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# Physics Abstracts

Science Abstracts Series A  
January-June 1982

Subject Index (A-L)

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# CONTENTS

Title page	i	Subject index	S1
Abbreviations and acronyms	iii		

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## SIX-MONTHLY INDEXES TO SCIENCE ABSTRACTS

Cumulative indexes to Science Abstracts are published twice a year covering the period January-June and July-December. They comprise author and subject indexes and some specialised or 'small' indexes. For Physics Abstracts and Electrical & Electronics Abstracts the Author Index and Subject Index are published as separate volumes. In this case the Small Indexes are included in the Author Index volume.

Cumulative author and subject indexes for preceding years are also available. For details please see inside back cover.

### Subject Index

The Subject index provides an alphabetical subject key to the articles included in the abstracts journal. Some general guidance on its use is given below:

1. Look in the index for the name of the specific subject in which you are interested. In most cases this name will be a heading in the index and you will find relevant articles listed under it. The majority of the subject headings fall into the following categories: property, phenomena, substance or named objects, instrument, device, theory, method, process, application, event.
2. Occasionally you will be directed from the subject heading chosen to a different heading under which the relevant or additional articles are listed.
3. If you do not find the subject heading you first chose, try a more general heading.
4. Each entry under the heading relates to an article appearing in the abstracts journal and gives the serial number of that article in the journal preceded by the last digit of the current year, e.g. 2-12345; i.e. Abstract number 12345 in the abstracts journal for 1982

The language of the article, if it is not in English, is also indicated. e.g. oxide glasses, viscosity in glass transition range (Japanese) 2-22290.

Each entry starts with a Keyword or Keyphrase considered to be most relevant to the heading. On sorting these Keywords, the qualifying prefixes are usually ignored. (e.g.  $\alpha$ -brass, 5-sulphosalicylic, 31 Cygni, n-Ge are sorted under brass, sulphosalicylic, Cygni, Ge respectively).

There are three main Keyword lists; alphabetical A-Z, elementary particles, and chemical symbols (organic substances are written and not given as chemical formula). More than one Keyword list may be present under each subject heading.

For document on, say, 'photoemission of germanium' at least two access points 'photoemission' and 'germanium' are provided. Under the heading 'photoemission' the Keyword will be 'Ge' and under 'germanium' the Keyword will be 'photoemission'.

In a case like this, it is advisable and quicker to use the heading 'photoemission' and go straight to the chemical symbol list for 'Ge'.

Intermetallic compounds are indexed under the appropriate alloy headings. The chemical formula is used as Keyword. However, it is important to realise in searching the chemical symbol list that, at present, alloys and intermetallic compounds are sorted separately. For example FeCo is sorted at the end of the Fe- list e.g. Fe-Al, ... Fe-Co, ... Fe-Si, ... Fe-Si-B, ... FeCo, ... FeSi and so on in this order.



## January–June 1982

## Subject Index (A – L)

# Abstracts

## Science Abstracts Series A

### January-June 1982

# Subject Index (A - L)

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# Abbreviations and Acronyms

Abbreviations and acronyms are used in the modifiers in all INSPEC Cumulative Subject Indexes. Individual terms should be readily understood in the context of the subject headings. **Inorganic substances** are usually given by their chemical formulae. Iron and aluminium garnets appear in the formulae lists as MIG and MAG (where M is metal element, e.g. YIG and YAG); (Pb,La)(Zr,Ti)O<sub>3</sub> and Ce<sub>2</sub>Mg<sub>3</sub>(NO<sub>3</sub>)<sub>12</sub> appear as PLZT and CMN respectively. **Organic substances** including **liquid crystals** are not given as formulae but common abbreviations are used.

ABS resin	acrylonitrile-butadiene-styrene	CESR	conduction electron spin resonance
AC	alternating current	CGTO	contracted Gaussian-type orbital
ACV	air cushion vehicle	CHF	coupled Hartree-Fock
A/D	analogue-to-digital	CI	configuration interaction
ADC	analogue digital conversion	CIDEP	chemically induced dynamical electron polarisation
ADP	administrative data processing	CIDNP	chemically induced dynamical nuclear polarisation
AE	acoustic emission	CIEH	charge iterated extended Huckel
AEC	atomic electron correlation(s)	CIHY	configuration interaction Hylleras
AES	Auger electron spectra(oscopy)	CMI	computer managed instruction
AF	audio frequency	CMOS	complementary metal-oxide-semiconductor
AFC	automatic frequency control	CNC	computerised numerical control
AFL	abstract family of languages	CNDO	complete neglect of differential overlap
AFMR	antiferromagnetic resonance	COC	cholesteryl oleyl carbonate
AGC	automatic gain control	COM	computer output to microform (fiche or film)
AGR	advanced gas-cooled reactor	COOB	4,4'-cyano-octyloxy-biphenyl
ALARA	as low as reasonably achievable	CP	charge, parity
ALU	arithmetic logic unit	CPA	coherent potential approximation
AM	amplitude modulation	CPA	critical path analysis
APACHE	accelerator for physics and chemistry of heavy elements	CPM	critical path method
APR	acoustic paramagnetic resonance	CPSK	coherent phase shift keying
APS	appearance potential spectra(oscopy)	CPT	charge, parity, time
APW	augmented plane wave	CPU	central processing unit
ARMA	autoregressive moving average	CRO	cathode ray oscilloscope
ASCII	American standard code for information exchange	CRSR	coherent resonant Stokes rotation
ATC	air traffic control	CRT	cathode ray tube
ATE	automatic test equipment	CS	coupled states
ATM	Axilrod-Teller-Moto	CSM	continuous slowing down models
ATR	attenuated total reflection	CSRS	coherent Stokes-Raman spectra(oscopy)
ATWS	anticipated transients without scram	CT	computerised tomography
AVC	automatic volume control	CTR	controlled thermonuclear reactor
BARITT	barrier injection transit time	CVD	chemical vapour deposition
BBEA	4-butoxybenzal-4'-ethylaniline	CW	continuous wave
BBGKY	Bogoliubov-Born-Green-Kirkwood-Yvon	D/A	digital-to-analogue
BCC	body centred cubic	DAC	digital analogue conversion
BCD	binary-code decimal	DBMS	database management system
BCS	Bardeen-Cooper-Schrieffer	DBR	distributed Bragg reflector
BFO	beat-frequency oscillator	DC	direct current
BH	buried heterostructure	DDC	direct digital control
BWO	backward wave oscillator	DIP	dual in-line package
BWR	boiling water reactor	DDL	diode-diode logic
BWT	backward wave tube	DECENT	distribution of exact classical energy transfer
CAD	computer aided design	DESY	Deutsches Electron Synchrotron
CAE	computer aided engineering	DF	Dirac-Fock
CAI	computer assisted instruction	DFB	distributed feedback
CAM	computer aided manufacturing	DH	double heterostructure
CARS	coherent antiStokes Raman scattering (spectra)	DIL	dual-in-line
CATV	community antenna TV	DITE	divertor in torus experiment
CB	citizen band	DLTS	deep level transient spectra(oscopy)
CBI	computer based instruction	DM	delta modulation
CBOOA	cyanobenzylidene octyloxyaniline	DMA	direct memory access
CCBA	coupled channel Born approximation	DMM	digital multimeter
C-CD	charge-coupled device	DMOS	double diffused metal-oxide-semiconductor
CDFR	commercial demonstration fast reactor	DMSO	dimethylsulphoxide
CDI	collector diffusion isolation	DNA	deoxyribonucleic acid
CDM	code division multiplexing	DNMR	double nuclear magnetic resonance
CDW	charge-density wave	DOBAMBC	p-decyloxybenzylidene p'-amino 2-methyl butyl cinnamate
CEM	channel electron multiplier	DOD	different orbitals for different spins
CEPA	coupled electron pair approximation	DORIS	Dopple-ring-Speicher
CERN	Conseil Européen pour la Recherche Nucléaire	DOS	disc operating system



DOVETT	double velocity transit time	FDM	frequency division multiplex(ing)
DP	data processing	FDNC	frequency dependent negative conductance
DPCM	differential pulse code modulation	FDNR	frequency dependent negative resistance
DPPH	diphenylpicrylhydrazyl	FEM	field emission microscopy
DPSK	differential phase shift keying	FET	field effect transistor
DSC	differential scanning calorimetry	FFHR	fusion-fission hybrid reactor
DTA	differential thermal analysis	FFT	fast Fourier transform
DVM	digital voltmeter	FFTF	fast flux test facilities
DV-X $\alpha$	discrete variational X $\alpha$ method	FIM	field ion microscopy
DWBA	distorted wave Born approximation	FIR	finite impulse response
DWIA	distorted wave impulse approximation	FM	frequency modulation
		FMIT	fission materials irradiation test facility
E1,E2	electric dipole, quadrupole	FMR	ferromagnetic resonance
E <sup>2</sup> PROM	electronically erasable read-only-memory	FMSR	fast mixed spectrum reactor
EAROM	electronically alterable read-only-memory	FPT	finite perturbation theory
EAS	extensive air shower	FPLA	field programmable logic array
EB	exponential Born	FSK	frequency-shift keying
EBBA	4-ethoxybenzylidene-4'-n-butylaniline	FSGO	floating spherical Gaussian orbitals
EBIC	electron beam induced current(s)	FTR	fast test reactor
EBR	experimental breeder reactor		
EBT	Elmo Bumpy Torus	GAMBIT	gate modulated bipolar transistor
ECC	emergency core cooling	GANIL	grand accélérateur national a ions Lourds
ECCM	electronic counter-counter measures	GCFR	gas-cooled fast breeder reactor
ECELLR	epithermal critical experiment laboratory reactor	GCM	generator coordinate method
ECG	electrocardiography (-gram)	GDR	giant dipole resonance
ECL	emitter coupled logic	GHF-NO-CI	generalised Hartree-Fock/natural orbital/ configuration interactions
ECM	electronic countermeasures	GIAO	gauge-invariant atomic orbitals
EDA	ethylene diamine	GO	Gaussian orbitals
EDP	electronic data processing	GOO	generalised Overhauser orbitals
EDTA	ethylene diamine tetra-acetic acid	GPM	ground potential model
EEBAC	ethyl-4-(4'-ethoxy-benzylidene-amino) cinnamate	GTO	Gaussian-type orbitals
EEG	electroencephalography (-gram)	GVB	generalised valence bond
EELS	electron energy loss spectra(oscropy)		
EEPROM	electrically erasable programmable read-only- memory	HAM	hydrogenic atoms in molecules
EFM	extended Flygare method	HBAB	hexyloxybenzylidene-p' aminobenzonitrile
EFT	electronic funds transfer	HBT	N-(p-hexyloxybenzylidene)-p-toluidene
EHD	electrohydrodynamics	HCDA	hypothetical core disruptive accident
EHF	extremely high frequency	HCP	hexagonal close packed
EHP	electron-hole potential method	HEED	high energy electron diffraction
EHT	extended Huckel theory	HEMP	high altitude electromagnetic pulse
EHV	extra high voltage	HF	high frequency or Hartree-Fock
ELDOR	electron electron double resonance	HFB	Hartree-Fock-Bogoliubov
ELF	extremely low frequency	HFER	hot fuel examination facility
EM	electromagnetic	HFIR	high flux isotope reactor
EMC	electromagnetic compatibility	HFO	Hartree-Fock-Overhauser
EMF	electromotive force	HFS	hyperfine structure
EMG	electromyography (-gram)	HGMS	high gradient magnetic separation
EMI	electromagnetic interference	HIXE	heavy ion induced X-ray emission
EMP	electromagnetic pulse	HLW	high level waste (radioactive)
ENDOR	electron nuclear double resonance	HMO	Huckel molecular orbitals
ENG	electronic newsgathering	HOAB	heptyloxyazoxybenzene
EOF	end of file	HOBHA	p-n-heptyloxy-benzylidene-p-n heptylaniline
EPEN	empirical potential energy function based on interactions of electrons and nuclei	HOMO	highest occupied molecular orbitals
EPMA	electron probe microanalysis	HTGR	high temperature gas-cooled reactor
EPR	electron paramagnetic resonance	HV	high voltage
EPROM	erasable programmable read-only-memory	HVEM	high voltage electron microscopy
ERG	electroretinography (-gram)	HWR	heavy water reactor
ESCA	electron spectroscopy for chemical analysis	IAEA	International Atomic Energy Authority Agency
ESCAR	experimental superconducting accelerating ring	IBA	interacting boson approximation
ESFI	epitaxial silicon film on insulator	IBM	interacting boson model
ESS	electronic switching system	IBPBAC	isobutyl-4-(4'-phenylbenzylideneamino) cinnamate
EUV	extreme ultraviolet	IC	integrated circuit
EW	electronic warfare	ICDF	intermediate coupling Dirac-Fock
EXAFS	extended X-ray absorption fine structure	ICF	inertial confinement fusion
FAMOS	floating gate avalanche metal-oxide- semiconductor	IDT	interdigital transducer
FBR	fast breeder reactor	IEPA	independent electron pair approximation
FCC	face centred cubic	IETS	inelastic electron tunnelling spectra(oscropy)
		IF	intermediate frequency
		IGFET	insulated gate field effect transistor



IIR	infinite impulse response	M1,M2	magnetic dipole, quadrupole
IKO	Institute v. Kernph Ouder Amsterdam	MBBA	4-methoxybenzylidene-4'-n-butyl-aniline
I <sup>2</sup> L	integrated injection logic	MBE	molecular beam epitaxy
I <sup>3</sup> L	isoplanar I <sup>2</sup> L	MBPT	many body perturbation theory
ILS	instrument landing system	MCD	magnetic circular dichroism
IMPATT	impact avalanche transit time	MCSCF	multiconfiguration self-consistent-field
INDO	intermediate neglect of differential overlap	MCPESCF	multiconfiguration paired excitation SCF
INDOR	internuclear double resonance	MCZDO	multi-centre zero differential overlap
ING	intense neutron generator	MCX <sub>α</sub>	multiconfiguration X <sub>α</sub>
INO	iterative natural orbital	MEC	molecular electron correlation(s)
INTELSAT	international telecommunications satellite consortium	MEDO	multipole expansion of diatomic overlap
I/O	input/output	MESFET	metal-semiconductor field effect transistor
IOC-α	inclusion of the overlap charges in the omega	MF	medium frequency
IPSS	international packet switching service	MFP	mean free path
IR	infrared	MHD	magnetohydrodynamics
IRDO	intermediate retention of differential overlap	MIC	microwave integrated circuit
IRS	information retrieval system	MIDP	microwave induced delayed phosphorescence
ISABELLE	intersecting storage and acceleration	MIEHM	modified iterative extended Huckel method
ISFET	ion-sensitive field effect transistor	MIM	metal-insulator-metal
ISL	integrated Schottky logic	MIMD	multiple input multiple data
ISR	intersecting storage ring	MIS	metal-insulator-semiconductor or management information system
ISX	impurity study experiment	MIT	Massachusetts Institute of Technology
ITC	ionic thermocurrents	MM	millimetre
ITEP	Institute of Theoretical and Experimental Physics	MMF	magnetomotive force
ITR	ignition test reactor	MNOS	metal-nitride-oxide-semiconductor
IU	Indiana University	MO	molecular orbitals
IVO	improved virtual orbitals	MOCIC	molecular orbital constraint of interaction coordinates
JAERI	Japan Atomic Energy Research Institute	MOCVD	metal-organic chemical vapour deposition
JET	Joint European torus	MODPOT	model potential
JFET	junction field effect transistor	MOS	metal-oxide-semiconductor
JINR	Joint Institute for Nuclear Research	MOSFET	metal-oxide-semiconductor field effect transistor
KEK	Japan National Laboratory for High Energy Physics	MOST	metal-oxide-semiconductor transistor
KKR	Korringa-Kohn-Rostoker	MRD	multi-reference double excitation
LAMPF	Los Alamos meson physics facility	MRINDO	modified Rydberg INDO
LC	inductance-capacitance	MS	management science
LCAO	linear combination of atomic orbitals	MSI	medium scale integration
LCBO	linear combinations of (semi-localised) band orbitals	MSK	minimum shift keying
LCD	liquid crystal display/device	MSR	molten salt reactor
LCGO	linear combination of Gaussian orbitals	MSU	Michigan State University
LCP	large coil program	MTBF	mean-time between failures
LCRO	linear combination of Rydberg orbitals	MTF	modulation transfer function
LEC	liquid encapsulated Czochralski	MTX <sub>α</sub>	muffin-tin X <sub>α</sub>
LED	light emitting diode	MUF	maximum usable frequency
LEED	low energy electron diffraction	MWPC	multiwire proportional chamber
LEP	large electron positron	NAL	National Accelerator Laboratory
LET	linear energy transfer	NAND	not-and(logic)
LF	low frequency	NC	numerical control
LMC	Large Magellanic Cloud	NCMET	non-closed shell many electron theory
LMFBR	liquid metal fast breeder reactor	NDDO	neglect of diatomic differential overlap
LMTO	linear combination of muffin tin orbitals	NDT	nondestructive testing
LNG	liquified natural gas	NEMO	non-empirical molecular orbitals
LOCA	loss of coolant accident	NEVE	non-empirical valence-electron
LOCE	loss of coolant experiment	NHS	National Health Service
LOFT	loss of flow test facility	NIC	negative impedance convertor
LPE	liquid phase epitaxy	NMOS	N-channel metal-oxide-semiconductor
LSA	limited space charge accumulation	NMR	nuclear magnetic resonance
LSI	large-scale integration	NMR-ON	NMR on oriented nuclei
LSD	local spin density	NNDO	neglect of non-neighbour differential overlap
LTE	local thermodynamic equilibrium	NOR	not-or(logic)
LUMO	lowest unoccupied molecular orbitals	NQR	nuclear quadrupole resonance
LV	low voltage	NRC	nuclear regulatory committee
LWBR	light water breeder reactor	NRM	natural remanent magnetisation
LWR	light water reactor	NSSS	nuclear steam supply system
MADO	Mulliken approximation for differential overlap	NTO	natural transition orbitals
		OCR	optical character recognition
		ODMR	optical detection of magnetic resonance
		OEM	original equipment manufacture
		OER	oxygen enhancement ratio



OPHF	orbital polarised Hartree-Fock	PWBA	plane wave Born approximation
OPW	orthogonal plane wave	PWIA	plane wave impulse approximation
OR	operations research	PWM	pulse width modulation
ORELA	Oak Ridge electron linear accelerator	PWR	pressurised water reactor
ORNL	Oak Ridge National Laboratory		
OS	operating system	QCD	quantum chromodynamics
OTEC	ocean thermal energy conversion	QDMBPT	quasi-degenerate many-body perturbation theory
OTF	optical transfer function	QED	quantum electrodynamics
		QPSK	quaternary phase shift keying
PAA	paraazoxyanisole		
PABX	private automatic branch exchange	RAM	random access memory
PAC	perturbed angular correlation	RBE	relative biological effectiveness
PAHR	post accident heat removal	RC	resistance-capacitance
PAM	pulse amplitude modulation	RCNDO	Rydberg CNDO
PAP	paraazoxyphenetole	RCS	rapid cycling synchrotron
PBF	power bursts facility	R & D	research and development
PBR	pebble bed reactor	RF	radio frequency
PBX	private branch exchange	RFI	radio frequency interference
PC	printed circuit	RG	renormalisation group
PCAC	partially conserved axial currents	RHEED	reflection high energy electron diffraction
PCB	printed circuit board	RHF	restricted Hartree-Fock
PCES	phase change energy storage	RINDO	Rydberg INDO
PCGVB	pairwise correlated generalised valence bond	RKKY	Rudermann-Kittel Kasuya-Yosida
PCIOCC	perturbative configuration interaction using localised orbitals for crystal calculation	RLC	resistance-inductance-capacitance
	pulse code modulation	RMS	root-mean-square
PCM	prestressed concrete reactor vessel	RNA	ribonucleic acid
PCRV		ROM	read-only memory
PCX	plasma confinement experiment	RPA	random phase approximation
PDX	poloidal divertor experiment	RPAE	random phase approximation with exchange
PEP	positron electron proton	RPM	relaxation potential model or revolutions per minute
PET	polyethylene terephthalate		
PETRA	positron electron tandem ringbeschleuniger anlage	RTG	radioisotope thermoelectric generators
		SACCI	symmetry adapted cluster configuration interaction
PF	power factor		
PFM	pulse frequency modulation	SAMO	simulated ab initio molecular orbitals
PFR	prototype fast reactor	SAW	surface acoustic waves
PHWR	pressurised heavy water reactor	SCC	stress corrosion cracking
PID(PI,PD)	proportional+integral+differential (derivative)	SCF	self consistent field
PIXE	proton induced X-ray emission	SCL	space charge limited
PLA	phase locked arrays or programmable logic array	SCPT	self consistent perturbation theory
		SCR	silicon controlled rectifier
PLBR	prototype large breeder reactor	SDM	space division multiplexing
PLC	programmable logic control	SDO	shielded diatomic orbitals
PLL	phase locked loops	SEHF	spin extended Hartree-Fock
PLT	Princeton Large Torus	SEM	scanning electron microscope
PM	pulse modulation	SFE	solar-flare effect
PMMA	polymethylmethacrylate	SGEMP	system generated electromagnetic pulse
PMDR	phosphorescence microwave double resonance	SGHWR	steam generating heavy water reactor
		SHF	superhigh frequency
PMOS	P-channel metal-oxide-semiconductor	SHG	second harmonic generation
PMR	proton magnetic resonance	SIMS	secondary ion mass spectra(oscropy)
PND0	partial neglect of differential overlap	SIN	Swiss Institute of Nuclear Research
PNO-CI	pair natural orbital configuration interaction	SINDO	scaled INDO
POL	pair orthogonalised Lowdin	SISAM	spectrometer with interference selective amplitude modulation
POPAE	protons on protons and electrons		
POPOP	phenyl-oxazolyl-phenyl-oxazolyl-phenyl	SIT	static induction transistor
POS	point of sale	SMC	Small Magellanic Cloud
PPDP/S	Pariser-Parr-Del Bene-Pople/Segal calculations	S/N	signal-to-noise
		SOG	strongly orthogonal geminal
PPI	plan position indicator	SOS	silicon on sapphire
PPM	pulse position modulation or parts per million	SPA	separated pair approximation
PPP	Pariser-Parr-Pople	SPC	stored program control
PRDDO	parial retention of diatomic differential overlap	SPEAR	Stanford positron electron asymmetric ring
PRF	pulse recurrence (repetition) frequency	SPHF	spin polarised Hartree-Fock
PROM	programmable read-only-memory or Pockels readout optical modulator	SPIN-CIPSI	spin symsmetry adapted generalisation of CIPSI
		SPS	super proton synchrotron (CERN)
PS	proton synchrotron (CERN)	SREMP	source region electromagnetic pulse
PSK	phase shift keying	SQUID	superconducting quantum interference device
PTFE	polytetrafluoroethylene	SRMCASE	symmetry-restricted-multiconfiguration annihilation of single excitations
PTM	pulse time modulation		
PVC	polyvinyl chloride	SSB	single sideband
PWA	partial wave analysis		
PWB	printed wiring board		



SSBW	surface skimming bulk wave	TUCA	transient undercooling accident
SSC	sudden storm commencement	TV	television
SSI	small scale integration	TW	travelling wave
SST	supersonic transport	TWT	travelling wave tube
STD	salinity-temperature-depth or subscriber trunk dialling		
STEC	solar thermal energy conversion	UART	universal asynchronous receiver/transmitter
STEM	scanning transmission electron microscopy	UCHF	uncoupled Hartree-Fock
STO	Slater-type orbitals	UHF	ultra high frequency or unrestricted Hartree-Fock
STOL	short take-off and landing	UHPS	underground hydroelectric pumped storage
STP	Slater-transfer Preuss	UHV	ultra high voltage
SW	short wave	UKAEA	United Kingdom Atomic Energy Authority
SWR	standing wave ratio	ULA	uncommitted logic array
SXAPS	soft X-ray appearance potential spectrum	ULF	ultra low frequency
		UMD	unitised microwave devices
TBBA	terephthal-butylaniline	UPS	ultraviolet photoelectron spectra
TCNE	tetracyanoethylene	US	ultrasonic
TCNQ	tetracyanoquinodimethane	UV	ultraviolet
TCR	temperature coefficient of resistance		
TDHF	time dependent Hartree-Fock	VAD	vapour phase axial deposition
TDM	time division multiplex(ing)	VB	valence bond
TDMA	time division multiple access	VCR	video cassette recorder
TDPAC	time differential perturbed angular correlation	VDM	vector dominance model
TDS	thermal desorption spectra(scopy)	VDU	visual display unit
TE	transverse electric	VHF	very high frequency
TEA	transversely excited atmosphere	VLBI	very long base line interferometry
TEGFET	two-dimensional electron gas field effect transistor	VLF	very low frequency
		VLSI	very large scale integration
TEM	transverse electromagnetic or transmission electron microscopy	VMOS	vertical channel metal-oxide-semiconductor
		VOR	VHF omnidirectional range
TEXT	Texas Experimental Tokamak	VPE	vapour phase epitaxy
TFTR	Tokamak fusion test reactor	VRC	visual record computer
TGA	thermogravimetric analysis	VRDDO	variable retention of diatomic differential
TGFB	triglycine fluoroberyllate	VS	virtual storage
TGS	triglycine sulphate	VSF	vestigial sideband
TGSe	triglycine selenate	VSEPR	valence shell electron pair repulsion
TJS	transverse junction stripe	VSWR	voltage standing wave ratio
TLD	thermoluminescent dosimeter(-ry)	VTOL	vertical take-off and landing
TM	transverse magnetic	VTR	voltage transformation ratio or video tape recorder
TMI	Three Mile Island		
TMMC	tetramethylammonium manganese chloride	VUV	vacuum ultraviolet
TMMTSF	tetramethyltetraselenofulvalene	VVER	water moderated water cooled reactors
TMTTF	tetramethyltetrathiofulvalene		
TOP	transient overpower accident	WKB	Wentzel-Kramers-Brillouin
TNS	The next step	WP	word processing
TRAPATT	trapped plasma avalanche triggered transit	WWER	water moderated water cooled reactors
TREAT	transient reactor test facility		
TRM	thermoremanent magnetisation	XPS	X-ray photoelectron spectra
TSC	thermally stimulated currents		
TSEE	thermally stimulated exo-electron emission	ZEBRA	zero energy breeder reactor assembly
TTF	tetrathiofulvalinium	ZGS	zero gradient synchrotron
TTL	transistor transistor logic	ZPPR	zero power plutonium reactor
TTT	tetrathiotetracene		







# Subject Index

1/f noise *see random noise*

## A-centres

- alkali halides,  $Tl^{+}$ -doped,  $F_A$ -type centre broadly tunable CW laser operation, optical props. 2-20310
- lasers using  $F_A(II)$ ,  $F_B(II)$  centres, flashlamp excitation 2-7777
- $CaO:Mg$ , neutron irradi., ODMR study of electron transfer from excited  $F$  centres 2-46430
- $KBr:Ag(Cu)$ ,  $A_F$ -centres, luminesc. linear polarisation obs. 2-36689
- $KBr:Li$ , ground state and optical props. 2-21530
- $KCl:Ag(Cu)$ ,  $KCl:Kl:Ag(Cu)$ ,  $A_F$ -centres, luminesc. linear polarisation obs. 2-36689
- $KCl:Li$ ,  $Ag^{-}$  and  $KCl:Na$ ,  $Ag^{-}$ , interstitial  $Ag$  centre form. by optical destruction of  $Ag^{-}$  centres, absorpt. spectra study 2-41386
- $KCl:Li$ ,  $F_A(II)$  col. centre saddle point relax., luminesc. study 2-36693
- $KCl:Li$ , ground state and optical props. 2-21530
- $KCl:Li$ , optically excited colour centres, ultrafast configurational relax. 2-31552
- $NaF(F_2^{+})_A$  laser, stimulated emission 2-44311
- $RbCl:Ag(Cu)$ ,  $A_F$ -centres, luminesc. linear polarisation obs. 2-36689
- $Si$ , field depend. of thermal activation energy, electron captive cross sections and relax. time, using capacitance transient spectroscopy 2-45887
- $Si$ , Jahn-Teller distortion of  $A^{-}$  and  $E^{-}$  centres 2-1872
- $n$ - $Si$ , neutron and 2 MeV electron damage, comparison by DLTS 2-8545
- $n$ - $Si$ , neutron irradiated,  $A$ -centre build up kinetics and recharge at defect clusters 2-35495
- $ZnS:Pb$ , photosensitive EPR excitation and quenching meas.  $A$ -centre model 2-17336

A/D conversion *see analogue-digital conversion*

## ab initio calculations

- $^2H$  and  $^{17}O$  nuclear quadrupole coupling const., H bonding effect 2-39422
- ab initio SCF calcs. 2-43786
- acetaldehyde, methyl hyperconjugation, struct., ab initio study 2-34268
- acetic acid, methyl hyperconjugation, struct., ab initio study 2-34268
- acetylene, ionic states, ab initio SCF and PNO CEPA calcs. 2-29519
- acetylene, photoionisation mass spectrometric study in VUV region, ab initio calcs., autoionisation 2-34507
- acetylene, valence electron binding and relaxation energies, ab initio SCF, HF, LCAO and CI calcs. 2-29521
- acrolein, force consts., ab initio SCF calcs. 2-650
- alanine, dipeptide bond, conformational energy map ab initio MO calc. 2-4422
- allylsilylene, ab initio SCF calcs. 2-43786
- 2-aminoethanol, mol. struct. and conformational anal., ab initio studies, hydrogen bonds 2-43777
- aromatic molecules, nitration, frontier orbital theory, ab initio version, appl. 2-49250
- atom, transition state of many-electron systems on basis of quantum statistical ab initio theory 2-19949
- atom+ molecule collisions, vibrational scattering, nuclear relax., ab initio calcs. 2-24834
- atomic electron scatt. with polarisation, Schwinger var. calcs. 2-20185
- azomethine radical, stability, decomposition path, ab initio SCF calcs. 2-24589
- azomethine compounds, ground and ionised state intramol. hydrogen bonds 2-29514
- beryllosilicate minerals,  $BeOSi$  bond role in struct. 2-21075
- bicyclo(1,1,0)butane, mol. and electronic struct. ab initio SCF calc. 2-43774
- bicyclo(2,1,0)pentane, mol. and electronic struct. ab initio SCF calc. 2-43774
- bicyclo(3,1,0)hexane, mol. and electronic struct. ab initio SCF calc. 2-43774
- borate polyhedra, bond distances, X-ray spectra and electron density distributions, calcs. using ab initio methods 2-35436
- iso-butane, mol. struct. determ. by geometrically unconstrained ab initio force relax. 2-43776
- carbocations,  $C_1$ - $C_3$ , struct. and energetics, electron correl. effects 2-49255
- carbonic acid trihydrates, molecular struct., ab initio calc., influence of solvation 2-43775
- carbonyl compounds, monosubstituted, harmonic and anharmonic stretching force const., ab initio calc., H-bonds 2-29729
- carbonyllyde, rot. energy barrier, ab initio RHF CI calcs. 2-24614
- carboxylic acid, dimers, H bond exchange, ab initio calcs. 2-11394
- catalysis quantum chem. approaches (French) 2-6061
- $N$ -chloroaziridine, generalised valence force field calcs., ab initio calcs. 2-11585
- chlorobenzene, photoelectron spectra, ab initio calc., vibr. fine struct., spin-orbit interaction 2-11545
- chlorobenzenes, photoelectron spectra, ab initio calc., vibr. fine struct., Jahn-Teller splitting 2-29657
- chloroform-aliphatic nitrile complexes, IR absorpt. integrated intensities, ab initio and MO calcs. 2-29591
- cyclobutadiene radical cation, pot. surface, ab initio and CI calcs., Jahn-Teller effect 2-49310
- cyclobutanes, monosubstituted, equilib. geometries, ab initio Hartree-Fock gradient technique calcs. 2-15704
- cyclohexane, structural trends in C-H bond distances and C-C-H bond angles, ab initio calcs. 2-49275
- diamond, ground state props., ab initio density functional pseudopot. method 2-40318
- dichlorobenzene, photoelectron spectra, ab initio calc., vibr. fine struct., spin-orbit interaction 2-11545
- difluorovinylidene, rearrangements to acetylenes, ab initio 4-31G SCF calcs. 2-9529

## ab initio calculations continued

- 1,2-dilithioethane, configs., pot. energy surface, MO ab initio calcs. 2-34279
- dimethoxymethane, mol. struct., ab initio study 2-34269
- dimethyl vinylidenes, rearrangements to acetylenes, ab initio SCF calcs. 2-29503
- dimethylnitrosamine, electronic struct., ab initio calcs 2-49279
- dioxirane, unimol. dissoci., reaction pathway, ab initio CI calcs. 2-47305
- dipeptide  $N$ -acetyl- $N'$ -methyl glycyl amide, mol. struct. and conformational anal., ab initio studies 2-43758
- 1,4-dithiin, mol. conformations, ab initio STO study 2-630
- DNA, H-bonded and complementary base pair systems, pot. energy curves 2-635
- electronic structure theory, review 2-35919
- ethane, valence electron binding and relaxation energies, ab initio SCF, HF, LCAO and CI calcs. 2-29521
- ethanol, mol. struct., ab initio geometry optimisations using Pulay's force method 2-49274
- ethene-HF(HCl), H-bonded complex, mol.-struct., dissoci. energy, ab initio SCF MO calcs. 2-43779
- ethyl anion, mol. struct., ab initio geometry optimisations using Pulay's force method 2-49274
- ethyl methyl phosphate conformational energy, ab initio SCF-MO calcs. 2-39306
- ethylamine, mol. struct., ab initio geometry optimisations using Pulay's force method 2-49274
- ethylene ozonide, conformers, activation energy of form., ab initio MC SCF calcs. 2-19952
- ethyne-HF(HCl), H-bonded complex, mol.-struct., dissoci. energy, ab initio SCF MO calcs. 2-43779
- fluorocarbene, low-lying electronic states, ab initio quantum chem. calcs. 2-644
- fluorocarbene anion, low-lying electronic states, ab initio quantum chem. calcs. 2-644
- fluoroform, dimer configurations, ab initio MO study 2-19951
- fluorovinylidenes, rearrangements to acetylenes, ab initio 4-31G SCF calcs. 2-9529
- formaldehyde, fragmentation and isomerisation, intrinsic reaction coordinate, ab initio MO calc. 2-31903
- formaldehyde, lowest singlet pot. surface, ab initio MO calc., isomerisation, electron correl. 2-11419
- formamide, struct., dipole moments, force fields and anharmonic freq., ab initio study 2-4213
- formamide- $H_2O$  complex,  $Li^{+}$  influence on H bonds, ab initio calcs. 2-39519
- formic acid,  $^2H$  and  $^{17}O$  nuclear quadrupole coupling const., H bonding effect 2-39422
- formic acid, force consts., ab initio SCF calcs. 2-650
- formic acid monohydrates, molecular struct., ab initio calc., influence of solvation 2-43775
- FORTTRAN IV general computer program for ab initio calcs. in quantum chemistry using SCF-LCAO-MO method (Chinese) 2-43771
- furan, d-orbital bonding, CNDO/2 and ab initio calcs. 2-15701
- furan, Dewar and valene, structs., ab initio and CNDO/2 MO calcs. 2-15705
- furan, struct. and aromatic character, SCF ab initio calc. 2-4205
- germylmethylene and its cation, restricted HF calc., geometry, proton affinity and thermodynamic stability 2-39294
- glycolic acid rotamers, geometry optimisation, gradient techniques calcs. 2-15703
- guanidine, rot. barriers, ab initio SCF calcs. 2-645
- guanidine, substituted, rot. barriers, ab initio SCF calcs. 2-645
- guanidine and substituted guanidines, proton affinities, geometries and atomic charges, ab initio SCF study 2-652
- hard-soft Lewis acid-base concept and Drago equation, anal. using ab initio calcs. 2-34284
- heavy symmetric atom+ion collisions,  $2p_x$ - $2p_z$  crossing, level struct. 2-49345
- hexachlorobenzene, photoelectron spectra, ab initio calc., vibr. fine struct., Jahn-Teller splitting 2-11546
- hybrid technique of orthonormality constrained orbital optimization in SCF calculations 2-39278
- $\beta$ -hydroxyacrolein, harmonic force fields, ab initio SCF calcs. 2-650
- hydroxydimethylnitrosamine, electronic struct., ab initio calcs 2-49279
- hydroxypyridines, vapour phase tautomeric equilib., ab initio calcs. 2-15709
- ice, structure prediction, tests of effective pair pots. 2-40332
- III-V semiconductors, (110) surface reconstruction, ab initio quantum chem. calc. 2-12895
- inert gas atoms, transition states of many-electron systems on basis of quantum statistical ab initio theory 2-19949
- integral program for related molecules 2-39307
- ion structures and proton affinities calc. using FOGO method 2-43784
- isobutene, methyl hyperconjugation, struct., ab initio study 2-34268
- isobutyl radicals, barrier for internal rot. calc. using ab initio SCF calcs. 2-43787
- malonic acid and its derivatives, XPS and MO study 2-43999
- methane, Auger electron spectrum, semi-empirical HAM/3 MO calc. 2-632
- methane, dipole moment function calc., overtone and combination bands intensities for  $\nu_3$  and  $\nu_4$  determ. 2-49591
- methane, valence electron binding and relaxation energies, ab initio SCF, HF, LCAO and CI calcs. 2-29521
- methanol, photolysis and electron impact fragmentation, pot. curves, ab initio CI calcs. 2-13986
- methanol- $H_2O$  mixtures, thermal cond. anal MO calcs., enthalpy, entropy of association, H-bonds 2-35258

## ab initio calculations continued

- methanol-water solution, mol. calculations 2-24605  
 methoxy radical, pot. energy surfaces studied using ab initio quantum chemical techniques, vibr. freq. 2-39346  
 methyl vinyl ether, rot. isomers, mol. struct. 2-49411  
 methyl vinylidenes, rearrangements to acetylenes, ab initio SCF calcs. 2-29503  
 3-methylcholanthrene and its metabolites, electrostatic mol. pot. contour maps, ab initio MODPOT/VRDDO/MERGE calc. 2-24593  
 3-methylcholanthrene and its metabolites, MO calc. using MODPOT/VRDDO/MERGE calc. 2-637  
 methylethyl ether, mol. struct., ab initio geometry optimisations using Pulay's force method 2-49274  
 methylethylamine, mol. struct., ab initio geometry optimisations using Pulay's force method 2-49274  
 N-methylformamide, cis- and trans-, equil. geometries, force const., vibr., dipole moment, ab initio SCF MO calcs. 2-29508  
 methylvinylsilylene, ab initio SCF calcs. 2-43786  
 molecular electron scatt. with polarisation, Schwinger var. calcs. 2-20185  
 molecule, single orbital relax. energy, ab initio LCAO MO SCF calcs. 2-19967  
 molecules, electronic-structure, ab initio valence shell Hamiltonian calcs., many body perturbation theory 2-7486  
 molecules, geometry optimisation, ab initio SCF-MO calcs. 2-34255  
 molybdenum diformate, satellite peaks in C 1s photoelectron spectra 2-20125  
 molybdenum methylformate, satellite peaks in C 1s photoelectron spectra 2-20125  
 neopentyl radicals, barrier for internal rot. calc. using ab initio SCF calcs. 2-43787  
 organic compounds, ab initio geometries and their correl. to total energy group increments, 4-21G bond distances 2-49251  
 organic metal, quasi-one-dimens. cond., electron-phonon coupling const., resist. mechanism 2-21573  
 n-pentane, mol. struct. determ. by geometrically unconstrained ab initio force relax. 2-43776  
 performic acid, force const., ab initio SCF calcs. 2-650  
 period II element fluorides, nonempirical PRDDO and ab initio calcs. 2-15716  
 period II element oxides, nonempirical PRDDO and ab initio calcs. 2-15716  
 period III element fluorides, nonempirical PRDDO and ab initio calc. 2-15715  
 period III element oxides, nonempirical PRDDO and ab initio calc. 2-15715  
 polyacetylene, soliton excitations, ab initio calc. 2-45903  
 polyadenylic acid, single-stranded, adenine-adenine interaction, ab initio MO study 2-52423  
 polyethylene, ab initio calcs. of electronic props. 2-12960  
 proline dipeptide, struct. and bonding, ab initio calcs. 2-18171  
 propadienone, and struct. isomers, equil. struct., ab initio calcs. 2-24594  
 n-propane, mol. struct. determ. by geometrically unconstrained ab initio force relax. 2-43776  
 protein central residues, C<sub>10</sub> H bonds and  $\beta$  bands, struct. and bonding calcs. 2-18172  
 proteases, serine and cysteine, proton-transfer energetics, theoretical model 2-9761  
 pyridine, ground and ionised state, ab initio valence bond calc., ionisation pot. 2-657  
 pyrimidines, 4-monosubstituted, ground and excited states, substituent effects ab initio SCF-CI calcs. 2-19978  
 pyrrole, struct. and aromatic character, SCF ab initio calc. 2-4205  
 pyrrole, Dewar and valene, structs., ab initio and CNDO/2 MO calcs. 2-15705  
 quantum chemistry calcs. using parallel processing on microcomputers 2-649  
 semiconductors, cubic, polar and covalent, phonon freq., local density formalism 2-50797  
 semiconductors, electronic struct., first principles calc. 2-30793  
 shell structure use in eliminating linearly depend. AO integrals in LCAO calcs. 2-7493  
 2-silabutadiene, ab initio SCF calcs. 2-43786  
 spiro[2.4]hepta-4,6-diene, microwave spectra and electron distribution 2-7545  
 symmetry adaptation in molecular ab initio calculation 2-15697  
 tetrazoles, gas phase tautomerism, PES and ab initio MO calcs. 2-20128  
 trimethylaldehyde, geometries of ground and first excited triplet states 2-43815  
 thioformamide, struct., dipole moments, force fields and anharmonic freq., ab initio study 2-4213  
 thiophene, d-orbital bonding, CNDO/2 and ab initio calcs. 2-15701  
 thiophene, struct. and aromatic character, SCF ab initio calc. 2-4205  
 thymine-H<sub>2</sub>O complex hydrogen bond, ab initio SCF and SCF-CI calcs. 2-39335  
 triazoles, gas phase tautomerism, PES and ab initio MO calcs. 2-20128  
 TTF-TCNQ, quasi-one-dimens. cond., electron-phonon coupling const., resist. mechanism 2-21573  
 vinyoxy radical, electronic struct., ab initio multiconfig. HF wave functions 2-39299  
 vinylidene, ionic states, ab initio SCF and PNO CEPA calcs. 2-29519  
 vinylidene ion, preferred struct., ab initio calcs. 2-43778  
 Z=113 dimer, ab initio relativistic calc. 2-29742  
 Al, crystal energy and struct., ab initio pseudopot. calc. 2-35961  
 AlH<sub>3</sub> ground and excited states, pot. energy curves, dissoci., ab initio CI calcs. 2-24617  
 AlH<sub>4</sub><sup>+</sup> ab initio LCAO SCF calc. 2-15722  
 Ar+HF, state to state cross sections for energy transfer, modified infinite-order method theory 2-29698  
 Ar<sub>2</sub> ground state pot. energy curve, ab initio SCF obs. 2-39343  
 B+Ar, interatomic pots., non-adiabatic matrix, ArB form., ab initio CI calcs. 2-24825  
 BF<sub>3</sub>, vibr. fine struct., ab initio coupling const., photoelectron spectrum 2-34492  
 BH, vibr. struct., electronic transition,  $\Lambda$ -doubling, ab initio calcs. 2-4212  
 B<sub>2</sub>H<sub>4</sub>, geometrical struct. and vibr. freq. studied via ab initio mol. electronic struct. theory 2-49280  
 B<sub>2</sub>H<sub>6</sub>, differential cross sections meas. by high energy electron scatt., chemical binding effect, ab initio mol. calc. 2-7644  
 B<sub>2</sub>H<sub>6</sub>, quadratic force fields, ab initio calcs. 2-15702  
 BH<sub>3</sub>NH<sub>3</sub> binding energy, ab initio calculations 2-15713

## ab initio calculations continued

- BN, band and cryst. struct., LCAO SCF ab initio HF calc. 2-35935  
 BO radicals, B<sup>16</sup>O and B<sup>18</sup>O, ESR matrix isolated spectra, nuclear hyper-fine struct. and ab initio calc. comparison 2-34451  
 Ba<sub>2</sub> term dependent hybridisation of the 5f wave function 2-39311  
 Ba<sup>2+</sup>, term dependent hybridisation of the 5f wave function 2-39311  
 BeF<sub>2</sub><sup>-</sup>, ground state, geometry, force const., ab initio HF calcs. 2-646  
 Be<sub>2</sub>H<sub>2</sub><sup>-</sup> anion, struct. and stability, ab initio calcs. 2-29502  
 C, ab initio effective spin-orbit operators for struct. calc. 2-43782  
 C<sup>+</sup>, gas excited ions, prompt and time delayed electron decay-in-flight spectra 2-4353  
 C<sup>+</sup>+H<sub>2</sub>-CH<sup>+</sup>+H, pot. energy surfaces, chemiluminescence, ab initio MCSCF-POLCI calcs. 2-27427  
 CH<sub>3</sub> (X<sup>3</sup>B<sub>1</sub>), spin-orbit interactions, fine struct., GAUSSIAN program, ab initio calcs. 2-29515  
 C<sub>2</sub>H<sub>4</sub><sup>2+</sup> struct. and energies of isomers ab initio calcs. 2-19962  
 C<sub>2</sub>H<sub>5</sub>O<sup>+</sup> isomers, pot. surface, ab initio MO calcs. 2-770  
 CO, chemisorbed on Ni (100), geom., vibr. freqs., ionisation pot., and photoelectron spectrum 2-1743  
 CO, single orbital relax. energy, ab initio LCAO MO SCF calcs. 2-19967  
 CO-HCl, H-bonded complex, ab initio SCF-MO calcs. 2-29496  
 CO-HF, H-bonded complex, ab initio SCF-MO calcs. 2-29496  
 CO+He, V-T collisional relax., ab initio pots. calcs. 2-39478  
 C<sub>2</sub>SiH<sub>4</sub> isomers, multiple bonds stability, ab initio SCF calc. 2-7674  
 CaF<sub>2</sub>, origin of superionicity 2-21388  
 Cr I, 3d and 4s spectra, spectator electrons approx., ab initio HF calcs. 2-4244  
 Cu, clusters, struct., ab initio SCF calcs. 2-4435  
 Cu, clusters, struct., ab initio SCF calcs. 2-7694  
 CuCl, energy levels, ab initio HF MO calcs. 2-11402  
 (CuCl)<sub>2</sub>, energy levels, ab initio HF MO calcs. 2-11402  
 CuF, energy levels, ab initio HF MO calcs. 2-11402  
 D<sub>2</sub>(J<sub>2</sub>), vibr. rot. const., ab initio pot. energy curve 2-49311  
 F+HNF, IR chemiluminesc. obs., heat of form., ab initio and statistical calcs. 2-37077  
 FH.CN<sup>-</sup>, prod. from HF CN<sup>-</sup> reaction, electronic struct. and geometry, quantum chem. calc. 2-22433  
 F<sub>2</sub>O, ab initio force const. determ. 2-43781  
 Fe-porphine, ab initio LCAO SCF MO calc. with double zeta basis set 2-11390  
 Fe<sub>2</sub>B and FeB, bonding rel. to struct. and mag. props., photoemission meas. and ab initio calcs. 2-13628  
 GaAs (110) surface core excitations, ab initio calc. 2-8850  
 GaAs, force const., phonon dispersion curves, and dielec. const., ab initio calc. 2-50820  
 Ge, lattice dynamics, ab initio calc., local density functional formalism 2-50796  
 H atom, excitation by electron and photon joint collision 2-7647  
 H chemisorption on diamond face (100), ab initio SCF model calcs. 2-21440  
 H<sub>2</sub>, Gaussian MO ab initio calcs. including configuration interaction 2-7511  
 H<sub>2</sub>+Na, quenching process, energy transfer, ab initio RHF-SCF and PNO-CEPA calcs. 2-29699  
 H<sub>2</sub> cluster, electronic states, ab initio CI calcs. 2-24910  
 H<sub>2</sub>, ab initio and nonorthogonal bond orbital SCF calcs., rel. to H<sub>2</sub>-H<sub>2</sub> interaction 2-29499  
 (HBX)<sub>2</sub> (X=Be, BH, CH<sub>2</sub>, NH, O), band structure, ab initio STO calcs. 2-39309  
 HCO<sup>+</sup>, mol. struct. by microwave substitution method 2-20205  
 HD(J<sub>2</sub>), vibr. rot. const., ab initio pot. energy curve 2-49311  
 HF, Auger electron spectrum, semi-empirical HAM/3 MO calc. 2-632  
 HF molecules, bent chain, equil. geometry and vibr. spectra, ab initio studies 2-43783  
 H<sub>2</sub>(J<sub>2</sub>), vibr. rot. const., ab initio pot. energy curve 2-49311  
 H<sub>2</sub>N-OH, conformational stability, ab initio SCF-MO calcs. 2-34273  
 H<sub>2</sub>N-SH, conformational stability, ab initio SCF-MO calcs. 2-34273  
 HNO<sub>3</sub>, microwave spectrum, centrifugal distortion anal., harmonic force field, ab initio calc. 2-4267  
 HO<sub>2</sub><sup>+</sup>, X<sup>3</sup>A<sup>+</sup> state, VUV PES of transient species 2-34493  
 H<sub>2</sub>O, ab initio force const. determ. 2-43781  
 H<sub>2</sub>O, Auger electron spectrum, semi-empirical HAM/3 MO calc. 2-632  
 H<sub>2</sub>O, large amplitude bending motion, ab initio SCF-CI studies, rigid, semirigid and nonrigid bender models 2-4216  
 H<sub>2</sub>S, absolute proton affinity, ab initio mol. orbital theory 2-44138  
 He, coupled states, cross sections rotational rainbows, power gap model validity 2-15884  
 He-Be string, interaction pot., ab initio calc. 2-44026  
 \*He+\*He low energy cross section, interatomic pot. and vel. depend. 2-49545  
 KCN, configs., pot. energy curves, ab initio SCF calcs. 2-43797  
 KF, in carboxylic acid solns., ab initio calcs., solvation, IR obs. 2-29501  
 Li isoelectronic sequence, improved Hylleraas calc. for ground state energies 2-24592  
 LiBeF<sub>2</sub>, struct., force field, freq. and intensities of normal modes, ab initio calc., IR spectrum 2-49254  
 LiBeH<sub>2</sub>, complex, struct. and stability, ab initio calcs. 2-29502  
 LiF surface, H adsorption, mol. parametrised CNDO and ab initio calcs. 2-16944  
 Li<sub>2</sub>H<sub>m</sub> (m≤n≤4), electronic struct., ab initio SCF MO calc. 2-43788  
 N<sub>2</sub>-N<sub>2</sub>, mol. interaction, electron gas and ab initio pots., second virial coeffs. 2-44030  
 N<sub>2</sub>, stability, possible form-in photochemical reactions ab initio set and CI calcs. 2-24615  
 NF<sub>3</sub>, IR absorpt. bands, ab initio and localised MO calcs. 2-43906  
 NH<sub>3</sub> and ND<sub>3</sub>, UV photoelectron transitions, pot. curves by ab initio CI calcs. 2-49518  
 NH<sub>3</sub>, IR absorpt. bands, ab initio and localised MO calcs. 2-43906  
 (N<sub>2</sub>H<sub>2</sub>)<sup>+</sup>, H-bonded system, H<sup>+</sup> transfer and electronic redistrib., ab initio MO calcs. 2-24848  
 NH(X<sup>2</sup>Σ<sup>-</sup>), spin-orbit interactions, fine struct., GAUSSIAN program, ab initio calcs. 2-29515  
 NO, five photon ionisation cross sections, ab initio calcs. 2-29660  
 NO, photoionisation, multiphoton spectra, ab initio calcs. 2-24590  
 N<sub>2</sub>O<sup>+</sup>, \*A<sup>1</sup> first excited state saddle point region, ab initio SCF and CI calcs. 2-39336  
 NaAr, A<sup>2</sup>Π state, vibr.,  $\Lambda$  doubling, spin-orbit coupling, fluoresce. 2-4324  
 NaCN, configs., pot. energy curves, ab initio SCF calcs. 2-43797  
 NaCl, NaF and some alkali and halide ions pairs, ab initio SCF pair pot. and polarisabilities 2-49537



**ab initio calculations continued**

- Nb, phonon freq. and lattice energy, first principles LCAO calc. 2-50794  
 Ne+Na<sub>2</sub>, coupled states, cross sections rotational rainbows, power gap model validity 2-15884  
 Ne<sub>2</sub>, ab initio polarisability invariants, spectroscopic exam. 2-4411  
 NiFe electronic states, ab initio HF-Cl calcs. 2-24623  
 O<sub>2</sub>, core binding energy, ab initio SCF calcs. 2-34280  
 OF<sub>2</sub>, core binding energy, ab initio SCF calcs. 2-34280  
 (O<sub>2</sub>H<sub>2</sub>)<sup>+</sup>, H-bonded system, H<sup>+</sup> transfer and electronic redistrib., ab initio MO calcs. 2-24848  
 O(C<sub>2</sub>P)<sub>2</sub>+ethylene, ab initio HF and multiconfig. HF calcs. 2-41875  
 OSCl, electronic struct. and props., ab initio SCF MO calcs. 2-34274  
 OSeCl, electronic struct. and props., ab initio SCF MO calcs. 2-34274  
 O<sub>2</sub>(X<sup>3Σ<sub>g</sub><sup>-</sup>), spin-orbit interactions, fine struct., GAUSSIAN program, ab initio calcs. 2-29515  
 PF<sub>3</sub>, IR absorpt. bands, ab initio and localised MO calcs. 2-43906  
 PH<sub>3</sub>, absolute proton affinity, ab initio mol. orbital theory 2-44138  
 PH<sub>3</sub>, IR absorpt. bands, ab initio and localised MO calcs. 2-43906  
 PN+Ni(Cu) interactions, ab initio MO calcs. 2-13946  
 Pr<sup>3+</sup>, electron correlations, ab initio and multiconfiguration HF calcs. 2-660  
 S<sup>2+</sup>+H, charge transfer, pot. energy curves, ab initio MO calcs. 2-20177  
 SF<sub>6</sub>, electronic struct., PES 2-11547  
 Si<sub>2</sub>N<sub>2</sub>, mol. and electronic struct., ab initio MO calcs. 2-34275  
 SOF<sub>2</sub>, electronic struct., PES 2-11547  
 SOF<sub>4</sub>, electronic struct., PES 2-11547  
 Se, band edges, press. depend., relativistic ab initio calc. 2-45824  
 Si, ab initio effective spin-orbit operators for struct. calc. 2-43782  
 Si, band structure and cryst. struct., LCAO SCF ab initio HF calc. 2-35929  
 Si, directional Compton profiles in impulse approx., exact exchange Hartree-Fock calcs. 2-2364  
 Si, phonon freq. and lattice energy, first principles LCAO calc. 2-50794  
 Si, phonon spectra, first principles calc., dielec. screening method 2-50793  
 SiH<sub>2</sub>, ab initio effective core pot. calc., MO energies 2-49283  
 Si<sub>2</sub>H<sub>4</sub>, singlet and triplet states, struct. and stability, ab initio SCF calcs. 2-39296  
 SiO<sub>2</sub><sup>-</sup>, equil. geometries and relative stabilities, ab initio SCF MO calcs. 2-34286  
 SrF<sub>2</sub>, origin of superionicity 2-21388  
 Te, band edges, press. depend., relativistic ab initio calc. 2-45824  
 Ti surface, chemisorpt. of H<sub>2</sub>, embedding theory and small cluster calc. 2-45729  
 TiH<sub>2</sub>, ab initio effective core pot. calc., MO energies 2-49283  
 VH<sub>2</sub>, ab initio effective core pot. calc., MO energies 2-49283</sup>

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**aberrations**

- aberrations in optics and particle optics only*  
*see also lenses; optical instrument testing; particle optics*  
 Ω three magnet energy filter, chromatic plane aberration effects 2-49653  
 achromatic quadrupole lens doublet for positive ions 2-49656  
 acoustic microscopy of solids, mechanically scanned B-scan system 2-1096  
 acoustic microscopy of solids, mechanically scanned B-scan system 2-7992  
 anisoplanatic error reduction for propag. through turbulent atm. 2-24969  
 anisoplanatism for compensated imaging system and adaptive optics laser transmitter 2-24968  
 apodised optical systems with spherical aberrations, image quality criteria for one-, two-point imaging 2-34679  
 astigmatic rainbow holography, aperture conjugation technique 2-20266  
 astigmatic ray pencil reconstruction from holograms 2-34692  
 atmosphere laser beam propag., modal compensation of turbulence induced wavefront aberrations 2-48001  
 balancing and tolerance for instruments with inhomogeneous exit pupil (Hungarian) 2-34671  
 broad-range particle spectrograph 2-587  
 camera shake evaluation by hand-held speckle photography 2-33656  
 cathode systems, geometric aberration coeff., expansion parameters 2-39557  
 cemented double-lens objectives, CAD algorithm (Russian) 2-44427  
 coherent optical processor aberrations, phase errors in Fourier transformed plane 2-852  
 coma formed by decentering, vector summation method 2-15967  
 conical light beam generation for smoke-chamber demonstrations 2-28636  
 corrected mag. prism spectrometer for electron microscopy 2-19216  
 Czerny-Turner monochromator, coma correction 2-20399  
 double-symmetrical system, wave aberration calc., anamorphic or astigmatic imaging 2-20261  
 doublet comprising thin component and finite thickness meniscus, fund. aberration coeffs., numerical method 2-49867  
 dye laser, CW, with phase-conjugate mirror, longit. modes and aberration-correction props. 2-25008  
 echelle and holographic grating comparison for scatt. and spectral resolution 2-864  
 electric-magnetic focusing deflection system, relativistic aberration theory (Chinese) 2-20238  
 electron and ion optical systems possessing primary aberrations, Liouville theorem appl. 2-24931  
 electron beam coherence, spatial and temporal, from astigmatic image of amorphous C film 2-39552  
 electron beam devices, design, probe current-density distribution and probe-system optimization 2-43133  
 electron beam half-radius, influence of spherica and chromatic aberrations 2-7712  
 electron lens, variable axis 2-15951  
 electron lens correction using improved multipole system, technological requirements (German) 2-39555  
 electron lenses, axial aperture aberration correction system 2-39553  
 electron lenses, stigmator circuit for independ. control of corrector amplitude and orientation 2-6929  
 electron micrograph diffractograms, scatt. factor phase and spherical, astigmatic aberration consts. meas. 2-830  
 electron microscope, corrected, improvement test (German) 2-48846  
 electron microscope, high voltage, astigmatism correction method using optical diff. 2-38724

**aberrations continued**

- electron microscopy, conventional, transmission, low-contrast objects, point-spread and transfer functions 2-23780  
 electron microscopy defocus effect on spherical aberration coeff. determ. from micrograph of amorphous phase object 2-33687  
 electron optical systems, primary aberrations, optical transfer matrix, Liouville's theorem appl. (Chinese) 2-29775  
 electrostatic ion optics and beam transport for ion implantation 2-834  
 eye chromatic aberration correcting lenses 2-37706  
 fifth-order deflection aberrations, computational and expt. anal. 2-49649  
 Fresnel lenses use in solar concentration system, chromatic aberration effect 2-18003  
 Fresnel lenses efficiency with respect to reflection and transmission losses 2-39714  
 gas lens, thermal, numerical analysis of imaging props. 2-34873  
 geometrical optics and optical aberrations, Lie algebra theory 2-49658  
 hologram aberration correction, entrance pupil position influence 2-34704  
 holographic crossed gratings, diff. efficiencies, aberration theory, ray tracing 2-39588  
 holographic diffraction gratings, concave, type 3, aberrations in UV 2-49711  
 holographic grating aberration correction for a Rowland circle mount 2-24975  
 holographic grating aberration correction for a Rowland circle mount 2-24976  
 holographic interferometry, aberration and technological requirements calc. 2-49710  
 holographic lenses, image quality estimate, classical intensity MTF 2-39591  
 holography, Dennis Gabor memorial symposium, Haifa, Israel (Mar. 1980) 2-33216  
 image converter, high voltage magnetically focused, aberrations and transverse field effects 2-34648  
 incoherent imaging, intensity distrib., reconstruction, real optical systems and multipoint imaging quality 2-34677  
 intracavity adaptive optic compensation of phase aberrations, passive small equiv. Fresnel no. resonator 2-11728  
 ion optical systems, primary aberrations, optical transfer matrix, Liouville's theorem appl. (Chinese) 2-29775  
 IR imaging systems, aberration correction method for thin achromat 2-34935  
 laser beam transforming optical system, induced aberration correction in design 2-951  
 laser optical system error sensing using scattered light 2-49764  
 lens aberration determination using holographic interferograms of pupils recorded for two points on image plane (French) 2-44217  
 lens CAD, optimisation techniques comparison 2-1001  
 lens coupling in fibre optic devices, efficiency limits 2-4593  
 magnetic spectrograph ion-optical system, induced aberrations optimisation 2-4169  
 mass spectrometer using mag. and elec. sector fields, ion optics 2-3648  
 mirror, spherical primary with aspheric corrector plates located near focus, optimum soln. 2-20392  
 objective wave aberration evaluation, shearing interferogram meas., wavefront reconstruction and reference sphere selection 2-20260  
 perfect grating rhomb laser beam sampler, aberrations for diverging beam 2-25107  
 photofabricated focusing diffracting optics 2-4619  
 planar Rowland spectrometer for fibre-optic wavelength demultiplexing 2-33645  
 plane holography, effective pupil model 2-39590  
 Popov-Bowen camera, aberration correction and F-ratios 2-42604  
 quadrupole lenses elec. rotation 2-4449  
 quasi diffraction-limited optical imaging, transfer function and spread function of edge, coherence and wave aberration (German) 2-4458  
 rainbow holography, one step, astigmatic technique 2-44220  
 RATAN-600 radiotelescope radiation pattern allowing for aberrations 2-28345  
 Schmidt-Cassegrain two-element telescope, well-corrected with flat image 2-25095  
 sector magnet, second order image aberration meas. 2-572  
 SEM images, raster methods for displaying defocus and astigmatism 2-48849  
 Siedel aberration contributions in optical systems, meas. by HP-97 calculator program 2-7845  
 spherical aberration correction by aspheric surfaces in optical systems 2-7848  
 spherical aberration optimal balance under partially coherent illum. 2-11649  
 stellar interferometry speckle image reconstruction problem, wavefront correl. function and deterministic wavefront aberration influence 2-18714  
 symmetrical system, caustic surface and illuminance computation, optical aberration functions 2-15960  
 symmetrical systems, FORTRAN subroutines for optical aberration coeffs. automatic computation 2-850  
 thick lens-hologram refr.-diff. optical system, aberration compensation 2-39719  
 transaxial electrostatic cathode lens, aberration coeffs. 2-20243  
 wave-optical evaluation of optical systems for automatic correction (German) 2-29860  
 X-ray aspheric mirror, wavefront error, point diff. interferometric testing 2-6896  
 zonal errors influence on optical system image quality, automatic correction program calc. 2-1003  
 GaAlAs DH diode laser wavefront meas. and anal. 2-25049  
 LiNbO<sub>3</sub> crystal, radiation conversion, strong focusing effect 2-49822  
 Nd:glass laser, aberration cancellation by wavefront inversion, appl. to plasma diagnostics 2-20325

**abrasion**

- see also hardness; wear*  
 abrasive grains, friability test (Japanese) 2-27392  
 calorized, wear charact. during dry rubbing (German) 2-27289  
 gas turbines, coal-burning, research advances in erosion prediction and reduction 2-16271  
 Hertzian contact stress, effect of thin compliant protective coating 2-47207  
 impact abrasive wear testing method 2-2643  
 metal coating for electrical contacts, tribology 2-31800



**abrasion continued**

- optical glasses entering into GOST 3514-76, relative abrasion hardness 2-4985
- rubbing pairs at high slip speeds (*Russian*) 2-8097
- sliding contact, high-velocity, generation of wear debris 2-36974
- solar installation mirrors reflectance, effect of abrasive action of atmospheric particles 2-999
- steel, abrasive wear testing method 2-37023
- steel, C, scuffing under boundary lubricated conditions 2-52055
- steel, C and austenitic, oxidation in reversing rubbing 2-5986
- steels, austenitic stainless and ferritic, fretting and wear in LMFBF boiler 2-15499
- steels, surface modification, ion implantation parameter influence 2-1499
- wear model in abrasive environment, appl. to mag. sensor 2-5982
- wear resistance assessment, correl. between model and workshop tests 2-9510
- Al, anodic coated, hardness, wear and abrasion meas. 2-47186
- Al, oxidation in reversing rubbing 2-5986
- Al-Zn rubbing, severe-mild wear transition, semicond. material form. on sliding surface (*Japanese*) 2-52054
- BN, cubic, new developments, optimisation of performance 2-46986
- CdTe, surface polishing by diamond milling 2-41767
- Cr<sub>3</sub>C<sub>2</sub>, plasma- and vacuum-plasma sprayed composite coatings, props. 2-17761
- Cu, oxidation in reversing rubbing 2-5986
- Cu, surface struct., mechanically polished TEM study 2-41844
- Fe, cast and Armco, oxidation in reversing rubbing 2-5986
- HfO<sub>2</sub>, Er<sub>2</sub>O<sub>3</sub>-stabilised, abrasability and hardness 2-47184
- KCl, mechanically treated, depth and struct. of damaged layer (*Russian*) 2-2590
- LiF, influence of free abrasive conc. on defective zone parameters (*Russian*) 2-5966
- MgO, abrasive wear debris, struct. 2-36981
- NaCl, influence of free abrasive conc. on defective zone parameters (*Russian*) 2-5966
- Si, influence of O<sub>2</sub> on wear 2-9433
- TiC-Fe wear resistant powder metallurgical coatings, on C steel 2-13860
- VN, cubic, powders synthesis, MgB<sub>2</sub> catalyst appl. 2-13692
- Zn, oxidation in reversing rubbing 2-5986

**abrasive wear** *see abrasion***absolute gravity** *see gravity***absolute pressure measurement** *see pressure measurement***absolute temperature** *see temperature***absorption**

- for absorption of substances *see sorption*
- see also acoustic wave absorption; electromagnetic wave absorption
- gas sorption dynamics, Goursat problem for quasi-linear system 2-8254
- Monte Carlo computer program for estimation of absorpt. probability functions 2-3877
- seismic waves, scatt. and attenuation of high-freq. body waves (1 to 25 Hz) in lithosphere 2-22924
- steel, C-Mn, exposed to NaCl acidified solns., H absorpt. and evolution kinetics 2-31826
- FeTi phase, effect of oxide phase and  $\beta$ Ti phase on hydriding characts. (*Japanese*) 2-8623
- FeTi-H system, theory of H absorpt., mean-field approx. calcs. 2-5303
- K<sub>2</sub>CO<sub>3</sub>, condensation of liq. force surface, droplet mass transfer effect 2-26183
- ZrCr<sub>2</sub>, H<sub>2</sub> absorbing cpd., XPS and SAM studies 2-22146

**absorption spectra** *see spectra***absorption wavemeters** *see wavemeters***abundance ratio** *see element relative abundance; isotope relative abundance***a.c. motors**

- see also induction motors
- submersible AC pump-motor aggregates coupled to photovoltaic array via DC-AC convertor, efficiency improvements 2-32078

**a.c. network analysers** *see network analysers***acceleration**

- see also acceleration measurement; accelerometers
- earthquakes, near-field ground accel. excited by radiation from slip zone of arbitrary shape 2-32441
- Newton's second law experiment, student demonstration 2-48456
- Newtonian mechanics, new formulation of fundamental law of motion 2-18873
- nonstationary vibration during acceleration through crit. speeds, max. amplitudes and rot. speeds 2-44669
- relativistic mech., spatial relations between force and accel. 2-48449

**acceleration measurement**

- dynamic angular accel. and torque measurement methods (*German*) 2-38635
- shock parameters meas. with noncontacting fibre optic lever vibration transducers 2-12111

**accelerators (particle)** *see particle accelerators***accelerometers**

- see also acceleration measurement
- absolute calibration at high frequency 2-23617
- back-to-back, absolute interferometric calibration, vibration standard appl. 2-33491
- fibre-optic accelerometer with hydrophone appls. 2-11823
- micro-accelerometers, appl. for space geodetic expts. 2-6437
- micromechanical accelerometer integrated with MOS detect. circuitry 2-33501
- seismic accelerometers, selection guidelines for high-resolution appls. 2-32690
- Si integrated microbeam PI-FET 2-33502

**accidents**

- see also electric shocks; explosions; safety
- biomedical equipment international standards and safety status, trends and evaluation 2-47748
- BWR blowdown emergency core cooling programme, 64 rod bundle blow-down heat transfer phase, test results 2-24393
- commercial power plants, nuclear regulating requirements sources 2-7266
- electrical hazards and monitoring during biomedical diagnosis 2-47743
- EPRI nuclear fuel-cycle accident risk assessment 2-11237
- experimental nuclear reactor fuel unit behaviour due to flooding and during nuclear drying (*German*) 2-11202
- fast reactor loss-of-flow accident simulation at Argonne National Laboratory, USA, evaluation 2-7317

**accidents continued**

- LMFBR, Na-saturated fuel particle beds, heat transfer behaviour, one-dimensional computation method 2-15544
  - LMFBR accidents, escaping radioactive effluent effects (*Italian*) 2-19737
  - LWR, computer code WTRLGD, waterlogged fuel rods under RIA condition, transient anal. 2-15590
  - LWR, molten fuel-coolant interaction during reactivity initiated expt. 2-15545
  - LWR, steam explosion following postulated core meltdown accident, containment failure anal. 2-15592
  - LWR accidents, consequences and effects (*Dutch*) 2-4071
  - LWR containment vessel improvement concepts, review 2-24394
  - LWR press. vessel surveillance dosimetry improvement program 2-7267
  - LWR safety program, Mod-3 results review 2-11238
  - nature of physiological effects of electric current 2-47622
  - nuclear facilities, accidental activity release, radioactive plumes, wet deposition calc. 2-14131
  - nuclear power plants, accidents, operators' liability for compensation, in France (*French*) 2-4057
  - nuclear reactor accident, aerosol coagulation, deposition and leakage, scale modelling 2-7263
  - nuclear reactor accident consequence analyses, computer codes 2-4101
  - nuclear reactor accidents, long-term somatic effects 2-39202
  - nuclear reactor sites, California, health consequences of severe accidents 2-511
  - olds, F.C. 2-545
  - power industry, environmental risk assessment 2-52397
  - PWR, 900 MWe, tihange type Pu, steady state and accident anal. 2-29399
  - PWR, bubble detection and level meas. in main coolant ccts. using ultrasonic transducers (*German*) 2-11260
  - PWR rod control system, safety and reliability assessment methods 2-24380
  - PWR with tight-lattice core using UO<sub>2</sub>-PuO<sub>2</sub> and very low water volume fraction, response to loss-of-coolant accident 2-15524
  - radioactive fallout following nuclear accident, realistic assessment (*French*) 2-4079
  - risk assessment in relation to major hazards 2-7322
  - risk of electrical danger in medicine, conf. RELMED 1981 2-47742
  - SNR-300 fast breeder reactor in Germany, energy release following accident, updated assessment (*Dutch*) 2-49157
  - space nuclear power, US flight safety process overview 2-7265
  - Three Mile Island 2 accident, defense-in-depth approach to safety in LWR 2-29392
  - TMI-2, core temp. transient in early phase of core uncovering 2-4078
  - TMI-2 accident, radioactive release pathways (*Japanese*) 2-4073
  - TMI-2 accident, thermal-hydraulic and core-damage anal. 2-29393
  - transition boiling heat transfer in fission reactor cores during reflooding after LOCA 2-49165
  - Westinghouse J-loop loss-of-coolant accident test facility 2-516
  - <sup>252</sup>Cf contamination accident at Univ. of Tokyo, radiation management (*Japanese*) 2-4072
  - Pu, test criteria specification for containers to be used in air transport 2-7269
- accommodation coefficient** *see sorption*
- accounts data processing**
- nuclear material safeguards, computerised account auditing 2-4039
  - safeguards, nuclear materials accounting, computer systems 2-4040
- accretion disks** *see circumstellar shells*
- accumulation layers**
- lutetium dipthalocyanine, red and green forms, surface space charge layer differences 2-21652
  - metal-semiconductor interface, minority carrier extraction and accumulation 2-21674
  - semiconductor-multilayer dielec. coating struct., field effect cond. at enriching voltages (*Russian*) 2-46150
  - n-InAs, far IR cyclotron reson. and Shubnikov-de Haas oscils. 2-41020
  - Si-SiO<sub>2</sub>-Al structure, Fowler-Nordheim electron tunnelling 2-26503
  - Si-SiO<sub>2</sub>-Al structures, electron tunnelling 2-21677
- accumulators** *see secondary cells*
- acidity** *see pH*
- acids, organic** *see organic compounds*
- acoustic analysis**
- No entries
- acoustic applications**
- see also ultrasonic applications
  - aerosol particle sizing technique 2-15145
  - aerosol research, Schmallenberg, Germany (Oct. 1980) 2-15144
  - dielectric partial discharge monitoring, electrical and acoustic detect. computer-controlled data acquisition 2-13420
  - elastic moduli measurement 2-31725
  - fatigue crack initiation, assessment by acoustic emission 2-17826
  - geophysical well logging, direct and spiral waves for sources and receivers of various polarisation and symmetry 2-52742
  - leak detect in underground nat. gas pipes, active acoustic diagnostics 2-50031
  - ocean acoustic tomography, tidal anal. of intermittent acoustic obs. 2-28079
  - polymers, concentrated solns., relaxational props. by acoustic spectroscopy (*Russian*) 2-21240
  - He gas purity monitor for reliquification installation, sound wave vel. meas. 2-33551
- acoustic arrays**
- adaptive array antennas, new design method 2-44614
  - adaptive beamforming system, limit resolution ability and dynamic range of optimum weighting coefficients 2-29907
  - adaptive noise cancellation with wanted signal leakage 2-44588
  - adaptive receiving array interference nulling schemes compared 2-44585
  - adaptive ultrasonic array imaging system through an inhomogeneous layer 2-39781
  - compound-bar transducer design for deep-ocean cylindrical array 2-50039
  - conformal arrays, side-lobe patterns 2-44582
  - convolution arrays, generalised time/space approach 2-44594
  - deep water acoustic ranging system modelling, algorithmic implementation and performance 2-44533
  - digital deep-towed hydrophone array 2-29969
  - directional transducer array, sidelobe suppression, design considerations 2-29956



**acoustic arrays continued**

- directivity of an array of point receivers in a recess near a compliant baffle 2-7925
- extended arrays, response optimisation for waves propagating in an inhomogeneous medium 2-7931
- linear array, estimation of location and motion parameters of a moving source 2-29935
- linear arrays, directivity improving factors 2-29959
- mathematical programming in phase synthesis of an array 2-29897
- multidimensional constrained lattice processor for passive sonar adaptive arrays 2-44589
- narrowband adaptive array processing and beamforming 2-44586
- optimal beamformer response to source with all-pole angular power density spectrum 2-44599
- parametric acoustic arrays, applns. in oceanographic research 2-25171
- parametric acoustic sources, effective lengths 2-34967
- passive listening adaptive array spatial resolution improvement 2-44597
- passive sonar array processing in nonstationary random fields 2-44598
- performance analysis utilizing selective sensor exclusion 2-29962
- phase shift beamforming systems, frequency dependent refocusing 2-7981
- phased array microphone by charge transfer device 2-11965
- random arrays, signal and noise estimation 2-39780
- random sonobuoy array statistical props. and beam patterns 2-44587
- real-time US receiving system, monolithic array transducer, microcomputer for data acquisition (*Japanese*) 2-11964
- signal processing, spatial and temporal, effects of medium inhomogeneities and instabilities 2-44528
- sonar, line array response patterns, effect beamformer time delay sampling errors 2-44540
- sonar array transducer and hydrophone design and construction 2-44531
- sound field structure effects on array signal gain in multipath environment 2-16169
- time delay estimation for multipath propagation 2-44593
- time-domain adaptive array processing and beamforming recursive algorithms 2-44592
- vertical line acoustic array in a water layer, directivity 2-7952
- ZnO-Si, induced junction monolithic SAW storage correlator 2-50006

**acoustic delay lines**

- see also ultrasonic delay lines*
- SAW, variable delay line using voltage controlled air gap 2-50020
- transient response analysis 2-34218
- AIN on Si SAW devices 2-29953
- Ni film coated surface wave delay line, magnetization-surface wave interaction mechanism 2-50977

**acoustic detectors** *see acoustic transducers***acoustic devices**

- see also acoustic delay lines; acoustic generators; acoustic microscopes; acoustic microwave devices; acoustic parametric devices; acoustic radiators; acoustic receivers; acoustic resonators; acoustic transducers; bells; surface acoustic wave devices; ultrasonic devices*
- pistonphone, with linearised response 2-25205

**acoustic dispersion**

- see also ultrasonic dispersion*
- apparatus for meas., in liquids and solids 2-20498
- critical fluid, mode coupling approach to propagation, hydrodynamic interaction corrections 2-4627
- critical fluid, sound propag., mode-coupling approach 2-50767
- elastic waves in vibrating bars with polygonal cross-section 2-8069
- elastic waves velocity dispersion meas. 2-1100
- smectic liquid crystals, A-phase, sound attenuation and propag. near phase transition 2-50768

**acoustic echoes** *see echo***acoustic emission**

- see also ultrasonic materials testing*
- alloy, precipitation strengthened, AE from dislocation motion 2-31881
- amplitude distrib. for AE signal processing 2-7983
- bone, compact, permanent deform. monitored by acoustic emission 2-6241
- brittle creep rupture detection at welds by AE 2-41823
- ceramic substrates for catalytic converters, empirical study 2-9475
- crack start determination by acoustic method 2-13884
- detection, decision interval choice (*Rumanian*) 2-50007
- dispersion hardened alloy, computer simulation of AE during yield (*Japanese*) 2-13741
- ductile creep rupture detection at welds by AE 2-41824
- elastic waves and microstruct., conf., Oxford, England (Dec. 1980) 2-28602
- fatigue, high-cycle, acoustic emission mechanisms 2-5935
- fatigue crack initiation, assessment by acoustic emission 2-17826
- ferroelectric crystals, domain wall dynamics, acoustic emission study 2-45386
- glass plates, acoustic emission in fracture 2-31776
- heterogeneous materials, fracture acoustic signals parameters rel. to dimensions of breaks in continuity 2-37032
- HTR metal under process gas atm., temp. cycling influence on tritium permeability (*German*) 2-470
- laser material interaction obs. with acoustic emission 2-4630
- laser-generated standard AE source 2-39787
- LWR, leak detection in pressurised parts using sound emission (*German*) 2-19753
- macrocrack formation and acoustic emission in brittle fracture 2-12676
- magnetomechanical acoustic emission, NDT internal stress meas. 2-2657
- material flaws assessment, acoustic emission analysis appls. 2-27377
- materials testing appls., research in Hungary (*Hungarian*) 2-47287
- metal-polymer friction pairs, tribological systems, acoustic spectrometry eval. 2-22340
- metal/insulator pairs, transient slip behaviour, at 4.2K 2-21209
- metals, acoustic emission, influence of surface-active liq. metals 2-40494
- nondestructive materials testing, surface wave injection for acoustic emission technique (*Dutch*) 2-25194
- Oshima granite, influence of strain rate on acoustic emission under uniaxial compression 2-32507
- PMMA, electron avalanche, acoustic emission meas. 2-51239
- PMMA/methanol system, environmental crazing, acoustic emission appli. 2-47291
- polyethylene, tree growth, acoustic emission meas. 2-26818
- polystyrene/methanol system, environmental crazing, acoustic emission appli. 2-47291
- pop-in crack propag., acoustic energy emission 2-52013
- PTFE, electron avalanche, acoustic emission meas. 2-51239

**acoustic emission continued**

- rocks, failure, sample dimensions determ. 2-32500
- spherical cavitation bubbles in a sound field 2-20658
- steel, acoustic emission signals during tensile tests, appl. of signal processing 2-52163
- steel, AISI 4340, H-induced cracking unit eval. by acoustic emission technique (*Japanese*) 2-52134
- steel, alloy, AE from cleavage microcracking 2-52037
- steel, cleavage controlled instability monitoring by AE 2-27362
- steel, low alloy, medium- and high-strength, AE during ductile fracture, effect of proof stress, composition and microstruct. 2-31872
- steel, mild 1015, acoustic emission mechanisms, during high cycle fatigue 2-5935
- steel, mild and structural, AE associated with fracture processes 2-31868
- steel, Mn, ferritic, AE during crack growth, sources 2-31870
- steel, Mn-C, acoustic emission source localisation using broadband acquisition technique 2-37037
- steel, Ni (3.5 wt.%), AE during deform. and fracture, microstruct. effect 2-31871
- steel, pressurised water reactor, review of AE appl. 2-17804
- steel, stainless 304, corrosion fatigue and AE anal. (*Japanese*) 2-47235
- steel, stainless 304 and 21-6-9, unflawed, AE under biaxial stresses 2-31874
- steel, structural, crack toughness charact. by tearing modulus parameter and AC 2-52033
- steel, structural and weldments, AE rel. to deform. and fracture 2-31869
- steel, tool D6, acoustic emission mechanisms, during high cycle fatigue 2-5935
- stress corrosion cracking monitoring, of stainless steel and brass 2-41861
- Texas Pink granite, testing to failure 2-32499
- transient sound radiation from circular plate for impulsive sound wave, mech. 2-29919
- waveform analysis 2-17797
- Al, AE response during tensile straining (*Slovak*) 2-31753
- Al and Al alloys 7075 and 7050, AE during tensile and compressive deform., microstruct., effect 2-31883
- Al and alloys, AE during deform., microstruct. effect 2-31882
- Al-Cu-Mg alloy 2024-T3, low cycle fatigue life prediction by acoustic emission 2-52020
- Al-Zn Mg-Cu alloy 7075-T6, low cycle fatigue prediction by acoustic emission 2-52021
- Au-Cd (47.5 wt.%), thermoelastic martensitic phase transform. AE meas. 2-51897
- Cu-Zn-Al, acoustic emission during martensitic transform., energy meas. 2-36856
- Cu-Zn-Al alloys, martensitic transformation study by coupled enthalpy and acoustic emission meas. 2-2509
- Cu-Zn-Al(15.1, 15.1 at.%), acoustic signal emitted during martensitic transformation (*French*) 2-17677
- Fe, Armco, acoustic emission mechanisms during plastic deform. 2-22275
- Fe-C alloys and structural steel, AE during tensile tests 2-31873
- InGaAsP-InP laser, current injection induced acoustic signals 2-950
- Mg alloys, elastically stressed, AE during unloading 2-52135
- Nb-H, acoustic emission during hydride precipitation, effect of thermal cycling 2-45392
- Si:H, amorphous, p-i-n junctions, photoacoustic emission 2-46113
- Ti-Al-Mo-V, H embrittlement and stress corrosion cracking 2-17736
- Zn-Al (0.4 wt.%), disappearance of acoustic emission in presence of superplasticity 2-17718
- Zr-Nb (2.5 wt.%), crack growth at elevated temps., acoustic emission monitoring 2-31860
- Zr-Nb (2.5 wt.%), fracture initiation at hydrides 2-47178

**acoustic equipment**

- see also acoustic arrays; acoustic wave interferometers; ultrasonic equipment*
- calibration, traceability to NBS 2-11976
- earmuff threshold attenuation props., psychophysical and physical meas. methods 2-4670
- laboratory accreditation schemes 2-11978
- optical fibre coatings, opto-acoustic underwater detection systems 2-49922
- personal ear protectors, performance meas. with objective methods, review 2-4669
- room acoustics, digital simulation system (*German*) 2-44577
- specification, calibration and certification of acoustical instruments for noise law enforcement 2-11972
- spherical 2-layer lenses, RTV silicon rubber/zinc powder mixture, Luneberg lens comparison (*Japanese*) 2-8004
- testing laboratory, calibration and certification activities 2-11977
- Y-t recorder, microprocessor-controlled 2-29965

**acoustic field**

- acoustic radiation force, application in ultrasonic power measurements 2-7914
- active noise attenuation in three-dimens. space, reduction of acoustic press. field, theory 2-4656
- adjacent rooms, acoustic coupling, modal description (*French*) 2-25180
- audiometric testing, comparison of stimuli used 2-52501
- baffled piston, limiting form for the nearfield 2-34979
- conical US radiators for medical imaging, acoustic field calc. 2-44624
- cylinder with acoustically compliant ends, calcs. 2-25156
- disc or strip in diffuse sound field, acoustic field, geom. acoustics approx. (*Japanese*) 2-44507
- elliptical cylindrical radiators in the presence of a baffle of arbitrary acoustic stiffness 2-25153
- extrapolation method for calculating wind influence on environmental sound levels 2-14146
- flexurally vibrating plates, compensation of vibroacoustic field 2-7961
- geophysical well logging, direct and spiral waves for sources and receivers of various polarisation and symmetry 2-52742
- harmonic line source moving in infinite medium 2-20453
- hearing threshold levels, low freq., in free and diffuse sound fields 2-37586
- horizontal field of acoustic waveguide, mode charact. in model situations 2-1060
- infinite cylindrical radiators with mixed boundary conditions 2-7923
- long-range sound field in shallow water, spatial correlation and temporal stability 2-29903
- microphone calibration, secondary method for meas. of response curve, free and semireverberant fields 2-7999
- ocean sound fields, calculation by the parabolic eqn. method 2-29908



**acoustic field continued**

- parametric circular piston difference frequency field, Lighthill-Westervelt wave eqn. soln. 2-44515
- plane periodic grating of impedance strips 2-7924
- plane wave diffraction, distortion for sphere with mixed boundary conditions, least squares method analysis 2-1057
- plane waveguide, Malyuzhynets diffusion approx. 2-44509
- point source moving at subsonic velocity 2-16161
- rectangular enclosure, low frequency response 2-29893
- reverberant, speech articulation study 2-29942
- ring radiators of finite width, struct. 2-4681
- ship self-noise, sound field structure and meas. 2-29922
- sound field structure effects on array signal gain in multipath environment 2-16169
- transient reflection from fibrous absorptive surfaces, sound field for various source/receiver position 2-1056
- ultrasonic radiators, pulsed and focused, pressure field patterns 2-44505
- vibrating membrane, acoustic intensity distrib., energy flow in near acoustic field 2-7958
- viscoelastic sandwich panels forming rectangular enclosure sound transmission props., random external press. fields 2-20445
- waveguide, acoustic mode investigation using spectral analysis 2-7927

**acoustic generators**

- see also earphones; loudspeakers; photoacoustic effect*
- corona-type point sound source for acoustic meas. appls., 1 kHz to 100 kHz, power level 2-11958
- dynamic axial generator acoustic efficiency rel. to rotor and stator hole shape 2-4677
- electroacoustic emitters, directivity, characterisation 2-8010
- exploding-wire underwater electroacoustic generator construction 2-4676
- impulsive shock waves generated by electric discharges in air, schlieren photographs, obs. (Japanese) 2-25173
- laser meas. and generation of ultrasound 2-11997
- optical generation of tunable ultrasonic waves 2-50043
- rotating diffusers, pure tones and side-band generation 2-16216
- SAW, optical generation of 76 MHz waves on YZ LiNbO<sub>3</sub> 2-50036
- underwater focused pulsed sound sources (German) 2-35023

**acoustic holography**

- B-scan resolution enhancement using Fourier transform holography 2-17845
- basic principles and appls., liquid/gas interface and phonosensitive media (Spanish) 2-44603
- basic principles and appls. (Spanish) 2-39783
- imaging method by rotational scanning of objects 2-7731
- liquid gas interphase, deformation caused by radiation pressure (Spanish) 2-25186
- object position determination using acoustical holograms 2-29939
- objects immersed in water, imaging apparatus 2-4662
- optical observation of acoustic waves and electrical characteristics in LiTaO<sub>3</sub> SAW devices 2-29934
- pressure vessel in-service inspections using acoustic holography methods 2-1093
- pulsed US radiation transmission (Spanish) 2-50010
- recording and retention, full view, real-time 2-25185
- source three-dimensional struct., direct reconstruction 2-16194
- spatial replication in back-propagated acoustic holograms 2-44602
- stress meas., acoustic holographic interferometry appl. 2-17838
- velocity meas., liquid surface holographic method (Chinese) 2-50009
- X-cut crystal quartz transducers for US holographic imaging (Chinese) 2-50008

**acoustic imaging**

- see also acoustic holography*
- adaptive ultrasonic array imaging system through an inhomogeneous layer 2-39781
- biological US velocity tomography, imaging method cardiac appl. 2-2980
- computer reconstruction techniques in compound scan pulse-echo imaging 2-18275
- cylinders buried in seafloor sediment, use of narrow-beam US sound (Japanese) 2-25202
- diagnostic US imaging, contrast-detail anal. 2-47656
- false-colour acoustic micrographs 2-11960
- focused probes for US detection, imaging and sizing of flaws 2-17841
- image processing by two-dimensional digital filtering 2-44600
- long wavelength system, depth of field improvement 2-11959
- lung, US imaging, transmission of contrast 2-37638
- medical US images, logarithm-differential processing method 2-47658
- metal, synthetic aperture US imaging 2-17840
- microscopy, imaging through opaque materials, review 2-39789
- microscopy of solids, mechanically scanned B-scan system 2-1096
- microscopy of solids, mechanically scanned B-scan system 2-7992
- monolithic array transducer, spatial resolution increase using local sound vibr. 2-50037
- natural ocean waveguides, acoustic image transmission capability 2-7954
- NDT appl. 2-17839
- noise source locating system for industrial plant environment 2-11969
- optoacoustic transducer, multilayer planar design, resolution calc. 2-7722
- paraxial anisotropic light diffraction by elastic waves in crystals 2-29968
- phased array acoustic imaging transducer, construction and performance 2-44628
- review of modern acoustics 2-49967
- synthetic tomography, computer evaluation, ultrasound imaging using multi-element transducers 2-44601
- textural variations in B-mode ultrasonography, a stochastic model 2-18276
- texture analysis of US signals, comparison of RF and demodulated A-scan data 2-47663
- thin films, acoustic imaging at microwave freq. 2-25208
- ultrasonic imaging through turbulent media using data selection processing 2-11962
- ultrasonic visualization of tongue motion during speech 2-14304
- US, 3-dimens. image reconstruction 2-18271
- US B-scan Doppler imaging system for scanning peripheral anatomy 2-47659
- US B-scan images, resolution enhancement by deconvolution 2-47655
- US image luminance, enhancement by aqueous solns. with high speed of sound 2-47660
- US images, lateral resolution improvement 2-35022
- US imaging, two transducer test bed 2-17846
- US tomography, of human head, experimental results 2-47662

**acoustic imaging continued**

- US transducer, Lamb wave eigenmodes of vibr. in terms of transducer thickness-to-width ratio 2-39790
- US transmission speckle imaging 2-44619
- US wave visualisation of waves launched by PVF<sub>2</sub> film transducer 2-35014
- wide-band reflection-mode US attenuation imaging system, preliminary results 2-29961
- LiNbO<sub>3</sub> substrate, SAW propag., diffr. effects, X-ray topographic study 2-45705
- LiNbO<sub>3</sub>, Y collinear acoustooptic filter, acoustic transducer imaging 2-39791

**acoustic impedance**

- see also acoustic wave velocity*
- brass wind instruments, analytic study of input impedance (French) 2-20490
- cylinder with acoustically compliant ends, calcs. 2-25156
- Earth, acoustic impedance for direct and spiral waves in well logging 2-52742
- grids, specific acoustic resistance calcs. 2-29895
- guinea pig middle ear, changes in acoustic impedance after exposure to impulse noise and air blast 2-32252
- matching of acoustic media using piezoelec. device 2-16198
- measurement, tube technology for flow acoustics 2-25200
- modal density derivation from acoustic point impedance 2-25176
- mutual impedance of complex spherical radiators 2-1059
- reflection and absorption coeffs. of material, three-dimensional trace (French) 2-25151
- shear impedance of liquid crystals, effect of magnetic field 2-8433
- study of the acoustic impedance of major bovine blood vessel walls 2-47627
- US, level sensor for cryogenic liquids 2-33539
- US piezoelectric transducers, sensitivity meas. (Russian) 2-35028
- valve noise control using acoustic impedance 2-4635
- vibration and noise control, materials 2-25178
- vibrational impedance of spherical shell in axisymmetric modes under the influence of rotary inertia and shear 2-8082
- <sup>3</sup>He, liquid, normal phase, transverse acoustic impedance, 3 mK to 1K 2-35795
- <sup>3</sup>He, liquid, normal phase, transverse acoustic impedance, anomalous freq. depend. 2-35820

**acoustic insulating materials** *see noise abatement***acoustic intensity**

- see also acoustic noise; loudness*
- active noise attenuation in three-dimens. space, reduction of acoustic press. field, theory 2-4656
- airport noise exposure, equal cumulative noise contours, Effective Perceived Noise Level/Noise Exposure Forecast descriptors 2-11904
- automatic speaker recognition, measuring of contours of intensity and fundamental period of speech (German) 2-7996
- community noise caused by road, rail and air traffic, annoyance as measure of noise level of sources 2-11903
- corona-type point sound source for acoustic meas. appls., 1 kHz to 100 kHz, power level 2-11958
- Delta Stereophony, directional sound transmission for large auditoriums, sound intensity distrib. (French) 2-39779
- enclosures, naturally coupled, steady state sound level prediction 2-29894
- excitation-pattern model for intensity discrimination 2-37587
- fan room and adjacent room octave band sound level spectra rel. to noise control by mech. adjustment 2-11951
- Occupational Safety and Health Administration noise violations 2-8008
- silencer performance effects of steady flow rate and acoustic intensity 2-14162
- vibrating membrane, acoustic intensity distrib., energy flow in near acoustic field 2-7958

**acoustic intensity measurement**

- car noise evaluation, digital equipment for real time sound intensity meas. 2-44620
- decibel as unit of sound press. level, addition and subtraction operations 2-20504
- diesel engines, comparison of noise source identification techniques 2-16209
- electric machines, sound power level nearfield meas. method 2-11983
- error sources, evaluation using bivariate stochastic process 2-1098
- human perception of loudness, comparison of measurement methods 2-9807
- integrating average sound level meters, applications and features, comparison with standard sound level meters 2-8009
- integrating sound-level meter 2-25206
- intense sound source power meas., three-points-in-tube method (Chinese) 2-50025
- panel transmission loss determ. using acoustic intensity meas. by FFT analyzer 2-4675
- power flow, sound intensity meas. 2-50023
- production forge hammer impact noise, two microphone intensity meas. method 2-11981
- pulsed US field intensity meas. using miniature hydrophone calibrated by simplified technique 2-20499
- pure frequency noise source in rectangular reverberation room, sound power (Japanese) 2-25203
- random fluctuating sound, loudness meas. by discrimination test, hearing system simulation (Japanese) 2-27810
- reverberation chamber boundaries, effect on sound power meas. 2-11984
- sound level meters, plug-in concept, IEC 651 meas. standard 2-20503
- sound power determination using intensity measurements under field conditions 2-16200
- sound pressure meter, 50 to 110 dBA range 2-1097
- source characterisation using pair of microphones 2-11982
- speech loudness, subjective rating (Japanese) 2-44606
- suspended sphere radiometer targets, calc. of Y<sub>p</sub> 2-7990
- two microphone technique, error anal. 2-35019
- Y-t recorder, microprocessor-controlled 2-29965

**acoustic magnetic resonance**

- see also acoustic nuclear magnetic resonance; acoustic paramagnetic resonance*
- No entries

**acoustic measurements** *see acoustic variables measurement***acoustic microscopes**

- acoustic material signatures using the reflection acoustic microscope 2-17849



**acoustic microscopes continued**

- alloy spike detection and charact. in power transistors using trans. acoustic microscopy 2-17852
- basic techniques, introduction 2-16213
- coherent techniques 2-17848
- differential phase contrast, for improved meas. stability 2-44611
- electron-acoustic microscopy, review 2-19224
- false-colour acoustic micrographs 2-11960
- hybrid microelectronic appl. of acoustic microscopy 2-17851
- image processing with acoustic microscope with IEEE 488 bus (*French*) 2-25184
- imaging through opaque materials, review 2-39789
- mechanically scanned *B*-scan system for acoustic microscopy of solids 2-1096
- mechanically scanned *B*-scan system for acoustic microscopy of solids 2-7992
- photoacoustic microscopy with modulation technique 2-25195
- Rayleigh wave absorption via acoustic microscopy 2-35015
- scanning laser acoustic microscope, operational details and appls. 2-11961
- scanning laser acoustic microscope examination of solar cells and solar cell welds 2-27690
- scanning ultrasonic, 100-300 MHz, wave gathering device using ZnO membrane (*Japanese*) 2-25196
- surface flow charact. using acoustic microscopy 2-17850
- LiNbO<sub>3</sub>-water boundary, propag. characts. of leaky SAWs meas. by acoustic microscope 2-35013

**acoustic microwave devices**

- see also *acoustic transducers; surface acoustic wave devices*
- bulk acoustic wave composite resonators, low temp. coeff. 2-44622
- spectrometer for investigation of hypersound absorption in liquids at frequencies of approx. 10 GHz 2-8007

**acoustic mode of crystals** see *lattice dynamics***acoustic noise**

- adaptive cancellation technique in form of optimal filtering, machine condition monitoring, spectral analyses 2-11886
- aerodynamic sound production, mechanical-aerodynamic feedback 2-1188
- aircraft, environmental noise for cabin staff 2-9718
- aircraft, prediction meas. evaluation and control 2-11896
- aircraft and ground vehicle noise levels in front and backyards of residences 2-49990
- aircraft noise, community response at Toronto International and Oshawa Municipal airports, comparison 2-20466
- aircraft noise, effect on pupil performance, long-term assessment 2-52408
- aircraft noise, nonlinear propag. in atmosphere 2-7964
- aircraft noise contours rel. to land use compatibility, appls. in planning studies 2-11915
- airport noise contour predictions, algorithm specification, progress of working group 2-11912
- airport noise exposure, equal cumulative noise contours, Effective Perceived Noise Level/Noise Exposure Forecast descriptors 2-11904
- airports, Integrated Noise Model computer program for noise exposure prediction 2-1077
- airports, noise exposure contour generation, comparison of Integrated Noise Model and NOISEMAP programs 2-11911
- airports, noise exposure contour generation using NOISEMAP computer program 2-11909
- ambient acoustic noise propag. in shallow-water channels in ocean, theory 2-44535
- annoyance in residential areas; contrib. of indoor and outdoor effects 2-14166
- annoyance of sounds of different character 2-49987
- annoyance scale development for community noise assessment 2-34991
- atmospheric sound propagation, review 2-49988
- attenuation of weak shock waves by ear muffs 2-20469
- automobiles, speed-distance sound level test procedure 2-9720
- automobiles noise assessment procedure 2-9719
- axial fan noise, peak blade surface velocity analysis for prediction and correlation 2-4637
- band-reject noise, tone detect. 2-52503
- Banfield Transitway, Oregon, public reaction to noise 2-14169
- behaviour patterns in people living near traffic noise (*French*) 2-27752
- biological effects, hearing loss and high blood press. 2-2881
- blasting noise and vibration, annoyance to nearby residents 2-14167
- car tyre vibration noise 2-4640
- cardiovascular and behavioral effects of community noise 2-27751
- cavitation nuclei, influence of conc. and distribution on inception and noise of bubble cavitation 2-29910
- centrifugal pumps, turbulence-generated hydraulic noise 2-1081
- chinchilla, detection of sinusoidally amplitude modulated noise 2-47607
- circular saw blade, resonant, free running, effective sound radiation, coincidence criterion 2-11882
- circular sawing machines, testing of noise and noise reduction (*Hungarian*) 2-34993
- coal preparation plants, noise exposure levels of workers, cost effective assessment methods 2-11932
- coal unloading facilities for barges, ships and trains, noise assessment 2-11925
- community noise, loudness summation 2-34986
- community noise caused by road, rail and air traffic, annoyance as measure of noise level of sources 2-11903
- community noise in various cities of Kentucky USA, short-term statistical data 2-1073
- computer rooms, noise prediction models for design specification development 2-16184
- control valve aerodynamic noise generation and reduction 2-4636
- cylindrical combustion chamber, effect of combustion on freq. of acoustical vibr. 2-7967
- data processing installations, sound level modelling 2-16185
- developments in flow acoustics (*German*) 2-8129
- diesel engines, vibration transmission causing noise 2-1069
- dwellings in France, noise reduction (*French*) 2-49989
- electric power plant environmental noise guide 2-20472
- engineering-related noise, sources, reduction, and meas. (*Hungarian*) 2-52411
- environmental noise, a program to support full utilization of data from existing social surveys 2-11936
- environmental noise problems in present-day Japan 2-11937
- exposure to children, measured by dosimetry, longitudinal hearing study 2-44566

**acoustic noise continued**

- far-field noise levels for source in a rectangular enclosure, computer simulation 2-16187
- flanking path identification in buildings 2-20477
- flow ducts, development of vortices in shear layer due to separating flow, resonator excitation 2-20659
- forge hammers, noise sources identification 2-20468
- granular mass flow, sound generation, characts. and mech. 2-1071
- grass covered ground, sound propag. 2-34963
- hazard evaluation rel. to freq. of hearing loss in exposed population 2-22832
- hearing, temporary threshold shift due to exposure to noise, RMS sound press. consideration 2-14256
- hearing impairment, noise induced, in industrial and everyday environments 2-47611
- hearing loss, cochlear resonance pathogenic model (*French*) 2-27808
- hearing loss, early, induced in teenage boys 2-2893
- hearing protection in hazardous noise environments, earplugs and their utilization 2-22838
- heat exchanger noise suppression in heat pump circuits (*French*) 2-6157
- heating, ventilating and air-conditioning systems, revised noise criteria for acoustical design and rating 2-1074
- helicopter rotor impulsive noise, anechoic wind tunnel expts. 2-34992
- high-level impulse noise source, to assist in development of hearing protection 2-44615
- highway noise, ultrasonic simulation expt. 2-34983
- idling circular saw blades, pure tone noise 2-7974
- impulse noise, equivalent continuous sound level concept and relation to noise-induced hearing loss 2-11941
- impulsive noise generation by ascending bubbles in water (*Japanese*) 2-44520
- industrial noise, amplitude distributions and effects on hearing damage 2-11940
- industrial plants, computer-aided noise modelling 2-16186
- intrusive sounds, scaling the annoyance whilst playing electronic video games 2-34990
- jet, instabilities simulation and sound generation 2-12134
- jet flow, edge noise theories 2-44715
- jets, inverted velocity profile coannular, noise characts. 2-44716
- jets, shear layer, noise and its effect on jet forcing 2-16360
- LF acoustic transmission through walls of rectangular ducts, design charts 2-34964
- liquid natural gas carrier underwater noise study in Baffin Bay 2-34984
- loudness and annoyance rating model comparisons 2-39776
- machinery noise predictions at the design stage using acoustic modelling 2-52407
- machines, noise sources and meas. (*Hungarian*) 2-49994
- machines, sound power computation based on Helmholtz integral 2-39774
- modal density derivation from acoustic point impedance 2-25176
- motorcycles, CEE test results for Moto Gu 1 SP 1000 2-11897
- motorcycles, usage and resultant noise disturbance 2-20474
- neighbour noise and sound insulation of party walls in houses 2-49991
- noise field of sources near end of a wedge spatial correlation function 2-7969
- noiselevel judgement by acoustical meas. anal. (*Hungarian*) 2-50032
- nonstationary aircraft noise, statistical estimation of correlation 2-11885
- NSU Wankel rotary engine, frequency and time domain analysis of exhaust pressure pulses 2-1082
- nuclear power plants, environmental noise prediction and optimization of noise abatement measures 2-11926
- occupational, OSHA standard 1981 amendment 2-52410
- occupational noise exposure levels in Netherlands and resulting legislation 2-16191
- ocean ambient noise, environmental thresholds and causes 2-44529
- Oslo subway, meas. and control of traffic noise 2-9721
- pack ice deformation and ambient noise generation 2-47921
- paper noise in an impact line printer 2-34987
- pitch of amplitude-modulated noise, observations 2-37588
- plate, circular, relationship between vibration and radiated noise 2-20458
- power station noise sources, acoustical characteristics 2-11930
- punch press, modified formula for noise predictions 2-44567
- rail fasteners, stiffness meas. rel. to elevated structure noise 2-9724
- rail traffic in Great Britain, annoyance to residents 2-11921
- railway classification yard noise, in-depth study for CP Rail Agincourt yard 2-11922
- railway trains, noise model testing and meas. (*Hungarian*) 2-52413
- railway yard noise, community reaction study by Ontario Ministry of the Environment 2-11924
- railway yards, noise emission levels of individual sources, under varying operating conditions 2-11923
- railways, occupational noise sources 2-2825
- random, detection method for first order correlation character of time series 2-7963
- reciprocating machines, noise and vibration analysis using triggered FFT method 2-11889
- reverberation time measuring system with correlation technique 2-50022
- ring damped railway wheels, modal damping ratios 2-11899
- road traffic, noise prognostical method and noise level (*Hungarian*) 2-52412
- road traffic and aircraft, comparison of community response 2-34988
- road traffic in built-up areas, noise level prediction and acoustical guidelines for town planning 2-11928
- road traffic noise, effects of disturbances to schools 2-20465
- road traffic noise fluctuation, probability distribution (*Japanese*) 2-44571
- road traffic noise level, mathematical model 2-11919
- road traffic noise prediction model, field evaluation 2-16183
- road traffic random noise peak value distribution, psychological effect (*Japanese*) 2-9717
- rotating blade noise, linear acoustic formulas 2-20461
- rotating electrical machinery couplings, aerodynamic acoustic power 2-7971
- sewage purification plants, noise aspects and provisions 2-11929
- ship self-noise, sound field structure and meas. 2-29922
- sound exposure during sleep (*Japanese*) 2-44570
- sound levels around buildings near roadways 2-50004
- sources in close-fitting enclosures, simulating system 2-16188
- spatial coherence of wind-generated noise in a shallow ocean channel 2-34976
- speech in noise, detect. by infants 2-32219
- spoiler aerodynamic noise, generated in low velocity flow duct 2-49992



**acoustic noise continued**

- stapedial reflex, in workers exposed to noise, workplace study (*French*) 2-25177
- steam power station, vibration problems due to low frequency noise 2-11927
- street traffic in Switzerland effects of noise, review of 4 surveys 2-34989
- structures with spatially separated excitation, body sound propagation (*German*) 2-1072
- subjective annoyance using principal component analysis (*German*) 2-37582
- subway station, external noise level evaluation 2-9722
- surroundings and occupational noise, activities and regulations in Denmark (*Hungarian*) 2-52415
- temporal sampling strategy for noise surveys 2-11935
- tracks, indoor stationary test procedure for exterior noise 2-2835
- traffic, noise prediction and assessment methodology 2-16182
- traffic noise, annoyance in persons with normal and impaired hearing 2-14165
- traffic noise propag. in urban environment, optical scale model 2-52406
- trailing edge noise prediction from measured surface pressures 2-16307
- trailing edge noise prediction using Amiet's method 2-20660
- transformer stations in dwelling houses, noise problems (*Hungarian*) 2-52414
- truck tire vibration sound 2-4643
- truck tyre noise due to air pumping and carcass vibration, quantitative analysis 2-1085
- truck tyre noise sources, identification and quantification under on-the-road operating conditions 2-1084
- truck tyre vibration sound mechanism, analytical model 2-44565
- truck tyre/pavement interaction noise, effect of tread wear 2-4642
- turbomachinery, rotational noise generation, total acoustic power 2-49993
- turbomachinery rotor noise rel. to inlet turbulence, strut wake and vortex flow 2-7968
- turbulent boundary layer, investigation of noise on body surface 2-35121
- twin jets, heated, expt. study of noise characts. 2-44568
- tyre noise sensed in passenger cars—characteristics, sources, strategies for control 2-4644
- tyre/road noise, generating mechanisms and reduction techniques 2-1083
- tyre/road noise, influence of road surface, Belgian Road Research Centre research program results 2-4641
- tyre/road noise generated by an aggregation of vehicles interacting with thirteen different road surfaces 2-4645
- underwater acoustic noise sources, radiation and mitigation 2-44527
- urban noise, statistical anal., linear correl. of levels in adjacent freq. regions rel. to pop. density 2-1075
- urban traffic control systems, effect on noise level 2-11920
- vibration and noise control, materials 2-25178
- VLF wind-generated turbulence noise beneath ocean surface 2-37887
- wind generated noise in the Parece Vela Basin 2-37886
- wind-induced sound pressures at the human ear 2-11939
- word identification, binaural and monaural, effect of noise and reverberation 2-52504
- Te, Y-cut, total saturation of current 2-46080

**acoustic noise measurement**

- air flow through coaxial jet in long, straight pipe, downstream modal press. spectra meas. for 200-6000 kHz range 2-1189
- air samplers effect, prediction and reduction 2-42063
- aircraft noise control test facilities at Douglas Aircraft Company, USA 2-16202
- aircraft noise identification system for inflight position detector 2-16208
- aircraft noise monitoring system of GLC and London Boroughs, present system, future development 2-20501
- automobile hot exhaust, radiated sound meas. and comparison with calcs. for cold pipe flow 2-8003
- binaural noise dosimetry 2-11945
- broadband noise propagating inside circular duct, modal separation measurement technique 2-8001
- building acoustics analyzer type 4417 noise level meas. 2-44617
- calibration by OSHA Cincinnati Lab. 2-11975
- calibration of instrumentation for measurement of sound and vibration 2-11973
- calibration of instrumentation for noise and vibration measurements 2-11979
- cavitation noise spectra, dynamics 2-35012
- cepstrum analysis theory and appl. 2-18584
- circular sawing machines, testing of noise and noise reduction (*Hungarian*) 2-34993
- construction site noise abatement, cost effectiveness, comparison of anal. and meas. 2-20475
- converter substation, noise source identification by FFT anal. 2-14137
- diesel engine idling noise 2-14170
- diesel engines, comparison of noise source identification techniques 2-16209
- dose overestimation in presence of impulsive noise 2-11942
- dose overestimation in response to impulsive noise 2-11943
- dual-channel FFT meas. 2-29923
- electric machines, sound power level nearfield meas. method 2-11983
- electric motor, method (*Russian*) 2-44616
- engine diagnostics using noise and vibration meas. 2-16206
- engineering-related noise, sources, reduction, and meas. (*Hungarian*) 2-52411
- environmental noise meas. influence of reflected sound waves 2-14144
- frequency analyser, portable real time for on site meas. 2-11971
- impulse noise, errors in meas. using automated monitoring instrumentation 2-16205
- impulse noise, fluctuating, peak level detection 2-16204
- impulsive noise: determination of sound power using reverberation room methods 2-16201
- industrial noise, outdoor, test of draft standards for meas. and computation in Netherlands 2-16211
- industrial plant environment, noise source locating system 2-11969
- long-term noise exposure meas. using dosimeters 2-11944
- machine tools, impact noise prediction, energy balance in machine and radiated sound energy meas. 2-8000
- machines, noise sources and meas. (*Hungarian*) 2-49994
- minimum sample size for percentile estimation, determined from a model study 2-1070
- noiseload judgement by acoustical meas. anal. (*Hungarian*) 2-50032
- nuclear VVER reactors internal vibration monitoring and control (*Czech*) 2-49144

**acoustic noise measurement continued**

- Occupational Safety and Health Administration noise violations 2-8008
- outdoor noise barrier acoustical meas. standardisation progress report 2-14154
- passenger elevators, cab interior noise meas., effect of compartment velocity 2-11968
- penetration through partition for two independent sources on either side, statistical problems rel. to building design 2-11967
- personal noise dosimeters, MSHA program for type testing and calibration 2-11974
- platelike structure acoustic excitation and radiation meas. apparatus 2-14143
- pneumatic peening hammer, noise source identification 2-16207
- portable tool for room acoustic meas. 2-25197
- problems and anomalies in acoustic noise meas. 2-20473
- production forge hammer impact noise, two microphone intensity meas. method 2-11981
- pumps, cavitation noise meas. techniques 2-20505
- punch press, direct meas. of radiated acoustic energy 2-11980
- pure frequency noise source in rectangular reverberation room, sound power (*Japanese*) 2-25203
- quiet valves, practical considerations in noise testing 2-4634
- railway trains, noise model testing and meas. (*Hungarian*) 2-52413
- road traffic, noise prognostical method and noise level (*Hungarian*) 2-52412
- road traffic and aircraft, comparison of community response 2-34988
- road vehicle noise, sound power level meas. using reverberant tunnel, sound source substitution method 2-20500
- room noise, steady-state meas., standard methods 2-16210
- ship radiated noise, use of averaged power spectrum for recognising objects 2-29958
- shipboard accommodation, noise and vibration level meas. based on matching rating scales 2-20502
- short-term equivalent level series for environmental noise assessment 2-14168
- sound transfer props. of resilient elements for independent excitation with orthogonal components, expt. meas. 2-4674
- specification, calibration and certification of acoustical instruments for noise law enforcement 2-11972
- truck cabins, techniques and development of comprehensive meas. standard 2-7995
- truck passby noise testing, effect of environmental variables 2-14138
- vehicles, semi-anechoic chamber for noise emission testing 2-16203
- wind turbine, methods 2-16214
- CDs, electro-acoustical noise 2-51266
- acoustic nuclear magnetic resonance**
  - metals, acoustic spin-doppler reson. (*Russian*) 2-17345
  - CsI, spin-phonon coupling for  $^{127}\text{I}$  nuclei pulsed nucl. acoustic reson. study 2-36455
  - Ta, strain elec. field gradient tensor, temp. depend., acoustic NMR study 2-46393
- acoustic paramagnetic resonance**
  - electron spin-ultrasound wave interaction in nonhomogeneous mag. field (*Bulgarian*) 2-5583
- acoustic parametric amplifiers**
  - receiver using converging pump beam analysis 2-1063
  - wavefront reversal and reversed wave amplification problems 2-34971
- acoustic parametric devices**
  - see also *acoustic parametric amplifiers; acoustic parametric oscillators*, amplifiers and receiver, combination-frequency field calcs. 2-25163
  - Love waves, parametric excitation in the microwave region by an electric field in a piezoelectric plate 2-7938
  - nonlinear piezoelectric effect in crystals with presence of reflection, acoustic wave propag. 2-8015
  - programmed parametric speech synthesizer 2-29941
  - virtual source array lengths for parametric sources 2-34967
- acoustic parametric oscillators**
  - circular piston difference frequency field, Lighthill-Westervelt wave eqn. soln. 2-44515
- acoustic radiators**
  - see also *acoustic generators; Doppler effect*
  - baffled piston, limiting form for the nearfield 2-34979
  - beam vibrating in constant width thickness mode, sound radiation in long wave approximation 2-7960
  - circularly symmetric sources radiating into parabolically anisotropic or isotropic media, Hankel transform diffraction theory 2-7920
  - complex spherical radiators mutual impedance 2-1059
  - conical US radiators for medical imaging, acoustic field calc. 2-44624
  - elastic plates, fluid-loaded, antisymmetric modes of acoustic radiation 2-7956
  - flexurally vibrating isotropic plates, acoustic interaction of radiating edges 2-1068
  - infinite cylindrical radiators with mixed boundary conditions, sound field determ. 2-7923
  - parametric, behaviour of characts. in presence of reflecting boundary 2-29911
  - planar axisymmetric vibrators, acoustic transient eval. using the impulse response approach 2-16156
  - platelike structure acoustic excitation and radiation meas. apparatus 2-14143
  - ring radiators of finite width, struct. 2-4681
  - underwater acoustic electro-ceramic projector radiated pressure control by state variable feedback 2-44629
- acoustic reactance** see *acoustic impedance*
- acoustic receivers**
  - see also *microphones*
  - adaptive signal detection in fluctuating noise, general detection and estimation theory 2-44590
  - parametric, amplification using converging pump beam analysis 2-1063
  - real-time US receiving system, monolithic array transducer, microcomputer for data acquisition (*Japanese*) 2-11964
  - signal processing aspects of nonlinear acoustics 2-44514
- acoustic resistance** see *acoustic impedance*
- acoustic resonators**
  - bulk acoustic wave composite resonators, low temp. coeff. 2-44622
  - Helmholtz equation numerical solution using elementary matrix transformations 2-1061
  - Helmholtz resonators, effect of external harmonic oscillations on self-excited thermal oscillations 2-4622



**acoustic resonators continued**

- low-volume acoustic resonator (silator) analysis and expt. 2-14160
- radiation losses in resonant tubes due to sound absorption 2-7919
- silencer performance effects of steady flow rate and acoustic intensity 2-14162
- tuned quarter-wavelength, use in centrifugal fan noise control 2-4639
- water-filled, cylindrical 430 litre resonator 2-29957
- AIN on Si SAW devices 2-29953

**acoustic signal processing**

- acoustic emission detection, decision interval choice (*Rumanian*) 2-50007
- acoustic emission signals, amplitude distrib. 2-7983
- active sonar, noise-limited, optimum frequencies for detection 2-20454
- adaptive active sound control in a duct computer simulation 2-11884
- adaptive receiving array interference nulling schemes compared 2-44585
- adaptive signal detection in fluctuating noise, general detection and estimation theory 2-44590
- adaptive ultrasonic array imaging system through an inhomogeneous layer 2-39781
- ambiguity function of scattered acoustic pressure field 2-35001
- array adaptive noise cancellation with wanted signal leakage 2-44588
- aspects of nonlinear acoustics 2-44514
- atmosphere, boundary layer, vertical sounding, changes in acoustic signal charact. 2-37961
- B-scan resolution enhancement using Fourier transform holography 2-17845
- coarse grained material, US testing, signal to noise ratio improvement by, signal averaging 2-17866
- conformal arrays, side-lobe patterns 2-44582
- correlation processing, effect of propagation fluctuation 2-29930
- CP200, cinema theatre audio processor 2-11993
- defect charact., adaptive filtering appl. 2-17818
- detection probabilities in Gaussian and nonGaussian noise 2-44583
- direct-resolution method for measuring parameters of sources of random acoustic signals, estimation error 2-1092
- Doppler tracking, uniqueness of solution track 2-29936
- electroacoustic systems, freq. characts. meas. using pulse method (*Czech*) 2-29966
- empirical statistical spectral analysis procedures 2-44596
- false-colour acoustic micrographs 2-11960
- fish stock assessment, using microprocessors as target classifiers 2-44524
- frequency analyser, portable real time for on site meas. 2-11971
- Kassam-Thomas nonparametric dead-zone limiter detection system, two-stage version 2-39782
- linear array, estimation of location and motion parameters of a moving source 2-29935
- modulation transfer functions: definition and measurement 2-20483
- multidimensional constrained lattice processor for passive sonar adaptive arrays 2-44589
- narrowband adaptive array processing and beamforming 2-44586
- noise signals, adaptive cancellation technique in form of optimal filtering, machine condition monitoring, spectral analyses 2-11886
- nonlinear least squares model fitting to error-disturbed obs. 2-44595
- nonstationary aircraft noise, statistical estimation of correlation 2-11885
- ocean ambient noise, environmental thresholds and causes 2-44529
- parameter estimation techniques and results 2-44591
- passive listening adaptive array spatial resolution improvement 2-44597
- passive sonar array processing in nonstationary random fields 2-44598
- passive sonar signal processing estimation techniques 2-44534
- phase shift beamforming systems, frequency dependent refocusing 2-7981
- pitch extraction of musical instrument tones using digital processing techniques (*Japanese*) 2-44609
- portable tool for room acoustic meas. 2-25197
- pulse-echo systems, analogue implementation of analytic signal processing 2-35002
- quadrature receivers connected in parallel to improve detection performance in a multipath environment 2-44581
- random arrays, signal and noise estimation 2-39780
- randomly space-time variant channel, signal detection and parameter estimation 2-29931
- sampling rate reduction by generalizing quadrature methods of separate interpolation 2-20484
- separation of several speakers recorded by two microphones 2-7982
- sonar data analysis, filtering techniques 2-29937
- sonar receiver detection threshold with reverberation limited conditions 2-44584
- sonar signal processing, research community needs in the 1980s 2-29938
- sonar target recognition method, aspect independent 2-11877
- sound processor design, VLSI applns. 2-11956
- source three-dimensional struct., direct reconstruction 2-16194
- spatial and temporal, effects of medium inhomogeneities and instabilities 2-44528
- speech synthesis system using adaptive data modulation 2-35008
- steel, acoustic emission signals during tensile tests, appl. of signal processing 2-52163
- steel, austenitic weld, coarse grained material, US testing, signal to noise ratio improvement by signal averaging 2-17866
- steel, stainless, pipe weld, crack detection using US signal processing, appl. of adaptive learning networks 2-13918
- synthetic focusing operators derived from acoustic wave theory 2-7980
- time-domain adaptive array processing and beamforming recursive algorithms 2-44592
- ultrasonic imaging through turbulent media using data selection processing 2-11962
- undersea sound propagation factors and remote sensing 2-47916
- underwater acoustics and signal processing, conf., Copenhagen, Denmark (Aug. 1980) 2-42789
- US B-scan images, resolution enhancement by deconvolution 2-47655
- US CW Doppler FHR signals, meas., extraction and processing (*Chinese*) 2-9842
- Al multilayered adhesively bonded structures, appl. of adaptive learning networks to US signal processing, flaw classification 2-17854
- ZnO-Si, induced junction monolithic SAW storage correlator 2-50006

**acoustic streaming**

No entries

**acoustic superradiance**

No entries

**acoustic surface wave devices** *see surface acoustic wave devices***acoustic surface waves** *see surface acoustic waves***acoustic transducers**

- see also acoustoelectric transducers; ultrasonic transducers*
- directional transducer array, sidelobe suppression, design considerations 2-29956
- hydroacoustic position reference system with a narrow beam tracking transducer 2-44523
- monolithic array transducer, spatial resolution increase using local sound vibr. 2-50037
- planar axisymmetric vibrators, acoustic transient eval. using the impulse response approach 2-16156
- SAW interdigital transducers, coupling constant, optical method for meas. 2-50041
- sonar, new materials and types of device 2-44532
- welded structure deformations, acoustic sensing elements 2-5991

**acoustic variables control***see also noise abatement*

- active sound control in a duct, computer simulation 2-11884
- underwater acoustic electro-ceramic projector radiated pressure control by state variable feedback 2-44629
- vibration and noise control, materials 2-25178

**acoustic variables measurement***see also acoustic intensity measurement; acoustic noise measurement; acoustic wave velocity measurement; Q-factor measurement; ultrasonic measurement*

- absorption coeff. meas. in standing wave tube using a simple two-microphone method 2-39784
- acoustic panels echo-reduction meas., modified Prony method approach 2-16155
- anechoic chamber for environmental acoustics measurement 2-11963
- automatic speaker recognition, measuring of contours of intensity and fundamental period of speech (*German*) 2-7996
- building acoustics analyzer type 823, microprocessor controlled 2-44618
- dispersion measurement apparatus 2-20498
- electroacoustic systems, freq. characts. meas. using pulse method (*Czech*) 2-29966
- frustrated-total-reflection acoustic sensing method 2-20496
- hypersound absorption in liquids at frequencies of approx. 10 GHz 2-8007
- impedance of solid medium, using resonance of liquid layer and US impulse reflection 2-7997
- impedance tube technology for flow acoustics 2-25200
- input immittance meas. for human ear 2-32368
- Lamb wave, propag., acoustic field distrib., optical probe technique 2-50034
- liquids, specific heat temp. dependence, determination by acoustic methods 2-21234
- microwave meas. of electroacoustic conversion and attenuation of elastic waves 2-29967
- miniature ceramic ultrasonic probes, design, construction and performance 2-29981
- nonlinear parameter (B/A) in n-pentane 2-35591
- normal incident sound absorption characteristics of materials, meas. method using acoustic tube 2-29963
- pitch change of a complex tone following its association with a second complex tone 2-52498
- pitch extraction of musical instrument tones using digital processing techniques (*Japanese*) 2-44609
- pitch of pure and complex tones, noise-induced shifts 2-35016
- pulse-testing device for electroacoustic meas. 2-25198
- reverberation time measuring system with correlation technique 2-50022
- single-path underwater transmission, spectrum of delay fluctuations 2-16168
- sound field audiometric testing, comparison of stimuli used 2-52501
- violins, sound output meas. 2-20492

**acoustic velocity** *see acoustic wave velocity***acoustic wave absorption***see also noise abatement; ultrasonic absorption*

- absorption coeff. meas. in standing wave tube using a simple two-microphone method 2-39784
- active acoustic attenuation of complex noise sources, development of practical realizations 2-4653
- active sound absorber in ducts 2-29921
- anechoic chamber at Istituto Superiore, Roma, Italy, sound absorption treatment (*Italian*) 2-4663
- building codes, noise control provisions, min. insulation requirements, simplified meas. procedures 2-11950
- ceramic sound-absorbing materials, appls. in industrial noise control 2-4647
- chemically reactive mixtures, critically slowed down, sound atten. 2-40488
- clog-resistant silencer design for contaminated gas flow processes and plants 2-14163
- critical fluid, sound propag., mode-coupling approach 2-50767
- earmuff threshold attenuation props., psychophysical and physical meas. methods 2-4670
- elastic waves, attenuation meas. 2-1100
- environmental noise model for combined effects of ground absorption and diffraction by obstacles 2-14145
- excess attenuation during sound propagation from an isotropic source above grassland 2-16167
- fabric roof struct., sound-absorbing material installation in roof/ceiling area, acoustical treatments 2-4649
- fibrous glass sound-absorbing materials, industrial and commercial noise control appls. 2-4648
- finite-amplitude sound wave propag., saturation due to wave distortion, suppression by absorption in medium 2-7934
- foliage as an attenuator of sound, experiments with model forests in an anechoic chamber 2-7940
- glass acoustic props. at low temps. and low freqs. 2-16725
- gypsum wallboard partitions, sound transmission loss 2-39775
- hot wall-jet flow over absorbing wall, sound propag., sound-absorbing liners, blown flap environment 2-4624
- hypersound absorption in liquids at frequencies of approx. 10 GHz 2-8007
- Kirchhoff's formula attenuation coeffs., connection with absorption of air in tube 2-29900
- linear transverse acoustic wave propag. in isotropic media 2-49974
- lined rectangular ducts, influence of shear layer 2-14164



**acoustic wave absorption continued**

- low frequency sound waves in the sea (*French*) 2-25170  
 metal, sound absorpt., crit. directions, rel. to zero-slope lines on Fermi surface 2-45403  
 metal fibre material, porous, sound absorbing props., geometric struct. parameters effect 2-13675  
 metal jacketings and mastic coatings, sound attenuation properties 2-11890  
 metals, sound absorption and propagation above Debye temp. (*Russian*) 2-45408  
 nematic liquid cryst., biaxial, hydrodynamic eqns., free energy density, sound wave attenuation 2-50535  
 normal incident sound absorption characteristics of materials, meas. method using acoustic tube 2-29963  
 ocean, horizontally stratified, effective range derivative for acoustic prop. loss 2-37884  
 phase transition points, anomalies in temp. depend. 2-45385  
 planted vegetation, sound attenuation capacity meas., noise pollution abatement in town and landscape p-lanning 2-7993  
 quartz, SAW, viscous attenuation and vel. 2-45700  
 radial diffuser with absorptive walls, analytical model for sound attenuation 2-44506  
 Rayleigh wave absorption via acoustic microscopy 2-35015  
 residential property modification for increased attenuation of road traffic noise 2-11949  
 resonant tubes, radiation losses 2-7919  
 review of modern acoustics 2-49967  
 SAW attenuation by thin film 2-1724  
 semiconductors, spin-magnetophonon reson. and sound absorpt. 2-13141  
 solid solution, sound attenuation and thermal cond. 2-40492  
 sound decay in a semipartitioned rectangular enclosure with non-uniform absorption, and comparison with geometric theory 2-39777  
 suspended water droplets in air flow in tube, 2 kHz to 50 kHz 2-20444  
 three-dimensional trace of coeffs. of sound refl. and absorption of material (*French*) 2-25151  
 traffic noise barrier excess attenuation formula 2-14149  
 traffic noise control, standard panel design and construction for absorbent barriers 2-14148  
 transverse sound propagation near dispersive transition points 2-45407  
 underwater resonant absorber, absorption theory 2-29905  
 vibration and noise control, materials 2-25178  
 water fog sound absorption properties 2-20452  
 Fe, high-porosity, props. 2-17646  
 $^4\text{He}$ - $^3\text{He}$  vapour mixture, sound absorpt. 2-30270  
 $\text{MgCO}_3$  chem. relaxation accounting for undersea sound absorption anomaly 2-47915  
 $\text{N}_2$ , moist, at elevated temps., acoustical meas. of vibrational relaxation 2-40025  
 Nb-H solution, sound attenuation due to density wave decay (*Russian*) 2-12691  
 Ni, high-porosity, props. 2-17646  
 Ni-Cr (20 wt.%), high-porosity, props. 2-17646  
 $\text{SiO}_2$ , vitreous, sound absorpt., freq. depend., 10 MHz to 35 GHz 2-45390  
 $\text{TeO}_2$  cryst., slow acoustic shear wave attenuation at high freq. 2-40493

**acoustic wave amplification**

- see also *acoustoelectric effects*  
 liquid, sound excitation, thermo-optical methods, book contrib. 2-31460  
 optical generation of tunable ultrasonic waves 2-50043  
 polarisation plane rotation for strong ESR saturation 2-51448  
 semiconductor, US electronic absorpt. and amplification, kinetic theory, book contrib. 2-30934  
 semiconductors, microwave phonons, parametric amplification and freq. conversion 2-51237  
 CdS, surface, acoustoconcentration effect due to amplified US wave, elec. cond. obs. 2-51238  
 n-InSb, acoustic wave multitransit generation in elec. field 2-5442

**acoustic wave attenuation** see *acoustic dispersion; acoustic wave absorption; acoustic wave scattering; acoustic wave transmission; ultrasonic absorption***acoustic wave diffraction**

- see also *ultrasonic diffraction*  
 circularly symmetric sources radiating into parabolically anisotropic or isotropic media, Hankel transform diffraction theory 2-7920  
 convex or concave dome in an infinite baffle 2-34955  
 cylindrical elastic bodies, transient acoustic diffraction problems 2-25162  
 elastic wave propagation in medium with an elliptical wave surface 2-7922  
 environmental noise model for combined effects of ground absorption and diffraction by obstacles 2-14145  
 fluid spheres, diffraction and interference near critical scattering angle 2-34956  
 hard-soft barrier diffraction, analytical solution 2-16154  
 high intensity acoustic beams, nonlinear effects 2-25161  
 impedance paraboloid, sound field analysis 2-34962  
 matching of asymptotic expansions in application to the Rayleigh approximation in scalar diffraction theory 2-25155  
 normal-mode diffraction by a compliant baffle resembling segregate in a plate 2-7930  
 parallel half-planes, hard and soft 2-44496  
 plane periodic grating of impedance strips, sound field 2-7924  
 plane step pressure wave diff. by elliptic cylinder and strip 2-44508  
 Rayleigh surface wave prop. across large-amplitude grating 2-42872  
 rigid baffle edge, dipole sound diff. 2-34972  
 rigid many-sided barrier or pillar, theory 2-49972  
 SAW IDT filters design, errors due to diffraction compensation 2-8011  
 screens, wedge-shaped, perfectly rigid and perfectly soft, diff. problem soln. 2-7915  
 sound field distortion for sphere with mixed boundary conditions, least squares method analysis 2-1057  
 spatial spectra of diffraction fields 2-25164

**acoustic wave diffusion** see *acoustic wave scattering***acoustic wave effects**

- see also *acoustic magnetic resonance; acousto-optical effects; acoustoelectric effects; biological effects of acoustic radiation; sonoluminescence; ultrasonic effects*  
 circular plate, baffled, transient waveform excited by triangular sound pulse 2-34981  
 fluid-solid interaction and fluid acoustical effects, piping system dynamics 2-11244

**acoustic wave effects continued**

- nematic liquid cryst., orientation, stability in sound field in absence of squeeze-flow 2-5048  
 perhalomethanes sonolysis, EPR and spin trapping studies 2-36437  
 polymers, concentrated solns., relaxational props. by acoustic spectroscopy (*Russian*) 2-21240  
 solar magnetic flux tubes, prop. speeds and acoustic damping of wave modes 2-48206  
 Al alloy D16T, welded joints, acoustic fatigue under var. amplitude loading 2-13817  
 Ti alloy OT4-1, welded joints, acoustic fatigue under var. amplitude loading 2-13817
- acoustic wave interference**  
 see also *acoustic wave interferometers; acoustic wave interferometry*  
 active attenuation of duct noise 2-11883  
 fluid spheres, diffraction and interference near critical scattering angle 2-34956  
 noise refraction, phase delay and interference device 2-14156  
 Cu discs, miniature Chladni pattern obs. in electron-acoustic microscopy 2-19224
- acoustic wave interferometers**  
 see also *acoustic wave interferometry*  
 pulse-echo US, for automatic meas. of vel. and, attenuation changes 2-8006
- acoustic wave interferometry**  
 see also *acoustic wave interferometers*  
 metal film, evaporated wedge-shaped films, attenuation and phase vel. of hypersound by multiple-beam interferometry 2-26198  
 velocity meas., liquid surface holographic method (*Chinese*) 2-50009
- acoustic wave propagation**  
 see also *acoustic dispersion; atmospheric acoustics; Doppler effect; liquid helium sound propagation; seismic waves; shock waves; surface acoustic waves; ultrasonic propagation; underwater sound*  
 acoustic logging, cylindrical waves in transversely isotropic media 2-16153  
 aircraft noise, nonlinear prop. in atmosphere 2-7964  
 atmosphere, boundary layer, vertical sounding, changes in acoustic signal charact. 2-37961  
 beam reinforced plate under random loading 2-7959  
 borehole logging space-time dependence of acoustic waves 2-34957  
 Burgers model for 1-D acoustical waves, turbulence description 2-34969  
 p-butoxybenzylidene-p'-octylaniline, smectic B liq. cryst., ang. depend. of acoustic shear wave prop. 2-50536  
 butyloxy-benzilidene octylaniline, Brillouin scattering in  $S_A$  and  $S_B$  phases 2-2299  
 circular duct, broadband noise prop., modal separation measurement technique 2-8001  
 continuous wave prop. in shallow water, effect of tides 2-7941  
 critical fluid, mode coupling approach to propagation, hydrodynamic interaction corrections 2-4627  
 critical fluid, sound prop., mode-coupling approach 2-50767  
 cubic crystals, ballistic phonons and acoustic ray surface shape 2-12701  
 CW signal prop. characteristics under ice in Arctic 2-37881  
 cylindrical ducts, discontinuity effects with mean flow and bulk interacting linings 2-11872  
 cylindrical ducts, industrial noise abatement appl. 2-49969  
 difference-frequency sound generation in a liquid containing bubbles of different sizes 2-4628  
 distortion of wave-form of weak and short wave in Eulerian fluid 2-4621  
 duct, circular cross section, liquid-borne transverse resonance mode prop., acoustic filter, evaluation by meas. of transmission loss 2-4671  
 duct bends, acoustic characts. for higher order modes, geometry effect 2-16160  
 elastic cylinders, finite length, asymmetrically excited 2-44504  
 elastic cylinders, finite length, axisymmetrically excited 2-44503  
 elastic wave propagation in hexagonal honeycombs, analysis and low freq. characts. 2-34977  
 elastic wave propagation in hexagonal honeycombs, high freq. characts. 2-34978  
 elastic waves in anisotropic medium, wave surface cross section calcs. and singularity analysis 2-8566  
 elastic-walled ducts, two-dimens. acoustic wave prop. anal. 2-7935  
 enclosure, model investigations on identification of air-borne and structure-borne sounds 2-16181  
 excess attenuation during sound propagation from an isotropic source above grassland 2-16167  
 fibrous sound absorbers, wave propagation theory 2-7977  
 finite amplitude longitudinal wave prop., initial strain effect 2-30053  
 finite amplitude wave prop. through circular pipe with discontinuity cross sections 2-29899  
 finite-amplitude sound wave prop., saturation due to wave distortion, suppression by absorption in medium 2-7934  
 fluid-solid interaction and fluid acoustical effects, piping system dynamics 2-11244  
 2-D gas flow in axisymmetric channel of variable cross sections, 3-D acoustic perturbations prop. 2-20450  
 generalised 1-D wave eqn., soln. using boundary operator method 2-49973  
 geometric acoustics truncation error in computing reverberation 2-20442  
 grass covered ground, sound prop. 2-34963  
 harmonic acoustic generation in crystals 2-34970  
 harmonic acoustic wave prop. in laminated elastic composites 2-49971  
 harmonic elastic wave propagation along edge of a right-angle elastic wedge 2-7928  
 helical hard-wall ducts, sound transmission anal. 2-4625  
 hereditary media, asymptotic description of pulse evolution 2-25157  
 hollow cylinder immersed in liq., acoustic wave prop. 2-32250  
 hot wall-jet flow over absorbing wall, sound prop., sound-absorbing liners, blown flap environment 2-4624  
 infrasound propagation in atmosphere, ray tracing theory 2-32552  
 inhomogeneous medium, response optimisation for extended acoustic array 2-7931  
 interpenetrating plasma beams, runaway-ion instability due to thermalisation 2-16441  
 jet, turbulent, coherent part and intensity (*French*) 2-44768  
 jet, turbulent, spectral broadening of acoustic beam (*French*) 2-49975  
 kaolinite suspensions, hydrodynamic and electric interactions with sound field 2-30529  
 laser-excited acoustic pulse generation, influence of temp. dependence of light absorption coeff. on pulse shape 2-5189



**acoustic wave propagation continued**

- line array in shallow water for range and depth estimation 2-7955
- linear transverse acoustic wave propag. in isotropic media 2-49974
- linear wave propag. in homogeneous and inhomogeneous media, dispersion relations 2-18911
- liquid crystals, phase transition behaviour (*Japanese*) 2-8432
- liquid layer, acoustic wave propag., dispersion relation 2-11873
- long wave propag. in acoustically treated, curved ducts 2-39770
- Love waves, transmission past a rounded edge, theoretical aspects 2-8567
- marine sediments, Biot theory 2-47922
- metals, sound absorption and propagation above Debye temp. (*Russian*) 2-45408
- nonlinear and diffraction transformation of acoustic pulses 2-29901
- nonlinear piezoelectric effect in crystals with presence of reflection 2-8015
- obstacle, surface impedance, inverse far-field scatt. 2-11875
- ocean, resolved acoustic multipaths, short range fluctuations 2-7948
- ocean acoustic multipath identification at long range, using both travel time and vertical arrival angle 2-37885
- ocean acoustic wave propag., stochastic waveguide model 2-44519
- ocean sound propagation, deterministic modelling fundamentals 2-47918
- ocean sound propagation, deterministic modelling results 2-47919
- ocean sound propagation, stochastic models 2-47920
- ocean thermocline internal wave propag., computer modelling 2-42371
- outdoor noise barrier performance calc. allowing for near-ground plane propagation 2-14152
- Pekeris model virtual mode resonance, complex wave number calc. 2-44530
- piezoelectric materials, wave propagation and resonance 2-36535
- piezoelectric solid cylinders, asymptotic analysis of modes 2-44499
- piezoelectric transducers, partially-electroded, radiation pattern analysis 2-35026
- planar axisymmetric vibrators, acoustic transient eval. using the impulse response approach 2-16156
- plate under action of moving harmonic forces, sound radiation 2-25174
- pressure waves produced by pulsed electric arcs, saturation meas. 2-50469
- radiation pressure, definition as time field parameter 2-1062
- random fluid, acoustic wave propag., integrodifferential eqn., asymptotic behaviour 2-12169
- random media, quasi-Rytov analysis method 2-44498
- random medium, theoretical analysis of wave field 2-39769
- reduced wave equation, elementary source-type solns. 2-34952
- SAW time inversion system distortion estimation, based on delta function approx. 2-7978
- sensor array time delay estimation for multipath propagation 2-44593
- shallow water, description of acoustic field at sea surface and sea floor 2-34974
- shallow water propagation of sound, improved ray calcs. 2-7946
- shallow-water channels in ocean, ambient acoustic noise propag., theory 2-44535
- shock wave propagation in the ocean, relaxation effects 2-7950
- slug flow jet, HF acoustic wave transmission 2-20752
- small perturbations, propag. in vapour-gas-liquid medium 2-8576
- smectic liquid crystals, A-phase, sound attenuation and propag. near phase transition 2-50768
- sound propagation over ground having inhomogeneous surface impedance 2-7939
- spherical waves, general directional, nonlinear propag. 2-44511
- stratified medium, acoustic vibr. field, Lippmann-Schwinger eqns. 2-48512
- structure-borne sound in homogeneous plates of arbitrary thickness 2-20440
- structures with spatially separated excitation (*German*) 2-1072
- surface transverse wave resonances on corrugated plates of finite thickness 2-44497
- transient sound behaviour in coupled diffuse spaces, improved theory 2-20443
- transonic flow, acoustic pulse excitation by distribution heat-release zones 2-8177
- transverse sound propagation near dispersive transition points 2-45407
- tunnel effect of virtual mode propag. in surface duct with bilinear sound profile (*Japanese*) 2-44521
- undersea sound propagation factors and remote sensing 2-47916
- underwater acoustic of ocean shelves, vertical refraction patterns of normal modes 2-7953
- underwater acoustics and signal processing, conf., Copenhagen, Denmark (Aug. 1980) 2-42789
- underwater sound, normal mode propagation in deep-ocean sediment channels 2-7947
- underwater sound, parabolic wave eqn., finite difference solution 2-7943
- underwater sound propagation inhomogeneities and instabilities 2-47914
- water, acoustical background, investigation using receiver of finite dimensions (*Russian*) 2-16172
- wind tunnels, turbulent shear layer, effect on sound propag., spectral broadening effects 2-8121
- n-CdS, piezoelectric semicond., acoustic wave propag., electron mass and collision freq. changes 2-46079
- Ge wafers, refr. index variations, acoustic method meas. 2-4567
- LiNbO<sub>3</sub>, elastic wave propag. anisotropy, group velocities 2-30536
- LiNbO<sub>3</sub>-water boundary, propag. characts. of leaky SAWs meas. by acoustic microscope 2-35013

**acoustic wave reflection**

- see also echo; reverberation; ultrasonic reflection*
- attenuation of coherent field in reflection from disturbed ocean surface 2-29912
- auditorium, curved rigid panels, sound reflection characts. 2-20482
- concert halls, spatial impression due to early lateral reflections, phys. measure 2-20479
- corrugated surface, expt. accuracy 2-34959
- duct bends, acoustic characts. for higher order modes, geometry effect 2-16160
- environmental noise meas. influence of reflected sound waves 2-14144
- finite amplitude wave propag. through circular pipe with discontinuity cross sections 2-29899
- homogeneous liquid/elastic layer sound reflection properties 2-25154
- liquid-liquid interface, asymptotic representation 2-7929
- lossy liquid-lossless solid interface, reflection coeff. 2-16158
- marine sediments meas., reflections from subsurface layered media 2-48028

**acoustic wave reflection continued**

- mitred duct bend, transmission and reflection of higher modes 2-25152
  - quasimonochromatic outgoing radiation pulse reflection by random surface, diffractal echoes 2-15040
  - sediment boundary reflection loss at small grazing angles (*Chinese*) 2-49979
  - sonic reflectivities under ice at frequencies below 1 kHz 2-7949
  - spherical wave reflection from an impedance boundary 2-29896
  - statistically rough surface, width of wave reflection pattern 2-28673
  - surface skimming bulk waves, rel. to reflection suppression in devices 2-44510
  - three-dimensional trace of coeffs. of sound refl. and absorption of material (*French*) 2-25151
  - transient reflection from fibrous absorptive surfaces, sound field for various source/receiver position 2-1056
  - wideband acoustic plane waves in layered viscoelastic media 2-39767
- acoustic wave refraction**
- see also acoustic dispersion; ultrasonic refraction*
  - noise refraction, phase delay and interference device 2-14156
  - point-source noise propagation, influence of meteorological parameters 2-14147
  - prism-shaped network of rigid strips 2-34954
  - spatially varying mean flow in ducts, high frequency effects 2-7917
- acoustic wave scattering**
- see also ultrasonic scattering*
  - Armo Fe, thin elastic cylindrical shell, sound pulse scattering (*Russian*) 2-16162
  - Armo Fe cylinder, surface wave resonances in sound pulse scattering (*Russian*) 2-34965
  - chaotic wave scattering by flaw in isotropic homogeneous solid 2-8070
  - echo signals reflected from a weakly scattering volume, analysis using a discrete model of the medium 2-34961
  - elastic arbitrary-shaped obstacles immersed in water, acoustic wave scatt. 2-16174
  - elastic waves, by elliptical shells 2-44501
  - factories, noise control in scattering environment 2-11931
  - finite elastic cylinder immersed in water 2-34975
  - finite rank acoustic scattering problems 2-39766
  - fluid spheres, diffraction and interference near critical scattering angle 2-34956
  - integral transforms, asymptotic expansion method 2-15079
  - inverse diffraction method for reconstruction of wave field on surface of scattering object 2-4623
  - inverse scattering theory, applns. to stratified ocean and bottom 2-37882
  - multiple scatt. by random distribns. of discrete scatterers, quasicrystalline-coherent pot. approx. 2-16159
  - multiple scattering of waves by correlated distributions, review 2-15074
  - multipole resonances, in mech. wave scatt. from voids, bubbles, drops 2-16264
  - nonlinear theory for scattering of sound by sound, perturbation series and formal operator soln. 2-7933
  - obstacle, surface impedance, inverse far-field scatt. 2-11875
  - ocean acoustic wave propag., stochastic waveguide model 2-44519
  - ocean inhomogeneities, acoustic backscatter and one-way propagation effects 2-47917
  - ocean surface scattering, diffraction theory 2-16170
  - ocean surface-scatter communication channel, generalised Kirchhoff approach, transfer function of ocean surface 2-42372
  - parallel half-planes, hard and soft 2-44496
  - periodic, pressure-release surface scattering, an exact solution 2-16171
  - pulse mode sonar echo prediction, S-matrix theory 2-16173
  - radiation field of two cylinders partially enclosed in annular layers, using method of partial domains 2-1058
  - random medium, theoretical analysis of wave field 2-39769
  - resonance theory of the effective properties of perforated solids 2-44502
  - resonant scattering of a Rayleigh surface wave by periodic inhomogeneities at the boundary of a solid 2-1725
  - rigid body scattering by prolate spheroids, computation using T-matrix approach 2-39768
  - sea sediment identification 2-48052
  - submerged solid body, mech. wave scatt., resonances, flaw detection appl. 2-16166
  - surface waves, appls. of theory of dispersion relations 2-8698
  - surface waves, role in scatt. theory 2-15077
  - transient elastic wave scattering by inhomogeneous obstacle, contrast in volume density of mass 2-44500
  - underwater, by volume inhomogeneities of bottom with rough surface 2-29909
  - underwater sound, scattering by random inhomogeneities at the bottom, theory 2-7951
  - velocity inversion, one-dimens., for seismic waves 2-15092
  - viscoelastic arbitrary-shaped obstacles immersed in water, acoustic wave scatt. 2-16174
  - vortex ring sound scatt. 2-16164
- acoustic wave transmission**
- see also ultrasonic transmission*
  - buildings, investigation of model parameters and appls. 2-20478
  - concrete plate junctions, sound transmission and mode coupling, parametric study 2-20598
  - double panel, steady state analysis of airborne sound 2-34995
  - duct, circular cross section, liquid-borne transverse resonance mode propag., acoustic filter, evaluation by meas. of transmission loss 2-4671
  - duct transmission studies, finite element anal., utility of wave envelope approach 2-7936
  - finite amplitude wave propag. through circular pipe with discontinuity cross sections 2-29899
  - helical hard-wall ducts, sound transmission anal. 2-4625
  - hysteretic double wall, transmission through sound bridge 2-49998
  - impedance matching of acoustic media using piezoelec. device 2-16198
  - LF acoustic transmission through walls of rectangular ducts, design charts 2-34964
  - machinery, vibration transmission between mountings and foundations, effective mobilities of coupling 2-4632
  - mitred duct bend, transmission and reflection of higher modes 2-25152
  - noise penetration through partition for two independent sources on either side, statistical problems rel. to building design 2-11967
  - open plan office spaces, acoustical privacy provision through use of screens and special ceiling materials, sound transmission paths 2-11901
  - panel, acoustic transmissibility, freq. var., theoretical and expt. anal. rel. to noise control problems 2-11900



**acoustic wave transmission continued**

- panel transmission loss determ. using acoustic intensity meas. by FFT analyzer 2-4675  
 partition sound insulation performance, single value rating method 2-4661  
 partitions, transmission loss calc. for single, double and triple panels, statistical energy anal. 2-7976  
 plane waveguide, Malyuzhynets diffusion approx. 2-44509  
 plate junctions, sound transmission and mode coupling 2-20597  
 porous disk, sound transmission 2-16152  
 room-to-room acoustical privacy, anal. and selection of sound isolating constructions 2-4660  
 sandwich panel, damped, backed by cavity, acoustoelasticity 2-44548  
 ship structureborne sound transmission, statistical energy analysis results 2-9733  
 slab joints, coupling loss factors for statistical energy anal. 2-20480  
 slab joints, coupling loss factors for statistical energy anal. 2-20481  
 slug flow jet, HF acoustic wave transmission 2-20752  
 sound transfer props. of resilient elements for independent excitation with orthogonal components, expt. meas. 2-4674  
 structural junction vibration level reduction meas., impulse method, appl. to sound transmission studies 2-8002  
 underground rapid transit system, structureborne sound transmission into nearby concert hall, vibration level meas. 2-4673  
 viscoelastic sandwich panels forming rectangular enclosure sound transmission props., random external press. fields 2-20445  
 wideband acoustic plane waves in layered viscoelastic media 2-39767

**acoustic wave velocity**

- see also acoustic dispersion; liquid helium sound propagation; shock waves; ultrasonic velocity*  
 bubbles, additional thermodynamic degrees of freedom 2-35592  
 cyclonic rings, underwater sound speed distributions 2-37883  
 electrolytes in acetonitrile at 25°C, isentropic compressibilities, sound vel. meas. 2-12655  
 n-p-ethoxy-benzyliden-p-n-butylaniline, isotropic phase, Brillouin scatt. under high press. 2-51619  
 fluid-solid mixture, periodic struct., virtual density, speed of sound 2-12200  
 glass acoustic props. at low temps. and low freqs. 2-16725  
 granite heated block under uniaxial stress, acoustic vels. 2-32501  
 linear transverse acoustic wave propag. in isotropic media 2-49974  
 liquids, nonlinear parameter det. using thermodynamic constants 2-50765  
 liquids, Shirokov's formula connecting transfer props. with vel. of sound 2-35156  
 magnetised plasma, sound speed interferometric determ. using time delayed correlation techniques 2-20926  
 majorite ((Mg,Fe)SiO<sub>3</sub>), vibrational and compressional props. of mineral high-press. phase 2-22973  
 MBBA, isotropic phase, Brillouin scatt. under high press. 2-51619  
 oceans, nine term eqn. for sound speed 2-7945  
 phase transition points, anomalies in temp. depend. 2-45385  
 polyacenes, crystals, sound vel., compressibility and thermal expansion, linear chain model 2-45401  
 p-polyphenyls, crystals, sound vel., compressibility and thermal expansion, linear chain model 2-45401  
 p-polyphenyls, phase transitions, Brillouin scatt. study 2-51614  
 propane, liq., sound vel. meas., rel. to compressibility, specific heat 2-8574  
 quartz, SAW, viscous attenuation and vel. 2-45700  
 radial motion of cavitating spherical bubble in inviscid compressible liquid with variable sound speed 2-8208  
 rare earths, liq., compressibility and sound vel. 2-35593  
 sea water sound speed data, discussion 2-7944  
 SOFAR propag. paths from Australia to Bermuda: comparison of signal speed algorithms and expts. 2-42370  
 spin dynamics and sound propagation near the spin-glass transition 2-51416  
 ternary liq. mixtures, sound vel. and interaction investig. 2-30530  
 toluene, liq., relationship between thermal conduct., speed of sound and heat capacity 2-12860  
 transition metal dihalides, cryst. vibrs., linear chain dynamical model 2-5197  
 transverse sound propagation near displacive transition points 2-45407  
 water, liq., relationship between thermal conduct., speed of sound and heat capacity 2-12860  
 water vapour, sound vel. calc. using effective potential 2-4912  
 water-steam mixture, eqn. of state, sound velocity 2-40511  
 CO<sub>2</sub>, moist vapour, sound speed dispersion 2-35263  
 D<sub>2</sub>O, liq. and vap., speed of sound on sat. line, appl. of law of corresponding states 2-16720  
 FeSi, acoustic wave vel., temp. depend. (Russian) 2-50769  
 H, atomic, spin-polarised, ground state props., Ursell-Meyer method 2-35861  
 He-Ar mixtures, acoustic vel. and density 2-35264  
<sup>3</sup>He, superfluid, thermodynamic props., OK to lambda transitions 2-5292  
 Li<sub>3</sub>N, amorphous ionic conductor, sound vel. temp. depend., H impurity tunnelling 2-30534  
 LiNbO<sub>3</sub>, elastic wave propag. anisotropy, group velocities 2-30536  
 NaNO<sub>2</sub>, incommensurate (antiferroelec.) phase transition, Brillouin scatt. study 2-46512  
 NaNO<sub>2</sub>-KNO<sub>3</sub> binary melt, Brillouin scattering (Japanese) 2-46623  
 Pb, <sup>208</sup>Pb, <sup>210</sup>Pb, high-temp. phase transitions, sound velocity study 2-35680  
 SrO, high-press. phase transition at 36 GPa 2-50843  
 α-Zn, acoustic and optical transparency, elastic and photoelastic props. 2-45404

**acoustic wave velocity measurement**

- see also ultrasonic velocity measurement*  
 acoustic mirmicroscopes, differential phase contrast, for improved meas. stability 2-44611  
 impulsive shock waves generated by electric discharges in air, schlieren photographs, obs. (Japanese) 2-25173  
 liquid surface holographic method (Chinese) 2-50009  
 longitudinal wave velocity meas. in transparent plates immersed in liquid, laser beam appl. 2-29954  
 rarefaction wave velocity meas. at very high pressures using optical technique 2-50217  
 SAW velocity meas. using phase interference method 2-29960  
 shear wave velocity meas. in transparent plates immersed in liquid, laser beam appl. 2-29954

**acoustic wave velocity measurement continued**

- He gas purity monitor for reliquification installation, sound wave vel. meas. 2-33551  
 K, thermodynamic props. in 1000 to 1800K 2-35020  
 Na, thermodynamic props. in 1000 to 1800K 2-35020  
 Na-K eutectic alloys 2-35020  
**acoustic waveguides**  
 elastic, US pulse excitation 2-1102  
 homogeneous adaptive estimation of position of a sound source 2-7932  
 inhomogeneous refraction waveguide sections, mode conversion estimation methods 2-7921  
 liquid layer, acoustic wave propag., dispersion relation 2-11873  
 mode characts. of horizontal field in model situations 2-1060  
 modes of acoustic field, investigation using spectral analysis 2-7927  
 natural ocean waveguides, acoustic image transmission capability 2-7954  
 normal-mode diffraction by a compliant baffle resembling segregate in a plate 2-7930  
 phase distortion compensation by wave-front inversion 2-7926  
 plane waveguide, Malyuzhynets diffusion approx. 2-44509  
 trapped mode resonances rel. to open volume quasimode excitation 2-20446  
 US, method for generating and receiving narrow US beams in fast reactor liq. Na environment 2-49130

**acoustic waves**

- see also acoustic emission; magnetoacoustic effects; shock waves; surface acoustic waves; ultrasonic waves*  
 continuous waves generated by focused radiators 2-34958  
 cylindrical, asymptotic behaviour of N-wave soln. of Burgers' generalised eqn. 2-34966  
 disc or strip in diffuse sound field, acoustic field, geom. acoustics approx. (Japanese) 2-44507  
 geophysical well logging, direct and spiral waves for sources and receivers of various polarisation and symmetry 2-52742  
 measurement, tube technology for flow acoustics 2-25200  
 microwave meas. of electroacoustic conversion and attenuation of elastic waves 2-29967  
 solar atmosphere, no reson. between linear fast MHD waves and gravity acoustic waves 2-48212  
 CdS, collinear interaction of acoustic waves 2-35604

**acoustical laboratories**

- see also anechoic chambers; reverberation chambers*  
 Concordia University, Montreal, lightweight acoustic research facility, coupled reverberation chambers, -IEEE-488 computer interface 2-7994

**acoustics**

- see also acoustic applications; acoustic devices; acoustic equipment; acoustic noise; anechoic chambers; architectural acoustics; atmospheric acoustics; audio acoustics; hearing; musical acoustics; photoacoustic effect; sound reproduction; ultrasonics; underwater sound; vibrations*  
 Acoustical Soc. Amer. 102nd meeting, Miami Beach, FL, USA, 1981 Nov. 2-6701  
 diffraction problems in unbounded domains, finite element soln. 2-25346

**acousto-optical devices**

- see also acousto-optical effects*  
 Bragg cell deflection and translation of laser beams with zero freq. shift 2-25106  
 collinear acoustooptic light filtration, limiting resolution 2-11795  
 correlator, time integrating, based on light polarisation processing 2-24965  
 correlators, space-integrating and time integrating 2-34668  
 fibre optic sensors for use in sonar systems 2-29913  
 fibre optical acoustic sensors 2-7877  
 fibre-optic microbending acoustooptic sensor design optimisation 2-1037  
 filter, tunable, operating principles 2-29869  
 filter for rapid scanning circular dichroism spectropolarimeter 2-212  
 frustrated-total-reflection acoustic sensing method 2-20496  
 guided-wave acousto-optic devices and apps., review 2-7891  
 hybrid bistable optical device using an acoustooptic waveguide modulator 2-20403  
 integrated acousto-optic spectral analyser using grating components 2-7892  
 integrated optic strip waveguides driven by surface acoustic waves 2-44488  
 integrated optics spectrum analyser, aspheric geodesic lenses 2-7884  
 intensity modification of gaussian laser beam using acoustic cell 2-29838  
 intensity modification of Gaussian laser beam using acoustic cell 2-34808  
 lasers, CW, highly stable acousto-optic mode-locking using active feedback 2-7809  
 light source spectral distribution meas. using acousto-optic tunable filter (Japanese) 2-6906  
 mode converter, ultra-wideband design using SAW and optical guided-wave structs. 2-11863  
 modulator, photoelastic, anisotropy induced by acoustic standing waves 2-11808  
 modulator, using acoustic waves in an anisotropic medium 2-34883  
 modulator for active mode locking of Ar<sup>+</sup> laser (Chinese) 2-25043  
 modulator for active mode-locked pulse Nd:YAG laser (Chinese) 2-16037  
 multichannel acoustic light modulator development 2-49893  
 multichannel modulator, US divergence compensation, holographic method 2-49713  
 optical field phase struct. recording feasibility by acoustooptic method 2-34936  
 overview of acousto-optics potential in instrumentation for 1980s 2-7851  
 photoelastic light polarisation modulator (Hungarian) 2-34880  
 RF pulse generator for liquid acousto-optic shutter 2-49890  
 sonar transducers, new materials and types of device 2-44532  
 spatial light modulator and CCD for optimal image correlation 2-44200  
 spectral analyser, integrated acoustooptic, prototype 2-1046  
 spectrum analyser 2-11803  
 systolic array processing, optical implementation 2-29790  
 transducer, wide band 2-11999  
 transducer resolution, multilayer planar design 2-7722  
 US bulk wave visualization in solids with internal light probe 2-11989  
 xerographic recording, non-reversal, laser character generation methods (Hungarian) 2-16056  
 Ge acoustooptic refractive IR chopper 2-11796  
 LiO<sub>2</sub>-Si layered system, Gulyaev-Blyushtein and Rayleigh wave amplification 2-21980  
 LiNbO<sub>3</sub> acousto-optic Q switch (Chinese) 2-20343



**acousto-optical devices continued**

- LiNbO<sub>3</sub>, Y collinear acoustooptic filter, acoustic transducer imaging 2-39791  
 LiNbO<sub>3</sub>/Ti guided-wave acousto-optic Bragg cells with SAW transducers, centre freqs. >1 GHz, 500 MHz bandwidth 2-7893  
 TeO<sub>2</sub> light deflector used in optical time domain reflectometer 2-3609  
 ZnS-Ta<sub>2</sub>O<sub>5</sub>-Nb<sub>2</sub>O<sub>5</sub> multilayered thin films optical tunable couplers using SAW, filtering props. 2-34945

**acousto-optical effects**

see also *acousto-optical devices*

- acoustic imaging based on paraxial anisotropic light-diffraction by elastic waves in crystals 2-29968  
 amplitude modulation of diffracted light waves caused by adjacent US beams of freq. ratio 1:n 2-11642  
 characteristics of acousto-optic diffraction for plane-polarized light (Chinese) 2-44192  
 critical fluid, diffraction and birefringence by acoustic waves 2-21979  
 EM-acoustic wave mutual focusing and defocusing 2-25166  
 Feynman diagram approach to acousto-optic scattering in the near-Bragg region 2-11632  
 fundamental harmonic phase, expt. study of light wave passing through ultrasonic beam 2-34659  
 interference of acoustically phase-modulated light transmitted by semi-transparent film with slit opening 2-25172  
 IR pulsed opto-acoustic spectroscopy 2-3635  
 Lamb wave, propag., acoustic field distrib., optical probe technique 2-50034  
 light diffr. by US beams having phase difference 2-11880  
 light modulation, using acoustic waves in an anisotropic medium 2-34883  
 linear dynamic range of optical nearfield diffraction technique for studying ultrasonic waves 2-16197  
 liquid crystal, ang. depend. 2-21977  
 liquid drop, light scatt. by sound 2-39570  
 magnetic field effects on acousto-optical interaction, reson. effects 2-41326  
 nematic liquid crystal, acousto-optical effect on incidence of ultrasonic beam (Russian) 2-51551  
 partially coherent imaging of periodic amplitude object with ultrasonically coherence-controllable illum. 2-39561  
 pentyl-cyanobiphenyl, isotropic phase, US wave induced birefr. 2-36597  
 pentylicyanobiphenyl, isotropic phase, pulse acousto-optic modulator 2-17440  
 quartz, collinear acousto-optical filtering 2-21978  
 Raman-Nath light diffraction by US in optically anisotropic media 2-36600  
 scattering, multiple, use of Laplace transforms 2-16176  
 semiconductor, photoelasticity, nonlinear 2-2217  
 semiconductor compounds as quantum electronic materials, physical characts. (Russian) 2-20385  
 stimulated acousto-optical effects in nonlinear photoelastic cryst. 2-13449  
 US light diffr. spectra, complementarity prop. 2-49982  
 US light diffraction, reciprocity in case of non-Bragg oblique incidence 2-29914  
 US light-diffraction phenomenon, correspondence rule and reciprocity theorem 2-20247  
 US light-diffraction spectrum, Raman-Nath formula, improvement 2-20248  
 waveguides, model and real, guided TM mode acoustooptic interaction efficiency, freq. depend. 2-34894  
 Ar ion laser, active mode locking by acousto-optic AM modulation (Chinese) 2-7807  
 H<sub>2</sub>, solid, vibrational overtone optical absorption 2-36634  
 n-InSb, light diffr. by sound, photoelasticity mechanisms 2-36599  
 LiNbO<sub>3</sub> plates, laser beam modulation due to elastic waves (Russian) 2-20342  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>(P<sub>2</sub>O<sub>5</sub>)(SiO<sub>2</sub>) system glasses, acousto-optical effectiveness, conc.-depend. 2-41327  
 Nd<sup>3+</sup>:YAG ring laser with acousto-optic mode locking, competitive effects 2-44309  
 PbO-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>(P<sub>2</sub>O<sub>5</sub>)(SiO<sub>2</sub>) system glasses, acousto-optical effectiveness, conc.-depend. 2-41327  
 TeO<sub>2</sub>, angular spectra of diffracted light in strong acoustooptical interaction 2-41325  
 α-ZnPO<sub>4</sub>, acoustic and optical transparency, elastic and photoelastic props. 2-45404

**acoustoelasticity** see *elasticity*

**acoustoelectric devices**

see also *acoustoelectric transducers*

No entries

**acoustoelectric effects**

- ferroelectric crystals, acoustoelectric phenomena, novel appls. 2-30933  
 ferroelectrics, electroacoustic echo, photovoltaic effect, electrogyration, and induced pyroelec. 2-46491  
 Love waves, parametric excitation in the microwave region by an electric field in a piezoelectric plate 2-7938  
 microwave meas. of electroacoustic conversion and attenuation of elastic waves 2-29967  
 physics reviews, book 2-28617  
 piezoelectric crystals, acoustoelectric phenomena, novel appls. 2-30933  
 piezoelectric insulator-semicond. layer struct., acoustoelectronic interaction, semicond. band bending effect 2-13140  
 piezoelectric semiconductor, acoustic wave nonlinear parametric interaction 2-11118  
 piezoelectric semiconductor, solid state plasma interacting with acoustic waves 2-21614  
 piezoelectric semiconductor, solid state plasma interacting with acoustic waves 2-21615  
 piezoelectric waveguides, metallized 2-40974  
 piezoelectric-gas discharge plasma interface, SAW nonlinear interaction 2-50980  
 piezosemiconductors, acoustic wave parametric excitation by microwave electric field 2-1966  
 PMMA, electron avalanche, acoustic emission meas. 2-51239  
 PTFE, electron avalanche, acoustic emission meas. 2-51239  
 Rochelle salt, ferroelectric phase transitions, electroacoustic interaction, polarisation echo study (Russian) 2-41310  
 semiconductorpiezoelectric insulator interface, coupled acousto-magnetoplasma oscils. 2-36145  
 semiconductor, inhomogeneous, electroacoustic absorpt., coeff. and sound vel., DC cond. depend. 2-17119

**acoustoelectric effects continued**

- semiconductor, US electronic absorpt. and amplification, kinetic theory, book contrib. 2-30934  
 semiconductor film, size-quantized, Rayleigh wave amplification by EM wave 2-1965  
 semiconductors, microwave phonons, parametric amplification and freq. conversion 2-51237  
 superconductors, thermoelec. and acoustoelec. effects 2-31042  
 transverse acoustoelectric effect in the separated-medium surface-wave configuration 2-21637  
 underwater focused pulsed sound sources (German) 2-35023  
 unipolar semicond. with nonstandard band structure, acoustomagneto-electric effect 2-5443  
 Bi<sub>2</sub>GeO<sub>20</sub>, phonon echo props. 2-45460  
 CdS, acoustic domains, shock excitation and nonlinear process suppression, Brillouin scatt. meas. 2-17117  
 CdS, acoustoelectric currents, nonlinear, during US carrier injection 2-36107  
 CdS, phonon echo props. 2-45460  
 CdS piezocrystal, surface acoustic waves, nonlinear refl. 2-26201  
 n-CdS, piezoelectric semicond., acoustic wave propag., electron mass and collision freq. changes 2-46079  
 CdS, RF elec. field excitation in volume elastic waves interaction 2-46082  
 CdS, surface, acoustoconcentration effect due to amplified US wave, elec. cond. obs. 2-51238  
 n-InSb, acoustic wave multitransit generation in elec. field 2-5442  
 p-InSb, acoustoelec. interaction, US relax. and magnetoresist. study 2-45413  
 KH<sub>2</sub>PO<sub>4</sub>, ferroelectric phase transitions, electroacoustic interaction, polarisation echo study (Russian) 2-41310  
 LiNbO<sub>3</sub>-InSb film struct., acoustoelectronic interaction, quantum size effect 2-46081  
 Te, Y-cut, total saturation of current 2-46080

**acoustoelectric transducers**

see also *earphones; headphones; hydrophones; loudspeakers; microphones*  
 development, operational use and parameter meas., calibration, review (German) 2-4678

- oscillation amplitude meas. by laser 2-43000  
 phase insensitive ultrasonic receiver based on acoustoelectric effect, response characts. 2-35024  
 spatially nonuniform US detect. with piezoelectric and acoustoelectric receivers 2-35025  
 wide band 2-11999

**acoustooptics** see *acousto-optical effects*

**actinide alloys**

see also *actinide compounds; neptunium alloys; plutonium alloys; thorium alloys; uranium alloys*  
 Th-Ce, extremely dilute, intermediate valence, TDPAD study 2-2169

**actinide compounds**

see also *compounds of individual actinides, e.g. uranium compounds*  
 see also *actinide alloys*  
 crystal chemistry and electronic struct. 2-21081  
 monazite minerals, high energy alpha emitters search 2-28073

**actinide metal compounds** see *actinide compounds*

**actinide metals** see *actinides*

**actinides**

see also *individual actinides, e.g. uranium*  
 waste actinides elimination by recycling to nuclear reactors 2-24316

**actinium**

see also *nuclei with ..... band struct., effect of correl., relativistic APW calc.* 2-26283

**actinium compounds**

No entries

**actinometers** see *radiometers*

**actinometry** see *radiometry*

**activation analysis** see *chemical analysis by nuclear reactions and scattering*

**active filters**

signal processing filter and wideband preamplifier for gas proportional detectors 2-43727

**active nitrogen** see *nitrogen*

**active oxygen** see *oxygen*

**actuators**

see also *electric actuators*

cryogenic pneumatic materials test system for low temp. appl. 2-22404

**adaptive control**

see also *adaptive systems*

- active sound control in a duct, computer simulation 2-11884  
 blood pressure automated control using self-tuning regulator, dog expt. 2-22872  
 PWR power station self-tuning load-following control 2-546  
 rotating-mirror cameras, adaptive digital control 2-48830

**adaptive optics**

see also *optical phase conjugation*

- active mirror shaping, use of synthesized holograms as compensators 2-1004  
 anisoplanatic error reduction for propag. through turbulent atm. 2-24969  
 anisoplanatism for compensated imaging system and adaptive optics laser transmitter 2-24968  
 anisoplanatism in adaptive optics 2-44206  
 astronomical appl. (Japanese) 2-53094  
 coherent adaptive optical techniques (COAT) system, performance determ. in pursuit regime (French) 2-29865  
 coherent optics, conditions for effective phase adaption (Russian) 2-847  
 conjugate wave generation physics, adaptive optics appl. 2-25077  
 corner-cube array coat, phase conjugator for large aperture wavefronts 2-7831  
 deformable bimorphous mirror using Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub> electrostrictor 2-2998  
 deformable high-speed mirror system, laser wave front correction appls. 2-49856  
 deformable mirrors for all seasons and reasons 2-49855  
 discrete components for adaptive optical systems, review 2-25100  
 emission wavefronts, sphericity control (Russian) 2-44204  
 intracavity adaptive optic compensation of phase aberrations, passive small equiv. Fresnel no. resonator 2-11728  
 laser beams, modal compensation of atmospheric turbulence induced wavefront aberrations via adaptive optics 2-48001



**adaptive optics continued**

- laser optics, conf., Leningrad, USSR (Jan. 1980) 2-28594
- mirror system, synthesized, element fabrication and mounting, errors 2-39716
- nonlinear distortions correction of light beams by optical system with feedback 2-981
- nonlinear image processing, adaptive optical 2-44207
- phase measurement systems for adaptive optics 2-23716
- resolving power evaluation of coherent optical adaptive systems through turbulent atm. 2-24948
- special topics in optical propagation, conference, Monterey, California, (1981 April 6 to 10) 2-28611
- state-of-the-art report, atm. turbulence and thermal blooming correction 2-25085
- thermal blooming compensation 2-25086
- wavefront tilt compensation in inhomogeneous propagation media (*Russian*) 2-34665
- Bi<sub>2</sub>SiO<sub>20</sub> photorefractive crystal, phase conjugation by real-time holography and degenerate four wavemixing 2-25078

**adaptive systems**

- see also *adaptive control; adaptive optics; learning systems; pattern recognition; self-adjusting systems*
- array adaptive noise cancellation with wanted signal leakage 2-44588
- empirical statistical spectral analysis procedures 2-44596
- multidimensional constrained lattice processor for passive sonar adaptive arrays 2-44589
- optimal beamformer response to source with all-pole angular power density spectrum 2-44599
- passive listening adaptive array spatial resolution improvement 2-44597
- steel, stainless, pipe weld, crack detection using US signal processing, appl. of adaptive learning networks 2-13918
- Al multilayered adhesively bonded structures, appl. of adaptive learning networks to US signal processing, flaw classification 2-17854

**adding machines** see *calculating apparatus***adherence** see *adhesion***adhesion**

- absorbing thin films, adhesion influence on laser heating and damage processes 2-35537
- Araldite type epoxy resins and polycarbonate boxes, adhesion failure (*Hungarian*) 2-47297
- aryloxy surface modification by N<sub>2</sub> plasma electrodeless HF capacitive discharge (*Russian*) 2-5967
- block copolymer, thermodynamic props. and adhesion (*French*) 2-16828
- bonding, diffusion, theoretical model 2-41864
- cells, specific adhesion to surfaces or other cells, theoretical models 2-9787
- cement, K-400, interaction with pyroceramic and quartz, MFTIR IR spectra obs. 2-49840
- coatings, review 2-47213
- composites, polymeric, multilaminar polymer films as models 2-36924
- diffusion bonded precision joints, reaction pressure distrib. 2-12106
- diffusion bonding process for joining of ferrite to BaTiO<sub>3</sub> ceramic 2-31895
- electrodeposited coatings, for sliding contacts, adhesive wear props. 2-9425
- enamel/metal interface, X-ray Auger microanalysis of Fe 2-35900
- epoxy adhesive for mounting optical elements to holders 2-7900
- epoxy glue joints, static crack stability determ. 2-13908
- fibre reinforced composites, high-speed test instrument, adhesive forces meas. 2-9485
- fibre reinforced plastics, adhesive joint strength, effect of joint shape and lap length (*Japanese*) 2-5949
- film, atomic beam deposited, integrated sticking coeff. calc. 2-12937
- friction coefficient, magnitude with and without adhesion (*German*) 2-35588
- hardened cement paste, endurance testing by radiometric emanation method (*Czech*) 2-47286
- Hertzian contact stress, effect of thin compliant protective coating 2-47207
- hexamethylenedisilazane coated motion lead-ions, frictional characts., coating method influence (*Russian*) 2-9420
- hydrothermal degradation detection by US spectroscopy 2-17853
- inorganic sublayers, vacuum evaporated, for Ag-As<sub>2</sub>S<sub>3</sub> based photographic system 2-28917
- interface waves in thin adhesive films, adhesive bond strength determ. 2-2647
- ion scattering spectrometry, low energy, for material characterisation 2-46859
- liver cells, adhesion to glass surfaces, reflection-contrast microscopy 2-52694
- low energy surfaces, characterisation by standard surface method 2-5295
- metal, ductile, role of adhesion during wear 2-27291
- metal surface and polar liquid, adhesive interaction, mutual polarisation influence 2-30717
- metal-metal adhesively bonded structures, through transmission US attenuation meas. 2-17856
- metals, experiment for Spacelab I, development status 2-31896
- mixed colloidal systems, heterocoagulation, adhesion and microfloitation 2-47380
- parylene adhesion, to various substrate materials, the effect of plasma pretreatment 2-17791
- physical adhesive state between solids 2-27406
- plasma sprayed coatings, acoustic materials testing 2-17811
- polybutadiene-glass adhesion strength, rel. to no. of chem. bonds. 2-37040
- polyethylene-Al, XPS quantitative anal. 2-46881
- polyethylene-polyvinyl acetate cement-melt for optical component blocking, thermal and adhesion props. 2-49957
- polymer bridging forces in liquid/liquid systems 2-35864
- polymer films, multilaminar, modes of polymer composites 2-36924
- polystyrene-b-isoprene copolymer films, adhesive appls., tensile strength 2-17868
- powders, heated state, adhesive force and fluidity (*Japanese*) 2-36948
- protective coatings, adhesive-cohesive equality of strength criteria, and heat resist. 2-31815
- PTFE coated motion lead-ions, frictional characts., coating method influence (*Russian*) 2-9420
- resin sand mixture, cold-setting, bonding mechanism, fracture appearance 2-27257

**adhesion continued**

- silicone adhesive, pressure sensitive, wide temp. range and minimal creep 2-2691
  - slope stability of electropacked beds 2-20229
  - solid/solid interface, adhesive performance prediction, surface energy characterisation 2-35899
  - sprayed coatings, US and optical nondestructive testing 2-17812
  - steels, diffusion bonding study 2-22408
  - stress analysis of adhesive joint by finite element methods (*Japanese*) 2-6014
  - strip elasticity theory, punch indentation, mixed problem soln. 2-1153
  - thick film, effects of substrate heating and ion cleaning 2-52171
  - viscoelastic analysis of adhesively bonded joints 2-12049
  - Ag chips, with and without Ag<sub>2</sub>S tarnish layer, subject to friction load, contact resist., adhesion and wear 2-36973
  - Al alloy, selective reinforcement by adhesive bonding with uniaxially aligned C fibre reinforced epoxy 2-27221
  - Al film, plasma vapour deposited, adhesion failure by repeated bending of substrate 2-2689
  - Al-Mg adhesive joints, bonding and failure mechanism 2-6015
  - Al-Mg joints, welded and glued, strength under dynamic tensioning 2-41701
  - Au/Si adhesion on radiation detector substrate, temp. and aging depend. 2-49215
  - Au-Sn-Al metallisations on GaAlAs, interfacial struct. studies 2-8713
  - Bi, vacuum deposited coating, mech. props., cracks and wrinkles 2-21476
  - Bi film, plasma vapour deposited, adhesion failure by repeated bending of substrate 2-2689
  - C film, on glass substrate, internal stress, Young's modulus and adhesion energy 2-8740
  - C vacuum deposited coating, mech. props., cracks and wrinkles 2-21476
  - C-fibre composite/Al-alloy, thermally-induced shear stress meas. 2-52169
  - Cu alloy M1, joints, welded and glued, strength under dynamic tensioning 2-41701
  - Cu film, magnetron sputtered, electron beam ionisation effects 2-51804
  - Cu/Cr thin film system, shear stress and adhesion of film areas of various sizes and shapes 2-5334
  - Fe, protective coatings by anodic coupling polymerization of o-allylphenol 2-27328
  - $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, haematite, particle adhesion and removal, kinetics of detachment from steel 2-27485
  - MgF<sub>2</sub>, vacuum deposited coating, mech. props., cracks and wrinkles 2-21476
  - MoSi<sub>2</sub> coating on steel, oxidation resistance 2-52090
  - NbTi-Cu multifilament supercond., explosive bonding (*Chinese*) 2-41096
  - SiC self-bonded, joining by Ge metal 2-9521
  - SiO film, plasma vapour deposited, adhesion failure by repeated bending of substrate 2-2689
  - Sn alloys, antifriction, microstructural studies by SEM, TEM and X-ray microanalysis (*Rumanian*) 2-21319
  - Sn based antifriction alloy, struct. obs. in contact areas (*Rumanian*) 2-16805
  - Ti adhesively bonded joint, swelling by water uptake, osmosis 2-13929
  - Ti-Al-Mo joints, welded and glued, strength under dynamic tensioning 2-41701
  - TiC-Fe wear resistant powder metallurgical coatings, on C steel 2-13860
  - TiN, ion plated on steel, adhesion studies 2-8719
  - ZrO<sub>2</sub>-8Y<sub>2</sub>O<sub>3</sub>/Ni-Cr-Al-Y thermal barrier coated rods, assessment of variations in thermal cyclelife data 2-31819
- adiabatic compression, plasma** see *plasma heating*
- adiabatic demagnetisation** see *magnetic cooling*
- adion** see *adsorption*
- administrative data processing**  
see also *management information systems; medical administrative data processing*  
safeguards, information system for IAEA 2-4145
- admittance, electric** see *electric admittance*
- admittance, electric, measurement** see *electric admittance measurement*
- ADP** see *administrative data processing*
- ADP (ammonium dihydrogen phosphate)** see *ammonium compounds*
- adsorbed layers**  
see also *monolayers*  
acetylene, adsorbed on Cu and Pt surfaces, AES study 2-51002  
acetylene adsorbed on Ag colloid, surface-enhanced Raman spectra 2-34413  
adatoms, interactions rel. to pot. difference at metal-electrolyte interface 2-1748  
adsorbed layer, heat transmission from substrate, film thickness depend. 2-50954  
adsorbed mols., photoelectrons ang. distrib., energy dependence 2-46877  
adsorption of Ar, monolayer and bilayer films, lattice consts. and vibrs., thermodynamic props. 2-45714  
aliphatic carboxylate ions adsorbed on Al and MgO surfaces, inelastic electron tunnelling spectra, vibr. mode assignments 2-24805  
alkali metal covered Ni(100), CO adsorpt. 2-40696  
alkali metals, adsorbed Cs, response to surface core excitations 2-40679  
alkali metals, on Ge (111), effect on O<sub>2</sub> adsorption 2-12918  
tetra-alkylammonium chlorides, adsorpt. on heptane/water separation boundary, Traube rule 2-45679  
alumina with adsorbed NO<sub>2</sub>/N<sub>2</sub>O<sub>4</sub>, SO<sub>2</sub>, Br<sub>2</sub> and acetylene, resonance Raman spectra 2-2295  
azo dye, surface-active, adsorbed at glass-water interface, reson. Raman spectra 2-5716  
azulene chemisorbed monolayer on Pt(111), order-disorder phase transition 2-26211  
benzene, chemisorbed on Raney Pt, neutron inelastic scatt. study 2-16938  
benzene, on Ni, photoemission spectroscopy (*German*) 2-17598  
benzene adsorbed on Ag(111) surface, electronic excitation, EELS and Raman spectra 2-30945  
benzene adsorbed on Ag (111), electron scatt. study of vibr. overtones 2-34377  
benzene adsorbed on Pt-Al<sub>2</sub>O<sub>3</sub>, Fourier transform IR spectroscopy, evidence for  $\pi$ - and  $\sigma$ -bonded chemisorbed species 2-40694  
benzene chemisorbed on small P+ clusters, enhanced Raman scatt. 2-41365  
bile pigments, surface enhanced Raman spectra 2-14206  
chemisorbed atoms on metal surface, quasi-two dimens. system, many-body effects 2-31437



## adsorbed layers continued

chemisorption on stepped surfaces theory, adatom binding energies, LEED intensity expression 2-1770  
 commensurate order, multicrit. points and finite sizes 2-1751  
 commensurate-incommensurate transitions 2-5335  
 commensurate-incommensurate transitions with  $2 \times 2$  structure in mean-field approx. 2-21813  
 critical properties near transition temp. using LEED intensity 2-1761  
 cyclohexane adsorbed on  $\text{Pt-Al}_2\text{O}_3$ , Fourier transform IR spectroscopy, evidence for  $\pi$ - and  $\sigma$ -bonded chemisorbed species 2-40694  
 desorption rate const. preexponential factor, lateral interactions effect 2-16947  
 diatomic molecule on metal surface, vibrational excitation intensities 2-2247  
 diazines, on Ag electrode, Raman spectra enhancement, vibr. modes 2-5706  
 p-(dimethylamino)azobenzene adsorbed on  $\text{ZnO}$  and  $\text{TiO}_2$  surfaces, reson. Raman excitation profiles 2-34422  
 N,N'-dimethyl 4,4'-bipyridinium ion and monoradical cation, adsorpt., Raman spectrosc. obs. 2-39397  
 dye adsorbed on Ag island films, enhanced surface SHG and two-photon dye luminesc. 2-11755  
 dynamics of surfaces with overlayers 2-1726  
 EELS, dipole electron scatt., book contrib. 2-41469  
 elastic interaction with surface step 2-35883  
 electrode surface, adsorbed species interactions, Friedel oscill. analog effects 2-51285  
 electron impact vibr. excitation, angle and energy depend., book contrib. 2-41470  
 ethane, on graphite, thermodynamic props. investig. (French) 2-21461  
 ethyl  $\alpha$ -cyanoacrylate, adsorbed on  $\text{Al-Al}_2\text{O}_3$ -Pb tunnel junction, IR and IETS study 2-40691  
 ethylene, adsorbed on Cu and Pt surfaces, AES study 2-51002  
 ethylene adsorbed on Ag colloid, surface-enhanced Raman spectra 2-34413  
 ethylene on Ru (001), mol. conform. 2-5302  
 formic acid, on  $\text{Al}_2\text{O}_3$  and  $\text{MgO}$ , vibr. modes, IETS study, book contrib. 2-39459  
 graphite, adsorbed He, selective adsorption intensity features, perturbative calcs. 2-41480  
 graphite, adsorbed methane film, specific heat, rot. transition 2-30749  
 graphite, adsorbed  $\text{N}_2$ , fluctuation induced phase transition 2-40686  
 graphite, adsorbed  $\text{N}_2$ , molecular axes orientational ordering 2-40685  
 graphite, adsorption of Ne submonolayers, struct. and phase transitions 2-30748  
 honeycomb lattice gas model of transitions, renormalisation group calcs. 2-1776  
 hydrocarbon films adsorbed on graphite, orientational order 2-1756  
 incommensurate phase, soliton crossing 2-45723  
 indigoid dyes adsorbed on alumina, photochemistry, photoacoustic spectra 2-47354  
 inelastic molecular beam scattering from surfaces, book contrib. 2-41485  
 inert gas microclusters, two-dimens. and adsorbed, struct., mol. dynamics method 2-1775  
 ion scattering, high energy, for surface struct. determ., review 2-22132  
 liquid-air interface, aq.-nonelectrolyte soln., surface activity, H bond form. theory 2-1709  
 long range order and neutron scatt. from low-dimens. systems, substrate effects 2-1764  
 low energy ion scattering, comp. and struct. analysis of solid surfaces 2-27047  
 melting anomalies in adsorbate systems 2-30750  
 mercaptobenzothiazole, on Ag electrodes, surface enhanced Raman scatt. 2-22008  
 metal monolayer on metal substrate, quantitative AES 2-36741  
 metal particles, subwavelength dimens., EM wave reflection, field intensities 2-46522  
 metal surface, adsorbed species, EELS study 2-22127  
 metal surface, Raman intensities from adsorbed molecules, surface roughness effects 2-5700  
 metal surface, Raman scattering by adsorbed molecules, role of surface roughness 2-2291  
 metal surface spectra, CT and totally symm. mode activity 2-22017  
 methane adsorbed on graphite, rot. tunnelling, inelastic neutron scatt. spectra 2-21442  
 methanol, on Cu (100), surface vibr. modes, EELS study 2-17581  
 methoxide, adsorbed on Cu (100), vibr. damping, IR spectra study 2-45707  
 methoxide adsorbed on Cu(100), CH stretch vibr., IR spectra 2-20051  
 methyl isocyanide, adsorbed on Rh, tunnelling spectra, top metal electrode effect 2-35892  
 molecule, on liq. Hg, surface enhancement Raman scatt., EM effects 2-5685  
 molecule, on metal substrate, Raman scatt. enhancement 2-5713  
 molecule, on metallic sphere, surface enhanced Raman scatt. 2-5710  
 molecule adsorbed on metal surface, electron-hole excitation role 2-40983  
 molecules, laser Raman scatt. obs., review (Japanese) 2-31501  
 molecules adsorbed on metal, surface-enhanced Raman scatt. 2-2237  
 molecules on Ag island films, fluoresc. lifetimes and yields 2-43981  
 Mossbauer cross section isotherms, adsorbed phase boundaries, two-dimens. phenomena 2-2172  
 naphthalene, adsorbed on Pt (111), LEED beam symmetry extinction 2-1741  
 neopentane adsorbed upon  $\text{TiO}_2$ , NMR spectra, rot. and translational diffusion coeff. 2-13355  
 neutron scattering, review 2-44981  
 p-nitroso-N,N'-dimethylaniline adsorbed on  $\text{ZnO}$  and  $\text{TiO}_2$  surfaces, reson. Raman excitation profiles 2-34422  
 NMR studies, review 2-51474  
 O, on V and Nb, vel. depend. of ionisation probability of sputtered O<sup>-</sup> 2-13607  
 one-dimensional chain, dynamics in periodic pot., quantum calc. 2-26232  
 order-disorder transformations on transition metal alloys 2-50967  
 order-disorder transition, finite-size effects and charact. substrate sizes, renormalisation group calcs. 2-5309  
 ordered, chem. diffusivity simulation 2-1774  
 overlayers with antiphase boundaries or islands, struct. function, LEED determ. 2-16949  
 oxides, surface clusters, quantum chem. calc. (German) 2-45736  
 pair energy meas. on W(110) plane 2-12910  
 phenol, adsorbed layer, tunnelling spectra at mK temps. 2-35891

## adsorbed layers continued

photoelectron angular distributions and photoionization cross-sections in the vacuum ultraviolet, book contrib. 2-34494  
 photoemission, angle-resolved, from adsorbate covered surfaces, review 2-46880  
 physisorbed films, commensurate-incommensurate transitions on anisotropic substrates 2-26212  
 plasmon mediated, long range, oscillating van der Waals forces between molecules adsorbed on metals 2-44031  
 polymer bridging forces in liquid/liquid systems 2-35864  
 polymer mixtures on plane square lattice, thermodynamic props. 2-8712  
 polystyrene, adsorpt. on Pyrex glass, conformation and dimensions, viscosimetry study 2-5299  
 polyvinyl alcohol, effect of polydispersity on adsorption isotherm 2-26213  
 pyrazine, electronically excited  $^3\text{B}_{3g}$ , mol. adsorbed on Ag and Au surfaces, time resolved energy transfer 2-41398  
 pyrazine adsorbed monolayers on Ag, optical second-harmonic generation 2-968  
 pyrazine adsorbed on Ag(111) surface, electronic excitation, EELS and Raman spectra 2-30945  
 pyridine, adsorbed on Ag electrode, radiochem. and Raman spectra study 2-2249  
 pyridine, adsorbed on metal and metal oxide surfaces, surface enhanced Raman scatt. 2-51563  
 pyridine, on Ag, enhanced Raman scattering in ultrahigh vacuum 2-5709  
 pyridine, on Ag, XPS and Raman spectra study 2-13625  
 pyridine, on Ag electrode, pot. modulation Raman spectra 2-5717  
 pyridine, on Ag electrode, Raman intensity enhancement due to radicals form. 2-5711  
 pyridine, physisorbed on Ag and Au, enhanced Raman scatt. 2-5707  
 pyridine+Cl<sup>-</sup>, adsorbed on Ag electrode, surface enhanced Raman scatt., overtones and combination modes 2-5708  
 pyridine adsorbed on Ag(111) surface, electronic excitation, EELS and Raman spectra 2-30945  
 pyridine adsorbed on Ag colloid and electrode, surface-enhanced Raman effect pot. depend. comparison 2-34414  
 pyridine adsorbed on Ag surface modified Au, enhanced Raman scatt. from adsorbate 2-2292  
 pyridine adsorbed on Cd, surface enhanced Raman scatt. 2-34420  
 pyridine adsorbed on weakly roughened Ag film, surface enhanced Raman scatt., extended surface plasmons effect 2-41366  
 pyridine exposed Ag, Cu, and Au films, Raman spectroscopy 2-36614  
 pyridine on Ag (111), electron scatt. study of vibr. overtones 2-34377  
 reaction products on electrode surface, pot. modulation Raman spectroscopy 2-5717  
 reflection absorption IR spectroscopy, appl. to adsorbates, book contrib. 2-41370  
 rhodamine 6G, adsorbed on silica surface, energy transfer and electronic interactions 2-43986  
 rhodamine B, on Ag particle film, enhanced two-photon fluoresc. 2-29655  
 rhodamine B on Ag, surface plasmons, light reflection study (French) 2-2360  
 spectroscopy of adsorbates on narrow semicond. channels 2-35885  
 submonolayer adsorbed films, thickness detect. and meas. using optical reflectance technique 2-23710  
 surface, (111) and (100), HBr(HCl) adsorpt., superlattice formation, expt. study 2-45726  
 surface enhanced Raman scatt., causes 2-5702  
 surface enhanced Raman scatt. at metal surfaces, book contrib. 2-41371  
 surface enhanced spectroscopy, role of EM interactions 2-2377  
 surface EXAFS technique for surface struct. determ. 2-22113  
 surface phonon modification, localised and reson. modes, book contrib. 2-40665  
 surface science, recent advances 2-21434  
 surface vibr. study by neutron scatt., book contrib. 2-40666  
 surface-enhanced Raman scattering in attenuated total reflection arrangement 2-48805  
 tetrabromophenol blue, adsorption on  $\text{ZnO}$  and resulting photovoltaic properties under He-Ne laser 2-26449  
 thermal desorption of particles experiencing dissociation reaction in adsorbed layer, transient processes of surface ionisation 2-22489  
 tryptamine adsorbate-phosphors on silica gel, afterglow, O<sub>2</sub> quenching at late damping stages 2-36690  
 two-dimensional phase transforms as displayed by adsorption isotherms on graphite and other lamellar solids 2-8700  
 vibrational modes, IETS study, book contrib. 2-39459  
 vibrational spectroscopy, book 2-38375  
 vibrations on metal substrate, rel. to ligand vibr. in metal clusters and complexes, book contrib. 2-39376  
 water, on Pt, synchrotron radiation photoemission study 2-2413  
 zeolite with adsorbed  $\text{NO}_2/\text{N}_2\text{O}_4$ ,  $\text{SO}_2$ ,  $\text{Br}_2$  and acetylene, resonance Raman spectra 2-2295  
 (110) surface, caesiated,  $\text{H}^-$ ,  $\text{D}^-$  formation by  $\text{H}^+$ ,  $\text{D}^+$  scatt. 2-41477  
 Ag adsorbed  $\text{H}_2$ , rotational excitation obs. 2-40687  
 Ag adatoms, on Ag electrode surfaces, Raman spectra, background signals 2-51604  
 Ag, adsorbed on Si(111), growth and surface struct., expt. study 2-45727  
 Ag enhanced Raman spectra of adsorbed CO, ethylene and propene 2-2294  
 Ag, of pyridine, Raman scatt., C adsorption 2-5705  
 Ag surface enhanced Raman scatt. from adsorbed pyridine, triphosphene and ruthenium red 2-5704  
 Al-Al oxide-Ag  $\text{CaF}_2$  roughened tunnel junction with adsorbed 4-pyridine-COH, Raman spectra 2-5703  
 $\gamma\text{-Al}_2\text{O}_3$ , surface, fluorescence decay of adsorbed aromatic hydrocarbons 2-51674  
 Ba on W, field emission spectroscopy study 2-17609  
 BaO, on W, field emission spectroscopy study 2-17609  
 Be, on W, field emission spectroscopy study 2-9254  
 Bi, on Si, sticking coeff., first adlayer struct. influence 2-45733  
 C during Ag adsorption of pyridine, Raman scatt. 2-5705  
 C, on W, effect on surface diffusion of Pb adatoms 2-16955  
 CN<sup>-</sup>, adsorbed on Ag electrode, radiochem. and Raman spectra study 2-2249  
 CO, adsorbed on Fe, tunnelling spectra, top metal electrode effect 2-35892  
 CO adsorbed on Ni (111), polarisation of Raman modes 2-2251  
 CO adsorption on Ni(111) surface, struct. exam. 2-40673  
 CO bridge bonded on Pt, IR integrated absorpt. intensities and extinction coeff. 2-34396



## adsorbed layers continued

- CO c(2x2) layer on Ni (001), image pot. and ion trajectories in SIMS 2-41481  
 CO, chemisorbed on Ni (100), geom., vibr. freqs., ionisation pot., and photoelectron spectrum 2-1743  
 CO chemisorbed on Ni (100), photon stimulated desorption due to multi-electron emission 2-12908  
 CO chemisorbed on Pt, UV photoemission, valence band studies 2-41496  
 CO, chemisorbed on Pt and Cu surfaces, Auger spectra 2-51003  
 CO, on Ag, inelastic electron scatt. 2-2389  
 CO, on Cu, refl. absorpt. IR spectroscopy study, book contrib. 2-41370  
 CO, on Cu (100), surface vibr. modes, EELS study 2-17581  
 CO, on metal surface, mol. vibr. interaction, dipole-dipole interaction 2-45709  
 CO on Ni (100), inelastic electron scatt. by adsorbate vibrs. 2-22128  
 CO, on Pt, synchrotron radiation photoemission study 2-2413  
 CO, oxidation on Pd surface, IR reflection-absorpt. spectra study 2-41921  
 CO+H<sub>2</sub>, on small Ni particles, Raman scatt. enhancement 2-5712  
 Cl chemisorbed on Pd (001), electronic struct., LCAO calc. 2-1987  
 Cl, chemisorption on Ni (100) surface, bonding calcs. 2-12905  
 Cl<sup>-</sup>, adsorbed on Ag electrode, radiochem. and Raman spectra study 2-2249  
 Co adsorbed on Cu surface, reconstruction, CDW, surface mag. and O<sub>2</sub> adsorption 2-12911  
 Co isotopic mixture overlayers on Cu (111) and (001), collective vibr. modes 2-12903  
 CoO, surface clusters, quantum chem. calc. (*German*) 2-45736  
 Cu surface, (100), adsorbed ethene vibr. excitation and struct. 2-49362  
 Cu, surface enhanced Raman scatt. from adsorbed pyridine, triphosphene and ruthenium red 2-5704  
 Fe, surface dispersed layers in far from thermodynamic equil. state, prep. by surface reactions 2-2739  
 Fe<sub>2</sub>O<sub>3</sub> surface dispersed layers in far from thermodynamic equil. state, prep. by surface reactions 2-2739  
 Ge surface, adsorbed K(Na), work function, field desorpt. and theoretical study 2-46103  
 H, adsorbed on He film surface, motion and effective mass 2-30706  
 H, adsorbed on solid H<sub>2</sub> and superfluid <sup>4</sup>He, EPR study 2-29541  
 H, atomic, spin polarised, physisorbed on liq. <sup>4</sup>He, dynamic props., third sound study 2-30707  
 H, atomic, spin polarised, adsorbed on <sup>4</sup>He, longit. and transverse relax. 2-35862  
 H chemisorbed on W(100), IR study by surface EM wave spectroscopy 2-26220  
 H, chemisorption on Ni (100) surface, bonding calcs. 2-12905  
 H, on Ni and Pd, ordered struct. form., role of H-H interactions 2-1744  
 H, on W (001), adsorbate induced optical phonons, book contrib. 2-40665  
 H, on W (001) surface, effect on commensurate-incommensurate transform. 2-1771  
 H, on W (110) plane, field emission current fluctuation method obs., surface diffusion and phase transition 2-1769  
 H, on W(100), EELS, impact scatt. calc. 2-2388  
 H, sticking probabilities on <sup>3</sup>He and <sup>4</sup>He on binding energy on <sup>3</sup>He 2-1694  
 H<sub>2</sub>, chemisorbed on W (001) and Mo (001) surfaces, substrate rearrangement and 2D ordering 2-1755  
 H<sub>2</sub>, on Ag, inelastic electron scatt. 2-2389  
 o-H<sub>2</sub>, quantum liquid cryst. adsorbed on graphite 2-45668  
 H<sub>2</sub>(HD)(D<sub>2</sub>) on Cu (100), rot. transitions, EELS study 2-46843  
 H<sub>2</sub>O adsorbate on SiO<sub>2</sub> gels, Cu<sup>2+</sup> electron spin echo 2-9028  
 H<sub>2</sub>O chemisorbed on Pt, UV photoemission, valence band studies 2-41496  
 H<sub>2</sub>O, dissoci. reaction on clean and oxidised Fe (110) investigated using UPS 2-47326  
 H<sub>2</sub>O dosed GaAs (110) surface photon stimulated ion desorption of H<sup>+</sup> ions 2-1740  
 He, on graphite, anisotropic pair pot. and band struct. effects 2-1772  
<sup>3</sup>He adsorbed layers on fluorocarbons, nuclear relax. study 2-35838  
<sup>3</sup>He, adsorbed on exfoliated graphite, ferromag. ordering, susceptibility and NMR study 2-35837  
<sup>3</sup>He, adsorbed on graphite, second layer and nucleation, neutron diff. study 2-40637  
<sup>3</sup>He, adsorbed submonolayer on solid Ne, sp. ht. anomalies 2-40642  
<sup>3</sup>He solid layers adsorbed on graphite, mag. coupling 2-16923  
<sup>4</sup>He, adsorbed on Grafoil, excitations, neutron diff. study 2-40641  
<sup>4</sup>He, adsorbed on graphite, second layer, neutron diff. study 2-40640  
<sup>4</sup>He, adsorbed on pyrolytic graphite superfluid onset, third sound and vapour press. study 2-40644  
<sup>4</sup>He, adsorbed submonolayer on solid Ne, sp. ht. anomalies 2-40642  
<sup>4</sup>He film, attenuation of static polarisation echo 2-45667  
<sup>4</sup>He, on grafoil, solid layer struct. 2-1698  
<sup>4</sup>He, superfluid, adsorbed on Vycor glass, superfluid transition above bulk solidification press. 2-35836  
<sup>4</sup>He superfluid film, adsorbed in porous Vycor glass, superfluid density, Landau elementary excitations 2-26171  
 I, on Cu (001), charge state, XPS study 2-41494  
 In, adsorbed on Si (111), elec. current effect, RHEED obs. (*Japanese*) 2-21653  
 In on Ge(111), surface superstruct., RHEED study 2-26196  
 Ir overlayers on W (110), FIM study 2-1742  
 Kr, adsorbed on graphite two-dimensional phase transforms. 2-8700  
 Kr, adsorbed on Pd, layer-dependent core-level shifts 2-2014  
 Kr, on Ag(111), monolayer and bilayer films, lattice const. and vibr., thermodynamic props. 2-45714  
 Kr, on graphite, pair pot. 2-1768  
 Mg, adsorbed Cs and Rb submonolayers, outer core spectra 2-40678  
 MgO-CoO, surface clusters, quantum chem. calc. (*German*) 2-45736  
 Mo, adsorbed Cs, work function, thermal stability, LEED study 2-45732  
 N<sub>2</sub>, on Ag, inelastic electron scatt. 2-2389  
 NH<sub>3</sub> adsorbate on SiO<sub>2</sub> gel surface, Cu<sup>2+</sup> electron spin echo 2-9028  
 NH<sub>3</sub>, on Ru (001), mol. conform. 2-3302  
 NO(-CO)(-O<sub>2</sub>) adsorbed on Pd surface, IR spectra, thermal desorpt. and XPS study 2-50997  
 Na, chemisorption on Ni (100) surface, bonding calcs. 2-12905  
 Ni (111), adsorbed CO, electron-stimulating desorption 2-51000  
 Ni, of Cl during passivation by burning discharge in Cl-O<sub>2</sub> mixture (*Russian*) 2-2611  
 Ni, on Au, photoemission spectroscopy (*German*) 2-17598

## adsorbed layers continued

- Ni, surface (001) adsorbed O c(2x2) overlayer, ion bombardment, angular distrib. of ejected atoms 2-1529  
 O, adsorbed on  $\alpha$ -brass (110), vibr. spectra, EELS study 2-51753  
 O, chemisorbed on Al(111), self-consistent electronic struct. and bonding 2-13153  
 O chemisorbed on W (110), island form. and dissolution, LEED study 2-1757  
 O, chemisorbed on Al(111), electronic band struct., and bond length 2-13154  
 O, chemisorption on Ni (100) surface, bonding calcs. 2-12905  
 O, on Fe(100) and (110) effect on N adsorpt. (*Japanese*) 2-26218  
 O, on Ni (111), adsorbate induced optical phonons, book contrib. 2-40665  
 O, on Ni (111), order-disorder transition; random four-state Potts model 2-50998  
 O, on Ni and Fe, electron stimulated desorption 2-26231  
 O, on Ni(111), multicritical phase diagram 2-1752  
 O, on stepped W (110) surface, chemisorption theory and adatom binding energies 2-1770  
 O<sub>2</sub> chemisorbed on Pt surface effect on Ag film growth 2-45756  
 O<sub>2</sub> chemisorbed on Ti(0001), surface states study 2-26221  
 O<sub>2</sub>, on Ag, inelastic electron scatt. 2-2389  
 O<sub>2</sub> physisorbed on graphite, vibr. bands in photoemission spectra 2-13623  
 Pb, surface diffusion on W, field electron microscopy study 2-16954  
 Pb, surface diffusion on W, effect of coadsorbed C 2-16955  
 Pd on Pt, cluster absorption on amorphous and crystalline surfaces, mol. dynamics study 2-8709  
 Pd overlayers on W (110), FIM study 2-1742  
 Pt on Cu, cluster absorption on amorphous and crystalline surfaces, mol. dynamics study 2-8709  
 Pt overlayers on W (110), FIM study 2-1742  
 S c(2x2), on Ni (100), struct. determ. using polarisation depend. surface EXAFS 2-30751  
 S, chemisorption on Ni (100) surface, bonding calcs. 2-12905  
 S, on Cu (100), surface vibr. modes, EELS study 2-17581  
 S, on metal surface, interatomic and quasiatomic Auger spectra 2-17579  
 SO<sub>2</sub>, on zeolite 4A, 2-21918  
 SO<sub>2</sub><sup>-</sup>, adsorbed on Ag electrode, radiochem. and Raman spectra study 2-2249  
 Sb, on GaAs (110) bonding of column 3 and 5 atoms 2-30728  
 Se, adsorbed on Ni, photoelectron diff. data for surface-struct. determ. 2-51767  
 Si overlayers on W (110), FIM study 2-1742  
 Si, surface oxidation, O and O<sub>2</sub> chemisorpt. 2-27474  
 SiO<sub>2</sub>, donor-acceptor interaction of surface Si atoms with bulky ligands 2-35896  
 SiO<sub>2</sub>, surface clusters, quantum chem. calc. (*German*) 2-45736  
 Ti (001), O<sub>2</sub> adsorbed on Ti (001), photon stimulated desorption, Auger spectra 2-40689  
 W, photodetachment of ions of adsorbed rhodamine 6G by laser pulses (*Russian*) 2-16957  
 W surface (001), EELS angular depend., clean and adsorbate covered surfaces 2-51754  
 Xe, adsorbed on graphite two-dimensional phase transforms. 2-8700  
 Xe, adsorbed on Pd, layer-dependent core-level shifts 2-2014  
 Xe, on Ag(111), monolayer and bilayer films, lattice const. and vibr., thermodynamic props. 2-45714  
 Xe, on glass, electronic-vibrational transitions in Raman scatt. spectra (*Russian*) 2-13479  
 Xe on graphite, H atom diffraction scatt. 2-2400  
 Xe, physisorbed on W(100), angle-resolved photoelectron emission 2-5795  
 Xi ordered layer on Cu(001), He atom scatt. with energy anal. 2-41482  
 ZnO, coadsorbed p- and n-dyes, spectral sensitivity 2-1945

## adsorption

- see also heat of adsorption  
 acetic acid, adsorpt. on rutile immersed in n-heptane, IR obs. 2-41350  
 activated C, adsorption kinetics rel. to struct. 2-1731  
 adsorbate-induced emission noise, representation of temp.-depend. spectral props. by Lorentz functions (*German*) 2-13145  
 adsorbed ions, interactions, Helmholtz layer props. effects 2-5306  
 aerosols, chemically modified, N<sub>2</sub> adsorpt. energy distrib. functions, condensation approx. 2-41942  
 Amberlite XAD-4, appl. of mercury intrusion for adsorpt. behaviour of phenol 2-27405  
 anions on Hg electrodes, virial isotherm for adsorption from const. strength soln. 2-31944  
 aromatic esters adsorption on silica immersed in carbon tetrachloride, IR spectra study 2-2231  
 atom-surface scatt. in selective adsorption intensity features, perturbative calcs. 2-41480  
 blood proteins, adsorption kinetics, Fourier transform IR spectroscopy 2-52422  
 Brownian particles, steady absorpt. by infinite cylinder 2-38567  
 Brownian particles adsorption in presence of pot. barriers, different double-layer interaction modes effect 2-37107  
 butanol adsorbed on NaY zeolite, heteronuclear spin decoupling in the presence of thermal motion (*German*) 2-13348  
 carbonaceous microporous adsorbents, water vapour adsorption, isotherm eqn. 2-40672  
 CC, H, atomic, spin-polarised, adsorpt. isotherms and exchange interactions on <sup>4</sup>He 2-35835  
 charcoal, adsorption isotherms and heats of adsorption of Ne and H<sub>2</sub> 2-35889  
 crystal growth from impure soln. using monolayer adsorption mechanism, theory 2-12524  
 crystal-impure solution interface, interfacial tension, one-layer adsorption model 2-35884  
 dielectric liquid, electric current generation by laminar flow 2-12796  
 1,4-dinitronaphthalene, electrical cond., effect of adsorpt. of vapours 2-26381  
 Dubinin-Radushkevich equation applic. to absolute adsorption from dil. aqueous solns. on activated C 2-35888  
 electrical double layer, ionic adsorption, primitive model electrolyte against charged surface 2-2716  
 electrochemical phase form., adsorpt.-nucleation based models 2-12718  
 electrolysis, thermodynamics of double-layer forces, preferential ion adsorption effect 2-8858  
 electrosorption bond theory, Hartree-Fock approx. calcs. 2-26210



## adsorption continued

- ethyl acetate, adsorpt. on rutile immersed in n-heptane, IR obs. 2-41350  
ethyl cyanoacetate adsorption on silica in carbon tetrachloride, IR spectra study 2-706  
fixed bed, gas adsorption, linearised equilibrium model 2-21439  
gelatins, photographic adsorption layer compression-dilatation props. (*German*) 2-43116  
graphite, adsorpt. of Ar, second surface virial coeff. calc. 2-14002  
graphite, anisotropic pot. energy functions for C atoms, rel. to interaction with He 2-15868  
graphitised carbon black, of hydrocarbon mols., chromatographic step-and-pulse method obs. 2-12906  
hard disc dipoles, surface film, virial coeffs. 2-48656  
heterogeneous catalysis research, Mossbauer spectroscopy appls. 2-7582  
heterogeneous solid surfaces with random topography, low temp. adsorption of gases 2-26216  
heterogeneous surface, adsorption isotherms (*German*) 2-45737  
ideal adsorbed solns., binary Langmuir and Freundlich isotherms 2-45681  
interfacial phenomena, thermodynamics 2-45721  
intergranular penetration mechanism, when Cu alloys deposited on steel 2-50929  
kaolinite, solid phase deform. under influence of adsorbed water and organic compounds 2-35451  
kinetic theory 2-16941  
kinetics of ions of various valences 2-1732  
lattice gas model, Monte Carlo simulation 2-12916  
mercury porosimetry, and gas adsorption 2-30747  
metal film, discontinuous, coalescence grown, quantitative struct. evaluation, statistical model 2-21459  
metal film, elec. resist. changes during vapour and gas adsorption, review (*Russian*) 2-30974  
metal surface, atomic processes, quantitative investigation at atomic resolution, review 2-30726  
metal/ $\beta$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$  interface, evolution in humid atm. (*French*) 2-8877  
methanol catalysts, adsorpt. of CO, FT-IR spectrosc. obs. 2-27487  
mixed colloidal systems, heterocoagulation, adhesion and microfloitation 2-47380  
molecular configurations, chromatostuctural anal. 2-11589  
9-nitroanthracene, electrical cond., effect of adsorpt. of vapours 2-26381  
nucleation, two dimens., crit. size and crit. free energy 2-12523  
organophosphorous compounds and pesticides detection using coated piezoelectric crystal, air-pollution sensor 2-18159  
PAA, thermal degradation, stabilisation by adsorbed metal ions 2-47335  
phonon-mediated physisorption for gas-solid systems approaching monolayer coverage, quantum statistical theory 2-16953  
phthalimide, adsorpt. on Pt electrode from thiocyanate melts 2-30753  
physical electronics conf., Bozeman, MT, USA (June/July 1981) 2-10547  
pinacanol, adsorbed monolayers, electron affinity calc. 2-49600  
plasma etching, mechanisms, review 2-27309  
polar fluids, nonlinear effects, molecular theory of electrostriction 2-9093  
polyethylene terephthalate, of iodine, struct. and props. (*Russian*) 2-6065  
polymer adsorption, self-avoiding walks interacting with a surface 2-40677  
polymer chains at interfaces 2-4431  
polymer solutions, ternary, rel. between preferential adsorpt. coeff. and intrinsic viscosity 2-16835  
porous materials, adsorption isotherm data, relevant to morphological props., automatic data anal. 2-5307  
precursor state kinetics, dynamical aspects 2-41940  
PTFE-polyhexafluoropropylene electret, charge relaxation, surface phenomena role 2-17399  
quantum theory of accommodation and adsorpt. at low energy 2-26228  
radioactive waste remobilization, effect of complexing ions, bench-scale tests 2-29343  
radiotracer technique for adsorption and catalysis studies 2-8707  
rate consts., lateral interactions effect, lattice-gas model 2-16951  
refractory carbides, emission-adsorpt. props. anisotropy 2-13601  
rhodamine C, adsorption on polyethylene terephthalate, struct. and props. (*Russian*) 2-6065  
rutile, of hydrocarbons, IR obs. 2-41349  
short chain alcohols, adsorbed at water-decane interface, interfacial tension effects (*French*) 2-21441  
site energy distribution for adsorption of gases on solids, numerical method for evaluation 2-26209  
solar energy, materials, stability of interfaces, review 2-22621  
solid, of gas, thermodynamic props., two and three dimensional treatment 2-30743  
sorption kinetics, meas. by differential test, heat of sorption effect 2-21438  
steel, colour metallography of oxide scales, new dye adsorpt. technique 2-41845  
steel, H embrittlement, gaseous, rate controlling process 2-12675  
steel, strain hardening rate, changes during adsorption and desorption of H during cathodic charging 2-22243  
surface heterogeneity, effects on adsorpt. isotherms and heats of immersion 2-40680  
surface science, recent advances 2-21434  
surfaces, monocryst.,  $\text{CO-H}_2$  interaction, 'carbide' form. (*French*) 2-41927  
transition metal carbides, surface props. (*Japanese*) 2-1738  
transition metals, of H, embedded cluster model 2-12915  
water-decane interface, adsorpt. and penetration of short-chain alcohols, interfacial tension effects (*French*) 2-21441  
zeolite 13X, adsorption isotherms and heats of adsorption of Ne and  $\text{H}_2$  2-35889  
zeolite-gas-liquid system, adsorption-evap. process, quasi-steady state refrigeration machines involving affinity (*French*) 2-6059  
Ag (100), coadsorption of K, Cl and O LEED, AES, work function, and thermal desorption meas. 2-1745  
Ag (110) surface, clean and O-covered, adsorption and reaction of water 2-16950  
Ag, deposition of Zn layers, adsorption and alloy formation 2-9290  
Ag electrodes, adsorption of developing solution components (*Russian*) 2-27481  
Ag, halide ion adsorption, surface enhanced Raman spectra 2-6068  
Ag, of pyridine, equilib. and transient study, second harmonic generation and Raman scatt. appl. 2-22486  
Ag, powder, adsorption of  $\text{SO}_2$ , surfacing enhanced hyper-Raman scatt. from  $\text{SO}_3^{2-}$  2-36615

## adsorption continued

- Ag-electrolyte (vacuum) interfaces, surface enhanced Raman scatt., adatom model 2-5714  
Al surface,  $\text{H}_2$  physisorpt., EELS study 2-27039  
Al-Zn alloys matrix effect study in secondary ion emission,  $\text{O}_2$  adsorption saturation conditions 2-46851  
 $\gamma$ - $\text{Al}_2\text{O}_3$ , adsorpt.-desorpt., of metal ions, static obs. 2-45716  
 $\gamma$ - $\text{Al}_2\text{O}_3$ , adsorpt.-desorpt. of metal ions, press. jump obs. 2-45717  
 $\text{Al}_2\text{O}_3$ , surface,  $\text{H}_2$  physisorpt., EELS study 2-27039  
 $\text{Al}_2\text{O}_3$  surface, substituted adamantanes adsorpt., inelastic electron tunnelling spectroscopy 2-27476  
Au, of  $\text{NH}_3$ , adsorpt. kinetics studied by monitoring gas conc. using optoacoustic effect 2-52247  
Au, of Ni, photoemission spectroscopy (*German*) 2-17598  
 $\text{Br}_2$  adsorbed in glass with fine pores, reson. fluoresc. and Raman scatt. 2-34489  
C, activated, inert gas adsorption, review and evaluation 2-30744  
C, adsorption props. in electrolyte soln., cryst. struct. effects 2-30755  
C, of benzene, cyclohexane, n-heptane, enthalpy and entropy effects 2-45715  
C surfaces, active, adsorption mechanism of aliphatic alcohols and amines, Polanyi-Dubinin theory 2-40671  
CO, adsorbed in zeolites,  $^{13}\text{C}$  NMR investig. 2-17344  
CO adsorption on  $\text{CaO}(\text{SrO})$ , IR spectra study 2-707  
 $\text{CO+H}_2$ , interaction on Ni monocryst. surfaces (*French*) 2-41927  
 $\text{CO}_2$ , adsorbed in zeolites,  $^{13}\text{C}$  NMR investig. 2-17344  
 $\text{CaSO}_4$ , supersaturated solns., formation of crystallisation contacts 2-1419  
Cd, oxidation initial stages, low-energy EELS and AES study 2-13603  
CdS thin films, elec. props., effects of  $\text{H}_2$  adsorption 2-30986  
Co metal films, of CO, interaction investigated by means of thermal desorpt. mass spectrometry 2-9569  
Cr-graphite composite coatings, electrodeposited, effect of plating variables 2-9291  
Cu (001), of CO and Xe, off-specular coherent and incoherent elastic scatt. of He 2-2396  
Cu, galvanokinetic behaviour, in  $\text{Na}_2\text{PO}_4\text{-NaCl}$  aq. soln. 2-47227  
Cu, liq., surface tension, effect of O 2-8691  
Cu, of Pt, cluster absorption on amorphous and crystalline surfaces, mol. dynamics study 2-8709  
Cu-benzotriazole, adsorpt. isotherm 2-45711  
Cu-Co system,  $\text{O}_2$  adsorption 2-12911  
Cu(111) surface, CO adsorption, surface state energy shifts 2-36122  
Fe (111) surface, water vapour adsorption, LEED and work function changes meas. 2-26206  
Fe metal films, of CO, interaction investigated by means of thermal desorpt. mass spectrometry 2-9569  
Fe polycrystalline surface, interactions with K,  $\text{O}_2$  and  $\text{N}_2$ , AES, work function and thermal desorption meas. 2-16939  
Fe, strain hardening rate, changes during adsorption and desorption of H during cathodic charging 2-22243  
Fe surface, adsorpt. of  $\text{H}_2$ , K preadsorpt. effect 2-26224  
Fe surface,  $\text{N}_2+3\text{H}_2\rightarrow 2\text{NH}_3$  catalysis, AES and thermal desorpt. study 2-41922  
Fe-are earth, dopant distrib. studied by internal friction 2-45238  
FeCo metal films, of CO, interaction investigated by means of thermal desorpt. mass spectrometry 2-9569  
 $\text{Fe}_2\text{O}_3\cdot\text{H}_2\text{O}$ , amorphous, competitive adsorption of Cd, Cu, Zn and Pb 2-35887  
GaAs surface, (111), Ga adsorpt., total-current spectra fine struct. 2-17583  
n-GaAs, surface (100) exposed to  $\text{O}_2$  and electron irradiated, energy band bend shifts, UPS 2-40984  
Ge (111), alkali metal covered of  $\text{O}_2$ , AES, EELS, thermal desorption, and work function meas. 2-12918  
Ge (111), of  $\text{O}_2$ , AES, thermal desorption, work function, and EELS study 2-12917  
n-Ge, carrier capture by slow surface states, effect of adsorbed hexane and carbon tetrachloride 2-8855  
Ge, energy spectrum of surface recombination centres, effect of sorption processes 2-1980  
Ge-GeO<sub>2</sub> system, photomemory, structure defect form. 2-30929  
 $\text{H}_2+\text{CO}_2$ , interaction on supported Rh surface, IR obs. 2-41931  
 $^4\text{He}$ , superfluid, step-wise solid layer nucleation on Grafoil, fourth sound vel. study 2-40643  
Ir (110), chemisorption of  $\text{N}_2$  and coadsorption of  $\text{H}_2$ , thermal desorption, XPS, UPS, AES, and LEED meas. 2-12914  
Ir(332), preferential adsorption of  $\text{H}_2$ , rel. to intrinsic step related surface states 2-13158  
 $\text{LaNi}_5$ , of  $\text{H}_2$ , electrochem. oxidation kinetics 2-30754  
Li clusters, multibody effects, unrestricted HF study and their relevance to atom-surface interactions 2-11610  
LiF surface, H adsorption, mol. parametrised CNDO and ab initio calcs. 2-16944  
Mg, oxidation, early stages, LEED, EELS, work function, and ellipsometry meas. 2-27344  
Mg surface, (0001),  $\text{O}_2$  adsorpt., XPS study 2-41886  
 $\text{MgO}$ , activation by cyclic temp. change, adsorption capacity, activated material behaviour during sintering 2-6026  
 $\text{MgO}$  powder,  $\text{O}_2$  adsorpt., emitted electron energy distrib. study 2-17592  
Mo (112), of Ba, work function, thermal stability, LEED and contact pot. meas. 2-45731  
Mo, adsorption of F, Cl, and Br, binding energies 2-40695  
Mo surface, adsorbed CO dissociation, pulsed laser atom-probe study 2-26226  
Mo, surface imaging by pulsed laser stimulated field desorption of field adsorbed atoms 2-2421  
N, on Fe(100) and (110), adsorbed O effect (*Japanese*) 2-26218  
NaY-type zeolite, adsorpt. of butanol,  $^{13}\text{C}$  spin relax. 2-26217  
Ni (001), interaction with  $\text{O}_2$ , semiempirical model pot. 2-16946  
Ni (001), molecular and at. adsorption on surfaces, SIMS investigation 2-45712  
Ni (001), of S and Se, angle resolved XPS and AES from core levels 2-41495  
Ni (110), clean and O covered, adsorption and reaction of water 2-16952  
Ni (111), of NO, electron stimulated desorption and LEED study 2-12912  
Ni metal films, of CO, interaction investigated by means of thermal desorpt. mass spectrometry 2-9569  
Ni, of benzene, photoemission spectroscopy (*German*) 2-17598



## adsorption continued

- Ni surface, (111), adsorbed O, phonon spectrum, force const. calc. 2-50988  
 Ni surface, O<sub>2</sub> and C coadsorpt., residual gases electron beam bombard. effects 2-40670  
 Ni surface (100), alkali metal covered, CO adsorpt. 2-40696  
 NiO, catalyst, textural props. 2-1749  
 Pb<sub>2</sub>, Bi, F<sub>2</sub>, symmetrical cells, interfacial phenomena 2-14064  
 $\beta$ -PbF<sub>2</sub>, symmetrical cells, interfacial phenomena 2-14064  
 $\beta$ -PbF<sub>2</sub>, thin films, superionic cond., O<sub>2</sub> adsorpt., ESCA and nuclear anal. 2-16881  
 PbS, galena, Cu<sup>2+</sup>(Ag<sup>+</sup>)(Au<sup>+</sup>) adsorpt., rest pot. and surface photovoltage changes 2-41008  
 Pd, adsorption/desorption of CO, surface struct. effects 2-16948  
 Pd surface (111), ethylene adsorpt. and reaction, angle-depend. EELS anal. 2-52250  
 Pt, adsorption of H<sub>2</sub> and CO, electron stimulated and thermal desorption spectra 2-26223  
 Pt clusters, of H<sub>2</sub>, EHMO calcs. 2-17916  
 Pt, of O<sub>2</sub>, thermal desorption and electron stimulated desorption study 2-5305  
 Pt, of Pd, cluster absorption on amorphous and crystalline surfaces, mol. dynamics study 2-8709  
 Pt surface, (111), adsorbed NO and CO interactions 2-26227  
 Pt surface, polymer adsorption, surface coverage anal. using iodide-125 2-45718  
 Pt surface (111), interaction with H<sub>2</sub> studied by He beam diff. 2-41941  
 Pt, surface imaging by pulsed laser stimulated field desorption of field adsorbed atoms 2-2421  
 Pt surfaces, flat (111) and stepped (557), NH<sub>3</sub> decomposition 2-2735  
 Pt(110), of SO<sub>2</sub>, 2-16940  
 Re (1010), of Ba, work function, thermal stability, LEED and contact meas. 2-45731  
 Rh, Al<sub>2</sub>O<sub>3</sub>-supported, adsorption and dissoc. of CO 2-14006  
 Rh surface, (100), adsorpt. of Ag 2-26225  
 Rh, surface distrib. of field adsorbed H, imaging atom-probe study 2-8711  
 Rh(110), of SO<sub>2</sub>, 2-16940  
 Ru(001), of water, monolayer and multilayer adsorpt., vibr., electronic and thermodynamic props. 2-27473  
 Se film, adsorption and dissoc. of CO, methanol, and ethanol 2-17924  
 Si amorphous layer induced by UV laser pulse, laser induced oxidation via O trapping 2-5975  
 Si disordered surface, O<sub>2</sub> adsorpt. 2-26215  
 Si, laser-induced amorphous, adsorpt. of O, expt. study 2-45268  
 Si, O<sub>2</sub> and CO, mechanisms studied by AES 2-40693  
 Si, of Bi, sticking coeff., first adlayer struct. influence 2-45733  
 Si surface, (100), struct. induced by Ga evaporation, RHEED study 2-26195  
 Si surface adsorption, optical memory centres 2-21649  
 Si:H amorphous films, photocreation of defects, light-induced cond. changes, doping depend. 2-36091  
 SiO<sub>2</sub>, esterified with alcohols, surface energy, contact angle and adsorption study 2-1728  
 SiO<sub>2</sub> film, glassy, deposition kinetics for SiH<sub>4</sub>, O<sub>2</sub> and N<sub>2</sub> 2-21457  
 SiO<sub>2</sub> gel, surface treated, change of surface struct. after pyrolysis (Japanese) 2-37101  
 SiO<sub>2</sub> gel and aerogel, of aliphatic amines and aldehydes, contact angle, oriented adsorpt. and desorpt. 2-16943  
 SiO<sub>2</sub> porous glass, adsorption of biological materials in sea water 2-32168  
 Ti, adsorption and dissolution of H<sub>2</sub>, digital simulation 2-50866  
 Ti clean surface, adsorption of CO, O<sub>2</sub> CO<sub>2</sub>, elec. resistance ionisation, binding state (Japanese) 2-5304  
 Ti/W interface, surface free energy, field ion microscopy study 2-45695  
 TiO<sub>2</sub> films, selective sputtering and electrophys. and absorpt. props. under 10-300 eV inert-gas ions bombardment 2-21696  
 TiO<sub>2</sub>, formic acid and 1,2-diaminoethane adsorbates, phase transition 2-8702  
 TiO<sub>2</sub>, of water, SIMS and Auger study, surface stoichiometry determ. 2-52246  
 TiO<sub>2</sub>, V<sub>2</sub>O<sub>5</sub>, of O<sub>2</sub>, EPR study, behaviour upon illumination 2-2737  
 UO<sub>2</sub>, kernels, monolayer capacity in physical adsorpt. of Kr 2-30756  
 V<sub>2</sub>O<sub>5</sub>, amorphous, hydration process, IR and Raman study 2-51578  
 W (001), electron spin polarisation, effect of ordered O adsorption 2-1717  
 W (100), of H, surface reconstruction, surface core level spectroscopy study 2-5798  
 W, adsorption of He at low energy, quantum theory 2-26228  
 W, of Li and O, on (100) face, work function and heat of absorpt. 2-21444  
 W surface, (110), adsorpt. of NO and heat treatment, surface reconstruction 2-26193  
 WO<sub>3</sub> (001), adsorption of H and H<sup>+</sup> ion bombard., new states in UPS spectra 2-17605  
 Y<sub>2</sub>O<sub>3</sub> surface, O<sub>2</sub> adsorpt., EPR study 2-40668  
 ZnO, adsorbed O influence on luminesc. temp. depend. 2-31542  
 ZnO polycryst. films, selective sputtering and electrophys. and absorpt. props. under 10-300 eV inert-gas ions bombardment 2-21696  
 Zr-O-W(100) emitter, coadsorpt. of Zr and CO 2-22139

## aerials see antennas

## aerodromes see airports

## aerodynamics

- see also hypersonic flow; jets; shock waves; supersonic flow; transonic flow; turbulence; wind tunnels  
 aircraft trailing, turbulent vortices, stratified fluids, numerical soln. 2-20676  
 blunt body in air, shock wave, none-equilibrium emission 2-16390  
 circular cascading blades, unsteady aerodynamic forces and moments 2-44746  
 computerised image analysis appl. to aerodynamic testing 2-40012  
 conservative props. of difference schemes anal. by method of differential approx. 2-1217  
 cricket ball, swing in flight due to aerodynamic forces 2-20797  
 cylinder-shaft disk system, supersonic flow with bow separation zone, aerodynamics 2-16346  
 decelerated gas mixtures, inertial nonequilibrium 2-50331  
 discus flight, aerodynamic effects 2-28624  
 eddy dryer for liquid materials, aerodynamics 2-30202

## aerodynamics continued

- formation of and dispersal of toxic components, chemical kinetics, jet flows in atmosphere 2-35188  
 gas dynamics, relativistic, eqns., exact soln. 2-50284  
 gas dynamics difference schemes, use of dispersion props. (Russian) 2-30161  
 gas ejector, zero and negative ejection coefficient operation, thermal energy separation characts. 2-44771  
 gas pressure changes during movement of crevices in pipes (Russian) 2-8232  
 gases, low density, aerodynamics, heat transfer, dimensionless numbers 2-30120  
 glow discharge in gas flow, spatial modulation, gas-dynamic and electrical parameters 2-12418  
 ideal gas, unsteady flow, shock wave motion, integral inequalities 2-16341  
 incompressible flow, stability of two dims. finite panel exposed to flow 2-50142  
 intergalactic gas flow interaction with rigid body spheroidal galaxy 2-33137  
 ionospheric satellite or rocket, near wake supersonic flow 2-32707  
 liquid films, aerodynamic heating, ablation, lamellar to turbulent transition, asymptotic props. 2-35132  
 magnetogasdynamics, axially symm. explosion model, Eulerian coord. system anal. method 2-8241  
 magnetogasdynamics axially symm. explosion model, flow variables behind shock front 2-8240  
 nonlinear aerodynamic characts. of finite span wing 2-12171  
 one dimensional gas dynamics problem, radiation transport eqn. (Russian) 2-30160  
 optimal body-of-revolution form in transonic gas flow 2-30165  
 perfect gas, three-dims. flows in narrow ducts 2-50315  
 power station atmospheric plumes dispersion, aerodynamic effects of large structures, wind tunnel simulations 2-27750  
 protostellar evolution, main accretion phase, inflowing material radiation gas dynamics 2-10403  
 radiative gas flows, shaping of subsonic part of Laval nozzle (Russian) 2-30238  
 rigid baffle edge, dipole sound diff. 2-34972  
 sound production, mechanical aerodynamic feedback 2-1188  
 spherical column packing, local aerodynamics and heat transfer characts. (Russian) 2-12215  
 spinning slender bodies at supersonic speeds, computational parametric aerodynamic study 2-8179  
 spoiler aerodynamic noise, generated in low velocity flow duct 2-49992  
 spray flow from nozzles, analytic model development 2-25415  
 super-compressed detonation wave propagation, gas dynamic eqn. soln. 2-16340  
 surface flow phenomena, study using Fizeau interferometry of oil films 2-25453  
 surface velocity method for finite volume solutions 2-30169  
 surface vorticity modelling of separated flows from two-dimensional bluff bodies of arbitrary shape 2-16344  
 transonic flow, simplified Oswatitsch equation, numerical soln. 2-20703  
 transonic flow, steady three-dims., about wing, computation by relax. method (Chinese) 2-4488  
 transonic swept wings studied by the lifting-line theory 2-8175  
 trends and pacing items in computational aerodynamics 2-30162  
 turbulent boundary layer, press. driven along a circular cylinder 2-16297  
 vertical-axis wind turbine sailing aerodynamics, wind-tunnel tests 2-27531  
 vortex shedding in compressible flow, base bleed and press. effect 2-1206

## aeronomy see meteorology; terrestrial atmosphere; upper atmosphere

## aerosols

## see also foams

- acoustically based aerosol particle sizing technique 2-15145  
 aerosol research, Schmallenberg, Germany (Oct. 1980) 2-15144  
 air pollution meas. electro-optical (German) 2-253  
 atmosphere, aerosol and light transmission meas. in coastal environments 2-32632  
 atmosphere, aerosol extinction rel. to depend. of air to ground visibility on flight altitude 2-32642  
 atmosphere, aerosol form., transformation and effects in Denver's emission plume 2-18156  
 atmosphere, Asia marine boundary layer, aerosol sulphate, chloride and Na concs. 2-14592  
 atmosphere, coherent lidar return characts. from calibration targets and aerosols 2-18567  
 atmosphere, composition of marine air in tropical Atlantic 2-28179  
 atmosphere, conc. of metals and total suspended particulates in Rio de Janeiro 2-9714  
 atmosphere, effect of marine aerosols on Over-the-Horizon optical scatter propag. 2-32639  
 atmosphere, formation photochemistry rel. to aerosol conc. 2-14543  
 atmosphere, Great Wall nonurban area, China, aerosol comp., natural and pollutants 2-47544  
 atmosphere, high-latitude stratosphere, 1978 and 1979 obs. 2-37963  
 atmosphere, influence of aerosol particles on solar radiation absorpt. by clouds 2-18568  
 atmosphere, meas. of size distrib. by multispectral solar extinction method 2-32677  
 atmosphere, meas. of trace elements in resuspended dust from school playgrounds 2-6206  
 atmosphere, meteorological descriptions for aerosol optics in marine boundary layer 2-32641  
 atmosphere, multi-element airborne dust meas. for Walsall, England, (January to December 1979) 2-6202  
 atmosphere, multi-element airborne dust meas. for Walsall, England (December 1977 to November 1978) 2-6203  
 atmosphere, multiwavelength extinction and refr. index fluctuation meas. 2-32644  
 atmosphere, New York state rural sites, summer aerosol pollutant, trace element conc. and transport 2-9712  
 atmosphere, optical props. of stratospheric aerosol 2-18572  
 atmosphere, particle dry deposition velocity onto cereal crop land 2-47939  
 atmosphere, plume dispersion over sea surface, remote meas. using DFVLR Minilidar 2-2830  
 atmosphere, pollution particle conc. in air over Toulouse, France (French) 2-47542



**aerosols continued**

atmosphere, random displacements of optical beams 2-29785  
 atmosphere, Sahara desert particle size profiles radiative flux meas., particle nonsphericity obs. 2-32587  
 atmosphere, salt nuclei obs. over Dalian and Beijing, China (*Chinese*) 2-18492  
 atmosphere, size of natural aerosols, departure from Junge distrib. 2-47940  
 atmosphere, size spectra in Sahara Desert, vertical profiles, radiative flux obs. 2-32586  
 atmosphere, sulphate aerosol growth in stratosphere 2-42421  
 atmosphere, Ti pollution transport and dispersion, statistical model 2-27749  
 atmosphere, turbidity meas. over central North Carolina 2-14602  
 atmosphere, volcanic aerosol reducing planetary albedo 2-28207  
 atmosphere, volcanic ash from Mt. St. Helens 1980 eruption, mineralogical composition 2-32475  
 atmosphere, volcanic clouds in Fukuoka stratosphere due to Mt. St. Helens eruption, lidar obs. 2-28052  
 atmosphere aerosol, particle size evaluations using multiwavelength extinction meas. 2-48011  
 atmosphere of Sahara, chem. composition of particulates (*French*) 2-42435  
 atmosphere particulates deposition onto forest vegetation 2-14545  
 atmospheric, vertical brightness profiles, water vapour conc. from space meas. (*Russian*) 2-18575  
 atmospheric and aerosol emissions effect on IR imaging device performance 2-25141  
 atmospheric imaging, desert dust spectral effects 2-14607  
 backscatter, IR differential absorption lidar implications 2-28197  
 bipolar charging of submicron aerosol, effect of external elec. field 2-22497  
 Brookhaven National Laboratory, New York, boundary layer pollutant light scatt. 2-9713  
 cloud condensation nuclei, S. Florida summertime meas. 2-28153  
 coagulation, deposition and leakage during nuclear reactor accident 2-7263  
 dendritic aerosol deposition, particle density calc. 2-17926  
 hot-wire thermal precipitator with low inlet losses and low size selectivity for meas. of aerosol size distributions 2-43012  
 IR laser beam, model of transmission through water droplet aerosol under thermal self-action 2-34862  
 Jupiter atmosphere, aerosol layer struct. from spectrophotometry of Great Red Spot 2-6565  
 Jupiter atmosphere, aerosols absorpt. of sunlight 2-28373  
 large aerosol particle random distrib., quadratic approx. validity range for optical propag. 2-49675  
 laser microprobe mass analyser, appl. to aerosol research 2-31980  
 light extinction by stratospheric aerosol 2-18573  
 light scattering by atmospheric aerosol, turbulence parameter determ. using laser method 2-42487  
 LMFBR accident, aerosol behaviour code, gravit. collision efficiency 2-513  
 marine atmosphere, origin of particulate organic C as indicated by stable C isotopic comp. 2-28129  
 marine atmosphere  $^{210}\text{Pb}$  particles size distrib. 2-37929  
 motion in inhomogeneous temp. field, influence of flat wall 2-39969  
 notional accidental release from FBR, radiological consequences 2-4070  
 ocean, radionuclides transfer to land at La Hague nuclear reprocessing works (*French*) 2-6199  
 ocean waves producing aerosol, due to breaking of wave 2-18541  
 optical counter response to dry and liquid particles of different shape and refractive index 2-15277  
 optical depth determ. from upward spectral radiances, optimum wavelength determ. 2-32635  
 optical extinction calc. using aerosol spectral data 2-28198  
 particle absorption spectroscopy by photothermal modulation of Mie scattered light 2-6438  
 particle anal. by direct inlet mass spectrometer 2-9755  
 particle anal. by surface ionisation mass spectrometry 2-9756  
 plume dispersion over sea surface, remote meas. using DFVLR minilidar 2-22692  
 radioactive aerosol, retention in rabbit lung, system for in vivo meas. 2-47765  
 reactor aerosol emissions, particle diameter dependence of deposition velocity, washout coeff., inhalation dose factor 2-29454  
 remote measurement by laser radar, wind direction and velocity (*Japanese*) 2-14628  
 remote sensing data, spectral effects of desert dust 2-52930  
 scattering and transformation processes (*Russian*) 2-10125  
 scattering in stratosphere, effect on tropospheric UV flux and photolysis 2-28120  
 seasonal var. at Mauna Loa 2-18536  
 seasonal variation in Antarctic aerosol 2-52906  
 seasonal variations of atmospheric clearness numbers for use in solar radiation modelling 2-32637  
 selective and continuum absorpt., microwindows, 8-12  $\mu\text{m}$  2-18574  
 simulation using steel balls in glycerine 2-4087  
 smoke plume, airborne lidar meas. of plume distrib., vertical transmission and particle size 2-47935  
 solid fuel particle cleaning, optical radiation 2-41947  
 soot in atmosphere, visible absorption 2-23105  
 source region identification by remote infrared obs. 2-52908  
 stratosphere, lidar obs. of increase of aerosols caused by La Soufriere 1979 volcanic eruption 2-32600  
 stratosphere absorpt. of solar radiation, effect on troposphere energy budget 2-37948  
 stratosphere haze causing perturbations in twilight sky colour and radiance 2-3089  
 stratosphere particle size measurement (1974-9) in S. hemisphere 2-37949  
 stratosphere sulphate from Gareloi volcanic eruption (1980) 2-22951  
 sulphate aerosol in Lexington, Kentucky atm., correl. with major surrounding  $\text{SO}_2$  pollutant sources 2-9709  
 troposphere aerosol size distrib. fluctuations, spectral anal. of meas. with fast response sensor 2-18547  
 troposphere ice forming nuclei concentration (*German*) 2-32612  
 tunnel test facility, for particulate control devices testing 2-14172  
 twilight atmosphere, optical phenomena 2-23111  
 Venus, clouds, aerosol study using FP filters 2-48165

**aerosols continued**

Venus subcloud atmosphere, scatt. radiation and aerosol characts. from Venera obs. 2-38086  
 volcanic, physical chem., statistical anal. (*French*) 2-42325  
 volcanic plumes, gas-particle conversion of  $\text{SO}_2$  aerosols (*French*) 2-37817  
 volumetric scattering at South Pole 2-32562  
 water vapour, spontaneous condensation characts., effect of heterogeneous centres 2-16763  
 water-solubilising props., rot. isomerism, PMR spectroscopy 2-22494  
 C total content of aerosol deposits, gas-phase photoacoustic determ. 2-47386  
 $\text{H}_2\text{O}$ , aerosol drops, heating, evaporation, rupture, laser radiation, optical consts. 2-9575  
 $\text{H}_2\text{SO}_4$  aerosols, 1  $\mu\text{m}$  extinction of solar radiation in stratosphere 2-23106  
 $\text{NH}_4^+$  particulate in Massachusetts, deposition on vegetation 2-23072  
 $\text{Na}_2\text{O}$  aerosol, behaviour in nuclear safety pilot plant containment 2-4086  
 $\text{O}_3$  and aerosol profile meas. in lower troposphere using NASA Langley airborne DIAL lidar system 2-3108  
 $\text{UO}_2$  aerosol, behaviour in nuclear safety pilot plant containment 2-4086

**aerospace**

see also aerospace computing; aerospace control; aerospace instrumentation; aerospace propulsion; aerospace simulation; aerospace test facilities; aircraft; ground support systems; space research; space vehicles; terrestrial atmosphere  
 technology, science and applications trends and future activities 2-53049

**aerospace applications of computing** see aerospace computing**aerospace biophysics**

aircrew, main ECG anomalies (*French*) 2-6269  
 aircrew medical standards, conf., Toronto, Canada (Sep. 1980) 2-6708  
 aviation medicine course 2-18307  
 biology and medicine, expts. in space 2-47729  
 ECG abnormalities, disposition in aviators 2-18308  
 echocardiography in aeronautical medicine, review (*French*) 2-6268  
 mass discrimination during weightlessness, plan for Spacelab 1 experiment 2-27912  
 solar radiation monitoring for high altitude aircraft 2-22839  
 space developments applications, conf., Tokyo, Japan (September 1980) 2-6697  
 Space Sled—A European facility for life-science experiments in Spacelab 2-2959  
 Spacelab, biological and medical expts. (*Italian*) 2-22840  
 standards proposed for 1980s and beyond, contrast sensitivity, aircrew appl. 2-9798

**aerospace computer control**

see also aerospace computing  
 flight dynamics, conf., Darmstadt, Germany (May 1981) 2-38364  
 IR astronomical satellite, obs. planning facility 2-48136  
 Voyager 1 Saturn near encounter, close Titan flyby effect compensation 2-38040

**aerospace computing**

see also aerospace computer control  
 airport cumulative noise exposure contour generation using NOISEMAP computer program 2-11909  
 airport noise exposure contour generation, comparison of Integrated Noise Model and NOISEMAP programs 2-11911  
 Comet Halley mission, midcourse navigation and propellant estimation computing 2-42577  
 ESA VHF ranging system, SIRIO-2 laser ranging experiment 2-42572  
 ESOC flight dynamics support 2-42575  
 flight dynamics, conf., Darmstadt, Germany (May 1981) 2-38364  
 mean-Earth satellites, analytical singularity-free orbit predictor 2-48138  
 near-Earth satellite orbit determ., 1981-status and future trends 2-48137  
 orbit and attitude determ. for Bhaskara satellite 2-48139  
 reentry environmental conditions forecasting, cloud particle effects determ., real-time processing 2-38003  
 satellite anomalous attitude motion computing 2-42578  
 spacecraft HF structural vibrs., prediction using statistical energy anal. 2-1067  
 spacecraft model testing in combined environmental simulator 2-38036  
 triaxial satellite response and separate body testing within SGEMP simulator 2-32803  
 wind tunnel, laser Doppler velocimeter appl. 2-40013

**aerospace control**

see also attitude control  
 artificial satellites, dual spin, subject to gravit. torques, stabilisation due to gyroscopic coupling 2-42568  
 clock synchronisation technique, for tracking and controlling deep space probes 2-18679  
 ESOC flight dynamics support 2-42575  
 lunar orbiter missions having low inclination, trajectory optimisation 2-18699  
 reflector technology for farming, weather manipulation and energy supply 2-52297  
 Venus atmosphere two component working material for a floating probe 2-38087

**aerospace engines**

gas turbine, using Ni and Co alloys, corrosion prevention due to surface treatment 2-47221

**aerospace instrumentation**

see also aircraft instrumentation; Langmuir probes  
 ESOC flight dynamics support 2-42575  
 hypersonic re-entry vehicles, miniaturised differential temp. gauge for boundary-layer transition onset detection 2-38651  
 IR radiance model validation by sensor flight measurements 2-38041  
 low-energy electron magnetometer for terrestrial and aerial mag. field meas. 2-3595  
 Sirio-2 program, MDD and Lasso missions 2-14754  
 Space Shuttle, data acquisition systems using Perkin-Elmer 32-bit computers 2-19918  
 synthetic aperture radar, spacetime for planetary geodesy and navigation 2-42594  
 test techniques advances, conf., Indianapolis, IN, USA (April 1981) 2-38367  
 He refrigerator, at 4.4K, for Salyut-6 2-19111



**aerospace propulsion**see also *aerospace engines*

- EM gun, rotating bed reactor as power source 2-49171
- flight from Paris to London by solar-powered aircraft 2-41988
- fuel pumps flow visualisation 2-20787
- inert-gas ion thruster, plasma processes modelling 2-50382
- interplanetary Mars-Earth-Venus shuttle, flight characts. with solar powered thermionic generator 2-28316
- ion engine, magnetosphere modification due to  $\text{Ar}^+$  ion injection 2-10275
- ion thruster, charge-exchange plasma flow meas. 2-50454
- nuclear energy applications (*German*) 2-49197
- rocket effluent effects on EM wave propagation in upper atmosphere 2-10244

**aerospace simulation**see also *aerospace test facilities*

- aircraft development using water tunnel simulation facility 2-20792
- chamber design and fabrication implantation damage study 2-6841
- data enhancement and analysis, through mathematical deconvolution of signals 2-15154
- IR radiance model validation by sensor flight measurements 2-38041
- near-Earth satellite orbit determ., 1981-status and future trends 2-48137
- satellite model testing in combined environmental simulator 2-38036
- satellite response and separate body testing within an SGEMP simulator 2-32803
- satellite shaded Sun sensor modelling, general approach 2-42006
- satellite system-generated EM pulse simulation fidelity criteria 2-32802
- spacecraft charging tests using multiple electron guns, NASCAP simulation 2-38038
- supersonic flow, vortex shedding prediction from noncircular bodies 2-50295

**aerospace test facilities**see also *wind tunnels*

- air flow rate meas. in aviation motor construction 2-30257
- aircraft component fatigue crack growth rates, electron fractography 2-52129
- aircraft development using water tunnel simulation facility 2-20792
- computerised image analysis for aerodynamic testing 2-40012
- EM damper and ferrite isolated data link for SGMP testing 2-32804
- flow visualisation in fuel pump impeller passages, low specific speed 2-20787
- Rolls-Royce turbomachinery research, flow diagnostics using holographic interferometry and laser anemometry 2-20790
- satellite model testing in combined environmental simulator 2-38036
- shock oscillations on spiked body obs., flow visualisation using laser interferometer 2-20786
- space chambers, small, vac. pumping systems (*Japanese*) 2-43037
- STARSAT, anal. and research satellite, SGEMP test, high-level current injection testing 2-32801
- water towing tank techniques appl. 2-16405

**AFC** see *automatic frequency control***afterglows**

- chlorophylls in photosynthesizing organisms, ps. luminesc. afterglows 2-22701
- rare gas flowing afterglow, energy transfer reactions with  $\text{S}_2\text{Cl}_2$ , UV and visible emission 2-27426
- tryptaflavine adsorbate-phosphors on silica gel, afterglow,  $\text{O}_2$  quenching at late damping stages 2-36690
- whistler wave propagation expts. using magnetized plasma device (*Japanese*) 2-30306
- Ar, selective population of levels in afterglow 2-49317
- Cd, excited levels population in electron beam, electron stimulated desorpt. effects 2-44104
- $\text{F}^+$ -methylbromide, space charge effects in flowing afterglow, rate const. 2-17879
- I I radiation lifetimes of levels 2-34349
- I II, radiation lifetimes of levels 2-34349
- KBr:Ag crystal, ESR of electron and hole centres, tunnel recomb. afterglow 2-9035
- KCl:Ag, crystal, ESR of electron and hole centres, tunnel recomb. afterglow 2-9035
- Kr selective population of levels in afterglow 2-49317
- $\text{MgAl}_2\text{O}_4$  crystals exposed to  $\gamma$ -rays, optical spectra 2-51631
- N atomic laser action in hollow cathode discharge 2-24997
- $\text{N}_2$ , luminesc. studies at liq. He temps. 2-30273
- $\text{N}_2$ , post-discharge, electron energy distrib. function relax., superelastic vibr. collisions effect 2-20957
- $\text{Ne}+\text{O}_2$ , afterglow, quenching rate const., O I spectra 2-43973
- $\text{O}_2$ , atom recombination in afterglow, mol. const., mag. dipole transition, IR and microwave obs. 2-34387
- Pb vapour laser, IR emission at 3.15 and 7.15  $\mu$  2-34737
- $\text{SiH}_4$ -Ar plasma, Si atom diffusion and Si:H amorphous film deposition 2-35274
- $\text{SnCl}_4$  in He afterglow,  $\text{SnCl}^+$  ( $a^3\Sigma^+$ ,  $X^2\Sigma^+$ ) emission 2-20108
- Xe, selective population of levels in afterglow 2-49317

**AGC** see *automatic gain control***age (Earth)** see *geochronology***age determination, radioactive** see *radioactive dating***age hardening** see *precipitation hardening***ageing**see also *precipitation hardening; strain ageing*

- ABS terpolymer, impact strength, effect of thermal ageing 2-31784
- ageing materials, class of kernels describing creep 2-45330
- binary alloys, elec. resist. mech. during clustering 2-1889
- carbonate-siloxane block copolymers physical ageing rel. to mech. and thermal props. 2-27249
- graphite epoxy prepreg, effect of ageing and moisture on reactivity 2-13753
- ice  $I_h$ , ageing phenomena, internal friction, X-ray topography meas. (*French*) 2-12680
- inhomogeneous ageing body, boundary-value creep problem 2-25275
- negative photographic emulsions, chemical ageing, removal of primary fogging, characterization during sensitization (*Russian*) 2-10907
- photovoltaic modules natural sunlight accelerated weathering using Super-Maq 2-27629
- plastics, humid ageing, long term 2-31716
- PMMA, electrical aging, light scatt. study 2-36526
- PMMA, physical ageing in secondary relax. region 2-22253
- polyamide 6, accelerated method of ageing rel. to fatigue resistance (*German*) 2-31715

**ageing continued**

- polyamides, constructional, natural ageing, effect on mech. props. 2-17758
- polycarbonate, impact strength, effects of internal stress, ageing and thickness 2-52024
- polycarbonate, physical ageing in secondary relax. region 2-22253
- polyethylene, IR spectra changes after  $\gamma$ -irradiation in process of elec. ageing in air (*Russian*) 2-35539
- polyethylene, multistress aged, impulsive dielectric breakdown 2-17407
- polyethylene-thermoplastic rubber blends, mech. props., depend. on shear and thermal history 2-13810
- polymers, anelasticity, physical ageing and the constant enthalpy change hypothesis 2-45356
- polymethylsiloxysiloxane-toluene solution, accelerated ageing by UHF irradi. (*Russian*) 2-2486
- polyvinylidene fluoride films, gamma irradi., piezoelectric, aging behavior 2-8540
- PVC pipes, high density, carrier lines, He gas recovery 2-3584
- steam turbine components, service life determ. and evaluation 2-52124
- steel, austenitic, spring, corrosion resistant, thermal stability 2-27245
- steel, austenitic stainless 316, influence of  $\delta$ -ferrite on precipitation, thermal ageing 2-5880
- steel, C-Mn (0.015, 1.3 wt.%), influence of prestrain and strain ageing on cleavage fracture 2-2587
- steel, Cr-Mo, anal. of carbides formed during accel. ageing 2-51958
- steel, Cr-Mo (12, 1 wt.%), ageing 2-15482
- steel, Cr-Mo-Ni-Mn, effect of partial replacement of Ni by Mn 2-5914
- steel, Cr-Mo-V, alloying elements redistrib. after ageing under stress 2-41642
- steel, Cr-Mo-V cast, quenching, tempering and ageing rel. to mech. props. 2-13750
- steel, Cr-Ni-Al, discontinuous precipitation of Ni-Al intermetallic compd. 2-51913
- steel, Cr-Ni-Al, precipitation hardened by NiAl intermetallic compd., twinning 2-51928
- steel, Cr-Ni-Co-Mo-Mn, corrosion-resist., heat treatment and mech. props. 2-41640
- steel, ferritic stainless, Cr-Mo-Ti stabilised, sensitisation, influence of heat treatment 2-47243
- steel, ferritic stainless, serrated flow 2-27236
- steel, H10N7K10M5, quenched and aged internal friction peak at 250K, shear modulus change (*Polish*) 2-27207
- steel, low C, brittle-ductile state diagram in impact bending 2-52044
- steel, low C, magnetic props. for soft magnetic appl., heat treatment 2-21831
- steel, low C, study of mag. ageing kinetics 2-26659
- steel, low-C, strain hardening, mech. ageing effect 2-2527
- steel, maraging, Co-Mo-Ti-Ni, calorimetry anal. for ageing (*Japanese*) 2-13742
- steel, maraging, spring, corrosion resistant, thermal stability 2-27245
- steel, maraging Cr-Ni type, strength characts. at elevated operating temps. 2-52047
- steel, metallurgical props., US vibr. effect 2-47053
- steel, Mn, austenitic, strengthening by deform. and ageing 2-36891
- steel, precip. hardening, deform. under thermal cycling, neutron irradi. and stress 2-51996
- steel, quenched and aged, N18K8MST steel, internal friction and shear modulus changes, 320 to 650K (*Polish*) 2-27208
- steel, stainless, ferritic and martensitic, calorimetric anal. of ageing reaction (*Japanese*) 2-27194
- steel, stainless, Ti, 316, microstruct. after ageing and after neutron irradi. (*French*) 2-51947
- steel, stainless AISI 304, carbide precipitation, small angle neutron scattering obs. 2-13728
- steels, alloy, internal friction, rel. to temper brittleness 2-47090
- styrene-butadiene block copolymers physical ageing rel. to mech. and thermal props. 2-27249
- thermally aged anodic films on III-V semiconductors, native oxide reactions 2-52205
- Al alloy 7076-T6, fracture toughness, moving load controlled displacement machine 2-13876
- Al alloys, ageing laws 2-5898
- Al alloys, two-phase, plastic anisotropy in unidirectional deform. 2-2547
- Al and alloys, AE during deform., microstruct. effect 2-31882
- Al-Cu (2-5 wt.%), coarsening of  $\theta'$  plates, expt. determ. of mechanisms 2-13722
- Al-Cu (3 wt.%), pre-precipitate microstruct., obs. by lattice imaging technique (*Japanese*) 2-1448
- Al-Cu alloy, elastic moduli variations due to struct. changes 2-50736
- Al-Cu alloy D76 plates, under biaxial tension, thermomech. treatment effect on mech. props. 2-51957
- Al-Cu-Mg (4.1, 1.4 wt.%), alloy 142, age-hardening behaviour 2-2537
- Al-Mg alloy, elastic moduli variations due to struct. changes 2-50736
- Al-Si, precipitation of Si phase (*Japanese*) 2-47035
- Al-Zn, vacancy behaviour during Guinier-Preston zone form. and growth, positron expts. 2-21141
- Al-Zn (10 wt.%), solute conc. fluctuation effect on ageing at low temp. 2-47042
- Al-Zn (15 wt.%), reversion behaviour between 155°C and 175°C 2-47058
- Al-Zn (40 wt.%), aged, cellular dissoln., mechanism and kinetics 2-36858
- Al-Zn (5.3-6.8 at.%), unmixing kinetics, neutron small angle scatt. study 2-50859
- Al-Zn elec. resist. mech. during clustering 2-1889
- Al-Zn-Mg (4.5, 2 at.%), reversion behaviour, precipitate size depend. 2-2517
- Al-Zn-Mg (4.5, 2.0 wt.%), influence of pre-ageing temp. on reversion behaviour 2-47059
- Al-Zn-Mg (4.5, x wt.%), influence of Mg content on formation and reversion of GP zones 2-2538
- Al-Zn-Mg (4.9, 1.2 wt.%), peak aged, fatigued, persistent slip bands, dislocation structure and precip. 2-36935
- Al-Zn-Mg (5, 1 wt.%), peak aged, fatigued, persistent slip bands in front of Stage I cracks 2-36936
- Al-Zn-Mg (6 at.%Zn, 0.81, 1.73 at.% Mg), early decomp. behaviour, isothermal resist. curves analytical description 2-17681
- Al-Zn-Mg supersaturated alloy, decomposition behaviour, heat treatment influence 2-13724
- Al-Zn-Mg-Cu, alloy 7075-T651, effects of warm working 2-47064
- Al-Zn-Mg-Cu, stress corrosion characts., effect of heat treatment and Cu content 2-37004



## ageing continued

- Al-Zn-Mg-Cu (6, 2, 0.01-2.1 wt.%), high strength, low cycle fatigue behaviour in T7351 condition 2-27276  
 Al-Zn-Mg-Cu-Fe-Ni(Zr), struct. and mech. props., Fe with Ni or Zr addition effect 2-51991  
 Al-Zn(3 wt.%), Guinier-Preston zones during decomposition 2-45588  
 AlGaAs oxide stripe CW lasers, spatial mode stability during ageing 2-7764  
 AlMg-Si, aged, high temp. background of internal friction 2-27213  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O ceramics, resist. ageing in Na-S cells 2-27587  
 Al<sub>4</sub>Zn<sub>1.6</sub>Mg, aged, low-cycle fatigue, plastic strain change effects (Serbian) 2-9389  
 Al<sub>4</sub>Zn<sub>1.6</sub>Mg, overaged, deform. microstruct. and crack form. in low-cycle fatigue (Serbian) 2-9388  
 Au/Si adhesion on radiation detector substrate, temp. and aging depend. 2-49215  
 Au-Fe(14.5 at.%), field induced ferromagnetism, close to percolation limit (French) 2-51411  
 CdS single crystals, photoinduced processes, ageing and annealing effects 2-21620  
 Cr, electrodeposited, low contraction, parameter optimization 2-12947  
 Cu-Ni-Co (50, 21, 29 wt.%), mech. and mag. hardening 2-17686  
 Cu-Ni-Fe decomposed solid solns., plastic deform. effect on mag. props. (Russian) 2-21862  
 Cu-Ni-Ti alloys ageing characts. 2-5900  
 Cu-Sn alloys, eutectoid transformation  $\gamma \rightarrow \alpha + \epsilon$  (Russian) 2-13713  
 Cu-Sn-(Ni,Al,Ge,In), phase transforms. 2-51916  
 CuS spectrally selective coating, chemically deposited, optical props. and emissivity 2-9680  
 Cu<sub>2</sub>S-CdS sprayed backwall solar cells for terrestrial appls., reliability 2-37321  
 Fe alloy, aged, martensitic  $\gamma \rightarrow \epsilon$  transformation (Russian) 2-13717  
 Fe, magnetic props. for soft magnetic appl., heat treatment 2-21831  
 Fe, pure polycrystalline, internal friction effect of H, low temps. 2-22261  
 Fe-Al (24.3 at.%) alloy, atomically ordering, mag. aftereffects related to C migration (Polish) 2-36394  
 Fe-C (1.5-7.2 at.%), martensite, interstitial atom config., study using Mossbauer spectroscopy 2-35439  
 Fe-Cr-Co, permanent magnet, heat treated in miscibility gap, mag. props. 2-36983  
 Fe-Cr-Ni commercial alloys, irradi. induced swelling 2-50716  
 Fe-Ni-Al, ageing in region of reverse martensitic transform., phys. props. change (Russian) 2-51942  
 Fe-Ni-Cu-Si-Mn-Cr-C, cast austenitic, struct. and mech. props., heat treatment effect 2-51953  
 Fe-V-C, elec. resistivity and length changes during precipitation 2-5882  
 Fe-Zr-B, amorphous, form. range, mag. props. and thermal stability 2-31243  
 KBr, single crystals, annealing and ageing as thermal and temporal recovery mechanism 2-35581  
 KCl, single crystals, annealing and ageing as thermal and temporal recovery mechanism 2-35581  
 KI, single crystals, annealing and ageing as thermal and temporal recovery mechanism 2-35581  
 LiF-MgF<sub>2</sub> precipitated composites, fracture toughness meas. 2-36941  
 Mo wire, internal friction after different heat treatments 2-27214  
 Mo-Zr alloy, Tsm-6, heat treated, He ion blistering 2-12648  
 NaBr:Eu<sup>2+</sup>, precipitated phase, optical absorpt. and luminesc. spectra 2-41408  
 NaI:Eu<sup>2+</sup>, precipitated phase, optical absorpt. and luminesc. spectra 2-41408  
 Nb alloys, solid-solution and dispersion strengthened, strength, ageing duration effect 2-13754  
 Nb-Ge-(Si) CVD films, supercond. crit. temp. 2-30991  
 Nb-H, acoustic emission during hydride precipitation, effect of thermal cycling 2-45392  
 Nb-Si CVD films, supercond. crit. temp. 2-30991  
 Nb-Ti-N, influence of ageing on internal friction 2-47088  
 Nb-W-Mo-Zr-C, high-temp. ageing under stress, influence on lattice parameters 2-17695  
 Nb-Zr-C, electronic struct., dispersion hardening, interatomic bonds 2-45822  
 Ni based superalloys, influence of Pt-Al coatings and hot corrosion on fatigue behaviour 2-31850  
 Ni, internal friction peak due to H-dislocation interaction 2-41658  
 Ni:H, cold-worked, internal friction peaks 2-8568  
 Ni-Cr, Alloy 800, susceptibility to intergranular corrosion 2-52092  
 Ni-Cr superalloy, IN597, long term isothermal ageing at 850°C, microstruct. and creep props. 2-41673  
 Ni-Cr-W-Mo-Al-Ti (16.9,4.1,4.1,4.1 wt.%),  $\gamma'$  phase discontinuous precipitation and recrystn. (Russian) 2-51909  
 Ni-Fe-Nb-Al, struct. effect on physical props. (Chinese) 2-2533  
 Ni-Mo-Cr, Hastelloy, long-term ageing characts. 2-9361  
 Ni-Ni<sub>3</sub>Al-Mo,  $\gamma/\gamma'$ -aligned eutectic composite, elevated temp. stability of phases 2-22228  
 Ni-Ti (9.6 at.%), magnetic study on phase decomposition 2-17663  
 Se amorphous film, glass transition temp. depend. on heating rate and ageing 2-12756  
 Se<sub>2</sub>Te<sub>1-x</sub>, amorphous system, kinematical transform. and struct. ageing, glass transition, enthalpy, thermal anal. 2-50551  
 Si:H, amorphous plasma deposited coating, IR and electron spectra and oxidation, polysilane analogue 2-41351  
 Sm-Co alloy film, amorphous, mag. behaviour 2-51440  
 Sr<sub>0.5</sub>Ba<sub>0.5</sub>Nb<sub>2</sub>O<sub>6</sub>:Cu ceramics, ageing study through photovoltaic effect 2-26432  
 Ta, magnetron RF sputtering, high rate, in N<sub>2</sub> atmosphere (Japanese) 2-27085  
 Ti alloys, phase transform. in alloys heat hardened by high speed heating (Russian) 2-36851  
 Ti-Li-O superconductor, hot pressed, aging effects, elec. resistivity 2-2540  
 Ti-Nb (35 wt.%), isothermal  $\omega$  phase form., electron microscopy and small-angle X-ray scatt. study (French) 2-9352  
 TiN<sub>x</sub>, quenched and aged, supercond. transition temp. enhancement 2-30997  
 Ti<sub>48</sub>Ni<sub>43</sub>V<sub>9</sub>, long-period struct., electron diff. and electron microscopy study (Russian) 2-35442  
 U(Al,Fe) dil. alloys, TEM obs. of microstruct. rel. to hardness 2-43557  
 V-Ga-Ce (16, 1 wt.%), irradi. conditions on mechanical props. 2-13757  
 Zn-Al (0.4 wt.%), fine grain, creep characts. (Russian) 2-9383  
 Zn-Al alloy castings, damping capacity and mech. props. 2-47170

## ageing continued

- ZnS phosphor powder for electrolum. panels, UV light induced ageing, photoacoustic spectroscopy study 2-5775  
 Zr, internal friction, dislocation-point defect interactions 2-45345  
 ZrO<sub>2</sub>, partially stabilised by CaO, crack branching and propagation 2-17730  
 ZrO<sub>2</sub>, Y<sub>2</sub>O<sub>3</sub> stabilized, elec. cond. behaviour 2-12840  
 ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub> solid electrolyte, phase change and mech. props. after ageing 2-13715
- agriculture**  
 see also farming  
 agrometeorology, heat and mass transfer, electrochem. simulation 2-4687  
 energy demand in US, report 2-17958  
 energy-agro-waste complexes, unit process models for potential subsystems 2-27744  
 Finnish agriculture, utilisation of alternative energy source (Hungarian) 2-41975  
 gasification of rice husk 2-27526  
 irrigation water, economic feasibility of solar pumping/ 2-37187  
 land use in Canada, effects on compatibility with snow cover data 2-23032  
 LANDSAT multitemporal data, environmental change monitoring system 2-10183  
 pilot biogas plant using agricultural waste, France (French) 2-32005  
 residue gasification, Canadian technical and economic evaluation 2-27522  
 salination of agricultural land in western USA 2-6198  
 soil moisture remote sensing by microwave brightness temp.method 2-10197  
 soil surface props. sensing using vibrator probe with piezoceramic transducer 2-14634  
 solar photoelectric plants for irrigation and supply of water to agricultural users 2-6125  
 solar powered pumping plants characts. 2-32034  
 windmill, blade configurations and performance on the Savonius rotor with application to irrigation system in Indonesia 2-27538  
 H<sub>2</sub> storage, biomass, solar energy system for agriculture, drinking water and hydroelectric power 2-27736
- air**  
 see also terrestrial atmosphere  
 air-H<sub>2</sub>-methane, combustion, quenching distance determ. 2-22447  
 air-H<sub>2</sub>S equilibria under Claus furnace conditions 2-31943  
 air-water mixtures, pipe flow, flow patterns, pressure gradients 2-30218  
 alcohol-air fuel cells using alkali electrolytes 2-9647  
 arctic air chemistry, conf. (Narragansett, Rhode Island, May 1980) 2-6  
 atmospheric, breakdown by Nd laser radiation forming large-dia. focusing spots. 2-35267  
 bubbles, cooling of heated H<sub>2</sub>O stream in open channel, enthalpy transfer coeffs. 2-25366  
 condensation nuclei creation by negative corona discharge 2-30346  
 corona-onset field strength calcs. and equiv. radius concept 2-8365  
 countercurrent flow with water in vertical duct, wall roughness effect on heat transfer 2-35135  
 DC positive streamer corona enhancement due to electronegative gas addition 2-25668  
 electric strength recovery in gaps after sliding discharge along surface of insulator 2-1362  
 flow through highly deformable porous media 2-25440  
 heat transfer in air enclosures of aspect ratio less than one 2-50268  
 high frequency capacitive discharges, relationship between maximum plasma temp. and current 2-40199  
 hypersonic flow, blunt body radiative-convective heat transfer, ablation product effect 2-4855  
 luminescence yield under influence of <sup>239</sup>Pu  $\alpha$ -particles 2-48006  
 multipass solar air heaters, tests and results 2-14116  
 plasma produced by beam of fast electrons, electron distrib. function 2-4948  
 pollutant absorption coeffs., photoacoustic spectroscopy study 2-18165  
 propane-air flame, laser-induced Na fluoresc. saturation characts., chem. reaction role 2-47343  
 rainwater natural acidity, factor controlling variability 2-52907  
 shock wave, ahead of blunt body, nonequilibrium emission 2-16390  
 streamer breakdown criterion for compressed gases 2-1357  
 thermal equilibrium composition of Cu arc in air (Japanese) 2-25671  
 transverse air flow, glow discharge, spatial distrib. of electron conc. 2-8374  
 transverse flow, glow discharge, electron characteristics 2-5011  
 ventilation effects on cavitation in venturi 2-30189  
 venturi, flowing down bubble effects on cavitation 2-30188  
 voltage breakdown between closely spaced electrodes over polymeric insulator surfaces 2-50466  
 volume discharge contraction process investigation 2-20958  
 water-air mixture quenchant for C steel 2-36887  
 Cl and S anal. by Ar ion induced X-ray emission 2-47545  
 H<sub>2</sub>O-air two-phase flow, min. film thickness, flow obstruction effect 2-4873
- air bases** see airports  
**air bubbles** see bubbles  
**air compressors** see compressors  
**air conditioning**  
 see also ventilation  
 active solar cooling system in northern Italy 2-52392  
 active solar cooling system using LiBr-H<sub>2</sub>O absorpt. machine 2-18130  
 active solar heating and cooling systems, performance and cost 2-18121  
 buildings heating, ventilating and air-conditioning energy requirements reduction measures in USSR (German) 2-37184  
 chemical heat pumps and competitive systems, cost effectiveness and energy consumption evaluation 2-22673  
 domestic cooling using passive techniques in Saudia Arabia 2-14055  
 heat pumps, solar assisted series system, computer simulation anal. of operation 2-47513  
 Kentucky solar house: a flexible experimental test bed 2-27554  
 noise control by sound cancellation 2-7965  
 noise control in heating and ventilating equipment, practical advice 2-7966  
 passive solar systems for domestic heating and cooling in Turkey, performance and results 2-14114  
 plant at Riyadh University, Saudi Arabia, heat pump appl. 2-9667  
 plate finned tube heat exchangers, heat transfer coeff. enhancement (Japanese) 2-43014



**air conditioning continued**

- railroad driver cab thermoelectric heat pump transient response 2-18114
- regional simplified solar cooling design charts 2-18017
- residential air-conditioning system for heating and cooling, alternative power sources 2-32106
- residential space and water heating using off-peak electricity supplied heat pumps 2-37423
- Sol-Temp system, total energy solar collector for buildings 2-9631
- solar assisted heat pump system, thermal anal. and outline 2-27551
- solar energy anal. in India 2-41986
- solar energy application in heating and air conditioning, Netherlands (Dutch) 2-37173
- solar energy utilisation to increase thermal comfort in buildings 2-27552
- solar powered, characts. and advantages 2-18015
- solar powered heat pumps characts. 2-18020
- solar powered Li-Br dual absorption cycle for air conditioning 2-42037
- solar/fossil Rankine cooling 2-18016
- thin adiabatic desiccant beds, design and testing for solar air conditioning appls. 2-6173
- H<sub>2</sub>SO<sub>4</sub> chemical heat pumps for industry 2-22674

**air permeability** *see permeability***air pollution**

*see also air pollution detection and control; smoke*

- accidental radioactive atmospheric release, environmental measurements 2-39204
- acid rain, potential impacts on unpolluted naturally acid waters in SE Alaska 2-10095
- acid rain and long range transport of air pollutants 2-52405
- acid rain at Nova Scotian (Canada) rural site 2-47543
- acid rain in NE. USA, relative importances of HNO<sub>3</sub> and H<sub>2</sub>SO<sub>4</sub> 2-2823
- acidic precipitation problems and need for air quality standard 2-52404
- aerosol pollution, meas. of trace elements in resuspended dust from school playgrounds 2-6206
- aerosol pollution, multi-element airborne dust meas. for Walsall, England, (January to December 1979) 2-6202
- aerosol pollution, multi-element airborne dust meas. for Walsall, England (December 1977 to November 1978) 2-6203
- air basin preservation, mathematical problems 2-6207
- Alberta, S gases deposition from multiple scattered sources 2-9697
- Arctic region, pollution from local sources (German) 2-18158
- automobile exhaust, prediction using inhomogeneous stratified medium 2-42061
- benz(a)pyrene, pollution of Atlantic air 2-22688
- boundary layer, diffusivity tensor 2-32559
- boundary layer propagation and turbulent diffusion 2-6440
- Brookhaven National Laboratory, New York, boundary layer pollutant light scatt. 2-9713
- carbon tetrachloride, atmospheric concentration, 1979 obs. 2-9716
- carbonaceous smokes, optical props. and mass conc. 2-2819
- Chicago urban intersection, CO pollution correl. with traffic and wind 2-9710
- chlorofluorocarbon and O<sub>3</sub> depletion of stratosphere, 1-D models 2-3067
- chlorofluorocarbon depletion of atmos. O<sub>3</sub>-layer, 2-D model 2-47976
- chlorofluorocarbons and other pollutants, impact on stratospheric O<sub>3</sub> 2-6204
- chlorofluoromethanes, combined effects on stratospheric O<sub>3</sub>, air temp. and surface temp. 2-32142
- chlorofluoromethanes pollution of stratosphere, effect on O<sub>3</sub> trends 2-10107
- coal fired power stations and the environment in West Germany (German) 2-18151
- conc. of pollutant near to ground level source, use of wind-rose model 2-47541
- concentrations in stable boundary layer due to surface releases 2-47540
- Denver, Colorado, aerosol form., transformation and effects in emission plume 2-18156
- dichlorofluoromethane, atmosphere midlatitude vertical profile (obs. made in 1977, 8, 9) 2-10131
- diffusion into boundary layer, effect of surface absorpt. 2-22687
- diffusion model of air pollution (German) 2-2824
- dispersal and diffusion of tracer gases released from meteorological towers 2-42454
- dispersal of contaminant in atmosphere, boundary condition 2-22683
- dispersion, effect of thermal plumes 2-23065
- dispersion from ground-level source, surface roughness effects 2-2822
- dispersion modelling, UK review 2-29445
- dispersion of non-buoyant particles in convective boundary layer 2-47539
- dispersion of pollutants, stationary non-Gaussian model 2-14529
- dry deposition of particles and gases, analytic model 2-42456
- Ellesmere Island, Canada, snow, acid sulphate pollution since 1950 AD 2-42410
- environmental fluid mechanics 2-18558
- Erevan, atmosphere O<sub>3</sub> content rel. to meteorological conditions 2-22685
- fallout interhemispheric transport by E. African low-level jet 2-42428
- Fawley Power Station stack, use of SF<sub>6</sub> as tracer of plume 2-9706
- fluorocarbons (C<sub>2</sub>F<sub>6</sub>, CF<sub>3</sub>Cl, CF<sub>3</sub>Br, C<sub>2</sub>F<sub>3</sub>Cl), atmospheric concentration, 1979 obs. 2-9716
- formation of and dispersal of toxic components, chemical kinetics, jet flows in atmosphere 2-35188
- freon content of stratosphere (F13 to 14 and F113 to 116) 2-37955
- Gaussian plume model, inaccuracies during real appl. 2-29443
- Great Wall nonurban area, China, aerosol comp., natural and pollutants 2-47544
- ground-level conc. downwind of elevated line source, analytic approx. 2-14134
- halocarbons in stratosphere, estimates of O<sub>3</sub> depletion for global halocarbon usage 2-6205
- heavy-gas spread from point source into complex terrain, hydraulic modelling 2-42060
- Lexington, Kentucky, particulatesulphates correl. with SO<sub>2</sub> pollutant sources, transport 2-9709
- lidar determination method for aerosol characts. downwind of factory 2-27755
- long-range transport, study of aerosol deposition 2-22686
- long-term concentration model for S-pollutants over USA and Canada 2-47937
- Manchester area, England, meteorological aspects of SO<sub>2</sub> and smoke pollution 2-3046
- air pollution continued**
- maximum annual dose-rate, air pathway, time-depend. variations 2-39230
- methane, atmosphere midlatitude vertical profile (obs. made in 1977, 8, 9) 2-10131
- methane, pollutant conc. increase and Earth surface temp. increase 2-32143
- methane, recent increase and impending global temp. rise 2-2820
- methane trends in southern hemisphere 2-37928
- methylchloroform pollution in atmosphere, global trends 2-27748
- Moscow, atmosphere O<sub>3</sub> content rel. to meteorological conditions 2-22685
- natural-draught cooling tower emissions, atmospheric impact assessment 2-37476
- New York City, SO<sub>2</sub> concs., rel. to sea breezes and fronts 2-32145
- New York state rural sites, summer aerosol pollutant, trace element conc. and transport 2-9712
- E North America, sulphur cpd. pollutant transport and deposition 2-14133
- nuclear plants, radioactivity emissions in EEC 2-39248
- nuclear reactor accidents, long-term somatic effects 2-39202
- nuclear weapon <sup>14</sup>C, <sup>13</sup>C and T, dispersion, C cycle model appl. 2-14596
- particle dry deposition velocity onto cereal crop land 2-47939
- particles in air, size distrib., real time meas. by surface ionisation mass spectrometry 2-18162
- particulate transport from elevated source, theoretical model 2-14512
- peroxyacetyl nitrate in long-range transported polluted air in Scandinavia 2-14136
- photochemical smog formation, effect of hydrocarbon and NO<sub>x</sub> concs. 2-52401
- plume dispersion, topography effects 2-14132
- plume from chimney, cross-section struct. model 2-10118
- plume rise dynamics, ambient turbulence effects on bent-over plume (Chinese) 2-18483
- plume rise models, effective source flux parameters 2-47936
- plumes and visibility, measurements and model components, conference, Arizona (1980 November 10 to 14) 2-6695
- polycyclic aromatic hydrocarbons on dust from German cities 2-2821
- Quebec City, urban heat island obs. during winter (French) 2-22682
- radioactive, monitoring and meas. at CEN, Mol 2-39251
- radioactive plumes, wet deposition calc. 2-14131
- radionuclides transfer from sea to land at La Hague nuclear reprocessing works (French) 2-6199
- rain-water, meteorological interpretation of chemical comp. at one measuring site 2-10151
- real-time dose prediction system, for nuclear accidents 2-39238
- regional long-term transport model 2-28168
- Rio de Janeiro, atmospheric conc. of metals and total suspended particulates 2-9714
- solar energy systems, effects of air pollution on system performance and design 2-18058
- soot, visible absorption 2-23105
- St. Louis photochemical grid model 2-37477
- St. Louis Ti pollution, transport and dispersion, statistical model 2-27749
- sulphate aerosol growth in stratosphere 2-42421
- sulphate washout ratios in winter storms 2-28161
- surface concentration in wake of power station, estimation algorithm 2-32146
- 1,1,1,2-tetrafluoroethane, chemistry and eddy diffusion model 2-9708
- Toulouse, France, pollution particle composition of air (French) 2-47542
- trace gas measurement with clean air sampling system 2-37932
- trace gases increase throughout 1970s, greenhouse effect operation 2-37926
- trichlorofluoromethane, atmosphere midlatitude vertical profile (obs. made in 1977, 8, 9) 2-10131
- trichlorofluoromethane used as tracer of urban air masses 2-9711
- troposphere aerosol size distrib. fluctuations, spectral anal. of meas. with fast response sensor 2-18547
- troposphere CO and methane over India, Saudi Arabia and Arabian Sea 2-32144
- United States Atlantic and Gulf coast, air mass transport and diffusion 2-32606
- United States of America, sulphur pollutant daily distrib. model 2-14565
- urban heat island over Christchurch, New Zealand 2-14561
- weather of Midwest USA affected by aircraft contrails 2-14567
- wood, energy resource potential and effects of increased combustion on air quality 2-17983
- CO<sub>2</sub>, atmosphere midlatitude vertical profile (obs. made in 1977, 8, 9) 2-10131
- CO<sub>2</sub>, buildup affecting Antarctic sea ice extent 2-47912
- CO<sub>2</sub> content, Earth surface temp. sensitivity 2-18562
- CO<sub>2</sub>, effect on climate; feedbacks and synergisms 2-47996
- CO<sub>2</sub>, in atmosphere due to fossil fuel burning and biomass uptake 2-32591
- CO<sub>2</sub>, increase due to fuel combustion, radiative-convective model 2-42464
- CO<sub>2</sub>, increase due to man, past and projected climate changes 2-23102
- CO<sub>2</sub>, releases, combined effects on stratospheric O<sub>3</sub>, air temp. and surface temp. 2-32142
- CO<sub>2</sub>, review of greenhouse problem 2-10166
- <sup>14</sup>C activity meas. in tree leaves, near Swiss nuclear power stations 2-39239
- CIX species in stratosphere, catalytic mechanisms for O<sub>3</sub> destruction 2-32593
- I vapour, deposition velocity, rel. to atmospheric variables 2-42062
- <sup>122</sup>I, airborne, arising from surface contamination 2-37688
- NO<sub>x</sub>, background mixing ratios over N. Atlantic 2-18526
- NO<sub>x</sub>, contrib. of anthropogenic sources from meas. of prod. in laboratory discharge 2-28130
- NO<sub>x</sub>, in stratosphere, effect on O<sub>3</sub>, implications of low OH conc. 2-23046
- N<sub>2</sub>O, atmosphere midlatitude vertical profile (obs. made in 1977, 8, 9) 2-10131
- O<sub>3</sub> depletion due to chlorofluorocarbons, calc. of biological damage 2-27841
- O<sub>3</sub> depletion due to chlorofluorocarbons, 2-D model 2-47976
- Pb airborne particulates, survey at Melbourne kindergartens 2-52403
- Pb, natural background conc. deduced from polar ice cores 2-52896
- Pu environmental levels near Karlsruhe nuclear plant 2-42054
- <sup>238</sup>U, A=219, 220, 222, atmospheric conc. over Banghazi, Libya, from beta counting 2-14135
- S, surface removal, horizontal flux, regional long term model 2-9705
- SO<sub>2</sub> absorption cross-section meas. in 290-317 nm range 2-18155



**air pollution continued**

SO<sub>2</sub> conc. in air of a coastal site, gaussian climatological model 2-47938  
 SO<sub>2</sub> concentration prediction, construction of diffusion model (*Japanese*) 2-22689

**air pollution detection and control**

absorption coeffs., optoacoustic spectroscopy study 2-18165  
 acidic precipitation problems and need for air quality standard 2-52404  
 aerosol, particle size evaluations using multiwavelength extinction meas. 2-48011  
 aerosol particle absorption spectroscopy by photothermal modulation of Mie scattered light 2-6438  
 aerosol plume dispersion over sea surface, remote meas. using DFVLR Minilidar 2-2830  
 aerosol tunnel test facility, for particulate control devices testing 2-14172  
 aerosols, electro-optical meas. using laser beam (*German*) 2-253  
 airborne particles real time anal. by surface ionisation mass spectrometry 2-9756  
 airborne particles real-time anal. by direct inlet mass spectrometer 2-9755  
 analysis instrumentation, conf., St. Louis, MO, USA (March 1981) 2-32156  
 Apheron Peninsula (Baku), Caspian Sea, atmospheric pollution forecasting 2-22684  
 carbonaceous particles, photoacoustic detect. 2-22690  
 chromatography, microprocessor controlled analyser based on photoionisation detector 2-32157  
 chromatography, portable, for multi-component analysis, based on photoionisation detector 2-32158  
 chromatography and mass spectroscopy appl., computer-controlled 2-32162  
 contamination measurements with quadrupole mass spectrometer 2-37131  
 determination of pollution levels in unknown area, use of random- and minimax-sampling 2-2826  
 differential reflectance measurements of various materials at CO<sub>2</sub> laser wavelengths 2-3109  
 electrostatic precipitators for industrial gases cleaning, cost-effectiveness 2-47383  
 emissions from thermal power stations, automatic monitoring and control equipment, in USSR 2-27757  
 gas pollutant conc. meas. by laser Raman probe, spatial and temporal resolution 2-14174  
 Gelderland 600 MW dual coal/oil-firing power station, technical details and environment protection measures (*German*) 2-47537  
 hydrocarbons, He-Xe laser radiation, absorpt. coeffs. 2-11637  
 IR laser beams retroreflected through atm., direct and heterodyne obs. 2-52931  
 laser application to atm. gas remote meas., Raman reson. diffusion method (*French*) 2-32163  
 laser radar and appls., review 2-14637  
 lasers for hydrometeorological research and environmental monitoring 2-32654  
 lichens and air pollution monitoring 2-18161  
 lidar determination method for aerosol characts. downwind of factory 2-27755  
 lidar method, three-wavelength, for mass conc. meas. in pollutant cloud 2-22693  
 lidar mobile system for environmental probing 2-37478  
 luminescence techniques development, room temperature phosphorescence and synchronous luminescence 2-32160  
 luminescence techniques in air anal. 2-14171  
 metal dusts and fumes, mag. props. meas. technique 2-48730  
 meteorological tower equipped for automatic temp. and wind meas. (*Chinese*) 2-18585  
 methane, trace gas monitoring using PbSnTe tunable diode laser 2-27754  
 methane monitoring, Pb-salt diode laser tunability utilisation 2-22694  
 methane/total hydrocarbon automated analyzer for aircraft atmospheric meas. 2-18164  
 multicomponent gas mixtures automatic analysis, data interpretation 2-9757  
 off gas from atomic power station, Kr, Xe, water vapour combined adsorption 2-18157  
 optoacoustic detection, interfering gases phase lag effect 2-22681  
 organophosphorous compounds and pesticides detection using coated piezoelectric crystal 2-18159  
 PADAR: photo-acoustic detection and ranging—a new technique for the remote detection of gases 2-43102  
 parametrisation of pollution from source in surface air layer 2-52402  
 plume dispersion over sea surface, remote meas. using DFVLR minilidar 2-22692  
 plume observation method By IR imagery 2-14173  
 power station stack emission control, evaluation of Australian coal 2-52416  
 protection measures against air and water pollution at Swiss PTT, quantitative and qualitative measurements (*German French*) 2-14176  
 radioactive inert gases, low-level concentration determ. 2-32155  
 radioactivity, airborne discharges, collective doses from UK nuclear industry 2-32141  
 radiocarbon dating techniques, appl. to air pollution studies 2-47546  
 remote probing using CO<sub>2</sub> DIAL system 2-2828  
 simulated tests developments 2-42064  
 smog forecasting, accurate Doppler radar meas. of atmospheric speed of sound (*Russian*) 2-44516  
 smoke plume, airborne lidar meas. of plume distrib., vertical transmission and particle size 2-47935  
 spectrometric method, cl-ray, for anal. of <sup>210</sup>Pb and <sup>210</sup>Po concs. in surface air 2-9752  
 stack effluent spectral meas. using double-beam interferometer 2-27753  
 stack emission measurement by Lidar and correl spectrosc. method 2-18163  
 stack gas concentration meas. in 1-6 µm wavelength region 2-2834  
 stack gas diffusion from Shimane Nuclear Power Station (*Japanese*) 2-4048  
 tetrachlorodibenzodioxins, detect. in air filter samples 2-32140  
 thermochemical processes for H<sub>2</sub> prod., preliminary assessment of environmental impact 2-9691  
 trace gas minimum detectable quantities using high resolution spectroscopy 2-27758  
 turbidity measurement, intercomparison of integrating nephelometer meas. 2-9751  
 water vapour lidar improvements using DIAL techniques 2-2832

**air pollution detection and control continued**

CO content over a city, atm. transmission function technique (*Russian*) 2-9754  
 CO monitoring system, using nondispersive IR analyser 2-32159  
 Cl and S anal. by Ar ion induced X-ray emission 2-47545  
 HF gaseous concentration meas., CW He-Ne laser appls. 2-44368  
 H<sub>2</sub>S, He-Xe laser radiation, absorpt. coeffs. 2-11637  
 H<sub>2</sub>SO<sub>4</sub> vapour in combustion gases, continuous meas. by portable automatic monitor 2-42065  
 Hg, determ. in air by Hg/hydride system 2-17932  
 NO<sub>2</sub> detection using DIAL 2-9750  
 NO<sub>2</sub> profile in stack plume, remote meas. by differential absorpt. LIDAR (*Japanese*) 2-37479  
 Pu, determ. in smear samples and air filters 2-37126  
 S compounds, traces, gas chromatography with flame photometric detector 2-32161  
 SO<sub>2</sub> concentration meas. by lidar and computer 2-37475  
 T monitoring in air, method (*Chinese*) 2-34212

**air pumps see compressors****air terminals see airports****aircraft**

see also aerospace control; aerospace instrumentation; helicopters  
 airship for geosciences monitoring, very large stratosphere solar heated craft 2-6480  
 community noise caused by road, rail and air traffic, annoyance as measure of noise level of sources 2-11903  
 component fatigue crack growth rates, electron fractography 2-52129  
 Concorde-generated shock waves, ducted propag. 2-44544  
 environmental noise for cabin staff 2-9718  
 flight from Paris to London by solar-powered aircraft 2-41988  
 liquid H<sub>2</sub> worldwide production prospects for utilisation as aircraft fuel 2-37461  
 military aircraft noise exposure control, USAF plans for 1980s, overview 2-11905  
 noise, comparison of community response with road traffic 2-34988  
 noise, effect on pupil performance, long-term assessment 2-52408  
 noise, nonlinear propag. in atmosphere 2-7964  
 noise contours rel. to land use compatibility, appls. in planning studies 2-11915  
 noise control at airports, certification 2-16192  
 noise control test facilities at Douglas Aircraft Company, USA 2-16202  
 noise identification system for inflight position detector 2-16208  
 noise levels in front and backyards of residences 2-49990  
 noise monitoring system of GLC and London Boroughs, present system, future development 2-20501  
 noise prediction meas. evaluation and control 2-11896  
 nonstationary aircraft noise, statistical estimation of correlation 2-11885  
 simulation facility using water tunnel 2-20792  
 supersonic transport aircraft at takeoff, noise abatement, flight path optimisation using dynamic programming 2-11916  
 thunderstorms hazards and their avoidance 2-23057

**aircraft instrumentation**

camera optical performance under aircraft internal-compartment turbulence effects 2-48814  
 clear air turbulence warning system for aircraft, IR radiometry system 2-23143  
 meteorological system for reentry environmental conditions forecasting 2-38003  
 sealed Pb-acid batteries for aircraft appls. 2-22569  
 velocity field near a wing-fuselage combination at an angle; of attack in a supersonic stream 2-20708

**airfields see airports****airglow**

see also atmospheric spectra; aurora; nightglow; sky brightness; twilight  
 557.7 nm line effects of gravity and planetary waves and meteor winds 2-28259  
 IR radiance model of upper atmosphere, rel. to obs. of Earth IR limb 2-32699  
 IR radiation, recent auroral and airglow meas. 2-32703  
 line intensity ratios used to determine F-region parameters 2-6441  
 Ca<sup>+</sup> twilight airglow from thermosphere intermediate ionisation layers 2-28260  
 Fe I 386 nm emission in twilight spectra; obs. by ratioing technique 2-6486  
 NO γ-band airglow measurement with self-absorpt. gas cell, error anal. (*Japanese*) 2-3114  
 NO, UV delta-bond airglow 2-42508  
 O I 5577 Å emission intensity calc. 2-38008  
 O I 6300 Å, obs. rel. to non-thermal O(<sup>3</sup>D) production by O<sub>2</sub><sup>+</sup> dissociative recomb. 2-14644  
 O, O<sub>2</sub> and OH emission in lower thermosphere 2-18615  
 O<sup>+</sup> EUV emission spectra branching ratios 2-10221  
 O<sup>+</sup> extreme UV dayglow, rocket obs. 2-10220  
 O<sub>2</sub>, IR emission spectra for upper atmos. conditions 2-10223  
 OH (6-2) band, intensity oscils. rel. to rotational temp. 2-23153  
 OI 5577 Å airglow variation, satellite observation between April 1971 and December 1977 2-38014  
 O(<sup>3</sup>P<sub>1</sub>) 1304 Å triplet intensity ratios 2-42509

**airports**

aircraft and ground vehicle noise levels in front and backyards of residences 2-49990  
 military airbase induced community noise control/land-use compatibility planning, military/civil interface 2-11913  
 noise, community response at Toronto International and Oshawa Municipal airports, comparison 2-20466  
 noise abatement, optimization of complex runway use programmes 2-11914  
 noise abatement aspects, acoustical conditioned zones, definition and implementation rel. to construction programmes 2-11908  
 noise contour predictions, algorithm specification, progress of working group 2-11912  
 noise control, Beograd, Yugoslavia, long range research program 2-11918  
 noise control, US Federal Aviation Authority plans and policies for 1980s 2-7970  
 noise control aspects, land use planning to minimize potential noise impact 2-11907  
 noise control programme, effectiveness at Torrance, California Municipal 2-11910  
 noise control strategies rel. to land use compatibility, ANCLUC environmental studies 2-11917



**airports continued**

- noise exposure, equal cumulative noise contours, Effective Perceived Noise Level/Noise Exposure Forecast descriptors 2-11904  
noise exposure contour generation, comparison of Integrated Noise Model and NOISEMAP programs 2-11911  
noise exposure contour generation using NOISEMAP computer program 2-11909  
noise exposure in vicinity of airports, reduction rel. to planning, airspace use, aircraft operations and land use 2-11906  
noise exposure prediction using Integrated Noise Model computer program 2-1077  
Singapore International Airport, noise control measures 2-44559

**alarm systems**

- disturbance anal. systems for nuclear plant safety 2-34195  
security system CCTV, video disc recording appl. 2-43544

**albedo**

- Amalthea 2-32935  
cirrus, albedo to solar radiation and influence on atmos. heat budget 2-3091  
cylinder, albedo calc. incorporating first-pass neutrons 2-3989  
Earth's atmosphere, reduced albedo due to volcanic aerosol 2-28207  
Earth radiation budget 2-37947  
AM Herculis, spectra, model, white dwarf albedo and mass, X-ray obs. 2-28498  
Io, surface albedo and colour variations, Voyager I obs. 2-32932  
Jupiter, internal heat, IR albedo and energy balance 2-28393  
Jupiter, near UV scattering props. of atmos. 2-28402  
Mars disk, spectral albedos anal. and visible obs. 2-23248  
Phanerozoic land-sea and albedo variations as climate controls 2-52921  
planetary astronomy, definition of albedo and appl. to irregular particles 2-32950  
planetary objects, albedo meas., reduced Sun appl. 2-42607  
snow albedo at South Pole, cloudiness and solar elevation depend. 2-10160  
snow albedo feedbacks in atmospheric models, linear and nonlinear aspects 2-18539  
snow spectral albedo, effect of grain size and snowpack water equivalence on satellite visible and near IR obs. 2-23040  
Uranus spectral albedo (47 to 1 micron) comparison with methane absorpt. band form. models 2-42645  
Venus atmosphere, gravity waves from UV albedo contrast anal. 2-6552

**alclad** *see aluminium alloys***Alfvén waves** *see magnetohydrodynamic waves; solid-state plasma***algebra**

- see also Boolean algebra; linear algebra; matrix algebra*  
C algebra approach in quantum field theory 2-33738  
C\* algebra, unbounded derivations commuting with compact group actions 2-28687  
C\*-algebra, pure states as dual object 2-48526  
Clifford algebras, generalisation to orthogonal and symplectic forms 2-10985  
Clifford algebras with three anticommuting elements, algebras over singular field 2-23403  
Clifford algebras with three anticommuting elements, spinors and quaternions 2-23402  
critical Kolmogorov-Arnold-Moser trajectory, scaling 2-28783  
electromagnetism and space-time holomorphic props. 2-18931  
finite algebras, Bose realisation, rel. to B-para algebra 2-38812  
geometrical optics and optical aberrations, Lie algebra theory 2-49658  
Goldstone theorem in C\* algebraic approach 2-10943  
holography and Fourier optics, wavelength var., operator algebra description 2-34690  
multiparticle scatt. theory and partition combinatorics 2-18953  
on the moments of the number of renewal epochs 2-23404  
operator algebra for Josephson tunneling 2-51379  
partial isometries and quotient structures in Hilbert spaces 2-76  
pre-Hilbert space props. 2-38481  
quantum mechanics, statistical inference 2-3423  
speckle pattern behaviour, static and dynamic, operator algebra description 2-20252  
spectral subspaces for compact actions 2-3358  
superselection rules, weak inequivalence 2-28682  
theorem about states on quantum logics 2-77  
time-dependent Schrödinger eqn. symmetry, pot. classification by maximal kinematical symmetry 2-18952  
unbounded operator algebras topologisation 2-3359

**algorithm theory**

- see also computational complexity*  
liquid-film lubrication problems, cavitation algorithm 2-25328

**algorithms (computer listings)** *see subroutines***aliphatic compounds** *see organic compounds***alkali metal alloys**

- see also caesium alloys; lithium alloys; potassium alloys; rubidium alloys; sodium alloys*  
disordered, heat of form., density functional pseudopot. approach 2-5247  
disordered, heat of form., density functional pseudopot. approach 2-8639  
liquid, elec. resist. and struct., electron-ion plasma model 2-26356  
phase diagrams, electronic theory 2-22199

**alkali metal compounds**

- see also alkali metal alloys; alkali metal halides; caesium compounds; francium compounds; lithium compounds; potassium compounds; rubidium compounds; sodium compounds*  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-M<sub>2</sub>O, M-alkali metal, mixed alkali effects, NMR study 2-31318  
borosilicate gradient-index AR film deposited by sol-gel process 2-49951  
bromide crystals, modified electronic charge densities 2-1439  
complexes with polyethers, struct. and ion transport 2-21366  
cyanide, phase transition, elasticity theory 2-12728  
germanate glasses, struct. determ. by XPS 2-30401  
germanosilicate glasses, struct. determ. by XPS 2-30401  
hydrides, thermal expansion coeff., isothermal compressibility and Grüneisen const. determ. 2-50819  
intercalation compounds with alkali metals, thermal expansion meas. 2-50892  
intercalation compounds with graphite, phonons 2-50787  
M<sub>2</sub>Cl:M<sup>II</sup>Cl<sub>2</sub>, oriented microinclusions on crystallisation from melt (*Russian*) 2-13639  
neodymium polyphosphates, MnD(PO<sub>3</sub>)<sub>2</sub>, spectral-luminesc. investig., Nd<sup>3+</sup> level obs., Stark structures 2-2325  
nitrites, activity and osmotic coeffs., data correlation 2-33247

**alkali metal compounds continued**

- oxide systems, reactor applications, thermodynamic review 2-19616  
oxides, impurity in vitreous SiO<sub>2</sub>, effect on viscosity 2-25966  
phosphate glasses, electron struct., MO LCAO method 2-26280  
12-phosphomolybdates, vibr. modes, struct., laser Raman and IR obs. 2-36622  
12-phosphotungstates, vibr. modes, struct., laser Raman and IR obs. 2-36622  
pyroarsenates, A<sub>2</sub>B<sup>III</sup>X<sub>2</sub>O<sub>7</sub> type, struct. and IR charact. (*French*) 2-45121  
pyrophosphates, A<sub>2</sub>B<sup>III</sup>X<sub>2</sub>O<sub>7</sub> type, struct. and IR charact. (*French*) 2-45121  
pyrovanadates, A<sub>2</sub>B<sup>III</sup>X<sub>2</sub>O<sub>7</sub> type, struct. and IR charact. (*French*) 2-45121  
silicate glass, mixed-alkali, elec. cond. theory, electronegativity and internal ion exchange role 2-12822  
silicate glass, surface tension rel. to microhardness 2-30742  
silicate glasses, relaxation transitions and deform. below glass-transition temp. 2-9364  
silicate glasses, struct. determ. by XPS 2-30401  
silicate glasses, viscous flow, fluctuation microcavity vol., activation vol. and molar vol. 2-8450  
silicate glasses containing Ag and Ce, light-sensitive, Ag reduction mechanism 2-41911  
sulphates, pot. functions, configs. semiempirical calcs. 2-39403  
superoxides, CDW and displacive collective Jahn-Teller effect 2-21514  
trihydroselemites, hypothetical ancestral phase 2-35428  
tungsten bronzes A<sub>x</sub>WO<sub>3</sub> (where A=alkali or H atom), electronic struct., SCF MS Alpha calcs. 2-49286  
zirconosilicates, electronic struct., bonds, X-ray electron spectra, MO LCAO calcs. 2-39419

**alkali metal halides**

- see also compounds of individual alkali metals, e.g. sodium compounds*  
activation volumes, critical assessment of estimation methods vel. to viscosity variation in Earth mantle 2-42352  
anisotropic point defect interactions in radiation induced hardening 2-5152  
coloured, electron recombination kinetics with  $\alpha$ -centres 2-21528  
compressibility, Broat sum rule, Debye-Waller factor, melting 2-12698  
crystal, fundamental luminesc. following dense electron-beam nanosecond irradiation 2-5755  
crystal binding energies and Gruneisen-Anderson parameters 2-1437  
crystals, photoelasticity, interionic pots., permittivity 2-36594  
diatomic mol. binding energy 2-24890  
dielectric theory of Yamashita-Kurosawa, optic mode frequencies and Gruneisen parameters 2-25994  
electroluminescence of thin single-crystal layers, prebreakdown mechanism 2-46770  
extended defects produced by irradi. and TEM obs. (*French*) 2-30500  
extended interionic potential 2-40315  
F band thermal shift, model based on cryst. thermal expansion (*Spanish*) 2-41387  
F-centres, spin-mixing parameter, light absorpt. effect 2-51632  
F-centres, surface, quantum chem. models (*German*) 2-46654  
F-coloring, role of impurities on primary process 2-12591  
foreign ion distrib. coeff. as function of ionic radius 2-12621  
freezing, classical statistical mech. theory 2-26021  
gases, props. calc. in equilib. position, Hellmann interionic pot. model 2-29560  
heat of vaporisation calcs. 2-16765  
hologram formation, Gaussian type complex refractive index props. 2-2212  
ion formation by high power pulsed laser irradi. 2-52204  
irradiated, colloidal centres growth (*Russian*) 2-2740  
laser-Raman matrix isolation spectroscopy 2-236  
liquid-Ag halide mix., activity coeff. and excess molar Gibbs functions at varying temp. and composition 2-12783  
molten salt surface, double layer effects 2-12449  
optical and electronic props. of narrow and wide gap materials, model based studies 2-31441  
optical materials, plasma polymerised films as moisture barriers 2-44420  
optical spectra, F-centre absorpt., vibr. props. 2-9170  
photoconductivity of broad-band dielect. excited by UV laser radiation (*Russian*) 2-26448  
reaction with hexakis(pyridine N-oxide) M(II) salts, (M-Co, Ni, Zn), IR spectroscopy 2-41895  
recombination photostimulated luminescence, kinetics and distrib. of radiation defects (*Russian*) 2-5741  
single-crystal fibre waveguides for middle IR range, optical and mech. props. 2-44477  
solutions, struct. relax. and Brillouin scatt. 2-51608  
spin-lattice relax. mechanisms of V<sub>k</sub> and related centres 2-41195  
sputtering (*Japanese*) 2-5788  
stability of NaCl, CsCl, and cubic ZnS cryst. structs. 2-45108  
surface F centre, F band position, absorpt. spectra 2-40380  
thermally stimulated depolarisation of Eu<sup>2+</sup>-cation vacancy dipoles 2-36511  
thin film TO mode freq. press. depend. 2-45434  
viscosity, corresponding state principle 2-21342  
X-irradiated at low temps., thermally stimulated exoelectron emission and thermolum. (*Japanese*) 2-51777  
Z<sub>1</sub> centre, approx. pseudopot. calc. 2-30817  
Eu<sup>2+</sup> luminesc., temp. depend. 2-46662

**alkali metals**

- see also caesium; francium; lithium; potassium; rubidium; sodium*  
adsorbed Cs, response to surface core excitations 2-40679  
adsorbed layer on Ni(100), CO adsorpt. 2-40696  
adsorbed on Ge (111), effect on O<sub>2</sub> adsorption 2-12918  
atom, doublet splittings and rel. between relativistic and nonrelativistic theories 2-49381  
atom, ground state, impact relax. of polaris. in dense gases 2-34590  
atom, highly excited states, review (*French*) 2-49304  
atom, self-shift and broadening of Doppler-free Rydberg <sup>2</sup>S spectral lines 2-49336  
atom+Hg, collisional electronic excitation, integral cross section calcs., close coupling approx. 2-7634  
atoms, core polarisation and relativistic effects, fine struct., oscillator strengths, HF calcs. 2-24601  
atoms, isoelectronic series, appl. of dipole matrix element for Rydberg states 2-29538  
atoms, optically pumped, pulse study method 2-15750



**alkali metals continued**

atoms + diatomic mol.s., atomic fine struct. transitions nonadiabatic coupling 2-34535  
 atoms + H, interaction pots. and collision integrals 2-34533  
 diatomics, dissociation energy estimation using extended Linderberg relation 2-11389  
 dimers, transition dipole moment, depend. on internuclear distance 2-24885  
 elastic stiffness const.s., press. depend. 2-35567  
 electrical resist., phonon-dislocation scatt. and phonon drag contrib. 2-21577  
 electronic props., exchange and correlation effects, pseudopotential model 2-30813  
 insertion compounds with transition metal chalcogenides, electrochem. reactions 2-22466  
 ionisation in CO flames, RF reson. study and RF system design 2-4238  
 ions, hydration and struct. changes in  $H_2O(D_2O)$ , isotope effects, thermodynamics 2-16545  
 liquid, diffraction models, thermodynamics, electrical cond. changes (Dutch) 2-8414  
 liquid, elec. resist. and struct., electron-ion plasma model 2-26356  
 liquid, selfconsistent theory, surface tension 2-25717  
 liquid, structure determ., electron-ion plasma 2-30383  
 melting curve eqn. under high press., Simon's eqn. 2-45537  
 melting thermodynamics under high press., Simon eqn. 2-5208  
 metal-NH<sub>3</sub> solutions, ESR at -65°C 2-13330  
 negative ion photorecomb., at. polaris effects 2-49348  
 solutions in NH<sub>3</sub> and vapours, phase separations and metal-nonmetal transition 2-8605  
 surface energy, work function, variational calc. 2-30741  
 surface tension, temp. depend. (Russian) 2-21427  
 vapour, gas-dynamic jet, use of vacuum props. 2-1245  
 vapour lamp, early blocking mechanism of internal tube wall (Chinese) 2-44422  
 vapours, thermal cond. meas. unit for high temps. 2-6849  
 NH<sub>3</sub> solutions, conc., CESR obs. 2-26745  
 ZnSe: alkali metal ion, interstitials energy of form. 2-30459

**alkaline earth alloys**

see also barium alloys; beryllium alloys; calcium alloys; magnesium alloys; strontium alloys  
 disordered solid, heat of form., density functional-pseudopot. calc. 2-37097

**alkaline earth compounds**

see also barium compounds; beryllium compounds; calcium compounds; magnesium compounds; radium compounds; strontium compounds  
 fluorides, foreign ion distrib. coeff. as function of ionic radius 2-12621  
 fluorides, relation between bound and free ion motion 2-21389  
 formates, energy anal. 2-1435  
 halides, aq. solns., activity coeffs. determ. (German) 2-50886  
 halides, gases, props. calc. in equilib. position, Hellmann interioric pot. model 2-29560  
 halides, spin-lattice relax. mechanisms of  $V_i$  and related centres 2-41195  
 MCl:M'Cl<sub>2</sub>, oriented microinclusions on crystallisation from melt (Russian) 2-13639  
 metaphosphate glasses, temp. depend. of internal friction (Polish) 2-35589  
 metasilicates, crystn. by saturated soln. slow cooling in metal chloride melt 2-35418  
 nitrate salts in N-methylacetamide, Raman and US relax. spectra 2-13468  
 oxides, defect energies and volumes calc. 2-5112  
 perchlorates, aq. solns., activity coeffs. determ. (German) 2-50886  
 rare-earth alkaline-earth cobaltate electrode materials for high-temp. solid electrolyte fuel cells 2-14069  
 titanates, with isovalent substitutions, dielectric props. and structure 2-5615

**alkaline earth metals**

see also barium; beryllium; calcium; magnesium; radium; strontium  
 diatomics, dissociation energy estimation using extended Linderberg relation 2-11389  
 equation of state and bulk modulus, partial press. contribs. 2-35639  
 excited electron correlations mapping 2-24622  
 ions, hydration and struct. changes in  $H_2O(D_2O)$ , isotope effects, thermodynamics 2-16545  
 precipitation from aq. solns., and excess alkali metal oxalate soln. 2-47369

**alkalinity** see pH**allotropism** see polymorphism**alloy steel**

see also tool steel  
 AE from cleavage microcracking 2-52037  
 aircraft component fatigue crack growth rates, electron fractography 2-52129  
 anisotropic, electrical, crystallographic texture in moving strip, inspection 2-2678  
 anisotropy factor determination by metallography using Epiquant instrument 2-37015  
 austenite decomposition kinetics, steel 9Kh2MF 2-36863  
 austenite recrystallisation, retardation by solutes 2-41625  
 bainitic CrMoV, mismatch effect in creep props. on creep damage distribts. 2-41739  
 boiler type, influence of use on internal friction (Polish) 2-36906  
 carbon steel temperature rise on cryogenic impact test, in 45 medium C steel (Chinese) 2-17794  
 carbonitrided gears, anticorrosion props., retained austenite effect 2-52053  
 Charpy tests, relationship of toughness, fracture initiation energy and specimen deflection, type 4340 2-13806  
 chromised, surface Cr determ. by EPMA 2-17787  
 constructional, heat treatment inspection by electromagnetic-acoustic method 2-2679  
 corrosion protective coatings on thin-sheet steel, effect on durability 2-27351  
 Cr-Mo (2.25, wt.%), stress relief cracking, multicomponent segregation effects 2-52005  
 Cr-Mo-V, creep fracture 2-52036  
 creep, pore formation onset, time-to-rupture (Russian) 2-5936  
 developments w.r.t. improved formability and strength 2-22241  
 dimensional changes after phase recrystallisation, bulk cold plastic deform. effect 2-22239

**alloy steel continued**

drilling, influence of liq. Sn-Zn and powder Sn-Zn suspension cutting fluids 2-2591  
 dual-phase, H embrittlement phenomena, SEM study 2-9407  
 dual-phase, martensite C-content influence, on cyclic props. 2-41719  
 ductile structural, rel. between stretched zone parameters and fracture toughness 2-27271  
 dynamic fracture toughness parameters, of HY-80, HY-130 and their weldments 2-5929  
 elastoplastic strain field in mouth zone of crack, type 38KhNVA 2-13804  
 electrochemical DC and AC methods of rate determ. in type 4340 2-41830  
 electron irradiation, of Kh18N9T (Russian) 2-31700  
 fatigue crack closure in type X-70 2-5944  
 ferritic, 2.25%Cr, H effect on corrosion by high temp. water 2-9454  
 ferritic, creep cavitation, influence of impurity segregation 2-41612  
 ferritic, stress relief heat treatment rel. to crack form. (German) 2-51961  
 ferritic, subgrain strengthening 2-41619  
 ferritic steel, low-alloy, creep, decarburization effect 2-15487  
 fracture surface study, by spatial-energy spectrometry, of alloy 17G2AF 2-23775  
 fracture toughness characs., loading cycle influence 2-52040  
 gas nitriding in medium of NH<sub>3</sub> and CO<sub>2</sub> 2-52103  
 generator end bells made from non-magnetic steel, resistance to stress corrosion and H embrittlement (German) 2-5976  
 hardness inspection by higher harmonics method, type 40KhN 2-6005  
 heat treatment quality control, inspection instrument, electromag. losses in mag. reversal in weak mag. field meas., type 40Kh 2-27384  
 high speed, hardening, use of high vacuum furnaces 2-48706  
 high-speed, powder metallurgy processing 2-9314  
 HSLA, fail-safe mag. permeability inspections 2-2637  
 HSLA wires, hydrogen induced delayed failure 2-27262  
 hydrogen corrosion, Mo additions influence 2-41806  
 internal friction of 14 HG steel, thermochem. treatment influence (Polish) 2-27211  
 internal friction of 14HG and N18K9M5T steels, low temp., surface mineral oil layer influence (Polish) 2-27209  
 laser surface heat treatment, microstruct. study 2-47242  
 low alloy, crack growth, effects of overstrengthening 2-31769  
 low alloy, fatigue strength, effect of modified ausforming 2-22303  
 low alloy, fatigue strength, under combined superposed stress waves (Japanese) 2-21224  
 low alloy, H absorpt. phenomenon in H<sub>2</sub>S soln. (Japanese) 2-22313  
 low alloy, high strength, creep resist., microstruct. effects 2-27238  
 low alloy, high strength, fatigue crack propag., effect of low temp. and grain size 2-47174  
 low alloy, high strength, rehardening by surface plastic deform. 2-36876  
 low alloy, laser transform. hardened, presence of retained austenite 2-22388  
 low alloy, medium- and high-strength, AE during ductile fracture, effect of proof stress, composition and microstruct. 2-31872  
 low alloy, P segregation, effect of Ni, Cr and Mn 2-13730  
 low alloy, plate, surface fatigue crack growth 2-9395  
 low alloy, yield stress, apparent, effect of H on delayed plasticity 2-52011  
 low alloy cylindrical specimens, rolling contact fatigue, effect of Tufftriding 2-27286  
 low-alloy, austenitising processes, direct electron microscopy study 2-51937  
 low-alloy, avoiding transverse cracking by surface temp. control 2-2573  
 low-alloy, ductile-brittle transition temp., comparison for DWTT and impact specimens 2-13795  
 low-alloy, ferritic-pearlitic, fracture toughness energy content, VC precipitates influence 2-5960  
 low-alloy, for machine structural use, low- and high-cycle fatigue props. 2-27267  
 low-alloy, fracture and low-cycle deform. at low temps. 2-41746  
 low-alloy, heat-resistant, endurance, effects of loading freq., temp. and cycle asymmetry 2-41754  
 low-alloy, induction hardening 2-27198  
 low-alloy, laminated pipes, impact strength and cold brittleness threshold, effect of number of layers 2-13796  
 low-alloy, pipe, B microalloying effectiveness, heat treatment influence 2-36889  
 low-alloy, sintered, density effect on tensile strength, fracture toughness and fatigue crack propag. 2-41734  
 low-alloy, structural, heat treatment 2-36888  
 low-alloy sintered, density effect on fracture behaviour, model investig. 2-41735  
 maraging, Co-Mo-Ti-Ni, calorimetry anal. for ageing (Japanese) 2-13742  
 maraging, shear banding, effect of low fugacity H 2-36969  
 maraging, spring, corrosion resistant, thermal stability 2-27245  
 metastable austenite, fatigue failure 2-41725  
 metastable austenite, mech. behaviour during tensile test near M<sub>s</sub> point 2-31736  
 microalloyed with Se and Ca, effect on machinability 2-36958  
 nitriding in vac. 2-22381  
 nonstationary vaporisation regime of steel type ST3 on electron beam irradi. (Russian) 2-1605  
 Pb containing, struct., machinability, heat treatment and appls. 2-36885  
 plastic strain ratio, variation with strain level 2-17715  
 quenched and aged, N18K8M5T steel, internal friction and shear modulus changes, 320 to 650K (Polish) 2-27208  
 quenched and aged internal friction peak at 250K, H10N7K10M5 steel, shear modulus change (Polish) 2-27207  
 quenched and tempered, sharp crack and blunt notch toughness behaviour 2-47288  
 quenching parameters optimisation for large rotors 2-41635  
 reactor-pressure vessel, A508, lower-bound fracture toughness 2-5934  
 sheet, heat treatment, heating regimes 2-51952  
 sintering, effect of repeated phase transformation on type 4640 2-46972  
 steamplant, pitting and crevice corrosion meas. methods (Dutch) 2-52095  
 steel, 18% Ni maraging, machining-soln.-treated and aged, subsurface region state 2-52057  
 steel, alloy, stress corrosion cracking significance to corrosion fatigue crack growth 2-52096  
 steel, low-alloy, full-scale welded I-beams, fatigue life calc. and testing 2-27370  
 steel, low-alloy, powder forged, preforming treatments influence on mech. props., inclusion content 2-41736



## alloy steel continued

- steels, high-speed, powder-processed, rel. between microstruct. and strength 2-9387
- strain-temperature correlations obtained an application of axisymm. compressive stresses 2-47138
- stress corrosion cracking, influence of surface props. under electrolytic cleaning 2-17773
- stress corrosion cracking mechanism in water, tensile strength effect 2-22363
- structural, biphasic, high-strength and ductility, differentiated treatment 2-2564
- structural, criteria for working capacity determ. 2-5952
- structural, cyclic fracture toughness determ., cylindrical sample with circular crack 2-27379
- structural, fatigue strength and embrittlement, Pb addition effect 2-36957
- structural, fractures inspection for nonmetallic inclusions using TEM and C replicas 2-47276
- temper rolling influence, on transient stage of cyclic deform. 2-41628
- temperature rise on cryogenic impact test in 15Mn26Al4 steel (Chinese) 2-17794
- tempering, transforms. during 2-41636
- tool, effect of clearance angle on wear 2-47190
- Torbar, reinforcing for concrete, formation and growth of fatigue cracks 2-5942
- tubular, C-Mn, hot-rolled, low ductility tensile failures (German, English) 2-41690
- wear characteristics, comparison with Co-base hardfacing alloy 2-9429
- wear resistance and fatigue strength, low-temp. carbonitriding effect 2-52052
- Al, high C, fine cryst. struct. of martensite (Russian) 2-22334
- Al killed, low C, acid soluble Al content estimation using O probe 2-14041
- C-Mn, ductile rupture fracture toughness, evaluation with Charpy-V type specimens, influence of notch root radius 2-9489
- cc NiCr (3.5, 1.7 wt%), grain boundary etching to detect P segregation (Japanese) 2-13887
- Co steel, Covar, oxidation in various media (Russian) 2-2612
- Cr (13-25 wt%), carburised, struct. form. and wear resist. 2-51951
- Cr, as-quenched with low interstitial C content 2-27204
- Cr, boride layers, wear behaviour 2-22336
- Cr, carbide dispersion carburizing (Japanese) 2-27183
- Cr, commercial, oxidation at 650 to 1100°C under 1 bar O<sub>2</sub> 2-52120
- Cr, crack initiation and propagation, microstruct. effect (German) 2-13823
- Cr, martensitic struct., TEM and optical microscopy study 2-5872
- Cr, martensitic transformation, pulsed mag. field influence (Russian) 2-51901
- Cr-Al, corrosion, high temp. effect of Al content (Korean) 2-22377
- Cr-C, martensite structure after  $\gamma \rightarrow \alpha$  transition (Russian) 2-51892
- Cr-Mn, austenitic, surface topography after He ion bombardment 2-25946
- Cr-Mn, austenitic, surface  $\gamma \rightarrow \alpha$  phase transition during oxidation (Russian) 2-50966
- Cr-Mn, containing ferrite and N<sub>2</sub>, precipitation and corrosion processes after isothermal annealing 2-25138
- Cr-Mn, low C, martensitic, high strength, props. and heat treatment 2-27246
- Cr-Mn-Si, bainite morphology (Chinese) 2-17675
- Cr-Mn-Si-Ni, 30CrMnSiNi<sub>2</sub>, internal friction, rel. to temper brittleness 2-47090
- Cr-Mo, anal. of carbides formed during accel. ageing 2-51958
- Cr-Mo, cyclic crack growth at low stress intensities, influence of fatigue underloads 2-27278
- Cr-Mo, different grain sizes, test temp. influence on impact fatigue crack growth 2-5996
- Cr-Mo, low alloy, segregation of Cr to prior austenite boundaries during quenching 2-5875
- Cr-Mo, stress corrosion in NaOH soln., film rupture model 2-27320
- Cr-Mo (12, 1 wt%), optimisation for SNR boilers 2-15482
- Cr-Mo (1.25, 0.5 wt%), welded to 4Cr25Ni20 steel, brittle cracks along welded fusion zone (Chinese) 2-31780
- Cr-Mo (2.25, 1 wt%), I sorption in HTGR coolant circuit 2-7175
- Cr-Mo ferritic steel stress corrosion cracking in caustic environment 2-15498
- Cr-Mo steel, for fission reactor steam generator components, creep, ductility, fatigue 2-15489
- Cr-Mo steel, LMFBR steam generator materials experience 2-4020
- Cr-Mo steel FBR materials, compatibility in high temp. Na (Japanese) 2-7160
- Cr-Mo type 15Kh5M steel, use of superplasticity to increase heat treatment quality (Russian) 2-2551
- Cr-Mo-Ni-Mn, effect of partial replacement of Ni by Mn 2-5914
- Cr-Mo-V, alloying elements redistrib. after ageing under stress 2-41642
- Cr-Mo-V, crack propagation, in high-temp. low-cycle fatigue 2-22324
- Cr-Mo-V, pearlitic, steam-pipe, operational reliability after 150000-20000 hours 2-41682
- Cr-Mo-V, steam pipe material, max. creep strain rel. to defectiveness 2-41684
- Cr-Mo-V, tensile ductility, effects of austenitization temp. and impurities 2-51993
- Cr-Mo-V 2-41638
- Cr-Mo-V cast, quenching, tempering and ageing rel. to mech. props. 2-13750
- Cr-Mo-(Ni), effect of alloying on struct. and props. of nitrided case 2-22382
- Cr-Mo-(V), heat-resist., long-term strength under creep conditions 2-41683
- Cr-Ni, austenitic, deform. anisotropy of yield strength, temp. effect 2-41707
- Cr-Ni, austenitic, forgings for low temp. apps. (German) 2-46978
- Cr-Ni, austenitic, heat-resistance, endurance, effects of loading freq., temp. and cycle asymmetry 2-41754
- Cr-Ni, maraging, strength characts. at elevated operating temps. 2-52047
- Cr-Ni, oxidation, influence of metal grain growth 2-9470
- Cr-Ni-Al, discontinuous precipitation of Ni-Al intermetallic compd. 2-51913
- Cr-Ni-Al, precipitation hardened by NiAl intermetallic compd., twinning 2-51928
- Cr-Ni-Co-Mo-Mn, corrosion-resist., heat treatment and mech. props. 2-41640

## alloy steel continued

- Cr-Ni-Mn, austenitic, corrosion-mech. strength in aq. media 2-27345
- Cr-Ni-Mn, austenitic, mech.-corrosion strength, plastic deform. and tempering influence 2-17775
- Cr-Ni-Mn, energy loss during fracture 2-31722
- Cr-Ni-Mn type, austenitic, martensite transform. effect on cyclic strength and damping during deform. 2-52048
- Cr-Ni-Mo, boronising, technological processes optimisation 2-52104
- Cr-Ni-Mo, corrosion cracking in NaCl soln. 2-17771
- Cr-Ni-Nb, oxidised in CO<sub>2</sub> at 1123K, nature of oxide formed 2-52099
- Cr-W-Mo-V-Nb, microstructure, mechanical properties and heat treatment 2-27216
- Cr-Zr, Zr effect on props. 2-2565
- CrMo, low alloy, grain boundary etching method appl. (Japanese) 2-25903
- CrNiMo, medium-C, correlations between numerical fracture characts. and fracture toughness (Chinese) 2-22301
- CrNiMoV, medium-C, forgings, lamellar fracture characts. (Chinese) 2-22300
- Cu-Ni-Nb, high strength low alloy, processing and heat treatment 2-31717
- Cu-Ti-B, high strength low alloy, processing and heat treatment 2-31717
- H attack, kinetics 2-17734
- H blistering, effect of external stress on ASE 4340 2-2585
- H-induced cracking, eval. by acoustic emission technique of AISI 4340 (Japanese) 2-52134
- Mn, 40Mn2, internal friction, rel. to temper brittleness 2-47090
- Mn, austenitic, strengthening by deform. and ageing 2-36891
- Mn, ferritic, AE during crack growth, sources 2-31870
- Mn, low-C, strain hardening 2-22331
- Mn, martensitic transformation, pulsed mag. field influence (Russian) 2-51901
- Mn steels, sintered powder, effect of compacting pressure and 0.5% Mo on props. 2-9313
- Mn, wrought, phase comp. and props., effect of C, Mn, Ni and N concs. 2-51938
- Mn-C, acoustic emission source localisation using broadband acquisition technique 2-37037
- Mn-C, martensite structure after  $\gamma \rightarrow \alpha$  transition (Russian) 2-51892
- Mn-C (1.3, 0.015 wt%), influence of prestrain and strain ageing on cleavage fracture 2-2587
- Mn-C steel, exposed to NaCl acidified solns., H absorpt. and evolution kinetics 2-31826
- Mn-Cr-Ni-Mo-V, contact resist. in working media, C content influence 2-41759
- Mn-Mo, 40Mn2Mo, internal friction, rel. to temper brittleness 2-47090
- Mn-Mo-Ni steels, temper embrittlement, ductile-brittle transition temp. 2-15502
- Mn-Ni-Mo, A533 gr. B, upper nose temper embrittlement mechanism 2-5899
- Mn-Si-V, dual phase, struct.-prop. relations 2-36916
- Mo, boride layers, wear behaviour 2-22336
- Mo, dual-phase, props. and struct., effect of heat treatment 2-9376
- Mo-V-Cr-W, high-speed, high-temp. ductility, hot gasostatic pressing parameters influence 2-41698
- morphology of upper bainite (Chinese) 2-27190
- Nb microalloyed, dynamic recovery and recrystallisation on Nb(CN) coarsening 2-51912
- Ni (3.5 wt%), AE during deform. and fracture, microstruct. effect 2-31871
- Ni, heat-resist., mech. props. of Al protective coatings 2-27348
- Ni maraging, low temp. ageing and repeated strain ageing 2-41620
- Ni, martensitic transformation, pulsed mag. field influence (Russian) 2-51901
- Ni, precipitated austenite, chem. comp., STEM study 2-36861
- Ni-Co, Charpy impact props., role of oxide and sulphide particles 2-13820
- Ni-Cr, fracture toughness effect of solute segregation 2-47175
- Ni-Cr, heat resisting, precip. hardening, fatigue props., low cycle, temp. and strain depend. (Japanese) 2-36950
- Ni-Cr, scale-resist., alloying fundamentals 2-2619
- Ni-Cr-Mo, microstruct. and mech. props., effect of thermal cycling (Korean) 2-5946
- Ni-Cr-Mo-V, caustic stress corrosion cracking, effect turbine steam impurities 2-52091
- Ni-Cr-Si, grain boundary melting and hot embrittlement on overheating (Japanese) 2-25980
- Ni-Mo-C (10, 1, 0.2 wt%), mech. props., cryogenic appl. 2-22295
- Ni-Ti, austenitic, metastable, surface hardening, wear resist. 2-2525
- NiMoCr, microstruct. and Bloch wall arrangement 2-17310
- Si, grain oriented, secondary recrystn. kinetics, high temp. background damping 2-47052
- Si steel strengthening at crack tip by current pulse (Russian) 2-2575
- Si-Al-(Co)-Mn, graphitised, with ferrite and ferrite-carbide matrix, damping props. 2-2566
- Si-Cr valve, cold-drawn, fracture-mechanics anal. (Chinese) 2-22299
- Si-V-C, dual phase, elemental partitioning as a function of heat treatment 2-51914
- Ti, low C, nitridable, cold forming processes 2-36871
- V, boride layers, wear behaviour 2-22336
- V, dual-phase, props. and struct., effect of heat treatment 2-9376
- V modified, hardenability, heat treatment 2-22229
- V-Cr, medium C, carbide phase soln., and precipitation, Cr addition effect 2-51911
- V-Nb, microalloyed, thin sheet, fracture toughness test results, validity (Slovak) 2-47172
- V-Ni, medium C, carbide phase soln. and precipitation, Ni addition effect 2-51911
- V-(Nb), microalloyed, precip. and recrystn. 2-47040
- W, rapidly solidified, as-quenched microstruct. and tempering behaviour 2-9345
- W-Mo, high-speed, tempering, high-temp. X-ray struct. study 2-41639

## alloying additions

- Alnico 5 with Nb additions, columnar, permanent mag., mag. props. 2-17316
- Inconel 706, influence of Ti, Nb, Al additions on struct. and mech. props. (French) 2-27229
- steel, 65Cr4W3Mo2VNB, microstructure, mechanical properties and heat treatment 2-27216
- steel, alloy, V modified, hardenability, heat treatment 2-22229



## alloying additions continued

steel, austenitic stainless, 304, effect of Si addition on stress corrosion cracking 2-22378  
 steel, austenitic stainless, intergranular corrosion, influence of Si additions 2-47241  
 steel, Cr-Al, corrosion, high temp. effect of Al content (*Korean*) 2-22377  
 steel, Cr-Mo-(Ni), effect of alloying on struct. and props. of nitrided case 2-22382  
 steel, Cr-Zr, Zr effect on props. 2-2565  
 steel, ferritic stainless,  $\chi$ -phase precip. hardened, fracture props. and ductility improvement 2-17725  
 steel, high C, struct., alloying principles 2-2586  
 steel, high-Cr, increasing passivation ability and corrosion resist. by Pd surface alloying 2-31849  
 steel, hydrogen corrosion, Mo additions influence 2-41806  
 steel, low alloy, P segregation, effect of Ni, Cr and Mn 2-13730  
 steel, low-alloy, pipe, B microalloying effectiveness, heat treatment influence 2-36889  
 steel, low-C, sulphide cracking resist., multiple alloying influence 2-17778  
 steel, microalloyed with Se and Ca, effect on machinability 2-36958  
 steel, mild, hot rolled sheet, MnS inclusion effect on mech. props. 2-51959  
 steel, mild, stress corrosion behaviour, effect of Al additions and grain size (*Korean*) 2-41791  
 steel, Mn, sintered powder, effect of compacting pressure and 0.5% Mo on props. 2-9313  
 steel, Ni-Cr-Co(Mn)(Al)(Si), scale resist., Co, Mn, Al and Si additions effect 2-2619  
 steel, rimming, inclusions and O behaviour after refining with base oxygen furnace 2-13738  
 steel, stainless, Cr-Ni, interactions between rare earth metals and harmful impurities 2-27178  
 steel, stainless, Cr-Ni, solidification process, influence of Ni (*French*) 2-22210  
 steel, stainless, void nucleation, solute addition effects 2-50625  
 steel, structural, fatigue strength and embrittlement, Pb addition effect 2-36957  
 steel, Ti, low C, nitridable, cold forming processes 2-36871  
 steel, type 316 Ti, Si and Ti conc. effect on swelling following electron irradi. (*French*) 2-39120  
 steel, V-Cr, Z 2-51911  
 steel, V-Ni medium C, carbide phase soln. and precipitation, Ni addition effect 2-51911  
 Ag-Cu based ternary alloys, dendritic segregation (*Russian*) 2-22217  
 Al-Cu-Ti, Ti effects on stress corrosion characts. 2-47240  
 Al-Fe-Mn, eutectic alloys, ternary directionally solidified, struct. and mech. props. (*Korean*) 2-22209  
 Al-Li system, alloy development 2-31693  
 Al-Mg-Sc, Sc effect on strength and thermal stability 2-27281  
 Al-Mg-Sc(Y)(La)(R), mech. props., effect of Sc, Y, La and rare earth metal additions 2-27242  
 Al-Si filler metal, influence of element additions for Al-brazing optimisation (*Chinese*) 2-22223  
 Al-Si-Cu-Zn-Mg-Ti, cryst. and struct., effect of cooling rate and Zn, Mg and Ti additions 2-1549  
 Al-Zn-Mg-Cu, stress corrosion characts., effect of heat treatment and Cu content 2-37004  
 Al-Zn-Mg-Cu-Fe-Ni(Zr), struct. and mech. props., Fe with Ni or Zr addition effect 2-51991  
 Al-Zn-Ti, Ti effects on stress corrosion characts. 2-47240  
 Al-Zn(Cu)(Si)-Mg, polygonised struct. thermal stability, Mg effect 2-27187  
 Co-Cr-Al coating containing active element additions, erosion resistance 2-31821  
 Co-Cr-Al coatings containing active element additions, oxidation behaviour vel. to struct. 2-31851  
 Co-Fe-Cr films, mag. props. variation during electron bombard., surface comp. (*Russian*) 2-21844  
 Cu alloys, strength and elec. props. optimisation by alloying additions (*Polish*) 2-27180  
 Cu, recryst., solute effect, comparison of single crystals and polycrystals. 2-22244  
 Cu-Al, dil. alloy, dislocation struct. of [321] crystals grown by Bridgman method, Al addition effects (*Japanese*) 2-12603  
 Cu-Al-Si, two-phase, hardened, mech. props. and damping capacity, Si addition effect 2-5919  
 Cu-Mn, resistivity anomaly, influence of addition of third metal (*German*) 2-36005  
 Cu-Sn (12 and 15 wt.%), deformability improvement by hot extrusion and boride grain refining additions (*German*) 2-13755  
 Fe alloy melt, ternary and multicomponent, alloying element effect on conc. and temp. depend. of  $H_2$  solubility (*German*) 2-27138  
 Fe alloys, alloying addition equivalent effect on conc. and temp. depend. of  $N_2$  solubility (*German*) 2-13695  
 $\alpha$ -Fe, electronic struct. and dislocation splitting, alloying elements influence (*Russian*) 2-51077  
 Fe sintered powder, effect of compacting pressure and 0.5% Mo on props. 2-9313  
 Fe: rare earth, dopant distrib. studied by internal friction 2-45238  
 Fe-B, amorphous, with transition metal substituents, mag. props. and crystn., cluster form. 2-8997  
 Fe-C, solute peak associated with grain boundaries 2-45150  
 Fe-Cr (20 wt.%) alloys, effect of  $Y_2O_3$  dispersion on high temp. oxidation 2-2632  
 Fe-Cr-Al, high temp. props. improvement by rare earth additions, internal friction study 2-45355  
 Fe-Cr-Al alloy, effects of rare earth on preferred orientation in oxide scales (*Chinese*) 2-22232  
 Fe-Cr $_2$ O $_3$ , oxidation resist., high temp., effect of dispersed oxides 2-47244  
 $\alpha$ -Fe-Cr(Mo/Si), nitrogenation kinetics in  $NH_3$ - $H_2$  mixtures, influence of alloying elements 2-41793  
 Fe-Ni-Cr-Co(Mn)(Al)(Si), scale resist., Co, Mn, Al and Si additions effect 2-2619  
 Fe-Ni-X, X=Ge, P, Au or Pt, ternary partition coeff., expt. determ. 2-36860  
 Fe-Pd-Ag, Ag effect on magnetic props. (*Japanese*) 2-27301  
 Fe-Si (3 wt.%), grain-oriented, effect of Al on mag. props. (*Chinese*) 2-22345

## alloying additions continued

Fe-Si-Al, effect of Al substitution on cold workability and mag. props. 2-26648  
 Fe-Si-Nb(Cr)(V), anodic processes, galvanostatic conditions 2-47224  
 Fe $_{82}$ -M $_2$ B $_{18}$  alloys, amorphous, effects of additions on crystn. temps. 2-1410  
 FeTi-(Mn) alloys, H storage props. 2-22409  
 In-Pb(Sn)(Ti), liquid, dil., diffusivity, solubility, and activity of O, effect of solute additions 2-26094  
 Mg-Y-Zr-Nd-Zn, as-cast, creep rates, influence of Nd and Zn additions 2-9377  
 Nb-Ti-Ta(Hf), supercond. crit. field,  $H_{c2}$ , enhancement by alloy additions 2-13248  
 Nb $_3$ Sn composite-processed, alloying addition effect on comp., growth rate and supercond. props. 2-21743  
 Nb $_3$ Sn composites, crit. currents strain response, alloying effects 2-13264  
 Nb $_3$ Sn, phase transition at low temp., X-ray obs., effect of added elements and strain 2-30596  
 Ni base superalloy, cast, CoO inoculant for surface grain refinement (*Chinese*) 2-17692  
 Ni-Co-Cr-Al, superalloy, oxidation, effect of Ti and Ta additions 2-2621  
 Ni-Cr-Nb, discontinuous precipitation, alloying addition influence (*Russian*) 2-51908  
 Ni-Cr-Ti, Ti effect on oxidation resistance 2-13864  
 Ni-TiC powder mixtures, struct. and DTA, effect of Mo, Ta or Co additions 2-31671  
 SmCo $_5$ -Fe $_2$ Sn $_4$ , permanent magnets, Mossbauer effect 2-9066  
 Ti-Al-V composite, B fibre reinforced, B solubility, matrix alloying effect 2-36867  
 V-Ga bronze processed wires, effect on props. of adding In, Zn, Mn 2-8923  
 W-C-Ti(Zr)(Hf), cast, struct. and props., alloying effect 2-41743  
 WC-Co, hard electrodes, strengthened layer formation by B electrospray alloying (*Russian*) 2-31827  
 WC-Co-B (GB $_2$ ) electric-spark alloying of C steel, microalloying effect on cathode weight gain 2-17780  
 ZrO $_2$ -(Al $_2$ O $_3$ )-Y $_2$ O $_3$ -CeO $_2$  composites, transform. toughening and fracture toughness, effect of alloying additions and temp. 2-51926

## alloys

alloys such as Au-Cu, Au-Cu-Zn are indexed under components of the named elements i.e. gold alloys; copper alloys; zinc alloys in these examples  
 see also actinide alloys; alkali metal alloys; alkaline earth alloys; alloying additions; aluminium alloys; antimony alloys; arsenic alloys; bismuth alloys; boron alloys; cadmium alloys; dilute alloys; eutectic alloys; gallium alloys; germanium alloys; indium alloys; lead alloys; liquid alloys; mercury alloys; rare earth alloys; selenium alloys; silicon alloys; solid solutions; superalloys; tellurium alloys; thallium alloys; tin alloys; transition metal alloys; zinc alloys  
 amorphous, as corrosion-resistant optical storage media 2-987  
 amorphous, positron annihilation and positive muon study 2-9214  
 amorphous, prep. and props. 2-5843  
 amorphous, radial distrib. function and struct. relax. 2-45040  
 amorphous, structure and structural units, Mossbauer effect study 2-9059  
 amorphous, three-dimensional structural models 2-8434  
 amorphous alloys, formation, effect of size factor (*Chinese*) 2-22207  
 amorphous metallic alloys, specific heat anomaly near vitrification point 2-26073  
 anomalous diffusion during pulse loading (*Russian*) 2-1669  
 antiferromagnetic alloys, modelling mag. defects 2-2062  
 austenite-martensite equilibrium temp., conc. depend. 2-2510  
 BCC lattice, ductile-brittle transition, nonmetallic inclusions influence 2-52045  
 BCC lattice, mechanical relax. of substitutional-interstitial atom complexes 2-45151  
 binary, ferromagnetic, order-disorder transitions, specific heat 2-21794  
 binary, freezing, classical statistical mech. theory 2-26021  
 binary, localization, self-consistent theory 2-30833  
 binary, matrix effects in quantitative AES 2-37128  
 binary, oxide solid soln. form. during internal oxidation 2-47253  
 binary, quenched, dynamic scaling of struct. functions 2-40550  
 binary, surface segregation, simple theoretical model 2-45693  
 binary, vibrational entropy change due to disordering, 1D and 2D cases 2-45529  
 binary Al $_3$  phases, empirical rule of form. and  $T_c$  variation (*Chinese*) 2-5853  
 binary alloy, oxide solid soln. growth, parabolic, semiempirical approach 2-47248  
 binary alloys, elec. resist. mech. during clustering 2-1889  
 binary alloys, morphology of uniform adherent scales 2-47247  
 binary alloys, SRO and mag. props. 2-2092  
 binary alloys, two-dimensional, disordering, vibr. entropy change 2-45528  
 binary BCC alloys, three-particle interactions on order-disorder equilibrium diagrams 2-5224  
 binary intermetallic compounds, recursion method, asymptotic behaviour, local densities of states 2-5360  
 binary solid solutions, self-diffusion theory 2-1654  
 binary substitutional, phenomenological anal. of diffusion coeffs., correl. and vacancy flux effects 2-21348  
 binary substitutional, phenomenological anal. of diffusion coeffs., correl. and vacancy flux effects 2-21349  
 biphasic isotropic, elastoplastic props., comparison with constituent props. (*French*) 2-30507  
 chemical bonding, valence model (*German*) 2-30433  
 chemical-diffusion coefficients, in alloys, electrochem. technique determ. 2-45633  
 creep crack growth behaviour and theoretical modelling 2-5953  
 cryogenic engineering materials, conf. Madison, WI, USA (Aug. 1979) 2-18815  
 crystallisation, magnetic field and thermoelectromotive force effects, convective flow 2-12530  
 cyclic hardening behaviour, endochronic description 2-31706  
 deformation behaviour, elevated temps. controlled rolling (*Japanese*) 2-9373  
 dendritic structure formation, processes of heat and mass exchange in ingot 2-22211  
 density, review of F.C. Achard's work (1788) 2-13739  
 density of states in locator CPA generalisation 2-8745  
 dislocations, group velocity 2-12595



## alloys continued

- disordered, Coulomb correlations, Green's function study 2-12953  
 disordered alloys, irradiated, damaged regions struct. simulation 2-25920  
 disordered systems, electronic states 2-40770  
 dispersed system stability, Gibbs-Thomas relation 2-50871  
 dispersion hardened alloy, computer simulation of AE during yield (*Japanese*) 2-13741  
 DO<sub>19</sub> ordered structure, planar fault stability and energy 2-45208  
 ductile fracture of materials with inclusions (*German*) 2-27285  
 ductility evaluation, by microfracture with indenter 2-2642  
 dynamic testing, temp. relationship of mech. props. using explosive loading and impulse elec. heating 2-52161  
 electrical elastoresistivity at 77.4K 2-5380  
 electro-elastic polishing, optimum condition determ. (*Russian*) 2-52097  
 electron-thermal treatment, surface struct. (*Russian*) 2-31828  
 energy-related materials, research opportunities 2-27113  
 fatigue crack growth, high temp., design approach for correl. over wide range of parameters 2-31794  
 FCC binary, ordering and segregation reactions 2-40547  
 ferromagnetic, nuclear spin-lattice relax. (*Russian*) 2-13368  
 ferromagnetic alloys, heterogeneous, Curie, temp., press. depend. 2-8975  
 ferromagnetic amorphous alloys, effect of random anisotropy on magnetoelastic props. 2-21865  
 ferromagnetic amorphous alloys, theory of coercive field 2-21832  
 ferromagnetic binary alloys, phase transitions, Griffiths singularity 2-26644  
 formation and electronegativity scales of simple metals 2-26320  
 fracture resistance, alloy design 2-5957  
 fusion reactor materials, radiation damage 2-24424  
 hard, crack resist., loading rate and temp. effects 2-31789  
 hardening, method of determ. penetrability of two-phase zone 2-13878  
 heat treatment technology, development trends 2-36890  
 heat-resistant EP693VD, fatigue life determination, by testing for thermal fatigue 2-37020  
 Heusler alloys, ordering temperature calc. 2-50830  
 high strength, microcryst. prep. by devitrification of metallic glasses 2-9311  
 high strength, prep. by devitrification/hot consolidation of metallic glasses 2-9312  
 HVEM, recent progress, appls. to study of props. of metallic materials (*Chinese*) 2-19214  
 internal friction phenomena associated with diffusionless phase transforms 2-47095  
 internal stresses, arising in heat treatment processes 2-51941  
 L1<sub>2</sub> ordered, struct. stability and deform. behaviour 2-12665  
 laser processing technique, for improving wear resist. 2-31798  
 laser surface alloying, bibliography 2-3345  
 long-range ordered, brittle to ductile transition, grain size effect 2-27260  
 long-term strength and equivalent failure prediction 2-31890  
 magnetic alloys, amorphous, HF mag. props. 2-26658  
 magnetic binary alloys, surface and thickness effects, review 2-51447  
 martensitic, damping spectrum rel. to dislocation motion 2-47096  
 materials science appl. of nucl. and electron reson., spectroscopies, conf., Boston, MA, USA (Nov. 1980) 2-33241  
 melt quenching, criterion of amorphous state formation (*Chinese*) 2-22206  
 metal-metalloid, cryst. alloys, atomic vol. 2-12541  
 metallurgical synthesis 2-9303  
 metastable phases formation by ion implantation and ion beam mixing 2-30501  
 microprobe analysis, electron and ion, elemental distributions, image processing 2-27515  
 microstructural synthesis 2-5869  
 microstructure, lattice defects (*German*) 2-31680  
 modern theory 2-45818  
 multicomponent, rates of solution during electrochem. forming, methods of calc. (*Russian*) 2-8619  
 NMR expts., review 2-31300  
 noble metal based, prediction of solid solubility 2-35692  
 noncubic, elec. field gradient, PAC studies 2-31352  
 nucleation mechanism for discontinuous precipitation cells (*Russian*) 2-50826  
 oxidation, metal lattice diffusion effect 2-47252  
 phase growth interdusion zone during interdiffusion in external elec. field (*Russian*) 2-21405  
 phase stability and martensitic transform 2-5218  
 phase stability and martensitic transform 2-8608  
 phonon dispersion curves, average local information transfer approx. 2-45451  
 polycrystalline, yielding, role grain boundaries 2-31733  
 polyphase, microstruct. changes in presence of externally appl. pot. gradients 2-41616  
 precipitate-enhanced cavity swelling during irradi. 2-5155  
 precipitation strengthened, AE from dislocation motion 2-31881  
 preparation, CVD by pyrolysis, reduction and dismutation (*French*) 2-26260  
 prime candidate alloy, optimisation of struct. and props. by rapid solidification 2-31692  
 pseudobinary AB<sub>2</sub>-type, H<sub>2</sub> absorpt. 2-41929  
 quaternary alloys, mass-disordered, one-dimensional, vibr. spectra 2-35626  
 random, angle-resolved photoemission, KKR-CPA treatment of disorder 2-9248  
 random, with short-range order, electronic props., self-consistent theory 2-1810  
 random alloys, interatomic spacings distribution 2-45111  
 random binary alloys, computer generated, ordered, random, and clustered distrib. 2-35435  
 reentrant nematic phase, PMR spin-lattice relaxation times 2-2155  
 salt bath nitrocarburising, new approach 2-52089  
 shape memory alloys, extension, superplasticity (*Russian*) 2-5907  
 shape-memory type, martensitic transform, dynamics 2-41606  
 shock compression in elastoplastic loading waves, expt. study 2-2641  
 sintering, liq.-phase, compact porosity changes due to diffusional impregnation 2-31654  
 sintering of complex systems, compact growth prevention 2-41546  
 solid solutions, Mossbauer impurity atom, vacancy trapped, second-order Doppler shift, anharmonicity effect 2-21925  
 solid-solution hardening, strength anomalies at low temps. 2-27181  
 solute effect on strength and strain hardening 2-51931  
 sputtered coatings, composition, kinetic model 2-45783

## alloys continued

- stainless, H ingress and egress during electrolyte charging, surface wave study 2-45701  
 steel, Cr-Mo (2.25, 1 wt.%), I sorption in HTGR coolant circuit 2-7175  
 strengthening mechanisms 2-5887  
 stress-strain paths and constitutive relations in plastic range, review 2-39833  
 structural alloys, fracture mechanics approach to creep crack growth, review 2-52016  
 substitutional alloy, with interstitial impurity, equilibrium vacancy conc. 2-50631  
 superconducting films, periodically modulated, crit. current and fields 2-31117  
 superstructure Li<sub>2</sub>, plastic behaviour under low temperature creep 2-1488  
 surface, caesiated, negative secondary ion emission, energy depend., surface comp., work functions (*French*) 2-5787  
 symmetric alloy, 1D decomp. and aggregation of precipitates 2-2519  
 ternary, short-range order, electronic theory, pseudopot. approx. (*Russian*) 2-21318  
 ternary alloys ordering in self-consistent field approx. 2-3527  
 ternary solid soln., mutual diffusion coeffs., calc. method (*Russian*) 2-50903  
 test apparatus for shape memory effect in thermocycling 2-9483  
 thermal and electrical conductivity measuring unit 2-6850  
 thermochemical data, obtained from photoelectron spectra 2-6050  
 thermometric analysis (*German*) 2-41843  
 void sites nucleation, in creep and hydrogen attack 2-27217  
 InSb-NiSb eutectic, directionally solidified by vertical Bridgman type method, growth bands 2-27163  
 Nb<sub>3</sub>Sn tapes, CVD, dynamic stability (*Chinese*) 2-41097
- alnic alloys** see iron alloys
- Al<sub>2</sub>O<sub>3</sub>** see alumina
- Al<sub>2</sub>O<sub>3</sub>-α** see corundum
- α-Al<sub>2</sub>O<sub>3</sub>** see corundum
- alpha-decay**  
 see also alpha-decay theory; alpha-particle spectra  
 A=107 nuclei obs. by α-decay 2-19590  
 A=144 to 172, nuclei far from stability radioactive decay study 2-15392  
 A=149 to 171 nuclei, neutron deficient isotopes, decay props. study 2-19517  
 deformed nuclei, alpha reduced widths, harmonic oscillator wave functions 2-359  
 internal pair production 2-19511  
 monazite minerals, high energy alpha emitters search 2-28073  
 radioisotope decay characts., data table (*French*) 2-29177  
 rare-earth isotopes, A=146 to 178, at masses 2-19487  
 rare-earth region nuclei, reduced alpha width systematics 2-7083  
<sup>217</sup>Ac(<sup>217</sup>Ac<sup>m</sup>), α-particle perturbed ang. distrib., g-factor meas., time-differential obs. 2-19516  
<sup>191</sup>Ag(<sup>191</sup>Kr,X), A=107, 109, 664 MeV, deep-inelastic reaction, ang. momentum transfer and partition 2-24262  
<sup>27</sup>Al(<sup>27</sup>S,X), 160 MeV, evaporation preequilibrium, alpha emission 2-34071  
<sup>191</sup>Pt<sup>m</sup>, alpha-decay half-life 2-38991  
<sup>209</sup>Bi(α,X), 22, 33 MeV, α-spectrum study, in-beam expts. applying electrostatic ellipsoidal mirror 2-15660  
 (<sup>16</sup>C,X), 86 MeV/u, A=166-186, α emitter prod., cross sections, ang. distrib. 2-49082  
<sup>244</sup>Cm α-decay, <sup>238</sup>Pu levels, J<sup>π</sup>, T<sub>1/2</sub> and EI transition probabilities 2-7079  
<sup>114</sup>Cs α-decay, T<sub>1/2</sub> and branching ratios 2-3875  
<sup>257</sup>Fm alpha decay, α-intensities and energies, <sup>253</sup>Cf levels, J<sup>π</sup>, transitions 2-43460  
<sup>162</sup>Hf decay obs., α-decay chain completion 2-19515  
<sup>11</sup>Al, A=110-113, α-decay, T<sub>1/2</sub> and branching ratios 2-3875  
 Ir, neutron-deficient isotopes, precise α decay energy meas. (*French*) 2-49057  
<sup>7</sup>Li\* (4.63 MeV) excited state asymmetrical decay in <sup>9</sup>Be(d,t)2α 2-24242  
<sup>20</sup>Na, beta-delayed particles kinematic shifts as probe of β-γ ang. correl. 2-19502  
<sup>20</sup>Ne 8p-4h state, J<sup>π</sup>, α-branching ratios from (α,α'), (<sup>12</sup>C,α)-2-38949  
 Os, neutron-deficient isotopes, precise α decay energy meas. (*French*) 2-49057  
 Pb region nuclide, A=183-188, alpha-decay studies and ground state proton radioactivity 2-19513  
<sup>188</sup>Pb, A=188,190,192 even-even isotopes, alpha-decay rates 2-19514  
 Po, k-shell ionization during α decay 2-43461  
<sup>188</sup>Po, A=192-194, alpha-decay half-life 2-38991  
 Pt, neutron-deficient isotopes, precise α decay energy meas. (*French*) 2-49057  
<sup>198</sup>Pt(<sup>13</sup>C,γ), 57-60 MeV, <sup>211</sup>Po isomeric state alpha emission 2-39061  
<sup>239</sup>Pu half-life determ. by specific activity meas. 2-11119  
 Re, neutron-deficient isotopes, precise α decay energy meas. (*French*) 2-49057  
 Sn region nuclide, A=106-114, alpha-decay studies and ground state proton radioactivity 2-19513  
<sup>114</sup>Te, A=106-110, α-decay, T<sub>1/2</sub> and branching ratios 2-3875  
<sup>228</sup>Th, decay modes, γ-ray spectra following <sup>228</sup>Th(n,γ) 2-3876  
<sup>238</sup>U half-life meas. 2-19510  
<sup>238</sup>U-<sup>234</sup>Th decay, α-recoil range 2-43749  
 W, neutron-deficient isotopes, precise α decay energy meas. (*French*) 2-49057  
<sup>114</sup>Xe, A=110-113, α-decay, T<sub>1/2</sub> and branching ratios 2-3875
- alpha-decay theory**  
 see also alpha decay  
 Coulomb repulsive energy, dynamic role 2-19512  
 deformed nuclei favoured α-transitions 2-33968
- alpha-particle absorption**  
 No entries
- alpha-particle angular distribution**  
 see also alpha-particle spectra  
 B(α,α), A=10,11, 31.2 MeV, α-particle ang. distrib. (*Chinese*) 2-34061  
<sup>12</sup>C(<sup>12</sup>C,X), E<sub>cm</sub>=2.8-6.3 MeV, fusion reaction study by charged-particle spectroscopy 2-39070  
<sup>18</sup>Ag(α,α'), A=198,200,202,204, nuclear octupole vibrations 2-3829  
<sup>188</sup>Pb(α,α'), A=204,206,208, nuclear octupole vibrations 2-3829  
<sup>141</sup>Pr(n,α), 14 MeV, α spectra and ang. distrib. precompound emission (*Chinese*) 2-34043  
<sup>235</sup>U(n,f) ternary fission, α-particle wavepacket description 2-3968



**alpha-particle attenuation** *see alpha-particle absorption***alpha-particle detection and measurement**

- see also alpha-particle spectrometers; radioactivity measurement*  
 cellulose nitrate, Kodak LR film, ang. sensitivity to  $\alpha$ -particles 2-24497  
 CR-39, new  $\alpha$ -particle sensitive polymeric detector, environmental radioactivity appl. 2-6210  
 dielectric detectors,  $\alpha$ -particle track autoradiography appls. (Russian) 2-9506  
 dielectric nuclear track detectors, range meas. and track kinetics 2-11356  
 liquid scintillation method,  $\beta$  and  $\gamma$ -ray rejection 2-43670  
 LR-115 and CR-39 plastic detectors, alpha-particles registration 2-43703  
 range in matter, calc. and meas. 2-11357  
 $\alpha$ -recoil track registration in mica,  $\alpha$ -recoil dating method prospect 2-6465  
 Ge(Li) coaxial detectors, charge losses in sensitive film near-surface region (Russian) 2-19873  
 $^{239}\text{Pu}$ , residual, determ. in nucl. explosion debris (Chinese) 2-47401  
 Si diode matrix array for  $\alpha$ -particle autoradiography 2-4176

**alpha-particle effects**

- air luminescence yield under influence of  $^{239}\text{Pu}$   $\alpha$ -particles 2-48006  
 funnelling, alpha-particle-induced field and enhanced collection of carriers 2-50720  
 liquid scintillation following  $\alpha$ -irrad. (Bulgarian) 2-22096  
 supercond. and mag. transition temp.,  $\alpha$ -particle effect 2-31026  
 $\text{Cu}_3\text{Au}$  ordered alloy  $\alpha$ -irrad., atomic replacement, resistivity meas. 2-8547  
 $\text{ErRh}_2\text{B}_4$  and  $\text{Er}_{0.4}\text{Ho}_{0.6}\text{Rh}_2\text{B}_4$ , supercond. and mag. transition temp.,  $\alpha$ -particle effect 2-31026  
 Ga, channelographic projection patterns at 295.77 and 4K, lattice struct. (French) 2-5075  
 GaAs,  $\alpha$ -particle irrad., primary defects migration 2-16690  
 GaAs, radiation defect annealing, redistrib. of point defects 2-45152  
 Si,  $\alpha$ -particle damage, X-ray diff. study 2-40445  
 Si,  $\alpha$ -radiation defects in  $p$ - $n$  diodes 2-40447  
 Si  $p$ - $n$  junction, alpha particle irradiation, radiation defects 2-12647  
 Si surface barrier detector,  $^{244}\text{Cm}$  and  $^{252}\text{Cf}$  spontaneous fission fragments pulse height spectra 2-15670  
 SnCd, lattice damage at recoil Sm impurity 2-25943

**alpha-particle interactions** *see alpha particle-nucleus reactions***alpha-particle model** *see nuclear cluster model***alpha particle-nucleus reactions**

- for inelastic alpha particle-nucleus scattering, *see "alpha particle-nucleus scattering"*  
 A=4-40 projectile induced fusion cross sections, empirical description 2-24279  
 optical model cross section parameterisation for  $n$ ,  $p$  and  $\alpha$  2-380  
 ( $\alpha$ , 2n) for A=86-208, fast neutron emission, neutron skin effect 2-24251  
 ( $\alpha$ , X), A=12-208, medium energy total cross sections, adiabatic effects 2-39038  
 $^{27}\text{Al}(\alpha, d)$ , 27.2 MeV, stripping reaction, diff. cross section, cluster and microscopic descripts. 2-33995  
 $^{27}\text{Al}(\alpha, d)^{28}\text{Si}$ , 26.2, 26.45, 26.7 MeV, reaction mechanism study 2-34049  
 $^{197}\text{Au}(\alpha, X)$ , 43 MeV/A, isotope yield, rel. to coalescence and statistical models 2-39042  
 $^9\text{Be}(\alpha, nx)$ , 0-30 MeV, neutron characts., therapy source appl. 2-19810  
 $^{208}\text{Bi}(\alpha, X)$ , 22, 33 MeV,  $\alpha$ -spectrum study, in-beam expts. applying electrostatic ellipsoidal mirror 2-15660  
 $^{209}\text{Bi}(\alpha, 5n)^{208}\text{At}$ , 59 MeV, levels study in  $^{208}\text{At}$  2-15371  
 $^{12}\text{C}(\alpha, ^3\text{He})$ , kinematic anal. of four prong processes 2-43494  
 $^{40}\text{Ca}(\alpha, ^3\text{He})^{41}\text{Ca}$ , 36 MeV, two-step reaction mechanism 2-15414  
 $^{43}\text{Ca}(\alpha, n)$ , 12, 17 MeV,  $^{46}\text{Ti}$  levels, bands,  $J^\pi$ , lifetimes and decay schemes 2-38921  
 $^{106}\text{Cd}(\alpha, n)$ ,  $^{109}\text{Sn}$  level struct. 2-19452  
 $^{114}\text{Cd}(\alpha, p)$ ,  $^{117}\text{In}^{m8}$  isomer excitation cross section ratios 2-33880  
 $^{116}\text{Cd}(\alpha, n)^{117}\text{Sn}$ , excitation function, production yield 2-3942  
 $^{54}\text{Cr}(\alpha, X)$ , A=52-54, 27.2 MeV, total reaction cross sections 2-34048  
 $^{63}\text{Cu}(\alpha, X)$ , superdense nuclei decay (Russian) 2-19439  
 $\text{Cu}(\alpha, X)$ , 0.18-28 GeV, momentum transfer 2-29266  
 $^{19}\text{F}(\alpha, \gamma)$ , 5 MeV,  $^{23}\text{Na}$  excited states, spectroscopic factors,  $\gamma$ -decay spin depend. 2-33904  
 $^{19}\text{F}(\alpha, p)$ , 5 MeV,  $^{23}\text{Na}$  excited states, spectroscopic factors,  $\gamma$ -decay spin depend. 2-33904  
 $^{56}\text{Fe}(\alpha, X)$ , 35, 49 MeV,  $p$ ,  $d$ ,  $t$ ,  $\alpha$ -energy spectra, preequilibrium process mechanism 2-33997  
 $^{160}\text{Gd}(\alpha, 2n)$ , 28 MeV,  $^{162}\text{Dy}$  band crossing, negative parity yrast and yrare sequences 2-3833  
 $^2\text{H}(\alpha, \gamma)$ , cross-section, rel. to  $^6\text{Li}$  prod. in big bang 2-39040  
 $^2\text{H}(\alpha, pn)$ , 10.27, 11.3, 13 MeV, correl. cross section near threshold 2-34060  
 $^4\text{He}(\alpha, X)$ , X= $p, d$ , 110-172 MeV, continuous spectra, statistical partition model anal. 2-428  
 $^{165}\text{Ho}(\alpha, 2n)^{167}\text{Tm}$ ,  $\gamma$ -ray ang. distrib. anal. 2-24250  
 $^{115}\text{In}(\alpha, n)$ ,  $^{118}\text{Sb}^{m8}$  isomer excitation cross-section ratios 2-33880  
 $^{139}\text{La}(\alpha, Zn\gamma)$ , 20-27 MeV,  $^{141}\text{Pr}$  high spin levels,  $J^\pi$ ,  $T_{1/2}$ , ICC, gamma transitions 2-19419  
 $^{25}\text{M}(\alpha, n\gamma)^{26}\text{Si}$ ,  $^{28}\text{Si}$  structure from high-spin states spectroscopy 2-24166  
 $^{25}\text{Mg}(\alpha, n)$ , 0-4.8 MeV, total cross-sections 2-427  
 $^{93}\text{Nb}(\alpha, 3n)$ ,  $^{94}\text{Tc}$  high spin states,  $J^\pi$ ,  $T_{1/2}$  and  $\gamma$  transitions 2-43402  
 $^{93}\text{Nb}(\alpha, xn)\text{Te}$ , ( $x=2-5$ ), Te recoil ranges 2-3943  
 $^{150}\text{Nd}(\alpha, 2n\gamma)$ , 21-25 MeV,  $^{152}\text{Sm}$  rotational bands,  $J^\pi$ , ICC,  $T_{1/2}$  and transitions 2-43401  
 $^{206}\text{Ne}(\alpha, ^{12}\text{C})$ , resonant struct.,  $^{24}\text{Mg}$  levels 2-33915  
 $^{206}\text{Ne}(\alpha, \alpha)$ , resonant struct.,  $^{24}\text{Mg}$  levels 2-33915  
 $^{58}\text{Ni}(\alpha, X)$ , 43 MeV/A, isotope yield, rel. to coalescence and statistical models 2-39042  
 $^{58}\text{Ni}(\alpha, X)$ , superdense nuclei decay (Russian) 2-19439  
 $^{58}\text{Ni}(\alpha, n\gamma)^{61}\text{Zn}$ , 10.75-16.0 MeV,  $^{61}\text{Zn}$  gamma-ray spectroscopy 2-43444  
 $^{60}\text{Ni}(\alpha, X)$ , 35, 49 MeV,  $p$ ,  $d$ ,  $t$ ,  $\alpha$ -energy spectra, preequilibrium process mechanism 2-33997  
 $^{16}\text{O}(\alpha, \gamma)^{20}\text{Ne}$ , reson. reaction rate considering screening effect 2-24252  
 $^{31}\text{P}(\alpha, n\gamma)^{34}\text{Cl}$ , 11.7-16.3 MeV, high-spin yrast states study 2-38928  
 $^{208}\text{Pb}$ , giant quadrupole reson., neutron decay in ( $\alpha, n$ ) coincidence expt. 2-29242  
 $^{208}\text{Pb}(\alpha, x)$ , ( $x=^3\text{He}, t$ ), energy depend. DWBA calcs. 2-19557  
 $^{208}\text{Pb}(\alpha, X)$ , superdense nuclei decay (Russian) 2-19439  
 $^{103}\text{Rh}(\alpha, nX)\text{Ag}$  16-82 MeV, excitation function meas. 2-43495  
 $^{45}\text{Sc}(\alpha, X)$ , 27.2 MeV, total reaction cross sections 2-34048  
 $^{74}\text{Se}(\alpha, 2np)$ , 51-59 MeV,  $^{75}\text{Br}$  deformed high spin levels,  $J^\pi$ , transitions and  $T_{1/2}$  2-33884

**alpha particle-nucleus reactions continued**

- $^{80}\text{Se}(\alpha, n\gamma)^{83}\text{Kr}$ , level struct. of  $^{83}\text{Kr}$ ,  $\gamma$ -ray spectra 2-33951  
 $^{147}\text{Sm}(\alpha, ^3\text{He})$ , 40 MeV,  $^{145}\text{Sm}$  levels,  $J^\pi$ , spectroscopic factors, DWBA anal. 2-15365  
 $^{150}\text{Sm}(\alpha, ^3\text{He})$ , 40 MeV,  $^{151}\text{Sm}$  high spin states,  $J^\pi$ , DWBA anal. 2-15358  
 $^{153}\text{Sm}(\alpha, n)^{153}\text{Gd}$ , 17, 19 MeV,  $^{153}\text{Gd}$  level structure study 2-24079  
 $\text{Ta}(^3\text{He}, X)$ , 4.2 GeV/c per nucleon,  $\pi^-$  meson momentum and ang. characts. (Russian) 2-34057  
 $^{181}\text{Ta}(\alpha, X)$ , superdense nuclei decay (Russian) 2-19439  
 $^{181}\text{Ta}(\alpha, X)$ , 27.2 MeV, total reaction cross sections 2-34048  
 $^{238}\text{U}(\alpha, f)$ , 120 MeV, fission probab. in giant resonance region, recoil axis axial symmetry 2-43514  
 $^{51}\text{V}(\alpha, X)$ , 27-2 MeV, total reaction cross sections 2-34048

**alpha particle-nucleus scattering**

- $^{243}\text{Am}(\alpha, \alpha')$ , 17 MeV, rotational states Coulomb excitation and ground-state quadrupole moment 2-34059  
 $^A\text{B}(\alpha, \alpha')$ , A=10, 11, 31.2 MeV,  $\alpha$ -particle ang. distrib. (Chinese) 2-34061  
 $^{12}\text{C}(\alpha, \alpha')$ , 10G MeV, E0 strength in giant reson. region 2-33991  
 $^{12}\text{C}(\alpha, \alpha)$ , A= $^6\text{Li}$ ,  $^9\text{Be}$ , 240-270 MeV, nonlinear Schrodinger eqn. anal. 2-43498  
 $^{12}\text{C}(\alpha, \alpha)$ , low energy direct channel Regge-pole approach, differential cross section 2-24249  
 $^{13}\text{C}(\alpha, \alpha')$ , 43.6 MeV, isoscalar and isovector transition amplitudes in A=13, high spin state excitation 2-372  
 $^{40}\text{Ca}(\alpha, \alpha')$ , 98.5-129.4 MeV, giant quadrupole resonance and isoscalar dipole state 2-382  
 $^{40}\text{Ca}(\alpha, \alpha')$ , 20-50 MeV, effective imaginary pot., absorption microscopic calc., RPA model 2-15416  
 $^{40}\text{Ca}(\alpha, \alpha')$ , 24.1 MeV, anomalous scatt. at large angles 2-19554  
 $^{52}\text{Cr}(\alpha, \alpha')$ , 104 MeV, transition rates of collective excitations, anal. method 2-3869  
 $^{19}\text{F}(\alpha, \alpha)$ , 5 MeV,  $^{23}\text{Na}$  excited states, spectroscopic factors,  $\gamma$ -decay spin depend. 2-33904  
 $^2\text{H}(\alpha, \alpha')$ , 6-14 MeV, cross-section ang. distrib., phase-shift and R-matrix anal.,  $^6\text{Li}$  levels 2-49077  
 $^4\text{He}(\alpha, \alpha')$ , 64 MeV, level parameters for  $\alpha^*$  2-33907  
 $^4\text{He}(\alpha, \alpha')$ , 64 MeV,  $^3\text{He}$ ,  $^3\text{He}$   $p$  and  $n$  phase shifts and scatt. length from R-matrix anal. 2-33907  
 $^{218}\text{Hg}(\alpha, \alpha')$ , A=198, 200, 202, 204, nuclear octupole vibrations 2-3829  
 $^{218}\text{Ne}(\alpha, \alpha')$ , differential cross sections 2-34058  
 $^{210}\text{O}(\alpha, \alpha)$ , A=16, 18, neutron blocking, generator coordinate method 2-43497  
 $^{16}\text{O}(\alpha, \alpha')$ , 9.5-9.8 MeV,  $^{20}\text{Ne}$  8p-4h state,  $J^\pi$ ,  $\alpha$ -branching ratios 2-38949  
 $^{192}\text{Os}(\alpha, \alpha')$ , 24 MeV, bands and transitions from IBA/coupled channel anal. 2-24077  
 $^{208}\text{Pb}(\alpha, \alpha')$ , A=204, 206, 208, nuclear octupole vibrations 2-3829  
 $^{208}\text{Pb}(\alpha, \alpha')$ , giant reson., Coulomb excitation, coupled channel calc. 2-33990  
 $^{208}\text{Pb}(\alpha, \alpha)$  energy depend., DWBA calcs. 2-19557  
 $^{50}\text{Ti}(\alpha, \alpha')$ , 104 MeV, transition rates of collective excitations, anal. method 2-3869  
 $^{173}\text{Yb}$  636 keV level Coulomb excitation by  $\alpha$  and HI, lifetime determination 2-33905

**alpha-particle scattering** *see alpha particle-nucleus scattering***alpha-particle spectra***see also alpha-particle angular distribution*

- BWR, spent fuel characteristics,  $\alpha$ - and  $\gamma$ -spectra study 2-11185  
 liquid scintillation method,  $\beta$  and  $\gamma$ -ray rejection 2-43670  
 radioisotope decay characts., data table (French) 2-29177  
 $^{86}\text{Ag}^{40}\text{Kr}(X)$ , A=107, 109, 664 MeV, deep-inelastic reaction, ang. momentum transfer and partition 2-24262  
 Au, high-resolution Rutherford backscattering spectra of  $\alpha$ -particles 2-46854  
 $^9\text{Be}$ , excited states, beta recoil and width influence on delayed particle spectra 2-19503  
 $^{14}\text{Nd}(n, \alpha)$ , 12-18 MeV,  $\alpha$ -particle spectra, target nucleus shell effect 2-39031  
 $^{16}\text{O}(\alpha, \alpha)$  on  $^{12}\text{C}$ ,  $^{13}\text{C}$ ,  $^{14}\text{N}$ ,  $^{16}\text{O}$ ,  $^{20}\text{Ne}$ , 145 MeV, nucl. mol. reson. obs. 2-49081  
 $^{210}\text{Pb}$  and  $^{210}\text{Po}$ ,  $\alpha$ -spectrometric method for anal. of concs. in surface air 2-9752  
 $^{210}\text{Po}$   $\alpha$ -particle sources, prevention of contamination in  $\alpha$ -particle spectrometry 2-15663  
 $^{141}\text{Pr}(n, \alpha)$ , 14 MeV,  $\alpha$  spectra and ang. distrib. precompound emission (Chinese) 2-34043

**alpha-particle spectrometers***see also alpha-particle spectra*

- $\alpha$ - $\gamma$  coincidence spectrometers, high resolution, for transuranium nuclides meas. (Chinese) 2-43668

**alpha-particles***see also cosmic ray alpha-particles and helium nuclei*

- magnetosphere,  $\alpha$ -particle beams upstream of bow shock 2-14693  
 three body force based on  $\alpha$ -particle energy levels 2-33921  
 Cu, energy-loss straggling of alpha-particles 2-43736  
 $^{210}\text{Po}$   $\alpha$ -particle sources, prevention of contamination in  $\alpha$ -particle spectrometry 2-15663

**alpha-radiation** *see alpha-particles***alpha-rays** *see alpha-particles***alpha-rhythm** *see bioelectric potentials***alpha-rhythm measurement** *see electroencephalography***alternators**

- equation of motion  $d^2y/dx^2 + c^2 \sin y = 0$ , solns. for pendulum and alternators 2-18872

**altimeters**

- GEOS 3 altimeter, calibration validation 2-23205  
 laser altimeters, anal. of target signatures 2-48010  
 radar, remote sounding of atmosphere and ocean, for climate research 2-3102

**altitude measurement** *see height measurement***alumina***see also corundum*

- addition to  $\text{WO}_3$ , effect on reduction kinetics 2-13671  
 adsorption of formic acid, vibr. modes, IETS study, book contrib. 2-39459  
 adsorption-desorp. of metal ions on  $\gamma\text{-Al}_2\text{O}_3$  surface; press. jump obs. 2-45717  
 adsorption-desorption of metal ions, on  $\gamma\text{-Al}_2\text{O}_3$ , static obs. 2-45716  
 $\beta\text{-Al}_2\text{O}_3\text{-M}_2\text{O}$ , M-alkali metal, mixed alkali effects, NMR study 2-31318



alumina continued

- $\gamma$ -alumina, anomalous low temp. dielectric behaviour 2-31367  
 $\beta$ -alumina composition effect on Na-S cells 2-27588  
 aluminosilicate refractories, crack stability in work-of-fracture test 2-37024  
 anodic film, oxidation of Al, ion beam nuclear analysis (*French*) 2-1799  
 anodized film, on line colour meas. during electrolytic colouring 2-43065  
 ceramic acetabulum, cement hardening action on artificial hip joint components 2-22859  
 ceramics, MK, GB-7, UF-46, neutron irradiated, elastic props. 2-22258  
 chemisorption of organic monolayer, surface enhanced Raman scatt. 2-51568  
 Chinese bauxites, sintering charact. 2-27122  
 crack-void interaction, bending strength of polycryst. samples 2-13798  
 crystal, structural props. under dielec. load 2-5621  
 debased insulation material, thermal cond. prediction 2-26154  
 deformed  $\alpha$ -phase single crystal, X-ray extinction contrast 2-35506  
 double layer, sputter effects on SIMS/AES profiles (*German*) 2-13616  
 electrophoretic tube form. from  $\beta$ -phase powder (*Polish*) 2-27127  
 fibre reinforced refractory oxides, composite strength 2-27269  
 fibres, insulating, at high temps., thermal conductivity 2-50947  
 fibres, prod. by anodising Al wire 2-27124  
 film, anodised amorphous, DC cond. and dielec. polarisation, thickness depend. and defects role 2-30987  
 film, plasma anodized, in GaAs and InP MIS structs. 2-51340  
 film, reactively magnetron sputtered, gas composition effects 2-51810  
 film covered p-CdTe, annealing effects (*Japanese*) 2-40609  
 film form. from laser plasma, operating mode investigation 2-46913  
 fracture in combined tension/torsion, Weibull theory 2-36943  
 fracture in combined tension/torsion 2-36942  
 fused, anomalous expansion, causes 2-50889  
 hardening, supershard, from liq. phase (*Ukrainian*) 2-13740  
 Haven ratio and percolation problem 2-26127  
 humidity sensor (*German*) 2-19115  
 hysterisis and transition effects during boiling on surfaces with porous coatings 2-16766  
 ion implantation, projected ranges and standard deviations (*Japanese*) 2-12653  
 ionic conductivity, moisture, effect in  $\beta''$ -phase 2-26116  
 irradiated, tritium trapping release 2-4117  
 liquid, saturation of prous W (*Russian*) 2-1734  
 metal/ $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O interface, evolution in humid atm. (*French*) 2-8877  
 microcracking in large-grained material 2-47173  
 near MM-wave Fourier transform refl. and transmission spectroscopy for plasma diagnostics 2-40183  
 particles in rocket plume, IR radiance 2-26089  
 $\beta$ -phase, AC conductivity below 10<sup>11</sup> Hz 2-40899  
 $\beta$ -phase, fabrication scheme using fast firing method 2-27129  
 $\beta$ -phase in Na-S batteries, interface resistance study 2-27589  
 $\beta$ -phase membrane with oriented conduction plane, ion transport in Na-Na cells 2-26134  
 plasma arc spraying, optimisation of conditions and coating props. of  $\gamma$ -phase 2-27306  
 plasma sprayed, applied to metallic substrates, delayed failure 2-52077  
 plasma-sprayed coatings, elastic moduli variations during structural phase transitions (*French*) 2-36901  
 plasmochemical synthesis, thermodynamical anal. 2-31667  
 polycrystalline, creep cavitation effects 2-13790  
 powders, densification in liq. phase presence 2-31665  
 powders, ultrafine, particle growth in plasma-chem. reactions 2-31669  
 precipitated structure, SIMS and EPR spectra of tracer ions Cr<sup>3+</sup> and Fe<sup>3+</sup> 2-9030  
 pressed powder substrate, prod. for surface energy meas. of glass melts 2-16929  
 prismatic slip of single crystals below 1000°C in compression under hydrostatic press. 2-16654  
 protective coating, plasma-sprayed on metal substrates, degradation in physiological media 2-2616  
 pyrolytic, deposition temp. effect on InP inversion-mode MISFET 2-13189  
 Raman spectra of adsorbed NO<sub>2</sub>/N<sub>2</sub>O, SO<sub>2</sub>, Br<sub>2</sub> and acetylene 2-2295  
 refractories, damage-resist. parameters and ribbon test 2-31859  
 refractories, micro- and macrocrack growth 2-31765  
 refractories obtained from different sources, props. 2-27121  
 Sialon, effect of additives on sintering and mech. props. 2-17657  
 solid electrolyte, degradation mechanism,  $\beta$ -phase 2-27591  
 spectral analysis, using scanning-electrode method 2-37120  
 spherical granules prod. from thermoplastic slips 2-41570  
 stress corrosion, biological implant appls. 2-9449  
 surface,  $\gamma$ -phase, fluorescence decay of absorbed aromatic hydrocarbons 2-51674  
 surface, H<sub>2</sub> physisorpt., EELS study 2-27039  
 surface, plasma interaction with C impurities, surface defects, EPR, mass and emission spectroscopy 2-16933  
 surface, substituted adamantanes adsorpt., inelastic electron tunnelling spectroscopy 2-27476  
 thin films, electrical cond. meas., Poole Frenkel cond. mechanism 2-17178  
 trace amounts, of  $\alpha$ -emitters, identification and anal. of contamination 2-27512  
 ultradisperse particles, phase comp. 2-50831  
 $\eta \rightarrow \alpha$  transformation, prep. from decomp. of (Al<sub>2</sub>SO<sub>4</sub>)<sub>3</sub> 2-5849  
 3Al<sub>2</sub>O<sub>3</sub>·2SiO<sub>2</sub>, mullite containing powders, sintering, composition effects 2-51857  
 3Al<sub>2</sub>O<sub>3</sub>·2SiO<sub>2</sub>, mullite containing powders, agglomeration effects 2-51858  
 $\beta$ -Ag<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>, polycryst., highly non-stoichiometric, structural studies neutron diff. obs. 2-50612  
 Al/Al<sub>2</sub>O<sub>3</sub>/Pb tunnel junctions, zero-bias resist., voltage and thermal treatment effects, ionic mobility 2-51343  
 Al-Al<sub>2</sub>O<sub>3</sub> particle composites, US vel. and elastic const., influence of microstruct. parameters 2-36902  
 Al-Al<sub>2</sub>O<sub>3</sub> powder composites, wear-resistant, produced by cold extrusion 2-36813  
 Al-Al<sub>2</sub>O<sub>3</sub>-Ag MOM tunnel structs., surface plasma oscills., dispersion anomalies 2-17171  
 Al-Al<sub>2</sub>O<sub>3</sub>-Ag tunnel junctions on gratings, light emission 2-41431  
 Al-Al<sub>2</sub>O<sub>3</sub>-Ag tunnel structures, dispersion anomalies of surface plasma oscills. 2-30973  
 Al-Al<sub>2</sub>O<sub>3</sub>-Al superconducting tunnel junctions, current-induced negative resist. 2-36243

alumina continued

- Al-Al<sub>2</sub>O<sub>3</sub>-Cd<sub>3</sub>As<sub>2</sub> junctions, electron tunnelling, band struct. parameters of Cd<sub>3</sub>As<sub>2</sub> 2-26561  
 Al-Al<sub>2</sub>O<sub>3</sub>-Pb(Ag) structure, inelastic electron tunnelling spectroscopy 2-26516  
 $\gamma$  and  $\eta$ -Al<sub>2</sub>O<sub>3</sub>, adsorpt. of halogens, effect on catalytic activity, IR study 2-5682  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub> and  $\beta''$ -Al<sub>2</sub>O<sub>3</sub>, thermoelec. power 2-26128  
 Al<sub>2</sub>O<sub>3</sub>, ceramic materials for HTR appls., thermomech. props. (*German*) 2-473  
 Al<sub>2</sub>O<sub>3</sub> ceramics, consideration between burning out of polyvinyl butylar binder and sintering 2-27131  
 Al<sub>2</sub>O<sub>3</sub>, effect on viscosity of vitreous SiO<sub>2</sub> 2-25966  
 Na<sup>+</sup>- $\beta$ -Al<sub>2</sub>O<sub>3</sub>, elec. degradation 2-51868  
 Al<sub>2</sub>O<sub>3</sub>, heat resistant materials for medium high temp. ranges, chem. and phys. props. (*German*) 2-472  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>, Li-stabilised, prep. and characts. 2-2482  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>, membrane, mech. quality control using acoustic emission 2-31864  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>, polarized Brillouin scatt. 2-17500  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>, polycryst., asymmetric resistance, time depend. 2-26113  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>, polycryst., electro-mech. degradation 2-52071  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>, spray-dried, homogenisation, phase form. and sintering 2-5846  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>, two-peak firing 2-9434  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Ag<sup>+</sup>, antiferroelec. transitions, three-state two-dimens. Potts model 2-2207  
 Al<sub>2</sub>O<sub>3</sub>-Cr<sup>3+</sup>, interlevel nonradiative transitions of impurities 2-13550  
 Al<sub>2</sub>O<sub>3</sub>-Cr<sup>3+</sup>, ion distrib. coeff. and localisation by EPR studies (*Russian*) 2-1507  
 Al<sub>2</sub>O<sub>3</sub>-Cr<sup>3+</sup>, spin-spin reservoir relax. theory (*Russian*) 2-46362  
 Al<sub>2</sub>O<sub>3</sub>-Cr<sup>3+</sup> precipitated struct., SIMS and EPR spectra line broadening, spin matrix param. 2-9031  
 $\alpha$ -Al<sub>2</sub>O<sub>3</sub>-Cr<sup>3+</sup>(Ti<sup>3+</sup>)(Ti<sup>4+</sup>)(Mg<sup>2+</sup>), deformed by basal slip, dislocation substruct. 2-35499  
 Al<sub>2</sub>O<sub>3</sub>-F, nature of F modified oxide surfaces, NMR study 2-31303  
 Al<sub>2</sub>O<sub>3</sub>-Fe<sup>2+</sup>, V<sup>2+</sup> bicrystal, freq. crossing and inelastic scatt. at surfaces 2-45644  
 Al<sub>2</sub>O<sub>3</sub>-Fe<sup>3+</sup>, particle orientations characterisation by EPR 2-31264  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-H<sub>2</sub>O<sup>+</sup>(-K<sup>+</sup>), protonic motion, NMR study 2-16856  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Mg<sup>2+</sup> ion implanted thin film, sputter deposition, Raman scatt. 2-27088  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-NH<sub>4</sub><sup>+</sup>, H<sub>2</sub>O<sup>+</sup>, proton motion and relation times 2-16855  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-NH<sub>4</sub><sup>+</sup>, proton motion and relation times 2-16855  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sup>+</sup>, mech. and elec. relaxation meas. 2-16718  
 $\beta$ - and  $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-Na<sup>+</sup> single crystals, ionic conductivities 2-16844  
 Al<sub>2</sub>O<sub>3</sub>-Ni<sup>2+</sup>(Mn<sup>2+</sup>), Jahn-Teller system, effect of stress, EPR data anal. 2-45924  
 Al<sub>2</sub>O<sub>3</sub>/Rh/CO system, IR spectra 2-37100  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Ag<sub>2</sub>O, dilatometric study 2-5254  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-Ag<sub>2</sub>O-Li<sub>2</sub>O-H<sub>2</sub>O, proton NMR of absorbed H<sub>2</sub>O 2-26786  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Ag<sub>2</sub>O(K<sub>2</sub>O)(Ti<sub>2</sub>O)(Na<sub>2</sub>O)(NH<sub>4</sub><sup>+</sup>), vibr. spectra 2-31509  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-Ag<sub>2</sub>O(Ti<sub>2</sub>O), vibr. spectra 2-31509  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-BaO, ion exchange prep., ionic cond. props. 2-12835  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-BaO(CaO), cryst. struct., X-ray diff. study 2-25844  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-BaO(SrO)(CaO)(CdO)(PbO), divalent cation cond. 2-26130  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-CdO, ion exchange prep., ionic cond. props. 2-12835  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-FeO, ionic and electronic cond. and Mossbauer study 2-26124  
 Al<sub>2</sub>O<sub>3</sub>-H<sub>2</sub>O<sup>+</sup>(Li<sub>2</sub>O)(Na<sub>2</sub>O),  $\beta$  and  $\beta''$  phases protonic species, cond., and vibr. spectra 2-26923  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-H<sup>+</sup>-H<sub>2</sub>O<sup>+</sup>, vibrational study, IR absorpt. spectra and neutron scatt. 2-9145  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-K<sub>2</sub>O, dilatometric study 2-5254  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-K<sub>2</sub>O, struct. and ionic cond., X-ray study 2-25843  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-K<sub>2</sub>O-MgO, struct., ionic cond. and ion-ion correlations 2-26121  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O, decomp. mechanisms rel. to ionic cond. 2-41897  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O, diffusion of water into cond. plane, IR absorpt. study 2-45629  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O, F<sup>+</sup>-centre in cond. planes, EPR and ENDOR study 2-26744  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O-H<sub>2</sub>O, intercalation of water, IR absorpt. and neutron diff. study 2-27431  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O-H<sub>2</sub>O, proton NMR of absorbed H<sub>2</sub>O 2-26786  
 Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O-Na<sub>2</sub>O,  $\beta$ - and  $\beta''$ -phases, ionic cond. 2-26131  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O-Na<sub>2</sub>O, ceramic solid electrolyte, DC resistivity 2-50917  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-M<sub>2</sub>O, (M=Ag<sup>+</sup>, Na<sup>+</sup>, K<sup>+</sup>, NH<sub>4</sub><sup>+</sup>, H<sup>+</sup>/H<sub>2</sub>O), non-stoichiometry 2-21320  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-metal oxide-ZnO(MgO), cryst. struct., neutron diff. study 2-25842  
 Al<sub>2</sub>O<sub>3</sub>-MgO, transparent spinel, fusion casting 2-51849  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-MgO-Na<sub>2</sub>O(K<sub>2</sub>O)(Ag<sub>2</sub>O)(Ti<sub>2</sub>O), vibrational spectra and cond. parameters 2-41369  
 $\gamma$ -Al<sub>2</sub>O<sub>3</sub>-MoO<sub>3</sub>(-CoO)(NiO) catalyst, prep. and characterisation by Raman spectroscopy 2-31972  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-NH<sub>4</sub><sup>+</sup>, defect struct. and low dimensionality effects, proton NMR study 2-26773  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-NH<sub>4</sub><sup>+</sup>, paramag. impurities and proton motion, EPR and NMR 2-31275  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-NH<sub>4</sub><sup>+</sup> prep., cryst. struct., and thermal decomp. 2-25847  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-NH<sub>4</sub><sup>+</sup>-H<sub>2</sub>O<sup>+</sup>, paramag. impurities and proton motion, EPR and NMR 2-31275  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, Li<sub>2</sub>O single cryst., ionic cond. 2-12820  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, AC cond. and dielec. loss, 10<sup>2</sup> to 10<sup>11</sup> Hz 2-26123  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, AES study 2-9229  
 Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O,  $\beta$  and  $\beta''$  phases, Na<sup>+</sup> distrib. temp. depend., NMR study 2-26119  
 Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O,  $\beta$ - and  $\beta''$ -phase, US attenuation peaks 2-45411  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, cond. ion correls., hydration effect 2-25846  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, dilatometric study 2-5254  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, elec. degradation characts., surface form. of Na 2-12833  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, F<sup>+</sup>-centre in cond. planes, EPR and ENDOR study 2-26744  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, low-lying excitations and local motions, NMR study 2-31317  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, moisture and comp. effects, <sup>23</sup>Na NMR study 2-26787  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, stability in O<sub>2</sub> atoms. 2-8627  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, struct. and ionic cond., X-ray study 2-25843  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, superionic conductor, low freq. responses, model 2-21361  
 Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, synthetic Bayer liquor, elec. cond., effect of Al content, temp. and impurities 2-8651  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, thermodynamic stability 2-13994



**alumina continued**

- $\beta$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$  and  $\beta''$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ , superionic conductors, pot. energy calc. 2-21362
- $\beta$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$  ceramics, resist. ageing in Na-S cells 2-27587
- $\beta''$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$  electrolyte-based thermoelec. conversion, Na heat engine 2-27715
- $\beta$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$  solid electrolyte, failure modes 2-26133
- $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ : $\text{K}^+$ ( $\text{Ca}^{++}$ ),  $\beta$  and  $\beta''$  phases, grain boundary and bulk cond., impurities effect 2-12834
- $\beta$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ /Al<sub>2</sub>C<sub>3</sub> electrolyte cell, C activity meas. 2-18046
- $\beta$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ -AlN ceramics, form. and ionic cond. 2-12836
- $\beta''$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ -CaO, fast ion cond., Ca segregation at grain boundaries 2-26129
- $\beta$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ -Fe<sub>2</sub>O<sub>3</sub>, ionic cond., effect of the Fe doping level 2-26114
- $\beta$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ -Li<sub>2</sub>O, ion exchange prep., ionic cond. props. 2-12835
- $\beta$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ -Li<sub>2</sub>O, mixed ionic diffusion, kinetic non-ideality 2-26126
- $\beta$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ -Li<sub>2</sub>O, Na<sup>+</sup> distrib. temp. depend., NMR study 2-26119
- $\beta''$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ -Li<sub>2</sub>O, struct. and cond. plane, powder neutron diff. study 2-25841
- $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ -Li<sub>2</sub>O-MgO,  $\beta$  and  $\beta''$  phases, growth, struct., comp. and ionic cond. 2-26122
- $\beta''$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ -MgO(ZnO), struct. and ion-ion correlations, ionic cond. and Raman spectra study 2-26121
- $\beta''$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ -MgO(ZnO), ionic cond., roles of stabilising ion, electrode material, and growth conditions 2-40595
- $\beta$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ -NH<sub>4</sub><sup>+</sup>, ion exchange and thermal evolution 2-27432
- $\beta$ - $\text{Al}_2\text{O}_3$ - $\text{Na}_2\text{O}$ (K<sub>2</sub>O), ion rich, quasi long range order and ionic cond. 2-26120
- $\text{Al}_2\text{O}_3$ -NiAl<sub>2</sub>Si<sub>5</sub>O<sub>4.8</sub>-Ni system, thermodynamics, 900 to 1400K 2-17911
- $\text{Al}_2\text{O}_3$ -Si<sub>3</sub>N<sub>4</sub> multilayer facet coatings for diode laser, optimisation of selection 2-922
- $\text{Al}_2\text{O}_3$ -SiO<sub>2</sub>, alumina-mullite ceramic, susceptibility to delayed failure after dynamic testing 2-5920
- $\text{Al}_2\text{O}_3$ -SiO<sub>2</sub>, mullite, fused, texture anisotropy and mech. props. 2-41622
- $\text{Al}_2\text{O}_3$ -SiO<sub>2</sub>, naturally occurring aluminosilicates, thermal cond. 2-21408
- $\text{Al}_2\text{O}_3$ -SiO<sub>2</sub>, plasma processing, HF and DC 2-46991
- $\text{Al}_2\text{O}_3$ -SiO<sub>2</sub>, refractories, chem. phase anal. 2-41957
- $\text{Al}_2\text{O}_3$ -SiO<sub>2</sub>-Na<sub>2</sub>O(CaO), zeolites, Al-Si ordering, magic angle <sup>29</sup>Si NMR 2-26766
- $\text{Al}_2\text{O}_3$ -SiO<sub>2</sub>, surface phase comp., IR study 2-5682
- $\beta''$ - $\text{Al}_2\text{O}_3$ -SrO, ion exchange prep., ionic cond. props. 2-12835
- $\text{Al}_2\text{O}_3$ -talc compositions, hot-pressing 2-46971
- $\text{Al}_2\text{O}_3$ -TiO<sub>2</sub>, strength and thermal expansion obs. (Japanese) 2-31729
- $\text{Al}_2\text{O}_3$ -TiO<sub>2</sub>-PdO, spectrophotometric investig. 2-9160
- $\text{Al}_2\text{O}_3$ -ZrO<sub>2</sub>, binary system, eutectic and liquidus 2-31686
- $\text{Al}_2\text{O}_3$ -ZrO<sub>2</sub>, plasma processing, HF and DC 2-46991
- $\text{Al}_2\text{O}_3$ -ZrO<sub>2</sub>-MgO(CaO)(SrO)(BaO), based high-refractory cements, reaction kinetics 2-41571
- ( $\text{Al}_2\text{O}_3$ )<sub>18</sub>MgO, deformed single crystal, X-ray extinction contrast 2-35506
- 3Al<sub>2</sub>O<sub>3</sub>·2SiO<sub>2</sub>, 'fusion', in centrifugal furnace, grain growth (Japanese) 2-36804
- $\beta$ - $\text{Al}_2\text{O}_3$ - $\beta$ -Na<sub>2</sub>O, ionic diffusion, <sup>23</sup>Na NMR study 2-26772
- <sup>27</sup>Al NMR, two-quantum free decay, mag. dipolar interactions effect 2-26780
- B<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>, literature review and exploratory data on ternary subsystems 2-47014
- B<sub>2</sub>O<sub>3</sub>-PbO-Al<sub>2</sub>O<sub>3</sub> glass system, dynamical scaling, small angle X-ray scatt. study 2-12500
- BaO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> celsian ceramic, DC cond., dielec. loss 2-5890
- Ca migration, dense samples aged in water and physiological media 2-50686
- CaO-Al<sub>2</sub>O<sub>3</sub> glasses, crystn. characts., SEM study 2-50553
- CaO-B<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>, autosolvation effect, elec. cond. 2-50908
- CaO·2 Al<sub>2</sub>O<sub>3</sub>·H<sub>3</sub>PO<sub>4</sub> system, hardened body, props. and thermal changes 2-52001
- cc Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> composites, transform. toughening, fabrication and fracture toughness 2-51925
- Cd aluminophosphate glass: C<sup>2+</sup>, ESR study 2-31274
- CdS:Al<sub>2</sub>O<sub>3</sub> coating prep. by spray pyrolysis, solar cells appl. 2-51042
- Co  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> and CoMo  $\gamma$ -Al<sub>2</sub>O<sub>3</sub>, hydrodesulphurisation catalysts, XPS and ESR obs. of Co species after catalytic operation 2-27507
- Co-Al<sub>2</sub>O<sub>3</sub> cermet selective films, photothermal conversion, effective dielectric function bounds 2-9683
- CoO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, AC susceptibility meas. 2-46300
- Cr<sub>2</sub>O<sub>3</sub>-AP<sub>3</sub>O<sub>7</sub>-Mo system, thermionic emitter material 2-2487
- Cr<sub>2</sub>O<sub>3</sub>:Al<sub>2</sub>O<sub>3</sub>, EPR line width, nonmag. dopant effects (German) 2-21875
- Cr<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>, solid solutions, inter- and intra-crystalline ion exchange equilib. 2-52201
- Cu-Al<sub>2</sub>O<sub>3</sub> composite coatings, factors affecting entrapment of Al<sub>2</sub>O<sub>3</sub> particles 2-2608
- Cu-Al<sub>2</sub>O<sub>3</sub> dispersion strengthened, strengthening and mech. props. study 2-22309
- Fe-Al<sub>2</sub>O<sub>3</sub> compact, infiltration of liquid Cu (Japanese) 2-27117
- Fe-Al<sub>2</sub>O<sub>3</sub> granular thin films, blocking temp. freq. depend., susceptibility and Mossbauer study 2-31249
- Fe-Cr-Al (0-17.7, 2.6-9.3 wt.%), Al<sub>2</sub>O<sub>3</sub>-forming, oxidation morphology 2-27341
- <sup>59</sup>Fe tracer diffusion 2-50926
- K<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub> system glasses, Fe<sub>2</sub>O<sub>3</sub> additions influence on Faraday rot. 2-41336
- Li-Al<sub>2</sub>O<sub>3</sub> solid-state secondary battery system 2-18044
- LiAlO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>, precipitation of metastable phases with periodic antiphase struct. (French) 2-47044
- MgO:2Al<sub>2</sub>O<sub>3</sub> crystals, defects, spectrosc. investig. 2-2323
- MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, cordierite bodies with improved refractoriness 2-5847
- MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> comps., subsolidus phase equilibria and melting temps. 2-51880
- MgO-Cr<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO-SiO<sub>2</sub> constitution changes due to O<sub>2</sub> press. at high temp. 2-31822
- MgO-FeO(Fe<sub>2</sub>O<sub>3</sub>)-Al<sub>2</sub>O<sub>3</sub>-Cr<sub>2</sub>O<sub>3</sub> system, spinels form. kinetics 2-41598
- Mo/Al<sub>2</sub>O<sub>3</sub> cermets, thermal diffusivities 2-30667
- Mo-Al<sub>2</sub>O<sub>3</sub>, cermet thin film, coevaporation technique (German) 2-31640
- Mo-Al<sub>2</sub>O<sub>3</sub> composite film, surface roughness, photothermal absorber appls. 2-45688
- $\beta''$ -N<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, Mg stabilised, NMR study of Na ion mobility, water effects in polycryst. samples 2-31316
- Na<sub>2</sub>O:Al<sub>2</sub>O<sub>3</sub> superionic conductors, lattice phonon effects 2-45423
- $\beta$ -Na<sub>2</sub>O:Al<sub>2</sub>O<sub>3</sub>, polycryst., highly non-stoichiometric, structural studies neutron diff. obs. 2-50612

**alumina continued**

- Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-P<sub>2</sub>O<sub>5</sub>-Li<sub>2</sub>O(K<sub>2</sub>O)(MgO)(CaO)(BaO) glasses, elec. cond., mixed alkali effect 2-12825
- Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> molten system, IR emission spectra (Japanese) 2-9148
- Na<sub>2</sub>O-BaO-Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> glasses, alkaline durability 2-52085
- Na<sub>2</sub>O-MgO-Al<sub>2</sub>O<sub>3</sub>,  $\beta''$  and  $\beta'''$  phases, electron irradi. induced defects, TEM study 2-16681
- Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-Ce, gamma-ray irradi., absorpt. bands, optical density variation 2-31527
- Na<sub>2</sub>O-MgO·5Al<sub>2</sub>O<sub>3</sub> ceramics, preparation and elec. cond. 2-27128
- Nb/Al<sub>2</sub>O<sub>3</sub> cermet films, current cond. mechanism, energy depend. 2-46157
- NiO-Al<sub>2</sub>O<sub>3</sub> disperse system, Doppler broadening of positron annihilation lines, struct. characts. 2-22111
- NiO-MoO<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub> catalysts, oxide state characts. by Raman spectroscopy 2-5718
- O<sub>2</sub>SiH<sub>4</sub>, Al<sub>2</sub>O<sub>3</sub> supported, characterisation by inelastic tunnelling spectroscopy 2-36149
- PO<sub>4</sub>-bonded Al<sub>2</sub>O<sub>3</sub> refractories, strength and microstruct. 2-31728
- PbO-Nb<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> system, precipitation of ferroelec. PbNb<sub>2</sub>O<sub>6</sub> and dielec. props. of crystallised glasses (Japanese) 2-51917
- Pt-Al<sub>2</sub>O<sub>3</sub>, adsorption of cyclohexane and benzene, Fourier transform IR spectroscopy, evidence for  $\pi$ - and  $\sigma$ -bonded chemisorbed species 2-40694
- Pt-Al<sub>2</sub>O<sub>3</sub> catalyst, hydrogenation of cyclohexene, intraparticle diffusion effects 2-27472
- Pt-Al<sub>2</sub>O<sub>3</sub> selective absorber coatings, sputter-deposited 2-22654
- Si<sub>3</sub>N<sub>4</sub>-Al<sub>2</sub>O<sub>3</sub>, thermal cond. and microhardness, with and without additives 2-52006
- Si<sub>3</sub>N<sub>4</sub>-Y<sub>2</sub>O<sub>3</sub>/Al<sub>2</sub>O<sub>3</sub>, densification by dual N<sub>2</sub> press. process 2-36820
- SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>, small cones, deform. temp. (Japanese) 2-22291
- SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> system, reactions at subsolidus temps., electron microprobe anal. 2-51879
- SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> ceramics, dense, corrosion resist. in H<sub>2</sub>SO<sub>4</sub> solns. 2-22350
- W-Al<sub>2</sub>O<sub>3</sub>, cermet thin film, coevaporation technique (German) 2-31640
- ZrN-Al<sub>2</sub>O<sub>3</sub>-Mo(W) cermets, sintered, strength 2-13693
- ZrO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO, phase equilibria, development of SiO<sub>2</sub> O<sub>2</sub> sensor 2-47013
- ZrO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> refractories, sintering with rare earth oxide additives 2-36824
- ZrO<sub>2</sub>-(Al<sub>2</sub>O<sub>3</sub>)-Y<sub>2</sub>O<sub>3</sub>-CeO<sub>2</sub> composites, transform. toughening and fracture toughness, effect of alloying additions and temp. 2-51926

**aluminium**

- see also nuclei with .....
- $\mu^+$  motion,  $\mu$  spin rot. study 2-36491
- AE during deform., microstruct. effect 2-31882
- AE during tensile and compressive deform., microstruct., effect 2-31883
- AE response during tensile straining (Slovak) 2-31753
- Al I, meas. of oscillator strengths and autoionisation widths of 3s<sup>2</sup> 3p<sup>2</sup> 3s3p<sup>2</sup> 2P multiplet 2-10308
- anodic coated, hardness, wear and abrasion meas. 2-47186
- anodic film, corrosion resistance evaluation, Hunter's method 2-27368
- anodic films, intrinsic stresses meas. 2-47229
- anodic oxidation, ion beam nuclear analysis (French) 2-1799
- anodising to produce  $\alpha$ -Al<sub>2</sub>O<sub>3</sub> fibres 2-27124
- anodization in aqueous borate and borate-glycol solns., anodic barrier film form. 2-41814
- applications review in electrical engineering (German) 2-32052
- atom, Clementi Roetti atomic HF wave functions, improved local accuracy using global constraints 2-39300
- atoms, electron elastic scatt. cross section calcs. 2-20188
- atoms and solid, binding energy, Auger and photoelectron spectra 2-34367
- bent crystals, crossed bend contours, fine struct. appearing in electron microscope images 2-25697
- bimetal with stainless steel, qz 2-27251
- biofouling in simulated OTEC evaporator tubes on at-sea research platform at Punta Tuna, Puerto Rico 2-6167
- cast, H partitioning in pure specimens, determ. by dynamic evolution meas. 2-16802
- cathodes, thermal instability, electrical breakdown 2-12416
- cavitation erosion, vibratory and Venturi tests 2-9427
- cesiated thin film, surface and volume photoeffect 2-2409
- CESR, low temp., and electron-electron interactions 2-36432
- chemical polishing, in NH<sub>4</sub>HF<sub>2</sub>-HNO<sub>3</sub> acid 2-9472
- chemisorption of O on (111) surface, self-consistent electronic struct. and bonding 2-13153
- chemisorption of O on (111) surface, electronic band struct., and bond length 2-13154
- circular diaphragm, hydrostatic bulging 2-4728
- coarse grained polycrystals, mech. behaviour in plastic deform. 2-2558
- coated with Al, detonation spray deposition, diffusion zones detection 2-41853
- composite, B fibre reinforced, deform. characts. and fracture 2-36918
- composite, C fibre reinforced, component reactions, matrix comp. effect 2-36920
- composite, C fibre reinforced, corrosion and mech. props., carbide phase content effect 2-41556
- composite, C fibre reinforced, effect of coating C fibres with TiC 2-36811
- composite, C fibre reinforced, effect of SiC coating on C fibres 2-36994
- composites, C and B fibre reinforced, damage accumulation during low-cycle deform. 2-36921
- convergent-beam electron diff. patterns, 3D strain-field information 2-44984
- corrosion, microbiological, in fuel/water systems, redox pot. 2-47226
- corrosion protection by Zn suspension in aqn. glycol soln. 2-22369
- creep under conditions of superplasticity in torsion (Russian) 2-5906
- crystalline film, transmission electron diff. pattern contrast, amorphous material effect 2-44986
- cyclic uniaxial loading, comparison with elastoplastic model 2-12047
- defect prod. by neutrons at 4.7K 2-29330
- deformation mechanism diagrams, coords. and modifications 2-41676
- deformed, recovery, length changes and stress effects 2-41621
- deposition from tetrahydrofuran soln., electrode reaction mechanism 2-27110
- detection, by laser-induced fluorimetry using lumogallion complex 2-27488
- determination in steel by X-ray fluoresc. spectrometry 2-41961



## aluminium continued

diffusion, open tube, in Si 2-12848  
diffusion in Cu along dislocations 2-8674  
diffusion in ion-implanted Cu, Ag, and Au 2-12847  
dislocation drag coefficients 2-35498  
dislocation motion, pulsed NMR study 2-31321  
dissolution in HCl, retardation, effect of B-diketo cpds. 2-13843  
distributed furnaces fibre reinforced composite leads appl. 2-41576  
ductile, erosion mechanisms 2-27293  
dynamic internal friction and dynamic modulus meas. 2-45351  
dynamic recrystallisation during hot deform. in torsion (*Russian*) 2-22233  
dynamic strain ageing tested dynamically in torsion 2-13751  
elastic constants of 2024-T351 Al, dynamic press. depend. 2-51967  
electric field gradient tensor in crystals with dil. vacancy conc. 2-21545  
electrical conductivity measurement by eddy current method (*Chinese*) 2-15181  
electrical resist., 40 mK to 1.5K 2-26358  
electrochemical properties, freshly formed surfaces in electrolyte solns. 2-41904  
electrolytic polishing, electrolyte anal. (*German*) 2-31830  
electron backscattering by polycryst., 0.3 to 1.2 MeV calcs. (*French*) 2-5781  
electron irradiated, interstitial trapping Ga or Si atoms 2-35543  
electron scattering, 1 to 10 keV, Monte Carlo simulation 2-41466  
electron-dislocation scatt. relax. time anisotropy 2-45943  
electropolishing, icing defects 2-2629  
electrothermal atomisation, mol. absorpt. spectra 2-31975  
Eliashberg function and force consts., linear response theory 2-12708  
energy straggling of  $H^+$ ,  $He^+$  ions, 70 to 1200 keV 2-40454  
equation of state in intermediate press. region, 0.5 to 10 TPa 2-1583  
exoelectron emission, effect of atmos. (*Japanese*) 2-51776  
fatigue, low-cycle and cyclic creep 2-2580  
fatigue crack propagation, in 99.99<sup>+</sup> and 1100 specimens 2-36954  
film, DC and RF magnetron sputtering, deposition rate depend. on power input 2-22167  
film, fracture kinetics (*Russian*) 2-21473  
film, grain-boundary sliding, vibrating reed technique 2-45792  
film, granular, resist. transitions, vortex unbinding 2-17249  
film, granular, vortex motion dynamics of two-dimens. supercond. 2-2034  
film, magnetron sputtered, gas composition effects 2-51810  
film, nonequilibrium effects in dynamic mixed state 2-31112  
film, plasma etching 2-41785  
film, plasma vapour deposited, adhesion failure by repeated bending of substrate 2-2689  
film (111), band struct., valence charge densities, and work function, self-consistent calcs. 2-17134  
film (111), surface reson. in two-dimens. Brillouin zone 2-47133  
film contact to NiSi using thin W layer as barrier, elec. characts. 2-21655  
films, whiskers and hillock growth, O impurities effect 2-45795  
films oxide thickness evolution, EELS study 2-46846  
foil, CESR at 42.5 MHz, evidence for electron-electron spin scatt. process 2-26747  
foil, elec. explosion, numerical modelling of laminar pulsed discharge 2-44939  
foil, sputtering by heavy-current pulse arc in coaxial vaporiser (*Russian*) 2-9234  
foil, XPS quantitative anal. of surface 2-46881  
foils, energy loss straggling for electrons 2-31593  
foils in artificial quartz atmosphere, electrical explosion 2-1361  
fracture, work hardened thin specimens, role of anisotropy coeff. R (*French*) 2-22317  
fracture toughness, computer data bank 2-13807  
friction welded tubes, residual stress assessment 2-27297  
gamma-ray attenuation coeff., Mossbauer spectrometer meas. (*Chinese*) 2-19907  
GaP:Al p-n junctions, influence of Al post implantation 2-12627  
grain boundaries, low-energy orientations (*Russian*) 2-21156  
grain boundaries, sliding behaviour and dislocation struct. 2-40411  
grain boundary dissociation study 2-12610  
granular, localisation and electron interaction effects in magnetorist. 2-36008  
graphite fibre reinforced Al, US charact. of elastic const. and moduli 2-17829  
Hamiltonian consistent effective pot. calc. rel. to mol. shape 2-11395  
industry, Hall-Heroult cells, with conventional and special electrodes, energy reduction 2-41995  
internal friction, high temp., and dislocation motion 2-45352  
internal friction in plastic deform., general dislocation dynamic model 2-45348  
internal friction of cyclic deformation, impurity conc. and annealing effects 2-45340  
internal stresses and Bordoni relax. during plastic deformation or annealing 2-47074  
ion bombarded single crystals, orientation, surface struct. and sputtered spot patterns 2-46857  
ions, config. mixing effect on radiation spectrum struct. 2-34336  
irradiated with 600 MeV protons, gas generation effect in cavities formation and distrib. 2-40446  
jump-like deform. near normal-supercond. transition, elec. resist. meas. (*Russian*) 2-41046  
jumplike deformation during low temp. creep, rel. to supercond. 2-22292  
large single crystal, highly deformed, struct. changes, Lang X-ray topographic obs. 2-12602  
laser annealing, pulsed, ion beam and TEM anal. 2-50700  
laser irradiated plane target, ion flow characts. 2-36739  
laser pulse irradiated, slip deform. and melt threshold 2-1485  
laser pulse-solid target interaction in mag. field 2-1322  
lattice dynamics, phonon dispersion 2-21253  
lattice energy and struct. ab initio pseudopot. calc. 2-35961  
Leoville meteorite Ca-Al rich inclusion, Al correlated,  $^{26}\text{Mg}$  excess 2-18742  
liner, cylindrical shell, EM implosion in Z-pinch discharge 2-50429  
liquid, interionic pot. from struct. data 2-20996  
liquid, small and large angle struct. factors 2-40254  
liquid, structure study using molecular dynamics method 2-25719  
liquid, thermodynamics using hard sphere vs. one component plasma reference systems 2-8415  
liquid layer, freezing after laser pulse irradiation, non-equilib. Pb segregation effects 2-35699

## aluminium continued

liquid struct., radial distrib. functions 2-40256  
low field Hall effect, size effects 2-36012  
marine microfouling on Al and Ti heat exchanger surfaces at OTEC facility, Puerto Rico 2-6168  
mask, in Fresnel zone plate, fabrication using reactive sputter etching 2-251  
material energy flow in solid state plasma 2-46048  
Matthiessen rule deviation at low temp. due to surface scatt. 2-26378  
MBE growth on GaAs, TEM and Rutherford backscatt. study 2-45760  
MBE growth on GaAs (110) 2-51812  
melting point, thermodynamic calc. 2-5209  
metallisation, electromigration meas. techniques for grain boundary diffusion activation energy 2-30662  
modified Ashcroft pseudopotential 2-35616  
multilayered adhesively bonded structures, appl. of adaptive learning networks to US signal processing, flaw classification 2-17854  
neutron irradiated, effect of point defects on room temp. internal friction 2-25985  
New Jersey Pine Barrens, Al concs. in precipitation, streams and shallow groundwater 2-22680  
optical constants determ. using ellipsometer 2-10572  
ordered system of vacancy voids, resonant transition radiation of relativistic charged particles (*Russian*) 2-51734  
overdriven shocks, processes, thermodynamics 2-40487  
overlay on GaAs (110), model, appl. to MBE 2-12935  
oxidation in reversing rubbing 2-5986  
oxide-coated, laser refl. 2-49660  
phonon dispersion relations, phenomenological models 2-45435  
phonon drag effects on electron-phonon scatt. resist. 2-36030  
pipes flooded with liquid  $N_2$ , cooling down expt. on models 2-185  
plasma, backlighted, extreme UV absorption spectroscopy 2-4992  
plasma, partially ionised, eqn. of state models comparison 2-16425  
plasma sprayed coating, acoustic materials testing 2-17811  
plasma sputtered, on monocrystalline Si, oxide film behaviour (*Russian*) 2-31809  
plasma sputtered, struct. and props. (*Russian*) 2-2576  
plasma-GMA welding for Al assemblies 2-34151  
plasmon losses, surface and bulk, relative intensity variation due to crystal orientations, low energy EELS study 2-17582  
plastic deformation, phys. model 2-45321  
plastically deformed, temp. depend. of US velocity to evaluate internal stresses 2-17835  
polycrystalline, internal friction, medium temp. 2-45353  
polycrystalline, microfracture during high-temp. creep 2-41728  
polyethylene-Al, adhesion, XPS quantitative anal. 2-46881  
porous plasma sprayed coatings, influence of thickness on heat transfer for boiling freon F-113 (*Russian*) 2-35037  
positron annihilation, effects of electron-positron correlation, band struct. 2-51740  
positron annihilation radiation spectra, 298 to 897K, Doppler broadening meas. 2-9215  
positron lifetime in vacancy-impurity complexes 2-41446  
powder, static polarisation echo 2-45459  
production, energy considerations 2-22528  
protective coatings on heat-resist. steel, mech. props. 2-27348  
protective coatings on steel, pulsed deposition, transition zones (*Russian*) 2-2614  
quench-hardened single crystal, yielding and stage I deform., influence of specimen geometry 2-13784  
quenched, vacancy clustering, Doppler broadening positron study 2-41445  
quenched, vacancy clustering, impurity effects, recovery curves 2-40426  
quenched in  $H_2$  atmosphere, void form. electron microscopy exam. 2-16643  
quenched pure specimens, effect of atmospheric water vapour on void formation 2-40374  
reactor elements Al coating 2-47266  
recrystallising interfaces, movement of grain boundary dislocations 2-40413  
relation between Debye temp., elasticity and thermal expansion 2-21261  
release of T, chem. forms. 2-43605  
self-consistent vacancy electron struct. 2-40825  
shear stresses on shock front, investig. 2-31747  
sheet, resistivity meas., appl. of Thompson-Lampard theorem 2-28862  
sheets, well-developed preferred orientation, biaxial stretching, effect of grain anisotropy 2-9379  
shock compressed, cryst. struct. determ. (*Russian*) 2-5076  
shock wave hardening, positron annihilation study 2-45377  
short-range ordering kinetics, vacancy parameters, quench and irradiation study 2-5110  
short-range ordering kinetics, vacancy parameters, quench and irradiation study 2-8511  
SIMS analysis of precipitates (*French*) 2-5879  
single crystal, orientation effects on cutting mechanism 2-45184  
single crystal growth by Bridgman and G'Sell methods 2-46905  
solid, C ion effect on creep and fracture 2-17737  
spalling fracture, crit. stress depend. on loading time 2-13803  
specific heat, anharmonic contribs. 2-12770  
specific heat press. depend. 2-1634  
spherical monocrystal growth in zero gravity (*Russian*) 2-2438  
sputtering rate meas. for 10 keV  $O_2^+$  ions with ion microanalyzer 2-41475  
sputtering yield,  $Ar^+$  ion irradiation, 5 to 15 keV, ang. depend. (*Japanese*) 2-41476  
steel wire reinforced Al, continuous casting, prod. and props. 2-46985  
strain-temperature correlations obtained an application of axisymm. compressive stresses 2-47138  
stress waves, laser induced, damping 2-16716  
strip, transient voltage response to supercrit. current pulse 2-31041  
substrate, vacuum deposited Cr film, laser treatment at high power densities 2-51750  
substrate cleaning using alkaline soln., prevention of metal pitting corrosion by  $Mg^{2+}$  ion addition 2-31832  
supercond., thermoelec. charge imbalance 2-13238  
superconducting, supercritical current pulses, voltage response, temp. depend. time delay 2-36276  
superconducting filament, crit. pair-breaking current far below  $T_c$  2-36292  
superconducting film, granular, microwave characts., DC resist., long-range supercond. 2-17217



## aluminium continued

- superconducting film, paramag. limited, heat capacity and elec. resist. meas. 2-36219  
 superconducting granular film, anomalous temp. depend. of microwave loss in supercond. transition 2-36174  
 superconducting strip, freq. depend. of AC crit. current amplitude 2-41057  
 superconducting strip, microwave enhanced order parameter, supercurrent effect 2-36228  
 superconducting strips, phase slip centres; nonequib. pots. 2-31084  
 superconducting tunnel junction, I-V curves, microwave radiation effects 2-36259  
 superconducting tunnel junctions coupled to microstrip resonators, gap enhancement 2-36226  
 superconducting with paramag. impurities, strong coupling calc. 2-46189  
 superconductivity, press. depend. 2-2024  
 superconductor, granular, crit. field and transition temp. 2-46190  
 surface, (111), O chemisorpt., direct force calc. by LCAO  $X\alpha$  method 2-654  
 surface, electron-hole pair excitations, dielectric function, photoemission 2-36758  
 surface,  $H_2$  physisorpt., EELS study 2-27039  
 surface, heavy-ion bombardment, Auger electron emission 2-27046  
 surface, ion bombarded, secondary electron emission 2-27042  
 surface, laser irradiated, corrosion behaviour 2-9474  
 surface, modification by laser melt-particle injection 2-47263  
 surface {111}, oxidation initial stages, LEED and AES study 2-45724  
 surface (100), photoexcitation enhancement due to surface photoeffect, photoelectron spectra 2-13627  
 surface (111) oriented cryst., EELS study 2-2392  
 surface energy, work function, variational calc. 2-30741  
 surface passivation by He, interpretation of effect 2-17770  
 surface polaritons associated with extreme anomalous skin effect 2-35953  
 tensile stresses under dynamic tension 2-50763  
 thermomechanical treatment, dislocation arrays stability rel. to deform. temp. 2-5127  
 thin film, elec. cond. size effect, mean free path, specularly parameter surface roughness 2-51350  
 thin film, electrical and mechanical properties of thin metal films: Size effects, review 2-51348  
 thin films, structural factors effect on  $1/f$  noise 2-46085  
 thin targets, partially stripped ions energy loss straggling, charge exchange role 2-43733  
 tilt boundaries, symmetric, stress induced migration 2-8676  
 tunnel junctions, quasiparticle energy distrib. under microwave irradi. 2-17236  
 upper atmosphere chemiluminescent emission on release of Al and compounds 2-32694  
 US shear wave-dislocation interaction, nonlinear 2-45195  
 US study of thermally activated double kink generation during cyclic deformation 2-45185  
 vaporisation, graphite furnace AAS 2-31974  
 voltage response time delay to supercritical current pulses 2-31108  
 wear surfaces investigation by electrode potential method 2-41761  
 whisker, elastic consts., second and third order tensile tests. 2-51067  
 work-hardened material, deform. by heating under small stress (*Japanese*) 2-5889  
 X-ray induced electron emission meas. 2-31601  
 X-ray line profile analysis, of deformed Al 2-50647  
 X-ray photoelectric cross-sections 2-30926  
 yield stress in mag. fields up to 62 kOe (*Russian*) 2-41677  
 Al anode battery, anode polarisation, pulsating current effects 2-47463  
 Al, cryst. plates, numerical calc. of isotherms during growth by Bridgman method 2-25787  
 Al I in solar spectra, quiet Sun obs. 2-53223  
 Al III, electron impact ionisation, excitation and autoionisation, cross sections and rate coeff. 2-4395  
 Al IV, second-order lifetime calc. improvement within the parametric pot. model 2-43849  
 Al ions + He (Ne) (Kr) ( $H_2$ ), charge transfer cross sections involving electron capture processes 2-7631  
 Al poly-Si composites, electromigration 2-21404  
 Al, porous plasma sprayed coatings, influence of thickness on heat transfer for boiling freon F-113 (*Russian*) 2-35037  
 Al, specific resistivity meas. in temp. range 20-150°C, temp. depend. (*German*) 2-38663  
 Al, ultrasound propag., laser-generated, directivity patterns 2-20456  
 Al, use of Ga-induced brittle fracture, for grain struct. anal. (*German, English*) 2-52156  
 Al, vapour quenched films, mech. stresses 2-5336  
 Al XII, lifetime meas., cascade model, X-ray obs. 2-4243  
 Al<sup>2+</sup>, electron impact ionisation absolute cross section meas. 2-44106  
 Al<sup>2+</sup>, electron impact ionisation, excitation autoionisation effect, distorted-wave approx. 2-44107  
 Al<sup>3+</sup>, structured role in silicate melts, Raman spectra study 2-22003  
 Al:<sup>57</sup>Fe, interstitial <sup>57</sup>Fe sites, struct. and oscillational motion 2-51116  
 Al:Cu, ion implanted, pulsed laser irradiation, Cu redistrib., thermal diffusion role 2-45250  
 Al:Cu thin films diffusion coeff., influence of noise driving force 2-1652  
 AlO thin film, RF impedance of superconducting and normal states 2-36185  
 Al:Sb, ion implanted, laser treated, ion microprobe anal. 2-46836  
 Al/Al<sub>2</sub>O<sub>3</sub>/Pb tunnel junctions, zero-bias resist., voltage and thermal treatment effects, ionic mobility 2-51343  
 Al/Cu bimetallic thin film couple, interfacial reaction, contact resist. meas. 2-50931  
 Al/Cu conductor stripes with polyamide passivation, electromigration 2-26149  
 Al/GaAs, plasma anodisation, composite oxide film formation, AES study 2-52075  
 Al/n-Si, small area laser beam annealing, subsurface alloying and deep Al penetration 2-1517  
 Al/Nb-Ti composite supercond., boundary resist. 2-13167  
 Al/Nb-Ti composite supercond., strengthened, fabrication, energy storage appl. 2-13687  
 Al/NbTi-Cu composite conductor, nonlinear stresses and relative displacements, finite element model 2-13789  
 Al/NbTi-Cu composite supercond. for tokamak toroidal field coils 2-11273  
 Al/Si (111) cleaved interface, photoemission, Auger electron yield, and AES study 2-5797

## aluminium continued

- Al-Al interface, impurity content, secondary ion mass spectrometry (*Russian*) 2-5310  
 Al-Al oxide-Ag CaF<sub>2</sub> roughened tunnel junction with adsorbed 4-pyridine-COH, Raman spectra 2-5703  
 Al-Al thermal and elec. contact resist. rel. to Al-stabilised superconductor develop. 2-13167  
 Al-Al<sub>2</sub>O<sub>3</sub>-Ag MOM tunnel structs., surface plasma oscills., dispersion anomalies 2-17171  
 Al-Al<sub>2</sub>O<sub>3</sub>-Ag tunnel junctions on gratings, light emission 2-41431  
 Al-Al<sub>2</sub>O<sub>3</sub>-Ag tunnel structures, dispersion anomalies of surface plasma oscills. 2-30973  
 Al-Al<sub>2</sub>O<sub>3</sub>-Al superconducting tunnel junctions, current-induced negative resist. 2-36243  
 Al-Al<sub>2</sub>O<sub>3</sub>-Cd<sub>3</sub>As<sub>2</sub> junctions, electron tunnelling, band struct. parameters of Cd<sub>3</sub>As<sub>2</sub> 2-26561  
 Al-Al<sub>3</sub>Ni eutectic composites, torsional characteristics 2-47131  
 Al-Al<sub>2</sub>O<sub>3</sub>-Pb tunnel junction, adsorbed ethyl  $\alpha$ -cyanoacrylate, IR and IETS study 2-40691  
 Al-AlO<sub>2</sub>-Pb(Ag) structure, inelastic electron tunnelling spectroscopy 2-26516  
 Al-B fibre composite, damping props. (*Russian*) 2-1562  
 Al-B fibre composite, structural instability and damping props. (*Russian*) 2-2534  
 Al-BN fused contact, Al catalytic action on  $\alpha$ - $\beta$  phase transition of BN 2-41603  
 Al-barium stearate-Sn, thin film diode struct., temp. depend. of internal voltage 2-5471  
 Al-CdS(Se), electronic barrier characts., time-resolved charge injection 2-8878  
 Al-Cu bimetal wire conductor, elec. resistivity stability, operating conditions effect 2-51145  
 Al-Cu-Al system, backscattering of 4 to 30 keV electrons 2-41468  
 Al-GaAs (110), exchange reaction, angle integrated photoemission study 2-8695  
 Al-GaAs (110) interface, initial stage of formation 2-8881  
 Al-GaAs interface, chemical reaction study 2-12857  
 Al-GaAs interfaces, at. geometry, soft XPS and elastic LEED studies 2-8714  
 Al-graphite particle composites, dry wear 2-2595  
 Al-H system, phase diagrams (*Ukrainian*) 2-2489  
 Al-like ions, electric dipole transitions, oscillator strengths, relativistic energy levels 2-679  
 Al-n-Si diodes, CW laser processed, elec. props., laser power depend. 2-46127  
 Al-n-SiC, Schottky diode, elec. props. (*Russian*) 2-46132  
 Al-p-Si, polycrystalline Schottky barrier solar cell, elec. behaviour depend. on chem. prep. prior to metal evaporation 2-52347  
 Al-PSG (SiO<sub>2</sub>-Si) system, interface passivation and distrib. of mobile ion trapping levels (*Chinese*) 2-26502  
 Al-Pb-PbTe-Pb tunnel junctions, ballistic electron transmission obs. (*Russian*) 2-8888  
 Al-poly-Si Schottky-barrier solar cell, large grain, majority carrier current characteristics 2-2788  
 Al-polyacrylonitrile-Al struct., thermally stimulated short-circuited currents 2-51364  
 Al-polyethylene, sandwich laminates, cold press workability 2-13745  
 Al-sapphire interface, thermal boundary resist., 0.1 to 6K 2-36218  
 Al- $Se_{2.5}Te_{2.5}As_{2.5}Ge_{2.5}$ -Au structure, elec. characts. of amorphous semicond. layer 2-26525  
 Al-SiO<sub>2</sub> internal photoemission characts., forming gas anneal effect 2-13617  
 Al-SiO<sub>2</sub> layered targets irradiated by picosecond Nd-laser pulses, energy transport parameters determ. 2-40171  
 Al-SiO<sub>2</sub>-GaAs-n<sup>+</sup>-GaP, MIS light modulators using Franz-Keldysh effect 2-4585  
 Al-SiO<sub>2</sub>-Si MIS inversion layer solar cells, surface recombination current 2-14078  
 Al-SiO<sub>2</sub>-Si MIS solar cell, elec. and photoelectric props. 2-22620  
 Al-SiO<sub>2</sub>-Si MOS structs., metallisation by secondary-ion mass spectrometry (*Russian*) 2-21680  
 Al-SiO<sub>2</sub>-Si structure, hole mobility and density of states at Si-SiO<sub>2</sub> interface 2-5469  
 Al-SiO<sub>2</sub>-Si structure with plasmachemical insulator, elec. props. 2-21684  
 Al-SiO<sub>2</sub>-Si structures, electron tunnelling 2-21677  
 Al-SiO<sub>2</sub>-Si structures, work function difference meas. using photoelectric methods 2-51334  
 Al-SiO<sub>2</sub>-Si tunnel diodes, elec. characts. for different oxide layer formation processes 2-51335  
 Al-SiO<sub>2</sub>-Si tunnel MIS structures, photoresponse, current-voltage, lux-ampere, freq., and load characts. 2-13137  
 Al-Si(111)(2 $\times$ 1) interface electron struct.,  $L_1L_{2,3}$ V AES study 2-13594  
 Al-Tb<sub>2</sub>Ge<sub>3</sub>-Fe structure, charge transport mechanism 2-21683  
 Al-Zn rubbing, severe-mild wear transition, semicond. material form. on sliding surface (*Japanese*) 2-52054  
<sup>27</sup>Al NMR spectroscopy at 104.2 MHz 2-23693  
 Au-Al interfaces, energy deposition, semi-empirical electron transport model 2-30503  
 Au-Sn-Al metallisations on GaAlAs, interfacial struct. studies 2-8713  
 Be-Al composite diaphragm for dome-type loudspeaker, vacuum deposition production method (*Japanese*) 2-25219  
 CaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-H<sub>2</sub>O, selected phases, thermodynamic tabulations 2-33245  
 CdS-Al contacts, carrier transport, effects of interfacial ambients, time resolved charge injection technique 2-51299  
 n-CdTe:Al, DLTS study of deep levels 2-35962  
 n-CdTe:Al, deep centres, charact. 2-51115  
 CdTe:Al, Li, IR absorpt. of Al-Li defect pairs 2-9169  
 CdTe:P,Al, localised vibr. modes, Green's function calc. 2-50814  
 Cu:Al ion implanted film, corrosion inhibition, Rutherford backscatt. study 2-47228  
 FCC, reson. vibrs. of self interstitials, appl. to neutron scatt. and sp. ht. 2-45432  
 Fe-Si (3 wt.%), grain-oriented, effect of Al on mag. props. (*Chinese*) 2-22345  
 GaAs-Al contact interface, metallurgical and elec. props., heat treatment effects (*Chinese*) 2-21672  
 GaAs/Al contacts, metal diffusion, penetration depth, SEM and microprobe anal. 2-40701  
 GaAs-Al<sub>2</sub>O<sub>3</sub> devices I-V characts., hopping cond., space-charge-limited currents 2-51329



## aluminium continued

- GaAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As, heterojunctions and superlattices, band struct., effective mass approx. tight binding calc. 2-51292  
 Ge:Al, ion implanted, annealing behaviour obs., Al conc. profiles determ. 2-45241  
 InSn<sub>0.2</sub>O<sub>2</sub>-Ta<sub>2</sub>O<sub>5</sub>-ZnS:Mn-Ta<sub>2</sub>O<sub>5</sub>-Al thin film struct., DC electrolum. 2-46764  
 Li<sup>22</sup>Al, <sup>28</sup>Al dynamic polarisation by Overhauser effect, <sup>28</sup>Al  $\beta$ -decay props. determ. 2-31325  
 Li-Al/FeS cell performance prediction equations, development by multiple regression analysis 2-22457  
 MgO:Al, edge cathodoluminescence and reflectivity in edge vacuum 2-2349  
 MgO:Al, excitons and edge luminescence 2-46781  
 Ni<sub>1</sub>MnCu:Al, saturation magnetisation, magnetostriction 2-26649  
 Si:Al, junction solar cell, emitter layer minority carrier lifetime photovoltaic obs. 2-52339  
 n<sup>+</sup>-Si/Al solder, ohmic contact, invest. of form. (Japanese) 2-5462  
 Si-Al interface acoustic phonons, Brillouin scatt. study 2-51615  
 Si-Al(111)Si structures, redistrib. of Si at low annealing temps 2-13183  
 Si-SiO<sub>2</sub>-Al structure, Al-SiO<sub>2</sub> and Si-SiO<sub>2</sub> interlayer characts., ellipsometry, C-V meas., and AES study 2-5470  
 Si-SiO<sub>2</sub>-Al structure, Fowler-Nordheim electron tunnelling 2-26503  
 SiC discontinuous whisker reinforced Al, US charact. of elastic const. and moduli 2-17829  
 SiC reinforced Al, composite fabrication 2-41555  
 SiC:Al, ion implanted, defect luminescence spectra 2-36712  
 SiC:Al<sup>+</sup> implanted epitaxial diodes, cathodoluminescence characts. 2-17557  
 $\alpha$ -SiC:Al<sup>+</sup> LED, electroluminesc. spectra fine struct. 2-46774  
 SiO<sub>2</sub> thin films, enhanced low temp. diffusion of electron-beam evaporated Al 2-50925  
 SnO<sub>2</sub>-AnS-Cu<sub>2</sub>S-ZnS:Mn(Cu)-AP thin film cell, shortwave electrolum. 2-26996  
 TiO<sub>2</sub>:Al, diffusion doped, elec. and optical props. 2-5369  
 U<sub>2</sub>O<sub>7</sub>-Al fuel plates, U loading 2-49121  
 YIG:Al, <sup>57</sup>Fe NMR line splitting, cation distrib. 2-9054  
 YIG:Al<sup>3+</sup> nonmag. ion doped, optical const., ellipsometric parameters 2-46531  
 (YbGd)IG:Bi,Pr,Al, for magneto-optical appls. LPE growth, Pr, Bi and Pb segregation 2-31644  
 ZnMnFe<sub>0.95</sub>O<sub>4</sub>:Al, dielec. props., elec. cond., mag. props., lattice constants, dopant effects 2-51524  
 ZnS:Al, single cryst., polarisation of electrolum. 2-22094  
 ZnS:Cu:Al luminophors, energy spectrum of traps 2-46789  
 ZnS:Mn:Al contact as part of multilayer electrolum. element, elec. props. 2-36139  
 ZnSe:Al, formation of low resist. in contacts 2-21673  
 ZnSe:Al, Li, IR absorpt. of Al-Li defect pairs 2-9169  
 ZnSiO<sub>4</sub>:Al, photoluminesc. and photocond. 2-51672

## aluminium alloys

see also aluminium compounds

- AD1, spalling fracture, crit. conditions, temp. effects 2-13802  
 AE during deform., microstruct. effect 2-31882  
 AE during tensile and compressive deform., microstruct., effect in types 7075 and 7050 2-31883  
 ageing laws 2-5898  
 Alnico 5 with Nb additions, columnar, permanent mag., mag. props. 2-17316  
 Alumel thermocouple, uniformity improvement of thermoelectric props. 2-23634  
 aluminate coatings, on Co and Ni base superalloys, oxide struct. 2-30732  
 aluminate coatings an oxide dispersion strengthened alloys, struct. and interdiffusional degradation 2-30768  
 AMg6, spalling fracture, crit. conditions, temp. effects 2-13802  
 brass, Al, stress corrosion cracking, influence of As and P 2-13842  
 bronze, magnetoresistance, 77 to 300K 2-36017  
 C16, spalling fracture, crit. conditions, temp. effects 2-13802  
 C Ti-Al-V alloys, BT6, BT20, rate sensitivity of mech. props. and fracture characts. 2-41720  
 castings, plate quality, X-ray eval., comparative tests (French) 2-47269  
 compact tension specimens, alloy 7075-T651, K<sub>IC</sub> values, effect of crack length and crack front geometry 2-12670  
 component failure anal. 2-31867  
 corrosion, microbiological, in fuel/water systems, redox pot. 2-47226  
 corrosion by Al salts, chemical nature 2-22367  
 corrosion inhibiting aluminosilicate interface, IR reflection and electron spectra 2-5988  
 crack opening stress level, 2024-T3 sheet material, theory 2-12667  
 crack start determination by acoustic method 2-13884  
 creep, transient, kinetic eqns. selection, dislocation theory, alloy D16AT 2-25979  
 creep under stress, varying principal directions 2-31735  
 cryogenic struct. materials, mech. and phys. props. requirements (Japanese) 2-43026  
 $\beta$ -Cu-Zn-Al, anelastic effects after quenching 2-47097  
 dendrites growth suppression, producing surface bulges 2-2437  
 dilute, cold worked, low freq. internal friction peaks, strain amplitude 2-47079  
 dilute, quenched in H<sub>2</sub> and He atmosphere, void formation, electron microscopy exam. 2-16644  
 displacement field around crack tip of Al alloy strip, holographic and speckle interferometry obs. (Chinese) 2-8101  
 ductile, erosion mechanisms 2-27293  
 ductile, significance of initiation, propagation and closure of microcracks in high cycle fatigue 2-52019  
 dynamic fracture toughness meas. (French) 2-41834  
 elastoplastic instantaneous deform., prior creep strain effect, AK4-IT alloy 2-41706  
 electrohydroimpulse working, effect on struct. and props. 2-17777  
 electrolytic polishing, electrolyte anal. (German) 2-31830  
 Elinvar alloy 44NKHMT, inspection of heats using Curie temperature 2-9487  
 failure resistance evaluation under fatigue and creep conditions 2-47279  
 fatigue, liq. agents effect, alloy AK41T1 2-27352  
 fatigue, low-cycle and cyclic creep 2-2580  
 fatigue crack growth, 7075-T651, effect of irregular crack front 2-13793  
 fatigue crack growth characteristics, cracks embedded in fastener hole walls 2-12671  
 aluminium alloys continued  
 fatigue crack growth rate, rel. to stress intensity factor, correl. anal., alloy AK4-IT1 2-22325  
 fatigue crack growth rate data acquisition system for linear and nonlinear fracture mechanics appl. 2-22314  
 fatigue fractures microrelief, in high-freq. loading 2-22326  
 fatigue strengths and welded joints 2-52122  
 Fe-Al-B amorphous system, annealing effects on magnetic properties and crystallisation process (Japanese) 2-22242  
 fracture toughness characts., loading cycle influence 2-52040  
 fracture toughness testing, moving load controlled displacement machine 2-13876  
 fracture-relief morphology in corrosion-fatigue fracture 2-22390  
 heat treatment quality inspection by EM method, type AK4-1 2-6012  
 Heusler alloy, vacancy conc. and ordering (Japanese) 2-47023  
 Heusler ternary alloys, M<sub>2</sub>MnAl (M=Cu, Ni, Co, Pd, Pt), order-disorder transition, X-ray diff. study 2-1610  
 high velocity deformation, micromechanical study 2-21220  
 high-strength, 2024-T4, 6061-T6, 7075-T6, fatigue crack tip plastic strain 2-5941  
 high-strength, fracture toughness determ. from stress intensity factor at moment of crack starting 2-9476  
 Magnox Al-80, etched, corrosion in dry steam at 10<sup>5</sup> Pa press., 373 to 573K 2-31834  
 mica reinforced Al alloy, damping capacity, resistivity, thermal expansion and machinability 2-12785  
 phosphosilicate glass/Al-Si thin film structs., stress, temp. depend. 2-1804  
 potentiostatic differential etching (German, English) 2-52112  
 pressure cells for neutron scatt. expts., comparative tests 2-50486  
 quenching in polyethylene oxide solution, effect on struct. and props. 2-27197  
 rapidly quenched, optimization of processing conditions 2-41631  
 rare earth alloy, Al<sub>12</sub>, 4f moment determ. from NMR 2-46420  
 rare earth intermetallic compound, Al<sub>12</sub>Si<sub>2</sub>, electron struct., XPS study (Russian) 2-26285  
 resistance to piercing, temp. effect 2-27283  
 selective reinforcement by adhesive bonding with uniaxially aligned C fibre reinforced epoxy 2-27221  
 semifinished products, fracture toughness struct. relationship, metallography appl. 2-52042  
 sheet material, shear lips on fatigue fractures 2-5931  
 sheets, fracture toughness determ. under static loading 2-41749  
 solidification, optimum regime for continuous casting in electromagnetic mould (Russian) 2-27168  
 steel, Al killed, low C, acid soluble Al content estimation using O probe 2-14041  
 Stepanov growth, heat removal rate procedure near growth surface, shapers classification 2-2435  
 strain hardening, high strain, effect on strain localisation 2-47054  
 stress corrosion cracking and corrosion fatigue, specimen thickness effects 2-41711  
 stress corrosion cracking significance to corrosion fatigue crack growth in wrought and cast alloys 2-52096  
 stress corrosion susceptibility, soln. treatment temp. effect on type 7075 2-41778  
 surface characterization and gas desorpt. meas. (Japanese) 2-21432  
 thin-walled parts of D16T, max. corrosion determ. 2-22398  
 trapezoidal sheet, load-carrying capacity in post-buckling area due to static compression 2-30516  
 ultra high vacuum production apparatus for synchrotrons using Al alloys (Japanese) 2-15180  
 welded joints, acoustic fatigue under var. amplitude loading, alloy D16T 2-13817  
 Ag-Al, electron irradiated, extended jog motion on dissociated dislocations, weak beam electron microscopy obs. 2-25886  
 Ag-Al alloys reflectivity for use in solar reflectors 2-47449  
 Al-Ag, precipitation stages, internal friction 2-47036  
 Al-Ag, two-phase, plastic anisotropy in unidirectional deform. 2-2547  
 Al-Ag, vapour quenched films, mech. stresses 2-5336  
 Al-Ag (13.5 at.%), torque oscills. damping, magnetisation curves, fluxoid pinning (Russian) 2-17247  
 Al-Ag (13.5 at.%) alloy, Abrikosov fluxoid pinning by mag. and torque meas. 2-13252  
 Al-Ag (13.5 wt.%), mag. moment and pinning of Abrikosov fluxoids 2-41094  
 Al-Ag system evap. at 10<sup>-4</sup> Torr, Rutherford backscatt. and AES analysis of O distrib., diffusion barrier form. 2-27032  
 Al-Ag(Cu), two-phase alloys, plastic anisotropy in load reversal tests 2-51976  
 Al-Al<sub>2</sub>O<sub>3</sub> particle composites, US vel. and elastic const., influence of microstruct. parameters 2-36902  
 Al-Al<sub>2</sub>O<sub>3</sub> powder composites, wear-resistant, produced by cold extrusion 2-36813  
 Al-Al<sub>3</sub>Ni, eutectic, prep. of dispersion hardening materials (French) 2-41554  
 Al-Al<sub>3</sub>Ni eutectic composites, torsional characteristics 2-47131  
 Al-Au dilute alloy for moderate-strength, high cond. appls. 2-5489  
 Al-Au films, amorphous, short range order, electron diff. study 2-5330  
 Al-B fibre composite, elec. cond. depend. on fibre composition and struct. (Russian) 2-1886  
 Al-Be, irradi., interstitial-solute complexes, configs. and binding energies 2-30483  
 Al-C-B interstitial solid soln., mixing energy (Russian) 2-5228  
 Al-Ca, absorption of H<sub>2</sub>, thermodynamics, H<sub>2</sub> titration method 2-8706  
 Al-Ca, irradi., interstitial-solute complexes, configs. and binding energies 2-30483  
 Al-Cd, high power laser effects 2-50705  
 Al-Co, dil., low field Hall coeff., virtual bound state effect 2-13044  
 Al-Co dilute alloy for moderate-strength, high cond. appls. 2-5489  
 Al-Co-Fe alloys, magnetomech. coupling, annealing effect 2-26713  
 Al-Cr, rapidly solidified, coarsening of intermetallic particles 2-41611  
 Al-Cr-M, (M=Co, Ni, Fe), plasma deposited coatings formed from mechanically alloyed powders 2-17622  
 Al-Cu, 2017 alloy, features of Portevin-Le Chatelier effect (Japanese) 2-2560  
 Al-Cu, directionally solidified, meas. of cell and primary dendrite arm spacings 2-1806  
 Al-Cu, two-phase, plastic anisotropy in unidirectional deform. 2-2547  
 Al-Cu (14 wt.%),  $\theta'$  plates, TEM contrast (French) 2-40235



## aluminium alloys continued

- Al-Cu (2.5 wt.%), coarsening of  $\theta'$  plates, expt. determ. of mechanisms 2-13722
- Al-Cu (2.5 wt.%), coarsening of Gq' plates, influence of ledge mechanism 2-13723
- Al-Cu (3 wt.%), pre-precipitate microstruct., obs. by lattice imaging technique (*Japanese*) 2-1448
- Al-Cu (33 wt.%) with non-uniform cross-sections, deform. behaviour (*Japanese*) 2-51985
- Al-Cu (4 wt.%), yield stress of alloys containing plate-like precipitates, expt. and theoretical determ. 2-22271
- Al-Cu alloy, 2024-T3, anodisation in  $H_3PO_4$ , AES and Rutherford backscatt. study 2-22392
- Al-Cu alloy, elastic moduli variations due to struct. changes 2-50736
- Al-Cu alloy D76 plates, under biaxial tension, thermomech. treatment effect on mech. props. 2-51957
- Al-Cu alloys, effect of second-phase vol. fraction on grain size stability and flow stress during superplastic flow 2-22268
- Al-Cu liquid-phase sintering, effect of gravity (*Japanese*) 2-5842
- Al-Cu porous alloy, sintered, friction and wear (*Japanese*) 2-22333
- Al-Cu vapour quenched films, mech. stresses 2-5336
- Al-Cu-Mg (4.1, 1.4 wt.%), alloy 142, age-hardening behaviour 2-2537
- Al-Cu-Mg alloy 2024-T3, low cycle fatigue life prediction by acoustic emission 2-52020
- Al-Cu-Mg-Fe-Ni, superplasticity in creep (*Russian*) 2-5905
- Al-Cu-Mg-Mn-Si-Fe, type D16T, nonstationary vaporisation regime on electron beam irradiation (*Russian*) 2-1605
- Al-Cu-Ti, Ti effects on stress corrosion characts. 2-47240
- Al-Cu(Fe)(Si)(Cu-Mg-Si-Fe), internal friction and creep rupture behaviour 2-47083
- Al-Cu(Mg)(Zn)(Ag) alloys, role of substitutional solute atmospheres during cyclic deform. 2-5950
- Al-Fe, rapidly solidified, coarsening of intermetallic particles 2-41611
- Al-Fe intermetallic phase, formed during controlled solidification 2-36848
- Al-Fe liquid-phase sintering, effect of gravity (*Japanese*) 2-5842
- Al-Fe-Mn, eutectic alloys, ternary directionally solidified, struct. and mech. props. (*Korean*) 2-22209
- Al-Fe-Si system, phase equilibria, critical eval. of constitution 2-5857
- Al-Ga (Si), dil., electron irradiated, interstitial trapping by Ga or Si atoms 2-35543
- Al-Ga (0.5 wt.%), cold work internal friction peak at low temp. 2-45342
- Al-Ge, morphology of eutectics with metastable phases 2-17662
- Al-Ge evaporated thin film, effect of crystallinity on morphology, resist. meas. and TEM 2-40721
- Al-Ge film, nongranular, low supercond. transition temp. 2-31016
- Al-Ge-Si, heat of form. determ. by high temp. calorimetry 2-9563
- Al-In, liq. state, interface tension meas. (*French*) 2-1710
- Al-K, irradi., interstitial-solute complexes, configs. and binding energies 2-30483
- Al-Li, irradi., interstitial-solute complexes, configs. and binding energies 2-30483
- Al-Li alloys, thin-foil prep. ion-beam thinning, precipitation 2-31698
- Al-Li system, alloy development 2-31693
- Al-Li-X alloys, microstruct., mech. props., and corrosion resist. 2-31740
- Al-Mg, A5083-O, butt-welded joints, fatigue fractographs (*Japanese*) 2-22311
- Al-Mg, alloy 5083, stress corrosion testing 2-27364
- Al-Mg, crack start determination by acoustic method 2-13884
- Al-Mg, dil. quenched and annealed, vacancy migration energy, positron annihilation meas. 2-13585
- Al-Mg, dil., quenched, vacancy clustering, impurity effects, recovery curves 2-40426
- Al-Mg, dil., vacancy clustering, Doppler broadening positron study 2-41445
- Al-Mg, dispersion strengthened by mech. alloying 2-17689
- Al-Mg, elastic core effect, EXAFS study 2-41453
- Al-Mg, fatigue testing, random and programmed loading equivalence 2-13911
- Al-Mg, high temp. deform., determ. by strain-rate change test 2-2634
- Al-Mg, hot forming, lubricants action 2-27292
- Al-Mg, irradi., interstitial-solute complexes, configs. and binding energies 2-30483
- Al-Mg, service life determination under low-cycle loading, fractographic and ultrasonic methods comparison 2-2667
- Al-Mg (1.93 wt.%), thermal mechanism of anomalous temp. depend. of flow stress 2-41694
- Al-Mg (2 wt.%), dissolution of beta-phase, effect of cold work, fracture stress 2-5891
- Al-Mg (3 wt.%), stress sensitivity parameter in high temp. creep 2-41693
- Al-Mg (5 wt.%), internal friction, grain boundary effect of environment 2-51962
- Al-Mg (5.5 at.%), cold worked, recovery, role of Mg atoms 2-47051
- Al-Mg (8 wt.%), effect of temp. and strain rate on hydrogen embrittlement (*Japanese*) 2-9400
- Al-Mg adhesive joints, bonding and failure mechanism 2-6015
- Al-Mg alloy, elastic moduli variations due to struct. changes 2-50736
- Al-Mg alloys,  $H_2$  permeation 2-50993
- Al-Mg and Al-Li(Zn)-Mg, corrosion cracking, role of defects near boundary 2-17772
- Al-Mg joints, welded and glued, strength under dynamic tensioning 2-41701
- Al-Mg-Si, precipitates, influence of initial struct. 2-31702
- Al-Mg-Fe-Ni, alloy type 2168-T651, fatigue crack arrest threshold, influence of various parameters 2-27264
- Al-Mg-Sc, Sc effect on strength and thermal stability 2-27281
- Al-Mg-Sc(Y)(La)(R), mech. props., effect of Sc, Y, La and rare earth metal additions 2-27242
- Al-Mg-Si, directionally solidified, meas. of cell and primary dendrite arm spacings 2-1806
- Al-Mg-Si, two-phase, plastic anisotropy in unidirectional deform. 2-2547
- Al-Mg-Ti-Cu, castings, struct. and mech. props., Na impurity effect 2-27241
- Al-Mg-Zn, fretting fatigue, environmental and cyclic stress effect, statistically-based study 2-31791
- Al-Mg-Zn, fretting fatigue, effect of periodic high loads 2-31792
- Al-Mg-Zn-Cu alloys, stress corrosion cracking after precompression 2-13847
- Al-Mg(Cu)(Si), cryst. under nonequilib. conditions, phase diagrams 2-27146

## aluminium alloys continued

- Al-Mn, grain boundary and precipitation effects, internal friction and dynamic elastic modulus meas. 2-47038
- Al-Mn, precipitation and recrystn., internal friction study 2-47037
- Al-Mn (1.3%), corrosion inhibition by furfuraldehyde (salicylaldehyde) 2-47239
- Al-Mn(Mg)(Li),  $\mu^+$  motion,  $\mu$  spin rot. study 2-36491
- Al-Mo, highpower laser effects 2-50705
- Al-Na(Mg)(Zn), vacancy-impurity complexes, positron lifetime (*French*) 2-46813
- Al-Ni, dil., low field Hall coeff., virtual bound state effect 2-13044
- Al-Ni, parallel Moire effect in electron micrographs 2-44987
- Al-Ni, rapidly solidified, coarsening of intermetallic particles 2-41611
- Al-Ni-Sb dilute alloy for moderate-strength, high cond. appls. 2-5489
- Al-Ni-Sn, parallel Moire effect in electron micrographs 2-44987
- Al-Pb, liq. state, interface tension meas. (*French*) 2-1710
- Al-Pb, structural props., prepared in quasi-weightless conditions (*Russian*) 2-2501
- Al-Sc, dil., low field Hall coeff., virtual bound state effect 2-13044
- Al-Si, crystn. process and as-cast struct., Sb effect, Si dissolution in Al-Si melt 2-36844
- Al-Si, eutectic and hypo-eutectic, bulk solidification, effect of stirring 2-51887
- Al-Si, heat of form. determ. by high temp. calorimetry 2-9563
- Al-Si, precipitation of Si phase (*Japanese*) 2-47035
- Al-Si, sliding wear, surface topography, SEM study 2-9426
- Al-Si, temp. gradient zone melting, instabilities 2-13640
- Al-Si (Cr) (Mn), C fibre reinforced, component reactions, matrix comp. effect 2-36920
- Al-Si (11.3 at.%), microstructure, negative magnetoresistivity and supercond. props., heat treatment effects (*Chinese*) 2-21706
- Al-Si (2-17 wt.%), partially solidified under stirring, apparent viscosity and struct. (*Japanese*) 2-2504
- Al-Si alloy, deep etched specimen, assessing changes in shape of structural components (*German, English*) 2-52154
- Al-Si alloys, dry wear, subsurface damage 2-47189
- Al-Si alloys, fracture strain, influence of particle cracking 2-21226
- Al-Si eutectic alloy, cast and heat treated, microstruct. and mech. props. (*German*) 2-47068
- Al-Si eutectic alloys, struct. (*Chinese*) 2-30434
- Al-Si filler metal, influence of element additions for Al-brazing optimisation (*Chinese*) 2-22223
- Al-Si film, plasma etching 2-41785
- Al-Si surface, production by laser melt-particle injection 2-47263
- Al-Si-Cu-Zn-Mg-Ti, cryst. and struct., effect of cooling rate and Zn, Mg and Ti additions 2-1549
- Al-Sn, struct. and mech. props., heat treatment effects, X-ray diff. obs. 2-35443
- Al-Sn, vapour quenched films, mech. stresses 2-5336
- Al-Sn-Cu, solidification by rapid cooling, mechanism (*Japanese*) 2-9342
- Al-Sn-Cu, solidified by rapid cooling, microstruct. (*Japanese*) 2-2503
- Al-steel, fibre composite, elec. cond. depend. on fibre composition and struct. (*Russian*) 2-1886
- Al-Ti, dil., low field Hall coeff., virtual bound state effect 2-13044
- Al-Ti(Cr)(Mn)(Fe)(Ni)(Cu), low-field Hall effect, impurity effects 2-36011
- Al-Ti(V), giant low field magnetoresistance and Hall effect 2-36014
- Al-V, dil., low field Hall coeff., virtual bound state effect 2-13044
- Al-Zn, dil., vacancy clustering, Doppler broadening positron study 2-41445
- Al-Zn, eutectoid transform., determ. of activation energy using DSC 2-13714
- Al-Zn, interdiffusion, hydrostatic press. effects 2-50933
- Al-Zn, spherical precipitation size distrib. functions determ. by neutron small-angle scatt. 2-36859
- Al-Zn, ultrasonic study of mixed dumbbell tunnelling 2-45391
- Al-Zn, vacancy behaviour during Guinier-Preston zone form. and growth, positron expts. 2-21141
- Al-Zn (10 wt.%), solid soln. alloy, recovery and work hardening rates, 523-823K 2-27189
- Al-Zn (10 wt.%), solute conc. fluctuation effect on ageing at low temp. 2-47042
- Al-Zn (10 wt.%), solute conc. fluctuation effect on ageing at low temp. 2-47043
- Al-Zn (15 wt.%), reversion behaviour between 155°C and 175°C 2-47058
- Al-Zn (38 at.%), spinodal decomp., various stages 2-47007
- Al-Zn (40 wt.%), aged, cellular dissoln., mechanism and kinetics 2-36858
- Al-Zn (5.3-6.8 at.%), unmixing kinetics, neutron small angle scatt. study 2-50859
- Al-Zn alloys, precipitation, numerical method for spherical and ellipsoidal particle size distrib. 2-36864
- Al-Zn alloys matrix effect study in secondary ion emission,  $O_2$  adsorption saturation conditions 2-46851
- Al-Zn elec. resist. mech. during clustering 2-1889
- Al-Zn Mg-Cu alloy 7075-T6, low cycle fatigue prediction by acoustic emission 2-52021
- Al-Zn-Cu, transform. during isochronal cooling, Cu addition influence 2-27170
- Al-Zn-Mg, 7075, toughness, effect of thermomech. treatment 2-47161
- Al-Zn-Mg, environmental embrittlement (*Japanese*) 2-27331
- Al-Zn-Mg (10.8, 0.85 wt.%), quantitative metallography of superplastic deform. (*Japanese*) 2-9369
- Al-Zn-Mg (2.8, 1.9 wt.%), precip. on low-angle grain boundaries 2-17683
- Al-Zn-Mg (4.5, 2 at.%), reversion behaviour, precipitate size depend. 2-2517
- Al-Zn-Mg (4.5, 2.0 wt.%), influence of pre-ageing temp. on reversion behaviour 2-47059
- Al-Zn-Mg (4.5, x wt.%), influence of Mg content on formation and reversion of GP zones 2-2538
- Al-Zn-Mg (4.9, 1.2 wt.%), peak aged, fatigued, persistent slip bands, dislocation struct. and precip. 2-36935
- Al-Zn-Mg (5, 1 wt.%), peak aged, fatigued, persistent slip bands in front of Stage I cracks 2-36936
- Al-Zn-Mg (6 at.% Zn, 0.81, 1.73 at.% Mg), early decomp. behaviour, isothermal resist. curves analytical description 2-17681
- Al-Zn-Mg supersaturated alloy, decomposition behaviour, heat treatment influence 2-13724
- Al-Zn-Mg-Cu, 7000 series, low cycle fatigue behaviour, effect of alloy chem. and heat treatment 2-17735



## aluminium alloys continued

- Al-Zn-Mg-Cu, alloy 7075-T651, effects of warm working 2-47064  
 Al-Zn-Mg-Cu, high strength, heat treatment, struct. and props. 2-27243  
 Al-Zn-Mg-Cu, slip behaviour, effect of solute content 2-47141  
 Al-Zn-Mg-Cu, stress corrosion charact., effect of heat treatment and Cu content 2-37004  
 Al-Zn-Mg-Cu (5.9, 2.6, 1.7 wt.%), fatigue crack propag., effect of microstruct. 2-9405  
 Al-Zn-Mg-Cu (6, 2, 0.01-2.1 wt.%), high strength, low cycle fatigue behaviour in T7351 condition 2-27276  
 Al-Zn-Mg-Cu (6.2, 2.5, 1.7 wt.%), type 7010, fatigue crack initiation at notches 2-27259  
 Al-Zn-Mg-Cu-Fe-Ni(Zr), struct. and mech. props., Fe with Ni or Zr addition effect 2-51991  
 Al-Zn-Mg-Li, oxidation behaviour, influence of Li 2-9465  
 Al-Zn-Mg-(Cu), Guinier-Preston zone form., early stages, neutron scatt. invest. 2-51905  
 Al-Zn-Sn alloy sacrificial anodes, heat treatment effects 2-31839  
 Al-Zn-Ti, Ti effects on stress corrosion charact. 2-47240  
 Al-Zn-(Sn)-(In), sacrificial anodes, sea water testing 2-52093  
 Al-Zn(Cu)(Si)-Mg, polygonised struct. thermal stability, Mg effect 2-27187  
 Al-Zn(Sb), pulsed laser annealing ion beam and TEM anal. 2-50700  
 Al-Zn(3 wt.%), Guinier-Preston zones during decomposition 2-45588  
 Al-Cu crystal, simulation of melt cryst. growth (*French*) 2-8456  
 AlMgSi alloy collimator, of 30 MeV electron LINAC, radiation damage study by positron annihilation 2-45277  
 AlMg<sub>2</sub>Si, aged, high temp. background of internal friction 2-27213  
 Al<sub>4</sub>Zn<sub>1.6</sub>Mg, aged, low-cycle fatigue, plastic strain change effects (*Serbian*) 2-9389  
 Al<sub>4</sub>Zn<sub>1.6</sub>Mg, overaged, deform. microstruct. and crack form. in low-cycle fatigue (*Serbian*) 2-9388  
 Au-Al, film, supercond. energy gap and transition temp. 2-36257  
 Au-Al, diffusion-formed, optical props., ellipsometric study 2-17432  
 C-fibre composite/Al-alloy, thermally-induced shear stress meas. 2-52169  
 (Ce, La)Al<sub>3</sub>, high-field magnetisation, single ion Kondo effect and ferromag. short range order 2-36310  
 (Ce,M)Al<sub>3</sub> (M=La, Y, Sc), spin dynamics, neutron scatt. study 2-26584  
 Ce-Al alloys, quenched, metastable phases, resistivity and struct. during heating 2-13040  
 CeAl<sub>3</sub>, high-field magnetisation, single ion Kondo effect and ferromag. short range order 2-36310  
 CeAl<sub>3</sub>, spin dynamics, neutron scatt. study 2-26584  
 CeAl<sub>3</sub>, 4f levels, XPS and bremsstrahlung isochromat spectroscopy studies 2-27052  
 CeAl<sub>3</sub>, low temp. magnetoresist., cryst. field and Kondo effects 2-5390  
 CeAl<sub>3</sub>, with unstable 4f shells, Gruneisen parameter 2-16743  
 Ce<sub>1-x</sub>Al<sub>x</sub>Co<sub>3</sub>, constitution, struct. and mag. props. 2-47199  
 CeNi<sub>2</sub>Al<sub>3</sub>, lattice constants (*Ukrainian*) 2-25813  
 Co-Al, valence band density of states, XPS study 2-22147  
 Co-Cr-Al coating containing active element additions, erosion resistance 2-31821  
 Co-Cr-Al coatings containing active element additions, oxidation behaviour vel. to struct. 2-31851  
 Co-Cr-Al-Y coating, low press. plasma applied, mech. props. 2-45794  
 Co-Cr-Al-Y laser treated coatings, struct. 2-30769  
 Co-Cr-Al-Y plasma sprayed coatings for aircraft gas turbine appl. 2-47262  
 Co-Ni-P-B-Al, amorphous, ferromag. reson. 2-31292  
 CoAl, electron momentum distrib. and charge transfer, Compton scatt. study 2-26281  
 Co<sub>2</sub>YAl, Heusler alloys, mag. and magneto-optical props. 2-26671  
 Cr-Al, Neel temp., random distrib. of antiferromag. clusters model 2-31184  
 Cr-Al-Si diffusion coatings on Nb alloys, heat resist. 2-41802  
 Cr<sub>100-x</sub>Al<sub>x</sub>, struct. and microstruct. study 2-21065  
 Cr<sub>100-x</sub>Al<sub>x</sub>, struct. and microstructure study 2-21066  
 Cu-Al, concentrated alloy, internal friction 2-45343  
 Cu-Al, dil., electronic impurity scatt. anisotropy, mag. field induced surface-state resons. meas. 2-13058  
 Cu-Al, dil., impurity diffusion study by NMR 2-41217  
 Cu-Al, dil. alloy, dislocation struct. of [321] crystals grown by Bridgman method, Al addition effects (*Japanese*) 2-12603  
 Cu-Al, linear dislocation multipole structures, weak beam electron microscopy obs. 2-25895  
 Cu-Al, liquid, free energy and other thermodynamic props., conc. depend. 2-12779  
 Cu-Al, stacking faults of dissociated glide dislocations 2-45205  
 Cu-Al (0.1 wt.%) single crystal, substruct. stabilisation by particles of a second phase (*Russian*) 2-51910  
 Cu-Al (10.1 wt.%), internal friction meas. during tempering 2-47089  
 Cu-Al (13-16 at.%), elec. and optical props., influence of short range order (*German*) 2-31806  
 Cu-Al (2.5 wt.%), intergranular cavitation fracture in presence of a priori crack 2-47155  
 Cu-Al (9 wt.%), microcalorimetric eval. of disordering under different mech. solicitations 2-41602  
 Cu-Al alloy, flow-softening during hot compression 2-47118  
 Cu-Al alloys, ordered linear dislocation multipoles struct. 2-8524  
 α-Cu-Al alloys, short range ordering, specific heat and elec. resistivity, temp. depend. 2-5220  
 Cu-Al low stacking fault energy alloy, dislocation multipoles, diffraction contrast electron micrograph obs. 2-25885  
 Cu-Al-Fe, C62500 Al bronze, laser quenched, cavitation erosion, surface layer transform. 2-9458  
 Cu-Al-Fe, phase transform. under anomalous elastic deform. 2-47031  
 Cu-Al-Fe (14, 4 wt.%) ion plated coating, wear under arduous metal-forming conditions 2-30778  
 Cu-Al-Ni, nonlinear reson. near martensitic transform. 2-47101  
 β-Cu-Al-Ni (14, 4.1 wt.%), elastic and anelastic props., effect of thermoelastic martensitic transform. 2-47102  
 Cu-Al-Si, two-phase, hardened, mech. props. and damping capacity, Si addition effect 2-5919  
 Cu-Al-Si-Co (2.8, 1.8, 0.4 wt.%), superplastic, doubt over existence of Region I 2-31730  
 Cu-Al-Ti-Hf, precipitation of particles during internal oxidation (*Russian*) 2-22218  
 Cu-Mn-Al, atomic ordering processes, X-ray diff. study 2-1434  
 Cu-Mn-Al (20.6, 34.7 at.%), displaced hysteresis loop upon mag. annealing 2-26687  
 Cu-Ni-Al-Mn, quasi-periodic struct. form. sequence (*Russian*) 2-5876

## aluminium alloys continued

- Cu-Sn-Al-Fe-Ni-Mn, fracture and mech. props., effect of comp. and crystn. conditions 2-41729  
 Cu-Sn-(Ni,Al,Ge,In), phase transforms. 2-51916  
 Cu-Zn-Al, acoustic emission during martensitic transform., energy meas. 2-36856  
 Cu-Zn-Al, high damping alloys, dynamic props. 2-47109  
 Cu-Zn-Al, internal friction meas. rel. to two way memory effect 2-47099  
 Cu-Zn-Al, martensitic transformation study by coupled enthalpy and acoustic emission meas. 2-2509  
 β-Cu-Zn-Al, precipitates, commensurate-incommensurate transition 2-45568  
 Cu-Zn-Al, pseudoelastic, hysteresis loop, strain-rate, amplitude and temp. depend. 2-47098  
 Cu-Zn-Al, stress induced hexagonal martensite 2-51903  
 Cu-Zn-Al (25.5 at.%), partial martensitic transform., electron-acoustic microscopy 2-19224  
 β-Cu-Zn-Al alloy, calorimetric study of ordering 2-2541  
 Cu-Zn-Al high-damping coil spring, pseudoelastic behaviour 2-47100  
 Cu-Zn-Al(15.1, 15.1 at.%), acoustic signal emitted during martensitic transformation (*French*) 2-17677  
 Cu<sub>90</sub>Al<sub>10</sub> (100) surfaces obs. of Tamm-type state, angle-resolved photoemission study 2-13149  
 Cu<sub>2</sub>MnAl, Heusler alloy, Hall effect and magnetoresistance 2-36010  
 Cu<sub>2</sub>MnAl, optical absorpt. spectrum within RPA 2-9163  
 DyAl<sub>3</sub>, narrow domain walls, pulsed NMR study 2-41229  
 DyCo<sub>2</sub>-DyAl<sub>3</sub>, soft X-ray emission spectrum 2-46830  
 ErAl<sub>3</sub>, thin film, occurrence of modulated phases 2-8734  
 ErCo<sub>2</sub>-ErAl<sub>3</sub>, cryst. struct. and mag. props. 2-8476  
 Er<sub>1-x</sub>Gd<sub>x</sub>Al<sub>3</sub> thin film, occurrence of modulated phases 2-8734  
 Fe-Al, cold worked, Mossbauer study of atomic reordering 2-17377  
 Fe-Al, magnetisation and magnetostriction, magnetic annealing effects 2-17322  
 Fe-Al, Mossbauer spectra hyperfine struct. parameters 2-5613  
 Fe-Al (10 to 50 at.%), elastic moduli (*German*) 2-51971  
 Fe-Al (12.7 wt.%), doped, piezomag., magnetomech. internal friction (*Polish*) 2-36407  
 Fe-Al (20 to 50 at.%), coeff. of expansion (*German*) 2-12788  
 Fe-Al (24.3 at.%), atomically ordering, mag. aftereffects related to C migration (*Polish*) 2-36394  
 Fe-Al (30.5 at.%), ordered alloy, plastically deformed, antiphase domain boundary tubes obs. 2-41691  
 Fe-Al alloy system, Fe-rich, long-range order parameter, Mossbauer spectra (*Chinese*) 2-2165  
 Fe-Al bronzes, laser surface melting from homogenisation 2-2539  
 Fe-Al single cryst., ordered B2 type, annealing-out of quenched-in vacancies 2-47065  
 Fe-Al-C, α-martensite anomalous tetragonality, role of Al and C (*Russian*) 2-51921  
 α-Fe-Al-C, dil., mag. permeability disaccommodation, interaction energy of Al-C pair (*Polish*) 2-36396  
 Fe-Al-Co, piezomag., annealed, internal damping depend. on mag. polarisation (*Polish*) 2-36903  
 Fe-B-Si-C-Al, amorphous, crystn. temp., mag. props. 2-41160  
 Fe-Cr-Al, high temp. props. improvement by rare earth additions, internal friction study 2-45355  
 Fe-Cr-Al (0-17.7, 2.6-9.3 wt.%), Al<sub>2</sub>O<sub>3</sub>-forming, oxidation morphology 2-27341  
 Fe-Cr-Al alloy, effects of rare earth on preferred orientation in oxide scales (*Chinese*) 2-22232  
 Fe-Ni-Al, ageing in region of reverse martensitic transform., phys. props. change (*Russian*) 2-51942  
 Fe-Ni-Al alloy Y<sub>2</sub>Nd<sub>4</sub> magnets, cooling rate rel. to mag. props. 2-26674  
 Fe-Ni-Cr-Al, scale resist., Al addition effect 2-2619  
 Fe-Ni-P-B-Al, amorphous, ferromag. reson. 2-31292  
 Fe-Si-Al, effect of Al substitution on cold workability and mag. props. 2-26648  
 Fe-Si-Al single crystals, mag. props. near Sendust comp. 2-26624  
 FeAl, electron momentum distrib. and charge transfer, Compton scatt. study 2-26281  
 FeAl, positron annihilation, band struct. and Fermi surface 2-46814  
 FeAl, single cryst., effect of compositional deviations from stoichiometry on slip transition direction 2-5177  
 Fe<sub>3</sub>Al single crystal, deform. at high temps. 2-41695  
 Fe<sub>3</sub>Al<sub>0.95</sub>Si<sub>0.05</sub>, DO<sub>3</sub> struct., deform. 2-27256  
 Fe<sub>3</sub>Al<sub>0.9</sub>Si<sub>0.1</sub>, mag. hyperfine field and isomer shift, Mossbauer study 2-17374  
 FeCr<sub>20</sub>Ni<sub>2</sub>Al<sub>2</sub> wire, mass spectrometric anal. of precipitates formed under heat treatment (*French*) 2-51960  
 FeMn<sub>2</sub>Al, Mossbauer spectrum, hyperfine struct. investig. 2-13380  
 (Fe<sub>75</sub>Ni<sub>15</sub>)<sub>75</sub>P<sub>16</sub>B<sub>9</sub>Al<sub>1</sub>, amorphous, ferromag. transition, struct. relax. effect on scaling law anal. 2-5542  
 (Fe<sub>75</sub>Ni<sub>15</sub>)<sub>75</sub>P<sub>16</sub>B<sub>9</sub>Al<sub>1</sub>, amorphous, Mossbauer study 2-31356  
 Gd-Al, amorphous spin glass, DC susceptibility, field depend. 2-31214  
 Gd-Al, spin-glasses, scaling of nonlinear susceptibility 2-31196  
 GdAl<sub>3</sub>, cubic ferromagnet, pseudoquadrupole effect 2-36375  
 Gd<sub>1-x</sub>Er<sub>x</sub>Al<sub>3</sub>, cryst. struct., X-ray diff. study 2-8475  
 Gd<sub>1-x</sub>Er<sub>x</sub>Al<sub>3</sub>, Curie temp., spin-disorder resist. and residual resist. 2-35991  
 Gd<sub>0.05</sub>La<sub>0.95</sub>Al<sub>2</sub> spin glass, freq. depend. ESR 2-31271  
 Gd<sub>2</sub>Ni<sub>7-12</sub>Al<sub>x</sub>, mag. behaviour in ferrimag. and paramag. regions 2-51399  
 Gd<sub>1-x</sub>Re<sub>x</sub>Al<sub>3</sub> (Re=Dy, Ho, Er), Curie temp., theoretical calc. 2-21793  
 La-Al-Ga metallic glasses, struct. determ. by X-ray diff. 2-12492  
 La<sub>80</sub>Al<sub>20</sub>, amorphous, press. depend. of supercond. transition temp. 2-36176  
 La<sub>75</sub>Al<sub>25</sub>In<sub>10</sub>, amorphous, press. depend. of supercond. transition temp. 2-36176  
 (LaCe)Al<sub>3</sub>, re-entrant supercond. phase boundaries, 'press. depend. 2-31020  
 La(Ni,Al)<sub>3</sub>, absorpt. of H<sub>2</sub>, electron conc. effect 2-35697  
 LaNi<sub>2</sub>Al<sub>3</sub>, lattice constants (*Ukrainian*) 2-25813  
 LaNi<sub>2</sub>Al<sub>3</sub>-H<sub>2</sub> system, form. and decomp. kinetics, press. depend. 2-26059  
 Li-Al/FeS<sub>2</sub>, batteries, ceramic-coated positive current collectors 2-47469  
 LiAl, <sup>7</sup>Li diffusion, quasielastic neutron scatt. studies 2-21374  
 LiAl, anomalous heat capacity and elec. resist. near crit. comp. 2-40565  
 LiAl, chemical-diffusion coefficients, electrochem. technique determ. 2-45633  
 LiAl, electronic struct., self consistent calc. 2-12962



## aluminium alloys continued

- LiAl fast-ion electrode, defects and disorder 2-21300  
 $\beta$ -LiAl, pure and doped, NMR study 2-36465  
 $\text{Li}_2\text{Al}_{1-x}(\text{x}=0.49, 0.50, 0.51)$ , superionic, NMR relaxation study of Li motion 2-21909  
Mg-Al and Mg-Li-Al-Ca, fatigue crack growth rate at 20 and  $-135^\circ\text{C}$  2-41747  
Mg-Al-Zn-Mn, B fibre reinforced, corrosion resist. and electrochem. characts. 2-36995  
Mn-Al-C, permanent mag., magnetisation props.,  $-50$  to  $150^\circ\text{C}$  2-21826  
 $\text{Mn}_2\text{V}_{1-x}\text{Al}_x$ , hyperfine field, NMR satellites 2-46406  
Nb-Al vapour phase high temperature co-condensation process (Japanese) 2-27118  
Nb<sub>3</sub>Al, anomalous low temp. lattice thermal cond., 2 to  $2.7\text{K}$  2-26153  
Nb<sub>3</sub>Al, multifilamentary, precip. from supersaturated BCC phases, supercond. props. 2-26532  
Nb<sub>3</sub>Al, neutron irradiat., sp. ht., 1.3 to  $25\text{K}$ , supercond. transition temp. 2-17213  
Nb<sub>3</sub>Al ribbons, critical currents in mag. field (Russian) 2-51387  
Nb<sub>3</sub>Al superconductor, phase stability and atomic ordering (Russian) 2-5481  
Nb<sub>3</sub>Al<sub>0.75</sub>Ge<sub>0.25</sub>, elec. cond., lattice const. (Russian) 2-45939  
Nb<sub>3</sub>(Al<sub>0.75</sub>Ge<sub>0.25</sub>), supercond. wire, manufacture from powder (Chinese) 2-41539  
NdAl<sub>3</sub>, ferromag., magnetisation density polarised neutron study 2-17317  
Ni-Al, Auger spectrum, conduction band X-ray photoelectron spectra 2-13593  
Ni-Al, plasma sprayed coating, acoustic materials testing 2-17811  
Ni-Al (32 to 40 at.%), quenching effect on magnetic behaviour 2-21774  
Ni-Al film, coevaporated, outgrowths, form. 2-45778  
Ni-Al films, prep. by different evap. methods, surface outgrowths, comp. variations 2-26259  
Ni-Al matrix containing Fe rod, intrinsic boundary dislocations, anisotropic elastic fields 2-36900  
Ni-Al plasma coatings, influence on fatigue and corrosion fatigue of medium-C steel 2-17776  
Ni-Al powdered protective coatings on steel, phase struct. changes 2-22385  
Ni-Al system, O<sub>2</sub> surface conc. change during diffusion saturation at const. rate 2-33475  
Ni-Al-Mo, aligned eutectics, fatigue at elevated temps. 2-36952  
Ni-Al-Mo-base superalloys, microstruct. features 2-41689  
Ni-Co-Cr-Al, superalloy, oxidation, effect of Ti and Ta additions 2-2621  
Ni-Co-Cr-Al-Y laser treated coatings, struct. 2-30769  
Ni-Co-Cr-Al-Y plasma sprayed coatings for aircraft gas turbine appl. 2-47262  
Ni-Cr-Al (15.1, 1.1 wt.%), internal and intergranular oxides development at high temp. 2-37000  
Ni-Cr-Al (28.8, 1.0 wt.%), internal and intergranular oxides development at high temp. 2-37000  
Ni-Cr-Al-Co, anisotropic fatigue hardening of single cryst. at elevated temps. 2-13814  
Ni-Cr-Al-Ti, Alloy 800,  $\gamma'$ -particle coarsening and yield, TEM study 2-31701  
Ni-Cr-Al-Ti-Mo, tensile behaviour, elevated temp., influence of coherency strain 2-9380  
Ni-Cr-Al-Y laser treated coatings, struct. 2-30769  
Ni-Cr-Al-Y/ZrO<sub>2</sub>-8Y<sub>2</sub>O<sub>3</sub>, thermal barrier coated rods, assessment of variations in thermal cycle life data 2-31819  
Ni-Cr-Co-Mo-Al-W-Ti-C, heat-resist., cryst. and dislocation struct., var. during cutting 2-51989  
Ni-Cr-W-Mo-Al-Ti (16.9, 4.1, 4.1, 4.1 wt.%),  $\gamma'$  phase discontinuous precipitation and recryst. (Russian) 2-51909  
Ni-Fe-Nb-Al, struct. effect on physical props. (Chinese) 2-2533  
Ni-Ni<sub>3</sub>Al-Mo,  $\gamma/\gamma'$ -aligned eutectic composite, elevated temp. stability of phases 2-22228  
Ni<sub>3</sub>Al-Ni<sub>3</sub>Nb, eutectic alloy, directional solidification 2-5868  
NiAl, creep props., high temp., effect of graphite impurity 2-13775  
NiAl, electron momentum distrib. and charge transfer, Compton scatt. study 2-26281  
Ni<sub>3</sub>Al<sub>3</sub>, aluminisation of Ni, formation of intermetallic phases 2-13848  
Ni<sub>3</sub>Al<sub>3</sub>, multiphase layer growth, math. modelling of diffusion 2-8677  
Ni<sub>3</sub>Al, lattice dynamics, specific heat 2-26005  
Ni<sub>3</sub>Al, strength, positive temp. depend., effect of nonstoichiometry 2-9356  
Ni<sub>3</sub>Al-Mo, eutectic, directionally solidified, low cycle fatigue behaviour 2-36953  
Pr<sub>2</sub>-Al<sub>2</sub>Co<sub>3</sub>, constitution, struct. and mag. props. 2-47199  
Pr<sub>2</sub>Ni<sub>2</sub>Al<sub>3</sub> and analogues, cryst. struct. (Ukrainian) 2-25813  
Pt-Al coatings, effect on high cycle fatigue behaviour of Ni based superalloys 2-31850  
Si-Al saturated solns. in melt, elec. cond., temp. depend. 2-5378  
SiC fibre reinforced Al alloy, high-temp. strength 2-13779  
Sn-Al alloys, supercond. props. 2-17185  
TbAl<sub>3</sub>, localised modes,  $\gamma$ -ray resonant absorption study 2-45486  
Th(NiAl)<sub>3</sub>, absorpt. of H<sub>2</sub>, electron conc. effect 2-35697  
Ti-Al, oxide coated, fatigue strength 2-27279  
Ti-Al, phase diagram,  $\alpha$ - $\alpha_2$  phase boundary determ. 2-27145  
Ti-Al, solid-solution hardening, kink-pair model 2-13743  
Ti-Al, work hardening rate rel. to dislocation struct., 4.2 to  $373\text{K}$  2-22245  
Ti-Al alloy single cryst., slip band morphology and development (Russian) 2-5124  
Ti-Al thin film, reactive cosputtering, struct. modification 2-45780  
Ti-Al-Cr-Mo alloy VTZ-1, fatigue testing and strength, statistical regularities 2-37010  
Ti-Al-Fe, Z (German) 2-13700  
Ti-Al-Mn, strength properties, annealing in air temp. influence 2-27252  
Ti-Al-Mo, dynamic compression diagrams, method for determ. at elevated temps. 2-41855  
Ti-Al-Mo joints, welded and glued, strength under dynamic tensioning 2-41701  
Ti-Al-Mo-V, H embrittlement and stress corrosion cracking 2-17736  
Ti-Al-Mo-V, rehardening by surface plastic deform. 2-36876  
Ti-Al-Mo-V (8, 1, 1 wt.%), deform. of individual Widmanstätten colonies with  $\alpha$ - $\beta$  lamellar microstruct. 2-36913  
Ti-Al-Sn-Zn-Mo-Si alloy 6242, compressive plastic instability 2-27219  
Ti-Al-Sn-Zr-Mo-Si, hot forging, deform. and unstable flow 2-17712  
Ti-Al-Sn-Zr-Mo-Si, hot torsion, deform. and unstable flow 2-17713  
Ti-Al-Sn-Zr-Mo-Si (6, 2, 4, 2, 0.1 wt.%), forging deform., characterisation and modelling 2-36912

## aluminium alloys continued

- Ti-Al-Sn(V)(Mo)(V-Sn), oxidation effect on surface crack form. and mech. props. (German) 2-13866  
Ti-Al-V, fretting, high temps. 2-22335  
Ti-Al-V, H diffusion coeffs., determ. by nuclear physics method 2-12845  
Ti-Al-V, prior creep strains effect on instantaneous elastoplastic deform. 2-41706  
Ti-Al-V, type VT6, nonstationary vaporisation regime on electron beam irradiat. (Russian) 2-1605  
Ti-Al-V, VT6, superplasticity, influence of texture 2-13776  
Ti-Al-V (6.4 wt.%), delayed failure of plasma sprayed H<sub>2</sub>O<sub>2</sub> coating 2-52077  
Ti-Al-V (6.4 wt.%), fretting wear at elevated temps. 2-36980  
Ti-Al-V (6.4 wt.%), isostatically hot pressed, powder purity problems 2-13677  
Ti-Al-V (6.4 wt.%) thin film, vacuum condensation process characts. (Russian) 2-2447  
Ti-Al-V composite, B fibre reinforced, B solubility, matrix alloying effect 2-36867  
Ti-Al-V plasma-sprayed coatings, microstruct. and reaction processes, metallography 2-13865  
Ti-Al-V-H, internal friction study 2-45362  
Ti-Al-V-Ni(Fe), blended elemental powder processing 2-46982  
Ti-Al-V(Fe-Al), crack initiation and propagation, microstruct. effect (German) 2-13823  
Ti-Al-V (9, 3 at.%), specific heat, diffusivity and thermal cond. in  $750$ - $1700\text{K}$  temp range 2-5239  
Ti-Al-Zr-Mo, blended elemental powder processing 2-46982  
Ti-Al-Zr-Mo-Si alloy, Ti 685,  $\alpha/\beta$  interface phase (French) 2-5855  
Ti-Al-Zr-Sn-Nb, IMI 829, fatigue behaviour 2-31770  
Ti-Al(-N) films, cosputtering prep., struct. modifications 2-5324  
Ti-Cu-Al (4.2, 6 wt.%), Ti<sub>2</sub>Cu precipitation, microanalytical investigation (German) 2-13733  
Ti-Mo-Al-V alloy, BT-16, thermal cycling simulating diffusion welding, strength and fracture toughness 2-41721  
Ti-Si-Al, sputtered coatings, composition, AES and SIMS study 2-45783  
TiAl<sub>3</sub>-VAl<sub>3</sub>-FeAl<sub>3</sub>, room temp. section of Ti-Al-V-Fe system, phase diagram (Chinese) 2-2488  
TiAl<sub>3</sub>-VAl<sub>3</sub>-NiAl<sub>3</sub>, room temp. section of Ti-Al-V-Ni system, phase diagram (Chinese) 2-2488  
Ti<sub>50</sub>Ni<sub>50</sub>Zr<sub>50</sub>Al<sub>50</sub>, metastable states in premartensite region 2-47008  
U(Al,Fe) dil. alloys, TEM obs. of microstruct. rel. to hardness 2-43557  
U(Fe,Al)<sub>2</sub>- $\gamma_2$ , electronic struct., Mossbauer study 2-13378  
V-Ga/Cu-Ga-Al composite system, metallurgical processing, superconducting props. of V<sub>3</sub>Ga wires 2-13686  
W-Al, solid-liquid interaction, W solubility in liquid Al (Russian) 2-1621  
Y-Al-Cr-metal, vacuum plasma sprayed coatings 2-17623  
Y(Ni,Al)<sub>3</sub>, absorpt. of H<sub>2</sub>, electron conc. effect 2-35697  
YbAl<sub>3</sub>, mixed valent, surface core-level shifts and surface valence change, photoemission study 2-36763  
YbCuAl, intermediate valent, thermal expansion, sp. ht. and resist. 2-16823  
YbCuAl, specific heat, press. depend. 2-30616  
Zn immersion deposits, on Al-alloys, factors influencing growth 2-2630  
Zn-Al, laser irradiat., Soret effect in molten layer 2-40582  
Zn-Al, superplastic, high damping and modulus characts. 2-47093  
Zn-Al, transient creep during transformations 2-21221  
Zn-Al (0.4 wt.%), disappearance of acoustic emission in presence of superplasticity 2-17718  
Zn-Al (0.4 wt.%), fine grain, creep characts. (Russian) 2-9383  
Zn-Al (1.1 wt.%), creep behaviour 2-27218  
Zn-Al (22 wt.%) superplastic alloy, solution-precipitation mechanism for grain boundary discontinuities 2-47045  
Zn-Al alloy castings, damping capacity and mech. props. 2-47170  
Zn-Al alloys, effect of second-phase vol. fraction on grain size stability and flow stress during superplastic flow 2-22268  
Zn-Al eutectoid, internal friction and thermal losses 2-30525  
Zn-Al eutectoid alloy, superplastic, room temp. decomp. 2-27137  
Zn-Al eutectoid alloy sheet, bulge forming of deep-drawn superplastic cup 2-2563  
Zn-Al eutectoid alloys, superplastic roles of interphase and intercryst. boundary sliding 2-41667  
Zr(Fe<sub>1-x</sub>Al<sub>x</sub>)<sub>2</sub> Laves phase, mag. hyperfine interactions, <sup>57</sup>Fe Mossbauer study 2-46438

## aluminium compounds

see also alumina; aluminium alloys

- Al<sub>2</sub>TiO<sub>5</sub>-Fe<sub>2</sub>TiO<sub>5</sub>, strength and thermal expansion obs. (Japanese) 2-31729  
aluminofluorophosphate glass, effect of additions of groups II and III fluorides on struct. and props. 2-8451  
aluminosilicate ceramic fibres, review of props. and appl. 2-41558  
aluminosilicate interface, corrosion inhibiting an Al alloys, IR reflection and electron spectra 2-5988  
aluminosilicate solns., <sup>27</sup>Al NMR, second coord. sphere effects on shielding of Al 2-20080  
aluminosilicates, nature of F modified oxide surfaces, NMR study 2-31303  
analcime, Raman spectra, up to  $9.4\text{ kbar}$  2-2236  
n-Ga<sub>1-x</sub>Al<sub>x</sub>As, grown by organometallic vapour phase epitaxy, hole traps 2-51112  
gibbsite, refractory products, sagging under load, inter-laboratory trials by differential method (French) 2-27360  
graphite- $\text{AlCl}_3$ , intercalate, Shubnikov-de Haas effect (Russian) 2-8820  
graphite- $\text{AlCl}_3$  intercalation compounds, order-disorder transformation 2-27171  
kaolinite, solid phase deform. under influence of adsorbed water and organic compounds 2-35451  
n<sup>+</sup>/p<sup>+</sup> tunnel junction, MBE, ohmic contact for cascade solar cell 2-6141  
Sialon, effect of additives on sintering and mech. props. 2-17657  
upper atmosphere chemiluminescent emission on release of Al and compounds 2-32694  
A GaAs-GaAs heterojunction, selective dry etching 2-26486  
(Al,Ga)As DH injection laser with asymm. gain distrib., computer model 2-44291  
(Al,Ga)As heterostruct. fabricated by isothermal diffusion of Al, props. 2-12941  
(Al,Ga)As multilayers, efficient luminesc. band created by athermal laser processing 2-9177



## aluminium compounds continued

- (Al,Ga)As, use of sapphire liners to eliminate edge growth in LPE 2-13661  
 (Al,Ga)As/GaAs heterostructures, molecular beam epitaxy growth 2-36789  
 (Al, Ga)As-GaAs heterostructures, growth monitoring and characterisation, ellipsometry 2-6890  
 (Al,Ga)As-GaAs heterostruct., electron mobility, background doping effect 2-26483  
 Al complex, AlOH-phthalocyanine, solns., excited states, radiative lifetimes, triplet-triplet absorpt. spectra 2-9188  
 Al complex, Al(urea)<sub>6</sub>(ClO<sub>4</sub>)<sub>3</sub>, antiferrodistortive, two-dimensional critical behaviour 2-12738  
 Al-Al oxide-Ag CaF<sub>2</sub> roughened tunnel junction with adsorbed 4-pyridine-COH, Raman spectra 2-5703  
 Al-Al<sub>2</sub>O<sub>3</sub>-Pb tunnel junction, adsorbed ethyl  $\alpha$ -cyanoacrylate, IR and IETS study 2-40691  
 Al-B-Li(Ti)(V)(Cr)(Mn)(Fe)(Co)(Ni)(Cu) systems, B-rich phases grown from melts, X-ray diff. study 2-46904  
 Al-Si-O-N, plasma processing, HF and DC 2-46991  
 AlAs, crystal binding and density of states, pseudopot. calc. 2-45874  
 AlAs, intrinsic defect theory 2-45884  
 AlAs, surface reconstruction, angle integrated photoemission study 2-8695  
 AlAs-Al<sub>0.2</sub>Ga<sub>0.8</sub>As superlattices, absorpt., stimulated emission and clustering 2-46794  
 AlAs-GaAs heterojunction stripe geometry lasers, nonlinear power-current characteristics 2-29831  
 AlAs-GaAs MBE superlattice, photolum., 0.7 to 0.08  $\mu$ m 2-2329  
 AlAs-GaAs solid solns., Al and Ga density profiles determ. by SIMS 2-17950  
 AlAs-GaAs superlattice, absorption and stimulated emission 2-31526  
 Al<sub>0.2</sub>As<sub>0.8</sub>Ti<sub>0.4</sub> amorphous alloy, model for short range structure (*Spanish*) 2-21029  
 Al<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>Tb<sup>3+</sup>, cathodoluminescence saturation effects 2-51717  
 AlCl<sub>3</sub>, electrolyte soln. liq. struct., X-ray diff. study 2-45012  
 AlCl<sub>3</sub>-NdCl<sub>3</sub>, mass spectrometric investigation 2-9585  
 AlF<sub>3</sub> activated aluminising packs, kinetics of gas transport 2-30660  
 AlF<sub>3</sub> film, absorption spectrum, Al L<sub>2,3</sub> excitation 2-2310  
 AlF<sub>3</sub>, octahedral F complexes, X-ray absorpt. spectra 2-2372  
 AlF<sub>3</sub> struct., bending vibr., bond angles, CNDO/2 calcs. 2-19971  
 AlF<sub>3</sub> in KF-AlF<sub>3</sub> form., mol. const., thermodynamic functions, ion-mol. reactions 2-22428  
 AlF<sub>3</sub> in KF-AlF<sub>3</sub> form., mol. const., thermodynamic functions, ion-mol. reactions 2-22428  
 Al<sub>0.4</sub>Ga<sub>0.6</sub>As-GaAs heterojunction FET, magnetoconductance, g-factor, gate voltage 2-41003  
 AlGaAs CSP laser, used in optical switch 2-34783  
 AlGaAs constricted DH laser, low threshold current temp. sensitivity 2-29819  
 AlGaAs constricted double-heterojunction diode lasers, structs. and electrophysical characts. 2-34789  
 AlGaAs, DH IR source, luminesc., external quantum efficiency, rough and smooth emitting surfaces 2-51712  
 AlGaAs DH laser, highly RF modulated, effect of cavity length on picosecond pulse generation 2-29832  
 AlGaAs DH laser amplifiers, signal gain, freq. bandwidth, saturation output power 2-16049  
 AlGaAs DH laser diodes, Si optical bench for reproducible optical feedback path 2-29889  
 (AlGa)As DH lasers, molecular beam epitaxy for optical communication systems 2-34793  
 (AlGa)As DH lasers, MBE grown, CW aging 2-39646  
 AlGaAs DH lasers, modulation characts. in 6 to 10 GHz range 2-39651  
 AlGaAs DH wavelength multiplexing injection laser source with graded comp. along active layer 2-919  
 AlGaAs diode laser, RF modulated, generation of ultrashort optical pulses (*Japanese*) 2-4542  
 AlGaAs diode laser, subpicosecond coherent optical pulse generation by passive mode locking 2-44354  
 (AlGa)As, graded index waveguide separate confinement heterostruct. laser, MBE grown 2-49773  
 (AlGa)As injection laser, metalisation and heat sink problems 2-4519  
 AlGaAs injection locked semiconductor laser, optical phase modulation 2-49778  
 AlGaAs injection-locked semiconductor laser, optical FM signal amplification and FM noise reduction 2-16039  
 AlGaAs lasers, narrow proton-implanted, for audio/video discs, optical communication and recording 2-7802  
 AlGaAs lasers with micro-cleaved mirrors suitable for monolithic integration 2-49774  
 AlGaAs, layers growth by OM-VPE 2-8723  
 AlGaAs mode-locked diode lasers, oscillation characts. of coherent ultrashort optical pulses 2-25012  
 AlGaAs, organometallic VPE grown, characterisation for solar cell appls. 2-30762  
 AlGaAs oxide stripe CW lasers, spatial mode stability during aging 2-7764  
 AlGaAs, short wavelength laser and LEDs, role of buffer layers in reducing degradation 2-934  
 AlGaAs stripe-geometry DH lasers with soft turn-on, extinction ratio 2-34753  
 AlGaAs window stripe laser, optimum design conditions 2-7787  
 n-AlGaAs:Be, p-n junction formation by Be<sup>+</sup> implantation 2-51287  
 AlGaAs/GaAs concentrator solar cell array, high efficiency-large area for concentrating photovoltaic array of 1 kWp, construction and performance 2-42017  
 AlGaAs/GaAs high efficiency cascade solar cells, efficiencies of 15% at AM0 and 16.4% at AM1 2-32083  
 AlGaAs-GaAs concentrator solar cells, fabrication by OM-VPE and LPE, performance and durability 2-32085  
 AlGaAs-GaAs heterostructures, LPE growth for solar energy conversion 2-46952  
 AlGaAs-GaAs laser with external dispersive resonator, bistable operation and spectral tuning 2-34817  
 AlGaAs-GaAs lasers, MO-CVD grown, review 2-7765  
 AlGaAs-GaAs solar cells, deep-level defects, low temp. periodic annealing effects 2-32066  
 AlGaAs-GaAs solar cells, proton irradi., radiation-induced deep-level defects, annealing, DLTS, SEM 2-32084  
 AlGaAs-GaAs-AlGaAs struct., phonon scatt. of electron gas 2-36131

## aluminium compounds continued

- Al<sub>0.4</sub>Ga<sub>0.6</sub>As:Ge LPE film, dislocation clusters, TEM obs. 2-45762  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs, superlattice avalanche photodiode, large ionisation rate ratio 2-51289  
 Al<sub>1-x</sub>Ga<sub>x</sub>As, alloy clustering effects on impact ionisation 2-46008  
 Al<sub>1-x</sub>Ga<sub>x</sub>As buried heterostruct. laser, single mode operation by loss stabilisation 2-7788  
 Al<sub>1-x</sub>Ga<sub>x</sub>As, comp. change w.r.t. LPE temp. (*Russian*) 2-16967  
 Al<sub>1-x</sub>Ga<sub>x</sub>As DH laser, deep level luminesc., spatial distrib. 2-915  
 Al<sub>1-x</sub>Ga<sub>x</sub>As epilayers, mm thick, Peltier-induced LPE and compositional control 2-5318  
 Al<sub>1-x</sub>Ga<sub>x</sub>As epilayers, MBE, protection during ambient transfer 2-5815  
 Al<sub>1-x</sub>Ga<sub>x</sub>As, epitaxial layer, MBE growth 2-21469  
 Al<sub>1-x</sub>Ga<sub>x</sub>As films, VPE growth in inorganic transport systems 2-13653  
 Al<sub>1-x</sub>Ga<sub>x</sub>As, grown by MOVPE, luminescence 2-9182  
 Al<sub>1-x</sub>Ga<sub>x</sub>As grown by MBE, photoluminescence studies 2-13532  
 Al<sub>1-x</sub>Ga<sub>x</sub>As injection heterojunction laser with high pulsed power 2-20329  
 Al<sub>1-x</sub>Ga<sub>x</sub>As interdiffused layer formed at GaAs-Al interface 2-12857  
 Al<sub>1-x</sub>Ga<sub>x</sub>As modified multiquantum well heterostructure lasers, MBE grown, extremely low threshold operation 2-20304  
 Al<sub>1-x</sub>Ga<sub>x</sub>As, OMVPE growth 2-5820  
 Al<sub>1-x</sub>Ga<sub>x</sub>As p-n junction solar cells, grown-in deep-level defects 2-37393  
 Al<sub>1-x</sub>Ga<sub>x</sub>As, photoluminesc. with graded forbidden band under pulsed excitation 2-13545  
 Al<sub>1-x</sub>Ga<sub>x</sub>As, photoluminescence, carrier mobility and lifetime determ. 2-41424  
 Al<sub>1-x</sub>Ga<sub>x</sub>As Schottky barriers and p-n junctions, current-voltage characts. 2-5452  
 n-Al<sub>1-x</sub>Ga<sub>x</sub>As, Schottky barrier, MBE growth, deep levels, substrate growth temp. effects, DLTS study 2-17009  
 Al<sub>1-x</sub>Ga<sub>x</sub>As solid solns., epitaxial, variable composition, surface recombination (*Russian*) 2-1925  
 Al<sub>1-x</sub>Ga<sub>x</sub>As solid solution, elec. cond. slow relax. 2-45987  
 Al<sub>1-x</sub>Ga<sub>x</sub>As:Cr variable gap semicond. solid solns., deep impurity centres and impurity photoluminescence 2-17025  
 Al<sub>1-x</sub>Ga<sub>x</sub>As:Ge(Sn)(Te) epitaxial layers, photolum. rel. to surface composition (*Russian*) 2-9189  
 Al<sub>1-x</sub>Ga<sub>x</sub>As:Si graded-band-gap p-n structs., photoluminescence spectra 2-13528  
 Al<sub>1-x</sub>Ga<sub>x</sub>As:Sn, MBE grown, photolum. spectrum, As/Ga flux ratio effect 2-5734  
 n-Al<sub>1-x</sub>Ga<sub>x</sub>As:Te, heavily doped, photolum. in indirect energy gap region 2-2324  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-AlAs-GaAs quantum well heterostruct., size fluctuations and laser operation 2-25011  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs, V shaped DH laser, metalorganic CVD growth and properties 2-20323  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs heterostructure, modulation doped, MBE grown, electron mobility study 2-8865  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs heterostructures, carrier mobility enhancement 2-36130  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs heterojunction FET, magnetoconductance, g-factor 2-41002  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs heterojunction, selectively doped, cyclotron reson. linewidth 2-51467  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs quantum-well heterostruct. lasers, MBE growth, clustering and phonon effects 2-4510  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs quantum-well heterostructure laser, transient and noise characts. 2-7767  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs quantum-well heterostruct. lasers, MBE grown, alloy clustering, photoluminesc. study 2-44336  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs quantum well heterostruct. laser, photopumped, CW 7270 Å operation at 300K 2-49746  
 AlGaAsSb/GaInAsSb/GaAsSb laser, light confinement and divergence 2-44364  
 AlGaAsSb/GaAsSb laser, light confinement and divergence 2-44364  
 AlGaAsSb-GaAsSb cascade solar cells, elec. and spectral response characts. 2-37394  
 Al<sub>1-x</sub>Ga<sub>x</sub>In<sub>1-x-y</sub>Sb, lattice const. and optical energy gap, comp. depend. 2-25818  
 Al<sub>1-x</sub>Ga<sub>x</sub>P solid soln., Raman scatt. by optical phonons 2-17485  
 Al<sub>0.26</sub>Ga<sub>0.74</sub>Sb-GaSb photodetector, LPE growth and photo response (*Japanese*) 2-2469  
 Al<sub>1-x</sub>Ga<sub>x</sub>Sb heterostructure, reproducible epitaxial layer growth from saturated Ga soln. 2-17634  
 Al<sub>1-x</sub>Ga<sub>x</sub>Sb, LPE (*Japanese*) 2-2469  
 AlH, mass spectrometric determ. of dissociation energies 2-29726  
 AlH, rot. const. vibr. const. and binding energies calc. using Born-Mayer interaction pot. model 2-15766  
 AlH<sup>+</sup> ground and excited states, pot. energy curves, dissoci., ab initio CI calcs. 2-24617  
 AlH<sub>3</sub>, phase transitions, pyroelec. effect, cond. anomaly, UV irradi. effect, TSD and electret states, image form. 2-41263  
 AlH<sub>3</sub>, sensitisation by dyes (*Russian*) 2-27462  
 AlH<sub>3</sub>, ab initio LCAO SCF calc. 2-15722  
 Al<sub>0.48</sub>In<sub>0.52</sub>As, MBE layers, elec. props. 2-30978  
 Al<sub>0.48</sub>In<sub>0.52</sub>As<sub>0.52</sub>As<sub>0.48</sub>Ga<sub>0.4</sub>In<sub>0.53</sub>As<sub>0.48</sub>In<sub>0.52</sub>As DH laser, MBE grown 2-7791  
 Al<sub>1-x</sub>In<sub>x</sub>N thin films, RF sputtering deposition 2-36784  
 (Al<sub>1/3</sub>In<sub>2/3</sub>)<sub>2</sub>S<sub>3</sub>, powder diffraction data 2-45129  
 AlN ceramic with added Y<sub>2</sub>O<sub>3</sub> or Ni, structural characteristics 2-46989  
 AlN coatings on Mo, prep. by RF reactive ion plating, deposition mech. 2-13658  
 AlN covered p-CdTe, annealing effects (*Japanese*) 2-40609  
 AlN, densification kinetics during hot pressing 2-27125  
 AlN, effects of various additives on sintering 2-27133  
 AlN film grown at low temp. by modified sputter gun 2-13641  
 AlN film prep. by ion implantation, AES and low-energy EELS studies 2-12613  
 AlN films, high rate deposition using new magnetron sputtering techniques 2-41520  
 AlN, ion implantation, projected ranges and standard deviations (*Japanese*) 2-12653  
 AlN on Si SAW devices 2-29953  
 AlN, refractive index, birefringence and permittivity calcs. 2-26853  
 AlN ultrafine powders, produced by reactive gas evaporation technique with electron beam heating 2-46990  
 AlN, valence-electron density, X-ray determ. 2-40355  
 AlN:O, EPR study of O centres 2-51457



## aluminium compounds continued

- AlN-SiO<sub>2</sub> solid electrolyte, meas. of N activity in Fe-C liq. alloys using N conc. cells 2-30634
- Al(NO<sub>3</sub>)<sub>3</sub>, electrolyte soln. liq. struct., X-ray diffr. study 2-45012
- Al(NO<sub>3</sub>)<sub>3</sub>·Cr<sup>3+</sup>·Fe<sup>3+</sup>, EPR spectra and crystal struct. 2-13333
- Al(NO<sub>3</sub>)<sub>3</sub>·9H<sub>2</sub>O·Fe<sup>3+</sup>, Mossbauer study of hyperfine struct. 2-31329
- AlNBO<sub>4</sub> cryst. struct. refinement 2-25840
- AlO (A<sup>2</sup>-X<sup>2</sup>) band system, Franck-Condon factors, r-centroids and electronic transition moment variation 2-24791
- AlO, UV spectrum and rot. struct. 2-4313
- Al<sub>2</sub>O<sub>3</sub>-AlN spinel, prep. by carbothermal nitridation of Al<sub>2</sub>O<sub>3</sub> 2-31664
- β-Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O/Al<sub>2</sub>C<sub>3</sub> electrolyte cell, C activity meas. 2-18046
- Al(OH)<sub>3</sub>, dissolution and crystn. mechanism from NaOH soln., ionic equilibria and cryst. phases 2-30426
- α-AlOOH, diaspor, polycryst., struct. parameters, X-ray diffr. obs. 2-25830
- AlP, heat of formation and combustion, O<sub>2</sub> bomb calorimetric technique 2-9566
- p-AlP, saturable absorption of high intensity CO<sub>2</sub> laser light 2-975
- Al(PO<sub>3</sub>)<sub>3</sub>-NaF, replacement of fluorides by chlorides or bromides, optical and thermooptical props. 2-31444
- AlPO<sub>4</sub>, berlinite, SAW props. of temp. compensated orientations 2-50976
- α-AlPO<sub>4</sub>, berlinite crystals, hydrothermal synthesis 2-51790
- Al<sub>2</sub>S<sub>3</sub>, high temp. enthalpy and X-ray powder diffr. data 2-50887
- Al<sub>2</sub>S<sub>3</sub>, thermodynamic props. 2-30629
- Al<sub>2</sub>S<sub>3</sub>-In<sub>2</sub>S<sub>3</sub> system, X-ray diffr. study in In-rich region 2-45129
- Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>, decomp., characterisation of resultant aluminas 2-5849
- Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>, electrolyte soln. liq. struct., X-ray diffr. study 2-45012
- AlSb, epitaxial growth, eval. of triisobutylaluminium rel. to trimethylaluminium 2-9281
- AlSb, LPE from Sb solns. 2-31643
- Al<sub>2</sub>SiO<sub>5</sub>·Fe<sup>3+</sup>, inverted spin system, cross relax. 2-2129
- Al<sub>2</sub>TiO<sub>5</sub>, decomposition by isothermal heating, reaction kinetics (*Japanese*) 2-31902
- Al<sub>2</sub>TiO<sub>5</sub>·MgTi<sub>2</sub>O<sub>5</sub>, strength and thermal expansion obs. (*Japanese*) 2-31729
- AlX<sub>3</sub>, (X=Cl, Br, I), soln. complexes, high-field <sup>27</sup>Al NMR obs. 2-15819
- Au-n-Ga<sub>1-x</sub>Al<sub>x</sub>P surface barrier struct., photoelectric effect 2-26500
- BN, cubic, synthesis, AlN additions and atmosphere effects 2-51855
- BaF<sub>2</sub>·CaF<sub>2</sub>·AlF<sub>3</sub>·BeF<sub>2</sub> glasses, Raman spectroscopic study 2-31484
- BaF<sub>2</sub>·CaF<sub>2</sub>·YF<sub>3</sub>·AlF<sub>3</sub> glass for IR optical fibres, material dispersion meas. 2-49846
- Ga-Al-As-Ge quaternary system, phase diagram 2-13703
- GaAl as LPE layers, Al profiles, appl. of method for fitting error functions to data 2-8738
- GaAlAs bistable CW injection heterolaser 2-34756
- GaAlAs channel-substrate-planar lasers with elevated facet reflectivities, operating charact. 2-910
- GaAlAs, channelled substrate planar and V-groove lasers, microwave-induced oscillations 2-4507
- GaAlAs DH diode laser wavefront meas. and anal. 2-25049
- GaAlAs DH injection laser, coherent reception, multimode effects 2-38688
- GaAlAs DH laser, strain related degradation phenomena, SEM cathodoluminescence and induced current study 2-39652
- GaAlAs DH laser diode, optical source for fibre-optical digital communication 2-7880
- GaAlAs DH shallow proton stripe laser grown by metalorganic CVD, current threshold uniformity 2-44283
- GaAlAs heterostructure, screening of scatt. fields by carrier space charge, theory 2-13172
- (GaAl)As injection laser linewidth measurements, CW longit. mode struct. 2-7768
- (GaAl)As injection lasers, mode locking study 2-11697
- GaAlAs laser, spectrum-narrowing ratio determ. by optical feedback 2-39647
- GaAlAs laser frequency stabilisation using automatic freq. control system 2-4527
- GaAlAs lasers, second-harmonic generation, use of KNbO<sub>3</sub> waveguides 2-29850
- GaAlAs p-n junction characters., effect of X-ray irradiation (*Russian*) 2-30965
- (GaAl)As single-mode injection laser, power-depend. linewidth meas. 2-7769
- GaAlAs single-mode laser, dynamic wavelength tuning 2-7770
- GaAlAs substrate, Au-Sn-Al metallisations, interfacial struct. study 2-8713
- GaAlAs, volume photovoltaic effect in case of high rates of carrier prod. and radiative recomb. 2-27605
- GaAlAs:Cr<sup>2+</sup>, luminesc. of Cr<sup>2+</sup> internal transition 2-51661
- GaAlAs:Sn, thin layer emitters, luminescence and Sn-X centres 2-46772
- GaAlAs/GaAs, LD single-mode injection lasers for optical fibre communication 2-16143
- GaAlAs/GaAs multilayer monolithic integration of active and passive components for integrated optics 2-11868
- GaAlAs-GaAs DH lasers, nonradiative lifetime and leakage losses 2-7763
- GaAlAs-GaAs DH lasers, low threshold narrow stripe, controlled Zn diffusion 2-7790
- GaAlAs-GaAs heteroface solar cell, window layer thickness, reflection loss minimisation 2-6140
- GaAlAs-GaAs heterojunction solar cells with different contact materials, thermal stability 2-27653
- GaAlAs-GaAs multilayer structures, monolithic integration of optoelectronic, electronic and passive components 2-49945
- GaAlAs-GaAs oxide stripe laser, low degradation rate, high performance 2-926
- Ga<sub>0.88</sub>Al<sub>0.12</sub>As:Te(Zn) laser pumped by electron beam, cathodolum. and threshold current density, doping influence 2-7766
- Ga<sub>0.9</sub>Al<sub>0.1</sub>As-GaAs heterostructure laser, electron-beam-pumped, operating at low accel. voltages 2-34760
- Ga<sub>1-x</sub>Al<sub>x</sub>As, conduction band structure from Hall mobility measurements at high pressures 2-46030
- Ga<sub>1-x</sub>Al<sub>x</sub>As DH laser, threshold current temp. depend., 0.74 to 0.9 μm 2-7762
- Ga<sub>1-x</sub>Al<sub>x</sub>As, deep impurities, cross-section for photoionisation to conduction bands 2-35968
- Ga<sub>1-x</sub>Al<sub>x</sub>As, disorder activated Raman scatt. 2-2244
- Ga<sub>1-x</sub>Al<sub>x</sub>As electron-beam-pumped laser, oxide film-influence on threshold current density 2-34822

## aluminium compounds continued

- n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layers, Hall to drift mobility ratio 2-8821
- n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layers, electron mobility 2-13076
- n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layer, intervalley scatt., Hall mobility study 2-17061
- Ga<sub>1-x</sub>Al<sub>x</sub>As, epitaxial layers, Raman scatt. study 2-46577
- Ga<sub>1-x</sub>Al<sub>x</sub>As, hot electron transport, expt. and Monte Carlo simulation 2-46001
- Ga<sub>1-x</sub>Al<sub>x</sub>As injection laser, second-harmonic generation by KNbO<sub>3</sub> crystal 2-16062
- Ga<sub>1-x</sub>Al<sub>x</sub>As injection light source radiation, electron-beam control 2-34759
- Ga<sub>1-x</sub>Al<sub>x</sub>As, local field effects and IR optical props. 2-22028
- Ga<sub>1-x</sub>Al<sub>x</sub>As MBE layers, alloy clustering 2-40740
- Ga<sub>1-x</sub>Al<sub>x</sub>As, nondegenerate storage obs. at low temp. 2-46071
- Ga<sub>1-x</sub>Al<sub>x</sub>As solid solns., epitaxial film prep. from gas phase, deposition thermodynamics 2-13651
- p-Ga<sub>1-x</sub>Al<sub>x</sub>As:Ge, LPE grown, charge compensation, photoluminescence spectrum 2-17517
- Ga<sub>1-x</sub>Al<sub>x</sub>As:Si epitaxial layers, free-to-bound transitions, photoluminesc. study 2-22072
- Ga<sub>1-x</sub>Al<sub>x</sub>As/Ga<sub>1-x</sub>Al<sub>x</sub>As DH lasers, facet degradations 2-44294
- Ga<sub>1-x</sub>Al<sub>x</sub>As-GaAs heterojunction lasers, accelerated life tests, temp. interval optimisation 2-44300
- Ga<sub>1-x</sub>Al<sub>x</sub>As-GaAs heterojunction lasers, reliability forecasting 2-44301
- Ga<sub>1-x</sub>Al<sub>x</sub>As-GaAs interfaces, nondestructive charact. using nucl. profiling 2-12921
- Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layers on GaAs, morphology and misfit dislocations 2-5319
- Ga<sub>1-x</sub>Al<sub>x</sub>As, heterostructure MESFET devices, LPE 2-1802
- Ga<sub>1-x</sub>Al<sub>x</sub>As LPE growth, GaAs substrate dislocation behaviour 2-1480
- Ga<sub>1-x</sub>Al<sub>x</sub>As MBE growth, volatile metal oxide incorporation 2-12936
- Ga<sub>1-x</sub>Al<sub>x</sub>As<sub>1-x</sub>Sb<sub>x</sub>, energy band gap calc. using dielec. theory of electronegativity 2-8755
- Ga<sub>1-x</sub>Al<sub>x</sub>In<sub>x</sub>As, energy band gap calc. using dielec. theory of electronegativity 2-8755
- n-Ga<sub>1-x</sub>Al<sub>x</sub>P epitaxial films, cathodoluminesc. spectra 2-22097
- Ga<sub>1-x</sub>Al<sub>x</sub>P variable-gap surface barrier UV photodetectors 2-43089
- Ga<sub>1-x</sub>Al<sub>x</sub>Sb epitaxial layer, Raman selection rules, resonance and inhomogeneity 2-2362
- Ga<sub>1-x</sub>Al<sub>x</sub>SbTe, high field magnetotransport props. under hydrostatic press., direct-infrared band transition 2-8828
- GaAs/AlGaAs TJS lasers, gain suppression 2-7759
- GaAs/GaAlAs curved rib waveguides, loss value meas. 2-11867
- GaAs/GaAlAs injection lasers, grown by MOCVD 2-7801
- GaAs/GaAlAs lasers, MO-CVD grown, props. as function of stripewidth 2-34790
- p-GaAs/P-Ga<sub>1-x</sub>Al<sub>x</sub>As isotype heterojunction in DH laser materials 2-46111
- GaAs-(Al,Ga)As heterostructure growth, qualitative and quantitative assessments by fast ellipsometers 2-8730
- GaAs-(Al,Ga)As heterostructures, light scatt. spectroscopy of electrons, rel. to transport props. 2-13500
- GaAs-(Al,Ga)As heterojunction interfaces, modulation doped, electron mobility depend. on electron density and Al conc. 2-21662
- GaAs-(Al,Ga)As heterostructure, coupled electron-LO phonon excitation 2-50808
- GaAs-Al<sub>0.25</sub>Ga<sub>0.75</sub>As multiquantum well struct., resonant degenerate four-wave mixing 2-44401
- GaAs-Al<sub>0.2</sub>Ga<sub>0.8</sub>Sb non-lattice matched stacked solar cells, laser bonding 2-37407
- GaAs-Al<sub>2</sub>O<sub>3</sub> devices I-V charact., hopping cond., space-charge-limited currents 2-51329
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As DH laser, basic props. 2-4508
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As diode struct. elec. charact., gamma radiation effect 2-46125
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As heterostructure, modulation doped surface and interface proximity effect on quantum melt electron mobilities 2-13170
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As heterojunctions, exciton excited levels 2-13551
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As heterostruct., Hall effect, fine struct. const. determ. 2-28831
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As multiquantum well structures, opt. props. and interface disorder, growth-temp. optimisation 2-8869
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As superlattice, energy levels and cond. in appl. mag. field 2-8866
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As submicron heterostructures, IR optical characterisation 2-17565
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As superlattices, as sources of polarised photoelectrons 2-17595
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As superlattice, mag. quantisation and transport 2-26492
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As selectively doped multilayer systems, reson. inelastic light scatt., single particle and collective excitons 2-26493
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As:Si interface, far IR emission from 2D electrons 2-2336
- GaAs-AlAs (100) superlattice, vacancy induced band gap levels 2-45883
- GaAs-AlAs heterojunction band discontinuities, XPS meas., growth sequence depend. 2-13619
- GaAs-AlAs interface, antisite defect 2-26321
- GaAs-AlAs superlattice, phonons, Raman scatt. study 2-51587
- GaAs-AlGaAs DH injection laser, active layer radiative processes in strong mag. field 2-49751
- GaAs-AlGaAs DH laser with p-type active layer, operation in mag. field 2-7761
- GaAs-AlGaAs DH system, monolithic integration of optical sources and detectors, processing techniques 2-4611
- GaAs-AlGaAs heterojunction interface, backside-gated modulation-doped 2-8862
- GaAs-AlGaAs interface, hot electron effects in 2D electron gas 2-51291
- GaAs-Ga<sub>1-x</sub>Al<sub>x</sub>As channel injection heterojunction laser charact. 2-4511
- GaAs-Ga<sub>1-x</sub>Al<sub>x</sub>As multilayer epitaxial heterocomps., elec. active defects, combined SEM and TEM obs. 2-50620
- GaAs-Ga<sub>1-x</sub>Al<sub>x</sub>As stripe geometry DH laser, threshold current, self-consistent calc. 2-44296
- GaAs-Ga<sub>1-x</sub>Al<sub>x</sub>As DH and multiple quantum well superlattices, luminesc. props. and struct. 2-46779
- GaAs-GaAlAs, DH laser grown by metalorganic CVD process 2-937
- GaAs-GaAlAs, stripe DH laser, Zn-diffused, metalorganic CVD grown 2-49772
- GaAs-GaAlAs diode laser, multiple segment stripe contact, effect of non-uniform current 2-935



**aluminum compounds continued**

- GaAs-GaAlAs flat-band semicond. heterostructures, electronic props. 2-1994  
 GaAs-GaAlAs heterojunction, localisation and interaction effects in electron gas 2-21664  
 GaAs-GaAlAs heterostructure, Gunn oscillation optically triggered by 1.06 micron radiation 2-17077  
 GaAs-GaAlAs injection lasers, state of the art, operating parameters and limitations rel. to appls. 2-4525  
 GaAs-GaAlAs integrated optical devices fabricated by MBE and metal-organic CVD 2-49947  
 GaAs-GaAlAs interface, cyclotron emission, two-dimens. character of electron gas 2-5586  
 GaAs-GaAlAs modulation doped multilayer struct., optimum cond. and effective mobility conditions, LPE grown struct. 2-5456  
 GaAs-GaAlAs stripe laser, proton-isolated, with tilted facet reflectors 2-25035  
 GaAs-GaAlAs superlattices, band struct. calcs. 2-40784  
 GaAs-GaAlAs:Zn CVD layers, cryst. defect incorporation during growth 2-31635  
 GaAs-n-AlGaAs heterostructure grown by MBE, growth temp. effect on two-dimens. electron gas mobility 2-8867  
 GaInAs-AlInAs structures grown by molecular beam epitaxy 2-21456  
 Ga<sub>0.7</sub>In<sub>0.3</sub>As-Al<sub>0.48</sub>In<sub>0.52</sub>As heterojunction, MBE, modulation doped, electron mobility 2-46108  
 GaInAsP-InP chip, laser-polyimide/SiO<sub>2</sub> slab waveguide interconnection 2-49946  
 GaSb-AlSb-InAs polypeptide superlattices and multi-heterojunction characts. 2-1993  
 Gd(Cr,Al<sub>1-x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688  
 H<sub>2</sub>AlP<sub>2</sub>O<sub>7</sub>·2H<sub>2</sub>O, IR spectroscopic investigation of proton-containing groups 2-13464  
 H<sub>2</sub>O-H<sub>2</sub>PO<sub>4</sub>-AlPO<sub>4</sub> system, pressure-vol.-temp. behaviour, rel. to hydrothermal growth of AlPO<sub>4</sub> 2-25783  
 InAlAs/InGaAs MBE layer structs., ion beam anal. 2-35906  
 InAlAs-InGaAs interface, MBE, channelling anal. 2-12922  
 InGaP-InGaAlP double heterostructures, optically pumped laser action at 77K, MBE prep. 2-49750  
 KMg<sub>2</sub>[AlSi<sub>2</sub>O<sub>10</sub>]F<sub>2</sub> crystals, growth from melt, morphology and gas cavity distribution 2-8463  
 LiAlB<sub>4</sub>, crystal structure 2-45132  
 LiCl-AlCl<sub>3</sub> melt mixtures, viscosity determ. 2-21341  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-P<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub> system pyroceramics, props. 2-9436  
 LuAlB<sub>4</sub>, single cryst. growth from Al melt, struct. refinement 2-41510  
 Lu(Cr,Al<sub>1-x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688  
 MgAl<sub>2</sub>(OH)<sub>8</sub>, Mg<sub>2</sub>Al(OH)<sub>7</sub> and Mg<sub>2</sub>Al(OH)<sub>7-x</sub>(NO<sub>3</sub>)<sub>x</sub>, X-ray diffr. of cryst. struct. 2-45125  
 Na<sub>3</sub>AlF<sub>6</sub>, octahedral F complexes, X-ray absorpt. spectra 2-2372  
 Na<sub>3</sub>AlH<sub>6</sub>, cryolite type, Al-H bond lengths determ. by NMR (French) 2-36466  
 NaCl-AlCl<sub>3</sub>, thermodynamics 2-45591  
 NdAl<sub>1.67+0.67</sub>(B<sub>2</sub>O<sub>3</sub>)<sub>2</sub>O<sub>8</sub>, double metaborate cryst. struct. 2-50604  
 β-Si-Al-O-N, thermal expansion, meas. using dilatometry 2-50888  
 Si-Al-Zr-N-O, phase diagram determ. by expt. and thermodynamic calc. 2-27155  
 SiC-AlN, hot-pressed, fabrication and charact. 2-36817  
 α-SiO<sub>2</sub>:(AlO<sub>4</sub>/H<sup>+</sup>)<sup>+</sup>, mag. props. of centres by EPR 2-26742  
 α-SiO<sub>2</sub>:(AlO<sub>4</sub>/Li<sup>+</sup>)<sup>+</sup>, mag. props. of centres by EPR 2-26742  
 SiO<sub>2</sub>:(AlO<sub>4</sub>)<sup>+</sup>, mag. props. by EPR spectra 2-46374  
 α-SiO<sub>2</sub>:AlO<sub>4</sub>, mag. props. of centres by EPR spectra 2-26741  
 SrAlF<sub>6</sub> family, ferroelec. behaviour and phase transitions 2-31414  
 SrFe<sub>2</sub>O<sub>9</sub>:Al<sub>2</sub>O<sub>3</sub>, mag. meas., Al<sup>3+</sup> substituent effect, Mossbauer study 2-2170  
 T 2-49777  
 TbAl garnet, resonance Raman scattered light pulse, time evolution 2-5688  
 ThF<sub>4</sub>-AlF<sub>3</sub>-YF<sub>3</sub>-BaF<sub>2</sub> system glasses, with large optical transmission band, high chem. resist. (French) 2-13512  
 TiCl<sub>4</sub>-diethyl aluminium chloride catalyst, polymerisation of ethylene, polyethylene props. (Russian) 2-25271  
 TlAl(SO<sub>4</sub>)<sub>2</sub>·12H<sub>2</sub>O single crystals, Cr<sup>3+</sup> doped, EPR study 2-2123  
 Y<sub>3</sub>Al<sub>5</sub>O<sub>12</sub>, garnet, energies of dislocations 2-12593  
 YbAlB<sub>4</sub> and Yb<sub>2</sub>AlB<sub>4</sub>, single cryst. growth from Al melt, struct. refinement 2-41510  
 YbAlCu, press. and temp. depend. of mag. susceptibility 2-36308  
 ZnAlFeO<sub>4</sub>, ferrite, specific heat, thermal diffusivity 2-26069

**aluminosilicate glasses**

- boroaluminosilicate melt, formation of protective vitreocrystalline coatings 2-5051  
 fibre, structural changes during heating, oxide additives influence 2-5217  
 IR absorption, in 0.9-1.2 μm range, production 2-22192  
 medical glass, synthesis using mathematical expt. planning 2-22191  
 optical glasses, glass-forming systems, optical consts., review 2-25090  
 polyelectrolyte cements 2-9341  
 structural anal. 2-50552  
 Al<sub>2</sub>O<sub>3</sub>-CaO-SiO<sub>2</sub>-MgO glass, colour variation 2-2376  
 Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass system, glass struct. and decomp. model 2-25749  
 Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass system, later stage spinodal decomposition and metastable immiscibility 2-26064  
 B<sub>2</sub>O<sub>3</sub>-PbO-Al<sub>2</sub>O<sub>3</sub> glass, cooling rate dependence of SAXS spectra 2-41599  
 CaAl<sub>2</sub>Si<sub>2</sub>O<sub>8</sub>, anorthite, cryst. nucleation barrier, undercooling and glass crystn. expts. 2-1593  
 CaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, sintered ceramic, dielec. props. 2-9081  
 CaO-MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-H<sub>2</sub>O, quartz eclogite comp., phase relationships at 30 kbar, subduction zone magma implications 2-37849  
 CaO-MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> pyroxene glasses, catalysed crystn. using Cr<sub>2</sub>O<sub>3</sub>, nucleation rate, conc. and temp. depend. 2-40288  
 CoO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, AC susceptibility meas. 2-46300  
 Fe<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> based glasses, crystn. in ferromag. phase, effect of chem. comp. 2-25753  
 0.7K<sub>2</sub>O·0.3SiO<sub>2</sub>·0.4Al<sub>2</sub>O<sub>3</sub>·B<sub>2</sub>O<sub>3</sub>·2SiO<sub>2</sub>, phase separation phenomenon (Japanese) 2-12503  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, struct. state change of Cu<sup>II</sup> and Mn<sup>IV</sup> during crystn., ESR obs. 2-41190  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> system glasses, acousto-optical effectiveness, conc. depend. 2-41327  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-TiO<sub>2</sub>-(ZrO<sub>2</sub>), crystn., laser Raman spectroscopy 2-12491  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-TiO<sub>2</sub> elastic props., comp. depend., rel. to density and refr. index 2-13768

**aluminosilicate glasses continued**

- Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-TiO<sub>2</sub> system, phase separation kinetics at presatiation stage, small-angle X-ray scatt. 2-40560  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub>-SiO<sub>2</sub> and Li<sub>2</sub>O-K<sub>2</sub>O(Ag<sup>+</sup>)-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass ceramics, deform. rate influence on bending strength and failure 2-52046  
 Li<sub>2</sub>O-Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> ion exchanged glass, conc. depend. of refr. index gradient 2-41322  
 MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glasses, density and upper temp. limit of crystn. 2-25754  
 MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-TiO<sub>2</sub> glass, radiation induced paramag. centres 2-2133  
 Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, ion exchange strengthening, thermal shock resist. 2-13819  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>-Al<sub>2</sub>O<sub>3</sub>-(B<sub>2</sub>O<sub>3</sub>), bioglass, chem. comp., Vickers hardness, chemical durability (Japanese) 2-41774  
 Na<sub>2</sub>O-CaO-MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, strength props., for large dimension designs 2-31762  
 Na<sub>2</sub>O-SiO<sub>2</sub>-(Al<sub>2</sub>O<sub>3</sub>)-(B<sub>2</sub>O<sub>3</sub>), X-ray photoelectron spectra 2-51269  
 PbO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> system glasses, acousto-optical effectiveness, conc. depend. 2-41327  
 PbO-Nb<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> system, precipitation of ferroelec. PbNb<sub>2</sub>O<sub>6</sub> and dielec. props. of crystallised glasses (Japanese) 2-51917  
 PbO-SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> fritted glass, dielec. breakdown and device evaluation 2-21945  
 SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO-MgO-Na<sub>2</sub>O-ZnO glasses, impact resist. and Young's modulus, effect of ZnO 2-36946  
 SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-MgO-K<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-Fe<sup>3+</sup> glass-ceramic, CGW-9658, transport and reactivity of H<sub>2</sub> 2-22488  
 SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-K<sub>2</sub>O-RO glass, colourless container, chem. resist. 2-22351  
 SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO-MgO-Na<sub>2</sub>O-Fe<sub>2</sub>O<sub>3</sub> glass, ESR spectra, 300 to 700K 2-31268  
 SiO<sub>2</sub>-Li<sub>2</sub>O-CaO-Al<sub>2</sub>O<sub>3</sub>-Nd, energy transfer, radiationless quenching rate, fluorescence obs. 2-46723  
 SiO<sub>2</sub>-Na<sub>2</sub>O-CaO-Al<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>-MgO-SO<sub>3</sub> glass, chem. stability, electrochem. treatment effect 2-22349  
 SiO<sub>2</sub>-Na<sub>2</sub>O-CaO-MgO-Al<sub>2</sub>O<sub>3</sub>, soda lime glass, Faraday rot., energy gap determ. 2-26868
- a.m. (modulation)** see *amplitude modulation*  
**ambient temperature** see *temperature*  
**americium**  
 see also *nuclei with .....*  
 crystal structure, of high-pressure phase III 2-40319  
 M series, X-ray spectra 2-39352  
 sediments of Peru coastline, natural and radioactive fallout nuclides 2-52819  
 surface ionisation, ionisation pots. studied by mass spectra 2-17591  
<sup>241</sup>Am, biological availability in various freshwaters 2-42059
- americium compounds**  
 Am<sub>1+x</sub>Mo<sub>6</sub>Se<sub>6</sub>, cryst. struct., mag. and elec. props. 2-21087
- ammeters**  
 minicomputer calibration 2-33571
- ammonia**  
 ν<sub>2</sub> band, 2sQ transitions, identification and spectroscopic constants 2-49379  
 adsorbed on Pt flat (111) and stepped (557) surfaces, decomposition 2-2735  
 adsorbed on Ru (001), mol. conform. 2-5302  
 adsorption kinetics of NH<sub>3</sub> on Au surface studied by monitoring gas conc. using optoacoustic effect 2-52247  
 adsorption on Pt, visible optical reflectance study 2-40669  
 alkali metal-NH<sub>3</sub> solns., conc., CESR obs. 2-26745  
 alkali metal-NH<sub>3</sub> solutions, ESR at -65°C 2-13330  
 alkali metals, NH<sub>3</sub> solns. and vapours, phase separations and metal-nonmetal transition 2-8605  
 atmospheric conc. in Massachusetts, deposition on vegetation 2-23072  
 clusters, H bonding, EPEN/2 calcs. 2-813  
 conceptual designs for commercial OTEC-ammonia product plantships 2-9669  
 crystal, isotope effects, vibr. spectra, H exchange rates, IR and Raman study 2-36623  
 decomposition in nonequilibrium plasma chemical reactors, catalytic processes (French) 2-52249  
 desorption, electron stimulated, from Ru (001), ion angular distrib. 2-45725  
 determination as waste water and control using automatic anal. apparatus (German) 2-32149  
 dipole moments and polarisabilities, correlation effects, fourth order corrections 2-15730  
 dissociation, α-Al<sub>2</sub>O<sub>3</sub> catalyst carriers prod. 2-41569  
 double-resonance sub-Doppler spectroscopic study using a tunable-diode laser and CO laser 2-11530  
 DR 21 molecular cloud, clumping evidence from NH<sub>3</sub> (1,1) transition SHF obs. 2-23336  
 frost, reflectance spectra, astron. appl. 2-38122  
 gas, CO<sub>2</sub> laser light absorpt., optothermal detector optimisation appls. 2-43100  
 gas, spectrum determ. using opto-acoustic CO<sub>2</sub> laser spectrometer (Chinese) 2-23735  
 interstellar NH<sub>3</sub>, obs. in and around (Orion MC-1) 2-38273  
 inversion barrier struct. calc. by electron correl. 2-11393  
 ion structures and proton affinities calc. using FOGO method 2-43784  
 Kleinmann-Low Nebula, hot mol. core location, NH<sub>3</sub> lines obs. 2-23334  
 laser, 12-μm, Raman, pumped by low power CO<sub>2</sub> laser pulse 2-900  
 laser, far IR, intracavity, pumped by TE CO<sub>2</sub> laser 2-39675  
 laser, far IR, reson. pumping 2-15984  
 laser, optical pumping, lasing in fundamental band 2-15988  
 laser, optically pumped, amplification at 11.707 μm 2-25031  
 laser, optically pumped with common pump and lasing level, kinetic model 2-7749  
 laser, temp. characts. 2-44260  
 laser far IR system, isotopic CO<sub>2</sub> laser pumped <sup>15</sup>NH<sub>3</sub>, high power and efficiency 2-16021  
 laser lines, far IR, from <sup>14</sup>NH<sub>3</sub>, <sup>15</sup>NH<sub>3</sub> coincidences with CO<sub>2</sub>, N<sub>2</sub>O pump laser lines 2-49737  
 liquid, optical absorpt. spectrum of solvated electrons, isotope and temp. effects 2-5728  
 liquid solns., solute-solute interactions, vibr. Raman spectra 2-9153  
 in molecular clouds near galactic centre 2-28537  
 molecule, coherent picosec. active Raman spectroscopy nonreson. background suppression 2-34425



**ammonia continued**

- molecule, Doppler-free Stark spectrum 2-43110  
 molecule, electron-ion recombination coeff. 2-44118  
 molecule, IR diode laser heterodyne meas. 2-24699  
 molecule, local mode behaviour, mol. vibr., Morse oscillator model 2-11559  
 molecule, mol. electrostatic pots., net atomic charge model 2-19960  
 molecule,  $N_2$  matrix isolated, spin conversion, rot., vibr., fine struct. 2-20037  
 molecule, photolysis, NH photo fragment UV spectra 2-49450  
 molecule, power-broadened relax. parameters, line shapes, microwave transitions 2-34496  
 molecule, wall and intermolecular collisions, line broadening and relax., microwave transitions 2-24824  
 molecule adsorbate on  $SiO_2$  gel surface,  $Cu^{2+}$  electron spin echo 2-9028  
 molecules, IR absorpt. bands, ab initio and localised MO calcs. 2-43906  
 nonaqueous electrolyte solns., props. in microwave and far IR region 2-9219  
 nonaqueous solvents, excess electrons 2-13632  
 oxidation to NO in solid electrolyte fuel cell 2-22600  
 photolysis of  $NH_3$ -CH<sub>4</sub> mixtures for planetary atmos. conditions 2-53150  
 protonation energy, solvent effects, MINDO/3 and MNDO calcs. (German) 2-49295  
 radiolytic decomposition by electron irradi., effects of NO and  $O_2$  2-31936  
 removal from dialysate in oxygenator, flow rates effects 2-41939  
 SHF emission from southern sky, sources 2-48296  
 steam turbine condenser brass tube corrosion damage anal. 2-52118  
 supersonic molecular beams, vel. anal. 2-16345  
 synthesized from  $H_2$  produced using nuclear process heat, use as multipurpose energy vector nuclear power 2-47531  
 turbine design for OTEC plants 2-6159  
 $BH_3 + NH_3 \rightarrow BH_3NH_3$  binding energy ab initio calculations 2-15713  
 Cu-Ni alloy resistance to  $NH_3$  corrosion in simulated steam condenser conditions 2-37007  
 Li- $NH_3$  solns., low freq. Raman spectra 2-2228  
 $ND_3$  and  $NH_3$ , UV photoelectron transitions, pot. curves by ab initio CI calcs. 2-49518  
 $NH_3$ - $O_2$  catalyst system, pre-ignition/pre-extinction phenomena detection by modified DTA 2-6079  
 $NH_3$ , INDO CHF calcs. of spin-spin coupling const. involving  $H^+$  2-11404  
 $NH_3$  in  $H_2$ , absorption coefficient at laser wavelength, temp. depend. 2-7553  
 $^{14}NH_3$ , far IR CW Raman and laser gain 2-11685  
 $NH_3$ - $Li^+(Na^+)(Be^{2+})(Mg^{2+})$ , complex form., electronic struct., FSGO method 2-41918  
 $NH_3$ -trifluoromethane-d, TEA  $CO_2$  laser induced D-H exchange 2-47361  
 $NH_3 + Ar^+(Kr^+)(Xe^+)$ , energy disposal in thermal energy CT reactions 2-44084  
 $NH_3 + Fe$ , reaction in  $NH_3$  and  $NH_3/Xe$  matrices,  $^{57}Fe$  Mossbauer study 2-19984  
 $NH_3 + H^+$ , protonation energies, correl. corrections, basis set depend. 2-9528  
 $NH_3 + He$ , bending mode and inversion motion interaction pot., vibr. depend. 2-20159  
 $NH_3 + uranyl$  formate reaction 2-2710  
 $NH_3 + NH_3$ , charge transfer, H transfer, cross sections photoelectron obs. 2-9542  
 $(NH_3)_n$  ( $n=3-6$ ), dipole moment, N-N dist., polarisation model 2-44135  
 $NH_3H_2O$ , isotope effects, vibr. spectra, H exchange rates, IR and Raman study 2-36623  
 Na- $NH_3$  solns., low freq. Raman spectra 2-2228  
 Na- $NH_3$  solution, phase coexistence above consolute point 2-21287

**ammonia clocks see atomic clocks****ammonium compounds**

- ammonium sulphate-water-ethanol-benzene mixture, ultrasonic absorpt. near tricritical point 2-16722  
 aqueous solutions, light scatt. obs. of phase transition on electrolyte addition 2-16769  
 determination as waste water and control using automatic anal. apparatus (German) 2-32149  
 hexahalometallates, low temp. transitions, IR spectra 2-5676  
 hydrogen oxalate, domain struct., microscopic obs. 2-2208  
 lithium ammonium tartrate cryst., dielec. and elastic props. 2-36494  
 motionally narrowed NMR line shape 2-41222  
 $(NH_4)_2FeF_6$ , low temp. phase, remanent polarisation (French) 2-31371  
 $NH_4H_2PO_4$  electrooptic light modulators construction, performance, and modulation possibility 2-49888  
 tartrate, pyroelectric luminesc. 2-31567  
 $[Na_1-(NH_4)_2]SO_4$ , phase transition, IR spectroscopic study 2-21294  
 $[Ni(NH_3)_6](NO_3)_2$ , neutron scatt. study of  $NH_3$  reorientations 2-30542  
 Al, chem. polishing in  $NH_4HF_2-HNO_3$  acid 2-9472  
 $\beta-Al_2O_3 \cdot NH_4^+$ ,  $H_2O^+$ , proton motion and relation times 2-16855  
 $\beta-Al_2O_3 \cdot NH_4^+$ , proton motion and relation times 2-16855  
 $\beta-Al_2O_3 \cdot NH_4^+$ , defect struct. and low dimensionality effects, proton NMR study 2-26773  
 $\beta-Al_2O_3 \cdot NH_4^+$ , paramag. impurities and proton motion, EPR and NMR 2-31275  
 $\beta-Al_2O_3 \cdot NH_4^+$ , prep. cryst. struct., and thermal decomp. 2-25847  
 $\beta-Al_2O_3 \cdot NH_4^+$ , vibr. spectra 2-31509  
 $\beta''-Al_2O_3 \cdot NH_4^+ \cdot H_2O^+$ , paramag. impurities and proton motion, EPR and NMR 2-31275  
 $\beta-Al_2O_3-Na-O-NH_4^+$ , ion exchange and thermal evolution 2-27432  
 $Fe(SO_4)_2(NH_4)_2 \cdot 6H_2O$ , Mossbauer studies under appl. elec. field 2-26798  
 $KBiCrO_4Cr_2O_7 \cdot 1.5H_2O$ , synthesis and crystallographic study (French) 2-40326  
 Li- $NH_3$  system, phase diagram exam. in  $Li(NH_3)_3$  cpd. region 2-17669  
 LiI- $NH_4I(H_2O)$ , conductivity and phase equilibrium 2-21372  
 $LiNH_4SO_4$  ferroelectric cryst., elec. cond., temp. depend. 2-36036  
 $Li_2SO_4(NH_4)_2SO_4$ , cryst. and amorphous, phase diagram and ionic cond., DTA and X-ray diff. obs. (Chinese) 2-22201  
 $MnSO_4(NH_4)_2SO_4 \cdot 6H_2O$ , Tutton salt, thermal cond. and Kapitza resist. 2-35881  
 $ND_4Cl$ , effect of press. on  $\lambda$ -transitions 2-5219  
 $(ND_4)_2O_4$ , phase transition at high temp. from dielectric studies 2-8607  
 $(ND_4)_2SO_4$ , elec. cond., dielec. const., and phase transitions, -196 to  $50^\circ C$  2-36570  
 $NH_4^+$  cations, membrane transport using macrocyclic carriers 2-41934  
**ammonium compounds continued**  
 $NH_4^+$ , diamagnetic shielding tensor, struct. depend., MNDO and INDO calcs. 2-34300  
 $NH_4^+$  in  $NH_4Cl$ , X-ray K emission spectra,  $^2T_2$  valence state, Jahn-Teller effect 2-34430  
 $(NH_4)_2$ , ferroelec., commensurate-incommensurate transition, X-ray study 2-30431  
 $(NH_4)_2ZnCl_4$ , phase transitions, Raman and Brillouin scatt. study 2-31473  
 $NH_4Ag_2$ , superionic films, photolysis study 2-41912  
 $NH_4AlF_6 \cdot Fe^{3+}$ , order-disorder transition, EPR study 2-50849  
 $NH_4AlF_6 \cdot Fe^{3+}(Cr^{3+})$ , order-disorder transition, ESR investig. 2-40528  
 $(NH_4)_2AlF_6$ , low temp. phase, remanent polarisation (French) 2-31371  
 $(NH_4)_2Al(SO_4)_3$ , alum. crystn. spectroscopic determ. of trace contaminants 2-9584  
 $(NH_4)_2BeF_4$ , ferroelectric phase transitions, X-ray dilatometric study 2-21954  
 $(NH_4)_2BeF_4$ , ferroelec., optical activity and birefringence 2-31446  
 $NH_4BiCrO_4Cr_2O_7 \cdot 1.5H_2O$ , synthesis and crystallographic study (French) 2-40326  
 $NH_4Br$ , nuclear spin dipolar and rot. frame Zeeman relax. time, cross relax. and temp. effect 2-1874  
 $NH_4Br$ , phase transitions with coupled order parameters 2-48663  
 $NH_4Br$ , US studies of attenuation and dispersion near order-disorder transition 2-30535  
 $NH_4Ca_2Nb_2O_{10}$ , sheet perovskite (French) 2-35454  
 $NH_4Cl$ , effect of press. on  $\lambda$ -transitions 2-5219  
 $NH_4Cl$ , nuclear spin dipolar and rot. frame Zeeman relax. time, cross relax. and temp. effect 2-1874  
 $NH_4Cl$ , Raman study of pseudospin interaction with libration density of states (Russian) 2-9156  
 $NH_4Cl$  solid solns., thermodynamic props. near tricrit. points 2-35711  
 $NH_4Cl$ , two-phonon bound state calcs. 2-45440  
 $NH_4Cl:Ti$ , excitation and emission spectra, fluoresc. obs. 2-49513  
 $NH_4Cl-H_2O$  solution solidification, gravity-related flow study using laser shadowgraph and schlieren systems 2-25454  
 $NH_4Cl(Br)$ , light scatt. study of dynamic critical phenomena 2-41377  
 $NH_4Cl_1-Br_3$  solid solns., thermodynamic props. near tricrit. points 2-35711  
 $NH_4ClO_4$ , rot. tunneling, neutron spectra reanalysis 2-1412  
 $NH_4ClO_4-KClO_4$  solid soln., mechanoformation, thermal behaviour and combustion 2-9301  
 $(NH_4)_2CuBr_4 \cdot 2H_2O$ , 3-D Heisenberg ferromag., direct expt. determ. of gap exponent 2-26646  
 $NH_4Fe^{II}Fe^{III}F_6$ , ordered pyrochlore, antiferromag., cryst. struct. study 2-25822  
 $NH_4H_2AsO_4$ , antiferroelectric, behaviour of free radicals in phase transition (French) 2-36566  
 $NH_4H_2AsO_4$ , freq. doubling of CW ring dye laser, UV transitions obs. in Eu 2-673  
 $NH_4H_2PO_4$ , comparison between gel and solution grown crystals 2-27069  
 $NH_4H_2PO_4$ , cryst. growth from soln. surface diffusion model, activation energy, supersaturation 2-50564  
 $NH_4H_2PO_4$  monocrystals, growth rate of (100) faces in mag. fields 2-1422  
 $NH_4H_2PO_4$ , nucleation from aqueous soln., impurity effect 2-35413  
 $NH_4H_2PO_4$ , overdamped modes at 300K in IR refl. spectra 2-51597  
 $NH_4H_2PO_4-H_2O$  system, two-dimensional nucleation, crit. size and crit. free energy 2-12523  
 $NH_4H_2PO_4(AsO_4)$  and  $ND_4D_2PO_4$ , antiferroelec. transitions, pseudospin model, Green's function theory 2-46514  
 $(NH_4)_2HS_2VO_4$  ferroelastic, EPR study of twin struct. 2-41180  
 $(NH_4)_2(HSO_4)_2$ -type crystals, phase transitions and ferroelectricity (Japanese) 2-5222  
 $NH_4HSO_4$ , cryst. struct. at room temp. 2-35473  
 $NH_4HSO_4$ , domain struct., microscopic obs. 2-2208  
 $NH_4HSO_4$ , ferroelectric props. near phase transition temp. 2-9098  
 $NH_4HSO_4$ , influence of hydrostatic press. on phase transition 2-36571  
 $NH_4HSO_4$ , partly deuterated, ferroelectric props. 2-31425  
 $NH_4HSO_4$ , phase transition at 261K, US study, permittivity and polarisation meas. 2-36569  
 $NH_4I$ , nuclear spin dipolar and rot. frame Zeeman relax. time, cross relax. and temp. effect 2-1874  
 $NH_4I$ , partially disordered cryst., two-phonon density of states 2-50806  
 $NH_4I$ , rectangular parallelepiped nuclei, edge energy 2-45086  
 $NH_4IO_4$ , proton relax. for  $NH_4^+$  tunnelling in rotating frame 2-46415  
 $NH_4IO_4$ , Scheelite struct., cation electric field gradients, quadrupole coupling consts. 2-13030  
 $(NH_4)_2InF_6$ , electronic struct., X-ray spectra and XPS 2-40781  
 $(NH_4)_2In(SO_4)_2$ , high temp. form, monoclinic-trigonal transition 2-25799  
 $NH_4LiSO_4$ , ferroelec. phase transition, Brillouin scatt. study 2-17421  
 $NH_4MnF_6$ , optical and EPR spectra, 80 to 300K 2-46637  
 $(NH_4)_2MoO_5$ , polarised X-ray absorpt. spectra, SCF  $X\alpha$  MSW calc. and cryst. struct. 2-36733  
 $NH_4NH_3SO_4$  single cryst., Raman spectra study 2-51576  
 $NH_4NO_3$ , disordering of  $NO_3^-$  ions in phases I, II, and III, Raman scatt. study 2-26045  
 $NH_4NO_3 \cdot CuO$ , struct. phase transitions, EPR study 2-51451  
 $(NH_4)_2O \cdot WO_3 \cdot H_2O$ , paratungstate and metatungstate, thermal decomp.,  $20-500^\circ C$  2-31915  
 $NH_4OH + MgSO_4$ , periodic precipitation processes, temporal and spatial sequences 2-52243  
 $(NH_4)_2P_2S_7 \cdot 2H_2O$ , vibr., normal coordinate anal. of anion, IR and Raman study 2-2240  
 $(NH_4)_2PbCl_6$ ,  $^{135}C$  NQR temp. depend. 2-34444  
 $NH_4ReO_4$ , low freq. Raman spectra modes, temp. depend. 2-17467  
 $NH_4ReO_4$ , Raman spectrum, low freq. mode temp. depend. 2-2275  
 $(NH_4)_2SO_4$ , elec. cond., dielec. const., and phase transitions, -196 to  $50^\circ C$  2-36570  
 $(NH_4)_2SO_4$ , ferroelectric, internal vibr., polarised Raman spectrum 2-36653  
 $(NH_4)_2SO_4$ , ferroelectric transition, EPR study 2-46513  
 $(NH_4)_2SO_4$ , phase transition at high temp. from dielectric studies 2-8607  
 $(NH_4)_2SnCl_6$ ,  $^{135}C$  NQR temp. depend. 2-34444  
 $(NH_4)_2TeO_6$ , crystallographic study (French) 2-12565  
 $NH_4Ti(OH)(XO_4)$ , X=S, Se, lattice constants, X-ray diff. data (French) 2-40337  
 $(NH_4)_2UO_2Cl_4 \cdot xH_2O$ , polarised luminescence, IR and Raman spectra 2-13546  
 $(NH_4)_2ZnCl_4$ , ferroelec. phase transitions, dielec., thermal, and X-ray diff. meas. 2-2201



**ammonium compounds continued**

- $\text{NH}_4\text{ZnF}_3$ ,  $\text{NH}_4^+$  rotational motion, NMR study 2-25769  
 $(\text{NH}_4)_2[\text{Sb}_2\text{F}_{12}(\text{SO}_4)_3]$ , X-ray cryst. struct. determ. 2-50607

**amorphisation**

- ion bombardment induced phase changes in solids, anal. of nonlinear thermal diffusion processes 2-16686  
 metal-Si, thin film, laser induced melting and quenching process, Au, Pt, Pd, V and Nb silicides 2-51061  
 quartz, crystalline, elastic props. amorphisation effects., neutron irradi. 2-21186  
 quartz, crystalline, gamma-neutron irradiated, electrooptical anharmonicity, defects effect 2-13454  
 SOS, heteroepitaxial, electronic characterization by surface photovoltage spectroscopy 2-41030  
 Cu-Zr, amorphous, bulk and surface electron struct., positron annihilation study 2-51743  
 GaAs, ion implantation and low temp. epitaxial regrowth 2-8532  
 InP, amorphisation and low temp. recrystallisation 2-16665  
 InP:Se<sup>-</sup>, ion implanted, Rutherford backscatt. and ellipsometry 2-12617  
 Ni-B-Si-Cr brazing alloy, rapidly solidified surface melts 2-16935  
 Ni-Pd-P, glass forming ability (Japanese) 2-5054  
 Si, ion implantation, amorphisation, lattice displacement criterion 2-45221  
 Si polycrystalline film, Ge ion implantation effect on amorphization and recryst. 2-21474  
 Si:B, ion implanted, defect formation during annealing 2-45179

**amorphous-crystalline transformations** *see crystallisation***amorphous magnetic materials** *see magnetic properties of amorphous substances***amorphous semiconductors**

- see also chalcogenide glasses; electrical conductivity of amorphous semiconductors and insulators; insulators*  
 atomic and electronic structures of amorphous systems 2-40771  
 binary semiconductor alloys, liq. and amorphous, bonding 2-8436  
 book 2-42804  
 C:Si:H, amorphous, MOS solar cell, fundamental tunnelling process 2-46139  
 C:Si:H, amorphous, photoluminesc. and photocond., fatigue and Staebler-Wronski effects, irreversibility 2-46731  
 carrier recombination 2-46017  
 conference, Grenoble, France, (July 1981) 2-38359  
 continuous random networks, structural ordering related to chemical bonds 2-45031  
 density of localised states, linear specific heat, Anderson model 2-40836  
 disorder induced density of states within the band gap, partition function 2-40749  
 dispersive transport theory 2-40900  
 electronic density of states calc., liq. metal model approx., results (Russian) 2-8749  
 electronic density of states calc., liq. metal model approx., theory (Russian) 2-1816  
 electronic props., appl. to solar photovoltaic cells (Dutch) 2-13074  
 electrophotography, appl. 2-43124  
 EPR, review, 1978-79 2-26727  
 film, laser annealing and theory of photostimulated structures 2-25922  
 Hall effect due to hopping cond. in localised states 2-40935  
 Hall mobility in presence of long range pot. fluctuations 2-1930  
 homopolar amorphous surface, struct. and electronic props. 2-1982  
 hopping and AC cond., Hall mobility, master eqn. 2-40878  
 hopping cond. in solids exhibiting semicond.-insulator transition, freq. depend. 2-40894  
 hot carrier thermalization, deep trapping and recombination 2-46016  
 hydrogenated film, optical recording 2-49681  
 localised states, exciton effects on electroabsorption 2-41328  
 minimum metallic cond. and conduction near a mobility edge 2-40789  
 mobility distrib. in drift of carriers 2-17070  
 one-dimensional disordered system, excited states lifetime 2-21600  
 organotin films, amorphous, semiconductive and conductive, form. and props. 2-41532  
 photoconductivity, intensity and temp. depend. theory 2-40958  
 photoelectronic geminate and nongeminate recombination 2-46057  
 photogenerated carrier thermalisation and recomb. 2-5416  
 photoinduced absorpt., subpicosecond and picosecond relax. 2-44410  
 physics researches 2-45042  
 plasma deposited amorphous films, props. governed by plasma parameters 2-51041  
 pressure-induced effects and phase transitions 2-45044  
 progress in large area photovoltaic devices based on amorphous silicon alloys 2-22629  
 semiconductor glass, thermal behaviour, thermogravimetric anal., pyrolysis effect 2-8440  
 semiconductors at IBM: physics, novel devices, and materials science, review 2-36031  
 short-range order parameters 2-1407  
 a-Si:H photovoltaic cells conversion efficiency limiting parameters anal. 2-27639  
 Si:Sn, amorphous, short range order, <sup>119</sup>Sn Mossbauer spectra study 2-46449  
 Si, hot carrier relax., optical picosecond study 2-46529  
 Si thin films, ion beam profiling of gettered O 2-8538  
 single polaron hopping contrib. to AC cond. 2-40903  
 structure using curved spaces 2-40271  
 tetrahedral amorphous semiconductors, disorder types and electronic structures 2-45045  
 tetrahedrally bonded, Hall effect sign anomaly, chem. bond orbital approach 2-13100  
 transition metal oxides, amorphous, elec. cond. and electrochromic props., review 2-45973  
 transport properties, coherent pot. and random walk methods 2-40898  
 Ag-Te, amorphous semicond. film, prep. by diffusion and elec. cond. 2-45772  
 As amorphous film, UHV sublimed, elec. and optical props. 2-46172  
 As, amorphous semiconductor, review 2-45037  
 As, defects, theoretical study 2-1859  
 As<sub>2</sub>S<sub>3</sub>, non-crystalline, X-ray exam. of laser radiation effects on struct. (Russian) 2-1515  
 As<sub>2</sub>Se<sub>3</sub>, Ge<sub>2</sub>Se<sub>6</sub>Si<sub>2</sub>, amorphous, transient switching process, simple analytical explanation 2-8840  
 BaO-V<sub>2</sub>O<sub>5</sub>:Mn(Fe)(Co)(Cr)(Cu) glass, elec. cond. and EPR spectra 2-46365

**amorphous semiconductors continued**

- C, amorphous, dangling bonds defects, g-values of ESR signal 2-2134  
 C:H, amorphous, elec. and optical props. 2-40912  
 C:H(B), amorphous films, thermopower, elec. cond. 2-46178  
 Cd<sub>3</sub>As<sub>2</sub>, amorphous films, local atomic structure, radial distrib. function, electron diffr. obs. 2-25745  
 Cd<sub>3</sub>As<sub>2</sub>, amorphous films, structural, electrical and thermoelectric props. 2-26399  
 Cd<sub>3</sub>As<sub>2</sub>, amorphous films, elec. transport props. 2-40911  
 Cd<sub>3</sub>As<sub>2</sub>, thin films, Shubnikov de Haas oscils. in Hall volt. and magnetoresistance 2-26420  
 GaAs amorphous films, EXAFS, optical and cond. meas. (French) 2-46826  
 GaAs:Cr amorphous film, hopping conduction 2-41032  
 GaAs:H, amorphous, RF sputtering and optical props., H<sub>2</sub> partial press. effect 2-40730  
 GaP amorphous films, EXAFS, optical and cond. meas. (French) 2-46826  
 GaP amorphous thin films, struct. and optical props. 2-5329  
 GaP films, amorphous and cryst., core levels, disorder effects, XPS and AES 2-46173  
 GaSb amorphous film, flash evaporated, electronic props. 2-46174  
 GaSb amorphous films, EXAFS, optical and cond. meas. (French) 2-46826  
 Ge amorphous, annealing effect, struct. modelling 2-45055  
 Ge, amorphous, dangling bonds defects, g-values of ESR signal 2-2134  
 Ge, amorphous, elec. props. 2-17084  
 Ge, amorphous, electronic struct., CPA study 2-12959  
 Ge, amorphous, hopping cond. mechanism in strong elec. field 2-26387  
 Ge, amorphous, press. induced metal-semiconductor transitions 2-40790  
 Ge, amorphous, props. 2-40772  
 Ge, amorphous, solid-phase epitaxial crystn. on Si (100) 2-12932  
 Ge, amorphous, transition temp. and heat of crystn., DSC determ. 2-8435  
 Ge, amorphous and single crystal, scattered-ion yield enhancements near 180°, reversibility effects 2-46853  
 Ge amorphous film, defects study, SAW technique 2-35874  
 Ge amorphous film, laser induced crystallisation 2-16595  
 Ge, amorphous UHV deposited films, struct., elec. and optical props. 2-40732  
 Ge, DC hopping cond., Mott T<sup>-1/4</sup> law from rate eqn. formalism 2-13071  
 Ge, EXAFS study 2-5772  
 Ge, electronic struct., quantitative disorder effect 2-21495  
 Ge film, amorphous, vacuum deposited, internal stress and Young's modulus (Japanese) 2-26264  
 Ge film, laser processing, explosive crystn., liq. layer existence 2-45265  
 Ge film, scanned laser crystn., phase boundary kinetics meas. 2-45264  
 Ge, laser-induced metastable states 2-45895  
 Ge:H, amorphous film, interaction of US phonons with defects 2-26011  
 Ge:H, amorphous, AC loss at audio freq., electron tunnelling model 2-40897  
 Ge:H, P, amorphous, US phonon interaction with donor impurities 2-45482  
 Ge:Li film, amorphous, electret effect 2-17395  
 Ge:Te, crystalline and amorphous, Mossbauer study of disorder 2-41238  
 Ge-Bi(Sb), amorphous, elec. props. 2-17084  
 Ge<sub>1-x</sub>C<sub>x</sub>, ESR g-values due to dangling bonds, EHT calc. 2-36430  
 GeH<sub>4</sub>, amorphous film, defects study, SAW technique 2-35874  
 GeS(Se), amorphous, local struct. EXAFS, XPS studies 2-45032  
 GeS(Se)(Te), amorphous, electronic states calcs. 2-40764  
 GeSe, thin films, laser-induced phase transition 2-5762  
 Ge<sub>1-x</sub>Si<sub>x</sub>, amorphous, transition temp. and heat of crystn., DSC determ. 2-8435  
 Ge<sub>2</sub>Si<sub>100-x</sub>, amorphous films, crystn. on SiO<sub>2</sub> growth kinetics 2-5327  
 Ge<sub>2</sub>Si<sub>100-x</sub>, amorphous layers, heterostruct. fabrication by solid phase growth 2-8736  
 InAs:N<sub>2</sub><sup>+</sup> ion-implanted amorphous film prep., electrical conductivity and Hall mobility 2-8533  
 InP, amorphisation and low temp. recrystallisation 2-16665  
 InP, ion-implanted, CW laser annealing, amorphous layer recrystallisation 2-5143  
 In<sub>2</sub>S<sub>3</sub> polycrystalline and amorphous film, manufacture and appls. (Russian) 2-1790  
 InSb:N<sub>2</sub><sup>+</sup> ion-implanted amorphous film prep., electrical conductivity and Hall mobility 2-8533  
 InSe, cryst. and amorphous, elec. and photoelectrical props. 2-51225  
 InSe film, short-range order, elec. cond. and opt. absorpt. edge 2-40712  
 Mo<sub>2</sub>Ge<sub>1-x</sub>, amorphous film, elec. transport and struct. 2-40913  
 P, amorphous, obs. of bound exciton and distant pair resonances 2-17370  
 P, amorphous, time-resolved luminesc. meas. 2-46735  
 P, amorphous red, localised states, photolum. and ESR studies 2-46739  
 P, amorphous semicond., sputtered, optical absorption meas. 2-13581  
 P, amorphous semiconductor, review 2-45037  
 P, defects, theoretical study 2-1859  
 P sputtered, amorphous, optical absorption and struct. order 2-46802  
 P<sub>2</sub>O<sub>5</sub>-FeO-V<sub>2</sub>O<sub>5</sub> glass, internal friction and elec. cond. 2-1907  
 P<sub>2</sub>Se<sub>3</sub>, glassy chalcogenide semiconductors, localised states, photoluminesc. meas. 2-17523  
 PrO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub> glasses, elec. props. rel. to oxidation and red. treatments, glass form. range 2-13072  
 Sb, amorphous semiconductor, review 2-45037  
 Sb, defects, theoretical study 2-1859  
 Se, amorphous, deep traps, activation energy, TSC meas. 2-13014  
 Se, amorphous, EXAFS study 2-16594  
 Se, amorphous, electroabsorpt., polarised light anisotropy 2-46544  
 Se, amorphous, single polaron hopping contrib. to AC cond. 2-40903  
 Se, amorphous film, monostable switching, microwave noise 2-13146  
 Se, amorphous film, photostruct. fatigue 2-21624  
 Se amorphous film, spectral memory of electron work function 2-17143  
 Se, amorphous films, crystn., elec. cond. study 2-45038  
 Se film, amorphous, localised states, optical DLTS meas. 2-45899  
 Se film, amorphous, vacuum-evaporated, X-ray radial distrib. function anal. 2-16972  
 Se film, amorphous to crystalline transition, thickness depend. 2-40720  
 Se film, glass transition temp. depend. on heating rate and ageing 2-12756  
 Se film, Raman scatt. study 2-5683  
 Se film, vapour deposited, optical loss as meas. of crystallinity 2-36724  
 Se, glassy, γ-irrad., struct. relax. 2-21036  
 Se layers, electroradiographic, quantum yields (German) 2-43118



## amorphous semiconductors continued

- Se, localised electron states, xerographic spectroscopy 2-45896  
 Si 2-45226  
 Si, amorphous, bibliographies 1965-1980 2-22625  
 Si, amorphous, dangling bonds defects, g-values of ESR signal 2-2134  
 Si, amorphous, dangling bond site dehybridisation, light-induced metastable states 2-21497  
 Si, amorphous, ESR studies, review 2-31284  
 Si, amorphous, electron bombardment induced conductivity 2-13062  
 Si, amorphous, electronic density of states, correlation effects influence 2-45815  
 Si, amorphous, electronic struct., CPA study 2-12959  
 Si, amorphous, gap states and band tail absorption, direct meas. by const. photocurrent method 2-1954  
 Si, amorphous, hopping cond. mechanism in strong elec. field 2-26387  
 Si, amorphous, ion implanted, refractive index, thermal annealing effects 2-51537  
 Si, amorphous, K, Rb, and Cs atom diffusion 2-45624  
 Si, amorphous, molecular orbital selfconsistent field calc. 2-45814  
 Si, amorphous, national photovoltaic program 2-37342  
 Si, amorphous, new fabrication technologies 2-46923  
 Si, amorphous, optical gap and refractive index (*French*) 2-9211  
 Si, amorphous, p-type hydrogenated, for solar cells 2-37343  
 Si, amorphous, pattern laser annealing by pulsed laser 2-17578  
 Si, amorphous, photolum., influence of excitation density and n-type doping 2-46734  
 Si, amorphous, photovoltaic devices, device physics and optimum design 2-46076  
 Si, amorphous, plasma deposited and CVD coatings, ion implantation, elec. cond. and photoluminesc. 2-40905  
 Si, amorphous, prep. by ion implantation, optical reflectivity 2-17436  
 Si, amorphous, press. induced metal-semiconductor transitions 2-40790  
 Si, amorphous, props. 2-40772  
 Si, amorphous, rate of CW laser induced solid phase epitaxial regrowth 2-21451  
 Si, amorphous, solar cells, materials, assessment, internal field, hole transport and lifetime 2-42010  
 Si, amorphous, solar cells, industrialisation 2-42011  
 Si, amorphous, time resolved optical spectroscopy, review 2-46732  
 Si, amorphous, transition temp. and heat of crystn., DSC determ. 2-8435  
 Si, amorphous, vacuum deposited coating, annealing, EPR and TEM study 2-26244  
 Si, amorphous and crystalline, positron annihilation studies using Doppler broadening techniques 2-51739  
 Si amorphous film, laser crystallisation (*French*) 2-16970  
 Si amorphous film, prep. by CVD, elec. props. 2-2446  
 Si amorphous film, props. control by control of plasmachemical prep. processes, use in solar cells 2-36799  
 Si amorphous film on  $\text{Si}_3\text{N}_4$ /glass substrate, crystallisation as function of CW laser scan speed 2-50707  
 Si amorphous film on  $\text{SiO}_2$ , crystn. by CW laser irradi. 2-51013  
 Si, amorphous films, compositional and structural characterisation techniques 2-45043  
 Si amorphous films, evaporated and sputtered, annealing and hydrogenation 2-45771  
 Si, amorphous films, explosive crystn. in solid and liq. phases 2-40269  
 Si amorphous films deposited on substrates, using non-equilibrium plasma jet 2-51826  
 Si amorphous layer induced by UV laser pulse, laser induced oxidation via O trapping 2-5975  
 Si amorphous p-i-n junction, drift type photovoltaic effect 2-46107  
 Si amorphous RF sputtered coating, photocond., optical and EPR props. 2-40722  
 Si, amorphous thick film, conductivity as a function of spin conc. 2-40902  
 Si, amorphous thin-layers production and appls. (*German*) 2-46943  
 Si, amorphous-crystalline transition, thermodynamic criterion 2-45569  
 Si barrier hydrogenated amorphous, in photosensitive Josephson junction 2-31073  
 Si, bipolaronic ground-state and dangling-bond clusters 2-40846  
 Si,  $\text{CF}_4$  plasma etching 2-36798  
 Si, CVD growth, struct., optical, and elec. props. 2-40274  
 Si, DC hopping cond., Mott  $T^{-1/4}$  law from rate eqn. formalism 2-13071  
 Si, defects, localised states, Staebler-Wronski effect, Meyer-Neldel rule 2-40837  
 Si, dopant level depths 2-40845  
 Si, electrical cond. and thermoelec. power 2-40917  
 Si, electrodeposition from  $\text{SiHCl}_3$  solns. in aprotic solvents 2-27103  
 Si, electronic struct., quantitative disorder effect 2-21495  
 Si, energy gap determ. from optical meas. 2-13437  
 Si film, amorphous doped, deposition mechanism in  $\text{SiH}_4$  plasma 2-31639  
 Si film, crystallisation 2-50549  
 Si, film, plasma CVD (*Japanese*) 2-13654  
 Si films, CVD, amorphous and polycryst., cond. mechanism 2-46171  
 a-Si films, heavily doped, glow discharge, AC conduction 2-45989  
 a-Si, glow discharge, fatigue effect in luminesc. at low temp. 2-46755  
 Si, glow discharge film, density of states, MOS struct. capacitance determ. 2-51076  
 Si, HF plasma-ion sputtered, struct. parameters 2-40709  
 Si, implanted, phase transitions produced by pulsed laser or electron irradi. 2-45283  
 Si, ion implanted, amorphous, ultrashort pulse laser annealing 2-45266  
 Si, laser annealed, structural study 2-25925  
 Si, laser heated, nonlinear dynamic heat transport, carrier diffusion effect 2-2380  
 Si, laser-induced amorphous, adsorpt. of O, expt. study 2-45268  
 Si, laser-induced metastable states 2-45895  
 a-Si, new photovoltaic devices, review 2-46077  
 a-Si P-I-N solar cells, effect of F on performance 2-37312  
 a-Si P-I-N solar cells, field and light depend. effects, model 2-42018  
 Si,  $p^+$ -i-n $^+$  junction, injection electroluminesc. and photoluminesc. 2-46769  
 Si p-i-n solar cells, stability tests 2-27701  
 Si, picosecond laser annealing 2-25926  
 Si, plasma deposited amorphous films, props. governed by plasma parameters 2-51041  
 Si polycrystalline film, Ge ion implantation effect on amorphization and recrystn. 2-21474

## amorphous semiconductors continued

- Si Schottky barrier structs., reactively sputtered amorphous, effect of H on diode props. 2-17158  
 Si, self-implanted amorphous layers, swept-line electron beam annealing 2-50713  
 Si, solar cell, computer simulation 2-52342  
 Si, solar cell, p-i-n struct., stability 2-42003  
 a-Si, solar cells, fabrication processes advances, review 2-47498  
 Si solar cells, min. photovoltaic module cost projections, realistic comparison 2-37314  
 Si solar cells, state of the art review 2-42009  
 Si, trap-controlled dispersive transport and exponential band tails 2-40964  
 Si, Z 2-52341  
 a-Si:Ar RF sputtered films, elec. and optical props., effect of Ar 2-40736  
 Si:B, amorphous, profile distortions and at. mixing in SIMS anal. 2-45236  
 Si:B, As, P, amorphous, ion implanted, epitaxial regrowth, compensating impurity effect 2-51014  
 Si:B, H CVD film, hydrogenation effect, elec. cond. and ESR meas. 2-40906  
 Si:BF<sub>3</sub><sup>+</sup>, amorphous, elec. activation and impurity redistribution during pulsed laser annealing 2-45254  
 Si:B(P), laser chemically doped, elec. props. 2-21579  
 Si:F, amorphous, core level and valence band UPS and XPS spectra 2-2414  
 Si:F, amorphous, structural model 2-45030  
 Si:F, H, amorphous, vibr. excitations 2-45495  
 Si:F, H, annealing effects, NMR and ESR studies 2-41214  
 Si:F, H CVD film, hydrogenation effect, elec. cond. and ESR meas. 2-40906  
 Si:F, sputtered amorphous coating, struct. model, expt. study 2-16593  
 Si:F amorphous film, glow discharge plasma deposition from SiF<sub>2</sub> gas 2-40725  
 a-Si:F:H, electrical, spectral and doping properties 2-45790  
 a-Si:H, a-Si:F:H, Schottky-barrier diodes, elec. props. using new techniques 2-46104  
 Si:H, amorphous, <sup>1</sup>H NMR spin-lattice relaxation time, temp. and freq. depend. 2-46412  
 Si:H, amorphous, <sup>29</sup>Si NMR 2-46402  
 Si:H, amorphous, AC field and freq. depend. of elec. cond. 2-40901  
 Si:H, amorphous, absorpt. and excitation spectra 2-22053  
 Si:H, amorphous, dangling bond state within mobility gap, identification by ESR spectroscopy 2-41196  
 Si:H, amorphous, disorder and optical absorption edge 2-13440  
 Si:H, amorphous, dispersive electronic transport, multiple trapping, computer simulation 2-51198  
 Si:H, amorphous, effect of annealing on optical gap 2-2211  
 Si:H, amorphous, electroabsorpt., polarised light anisotropy 2-46544  
 Si:H, amorphous, electron irradi. effect on dark and photocond. and defect removal 2-45279  
 Si:H, amorphous, electron irradi., effect on photoconductivity 2-51233  
 Si:H, amorphous, electronic struct. of model defect 2-40820  
 Si:H, amorphous, glow discharge deposited, photoinduced absorpt., time resolved spectra 2-46801  
 Si:H, amorphous, H<sub>2</sub> exodiffusion, comparison with elec. cond. meas. 2-45623  
 Si:H, amorphous, Hall mobility in presence of long range pot. fluctuations 2-1930  
 Si:H, amorphous, homogenous CVD 2-41526  
 Si:H, amorphous, ion microprobe mass anal., ultrahigh vacuum, appl. to H detection 2-15263  
 Si:H, amorphous, laser beam defect creation, luminesc. and ODMR study 2-35533  
 Si:H, amorphous, light induced changes, field effect meas. 2-45813  
 Si:H, amorphous, luminesc. and recomb., review 2-5733  
 Si:H, amorphous, luminescence props. 2-46730  
 Si:H, amorphous, MIS solar cell, interface state of oxidation effects 2-47487  
 Si:H, amorphous, midgap density of states, space charge limited cond. study 2-45897  
 Si:H, amorphous, modulated photocurrent meas. 2-1946  
 Si:H, amorphous, molecular H<sub>2</sub> as proton spin-lattice relaxation centres 2-2157  
 Si:H, amorphous, non-dispersive and dispersive transport 2-46019  
 Si:H, amorphous, optical emission spectroscopy during growth (*Japanese*) 2-22174  
 Si:H, amorphous, optically detected mag. resonance study of recombination processes 2-21919  
 Si:H, amorphous, p-i-n junctions, photoacoustic emission 2-46113  
 Si:H, amorphous, photoconductivity, spectral and temp. depend. 2-1958  
 Si:H, amorphous, photoconductivity and negatively correlated defect effects 2-40962  
 Si:H, amorphous, photoelectrochem. cell, polypyrrole coated photoanodes, cell stability 2-52371  
 Si:H, amorphous, photoluminescence, no-Stokes shift model 2-36683  
 Si:H, amorphous, plasma deposited, photocond., temp. depend. 2-1943  
 Si:H, amorphous, plasma deposition, impurity doping, substrate pot. effect 2-40724  
 Si:H, amorphous, positron annihilation studies using Doppler broadening techniques 2-51739  
 Si:H, amorphous, prep. by reactive sputtering, characteristic props. 2-17625  
 Si:H, amorphous, prep. from higher silanes with high growth rate 2-2462  
 Si:H, amorphous, proton NMR spin-lattice relax. time charact. 2-31319  
 Si:H, amorphous, RF sputtered, transport props. 2-1913  
 Si:H, amorphous, RF sputtered, H distrib. PMR study 2-17346  
 Si:H, amorphous, reactively sputtered, solar cell, electron-hole recombination 2-42002  
 Si:H, amorphous, role of dangling bond as radiative center, ODMR 2-41233  
 Si:H, amorphous, solar cell appl., spectral response and capacitance meas. 2-37346  
 Si:H, amorphous, solar cells, electronic props., review 2-45970  
 Si:H, amorphous, solar cells, p-i-n and Schottky-barrier structs., comparison 2-52350  
 Si:H, amorphous, solar cells, p-i-n struct. field nonuniformity rel. to photogenerated carriers 2-52351  
 Si:H, amorphous, spin-lattice relaxation and spin diffusion 2-31307  
 Si:H, amorphous, sputtering conditions effect on H content and Si-H bonding 2-2444



## amorphous semiconductors continued

- Si:H, amorphous, time resolved luminesc. and fatigue effects 2-9179  
 Si:H, amorphous, ultrashort laser pulse annealing, expt. study 2-21170  
 Si:H, amorphous, vibr. excitations 2-45495  
 Si:H, amorphous film, electronic struct. study 2-40768  
 Si:H, amorphous film, elec. cond., thermopower temp. depend. 2-40896  
 Si:H, amorphous film, electron drift mobility meas 2-41036  
 Si:H, amorphous film, large area plasma deposition and elec. props. 2-40728  
 Si:H, amorphous film, plasma deposited, microstruct., PMR study 2-13358  
 Si:H, amorphous film, struct. evolution during annealing 2-45035  
 Si:H, amorphous film, X-ray study of atomic struct. 2-45034  
 Si:H, amorphous film deposition parameters from Si-H discharge plasmas 2-46944  
 Si:H, amorphous film growth, plasma diagnostics 2-45770  
 Si:H, amorphous films, optical props. 2-36727  
 Si:H, amorphous hydrogenated, reactive laser evaporation 2-2456  
 Si:H, amorphous ion beam deposited coating, prep. and props. 2-40723  
 Si:H, amorphous plasma deposited coating, IR and electron spectra and oxidation, polysilane analogue 2-41351  
 Si:H, amorphous plasma deposited coating, field effect cond., illumination and annealing effects 2-45969  
 Si:H, amorphous plasma deposited film, PMR 2-46398  
 Si:H, amorphous RF magnetron sputtered coating, elec. and optical props. 2-40727  
 Si:H, amorphous RF sputtered coating, IR 2000  $\text{cm}^{-1}$  absorpt. band and photoelectronic props. 2-41353  
 Si:H, amorphous Schottky barrier solar cells, prep. by plasma decomp. and sputtering, carrier generation efficiency 2-14079  
 Si:H, amorphous vacuum deposited films, theta pinch hydrogenation 2-40421  
 Si:H, amorphous-microcryst. mixed phase film, photoluminesc. 2-26960  
 Si:H, annealing effects, NMR and ESR studies 2-41214  
 a-Si:H, Ar sputtered films, interaction between Ar and dopants 2-40738  
 p-Si:H, B amorphous film, high cond., prep. by Penning discharge 2-41530  
 Si:H, bonding struct. and H distrib. IR absorpt. and NMR meas. 2-40276  
 Si:H, chem. bonding and H diffusion,  $^1\text{H}$  NMR study, 20 to 530°C 2-41221  
 Si:H, Cl amorphous films, IR vibr. spectra 2-36630  
 Si:H, Cl glow discharge films, amorphous, optical characts. and photoluminesc. 2-31546  
 a-Si:H, defect creation by optical excitation, ODMR study 2-45255  
 Si:H, density of states, dangling bond state, tight binding calc. 2-40750  
 Si:H, dopant level depths 2-40845  
 Si:H, electronic struct., electrorefl. study 2-41329  
 a-Si:H, gap states study, appl. of isothermal capacitance transient spectroscopy 2-45901  
 Si:H, hot carrier relax., optical picosecond study 2-46529  
 Si:H, intrinsic, amorphous, dual light beam modulation of photocarrier lifetime 2-46063  
 $\alpha$ -Si:H, large-area low-freq. discharge-produced 2-51019  
 Si:H, Li amorphous film, DC glow discharge deposited, photovoltaic effect 2-46170  
 Si:H, light induced changes, computer modelling of admittance and DLTS 2-36090  
 a-Si:H, meas., and anal. of current transients, DLTS and TSC obs. 2-46020  
 Si:H, microcrystalline and amorphous films, Raman scatt. 2-46564  
 Si:H, multiphase description, photoluminesc., TSC, optical absorpt. and elec. cond. meas. 2-41412  
 a-Si:H, Ne, chemical sites of Ne, XPS study 2-40277  
 Si:H, O sputtered films, amorphous, optoelectronic props., effect of O 2-41443  
 a-Si:H, optical absorption edge, electronic struct., thermal and struct. disorder effects 2-36719  
 a-Si:H, optically detected mag. resonance 2-36481  
 Si:H, P, amorphous, dispersive transport and electronic struct. 2-26408  
 a-Si:H, photoresponse time and density of localised states in mobility gap 2-46064  
 Si:H, plasma deposited amorphous film, density 2-35912  
 a-Si:H, recomb. processes and gap states, time-resolved luminesc. meas. 2-46736  
 a-Si:H, Schottky barrier structures, capture cross-section and density of deep gap states 2-41013  
 Si:H, sputtered, amorphous, time resolved photolum. spectra 2-46737  
 Si:H, sputtered coating, H effusion, ion beam nuclear analysis (French) 2-1799  
 Si:H, sputtered coatings, nuclear microanalysis and Rutherford backscattering (French) 2-5331  
 Si:H, struct. and electronic states, review 2-25744  
 a-Si:H, thermal and optical space charge spectroscopy of gap states 2-45900  
 Si:H, transport props., CPA calc. 2-40907  
 Si:H,B, Li-diffused, amorphous compensated, dark and photocond. 2-46065  
 Si:H,B amorphous film, elec. props., optical props. 2-46176  
 Si:H,B amorphous films, boron impurity conc. determ. 2-35527  
 Si:H,B(P), amorphous, IR and far IR absorpt., annealing effect 2-36628  
 a-Si:H,B(P), luminesc. spectrum, effect of dangling bond states 2-46670  
 Si:H,Cl amorphous film, photolum. studies 2-46738  
 Si:H,N(O), amorphous glow discharge film, elec. cond. and photocond.,  $\text{N}_2(\text{O})$  doping effect 2-40733  
 Si:H,P, amorphous, photogenerated carrier recombination 2-46018  
 Si:H,P, amorphous Schottky barrier, two-channel cond. obs. 2-51280  
 Si:H,P amorphous, transport props. 2-45984  
 Si:H,P films, elec. props., transition to amorphous phase, solar cell props. 2-46167  
 Si:H,P(B), amorphous, temp. depend. of ESR spectra, elec. cond. 2-5575  
 Si:H,P(B) amorphous film, photoconductivity mag. field depend. 2-41033  
 Si:H amorphous, electron and laser beam induced centres, photoluminescence study 2-36682  
 Si:H amorphous, interface with noble metals, struct. and elec. props. 2-41012  
 Si:H amorphous film, electron drift mobility study 2-41034  
 Si:H amorphous film, field effect studies, density of localized gap states 2-46169  
 Si:H amorphous film, light absorption 2-40838

## amorphous semiconductors continued

- Si:H amorphous film, photoacoustic spectroscopy, optical consts. determ. 2-2355  
 Si:H amorphous film, photoconductivity threshold and optical gap 2-36097  
 Si:H amorphous film deposition from  $\text{SiH}_4$ -Ar plasma 2-35274  
 Si:H amorphous film deposition by Penning glow discharge of  $\text{SiH}_4$  2-41528  
 Si:H amorphous film solar cell, Tandem type 2-47488  
 Si:H amorphous films, luminesc. spectra, defect induced red shift 2-17536  
 Si:H amorphous films, photocreation of defects, light-induced cond. changes, doping depend. 2-36091  
 Si:H amorphous films, photocond. and photolum. 2-40959  
 Si:H amorphous films for electrophotographic appl., photoelec. props. 2-46168  
 Si:H amorphous multijunction solar cells, conversion efficiency and interference effects in spectral response 2-37224  
 Si:H amorphous n-i-p solar cell, minority carrier transport in depletion layers 2-47489  
 Si:H amorphous p-n junctions, elec. transport, doping effects 2-46115  
 Si:H amorphous plasma deposited coating, elec. and optical props., RF power and growth temp. depend. 2-40729  
 Si:H amorphous plasma deposited coating, IR spectra, temp. depend. 2-41352  
 Si:H amorphous Schottky barrier diode characts., mathematical model 2-46102  
 Si:H amorphous Schottky barrier and PIN diodes, I-V characts., density of localised states 2-51281  
 Si:H amorphous Schottky diode, electron transport and deep localized state kinetics 2-46101  
 Si:H amorphous solar cell, carrier collection, image force effects 2-2785  
 Si:H amorphous solar cell, plasma deposited, impurity effects 2-14081  
 Si:H amorphous solar cell, large area, conversion efficiency under AM1 illumination 2-37347  
 Si:H amorphous solar cells, n-i-p and p-i-n structs., Dember effects 2-52365  
 Si:H amorphous thin film solar cells electrical and optical props. optimisation using RF bias-sputtering 2-37226  
 a-Si:H and a-Si:F H-P-I-N solar cells, photovoltaic behaviour 2-37313  
 Si:H and Si:H,B, amorphous, photoluminesc. spectrum, B doping and prep. conditions effect 2-36684  
 Si:H film, amorphous plasma deposited, RF power and reactant gas press. effect 2-21458  
 a-Si:H film, low optical absorption, annealing studies, photoacoustic spectroscopy meas. 2-36718  
 a-Si:H film, optical absorption spectra, photocurrent signal, waveguiding technique 2-36720  
 a-Si:H film, photocond. anal. luminesc. meas. of cond. band tail 2-46062  
 Si:H films, amorphous n-type and p-type, primary and secondary photocurrents 2-46061  
 Si:H films, gas phase doped or ion implanted H conc. and spatial distrib. 2-40735  
 a-Si:H films, impurity doping, morphological study, electrical and optical properties 2-45789  
 Si:H films, NMR study 2-41213  
 Si:H films, Raman and XPS study of transition from amorphous to crystalline phases 2-46796  
 a-Si:H films, reversible field-induced doping effect 2-51192  
 a-Si:H films, sub-gap and band edge optical absorption, photothermal deflection spectroscopy 2-36717  
 Si:H films, vibr. props. study 2-46798  
 a-Si:H glow-discharge films, evolution of  $\text{H}_2$  2-40682  
 a-Si:H multilayer structs., comp. profiles, nucl. scatt. and Rutherford backscatt. meas. 2-40737  
 $\alpha$ -Si:H preparation by CVD 2-22170  
 Si:H Schottky barrier diodes, amorphous, electrical characterisation 2-37225  
 a-Si:H solar cells, impurity effects 2-42019  
 a-Si:H solar cells, material optimisation studies 2-37310  
 a-Si:H solar cells, N-I-P and P-I-N, photogenerated carrier collection and loss mechanism anal. 2-37311  
 Si:H/SiC:H amorphous solar cell 2-46058  
 Si:H-Pd interface, interference enhanced Raman scatt. study of interfacial reaction 2-9147  
 Si:H-Pd(Pt), amorphous Si:H, interface phonons, interference enhanced Raman scatt. study 2-51592  
 Si:H(B)(P), amorphous DC sputtered coating, doping and elec. props. 2-40726  
 Si:H(F), chem. bonding environment of Si and dopant 2-40275  
 Si:H(F), phonon densities of states and eigenvectors 2-35627  
 Si:H(F) films, surface props., photoelectron spectra study 2-41491  
 Si:H(H,F), amorphous, plasma deposition kinetics model 2-41491  
 Si:In (Sb) implanted amorphous layers, defect and solubility limit study 2-30477  
 Si:N amorphous film, elec. and optical props. 2-17074  
 Si:O(H)(F) evaporated amorphous films, DC cond., impurities effect 2-13070  
 Si:P amorphous film, crystn. from glow discharge, cond. determ. 2-50550  
 Si-Cr point contacts, I-V characts., effects of Cr hydrogenation 2-51300  
 Si-F-H amorphous film, Schottky-barrier and MIS solar cell appls. 2-37344  
 Si-Pd Schottky barrier solar cell, characts. 2-27610  
 Si-Sn amorphous sputtered coating, electronic struct. and optical props. 2-41379  
 Si+H, amorphous, transient photocond. and Schottky barrier profile determ. 2-46060  
 SiC:H, amorphous, plasma deposited coating, photocond. and optical gap, valence electron control 2-46058  
 SiC:H/Si:H amorphous solar cell 2-46058  
 a-SiC:H/a-Si:H heterojunction solar cell with conversion efficiency more than 7.5% 2-27699  
 $\text{Si}_1-x\text{C}_x$ , ESR g-values due to dangling bonds, EHT calc. 2-36430  
 $\text{Si}_1-x\text{C}_x$ , amorphous, Stokes shift photoluminesc., comp. depend. 2-46668  
 $\text{Si}_1-x\text{C}_x$ , amorphous plasma deposited coating, luminesc. 2-41413  
 $\text{Si}_1-x\text{C}_x$ -H, amorphous films, photocond. and photolum. 2-40959  
 SiGe:H amorphous film solar cell, Tandem type 2-47488  
 $\text{Si}_1-x\text{Ge}_x$ , ESR g-values due to dangling bonds, EHT calc. 2-36430  
 a- $\text{Si}_1-x\text{Ge}_x$ , film, methods of comp. anal. (Japanese) 2-41955  
 a- $\text{Si}_1-x\text{Ge}_x$ , films for high performance solar cells 2-37227  
 $\text{Si}_1-x\text{Ge}_x$ -H, amorphous, photoconductivity, dark cond. 2-36104



## amorphous semiconductors continued

- Si<sub>1-x</sub>Ge<sub>x</sub>:H film, amorphous, ESR and IR studies 2-26740  
 Si<sub>1-x</sub>Ge<sub>x</sub>:H alloy amorphous films, optical and elec. props., solar cell appls. 2-37345  
 SiH<sub>4</sub>, amorphous Schottky barrier solar cell, carrier collection efficiency, recombination effects 2-9652  
 a-SiH<sub>4</sub>, solar cells, AM1 short cct. current optical limitations 2-37309  
 Si<sub>3</sub>N<sub>4</sub>, amorphous, MIS inversion layer solar cells fabrication, properties and performance 2-37232  
 a-Si<sub>1-x</sub>Ni<sub>x</sub>:H, wide optical-gap, photoconductive, elec. and optical props. 2-26439  
 Si<sub>(1-x)</sub>Sn<sub>x</sub> alloy semicond. for solar cells 2-27702  
 Si<sub>3</sub>H<sub>4</sub>, amorphous, sputtered coating, density of states, impurity effects 2-45898  
 SnO<sub>x</sub>, amorphous spray coating, elec. and optical props. 2-40908  
 V<sub>2</sub>O<sub>5</sub>, amorphous CVD coating, prep., elec. cond. and EPR spectra 2-40739  
 V<sub>2</sub>O<sub>5</sub>, amorphous layers, hopping cond., disorder energy 2-45981  
 V<sub>2</sub>O<sub>5</sub>-TeO<sub>2</sub> semiconducting glass, elec. cond., thermopower and optical absorpt. 2-45974  
 V<sub>2</sub>O<sub>5</sub>(W), amorphous, electron spin-lattice relax. of paramag. centres 2-46366  
 WO<sub>3</sub>, amorphous anodic films, semicond. props. rel. between photocurrent and electrode pot. 2-13064  
 Zn<sub>3</sub>P<sub>2</sub>, elec. cond. and thermoluminescence studies 2-27005  
 ZnTe amorphous vacuum deposited films, reproducibility, elec. cond. 2-5473

## amorphous state

- see also electrical conductivity of amorphous metals and alloys; electrical conductivity of amorphous semiconductors and insulators; electron energy states of amorphous solids; magnetic properties of amorphous substances; vitreous state  
 Airy stress function for atomic models 2-18898  
 alloys, formation, effect of size factor (Chinese) 2-22207  
 alloys, NMR expts., review 2-31300  
 alloys, structure and structural units, Mossbauer effect study 2-9059  
 alloys, three-dimensional structural models 2-8434  
 amorphous alloys, recent studies (Japanese) 2-26354  
 atomic and electronic structures of amorphous systems 2-40771  
 chalcogenides and pnictides, cond. band gap, chemical bond approach 2-35936  
 continuous random networks, structural ordering related to chemical bonds 2-45031  
 disorder system, scaling theory for hopping conduction 2-40864  
 disordered structures, study as spatial noise problem 2-45046  
 disordered systems, atomic structures 2-40278  
 elastomers, mixing with melting cryst. polypropylene, dynamic mech. obs. (Russian) 2-21279  
 electron diffraction pattern contrast, amorphous material effect 2-44986  
 electron microscopic images, computer simulation and interpretation 2-50489  
 energy-related materials, research opportunities 2-27113  
 glass hosts, impurities dephasing, temp. depend. 2-51128  
 homopolar amorphous surface, struct. and electronic props. 2-1982  
 hopping transport, dielec. polarisation 2-5407  
 inorganic solids, short-range order parameters 2-1407  
 insulators, amorphous, ESR studies, review 2-31286  
 inverse scatt. problem, soln. using ergodic theory 2-51613  
 lattice principles, model of system of particle-crystals 2-25743  
 localisation, normal mode anal. by quench-echo techniques 2-30558  
 melt quenching, criterion of amorphous state formation (Chinese) 2-22206  
 metal, local struct. and topology, dense random packing model 2-12487  
 metal, model, atomistic process of plastic deform. 2-5176  
 metal ribbon, amorphous, fatigue behaviour 2-17729  
 metallic alloys, glass-forming ability, theoretical aspects 2-8613  
 metallic alloys, specific heat anomaly near vitrification point 2-26073  
 metallic solids, amorphous, Mossbauer spectroscopy studies 2-31340  
 metals, amorphous, general introduction 2-6724  
 metals, granular and disordered, superconductivity destruction 2-46185  
 metals, radial distrib. function and struct. relax. 2-45040  
 metals and alloys, positron annihilation and positive muon study 2-9214  
 mobility edge in noncrystalline materials, electronic props. and minimum metallic cond. 2-45832  
 multiple electronic scattering by an amorphous atomic medium (French) 2-40229  
 non-crystalline solids, X-ray scattering pattern, first sharp max., interpretation 2-25686  
 noncrystalline solids, symposium, Kanpur, India (Feb. 1980) 2-14981  
 nuclear quadrupole spin-lattice relax. time due to phonon-rotors 2-26782  
 optical information encoding, rel. to amorphicity and struct. charge 2-39580  
 phase transitions, generalized Landau theory 2-31180  
 polycarbonate, molecular activity in cryogenic temp. range, thermally stimulated current meas. 2-7690  
 polyethylene, macromolecular struct. 2-4434  
 polymers, plasticized, glassy state photoelastic props. (Russian) 2-31451  
 polymers, semicrystalline, amorphous phase and fold surface modelling, Gambler's Ruin method 2-40293  
 polypropylene silicone rubber, radiothermoluminescence study of structure (Russian) 2-40291  
 quartz, amorphous fibres, IR spectra, resonances (German) 2-17458  
 quartz-silicate amorphous net, influence of bond breaking on optical stability (Russian) 2-2227  
 secondary electron emission props. meas. 2-13599  
 structural defects, computer model statistical anal. 2-1408  
 surface, cluster adsorption, mol. dynamics study of Pt on Cu and Pd on Pt 2-8709  
 surface dispersed layers in far from thermodynamic equil. state, prep. by surface reactions, amorphous struct. 2-2739  
 thin film formation mechanism, struct. and phys. props. 2-51044  
 thin films, sample holder in UHV -180 to +145°C (French) 2-43033  
 V<sub>2</sub>O<sub>5</sub>, amorphous, electron spin-lattice relax., spin-phonon interactions 2-46378  
 X-ray diffraction topography, method 2-43149  
 Al-Au films, amorphous, short range order, electron diff. study 2-5330  
 Bi<sub>1-x</sub>Co<sub>x</sub>, amorphous, mag. and magneto-optical props. 2-17450  
 Bi, amorphous, elec. field gradients, TDPAC studies 2-31350  
 Bi film, resist. transition, Ginzburg-Landau eqn., Kosterlitz-Thouless theory 2-17193

## amorphous state continued

- Bi<sub>84</sub>Sb<sub>16</sub> amorphous film, sp. ht., 0.2 to 1.0K 2-30623  
 C, amorphous, X-ray diff. studies 2-16596  
 C, amorphous and graphitised foils, differences in stripper qualities 2-11336  
 C, low-energy electron transport, Monte Carlo simulation (French) 2-50727  
 C, thick specimen, contrast and resolution in electron spectroscopy 0.1 to 3 MeV (French) 2-12436  
 Cd<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, glasslike thermal and dielectric props. 2-40613  
 Co-based alloys, recent studies review (Japanese) 2-26354  
 Cs-Au amorphous mixture, metal-insulator transition 2-40795  
 Cs-Sb amorphous mixture, metal-insulator transition 2-40794  
 Cs-Xe mixture, metal-insulator transition 2-40793  
 Cu, sputtered atoms energy distrib. calc. under low-energy Ar bombardment 2-13605  
 Cu-P, anodic dissolution, composition of black anodic film (Russian) 2-21454  
 ErAl<sub>3</sub>, thin film, occurrence of modulated phases 2-8734  
 Er<sub>1-x</sub>Gd<sub>x</sub>Al<sub>3</sub> thin film, occurrence of modulated phases 2-8734  
 Fe-B liq. and amorphous alloys, struct. (Russian) 2-8413  
 Fe-B (18 wt.%) amorphous and crystalline, NMR study 2-26771  
 Fe-based alloys, recent studies, review (Japanese) 2-26354  
 Fe-C-B alloys, liq. and amorphous struct. (Russian) 2-8413  
 FeF<sub>3</sub>, elec. field gradient, random packing model 2-30847  
 Fe<sub>40</sub>Ni<sub>35</sub>Mo<sub>4</sub>B<sub>18</sub> metallic glass, vitrification during sputtering 2-12501  
 Fe<sub>2</sub>O<sub>3</sub>·H<sub>2</sub>O, competitive adsorption of Cd, Cu, Zn and Pb 2-35887  
 Fe<sub>90</sub>Zr<sub>10</sub> amorphous ribbon, Curie temp. pres. depend. 2-13297  
 Ga, amorphous, elec. field gradients, TDPAC studies 2-31350  
 Ga<sub>25</sub>Ag<sub>75</sub> amorphous film, sp. ht., 0.2 to 1.0K 2-30623  
 GaAs, amorphous, disorder effects and optical props. 2-2357  
 GaP, amorphous, disorder effects and optical props. 2-2357  
 Gd-Co amorphous film, XPS study 2-17597  
 Gd-Co amorphous films, mag. orientation transitions 2-46284  
 Gd-Fe amorphous film, XPS study 2-17597  
 GeO<sub>2</sub>(-BaO) amorphous thin films, optical absorpt. edge, optical band gap 2-46804  
 In<sub>50</sub>Au<sub>50</sub>, amorphous, elec. field gradients, TDPAC studies 2-31350  
 IrO<sub>2</sub> film, electrochromic amorphous, cation insertion reactions 2-27435  
 Li<sub>12</sub>N, amorphous ionic conductor, sound vel. temp. depend., H impurity tunnelling 2-30534  
 Mo-C, bulk amorphous alloys, supercond. props. 2-36175  
 Mo-Si, bulk amorphous alloys, supercond. props. 2-36175  
 Mo-Zr, amorphous supercond., formation by liq. quenching on hot substrate 2-52059  
 Mo<sub>2</sub>Ge<sub>1-x</sub>, amorphous thin film, reflection small-angle X-ray scatt. method 2-44968  
 Mo<sub>1-x</sub>Si<sub>x</sub>, supercond. and normal state props. 2-36203  
 NO spin labels/probes slow tumbling motions from second derivative ESR powder spectra 2-41201  
 Nb, sputtered atoms energy distrib. calc. under low-energy Ar bombardment 2-13605  
 Nb-Si-Ge, amorphous supercond., formation by liq. quenching on hot substrate 2-52059  
 Nb<sub>2</sub>O<sub>5</sub> film, amorphous, nature of electrical forming (Russian) 2-30770  
 Ni<sub>48</sub>B<sub>20</sub>, amorphous sheets, electroless deposited, internal friction and dynamic modulus behavior 2-21230  
 Ni<sub>80-x</sub>P<sub>x</sub>, metallic glass, thermopower method for chemical composition 2-45942  
 P amorphous film, struct. and vibr. props. 2-26256  
 PbTiO<sub>3</sub>, amorphous, EXAFS study 2-41449  
 PbTiO<sub>3</sub>, amorphous, crystallisation process 2-40524  
 PbTiO<sub>3</sub>, amorphous, crystallisation, Raman study 2-41340  
 PbTiO<sub>3</sub>, amorphous, phase transition, dielectric anomalies 2-41301  
 PbTiO<sub>3</sub>, amorphous, struct. determ. by EXAFS 2-40270  
 Pd-Si, amorphous alloys, struct., temp. depend. (French) 2-21028  
 Sb film, cryst. struct., amorphous state influence 2-45779  
 Sb thin film, amorphous, impulse stimulated crystallisation 2-45039  
 Se<sub>2</sub>Ge<sub>1-x</sub> amorphous alloys, x=0.9, 0.85, US vel. behaviour near glass transition 2-1564  
 Si:B, amorphous, gas phase and ion implant doping, H content 2-45214  
 Si:H, amorphous film, AC conductivity and optical props. 2-41040  
 Si:P, amorphous, gas phase and ion implant doping, H content 2-45214  
 Si:Py, amorphous, <sup>29</sup>Si nuclear moments, optical polarisation 2-36479  
 Si-SiO<sub>2</sub>, amorphous-crystal interface, ion beam studies 2-45742  
 Si<sub>3</sub>C<sub>2</sub>F<sub>3</sub> amorphous films, reactive RF sputtering prep., optical and comp. props. 2-51727  
 Si<sub>1-x</sub>Co<sub>x</sub>, amorphous, mag. and magneto-optical props. 2-17450  
 Si<sub>3</sub>N<sub>4</sub> layers, oxidation kinetics, ellipsometric obs. on Si-Si<sub>3</sub>N<sub>4</sub>-SiO<sub>2</sub> struct. 2-5970  
 Si<sub>3</sub>N<sub>4</sub>-C, CVD, density and deposition rate 2-9286  
 SiO<sub>2</sub> amorphous film, influence of ion irradiation on struct. 2-45774  
 SiO<sub>2</sub>, amorphous RF sputtered films, elec. cond., EPR and optical absorpt. 2-45975  
 SiO<sub>2</sub>, amorphous silica, neutron irradiated, very small angle neutron scatt. 2-25940  
 SiO<sub>2</sub> films, amorphous, DC reactive sputtering prep., anomalous phys. props. 2-30764  
 SiO<sub>2</sub>, radiation-stimulated diffusion of metallic impurities and self-diffusion 2-40600  
 SiO<sub>x</sub>, amorphous, electronic struct. calcs. 2-40767  
 Sm-Co, amorphous mag. films, struct. changes during crystn. (Chinese) 2-1406  
 Sn-Ag(Au), amorphous films, transport props. and phase stab., electron conc. effect 2-35987  
 T-M amorphous alloys, T-Fe, Co, Ni and M=B, C, P, ferromagnetic glasses study 2-9000  
 T<sub>80</sub>M<sub>20</sub> amorphous alloys, T=Fe, Co, Ni, Pd, Mo and M=B, C, N, P, Si, Mossbauer spectroscopy 2-9060  
 Tb-Fe, amorphous film, interference enhanced Kerr spectra 2-51556  
 TbFe amorphous film, Faraday rotation 2-21989  
 TbFeSn amorphous film, Faraday rotation 2-21989  
 Ti-Pd (20 at.%) amorphous supercond. alloy, microstructures (Chinese) 2-21030  
 Ti-Si-O-N system, multiphase materials, invest. from 1200 to 1600°C 2-47011  
 Ti<sub>1-x</sub>Ni<sub>x</sub>(Cu<sub>x</sub>), amorphous, negative magnetoresistance at high mag. fields 2-36013  
 V<sub>2</sub>O<sub>5</sub>, amorphous, hydration process, IR and Raman study 2-51578  
 WO<sub>3</sub> film, charact. by optical absorpt. spectra (Japanese) 2-41442  
 W<sub>2</sub>Si<sub>1-x</sub>, formation by plasma CVD 2-2453



**amorphous state** continued

- Y-Fe-Cu, Mossbauer effect study of recoil free functions 2-46447  
 Zr alloys, amorphous supercond., low temp. sp. ht. 2-36221  
 ZrCu alloys, amorphous supercond. low energy excitations 2-36220  
 $Zr_{1-x}Cu_x(Ni_x)$ , amorphous, negative magnetoresistance at high mag. fields 2-36013  
 $Zr_{0.76}Ni_{0.24}$  alloy, amorphous supercond., effect of struct. relax. on tunnelling states, sp. ht. meas. 2-36222  
 $Zr_3Pd$ , glassy supercond. thermal relax. studied 2-41051  
 $Zr_8Si_{15}$ , amorphous superconductor, flux flow, critical currents 2-36290

**amorphous state structure** see *noncrystalline state structure***amplification**

- see also *acoustic wave amplification; amplifiers*  
 EM wave, frustrated total reflectance from invertible medium 2-29804  
 hot carrier p-n junction, elec. signal amplification kinetics 2-21667  
 $CO_2$  waveguide laser discharge tubes, signal amplification in 10.6  $\mu m$  band 2-39682

**amplification measurement** see *gain measurement***amplifiers**

- see also *amplification; differential amplifiers; fluidic amplifiers; micro-wave amplifiers; parametric amplifiers; preamplifiers; pulse amplifiers; ring lasers; wideband amplifiers*  
 lock-in, voltage resolution in isolated voltage contrast mode, scanning electron microscopes appl. 2-19218  
 low ionisation current meas., dosimetric problem 2-19890  
 remote-arming signal amplifier for thin film shock-sensor 2-12254  
 GaAs FET amplifier, for UHF SQUID magnetometer, at 4.2K 2-19140

**amplifying** see *amplification***amplitude modulation**

- electrooptic amplitude modulation, optically induced problems 2-25110  
 optical fibre, wideband FM signal conversion to AM through group velocity dispersion 2-49927  
 pitch of amplitude-modulated noise, observations 2-37588  
 HCN sub-MM wave laser, intensity modulation with Schottky barrier diode 2-39679

**analogue computer applications** see *analogue simulation***analogue computer methods** see *analogue simulation***analogue computers**

- see also *analogue-digital conversion; digital-analogue conversion*  
 laser dynamic equations soln., construction of analogue computer 2-44233

**analogue-digital conversion**

- see also *digital-analogue conversion*  
 angle digitizers accuracy, for polymodal instrumental error distribution functions 2-28821  
 barometer, battery-operated with digital indication (German) 2-10185  
 Biomation 8100 transient recorder, accurate US meas. 2-16212  
 cartography computer assisted mapping, digitizing and automatic output errors 2-37740  
 coder for current and voltage pulses of relativistic electron accelerator 2-15682  
 codes for current and voltage pulses of relativistic electron accelerator 2-19897  
 computerised tomography data from a radiotherapy simulator, instrument for digitisation 2-2934  
 curve digitizer, microcomputer-controlled 2-15152  
 design of A/D converter unit for cosmic ray air shower expts. 2-48154  
 digitising devices, control, microcomputer network 2-24561  
 Fourier transform NMR spectra, accumulation, signal-to-noise ratio 2-6880  
 heavy nuclei fission expts. automation with TPA-i1001 minicomputer 2-7445  
 image processing from photodiode array, using variable-threshold digitiser, biological appl. 2-27944  
 IR spectra of polymers, digitalisation 2-9579  
 mass spectrometers appl., acquisition of monotonously changing magnetic fields (German) 2-3652  
 microscope photometry, by voltage to freq. conversion, analogue meas. and digital processing 2-48741  
 microstructure image analyser signal input direct to Minsk-32 computer 2-48686  
 pipeline distributed processing system for real time pattern recognition applications 2-17847  
 portable digital thermometer using transistor sensor and A/D converter (Italian) 2-3581  
 seismology, digital recording rel. to data processing procedure 2-52743  
 shower calorimeter, ADC correction and readout, CAMAC processor 2-24521

**analogue simulation**

- plate subjected to tension loading, analogue simulation of nonlinear vibrations 2-39853

**analytical chemistry** see *chemical analysis***anaphoresis** see *electrophoresis***Anderson model**

- asymmetric, ground state 2-21480  
 asymmetric model, local quasiparticle density of states 2-35917  
 density of states, intermediate valence case and Kondo limit 2-13000  
 disordered 2-dimensional systems, electronic props., numerical calc. 2-40843  
 disordered systems, Anderson localisation 2-30832  
 disordered systems, localisation in one-dimens. Anderson model 2-1866  
 disordered two-band system, Anderson localisation, Hamiltonian diagonalisation and decimation method 2-40841  
 effective fourth-order Hamiltonian, RKKY interaction 2-26572  
 electron localization, self-consistent current relax. theory 2-45894  
 fermi glass, cond. activation energy and Seebeck coeff. in nearest-neighbour hopping regime, effective medium theory 2-8829  
 ferromagnets, magnon localisation, mobility edge position calcs. 2-46267  
 impurity, Anderson, in local spin fluctuation limit, props. 2-36340  
 impurity clusters, sp.-ht. and susceptibility Fermi liq. relations 2-26325  
 intermediate valence compounds, transport props. studied within alloy analog approx. of periodic Anderson model 2-17038  
 intermediate valence model, self energy, comparison with three-site model 2-8776  
 localisation, decimation method 2-40840  
 localisation problem, finite size scaling approach 2-40839  
 localization effects associated with disorder and electron-electron interactions 2-30834  
 metals, granular and disordered, superconductivity destruction 2-46185

**Anderson model** continued

- mixed valence compounds, periodic Anderson model, dynamic props. 2-30850  
 mixed valence cpds., periodic Anderson Hamiltonian, ground state props. 2-30784  
 molecular solids, excitation dynamics, book crit. 2-16998  
 naphthalene, phosphorescence study of critical exciton annihilation 2-46700  
 nonlinear  $\sigma$  theory, asymptotic gauge invariance 2-40815  
 one dimensional disordered systems, conductivity and localisation of electron states 2-13017  
 one-dimensional, exponential localisation proof 2-26268  
 one-dimensional, probability distrib. and scaling law for resist. 2-13035  
 one-dimensional  $\phi^4$  theory with long-range gradient term 2-15121  
 one-dimensional Anderson model with disorder, resistance scaling studies 2-40867  
 periodic, approx. based on zeroth band width limit, sp. ht. and f-electron local spin 2-2074  
 periodic, elec. cond. and longitudinal mag. susceptibility 2-30849  
 periodic, elec. resist. and metal-insulator transition 2-16992  
 periodic, with Falicov-Kimball type interaction, valence transition 2-51131  
 semiconductor-insulator nonlattice matched interface, U-shaped background density of interface states 2-26508  
 semiconductors, amorphous, density of localised states, linear specific heat, Anderson model 2-40836  
 spin glasses, Stoner and Kondo, mean field description 2-31219  
 symmetric model, ground-state energy 2-23588  
 two-band superconductors with Anderson impurities, sp. ht. discontinuity 2-13237  
 two-dimensional Anderson localisation, in mag. fields, self-consistent treatment 2-17040  
 two-dimensional simple-square, density of states 2-40850  
 two-dimensional system, Anderson localisation in Landau levels, Hall cond. and cyclotron resonance lineshape 2-51101  
 n-Ge, impurity band cond. study 2-40919  
 $^3He$ -He mixtures, superfluidity proximity effect 2-21422  
 Si, MOS inversion layers, Anderson localisation, Hall mobility study 2-51316  
 Si-MOS n-inversion layers, Anderson localisation and negative magnetoresistance (Japanese) 2-26513  
 Si-MOS, Anderson localisation in two-dimension, precursor effect 2-21548

**anechoic chambers**

- environmental acoustics measurement 2-11963  
 Istituto Superiore, Roma, Italy, building, sound absorption treatment (Italian) 2-4663  
 semi-anechoic chamber for vehicle noise emission testing 2-16203

**anelastic relaxation**

- see also *Bordoni effect; creep; elastic aftereffect; internal friction; Snoek effect; stress relaxation; Zener relaxation*  
 alkali silicate glasses, relaxation transitions and deform. below glass-transition temp. 2-9364  
 $\beta$ -Cu-Zn-(Al), anelastic effects after quenching 2-47097  
 epoxy polymers, crosslinking density influence on low-temp. relax. nature (Russian) 2-51964  
 epoxyamine polymers of polycondensation and polymerisation types, relax. processes (Russian) 2-51965  
 ice  $I_h$ , internal friction, very low freq. meas. 2-45359  
 magnetic aftereffects and anelastic relaxations in solids conf., Katowice, Poland (Jan. 1981) 2-23371  
 metallic glass, relaxation phenomena, review 2-40484  
 metallic glass, structural relaxation and atomic mobility, mag. anisotropy meas. 2-45358  
 metals, pure, high temperature damping spectra 2-45349  
 point defects study using mag. and mech. relax. meas. 2-26685  
 polydiethylaminophosphazene, relax. and mech. props. (Russian) 2-51966  
 polyethylene, mech. relax. with different thermal prehistory (Russian) 2-22263  
 polymer, linear, filled and plain, relax. spectra and mech. props. (German) 2-47110  
 polyphosphazenes, thermomech. transitions 2-45584  
 steel, 14HG, thermochem. treatment influence on internal friction processes (Polish) 2-27211  
 $\beta$ - $Al_2O_3:Na^+$ , mech. and elec. relaxation meas. 2-16718  
 As-Se glass,inelastic props. at very low freq. 2-45360  
 $CoO_2:Y^{3+}$ , relax. peaks due to defect complexes 2-45369  
 $\alpha$ -Cu-Ni-Zn, internal friction and elastic moduli meas. 2-47091  
 $\alpha$ -Fe, Snoek-Koster relax., role of screw dislocations and C-vacancy pairs 2-40407  
 Fe-B metallic glass, struct. relaxation, crystn., internal friction and elastic modulus 2-47085  
 Fe-Si alloy, plasticity, internal friction and struct. (Polish) 2-36905  
 Fe-Si-Sb alloy, grain boundary relaxation, grain boundary segregation effect 2-47081  
 $Fe_{50}Ni_{50}B_{20}$  metallic glass, anelasticity and struct. relaxation 2-45357  
 Nb-O, Snoek-Koster relaxation 2-47114  
 Nb-Ti (5 at.%), relax. peaks at liq. He temps. due to H motion in trap sites 2-22254  
 Ni-P metallic glass, struct. relaxation, crystn., internal friction and elastic modulus 2-47085  
 $Ni_{40}B_{20}$ , amorphous sheets, electroless deposited, internal friction and dynamic modulus behavior 2-21230  
 Se glass,inelastic props. at very low freq. 2-45360  
 Ta-O, Snoek-Koester relaxation (German) 2-47115  
 Ta-O, Snoek-Koster relaxation 2-47114  
 Zn, automodulation and nonlinear resonance 2-40483  
 $\alpha$ -Zr, dislocation core diffusion and unpinning 2-45196

**anelasticity**

- see also *anelastic relaxation*  
 metallic glass, anelasticity due to H, vibrating reed technique 2-45792  
 metals, pure, high temperature damping spectra 2-45349  
 multiphase systems, anelastic prop. characterisation, phase transitions 2-45371  
 polymers, anelasticity, physical ageing and the constant enthalpy change hypothesis 2-45356  
 $(Al_2O_3)_xMgO$  spinels, elastic and anelastic effects, precipitation 2-45373  
 Cu-Al-Ni, nonlinear reson. near martensitic transform. 2-47101  
 Fe-Mn alloy 100G13, structural FCC-FCT phase transition 2-2507  
 $Fe_{50}Ni_{50}B_{20}$  metallic glass, anelasticity and struct. relaxation 2-45357



**anelasticity continued**

- GdCu, anomalous elasticity and anelasticity at low temps. 2-1544  
 Lu-H(D), solid solution, anelastic effects 2-45365  
 Pb-Sn alloy, eutectic, anelastic contrib. to stress relax. and stress dip tests 2-41822  
 Pd<sub>82</sub>Si<sub>18</sub> metallic glass, ideal elastic, anelastic and viscoelastic deform. 2-13760

**anemometers**

see also *laser velocimeters*

- circularly polarised light scattering in laser Doppler anemometry 2-39568  
 constant-temp. hot-wire, effect on behaviour of varying resistance ratio 2-30241  
 differential laser microanemometer, contactless meas. of flow velocity distrib. 2-20776  
 Doppler effect laser sweep anemometer for velocity profile measurement (French) 2-35241  
 Doppler laser anemometer system for rapid scanning of flow fields 2-20778  
 hot film anemometer, forced convective heat transfer to Hg 2-30130  
 hot-film anemometry and conditional meas., report on Euromech 132 2-4907  
 hot-wire anemometry and conditional meas., report on Euromech 132 2-4907  
 hot-wire triple-sensor probes, data reduction techniques 2-50338  
 laser, aerospace turbomachinery flow diagnostics appl. 2-20790  
 laser, Doppler-difference, separated turbulent boundary layer in supersonic flow obs. 2-16408  
 laser, optical discriminator for Doppler frequency shifts (Russian) 2-4904  
 laser (Russian) 2-4903  
 laser Doppler anemometer backscatter meas., walls, two-phase flows, refl. suppression by polarisation 2-25452  
 laser Doppler anemometer measurements using nonorthogonal vel. components, error estimates 2-50333  
 laser Doppler anemometry, axisymmetric flow, near sphere in spheric cavity (French) 2-39880  
 laser Doppler anemometry for in situ meas. of flow props. of two-phase suspension 2-25458  
 laser transit anemometer with 5 ns correlator processor, for wind tunnel meas. 2-16404  
 pyroelectric, preparation and flow velocity meas. 2-16393  
 Raman, for component-selective velocity meas. of particles in flow 2-30243  
 thermoanemometer measuring transducers of fluid mass flow rates, metrological characts. 2-25467  
 thermoanemometer sensor for low flow speed meas., using Si crystal whisker 2-25462  
 time-of-flight laser velocimeter for atm. wind speed meas., scaling law, photon-count distrib. 2-52944  
 turbulent boundary layer on a rough permeable surface 2-1183  
 turbulent boundary layer separating struct., mean flow and Reynolds stresses 2-35122  
 turbulent boundary layer separating struct., transverse vel. meas. 2-35124  
 velocity meas., new technique using radioactive source 2-52954  
 water local velocity measurement with hot wire anemometers (German) 2-44800  
 wind speed and direction meas. station (Dutch) 2-42473

**angle measurement** see *angular measurement***angular correlation techniques**

No entries

**angular measurement**

see also *angular velocity measurement*

- analysis of combined system for controlling laser-mirror scanner (Russian) 2-25057  
 aspheric rotatory surfaces measurement 2-7912  
 aspherical surfaces testing 2-42987  
 digitizers accuracy evaluation, for polymodal instrumental error distribution functions 2-28821  
 dynamic angular accel. and torque measurement methods (German) 2-38635  
 geodesy, atmospheric refr. investigation in trigonometrical levelling traverses 2-9918  
 multibeam collimator using prism stack 2-7850  
 prisms angular discrepancies, using optical-electronic instrument 2-1049  
 radiotelescope, mm-wavelength, surface meas. by modulated laser beam 2-14778  
 reference angle gauge block calibration by null-balance method (French) 2-3561

**angular momentum**

- atmosphere, ang. momentum transfer during drought and normal monsoons 2-3064  
 atomic electron scatt., elementary processes from Franck-Hertz expt. of electron-photon ang. correl. (German) 2-20193  
 early B-type stars, rot. vels. meas. rel. to origin of stellar ang. momentum 2-53245  
 bounded systems, post-Newtonian spin and ang. momentum 2-38424  
 celestial mechanics, ang. momentum conservation law for dissipative Kepler's problem 2-6528  
 complex rotation group, irreducible representation in terms of rotation angles and axis 2-28696  
 heavy-ion elastic scatt. and fusion, pot. model and ang. momentum localisation 2-7126  
 heavy-ion fusion, energy depend. of cross section (German) 2-19589  
 odd-A nuclei, rotation effect on M1 and E2 transitions 2-19476

**angular momentum theory**

see also *quantum theory; Regge poles and trajectories*

- bispin, conservation of square and projection, Dirac eqn. 2-3706

**angular velocity measurement**

- analogue tachometer/generator, operation and construction 2-42999  
 DC torquer-tachometer, integrally-wound, electromagnetic coupling problems and application 2-23624  
 interferometer, used for rotation angle measurement 2-48683

**animal communication** see *biocommunications***anisotropy, magnetic** see *magnetic anisotropy***anisotropy, magnetocrystalline** see *magnetic anisotropy***annealing**

- see also *graphitising; laser beam annealing; magnetic annealing; recrystallisation annealing; solution annealing; stress relaxation*  
 $\alpha$ /brass, intergranular creep cavities, growth mechanism 2-41685  
 apatite, isothermal annealing, fission track retention in minerals 2-43706

**annealing continued**

- apatite, palaeotemperature determ. with fission-track method 2-6463  
 apatite fission track dating by isothermal plateau method 2-6464  
 apatites, annealed, track-in-track length meas., fission track dating 2-4190  
 apatites from volcanoclastic sandstones, natural long-term track annealing expt. 2-6365  
 C Si:H, amorphous, photoluminesc. and photocond., fatigue and Staebler-Wronski effects, irreversibility 2-46731  
 cermet film, changes in struct. and composition during heat treatment, oxidation (Russian) 2-5894  
 Cs halides, additively doped, Cs colloids, precip. and growth kinetics 2-25874  
 diamond, natural, dislocation-rich, cathodoluminescence study 2-31565  
 dielectrics, broad-band, photocond. excited by UV laser radiation (Russian) 2-26448  
 dilute alloys, annealed, ferromag. and antiferromag., spin waves, short range chem. order effect 2-31157  
 dimyristoylphosphatidylcholine, hydrated, conc. depend. EPR spectra, defect annealing effect 2-11598  
 elastomers, segmented, annealing-induced morphological changes, thermal anal. obs. 2-22240  
 electron beam generation systems for materials processing 2-43131  
 Elinvar,  $\gamma$ -phase form. mech., kinetics and singularities (Russian) 2-22212  
 Elinvar alloy 44NKhMT, inspection of heats using Curie temperature 2-9487  
 fission-track annealing curves, expt. artifacts 2-4189  
 flow stresses in prestrained annealed samples 2-31763  
 garnet bubble film, ion implanted layer, mag. state, temp. depend. study 2-26759  
 garnets, ion implanted, stress profile determ. 2-25910  
 glass, flat, high-temp. relax. processes 2-41666  
 glass, structural changes during heat treatment 2-27192  
 glass-enamel coatings on steel tubes, temp. regime for induction annealing 2-37003  
 graphite fibre reinforced advanced epoxy matrix composites, sub-T<sub>g</sub> annealing studies 2-17693  
 heat treatment in N<sub>2</sub>-based atmospheres 2-37006  
 II-VI semiconductors, defect formation, combined method of determining mode and energy of activation 2-8508  
 Inconel 625, superalloy, thermal stability 2-47060  
 laser processing of materials 2-47047  
 LIF, thermal neutron irradi., density depend. on radiation heating temp., macropores form. (Russian) 2-16682  
 magnetic alloys, amorphous, HF mag. props. 2-26658  
 metal, BCC, single cryst. ribbon prod. by cold rolling and high temp. annealing (Japanese) 2-17645  
 metallic glass, short-range order, calorimetric evidence 2-22214  
 metallic glasses, annealing effect, struct. modelling 2-45055  
 metallic thin film, elec. cond., annealing effect (Spanish) 2-46159  
 metals, plastically deformed, structural defect role during exoelectron emission (Russian) 2-2422  
 metals, vacancy type defects 2-25872  
 metglas 2826 MB, crystallisation charact. 2-21034  
 minerals and glasses, thermally-lowered fission-track age correction 2-19915  
 MoSi<sub>2</sub>, contact metallurgy technique by using ion-beam mixing 2-1679  
 nylon 6, drawn and phase, anisotropic mechanical props., compliance const. 2-17694  
 obsidian artifacts, fission track ages using plateau-annealing and track size age-correction techniques 2-4191  
 order parameter description of glassy state 2-5058  
 Permalloy, <sup>119</sup>Sn Mossbauer obs. of ordering process, mag. hyperfine field, annealing influence, elec. resist. 2-9058  
 Permalloy film, electromigration, electron microscopy study 2-45639  
 point defect-dislocation interaction, using rate theory 2-1512  
 poly(vinylidene fluoride),  $\alpha$ - and  $\gamma$ -phase, soln. grown crystal annealing 2-16601  
 poly-p-xylylene thin films, carrier traps, TSC meas. 2-40928  
 polyacetylene films, prep. by Luttinger's catalyst, morphology and isomerisation 2-45076  
 polycarbonate film, plane stress deformation zone at crack tip 2-13777  
 polyethersulphone, fracture behaviour 2-47180  
 polyethylene, mech. relax. with different thermal prehistory (Russian) 2-22263  
 polyethylene, ultrahigh-modulus, annealing and mech. constraint effect on struct., stiffness and melting 2-47072  
 polyethylene cryst. grown from soln., isothermal annealing and swelling, SAXS 2-40298  
 polyethylene oxide-Li salt electrolytes, thermal history-cond. relationship 2-40598  
 polypropylene, drawn, morphology and stress relax., ultrasonic attenuation investig. 2-13762  
 polystyrene, glassy, sub-T<sub>g</sub> structural relax. 2-16795  
 polythene, spin trapped radicals, motion, annealing and melting effects, ESR obs. 2-17340  
 polyvinylidene fluoride films, drawn and rolled, X-ray pole figures 2-16600  
 PVC films, crystallinity and glass transition temp., annealing, thermal history and solvent treatment effect 2-16797  
 quartz, ionic conduction, X-ray and  $\gamma$ -ray induced, annealing, activation energy 2-50910  
 quartz ceramic, sintering and crystn., influence of mould material and moulding process 2-5848  
 quartz glass, annealing influence on ultrasonic velocity 2-5190  
 random Potts annealed model, phase diagram 2-42952  
 semiconductor, ion implanted, plasma annealing 2-16664  
 semiconductor, ion-implantation-induced defect annealing using electron and laser beams (German) 2-35534  
 semiconductor layer, disrupted, pulsed annealing by electron beams 2-39260  
 solar absorber convertors with graded metal-C selective absorbing surfaces, sputtered, effect of metal base layer on solar absorptance and thermal emittance 2-9682  
 solar cell fabrication, pulsed electron beam annealing, apparatus and technique 2-37356  
 solid state track recorders, annealing phenomena 2-43701  
 SOS film, cryst. quality improvement by O implantation and thermal annealing 2-51023



## annealing continued

- steel, austenitic stainless, H solubility, effect of thermomech. treatment and surface condition 2-35700  
 steel, austenitic stainless, surface microgeometry and comp. evolution with prep. mode (*French*) 2-5983  
 steel, C, multilayer material, impact strength and damping props. 2-17706  
 steel, dual-phase, commercially produced, mech. props. and microstruct. 2-17707  
 steel, eutectoid, pearlite spheroidisation kinetics during static annealing and hot deform. 2-36908  
 steel, ferritic stainless, Cr-Mo-Ti stabilised, sensitisation, influence of heat treatment 2-47243  
 steel, heat resistant ferrite, diffusion of alloying elements (*Czech*) 2-45608  
 steel, heat resistant ferrite, diffusion of alloying elements (*Czech*) 2-45609  
 steel, heat resistant ferrite, diffusion of alloying elements (*Czech*) 2-45610  
 steel, heat treatment temp. rel. to phase diagram 2-47069  
 steel, high speed, wear resist., effect of electrospray hardening 2-47187  
 steel, low C, magnetic props. for soft magnetic appl., heat treatment 2-21831  
 steel, metallurgical props., US vibr. effect 2-47053  
 steel, Mn-Si-V, dual phase, struct.-prop. relations 2-36916  
 steel, Mo(V), dual-phase, props. and struct., effect of heat treatment 2-9376  
 steel, Ni-Cr-Mn, ferrite-containing, precipitation and corrosion processes after isothermal annealing 2-2518  
 steel, stainless, 18/10, precipitation and dissolution of Ti (C,N) (*Polish*) 2-27176  
 steel, stainless, Cr depleted zones, oxidation, low S activity effect 2-52109  
 steel pressure vessel, neutron-embrittlement, recovery obs. 2-49126  
 structural relaxation, US pulse-echo obs. after annealing 2-31880  
 superalloy, thermal stability 2-47060  
 superconducting amorphous alloys, supercond. props., review 2-31023  
 tools, welded, annealing processes chart computer development 2-27199  
 vitreocrystalline protective coatings, formation of crystalline phase in electrostatic field 2-5051  
 work-hardened material, deform. by heating under small stress (*Japanese*) 2-5889  
 Zircaloy-2, in-reactor deform. of tubes at 330K 2-47125  
 Zircaloy-2 and -4, neutron irradi., dislocation struct. 2-50649  
 Ag film, reflectivity, annealing effect 2-9210  
 Ag, proton or neutron irradi., recoil energy rel. to damage prod., positron annihilation study 2-1532  
 Ag<sub>3</sub>AsS<sub>4</sub>, ferroelec.-pyroelec. semicond., nonlinear acoustic and photoacoustic props., 4.2-300K 2-35605  
 AgInTe<sub>2</sub>, n-type ternary semicond., thermal cond. temp. depend. in synthesized and annealed samples 2-1686  
 AgInTe<sub>2</sub>, n-type ternary semicond., thermal cond. temp. depend. in synthesized and annealed samples 2-5289  
 Al, 99.99% and 1100, fatigue crack propagation 2-36954  
 Al alloys, dilute, cold worked, low freq. internal friction peaks, strain amplitude 2-47079  
 Al contact to NiSi using thin W layer as barrier, elec. characts. 2-21655  
 Al, deformation in work-hardened materials by heating under small stress (*Japanese*) 2-5889  
 Al, electron irradiated, interstitial trapping by Ga or Si atoms, elec. resist. meas. and isochronal anneals. 2-35543  
 Al, grain boundary dissociation study 2-12610  
 Al, internal friction of cyclic deformation, impurity conc. and annealing effects 2-45340  
 Al, internal stresses and Bordoni relax. during plastic deformation or annealing 2-47074  
 Al, quenched, vacancy clustering, impurity effects, recovery curves 2-40426  
 Al, quenched, vacancy clustering, Doppler broadening positron study 2-41445  
 Al, short-range ordering kinetics, vacancy parameters, quench and irradi. study 2-5110  
 Al, short-range ordering kinetics, vacancy parameters, quench and irradi. study 2-8511  
 Al-Co-Fe alloys, magnetomech. coupling, annealing effect 2-26713  
 Al-Mg, dil. quenched and annealed, vacancy migration energy, positron annihilation meas. 2-13585  
 Al-Mg, dil. quenched, vacancy clustering, impurity effects, recovery curves 2-40426  
 Al-Mg (5.5 at.%), cold worked, recovery, role of Mg atoms 2-47051  
 Al-Mg-Si, Se effect on strength and thermal stability 2-27281  
 Al-Mg(Zn), dil., vacancy clustering, Doppler broadening positron study 2-41445  
 Al-Si (11.3 at.%), microstructure, negative magnetoresistivity and supercond. props., heat treatment effects (*Chinese*) 2-21706  
 Al-SiO<sub>2</sub> internal photoemission characts., forming gas anneal effect 2-13617  
 Al-Zn (10 wt.%), solute conc. fluctuation effect on ageing at low temp. 2-47043  
 Al-Zn (40 wt.%), aged, cellular dissoln., mechanism and kinetics 2-36858  
 n-AlGaAs:Be, p-n junction formation by Be<sup>+</sup> implantation 2-51287  
 AlGaAs-GaAs solar cells, deep-level defects, low temp. periodic annealing effects 2-32066  
 AlGaAs-GaAs solar cells, proton irradi., radiation-induced deep-level defects, annealing, DLTS, SEM 2-32084  
 Al<sub>2</sub>O<sub>3</sub>, fused, anomalous expansion, causes 2-50889  
 α-Al<sub>2</sub>O<sub>3</sub> refractories, creep rel. to SiO<sub>2</sub> content, annealing temp. and microstruct. 2-36931  
 As amorphous film, UHV sublimed, elec. and optical props. 2-46172  
 As<sub>2</sub>Se<sub>3</sub> thin films, antireflecting prop., effect of thermostructural changes 2-51730  
 Au foil, annealed under reduced Cl<sub>2</sub> press., elec. cond. increase, 4.2K 2-35994  
 Au-Ag (15 at.%), short-range order form. and annihilation of vacancies 2-36985  
 Au-Co solid soln., elec. resist. and mag. susceptibility 2-30861  
 Au-Co solid soln. thin films, elec. resist., annealing treatment depend. 2-21693  
 Au-Er, dil. alloy, effects of near surface layer on EPR lineshapes, low temp. study 2-36421  
 Au-InP system, binary cpd. form., 320 to 360°C 2-1680

## annealing continued

- Au-Si surface phases, LEED, AES, and sputter depth profiling 2-1714  
 AuSn<sub>4</sub>, cryst. struct., annealing temp. depend. 2-8474  
 B, fine grained, internal friction, temp. depend. 2-41649  
 BN, superhard polycryst., struct. and mech. props., annealing effect 2-31788  
 BaTiO<sub>3</sub>(Cr to Ni), reversible wt. change after annealing, 700 to 1300°C 2-31712  
 Be wire, recryst. and grain growth in annealing 2-2526  
 Bi thin films, elec. resist., defect contrib. as function of deposition rate, annealing effect 2-46175  
 Bi<sup>3+</sup>(B<sub>1-x</sub>B<sub>2-x</sub>)<sub>4</sub>O<sub>4</sub>, ceramic prep. and characteris. 2-51530  
 C films, hydrogenated, produced by reactive magnetron sputtering, props. 2-39704  
 CaF<sub>2</sub>:Na, thermal destruction mechanism of M<sub>A</sub> colour centres 2-50634  
 Ca<sub>10</sub>(PO<sub>4</sub>)<sub>6</sub>(OH,F)<sub>2</sub>, β-type, acetate ions trapping, EPR detection 2-5584  
 Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>Cl:Mn<sup>2+</sup>(Ce<sup>3+</sup>), X-irrad., thermoluminesc. 2-41439  
 CaS:B, thermolum. phosphor, therm. parameters, operation importance 2-22101  
 Cd film, evaporated, elec. resist. meas. 2-26519  
 Cd, HCP, lattice defects, PAC and distrib. methods study 2-30462  
 Cd single crystals, X-ray topographic study of substruct. and dislocations (*Japanese*) 2-8522  
 n-CdS crystals, annealed in Cd or In, elec. cond. props. 2-45964  
 CdS, single cryst., two-phase annealing, elec. resist. meas. 2-8792  
 CdS single crystals, photoinduced processes, ageing and annealing effects 2-21620  
 CdS/Cu<sub>2</sub>S sintered solar cells, controlled annealing of sintered C, dS layer effects on photovoltaic performance 2-6172  
 CdSe film, deposited from heteroorganic cpds., exciton absorpt. 2-5761  
 CdSe, polycrystalline layers, effect of annealing on elec. props. 2-30984  
 p-CdTe, covered with dielec. films, annealing effects, diffusion phenomena and carrier conc. (*Japanese*) 2-40609  
 CdTe undoped p-type annealed in vacuum, electrical and crystalline props. 2-5750  
 Co complex, triethylenediamine Co(III) nitrate, oscillation annealing during neutron irradi. 2-21188  
 Co, initial fracture stages during cold rolling (*Russian*) 2-5939  
 Co-Fe-B-(Si), metallic glass, crystn., Lorentz microscopy study 2-21033  
 CsI:Na crystals, thermal stability of activation centres 2-51722  
 Cu crystal, bent, elec. resistivity, annealing effect 2-13827  
 Cu, electron irradiated, internal friction, oxidising and reducing anneals effect 2-47078  
 Cu, fatigued, positron lifetimes meas. in isochronal annealing 2-51738  
 Cu, flow stresses in prestrained annealed samples 2-31763  
 Cu, high purity, Matthiessen's rule deviations 2-17045  
 Cu, interstitial atom trapping and D localisation at <sup>57</sup>Co impurities 2-30484  
 Cu single cryst., Young's modulus low temp. peak 2-47080  
 Cu, surface, magnetron co-sputter etching, solar selective absorbing appl. 2-2617  
 Cu-Au, short-range order hardening 2-36868  
 Cu-Co solid soln., elec. resist. and mag. susceptibility 2-30861  
 Cu-Co solid solns., elec. resist. at low temp., annealing effect 2-45934  
 Cu-Fe multifilamentary composites, in situ formed, mag. hysteresis loops 2-13315  
 Cu-Nb ultrafine multifilamentary composites, Young's modulus enhancement 2-17698  
 Cu-Sn, diffusional interaction with Nb, Nb<sub>3</sub>Sn layer growth 2-40304  
 α-Cu-Zn (30 at.%), short-range ordering kinetics, vacancy parameters, quench and irradi. study 2-5111  
 α-Cu-Zn (30 at.%), short-range ordering kinetics, vacancy parameters, quench and irradi. study 2-8512  
 β-Cu-Zn-Al alloy, calorimetric study of ordering 2-2541  
 Cu-Zr(Mg)(P)(S) splat cooled alloy, mag. susceptibility (*Russian*) 2-5522  
 Cu<sub>2</sub>S thin films, phase transition study 2-12764  
 Cu<sub>50</sub>Ti<sub>50</sub>, amorphous, electron irradiation damage, positron lifetime meas. 2-50709  
 Dy, texture and mag. props. after rolling and annealing (*Russian*) 2-22236  
 Dy-Sb system, phase diagram construction and antimonides characts. 2-41584  
 ErAl<sub>3</sub>, thin film, occurrence of modulated phases 2-8734  
 Er<sub>1-x</sub>Gd<sub>x</sub>Al<sub>3</sub> thin film, occurrence of modulated phases 2-8734  
 Fe, cast, high-eutectoid, inoculated two-layer spheroidal graphite inclusion form. (*Ukrainian*) 2-27165  
 Fe, deformed, isothermal annealing positron annihilation study 2-51736  
 Fe foil, electrodeposited, mag. props. 2-26664  
 Fe, ion implanted, trapping of Sb by TaC and Cu precipitates 2-2513  
 Fe, magnetic props. for soft magnetic appl., heat treatment 2-21831  
 Fe-Al, cold worked, Mossbauer study of atomic reordering 2-17377  
 Fe-Al single cryst., ordered B2 type, annealing-out of quenched-in vacancies 2-47065  
 Fe-Al-B amorphous system, annealing effects on magnetic properties and crystallisation process (*Japanese*) 2-22242  
 Fe-B(18 wt.%), amorphous and crystalline, NMR study 2-26771  
 Fe-Co, neutron irradiated, accelerated diffusion (*French*) 2-35546  
 Fe-Co-M(V)(Ir) alloys, neutron irradiated, accelerated diffusion (*French*) 2-35546  
 Fe-Cr-Co-Si (27, 17.5, 1 wt.%), mag. and struct. transitions, mag. props. 2-26630  
 Fe-Cr-Si-B amorphous ribbons, mag. props. 2-36384  
 Fe-Mo(Ti)(Nb), dilute, muon hyperfine fields 2-46451  
 Fe-Ni, dil., mag. aftereffect after low temp. neutron irradi. 2-51439  
 Fe-Ni (36 and 50 wt.%), mag. props. after deform. and annealing 2-26673  
 Fe-Ni ferritic alloys, mag. and mech. props., telephone receiver appl. 2-26662  
 Fe-Ni-B-Si, amorphous, annealing effect on Barkhausen impulses 2-8999  
 Fe-Si (10-40 wt.%), anodic processes, galvanostatic conditions 2-47223  
 Fe-Si (3.25 wt.%), grain-oriented, core-loss, effect of cutting operation 2-17744  
 Fe-Si (6.5 wt.%) ribbons, mag. props. and grain struct. after annealing 2-26665  
 Fe-Si alloys, high Si content, mech. and mag. props., recent studies 2-26648  
 Fe-Si alloys, rapidly quenched, mag. props. 2-17315  
 Fe-Si based metallic glasses, mag. props., surface inclusion effects 2-41159



## annealing continued

- Fe-Si interface, silicide formation studied by Mossbauer spectroscopy and Rutherford backscatt. 2-31347  
 Fe-Si-Sb alloy, grain boundary relaxation, grain boundary segregation effect 2-47081  
 Fe-Sn,  $\alpha$ -solid soln., interdiffusion (*Japanese*) 2-12858  
 Fe<sub>80</sub>B<sub>20</sub>, amorphous, annealing behaviour on continuous heating 2-17690  
 Fe<sub>80</sub>B<sub>20</sub>, metallic glass, crystn. kinetics, TEM and DSC study 2-35399  
 Fe<sub>82</sub>B<sub>18</sub>, Be, metallic glasses, <sup>57</sup>Fe Mossbauer spectra study 2-17375  
 (Fe<sub>0.82</sub>B<sub>0.18</sub>)<sub>0.5</sub>Ti<sub>0.05</sub>La<sub>0.05</sub>, amorphous and crystallised, mag. props. 2-21820  
 FeCr<sub>2</sub>Se<sub>4</sub>, heat treatment effects on props. 2-13276  
 Fe<sub>40</sub>Ni<sub>60</sub>B<sub>20</sub>, amorphous, Lorentz electron microscopy study of domain struct. 2-5562  
 Fe<sub>40</sub>Ni<sub>60</sub>B<sub>20</sub>, metallic glass, atom probe FIM study of microstruct. after annealing 2-36874  
 Fe<sub>32</sub>Ni<sub>36</sub>Cr<sub>14</sub>P<sub>12</sub>B<sub>6</sub>, metallic glass, crystallisation and mech. props. 2-8447  
 $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, haematite, prep. by oxidation-precip., effect of heating 2-51946  
 Fe<sub>2</sub>S<sub>3</sub>O, natural pyrrhotites, hexagonal, mag. transition obs. 2-41124  
 GaAlAs-GaAs heterojunction solar cells with different contact materials, thermal stability 2-27653  
 GaAs, ion implanted, capless annealing, for microwave devices 2-2531  
 GaAs, compensation mechanisms related to deep B implantation 2-50678  
 n-GaAs, D<sup>+</sup> irradiated, carrier removal 2-1533  
 GaAs, fast neutron irradiated, As<sub>Ga</sub><sup>4+</sup> antisite defect, ESR spectra 2-46376  
 GaAs, ion implanted, Raman scatt. characteris. of changes induced by encapsulation and thermal annealing 2-17477  
 n-GaAs, positron annihilation study of radiation defects due to proton irradiat. 2-2366  
 GaAs post-implant annealing, encapsulation of semiconductor with CVD Si<sub>3</sub>N<sub>4</sub> to prevent decomposition 2-41634  
 GaAs, proton bombarded and annealed, photolum. 2-22074  
 n-GaAs, proton implanted, IR absorpt. 2-34886  
 GaAs, radiation defect annealing, redistrib. of point defects 2-45152  
 GaAs, single step selective implantation technology using proximity annealing, 10 GHz FET fabrication 2-16666  
 GaAs solar cell radiation damage, annealing, thermally and by minority carrier injection 2-27660  
 GaAs solar cell radiation damage and thermal annealing, conc. of vacancies, divacancies, thermochem. model 2-27661  
 GaAs solar cells, electron and proton damage coefficients and thermal annealing 2-37284  
 GaAs substrates, Cr, Si, Mn, and Fe distrib. after annealing with and without SiO<sub>2</sub> encapsulat. 2-30478  
 GaAs, VPE layers, implanted and annealed, elec. and optical props. 2-46164  
 GaAs:B(Si)(Se), ion implanted, stoichiometric disturbances 2-1501  
 GaAs:C, implanted, IR localised mode vibr. spectroscopy, annealing temp. depend. 2-17509  
 GaAs:Cd<sup>2+</sup>, ion-doped films, elec. props. 2-21701  
 GaAs:Cr, ion implanted, stoichiometric disturbances and Cr redistrib. during annealing 2-21161  
 GaAs:Cr, ion-implanted, depth distrib., range-energy data and shape factors 2-1500  
 GaAs:Fe, impurity redistrib. on annealing, saturation density 2-1508  
 GaAs:Ge(Se), neutron transmutation doping, elec. and physical props. 2-12619  
 GaAs:Se, electron beam annealing, multiply-scanned beam method 2-1526  
 GaAs:Se, electron beam annealing, multiply-scanned beam method 2-8542  
 GaAs:Se(S), impurity profile, implantation temp. and crystallinity depend. 2-40423  
 GaAs:Si, heavily doped, annealing-induced changes, Si defect conc. depend. 2-30889  
 GaAs:Si, implanted, multiply scanned electron beam annealing 2-45211  
 GaAs:Si, ion implanted and annealed, carrier conc. profiles, C-V meas. techniques 2-12623  
 GaAs:Zn, annealed, diffusion profiles meas. 2-26139  
 GaAs-n-AlGaAs heterostructure, MBE gram. effect of annealing on elec. props. 2-26485  
 GaP:Ag(Au), influence of heat treatment on distrib. of diffused impurities 2-26141  
 GaP:Pr, Y, heat treated, photoluminescence 2-17541  
 GaSb thin film, thermal treatment effect on elec. cond. and struct. 2-21697  
 (GaSb)<sub>1-x</sub>Ge<sub>x</sub> films, single cryst. metastable, growth, thermal stability and characteristics 2-27089  
 (GaSb)<sub>1-x</sub>Ge<sub>x</sub>, metastable single phase polycryst., from annealing of amorphous mixtures 2-51015  
 GaSe, excitonic spectra, phase transitions (*Russian*) 2-31557  
 Gd, strain effect on heat capacity near Curie temp. 2-13307  
 Gd-Co amorphous film, XPS study 2-17597  
 Gd-Co(Fe), amorphous film, effect of annealing on compensation temp. 2-26627  
 Gd-Fe amorphous film, XPS study 2-17597  
 Ge amorphous, annealing effect, struct. modelling 2-45055  
 Ge, amorphous, solid-phase epitaxial crystn. on Si (100) 2-12932  
 Ge amorphous film, defects study, SAW technique 2-35874  
 Ge film, amorphous, vacuum deposited, internal stress and Young's modulus (*Japanese*) 2-26264  
 Ge:Al, ion implanted, annealing behaviour obs., Al conc. profiles determ. 2-45241  
 Ge:H, amorphous film, interaction of US phonons with defects 2-26011  
 Ge-As solid solution, lattice const. meas. 2-21103  
 Ge-Sb-Se system, beam-resistant films, prep. and struct., thermal stability, optical parameters 2-5317  
 GeSe, glass, photoluminescence. spectra after thermal annealing 2-46750  
 GeSe, glassy films, self diffusion and kinetics of annealing, optical absorption edge meas. 2-21357  
 GeTe, plasma IR reflection, conc. phase heterogeneity 2-46612  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, electron irradi. and annealed, carrier lifetime and recomb. props. 2-17090  
 (Hg<sub>1-x</sub>Cd<sub>x</sub>)Te RF sputtered thin films, effect of annealing in Hg vapour on props. 2-8896  
 Hg<sub>2</sub>In<sub>2</sub>Te<sub>6</sub>, electrophysical props. and optical absorpt., influence of heat treatment 2-8791  
 HoCo film, amorphous, annealing effect on elec. resist. temp. depend., mag. compensation pt. and Hall parameters 2-9008  
 InP, amorphisation and low temp. recrystallisation 2-16665

## annealing continued

- InP crystals, electron irradi., near-edge absorption 2-17483  
 InP, ohmic contact formation using ion implantation 2-50677  
 InP, semi-insulating, Fe and Cr redistrib. 2-8537  
 InP:B(Si)(Se), ion implanted, stoichiometric disturbances 2-1501  
 InP:Fe, Mg(Zn), ion implanted, struct. and elec. props. 2-21163  
 InP:Si, capless annealing, for microwave devices 2-2531  
 InP:Si, ion implanted, electron pulse annealing with minimal P loss 2-30475  
 n-InP-Sn-Au alloyed ohmic contact formation, contact resistance depend. on annealing temp. 2-5463  
 InP-thermal nitride, interface in MIS diodes and MISFETs, interface props. annealing effects, device prop. 2-51308  
 InSe film, amorphous, short-range order, elec. cond. and opt. absorpt. edge 2-40712  
 $\alpha$ -In<sub>2</sub>Se<sub>3</sub>, intercalation compound with Li, layered, optical and transport meas. 2-26856  
 In<sub>2-x</sub>Sn<sub>x</sub>O<sub>3</sub> film, DC magnetron sputter deposition 2-51808  
 In<sub>2-x</sub>Sn<sub>x</sub>O<sub>3-y</sub> films, sputter deposited, elec. and optical props., heat treatment effects 2-26523  
 KBr, single crystals, annealing and ageing as thermal and temporal recovery mechanism 2-35581  
 KCl, single crystals, annealing and ageing as thermal and temporal recovery mechanism 2-35581  
 KI, single crystals, annealing and ageing as thermal and temporal recovery mechanism 2-35581  
 La-B films on Ta substrate, AES and work function changes 2-40743  
 LaNi<sub>5</sub>-H, plateau press. and hysteresis, annealing effect 2-41928  
 La<sub>2</sub>Ti<sub>2</sub>O<sub>9</sub>, synthesis, cryst. struct. and electrophys. props. 2-41562  
 LiF, annealing of radiation defects, chemiluminesc. and thermostimulated luminesc. (*Russian*) 2-9205  
 LiNbO<sub>3</sub>, Li in and out diffusion processes, refractive index meas. using SHG phase matching temp. technique 2-16845  
 LiNbO<sub>3</sub>:H<sup>+</sup> (He<sup>+</sup>), propag. of SAW during implantation 2-35875  
 Li<sub>2</sub>O, neutron and ion irradi. damage, ESR study 2-17338  
 mLi<sub>2</sub>AlF<sub>3</sub>, amorphous thin film ionic conductors 2-21355  
 Lu-H(D), solid solution, anelastic effects 2-45365  
 Mg, internal friction spectrum after plastic deform., impurities effect 2-41659  
 MgAl<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, luminesc. spectrum, N-lines, origin 2-41405  
 MgO:C, depth profiling, temp. and time-dependent behaviour 2-35524  
 Mo film, silicidized, annealing effects 2-13748  
 Mo, multicrystn., deform. fatigue, structural changes (*Russian*) 2-9386  
 Mo, neutron irradi., deform. behaviour in tensile and hardness tests 2-31745  
 Mo, single crystal 2-5160  
 Mo:Ge(In)(Te)(C), deform., high temp., effect of ion implantation 2-47142  
 Mo-MoO<sub>3</sub>, black Mo thin film, CVD growth and H<sub>2</sub> reduction 2-21464  
 Mo-Re alloy films, annealing behaviour 2-8890  
 Mo-Si contacts, P ion implantation effects 2-8531  
 Mo-Si films, elec. transport and microstruct. 2-51346  
 NaBr:Eu<sup>2+</sup>, precipitated phase, optical absorpt. and luminesc. spectra 2-41408  
 NaCl:Sr, UV irradiated, deformed, glow curve meas. 2-5759  
 NaI:Eu<sup>2+</sup>, precipitated phase, optical absorpt. and luminesc. spectra 2-41408  
 NaIn film prep. by sandwich-type evaporation method 2-12944  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glass nuclear track detectors, pre-irradiation annealing effect on bulk etch rate 2-29478  
 Nb, microstruct. and strength, effect of He 2-36914  
 Nb-NbO<sub>2</sub>-Pb, tunnel junctions, Nb energy gap and critical currents, temp. depend., base electrode annealing effects 2-36242  
 Nb-Ti (50 wt.%), phase distrib. and size, US vibr. influence (*Russian*) 2-5494  
 Nb-Ti alloy, He<sup>+</sup> ion implanted, heat treated, sp. ht. and supercond. props. 2-36280  
 $\delta$ -NbN<sub>0.85</sub>, ion implantation of C and N, supercond. obs. 2-2027  
 NbSi<sub>2</sub>, contact metallurgy technique by using ion-beam mixing 2-1679  
 Nb<sub>3</sub>Sn, internal friction and Young's modulus, 6 to 300K 2-47107  
 Nb<sub>3</sub>Sn layer growth, Sn diffusion in Cu-Sn coated Nb 2-40304  
 Nb<sub>3</sub>Sn-Cu, superconductor wire, prep. by in situ process, optimisation of props. 2-2043  
 Ni polycrystalline, push-pull deformed, vacancy behaviour during loading cycle, elec. resist. meas. 2-36930  
 Ni, segregation intergranular and surface kinetics during annealing, AES 2-51906  
 Ni, thin film, elec. resistivity and structure, effect of annealing 2-51351  
 Ni-Al powdered protective coatings on steel, phase struct. changes 2-22385  
 Ni-Cu, electron irradi., short-range clustering and long-range periodic decomp. 2-45278  
 NiFe-Cr(Mn) double layer mag. films, planar Hall effect 2-21565  
 NiFe<sub>2</sub>-Ni<sub>2</sub>Cr system, struct. transform., conc. depend. (*Russian*) 2-22196  
 Ni<sub>40</sub>Fe<sub>60</sub>Cr<sub>20</sub>Cr<sub>12</sub>Mo<sub>6</sub>B<sub>16</sub> amorphous alloy, H<sup>+</sup> ion bombardment effects 2-50672  
 Ni<sub>4</sub>Mo, quenched and annealed, thermal faceting, FIM obs. 2-25798  
 NiSi formation, effects of implanted O using <sup>4</sup>He<sup>+</sup> backscattering spectroscopy study 2-1502  
 NiSi<sub>2</sub>, laser formed, post-irradiation annealing 2-51010  
 Pb-Au, dil. alloy, electron irradi., dipion formation, resistivity annealing spectra study 2-36880  
 Pb-Sn alloys, mag. and thermomag. props. 2-17049  
 PbTiO<sub>3</sub>, amorphous, crystallisation, Raman study 2-41340  
 PbTiO<sub>3</sub>, amorphous, struct. determ. by EXAFS 2-40270  
 PbTiO<sub>3</sub>-PbZrO<sub>3</sub>-Pb(W<sub>0.5</sub>Cd<sub>0.5</sub>)O<sub>3</sub> pyroceramic electret with vitreous phase, prep. and characteris. 2-51866  
 Pd, annealed and cold rolled, diffusivity and solubility of H<sub>2</sub> (*Japanese*) 2-12853  
 Pd-Cu-H system, Cu ion implanted and H-charged supercond. transition temp. meas. 2-36170  
 Pd-D alloy, location of low-temp. resistivity anomaly 2-21639  
 Pd-Si, amorphous alloys, struct., temp. depend. (*French*) 2-21028  
 Pd-Si, electron bombardment and post-thermal annealing, cpd. form. 2-8543  
 Pd<sub>2</sub>MnSn ferromag. Heusler alloy, magnetisation reduction by cold working 2-9001  
 Pd<sub>2</sub>Si, laser formed, post-irradiation annealing 2-51010  
 Pd<sub>2</sub>Si-Si interface, thermally induced Si accumulation, Si-Pd bonds, photoemission study 2-26505



## annealing continued

- Pd<sub>80</sub>Si<sub>20</sub>, amorphous, electron irradiation damage, positron lifetime meas. 2-50709
- Pd<sub>83</sub>Si<sub>17</sub>, metallic glass, ideal elastic, anelastic and viscoelastic deform. 2-13760
- Pt film on Si, silicide growth kinetics, O effect 2-21401
- Pt sputtered film, microstruct., X-ray diffr. study 2-51022
- Pt-Si, electron bombardment and post-thermal annealing, cpd. form. 2-8543
- PtSi, laser formed, post-irradiation annealing 2-51010
- RhSi, laser formed, post-irradiation annealing 2-51010
- S,As, through oxide As implanted, recoil O implants and O thermal redistrib. 2-5133
- Sb thin film, amorphous, impulse stimulated crystallisation 2-45039
- Se amorphous film, glass transition temp. depend. on heating rate and ageing 2-12756
- Se amorphous film, vapour deposited, optical loss as meas. of crystallinity 2-36724
- Se film, discontinuous struct., mass transport effects 2-45781
- Se<sub>93.5</sub>As<sub>6.5</sub>, amorphous film, carrier mobility, thermal annealing and light irradi. effects 2-13199
- Se<sub>94.3</sub>Ge<sub>5.7</sub>, amorphous film, carrier mobility, thermal annealing and light irradi. effects 2-13199
- Si, amorphous, ion implanted, refractive index, thermal annealing effects 2-51537
- Si, amorphous, vacuum deposited coating, annealing, EPR and TEM study 2-26244
- Si amorphous films, evaporated and sputtered, annealing and hydrogenation 2-45771
- Si,  $\alpha$ -radiation defects in p<sup>+</sup>-n diodes 2-40447
- Si, Czochralski grown, internal gettering centres and SiO<sub>x</sub> precip. nucleation 2-40424
- Si, Czochralski-grown, thermally induced luminesc. centres 2-46666
- Si, defect formation during high-temp. inert gas annealing 2-30460
- Si, deformed, dislocation relax. study 2-25891
- Si, denudation zone and internal SiO<sub>x</sub> nucleation control, role of stabilised back-surface damage 2-12760
- Si diode neutron dosimeters, annealing effect on response 2-49249
- Si, dislocation-free single crystal, neutron irradi. and heat treatment effect on microdefects 2-5159
- Si film, polycryst., on SiO<sub>2</sub>, grain growth by CW scanning electron beam annealing 2-12925
- Si, gettering and redistrib. of O, 300 to 500°C 2-8536
- Si, heavily implanted layers, pulsed thermal annealing 2-50682
- Si, ion implantation damage, isothermal annealing using thermal radiation source 2-16663
- Si, ion implanted, annealing in plasma of pulsed gas discharge 2-40918
- Si, ion implanted, directional distrib. of Burgers vectors of dislocation loops 2-16648
- p<sup>+</sup>-Si, ion implanted, isothermally annealed, carrier mobility and conc. profiles 2-51170
- Si, ion implanted, pulsed electron beam apparatus and annealing 2-12625
- Si, mag. perception, influence of thermal neutron irradiation (*Russian*) 2-40441
- Si, neutron irradi. dislocation-free crystals, annealing influence on elec. and struct. props. 2-40440
- Si, neutron irradiated, carrier scatt. by defect clusters 2-21587
- Si, polycrystalline, laser recrystallised, cond. enhancement by H<sub>2</sub> annealing 2-52058
- Si, polycrystalline, potential barrier form. at grain boundaries following anneal 2-35514
- Si, proton bombarded, IR spectroscopy and X-ray topography study 2-1531
- Si, self-annealing implantation, elec. and struct. characterisation 2-50681
- Si, single step doping technique, pulsed ion implantation 2-35520
- Si, solar cell, n<sup>+</sup>-p, electron irradi. and annealing effects 2-2786
- Si solar cells, electron and proton damage coefficients and thermal annealing 2-37284
- Si solar cells, reduced annealing temps. 2-37282
- Si surface, (111), thermally cleaned, electron states and H chemisorpt., defect model 2-1986
- Si surface (111), O chemisorpt. configurations 2-26214
- Si, surface temp. evaluation of multi-scan electron beam irradi. samples, TEM obs. and optical pyrometry meas. 2-50712
- Si, thermally annealed Czochralski wafers, ambient effects on defect formation 2-50627
- Si wafer, Au gettering by P diffusion and Ar implementation, mech. and limitations 2-1671
- Si wafer, Czochralski grown, photolum. characteris. of thermally-induced defects 2-17535
- Si wafer, low power electron irradi. with conventional electron gun, heating effect numerical simulation 2-25932
- Si, wafer, thermally induced defect behaviour and effective intrinsic gettering sink 2-35505
- Si wafers, electron beam annealed, crystallographic damage anal. 2-50714
- Si:As, ion implanted, doping profiles and elec. activation, Rutherford backscatt. study 2-25916
- Si:As, ion implanted, polycrystn. film, laser irradi., elec. props. grain size, annealing effect 2-17173
- Si:As, ion implanted, pulsed electron beam annealing 2-50710
- Si:As, ion implanted, radiation defects annealing, Mossbauer and surface cond. study 2-35523
- Si:As(P), polycrystalline, heavily doped, comparison of thermal and CW laser annealing effect on resist. 2-51179
- Si:B, doping profile, SIMS layer-by-layer anal., matrix effects 2-51762
- Si:B, ion implanted, Auger study 2-45224
- Si:B, ion implanted, defect formation during annealing 2-45179
- Si:B, ion implanted, point defect generation during oxidation, loop annealing technique 2-25869
- Si:B, P, ion implanted, doping profiles, implantation sequence effect 2-45228
- n-Si:BF<sub>3</sub><sup>+</sup>, ion implanted, plasma annealing 2-16664
- Si:B(P), neutron irradi., optical props. of defects 2-13521
- Si:Bi, furnace and laser annealed, backscatt. and channelling anal., depth distrib. 2-45253
- Si:Co, implanted, laser and thermal annealing studied by Mossbauer spectroscopy 2-31346
- Si:Cr, ion-implanted, depth distrib., range-energy data and shape factors 2-1500

## annealing continued

- Si:F, H, amorphous, annealing effects, NMR and ESR studies 2-41214
- n-Si:Fe, solid soln. precip., capacitance study 2-16804
- Si:Ge, high fluence implantation, radiation damage annealing, backscatt. and channelling, anal. 2-45289
- Si:H, amorphous, annealing effects, NMR and ESR studies 2-41214
- Si:H, amorphous, effect of annealing on optical gap 2-2211
- Si:H, amorphous, electron irradi. effect on dark and photocond. and defect removal 2-45279
- Si:H, amorphous, H<sub>2</sub> exodiffusion, comparison with elec. cond. meas. 2-45623
- Si:H, amorphous, light induced changes, computer modelling of admittance and DLTS 2-36090
- Si:H, amorphous film, struct. evolution during annealing 2-45035
- Si:H, amorphous plasma deposited coating, field effect cond., illumination and annealing effects 2-45969
- Si:H, Cl amorphous films, IR vibr. spectra 2-36630
- Si:H,B, Li-diffused, amorphous compensated, dark and photocond. 2-46065
- Si:H,B(P), amorphous, IR and far IR absorpt., annealing effect 2-36628
- Si:H amorphous, electron and laser beam induced centres, photoluminescence study 2-36682
- Si:H amorphous film, field effect studies, density of localized gap states 2-46169
- Si:H amorphous plasma deposited coating, IR spectra, temp. depend. 2-41352
- a-Si:H film, low optical absorption, annealing studies, photoacoustic spectroscopy meas. 2-36718
- Si:H-Pd interface, interference enhanced Raman scatt. study of interfacial reaction 2-9147
- Si:In,Sb (100), ion implanted, solid phase epitaxy, solid solubility, channelling study 2-50862
- Si:O, Czochralski grown, precipitated O redissolution, expt. study 2-50860
- Si:O(H)(F) evaporated amorphous films, DC cond., impurities effect 2-13070
- n-Si:P, electrophysical props. thermal annealing and cooling condition effects 2-51175
- Si:P film, LPCVD, polycryst., grain size and resist. 2-13202
- Si:P implanted wafer, multicasting electron beam annealing, solar cells appl. 2-21177
- Si:P ion-implanted solar cells, pulsed electron beam annealing 2-37362
- n-Si:Pt, impurity levels, capture cross section, capacitance, hole lifetime and resistivity obs. 2-51125
- Si:Sb, polycrystalline, ion implanted, doping profiles and elec. resist., annealing effects 2-50685
- Si:Sn, ion implanted, radiation defects annealing, Mossbauer and surface cond. study 2-35523
- Si-Al-(111)Si structures, redistrib. of Si at low annealing temps 2-13183
- Si-insulator triple struct. fabrication by O<sub>2</sub> implantation and epitaxial growth 2-40719
- Si-Pd interface, PdSi and Pd<sub>2</sub>Si films and bulk phases, thermal stability, X-ray diffr. study 2-51005
- Si-SiO<sub>2</sub> interface, hot electron induced defects 2-46152
- Si-SiO<sub>2</sub> interface defects, low temp. annealing and hydrogenation 2-8885
- Si-SiO<sub>2</sub> MIS struct., Ar ion implanted, deep levels, C-V characts. meas. 2-13010
- Si-SiO<sub>2</sub> systems, physico-chemical processes, behaviour of H and H-containing structs. (*Russian*) 2-2008
- n-SiC (6H), minority carrier diffusion length, annealing effect, photocurrent obs. 2-51205
- SiC compacts, 6H to 3C reverse transform. 2-51893
- SiC thin layers formed by C ion implantation in Si, struct. and annealing props. 2-8733
- SiC:B(Si)(Se), ion implanted, stoichiometric disturbances 2-1501
- Si<sub>3</sub>N<sub>4</sub>, Ge<sub>2</sub>H film, amorphous, ESR and IR studies 2-26740
- Si<sub>3</sub>N<sub>4</sub> formation by N ion implantation of Si, AES and EELS studies 2-40422
- Si<sub>3</sub>N<sub>4</sub>Si, ion beam synthesised passivating layers, XPS study 2-45218
- SiO<sub>2</sub>, electron trapping, reduction by high temp. N<sub>2</sub> annealing 2-26405
- SiO<sub>2</sub>, electron traps, processing parameters influence 2-21598
- SiO<sub>2</sub>, plasma-deposited, charact. 2-9278
- SiO<sub>2</sub>:P, effect of heat treatment on chemical state of P, XPS study 2-36754
- SiO<sub>2</sub>-GaAs, MIS diode, props. of spin-on interfaces 2-2013
- SiO<sub>2</sub>-Si interface states generation at low temp. with ionising radiation 2-30944
- SiO<sub>2</sub>-Ta<sub>2</sub>O<sub>5</sub> waveguide dielec. thin films, refr. index var. due to laser irradi. and annealing 2-16106
- Si(111) surfaces, laser- and thermally-annealed, electronic struct. similarities, photoemission study 2-31603
- Sm(CoCu), structural transform. rel. to coercivity (*Czech*) 2-46343
- $\beta$ -Sn, electrical conductivity, thermal cond. and thermo EMF, 3/7-16K (*Russian*) 2-45937
- Sn<sub>1-x</sub>Cr<sub>x</sub>Te, mag. props., effect of isothermal annealing 2-41161
- SnO and SnO<sub>2</sub>, oxidation states of Sn, AES study 2-2385
- SrF<sub>2</sub>:Na, thermal destruction mechanism of M<sub>A</sub> colour centres 2-50634
- $\beta$ -Ta thermal oxidation below 500°C 2-52116
- Tb, texture and mag. props. after rolling and annealing (*Russian*) 2-22236
- Te, photocond. meas. at 77K in 1.4 to 4.4  $\mu$ m range 2-26434
- (Th, U)O<sub>2</sub>, irradi., lattice parameter change 2-43555
- Ti, comparative study of deep drawability with Zr (*French*) 2-2543
- Ti, oxide coated, fatigue strength 2-27279
- Ti, strength properties, annealing in air temp. influence 2-27252
- Ti-Al, oxide coated, fatigue strength 2-27279
- Ti-Al-Mn, strength properties, annealing in air temp. influence 2-27252
- Ti-Cr, ordering in incommensurate displacement structures 2-16776
- Ti-p-Si MIS type Schottky barriers 2-46100
- Ti-Ta-Si, amorphous, crystallisation induced superconductivity 2-13213
- TiBr-TiI type KRS-5 crystal, disturbed layer magnitude determ. at different stages of mech. finishing 2-1051
- TiCl-TiBr type KRS-6 crystal, disturbed layer magnitude determ. at different stages of mech. finishing 2-1051
- U, single cryst., defects due to fission damage 2-16683
- V film, vacuum deposited, annealing kinetics, elec. resist. study 2-45785
- V-Ga-Ce (16, 1 wt%), irradi. conditions on mechanical props. 2-13757
- V-Si, laser induced defects, material interactions 2-50704
- V<sub>2</sub>O<sub>5</sub> single crystals, of controlled stoichiometry, growth and elec. props. 2-36777



**annealing continued**

- V<sub>2</sub>Si layers, supercond. transition temp. and normal resistivity, proximity and annealing effects 2-51367  
 V<sub>2</sub>Si, voids induced by fast neutron irradi., critical temp. and current meas. 2-31015  
 V<sub>2</sub>Si:He, ion implanted, strain study, divergent beam X-ray diffr. obs. 2-16684  
 W-Ni-Fe binder phase, struct., heat treatment conditions effect 2-17696  
 WO<sub>3</sub>, amorphous film, charact. by optical absorpt. spectra (*Japanese*) 2-41442  
 WSi<sub>2</sub>-Si:P annealing behaviour, effect on MOSFET IC device fabrication 2-8720  
 W<sub>2</sub>Si<sub>3</sub>, formation by plasma CVD 2-2453  
 YAG:Nd, Czochralski grown crystal, residual stress, high temp. annealing effect (*Chinese*) 2-45144  
 YFe<sub>2</sub>-Ga<sub>2</sub>O<sub>7</sub>, FMR linewidth, annealing effects 2-21888  
 YIG epitaxial layers, Xe<sup>+</sup> irradi., magnetisation, Faraday rot. and FMR linewidth 2-21847  
 Ze,  $\alpha$  to  $\beta$  phase transition, early stages 2-27173  
 Zn, anneal hardening 2-51932  
 Zn, HCP, lattice defects, PAC and distrib. methods study 2-30462  
 Zn single cryst., internal friction under impact loading 2-45347  
 Zn-Ag(Ga), anneal hardening 2-51932  
 ZnAl<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, luminesc. spectrum, N-lines, origin 2-41405  
 ZnGa<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, luminesc. spectrum, N-lines, origin 2-41405  
 ZnGeP<sub>2</sub>, IR absorpt., brightening effect, heat treatment effects 2-36654  
 ZnS single cryst., martensitic and diffusional transitions, transition temp. and kinetics 2-5216  
 ZnSe, doped, luminescence centres, activation energy of form. 2-41392  
 ZnSe:Cu, IR absorpt., defect accumulations 2-5667  
 ZnSe:Li, Na, luminesc. spectra, exciton emission and donor-acceptor pair recomb. 2-46671  
 Zr, Auger spectrum and work function, contamination effects 2-51283  
 Zr, comparative study of deep drawability with Ti (*French*) 2-2543  
 $\alpha$ -Zr, fatigue, cold work effect at elev. temp. 2-31772  
 Zr-Nb (2.5 wt.%), in-reactor deform. of tubes at 330K 2-47125  
 Zr-O-W(100) emitter, coadsorpt. of Zr and CO 2-22139  
 Zr<sub>0.7</sub>Ni<sub>0.24</sub> alloy, amorphous supercond., effect of struct. relax. on tunnelling states, sp. ht. meas. 2-36222  
 Zr<sub>0.76</sub>Ni<sub>0.24</sub>, supercond. amorphous alloy, effect of struct. relax. on low temp. thermal props. 2-31054  
 Zr<sub>3</sub>Pd, glassy supercond. thermal relax. studied 2-41051

**annealing, magnetic** *see magnetic annealing***anodes**

- anode process, during heating by a sprayer (*Russian*) 2-31927  
 discharge behaviour of electrodeposited PbO<sub>2</sub> and Pb electrodes 2-37204  
 electrolytic oxidation, chromic sulphate to chromic acid, Pb anode preparation effects 2-22460  
 electrolytic plasma heating, temp. distrib. control (*Russian*) 2-30313  
 medical electrocoagulation, transcatheter, evaluation of anode and cathode 2-27929  
 metal fluidised-bed electrodeposition 2-31929  
 plasma channel, anode explosion 2-12419  
 plasma vacuum breakdown, interelectrode filling with anode material 2-44941  
 semiconductor photoanodes, protection with photoelectrochemically generated polypyrrole films 2-47203  
 vacuum gap electrodes, electric breakdown, thermal instability of anode 2-12417  
 Al-Zn-Sn alloy sacrificial anodes, heat treatment effects 2-31839  
 Al-Zn(-Sn)(-In), sacrificial anodes, sea water testing 2-52093  
 Ca<sub>1-x</sub>Y<sub>x</sub>/BiO<sub>0.1</sub>F<sub>2.8</sub> solid-state batteries with alloy anodes 2-9635  
 CdSe thin film anodes, photoelectrochem. characts. 2-8876  
 Ga, liq., positive ion source, mass transport 2-584  
 Na- $\text{AlCl}_3$  cells using solid electrolytes with molten Na anodes and cathodes composed of S compounds and  $\text{AlCl}_3$  2-22597  
 $\beta$ -PbO<sub>2</sub> anode for ozone prod., electrolyte anion adsorption effects 2-47352  
 n-Si photoanode, grain boundary and surface damage effects on stabilisation, rotating ring disc electrode studies 2-16932  
 n-Si photoanodes, stabilisation to surface corrosion in aqueous electrolyte with polypyrrole thin film 2-5971  
 Si:Cu<sub>2</sub>Si semipermeable anode for Si electrowinning 2-41534  
 SrTiO<sub>3</sub> photoanodes for photoelectrochemical cells, photocorrosion 2-22635  
 Ta-polypyrrole-Pt anodes in photoelectrolysis cells, O<sub>2</sub> evolution 2-52374  
 TiO<sub>2</sub> oxide film, photocurrent spectroscopy 2-13116  
 W rotating anode for X-ray tube, design 2-40219

**anodes, electrochemical** *see electrochemical electrodes***anodic machining** *see electrolytic machining***anodisation**

- austenitic stainless steels, AISI 304L and 316L, glow discharge optical spectroscopy of passive film (*French*) 2-52101  
 Josephson tunnel junction, large, fabrication and eval. (*Japanese*) 2-17235  
 Al, anodic oxidation, ion beam nuclear analysis (*French*) 2-1799  
 Al, anodization in aqueous borate and borate-glycol solns., anodic barrier film form. 2-41814  
 Al surface laser irradiated, corrosion behaviour 2-9474  
 Al wire, prod. of  $\alpha$ -Al<sub>2</sub>O<sub>3</sub> fibres 2-27124  
 Al-Cu alloy, 2024-T3, anodisation in H<sub>3</sub>PO<sub>4</sub>, AES and Rutherford backscatt. study 2-22392  
 Al<sub>2</sub>O<sub>3</sub> film, plasma anodized, in GaAs and InP MIS structs. 2-51340  
 Cu:P, anodic dissolution, composition of black anodic film (*Russian*) 2-21454  
 Fe, protective coatings by anodic coupling polymerization of o-allylphenol 2-27328  
 GaAs 2-47217  
 n-GaAs, passivation and interface state studies 2-17747  
 GaAs, plasma anodisation kinetics 2-13830  
 GaAs, plasma anodisation kinetics using multipole plasma source 2-47218  
 GaAs precoated with Al, composite oxide film formation by DC plasma anodisation 2-17762  
 Ga<sub>1-x</sub>In<sub>x</sub>As MOS structures, plasma anodisation and interface props. 2-46133  
 HgCdTe, anodic oxide and ZnS passivant films, substrate interaction, XPS and ion sputtering meas. 2-17756  
 Hg<sub>0.3</sub>Cd<sub>0.7</sub>Te-oxide interface, anodic oxide composition and Hg depletion 2-26237

**anodisation continued**

- InAs, anodic oxide films, Auger spectroscopic anal. 2-9586  
 Ni, anodic oxide film growth in borate buffer soln. 2-27329  
 NiO film, dissoln. in fused NaCl-KCl at 973K by anodic polarisation 2-9450  
 Si, influence of O<sub>2</sub> on wear 2-9433  
 Si, plasma anodisation kinetics using multipole plasma source 2-47218  
 Si:As, ion implanted, radiation damage determ. by profiling oxide growth rate 2-40448  
 Ti, anodic film growth 200-257°C 2-9463  
 Ti film on vitreous C, anodic oxidation 2-9464

**anodised coatings** *see anodised layers***anodised layers**

- metallic coating, plating and anodising 2-31813  
 production by continuous coil anodising 2-27343  
 Al, anodic coated, hardness, wear and abrasion meas. 2-47186  
 Al anodic films, intrinsic stresses meas. 2-47229  
 Al/GaAs, plasma anodisation, composite oxide film formation, AES study 2-52075  
 Al<sub>2</sub>O<sub>3</sub>, amorphous, DC cond. and dielec. polarisation, thickness depend. and defects role 2-30987  
 Al<sub>2</sub>O<sub>3</sub>, amorphous, oxidation of Al, ion beam nuclear analysis (*French*) 2-1799  
 Al<sub>2</sub>O<sub>3</sub>, anodic film, corrosion resistance evaluation, Hunter's method 2-27368  
 Al<sub>2</sub>O<sub>3</sub>, anodized film, on line colour meas. during electrolytic colouring 2-43065  
 Cu:P, black anodic film, anodic dissolution of Cu:P (*Russian*) 2-21454  
 GaAs, anodic oxide film, comp. and dielec. strength, SIMS study 2-47214  
 n-GaAs-anodic oxide interface, props., anal. using MOS theory 2-41015  
 InSb, anodic oxide film, comp. and dielec. strength, SIMS study 2-47214  
 Ta<sub>2</sub>O<sub>5</sub>, AES sputter yield, standard material appl. 2-47413  
 Ta<sub>2</sub>O<sub>5</sub> thin films, elec. props. and XPS-AES anal. for thermal, reactive and anodic types 2-17177  
 Ti-TiO<sub>2</sub>, optical props., spectroscopic ellipsometry (*French*) 2-41319

**anodised thin films** *see anodised layers***anolytes** *see electrolytes***anomalous skin effect**

- metal, semi-infinite, many-channel mirror surface reflections of conduction electrons (*Russian*) 2-21651  
 metals, multichannel electron boundary reflection, high freq. effects 2-36076

**antenna arrays**

- see also directional couplers; microwave antenna arrays*  
 adaptive array antennas, new design method 2-44614  
 adaptive receiving array interference nulling schemes compared 2-44585  
 curvilinear screen array, diffraction of plane E-polarised waves (*Russian*) 2-34634  
 European Remote Sensing Satellite, slotted waveguide array antenna 2-6519  
 far IR imaging antenna array 2-48698  
 Westerbork Synthesis Radio Telescope, multifrequency cryogenically cooled front end receiver 2-48147

**antenna feeders**

- polarization feeds for radiotelescope, antenna response 2-28342

**antenna lobe patterns** *see antenna radiation patterns***antenna patterns** *see antenna radiation patterns***antenna radiation patterns**

- IR antenna using corner reflector, EM coupling with 10 micron laser radiation 2-38689  
 optimal beamformer response to source with all-pole angular power density spectrum 2-44599  
 random sonobuoy array statistical props. and beam patterns 2-44587  
 RATAN-600 radiotelescope, with no aberration 2-28344  
 RATAN-600 radiotelescope radiation pattern allowing for aberrations 2-28345  
 resonant thin-wire antenna, thermal response of human in near zone 2-47634  
 time-domain adaptive array processing and beamforming recursive algorithms 2-44592

**antenna reflectors**

- IR antenna using corner reflector, EM coupling with 10 micron laser radiation 2-38689  
 variable-profile antenna, secondary mirror polarization props. 2-28343

**antenna theory**

- curvilinear screen array, diffraction of plane E-polarised waves (*Russian*) 2-34634  
 gratings, classical and crossed, microwave range of diffr., expt. investigation 2-825  
 IR antenna using corner reflector, EM coupling with 10 micron laser radiation 2-38689  
 monopole antenna, response to EM pulse with corona, transmission line model 2-44191  
 radiotelescope response and Muller polarization matrix 2-28342  
 reflector mappings in computer plane, uniqueness theorem, Monge-Ampere eqn. 2-4444

**antennas**

- see also antenna radiation patterns; dipole antennas; directive antennas; microwave antennas; mobile antennas; radar antennas; receiving antennas; reflector antennas*  
 conference, Aug. 1980, Munich, Germany 2-48397  
 gravitational radiation antenna, low temp., at Stanford, status 2-28744  
 ion-acoustic waves, radiation characts., dispersion effects 2-8321  
 isotropic pattern antennas, synthesized, for EM field meas. 2-33586

**anthropology**

- X-ray appls. 2-23800

**antibaryons** *see baryons***anticorrosion coatings** *see corrosion protective coatings***antiferromagnetism**

- No entries

**antiferroelectric materials**

- see also antiferroelectricity; ferroelectric materials*  
 ice Ih, ferroelec. phase transition and dielec. const. anisotropy 2-26832  
 squaric acid, antiferroelectric phase transition, thermodynamic props., statistical model calc. 2-17424  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>:Ag<sup>+</sup>, antiferroelec. transitions, three-state two-dimens. Potts model 2-2207



**antiferroelectric materials continued**

- $\text{Bi}^{3+}(\text{B}_{1-x}\text{B}_x)\text{O}_4$ , ceramic prep. and characteris. 2-51530  
 $\text{CsH}_2(\text{SeO}_3)_2$ , hydrogen bond network, antiferroelectric phase transition  $^2\text{D}$  and  $^{133}\text{Cs}$  NMR study 2-51481  
 $\text{DyVO}_4$  type crystal, Jahn-Teller ferrodistorion antiferroelec., elementary excitations in elec. field 2-13026  
 $\text{NH}_4\text{H}_2\text{AsO}_4$ , antiferroelectric, behaviour of free radicals in phase transition (French) 2-36566  
 $\text{NH}_4\text{H}_2\text{PO}_4$ , overdamped modes at 300K in IR refl. spectra 2-51597  
 $\text{NH}_4\text{H}_2\text{PO}_4(\text{AsO}_4)$  and  $\text{ND}_4\text{D}_2\text{PO}_4$ , antiferroelec. transitions, pseudospin model, Green's function theory 2-46514  
 $(\text{NH}_4)_2\text{ZnCl}_4$ , ferroelec. phase transitions, dielec., thermal, and X-ray diff. meas. 2-2201  
 $\text{Pb}(\text{Fe}_{1/2}\text{Nb}_{1/2})\text{O}_3\text{-Pb}(\text{Mg}_{1/2}\text{W}_{1/2})\text{O}_3$  solid soln., phase anal. 2-26831  
 $\text{PbHfO}_3$ , antiferroelec., phase transition temp., influence of permanent mag. field 2-9108  
 $\text{PbZrO}_3$ , Curie temp., external mag. field effect, thermographic study 2-9101  
 $\text{SnCl}_2\cdot(\text{H}_2\text{O})_{2-x}(\text{D}_2\text{O})_x$ , solid soln., critical temp. 2-36567

**antiferroelectricity**

see also *antiferroelectric materials*

- doubly reentrant liquid crystals, frustrated spin-gas model 2-12747  
 Jahn-Teller, coupled dielec. and elastic anomalies 2-31421  
 liquid crystal, smectic, dipole ordering, antiferroelec. and helicoidal types 2-35380  
 nonlinear dielec. props., mag. field effects 2-31420  
 phase transitions, surface effects, review 2-31399  
 phase transitions in  $\text{BaTiO}_3$ -type ferroelectrics 2-46503  
 squaric acid, layered antiferroelectric, phase transition 2-31398  
 symmetry aspects in ferroelectric, antiferroelectric, improper and incommensurate phase transitions 2-41291  
 thiourea, sinusoidal antiferroelectricity theory 2-21953  
 two dimensional model, ferroelastic effect 2-36554  
 $\text{KH}_2\text{PO}_4$ -type ferroelectrics and antiferroelectrics, cationic dynamics, paramag. probes 2-36490  
 $\text{K}(\text{M},\text{W}_{1-x})_2\text{O}_6$  ( $\text{M}=\text{Li}, \text{Al}, \text{Ti}$  or  $\text{Nb}$ ) cryst. chem., polymorphism and dielec. props. 2-5237  
 $\text{NaNO}_2$ , incommensurate (antiferroelec.) phase transition, Brillouin study 2-46512  
 $\text{NaNbO}_3$ , bladed crystals, growth and investigation 2-5805

**antiferromagnetic Curie temperature** see *Curie temperature*

**antiferromagnetic-ferromagnetic transitions** see *ferromagnetic-antiferromagnetic transitions*

**antiferromagnetic-paramagnetic transitions** see *paramagnetic-antiferromagnetic transitions*

**antiferromagnetic properties of substances**

see also *antiferromagnetism; magnetic semiconductors*

- alkyl diammonium iron chloride, layered cpds, mag. studies 2-26605  
 alkyl diammonium manganese tetrachloride, antiferromagnetic resonance meas. in MM-wave range 2-36444  
 alkylammonium manganese chloride, perovskite-type layer struct., mag. reson. 2-31293  
 alkylammonium manganese chlorides, Brillouin scatt. and linear birefringence 2-31518  
 antiferromagnetic cryst., elastic const. temp. depend., US vel. study 2-25968  
 bis(alkylammonium) manganese tetrachlorides, two-dimens. antiferromag., luminesc. spectra, exchange effects 2-46677  
 clay minerals, 1:1 layer pipe, mag. props. and struct. 2-26589  
 cobalt formate dihydrate, NMR spin echo in dilution refrigerator 2-31323  
 dialkylammonium manganese tetrachloride, antiferromag. resonance in mag. field at arbitrary angle to easy axis 2-36445  
 dialkylammonium manganese tetrachloride, antiferromagnetic resonance meas. in MM-wave range 2-36444  
 diethylammonium copper tetrachloride, antiferromag. reson., effects of mag. dipolar interaction 2-9041  
 dimethylammonium manganese tetrachloride, mag. reson. obs. in antiferromag. and spin-flop regimes 2-5587  
 dimethylammonium trichloromanganate, antiferromagnetic resonance study 2-21889  
 ethylenediammonium chloromanganate (II), quasi-two-dimens. antiferromag., AFMR study, 4.2 to 300K (Russian) 2-26755  
 ethylenediammonium chloromanganate (II), two-dimens. antiferromag., antiferromag. reson. 2-36441  
 haematite, single crystals, conversion electron Mossbauer obs. at low temp. 2-46444  
 magnetic properties of  $(\text{Co}_{1-x}\text{Mn}_x)_2\text{P}$  compounds 2-41113  
 manganese (II)  $(1,2,4\text{-triazole})_2(\text{NCS})_2$ , sublattice magnetisation 2-41162  
 manganese formate dihydrate, quasi-two-dimens. magnet, half-field and normal ESR study 2-5578  
 one-dimensional conductor, organic, mag. susceptibility and spin behaviour, review 2-26593  
 poly(chromium phosphinate) one-dimensional Heisenberg antiferromag., static and dynamic susceptibility 2-13279  
 $\text{R}_2\text{Fe}_2\text{Si}_2$  ( $\text{R}=\text{Gd}$  to  $\text{Er}$ ), mag. susceptibility and  $^{57}\text{Fe}$  Mossbauer studies 2-46256  
 rare earth alloys,  $\text{RM}_6\text{Al}_6$  ( $\text{M}=\text{Cr}, \text{Mn}, \text{Cu}$ ), magnetism, spin relax. and hyperfine interactions 2-36484  
 rare earth alloys,  $\text{RRh}_2\text{Sn}_2$ , supercond. and mag. props., Mossbauer study 2-13383  
 rare earth antichromites, mag. struct., neutron diff. study 2-46249  
 rare earth carbides, mag. susceptibilities, electrical resistivities 2-31181  
 rare earth compounds,  $\text{R}_2\text{Fe}_2\text{Si}_2$ , supercond. and mag. props., Mossbauer study 2-13383  
 rare earth cpds.,  $\text{R}_2\text{Fe}_2\text{Si}_2$ ,  $\text{R}_2\text{Co}_2\text{Si}_2$ , and  $\text{R}_2\text{Ru}_2\text{Ge}_2$  ( $\text{R}=\text{rare earth}, \text{Sc}$  or  $\text{Y}$ ), cryst. struct., supercond. and mag. props. 2-30449  
 rare earth cpds.,  $\text{R}(\text{Rh}_{1-x}\text{Ir}_x)_2\text{B}_4$ , antiferromag. order and supercond. 2-36323  
 rare earth cpds.,  $\text{RCu}_2\text{Ge}_2$  ( $\text{R}=\text{Gd}, \text{Tb}, \text{Dy}, \text{Ho}$ ), mag. susceptibility meas., 4.2 to 200K (French) 2-31150  
 rare earth dicarbides and solid solns., mag. and elec. props. 2-8973  
 rare earth intermetallics,  $\text{RMn}_2\text{Si}_2$  and  $\text{RMn}_2\text{Ge}_2$ , mag. props. study 2-2073  
 rare earth phases,  $\text{RPd}_3$  ( $\text{R}=\text{La}, \text{Pr}, \text{Tb}, \text{Er}$ ), heat capacity and magnetisation meas. 2-50881  
 rare earth ternary superconductors, neutron scatt. studies 2-17195  
 rare earth-manganese alloys,  $\text{R}_6\text{Mn}_{23}$ , mag. interactions and struct., anal. 2-51395

**antiferromagnetic properties of substances continued**

- sodium nickel triacetylacetonate, antiferromag. triangular Ising lattice, mag. phase transition 2-41130  
 steel, stainless, austenitic, low temp. mag. props. of Fe-Cr-Ni (17 wt.%), Cr conc. effect 2-41112  
 superconductor, role of percolation in  $\text{H}_{\text{C}2}$  determ. 2-5506  
 TCNQ salt, DMM (TCNQ) $_2$ , spin susceptibility 2-2061  
 TCNQ salt, quinolinium(TCNQ) $_2$ , mag. props. below 20 mK, effect of neutron irradi. induced disorder 2-26603  
 TCNQ salts, random exchange Heisenberg antiferromag. chains 2-13267  
 tetramethylammonium manganese copper chloride, quantum chain with classical impurities, mag. props. 2-31216  
 tetramethylammonium manganese copper chloride-d $_2$ , diffuse mag. solitons, NMR and neutron scatt. study 2-51497  
 TMMC, antiferromagnetic resonance study 2-21889  
 TMMC, linear antiferromag., mag. field effects on susceptibility 2-41117  
 TMMC, one-dimens. antiferromag., soliton excitations 2-21790  
 TMMC, one-dimensional antiferromagnet, one- and two-magnon excitations 2-8966  
 TMMC, solitons in strong mag. field, hard anisotropy axis switching 2-5551  
 (TMTSF) $_2\text{X}$ , quasi-one-dimens. cond.,  $\text{X}=\text{PF}_6, \text{AsF}_6, \text{NO}_3, \text{ClO}_4$  and  $\text{BF}_4$ , mag. and ESR obs. 2-21869  
 trimethyl ammonium manganese halides, quasi-one-dimensional antiferromags., mag. phase diagram and adiabatic magnetisation 2-46277  
 $\text{AgCrO}_2$ , mag. props. and struct. 2-51398  
 $\text{AgM}_{1-x}\text{Fe}_x\text{O}_2$  ( $\text{M}=\text{Al}, \text{Ga}$ ), mag. interactions between Fe(III) ions 2-41121  
 $\text{BaMnF}_4$ , antiferromag., pure exciton and magnon sideband optical transitions 2-2332  
 $\text{BaMnF}_4$ , magnetoelectric, Landau theory predictions 2-41170  
 $\text{Ba}_2\text{Mn}_2\text{P}_2\text{O}_{14}$ , mag. props., Mossbauer spectrosc. obs. 2-21927  
 $\text{BaNiF}_4$ , two-dimensional antiferromag., linear mag. birefringence and double-excitonic transitions 2-5661  
 $\text{BiFeO}_3\text{-BaTiO}_3(\text{PbTiO}_3)$  solid solns., magnetoelec. effect, ferroelec. props. 2-36406  
 $\text{Cd}_{1-x}\text{Mn}_x\text{Te}$ , mag. ordering study 2-36326  
 $\text{Cd}_{1-x}\text{Mn}_x\text{Te}$ , US velocity, 1.5 to 96K, magnetic transitions effect 2-50771  
 $\text{CeB}_2\text{C}_2$ , mag. props., 3-300K 2-41116  
 $\text{Ce}, \text{La}_{1-x}\text{Ce}_x$ , mag. and elec. props., mag. resist., cryst. field effect 2-8973  
 $\text{CeSb}$ , antiferromagnetic, critical neutron scatt. 2-17263  
 Co complex,  $\text{Co}(\gamma\text{-methylpyridine N-oxide})$  perchlorate, crystal struct., and superexchange pathways 2-25858  
 Co complex,  $\text{Co}(\gamma\text{-methylpyridine N-oxide})$  perchlorate, mag. ordering, susceptibility and sp. ht. obs. 2-26604  
 $\text{Co}_3\text{B}_2\text{O}_{11}\text{I}$ , magnetic and magnetoelec. props. 2-13327  
 $\text{CoF}_2$ , canted struct. induced by longitudinal mag. field, magnetooptical study 2-36321  
 $\text{CoF}_2$ , specific heat capacity near Neel temp. 2-8980  
 $\text{Co}_2$ , mag. and struct. investigations 2-26588  
 $\text{Co}_2\text{Mg}_{1-x}\text{O}$ , single cryst., mag. susceptibility (Russian) 2-2059  
 $\text{Co}_{1-x}\text{Mn}_x\text{F}_2$ , spin excitation spectrum in external field, effect of mag. impurities (Russian) 2-26754  
 $\text{Co}, \text{Ni}_{1-x}\text{Mn}_x\text{Ge}$ , mag. struct. and props. 2-36324  
 $\text{CoO}$ , semicond. antiferromag., Raman scatt. associated with magnons 2-26895  
 $\text{Co}_3\text{O}_4$ , polycrystalline, dispersity, struct. and mag. props. 2-21872  
 $\text{Co}_3\text{Zn}_{10}\text{F}_{22}$ , three-dimens. Ising antiferromag., random-field effects, neutron scatt. study 2-51423  
 Cr (100) surfaces, mag. structure study using electron capture spectroscopy 2-46244  
 Cr (100) thin film, electron band struct., local density of states, and spin polarisation 2-13148  
 Cr alloys, commensurate, influence of electron-phonon coupling on transition temp. into SDW state 2-5357  
 Cr alloys, itinerant antiferromagnets, elementary excitations 2-31122  
 Cr, Neel transition, first-order, effect of uniaxial stress 2-46280  
 Cr, spin density wave, Q-vector metastability 2-30810  
 Cr, spin waves and thermodynamic props. (Russian) 2-21784  
 Cr, surface magnetic ordering and mag. props. 2-8986  
 Cr-Al, Neel temp., random distrib. of antiferromag. clusters model 2-31184  
 Cr-Cr alloy, spin density waves, neutron diff. study 2-26585  
 Cr-Mn, frozen magnon theory 2-26612  
 Cr-Mn, spin density waves, amplitude and period, neutron diff. study 2-26586  
 Cr-OS, antiferromagnetic, positron annihilation (Russian) 2-17571  
 Cr-V, spin density waves, amplitude and period, neutron diff. study 2-26586  
 $\text{Cr}_2\text{O}_3\text{-}^{119}\text{Sn}^{2+}$ , Mossbauer study of mag. hyperfine interactions (Russian) 2-13382  
 $\text{Cr}_2\text{O}_3\text{-Ga}_2\text{O}_3(\text{Al}_2\text{O}_3)$ , EPR line width, nonmag. dopant effects (German) 2-21875  
 $\text{Cr}_2\text{Te}_3$ , mag. props., thermal expansion effect 2-13301  
 $\text{Cr}_2\text{Te}_6$ , magnetisation, temp. depend. 2-13320  
 $\text{CsCoCl}_3$  ( $\text{Br}_3$ ), magnon, spin dynamics, Raman study 2-13280  
 $\text{CsCoCl}_3$  antiferromagnet, quasi-one-dimensional Ising-like, ESR study 2-41182  
 $\text{Cs}_2\text{CoCl}_4$ , transverse susceptibility meas. 2-21779  
 $\text{CsCoCl}_3\cdot 2\text{H}_2\text{O}$ , antiferromag., one-dimens.,  $^{133}\text{Cs}$  nuclear spin-lattice relax., domain boundary propag. effect 2-26779  
 $\text{CsCuCl}_3$ , antiferromagnetic cryst., elastic const. temp. depend., US vel. study 2-25968  
 $\text{CsCuCl}_3$ , phase diagram, Neel temp. 2-26629  
 $\text{CsFeCl}_3$ , triangular X-Y antiferromag., spin ordering, susceptibility and sp. ht. study 2-36364  
 $\text{CsMnBr}_3$ , antiferromag., 1D mag. correlations 2-46245  
 $\text{CsMnCl}_3$ , excited electronic state gigantic splitting during exciton self localisation, luminesc. study (Russian) 2-26954  
 $\text{CsMnCl}_3$ , parametric excitation and relax. of electron spin wave 2-31153  
 $\text{CsMnCl}_3\cdot 2\text{H}_2\text{O}$ , exciton-magnon light absorpt. 2-31523  
 $\text{CsMnCl}_3\cdot 2\text{H}_2\text{O}$ , antiferromagnetic resonance study 2-21889  
 $\text{CsMnCl}_3\cdot 2\text{H}_2\text{O}$ , energy gaps in magnon spectrum 2-31155  
 $\text{CsMn}_{1-x}\text{Co}_x\text{Cl}_3\cdot 2\text{H}_2\text{O}$ , random mixture, mag. ordering, neutron diff. study 2-36327  
 $\text{CsMnD}_3$ , giant oscills. of parallel pumping threshold (Russian) 2-26614  
 $\text{CsMnF}_3$ , absorpt. spectrum, uniaxial stress and high mag. field effect 2-51550



## antiferromagnetic properties of substances continued

- $\text{CsMnF}_3$ , easy plane antiferromag., parametric double reson. of nucl. magnons (Russian) 2-26790  
 $\text{CsMnF}_3$ , mag. prop. study (Russian) 2-46264  
 $\text{CsMnF}_3$ , weak ferrimagnetism, polarisation spectroscopic study (Russian) 2-26931  
 $\text{CsNiCl}_3$ , antiferromag. chain, elastic moduli, phase comparison meas. 2-45318  
 $\text{CsNiCl}_3$ , one-dimens. antiferromag., thermal expansion, low temp. 2-30635  
 $\text{Cu}$  complex, copper (pyridine)<sub>2</sub> chloride, phase diagram, Neel temp. 2-26629  
 $\text{Cu}$  nuclei, transition temp. to mag. ordered state 2-36345  
 $\text{Cu}$ , static nucl. mag. susceptibility below 1  $\mu\text{K}$ , orientation depend. 2-36331  
 $\text{Cu-Mn-Al}$  (20.6, 34.7 at.%), displaced hysteresis loop upon mag. annealing 2-26687  
 $\text{CuCl}_2 \cdot 2\text{H}_2\text{O}$ , AFMR in wide range of freqs. and mag. fields (Russian) 2-17342  
 $\text{CuCl}_2 \cdot 2\text{H}_2\text{O} (2\text{D}_2\text{O})$ , NMR study of orientational phase transition 2-46286  
 $\text{CuFeS}_2$ , band struct., self consistent discrete variational  $X\alpha$  calc. 2-12969  
 $\text{Cu(II)}$  carboxylates adducted with triphenylphosphine oxide, electronic, IR, EPR and mag. susceptibility 2-46270  
 $\text{CuM}_{1-x}\text{Fe}_x\text{S}_2$  ( $\text{M}=\text{Al, Ga, In}$ ), mag. interactions between  $\text{Fe(III)}$  ions 2-41121  
 $\text{CuWO}_4$ , antiferromag. zigzag chains of spin  $1/2$  (French) 2-5559  
 $\text{Dy AC}$  sp. ht. rel. to mag. transitions 2-2082  
 $\text{DyCo}_2$ , cryst. struct. distortion and magnetostriction 2-45119  
 $\text{DyCuSi}_2$ , magnetisation and mag. susceptibility meas. 2-46259  
 $\text{DyFeO}_3$ , antiferromagnet-weak ferromagnet phase transition, antiferromag. boundary of nucleation line (Russian) 2-41125  
 $\text{DyMoS}_6$ , antiferromag. supercond., mag. order effect on  $\text{H}_{c2}$  2-13247  
 $\text{DyMoS}_6$ , mixed state, upper crit. field 2-17243  
 $\text{Dy(Ru,Rh)}_{1-x}\text{B}_4$ , superconductivity, ferromagnetism and antiferromagnetism 2-31010  
 $\text{ErB}_4$ , neutron diff. studies of cryst. and mag. struct. 2-40345  
 $\text{ErB}_2\text{C}_2$ , mag. props., 3-300K 2-41116  
 $\text{ErCo}_2$ , cryst. struct. distortion and magnetostriction 2-45119  
 $\text{ErFeO}_3$ , spin flip induced by mag. field near ion ordering temp. (Russian) 2-5544  
 $\text{Fe-Co}$ , FCC particles in  $\text{Cu}$  matrix, ferromag.-antiferromag. transition 2-13294  
 $\text{Fe-Cr}$ , mag. moments for different local at. configs. 2-46255  
 $\text{Fe-Cr-Ni}$  alloys, low temp. change of mag. struct. and plastic props. 2-22294  
 $\text{Fe-Mn}$  alloy 100G13, structural FCC-FCT phase transition 2-2507  
 $\text{Fe-Ni(Ru)}$ , mag. struct. determ. using specific heat, magnetocaloric effect data 2-13274  
 $\text{FeAuPd}_3$ , ferromagnetic-antiferromagnetic transition (Russian) 2-51404  
 $\text{FeBO}_3$ , AFMR line width, inhomogeneous elastic deform. effect 2-36442  
 $\text{FeBO}_3$ , parametric spin wave excitation (Russian) 2-46268  
 $\text{FeBO}_3$ , weak ferromagnet, mag. susceptibility, anomalous crit. behavior 2-36369  
 $\text{FeCl}_2$ , mag. prop. study (Russian) 2-46264  
 $\text{FeCl}_2\text{-MnCl}_2$ , metamagnetic, Mn and Fe spin excitations, AFMR study 2-21892  
 $\text{Fe}_{1-x}\text{Co}_x\text{S}$ , magnetic transitions, mag. susceptibility study 2-41136  
 $\text{FeF}_3$ , coupled magnon-phonon modes, in mag. crystals with Shubnikov symmetry 2-17270  
 $\text{FeF}_3$ , parametric spin wave excitation 2-31154  
 $\text{FeI}_2$ , mag. ordering and phase transitions, high field  $^{57}\text{Fe}$  Mossbauer spectrosc. obs. 2-41108  
 $(\text{Fe}_{1-x}\text{Mn}_x)\text{Sn}$ , hyperfine coupling tensor anisotropy,  $^{57}\text{Fe}$  Mossbauer study 2-41237  
 $\text{FeMoS}_6$ , mag. and struct. transformations, mag. susceptibility and Mossbauer study 2-31185  
 $\alpha\text{-Fe}_2\text{O}_3$ , AFMR line width, inhomogeneous elastic deform. effect 2-36442  
 $\alpha\text{-Fe}_2\text{O}_3$ , haematite, obtained from dehydration of goethites, Morin transition 2-5606  
 $\alpha\text{-Fe}_2\text{O}_3$ , hematite, surface mag. helicoid on nonbasal faces, Kerr effect study 2-46552  
 $\alpha\text{-FeOOH}$ , goethite, cryst. struct. during dehydration to haematite, Mossbauer o. bs. and Morin temp. of haematite 2-5606  
 $\text{Fe}_2\text{PO}_5$ , mixed valence compound, prep. Mossbauer, structural and mag. studies (French) 2-50600  
 $\text{FePS}_3$ , cathode in Li battery, synthesis, struct. and phys. props. (French) 2-32057  
 $\text{FePS}_3$ , cryst. and mag. struct., neutron diff. study 2-31144  
 $\text{Fe}_{31}\text{Rh}_{48.5}$ , ferromagnetic, press. induced antiferromagnetism 2-46282  
 $\text{Fe}_2\text{TeO}_9$ , magnetic struct. at 4.2K, neutron diff. study (French) 2-46246  
 $\text{FeTi}_2\text{S}_4$ , mag. props. 2-26657  
 $\text{Fe}_{1-x}\text{Zn}_x\text{F}_2$ , antiferromagnet, randomly diluted, antiferromag. resonance, theory 2-46273  
 $\text{GdAg}_{1-x}\text{Zn}_x$ , magnetic phase diagram 2-46281  
 $\text{GdB}_2\text{C}_2$ , mag. props., 3-300K 2-41116  
 $\text{GdB}_2\text{C}_2$ , mag. struct., neutron diff. study 2-36315  
 $\text{GdMoS}_6$ , antiferromag. supercond., mag. order effect on  $\text{H}_{c2}$  2-13247  
 $\text{Gd}_3\text{Mo}_2\text{Se}_8$ , upper crit. mag. field 2-36284  
 $\text{Ge:Ga}$ , impurity band, antiferromag. ordering, photoluminescence study 2-2340  
 $\text{H}$ , crystalline atomic phase, eqn. of state 2-1705  
 $^3\text{He}$ , solid, antiferromagnetic, spin wave spectrum and zero spin fluctuation 2-35854  
 $^3\text{He}$ , solid, magnetic transition, first order, renormalisation group calc. 2-35850  
 $^3\text{He}$ , solid, magnetically ordered, birefringence 2-35851  
 $^3\text{He}$ , solid, ring exchange Hamiltonians, exact crit. field 2-35853  
 $^3\text{He}$ , solid, spin wave spectrum calc. 2-35852  
 $^3\text{He}$ , solid, static magnetisation and ordering temp. 2-35847  
 $^3\text{He}$  solid layers adsorbed on graphite, mag. coupling 2-16923  
 $\text{Hg}_{0.9}\text{Mn}_{0.1}\text{Te}_2$ , semimag. semicond., elastic moduli, temp. and press. depend., US vel. study 2-30738  
 $\text{Ho-Tb}$ , mag. struct., neutron diffraction study (Bulgarian) 2-17262  
 $\text{HoCo}_2$ , cryst. struct. distortion and magnetostriction 2-45119  
 $\text{HoCuSi}_2$ , magnetisation and mag. susceptibility meas. 2-46259  
 $\text{Ho(Ir}_2\text{Rh}_{0.3})\text{B}_4$ , antiferromagnetic ordering above superconducting  $T_c$  2-31011

## antiferromagnetic properties of substances continued

- $\text{Ho(Rh}_{1-x}\text{Ir}_x)\text{B}_4$ , antiferromag. order and supercond. 2-36323  
 $\text{InMo}_2\text{S}_8$ , superconductor, exchange interactions, CESR and spin waves study 2-36211  
 $\text{KCoF}_3$ , relationship between mag. and crystallographic struct. 2-36329  
 $\text{K}_2\text{CoF}_4\text{Fe}$ , antiferromagnet, localised magnon gap modes 2-26611  
 $\text{KFeF}_3$ , relationship between mag. and crystallographic struct. 2-36329  
 $\text{KMnF}_3$ , specific heat capacity, cross-over from 3-D Heisenberg to Ising behaviour near Neel temp. 2-8980  
 $\text{K}_3\text{Mn}_2\text{F}_7$ , EPR crit. line broadening near Neel temp. 2-26736  
 $\text{K}_3\text{Mn}_2\text{F}_7$ , NMR, antiferromagnetic resonance studies 2-46434  
 $\text{KNiF}_3$ , mag. energy fluctuations, light scatt. obs. 2-41119  
 $\text{KNiF}_3$ , nearly cubic antiferromag., Brillouin scatt. and US propag. 2-46355  
 $\text{KO}_2$ , large-angle magnetogyratation theory 2-21867  
 $\text{K}_2\text{ReCl}_4(\text{Br}_2)$ , mag. susceptibility calcs. 2-21778  
 $\text{LaB}_6\text{-GdBi}_6$ , quasi-binary system, lattice struct. and mag. susceptibility meas. 2-8487  
 $\text{La}_2\text{LiO}_6$ , ordered antiferromagnetic perovskite, crystal struct. and mag. props. (French) 2-8486  
 $\text{La}_2\text{LiRuO}_6$ , ordered antiferromagnetic perovskite, crystal struct. and mag. props. (French) 2-8486  
 $\text{La}_2\text{Y}_{1-x}\text{Ce}_x$ , mag. and elec. props., supercond. transition temp. 2-8973  
 $\beta\text{-LiAlSiO}_4$ , paramagnetic-incommensurate-commensurate transitions, Ising model 2-46326  
 $\text{Mn}$  alloys, itinerant antiferromagnets, elementary excitations 2-31122  
 $\text{Mn}$  complex, tetrachlorobis(*n*-propylammonium) manganese II, heat capacity, 10 to 300K, struct. phase transitions, mag. ordering 2-40564  
 $\gamma\text{-Mn}$ , magnetic phases, vol. conserving axial press. calc. 2-8956  
 $\text{Mn(Br}_{1-x}\text{Cl}_x)_2 \cdot 4\text{H}_2\text{O}$ , press. depend. of Neel temp. 2-8977  
 $\text{MnCoO}_3$ , easy plane antiferromag., parametric double reson. of nucl. magnons (Russian) 2-26790  
 $\text{MnCl}_2(\text{Br}_2) \cdot 4\text{H}_2\text{O}$ , antiferromag., Kapitza resistance determ. from relaxation behaviour 2-36492  
 $\text{MnCl}_2 \cdot 4\text{H}_2\text{O}$ , NMR of oriented  $^{54}\text{Mn}$  nuclei 2-26778  
 $\text{MnF}_2$ , antiferromag. domains, neutron diff. topography obs. 2-36377  
 $\text{MnF}_2$ , specific heat capacity, cross-over from 3-D Heisenberg to Ising behaviour near Neel temp. 2-8980  
 $\text{MnF}_2\text{-Zn}^{2+}$ , magnon sideband transactions, fluorescence line narrowing 2-46749  
 $\gamma\text{-MnNi}$ , atom distrib. and mag. moment, neutron polarisation anal. 2-36314  
 $\text{MnO}$ , dielectric anomaly near mag. phase transition 2-26808  
 $\text{MnO}$ , dielectric anomaly near mag. phase transition 2-36493  
 $\text{MnO}$ , semicond. antiferromag., Raman scatt. associated with magnons 2-26895  
 $\text{MnPS}_6$ , cryst. and mag. struct., neutron diff. study 2-31144  
 $\alpha\text{-MnS}$ , semicond. antiferromag., Raman scatt. associated with magnons 2-26895  
 $\text{MnS-Ga}_2\text{S}_3\text{-GeS}_2$ , vitreous, mag. susceptibility and high field magnetisation (French) 2-13275  
 $\text{MnSO}_4(\text{NH}_4)_2\text{SO}_4 \cdot 6\text{H}_2\text{O}$ , Tutton salt, thermal cond. and Kapitza resist. 2-35881  
 $\text{MnTe}$ , antiferromagnetic, elec. resist. and mag. susceptibility 2-36046  
 $\text{MnTe}_2$ , thermal expansion meas. 2-16824  
 $\text{Mn}_{1-x}\text{Zn}_x\text{F}_2$ , critical  $^{19}\text{F}$  NMR line broadening 2-17348  
 $\text{NH}_4\text{Fe}^{10}\text{F}_6$ , ordered pyrochlore, antiferromag., cryst. struct. study 2-25822  
 $\text{Nb}_3\text{Si}$ , superconductor, exchange interactions, CESR and spin waves study 2-36211  
 $\text{NdB}_2\text{C}_2$ , mag. props., 3-300K 2-41116  
 $\text{NdMnSi}_3$ , cryst. and mag. struct. 2-8959  
 $\text{NiF}$ , weak ferromagnet, theory of static and resonance props. 2-2085  
 $\text{NiI}_2$ , mag. and struct. investigations 2-26588  
 $\text{Ni}_3\text{Mg}_{1-x}\text{O}$  single crystals, mag. props. and exchange parameters, 77 to 1100K (Russian) 2-17269  
 $\text{Ni}_3(\text{Mn,Ti})$ , conductivity, mag. moment per atom 2-40872  
 $\text{NiO}$ , antiferromag. domains, neutron diff. topography obs. 2-36377  
 $\text{NiO}$ , antiferromagnetic, absorpt. spectrum fine struct. 2-36652  
 $\text{NiO:Ca}$ , two-magnon Raman scatt. 2-26917  
 $\text{NiPS}_3$ , cathode in Li battery, synthesis, struct. and phys. props. (French) 2-32057  
 $\text{NiS}_2$ , FCC spin lattice, four-spin exchange interactions 2-13286  
 $\text{NpCo}_2\text{Si}_2$ , antiferromagnet, high press. Mossbauer study 2-46442  
 $\text{NpO}_2$ , phase transition, model with trivalent Np ions 2-8974  
 $\text{O}_2$ , solid,  $\alpha$ - $\beta$  transition, magnetoelastic origin (Russian) 2-16770  
 $\text{O}_2$ , solid, mag. props. of  $\alpha$ -,  $\beta$ - and  $\gamma$ -forms 2-31148  
 $\text{Pb(Fe}_{0.5}\text{Nb}_{0.5})\text{O}_3$ , EPR linewidth, crit. point anomalies 2-46368  
 $(\text{Pd,Ti}_{1-x})\text{Fe}$ , atomically ordered, transverse magnetoresist., ferromag.-antiferromag. transition 2-36020  
 $\text{Pr}$ , specific heat below 1K, mag. transition obs. 2-30615  
 $\text{Pr}$ , specific heat in mag. field, 1 to 6K 2-30614  
 $\text{PrMnSi}_3$ , cryst. and mag. struct. 2-8959  
 $\text{Rb}_2\text{CoF}_4\text{Fe}$ , antiferromagnet, localised magnon gap modes 2-26611  
 $\text{Rb}_2\text{Co}_2\text{Mg}_2\text{F}_4$ , two-dimens. Ising antiferromag., random-field effects, neutron scatt. study 2-51423  
 $\text{Rb}_2\text{Co}_2\text{Mg}_{1-x}\text{F}_4$ , dilute antiferromag., two-dimens., sharp phase transition 2-13303  
 $\text{Rb}_2\text{Cr}_2\text{Mn}_{1-x}$  mixed crystals, mag. excitations study by mag. resonance 2-36446  
 $\text{RbFeCl}_3$ , triangular X-Y antiferromag., spin ordering, susceptibility and sp. ht. study 2-36364  
 $\text{RbFeF}_4$ , Mossbauer effect, critical behaviour near  $T_N$  2-13292  
 $\text{RbMnCl}_3$ , ferroelastic domain struct. rel. to antiferromag., optical study 2-26869  
 $\text{RbMnCl}_3$ , magnetisation of system with alternating strong and weak exchange coupling 2-26667  
 $\text{RbMnCl}_3$ , phase transitions, Raman scatt. obs. 2-31476  
 $\text{Rb}_2\text{MnCl}_4$ , perovskite-type layer struct., mag. reson. 2-31293  
 $\text{Rb}_2\text{Mn}_{1-x}\text{Cr}_x\text{Cl}_4$ , spin glass behaviour 2-51414  
 $\text{RbMnF}_3$ , critical exponent  $\beta$  meas. by means of optical birefringence 2-8972  
 $\text{Si}$  (111) reconstructed surface, correlation effects on electronic struct. 2-51270  
 $\text{Si:B}$ , impurity band localised holes antiferromag. ordering, polarised luminesc. in mag. field 2-36701  
 $\text{Si(111)}$ , (1 $\times$ 1) structure, correlations in surface bands, antiferromag. ground state predictions 2-26467  
 $\text{SmB}_2\text{C}_2$ , mag. props., 3-300K 2-41116  
 $\text{Sr}(\text{Co}_{1-x}\text{Mn}_x)\text{O}_3$ , cubic perovskite struct., mag. props. meas. 2-26618  
 $\text{Sr}_{1-y}\text{La}_y\text{FeO}_3$ , valence state of Fe ions, Mossbauer study 2-2167



**antiferromagnetic properties of substances continued**

- Tb, AC sp. ht. rel. to mag. transitions 2-2082  
 TbB<sub>4</sub>, antiferromagnetic struct., neutron diff. study 2-26591  
 TbB<sub>4</sub>, neutron diff. studies of cryst. and mag. struct. 2-40345  
 TbB<sub>2</sub>C<sub>2</sub>, mag. props., 3-300K 2-41116  
 TbMo<sub>2</sub>S<sub>8</sub>, antiferromag. supercond., mag. order effect on H<sub>c2</sub> 2-13247  
 TiBe<sub>2</sub>, weak itinerant antiferromag., anomalous sp. ht. and resist. study 2-31198  
 Ti-Cr-S(Se)(Te) system cpds., mag. props. and struct. 2-51398  
 TmB<sub>2</sub>C<sub>2</sub>, mag. props., 3-300K 2-41116  
 TmFeO<sub>3</sub>, surface magnetoelastic wave propag., spin reorientation 2-41172  
 α-TmHx solid solns., mag. transition temps., magnetisation meas. 2-13295  
 TmRh<sub>2</sub>B<sub>4</sub>, coexistence of supercond. with long-range mag. order 2-21722  
 TmSe, trivalent and intermediate valent, dynamic susceptibility, inelastic neutron scatt. study 2-31164  
 Tm<sub>2</sub>Se, mixed valence cpd., mag. order, elec. resist. and magnetisation study 2-30884  
 UCu<sub>2</sub>Ge<sub>2</sub>, antiferromagnetic-ferromagnetic phase transition, neutron diff. study 2-36346  
 U<sub>0.15</sub>Hf<sub>0.85</sub>Ga<sub>2</sub>, mag. behaviour and dominant interactions 2-8962  
 V<sub>2</sub>O<sub>3</sub>, semicond. antiferromag., Raman scatt. associated with magnons 2-26895  
 V<sub>2</sub>S<sub>8</sub>, magnetic struct., neutron diff. study 2-41109  
 VSe<sub>2-x</sub>S<sub>x</sub>, struct., mag., and electrochem. props., battery cathode appls. 2-41905  
 V<sub>2</sub>Si, superconductor, exchange interactions, CESR and spin waves study 2-36211  
 YAG:Cr, antiferromag., fine struct. of R absorption lines of Cr<sup>3+</sup> 2-26940  
 Y<sub>1-x</sub>Er<sub>x</sub>Rh<sub>2</sub>B<sub>4</sub>, conduction electron spin polarisation, mag. props., superconducting props. 2-17218  
 YFeO<sub>3</sub> crystals, antiferromag. reson., sub-mm. absorpt. spectrum 2-2141  
 Y<sub>6</sub>Mn<sub>23</sub>Fe, mag. order, Mossbauer study 2-26587  
 Y<sub>6</sub>Mn<sub>23</sub>H<sub>2</sub>Fe, mag. order, Mossbauer study 2-26587  
 YMn<sub>2</sub>Si<sub>2</sub>(Ge<sub>2</sub>), cryst. and mag. struct. 2-8959  
 ZnS:MnS, mag. susceptibility and photomagnetic meas. 2-13291  
 Zr(Fe<sub>1-x</sub>Mn<sub>x</sub>)<sub>2</sub>, ferromag., mag. transition, <sup>55</sup>Mn NMR spin echo study 2-26788

**antiferromagnetic resonance**

- alkyl diammonium manganese tetrachloride, antiferromagnetic resonance meas. in MM-wave range 2-36444  
 alkylammonium manganese chloride, perovskite-type layer struct., mag. reson. 2-31293  
 dialkylammonium manganese tetrachloride, antiferromag. resonance in mag. field at arbitrary angle to easy axis 2-36445  
 dialkylammonium manganese tetrachloride, antiferromagnetic resonance meas. in MM-wave range 2-36444  
 diethylammonium copper tetrachloride, antiferromag. reson., effects of mag. dipolar interaction 2-9041  
 dimethylammonium manganese tetrachloride, mag. reson. obs. in antiferromag. and spin-flop regimes 2-5587  
 dimethylammonium trichloromanganate, antiferromagnetic resonance study 2-21889  
 αα-diphenyl-β-picrylhydrazil, AFMR obs. (Russian) 2-26763  
 easy-plane antiferromagnet, spin 3/2, magnetisation and reson. props. in transverse mag. field (Russian) 2-5533  
 ethylenediammonium chloromanganate (II), quasi-two-dimens. antiferromag., AFMR study, 4.2 to 300K (Russian) 2-26755  
 ethylenediammonium chloromanganate (II), two-dimens. antiferromag., antiferromag. reson. 2-36441  
 magnetoacoustic effect for antiferromagnetic plates, circumferential and flexural acoustic mode structures 2-8839  
 nonequilibrium props. of antiferromags. in pulsed fields near second-order phase transitions (Russian) 2-17276  
 TMMC, antiferromagnetic resonance study 2-21889  
 Co<sub>1-x</sub>Mn<sub>x</sub>F<sub>2</sub>, spin excitation spectrum in external field, effect of mag. impurities (Russian) 2-26754  
 CsMnCl<sub>3</sub>·2H<sub>2</sub>O, antiferromagnetic resonance study 2-21889  
 CuCl<sub>2</sub>·2H<sub>2</sub>O, AFMR in wide range of freqs. and mag. fields (Russian) 2-17342  
 FeBO<sub>3</sub>, AFMR line width, inhomogeneous elastic deform. effect 2-36442  
 FeCl<sub>2</sub>-MnCl<sub>2</sub>, metamagnetic, Mn and Fe spin excitations, AFMR study 2-21892  
 α-Fe<sub>2</sub>O<sub>3</sub>, AFMR line width, inhomogeneous elastic deform. effect 2-36442  
 Fe<sub>1-x</sub>Zn<sub>x</sub>F<sub>2</sub>, antiferromagnet, randomly diluted, antiferromag. resonance, theory 2-46273  
 K<sub>3</sub>Mn<sub>2</sub>F<sub>7</sub>, NMR, antiferromagnetic resonance studies 2-46434  
 O<sub>2</sub>, solid, mag. props. of α-, β- and γ-forms 2-31148  
 Rb<sub>2</sub>Cr<sub>2</sub>Mn<sub>1-x</sub> mixed crystals, mag. excitations study by mag. resonance 2-36446  
 Rb<sub>2</sub>MnCl<sub>4</sub>, perovskite-type layer struct., mag. reson. 2-31293  
 YFeO<sub>3</sub> crystals, antiferromag. reson., sub-mm. absorpt. spectrum 2-2141

**antiferromagnetism**

- see also antiferromagnetic properties of substances; exchange interactions (electron); metamagnetism  
 alloys, antiferromag., modelling mag. defects 2-2062  
 amorphous spin systems, Ising and Heisenberg, competing interactions 2-31221  
 Anderson localization effects associated with disorder and electron-electron interactions 2-30834  
 anisotropic antiferromagnetic Heisenberg chain 2-31230  
 anisotropic two-dimensional Heisenberg antiferromagnet, critical behaviours, phase diagrams 2-2097  
 clock models in two dims., phase transitions, renormalisation group study 2-26636  
 conference, Kharkov, USSR (Sept. 1979) 2-28593  
 dilute alloys, annealed, ferromag. and antiferromag., spin waves, short range chem. order effect 2-31157  
 easy plane antiferromagnet with mag. anisotropy, high freq. mag. susceptibility 2-21781  
 easy-plane, spin 3/2, magnetisation and reson. props. in transverse mag. field (Russian) 2-5533  
 Heisenberg antiferromagnet, light scatt. from surface 2-2224  
 Heisenberg antiferromagnet, randomly diluted, uniaxial anisotropy, effective medium approach 2-46273  
 Heisenberg antiferromagnet, spin-flop-paramag. phase transition 2-13310  
 Heisenberg antiferromagnetic chain, spin of spin wave 2-5534

**antiferromagnetism continued**

- Heisenberg antiferromagnetic chain, spin-1/2, high field spin dynamics 2-31229  
 Heisenberg linear chain, quantum spin dynamics 2-2098  
 Heisenberg linear chain antiferromag., renormalisation group method failure in semiclassical limit 2-8948  
 Heisenberg magnet, random, magnetic states with partial spin-glass ordering (Russian) 2-13309  
 Heisenberg magneto-order system, acoustic self-induced transparency 2-26720  
 Heisenberg model, antiferromag., with short-range interactions, exact ground states 2-41099  
 Heisenberg spin-Peierls transition, mean field theories 2-21814  
 Hubbard model ground state, mag. structure 2-8949  
 Hubbard one-band model, antiferromagnetism and electron correlation 2-21758  
 hyperfine magnetic fields at <sup>57</sup>Fe nuclei, press. depend. regularities 2-51485  
 Invar, exchange interaction role between ferro- and antiferromagnetic components 2-31168  
 Ising antiferromagnet, crit. and tricrit. behaviour, Monte Carlo renormalisation group method 2-2095  
 Ising antiferromagnet, FCC, low temp. series expansions 2-2089  
 Ising antiferromagnet, Fisher stabilised, reflection positivity, phase transitions 2-41153  
 Ising antiferromagnet, one-dimens., ESR due to domain wall propag. 2-13331  
 Ising antiferromagnetic, I(1) model, FCC lattice, crit. and thermodynamic props., series expansion calc. (Chinese) 2-41146  
 Ising spin glass, lower bounds for crit. conc. of antiferromag. bonds 2-46319  
 Ising to Heisenberg crossover, AC calorimetry technique 2-23639  
 Ising zig-zag chain, frustrated, dilution effects 2-31220  
 itinerant electron antiferromagnetism, and spin glasses, coexistence 2-17289  
 itinerant electron systems, spin fluctuation theory, single site approx. 2-31125  
 itinerant-electron antiferromagnet, short-range ferromag. order influence 2-46231  
 lattice gas, antiferromag., clusters and Ising droplets 2-41151  
 linear antiferromagnetic spin system, exact excited states 2-51392  
 linear chains, alternating, ground-state energy and gap in excitation spectrum 2-5514  
 low density crystals, antiferromag. and paramag. states, correlation energy, Hartree-Fock method 2-17007  
 magnetic phases of strongly correlated electrons in a nearly half-filled narrow band 2-41101  
 metastable states in the random antiferromagnetic Ising chain 2-31226  
 molecular monolayer on nonmagnetic substrate, magnetic phase transition model (Russian) 2-5545  
 Monte Carlo renormalization-group transformations in momentum space 2-112  
 NMR line profile, influence of dislocation-created elastic stresses (Russian) 2-51477  
 nonequilibrium props. in pulsed fields near second-order phase transitions (Russian) 2-17276  
 nuclear spin wave relax. due to Suhl-Nakamura interaction 2-2067  
 nuclear spin wave relaxation 2-21890  
 one dimensional planar antiferromag., spin dynamics, quantum effects 2-21756  
 one-dimensional, itinerant magnetism approach 2-31131  
 one-dimensional, with finite band width, solitary excitations 2-46301  
 one-dimensional antiferromag., new high-field phenomena in spin-Peierls systems 2-21757  
 one-dimensional antiferromagnet, anisotropic, with magnetoelastic coupling, solitary waves 2-2066  
 one-dimensional antiferromagnetic chain, boson Bogoliubov transform., magnon states 2-51428  
 one-dimensional antiferromagnetic XY model, transverse susceptibility 2-21779  
 one-dimensional conductors, triplet superconductivity and antiferromagnetism (Russian) 2-26543  
 one-dimensional Heisenberg random antiferromag. model, quantum case, universality 2-13268  
 phase transitions with coupled order parameters 2-48663  
 piezomagnetic effect associated with dislocations, amplification by longitudinal mag. field (Russian) 2-5570  
 quantum mechanical, ground state 2-36299  
 quantum spin chains, low temp. thermodynamics 2-46330  
 quasi-one-dimensional, with Ising anisotropy, Mossbauer linewidth, soliton contrib. 2-26793  
 random exchange Heisenberg antiferromag. chains 2-13267  
 random mixture of two antiferromagnets, with competing spin anisotropies, phase diagram 2-41129  
 rapidly oscillating mag. field effect of phase transition 2-31176  
 segnetoantiferromagnets, segnetons and magnons, interactions with paramag. impurities 2-31257  
 semiconductor, antiferromagnetic, carrier self-localisation at surface ferromag. microregion 2-13160  
 semiconductor, multivalley, energy spectrum and kinetic characs. of band electrons (Russian) 2-26291  
 site bond percolation in ferromagnetic and antiferromag. Ising model, renormalisation group approach 2-15119  
 spin 1/2 systems, highly disordered, scaling studies 2-51390  
 spin system, alternating strong and weak exchange coupling, mag. props. 2-26571  
 spin wave dynamics due to interaction with nucl. subsystem 2-36335  
 spin wave spectrum energy gap origin 2-36336  
 spin-flop-type phase transition in rhombohedral antiferromagnets (Russian) 2-26632  
 spin-Peierls and Peierls distortions, metallic and insulating states, electronic props., pairing-distortion effect 2-21502  
 substrate, antiferromag., for ferromag. film with domain struct., magnetisation and mag. reson. 2-9013  
 superconductor, behaviour near lower crit. field, vortex line and vortex lattice creation 2-13251  
 superconductor, ground state in presence of homogeneous mag. field 2-26547  
 superconductor, homogeneous mag. field effects, phase transitions 2-36189  
 superconductor, one-dimens., homogeneous mag. field effect 2-26545



**antiferromagnetism continued**

- superconductor, pairing, mean field theories 2-13233
- superconductor, phase diagram 2-36190
- superconductors, forced normal state, mag. order 2-21737
- superconductors, mixed state free energy, crit. fields, magnetisation curves 2-17243
- superfrustration models 2-17256
- tetragonal collinear antiferromagnet, obs. of mag. domains by magneto-optical effect 2-31233
- tetrameric clusters, hybrid electron-nuclear states 2-36338
- thermal conductivity over wide temp. range, model and nomogram, cond. increase prospects 2-40614
- three-state square lattice Potts antiferromagnet 2-31119
- triangular Ising antiferromagnet, phase diagram 2-31224
- triangular Ising antiferromagnet variational approx., phase diagrams 2-127
- triangular lattice, quantum frustration, renormalisation group approach 2-2086
- triangular lattice antiferromagnet, superfrustration models 2-17298
- trimeric clusters, Dzialoshinskii antisymm. exchange interactions 2-36339
- X-Y Lifshitz point model, biaxial, ferromag.-modulated transition, renormalisation group anal. 2-51419
- H atom lattice, metal-insulator and mag. transitions, self consistent band struct. theory 2-30802

**antihyperons see hyperons****antimony**

- see also nuclei with .....
- adsorbed on GaAs (110) bonding of column 3 and 5 atoms 2-30728
- amorphous semiconductor, defects, theoretical study 2-1859
- amorphous semiconductor, review 2-45037
- atom, inner shell ionisation by electron impact, 60-600 keV region 2-20190
- atoms, magnetic-dipole hyperfine struct. 2-7663
- atoms and solid, binding energy, Auger and photoelectron spectra 2-34367
- clusters, magic number obs., tetrahedra packings 2-44161
- core-hole ground state energies, XPS determ. 2-17602
- determination in luke water using hydride at. absorpt., valence state effects 2-17931
- diffusion in Cu, coeffs. calc. from single meas., activation enthalpy 2-16902
- dissolution in molten Bi, static conditions 2-8625
- dissolution into molten Bi, interfacial phenomena 2-1750
- electron-phonon scatt. rates, RF size effect 2-36032
- electronic structure differential characteristics, pseudopot. study (Russian) 2-12957
- film, cryst. struct., amorphous state influence 2-45779
- internal friction, overdamped and underdamped dislocation unpinning 2-45341
- K-shell ionisation,  $H^+$  and deuteron induced, nuclear Coulomb, energy loss and relativistic effects 2-44081
- MBE, RHEED study of free Sb surface lifetime on InSb 2-40713
- nuclei, quadrupole moment calcs. 2-7663
- overlayer on GaAs (110), model, appl. to MBE 2-12935
- solubility in molten  $SbCl_3$ - $AlCl_3$  and  $SbCl_3$ - $CsCl$  mixtures 2-1625
- thin film, amorphous, impulse stimulated crystallisation 2-45039
- Al:Sb, ion implanted, laser treated, ion microprobe anal. 2-46836
- $BaTiO_3$ :Sb, PTC effect as function of 3d element doping, elec. resist., grain sizes, carrier density 2-30887
- $CdP_2$ :Sb, cathodoluminesc. spectrum 2-46784
- Cs-Sb amorphous mixture, metal-insulator transition 2-40794
- Fe:Sb, ion implanted single crystal, Rutherford backscattering and channelling anal. 2-45220
- GaAs:Sb, reson. Sb level, photocond. study 2-21537
- GaP:Sb, In, impurity location by asymmetry of channelling dips 2-16693
- Ge:Pd, Sb,  $\gamma$ - and electron-irrad., complex formation, primary defects charge state effect 2-40436
- Ge:Sb, metal-insulator transition density, wave-function anisotropy effect 2-16993
- Ge:Sb, shallow traps and  $D^-$  centre, photoconductivity 2-45888
- Ge:Sb, single cryst., high temp. dislocation mobility under applied stress 2-45183
- n-Ge:Sb, ballistic heat pulse scatt., mag. field effects 2-50943
- $Pb(Zr_{1-x}Ti_x)O_3$ :Sb $^{5+}$  ceramics, wet or dry method prep., struct. and piezoelec. props., effect of initial Pb content 2-9091
- Sb III determ. in natural waters by chromatography-AAS 2-31955
- Sb, on Si, impurity distrib. after laser irrad. 2-45252
- Sb-GaSb, metallic, crystallisation speed influence on elec. props. and struct. (Russian) 2-5382
- Sb-Si (111) interface, Schottky barrier formation 2-41011
- Sb $_2$ , collision induced rot. transitions, rot. and vibr. consts., fluoresc. 2-49492
- Sb $_3$ , solid Ne matrix isolated, ground state vibr., absorpt., fluoresc. Raman obs. 2-20116
- Sb $_4$ , solid Ne matrix isolated, ground state vibr., absorpt., fluoresc. Raman obs. 2-20116
- SbV determ. in natural waters by chromatography-AAS 2-31955
- $^{121}Sb$ , Mossbauer spectra, effects of hyperfine interactions between nucleic and electronic props. 2-39350
- Si:In:Sb (100), ion implanted, solid phase epitaxy, solid solubility, channelling study 2-50862
- Si:Sb, MBE grown, sharp profiles with high and low doping levels 2-16670
- Si:Sb, polycrystalline, ion implanted, doping profiles and elec. resist., annealing effects 2-50685
- n-Si:Sb, positron capture by radiation defects 2-40853
- Si:Sb implanted amorphous layers, defect and solubility limit study 2-30477
- Si-P-Sb cation exchangers, struct. and thermal stability (Russian) 2-12572
- SnO $_2$ :Sb, thin film elec. and optical props. 2-41037
- SnO $_2$ :Sb film, prep. by activated reactive evaporation 2-51821
- SnO $_2$ :Sb film, platinized, prep., surface composition and electronic struct. 2-51799

**antimony alloys**

- see also antimony compounds
- solid soln., comp. control of homogeneous single crystals during melt growth 2-5806
- Al-Ni $_2$ Sb dilute alloy for moderate-strength, high cond. appls. 2-5489
- Al-Sb, pulsed laser annealing 2-50700

**antimony alloys continued**

- Bi-Sb solid solns., melting curve 2-1594
- BiSb, relax. time and effective mass of charge carriers 2-8811
- Bi $_{1-x}$ Sb $_x$  alloys, carrier dispersion relation 2-5347
- Bi $_{1-x}$ Sb $_x$ , chem. comp. determ. by polarography, electron probe, density and electron backscatt. meas. 2-27494
- Bi $_{1-x}$ Sb $_x$ , dil. alloys, magnetoacoustic attenuation, large dip and hump type quantum oscils. 2-16980
- Bi $_{1-x}$ Sb $_x$ , dil. alloys, magnetoacoustic attenuation, large dip and hump type quantum oscils. 2-16981
- Bi $_{1-x}$ Sb $_x$ , electron-hole liquid, ground-state energy in strong mag. field 2-12979
- Bi $_{1-x}$ Sb $_x$ , Fermi surface and band parameters, press. depend. magnetoref. studies 2-13457
- Bi $_{1-x}$ Sb $_x$ , semiconducting, impact ionisation rate, elec. field depend. 2-21594
- Bi $_{1-x}$ Sb $_x$ , semiconducting, hot carriers, interband recombination time 2-21605
- Bi $_{84}$ Sb $_{16}$  amorphous film, sp. ht., 0.2 to 1.0K 2-30623
- Cu-Sb, creep cavitation, influence of impurity segregation 2-41612
- Cu-Sb, self-diffusion of Cu, solute enhancement 2-40590
- Dy-Sb system, phase diagram construction and antimonides characts. 2-41584
- Fe-Sb-transition metal alloys, segregation, influence of chem. interaction between Sb and transition metal 2-47039
- Fe-Si-Sb alloy, grain boundary relaxation, grain boundary segregation effect 2-47081
- Fe $_{1-x}$ Sb $_x$ , magnetic ordering of interstitial Fe 2-46299
- Ge-Sb, amorphous, elec. props. 2-17084
- In-Sb, cryst. struct. and supercond. after high press. treatment 2-45118
- In-Sb, liq., O activity 2-8644
- InSb-NiSb eutectic, directionally solidified by vertical Bridgman type method, growth bands 2-27163
- MnSb alloy, mag. props. depend. on press. and temp. (Russian) 2-13298
- Nb $_2$ Sn $_{1-x}$ Sb $_x$ , tetragonal-tetragonal transition 2-50851
- Ni-Ni $_2$ Sb $_2$  eutectic system alloys, undercooling-structure relationship obs. (Japanese) 2-31689
- Sb-Sn wrought grids for cell, deep discharge cycle cell life 2-9641
- Sn-Sb, mag. props. of higher than second order super cond. phase transition 2-17184
- V $_6$ Ga $_4$ Sb, thermal expansion 2-50890

**antimony compounds****see also antimony alloys**

- antimonates, vibrational study, Raman spectra, force consts. (French) 2-13494
- polyantimonic acid, ion exchanger, thermodynamic props. (Russian) 2-13945
- polyparaphenylene:SbF $_3$ , magnetic behaviour, Pauli spin susceptibility 2-13273
- (TMTSF) $_2$  SbF $_6$ , organic salt, superconductivity study 2-26536
- $\alpha$ -AgSb $_2$ , lattice gas model of ionic space charge, mean field effects 2-36521
- Ag $_3$ Sb $_3$ , elastic const. determ. (Russian) 2-16708
- AsF $_3$ , dopant in polyacetylene, morphology, SEM study 2-45077
- (As $_2$ Se $_3$ ) $_{1-x}$ (Sb $_2$ Se $_3$ ) $_x$ , oscillator strength, far IR spectra and Kramers-Kronig analysis 2-26899
- BaTiO $_3$ :Sb $_2$ O $_3$ , semiconducting ceramics, positive temp. coeff. of resist., microstruct. effect 2-36040
- Bi-Sb films, semicond. behaviour, intercryst. barrier activation energy 2-2017
- Bi $_{80}$ Sb $_{20}$  alloy thin films, elec. props., vacuum-deposited at different substrate temps. 2-30979
- Bi $_2$ Sb $_{1-x}$ SI solid-solution ferroelectric semiconds., free energy and singularity 2-5649
- Bi $_2$ Te $_3$ -Sb $_2$ Te $_3$ , electromigration of Cu, effective ion charge, temp. and elec. cond. depend. 2-35749
- Bi $_2$ Te $_3$ -Sb $_2$ Te $_3$ , solid solutions, anisotropy coeffs. (Russian) 2-1927
- Bi $_2$ Te $_3$ -Se $_x$ -Sb $_2$ Se $_3$ , thermoelectrical props. with  $x=0.12$  and  $x=0.6$  2-5427
- Cd $_2$ Sb $_2$ Si $_2$ , crystal structure determ. 2-8503
- Co $_{23-x}$ M $_x$ B $_6$ ,  $\tau$  borides, mag. moments, M=Zr, Nb, Mo, In, Sn or Sb 2-31152
- Cs $_2$ SbCl $_5$ , 2-9140
- Cs $_2$ (Sn $^{IV}_{1-x}$ Sb $^{III}_x$ )Cl $_6$ , 2-9140
- Ga-Sb-Te system, GaSb-based solid soln. region investig. comp. depend. of carrier conc. 2-12720
- GaAs $_{1-x}$ Sb $_x$ , electron effective mass values 2-5345
- GaSb, p-n junction, pressure effects on avalanche breakdown voltage 2-26481
- GaSb+Sb $_2$ O $_3$ , interfacial reaction, Raman scatt. detection 2-6086
- Ge-As(Sb)-S(Se) vitreous chalcogenides CaF $_2$ /Ge $_{24}$ As $_{12}$ S $_6$  type antirefl. coatings, visible and IR 2-16086
- Ge-Sb-S glasses, defect centres, ESR study 2-2135
- Ge-Sb-S glasses, optical gap temp. depend., exponential absorpt. edge 2-13438
- Ge-Sb-Se glasses, optical props., dispersion energy and struct. (Russian) 2-26857
- Ge-Sb-Se system, beam-resistant films, prep. and struct., thermal stability, optical parameters 2-5317
- (H(H $_2$ O)n) $_{12}$ Sb $_2$ O $_{16}$ , new proton conductor 2-16847
- Hg $_8$ Sb $_2$ O $_{11}$ , naturally occurring mineral (shakhovite) 2-52784
- I $_2$ Cl $_4$ +SbCl $_5$ , cryst. struct. 2-21078
- Sb-Ge-Se system, elec. cond. glassy and liq. states 2-26394
- Sb-Ge-Se system with excess Se, vitrification temp. calc. method 2-40279
- Sb $_1-x$ Bi $_x$ Te $_2$ -Bi $_2$ Se $_3$ (Sb $_2$ Se $_3$ ) cross sections, thermoelec. prop s., conc. depend 2-13109
- SbCl $_3$ -AlCl $_3$ (CsCl), molten mixtures solubility of Sb metal 2-1625
- SbCl $_3$ -graphite, intercalant species identification by Mossbauer spectroscopy 2-31335
- SbF $_3$ , diffusion in polyacetylene 2-40601
- SbF $_3$ , enthalpy of formation 2-6058
- SbF $_3$  intercalated with graphite, XPS studies 2-41497
- SbH, radical, deuterium isotope effects, rot. anal., vacuum UV obs. 2-11505
- SbI $_3$ S $_2$ , addition cpd., Raman spectra, vibr. anal. and lattice modes obs. 2-5673
- SbNbO $_4$  crystals, struct. and lattice dynamics at 300 to 1000K 2-21108
- SbO $_2$ -I (2MA), ferroelastic, photoswitching 2-25976
- SbP $_3$ , vibr. anal., pot. and mol. consts., kinetic consts. method 2-24887



**antimony compounds continued**

- Sb<sub>2</sub>S<sub>3</sub>, enthalpy of formation and high temp. thermodynamic functions 2-6058  
 Sb<sub>2</sub>S<sub>3</sub>, epitaxial films, struct. 2-51037  
 Sb<sub>2</sub>S<sub>3</sub>, epitaxial growth on PbTe with diffusion interaction at phase boundary 2-51040  
 Sb<sub>2</sub>S<sub>3</sub>, lattice dynamics, neutron, X-ray scatt. and rigid ion model study 2-50795  
 Sb<sub>2</sub>S<sub>3</sub>As<sub>2</sub>S<sub>3</sub>, negative transient conductivity effects 2-45963  
 Sb<sub>2</sub>S<sub>3</sub>As<sub>2</sub>S<sub>3</sub>, glassy, hole drift mobility, composition and struct. depend. 2-46021  
 SbSBr, ferroelec., Raman spectra and soft modes 2-31480  
 SbSI, ferroelec. phase, spatially oscillating photovoltaic current 2-13131  
 SbSI, ferroelectric transition, low temp. phase symmetry 2-8465  
 SbSI, intrinsic optical bistability near phase transition temp. 2-29845  
 SbSI, soft mode, temp. depend. in paraelec. phase, IR refl. study 2-31419  
 SbSI, soft phonon modes near phase transition, microwave dielec. spectroscopy 2-31363  
 SbSI, sp. ht., 83 to 330K, Landau-type anomaly 2-30612  
 SbSI, textured ceramic, processing and characterisation techniques 2-9318  
 SbSI, thermoabsorption near ferroelec.-paralelec. phase transition 2-9136  
 SbS<sub>2</sub>O<sub>3</sub>-I, ferroelectric props., phenomenological model 2-31418  
 SbS<sub>2</sub>O<sub>3</sub>-I, soft phonon modes near phase transition, microwave dielec. spectroscopy 2-31363  
 Sb(Sb<sub>1-x</sub>Nb<sub>x</sub>)<sub>2</sub>O<sub>4</sub> single cryst., synthetic, dielec. props., crystn. parameter variation 2-51511  
 Sb<sub>2</sub>Se<sub>3</sub>, epitaxial films, struct. 2-51037  
 SbSeI, permittivity at microwave freq., 2-36503  
 Sb<sub>2</sub>Te<sub>3</sub>, pressure induced phase transition, elec. resist. and X-ray diff. study 2-30599  
 Sb<sub>2</sub>Te<sub>3</sub>, two-valence band model, galvanomagnetic effects 2-1928  
 Te<sub>40</sub>Ge<sub>20</sub>Sb<sub>40</sub>, glass transition and crystallisation effects, thermal anal. 2-12499  
 Te<sub>40</sub>Ge<sub>20</sub>Sb<sub>40</sub>, semicond. glass, photocond. meas. 2-1955  
 V<sub>2</sub>O<sub>5</sub>-P<sub>2</sub>O<sub>5</sub>-Sb<sub>2</sub>O<sub>3</sub>-As<sub>2</sub>O<sub>3</sub> glass, elec. props. 2-45968

**antineutrinos see neutrinos****antineutrons see neutrons****antinucleons see nucleons****antiphase boundaries**

- adsorbed layers with antiphase boundaries or islands, struct. function, LEED determ. 2-16949  
 DO<sub>19</sub> ordered structure, planar fault stability and energy 2-45208  
 L1, ordered alloys, struct. stability and deform. behaviour 2-12665  
 semiconductor heterostructure, partial dislocations, columnar growth, clustering and pinhole formation ultrathin film 2-12919  
 Au-Mg system, electron microscopic and electron diff. study 2-50588  
 Au<sub>2</sub>Mg, 2D antiphase struct. studied by high-voltage-high-resoln. electron microscopy 2-44992  
 Fe-Al single cryst., ordered B2 type, annealing-out of quenched-in vacancies 2-47065  
 Fe-C, amorphous alloys, crystn., study of struct. defects in metastable Fe<sub>2</sub>C<sub>3</sub> (French) 2-12489  
 Fe<sub>2</sub>Al<sub>3</sub>Si<sub>0.2</sub>, DO<sub>3</sub> struct., deform. 2-27256  
 FeCo, ordering, electron diff. study 2-45047  
 Fe<sub>2</sub>Ga, ordering, electron diff. study 2-45047  
 Fe<sub>2</sub>Si, ordering, electron diff. study 2-45047  
 Fe<sub>2</sub>TiO<sub>3</sub>, monoclinic, defect struct., electron microscopy and diff. studies 2-25907  
 LiAl<sub>3</sub>O<sub>8</sub>-Al<sub>2</sub>O<sub>3</sub>, precipitation of metastable phases with periodic antiphase struct. (French) 2-47044  
 Ni-base alloys, γ' precipitating, new aspects of particle hardening mechanisms, theoretical concepts 2-36869  
 Ni-Cr-Al-Ti-Mo, tensile behaviour, elevated temp., influence of coherency strain 2-9380  
 Ni<sub>3</sub>Al, strength, positive temp. depend., effect of nonstoichiometry 2-9356  
 Ni<sub>3</sub>Ga, strength, positive temp. depend., effect of nonstoichiometry 2-9356

**antiphase domains****see also antiphase boundaries**

- antisymmetry formalism, magnetic groups, description of structural phase transition of twins and antiphase domains (French) 2-25790  
 Au-Mn system, 2D antiphase structs. based on DO<sub>22</sub> struct. high-voltage-high-resoln. microscopy 2-40233  
 Au<sub>2</sub>Mg, 2D antiphase struct. studied by high-voltage-high-resoln. electron microscopy 2-44992  
 Cu<sub>2</sub>NiZn, order and domain strengthening in high purity and commercial specimens 2-47049  
 Fe-Al (30.5 at.%), ordered alloy, plastically deformed, antiphase domain boundary tubes obs. 2-41691  
 Ni(111), chemisorbed O 2-1752

**antiprotons see protons****antireflection coatings**

- alkali borosilicate gradient-index AR film deposited by sol-gel process 2-49951  
 antireflection trilayers, wavelength-depend. laser marking charact., 400-700 nm 2-992  
 combined solar-energy converters with selective coatings 2-22616  
 double-layer antireflection coating, global minimum determ. in thin-layer coating synthesis 2-39722  
 heat mirror coatings for energy conserving windows 2-39723  
 paint coatings, black, partially selective for solar collectors 2-52385  
 periodic structure optical coatings, appls. (French) 2-39560  
 polymer coatings, plasma-polymerised, prep. and charact. 2-47212  
 porous silica, prep. and durability for solar collector cover plates 2-44432  
 refractory oxide achromatic antireflection coatings, electron-beam deposition method 2-1006  
 single and double layer thicknesses computation for coating design 2-20395  
 solar absorber converters, spectrally selective paint for radiation losses reduction 2-4574  
 solar cell 2-37274  
 step-down high performance AR coatings for high refr.-index IR materials 2-49839  
 thermophotovoltaic conversion systems, design of dielectric-metal-dielectric filters for use as wide band filters 2-37217  
 wide-band antireflection coating layers, photometric optical thickness monitoring 2-16087

**antireflection coatings continued**

- As<sub>2</sub>Se<sub>3</sub> thin films, antireflecting prop., effect of thermostructural changes 2-51730  
 B-Pb glasses, types OF4 and OF5, chem. stability under high humidity and temp. conditions (t) 2-39707  
 BaF<sub>2</sub> double layer coatings on Ge, performance eval. 2-20395  
 BiF<sub>3</sub> double layer coatings on Ge, performance eval. 2-20395  
 CaF<sub>2</sub>/Ge<sub>2</sub>As<sub>2</sub>Si<sub>2</sub>S<sub>4</sub> type antirefl. coatings for Ge-As(Sb)-S(Se) vitreous chalcogenides in visible and IR 2-16086  
 In<sub>2</sub>O<sub>3</sub> coated mirrors to eliminate spacecraft surface charging 2-37178  
 Pt-Al<sub>2</sub>O<sub>3</sub> selective absorber coatings, sputter-deposited 2-22654  
 Si inversion layer MIS solar cells, electrostatic effects 2-37418  
 Si solar cells selective coatings, survey of present state of research 2-2787  
 Si:H, amorphous, solar cell, transparent conducting coating 2-14077  
 Si<sub>3</sub>N<sub>4</sub> antireflection coating for CVD ZrB<sub>2</sub>, photothermal solar absorber appl. 2-22656  
 SiO<sub>2</sub> antireflective film on solar collector windows, optical degradation 2-20381  
 Ta<sub>2</sub>O<sub>5</sub>, antireflection coating for Au-CdS Schottky barrier solar cell 2-27613  
 TiO<sub>2</sub> by thermal oxidation of TiN sputtered diffusion barriers 2-22546  
 TiO<sub>2</sub>:B antirefl. coating, spray deposition, Si solar cell appl. 2-37275  
 TiO<sub>2</sub>-SiO<sub>2</sub>, prepared by sel-gel proces, applied to polished Si and heat treated 2-7843  
 ZnSe double layer coatings on Ge, performance eval. 2-20395

**API gravity see density****apodisation see acoustic imaging; optical images****apparatus see instrumentation; instruments****apparent porosity see porosity****appearance potential see ionisation potential****appearance potential spectra**

- disappearance potential spectroscopy, of solid surfaces, rel. to AES (Japanese) 2-51746  
 X-ray spectroscopy, empty states in conduction bands (Polish) 2-46824  
 Ba, disappearance potential spectroscopy, of solid surfaces, rel. to AES (Japanese) 2-51746  
 Cr, disappearance potential spectroscopy, of solid surfaces, rel. to AES (Japanese) 2-51746  
 Cr, X-ray appearance pot. spectra and electronic struct., conduction bands, density of states distrib. function 2-41456  
 Fe, disappearance potential spectroscopy, of solid surfaces, rel. to AES (Japanese) 2-51746  
 La, disappearance potential spectroscopy, of solid surfaces, rel. to AES (Japanese) 2-51746  
 LiF, soft X-ray photoelectric yield and absorption spectra near F K-absorption edge, empirical construction 2-17596  
 Mo, X-ray appearance pot. spectra and electronic struct., conduction bands, density of states distrib. function 2-41456  
 NaF, soft X-ray photoelectric yield and absorption spectra near F K-absorption edge, empirical construction 2-17596  
 Ti, disappearance potential spectroscopy, of solid surfaces, rel. to AES (Japanese) 2-51746  
 Ti(0001) chemisorption of O<sub>2</sub>, surface states study 2-26221  
 U, disappearance potential spectroscopy, of solid surfaces, rel. to AES (Japanese) 2-51746  
 W, X-ray appearance pot. spectra and electronic struct., conduction bands, density of states distrib. function 2-41456

**appearance potential spectroscopy****thin film formation, substrate surface characterization 2-50975****Appleton layer see ionosphere****appliances, domestic see domestic appliances****applied mechanics see mechanics****approximation theory****see also function approximation; interpolation; least squares approximations**

- Fisher distributions, mean direction discrimination method 2-6449  
 hard sphere gas, third virial coeff., two-point Padé approximants 2-38561  
 heat conductivity, stationary, linear theory, variational principles (Russian) 2-29984  
 Maxwell's equations, initial boundary value problem, semi-discrete Galerkin approx. 2-63  
 photon correlation spectroscopy of polymer solns., extended cumulant method 2-46624  
 quasars H I line spectrum, approximation procedures for line transfer versus exact treatment 2-38338  
 reverse heat conductivity problem, soln. 2-16219  
 thermodynamic functions approximation using Legendre polynomial and power series (German) 2-10758  
 transport equation, averaging for periodic medium 2-42967

**APR see acoustic paramagnetic resonance****APW calculations**

- metals, electronic struct., universal model pot. in APW method 2-51073  
 non-muffin-tin APW method, generalised Ewald pot. 2-45802  
 Ac, band struct., effect of correl., relativistic APW calc. 2-26283  
 Ag (001), chemisorption of Cl, comparative LCAO and linear APW calcs. 2-40690  
 AgCl, APW-LCAO energy bands and fundamental absorpt. 2-26288  
 Al (111) film, band struct., valence charge densities, and work function, self-consistent calcs. 2-17134  
 Al(111), chemisorption of O, self-consistent electronic struct. and bonding 2-13153  
 Al(111), chemisorption of O, electronic band struct., and bond length 2-13154  
 Ar, solid, transition to metallic state, band struct. 2-26300  
 Ar(001), surface energyband struct., APW calc. 2-26469  
 Cu, electron-electron interaction and single-particle props. 2-40775  
 Fe, positron annihilation, band struct. and Fermi surface 2-46814  
 FeAl(Ti), positron annihilation, band struct. and Fermi surface 2-46814  
 Ir, relativistic APW calcs. of X-ray emission spectrum 2-22122  
 K, Knight shift vol. depend. 2-9046  
 Kr, solid, transition to metallic state, band struct. 2-26300  
 LaSn<sub>3</sub>, band struct., self-consistent APW calc. 2-16983  
 Li, electrical transport props. 2-40869  
 Li, Knight shift vol. depend. 2-9046  
 MoN and MoC, superconducting transition temp. prediction 2-31004  
 Na, Knight shift vol. depend. 2-9046  
 NaCl, SCF APW-k.p. calc. of band struct. 2-12952  
 Nb, Fermi surface, press. effect, de Haas-van Alphen meas. 2-45811



**APW calculations continued**

- Ne, solid, transition to metallic state, band struct. 2-26300
- O<sub>2</sub> molecule, full-pot. self-consistent APW method for electronic struct. 2-651
- Os, ultrasoft X-ray emission interpretation (*Ukrainian*) 2-27026
- Re, ultrasoft X-ray emission interpretation (*Ukrainian*) 2-27026
- Rh, FCC crystal, change of volume effects on electronic bandstructure 2-40773
- SmS, electron-electron interaction and interpretation of optical spectra of permittivity 2-51083
- Ta, ultrasoft X-ray emission interpretation (*Ukrainian*) 2-27026
- TiN, bulk energy band struct., APW calc. and angle-resolved-photoemission meas. 2-1823
- W, ultrasoft X-ray emission interpretation (*Ukrainian*) 2-27026
- Xe, solid, transition to metallic state, band struct. 2-26300

**arc discharges** *see arcs (electric)***arc furnaces**

- noise reduction by electrotechnical methods 2-9738

**arc heaters** *see arc furnaces***arc lamps**

- Xe arc lamp, radiant flux stabilisation 2-25091

**arc welding**

- see also welding equipment*
- plasma-GMA welding for Al assemblies 2-34151

**archaeoastronomy** *see astroarchaeology***archaeology**

- see also astroarchaeology*
- archaeosecular geomagnetic vars. in Ukraine and Moldavia, BP 5500 to present (*Russian*) 2-27979
- obsidian artifacts, fission track ages using plateau-annealing and track size age-correction techniques 2-4191
- pimple mound genesis, archaeological evidence 2-18431
- pottery age determination, description of thermolum. techniques 2-52936
- pottery sample sorting of same provenience from neutron activation analysis data bank 2-22499
- pottery samples, thermoluminesc., firing temp. estimation 2-31570
- thermoluminescence dating inclusion technique, beta source calibration, grain transparency depend. 2-19231
- Au coin elemental analysis by particle induced X-ray emission 2-22498

**architectural acoustics**

- see also anechoic chambers; echo; noise abatement; reverberation*
- acoustical response of enclosure 2-1090
- adjacent rooms, acoustic coupling, modal description (*French*) 2-25180
- auditorium, curved rigid panels, sound reflection characts. 2-20482
- auditorium seating rakes, design and evaluation 2-44579
- auditory fusion procedures assess reverberation in a theater 2-11947
- building codes, noise control provisions, min. insulation requirements, simplified meas. procedures 2-11950
- classroom for teaching of hearing-impaired persons, design rel. to utilization of residual hearing, noise control problems 2-4659
- concert halls, objective acoustical criteria 2-11946
- concert halls, spatial impression due to early lateral reflections, phys. measure 2-20479
- couple spaces, recommendations for reverberation time estimation 2-39778
- damping of building structures 2-49997
- Delta Stereophony, directional sound transmission for large auditoriums, sound intensity distrib. (*French*) 2-39779
- digital 4-channel PCM recording opera, Bayreuth appl. (*Italian*) 2-4657
- early-Christian monuments of Thessaloniki, acoustics 2-29926
- enclosures, naturally coupled, steady state sound level prediction 2-29894
- engineering acoustics, finite element method appls. 2-29928
- engineering-related noise, sources, reduction, and meas. (*Hungarian*) 2-52411
- fabric roof struct., sound-absorbing material installation in roof/ceiling area, acoustical treatments 2-4649
- fan room and adjacent room octave band sound level spectra rel. to noise control by mech. adjustment 2-11951
- fibrous sound absorbents, wave propagation theory 2-7977
- film recording studio, acoustic design 2-29927
- film sound recording studio reconstruction, acoustic features 2-1091
- flanking path identification in buildings 2-20477
- flutter echo generation and suppression in spherical domes 2-50005
- houses, soundproofing to prevent propag. of community noise 2-11948
- indoor swimming pools, acoustic comfort, design rel. to reverberation and max. noise levels 2-4658
- mixdown control room design 2-50002
- multi-dwelling constructions, control of plumbing noise from light-weight plastic waste piping 2-11952
- noise penetration through partition for two independent sources on either side, statistical problems rel. to building design 2-11967
- noise reduction in dwellings in France (*French*) 2-49989
- normal room modes distribution for acoustics of recording studios 2-1089
- number theory appl. in physics, communication engineering and artistic designs 2-33379
- open plan office spaces, acoustical privacy provision through use of screens and special ceiling materials, sound transmission paths 2-11901
- panel transmission loss determ. using acoustic intensity meas. by FFT analyzer 2-4675
- partition sound insulation performance, single value rating method 2-4661
- partitions, transmission loss calc. for single, double and triple panels, statistical energy anal. 2-7976
- placement equalisation of microphones in small rooms 2-44578
- portable tool for room acoustic meas. 2-25197
- pyramidal rooms, speech intelligibility analysis from Modulation Transfer Function using mirror image computer model 2-7984
- reconstruction Atlantic recording studios 2-50000
- recording studio, control room design problems 2-49999
- recording studio design, architect's viewpoint 2-50001
- residential property modification for increased attenuation of road traffic noise 2-11949
- resonators and reverberation rel. to studio construction 2-50003
- reverberation chamber, transmission function relative variance 2-25183
- reverberation time in enclosures, numerical const. used in formulae, errors 2-34997
- road tunnels, acoustic treatment (*French*) 2-25181
- room acoustic modes, calc. in BASIC 2-44576
- room acoustics, digital simulation system (*German*) 2-44577

**architectural acoustics continued**

- room-to-room acoustical privacy, anal. and selection of sound isolating constructions 2-4660
- scale acoustic models, speech imitation source 2-25199
- sound decay in a semipartitioned rectangular enclosure with non-uniform absorption, and comparison with geometric theory 2-39777
- sound energy decay curve in rectangular reverberant room, approx. formula 2-34998
- sound levels around buildings near roadways 2-50004
- sound recording studio control rooms, guidelines for obtaining good acoustical characts. 2-44575
- sound transmission in buildings, investigation of model parameters and appls. 2-20478
- space-ensemble average of reverberation decay curves 2-29929
- speech intelligibility in rooms, prediction using modulation transfer function, a ray-tracing computer model 2-20476
- speech studio acoustic design of local radio broadcasting station 2-25182
- statistical energy anal., extension and reformation 2-35000
- transmission of acoustic energy through a sound bridge in a hysteretic double wall 2-49998
- transmission of sound through double panel, steady state analysis of airborne sound 2-34995
- violin sound quality, problems in recordings for listening evaluation 2-29952

**architectural CAD**

- room acoustic modes, calc. in BASIC 2-44576

**architectural computer aided design** *see architectural CAD***architecture**

- see also building; civil engineering*
- earthquake protection building codes 2-37767
- seismic strong ground motion, correl. of horiz. components for building design application 2-28008

**arcing** *see arcs (electric)***arcs (electric)**

- see also arc furnaces; arc lamps; arc welding*
- AC current arc, break, convective air flow effect on admixture atoms behaviour 2-16532
- arc discharge, high pressure, plasma diagnostics, UV obs. 2-8384
- cold-cathode contracted discharge, multi-pulse regime, frequency mode charact. 2-16536
- excitation method, for spectral anal. of Al<sub>2</sub>O<sub>3</sub> by scanning-electrode method 2-37120
- fall regions and electrode effects in atmospheric arcs of vanishing length 2-30350
- fusion reactor supercond. magnet system, pot. failures and hazards 2-550
- gas-filled spark gap triggered RLC ccts. 2-25669
- glow-to-arc transition in high-pressure arc 2-8369
- graphite electrode of electric arc, use as high temperature standard 2-23606
- helical arc column, effect of longitudinal mag. field 2-16524
- high intensity arcs, anode contraction region, two-temp. modelling 2-35340
- inert gas, high pressure arc discharge, plasma diagnostics, UV obs. 2-8384
- long high current arc, plasma-beam props. (*German*) 2-16522
- LV insulations AC voltage insulating power (*German*) 2-50464
- metallic foil, sputtering by heavy-current pulse arc in coaxial vaporiser (*Russian*) 2-9234
- Myler thin film, surface flashover arc orientation 2-36518
- parallel impulsive arcing in gas, effects of different rates of development on discharge gap system (*Russian*) 2-50463
- planar vacuum arc, numerical simulation 2-35338
- plasma arcs characts. (*French*) 2-1320
- pressure waves produced by pulsed electric arcs, saturation meas. 2-50469
- pulse arc discharges, current-voltage relationships 2-16526
- pulsed arc channel dynamics in high press. heated gas expts. (*Russian*) 2-1354
- RF-glow discharge, ignition and arcing appl. to fusion devices 2-20960
- simultaneous operation of electric arcs from the same supply 2-35337
- spiral instability, gas flow effects 2-8377
- steel, stainless, unipolar arc damage 2-12636
- steel plate fabrication noise problem rel. to air-arc gouging 2-9739
- tandem accelerator tube leaking procedure using low voltage arc discharge 2-11312
- temperature fields on point cathode in homogeneous gas stream 2-50465
- two-electrode gap immersed in arc plasma, breakdown voltage meas. 2-44821
- unipolar arc erosion rates measured using an ion beam activation technique 2-30522
- vacuum arc, anode spots and cathodic plasma flow 2-30347
- vacuum arc behavior in a transverse magnetic field 2-35339
- vacuum arcs, anode spot form. 2-35341
- wall stabilised, displacement vel. in transverse mag. field 2-30344
- wires, electric explosion, conductivity disappearance and macroscopic inhomogeneities development 2-40202
- Al foils in artificial quartz atmosphere, electrical explosion 2-1361
- Ar arc in swirling gas flow, energy balance, overheating instability 2-40201
- Ar arc plasma, decaying, recomb., ionisation, diffusion and convection 2-30279
- Ar arc plasma jet, rel. to transversal mag. field (*Russian*) 2-25662
- Ar, arc stabilised, anode, specific thermal flux and current density distrib., arc burning regimes effect 2-30352
- Ar, electric arc, instabilities 2-8376
- Ar, laminar flow of arc plasma in cylindrical channel 2-40067
- Ar, plasma generation and decay for tokamak experiment (*Japanese*) 2-25670
- CO<sub>2</sub> gasdynamic laser with electric-arc heating, stimulated emission at 18.4  $\mu$  2-39672
- Cu arc in air, NO<sup>+</sup> behaviour study (*Japanese*) 2-25671
- Cu vacuum arc, cathode-fall region 2-8379
- Hg, arc discharge, nearly saturated vapour, pre-breakdown electrical conduct. 2-30354
- Hg discharge, low press., unipolar arcs 2-20951
- Ni cathode, oriented recrystn. during current flow 2-17621
- TiC coating on stainless steel, unipolar arc damage 2-12636
- W cathode, oriented recrystn. during current flow 2-17621



## area measurement

- catalysts, heterogeneous, parameter anal., research techniques, overview 2-15233
- glass particle-detector track diameter and area meas. 2-49223
- moments of inertia direct meas. using modified planimeter (*Rumanian*) 2-15147
- powders, specific surface areas measurement 2-10781
- two-component two-phase flow, interfacial area meas. using radioisotopes 2-12260
- US plethysmograph, microprocessor-controlled, limb cross-section area meas. 2-2910

## argon

- see also nuclei with .....
- absorption and diffusion on PCTFE, effects on craze vel. 2-47163
- adsorbed Lennard-Jones submonolayers on graphite, grand ensemble Monte Carlo study 2-21443
- adsorption on Ar, second surface virial coeff. calc. 2-14002
- adsorption on graphite, monolayer and bilayer films, lattice consts. and vibrs., thermodynamic props. 2-45714
- anharmonic cryst., thermodynamic props. 2-35719
- arc discharge, plasma generation and decay for tokamak experiment (*Japanese*) 2-25670
- arc in swirling gas flow, energy balance, overheating instability 2-40201
- arc plasma, decaying, recomb., ionisation, diffusion and convection 2-30279
- arc plasma, laminar flow in cylindrical channel 2-40067
- arc plasmon jet, rel. to transversal mag. field (*Russian*) 2-25662
- arc stabilised, anode, specific thermal flux and current density distrib., arc burning regimes effect 2-30352
- atom, 3s photoelectron satellites, CI calcs. 2-24621
- atom, collision-induced light scatt. spectra 2-34525
- atom, dynamic dipole polarisabilities calc. using R-matrix approach, oscillator strengths 2-15917
- atom, elastic scatt. of electrons, spin polarisation between 10 and 50 eV 2-24857
- atom, electron bombardment, bremsstrahlung fluoresc. obs. 2-19996
- atom, electron entrainment by reson. light and quadrupole reson. 2-15759
- atom, electron impact ionisation cross sections, theoretical 2-34571
- atom, g factor meas., optical pumping, mag. resonance 2-4265
- atom, outer shell photoelectron spectra, model for calc. atomic satellite struct. appl. 2-43997
- atom, pair polarisability, SCF calcs. 2-49285
- atom, photoionisation, cross sections, spin-polarisation, data compilation 2-38370
- atom, Rydberg states, colour centre laser optogalvanic spectroscopy in hollow cathode discharges 2-49316
- atom, slow-electron elastic scatt. cross section calc. 2-44094
- atom, wave functions, relativistic HF-Dirac SCF calc. (*Russian*) 2-15720
- atom + H<sup>+</sup>, K-shell electron capture calcs. 2-24847
- atom ground state, binding energies and wave function calc. using multi-dimensional ang. Coulomb functions 2-7495
- atoms, electron elastic scatt. cross section calcs. 2-20188
- atoms, valence electron spin-orbit splitting, Slater transition state calcs. 2-34283
- atoms, XPS shake up studies 2-43870
- bubble chambers, narrow bubble track formation by laser beam 2-15667
- classical trajectory model of electron transfer 2-4915
- crystal stimulated emission around 10 eV 2-51629
- crystalline, struct. and compression at high press. and room temp. 2-21063
- dense liquid, depolarised light scatt. intensity, pot. effect 2-31436
- determination in sputtered Si film, by energy-dispersive X-ray fluoresc. 2-31956
- electric arc, instabilities 2-8376
- electron swarm parameters 2-25487
- electronic stopping power of charged particles near its maximum 2-21193
- equation of state of pure fluid in one-phase region development from expt. data 2-40509
- free jet expansion, dimer depletion mass spectrometric meas. 2-27496
- gas, 61.6 nm coherent radiation generation by fifth harmonic conversion of XeCl laser 2-20366
- gas, binary collision-induced light scatt. 2-15798
- gas, electric strength recovery in gaps after sliding discharge along surface of insulator 2-1362
- gas, electrons injection, classical trajectory Monte Carlo model 2-40027
- gas, Fano factor meas. 2-50359
- gas, pre-breakdown ionisation current, collision processes 2-30355
- gas, singly ionised, singly ionised gas, model for satellite struct. in atomic spectra 2-43823
- gas, thermal cond. at high press. and temp. 2-40024
- gas and liquid phase, collision-induced light scattering spectral moments, density depend. 2-29539
- gas in various solvents, Gibbs free energies of solute solvent interactions 2-41920
- glow discharge, Langmuir probe, cleaning of vacuum chambers 2-50475
- high frequency capacitative discharges, relationship between maximum plasma temp. and current 2-40199
- homonuclear diatoms, collision-induced Raman spectra and diatom polarisability 2-29598
- hot cathode discharges, LF longitudinal waves, hydrodynamical model 2-20945
- hot cathode discharges, LF longitudinal waves 2-20944
- hot electron thermalisation in fluid argon—the effect of the Ramsauer-minimum 2-4916
- imploded microballoon plasma, dielectronic satellite spectral lines, inner shell excitation 2-44905
- ion injection in magnetosphere, aerospace engine beam effects 2-10275
- ion laser, active mode locking by acousto-optic AM modulation (*Chinese*) 2-7807
- laser, highly stable acousto-optic mode-locking using active feedback 2-7809
- laser coagulation treatment of bleeding ulcers 2-18288
- liquid, dielectric breakdown rel. to press., voltage polarity, pulse width and impurity 2-5636
- liquid, effective hard sphere diameters evaluation 2-20984
- liquid, free-carrier yields of radiation induced cond. in liquefied rare gases 2-1974
- liquid, fundamental props., use as radiation detector media 2-49227
- liquid, incoherent scattering function in simple classical liquids 2-44996

## argon continued

- liquid, nonpolar, hot electron scatt. 2-30941
- liquid, radial distrib. functions and struct. parameters, unified kinematic theory of diff. 2-25715
- liquid-vapour interfacial width, Van der Waals description 2-26032
- methyltrimethoxysilane-Ar mixture, plasma polymerisation in RF discharge, mass spectra study 2-46950
- mineral spring in fault zone, gas bubble emission, Ar/He ratio as earthquake precursor 2-6334
- mixtures, self-focusing of pulsed electron beam, ionisation 2-7648
- molecule, collision-induced depolarised Raman light scatt. cross section 2-34412
- molecule, photoionisation cross section, mass spectra 2-49532
- molecule, relative photoionisation cross sections between  $^2P_{3/2}^0$  and  $^2P_{1/2}^0$  fine struct. thresholds 2-29661
- optical discharge, continuous, theoretical model 2-25600
- perturbation of TI and Hg spectral line shapes 2-29552
- physisorbed monolayer, two-dimensional melting 2-1759
- planetary nebulae Ne, S, Ar abundances, visible/IR obs. 2-14903
- plasma, dust loading in thermal blow-down expt., Mie scatt. single particle counting 2-20934
- plasma, prod. by laser heated gas jet, soft X-ray source 2-28960
- plasma, spectrometric study of electron temp. and density 2-20936
- plasma etching, influence on charge props. of MOS<sup>1</sup> struct. (*Russian*) 2-5468
- plasma leak width of line- and point-cusp mag. fields 2-25656
- pressure transfer standards using triple point of gases in sealed cells 2-15139
- pulsed jet form. behind supersonic nozzle when gas can relax at entrance to nozzle 2-20723
- quantum crystal, inverse and energy surfaces, elastic waves 2-50956
- refractivity virial coeff. determ., visible spectrum 2-30272
- salting out from alkali halide solns. in D<sub>2</sub>O(H<sub>2</sub>O), struct. effects 2-16801
- salting-out from alkali halide solns. in D<sub>2</sub>O(H<sub>2</sub>O); thermodynamics 2-16800
- selective population of levels in afterglow 2-49317
- singly charged ion source 2-4158
- solid, erosion by fast He<sup>+</sup> ions 2-45294
- solid, excitons, hot luminescence and self trapping 2-17527
- solid, melting curve eqn. under high press., Simon's eqn. 2-45537
- solid, SIMS 2-36746
- solid, stopping power meas. for 0.5-3 MeV He ions using backscattering method 2-15684
- solid, transition to metallic state, band struct. 2-26300
- solubility method used to study struct. features of propylene glycol-water mixtures 2-12448
- supersaturated vapour, nucleation and condensation kinetics, appl. of curvature-depend. surface tension 2-45543
- supersonic beams, absolute intensities and perpendicular temps. 2-29732
- surface (001), energyband struct., APW calc. 2-26469
- thermal desorption from Pt, gas-surface interaction dynamics 2-40692
- gas  $\alpha$ -particles excited, recombination luminesc. at high-pressure, time depend. 2-50368
- Ar and Ar-Cl<sub>2</sub> mixture, glow discharge, positive column, electrical characteristics, electrical energy distrib. functions 2-8375
- Ar II CW laser with transverse supersonic gas circulation 2-39621
- Ar II ion laser, CW, supersonic transverse gas flow 2-34800
- Ar III CW laser with transverse supersonic gas circulation 2-39621
- Ar, inductively coupled plasma, spatial distrib., temp. and electron number density 2-16514
- Ar mixture liq. eqn. of state and press. effect an excess thermodynamic functions 2-5205
- Ar VIII, beam-foil excitation, relative level populations 2-43880
- Ar VIII, electron impact ionisation, excitation and autoionisation, cross sections and rate coeff. 2-4395
- Ar VIII, semiempirical pseudopotentials 2-15866
- Ar<sup>+</sup> laser, active mode-locking using temp. compensated acousto-optic modulator (*Chinese*) 2-25043
- Ar<sup>+</sup> laser, actively mode-locked, charact. obs. using scanning interferometer (*Chinese*) 2-20291
- Ar<sup>+</sup> laser, optical pumping of <sup>7</sup>Li<sub>2</sub> laser transitions 2-7750
- Ar<sup>+</sup> laser, passive mode locking using rhodamine 110 dye saturable absorber, optical bistability 2-20340
- Ar<sup>+</sup> lasers with glass envelopes, expt. study of props. (*Chinese*) 2-39622
- Ar<sup>+</sup>, pulsed laser, performance and fabrication 2-34791
- Ar<sup>18+</sup>, electron capture cross-sections from He-atoms and H<sub>2</sub> molecules (*Russian*) 2-7639
- Ar<sup>2+</sup>, S isoelectronic sequence, optical oscillator strength calcs. 2-43858
- Ar<sup>4+</sup>, optical oscillator strengths, Born approx. and LS coupling calc. 2-29551
- Ar/O<sub>2</sub>, N<sub>2</sub>, solid, electronic transport 2-36114
- Ar/O<sub>2</sub>, glow discharge, Langmuir probe, cleaning of vacuum chambers 2-50475
- Ar-Ar interaction energies, modified statistical methods calcs. 2-15864
- Ar-Ar(N<sub>2</sub>) plasmas, inductively coupled, high frequency, spectroanalytical investigation (*German*) 2-50459
- Ar-benzene complex, U<sub>g</sub> transition, struct., fluoresc. obs. 2-39442
- Ar-benzene (toluene) dil. solid solns., UV irradi., isothermal luminesc. and thermoluminesc. 2-27000
- Ar-benzene complex in jet, ionisation pot. meas. 2-49598
- Ar-Cl<sub>2</sub>, glow discharge, positive column, electrical characteristics, electrical energy distrib. functions 2-8375
- Ar-Co binary gas mixtures, thermal cond. 2-50357
- Ar-D<sub>2</sub>, HCl, gasdynamic laser, thermally pumped, gain and energy parameters 2-20296
- Ar-H<sub>2</sub>, gas mixtures, intermol. pot. from H<sup>+</sup> spin-lattice relax. 2-20152
- Ar-H<sub>2</sub>, hyperfine spectrum meas. using mag. beam reson. technique 2-34520
- Ar-H<sub>2</sub>, dimer, hyperfine spectrum obs. 2-34385
- Ar-H<sub>2</sub> mixture, viscosity meas. 2-1285
- Ar-H<sub>2</sub>-N<sub>2</sub>, combined discharges, suppression of spiral instability at atmospheric press. in longitudinal mag. field 2-40198
- Ar-H<sup>+</sup>, K-shell ionisation probability meas. 2-24840
- Ar-He, lineshapes and dipole moments in collision-induced absorption 2-29574
- Ar-Kr, pressure-induced multiphoton ionisation of Kr atoms 2-7530
- Ar-Kr mixture, Fano factor meas. 2-50359
- Ar-Kr-F<sub>2</sub> gas mixture, plasma props. under steady discharge condition (*Chinese*) 2-8367
- Ar-methane filled proportional counters lifetime 2-43688



## argon continued

- Ar-N<sub>2</sub> mol. fluids, thermodynamic functions, perturbation theory 2-20993  
 Ar-N<sub>2</sub> with pumping by high-current charged particles beam, numerical model 2-4493  
 Ar-Na vapour mixture, degenerate four-wave mixing in excited states, collision assisted transitions 2-29852  
 Ar-Ne mixtures, translational absorpt. spectra arising from collision induced dipole moment 2-31463  
 Ar-O<sub>2</sub> mol. fluids, thermodynamic functions, perturbation theory 2-20993  
 Ar-O<sub>2</sub> RF sputtering glow discharge, excited states, optical emission spectroscopy study 2-20953  
 Ar-O<sub>2</sub>(N<sub>2</sub>) mixtures, solid-solid phase diagrams 2-35672  
 Ar-SF<sub>6</sub> electric strength recovery in gaps after sliding discharge along surface of insulator 2-1362  
 Ar-SF<sub>6</sub> excess and interaction second virial coeff. 2-30263  
 Ar-SF<sub>6</sub> interdiffusion coeffs., temp. effects 2-20805  
 Ar-tetracene Van der Waals mols., fluoresc. obs., binding sites 2-34470  
 Ar-Xe, IR laser excited by UV preionised discharge 2-44246  
 Ar-Xe mixture, Fano factor meas. 2-50359  
 Ar-Xe mixture, intermol. forces and gaseous viscosities 2-44812  
 Ar-Xe multiple path fission foil nucl. lasing 2-15982  
 Ar+Ar<sub>2</sub>(Ne<sub>2</sub>)(ArKr), atom exchange, dissociation, quasiclassical trajectory and statistical study 2-47315  
 Ar+Ar<sup>+</sup> 2-44079  
 Ar+Ar<sup>+</sup>, inelastic collisions, fine-struct. transitions rot. coupling, transition probability calc. 2-15873  
 Ar+Ar(Xe), Ar K X-ray prod. cross sections, charge-state depend. of inner-shell vacancy prod. 2-7630  
 Ar+Ar(3p<sup>3</sup>Sp<sup>3</sup>), radiative lifetimes and collisional energy transfer rate consts. 2-39359  
 Ar+Ar(3p<sup>3</sup>Sp<sup>3</sup>), radiative lifetimes and collisional energy transfer rate consts. 2-39359  
 Ar+azulene\*, collisional energy transfer, IR fluoresc. obs. 2-34467  
 Ar+B, interatomic pots., non-adiabatic matrix, ArB form., ab initio CI calcs. 2-24825  
 Ar+B<sup>+</sup>(C<sup>+</sup>)(N<sup>+</sup>)(O<sup>+</sup>)(Ne<sup>+</sup>), K- and L-shell excitation cross sections 2-24843  
 Ar+BH, rot. states, energy transfer, cross sections, lifetime meas. 2-44065  
 Ar+C<sub>2</sub>O, fluoresc. decay and bimolecular electronic quenching behaviour 2-15842  
 Ar+C<sup>+</sup>, ion prompt and time delayed electron decay-in-flight spectra 2-4353  
 Ar+CO, relaxation of rotational energy over temp. range 300 to 1040K 2-4370  
 Ar+CO<sub>2</sub>, laser excitation study, fluoresc., lifetime meas., vibr., rot. depend. perturbation 2-24788  
 Ar+Cl<sup>+</sup>, tests of interaction pots., ion mobility and diffusion coeff. calcs. 2-34539  
 Ar+H<sub>2</sub><sup>+</sup>, vibr. effects in proton and charge transfer 2-2695  
 Ar+H<sub>2</sub>(D<sub>2</sub>), metastable atoms, collisional de-excitation cross sections expt. 2-24822  
 Ar+H<sup>+</sup>, electron detachment, cross sections, form. of excited H atoms 2-24841  
 Ar+H<sup>+</sup>, H(2p) charge exchange excitation, alignment tensor components 2-49570  
 Ar+HF, rot. to translational energy transfer, state-to-state cross sections 2-39480  
 Ar+HF, state to state cross sections for energy transfer, modified infinite-order sudden theory 2-29698  
 Ar+HF, vibr. and rot. energy transfer 2-39475  
 Ar+He, excess enthalpy, direct determ. 2-16415  
 Ar+He, He metastable states; chemi-ionisation velocity depend. 2-44069  
 Ar+He, total ionisation cross section, mass anal. 2-34544  
 Ar+He\*(2's, 2's), total integral collision and ionisation cross sections in thermal energy region (German) 2-7624  
 Ar+Hg, collisional perturbation of 6s6d levels of Hg 2-39471  
 Ar+I<sub>2</sub>, very low energy collision, adiabatic and effective pot. approx. calcs. 2-39469  
 Ar+K (7s-4p) emission line, perturbation, line shift, width and asymmetry, temp. depend. 2-43850  
 Ar+Kr, Kr L X-ray prod. cross sections, charge-state depend. of inner-shell vacancy prod. 2-7630  
 Ar+Kr<sup>+</sup>, collision broadening in MO-electron spectra 2-11568  
 Ar+Li, Li excitation, time of flight spectra vector polarisation anal. 2-784  
 Ar+methane, energy transfer collisions, photoacoustic study 2-44062  
 Ar+N<sub>2</sub> inelastic scatt., energy-adjusted sudden approx. 2-39481  
 Ar+N<sub>2</sub><sup>+</sup>, charge exchange, N<sub>2</sub><sup>+</sup>(X→A) Meinel bands, visible spectra 2-34552  
 Ar+Na, excitation transfer collisions and electron seeding processes 2-776  
 Ar+Na, high Rydberg Na s states, collisional depopulation cross section 2-24821  
 Ar+Na, scatt. cross section meas., pot. energy functions (German) 2-29685  
 Ar+Ne, Ne K X-ray prod. cross sections, charge-state depend. of inner-shell vacancy prod. 2-7630  
 Ar+O<sub>2</sub> liq. mixtures, vibr. energy relax., conc. depend. 2-29696  
 Ar+Rb, collision broadening and shift of Rb S and D Rydberg levels 2-49337  
 Ar+S<sub>2</sub>Cl<sub>2</sub>, energy transfer reactions, UV and visible emission 2-27426  
 Ar+UF<sub>6</sub> (MoF<sub>6</sub>), internal excitation, kinetic energy distrib. 2-4366  
 Ar+Xe, interaction pots., IR spectra, line shift, and broadening 2-20004  
 Ar<sup>+</sup>+Ar, L X-ray fluoresc., coincidence technique 2-44079  
 Ar<sup>+</sup>+H<sub>2</sub>O, H<sub>2</sub>O<sup>+</sup> and ArH<sup>+</sup> formation, crossed beam study at low energies 2-4378  
 Ar<sup>+</sup>+NH<sub>3</sub>, energy disposal in thermal energy CT reactions 2-44084  
 Ar<sup>+</sup>+Na, Rydberg atom l-change near matching vel. region 2-4374  
 Ar<sup>+</sup>+O<sub>2</sub>, charge transfer, O<sub>2</sub><sup>+</sup>(<sup>2</sup>Π<sub>g</sub>) product state, rate coeffs. 2-34555  
 Ar<sup>12+</sup>+C foil, K X-ray prod. foil thickness effect 2-33696  
 Ar<sup>2+</sup>+Ne, single electron capture functions meas., energy loss spectra 2-44052  
 Ar<sup>q+</sup>+He(Ne), q=1,2,3, projectile excitation, radiative emission cross sections 2-44073  
 Ar<sup>q+</sup>+He(Ne)(Ar) 2-11569  
 Ar<sup>q+</sup>+Ne, low energy collisions, charge transfer, ionisation, cross section meas. 2-34562  
 Ar<sub>2</sub>, ground state pot. energy curve, ab initio SCF obs. 2-39343  
 Ar<sub>2</sub>, Hulbert-Hirschfelder pot. function obs. 2-34329

## argon continued

- Ar<sub>2</sub>, monomer effective core pots., pot. energy curves, SCF and CI calcs. 2-24620  
 Ar<sub>2</sub><sup>+</sup> lowest states, pot. curves, extended basis sets, CI and spin-orbit coupling scheme calcs. expt. determ. 2-19983  
 Ar<sub>2</sub>+Ar, atom exchange, dissociation, quasiclassical trajectory and statistical study 2-47315  
 Ar<sub>2</sub> clusters, photoionisation efficiency curves 2-39521  
 Ar<sub>1</sub>, nonresonant levels, radiative lifetime meas. 2-43859  
 Ar<sup>+</sup>(<sup>2</sup>P<sub>1/2</sub>)+Ar(<sup>1</sup>S<sub>0</sub>) collision, fine struct. transitions in 60 to 1500 eV range 2-24837  
<sup>40</sup>Ar abundance in Venus atmosphere, rel. to planet plate tectonics 2-28366  
<sup>40</sup>Ar excess in metamorphics from Broken Hill, N.S.W. rel. to <sup>40</sup>Ar/<sup>39</sup>Ar age spectra 2-14420  
 Ar<sup>+</sup>+Ca, Penning ionisation collision, light absorpt., chemiluminescence 2-39484  
 Ar<sup>+</sup>+Ar(Kr)(Xe), low energy charge transfer reactions, time of flight study 2-15888  
 Ar<sub>2</sub><sup>+</sup>, quenching reaction cross sections, triplet state, dissociation, IR obs. 2-7555  
 Ar<sub>2</sub><sup>+</sup>+N<sub>2</sub>(C<sup>3</sup>Π), spectral line broadening and velocity distrib. (Russian) 2-24827  
 F<sub>2</sub>-D<sub>2</sub>-Ar(He)(CO<sub>2</sub>) mixtures, detonation investig. 2-22451  
 Fe:Ar, ion implanted single crystal, Rutherford backscattering and channeling anal. 2-45220  
 H II regions, galactic, abundances of Ar, S and Ne from IR forbidden lines 2-28524  
 H-O-Ar mixtures, transport props. at high temps. 2-8256  
 HCl/Ar, matrix isolated, role of local translation in vibr. relax. 2-7632  
 HF+Ar, rot. relax. rates from direct inversion of press. broadened linewidths 2-15882  
 He-Ar, electrically excited, electron energy distrib. and transport coeffs., Boltzmann stability eqn. calc (Chinese) 2-25665  
 He-Ar mixture, thermal diffusion factor, pressure and conc. depend. 2-30267  
 He-Ar mixtures, acoustic vel. and density 2-35264  
 He-Ar-Xe, IR laser excited by UV preionised discharge 2-44246  
 H<sub>2</sub><sup>+</sup>(v)+Ar→ArH<sup>+</sup>+H, Ar<sup>+</sup>+H<sub>2</sub>, reactions, CT cross sections near reson., TESISCO study 2-17886  
 Kr-Ar mixture released during nuclear fuel reprocessing, data on stabilising materials for low temp. rectification (German) 2-11211  
 Mg-Ar ion chamber sensitivity to high energy neutrons 2-19790  
 N<sub>2</sub>-Ar mixture, room temp. thermal cond., rel. to kinetic theory 2-30269  
 Na+Ar+hν<sub>1</sub>+hν<sub>2</sub>, collisions computational study 2-34547  
 Ne-Ar, electrically excited, electron energy distrib. and transport coeffs., Boltzmann stability eqn. calc (Chinese) 2-25665  
 Ne-Ar solutions, volume thermodynamic props., ultrasonic velocity (Russian) 2-12686  
 Si:Ar, ion implanted, radiative recomb. centres, photoluminesc. study 2-9194  
 Si:Ar implant damage gettering of generation impurity, backscatt., PIXE study 2-45288  
 a-Si:Ar RF sputtered films, elec. and optical props., effect of Ar 2-40736  
 a-Si:Ar, RF sputtered films, interaction between Ar and dopants 2-40738  
 Si:Ar, ion implanted, defect luminescence spectra 2-36712  
 SiH<sub>4</sub>-Ar plasma, Si atom diffusion and Si:H amorphous film deposition 2-35274  
 VO<sub>2</sub>-Ar solid solns., 3d electron localisation, metal-insulator transition, elec. cond. and optical spectra meas. 2-35942
- argon compounds**  
 Ar-N<sub>2</sub> complex, IR spectra, rot. predissoc., lineshapes 2-43899  
 Ar-N<sub>2</sub>O weakly bound complex, rot. spectra meas. using mol. beam spectroscopy, struct., dipole moments 2-20026  
 ArB, from Ar+B collisions, interatomic pots., ab initio CI calcs. 2-24825  
 ArF excimer laser, UV preionised, pulse energy and laser performance (Chinese) 2-7781  
 ArF excimer laser source, tunable ultrahigh spectral brightness 2-11724  
 ArF UV preionised discharged excimer laser, spectral tuning in 1926 to 1944 Å range (Chinese) 2-25024  
 ArF\* molecules excited by fast discharge, stimulated emission 2-4494  
 ArF\* ultrahigh-spectral-brightness excimer lasers as pump sources for coherent soft X-ray generation 2-28971  
 ArF\* ultrahigh-spectral-brightness source, third harmonic generation in gaseous media 2-49824  
 ArH, Rydberg states and visible spectrum 2-29618  
 ArKr+Ar, atom exchange, dissociation, quasiclassical trajectory and statistical study 2-47315  
 Ar.BCl<sub>3</sub>, IR photolysis and photodissoc. spectrum 2-22476
- aromatic compounds** see organic compounds
- arrays (antenna)** see antenna arrays
- arsenic**  
 see also nuclei with .....  
 (111) surface, chemisorption of InAs, phase transitions 2-45730  
 amorphous, electronic density of states calc., liq. metal model approx., results (Russian) 2-8749  
 amorphous, heat capacities below 1K 2-40567  
 amorphous and cryst., comparative UPS and XPS study 2-17601  
 amorphous film, UHV sublimed, elec. and optical props. 2-46172  
 amorphous semiconductor, defects, theoretical study 2-1859  
 amorphous semiconductor, review 2-45037  
 atoms and solid, binding energy, Auger and photoelectron spectra 2-34367  
 autodoping elimination through reduced pressure 2-30474  
 band structure, temp. depend. 2-16987  
 brass, Al, stress corrosion cracking, influence of As and P 2-13842  
 determination in luke water using hydride at. absorpt., valence state effects 2-17931  
 diamond:As, synthetic, luminance wave obs. (Russian) 2-22095  
 dopant profile control in Si by pulsed laser processing 2-50689  
 duoplasmatron ion source for implantation appl. 2-7417  
 health hazards, public and occupational, of photovoltaic energy technologies 2-22542  
 implantation through SiO<sub>2</sub>/Si, TEM, Rutherford backscatt. and MOS device characts. 2-40450  
 ion implanted layers, solid phase epitaxial regrowth 2-16960  
 K-shell fluorescence and photoionisation in elements 28≤Z≤53 2-29549  
 protective coatings for MBE Al<sub>x</sub>Ga<sub>1-x</sub>As epilayers during ambient transfer 2-5815



## arsenic continued

- proton interaction, heavy fragments energy spectra 2-25944  
 structure by bond-breaking processes from rock salt, band struct. calc. and gauche effect 2-25810  
 structure by bond-breaking processes from rock salt, struct. enumeration 2-25809  
 trace amount determ. using capacitively coupled microwave plasma 2-17948  
 amorphous, electronic density of states calc., liq. metal model approx., theory (*Russian*) 2-1816  
 As<sub>2</sub> vapour deposited films, struct. determ. by X-ray diffr. 2-5321  
 As<sub>2</sub>(As<sub>2</sub><sup>+</sup>), predissociation, rot. anal., UV spectra 2-49535  
 Ge:As, 1s and 2p states, quantitative piezoelectricity 2-26863  
 Ge:As, four-wave spectroscopy of shallow donors 2-22055  
 Ge:As, luminescence study, exciton excited hole state 2-46691  
 Ge:As, precipitation-induced defects, X-ray diffr. study, three-crystal spectrometry 2-45181  
 As<sub>2</sub> electron-hole liq., photoluminesc. polarisation in mag. field study 2-35952  
 N-Ge:As, ballistic heat pulse scatt., mag. field effects 2-50943  
 S:As, through oxide As implanted, recoil O implants and O thermal redistribution 2-5133  
 Si (111)(1×1):As surface, highly doped, laser annealing prep., electronic props., photoemission study 2-8847  
 Si:As, amorphous implanted, phase transitions produced by pulsed laser or electron irradi. 2-45283  
 Si:As, atom and carrier depth distrib. for channelled 300 keV As ions, SIMS study 2-5163  
 Si:As, B wafer reactive-ion etch end-point detect. using spectrophotometer and photodetector 2-5969  
 Si:As, CW laser and electron beam annealed, Rutherford backscatt. and SIMS anal. 2-46847  
 Si:As, channelling Rutherford backscattering (*Chinese*) 2-35553  
 Si:As, dopant distrib., sheet resist., spreading resist., junction depth, SIMS, and IR spectra meas. 2-12624  
 Si:As, doping by laser induced diffusion 2-16669  
 Si:As, heavily implanted layers, pulsed thermal annealing 2-50682  
 Si:As, implanted, CW Ar laser annealing, in situ temp. meas. using opt. pyrometer 2-45270  
 Si:As, implanted, CW laser annealed, real-time monitoring of opt. props. 2-46617  
 Si:As, implanted, laser or electron beam annealed, defect form., electron beam induced current study 2-45271  
 Si:As, ion implanted, doping profiles and elec. activation, Rutherford backscatt. study 2-25916  
 Si:As, ion implanted, ellipsometric spectrum (*Chinese*) 2-31519  
 Si:As, ion implanted, laser annealed, Si MBE growth, doping profile, Rutherford backscatt. study 2-51813  
 Si:As, ion implanted, polycryst. film, laser irradi., elec. props. grain size, annealing effect 2-17173  
 Si:As, ion implanted, pulsed electron beam annealing 2-50710  
 Si:As, ion implanted, radiation damage, in situ ion beam annealing 2-25911  
 Si:As, ion implanted, radiation defects annealing, Mossbauer and surface cond. study 2-35523  
 Si:As, ion implanted, radiation damage determ. by profiling oxide growth rate 2-40448  
 Si:As, ion implanted, threshold energy density for epitaxial recrystn. 2-45260  
 Si:As, polycryst. film, CW laser annealing, SiO<sub>2</sub>, Si<sub>3</sub>N<sub>4</sub> substrate material effect 2-8534  
 Si:As, polycrystalline, heavily doped, comparison of thermal and CW laser annealing effect on resist. 2-51179  
 Si:As, pulsed laser annealing, melting phenomena 2-46837  
 Si:As, thermally evaporated, near-surface layer impurities, luminescence anal. 2-17526  
 Si:As (111)(1×1) surfaces, electronic props., photoemission study 2-17136  
 Si:As film, implanted, CW laser-induced solid phase epitaxy dynamics, time-resolved reflectivity meas. 2-45791  
 Si:As implanted film, pulsed proton beam annealing 2-50718  
 Si:As polycryst. film, pulsed and CW laser annealing 2-25912  
 Si:As polycrystalline, effect on electrical conduction, model, experimental 2-5400  
 Si:As<sup>+</sup>, extended defect depth profiling, channelling, Rutherford backscattering meas. 2-12628  
 Si:As<sup>+</sup>, implanted, CW laser annealing and electron beam annealing 2-12640  
 Si:As<sup>+</sup>, ion implanted, laser annealing, refl. study 2-16677  
 Si:As<sup>+</sup>, solar cells, prep. by ion implantation and pulsed laser annealing, optical and elec. characterisation 2-14080  
 Si:As<sup>+</sup> ion implant, depth profile, stopping power, backscatt. meas. 2-45234  
 Si:As<sup>+</sup>, ion implantation, scanned electron beam annealing 2-1527  
 Si:B, As, P, amorphous, ion implanted, epitaxial regrowth, compensating impurity effect 2-51014  
 Si:B, As, ion implantation, alternate technique during MBE growth 2-50670  
 ZnSiO<sub>4</sub>:Mn, As, photoluminesc. and photocond. 2-51672  
 ZnSiO<sub>4</sub>:Mn<sup>2+</sup>, As, photoexcited and photostimulated luminesc. and cond. 2-51670  
 ZnSiO<sub>4</sub>:Mn<sup>2+</sup>, As, phosphorescence, electron traps effect 2-51671

## arsenic alloys

- see also arsenic compounds  
 As<sub>2</sub>Se<sub>3</sub>, liquid covalently bonded alloys, bond equilibrium theory 2-45014  
 U<sub>3</sub>As<sub>2</sub>, weak fields effect on transitions between states with different numbers of mag. phases 2-8971

## arsenic compounds

- see also arsenic alloys  
 arsenate glasses, binary and ternary, stability regions with glass formers 2-51882  
 a-As<sub>2</sub>S<sub>3</sub>, luminesc. and optically detected ESR 2-46756  
 polyacetylene:AsF<sub>5</sub>, <sup>13</sup>C NMR study 2-51489  
 polyacetylene:AsF<sub>5</sub>, magnetic behaviour, Pauli spin susceptibility 2-13273  
 Ag<sub>3</sub>As<sub>2</sub>, proustite, Brillouin scatt. spectra 2-46629  
 Al<sub>0.5</sub>As<sub>0.5</sub>Te<sub>0.4</sub> amorphous alloy, model for short range structure (*Spanish*) 2-21029  
 As-Ge-Se, glasses and melts, thermal and elec. cond. 2-8683

## arsenic compounds continued

- As-Ge-Se system, elec. cond. in glassy and liq., states across GeSe<sub>2</sub>-As<sub>2</sub>Se<sub>3</sub> and GeSe<sub>2</sub>-As<sub>2</sub>Se sections and with excess Se conc. 2-26393  
 As-Ge-Se system with excess Se, vitrification temp. calc. method 2-40279  
 As-Ge-Te glasses, pure and doped, elec. and dielec. props. 2-17075  
 As-S, amorphous film, optical waveguide, laser beam electrooptic modulation 2-34885  
 As-S glasses, retarded elasticity in glass transition range, creep meas. 2-13761  
 As-S-H, amorphous plasma deposited coating, optical props. and EPR 2-40734  
 As-S-Fe glass, dielec. const. and loss angle (*Russian*) 2-26816  
 As-Se, glassy, absorption spectra 2-26425  
 As-Se, glassy, hole drift mobility, composition and struct. depend. 2-46021  
 As-Se, glassy, optical absorpt. spectra 2-17120  
 As-Se, liquid, elec. and thermoelec. props. 2-17120  
 As-Se, liquid, elec. cond., thermoelec. power and semicond.-metal transition 2-26425  
 As-Se glass, vibrational spectra 2-5668  
 As-Se glass, inelastic props. at very low freq. 2-45360  
 As-Se glasses, dielectric consts., loss tangents, depend. on composition 2-17386  
 As-Se glasses, IR absorpt. spectra 2-26905  
 As-Se glassy films, photostructural changes, photodarkening and thermal bleaching 2-12497  
 As-Se-H, amorphous plasma deposited coating, optical props. and EPR 2-40734  
 As-Se-Ag, amorphous, AC cond. 2-45972  
 As-Se-Ge, amorphous film, anal. of relief-type gratings (*Japanese*) 2-39589  
 As-Se-Te, amorphous, photoconductor for electrographic printing 2-44421  
 As-Se-Te, metal-semicond.-metal struct., elec. props. 2-46155  
 As-Se-Te glass, thermal cond. and hardness 2-45641  
 As-Te, glass-forming tendency, comp. depend. 2-26058  
 AsBr<sub>3</sub>, vibr. anal., pot. and mol. consts., kinetic consts. method 2-24887  
 AsF, doped polyacetylene film, As-F species anal. 2-31962  
 AsF<sub>5</sub>, E<sup>+</sup> species, vibr. freq. and pseudo-exact force constant 2-15764  
 AsF, intercalated graphite, cond. and anisotropy of skin depth, <sup>19</sup>F NMR spectra 2-45965  
 AsF, intercalated in polyacetylene (polyphenylene), cryst. struct., neutron diffr. study 2-45073  
 As<sub>2</sub>Ge<sub>10</sub>Te<sub>4</sub>, amorphous, dielec. const. and loss meas. 2-17390  
 As<sub>2</sub>Se<sub>3</sub>, addition cpd., Raman spectra, vibr. and lattice modes obs. 2-5673  
 AsO radical, IR laser mag. reson. spectra 2-29633  
 As<sub>2</sub>O<sub>3</sub>, arsenolite and claudotite I, NQR study 2-2161  
 As<sub>2</sub>O<sub>3</sub> on GaAs surface, interfacial chemical reactivity of metal contacts 2-8879  
 AsP<sub>3</sub>, vibr. anal., pot. and mol. consts., kinetic consts. method 2-24887  
 As<sub>2</sub>S<sub>3</sub>, amorphous, acoustic dispersion meas. 2-20498  
 As<sub>2</sub>S<sub>3</sub>, amorphous, glass transition rel. to reversible photostruct. changes 2-26056  
 As<sub>2</sub>S<sub>3</sub>, amorphous, hot carrier relax., optical picosecond study 2-46529  
 As<sub>2</sub>S<sub>3</sub>, amorphous, intimate valence alternation pairs, exciton and pair recombination, ODMR study 2-46432  
 As<sub>2</sub>S<sub>3</sub>, amorphous, isothermal dielec. relax currents 2-46473  
 As<sub>2</sub>S<sub>3</sub>, amorphous, struct. model 2-12498  
 As<sub>2</sub>S<sub>3</sub>, amorphous and cryst., radiative recomb. of localised excitons 2-36685  
 As<sub>2</sub>S<sub>3</sub> amorphous film, local struct. model using electronic struct. of As<sub>2</sub>S<sub>3</sub> 2-24611  
 As<sub>2</sub>S<sub>3</sub> amorphous film, photoinduced elastic changes 2-40747  
 As<sub>2</sub>S<sub>3</sub>, amorphous film, photostruct. change, temp. cycling studies 2-46800  
 As<sub>2</sub>S<sub>3</sub> amorphous film waveguide with optical grating devices 2-49901  
 As<sub>2</sub>S<sub>3</sub> chalcogenide, photodarkening process 2-21960  
 As<sub>2</sub>S<sub>3</sub> film, amorphous, elec. breakdown 2-9089  
 As<sub>2</sub>S<sub>3</sub> film for holographic recording, three-layer (*Russian*) 2-11660  
 As<sub>2</sub>S<sub>3</sub> film waveguide, electron-beam directly written microgratings for integrated optical circuits 2-4618  
 As<sub>2</sub>S<sub>3</sub>, glass, electron beam induced defects, elec. and optical props. 2-45280  
 As<sub>2</sub>S<sub>3</sub>, glass, polymer struct., US study 2-45053  
 As<sub>2</sub>S<sub>3</sub> glasses, elect. props. 2-21612  
 As<sub>2</sub>S<sub>3</sub>, vitreous, electroabsorpt., polarised light anisotropy 2-46544  
 As<sub>2</sub>S<sub>3</sub>:Ag glass, structure, Raman spectra study 2-46575  
 As<sub>2</sub>S<sub>3</sub>:Sb<sub>2</sub>S<sub>3</sub>, negative transient conductivity effects 2-45963  
 As<sub>2</sub>S<sub>3</sub>-Ag based photographic system, use of vacuum evaporated inorganic sublayers 2-28917  
 As<sub>2</sub>S<sub>3</sub>-Ag light-sensitive system, behaviour during laser beam irradi. (*Russian*) 2-16679  
 As<sub>2</sub>S<sub>3</sub>-GeS<sub>2</sub> glass, optical props. and chemical bonds (*Russian*) 2-22036  
 As<sub>2</sub>S<sub>3</sub>:Sb<sub>2</sub>S<sub>3</sub> and As<sub>2</sub>S<sub>3</sub>:Sn, glassy, hole drift mobility, composition and struct. depend. 2-46021  
 As<sub>2</sub>S<sub>3</sub>, molecular electronic struct., local struct. model for amorphous As<sub>2</sub>S<sub>3</sub> film 2-24611  
 As<sub>2</sub>Se<sub>3</sub>, <sup>77</sup>Se<sub>2</sub>, glass, Raman spectra and struct. 2-46608  
 As<sub>2</sub>Se<sub>3</sub>(Se<sub>2</sub>), chalcogenides, electron stimulated ESR 2-5582  
 As<sub>2</sub>Se<sub>3</sub> (AsSe), vitreous, electroabsorpt., polarised light anisotropy 2-46544  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, density of state in gap, dispersive photocurrent meas. 2-46059  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, Faraday rot. 2-46549  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, geminate and non-geminate recomb. 2-13097  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, isothermal dielec. relax currents 2-46473  
 As<sub>2</sub>Se<sub>3</sub> amorphous film, spectral memory of electron work function 2-17143  
 As<sub>2</sub>Se<sub>3</sub>, amorphous film, transport props. 2-41035  
 As<sub>2</sub>Se<sub>3</sub>, crystalline, excitonic gaps and Urbach tail, absorpt. and electroabsorpt. 2-35946  
 As<sub>2</sub>Se<sub>3</sub> film, amorphous, localised states, optical DLTS meas. 2-45899  
 As<sub>2</sub>Se<sub>3</sub> film for holographic recording, three-layer (*Russian*) 2-11660  
 As<sub>2</sub>Se<sub>3</sub> glass, AC transport and struct. relax. 2-40904  
 As<sub>2</sub>Se<sub>3</sub> glass, electron beam induced defects, elec. and optical props. 2-45280  
 As<sub>2</sub>Se<sub>3</sub>, glass, polymer struct., US study 2-45053  
 As<sub>2</sub>Se<sub>3</sub> glass, pure and doped, transient hole transport meas. 2-26389



**arsenic compounds continued**

- As<sub>2</sub>Se<sub>3</sub> glass, temp. depend. of struct. factor up to glass transition 2-30404  
 As<sub>2</sub>Se<sub>3</sub>, glassy, dielec. losses and permittivity, temp. depend. 2-2182  
 As<sub>2</sub>Se<sub>3</sub>, photothermoplastic recording material, image contrast, inhomogeneity effects 2-48818  
 As<sub>2</sub>Se<sub>3</sub>, surface film, pulse annealing in InP 2-2383  
 As<sub>2</sub>Se<sub>3</sub> thin films, antireflecting prop., effect of thermostructural changes 2-51730  
 As<sub>2</sub>Se<sub>3</sub>:Ag, fused, impurity cond., temp. depend. 2-17126  
 As<sub>2</sub>Se<sub>3</sub>:Ag amorphous film, XPS study, core electron binding energy 2-46872  
 As<sub>2</sub>Se<sub>3</sub>-As<sub>2</sub>S<sub>3</sub>, photothermoplastic recording material, image contrast, inhomogeneity effects 2-48818  
 As<sub>2</sub>Se<sub>3</sub>-As<sub>2</sub>Te<sub>3</sub>, glassy semicond. elec. cond. in high elec. fields 2-51195  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, dielec. const. and loss meas. 2-17390  
 As<sub>2</sub>Se<sub>3</sub>, amorphous film, reversible photodarkening, photopolymerisation model 2-46799  
 (As<sub>2</sub>Se<sub>3</sub>)<sub>1-x</sub>(Sb<sub>2</sub>Se<sub>3</sub>)<sub>x</sub>, oscillator strength, far IR spectra and Kramers-Kronig analysis 2-26899  
 As<sub>2</sub>Sy, non-crystalline, X-ray exam. of laser radiation effects on struct. (Russian) 2-1515  
 AsTe, glassy semicond., memories, neutron radiation effects 2-51244  
 As<sub>2</sub>Te<sub>3</sub>-InSe, thermoelectrical props. 2-5428  
 As<sub>2</sub>Te<sub>4</sub>Ge<sub>10</sub>Si<sub>12</sub>, amorphous, transient switching process, simple analytical explanation 2-8840  
 As<sub>2</sub>Te<sub>3</sub>(Se<sub>3</sub>), single polaron hopping contrib. to AC cond. 2-40903  
 As<sub>2</sub>X<sub>3</sub>, X=S, Se or Te, crystallisation, semiempirical calc. of Tamman curves 2-8449  
 CuAsSe, HCC cryst. struct. 2-5090  
 Ga-Al-As-Ge quaternary system, phase diagram 2-13703  
 GaAs, p-n junction, pressure effects on avalanche breakdown voltage 2-26481  
 GaAs+As<sub>2</sub>O<sub>3</sub>, interfacial reaction, Raman scatt. detection 2-6086  
 Ge-(Sb)-S(Se) vitreous chalcogenides CaF<sub>2</sub>/Ge<sub>2</sub>As<sub>17</sub>S<sub>64</sub> type antiref. coatings, visible and IR 2-16086  
 Ge<sub>2</sub>As<sub>17</sub>S<sub>64</sub>/CaF<sub>2</sub> type antiref. coatings for Ge-(Sb)-S(Se) vitreous chalcogenides in visible and IR 2-16086  
 GeAsSe, crystal struct. determ. 2-21091  
 Hg<sub>1-x</sub>AsF<sub>6</sub>, Fermi surface press. depend. 2-35926  
 InAs<sub>1-x-y</sub>P<sub>x</sub>Sb<sub>y</sub>, LPE growth on InAs substrate 2-40717  
 K<sub>2</sub>CO<sub>3</sub>-As<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, Raman spectra 2-5675  
 S-As<sub>2</sub>Sx chalcogenide system, structural viscosity of melts, density and refractive index 2-50899  
 Se-As-Te, chalcogenide photocond. in near IR region 2-43114  
 Se-Ge-As glasses, fracture toughness, microhardness, and Young's modulus 2-36945  
 Se<sub>0.5</sub>As<sub>0.5</sub>, amorphous film, carrier mobility, thermal annealing and light irr. effects 2-13199  
 (Se<sub>0.5</sub>Te<sub>0.5</sub>)<sub>1-x</sub>As<sub>x</sub>, liquid, metal-nonmetal transition, mag. susceptibility study 2-40791  
 Si-As<sub>2</sub>Sr<sub>2</sub>Cu<sub>4</sub> p-n heterojunction, current-voltage characts. 2-46114  
 Si-As<sub>2</sub>Te<sub>3</sub>, synthesized using new fabrication techniques 2-46929  
 Si<sub>18</sub>Te<sub>45</sub>As<sub>28</sub>Ge<sub>26</sub>, amorphous chalcogenide IR emitting diode, optical props. 2-36705  
 Te<sub>48</sub>As<sub>30</sub>Si<sub>12</sub>Ge<sub>10</sub>, chalcogenide glass threshold switching devices, thermal cond., temp. meas. using liquid crystals 2-36108  
 Te<sub>30</sub>As<sub>36</sub>Si<sub>16</sub>Ge<sub>2</sub>P, glass, field effect meas. 2-40916  
 TlAsX<sub>2</sub>, X=S, Se or Te, crystallisation, semiempirical calc. of Tamman curves 2-8449  
 V<sub>2</sub>O<sub>5</sub>-P<sub>2</sub>O<sub>5</sub>-Sb<sub>2</sub>O<sub>3</sub>-As<sub>2</sub>O<sub>3</sub> glass, elec. props. 2-45968

**art**  
 colour printing and mixture, red-yellow-blue principle, as discovered by J.C. Le Blon 2-10575  
 designs, artistic, number theory appl. 2-33379

**articulation (speech) see speech****artificial hearts see artificial organs****artificial intelligence**

- see also adaptive systems; biocybernetics; brain models; learning systems; neural nets; self-adjusting systems  
 human stereopsis theory, psychophysical and computational studies 2-9803  
 human vision, intensity, visible-surface, and volumetric representations 2-9802  
 organic compounds: computer-aided structural anal. by AI system 2-20201  
 scene description generation from images 2-9801

**artificial kidneys see artificial organs****artificial limbs**

- above-knee amputees, bouncy knee concept 2-27939  
 cybernetic limb prosthesis, historical development, current status and future prospects 2-32359  
 EMG pattern discriminator for artificial arm (Japanese) 2-47751  
 mechanical hand, functionality 2-32365  
 myoelectric prosthesis functional effectiveness compared with split-hook, single subject expt. 2-37710

**artificial organs**

- see also prosthetics  
 blood pump motor controller for artificial heart 2-52667  
 cardiac prostheses, biolised, current status 2-18337  
 cardiac prostheses implanted in calves, mech. props. of aortas and pulmonary arteries 2-6237  
 cochlear, thin-film multielectrode arrays 2-37709  
 extracorporeal circulation, cooling stage, theoretical study of temp. regulation system (Japanese) 2-37504  
 kidneys, past, present and future 2-27938  
 larynx, intraoral, for revascularisation of laryngectomised patient 2-22860  
 left ventricular assist device, magnetically actuated implantable 2-14360  
 left ventricular assist system, implantable, long-term, elec.-actuated 2-18339  
 renal assist systems, overview 2-27937  
 review of priorities for research in external aids 2-32363

**artificial satellites**

- 1974-70 A, vars. of thermal accommodation coeff. from anal. of atmospheric lift effects 2-14753  
 AE-C satellite, comparison of theory and in situ obs. for electron and ion distrib. in near wake 2-10298  
 analytical survivability to nuclear weapon explosion effects estimates 2-32799

**artificial satellites continued**

- ANS inclination var. giving upper atmosphere rot. vel. 2-28253  
 APL satellite Ge X-ray detectors, mechanical refrigerator system 2-53051  
 Ariel 1, geophysical inferences during final thousand days of orbit 2-10299  
 ATS 6, differential charging effects 2-18680  
 attitude dynamics, nonlinear plane vibrations (Chinese) 2-42567  
 AXAF high-resolution X-ray scatt. meas. 2-14777  
 Bhaskara, Satellite Microwave Radiometer remote sensing of atmospheric water content 2-3057  
 Bhaskara remote sensing satellite, orbit and attitude determ. 2-48139  
 Canadian space science projects survey 2-32797  
 clock synchronisation expt. via SYMPHONIE satellite 2-23613  
 close Earth satellite, orbit perturbation due to Earth (Chinese) 2-18677  
 critical inclination in satellite theory, reconsiderations 2-32818  
 Doppler positioning appl. for geodynamics 2-10176  
 drag perturbations in spherically symm. atm. 2-14751  
 dual-spin satellites, subject to gravit. torques, stabilisation due to gyroscopic coupling 2-42568  
 educational appls. and projects for schools and colleges 2-48473  
 Einstein satellite and X-ray telescopes (book) 2-14986  
 EM damper and ferrite isolated data link for SGMP testing 2-32804  
 emitted gas, mean free path 2-50352  
 energy from space, 21st International and Scientific Space Congress, Rome 1981 Mar. 2-23368  
 equatorial orbit about oblate body, elliptic elements, Lie series 2-32817  
 ESA VHF ranging system, SIRIO-2 laser ranging experiment 2-42572  
 ESOC flight dynamics support 2-42575  
 European Remote Sensing Satellite, slotted waveguide array antenna 2-6519  
 EXOS-B, wave-particle interaction expts. with Siple Station (Japanese) 2-3181  
 EXOSAT Medium Energy Instrument 2-48135  
 EXOSAT operation and equipment 2-48133  
 EXOSAT X-ray imaging telescopes, performance and instrumentation 2-48134  
 Explorer 31, comparison of theory and in situ obs. for electron and ion distrib. in near wake 2-10298  
 flight dynamics, conf., Darmstadt, Germany (May 1981) 2-38364  
 Gamma-Ray Observatory, Burst and Transient Source Experiment 2-53044  
 geodetic experiments, use of micro-accelerometers 2-6437  
 geodetic satellites, appl. of orbital perturbations to oceanic tide studies 2-6369  
 geodetic satellites, appl. to space technology to geodynamics research 2-10209  
 geodetic satellites, appls. of problem of many fixed centres 2-42584  
 GEOS 3, altimeter calibration validation 2-23205  
 geostationary communication satellites development, review (German) 2-18682  
 geostationary satellite, predictions of occultations of Moon and stars by Earth as seen from satellite 2-10300  
 geosynchronous satellites, calc. of Earth station Sun outage times 2-32806  
 GOES satellite data appl. to automatic cloud tracking 2-14615  
 Hakucho, X-ray astronomy satellite, obs. of galactic X-ray sources 2-10531  
 Hakucho satellite, time for simultaneous X-ray/optical/infrared/radio obs. of X-ray sources 2-48354  
 Hakucho X-ray satellite, observing schedule, 1982 March to August, rel. to X-ray/optical/IR/radio obs. 2-53120  
 HIPPARCOS, signal and data processing, numerical simulation 2-10331  
 Hipparcos and open star cluster studies 2-53053  
 Interkosmos 11 at 15th order orbital reson., geopotential determ. 2-9908  
 Interkosmos 16 satellite, solar high resolution X-ray spectra anal. 2-3229  
 Interkosmos 11, X-ray photometric data for solar rel. to hot flare region models 2-14835  
 Interkosmos 19 equipment and effect on surrounding ionosphere plasma 2-28268  
 Interkosmos-14 satellite, meteoric matter investigations 2-14808  
 ion sputtering from satellite surfaces 2-42569  
 ionosphere satellite, effect of thermal motion of ions in determining ion distrib. behind satellite 2-6502  
 ionosphere-spacecraft interaction leading to effects on sensors 2-42476  
 ionospheric satellite or rocket, near wake supersonic flow 2-32707  
 IR astronomical satellite, obs. planning facility 2-48136  
 ISEE 3, mission update 2-14682  
 ISEE satellites, rapid traversal of magnetopause during interplanetary shock wave interaction with magnetosphere 2-18632  
 ISEE-B, anomalous attitude motion computing 2-42578  
 IUE satellite, results from first three years of operations 2-38039  
 JIKIKEN satellite, f<sub>0</sub>n resonance expt. rel. to magnetospheric plasma flow (Japanese) 2-3144  
 LAGEOS movement, neutral and charged particle action in exosphere (French) 2-10296  
 LANDSAT MSS data, geometric correction, land cover classification and change detection 2-48042  
 Landsat-3, appl. of Return Beam Vidicon (RBV) imagery to geomorphic mapping in New Zealand 2-18428  
 LASSO experiments on extremely precise time synchronisation using laser mirrors (Hungarian) 2-6539  
 magnetised satellite rot. in Earth's mag. field 2-28317  
 magnetosphere sheath effect on particle detectors with narrow acceptance angles on satellites 2-3107  
 magnetospheric radiation environment in a 12-hour circular orbit, Al shielded dosimetry obs. 2-53050  
 MAGSAT, attitude control system for magnetometer boom 2-52949  
 mean-Earth, analytical singularity-free orbit predictor 2-48138  
 METEOSAT, satellite data appl. to automatic cloud tracking 2-14615  
 METEOSAT image deformation problem solution, horizon extraction from image data and orbit information 2-48050  
 microwave beams from solar power satellite, ionosphere heating effects 2-48065  
 microwave radiation from solar power satellites, biological effects and exposure standards 2-52544  
 microwave remote sensing instrumentation for Earth satellites, advances 2-48049  
 motion, Brouwer geopotential theory improved 2-3187  
 motion, homogeneous atmosphere height change effect 2-53046



## artificial satellites continued

NAVSTAR, appl. of Global Positioning System geodetic receiver to geodesy and geophysics 2-6518  
 near-Earth satellite orbit determ., 1981-status and future trends 2-48137  
 NNSS, geodetic appl. (*Japanese*) 2-27970  
 nuclear energy applications (*German*) 2-49197  
 nuclear explosion, damage due to X-ray pulse, current injection tests 2-32801  
 nuclear explosion EM pulse problems and satellite design 2-32804  
 nuclear explosion X-ray damage problem, laboratory simulator 2-32802  
 nuclear explosion X-ray pulse damage problem 2-32800  
 nuclear explosion X-ray pulse damage problem 2-32803  
 nuclear weapon vulnerability assessment using NHEPS, classification, categorisation and screening 2-32798  
 operative position finding, artificial satellite appls. in navigation, geophysics and surveying, dist. meas., radio interferometry (*German*) 2-28238  
 optimal reorientation of satellite in circular orbit 2-23423  
 orbit, third order perturbation theory (*Chinese*) 2-18676  
 orbit determ. from laser range obs. of geodetic satellites 2-42573  
 orbit from pictures of planet, determ. of planetary pot. 2-6525  
 orbit parameters estimation method 2-28356  
 orbital image sensor geometry simulation, in FORTRAN 2-18580  
 orbital motion, effect of terrestrial IR radiation press. 2-18678  
 orbital perturbation, third order soln. 2-18685  
 orbits, combined effect of solar radiation pressure and, atmos. drag 2-32821  
 orbits, perturbations due to radiation pressure, modelling 2-42574  
 orbits analysis, upper atmosphere and gravitational field research review 2-42571  
 orbits near critical inclination, inclusion of lunisolar perturbations 2-18694  
 perturbation coupling, secular term elimination 2-32822  
 perturbing function of satellite restricted four-body problem 2-18690  
 potentials on surfaces in space, effects on spacecraft, review 2-42570  
 Prognostic satellites, aspects of investigation of X-ray emission of Sun 2-48200  
 remote sensing, analytic correction method for satellite multispectral scanner geometric distortions 2-18581  
 remote sensing, data collection platforms for local Earth data transmission to satellites, problems (*German*) 2-37973  
 remote sensing, Earth Observation Satellite, Landsat (*Japanese*) 2-14752  
 remote sensing, reduction of satellite magnetometer data for geological studies 2-32673  
 rotational motion, general perturbations anal. (*Polish*) 2-42581  
 S3-2 body potential in ionosphere, wake ion depletion 2-48074  
 Seasat altimeter data, appl. to ocean dynamic topography vars. west of Mid-Atlantic Ridge (*French*) 2-6368  
 SeaSat-A scatterometer, Ku-band ocean wind/radar signature 2-47878  
 Sirio-2 program, MDD and Lasso missions 2-14754  
 solar array power supplies, technological developments 2-52345  
 solar power, transmitting energy to earth via 2.45 GHz continuous wave microwaves, effects on honey bee colony 2-47623  
 solar power satellite construction, technological, political and economic factors (*French*) 2-52292  
 Solar Power Satellite laser beam power transmission, power generation from laser-produced plasma (*Japanese*) 2-6182  
 solar power satellite photovoltaic solar array development requirements, assessment 2-52335  
 solar power satellite systems, US development 2-52296  
 solar power satellites, environmental effects on upper atmosphere 2-52400  
 solar power satellites, health and environmental risk evaluation 2-52543  
 solar power satellites, potential 2-52291  
 solar power satellites, world energy needs over next fifty years, role (*French*) 2-52293  
 solar power stations, control and erection, need for high accuracy 2-27565  
 solar power stations, environmental factors associated with construction and operation 2-27561  
 solar power stations, microwave power transmission, problems, solutions, and research necessary 2-27559  
 solar power stations, microwave power transmission mechanical problems and nonlinear effects 2-27560  
 solar power stations, solar cells (*Polish*) 2-47491  
 solar power stations, thermal efficiency aspects (*Italian*) 2-27563  
 solar power stations as world-wide energy system, market potential and physical limitations 2-27558  
 solar power system 2-27546  
 solar power system launch into geosynchronous orbit, transportation system and cost comparison 2-27564  
 solar power systems, energy balance aspects 2-27566  
 SOLARIS project, French development of unmanned space-processing platform 2-28319  
 solid satellite in circular orbit, rotation, first order perturbations 2-14758  
 space-enhancing technological leadership, conf., Boston, MA, USA, (Oct. 1980) 2-18686  
 spaceborne ocean observations, NASA programs 2-32691  
 spacecraft charging induced discharges, voltage gradients in solar array cavities as breakdown sites 2-38037  
 spacecraft charging tests using multiple electron guns, NASCAP simulation 2-38038  
 spacecraft model testing in combined environmental simulator 2-38036  
 spin stabilised, motion irregularities analysis 2-42576  
 STARSAT, SGEMP test, high-level current injection testing 2-32801  
 stationary, collision probabilities and methods of collision avoidance (*Japanese*) 2-48132  
 Stereosat, cartographic potential of spacecraft line-array camera system 2-18357  
 Sun-synchronous orbits near critical inclination 2-18695  
 surface potential and ion collection efficiency of mass spectrometer analyzers 2-53048  
 surveying and ocean navigation appl., Transit development 2-10297  
 symmetric, non-ideal spin manoeuvres calc. 2-42852  
 system-generated EM pulse simulation fidelity criteria 2-32802  
 Systeme Probatoire d'Observation de la Terre (SPOT) satellite, remote sensing mission 2-18681  
 Tansei 4 satellite, obs. of solar flares soft X-ray line emission (*Japanese*) 2-3226  
 telemetry, drifting buoy obs. 2-42497  
 Tios 7 rocket at 15th order orbital reson., geopotential determ. 2-9908  
 Tios weather satellites, third generation equipment (*German*) 2-23058

## artificial satellites continued

TIROS-N series satellites, high-resolution weather satellite pictures, receiver design 2-18608  
 tracking data for polar motion studies, air drag effects 2-9904  
 triaxial satellite response and, separate body testing within SGEMP simulator 2-32803  
 triple probe method for plasma parameter display in spacecraft condition 2-32805  
 Upper Atmospheric Research Satellite, mm-wave radiometer system, atmos. parameter meas. 2-42491

**asbestos**  
 chrysotile asbestos, magnitude and phase photoacoustic spectra 2-48803  
 chrysotile asbestos fiber, short fiber separation, anal. and physico-chem. charact. 2-6067

**asdic** see sonar

**aspherical lenses**  
 see also aberrations  
 centration by rotary scan interferometer 2-7911  
 f/1 focusing lens, design and production 2-7907  
 fabrication by computer numerical and interferometer controlled diamond turning machine 2-7901  
 fabrication by diamond turning machine tools, air bearings and drive systems 2-7903  
 fabrication by machine tools, vibr.-control 2-7902  
 fabrication by thermal polishing and transparent turning 2-7908  
 flat lens doublets for parallel ray focusing 2-25093  
 Fresnel lens fabrication using Ni-plated mold die copies (t) 2-39763  
 geodesic lenses in Ti-indiffused LiNbO<sub>3</sub> waveguides, performance characts. 2-4613  
 integrated optics, geodesic components, use of aspherical surfaces 2-7883  
 integrated optics spectrum analyser, aspheric geodesic lenses 2-7884  
 laser fusion, appl. of aspheric optics 2-7849  
 measurement by non-contacting method 2-7912  
 measurement by optical differential technique 2-7906  
 spectral analyser, integrated acoustooptic, prototype 2-1046  
 spherical aberration correction by aspheric surfaces in optical systems 2-7848  
 testing by computer-generated holograms 2-7904  
 testing by in-line computer-generated holograms 2-7905  
 testing of aspherical surfaces using axial synthesized holograms as optical compensators 2-1005  
 thermal IR afocal telescope, use of aspheric surfaces 2-7847

**assemblers (program)** see program assemblers

**assembly programs** see program assemblers

**association**  
 see also association of liquids; associative ionisation  
 acids, strong, in aq. solns., struct., <sup>13</sup>C NMR and thermodynamic data 2-52189  
 2-aminopyridine, close lying inversion states by protonation, CNDO study 2-22432  
 anionites, Si containing anion exchangers, synthesis and props., complex form. (*Russian*) 2-47337  
 anthracene and derivatives, electronic absorpt. spectra in soln., rel. to assoc. 2-34407  
 7-azaindole, self-assoc. in nonpolar solvents 2-41884  
 tetra-n-butylammonium halide-SbCl<sub>5</sub> ion-pair interactions, UV spectral study 2-29684  
 cationization by alkali ion attachment in laser desorption mass spectrometry 2-52203  
 clustering, drift tube for absolute meas. (*Japanese*) 2-52198  
 cyanine dyes, intermol. interactions in solns., spectrosc. obs. 2-24715  
 dichloroacetic acid, dimerisation, spectrosc. obs. 2-52197  
 2,6-dimethyl-p-benzoquinone, photodimerisation, solid state reaction, Raman phonon spectra 2-41869  
 exciplex formation in gas phase, model 2-52194  
 4-hydroxypyridine, hydration shell construction based on electrostatic pots. 2-13933  
 impurity diffusion profile for case of diffusion with assoc. 2-35741  
 ion-molecule equilb. meas. by high press. mass spectrometry, recent advances 2-27465  
 ionic substances, polarisation model appl. 2-47310  
 lasalocid A and Ln<sup>3+</sup> interactions, absorpt. and emission spectra, fluoresc. 2-52191  
 macrofiche polyethers, complexation of <sup>24</sup>Na<sup>+</sup> and <sup>22</sup>Na<sup>+</sup>, isotope effects 2-52190  
 methanol-H<sub>2</sub>O mixtures, thermal cond. anal MO calcs., enthalpy, entropy of association, H-bonds 2-35258  
 methyl-N-methylcarbamate, assoc. by H bonds, vibr. spectra and anal. 2-43912  
 methylamine, association by H bonding, empirical pot. calcs. 2-15707  
 methylmercury complexation formation const., PMR study of soln. chem. 2-15806  
 monochloroacetic acid, dimerisation, spectrosc. obs. 2-52197  
 nitrate salts in N-methylacetamide, Raman and US relax. spectra 2-13468  
 parvalbumin, bond lengths and energy transfer by Tb(III) and En(III) luminesc. probes 2-14192  
 peralkylcyclohexadienyllithium compounds, struct. of ion-paired species, <sup>1</sup>H, <sup>13</sup>C and <sup>7</sup>Li NMR spectra 2-52188  
 pheophytin solns., spectra props. and birefringence, Alentsev-Fok method calcs. 2-13473  
 PMMA in acetonitrile and chlorobutane solvents, coil expansion, association and phase separation, cosolvency and temp. effects 2-20995  
 polyacetylene hydrogen sulphate, synthesis and EPR 2-44152  
 polyethylene imine-Cu(II) complex formation, polymer coil struct. change (*Russian*) 2-20223  
 protein, tobacco mosaic virus, endothermic association, high press. effects 2-32167  
 pseudoisocyanine chloride, aggregation and optical props. 2-52185  
 pyrene, excimer form., diffusion parameters, relax. kinetics 2-39472  
 radical pair recombination, influence of exchange and electrostatic interactions on mag. effects. 2-47308  
 recombination rate, diffusion coeff., reactivity, long time behaviour 2-27425  
 recombination reactions, Langevin dynamics with space dependent friction coeff. 2-37043  
 rhodamine 6G, soln., association with dyes, deformation of IR spectra 2-24701  
 rhodamine 6G solns., luminesc. yield, dimerisation effects 2-31549



**association continued**

- supercooled vapours, homogeneous nucleation thresholds, corresponding states correl. 2-25483  
 three-component solns., solvatofluorochromism kinetics, diffusion and complex form. 2-49308  
 tribromoacetic acid, dimerisation, spectrosc. obs. 2-52197  
 trichloroacetic acid, dimerisation, spectrosc. obs. 2-52197  
 trifluoroacetic acid, dimerisation, spectrosc. obs. 2-52197  
 trimethyllead-glutathione-complexation in aq. soln. and intact human erythrocytes, NMR study 2-13934  
 triplet methylene combination reaction, vinylidene radical formation 2-41878  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O-H<sub>2</sub>O, intercalation of water, IR absorpt. and neutron diff. study 2-27431  
 Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub>-MgO(CaO)(SrO)(BaO), based high-refractory cements, reaction kinetics 2-41571  
 Br+Br, radiative recombination, free-bound transitions 2-9543  
 C<sup>+</sup>+H<sub>2</sub>+H<sub>2</sub>, rate coeff. calc. from statistical theories compared with expt. data 2-17882  
 Cd(NO<sub>3</sub>)<sub>2</sub>, complexation kinetics in nonaqueous solvents, US obs. 2-40497  
 ClF+SF<sub>6</sub>, laser isotopic photochemistry, Raman anal. 2-47360  
 Co complexes, cis-(Co(X)<sub>2</sub>(en)<sub>2</sub>)<sup>+</sup> (X=CN<sup>-</sup>, NO<sub>2</sub><sup>-</sup>, NCS<sup>-</sup>, N<sub>3</sub><sup>-</sup>, Cl<sup>-</sup>), directional ion assoc., CD meas. 2-44033  
 CsF-ZrF<sub>4</sub>, mol. comp. of vapour, activities and dissoc. energies, mass spectra of evap. products 2-27466  
 Gd<sup>3+</sup> excited state in aq. soln., chem. behaviour 2-43828  
 HF+ClF, association reaction, thermodynamics, isomerism, energy hypersurfaces 2-27418  
 H<sub>2</sub>O, dimer effect on absorption of the 2.7  $\mu$ m IR absorpt. band 2-34394  
 KF-ZrF<sub>4</sub>, mol. comp. of vapour, activities and dissoc. energies, mass spectra of evap. products 2-27466  
 Li<sub>2</sub>Na<sub>2</sub>WO<sub>6</sub> bronze, thermodynamics and kinetics of electrochemical Li insertion 2-27434  
 MgO-FeO(Fe<sub>2</sub>O<sub>3</sub>)-Al<sub>2</sub>O<sub>3</sub>-Cr<sub>2</sub>O<sub>3</sub> system, spinels form. kinetics 2-41598  
 NF<sub>2</sub>+F+Ne→NF<sub>3</sub>+Ne, mol. recombination in laser media, theoretical study 2-47312  
 NF<sub>2</sub>+F+Ne→NF<sub>3</sub>+Ne, mol. recombination in laser media, expt. study 2-47313  
 Na+Na, excited states, associative ionisation, rate consts. 2-47334  
 Na+Na, Na<sub>2</sub><sup>+</sup> and Na<sup>+</sup> prod., associative and Penning ionisation 2-15889  
 Na<sup>+</sup>+K, Penning and associative ionisations 2-29701  
 Ni<sup>2+</sup> hydration in perchlorate and chloride solutions 2-2696  
 OH ions, aq., ionic association studies by PMR 2-13364  
 SO<sub>2</sub> complex, SO<sub>2</sub> (pyridine derivatives) in CCl<sub>4</sub>, normal vibs., Raman study 2-43924  
 U complex, bis-(1,1,1,5,5,5-hexafluoropentane-2,4-dionato)(<sup>18</sup>O) dioxo U(VI), gas phase IR spectra 2-703  
 XeCl\* exciplex form. and luminesc. in hollow cathode pulsed discharge 2-43987  
 XeF\* exciplex form. and luminesc. in hollow cathode pulsed glow discharge 2-43987  
 XeI, excimer form. and (<sup>2</sup> $\pi_{1/2}$ -<sup>2</sup> $\Sigma_{1/2}$ ) emission at 1.3  $\mu$ m 2-39405

**association factor (liquids) see association of liquids****association of gases see association****association of liquids***see also colloids*

- acridinium orange cation+fluorescein anion, aq. soln., assoc., spectrophotometric study 2-31900  
 alcohols, assoc. liq., limiting shear modulus, H bonds 2-12656  
 bile acid methyl esters, vapour press. osmometry and NMR investig. 2-2150  
 butanols in cyclohexane, solns., association equilib., thermodynamic props. 2-47329  
 N,N-disubstituted amides solns., self-association, dielectric permittivity anal. 2-13386  
 dye molcs., in soln., absorpt. spectra, assoc. effects 2-11462  
 Dynel solutions, in dimethylformamide and dimethylsulfoxide, aggregation studies 2-25714  
 electrolyte dilute solutions props. from calorimetric meas. 2-9567  
 electrolyte solutions, high dilution, equilib. and transport excess props., ion pairs limit 2-9546  
 Kanecaron solutions, in dimethylformamide and dimethylsulfoxide, aggregation studies 2-25714  
 micelles, organic counterion binding determ., Fourier transform NMR self-diffusion meas. 2-21915  
 FeCl<sub>3</sub>·6H<sub>2</sub>O melt, polynuclear complex formation, isoelectronic soln. method 2-41883  
 NiCl<sub>2</sub> aq. soln., Ni-Cl bonding at high Cl<sup>-</sup>/Ni<sup>2+</sup> ratios, X-ray diff. investig. 2-40248  
 Ni(NO<sub>3</sub>)<sub>2</sub> aqueous solns., ion association, Raman spectra study 2-5692  
 Zn(NO<sub>3</sub>)<sub>2</sub> aqueous solns., ion association, Raman spectra study 2-5692

**associative ionisation**

- CO, associative molecular ionisation on adiabatic expansion in supersonic flow (*Russian*) 2-15890  
 N<sub>2</sub>, associative molecular ionisation on adiabatic expansion in supersonic flow (*Russian*) 2-15890  
 Na+Na, energy pooling collisions, form. of Na<sub>5</sub>s and Na<sub>4</sub>d, rate const., associative ionisation 2-44058  
 Rb, highly excited S state, collisional ionis. 2-20168

**astatine***see also nuclei with .....*

## No entries

**astatine compounds**

## No entries

**asteroid satellites see planetary satellites****asteroids**

- 330 Adalberta, existence disproved, identified as galactic stars 2-48170  
 344 Desiderata, obs. of occultation of SAO 042418, (1982 January 11) 2-42637  
 1978 DA, Alinda-type asteroid, recovery, precise positions and ephemeris 2-48169  
 1978 DA, Amor-type asteroid, ephemeris (1981 December 22 to January 31) 2-48176  
 1978 DA, ephemeris, (1982 January 31 to March 12) 2-38101  
 1979 August positions for 140 small objects, ESO Schmidt obs. 2-18731

**asteroids continued**

- 1981 UA, fast-moving asteroidal object, discovery and approximate positions 2-14798  
 1981 UA, identification as probable Phocaea-type asteroid 2-10351  
 1981 VA, ephemeris for 1981 Dec.-1982 Jan. period 2-28370  
 1981 VA, fast-moving asteroidal object, discovery and approximate positions, (1981 November 4 to 5) 2-10352  
 1981 VA, precise positions, improved orbital elements and ephemeris 2-32897  
 1981 VA, precise positions, orbital elements and ephemeris 2-42636  
 1982 BB, Apollo-type asteroid, precise positions, orbital elements and ephemeris orbital elements 2-42638  
 1982 BB, Apollo-type asteroid, precise positions, orbital elements and ephemeris 2-53142  
 1982 BB, fast-moving asteroidal object, discovery and approximate position, (1982 January 20) 2-38102  
 1982 CA, fast-moving asteroidal object, discovery, approximate position and daily motion (1982 February 13) 2-48168  
 1982 DA, fast-moving asteroid, precise and approximate position (1982 February 18 to 23) 2-48171  
 1982 DA, fast-moving asteroidal object in Leo, discovery and approximate position (1982 February 18) 2-53141  
 1982 DA fast-moving asteroid approximate orbital elements and ephemeris (1982 March 2 to April 1) 2-48172  
 1982 DB, fast-moving asteroidal object, discovery and positions (1982 February 28 to March 4) 2-48173  
 1982 DB, precise posns., elements and ephemerides for Apollo object 2-53143  
 1982 DV, fast-moving asteroidal object, discovery and semi-accurate positions, (1982 February 28 to March 4) 2-48174  
 1982 DV, positional obs., UVB photometry, orbital elements and ephemeris 2-53146  
 1982 DV, semiaccurate posns., UVB photometry of Amor-type object 2-53145  
 1982 EA, discovery posns. of fast-moving object in Virgo 2-53144  
 Amor-Apollo types, replenishment rate anomaly, cometary origin model implausity 2-38100  
 29 Amphitrite, light curves, phase depend. and opposition effect, UVB obs. 2-42639  
 29 Amphitrite, UVB photometry and light curves rel. to shape and rot. axis 2-10350  
 Apollo, radar obs. of radius, surface and rotation 2-53140  
 324 Bamberga, IR spectral obs. and aq. alteration minerals 2-6559  
 belt, cosmogenic shadow effect 2-10312  
 belt formation, computer simulation 2-23232  
 Ceres, IR spectral obs. and aq. alteration minerals 2-6559  
 568 Cheruskia, astrometry from Dresden Lohrmann Observatory 2-48167  
 2060 Chiron, surface materials from JHK obs. 2-38099  
 collision with Earth, effect on poles 2-22874  
 Cretaceous/Tertiary boundary 2-37869  
 Earth collision prob., influx size and mass distrib. 2-37871  
 37 Fides, complex UVB lightcurve, quadrupole extrema 2-42635  
 formation of asteroid belt, scatt. effect. in restricted three-body problem (*Italian*) 2-10338  
 19 Fortuna, light curves, phase depend. and opposition effect, UVB obs. 2-42639  
 3 June, astrometry from Dresden Lohrmann Observatory 2-48167  
 Juno, evidence for colour vars. on surface from photoelectric UVB obs. 2-38097  
 39 Laetitia, astrometry from Dresden Lohrmann Observatory 2-48167  
 lightcurves and rotation period, visible obs. (*Chinese*) 2-18730  
 18 Melpomene, 1981 August 7 SAO 145972 occultation obs. 2-28369  
 Minor Planet Circulars 6221-6344, precise posns., elements, ephemerides and new nos. 2-3210  
 Minor Planet Circulars 6425-6480, precise posns., elements, ephemerides and new nos. 2-53147  
 observation and search technique using ETS duplex observatory 2-32855  
 occultations of AGK3 or SAO stars (1982-3) 2-48140  
 occultations of stars, timings (*French*) 2-18688  
 orbital elements, secular perturbations calc. by Halphen Goryachev method 2-32824  
 orbits, in Sun-Jupiter asteroid system two-body problem 2-23214  
 Pallas, IR spectral obs. and aq. alteration minerals 2-6559  
 11 Parthenope, astrometry from Dresden Lohrmann Observatory 2-48167  
 201 Penelope, fast-rotating asteroid, UVB photometry rel. to origin and shape 2-38096  
 positions for December 1979 from ESO, La Silla, Chile 2-38098  
 2100 Ra-Shalom, unusual Apollo-type object, ephemeris, (1981 August 20 to September 13) 2-3209  
 spin rate distribution, anal. 2-32896  
 88 Thisbe, obs. of occultation of SAO 187124, (1981 October 7) 2-14799  
 88 Thisbe, timings of occultation of SAO 187124 (1981 October 7) 2-48175  
 Trojans, orbital element perturbations 2-6558  
 CSV 96, not identical with proper-motion star G 1-26 (LTT 10289), probably asteroid 2-38203

**astigmatism see aberrations****astroarchaeology**

- Glen Loth, Sutherland lunar site, Clach Mhic Mhios menhir study 2-38070  
 Mayan activities and cosmology 2-38067  
 megalithic astronomy 2-38068  
 megalithic stone circles, Scotland 2-42613  
 megalithic structures, functions 2-6547  
 Mesoamerican zenith Sun obs. 2-38069  
 tropical archaeoastronomy 2-14793

**astrobiology see extraterrestrial life****astrolabes see meteorite craters****astronomy**

- 1400+162, triple source, UHF obs. 2-33169  
 1978 DA, Alinda-type asteroid, recovery and precise positions (1982 February 2 and 3) 2-48169  
 1980 S 1 and 3, obs. of positions and orbits 2-53160  
 1980 S 20 and 21, satellite orbits and positions 2-53160  
 1981 VA, Apollo-type minor planet, precise positions, (1981 November 4 to 7) 2-42636



## astrometry continued

- 1981 VA, precise positions, 1981 November 7 to 9, orbital elements and ephemeris 2-32897  
 1982 BB, Apollo-type asteroid, precise positions, 1982 January 20 to February 13, and ephemeris 2-53142  
 1982 BB, Apollo-type asteroid, precise positions, (1982 February 2 to 3) 2-42638  
 1982 DA, fast-moving asteroid, precise and approximate position (1982 February 18 to 23) 2-48171  
 1982 DB, fast-moving asteroidal object, discovery and precise positions (1982 February 28) 2-48173  
 1982 DB, precise posns., elements and ephemerides for Apollo object 2-53143  
 1982 DV, semi-accurate and precise positions (1982 February 28 to March 18) 2-53146  
 1982 EA, discovery posns. of fast-moving asteroidal object 2-53144  
 ADS 221 and 1762, visual binaries, orbital elements and masses, distance, astrometry anal. 2-42717  
 21 Arietis (Couteau 79), possible multiple system, positional obs. (1965 to 1980) 2-48276  
 asteroid positions for December 1979 from ESO, La Silla, Chile 2-38098  
 asteroids, 1979 August positions for 140 small objects, ESO Schmidt obs. 2-18731  
 astrolabe, setting errors of angle standard and comparison with circumzenithal instrument 2-38056  
 astronomical latitude in Europe, long period terms, non-polar nature 2-14756  
 atmospheric refraction in astronomy, research today and tomorrow 2-6427  
 binary star interferometry at high ang. resolution, appls. and limitations 2-53106  
 binary stars, positron angle and distance from standard coords. 2-14879  
 broad-line H $\alpha$  sources in M31, discovery, spectra and precise positions 2-10457  
 $\mu$  Cassiopeiae, unresolved binary star, astrometric anal. from Sproul 61 cm refractor photographs 2-3270  
 celestial objects positions computation, compact data for navigation and astronomy, (1981 to 1985) 2-10334  
 568 Chersukia, astrometry from Dresden Lohrmann Observatory 2-48167  
 circumzenithal instrument, setting errors of angle standard and comparison with astrolabe 2-38056  
 comet, probable object on ESO/SRC Southern Sky Survey, discovery and precise positions (1978 March 5) 2-53169  
 Comet Hartley (1982b), discovery, precise positions, 1982 February 5 and 6, and relation to Comet 1982c 2-42652  
 Comet Hartley (1982b), precise positions, 1982 February 7 to 8, orbital elements and ephemeris 2-42655  
 Comet Hartley (1982c), discovery, precise positions, 1982 February 5 and 6, and relation to Comet 1982b 2-42653  
 Comet Hartley (1982c), precise position, (1982 February 7) 2-42656  
 Cygnus OB2, members 6 cm radiation detect., variability, astrometry and mass loss, SHF obs. 2-28515  
 DA 344, radiogalaxy struct., UHF obs. 2-33135  
 dark companions of stars, detect. via interferometry and direct imaging 2-53062  
 Dione B, libration motion of coorbital satellite 2-53159  
 dynamical equinox, differing definitions in rotating reference frame and inertial frame 2-6520  
 equal altitude method potential (*Chinese*) 2-18712  
 eruptive variable star in LMC, discovery, precise position and photographic magnitudes 2-53284  
 FK5, compilation progress 2-53117  
 fundamental astrometry, future developments 2-53060  
 fundamental coordinate systems N30, FK3 anal. FK4, magnitude eqns. 2-32863  
 geodetic-astronomical observations with Danjon astrolabe, Potsdam, effects of local temp. field disturbances (*German*) 2-9907  
 HH 1, 2 and 3, large proper motion determ., visible obs. 2-33101  
 Hipparcos and open star cluster studies 2-53053  
 interferometric and space astrometry 2-53061  
 intergalactic space inertial frames determined from spiral galaxy rot. motion 2-28322  
 IR sources in star formation regions, positional comparisons with radio sources and masers 2-53343  
 Janus, obs. of orbit and positions 2-53160  
 3 June, astrometry from Dresden Lohrmann Observatory 2-48167  
 Jupiter and Galilean satellites, 100 precise positions (May 1980), ESO GPO obs. 2-18732  
 Jupiter and Galilean satellites, astrometry in 1978 from Observatoire Royal de Belgique 2-32898  
 kinematic astronomy, coord. systems and transformations 2-53056  
 BL Lacertae objects candidates, UHF obs. 2-33169  
 39 Laetitia, astrometry from Dresden Lohrmann Observatory 2-48167  
 Mars, astrolabe obs. rel. to DE111 ephemeris 2-38093  
 Mars, UHF radar obs. giving orbit, refl. props. and profiles 2-23240  
 mean obliquity, differing definitions in rotating reference frame and inertial frame 2-6520  
 Merate Observatory time and latitude results (1980) 2-32388  
 Mercury, UHF radar obs. giving orbit, refl. props. and profiles 2-23240  
 Mercury right ascension determ., SHF obs. 2-28363  
 Minor Planet Circulars 6221-6344, precise posns. for asteroids and 36 comets 2-3210  
 Minor Planet Circulars 6425-6480, precise posns. for asteroids and 43 comets 2-53147  
 Nova Aquilae 1982, precise position and optical and UV spectra, (1982 February 13 to 24) 2-48257  
 NPZT star positions, Belgrade meridian circle obs. accuracy 2-53058  
 O-type stars, absolute proper motion (*Russian*) 2-14851  
 optical measurements, relativistic effects 2-10335  
 OQ 208, extragalactic radio source, optical position and 'proper motion' 2-28574  
 Paris Observatory time and latitude results (1979-80) (*French*) 2-32389  
 11 Parthenope, astrometry from Dresden Lohrmann Observatory 2-48167  
 Periodic Comet du Toit-Hartley (1945 II=1982b, 1982c), precise positions (1982 February 17) 2-53171  
 periodic Comet du Toit-Hartley (1982b, 1982c), positions and visual magnitudes, (1982 February 18 to 22) 2-48184  
 Periodic Comet du Toit-Hartley (1982b, 1982c), precise positions (1982 February 16 to 19) 2-48185

## astrometry continued

- Periodic Comet Grigg-Skjellerup (1982a), recovery and precise positions, (1982 January 15 and 16) 2-42651  
 Periodic Comet Tempel 2 (1982d), recovery posns., elements and ephemeris 2-53173  
 Periodic Comet Vaisala 1 (1981i), recovery and precise position, (1981 December 7) 2-18740  
 plate reduction parameters, recursive estimation 2-18711  
 Pluto, 15 precise positions (May 1980), ESO GPO obs. 2-18732  
 positions from objective prism plates 2-53103  
 Q 0957+561A, B, double quasar, detect. of third compact radio component 2-10524  
 radio sources, metre-wavelength positions of seven 3C sources 2-14941  
 radio-interferometric meas. relativistic effects 2-10335  
 radio sources, benchmarks south of  $\pm 5^\circ$ , optical positions 2-33173  
 reference systems, radio interferometric, comparison with equatorial reference systems (*Russian*) 2-14757  
 Repsold dividing machine, explanation for systematic errors of Repsold dividing machine 2-53085  
 reseau astrometry for radio source optical identification 2-32809  
 reseau astrometry on Palomar Schmidt plates, variance analysis 2-32810  
 Saturn, positions 1970-8, San Fernando Danjon astrolabe obs. (*French*) 2-53165  
 Saturn VII (Hyperion), precise positions, (1981 March 1 to 12) 2-18736  
 Seyfert galaxy nuclei, optical positions, obs. 2-33150  
 SN in NGC 2268, precise posn. (1982 Feb.) 2-53301  
 star cluster membership 2-10494  
 star positions, catalogue designations, uniform digital systems 2-53118  
 stars, Cape astrometric survey of southern hemisphere, automatic meas. 2-53059  
 stellar declinations, Repsold meridian circle obs. at Cerro Calan 2-53057  
 stellar parallaxes measurement, appl. of interferometry and direct imaging 2-53062  
 stellar trigonometric parallaxes, systematic effects determ. from inter-observatory comparisons 2-14846  
 Sun, 1979 positions, CERGA astrolabe obs. (*French*) 2-18747  
 Sun, meridian obs., 1836 to 1953, rel. to solar radius vars. 2-10367  
 tangential coordinates determination, effects of atmospheric refraction (*French*) 2-6544  
 Tokyo Astronomical Obs., Time and Latitude Bulletins (April-June 1981) 2-32811  
 Tokyo Astronomical Obs., Time and Latitude Bulletins (Jan.-March 1981) 2-6521  
 transit-circle catalogues, systematic differences between W5-50, WL50, Perth 70 and AGK3r catalogues 2-32862  
 trigonometric parallax reduction techniques 2-53102  
 Tsubokawa's automatic astrolabe (*Japanese*) 2-14769  
 universal time, new definition 2-42580  
 Venus, UHF radar obs. giving orbit, refl. props. and profiles 2-23240  
 visual binary stars, interferometric obs. (*Russian*) 2-53335  
 visual double stars, ang. astrometric separation and position angle, visible obs. 2-42716  
 VLBI delay and delay rate accuracy 2-14787  
 Wolf 630, astrometric binary, component mass determ. 2-53319
- astronautics** *see space research*
- astronomical catalogues**  
*see also astrometry*  
 3A X-ray source catalogue for high galactic latitude ( $|b| > 10^\circ$ ) 2-32866  
 3A X-ray source catalogue for low galactic latitude ( $|b| < 10^\circ$ ) 2-32865  
 AFGL catalogue search for S-type stars 2-10409  
 bright G and K-type stars, homogeneous photometry on DDO system 2-53115  
 broad-line H $\alpha$  sources in M31, discovery, spectra and precise positions 2-10457  
 Catalogue of Isolated Galaxies, anal. of isolated-galaxy criterion 2-6675  
 Chinese meteorites, catalogue 2-14791  
 dwarf galaxies, catalogue and integrated magnitudes and mean colours in UVB system 2-10337  
 ESO/Uppsala survey of the ESO (B) Atlas of the southern sky 2-32864  
 extragalactic radio sources having flux densities greater than 1 Jy, at 5 GHz, catalogue 2-3206  
 FK5, compilation progress 2-53117  
 FK5, new definition of universal time 2-42580  
 flare stars in Orion, positions, magnitudes and finding charts for new discoveries 2-38066  
 fundamental catalogues, magnitude eqns. between coordinate systems N30, FK3 anal. (FK4) 2-32863  
 galaxies, catalogue in Webb Society handbook 2-42799  
 galaxies, list of 84 isolated triplets 2-28359  
 galaxies ESO/Uppsala lists, spectroscopic and photometric obs. third catalogue 2-18721  
 galaxies H I 21 cm data 2-42745  
 gamma ray bursts from KONUS expt. of Venera 11/12 (Nov. 1978 to Feb. 1980) 2-14790  
 gamma ray bursts from KONUS expt. on Venera 11, 12 (Sept. 1978 to May 1979) 2-14788  
 gamma ray bursts from KONUS expt. on Venera 11/12 (May to Oct. 1979) 2-14789  
 Hyades, soft X-ray sources with Einstein satellite 2-10336  
 IRC catalogue, search for S-type stars 2-10409  
 Jupiter, decametric emission, catalogue of Jan. 1978-Dec. 1979 obs. 2-18723  
 Jupiter, decametric emission in 15-40 Mhz range, Voyager 1 and 2 obs. catalogue 2-18722  
 Lick astrophotographic survey, galaxies selection and relationship of galaxy counts to galactic absorpt. 2-14927  
 LMC member stars, third list (*French*) 2-18795  
 M56, globular cluster, field, proper motion catalogue rel. to cluster membership 2-6546  
 M-type emission line stars from two objective prism lists, additional and newly-named variable stars 2-38065  
 nearby stars, colours, magnitudes and parallaxes for 1077 objects 2-18761  
 NPZT program stars, positions, Belgrade meridian circle obs. accuracy 2-53058  
 orbital parallaxes, preliminary catalogue 2-53321  
 Sagittarius bright cloud B stars, photometric catalogue 2-18720  
 solar UV spectrum synthesis, sample atlas from 224 to 300 nm 2-53116  
 solar wind high speed plasma streams (1964 to 1975) 2-23231  
 star positions, catalogue designations, uniform digital system 2-53118



**astronomical catalogues continued**

- stars in LMC direction, list of 489 objects (*French*) 2-18795  
 supernova database, proposed creation 2-53114  
 transit-circle catalogues, systematic differences between W5-50, WL50, Perth 70 and AGK3R catalogues 2-32862  
 variable stars, 66th name list 2-42611  
 X-ray sources in LMC, catalogue from soft X-ray study 2-6545

**astronomical ephemerides**

- 1978 DA, Alinda-type asteroid, recovery and revised ephemeris (1982 February 15 to May 31) 2-48169  
 1978 DA, Amor-type asteroid, ephemeris (1981 December 22 to January 31) 2-48176  
 1978 DA, ephemeris, (1982 January 31 to March 12) 2-38101  
 1978 P 1 (Charon), ephemeris for possible stellar occultation on (1982 April 15) 2-48182  
 1981 UA, identification as probable Phocaea-type asteroid 2-10351  
 1981 VA, Apollo-type minor planet, orbital elements and ephemeris, (1981 October 31 to November 24) 2-42636  
 1981 VA, ephemeris for 1981 Dec.-1982 Jan. period 2-28370  
 1981 VA, revised orbital elements and ephemeris (1981 November 12 to December 22) 2-32897  
 1982, observer's handbook of Royal Astronomical Society of Canada 2-38373  
 1982 BB, Apollo-type asteroid, orbital elements and ephemeris, (1982 February 10 to March 2) 2-42638  
 1982 BB, Apollo-type asteroid, orbital elements and ephemeris (1982 February 20 to March 22) 2-53142  
 1982 British Astronomical Association Handbook 2-33250  
 1982 DA fast-moving asteroid approximate orbital elements and ephemeris (1982 March 2 to April 1) 2-48172  
 1982 DB, precise posns., elements and ephemerides for Apollo object 2-53143  
 1982 DV, orbital elements and ephemeris (1982 March 17 to May 1) 2-53146  
 AC Andromedae, multiperiodic variable star, period changes anal. and new light elements 2-33037  
 28 Andromedae,  $\delta$  Scuti star, maximum times obs. and light elements 2-18767  
 V603 Aquilae (Nova 1918), periodic light vars. obs. and light elements 2-18766  
 V1343 Aquilae (SS 433), ephemeris for 6.3-day modulation of relativistic radial vel. curve 2-53285  
 asteroids, occultations of AGK3 or SAO stars (1982-3) 2-48140  
 EO Aurigae, early-type eclipsing binary, photoelectric light curve and ephemeris 2-33078  
 BD Pavonis (Nova 1934), ephemeris for periodic light vars. 2-23303  
 ST Carinae, eclipsing binary, photoelectric minima obs. rel. to ephemeris and light and colour curves 2-38240  
 Comet Bowell (1980b), improved orbital elements and ephemeris (1982 February 20 to July 30) 2-53172  
 Comet Hartley (1982b), parabolic and elliptical orbital elements and ephemeris, (1982 February 10 to March 2) 2-42655  
 Comet Howard-Koomen-Michels (1979 XI), Sun-grazing comet, orbital elements rel. to collision with Sun 2-18739  
 Comets Hartley (1982b, 1982c), orbital elements and ephemeris for 1982c, (1982 February 10 to March 2) 2-42657  
 computation, compact data for navigation and astronomy, (1981 to 1985) 2-10334  
 T Coronae Borealis, recurrent nova, prediction of possible periodic eruptions 2-38208  
 V1334 Cygni, Cepheid variable, UVB photometry rel. to pulsation period and ephemeris 2-10440  
 V801 Cygni, RR Lyrae star, linear and parabolic light elements 2-33039  
 Development Ephemeris 102, inclination and ascending node of solar system invariable plane 2-48160  
 WW Draconis, eclipsing RS Canum Venaticorum star, primary min. time and new light elements 2-42718  
 W Gruis, eclipsing binary, light elements from UVB photometry 2-10481  
 UW Gruis, RR Lyrae star, light curve, period and ephemeris from photoelectric UVB obs. 2-48253  
 Hakucho X-ray satellite, observing schedule, 1982 March to August, rel. to X-ray/optical/IR/radio obs. 2-53120  
 HD 8152, new W Ursae Majoris type eclipsing binary, UVB photometry, light curve and ephemeris 2-48281  
 RU Leporis, eclipsing binary, period variability and new ephemeris 2-3278  
 VZ Librae, W Ursae Majoris star, improved ephemeris from photoelectric minima and light curves 2-23329  
 Mars, astrolabe obs. rel. to DE111 ephemeris 2-38093  
 TU Mensae, long-period SU Ursae Majoris star, orbital period and ephemeris for superior conjunction 2-28480  
 Minor Planet Circulars 6221-6344, ephemerides for 109 asteroids and two comets 2-3210  
 Minor Planet Circulars 6425-6480, ephemerides for 14 asteroids 2-53147  
 Moon, AD 1980 to 2002 in two-day intervals (*French*) 2-32872  
 occultations by Earth as seen from geostationary satellite, predictions 2-10300  
 AG Pegasi, symbiotic star, orbital period and ephemeris 2-6603  
 Periodic Comet du Toit-Hartley (1945 II=1982b, 1982c), orbital elements and ephemerides (1982 February 20 to April 11) 2-53171  
 Periodic Comet du Toit-Hartley (1982b, 1982c), ephemeris, (1982 April 11 to June 20) 2-53175  
 Periodic Comet Kearns-Kwee (1981h), ephemeris (1981 December 22 to 1982 July 10) 2-48186  
 Periodic Comet Schwassmann-Wachmann 1 (1974 II, ephemeris (1981 June 25 to 1982 May 31) 2-23258  
 Periodic Comet Tempel 2 (1982d), recovery posns., elements and ephemeris 2-53173  
 1 Persei, new eclipsing binary with long period and elliptical orbit, ephemeris 2-23324  
 Pluto, ephemeris for possible stellar occultation on (1982 April 15) 2-48182  
 2100 Ra-Shalom, unusual Apollo-type object, ephemeris, (1981 August 20 to September 13) 2-3209  
 SAO 072799, new bright eclipsing binary, light curve, times of minima and light elements 2-38243  
 44 Tauri,  $\delta$  Scuti star, maximum times obs. and new light elements 2-23302  
 time adjustment on 1982 June 30, positive leap second 2-52697

**astronomical ephemerides continued**

- DN Ursae Majoris (HR 4560), bright eclipsing binary, period and ephemeris from light min. times obs. 2-38246  
 GG Velorum, Algol-type eclipsing binary, photoelectric light minimum times and light elements 2-48278  
 PU Vulpeculae (Honda-Kuwano object 1979), ephemeris for 78.1 day photometric period 2-38205

**astronomical instruments**

- see also *astronomical observations; astronomical techniques; astronomical telescopes; planetaria; radiotelescopes*  
 active cavity radiometers for determining total solar irradiance 2-23219  
 adaptive optics (*Japanese*) 2-53094  
 APL satellite Ge X-ray detectors, mechanical refrigerator system 2-53051  
 astrolabe, setting errors of angle standard and comparison with circumzenithal instrument 2-38056  
 AXAF mirror samples, visible light scatter meas. 2-14775  
 camera, annular-aperture, wide-field, astron. spectroscopic apps. 2-28346  
 channel electron multipliers arrays for solar X-ray spectrometer/spectrohelograph, props. 2-28348  
 CHASE grazing incidence telescope and spectrometer (Spacelab 2) 2-32849  
 circumzenithal instrument, setting errors of angle standard and comparison with astrolabe 2-38056  
 comet camera lens design, wideband 2-53091  
 Compton telescope, appl. to gamma radiation meas. between 0.4 Me and 7 MeV at balloon altitudes 2-10289  
 cosmic background radiation, polarization at mm wavelengths, meas. using photopolarimeter 2-42602  
 cosmic ray muon detector, appl. to sidereal anisotropy meas. at 1500 GV 2-10279  
 dichroic beamsplitters at visible wavelengths 2-32854  
 echelle spectrograph for Vienna Observatory, performance and design 2-53092  
 electrographic camera, superconducting magnet homogeneity, stabilisation (*Chinese*) 2-19138  
 EXOSAT Medium Energy Instrument 2-48135  
 EXOSAT operation and equipment 2-48133  
 external resulting systems for coronagraphs, theoretical evaluation of efficiency 2-53084  
 Fabry-Perot filter, narrow gap, tunable, with servo-control, astronomical apps. 2-14779  
 faint light detectors and spectrometers, book 2-42801  
 faint object spectrograph 2-53090  
 Fourier transformation optical system, appl. to solar granulation anal. 2-6577  
 Gamma-Ray Observatory, Burst and Transient Source Experiment 2-53044  
 gas scintillation camera for X-ray astronomy 2-48150  
 GIRL baffle system and telescope straylight anal. 2-14774  
 gravitational radiation antenna, background noise of terrestrial origin 2-38555  
 gravitational radiation antenna showing Earth free oscill. signal 2-15103  
 gravitational wave antenna (reson. bar type) signal and noise response 2-18709  
 gravitational wave antenna with new type of suspension 2-38554  
 gravitational wave antennas, background signals due to Earth free oscill. 2-15102  
 hard X-ray detector for XTE 2-53081  
 heliochronometer, non-skiatrical, with automatic correction for eqn. of time 2-3198  
 imaging detectors for middle and far UV, review 2-15218  
 ion chamber gamma burst detector 2-53082  
 IR photometer, design, tests and construction (*Spanish*) 2-10324  
 IR Si:B charge-injection-device array performance, space-based astronomical obs. appl. 2-3193  
 Jai Singh observatory, naked-eye instruments 2-48145  
 JHKL photometer, SAAO MkII equipment, saturation and colour corrections 2-23225  
 K-coronameter with reflex monitor at 5303 Å, appl. to electron density meas. in coronal active regions 2-6538  
 linear diode array detector system for spectroscopy (report) 2-18710  
 lunar occultation simulator (*French*) 2-18687  
 modulated Multiple Split Camera for improved localization of gamma ray bursts 2-53079  
 monochromator-interferometer combination for submillimeter astronomical spectrometry from aircraft 2-18701  
 multichannel television spectrophotometer for faint object spectra 2-28347  
 narrow-band filters for observing the Sun 2-14781  
 Offner null corrector for testing mirrors paraboloid or hyperboloid 2-39717  
 optics, instrumentation and techniques, conference, Oberkochen, Germany, (1981 April 1 to 3) (*German English*) 2-33223  
 photoelectric array detectors for use at XUV wavelengths 2-32853  
 photoelectric photometer, double-beam, for astronomical use, description (*Italian*) 2-10323  
 photoelectric photometry, revised automated system 2-32856  
 photographic RP series films, sensitivity, grain size and resolution 2-23749  
 photometric equipment for obs. of Saturn E-ring 2-6566  
 photon counting instrumentation, appl. to star brightness meas. 2-32852  
 Popov-Bowen camera, aberration correction and F-ratios 2-42604  
 radar system, microprocessor-based, appl. to radio meteor radiant distribs. imaging 2-48157  
 radiation receivers, nonlinear, quantum efficiency of detection 2-10325  
 refractometer, two-colour, appl. to anomalous astron. refr. meas. 2-10212  
 Repsold dividing machine, explanation for systematic errors of Repsold dividing machine 2-53085  
 ring core magnetometers, to be installed on artificial planet MST5 and rocket (K-9M-72) (*Japanese*) 2-3182  
 ring-core magnetometers, for interplanetary mag. field meas. by Japanese artificial planet (*Japanese*) 2-3171  
 solar, conf., Scheveningen, Netherlands (Sept. 1980) 2-18809  
 solar EUV spectrograph for Shuttle/Spacelab 2-32848  
 solar radiometer, field limiter 2-10320  
 solar spectral irradiance monitor for 120-400 nm range 2-18684  
 solar spectrometer for UV to IR spectral irradiance, instrument carried by Spacelab 2-18717  
 solar spectrometer using two-dimensional positioning device 2-14770



**astronomical instruments continued**

- spectrometer for solar surface oscillations and horizontal motion meas. 2-18704  
 spectrometer with Fabry-Perot multiplex for photoelectric recording of star and nebulae spectra 2-18708  
 spherical crystal cosmic X-ray spectrometer 2-48153  
 St. Andrews Scanner at SAAO Sutherland, Schott BG18 filter red leak 2-23110  
 stellar photoelectric photometers, optical design criteria 2-14780  
 Tsubokawa's automatic astrolabe (*Japanese*) 2-14769  
 two-dimensional white-light interferometer, review of appls. 2-53093  
 UV spectrometer and polarimeter for Solar Maximum Mission 2-18702  
 UV-PRIM astronomical spectrograph, aspherical diffraction gratings design (*French*) 2-32851  
 Very Large Area Spectroscopic Proportional Counter for space X-ray astronomy 2-3195  
 Voyager cameras, radiometric performance 2-32842  
 X-ray imaging spectrometer on NASA Solar Maximum Mission satellite, collimator alignment 2-20397  
 MgF<sub>2</sub>-NO ion chamber with O<sub>2</sub> gas filter, appl. to solar H Lyman  $\alpha$  radiation obs. (*Japanese*) 2-3225

**astronomical observations**

- see also *gamma-ray astronomical observations; infrared astronomical observations; radioastronomical observations; ultraviolet astronomical observations; visible astronomical observations; X-ray astronomical observations*  
 0016+16, red galaxies cluster at  $z=0.54$ , multicolour photometry 2-33165  
 V794 Aquilae, cataclysmic variable, X-ray and optical characts. 2-10435  
 YZ Canis Minoris, flare star, coordinated X-ray, optical and radio obs. of flaring activity 2-53269  
 VV Cephei, photometric obs. during 1976-78 eclipse (*Italian*) 2-10486  
 Cepheid variables, short-period, in southern hemisphere, photometric and radial vel. study 2-38200  
 FK Comae Berenice, UBVR1 photometry and light curves 2-38199  
 cosmic ray albedo neutron flux, solar diurnal anisotropy meas. 2-53029  
 cosmic rays, charge and isotopic comp. of  $Z=6$  to 14 nuclei at source 2-53030  
 cosmic rays, intensity obs. rel. to vars. of parameters of interplanetary medium 2-3168  
 cosmic rays, isotropic intensity vars. obs. during August-September (1979) 2-6513  
 cosmic rays, meas. of antiproton flux and search for antihelium 2-10288  
 cosmic rays, sidereal anisotropy meas. near 1500 GV 2-10279  
 ETS duplex observatory for asteroid obs. and searching 2-32855  
 Feige 7 (Gr 267), mag. degenerate star, interpretation of visible and UV spectra 2-53256  
 field Population II blue stragglers, photometry and spectra 2-28455  
 galactic cosmic rays, solar modulation in outer heliosphere 2-10286  
 Grw+70°8247, mag. degenerate star, interpretation of visible and UV spectra 2-53256  
 H2252-035, obs. and models 2-6640  
 Hakucho X-ray satellite, observing schedule, 1982 March to August, rel. to X-ray/optical/IR/radio obs. 2-53120  
 HD 200775, Herbig Be star, spectrum obs. and atmospheric parameters 2-48248  
 Io plasma torus, detect. by (Pioneer 10) 2-32900  
 Jupiter, magnetosphere, low-energy charged particles at 5-20 R<sub>J</sub> 2-32919  
 Jupiter, magnetosphere, plasma wave spectra obs. 2-32911  
 Jupiter, magnetosphere as origin of upstream and downstream energetic particle events 2-32795  
 Jupiter, magnetosphere nonthermal ion composition 2-32917  
 Jupiter, middle magnetosphere, positive ion obs. 2-32918  
 Jupiter, middle magnetosphere broadband electrostatic emission and field-aligned currents 2-32920  
 Jupiter, outer magnetosphere ion anisotropies 2-32916  
 $\alpha$  Lyrae, stellar polarisation study with CERGA interferometer 2-6592  
 Mars, local dust storm obs. rel. to generation mechanism 2-18727  
 NGC 604, H II region complex in M33, obs. over six decades in frequency 2-48298  
 O- and B-stars, effective temps. and radii rel. to model atmospheres 2-42684  
 OB-type stars in dusty H II regions, UBVR1 photometry rel. to interstellar extinction law 2-3291  
 BD Pavonis (Nova 1934), periodic light vars. detect. 2-23303  
 planetary nebulae, high excitation spectroscopic obs. rel. to chemical comp. 2-53353  
 quasar 2141+174, no self-absorption in Balmer lines 2-28579  
 red dwarf stars, intrinsic polarisation meas. 2-10430  
 solar cosmic rays, characts. of flares emitting <sup>3</sup>He or Fe enriched cosmic rays, 1977 September to December 2-14837  
 solar flare cosmic ray particles, ratio of proton fluxes and low-energy  $\alpha$ -particles 2-3167  
 solar low energy ions, spectral and comp. vars. during energetic storm particle event 2-32785  
 solar system high-resolution graphics model 2-18700  
 solar type III radio burst, obs. of assoc. energetic electrons and plasma waves 2-32964  
 Sun, second-stage acceleration in a limb-occulted flare 2-53208  
 V 471 Tauri (BD+16°516), RS CVn star, simultaneous photoelectric and single-trail spectroscopic obs. 2-33075  
 Ursa Minor dwarf galaxy, spectroscopic obs. rel. to metal abundance range 2-28557  
 BE Ursae Majoris (PG 1155+492), unique cataclysmic variable-like object, photometry and spectrum 2-38188

**astronomical observatories**

- Jai Singh observatory, naked-eye instruments 2-48145  
 Mizusawa Latitude Observatory, Japan, astron. refr. calc. 2-10168  
 Roque de los Muchachos Observatory, Palma, microthermal fluctuations rel. to seeing conditions 2-14768  
 time ball services 2-38399

**astronomical spectra**

- see also *atmospheric spectra; stellar spectra*  
 Abell 119, X-ray cluster, red shift and vel. dispersion, obs. 2-33163  
 Abell 43 and 50, contrasting planetary nebulae, obs. 2-14904  
 AFGL 618, planetary nebula precursor, near-IR spectroscopy 2-3288  
 Arakelian 120, Seyfert 1 galaxy, Balmer line profiles temporal var., obs. 2-33124  
 Arakelian 120, Seyfert galaxy, spectrum var., emission line region conditions, visible obs. 2-33138

**astronomical spectra continued**

- Arakelian 120, Seyfert 1 galaxy, continuum and emission line var. 2-38298  
 Arakelian 120, Fe II Seyfert 1 galaxy, UV and optical line spectrum obs. 2-38301  
 atomic spectroscopy for astrophysical applications 2-32838  
 massive black holes, stationary spherical symmetric accretion rel. to radiation spectrum and luminosity 2-53311  
 BN/KL region in Orion, CO and SO<sub>2</sub> lines obs. rel. to high vel. gas props. 2-28523  
 4C 18.68, QSO with precessing radio jets, spectrum and map 2-53377  
 3C 196, quasar, struct. and spectra, HF obs. 2-33178  
 3 C 273, high-resolution optical survey of interstellar absorpt. lines 2-42727  
 3C 273, no evidence for 3.3  $\mu$ m emission feature 2-38314  
 3C 273, quasar 3.3  $\mu$ m dust emission reexamined 2-33183  
 3 C 390.3, N-galaxy spectrum and H line problem 2-48331  
 Carina Nebula, UV obs. of high vel. interstellar lines 2-38265  
 Cassiopeia A, X-ray spectrum with gas scintillation spectrometer, obs. 2-48347  
 Cassiopeia A direction, identification of 26.13 MHz absorpt. line, HF obs. 2-23342  
 Cassiopeia A supernova remnant, UHF spectrum, line detect. and interpretation (*Russian*) 2-14917  
 Centaurus A (NGC 5128), H I obs. 2-3307  
 Comet Bowell (1980b), CN emission obs. (1982 January 31) 2-53170  
 Comet Bradfield (1979 X), gaseous comet, emission line-continuum ratio from narrowband photometry 2-10357  
 comet comae, H<sub>2</sub>O detect. from stellar occultations, Space Telescope UV obs. possibility 2-38129  
 Comet Kohoutek (1973 XII), spectrophotometric scans 2-53177  
 Comet Panther 1980u, mol. bands spectra, visible obs. (*French*) 2-38114  
 comets, faint, UV spectra obs. and comparison 2-38130  
 cosmic background radiation, spectrum of 2 keV to 100 MeV background rel. to quasars contrib. 2-6686  
 cosmic microwave background, obs. of decrement toward distant galaxy cluster (0016+16) 2-33187  
 Crab Nebula, gamma-ray line at 73 keV, balloon obs. 2-38266  
 CTA 1, SNR, spectral and polarisation characts., UHF/VHF obs. 2-33109  
 Cygnus Loop, high-resolution H $\alpha$  spectra of outer filament 2-28526  
 DDO 161, southern dwarf galaxy, central knots visible spectral obs. (*Russian*) 2-6672  
 diatomic molecules, Franck-Condon factors, high rot. quantum numbers effect 2-34499  
 diffuse far UV background, possible detect. of line emission from hot galactic corona 2-10517  
 dominant cluster radio galaxies, emission lines due to accretion gas 2-23346  
 DR21, H II region, formaldehyde absorpt. mapping 2-14911  
 DR 21 molecular cloud, clumping evidence from NH<sub>3</sub> (1,1) transition SHF obs. 2-23336  
 IE 0449-184, narrow emission line quasar, prototype for new class 2-38336  
 elliptical galaxies, stellar population evolutionary synthesis from visible/IR obs. 2-6664  
 elliptical galaxy X-ray source near M33, Long et al. object 9, redshift obs. 2-53391  
 faint objects spectra recorded with multichannel television spectrophotometer 2-28347  
 forbidden line ratios, dust sensitive 2-32858  
 formaldehyde, protonated, potentially observable interstellar molecule, spectra 2-14900  
 frosts reflectance spectra of interest to outer solar system bodies and comet nuclei 2-38122  
 G228.9+43.7, pulsar radio halo assoc. with PSR 0950+08, spectral index 2-28575  
 galactic annihilation radiation origin (*Russian*) 2-38054  
 galactic kinematic distances from radial vel. gradients 2-14786  
 galactic nuclei, active, spectrophotometric classification 2-33176  
 galaxies, superthin, spectroscopic obs. 2-28545  
 galaxies, vel. dispersions in bulges of spiral and S0 galaxies rel. to three-component model 2-28542  
 galaxies active nuclei, broad emission line profiles theory 2-6684  
 galaxies active nuclei, empirical results on emission lines intensities and widths 2-28543  
 galaxies active nuclei, radiation spectrum and luminosity from stationary spherical symmetric accretion onto massive black holes 2-53311  
 galaxies active nuclei, theory for X-ray spectra 2-28555  
 galaxies active nuclei, thermal instabilities in radiatively driven winds rel. to emission line clouds 2-28326  
 galaxies ESO/Uppsala lists, spectroscopic and photometric obs. third catalogue 2-18721  
 galaxies in Hercules region, redshifts rel. to supercluster bridge between groups of galaxy clusters 2-10520  
 galaxies in southern hemisphere, peculiar and associations, redshift, spectral obs. 2-3305  
 galaxies in Virgo cluster area, H I spectral profile 2-38304  
 galaxies occurrence of 3.3  $\mu$ m emission feature 2-38314  
 galaxy clusters, multiple, redshift (*Russian*) 2-6677  
 galaxy in Ursa Major, spectra and variability of compact blue object 2-42744  
 gamma-ray bursts, third-generation small spectroscopy experiment for hard transient events 2-53080  
 gamma-ray diffuse flux, spectrum meas. between 0.4 MeV and 7 MeV using Compton telescope 2-10289  
 halo B-type stars, spectra and interstellar lines anal., obs. 2-33019  
 Hb 12, planetary nebulae, UV spectral obs. 2-33096  
 HD 138403, low-excitation planetary nebula, spectral vars. rel. to edge and/or line locking mechanism(s) 2-48300  
 Herbig-Haro objects, 18 cm OH lines obs. 2-3298  
 Herbig-Haro objects HH 7-11, high vel. mol. gas obs. 2-28530  
 HH 11 and 43, polarisation, visible spectral obs. 2-33100  
 HH 30, exciting star HL Tauri, visible spectral obs. 2-33100  
 highly ionised atoms spectra classification during last seven years 2-24632  
 hydroxycarbene, potentially observable interstellar molecule, spectra 2-14900  
 IC 418, planetary nebula, obs. of C II 1335 Å dielectronic recomb. lines 2-6657



## astronomical spectra continued

- IC 443, supernova remnant, soft X-ray spectrum and X-ray centroid position obs. 2-28527  
 IC 5063, radiogalaxy, giant elliptical or SO spiral, struct., visible obs. 2-18792  
 interacting galaxies, emission line velocities rel. to motions in nests and chains 2-42753  
 interstellar 9.7 micron band, possible SiO grain interpretation 2-14907  
 interstellar absorption lines toward globular clusters and extragalactic objects, high-resolution optical survey 2-42727  
 interstellar cyanopolynes, absorpt. lines obs. in direction of Cassiopeia A 2-6655  
 interstellar diffuse bands, nature of carrier rel. to chemical processes in interstellar medium 2-53347  
 interstellar diffuse bands between 2.9 and 4.0 microns, obs. in spectrum of M-type supergiant 2-33119  
 interstellar gas in lines of sight to Magellanic Clouds, vel. struct. from CO II and Na I absorpt. 2-10508  
 interstellar gas  $L_{\alpha}$  radiation, effect of neutral component of solar wind (Russian) 2-53041  
 interstellar  $H_2$ , high velocity line emission obs. in NGC 2071 region 2-33114  
 interstellar  $H_2O$ , new search for absorpt. line in spectrum of  $\zeta$  Ophiuchi 2-28522  
 interstellar lines, diffuse, origin 2-33121  
 interstellar molecular clouds, high resolution spectroscopy rel. to star form. 2-53351  
 interstellar OH emission, circular polarisation of maser lines 2-42737  
 interstellar silicates, evidence from spectra comparisons with laboratory obs. 2-48306  
 interstellar SiO, use of thermal emission as probe of high vel. motions in regions of star form. 2-42735  
 interstellar UV extinction, spectroscopic evidence for MgO particles 2-42734  
 Io plasma torus, EUV spectrum anal. 2-32908  
 Jupiter, decametric radio spectra, S-L burst interaction 2-53155  
 Jupiter, spectrophotometry of Great Red Spot at 0.6 to 1.1  $\mu$  2-6565  
 Jupiter cloud cover color props., latitude and longitude var., visible spectra obs. 2-32938  
 Jupiter decametric spectra modulations, role of propag. effects in terrestrial ionosphere and Jovian environment 2-38103  
 Kazaryan galaxies with UV excess, morphology and spectra (Russian) 2-33157  
 Kleinmann-Low Nebula, hot mol. core location,  $NH_3$  lines obs. 2-23334  
 Kleinmann-Low nebulae in Orion, IR spectrum rel. to ice content 2-33110  
 line formation, in turbulent media with finite correlation lengths 2-10315  
 Lyman- $\alpha$  wings, radiation redistribution 2-10303  
 M101 H II regions, IR, UV and EHF obs. 2-6665  
 M16 (NGC 6611), Ha and CO spectra investigation 2-6648  
 M1-67, Wolf Rayet ring nebula, struct., visible obs. 2-14902  
 M33, forbidden O III/H $\beta$  ratios of emission regions and luminosity functions at fronts of arms 2-33143  
 M87, high-resolution optical survey of interstellar absorpt. lines 2-42727  
 Magellanic Cloud H II regions, age and H $\beta$  line equiv. width 2-18793  
 Markarian 171a and b, nuclei gas characts. and emission line obs. 2-6669  
 Markarian 335, Seyfert 1 galaxy, spectral var., visible/UV obs. 2-33134  
 Markarian 421 BL Lacertae object, X-ray spectrum components, obs. 2-48335  
 Markarian 509, Seyfert 1 galaxy, He I 10830 Å obs. 2-28553  
 Mars, organic molecules, sterility from UV-IR reflectance spectrum 2-38095  
 Mars airglow, spectroscopy of CO Cameron bands 2-6557  
 MC2 1210+121 and 1620+103, spectroscopy of radio-quiet BL Lac candidates 2-38308  
 Me 2-1 (CD-23°12238), planetary nebula, element abundances, optical/UV obs. 2-33097  
 microwave background spectrum distortion by intergalactic dust, implications from quasar reddening 2-28581  
 mm-wavelength spectral line data, calibration 2-28349  
 molecular bands, Franck-Condon factor formulae 2-49519  
 molecular cloud CO, high vel. wings and self reversal 2-14899  
 molecular clouds, new 2 mm interstellar transitions 2-38260  
 molecular clouds towards 3C 133, 3C 123 and W51, mag. field determ., UHF obs. 2-6652  
 molecules in interstellar gas, review of radio obs. 2-53346  
 N2 and N5 planetary nebulae in SMC, chem. comp., UV obs. 2-53363  
 N59A (DEM 241), giant filamentary shell in LMC, spectrum and dynamics 2-3293  
 nebulae, effect of small-scale electron density and temp. fluctuations on forbidden-line intensity ratios 2-28540  
 NGC 1052, active elliptical galaxy, UV spectrum obs. 2-3306  
 NGC 1068, Seyfert galaxy, 2-micron spectroscopy of galactic nucleus 2-42738  
 NGC 1275 Seyfert galaxy nucleus, gas structure from emission line variability 2-42746  
 NGC 1365, Seyfert galaxy, mild radial abundance gradient of O and N 2-3303  
 NGC 2024 (IRS 1 and 2), IR spectra and nature 2-10498  
 NGC 2371, planetary nebula spectrum anal., UV obs. 2-18786  
 NGC 2808, 1851, globular clusters, high-resolution optical survey interstellar absorpt. lines 2-42727  
 NGC 2867, optical and UV spectroscopic obs. of planetary nebula 2-14912  
 NGC 3242, planetary nebula, N abundance determ. from N II recomb. lines 2-3292  
 NGC 3862 (3C 264), head-tail radio galaxy, spectral index vars. from 0.6 to 5.0 GHz obs. 2-28573  
 NGC 4151, cloudy structure of Seyfert nucleus from forbidden O II line profile anal. 2-48322  
 NGC 4151, Seyfert 1.5 galaxy, near IR spectrophotometry 2-28547  
 NGC 4151, Seyfert galaxy, no evidence for 3.3  $\mu$ m emission feature 2-38314  
 NGC 4151, type I Seyfert galaxy, spectral components from optical and IR obs. 2-28546  
 NGC 4507, Seyfert 1.9 X-ray galaxy 2-14923  
 NGC 5128 (Centaurus A), shock-ionized gas, spectrophotometry and kinematics 2-14934  
 NGC 604, H II region complex in M33, UV spectrum of ionising star cluster 2-48298

## astronomical spectra continued

- NGC 6302, high excitation nebula, spectroscopic study 2-3294  
 NGC 650-1, planetary nebula, emitting gas rel. field rel. to spatial-kinematical model 2-6658  
 NGC 6905 and 5189, planetary nebulae UV spectral obs. 2-33096  
 NGC 7027, IR spectra of planetary nebula 2-18701  
 NGC 7212, Seyfert galaxy with asymmetric forbidden-line profiles in interacting system 2-33155  
 NGC 7538 (IRS 1), OH masers obs. 2-38278  
 non-LTE line transfer with partial redistribution, general emission profile 2-28334  
 Orion MC-1 region, obs. of  $NH_3$  emission 2-38273  
 Orion molecular cloud, detect. of S(8), S(12), S(13), S(14) and S(15)  $v=0-0$  lines of  $H_2$  2-10503  
 Orion Molecular Cloud 1, methyl cyanide lines detect. 2-33095  
 Orion Nebula, continuum and dust props., UV obs. 2-6649  
 Orion Nebula, near IR high resolution spectrophotometry of forbidden C I line 2-3289  
 P40 planetary nebula in LMC, UV spectral obs. C abundance and chem. comp. 2-53363  
 Periodic Comet du Toit-Hartley (1982b,c), mag. changes and spectroscopic obs. 2-53174  
 physicist, role in astronomy 2-53121  
 PKS 0521-36, BL Lacertae object, appearance of broad emission lines in optical spectrum 2-28560  
 PKS 0735+178, BL Lacertae object, Lyman continuum absorpt. detect., UV obs. 2-6661  
 planetary nebulae, emission-line spectra and C/N ion abundances 2-3299  
 planetary nebulae, high excitation spectroscopic obs. rel. to chemical comp. 2-53353  
 planetary nebulae, O III and N III line emission, IR obs. 2-33098  
 planetary nebulae, pseudo-resonance absorption lines existence 2-14906  
 planetary nebulae C abundance from 4267 Å C II line 2-10496  
 planetary nebulae  $H_2$  line emission 2-4270  
 planetary nebulae Ne, S, Ar abundances, visible/IR obs. 2-14903  
 planets, outer, cloud props. from methane 2.3  $\mu$ m spectral region 2-10344  
 plasma, conf., London England (July 1977) 2-18822  
 Q0957+561A,B, quasar, new absorpt. system discovery, origin, UV spectral obs. 2-14946  
 Q 0119-046 and absorption line redshifts, spectroscopic obs. 2-38335  
 Q 0122-380 and 1101-264, 320 to 520 nm absorption spectra in QSOs 2-38339  
 QSO 0957+561 AB emission line form. region, size and number of clouds 2-38341  
 QSO absorption spectra, H I Lyman  $\alpha$  line, cosmological evolution 2-38332  
 QSOs, exhibiting P Cygni profiles or variables, UV/visible obs. 2-33181  
 QSOs, O III 5007 Å forbidden line profiles 2-48350  
 quasar 2141+174, no self-absorption in Balmer lines 2-28579  
 quasar absorption lines, rel. to kinematics of high-speed gas in quasar envelopes 2-28571  
 quasar emission line cloud, line form., photoionisation and heating 2-33177  
 quasar emission line clouds, refractory element abundance, UV spectral obs. 2-14948  
 quasar emission line ratios, asymptotic escape probabilities, Stark broadening 2-38329  
 quasar emission line regions, two phase models 2-14947  
 quasars, broad emission line profiles theory 2-6684  
 quasars, C III 1909 Å semiforbidden line correl. with redshift 2-6683  
 quasars, detectability of H radio recomb. lines in compact sources 2-42757  
 quasars, emission lines Doppler widths rel. to gas clouds kinematics (Russian) 2-53369  
 quasars, H I Balmer  $\alpha$  and Lyman  $\alpha$  profiles, cloud models 2-38334  
 quasars, high redshift, dust shell hypothesis constraints from EHF obs. 2-38337  
 quasars, low redshift, spectrophotometric classification 2-33176  
 quasars, Lyman  $\alpha$  absorpt. lines rel. to physical state of primordial intergalactic clouds 2-14931  
 quasars, Lyman- $\alpha$ /Ha ratio used for models 2-10372  
 quasars, radiation spectrum and luminosity from stationary spherical symmetric accretion onto massive black holes 2-53311  
 quasars, spectral surveys, selection effects 2-14949  
 quasars absorption line systems, prod. by galactic absorpt. line coronae 2-28541  
 quasars absorption spectra, effects of photoionisation of intergalactic medium by massive neutrino decay 2-48333  
 quasars emission line clouds, role of thermal instabilities in radiatively driven winds 2-28326  
 quasars H I line spectrum, approximation procedures for line transfer versus exact treatment 2-38338  
 quasars new companion galaxies, new discoveries and redshifts 2-28576  
 quasi-stellar objects, radio-quiet, Fe II emission obs. in optical spectra 2-28578  
 radiative transfer non-LTE problems, soln. techniques involving approx. lambda operators 2-10330  
 radio galaxies, detectability of H radio recomb. lines in compact sources 2-42757  
 radio sources, compact, extragalactic, nonthermal spectra of assoc. large-scale X-ray and radio structs. 2-42754  
 radio sources, compact, near supernova remnants, H I absorption distances 2-48346  
 radio sources, extragalactic, with very steep decimetre wave spectrum, observational survey 2-6679  
 radio sources, flat spectrum, spectral indices of assoc. extended emission 2-6681  
 radio-sources, core-dominated, spectra of components from Jodrell Bank MTRLI obs. 2-48344  
 radio-sources, extragalactic, radio spectra shape anal., SHF/UHF obs. 2-33168  
 recombination lines from H II regions, electron temp. and level population var. determ. 2-18790  
 reflection nebulae, 18 cm OH lines obs. 2-3298  
 Sagittarius A and B2,  $^{18}O/H^{18}O$  abundance ratio in molecular clouds, UHF obs. 2-38276  
 Saturn atmosphere, ethane abundance, IR spectral obs. 2-10353  
 SC 0316-444 and 2008-569, X-ray clusters 2-33163  
 scale distortions on image converter spectrograms, reduction method 2-28353



## astronomical spectra continued

- Ser 40/6, X-ray cluster, red shift and vel. dispersion, obs. 2-33163  
 Seyfert 1.8 and 1.9 galaxies, spectrum interpretation and anal. 2-14918  
 Seyfert 1 galaxies, X-ray spectrum components, obs. 2-48335  
 Seyfert galaxies, comparative parameters of emission line regions of Seyfert 1 and Seyfert 2 galaxies 2-3308  
 Seyfert galaxies, He I 10830 Å obs. 2-28553  
 Seyfert galaxies, narrow emission line profile interpretation 2-18798  
 Seyfert galaxies Balmer line asymmetry due to optically thick clouds expanding system 2-53375  
 Seyfert galaxies nuclei, emission lines Doppler widths rel. to gas clouds kinematics (*Russian*) 2-53369  
 Seyfert galaxy nuclei, emission line form., photoionisation and heating 2-33177  
 supernova remnant optical emission, shock wave model 2-10504  
 supernova remnants, nuclear gamma-ray line fluxes 2-10506  
 supernova remnants in northern hemisphere, near IR spectroscopy and C abundances 2-28535  
 Taurus Molecular Cloud 1, deuterated cyanodiacetylene detect., SHF obs. 2-23339  
 Taurus Molecular Cloud 1, deuteriocyanobutadiyne detect., SHF obs. 2-23340  
 Taurus molecular cloudlets, obs. of four molecules 2-33112  
 Triton, unidentified features in spectrum 2-18737  
 Triton methane gaseous abundance, visible spectra obs. 2-6567  
 47 Tucanae, high-resolution optical survey of interstellar absorpt. lines 2-42727  
 UGC 10683, interacting galaxy pair, visible spectral obs. 2-6667  
 unevenly samples data spectral information recovery, two machine efficient solns. 2-53096  
 Uranus, (47 to 1 micron) comparison with methane absorpt. band form. models 2-42645  
 Venus atmosphere CO fourth positive bands in dayglow, synthetic spectra 2-32889  
 Vv 1-1, planetary nebula UV spectral obs. 2-33096  
 W51, H II region-molecular cloud complex, optical study in forbidden S III emission line 2-48302  
 W58 (K3-50), H II region, formaldehyde absorpt. mapping 2-14911  
 Wolf Rayet star assoc. ring nebulae, H II region type, spectral obs. 2-33023  
 X-ray bursts, third-generation small spectroscopy experiment for hard transient events 2-53080  
 X-ray emission from winds in active galactic nuclei and quasars 2-48325  
 X-ray sources spectra, numerical soln. of time-depend. Compton scatt. problems via integral eqn. 2-14952  
 X-ray sources temp. and density from He-like ions line ratios 2-10528  
 C I absorption lines in quasars, use as radiometer for background radiation at  $Z \geq 2$  2-28582  
 C<sub>2</sub> in comets, triplet-singlet, Phillips, Ballik-Ramsay and Mulliken vibr. bands prediction 2-38112  
 CO in face-on galaxies, distrib. from J=1-0 emission at 2.6 mm 2-38295  
 CO in molecular clouds, 870 µm obs. of J=3-2 emission 2-14914  
 CO<sup>+</sup>, 235-470 GHz elec. dipole allowed transitions 2-23337  
 CO<sup>+</sup> comet-tail emission and chemilum. in N<sup>+</sup> + CO collisions 2-15885  
 DCO<sup>+</sup>, rot. const., MW obs. 2-4264  
 Fe II, sextet transitions, and interstellar line identifications 2-38047  
 Fe II emission in quasars and Seyfert 1 galaxies 2-38330  
 Fe II spectrum of Seyfert 1 galaxies and quasars 2-38299  
 H I absorption line survey towards radiosources, UHF obs. 2-38275  
 H I Brackett γ line emission from interstellar molecular clouds 2-38262  
 H I clouds, anomalous motions from line vels. 2-48303  
 H I emission/absorption in active Irr II galaxies 2-38292  
 H I line profiles of interacting galaxies, velocities 2-48309  
 H I regions, CO line obs. and correls. with H I and OH lines 2-3290  
 H II regions, galactic, abundances of Ar, S and Ne from IR forbidden lines 2-28524  
 H II regions, O III and N III emission, IR obs. 2-33098  
 H II regions Sh2-152 and 156, O III/He I/O II/Hβ intensity ratios in H II regions 2-38271  
 H II regions towards Carina Nebula, CO maps, EHF obs. 2-18787  
 H II regions with embedded OB assoc., evolution, Hβ emission line equiv. width 2-33102  
 H line spectrum interpretation in galaxies active nuclei, importance of Doppler differential effect 2-28561  
 H<sub>3</sub><sup>+</sup>, interstellar, search in IR sources 2-53074  
 HCO<sup>+</sup>, rot. const., isotope effects, MW obs. 2-4264  
 H<sub>2</sub>O radio line, 1.35 cm obs. of nebulae (*Russian*) 2-33175  
 He II 4686 Å emission rel. to quasars and Seyfert galaxy reddening 2-38331  
 NH<sub>3</sub> SHF emission from southern sources 2-48296  
 O I forbidden lines in comets 2-28409  
 OH 1720 MHz masers in NGC 7538 (IRS1), polarised vel. components obs. 2-6678  
 OH absorption, UHF obs. towards galactic nuclei 2-38294  
 OH in W3 (OH),  $\pi_{3/2}$  J=7/2 and 9/2 Δ-doublet transitions 2-38269  
 Rb detection in local interstellar space from Rb I line towards zeta Ophiuchi 2-23341  
 Si II emission lines in Seyfert I galaxies and quasars, form. and transfer 2-14922  
 Si II interstellar lines, IUE of reddened stars 2-48294  
 ZrO Keenan and Wing bands identification 2-28332

astronomical spectroscopy see astronomical spectra; spectroscopy

## astronomical techniques

- see also astrometry; radioastronomical techniques  
 amplitude interferometry, prototype of very long baseline interferometer 2-53086  
 artificial satellite orbit parameters estimation 2-28356  
 asteroid obs. and search technique using ETS duplex observatory 2-32855  
 astrometric plate reduction parameters, recursive estimation 2-18711  
 astrometric positions from objective prism plates 2-53103  
 astrometry, appl. of interferometry and imaging to stellar parallaxes and detect. of dark companions 2-53062  
 astrometry, control of position of angle standard of circumzenithal instrument and astrolabe 2-38056  
 astrometry, effects of atmospheric refraction on tangential coordinates (*French*) 2-6544  
 astrometry, equal altitude method potential (*Chinese*) 2-18712  
 astrometry, interferometric and space techniques 2-53061

## astronomical techniques continued

- astrometry, relativistic effects in radar, optical and radio-interferometric meas. 2-10335  
 astrometry, research into astronomical refraction 2-6427  
 atmosphere radiative transfer, Chandrasekhar's X and Y functions, soln. for mu 2-10309  
 atmosphere refraction, calc. by means of continued fractions 2-6430  
 auto-oscillatory behaviour, limiting cycle calc. 2-18718  
 autoradiographic intensification of electronographic imagery 2-32857  
 binary star interferometry at high ang. resolution, appls. and limitations 2-53106  
 cataclysmic variable stars, distances determ. from K-band photometry 2-14862  
 celestial mechanics, numerical integration of satellites of outer planets 2-32815  
 celestial mechanics, theory of outer planets using iterative method (*French*) 2-6522  
 Cepheids, companion stars detection, companion effect on CORS method 2-14784  
 circumstellar shell detection using Mg II 2800 Å line 2-14782  
 comet, searching with blink technique 2-38061  
 comet inner coma visual observing techniques 2-23222  
 comet search and discovery techniques of W.A. Bradfield 2-23221  
 contours resemblance measurement on optical images, appl. to extended objects anal. 2-6541  
 cosmic background radiation temp. meas., use of C I as radiometer at cosmological epochs  $Z \geq 2$  2-28582  
 distance measurement, implications of IR luminosities of M-type supergiants 2-10412  
 BY Draconis stars, discovery technique involving one spectral obs. 2-10422  
 elliptical galaxy geometrical structure from study of gaseous disks 2-38290  
 ephemerides computation, compact data for navigation and astronomy, (1981 to 1985) 2-10334  
 EXOSAT X-ray imaging telescopes, performance estimation method 2-48134  
 exposure segmentation method for detection of faint astronomical objects (*French*) 2-3201  
 extinction, determ. using dust sensitive forbidden line ratios 2-32858  
 extra-galactic distance scale determ. appl. of obs. of novae 2-33149  
 extrasolar planets, evidence from accretion shocks due to stellar winds and star expansion 2-28513  
 faint light detection and spectrometry, book 2-42801  
 flare monitoring by obs. of ionospheric propagation of satellite radiosignal 2-52996  
 Fourier transform spectroscopy, high resolution, with phase correction in real time 2-23745  
 galactic kinematic distances from radial vel. gradients 2-14786  
 galaxies, elliptical, intrinsic shape test, use of surface brightness-axis ratio relation 2-6540  
 galaxies, false optical pairs, identification method (*Russian*) 2-6543  
 galaxy distance determ. from H II regions size distrib. 2-48158  
 galaxy images automatic classification, appl. of Fourier structural anal. 2-33144  
 galaxy size determination, use of assoc. quasars (*Russian*) 2-3202  
 galaxy velocity fields surveyed with galaxyimeter and Fabry Perot interferometer 2-33161  
 gamma-ray burst location, modulation collimator technique 2-53079  
 geodetic-astronomical observations with Danjon astrolabe, Potsdam, effects of local temp. field disturbances (*German*) 2-9907  
 geostationary satellite position determ., method of predicting occultations by Earth 2-10300  
 gravitational lens, mass density var. traversed by each radiation beam, determ. method 2-10310  
 gravitational lens detection interfering delay signal cepstral analysis 2-42605  
 gravitational quadrupole formulae for gravitat. bound systems 2-23215  
 gravitational radiation antenna showing Earth free oscill. signal 2-15103  
 gravitational wave antenna (reson. bar type) signal and noise response 2-18709  
 gravitational wave antennas, background signals due to Earth free oscill. 2-15102  
 grazing incidence mirrors produced by galvanoplastic technique 2-25092  
 heliosphere research, program for obs. from space, (1980 to 1995) 2-3185  
 heterodyne spatial interferometry at 41 µm, results and future uses 2-53254  
 high angular resolution stellar interferometry, IAU Colloquium 50, College Park, Maryland, USA (1978 August 30 to September 1) 2-48404  
 image processing, rectification and enhancement of Jupiter imagery 2-23220  
 image reconstruction of object undistorted by atmosphere from speckle interferograms 2-53098  
 images, information treatment (*French*) 2-3205  
 incoherent IR spatial interferometry, appl. to resolution of late-type stars 2-53089  
 intensity interferometry, review of astronomical achievements and potential 2-53107  
 interferometry, active control for Michelson stellar interferometers 2-53087  
 interplanetary magnetic field, meas. by Japanese artificial planet (*Japanese*) 2-3171  
 interplanetary magnetic field, meas. via ring core magnetometer on artificial planet MST5 (*Japanese*) 2-3182  
 interplanetary magnetic field sector estimation from geomag. data 2-27980  
 IR spatial interferometry, astronomical potential 2-53105  
 isophotal and effective wavelength determ. for BV system 2-18764  
 Julian Day calculation, computer formulae for cyclic fixed lunisolar calendars (*German*) 2-10333  
 Jupiter magnetotail detection  $\geq 2$  AU distant from planet 2-28377  
 light velocity measurement outside Solar System, use of visual binary stars 2-53099  
 lunar occultation technique, scope for meas. of stellar ang. dias. 2-53253  
 lunar occultations of stars, personal equation determ. (*French*) 2-18687  
 lunar orbiter missions having low inclination, trajectory optimisation 2-18699  
 magnetic stars surfaces, element distrib. determ. methods (*Polish*) 2-42609  
 massive stars, overshooting determ. from convective cores 2-14852



**astronomical techniques continued**

Mercury, liquid core size, determination from librational motion, mass and radius data 2-53132  
 Monte Carlo simulation, appl. to anal. of pulsar distrib. in Galaxy 2-33057  
 multidimensional statistical analysis, appl. to integral props. of normal galaxies 2-33142  
 O-B2 type stars, classification using Si IV and C IV lines 2-32987  
 observations in EHF, correction method for atm. attenuation 2-14574  
 observations reduction procedure for centre of M15 globular cluster 2-38257  
 open star membership determ. with maximum likelihood method (*Chinese*) 2-18713  
 optical astronomy, atmospheric turbulence effects, book contrib. 2-52929  
 optical Fourier transformation anal. of solar granulation, comparison with digital transformation 2-6577  
 optics, instrumentation and techniques, conference, Oberkochen, Germany, (1981 April 1 to 3) (*German English*) 2-33223  
 orbit calcs. near equilib. points, discrete mechanics method 2-3188  
 orbit determination method 2-14785  
 orbital interactions, geometrical formalism 2-53095  
 orbital parallax computing methods 2-53321  
 parallaxes and masses of binaries in unknown orbits, statistical method (*French*) 2-38237  
 periods searching in large series of observational data, in Fortran (*German*) 2-10332  
 photometry, appl. of new double-beam photoelectric photometer (*Italian*) 2-10323  
 photon counting 2-32852  
 planetary nebulae N abundances, determ. using N II recomb. lines 2-3292  
 pulsar luminosity function, determ. using pulsar intensities probability density distrib. 2-14868  
 pulsar searching, optical method 2-28352  
 radiative transfer non-LTE problems, soln. techniques involving approx. lambda operators 2-10330  
 refraction calculation in model atmospheres, binomial expansion coeffs. 2-10167  
 refraction measurement, appl. of two colour refractometer 2-10212  
 resau astronomy for radio source optical identification 2-32809  
 resau astronomy on Palomar Schmidt plates, variance analysis 2-32810  
 restoration of turbulence degraded images, review 2-53113  
 Ritchey-Chretien systems with prefocal correcting lenses, computer calc. techniques 2-42593  
 Roche harmonics construction for appl. to binary stars, soln. method 2-14783  
 rock sample thermal diffusivity meas. by Angstroms method 2-32672  
 rotation-shearing interferometry, appl. to holograms wavefront errors correction 2-53111  
 Savart plate measurements reduction procedure for polarisation survey 2-32860  
 selenographic reference method for lunar images 2-53097  
 solar activity forecasting, ultralong-range prediction method using geomag. activity index 2-48203  
 solar cycle peak prediction, use of faculae and interplanetary mag. field 2-23228  
 solar irradiance measurement by spaceborne instrumentation 2-18683  
 solar limb observations anal., effect of geometrical smearing on photospheric brightness fluctuations 2-38060  
 solar limb observations analysis, data restoration in tilted reference frame 2-38059  
 solar magnetism, technique for cross sectional mag. profile of coronal transient 2-3241  
 solar oscillation measurement with device having a magneto-optical filter 2-18706  
 solar photosphere, magnetic faculae, temperature deficit detect. method 2-10328  
 solar plasma diagnostics, use of spectral emission lines 2-28358  
 solar potential magnetic fields calculation, Green's function methods 2-53235  
 solar research, Z 2-3185  
 solar speckle pattern temporal autocorrel. function study 2-23227  
 solar spectrum synthesis, computer program and sample atlas from 224 to 300 nm 2-53116  
 solar variability measurement by spaceborne techniques 2-18716  
 space technology and the optical sciences 2-53043  
 speckle image reconstruction problem, wave-front correl. function and deterministic wave-front aberration influence 2-18714  
 speckle interferometry, ang. dependence of atmospheric turbulence effect 2-53110  
 speckle interferometry, modifications for astronomical reconstruction 2-53112  
 speckle interferometry, optimum exposure time and filter bandwidth 2-53109  
 speckle interferometry, quantification of atmospheric turbulence effects on imaging and pseudo-imaging systems 2-52932  
 speckle interferometry, signal to noise ratio 2-53108  
 spectral unevenly sampled data, information recovery, two machine efficient solns. 2-53096  
 spectrogram scale distortion reduction method 2-28353  
 spectrometry at sub-mm wavelengths using monochromator-interferometer combination 2-18701  
 star-like photometry and spectrophotometry of Sun using diffraction technique 2-42607  
 starspot temp. and area determ. from V and R light curves 2-28462  
 statistical anal. under incomplete knowledge of data, generalised formulation for population distrib. determ. 2-38063  
 stellar dynamics, spectral anal. using Fourier transforms of coordinates 2-53337  
 stellar interferometry, design of prototype 11 metre modern Michelson interferometer 2-53088  
 stellar interferometry at high ang. resolution, appl. to study of single objects in visual region 2-53104  
 stellar photometry, appl. of Geneva photometric boxes to distances and reddening for 43 open clusters 2-38256  
 stellar photometry, determ. of extra-atmospheric monochromatic magnitudes in region of telluric bands 2-53101  
 stellar photometry, optical design criteria for photoelectric photometers 2-14780  
 stellar radial velocities meas., digital method and appl. to Lacerta OB1 association 2-3200

**astronomical techniques continued**

stellar speckle interferometry, object intensity distrib. determ. method 2-42608  
 stellar spectral classification for G, K, M-type stars, use of medium resolution IR spectra (*Italian*) 2-10398  
 stellar trigonometric parallaxes, systematic effects determ. from inter-observatory comparisons 2-14846  
 stochastic processes, time asymmetry anal. method, appl. to pulsar signals 2-10329  
 Sun, quick matching method to determine radius-luminosity relation 2-53100  
 sunspot number prediction with forecasting charts 2-53202  
 sunspot theories distinguishment 2-23229  
 supernova remnant hydrodynamical evolution boundary conditions arbitrary form 2-10499  
 telescope mirror performance testing using IKAP-2 interferometer 2-10861  
 three-body problems, scattering, new treatment techniques 2-32816  
 transformations between photometric systems, VRI example 2-23224  
 trigonometric parallax reduction techniques 2-53102  
 triple probe method for plasma parameter display in spacecraft condition 2-32805  
 two-telescopes interferometry, appl. to stellar diameter meas. at optical wavelengths 2-28445  
 Universe size and age determ. 2-38351  
 visual binary stars, orbit determ. from parameters of apparent motion over short arc 2-6642  
 X-ray and  $\gamma$ -ray superfast photometry 2-42606  
 X-ray imaging with normal incidence mirror 2-19226  
 X-ray sources optical identification methods for Einstein Observatory medium and deep surveys 2-48159  
 X-ray sources spectra, numerical soln. of time-depend. Compton scatt. problems via integral eqn. 2-14952

**astronomical telescopes**  
*see also radiotelescopes*  
 AXAF high-resolution X-ray scatt. meas. 2-14777  
 celestial pole locator for portable telescopes 2-48152  
 CHASE grazing incidence telescope and spectrometer (Spacelab 2) 2-32849  
 Compton telescope, appl. to gamma radiation meas. between 0.4 Me and 7 MeV at balloon altitudes 2-10289  
 EUV grazing incidence telescopes 2-32850  
 EUV telescope devel. for ARIES rocket, 1 m normal incidence mirror 2-48148  
 EXOSAT X-ray imaging telescopes, performance and instrumentation 2-48134  
 gamma-ray telescope, passively anti-collimated, design, calibration and sensitivity 2-18703  
 gamma-ray telescope using coded aperture mask and drift chamber 2-38058  
 GIRL baffle system and telescope straightlight anal. 2-14774  
 grazing incidence mirrors produced by galvanoplastic technique, astron. appl. 2-25092  
 GRIST, high-resolution obs. of solar transition region 2-32980  
 GRIST and SOT, joint accommodation and operation 2-32844  
 GRIST instrumentation 2-32843  
 GRIST observations of non-solar objects: observational constraints 2-33088  
 incoherent IR spatial interferometer, appl. to resolution of late-type stars 2-53089  
 intensity interferometer, design and potential for stellar astronomy 2-53107  
 IRAS and SIRTf telescope stray light mechanism and performance comparison 2-14773  
 IRAS telescope stray light control 2-14772  
 McMath telescope, solar speckle pattern temporal autocorrel. function study 2-23227  
 Michelson stellar interferometer, prototype 11 metre instrument design 2-53088  
 Michelson stellar interferometers, active control 2-53087  
 mirror fabrication, production regime determ. in automated system 2-49960  
 mirror performance testing using IKAP-2 interferometer 2-10861  
 mirror surface finishing, tool size selection 2-49955  
 Multiple Mirror Telescope (book) 2-14986  
 parabolic 6-meter mirror, investigation under optical shop conditions 2-3194  
 reflector telescope mirrors, Al reflective coatings, vacuum techniques 2-10322  
 Ritchey-Chretien systems with prefocal correcting lenses, computer calc. techniques 2-42593  
 Schmidt type satellite telescope, stray light calcs. without using large computers 2-14771  
 SEUTS for Shuttle/Spacelab 2-32848  
 Solar Optical Telescope, NASA plans 2-32845  
 solar soft X-ray and XUV telescope for Space Shuttle deployment 2-18705  
 SOT instrumentation 2-32846  
 Space Telescope, image processing hardware, graphics systems 2-18707  
 Space Telescope, NASA's project 2-48146  
 Space Telescope (book) 2-14986  
 UV mirror surfaces, IR vacuum deposition appl. 2-51811  
 very large ground-based instruments, future designs for IR and optical region 2-53083  
 very long baseline amplitude interferometer, prototype 2-53086  
 Wolter type telescopes and Zerodur flat mirrors, X-ray scatt. meas. 2-14776  
 X-ray astronomy use of wide angle X-ray optics 2-48151  
 X-ray five mirror Wolter 1 telescope, design and performance 2-48149  
 X-ray mirrors (*Japanese*) 2-28341  
 X-ray telescope on board K-10-14 sounding rocket, for obs. of Cygnus Loop (*Japanese*) 2-6536  
 X-ray telescopes, imaging optics, appls. to astrophysical observations 2-32841  
 X-ray telescopes (book) 2-14986

**astronomy** *see astronomy and astrophysics*

**astronomy and astrophysics**

*see also astroarchaeology; astronomical catalogues; astronomical instruments; astronomical observations; astronomical observatories; astronomical spectra; clusters of galaxies; cosmology; extraterrestrial life; galax-*



## astronomy and astrophysics continued

- ies; *gamma-ray astronomy*; *infrared astronomy*; *intergalactic matter*; *interplanetary matter*; *interstellar magnetic fields*; *occultations*; *planetary*; *radioastronomy*; *solar system*; *stars*; *ultraviolet astronomy*; *X-ray astronomy*
- 1982 British Astronomical Association Handbook 2-33250
- AAVSO spring meeting, Tucson, Arizona (1981 April 25) 2-28592
- albedo in planetary astronomy, definition and appl. to irregular particles 2-32950
- American Astronomical Society, 158th meeting, Calgary, Alberta, Canada, (1981 June 28 to July 1) 2-6698
- annual review, book (vol.19) 2-33255
- Arabic astronomy, history (*Japanese*) 2-23400
- ASP meeting (Seattle, July 1981) 2-28603
- astrometry, effects of atmospheric refraction on tangential coordinates (*French*) 2-6544
- astronomical optics, instrumentation and techniques, conference, Oberkochen, Germany, (1981 April 1 to 3) (*German/English*) 2-33223
- Astrophysics and Space Physics Reviews (Vol.1) 2-28621
- atmosphere refraction, calc. by means of continued fractions 2-6430
- atmosphere refraction, characts. in Northern Hemisphere 2-6431
- atmosphere refraction at Mizusawa Latitude Observatory, Japan, calc. 2-10168
- atmosphere refraction rel. to environmental systematics, effects of urban heat islands 2-6428
- atmosphere seeing conditions, implications for modern 11-metre Michelson stellar interferometer 2-53088
- atmosphere turbulence effects on imaging and pseudo-imaging systems, nature and quantification 2-52932
- atmosphere turbulence effects on speckle interferometry, ang. dependence 2-53110
- atmospheric refraction in astronomy, research today and tomorrow 2-6427
- atomic data rel. to GRIST observing programs 2-32837
- calendars, basic formulae for computer calcs. of cyclic fixed lunisolar calendars (*German*) 2-10333
- Canadian Astronomical Society, 12th meeting (Quebec, May 1981) 2-48393
- conference, Astronomical Science Group of Ireland, Coleraine, Ulster (May 1979) 2-28598
- Conference, Astronomical Science Group of Ireland, Dublin, Ireland (Dec. 1979) 2-28599
- COSMOS used for image processing 2-38064
- dynamical equinox, differing definitions in rotating reference frame and inertial frame 2-6520
- dynamo theory and mean field MHD (book) 2-48415
- Easter dates, frequency distrib. 2-32867
- elementary quantum, consequences in physics and astrophysics of minimal energy quantum 2-53078
- EUV obs. of extra-solar objects, astrophysical problems 2-33087
- exotic nuclear beta transition, astrophysical examples 2-19508
- extra-galactic distance scale determ. appl. of obs. of novae 2-33149
- fluid dynamics, higher order eqns. for multicomponent nonequilib. stellar atmospheres and star clusters 2-32829
- fundamental astrometry, future developments 2-53060
- glossary of astronomy and astrophysics, second edition 2-38374
- gravitation and elementary particle physics (book) 2-48416
- gravitational instability in multicomponent fluid, anal. rel. to relativistic cosmology 2-42592
- Hanle effect applied to magnetic field diagnostics 2-32839
- high energy astrophysics, book 2-38378
- history, astronomy in the 14th century (*Italian*) 2-53119
- IAU (1976, 1979) System of Fundamental Astronomical Constants, numerical values 2-42582
- kinematic astronomy, coord. systems and transformations 2-53056
- light propag., gravitational and EM radiation nonlinear effects 2-87
- mean obliquity, differing definitions in rotating reference frame and inertial frame 2-6520
- megalithic stone circles, Scotland 2-42613
- molecular spectroscopy prompted by astrophysical observations, review 2-53075
- Neutrino Astronomical Object, form. and struct. (*Chinese*) 2-18773
- observer's handbook of Royal Astronomical Society of Canada (1982) 2-38373
- physicist, role in astronomy 2-53121
- plasma interactions with neutral gases, crit. ionisation vel. effect 2-14767
- plasma magnetic field line reconnection, laboratory expts. 2-12425
- plasma physics, influence of dense plasma on ions with K-electrons 2-10313
- plasmas with significant charge separation, occurrence and behaviour 2-12273
- population distributions determination, statistical anal. under incomplete knowledge of data 2-38063
- r-process, beta strength functions and neutron capture rate depend. 2-23218
- scale-invariant gravitation theory, reformulation and astrophysical test 2-3190
- scientific meeting of Astronomical Society, Munster, Germany (1980 September 22 to 25) (*German, English*) 2-6703
- seeing conditions at Roque de los Muchachos Observatory, La Palma, rel. to microthermal fluctuations 2-14768
- shock wave emergence at gas boundary, self-similar soln. 2-6535
- spherical clouds, self-gravitating, convective instability 2-32826
- star charts projections, scale errors for polar and equatorial projections (*Russian*) 2-53055
- teaching astronomy at university 2-14792
- tropical archaeoastronomy 2-14793
- turbulent dynamo, intermediate intensity fields at large-scale velocity 2-42590
- ultrarelativistic matter with Van der Waals eqn. of state, phase transitions and fluctuations 2-19471
- $^{12}\text{C}(^{12}\text{C},\text{X})$ ,  $E_{\text{cm}}=2.8\text{--}6.3$  MeV, fusion reaction, astrophysical aspects study 2-39070
- Fe II, semiempirical calc. of gf values 2-7516
- H cold atoms in gas phase and surface, at. proc. eses 2-49543
- $^{16}\text{O}(p,\gamma)^{17}\text{O}$ , 23.7 and 44.6 MeV, 6.13 MeV  $\gamma$ -ray prod., implications for  $\gamma$ -ray astronomy 2-34039

## astronomy computing

- see also *computerised instrumentation*
- auto-oscillatory behaviour, limiting cycle calc. 2-18718

## astronomy computing continued

- calendars, basic formulae for computer calcs. of cyclic fixed lunisolar calendars (*German*) 2-10333
- celestial mechanics, numerical integration of satellites of outer planets 2-32815
- COSMOS used for image processing 2-38064
- ephemerides computation, compact data for navigation and astronomy, (1981 to 1985) 2-10334
- galaxy images automatic classification, appl. of Fourier structural anal. 2-33144
- HIPPARCOS, signal and data processing, numerical simulation 2-10331
- images, information treatment (*French*) 2-3205
- IR astronomical satellite, obs. planning facility 2-48136
- IRAS and SIRT telescope stray radiation propag. path anal. using APART program 2-14773
- orbit calcs. near equilib. points, discrete mechanics method 2-3188
- periods searching in large series of observational data, in Fortran (*German*) 2-10332
- plate processing routine for Cape astrometric survey 2-53059
- radio meteor radiant distributions imaging, method using microprocessor-based radar system 2-48157
- radioastronomical data with unknown noise, use of /automatic search algorithm 2-28354
- radioastronomical observations, automatic optimal Gauss anal. algorithm 2-28355
- radioheliograph at Nancy (*French*) 2-6537
- solar observatory, data acquisition systems using Perkin-Elmer 32-bit computers 2-19918
- stellar collapse and shock wave propag., computer simulations 2-28486
- supernova database, proposed creation 2-53114
- astrophysics computing**
- see also *computerised instrumentation*
- solar spectrum synthesis, computer program and sample atlas from 224 to 300 nm 2-53116
- asynchronous electric machines** see *asynchronous machines*
- asynchronous machines**
- see also *induction motors*
- kinetic energy accumulator electric machines starting characts. determ. 2-47521
- asynchronous motors** see *induction motors*
- atmosphere, solar** see *solar atmosphere*
- atmosphere, terrestrial** see *terrestrial atmosphere*
- atmosphere, upper** see *upper atmosphere*
- atmospheric acoustics**
- boundary layer, vertical sounding, changes in acoustic signal charact. 2-37961
- Concorde-generated shock waves, ducted propag. 2-44544
- earthquake generated infrasound, of March 1964 earthquake 2-47955
- echo sounding of lower atmosphere preliminary studies 2-23135
- extrapolation method for calculating wind influence on environmental sound levels 2-14146
- F<sub>2</sub>-layer infrasonic oscils, assoc. with thunderstorms, detect. by HF radar obs. 2-14672
- infrasound produced by lightning discharges (*Russian*) 2-10122
- infrasound propagation, ray theory 2-32552
- point-source noise propagation, influence of meteorological parameters 2-14147
- propagation in absorptive dispersion fluid, rel. to freq. response of thermally driven atmosphere 2-47999
- radaracoustic sounding, estimation of Doppler freq. pulsation energy spectra (*Russian*) 2-44517
- review of sound propagation in the atmosphere 2-49988
- scattering form volume variability, wave eqn. anal. 2-3053
- smog forecasting, accurate Doppler radar meas. of atmospheric speed of sound (*Russian*) 2-44516
- sonic booms of higher order in homogeneous and stratified atmosphere (*German*) 2-25168
- sound propagation over ground having inhomogeneous surface impedance 2-7939
- temperature of boundary layer, measurable by acoustic sounding (*Russian*) 2-48026
- Visakhapatnam, India, sea breeze detect. with acoustic radar 2-42411
- atmospheric boundary layer**
- aerosol source region identification by remote infrared obs. 2-52908
- aerosols light scattering, temporal var. at Brookhaven National Laboratory, New York 2-9713
- aerosols produced from breaking wave bubbles 2-18541
- agrometeorology, heat and mass transfer, electrochem. simulation 2-4687
- air-ocean surface, shock wave interaction investigation 2-52909
- Anderson Creek Valley, Geysers, California, nighttime winds, pilot balloon obs. 2-28165
- arid surface with plants, model of surface-atmosphere interaction 2-10140
- Asia marine boundary layer, aerosol sulphate, chloride and Na concs. 2-14592
- balloon (super-pressure type) motion in convective boundary layer, comparison with air mass dispersion 2-14564
- baroclinic flow over sloping topography, model of flow instability 2-23068
- baroclinic instability influenced by topography 2-23074
- baroclinic layer, two-layer first-order closure model 2-28150
- barotropic boundary layer, model temp. profiles 2-52892
- N Bay of Bengal, surface energy exchange processes rel. to subsurface thermal struct. and mixed layer depth 2-3027
- benz(a)pyrene, pollution of Atlantic air 2-22688
- Boulder Atmospheric Observatory winds, diurnal behaviour 2-14520
- Bowen ratio measurement system 2-10181
- Christchurch, New Zealand, urban heat island model 2-14561
- coastal site, vertical struct. of wind turbulence props. 2-47978
- convective boundary layer, comparison of struct. parameter scaling expressions with turbulence closure model predictions 2-14536
- critical roughness Reynolds numbers of surface layer 2-10142
- density of surface layer, rel. to astronomical refr. vars. 2-6429
- desert region with low relief, stagnation and nocturnal temp. jumps 2-23054
- dispersal and diffusion of tracer gases released from meteorological towers 2-42454
- drainage wind from large area, temp. and vel. oscils. 2-14560



**atmospheric boundary layer continued**

- EM induction, E-polarisation boundary conditions above laterally non-uniform conductors 2-2921
- England, urban and topography affects on surface temp., satellite obs. 2-23095
- flow over terrain, analytic soln. of 3-D stationary flow 2-14563
- fog dispersal by linear heat source, calc. of clearing zone 2-28184
- geostrophic wind vector behaviour at temp. inversions (*German*) 2-3047
- Geysers, California, horizontal wind direction fluctuations over complex terrain, diurnal var. 2-14517
- gravity wave effect on turbulence of planetary boundary layer 2-23076
- gravity wave interaction with planetary boundary layer 2-23075
- heat flux from natural surfaces using remotely sensed surface temp. 2-6443
- heavy-gas spread from point source into complex terrain, hydraulic modelling 2-42060
- humidity measurement by laser backscattering method (*Russian*) 2-37935
- humidity measurement method, using ruby lidar system 2-14622
- Hurricane Allen, Caribbean, Aug. 1980, airborne microwave remote sensing obs. 2-37962
- inclined terrain, geostrophic drag and heat transfer 2-32580
- initial value model of stratified boundary layer (*Chinese*) 2-18486
- isolated hill, obs. of wind flow (Ailsa Craig, Scotland) 2-23077
- Johannesburg, S.Africa, urban heat plume dynamics 2-10119
- Lake Kinneret (Sea of Galilee), land-sea breezes 2-52886
- magnetosphere inner edge defined as solar wind plasmoid front side penetration 2-3175
- magnetosphere low latitude boundary layer struct. 2-10253
- marine  $^{210}\text{Pb}$  aerosols, particles size distrib. 2-37929
- marine boundary layer, meteorological descriptions for optical props. 2-32641
- marine boundary layer, Over-the-Horizon optical scatter propag. 2-32639
- marine boundary layer struct. near a developed sea, numerical model 2-23073
- meteorological tower equipped for automatic temp. and wind meas. (*Chinese*) 2-18585
- mixing of marine boundary layer by trade-wind cumuli 2-28141
- mountain induced gravity waves, Vitosha mts., Bulgaria (*German*) 2-47942
- nocturnal boundary-layer height, rate eqn. 2-28151
- northern hemisphere ground level air temp., climatic changes (1881-1978) 2-14598
- ocean gravity-capillary waves, steady state spectral density, air-sea interaction 2-47896
- ocean waves, airflow separation, wind tunnel obs. 2-10117
- ocean waves breaking to form droplets, photographic obs. 2-52913
- ocean wind-wave generation estimation in discrete spectral model 2-18462
- ocean-atmosphere gas exchange rate (*Russian*) 2-37936
- ocean-atmosphere interaction, dynamics of turbulent rough ocean surface layer (*Russian*) 2-10065
- optical conditions in atmosphere surface layer, rel. to levelling refr. research in geodesy 2-3092
- oscillations in a turbulent Ekman layer 2-52882
- overwater mm and cm radiowaves, energy spectra charact. of amplitude and arrival angle fluctuations 2-37960
- parameterisation in large-scale meteorological models, review 2-10110
- particle dry deposition velocity onto cereal crop land 2-47939
- planetary boundary layer, convective, turbulent scaling parameters 2-14518
- planetary boundary layer, entrainment processes and surface roughness 2-3070
- planetary boundary layer, similarity functions from VOVES expt. 2-52888
- planetary boundary layer, use of detailed model for parameterisation purposes 2-14538
- planetary boundary layer clear air roll vortices and turbulent motion, meas. with two techniques 2-28232
- planetary boundary layer stabilised by surface buoyancy, similarity theory 2-23051
- plume dispersion, topography effects 2-14132
- plume from chimney, cross-section struct. model 2-10118
- plume rise dynamics, ambient turbulence effects on bent-over plume (*Chinese*) 2-18483
- plume rise models, effective source flux parameters 2-47936
- pollutant conc. near to ground level source, use of wind-rose model 2-47541
- pollutant concentrations in stable boundary layer due to surface releases 2-47540
- pollutant diffusion calc. including effect of surface absorpt. 2-22687
- pollutant dispersal in atmosphere, boundary condition 2-22683
- pollutant dispersal model for convective boundary layer 2-47539
- pollutant ground-level conc. downwind of line source, analytic approx. 2-14134
- pollutant propagation and turbulent diffusion in surface layer 2-6440
- pollutants CO and methane over India, Saudi Arabia and Arabian Sea 2-32144
- pollution diffusivity tensor 2-32559
- pollution dispersion from ground-level source, surface roughness effects 2-2822
- quasi-geostrophic motion, second temporal boundary layer 2-23088
- Quebec City, urban heat island obs. during winter (*French*) 2-22682
- radiowave refractive index spatial structure at coastal site 2-3078
- rapidly rotating recycling flow over topography, laboratory expt. 2-52914
- sand beach, drag coeffs. and roughness length obs. 2-14558
- sea-air gas transfer rate, wind speed depend. 2-10113
- sea-land roughness discontinuity affecting wind struct. 2-10115
- seeing conditions of disturbed ground layers, image visibility obs. 2-10159
- shear of horizontal wind, depend. on diurnal variation of stability 2-32603
- snow albedo feedbacks in atmospheric models, linear and nonlinear aspects 2-18539
- soil moisture as regulator of heat fluxes between atm. and ground 2-32598
- Southern Ocean, air-sea energy exchange calcs. 2-18449
- spatial coherence of temp. fluctuations showing ramp-structure 2-52885
- stable boundary layer depth, prognostic model 2-10112
- stably stratified internal boundary layer formed by warm air advection over cooler sea 2-14521

**atmospheric boundary layer continued**

- subgrid scale turbulence in 3-D cloud convection model (*French*) 2-52889
- surf zone, drag coeffs. and roughness length obs. 2-14558
- surface layer over melting snowpeak, anomalous behaviour obs. 2-14551
- surface meteorological observations, new code 2-52916
- surface temperature, long term stabilisation by negative feedback mechanism 2-37950
- surface topography, rel. to barotropic theory for blocking anticyclones 2-14537
- temperature diurnal variation, calc. of curve for cloudless sky 2-28176
- temperature inversions rel. to abnormal atmospheric refr. phenomena 2-6436
- temperature vertical profile, measurable by acoustic sounding (*Russian*) 2-48026
- thermal plumes, echosonde study 2-23065
- three-dimensional flow over mesoscale mountains, linear theory 2-18493
- tilt of EM waves propagating above a rough sea 2-52918
- topographic interaction with atmospheric movements, resonant flows induced by Rossby lee waves 2-18503
- tropical Atlantic, latitude distrib. of  $R_n$ , aerosol,  $\text{H}_2\text{O}$  and sunlight 2-28179
- turbulence (inhomogeneous), numerical simulation of particle trajectories 2-52883
- turbulence and vertical refraction angle from angle-of-arrival variance 2-6434
- turbulence downstream of abrupt change of roughness and heat flux 2-23052
- turbulence in daytime boundary layer, Lagrangian and Eulerian time-scale relations 2-14549
- turbulence models, note on upper boundary conditions 2-52887
- turbulence of marine surface layer, turbulence spectral characts. 2-3074
- inhomogeneous turbulence of surface layer, numerical simulation of particle trajectories 2-52884
- turbulence properties in boundary layer, measurable by obs. of elec. charge turbulence 2-42424
- turbulence Reynolds number and kinetic energy balance 2-14515
- turbulence statistics of surface layer 2-23055
- turbulent heat transfer, obs. in mountainous area of Czechoslovakia 2-14528
- turbulent shear flow struct. functions, Kolmogorov consts. 2-6418
- turbulent transport processes above surface layer, buoyancy effects 2-3073
- urban heat island over Christchurch, New Zealand 2-14561
- vegetation, interception of solar radiation, model for clumped vegetation 2-6410
- velocity derivative high order moments, Reynolds number depend. 2-14513
- vertical sounding, changes in acoustic signal charact. 2-37961
- S Victoria Land, Antarctica, microclimate and temp. of a dry valley 2-47979
- Visakhapatnam, India, surface to air heat transfer causing thermal turbulence, acoustic radar detect. 2-42411
- watersput, horizontal vel. struct. obs. made with lidar 2-14559
- watersput velocity measurement by airborne Doppler lidar method 2-14616
- wind flow over hills, laboratory expts. 2-10116
- wind longitudinal r.m.s. velocities, terrain depend. 2-18543
- wind shear and gustiness at the Mod-I site, Boone, North Carolina 2-32611
- $\text{I}_2$  emission from sea surface in presence of ozone 2-10081
- NO in marine boundary layer, outgassed from seawater 2-3035
- $\text{O}_3$  budget, aircraft meas. of  $\text{O}_3$  eddy flux and mean conc. 2-18527
- $\text{O}_3$  ground-level conc. enhancement due to transport from stratosphere 2-10136

**atmospheric chemistry***see also atmospheric composition*

- aerosol, formation photochemistry rel. to aerosol conc. 2-14543
- aerosol transformation processes (*Russian*) 2-10125
- Arctic air chemistry, conf. (Narragansett, Rhode Island, May 1980) 2-6
- Arctic region, pollution from local sources (*German*) 2-18158
- aurora, excitation of N II 2145 Å feature 2-32701
- auroras, type B,  $\text{N}_2$  excitation model accounting for red lower border 2-32702
- cloud water chemistry and sulphate prod. 2-10108
- Erevan, photochemical  $\text{O}_3$  prod. rel. to meteorological conditions 2-22685
- $\text{F}_2$ -layer, photochemical effects of strong radiowave action 2-14657
- $\text{F}_2$ -layer, photochemistry and dynamics above Rullin, China, during solar eclipse (1980 February 16) (*Chinese*) 2-3122
- Hawaii rainfall, pH, cond. and comp. 2-23061
- hydrocarbons oxidation in unpolluted atmosphere, rel. to peroxyacetyl nitrate (PAN) prod. 2-18502
- ionosphere, effects of solar eclipse, 1980 February 16, on photochemistry and total electron content (*Chinese*) 2-3121
- lower ionosphere, molecules ionisation under effect of strong radio pulses 2-3131
- mesosphere, radiative-photochem. response to dynamical forcing 2-10135
- mesosphere and stratosphere warming event; photochem. and trace constituent calcs. 2-10129
- mesosphere  $\text{N}_2\text{O}$  source due to  $\text{N}_2(\text{A}^3\Sigma_u^+)$  excitation by solar UV radiation 2-42437
- mesosphere-lower thermosphere photochem. model including vertical transport 2-10217
- metal enrichment of airborne dust, study of glacier ice 2-52897
- middle atmosphere chemistry, effect of odd H prod. in precipitation events 2-3068
- Moscow, photochemical  $\text{O}_3$  prod. rel. to meteorological conditions 2-22685
- nightglow, O I and  $\text{O}_2$  emissions excitation 2-10224
- peroxyacetyl nitrate (PAN) prod. in unpolluted atmosphere, important reservoir for N oxides 2-18502
- peroxyacetyl nitrate as indicator of photochemically polluted air 2-14136
- photodissociation processes, anal. of solar UV spectral irradiance 2-10149
- radiation belt heavy ions, loss, transport and charge exchange 2-48113
- rain chemical composition at worldwide high-altitude sites 2-47941
- rainwater natural acidity, factor controlling variability 2-52907
- solvated electrons, existence in upper atmos. 2-38013
- stratosphere, 2-D chemical model involving transport 2-42417
- stratosphere, chemical and thermal response to long-term solar UV irradiance var. 2-18531



**atmospheric chemistry continued**

- stratosphere, impact of fluorocarbons and other pollutants on O<sub>3</sub> content 2-6204
- stratosphere, O<sub>3</sub> depletion estimates for global halocarbon usage by linear superposition method 2-6205
- stratosphere, OCS photolysis and 200-300 nm region absorpt., CO prod. 2-31939
- stratosphere chemical transport parameterisation by eddy diffusion, effect of temp./chemistry coupling 2-32588
- stratosphere O<sub>3</sub>, destruction, role of catalytic mechanisms involving ClX 2-32593
- stratosphere photochemical equilib. model used to determine densities 2-32592
- stratosphere radiation, photochemistry and dynamics coupling 2-37939
- stratosphere trace constituents, 2-D advective transport model 2-42416
- thermosphere, lower, meteor-ablation model of Na and K layers 2-28255
- thermosphere zonally averaged chemical-dynamical model 2-38008
- troposphere, chemical reactions rel. to spectral anal. of aerosol size distrib. fluctuations 2-18547
- troposphere, global photochemical model 2-18522
- troposphere, photolysis rates, aerosol scattering and cloudiness effects 2-28120
- troposphere OCS destruction by photolysis 2-28134
- upper atmosphere chemiluminescent emission on release of Al and compounds 2-32694
- CS photochemistry, form. from CS<sub>2</sub> oxidation and source for OCS 2-23059
- CS<sub>2</sub> photooxidation in troposphere, role in S chemistry 2-32563
- ClO in stratosphere, review of in situ obs. 2-18525
- H, dynamics, total mixing ratio rel. to global escape flux (*Rumanian*) 2-23152
- HNO<sub>3</sub>, stratosphere altitude distrib., photochem. model 2-42418
- H<sub>2</sub>O, photodissociation under mesospheric conditions 2-10133
- N, concentration in polar region thermosphere 2-32692
- NO in polar ionosphere, formation mechanism 2-14638
- NO, stratosphere altitude distrib., photochem. model 2-42418
- NO<sub>2</sub>, atmospheric chemistry and abundance 2-42414
- NO<sub>2</sub>, liquid phase chem. reactions and deposition to oceans 2-42415
- NO<sub>3</sub>, stratosphere altitude distrib., photochem. model 2-42418
- NO<sub>3</sub>, diurnal variation and formation chemistry 2-42414
- NO<sub>3</sub><sup>-</sup> ion production by aurora, rel. to use of nitrate in Antarctic firn as solar activity marker 2-18473
- NO<sub>x</sub> and NO production by lightning, implications of meas. in laboratory discharge 2-28130
- NO<sub>x</sub> in unpolluted troposphere, implication of natural sources for latit. gradients 2-32565
- N<sub>2</sub>O<sub>5</sub>, atmospheric chemistry and abundance 2-42414
- Na I natural emission excitation mechanism in upper atmosphere 2-3113
- Na layer distribution photochemistry modeling 2-23149
- O<sub>2</sub><sup>+</sup> in ionosphere, reaction rate coeff. for dissociative recombination 2-10249
- O<sub>3</sub> conc. in upper stratosphere and mesosphere photochem. model 2-14544
- O<sub>3</sub> depletion due to chlorofluorocarbons, validation of 1-D models 2-3067
- O<sub>3</sub> depletion due to chlorofluorocarbons, 2-D model 2-47976
- O<sub>3</sub> formation and spatial distrib. of precursor emission for Sydney 2-3045
- O<sub>3</sub> photochemistry in upper stratosphere during sunrise and sunset 2-3049
- O<sub>3</sub> production by lightning, implications of meas. in laboratory discharge 2-28130
- OCS in troposphere, effect of ocean hydrolysis on lifetime 2-18501
- OCS, photodissociation in upper atmos., troposphere and stratosphere 2-10218
- O(<sup>1</sup>D), non-thermal, production by O<sub>2</sub><sup>+</sup> dissociative recomb., theoretical model and obs. results 2-14644
- OH and CO composition of troposphere, 2-D time depend. model 2-10130
- OH, tropospheric global abundance model 2-10134
- O(<sup>1</sup>S) production in upper atmosphere, rel. to green light of night sky 2-14647
- O(<sup>1</sup>S) quenching by O<sub>2</sub> (a<sup>1</sup>Δ<sub>g</sub>) 2-32700
- <sup>18</sup>O<sub>2</sub> production in stratosphere, results from heavy O<sub>3</sub> height distrib. meas. 2-18500
- SO<sub>2</sub>, photochemical oxidation, IR spectra (*Russian*) 2-17909

**atmospheric composition**

- see also *atmospheric chemistry; atmospheric structure*
- acetylene, atmospheric conc. over N. Atlantic 2-42413
- acetylene, tropospheric concentration, IR spectral absorpt. obs. 2-42468
- aerosol, formation photochemistry rel. to aerosol conc. 2-14543
- aerosol, high-latitude stratosphere, 1978 and 1979 obs. 2-37963
- aerosol, size of natural aerosols, departure from Junge distrib. 2-47940
- aerosol salt obs., of air over Chinese cities (*Chinese*) 2-18492
- aerosol size distrib. meas. by multispectral solar extinction method 2-32677
- aerosol source region identification by remote infrared obs. 2-52908
- aerosols, meas. of trace elements in resuspended dust from school playgrounds 2-6206
- aerosols, multi-element airborne dust meas. for Walsall, England, (January to December 1979) 2-6202
- aerosols, multi-element airborne dust meas. for Walsall, England (December 1977 to November 1978) 2-6203
- aerosols, remote meas. of wind direction and velocity by laser radar (*Japanese*) 2-14628
- aerosols produced from breaking wave bubbles 2-18541
- Asia marine boundary layer, aerosol sulphate, chloride and Na concs. 2-14592
- tropical Atlantic, minor components latitude distrib. 2-28179
- carbon tetrachloride, atmospheric concentration, 1979 obs. 2-9716
- Carlsbad Caverns, USA, elec. parameters and <sup>222</sup>Rn comp. 2-32597
- chlorofluoromethanes, combined effects on stratospheric O<sub>3</sub>, air temp. and surface temp. 2-32142
- chlorotrifluoromethane, atm. conc., interferometric spectra study 2-14571
- clouds, influence of comp. and geometry on absorpt. of solar radiation 2-18568
- Colorado precipitation chemistry, effect of Mount St. Helens May-June 1980 eruption 2-9707
- D-region incoherent scattering, thermally induced chemical fluctuation effects 2-14666

**atmospheric composition continued**

- Denver, Colorado, trace gases and aerosols concs. in emission plume 2-18156
- dichlorofluoromethane, atmosphere midlatitude vertical profile (obs. made in 1977, 8, 9) 2-10131
- Erevan, atmosphere O<sub>3</sub> content rel. to meteorological conditions 2-22685
- ethane, atmospheric conc. over N. Atlantic 2-42413
- F-region convection model of ion composition 2-52982
- F-region ion density distrib. 2-23170
- fluorocarbon-22 spectra and abundance in stratosphere 2-28135
- fluorocarbons (C<sub>2</sub>F<sub>6</sub>, CF<sub>3</sub>Cl, CF<sub>3</sub>Br, C<sub>2</sub>F<sub>5</sub>Cl), atmospheric concentration, 1979 obs. 2-9716
- freon content of stratosphere (F13 to 14 and F13 to 116) 2-37955
- global measurement, advanced instrumentation for remote sensing 2-42480
- Great Wall nonurban area, China, aerosol comp., natural and pollutants 2-47544
- hydrocarbon conc. of air over N. Atlantic, C<sub>2</sub>-C<sub>5</sub> hydrocarbons 2-42413
- ice age climate and wind strength, E. Antarctic ice core study 2-3083
- Indian Ocean region, water vap. transport during 1975 monsoon 2-28189
- ion composition at high-latitude, 140-300 km altitude 2-23179
- ionosphere, effect on MF absorption at low latitude, seasonal and solar control 2-42516
- ionosphere, neutral comp. model rel. to var. of electron collision freq. 2-23166
- ionosphere, polar, O<sup>+</sup> and N<sup>+</sup> concs., magnetospheric effects 2-28269
- ionosphere, topside, latit. patterns in plasma scale heights and ion transition altitudes at low latits. 2-23163
- magnetosphere equatorial synchronous altitude region, heavy ion composition obs. 2-48112
- magnetosphere H<sup>+</sup>, He<sup>+</sup>, He<sup>2+</sup>, O<sup>+</sup> quantities and energy characts. during mag. storms 2-18648
- marine atmosphere, origin of particulate organic C as indicated by stable C isotopic comp. 2-28129
- mesosphere and stratosphere warming event, photochem. and trace constituent calcs. 2-10129
- mesosphere-lower thermosphere photochem. model including vertical transport 2-10217
- metal enrichment of airborne dust, study of glacier ice 2-52897
- methane, atmosphere midlatitude vertical profile (obs. made in 1977, 8, 9) 2-10131
- methane, recent increase and impending global temp. rise 2-2820
- methane, sources and rice paddy meas. 2-18521
- methane emission to troposphere from southeast USA forested freshwater swamps 2-28109
- methane trends in southern hemisphere 2-37928
- minor constituents determ. from solar IR spectral obs. 2-32688
- minor gas constituents effect on IR radiation field (*Russian*) 2-18570
- Moscow, atmosphere O<sub>3</sub> content rel. to meteorological conditions 2-22685
- N<sub>2</sub>O in troposphere, mole fraction determ. 2-18520
- natural gases, γ-ray detection, natural gases in Cerna Valley, Rumania (*Rumanian*) 2-28208
- O<sup>+</sup> in ionosphere and plasmasphere, prod. and transport 2-6498
- ocean-atmosphere gas exchange rate (*Russian*) 2-37936
- peroxyacetyl nitrate (PAN) prod. in unpolluted atmosphere, important reservoir for N oxides 2-18502
- plasmasphere, O<sup>2+</sup> density 2-32728
- pollutant concentrations over Apsheron Peninsula (Baku), forecasting technique 2-22684
- polycyclic aromatic hydrocarbons on dust from German cities 2-2821
- propane, atmospheric conc. over N. Atlantic 2-42413
- propene, atmospheric conc. over N. Atlantic 2-42413
- protonosphere electron content component, effect on upper plasmasphere 2-3165
- radiation belt heavy ions, loss, transport and charge exchange 2-48113
- rain chemical composition at worldwide high-altitude sites 2-47941
- rain-water, meteorological interpretation of chemical comp. at one measuring site 2-10151
- rainwater natural acidity, factor controlling variability 2-52907
- ring current ion composition 2-3160
- Rio de Janeiro, atmospheric conc. of metals and total suspended particulates 2-9714
- Sahara atmospheric particles, chem. composition (*French*) 2-42435
- small ion concentration in troposphere and stratosphere, balloon-borne meas. 2-18537
- solar cycle influence on atm., altitude depend. 2-18551
- solvated electrons in upper atmos. 2-38013
- stratosphere, abundances of HF and HCl from IR spectral obs. 2-37931
- stratosphere, emission spectra in submm range, constituent identification 2-6426
- stratosphere, ethane and propane, vertical profile meas. over S. France 2-18524
- stratosphere, interplanetary dust, transmission electron microscopy obs. 2-6571
- stratosphere, negative ion detect. and composition 2-23070
- stratosphere, O<sub>3</sub> depletion estimates for global halocarbon usage by linear superposition method 2-6205
- upper stratosphere, obs. of HF and HCl 2-32561
- stratosphere, sunrise O<sub>3</sub> depletion model 2-23062
- stratosphere, vertical O<sub>3</sub> profile rel. to external scale of clear air turbulence and vertical transport meas. 2-14553
- stratosphere aerosol sulphate from Garelloi volcanic eruption (1980) 2-22951
- stratosphere ion abundances and comp. meas. rel. to trace gas detect. 2-47973
- stratosphere O<sub>3</sub> content, impact of chlorofluorocarbons and other man-made pollutants 2-6204
- stratosphere O<sub>3</sub> trends, possible effects of chlorofluoromethanes pollution 2-10107
- stratosphere OH, low concs., implications for effects on O<sub>3</sub> 2-23046
- stratosphere positive ion composition, implications for neutral trace gases 2-28133
- stratosphere trace constituents, 2-D advective transport model 2-42416
- sulphate, content in polar ice cores, determ. by static elec. cond. obs. 2-28223
- sulphate aerosol growth in stratosphere 2-42421
- thermosphere, lower, meteor-ablation model of Na and K layers 2-28255
- thermospheric chemical composition model with horiz. wind effects 2-3112



## atmospheric composition continued

- thermosphere composition yearly variations anal., appl. of  $F_1$ -layer model 2-48058  
 thermosphere disturbed by magnetic storms, temp. and composition model 2-10215  
 thermosphere perturbed by geomagnetic storms theory 2-10216  
 lower thermosphere props. from incoherent radar obs. review 2-52972  
 thermosphere zonally averaged chemical-dynamical model 2-38008  
 topside ionosphere,  $O^+$ ,  $H^+$ ,  $He^+$  conc. profiles and diffusion coeffs. 2-3141  
 Toulouse, France, pollution particle composition of air (*French*) 2-47542  
 trace gas measurement with clean air sampling system 2-37932  
 trace gas pollution, increase throughout 1970s, greenhouse effect operation 2-37926  
 trace species concentration, response to solar cycle variations 2-18550  
 transport of chemically active species by planetary waves (*German*) 2-47945  
 trichlorofluoromethane, atmosphere midlatitude vertical profile (obs. made in 1977, 8, 9) 2-10131  
 troposphere, spectral anal. of trace gas concs. and aerosol meas. with new fast response sensor 2-18547  
 turbidity of air over Potsdam, E.Germany (*German*) 2-6405  
 upper atmosphere, compositional profiles rel. to IR radiance model 2-32699  
 upper atmosphere, effects of molecular diffusion 2-28254  
 upper atmosphere, seasonal-latitudinal vars. 2-14640  
 upper atmosphere K and Na layers, meteor ablation model anal. 2-28256  
 vertical profile of near-IR absorbing components by inversion of satellite brightness data (*Russian*) 2-38001  
 volcanic aerosols, physical chem., statistical anal. (*French*) 2-42325  
 volcanic ash from Mt. St. Helens 1980 eruption, mineralogical composition 2-32475  
 water integrated vapour density along long optical path, absorpt. band meas. 2-32567  
 water vapour, rel. to vertical brightness profile (*Russian*) 2-18575  
 water vapour exchange between land and ocean in northern hemisphere 2-42427  
 $^{10}Be/^{9}Be$  ratio used to analyse transport processes between stratosphere and troposphere 2-28226  
 CO<sub>2</sub> atmosphere midlatitude vertical profile (obs. made in 1977, 8, 9) 2-10131  
 CO<sub>2</sub> concentration in upper stratosphere, meas. from solar IR spectra 2-28132  
 CO<sub>2</sub> tropospheric hemispheric distrib. during 1974 July-August period 2-18523  
 CO<sub>2</sub> atmospheric content history, C cycle model 2-14596  
 CO<sub>2</sub> concentration during past 40000 yr, results from ice core sample meas. 2-37958  
 CO<sub>2</sub> content, Earth surface temp. sensitivity 2-18562  
 CO<sub>2</sub> effect on climate 2-14597  
 CO<sub>2</sub> global atmospheric meas., using computer-based meas. systems 2-14635  
 CO<sub>2</sub> in northern hemisphere, annual var. due to biomass 2-32591  
 CO<sub>2</sub>, ocean-atmos. gas exchange in Arctic Ocean 2-47926  
 CO<sub>2</sub> over Pacific at OWS P, sea surface temp. effect 2-28082  
 CO<sub>2</sub> partial press. buffered over geological time by negative feedback mechanism 2-37950  
 CO<sub>2</sub> releases, combined effects on stratospheric O<sub>3</sub>, air temp. and surface temp. 2-32142  
 CO<sub>2</sub>, review of greenhouse problem 2-10166  
 CO<sub>2</sub>, vertical profiles above E.African biomes (Kenya) 2-14546  
 $^{14}C$  activity, long term vars. and relation to geophysical and astrophysical phenomena 2-47948  
 $^{14}C$  activity, natural vars. on prolonged time scale rel. to solar activity 2-47827  
 $^{14}C$  content since 300 AD, tree ring evidence for solar activity and flux changes 2-18750  
 $^{14}C$ , cosmogenic, in terrestrial atmosphere, secular non-random vars. 2-37922  
 $^{14}C$ , cosmogenic, short-term vars., 1909-1952, rel. to 11-year cosmic ray vars. 2-48120  
 $^{18}O$  in troposphere, seasonal and latitudinal variations 2-10130  
 ClO in stratosphere, review of in situ obs. 2-18525  
 ClO radical, stratospheric composition 2-32618  
 Fe<sup>3+</sup> in upper atmosphere, obs. of Fe I 386 nm emission in twilight spectra 2-6486  
 H<sub>2</sub> dynamics in atmosphere, total mixing ratio rel. to global escape flux (*Rumanian*) 2-23152  
 H<sub>2</sub> in upper atmosphere, theoretical distrib. of conc. based on kinetic theory (*Rumanian*) 2-23151  
 H<sub>2</sub>, atmosphere midlatitude vertical profile (obs. made in 1977, 8, 9) 2-10131  
 HCN, stratosphere composition, IR spectra obs. 2-37964  
 HNO<sub>3</sub>, atm. conc., interferometric spectra study 2-14571  
 HNO<sub>3</sub>, stratosphere altitude distrib., photochem. model 2-42418  
 H<sub>2</sub>O content, determin. by Seasat microwave method 2-37957  
 H<sub>2</sub>O content of troposphere, meas. by satellite IR radiance method 2-14620  
 H<sub>2</sub>O, IR radiation absorpt. meas. 4.3 to 5.5  $\mu m$  2-10165  
 H<sub>2</sub>O, stratospheric altitude distrib. at high-latitudes 2-42422  
 H<sub>2</sub>O, stratospheric column density determ. from far IR absorpt. spectra by curve of growth method 2-28199  
 H<sub>2</sub>O total content changes and seasonal atmos. press. variations 2-10137  
 H<sub>2</sub>O, stratosphere vertical profile obs. 2-32618  
 H<sub>2</sub>SO<sub>4</sub> vapour concentration in stratosphere, extended meas. 2-32564  
 He<sup>+</sup> ionisation of thermosphere due to variable solar flux 2-52971  
 Hg emission into atmosphere from Mount St. Helens volcano during 1980, September 2-14434  
 I<sub>2</sub> emission from sea surface in presence of ozone 2-10081  
 N<sub>2</sub> concentration in polar region thermosphere 2-32692  
 N<sup>+</sup> topside equatorial ionosphere ion concs. 2-3128  
 NH<sub>3</sub> in Massachusetts, deposition on vegetation 2-23072  
 NO at 200 km, global distrib. from AED UVNO meas. 2-14643  
 NO, error anal. for  $\gamma$ -band airglow, measurement with self-absorpt. gas cell (*Japanese*) 2-3114  
 NO, in E-region, influence on electron conc. rel. to solar zenith angle (*French*) 2-14650  
 NO in marine boundary layer, outgassed from seawater 2-3035  
 NO in troposphere, global temporal and spatial distrib. (1976-80) 2-18519  
 NO, stratosphere altitude distrib., photochem. model 2-42418

## atmospheric composition continued

- NO<sub>2</sub>, atmospheric chemistry and abundance 2-42414  
 NO<sub>2</sub>, liquid phase chem. reactions and deposition to oceans 2-42415  
 NO<sub>2</sub>, seasonal trends in stratosphere over Calgary, twilight spectra 2-23056  
 NO<sub>2</sub>, stratosphere altitude distrib., photochem. model 2-42418  
 NO<sub>2</sub>, stratosphere mid-latitude summertime vertical distrib. 2-52891  
 NO<sub>2</sub>, diurnal analysis of local variabilities 2-18533  
 NO<sub>2</sub>, diurnal variation and formation chemistry 2-42414  
 NO<sub>2</sub> and NO production by lightning, implications of meas. in laboratory discharge 2-28130  
 NO<sub>2</sub> background mixing ratios over N.Atlantic 2-18526  
 NO<sub>2</sub> in unpolluted troposphere, implication of natural sources for latitudinal gradients 2-32565  
 N<sub>2</sub>O, atmosphere midlatitude vertical profile (obs. made in 1977, 8, 9) 2-10131  
 N<sub>2</sub>O<sub>5</sub>, atmospheric chemistry and abundance 2-42414  
 Na in upper atmos., abundance diurnal variation 2-52970  
 Na layer distribution photochemistry modeling 2-23149  
 Na layer of mesosphere, daytime lidar observations 2-52974  
 O<sub>2</sub> atomic density determination by nightglow obs. method 2-32674  
 O<sup>+</sup> ions in magnetosphere, ionospheric origin 2-28292  
 O<sup>+</sup> topside equatorial ionosphere ion concs. 2-3128  
 O<sub>2</sub> content in Precambrian atmosphere, rel. to Earth tectonic evolution 2-10032  
 O<sub>2</sub> density in upper atmosphere, meas. from solar H Lyman- $\alpha$  absorpt. 2-38012  
 O<sub>2</sub>, ocean-atmos. gas exchange in Arctic Ocean 2-47926  
 O<sub>2</sub>, ocean-atmos. gas exchange budget for World Ocean 2-47927  
 O<sub>2</sub><sup>+</sup> in ionosphere, reaction rate coeff. for dissociative recombination 2-10249  
 O<sub>3</sub> and aerosol profile meas. in lower troposphere using NASA Langley airborne DIAL lidar system 2-3108  
 O<sub>3</sub> at ground level, high concs. due to transport from stratosphere 2-10136  
 O<sub>3</sub> budget, aircraft meas. of O<sub>3</sub> eddy flux and mean conc. in boundary layer 2-18527  
 O<sub>3</sub> conc., rel. to solar cycle, proton events, solar rot. and cosmic rays 2-18549  
 O<sub>3</sub> conc. in upper stratosphere and mesosphere photochem. model 2-14544  
 O<sub>3</sub>, conc. in upper stratosphere, natural variability in tropical regions 2-28146  
 O<sub>3</sub> conc. variations due to the solar cycle 2-47947  
 O<sub>3</sub> concs. at Indian stations during high sunspot years 2-23067  
 O<sub>3</sub> content, control of time var. by quasi-biennial periodicity in solar phenomena 2-37952  
 O<sub>3</sub> density distribution, altitude profile 2-42412  
 O<sub>3</sub> depletion due to chlorofluorocarbons, validation of 1-D models 2-3067  
 O<sub>3</sub> depletion due to Tunguska meteor fall in 1908, model 2-32617  
 O<sub>3</sub> depletion of stratosphere, due to solar proton events 2-42419  
 O<sub>3</sub>, error in Dasibi flight meas. due to instrument wall loss 2-37930  
 O<sub>3</sub> global long term trends rel. to solar activity 2-32594  
 O<sub>3</sub> in European Russia during passage of southern cyclones 2-28183  
 O<sub>3</sub> in mesosphere during major warming event 2-10129  
 O<sub>3</sub> in stratosphere, effects of atmospheric CO<sub>2</sub> and chlorofluoromethanes 2-32142  
 O<sub>3</sub> in stratosphere and mesosphere over Thumba, rocket expts. 2-28171  
 O<sub>3</sub> measurement at nighttime, feasibility of observing stratosphere illuminated by moonlight 2-42477  
 O<sub>3</sub> mixing ratio in stratosphere, comparison of mass spectrometer and UV absorpt. meas. 2-28131  
 O<sub>3</sub>, monthly mean column total from 7 years of UV data, spatial and temporal var. 2-18529  
 O<sub>3</sub> production by lightning, implications of meas. in laboratory discharge 2-28130  
 O<sub>3</sub> profiles, determ. from high resolution UV spectra obtained with balloon-borne spectrometer 2-47934  
 O<sub>3</sub>, stratosphere vertical profile obs. 2-32618  
 O<sub>3</sub>, stratospheric column density determ. from far IR absorpt. spectra by curve of growth method 2-28199  
 O<sub>3</sub> total, summer maximum over NW.Europe 2-3069  
 O<sub>3</sub> total content from astronomical spectrophotometry (*Russian*) 2-10124  
 O<sub>3</sub>, total content variations, seasonal and interannual, 1970 to 1977 period 2-42420  
 O<sub>3</sub> total meas., time series analysis, no depletion 2-18528  
 O<sub>3</sub>, tropospheric hemispheric distrib. during 1974 July-August period 2-18523  
 OCS in troposphere, effect of ocean hydrolysis on lifetime 2-18501  
 O(<sup>1</sup>D), non-thermal, production by O<sub>2</sub><sup>+</sup> dissociative recomb., theoretical model and obs. results 2-14644  
 OH, global distrib., calc. using general circulation model 2-14542  
 OH radical, vertical column abundances, 1976 to 1979 obs. 2-10132  
 OH radical conc. in troposphere, seasonal and latitudinal variations 2-10130  
 OH, tropospheric global abundance model 2-10134  
 $^{18}O/^{16}O$  in stratosphere, meas. 2-18500  
 Pb, natural background conc. deduced from polar ice cores 2-52896  
 Rn concentration in lower atm. as index of vertical stability (*Spanish*) 2-14524  
 Rn near ground used to determine lower atm. vertical stability temporal var. (*Spanish*) 2-14522  
 $^{222}Rn$ , A=219, 220, 222, atmospheric conc. over Benghazi, Libya, from beta counting 2-14135  
 $^{222}Rn$  concentration near ground from vertical diffusion coefficient two layer model (*Spanish*) 2-14523  
 S gases, deposition from multiple scattered sources in Alberta 2-9697  
 SO<sub>2</sub> absorption cross-section meas. in 290-317 nm range 2-18155  
 SO<sub>2</sub> conc. in air of a coastal site, gaussian climatological model 2-47938  
 Th B/Rn relation, effect of meteorological variables (*Spanish*) 2-14525
- atmospheric density** see atmospheric pressure and density  
**atmospheric disturbances** see atmospheric movements; thunderstorms  
**atmospheric duct** see atmospheric electromagnetic wave propagation  
**atmospheric dynamics** see atmospheric movements  
**atmospheric electricity**  
 see also atmospheric electromagnetic wave propagation; atmospheric ionisation; atmospheric; aurora; electrojets; ionosphere; lightning; thunderstorms  
 AL index variability, effect of ionospheric cond. 2-32404  
 Arctic region, radar echoes altitude range and signal intensities 2-28157



**atmospheric electricity continued**

- aurora, solitary arc generation 2-42511  
auroral arc, electric field, ion and electron temps. obs. 2-18617  
auroral arc (prebreakup) electrodynamics and elec. fields 2-53001  
auroral arcs, electric currents and cond., obs. 2-28264  
auroral arcs, tangential elec. fields meas. in drifting arc 2-28262  
auroral morphology, electrostatic shocks, plasma wave emission, particle distribution and precipitation boundaries 2-10225  
auroral potential structure, rel. to newly emerging model of magnetospheric substorms 2-14728  
auroral zone, three-dimensional current flow in morning sector during substorm recovery phase 2-32742  
auroral zone parallel elec. fields mechanism 2-18619  
auroral zone parallel electric fields struct., use of electron data 2-10195  
Birkeland currents and low-latitude asymmetric disturbances 2-48101  
Birkeland currents distant mag. field effects determ. 2-32768  
Birkeland currents on large scale, seasonal depend. from mag. field data 2-38021  
boundary layer, E-polarisation conditions above laterally non-uniform conductors 2-9921  
Carlsbad Caverns, USA, elec. parameters and <sup>222</sup>Rn comp. 2-32597  
clouds, elec. charge separation in convective clouds 2-42430  
conductivities of auroral ionosphere, computer vars. during magnetospheric substorms 2-23158  
E-region, evening sector elec. field and electron density obs. 2-52987  
E-region, polar, elevated electron temps. and elec. field determ. 2-18625  
E-region nocturnal layers, directional elec. currents 2-53002  
electrojet, equatorial, magnetic storm time elec. field changes, VHF backscatter from plasma irregularities 2-6504  
electrostatic pot. gradient meas. near sea level 2-28630  
equatorial Cowling conductivity, longitudinal depend. in E-region 2-32705  
equatorial electrojet E-region, Joule heating, rel. to electron and neutral gas temps. 2-32732  
equivalent current system of winter geomag. reversal 2-27980  
F-region, equatorial, elec. fields rel. to plasma irregularities and drifts 2-28270  
F-region electric field rel. to Pc 3 ground pulsations 2-28276  
F-region polarised electric field up to latitude 56°, drifts radar obs. 2-14668  
field-aligned current in dayside cusp, study of 4.5 kHz hiss 2-42549  
field-aligned currents due to field line interaction in boundary layer 2-14659  
field-aligned currents in polar magnetosphere and ionosphere, anal. of distrib. 2-3133  
field-aligned currents observed by satellite JIKIKEN (EXOS-B) 2-18661  
field-aligned electric fields on auroral lines of force, nature 2-6493  
geomagnetic tides, spherical harmonic anal. of 1964-1965 data 2-14391  
Indian region abnormal quiet day Sq(Z) ranges due to Sq current system movement 2-27981  
ion clusters, clustering of water vapour about ions 2-18517  
ionosphere, auroral, cond. inhomogeneity rel. to field-aligned currents 2-3133  
ionosphere, auroral, current convective instability theory 2-6503  
ionosphere, auroral, effect of elec. fields on radar waves incoherent scatt. 2-10243  
ionosphere, Ba release experiment, development model with contour currents 2-32716  
ionosphere, elec. currents at high-latitude, model for substorm conditions 2-52991  
ionosphere, elec. field penetration through E-region to F-region 2-48069  
ionosphere, electric field convection meas. by long-line technique 2-6500  
ionosphere, electric field over Millstone Hill, model 2-14667  
ionosphere, field aligned currents and auroral zone struct. 2-42524  
ionosphere, field aligned currents and struct. of auroral ionosphere 2-14680  
ionosphere, photoelectron thermalisation and transport, theory 2-32745  
ionosphere, post substorm auroral arc currents 2-42522  
ionosphere currents and convection in 1979 November 8 midnight sector 2-10230  
ionosphere currents caused by semidiurnal tidal winds, 3-dimens. struct. 2-14670  
ionosphere currents observed in auroral zone, during westward travelling surge 2-10245  
ionosphere dynamo region, field line equipotentiality and ion neutral collision freq. 2-18622  
ionosphere electric currents and fields, global model 2-52990  
ionosphere electric field contrib. to thermosphere Joule heating, plasma convection data anal. 2-23148  
ionosphere electric field meas. by artificial ion beam technique 2-42472  
ionosphere electric pot. rel. to auroral magnetosphere evening sector 2-32717  
ionosphere electrostatic cyclotron harmonic waves, produced by field aligned currents 2-28271  
ionosphere electrostatic shocks on auroral field lines between 2.5 and 7 Earth radii 2-28274  
ionosphere fields caused by solar wind plasma interacting with interplanetary mag. field 2-42519  
ionosphere global electric fields (April 1978) during mag. storms and quiet times 2-23168  
ionosphere ion convection and elec. fields in visual auroral arcs 2-23155  
ionosphere paired electrostatic shocks, elec. field anal. 2-23160  
ionosphere Pedersen and Hall currents distrib. during disturbed conditions 2-10242  
ionosphere tidal dynamo, conventional theory 2-52998  
ionosphere two-layer dynamo, equivalent circuit calc. 2-10234  
ionosphere-magnetosphere electrodynamic coupling in auroral zone 2-42525  
ionosphere/inner magnetosphere region, computer simulation of substorm ( $L \geq 6$ ) 2-10257  
ionosphere/inner magnetosphere system during substorm, elec. fields and currents 2-10256  
ionospheric westward travelling surges during substorms 2-28283  
lightning, elec. field meas. rel. to two-dimensional interferometric positions of VHF sources 2-18540  
lightning electric radiation fields, amplitude spectra in interval from 100 kHz to 20 MHz 2-18499  
lower atmosphere, balloon-borne meas. of elec. cond., positive ion mobility and recomb. coeff. 2-18538  
magnetic tail resistivity effect on unstable dynamic evolution 2-18642

**atmospheric electricity continued**

- magnetopause currents, rel. to positive equatorial  $D_{st}$ -index and geomag. field diurnal var. 2-23187  
magnetosphere, azimuthal elec. fields determ. from spectrographic group delays of whistler mode signals 2-10265  
magnetosphere, below 1500 km, elec. fields over polar cap, Ba release expt. 2-10261  
magnetosphere, effect of parallel elec. field on charged particle precipitation 2-10247  
magnetosphere, electric field and antenna impedance obs. by JIKIKEN 2-18660  
magnetosphere, field-aligned currents and electric fields in dayside cusp 2-14717  
magnetosphere, S3-3 search for confined regions of large parallel elec. fields 2-32753  
magnetosphere, simulation of current-driven electrostatic ion cyclotron instability 2-32754  
magnetosphere convection electric field, effects on winds in auroral atmosphere 2-6507  
magnetosphere convection electric field rel. to solar wind elec. field 2-38031  
magnetosphere convective electric field effect on L ions radial diffusion 2-48110  
magnetosphere electric field generation in Alfvén wave 2-48092  
magnetosphere quasi neutral parallel elec. field, one dimens. model 2-14722  
magnetotail neutral sheet, low hybrid drift instability and assoc. anomalous resist. 2-32758  
magnetotail surface current, contrib. of magnetisation current round lobe in static conditions 2-18631  
measurement technique using tethered-balloon 2-42479  
middle atmosphere, meas. of 2-18498  
middle atmosphere, meas. of volt/meter vertical elec. fields 2-18497  
Pc 5 elec. fields in ionosphere, STARE radar obs. 2-53013  
Pedersen conductivity effect on toroidal Pc 5 pulsations 2-48109  
Pedersen currents in polar ionosphere, rel. to newly emerging model of magnetospheric substorms 2-14728  
Pi B correlation with auroras and equivalent current struct. during substorms 2-10271  
plasma sheet boundary ion jetting, dispersion effects due to elec. field and moving source 2-28294  
plasmasphere, penetration of substorm associated electric fields 2-10258  
polar cap field-aligned currents during mag. storm recovery phase 2-32774  
pressure discharges, action of DC and UHF electric fields, plasma parameters and electric characteristics 2-18505  
Ps 6 associated electric current flow in auroral forms 2-10246  
radioauroral pulsations generated by elec. field pulsations 2-10273  
ring current, contrib. to ions of low-energy geosynchronous plasma environment 2-14727  
ring current, correl. with interplanetary mag. field and geomag.  $D_{st}$ -index variation 2-6508  
ring current composition and sources, mag. storm effects 2-48111  
ring current development during geomag. storms, rel. to relation between AE and  $D_{st}$  indices 2-6511  
ring current  $H^+$  wave-particle interactions and charge exchange 2-3153  
ring current ion composition 2-3160  
ring current over S.America during IGY-IGC 2-23186  
Santorini, elec. pot. gradient meas. during April 29, 1976, annular solar eclipse 2-28158  
solar diffuse radiation rel. to cloud elec. discharge activity (for India) 2-3088  
Sq and field aligned currents generated by asymm. dynamo 2-52995  
stratosphere, high-latitude, electrical meas. in fair and foul weather under various solar conditions 2-32599  
substorm currents in ionosphere and magnetosphere, deduction from ground based geomag. obs. 2-3136  
tethered-balloon technique for measuring atmospheric potential, space charge problems 2-42478  
thermosphere, electrostatic field calc. method 2-14639  
thermosphere current system characteristics, model of daily vars. 2-6485  
thundercloud charge generation, riming electrification mechanism 2-47974  
thundercloud electrification process, laboratory test of inductive theory 2-23083  
topside ionosphere, height variations in auroral zone electrodynamics 2-32720  
turbulence properties in boundary layer, measurable by obs. of elec. charge turbulence 2-42424  
upper atmosphere, elec. currents rel. to reduction of satellite magnetometer data for geological studies 2-32673  
vertical potential difference determ. from balloons, apparatus 2-23132

**atmospheric electromagnetic wave propagation**

- see also *atmospheric light propagation; ionospheric electromagnetic wave propagation; magnetospheric electromagnetic wave propagation; tropospheric electromagnetic wave propagation*  
Arctic region, radar echoes altitude range and signal intensities 2-28157  
atmospherics, dispersive propagation in land and sea-ionosphere waveguide 2-32602  
attenuation in air below 1000 GHz 2-42445  
clear air radio propagation, review 2-14577  
conference, Aug. 1980, Munich, Germany 2-48397  
EHF Zenith atmospheric attenuation, correction of astronomical obs. 2-14574  
ELF atmospherics, distrib. function for ELF noise 2-38026  
IR 5-17  $\text{cm}^{-1}$  regions, absorpt. by water vapour 2-47972  
IR and MM waves, conf., Miami Beach, FL, USA (Dec. 1981) 2-38365  
IR radiation retroreflected through atm., direct and heterodyne obs. 2-52931  
large-scale perturbations propag. in atmosphere with anisotropic conductivity 2-42507  
lightning currents, EM field, wave form. and spectral distrib. 2-28159  
lightning position location by SHF-VHF radar 2-42423  
line-of-sight propag., fading due to effect of meteorological mechanisms 2-10154  
microwave satellite communications in L-band, Antarctic regions, propagation effects, mag. field and atmos. data var. 2-47994  
MM wave  $\text{O}_2$  absorption spectra calc. on small microcomputer 2-42459  
mutual-coherence function, two-position, two-freq., in turbulence 2-42467  
radar, Doppler meas. of clear air turbulence at 1290 MHz 2-14552



**atmospheric electromagnetic wave propagation continued**  
 radioastronomy, atmospheric interference elimination from images of extended objects in multiwave reception 2-3203  
 rain zone effect meas. by dual polarisation radar (*Spanish*) 2-14588  
 range-height-angle charts with lookdown capability 2-47975  
 RF interference models applicability evaluation 2-6422  
 sub-mm transmission, effect on astronomical obs. 2-42596  
 tropopause, effect of gravity waves on specular echoes observed by Poker Flat MST radar 2-32566  
 VHF radar, specular echoes, Fresnel scattering model 2-42450  
 VLF interference, fluctuation and pulse components intensities relationship calc. 2-6421  
 water vapour absorpt. in EHF window 2-38697

#### **atmospheric electron precipitation**

*see also aurora; radiation belts*  
 AL index variability, effect of auroral electron precipitation 2-32404  
 S Atlantic anomaly region, precipitation during mag. storm disturbance 2-23175  
 aurora, electron precip. rel. to field-aligned elec. fields on auroral lines of force 2-6493  
 aurora, intense pulsations, electrons energy characts. 2-18616  
 auroral arc precipitation, explosive charge ionsopher disturbance expt. 2-14660  
 auroral electron beams, elec. currents and energy sources 2-23177  
 auroral electron beams at 200-250 km altitude, stability and accel. 2-23176  
 auroral electron energies from O I/N<sub>2</sub><sup>+</sup> technique 2-3117  
 auroral electron energy spectra, energy flux and inferred pot. drop 2-38020  
 auroral electrons, drift precip. rel. to three-dimensional current flow in morning sector during substorm recovery 2-32742  
 auroral electrons, energy spectra determ. from auroral ionisation profiles 2-32730  
 auroral electrons, spectral hardening assoc. with westward travelling surge 2-10227  
 auroral energetic component meas. with X-ray pin hole camera 2-18597  
 auroral equatorward boundary rel. to solar wind and IMF 2-42521  
 auroral ionosphere, intense wave-particle event obs. 2-32719  
 auroral ions (low-energy) meas. during substorm 2-32746  
 auroral particle adiabatic transport in presence of homogeneous elec. field 2-32748  
 auroral precipitation, appl. of Ramfjordmoen partial refl. expt. 2-28231  
 auroral precipitation during quiet geomag. conditions 2-18624  
 electron beam-ionosphere plasma simulation expts. in large vacuum chamber 2-14677  
 energy degradation in O, spatial aspects 2-6499  
 fluctuating events during magnetosphere substorm (at L≈6.6) 2-10233  
 fluxes of precipitating electrons, rel. to lifetime of electrons in outer radiation belt 2-3146  
 guiding centre diffusion theory for electron beam, rel. to artificial auroral streak widths 2-6489  
 inner radiation belt electron precipitation, VLF transmitter effects 2-48103  
 intense magnetic storm electron precipitation, 26 March 1976 obs. 2-14658  
 longitude variations of precipitation following substorm 2-52985  
 magnetosphere, effect of parallel elec. field on charged particle precipitation 2-10247  
 magnetosphere, statistical anal. of electrons of low-energy geosynchronous plasma environment 2-14726  
 midday auroral oval, gap rel. to polar cusp region 2-10231  
 midlatitude D-region disturbance following mag. storm due to electron precip. 2-32737  
 pitch angle distributions near substorm injection front 2-53017  
 plasma particle trajectories through mag. holes 2-48089  
 plasma sheet, bi-directional electron pitch angle anisotropy 2-48102  
 plasmopause electron precipitation induced by VLF noise bursts 2-18623  
 Ps 6 associated electric current flow in auroral forms 2-10246  
 pulsating aurora, rocket meas. of particle pulsation 2-14648  
 pulsations rel. to ELF noise intensity modulations and Pc events 2-48108  
 relativistic electron precipitation event, rel. to middle atmospheric 2-18498  
 substorm electron precipitation, microburst, assoc. VLF chorus 2-14721  
 temporal distribution of precipitating particles flux, depend. of profile on pitch-angle dist. rib. 2-6494  
 temporal oscillation of electron acceleration region of auroral arc 2-10237  
 upgoing auroral ionospheric electrons, generation of ion-conic distrib. 2-23180

#### **atmospheric elementary particle precipitation**

*see also atmospheric electron precipitation; atmospheric proton precipitation*  
 auroral morphology, electrostatic shocks, plasma wave emission, particle distribution and precipitation boundaries 2-10225  
 auroral precipitation effect on radar echoes 2-28157  
 morning sector ion precipitation following substorm injection 2-3137  
 odd H production, effect on middle atm. chemistry 2-3068  
 pitch angle distributions near substorm injection front 2-53017  
 trapped particle precipitation from magnetospheric axisymmetric mag. flux tube 2-10232

#### **atmospheric energetics** *see atmospheric movements*

#### **atmospheric humidity**

*see also hygrometers*  
 absorption in IR 5-17 cm<sup>-1</sup> regions 2-47972  
 atmosphere convective boundary layer upper regions, refr. index fluctuations, temp. and humidity effects 2-28234  
 Bay of Bengal, statistical struct. of meteorological parameters during Monsoon-77 expt. 2-3063  
 boundary layer, convective, temp. and humidity struct. parameters from turbulence closure model 2-14536  
 cloud ensemble model construction involving moist convection and radiative cooling (*Russian*) 2-18507  
 cloud medium, meteoron jet height rel. to humidity (*Russian*) 2-18508  
 cloud water chemistry and sulphate prod. 2-10108  
 clouds, by water content rel. to microwaves absorpt. coeffs. 2-3058  
 effects on corona inception, in diverging electric field 2-16525  
 equatorial atmosphere, radio refractivity meas. over south Arabian Sea rel. to airmass moisture charact. 2-3059  
 Europe, ambient and dewpoint temps. meas. rel. to visible spectrum contrast transmittance modelling 2-32645

#### **atmospheric humidity continued**

global measurements from Seasat 2-32535  
 hygrometer, response of IR spectral absorption type (*French*) 2-42482  
 Indian Ocean region, water vap. transport during 1975 monsoon 2-28189  
 Indian subcontinent, atmosphere water vapour distrib. and integrated water vapour content 2-23066  
 IR radiative transfer in cloudy atm., used to find thermodynamic props., H<sub>2</sub>O effects 2-3090  
 ITCE in Australia, 1976 flux-profile obs. interpretation 2-28160  
 Kali river estuary interaction with pre-monsoon air 2-37925  
 Leine river, Germany, flooding and related rainfall, synoptic situation 2-32548  
 lidar measurement method for boundary layer vertical profiles 2-14622  
 lidar technique for simultaneous temp. and humidity meas. of troposphere 2-3096  
 marine boundary layer, warm air advection over cool sea, humidity and temp. var. 2-14521  
 marine boundary layer, wind, temp. and humidity values rel. to optical props. 2-32641  
 measurement of boundary layer by lidar method (*Russian*) 2-37935  
 measurement of H<sub>2</sub>O vapour using Seasat scanning microwave radiometer 2-37957  
 measurement of humidity by infrared light propag. method 2-28244  
 measurement of humidity profile, description of microwave radiometry technique (*Chinese*) 2-18586  
 measurement with Lyman alpha hygrometer 2-14621  
 mesosphere, water vapour mixing ratios rel. to ice nucleation and noctilucent clouds 2-14575  
 moist atmosphere, vertical total energy fluxes 2-14519  
 central North Carolina, humidity rel. to atmospheric turbidity meas. 2-14602  
 Piche evaporimeter as simple integrating mass transfer meter 2-32651  
 planetary boundary layer, use of detailed model for parameterisation purposes 2-14538  
 precipitable water vapour, short-term temporal spectrum meas. 2-23085  
 psychrometer, without ventilation (*Japanese*) 2-28239  
 radiative convective model with interactive water vapour transport and cloud devel. 2-14605  
 remote meas. using tunable IR lidar 2-10179  
 remote sensing of atmospheric water content, from Satellite Microwave Radiometer on Bhaskara 2-3057  
 seasonal variations of atmospheric clearness numbers for use in solar radiation modelling 2-32637  
 selective and continuum absorpt., microwindows, 8-12 μm 2-18574  
 solar radiation absorption by water vapour, efficient computation method 2-14601  
 stratosphere, H<sub>2</sub>O altitude distrib. at high-latitudes 2-42422  
 stratosphere/mesosphere, vertical profile during 1980, SHF obs. 2-37927  
 surface layer over melting snowpeak, relative humidity profiles rel. to anomalous temp. behaviour 2-14551  
 troposphere moisture meas. by satellite IR radiance method 2-14620  
 typhoon zone, total water vapour mass increase (*Russian*) 2-10123  
 Uccle station, Belgium (1976-1980) 2-28128  
 vapour, radiation contrib. to atm. downward flux from clear skies 2-14514  
 vapour absorption of EHF waves, effect on astronomical obs. 2-14574  
 vertical brightness profiles, water vapour conc. from space meas. (*Russian*) 2-18575  
 water vapour content rel. to determ. of extra-atmospheric monochromatic stellar magnitudes 2-53101  
 water vapour lidar improvements using DIAL techniques 2-2832  
 water vapour patterns, automatic tracking from METEOSAT obs. 2-14615  
 I vapour, deposition velocity, air relative humidity depend. 2-42062

#### **atmospheric ionisation**

*see also atmospheric radioactivity; ionosphere*  
 Arctic region, radar echoes altitude range and signal intensities 2-28157  
 aurora, intense pulsations, ionisation profile and optical emission o bs. 2-18616  
 auroral ionisation profiles, appl. to determ. of energy spectra of incident electrons 2-32730  
 D-region, ion recomb. coeffs. from electron density var. rel. to ionisation rate var. 2-38017  
 D-region, ionisation processes during total solar eclipse 2-42526  
 D-region winter anomaly, aeronomic and meteorological aspects, review 2-32706  
 E-region, evening sector elec. field and electron density obs. 2-52987  
 E-region, obs. of instabilities produced by solar eclipse (1980 February 16) (*Chinese*) 2-3123  
 electrojet conduction, electron precipitation as dominant cause of responsible ionisation, AL index effect 2-32404  
 F<sub>2</sub>-layer, annual variations of f<sub>o</sub> and N and S hemisphere 2-48067  
 F<sub>2</sub>-layer, daily variation of ionisation during magnetical quiet periods 2-32708  
 F<sub>2</sub>-layer, subauroral zone study of main trough region 2-14654  
 F-region, cause of electron content enhancement at night 2-28272  
 F-region, infrasonic waves causing weak-large-scale inhomogeneities 2-48071  
 F-region, short-period fluctuations of ionisation obs. at Arecibo 2-52984  
 F-region ionisation structures from spread-F anal. cct. mag. equatorial station Fortaleza 2-18621  
 ion clusters, clustering of water vapour about ions 2-18517  
 lower ionosphere, ionisation under effects of strong radio pulses 2-3131  
 ionosphere, obs. of total electron content during solar eclipse, 1980 February 16 (*Chinese*) 2-3121  
 ionosphere, photoelectron thermalisation and transport, theory 2-32745  
 ionosphere, positive ion temp. by K-9M-67 sounding rocket (*Japanese*) 2-6491  
 ionosphere, topside, latit. patterns in plasma scale heights and ion transition altitudes at low latits. 2-23163  
 ionosphere of S. Atlantic precipitation during mag. storm disturbance 2-23175  
 low energy particles, ionis. in ionosphere 2-52977  
 lower atmosphere, balloon-borne meas. of elec. cond., positive ion mobility and recomb. coeff. 2-18538  
 lower atmosphere electron density var. due to nucl. explosion X-rays 2-49184  
 magnetosphere, ionization duct monitoring, VLF Doppler shift meas. 2-18659



**atmospheric ionisation continued**

- metallic ions, sharp ionization layer formation in lower thermosphere 2-28258
- meteor trails, characts. and drift in upper atmosphere, effect of solar activity 2-23264
- natural gases,  $\gamma$ -ray detection, natural gases in Cerna Valley, Rumania (*Rumanian*) 2-28208
- natural gases, from Cerna Valley (Rumania) (*Rumanian*) 2-23086
- RF ionisation below ionosphere 2-23087
- small ion concentration in troposphere and stratosphere, balloon-borne meas. 2-18537
- solar cycle modulation of low altitude 55 MeV proton fluxes 2-42506
- sporadic E-layer over Central Europe, occurrence diurnal and seasonal var. 2-38018
- spread-F irregularities deduced from OI nightglow obs. 2-3139
- thermosphere, lower, ionisation rel. to Na and K layers 2-28255
- turbulence properties in boundary layer, measurable by obs. of elec. charge turbulence 2-42424
- Ca<sup>+</sup> twilight airglow from thermosphere intermediate ionisation layers 2-28260
- He<sup>+</sup> ionisation of thermosphere due to variable solar flux 2-52971
- N<sup>+</sup> topside equatorial ionosphere ion concs. 2-3128
- O<sup>+</sup> ions in magnetosphere, ionospheric origin 2-28292
- O<sup>+</sup> topside equatorial ionosphere ion concs. 2-3128
- O<sup>+</sup>, prod. and transport in ionosphere and plasmasphere 2-6498

**atmospheric light propagation**

- adaptive optics, state-of-the-art report, atm. turbulence and thermal blooming correction 2-25085
- aerosol atmosphere, random displacements of optical beams 2-29785
- aerosol pollutants in Brookhaven National Laboratory, New York boundary layer 2-9713
- aerosol rupture effect in laser beams 2-44199
- aerosols, multiwavelength extinction meas. rel. to particle size evaluations 2-48011
- angular, fluctuation of optical beam meas., using dissector follower system 2-3100
- anisoplanatic error reduction for propag. through turbulent atm. 2-24969
- astronomical refraction, origin of vars. 2-6429
- astronomical refraction, research today and tomorrow 2-6427
- astronomical refraction rel. to environmental systematics, effects of urban heat islands 2-6428
- cloud light field in depth regime (*Russian*) 2-10049
- clouds, depolarisation and multiple scatt. meas. by lidar system 2-32643
- clouds, influence of comp. and geometry on absorpt. of solar radiation 2-18568
- clouds, laboratory meas. of propag. in turbid media 2-29786
- clouds, multiple scatt. effects on optical propag. 2-32640
- clouds, Tiroso satellite data rel. to new worldwide cloud-cover models 2-14548
- coherent lidar return characts. from calibration targets and aerosols 2-18567
- condensation nuclei effect on attenuation of atmospheric radiation 2-23113
- Denver, Colorado, aerosol scatt. coeff. in emission plume rel. to warming and cooling effects 2-18156
- Downlink Laser Cloud Propagation Experiment, results 2-32646
- Europe, atmosphere optical quantities meas. rel. to visible spectrum contrast transmittance modelling 2-32645
- extinction, effect on calibration of stellar spectra 2-3204
- extinction at SAAO Sutherland 2-23110
- fog, multiple scatt. effects on optical propag. 2-32640
- greenhouse problem, effects of increased CO<sub>2</sub> concs. 2-10166
- ground reflectance, aerosol background contrib. 2-23107
- IDM measurements at Uppsala, turbulence effects 2-6435
- imaging through atm., desert dust spectral effects 2-14607
- imaging through atmospheric turbulence with annular pupils 2-849
- infrared absorpt. due to H<sub>2</sub>O vap. in 3.5 to 4.2  $\mu$ m atmospheric window 2-23112
- intense light beam propagation in weakly nonlinear turbulent atmos. 2-52927
- IR and visible radiation propag. in rain and snow 2-42457
- IR imaging device performance, atm. and aerosol emissions effect 2-25141
- IR laser beam, model of transmission through water droplet aerosol under thermal self-action 2-34862
- laser beam propagation, freq. response of thermally driven atmosphere 2-47999
- laser beam propagation, modal compensation of turbulence induced wavefront aberrations 2-48001
- laser beam propagation through hazes, fogs and clouds, significance of higher-order multiple scatt. 2-48002
- laser beams, anal. of target signatures for laser altimeters 2-48010
- laser CW beam propagation through moving stagnation zone, thermal blooming 2-7842
- laser obs. methods appls. 2-48032
- laser systems, error reduction 2-52928
- long-range transmission (visible to MM-wave) meas., results in coastal environment 2-32632
- marine boundary layer, meteorological descriptions for optical props. 2-32641
- nightglow intensity, scattering and absorption effect (*Russian*) 2-48059
- ocean light field in depth regime (*Russian*) 2-10049
- optical turbulence measurement, remote sensing of C<sub>N</sub><sup>2</sup> by multidimensional anal. of stellar scintillation 2-32647
- Over-the-Horizon optical scatter propag., meas. in marine boundary layer 2-32639
- phase excursions amplitude, meas. by two-dimensional white-light interferometer 2-53093
- plumes and visibility, measurements and model components, conference, Arizona (1980 November 10 to 14) 2-6695
- pulse broadening through thick clouds 2-42469
- pulsed laser energy propag. through atmosphere 2-48003
- radiative transfer, rel. to surface temp. sensitivity to increased atmospheric CO<sub>2</sub> 2-18562
- Rayleigh-scatt. optical depth, influence of rotational Raman depolarisation 2-14603
- refraction, anal. of abnormal phenomena 2-6436
- refraction, anomalous, meas. using two-colour refractometer 2-10212
- refraction, astronomical, at Mizusawa Latitude Observatory, Japan, calc. 2-10168

**atmospheric light propagation continued**

- refraction, astronomical, calc. by means of continued fractions 2-6430
- refraction, astronomical, in Northern Hemisphere, characts. 2-6431
- refraction, effects in photogrammetry 2-3093
- refraction, effects of local temp. field disturbances on geodetic-astronomical obs. with Danjon astrolabe (*German*) 2-9907
- refraction, effects on tangential coordinates in astrometry (*French*) 2-6544
- refraction, investigation in trigonometrical levelling traverses 2-9918
- refraction, statistical estimation of influence of environment on geodetic obs. 2-6306
- refraction, terrestrial, elimination 2-3094
- refraction calculation in model atmospheres, binomial expansion coeffs. 2-10167
- refraction coeffs., numerical filtering 2-6433
- refraction determ. accuracy from reciprocal zenith angles 2-6432
- refraction in geodesy, present state and future possibilities of levelling refr. research 2-3092
- refraction angle determ. accuracy using IDM meas. 2-32638
- scattering by atmospheric aerosol, turbulence parameter determ. using laser method 2-42487
- scintillation in Shanghai, effects on laser engineering (*Chinese*) 2-44359
- scintillation saturation resistance and inner-scale resistance of large-aperture scintillometer 2-20253
- seasonal variations of atmospheric clearness numbers for use in solar radiation modelling 2-32637
- seeing conditions of disturbed ground layers, image visibility obs. 2-10159
- self-channelling, atm. propag. of high-power laser pulses 2-4565
- shortwave radiation field at boundaries of cloudless atm. light scatt. function (*Russian*) 2-18569
- smoke plume, airborne lidar meas. of plume distrib., vertical transmission and particle size 2-47935
- solar radiation absorption by water vapour, efficient computation method 2-14601
- solar radiation diffuse fluxes on oriented sloping surfaces, improved approximation 2-18495
- special topics in optical propagation, conference, Monterey, California, (1981 April 6 to 10) 2-28611
- speckle interferometry, ang. dependence of atmospheric turbulence effect 2-53110
- stratosphere, lidar backscattering by volcanic aerosol during La Soufriere 1979 event 2-32600
- stratosphere haze causing perturbations in twilight sky colour and radiance 2-3089
- sunlight, UV spectral irradiance and action atmospheric photodissoc. processes 2-10149
- transmission at Mauna Loa and aerosol scattering 2-18536
- transmissivity, solar radiation, and hourly weather data, 1960 to 1969 in Japan (*Japanese*) 2-42452
- troposphere, multiwavelength extinction and refr. index fluctuation meas. 2-32644
- troposphere aerosol scatt. and particle size distrib., spectral anal. of meas. 2-18547
- turbidity, meas. over central North Carolina 2-14602
- turbidity coefficient, rel. to predeterm. of irradiation on inclined surfaces for different European centres 2-6423
- turbidity factors, rel. to climatology of solar irradiance on inclined surfaces 2-10152
- turbidity measurement, intercomparison of integrating nephelometer meas. 2-9751
- turbulence effects in optical astronomy, book contrib. 2-52929
- turbulence effects on imaging and pseudo-imaging systems, nature and quantification 2-52932
- turbulence effects on interference images, rel. to active control for Michelson stellar interferometers 2-53087
- turbulent atmosphere, intensity variance for discrete-spectrum polychromatic speckle field 2-11644
- turbulent atmosphere, resolving power evaluation of coherent optical adaptive systems 2-24948
- vertical refraction angle from angle-of-arrival variance 2-6434
- water vapour absorpt. rel. to determ. of extra-atmospheric monochromatic stellar magnitudes 2-53101
- wave beam propagation in randomly inhomogeneous med., statistical sampling method 2-44198
- wind velocity determination in turbulent atm., coherence analysis of optical meas. 2-42484
- CO content over a city, atm. transmission function technique (*Russian*) 2-9754
- CO<sub>2</sub> laser pulses, exact soln. for fog dispersal including preevaporation heating 2-48000
- He-Ne laser-light scatt. in atm. turbulence, measured statistics 2-42466

**atmospheric measuring apparatus**

- see also air-pollution detection and control; ionospheric measuring apparatus; meteorological instruments
- advanced instrumentation for remote sensing 2-42480
- aerosol size meas., intercalibration of optical and aerodynamic type instruments 2-48012
- air impurity analyser, portable gas chromatography instrument 2-32158
- Bowen ratio of boundary layer, meas. apparatus 2-10181
- cloud droplet measurement, collecting efficiency of cylindrical probe 2-28228
- dissector follower system for fluctuation of optical beam meas. 2-3100
- echosonde system for sounding of lower atmosphere, preliminary studies 2-23135
- Fabry-Perot interferometer max.-likelihood optimisation for thermospheric temp. and wind meas. 2-52945
- gas detection, wedge absorption remote sensor 2-23141
- Gerden condenser, appl. to balloon-borne meas. of small-ion concentration 2-18537
- humidity measurement in boundary layer, using ruby lidar system 2-14622
- integrating nephelometers, intercomparison of meas. 2-9751
- laser disdrometer for near-field raindrop meas. 2-52934
- laser rangefinders, eyesafe, using 1.73- $\mu$ m Er:YLF lasers 2-3110
- magnetosphere particle detectors with narrow entrance angles, sheath effect on current collection 2-3107
- meteorological tower equipped for automatic temp. and wind meas. (*Chinese*) 2-18585



**atmospheric measuring apparatus continued**

- methane/total hydrocarbon automated analyzer for aircraft atmospheric meas. 2-18164  
 MM-wave airborne radiometer for 94/183 GHz high altitude atmospheric meas. 2-42492  
 mm-wave radiometer system, atmos. parameter meas. from Upper Atmospheric Research Satellite 2-42491  
 near IR absorption spectrometer, rocket-borne, for meas. in upper atmosphere 2-23142  
 pollutant measurement by computer controlled chromatography 2-32162  
 polynuclear aromatic compounds detection in air, by room temperature phosphorescence and synchronous luminescence 2-32160  
 potential difference, vertical, determ. from balloons, apparatus 2-23132  
 Raman-lidar system, remote sounding of atm. species (*French*) 2-6481  
 refractometer, two-colour, appl. to anomalous astron. refr. meas. 2-10212  
 retarding potential analysers on ionospheric sounding rocket, positive ion temp. profile meas. (*Japanese*) 2-6491  
 ring core magnetometers, to be installed on artificial planet MSTs and rocket (K-9M-72) (*Japanese*) 2-3182  
 sunlight spectral irradiance at 300 to 1000 nm using pyronometer and spectrophotometer system 2-10211  
 time-of-flight laser velocimeter for atm. wind speed meas., scaling law, photon-count distrib. 2-52944  
 visible IR spin-scan radiometer atmospheric sounder, calibration 2-23117  
 wall loss effect on  $O_3$  meas. on Dasibi flight, errors involved 2-37930  
 water vapour lidar improvements using DIAL techniques 2-2832  
 wave-particle interaction experiments on Exos-B satellite, results (*Japanese*) 2-3181  
 wind vane testing procedure for dynamic response 2-14626  
 X-ray pin hole camera for auroral electron precipitation energetic component obs. 2-18597  
 CO monitoring system, using nondispersive IR analyser 2-32159  
 $CO_2$  analyser, open path, using eddy correlation technique 2-32671  
 NO self-absorption gas cell, error anal. of NO  $\gamma$ -band airglow meas. (*Japanese*) 2-3114  
 $SO_2$  concentration meas. by lidar and computer 2-37475

**atmospheric measuring instruments** *see atmospheric measuring apparatus***atmospheric motion** *see atmospheric movements***atmospheric movements**

- see also atmospheric turbulence; wind*  
 2-day wave in middle atmosphere, simulation in general circulation model extending from surface to 100 km 2-32601  
 acoustic-gravity waves from Mount St. Helens eruption, 1980 May 18, rel. to explosive yield 2-28053  
 acoustic-gravity waves in high latitudes 2-14641  
 E. African low-level jet, interhemispheric fallout transport 2-42428  
 air currents, radaracoustic sounding, estimation of Doppler freq. pulsation energy spectra (*Russian*) 2-44517  
 air mass trajectories over central North Carolina, rel. to atmospheric turbidity meas. 2-14602  
 air motion and precipitation growth in frontal systems 2-42439  
 air-ocean surface, shock wave interaction investigation 2-52909  
 airflow, generalized planetary scales 2-32568  
 ALEX program, airflow over mountains, GARP subprogram 2-28210  
 Arabian Sea monsoons, convective processes rel. to inversion regions extent 2-32616  
 E Asia westerly winds affected by unusual Pacific sea surface temp. (*Chinese*) 2-18485  
 auroral arc, drifting, ion convection vel. rel. to tangential elec. fields 2-28262  
 auroral ionosphere, convection patterns, Chatanika radar obs. 2-42530  
 balloon (super-press. type) motion in convective boundary layer, comparison with air mass dispersion 2-14564  
 baroclinic flow over sloping topography, model of flow instability 2-23068  
 baroclinic waves, rel. to correl. between Northern hemisphere glaciation and precip. rates 2-18560  
 baroclinic waves, unstable, effect of  $\beta$  on chaotic amplitude behaviour 2-14534  
 barotropic blocking theory, comparison with obs. 2-14537  
 barotropic flow, bifurcations from stationary to periodic solns. in low-order model 2-14533  
 barotropic primitive equation integration based on variational principal (*Chinese*) 2-18488  
 blocking phenomena of global barotropic flow 2-47963  
 boundary layer, oscillations in a turbulent Ekman layer 2-52882  
 boundary layer convection, comparison of struct. parameter scaling expressions with turbulence closure model predictions 2-14536  
 boundary layer velocity derivative high order moments, Reynolds number depend. 2-14513  
 chemically active species transport by planetary waves (*German*) 2-47945  
 China, 5-day mean circulation at 500 mb level rel. to surface air temp. (*Chinese*) 2-32557  
 circulation in meteor zone, dependence on solar activity cycle (*Russian*) 2-18612  
 circumpolar vortex, numerical diagnostic model 2-47960  
 climate, effect of increased  $CO_2$  in atm. circulation model 2-14597  
 cloud ensemble model construction involving moist convection and radiative cooling (*Russian*) 2-18507  
 clouds, automatic tracking technique appl. to GOES and METEOSAT obs. 2-14615  
 coastal lows caused by synoptic wave interaction with meridional escarpment 2-3072  
 cold front propagation properties, theory 2-23079  
 cyclones-anticyclones as Rossby solitons (*Russian*) 2-50279  
 depression tracks during winter of 1979 in Southern Hemisphere 2-23080  
 disturbances caused by rotation 2-14530  
 drainage wind from large area, temp. and vel. oscils. 2-14560  
 dry thermal dynamics, initiated by active admixture (*Russian*) 2-47951  
 dynamic initialisation scheme for prediction 2-47987  
 dynamics of atm., quasistatic approx. theory (*German*) 2-52895  
 E-region, changes in low-latit. drifts assoc. with counter electrojet events 2-23167  
 E-region, obs. of instabilities produced by solar eclipse (1980 February 16) (*Chinese*) 2-3123  
 Earth rotation about axis, 50 day variation due to atmos. 2-37738  
 empirical orthogonal analysis of Asian mean circulation data (*Chinese*) 2-18484  
 equatorial atmosphere, monsoon air mass transport from radio refractivity meas. 2-3059  
**atmospheric movements continued**  
 equatorial spread-F, gravity wave initiation, case study, backscattering maps 2-32723  
 equatorial spread-F decay phase, diffusion of small scale density irregularities 2-32725  
 $F_2$ -layer, photochemistry and dynamics above Ruili, China, during solar eclipse (1980 February 16) (*Chinese*) 2-3122  
 $F_2$ -layer, subauroral zone study of main trough region 2-14654  
 F-region, equatorial, irregularities and drifts, interferometer studies 2-28270  
 F-region, equatorial, plasma motion, vel. shear at post sunset rise 2-23162  
 F-region, infrasonic waves causing weak-large-scale inhomogeneities 2-48071  
 F-region, winter high latitude region, strong convection and assoc. plasma density features 2-23170  
 F-region convection model of ion composition 2-52982  
 F-region equatorial backscatter plume development 2-10239  
 Fawley Power Station stack, use of  $SF_6$  as tracer of plume 2-9706  
 flow over mountainous region, appl. of semi Lagrangian coord. system (*Russian*) 2-10127  
 fluid dynamics (book) 2-3338  
 forced waves in baroclinic shear flow theory 2-47959  
 frontogenesis, relationship to jet stream vertical circulation direction 2-23091  
 frontogenesis in vicinity of jet stream-frontal system 2-28138  
 frontogenesis near tropopause and geostrophically forced secondary circulation 2-28138  
 GATE convective band, assoc. mesoscale motion 2-32581  
 general circulation, effects of boundary conditions on vacillation in thermally driven rotating flow 2-16331  
 general circulation, eigenvector filtering of three-dimensional pressure field data 2-14554  
 general circulation, Hough function calc. method (*Chinese*) 2-18477  
 general circulation, parameterisation of atmospheric boundary layer in large-scale models 2-10110  
 general circulation, particle motions in large-amplitude wave fields 2-18440  
 general circulation, rel. to variability of ocean-ice-atmosphere system of N.Pacific and N.Atlantic 2-32529  
 general circulation disturbance, theory of planetary waves in baroclinic atmos. (*Chinese*) 2-18482  
 general circulation in both hemispheres rel. to sea level press. harmonics (*Chinese*) 2-32555  
 general circulation model, of Goddard Laboratory for Atmos. Sciences 2-28136  
 general circulation model of climate, effect of geographic cloud distrib. 2-42462  
 general circulation model of climate, with thermodynamic dissipation 2-3084  
 general circulation models in simulated climate ensembles 2-28190  
 geomagnetic tides, spherical harmonic anal. of 1964-1965 data 2-14391  
 geostrophic wind vector behaviour at temp. inversions (*German*) 2-3047  
 gravity wave effect on turbulence of planetary boundary layer 2-23076  
 gravity wave interaction with planetary boundary layer 2-23075  
 gravity wave sources in the thermosphere (*French*) 2-42503  
 gravity waves, effect on specular echoes observed by Poker Flat MST radar 2-32566  
 gravity waves, filtering using Hough functions (*Chinese*) 2-23049  
 gravity waves, internal solitary waves along Earth's surface (*Russian*) 2-47953  
 gravity waves, upward propag. assoc. with sporadic-E and F-region disturbances 2-48077  
 gravity waves at ionosphere altitude excited by tornado storms 2-18613  
 gravity waves in tropical atmos., 140-170 mbar altitude 2-3052  
 gravity waves in troposphere, and assoc. with TID phenomena 2-52905  
 gravity waves instability through wave-wave interactions 2-37945  
 gravity waves observed at California coastal site 2-23098  
 Hai River basin, droughts and floods rel. to general circulation (*Chinese*) 2-32556  
 Hawaii, vortices in downwind zone, HAMEC project obs. 2-32604  
 heavy-gas spread from point source into complex terrain, hydraulic modelling 2-42060  
 India, atmospheric energetics during drought and normal monsoons 2-3064  
 India, summer monsoon circulation pre-onset phase characts., thermodynamic forcing 2-3055  
 Indian Ocean region, water vap. transport during 1975 monsoon 2-28189  
 internal gravity waves produced by lightning discharges (*Russian*) 2-10122  
 internal gravity waves rel. to  $\gamma$ -ray intensity short period var. (*Russian*) 2-3071  
 internal gravity waves spiral struct. 2-32625  
 ion mobility in troposphere and stratosphere, balloon-borne meas. 2-18538  
 ionosphere, auroral, current convective instability theory 2-6503  
 ionosphere, auroral, Rayleigh-Taylor gravity instability rel. to kilometeric inhomogeneities form. 2-3130  
 ionosphere, Ba release experiment, development model with contour currents 2-32716  
 ionosphere, effect of thermal motion of ions in determining ion distrib. behind satellite 2-6502  
 ionosphere, electric field convection meas. by long-line technique 2-6500  
 ionosphere, Farley-Buneman instability, two-layer model 2-48069  
 ionosphere, neutral winds at low latitude 2-52999  
 ionosphere, plasma, waves wavenumber meas. by rocket expts. (*Japanese*) 2-3124  
 ionosphere, polar wind flux rel. to origin of magnetospheric  $O^+$  ions 2-28292  
 ionosphere, post substorm plasma convection 2-42522  
 ionosphere, topside, equatorial, interhemispheric plasma flow rel. to night-time electron temp. troughs 2-32731  
 ionosphere currents and convection in 1979 November 8 midnight sector 2-10230  
 ionosphere dynamo region, field line equipotentiality and ion neutral collision freq. 2-18622  
 ionosphere E and F-regions, drift speed at low latitudes, interplanetary mag. field effects 2-42518  
 ionosphere E- and F-regions, ionisation irregularities drift vel., interplanetary mag. field effects 2-42519



## atmospheric movements continued

- ionosphere electrostatic cyclotron harmonic waves, production and consequences 2-28271  
 ionosphere fast ion structure attenuation due to charge exchange and impact ionisation collisions 2-32729  
 ionosphere ion convection and elec. fields in visual auroral arcs 2-23155  
 ionosphere polar region, O cyclotron waves 2-23159  
 ionospheric plasma motion measurement by HF radar technique 2-32675  
 ionospheric trough dynamics, obs. made from Antarctica 2-48080  
 jet stream-generated Kelvin-Helmholtz instability, VHF radar meas. 2-10141  
 Johannesburg, S.Africa, urban heat plume dynamics 2-10119  
 kinetic energy, free and available values (*Russian*) 2-47952  
 La Hague nuclear reprocessing works, radionuclides transfer from sea to land (*French*) 2-6199  
 Lagrangian-mean flow produced by dissipating planetary waves 2-47958  
 large-scale transient disturbances of atmos., space and time scales 2-28140  
 laser beam propagation, freq. response of thermally driven atmosphere 2-47999  
 Lexington, Kentucky, particulatesulphates correl. with SO<sub>2</sub> pollutant sources, transport 2-9709  
 local multiple equilibria in global barotropic flow 2-47963  
 long waves in barotropic atmosphere, evolution (*Chinese*) 2-18487  
 lower atmosphere vertical stability from Rn conc. (*Spanish*) 2-14524  
 magnetosphere; whistler duct motions from spectrographic group delays of whistler mode signals 2-10265  
 magnetosphere, convention modification producing high latitude ionosphere sunward convection expanded regions, auroral effects 2-48063  
 magnetosphere convection, effects on winds in auroral atmosphere 2-6507  
 magnetosphere convection, rel. to newly emerging model of substorms 2-14728  
 magnetosphere plasma coil ions, diffusion eqn. describing transport across mag. field lines 2-32760  
 magnetosphere plasma flow, results of anal. of JIKIKEN f<sub>0</sub>n reson. expt. (*Japanese*) 2-3144  
 magnetotail neutral sheet, low hybrid drift instability and assoc. anomalous resist. 2-32758  
 marine inversion undergoing mountain leeside wind shear, waves 2-28162  
 Mauna Loa Observatory, Hawaii, back trajectories five year climatology 2-10106  
 meridional circulation of troposphere and stratosphere by zonally symmetric model 2-47946  
 meridional fluxes of heat and momentum due to planetary waves 2-47944  
 mesoscale convection and sea breeze circulation, linear stability analyses 2-32577  
 mesoscale convection and sea breeze circulation, nonlinear numerical model 2-32578  
 mesoscale dynamics, radiation conditions for model lateral boundaries 2-6419  
 mesoscale motion assoc. with GATE convective band 2-32581  
 mesosphere turbulence and stress due to gravity waves and tidal breakdown 2-38011  
 mesosphere wind and waves over Saskatoon (1979 Oct. to 1980 July), obs. 2-37938  
 mesosphere-lower thermosphere photochem. model including vertical transport 2-10217  
 meteor region, wind forcing by gravity waves, tides modulating effect 2-38010  
 Middle Atmosphere Program, conf., Urbana, USA (July-August 1980) 2-33219  
 middle atmosphere two day wave and wind field 2-37940  
 monsoon circulation over India, vertical slope of monsoon trough rel. to rainfall distrib. 2-3065  
 monsoon westerly disturbances, seasonal freq. 2-37951  
 mountain induced gravity waves, Vitosha mts., Bulgaria (*German*) 2-47942  
 mountain lee waves, 3-D hydrostatic model 2-47964  
 New York state rural sites, summer aerosol pollutant, trace element conc. and transport 2-9712  
 non-zonal baroclinic flow instability, multiple-scale anal. 2-28139  
 nonlinear evaluation of plasma enhancements in the auroral ionosphere 2-52979  
 E North America, sulphur cpd. pollutant transport and deposition 2-14133  
 northern hemisphere, summer vertical circulation between 45°N and equator (*Chinese*) 2-18480  
 O<sup>+</sup> in ionosphere and plasmasphere, prod. and transport 2-6498  
 objective analysis theory of atmos. circulation, spline interpolation (*Chinese*) 2-18489  
 orographic and thermal forcing of spherical atmos., baroclinic model 2-18512  
 Pacific typhoon tracks, effect of Asia westerly belt long wave trough 2-47990  
 particulate transport from elevated source, theoretical model 2-14512  
 peroxyacetyl nitrate in long-range transported polluted air in Scandinavia 2-14136  
 planetary (stationary) wave packet, vertical zonal-propagation theory 2-18513  
 planetary-wave climatology, anal. 2-14535  
 plume dispersion, topography effects 2-14132  
 plume rise dynamics, ambient turbulence effects on bent-over plume (*Chinese*) 2-18483  
 plume rise models, effective source flux parameters 2-47936  
 polar cusp convection and polar F-region var., interplanetary Y-component effect 2-38015  
 pollutant dispersal, stationary non-Gaussian model 2-14529  
 pollutant dispersal in atmosphere, boundary condition 2-22683  
 pollutant long-range transport, study of aerosol deposition 2-22686  
 pollutant long-term concentration model for S-pollutants over USA and Canada 2-47937  
 pollutant regional long-term transport model 2-28168  
 pollutant surface concentration in wake of power station, estimation algorithm 2-32146  
 pollution dispersion from ground-level source, surface roughness effects 2-2822  
 pollution long range transport and acid rain 2-52405  
 prefrontal surge and cold-frontal clouds, vertical air motions and microstructure 2-32583

## atmospheric movements continued

- pressure oscillations after 1980 May 18 eruption of Mount St. Helens 2-6411  
 primitive dynamic equations difference scheme (*Chinese*) 2-32554  
 quasi-geostrophic dynamical model of atmos. using max. entropy production states concept 2-6417  
 quasi-geostrophic motion, second temporal boundary layer 2-23088  
 radiation belt heavy ions, loss, transport and charge exchange 2-48113  
 radiative convective model with interactive water vapour transport and cloud devel. 2-14605  
 rapidly rotating recycling flow over topography, laboratory expt. 2-52914  
 resonance induced by Rossby lee waves, theory 2-18503  
 Rossby normal modes during equinox and solstice conditions 2-47957  
 Rossby normal modes in nonuniform background configurations 2-47956  
 rotation rate of upper atmosphere, inferences from final thousand days of orbit of (Ariel 1) 2-10299  
 Saurashtra cyclone (1978), cloud top temp. structure rel. to deep convection cells movement 2-3056  
 semidiurnal tidal wind in upper mesopause, seasonal max. 2-52973  
 solar rotation period evident in stratosphere temp. and dynamics 2-18552  
 Southern Hemisphere flows, linear theory for disturbances and eddy fluxes 2-14532  
 space and space-time geometries in atmospheric mechanics 2-23064  
 St. Louis T1 pollution transport and dispersion, statistical model 2-27749  
 stationary planetary waves predicted by GLAS general circulation model 2-28136  
 stratopause altitude variability during summer 2-32608  
 stratosphere, advection speed of volcanic aerosols from La Soufriere 1979 event 2-32600  
 stratosphere, diagnostic study of wavenumber-2 sudden warming in transformed Eulerian-mean formalism 2-14541  
 stratosphere eddy diffusion coefficients determ. 2-32592  
 stratosphere linear wave chemical transport parameterisation by eddy diffusion 2-32588  
 stratosphere planetary waves between 50 and 10 mbars, solar activity effects 2-37946  
 stratosphere sudden warmings and jet occurrence, transformed Eulerian mean approach 2-37943  
 stratosphere trace constituents, 2-D advective transport model 2-42416  
 stratosphere warming model, Eulerian and Lagrangian diagnostics 2-14540  
 stratosphere-troposphere exchange, as natural source of latit. gradients of NO<sub>x</sub> in unpolluted troposphere 2-32565  
 stratosphere/mesosphere, tidal and gravity wave anal., use of temp. and density obs. 2-37990  
 stratosphere/mesosphere warmings, temp. changes and planetary scale waves activity 2-37942  
 stratospheric, vertical transport meas. using turbulence external scale derived from vertical O<sub>3</sub> profile 2-14553  
 subsynoptic vortex formation on rain condensation latent heat release (*Chinese*) 2-32553  
 subtropical high (1977) northward shift, thermal wind adjustment anal. 2-32622  
 subtropical jet stream, anal. of limits 2-18494  
 surface wave generation by discrete vortices (*Russian*) 2-47875  
 1,1,1,2-tetrafluoroethane, chemistry and eddy diffusion model 2-9708  
 thermal plumes, echosonde study 2-23065  
 lower thermosphere, 2- and 5-day oscillations at mid-latitude (*German*) 2-48056  
 thermosphere, deposited momentum by atm. tides, zonal wind prod. 2-38009  
 thermosphere, model of daily vars. of dynamical characts. 2-6485  
 thermosphere expansion due to solar heating, effects on F-region 2-3135  
 lower thermosphere props. from incoherent radar obs., review 2-52972  
 thermosphere wind and waves over Saskatoon (1979 Oct. to 1980 July) 2-37938  
 three-dimensional flow over mesoscale mountains, linear theory 2-18493  
 tide (semidiurnal), hourly rainfall statistics of USA and Puerto Rico 2-42425  
 tides, eigenvalues of Laplace's eqn. 2-32537  
 tides in stratosphere, thermal excitation of non-migrating tides 2-52904  
 topside ionosphere, O<sup>+</sup>, H<sup>+</sup>, He<sup>+</sup> conc. profiles and diffusion coeffs. 2-3141  
 transport processes between stratosphere and troposphere, use of <sup>10</sup>Be/<sup>7</sup>Be ratio 2-28226  
 transport tensor for two-dimens. Eulerian model, determ. method 2-28229  
 traveling two day wave in middle atm., temp. obs. 2-37941  
 trichlorofluoromethane used as tracer of urban air masses 2-9711  
 tropical climate anomalies, time series anal. 2-28195  
 tropical cyclone path prediction, learning model appl. 2-14589  
 tropical region atmos. dynamics, long and ultralong waves (*Chinese*) 2-18481  
 tropical region sea surface temperature effect on atm. circulation (*Chinese*) 2-32525  
 tropics, long waves and ultra-long waves, scale anal. 2-47984  
 troposphere, circulation index cycle, ultra-long wave instability 2-18555  
 troposphere, seasonal var. of heat sources and sinks over northern hemisphere (*Chinese*) 2-23048  
 troposphere vorticity area index, apparent response to solar mag. field 2-18554  
 upper troposphere westerlies, development and movement of mid-tropospheric cyclone over India 2-3062  
 tropospheric-stratospheric mean zonal flow in winter 2-18534  
 United States Atlantic and Gulf coast, air mass transport and diffusion 2-32606  
 unstable internal gravity wave (an enquiry into CISK) 2-52911  
 unstable long wavelength baroclinic instability modes 2-28155  
 unstable modes in general circulation model, energy distrib. (*Russian*) 2-10121  
 upper atmosphere, internal gravity wave intensity rel. to tidal motions (*Russian*) 2-10214  
 upper atmosphere gravity and planetary waves, effect on airglow 2-28259  
 upper atmosphere rotational velocity determ. from ANS orbital inclination var. anal. 2-28253  
 upper troposphere large-scale transient wave disturbances assoc. with clouds 2-28137  
 vertical diffusion coefficient and mixing height determ., appl. to closed box model (*Spanish*) 2-14522  
 vertical diffusion coefficient two layer model -used to determine <sup>222</sup>Rn conc. (*Spanish*) 2-14523



**atmospheric movements continued**

- vertical flux computations in ensembles of tropical convective clouds 2-32582
- Walker circulation, linear model 2-28149
- water vapour exchange between land and ocean in northern hemisphere 2-42427
- wave-mean flow interactions 2-28147
- waves, evolution processes, WKBJ anal. 2-1213
- winter mean meridional circulation, sensitivity to heat and momentum sources 2-14590
- zonal flows in S.Hemisphere, nonlinear wave interactions 2-28148
- zonal harmonic waves 1-5, obs. and quasigeostrophic model 2-47943
- zonal mean circulation in middle atmosphere, annual cycle 2-28156
- zonally averaged circulation model using isentropic coords. 2-47960
- H<sub>2</sub> total mixing ratio rel. to global escape flux (*Rumanian*) 2-23152
- O<sub>3</sub> ground level conc. enhancement due to transport from stratosphere 2-10136

**atmospheric noise** *see* **atmospherics****atmospheric optics**

- see also* **airglow**; **atmospheric light propagation**; **sky brightness**; **sunlight**; **twilight**
- absorption calculation using line-by-line method 2-28204
- aerosol, absorption of direct solar radiation (*Russian*) 2-14600
- aerosol attenuation, determination procedure for spectral optical thickness 2-23144
- aerosol light extinction 2-18573
- aerosol optics properties at stratospheric altitudes 2-18572
- aerosol size distrib. meas. by multispectral solar extinction method 2-32677
- air to ground visibility, depend. on flight altitudes and meteorological parameters 2-32642
- albedo of atmosphere, lessened by effect of volcanic aerosol 2-28207
- astronomical seeing conditions, implications for modern 11-metre Michelson stellar interferometer 2-53088
- tropical Atlantic, direct solar radiation rel. to atmos. composition 2-28179
- atmosphere convective boundary layer upper regions, refr. index fluctuations, temp. and humidity effects 2-28234
- cirrus, albedo to solar radiation and influence on atmos. heat budget 2-3091
- cirrus, optical props. and gross struct., lidar and IR obs. 2-28144
- cloud light single scatt. albedo determ. by airborne method 2-48029
- condensation nuclei effect on attenuation of atmospheric radiation 2-23113
- contrast reduction by the atmosphere and retrieval of nonuniform surface reflectance 2-52925
- Europe, atmosphere optical quantities meas. rel. to visible spectrum contrast transmittance modelling 2-32645
- Fried's parameter for seeing, solar obs. 2-53216
- hexagonal ice crystal light scattering, geometrical optics treatment 2-18571
- humidity measurement in boundary layer, lidar method (*Russian*) 2-37935
- imaging through atm., desert dust spectral effects 2-14607
- infrared absorpt. due to H<sub>2</sub>O vap. in 3.5 to 4.2  $\mu$ m atmospheric window 2-23112
- far infrared absorpt. in 8-13 micron atm. window 2-28206
- intense light beam propagation in weakly nonlinear turbulent atm. 2-52927
- interferometric image reconstruction through the turbulent atmosphere 2-42465
- laser propagation (10.6  $\mu$ m) through ice clouds, microphys. effects 2-28205
- lidar, atmospheric diagnostics by lidar 2-3111
- LOWTRAN5 code, 5 cm<sup>-1</sup> band model option 2-3086
- marine boundary layer, meteorological descriptions for optical props. 2-32641
- micrometeorological temperature profile, optical data, linear and nonlinear inversion 2-32636
- molecular multiple light scattering theory 2-28200
- moonlight ultraviolet illumination of stratosphere suitable for O<sub>3</sub> remote observation method 2-42477
- Novaya Zemlya effect, abnormal atmospheric refr. phenomenon 2-6436
- outgoing thermal radiation spectra (*Russian*) 2-37934
- phase excursions amplitude, meas. by two-dimensional white-light interferometer 2-53093
- radiative transfer equation, invariance under a group of simultaneous transformations of scale 2-28201
- Rayleigh-scatt. optical depth 2-14603
- remote sensing, atmos. correction to satellite radiometry data for rugged terrain 2-18429
- satellite determination of top of atm. radiation budget, from wide angle data 2-48007
- seeing conditions at Roque de los Muchachos Observatory, La Palma, rel. to microthermal fluctuations 2-14768
- seeing conditions of disturbed ground layers, image visibility obs. 2-10159
- snow albedo at South Pole, cloudiness and solar elevation depend. 2-10160
- solar aureole, mol. multiple light scatt. theory application 2-28200
- solar diffuse radiation distrib. over sky, mapping technique 2-14617
- solar diffuse radiation rel. to cloud elec. discharge activity (for India) 2-3088
- solar radiation angular brightness distribution representation by gaussian summation 2-47451
- speckle interferometry, ang. dependence of atmospheric turbulence effect 2-53110
- spectral luminance determination from stratosphere, synthetic, far-IR, simplified computation 2-48004
- stratus clouds, optical transfer function (*Russian*) 2-37969
- surveying, correction of atmos. refraction errors 2-37731
- stratosphere, multiwavelength extinction and refr. index fluctuation meas. 2-32644
- turbidity from solar irradiance meas. 2-37971
- turbidity of air over Potsdam, E.Germany (*German*) 2-6405
- turbulence effects on imaging and pseudo-imaging systems, nature and quantification 2-52932
- turbulence effects on interference images, rel. to active control for Michelson stellar interferometers 2-53087
- turbulence induced wavefront aberrations, modal compensation 2-48001

**atmospheric optics continued**

- twilight, zenith polarization and colour ratio 2-37967
  - ultraviolet spectra absorpt. by OH radical 2-10132
  - vegetation, interception of solar radiation, model for clumped vegetation 2-6410
  - vertical brightness profiles, water vapour conc. from space meas. (*Russian*) 2-18575
  - vertical profile of near-IR absorbing components by inversion of satellite brightness data (*Russian*) 2-38001
  - vertical refraction effect in geodetic networks, models 2-37728
- atmospheric pollution** *see* **air pollution**
- atmospheric precipitation** *see also* **ice**; **rain**; **snow**
- acid rain at Nova Scotian (Canada) rural site 2-47543
  - Alberta, sulphates deposition in precip. from multiple scattered sources 2-9697
  - annual station precipitation, Poisson distrib. 2-10101
  - anticyclonic cyclonic formations at temperate latitudes, water vap. budget and precipitation 2-28181
  - chemical composition of high-altitude precipitation at worldwide sites 2-47941
  - S.Chile, temp. and precipitation extended to 43000 yr BP 2-18563
  - cloud seeding effect of precipitation, radar detect. 2-18548
  - cloud turbulent jet theory appl. to local precipitation increase (*Russian*) 2-18508
  - Colorado precipitation chemistry, effect of Mount St. Helens May-June 1980 eruption 2-9707
  - convective precipitation rel. to mesoscale thermodynamic variables 2-32569
  - cross polarisation on microwave links, review 2-14584
  - cyclonic formations at temperate latitudes, water vap. budget and precipitation 2-28181
  - earthquake prediction correl. for Sichuan and Yunnan provinces (*Chinese*) 2-32412
  - flash floods near Johnstown, long-lived convective system 2-32574
  - GOES imagery, interactive techniques for precipitation estimation 2-23145
  - growth in frontal systems 2-42439
  - hail from midlatitude cumulonimbus, model with ice phase parametrization 2-6416
  - hail patterns and kinetic energy characts. obs. in Swiss experiment 2-14562
  - hailstone embryo types, classification 2-28166
  - Hawaii rainfall, pH cond. and comp. 2-23061
  - hydrometeors, scattering of microwaves and MM waves 2-14581
  - ice accretion at mountain top site in Czechoslovakia (*German*) 2-14504
  - Iowa, dendroclimatic reconstruction of annual precip. amounts since 1680 2-23100
  - Mediterranean Sea, Early Holocene, stagnation after heavy precipitation, sapropel form. 2-42350
  - mesoscale systems, assoc. prefrontal surge and cold-frontal clouds 2-32583
  - monsoon westerly disturbances, seasonal freq. 2-37951
  - New Jersey Pine Barrens, Al concs. in precipitation, streams and shallow groundwater 2-22680
  - North America drought record, effect of lunar tides in atm. 2-47971
  - Northern Hemisphere, model study of relation between glaciation and precip. rates 2-18560
  - Pingliang region, China, hailstorm of 1976 June 4, struct. from radar echoes 2-47986
  - radiowave depolarization by atmospheric hydrometeors, review 2-14585
  - records and extremes in recent years 2-14595
  - River Amazon near Obidos, marine cyclic salts flux, precipitation and surface water anal. 2-32545
  - snowfall in Canada, compatibility with snow cover data 2-23032
  - stability rel. to wind direction over N.Switzerland 2-42455
  - sulphate washout ratios in winter storms 2-28161
  - system structures, global survey 2-14580
  - Tigris-Euphrates streamflow estimation, climate and precipitation 2-14503
  - weather modification by cloud seeding 2-42803
- atmospheric pressure** *see* **atmospheric pressure and density**
- atmospheric pressure and density**
- 500 mbar height patterns in northern hemisphere, anal. using Hough functions (*Chinese*) 2-23049
  - barometer with vibrating-wire sensor (*Chinese*) 2-52938
  - barometric effect of cosmic rays on spectrum of primary vars. 2-14737
  - Bay of Bengal, statistical struct. of meteorological parameters during Monsoon-77 expt. 2-3063
  - blocking anticyclones, comparison of barotropic theory with obs. 2-14537
  - coastal lows caused by synoptic wave interaction with meridional escarpment 2-3072
  - density scale height of upper atmosphere, inferences from final thousand days of orbit of (Ariel 1) 2-10299
  - density variations in 900-1200 km range 2-10213
  - equatorial spread-F decay phase, diffusion of small scale density irregularities 2-32725
  - general circulation in both hemispheres rel. to sea level press. harmonics (*Chinese*) 2-32555
  - geopotential field over northern hemisphere 2-28245
  - global measurement, advanced instrumentation for remote sensing 2-42480
  - hurricanes, midlatitude, at sea, baric topography and synoptic situation 2-23090
  - ionosphere, topside, latit. patterns in plasma scale heights and ion transition altitudes at low latits. 2-23163
  - ionosphere, topside, plasma density profiles rel. to origin of magnetospheric O<sup>+</sup> ions 2-28292
  - ionosphere, vertical plasma density gradients rel. to early phase of equatorial spread-F 2-23164
  - isopycnals inclination, effects on geodetic-astronomical obs. with Danjon astrolabe (*German*) 2-9907
  - isopycnals tilting, effects on characts. of astron. refr. in Northern Hemisphere 2-6431
  - isopycnal tilts due to urban heat islands, effects on astronomical refr. 2-6428
  - Kali river estuary interaction with pre-monsoon air 2-37925
  - Leine river, Germany, flooding and related rainfall, synoptic situation 2-32548
  - magnetosphere, discovery of auroral plasma cavity 2-18634



**atmospheric pressure and density continued**

- middle atmosphere pressure rel. to gamma ray intensity var. (*Russian*) 2-3071
- New Zealand coastal regions, geostrophic wind from press. difference obs. 2-10147
- North America pressure systems, aspects of snow albedo feed backs in atmospheric models 2-18539
- North hemisphere stratosphere, pressure geopotential height and temp. var. (1957 to 1979) 2-32589
- Northern Hemisphere characteristic anomalies of summer sea-level press. 2-28186
- Pacific typhoon tracks, effect of Asia westerly belt long wave trough 2-47990
- pressure gradient force in models with topography, coord. transform. 2-47988
- pressure oscillations after 1980 May 18 eruption of Mount St. Helens 2-6411
- sea level pressure in N.Pacific and N.Atlantic, rel. to variability of ocean-ice-atmosphere system 2-32529
- solar heating effects on pressure 2-14530
- stratosphere press. geopotential height between 50 and 10 mbars, solar activity effect 2-37946
- stratosphere/mesosphere, tidal and gravity wave anal., use of temp. and density obs. 2-37990
- surface layer, relation between density and anomalous astronomical refr. 2-6429
- three-dimensional flow over mesoscale mountains, surface press. fields from linear theory 2-18493
- three-dimensional pressure field data, eigenvector filtering 2-14554
- troposphere, geopot. field vars. correl. with seasonal var. of heat sources and sinks (*Chinese*) 2-23048
- troposphere, 500 mb surface heights rel. to planetary-wave climatology 2-14535
- upper troposphere ridge, effect on development of mid-tropospheric cyclone in westerlies over India 2-3062
- Uccle station, Belgium (1976-1980) 2-28128
- water integrated vapour density along long optical path, absorpt. band meas. 2-32567
- wind pressure excitation of ocean surface, fourth-order homogeneous random field 2-28080
- wind shear and gustiness at the Mod-1 site, Boone, North Carolina 2-32611
- wind-pressure balance eqn. in thin atm. model (*Russian*) 2-18556
- H<sub>2</sub>O total content changes and seasonal atmos. press. variations 2-10137
- O<sub>2</sub> density in upper atmosphere, meas. from solar H Lyman- $\alpha$  absorpt. 2-38012

**atmospheric propagation see atmospheric electromagnetic wave propagation****atmospheric proton precipitation**

see also aurora; radiation belts

- S Atlantic anomaly region, precipitation during mag. storm disturbance 2-23175
- auroral arc (prebreakup) electrodynamics and elec. fields 2-53001
- morning sector ion precipitation following substorm injection 2-3137
- plasma particle trajectories through mag. holes 2-48089
- polar cusp, H I Balmer  $\alpha$  and  $\beta$  emissions, model calc. 2-23154
- pulsating aurora, rocket meas. of particle pulsation 2-14648

**atmospheric radiation**

see also aurora

- absorption of visible radiation in atmosphere containing mixtures of absorbing and nonabsorbing particles 2-23105
- aerosol, absorption of direct solar radiation (*Russian*) 2-14600
- albedo of atmosphere, lessened by effect of volcanic aerosol 2-28207
- tropical Atlantic, direct solar radiation rel. to atmos. composition 2-28179
- auroral arcs optical emissions, rapid fluctuations of random nature 2-48061
- auroral kilometric radiation, rel. to auroral plasma cavity 2-18634
- auroral LF radiation intensity correl. with solar wind bulk flow speed 2-38029
- auroral LF radiation stimulated by solar type III radio burst 2-38030
- Bratislava, Czechoslovakia, global radiation and surface irr. obs. (*German*) 2-14527
- bremsstrahlung produced X-rays from aurorae, deposition in stratosphere and mesosphere 2-28266
- budget at Earth, net flux, albedo and annual global average emitted IR flux determ. 2-37947
- Carpathian Mountains, solar radiation obs., 1966-1975 AD 2-28123
- cirrus, albedo to solar radiation and influence on atmos. heat budget 2-3091
- daylight illuminance, var. during total solar eclipse, (1980 February 16) 2-32610
- downward flux from clear skies due to CO<sub>2</sub> and H<sub>2</sub>O 2-14514
- elevation dependence of sky and solar flux, estimation of assoc. surface temp. vars. 2-32521
- ELF atmospherics, distrib. function for ELF noise 2-38026
- ELF-VLF quasi-periodic emissions near L=6 2-42545
- EM wave emission from homogeneous magnetoplasma, theory 2-48090
- emission layers, Salyut 6 photographic obs. 2-52968
- Europe, Earth-atmosphere system, energy budget 2-14604
- Europe and Turkey, diffuse radiations statistical determination 2-14593
- gamma-radiation, atmospheric flux meas. between 0.4 MeV and 7 MeV at balloon altitudes 2-10289
- global energy and entropy fluxes and spectra, diagnostic study 2-14606
- global radiation at Potsdam (E.Germany), as function of turbidity (*German*) 2-6405
- ionosphere, auroral, intense wave-particle event obs. 2-32719
- ionosphere, electrostatic noise generated by auroral beam 2-3138
- ionosphere, VLF induced emission from polar electrojet region 2-32712
- IR absorption and reflection by oil film on sea (*Russian*) 2-9700
- IR background clutter correl. 2-52844
- IR background radiation from Earth and atmosphere, meas. from balloon-borne staring sensor 2-48055
- IR emission spectrum of upper atmosphere, recent auroral and airglow meas. 2-32703
- IR fluxes, effect of minor gases (*Russian*) 2-18570
- IR radiance model of upper atmosphere, rel. to obs. of Earth IR limb 2-32699
- IR radiation effect on temp. turbulence, spectral struct. and dissipation rate (*French*) 2-37921
- IR radiation pressure effect on artificial satellite orbital motion 2-18678

**atmospheric radiation continued**

- IR radiative transfer in cloudy atm., used to find thermodynamic props. 2-3090
- IR solar radiation, extinction by H<sub>2</sub>SO<sub>4</sub> aerosols 2-23106
- irradiance fluctuations under cloudy conditions, effect on spectral reflectance 2-23108
- irradiation on inclined surfaces, predeterm. for different European centres 2-6423
- kilometric radiation, source location and generation mechanism 2-18656
- LOWTRAN5 code, 5 cm<sup>-1</sup> band model option 2-3086
- magnetosphere, computer simulation of EM kinetic instabilities in multi-component space plasmas 2-32776
- magnetosphere, electrostatic noise generated by auroral electron beam 2-6497
- magnetosphere, radiowave nonthermal continuum emission, kilometric obs. by ISEE 1 2-14710
- magnetosphere electron cyclotron harmonic waves showing amplitude variations 2-28299
- magnetosphere half-harmonic electrostatic emissions and shell-like electron distribs. 2-53015
- magnetosphere or ionosphere, EM wave fields generated by electrons, theory 2-48091
- MESOKLIP data anal. 2-10164
- microwave emission, rel. to remote sensing of atmospheric water content from Bhaskara satellite 2-3057
- middle atmosphere internal gravity waves rel. to  $\gamma$ -ray intensity short period var. (*Russian*) 2-3071
- moist atmosphere, vertical total energy fluxes 2-14519
- monthly average insolation calcs. for tilted surfaces, use of weighted  $R_b$  factors 2-10150
- optical emission studies of nightglow, aurora borealis and noctilucent clouds from manned Soviet spacecraft (1961-1981) 2-52976
- outgoing longwave radiation over summer monsoon region, oscills. 2-28170
- outgoing thermal radiation spectra (*Russian*) 2-37934
- path radiance estimation in remote sensing obs. covariance matrix method 2-37998
- positron annihilation line at 511 keV, HEO 3 meas. 2-48057
- pyranometer operation and routine calibration 2-10202
- radiative convective model with interactive water vapour transport and cloud devel. 2-14605
- radiative cooling in low fog or cloudiness conditions via 8-13 micron window (*Russian*) 2-37968
- radiative transfer, N-stream approximations 2-28202
- radiative transfer and heat exchange (*Russian*) 2-48005
- radiative transfer equation, invariance under a group of simultaneous transformations of scale 2-28201
- Rayleigh layer, irregular boundaries, MW emission, appl. to snow emission 2-10162
- RF interference models applicability evaluation 2-6422
- ring current H<sup>+</sup> wave-particle interactions and charge exchange 2-3153
- Sahara desert, aerosol particle size profile, radiative flux meas., particle nonsphericity obs. 2-32587
- Sahara desert, atmosphere aerosol, size spectra vertical profiles, radiative flux obs. 2-32586
- satellite determination of top of atmos. radiation budget, from wide angle data 2-48007
- sea surface effective long wave radiation, estimates for Bay of Bengal 2-3025
- shortwave radiation field at boundaries of cloudless atm. (*Russian*) 2-18569
- solar and sky radiation intensity, statistics 2-52890
- solar diffuse radiation distrib. over sky, mapping technique 2-14617
- solar diffuse radiation rel. to cloud elec. discharge activity (for India) 2-3088
- solar energy, direct irradiance models, review, evaluation and improvement 2-37189
- solar radiation, ratio of diffuse to direct irradiance for clear skies 2-28169
- solar radiation and illumination 2-32631
- solar radiation angular brightness distribution representation by gaussian summation 2-47451
- solar spectral irradiance, meas. at Tanashi, Tokyo, Japan, data (*Japanese*) 2-23084
- solar spectral irradiance, meas. at Tanashi, Tokyo, Japan (*Japanese*) 2-18545
- solar UV irradiance, long-term var., chemical and thermal response of stratosphere 2-18531
- stratosphere haze causing perturbations in twilight sky colour and radiance 2-3089
- stratosphere radiation, photochemistry and dynamics coupling 2-37939
- submillimetre emission spectra of stratosphere 2-42471
- sunlight spectral irradiance at 300 to 1000 nm using pyranometer and spectrophotometer system 2-10211
- surface layer over melting snowpack, net radiative flux meas. rel. to anomalous temp. behaviour 2-14551
- thermal emission meas. from aircraft 2-42470
- thermal emission spectra meas. (*German*) 2-18504
- time-dependent emergent intensity from an anisotropically-scattering semi-infinite atmosphere 2-37970
- Tiros satellite data, rel. to new worldwide cloud-cover models 2-14548
- troposphere, UV flux, aerosol scattering and cloudiness effects 2-28120
- ULF power from magnetosphere, rel. to upstream solar wind quantities 2-23190
- ultraviolet spectra absorpt. by OH radical 2-10132
- upper atmosphere chemiluminescent emission on release of Al and compounds 2-32694
- visible IR spin-scan radiometer atmospheric sounder, calibration 2-23117
- VLF and ELF emission during ionosphere heating expts., role of instabilities 2-12301
- VLF electron cyclotron harmonic emissions from dayside magnetosphere 2-28298
- VLF emissions due to whistler-mode interactions of plasma sheet electrons 2-53018
- VLF ground hiss and field-aligned current in dayside cusp 2-42549
- VLF interference, fluctuation and pulse components intensities relationship calc. 2-6421
- VLF narrow band hiss emissions, generation mechanism 2-48096
- VLF noise background generated in iono- and magnetospheres 2-48073
- VLF whistler mode emission, freq. broadening during mag. disturbance 2-10262



**atmospheric radiation continued**

- X-ray bremsstrahlung bursts profile, depend. on on precipitating particles pitch-angle distrib. 2-6494  
 H I Balmer  $\alpha$  and  $\beta$  emissions in polar cusp, model calc. 2-23154  
 NO, backscatt. UV fluoresc. spectra 2-52926

**atmospheric radioactivity***see also fallout*

- airborne discharges, collective doses from UK nuclear industry 2-32141  
 Carlsbad Caverns, USA, elec. parameters and  $^{222}\text{Rn}$  comp. 2-32597  
 interhemispheric fallout transport by E. African low-level jet stream 2-42428  
 natural gases,  $\gamma$ -ray detection, natural gases in Cerna Valley, Rumania (Rumanian) 2-28208  
 natural gases, from Cerna Valley (Rumania) (Rumanian) 2-23086  
 $\gamma$ -ray exposure rate, short term fluctuation following release from nuclear plant (Japanese) 2-9715  
 $^{14}\text{C}$  activity, long term vars. and relation to geophysical and astrophysical phenomena 2-47948  
 $^{14}\text{C}$  activity, natural vars. on prolonged time scale rel. to solar activity 2-47827  
 $^{14}\text{C}$  content since 300 AD, tree ring record 2-18750  
 $^{14}\text{C}$ , cosmogenic, short-term vars., 1909-1952, rel. to 11-year cosmic ray vars. 2-48120  
 $^{\text{A}}\text{Rn}$ , A=219, 220, 222, atmospheric conc. over Banghazi, Libya, from beta counting 2-14135

**atmospheric spectra***see also atmospheric optics*

- absorption correction to Sun full disk spectrum (200 to 330 nm) 2-32975  
 acetylene, far IR spectra of troposphere 2-42468  
 aerosol attenuation, determination procedure for spectral optical thickness 2-23144  
 aerosol particle absorption spectroscopy by photothermal modulation of Mie scattered light 2-6438  
 aerosol source region identification by remote infrared obs. 2-52908  
 aerosol spectral data, optical extinction calc. 2-28198  
 air luminescence yield under influence of  $^{239}\text{Pu}$   $\alpha$ -particles 2-48006  
 airglow, error anal. for  $\gamma$ -band measurement with self-absorpt. gas cell (Japanese) 2-3114  
 airglow line intensity ratios used to determine F-region parameters 2-6441  
 aurora, excitation of N II 2145 Å feature 2-32701  
 aurora, intense pulsations, ionisation profile and optical emission o bs. 2-18616  
 aurora,  $\text{N}_2^+/\text{O}$  I emissions ratio during westward travelling surge rel. to electrons spectral hardening 2-10227  
 auroral kilometric radiation, rel. to auroral plasma cavity 2-18634  
 chlorotrifluoromethane, atm. conc., interferometric spectra study 2-14571  
 EHF spectral emission effect on obs. of astronomical bodies 2-14574  
 gaseous transmission, direct integration by Scott's method 2-10163  
 geocorona, Lyman  $\alpha$  absorpt. obs. rel. to solar Lyman  $\alpha$  flux determ. 2-32969  
 infrared absorpt. due to  $\text{H}_2\text{O}$  vap. in 3.5 to 4.2  $\mu\text{m}$  atmospheric window 2-23112  
 ionosphere plasma lines intensity, effects of electron-neutral collisions 2-6501  
 ionosphere radio wave propag., model of partially scattered field with completely displaced spectrum 2-3132  
 IR emission spectrum of upper atmosphere, recent auroral and airglow meas. 2-32703  
 lightning, amplitude spectra in interval from 100 kHz to 20 MHz 2-18499  
 magnetosphere, energetic particles spectra rel. to plasma temp. in distant plasma sheet 2-28291  
 mesosphere thermal horizontal structure, OH(8-3) band emission obs. 2-47980  
 nightglow, O I and  $\text{O}_2$  emissions excitation 2-10224  
 nightglow equatorial 630 nm depletions, motion 2-48060  
 O,  $\text{O}_2$  and OH airglow emissions in lower thermosphere 2-18615  
 optical emission studies of nightglow, aurora borealis and noctilucent clouds from manned Soviet spacecraft (1961-1981) 2-52976  
 outgoing thermal radiation spectra (Russian) 2-37934  
 planetary atmospheres, element composition and density, meas. by radiation generated by lander descent 2-38080  
 positron annihilation line at 511 keV, HEAO 3 meas. 2-48057  
 radiative cooling in low fog or cloudiness conditions via 8-13 micron window (Russian) 2-37968  
 Rayleigh scattering spectrum, rotational Raman lines rel. to scatt. optical depth 2-14603  
 remote sensing data, spectral effects of desert dust 2-52930  
 selective and continuum absorpt., microwindows, 8-12  $\mu\text{m}$  2-18574  
 solar irradiance attenuation due to  $\text{O}_2$  Schumann-Runge band absorpt. 2-32595  
 solar radiation absorption by water vapour, efficient computation method 2-14601  
 stratosphere, abundances of HF and HCl from IR spectral obs. 2-37931  
 stratosphere, emission spectra in submm range, constituent identification 2-6426  
 stratosphere,  $\text{O}_3$  UV absorpt. meas. and comparison with mass spectrometer expt. 2-28131  
 stratosphere Fluorocarbon-22 spectra and abundance 2-28135  
 submillimetre emission spectra of stratosphere 2-42471  
 sunlight, UV spectral irradiance and action atmospheric photodissoc. processes 2-10149  
 thermal emission meas. from aircraft 2-42470  
 thermal emission spectra meas. (German) 2-18504  
 turbidity, determ. from upward spectral radiances 2-32635  
 ultraviolet spectra absorpt. by OH radical 2-10132  
 water integrated vapour density along long optical path, absorpt. band meas. 2-32567  
 water vapour, remote sounding using Raman-lidar (French) 2-6481  
 water vapour absorpt. rel. to determ. of extra-atmospheric monochromatic stellar magnitudes 2-53101  
 BrO, spectral linewidth of 3 mm wave transition 2-7605  
 CO, IR spectra obs. rel. to conc. in upper stratosphere 2-28132  
 CO $_2$  stratospheric continuous absorpt. meas. near 2400  $\text{cm}^{-1}$  2-37966  
 COS and CS $_2$ , UV absorption spectra (French) 2-23147  
 ClO, spectral linewidth of 3 mm wave transition 2-7605  
 Fe I 386 nm emission in twilight spectra; obs. by ratioing technique 2-6486  
 HCN absorption near 14  $\mu\text{m}$  2-23104

**atmospheric spectra continued**

- HCl in upper stratosphere, mixing ratios from near IR spectra 2-32561  
 HF in upper stratosphere, mixing ratios from near IR spectra 2-32561  
 HNO $_3$ , atm. conc., interferometric spectra study 2-14571  
 HNO $_3$  synthetic spectra around 11.5  $\mu\text{m}$  (French) 2-48008  
 H $_2\text{O}$  fluorescence, Nimbus 7 SAMS meas. in 2.7  $\mu\text{m}$  band in mesosphere 2-23071  
 H $_2\text{O}$ , IR radiation absorpt. meas. 4.3 to 5.5  $\mu\text{m}$  2-10165  
 H $_2\text{O}$ , stratospheric column density determ. from far IR absorpt. spectra by curve of growth method 2-28199  
 H $_2\text{O}$  sub-mm transmission, spectrum 2-42596  
 H $_2\text{O}$  vapour absorpt. at I laser line 2-20048  
 H $_2\text{O}$  vertical profile in stratosphere/mesosphere, SHF obs. 2-37927  
 H $_2\text{O}_2$ (b) band intensity around 1266  $\text{cm}^{-1}$  2-24685  
 N $_2$  Lyman-Birge-Hopfield band emission in far UV nightglow 2-32698  
 N $_2$  stratospheric continuous absorpt. meas. near 2400  $\text{cm}^{-1}$  2-37966  
 NO, backscatt. UV fluoresc. spectra 2-52926  
 NO $_2$ , seasonal trends in stratosphere over Calgary, twilight spectra 2-23056  
 N $_2\text{O}$ , NO, NO $_2$  and HNO $_3$ , latitudinal, seasonal and diurnal var. 2-18530  
 Na I natural emission excitation mechanism in upper atmosphere 2-3113  
 O I 5577 Å emission in nightglow, theory of origin 2-14647  
 O I 6300 Å, obs. rel. to non-thermal O( $^1\text{D}$ ) production by  $\text{O}_2^+$  dissociative recomb. 2-14644  
 O $_2$  761.9 nm nightglow band, peak emission rate height, rocket meas. 2-14646  
 O $_2$  absorption band, determ. of temperature probing of atmosphere 2-42451  
 O $_2$  nightglow, synthetic spectra calc. 2-10219  
 O $_3$ , 4.1 $_{-0.4}^{+0.3}$  rotational line in mesosphere, diurnal vars., 101737 MHz obs. 2-18535  
 O $_3$ , IR emission spectra for upper atmos. conditions 2-10223  
 O $_3$  profiles, determ. from high resolution UV spectra obtained with balloon-borne spectrometer 2-47934  
 O $_3$ , stratospheric column density determ. from far IR absorpt. spectra by curve of growth method 2-28199  
 OH 686.3 nm Meinel nightglow band, peak emission rate height, rocket meas. 2-14646  
 OH (6-2) band, intensity oscills. rel. to rotational temp. 2-23153  
 OH nightglow bands over Brazil, photometric obs. 2-14534  
 OH, radiative lifetimes and quenching rates of excited rot. levels 2-44004  
 OI 5577 Å airglow variation, satellite observation between April 1971 and December 1977 2-38014  
 O( $^3\text{P}_1$ ) 1304 Å triplet intensity ratios in airglow 2-42509  
 SO $_2$ , UV absorption spectra (French) 2-23147

**atmospheric structure***see also atmospheric composition*

- auroral torch structure, pulsating aurora activity centre 2-6488  
 boundary layer, convective, comparison of struct. parameter scaling expressions with turbulence closure model predictions 2-14536  
 F-region, equatorial, irregularities and drifts, interferometer studies 2-28270  
 ionosphere, auroral, cond. inhomogeneity rel. to field-aligned currents 2-3133  
 ionosphere, auroral, formation of kilometric inhomogeneities above F-region maximum 2-3130  
 ionosphere, effect of boundary conditions on conjugate relationship of Pi 2 mag. pulsations 2-32769  
 ionosphere, nighttime mid-latitude vertical structure, model 2-14651  
 ionosphere, topside, equatorial, night-time electron temp. troughs satellite 2-32731  
 magnetosphere, discovery of auroral plasma cavity 2-18634  
 magnetosphere, simulation study of effects of east-west interplanetary mag. field 2-32750  
 outer magnetosphere energetic-electron fluxes meas. rel. to longit. drift shells splitting 2-6505  
 monsoon trough over India, vertical slope and assoc. with rainfall distrib. 2-3065  
 stability rel. to wind direction over N. Switzerland 2-42455  
 thermosphere, lower, meteor-ablation model of Na and K layers 2-28255  
 K layer in upper atmosphere, K abundance, meteor ablation model anal. 2-28256  
 Na layer in upper atmosphere, Na abundance, meteor ablation model anal. 2-28256

**atmospheric techniques**

- see also air pollution detection and control; geophysical equipment; ionospheric measuring apparatus; ionospheric techniques; meteorological instruments; weather forecasting*  
 acoustic sounding of atmos., recognition of struct. from echo intensity fluctuations (Russian) 2-52956  
 advanced instrumentation for remote sensing 2-42480  
 aerosol, particle size evaluations using multiwavelength extinction meas. 2-48011  
 aerosol particle absorption spectroscopy by photothermal modulation of Mie scattered light 2-6438  
 aerosol size distrib. meas. by multispectral solar extinction method 2-32677  
 aerosol source region identification by remote infrared obs. 2-52908  
 air impurity analyser, portable gas chromatography instrument 2-32158  
 airship for geosciences monitoring, very large stratosphere solar heated craft 2-6480  
 atmospheric scattering by atmospheric aerosol, turbulence parameter determ. using laser method 2-42487  
 auroral electron energies from O I/N $_2^+$  technique 2-3117  
 auroral zone parallel electric fields struct., use of electron data 2-10195  
 balloon (super press. type) in boundary layer, as tracer of fluid motion 2-14564  
 Birkeland currents distant mag. field effects determ. 2-32768  
 boundary layer parameterisation in large-scale meteorological models, review 2-10110  
 boundary layer pollution propagation and turbulent diffusion 2-6440  
 Bowen ratio of boundary layer, meas. apparatus 2-10181  
 chemical anal. method for Cd, Pb and Ag in airborne suspensions, by at. absorpt. spectrosc. 2-48039  
 clear air turbulence measurement, appl. of Doppler-radar obs. at 1290 MHz 2-14552  
 clear air turbulence prediction and monitoring, use of rawinsonde system 2-28233



## atmospheric techniques continued

- clear air turbulence warning system for aircraft, IR radiometry system 2-23143  
 cloud cover estimation, comparison of satellite and all-sky camera methods 2-14570  
 cloud droplet measurement, collecting efficiency of cylindrical probe 2-28228  
 cloud height meas. using eyesafe laser rangefinder 2-3110  
 cloud light single scatt. albedo determ. by airborne method 2-48029  
 cloud parameterisation schemes, appl. of detailed planetary boundary layer model 2-14538  
 cloud particle effects on reentry environmental conditions forecasting 2-38003  
 clouds automatic tracking technique, appl. to GOES and METEOSAT obs. 2-14615  
 convective boundary layer upper regions, refr. index fluctuations, temp. and humidity effects 2-28234  
 correspondence factor analysis method modification for temp. anal. 2-47991  
 cryogenic pump for sounding rocket instrumentation systems 2-43038  
 dendroclimatology, appl. to reconstruction of annual precip. amounts in Iowa since 1680 2-23100  
 Earth-atmosphere IR background radiation, meas. from balloon-borne staring sensor 2-48055  
 echo sounding of lower atmosphere preliminary studies 2-23135  
 electric potential measurement by tethered balloon, space charge problems 2-42478  
 electric potential measurement techniques using tethered balloon 2-42479  
 environmental probing using mobile lidar system 2-37478  
 fog dispersal by CO<sub>2</sub> laser pulses, exact soln. including prevaporationisation heating 2-48000  
 geomagnetic field, meas. at rocket altitudes via ring core magnetometer on K-9M-72 rocket (*Japanese*) 2-3182  
 geomagnetic storm development prediction from solar wind-magnetosphere energy coupling function 2-48040  
 geopotential field over northern hemisphere 2-28245  
 heavy-gas spread from point source into complex terrain, hydraulic modelling method 2-42060  
 humidity and simultaneous humidity meas. by lidar technique 2-3096  
 humidity determin. by IR light propag. method 2-28244  
 humidity measurement in boundary layer, using ruby lidar system 2-14622  
 humidity measurement with Lyman alpha hygrometer 2-14621  
 humidity of boundary layer, measurement by laser backscattering method (*Russian*) 2-37935  
 humidity profile measurement, microwave radiometry method (*Chinese*) 2-18586  
 hydrometry, with psychrometers without ventilation (*Japanese*) 2-28239  
 interferometry, two-dimensional, appl. to determ. of VHF lightning sources positions 2-18540  
 ionosphere, electron temp. determ. by plasma line technique 2-18596  
 IR heterodyne remote sounding of stratosphere, inversion technique 2-18582  
 kites and their meteorological use 2-18609  
 laser application to atm. gas remote meas., Raman reson. diffusion method (*French*) 2-32163  
 laser methods appls. 2-48032  
 laser radar, remote meas. of wind direction and velocity, spatial correl. techniques (*Japanese*) 2-14628  
 lasers for hydrometeorological research and environmental monitoring 2-32654  
 LF waves at oblique incidence, ionosphere refl. height determ., use of AM transmitters 2-37984  
 lidar, airborne, appl. to meas. of smoke plume distrib., vertical transmission and particle size 2-47935  
 lidar, IR, transmitter and receiver telescope alignment method 2-52935  
 light attenuation by aerosol, method for spectral optical thickness 2-23144  
 light radiation meas. at top of atmos., interpretation of wide-angle data 2-48007  
 lightning impulse voltages. recording by wave memories (*German*) 2-42489  
 lightning position location by SHF-VHF radar 2-42423  
 magnetic pulsations motion picture presentation, appl. to pulsation charact. determ. 2-32772  
 magnetosphere intense natural waves near  $f_{pe}$ , method for freq. exact location 2-48041  
 magnetosphere-particle beam experiments, SEPAC (space shuttle project) 2-14755  
 meteorological analysis, appl. of Hough functions (*Chinese*) 2-23049  
 meteorological automatic data processing, objective anal. (*Chinese*) 2-23114  
 meteorological tower equipped for automatic temp. and wind meas. (*Chinese*) 2-18585  
 microwave radiometry of ocean surface and atmosphere, inverse problems formulation and solution 2-48027  
 microwaves absorption by cloud and rain, computation method 2-3058  
 Middle Atmosphere Program, wind meas. techniques 2-37988  
 minor constituents determ. from solar IR spectral obs. 2-32688  
 N<sub>2</sub>O in troposphere, mole fraction determ. 2-18520  
 ocean waves breaking to form droplets, photographic obs. technique 2-52913  
 optical extinction calc. using aerosol spectral data 2-28198  
 optical measurements, techniques for multiwavelength extinction and refr. index fluctuation meas. 2-32644  
 optical turbulence measurement, remote sensing of  $C_N^2$  by multidimensional anal. of stellar scintillation 2-32647  
 path radiance estimation in remote sensing obs. covariance matrix method 2-37998  
 planetary boundary layer clear air roll vortices and turbulent motion, meas. with two techniques 2-28232  
 plume observation method by IR imagery 2-14173  
 pollution over Apsheron Peninsula (Baku), short-term forecasting technique 2-22684  
 precipitation analysis, stochastic cluster model of daily rainfall sequences 2-23099  
 precipitation estimation from GOES imagery, interactive techniques 2-23145  
 pressure field, eigenvector filtering of three-dimensional data 2-14554  
 radar (5 cm) detection of storms, attenuation problems 2-28127

## atmospheric techniques continued

- radar sounding of atmos., recognition of struct. from echo intensity fluctuations (*Russian*) 2-52956  
 radio refractivity sounding, Monex-1979 meas. over equator and south Arabian Sea 2-3059  
 radioactivity measurement, by  $\gamma$ -ray detection, natural gases in Cerna Valley, Rumania (*Rumanian*) 2-28208  
 radiometric methods for integrated water vapour density determ. 2-32567  
 rain droplet size measurement with Doppler radar 2-14624  
 rain estimation using satellite data, Griffith/Woodley technique 2-14623  
 rain observation by radar, comparison airborne and land based MONEX systems 2-28235  
 raindrop meas. in near-field using laser disdrometer 2-52934  
 rainfall estimation by satellite imagery methods 2-14618  
 Raman scattering O<sub>2</sub>/CO<sub>2</sub> ratio expt., computerised meas. system 2-10194  
 refraction, astronomical, calc. by means of continued fractions 2-6430  
 refraction calculation in model atmospheres, binomial expansion coeffs. 2-10167  
 refraction determ. rel. to geodetic meas., use of multiwave or single wave methods 2-3094  
 refraction determination, appl. to astronomy 2-6427  
 refraction measurement, appl. of two colour refractometer 2-10212  
 refractive index angle determ. accuracy using IDM meas. 2-32638  
 remote probing using CO<sub>2</sub> DIAL system 2-2828  
 remote sensing, Tiros satellite data rel. to new worldwide cloud-cover models 2-14548  
 remote sensing of atmospheric water content, from Satellite Microwave Radiometer on Bhaskara 2-3057  
 remote sounding of atmosphere and ocean, for climate research 2-3102  
 remotely sensed Earth imagery, atmospheric correction (*Japanese*) 2-3106  
 satellite orbits analysis, upper atmosphere and gravitational field research review 2-42571  
 semidiurnal wind in mesopause of predictable nature suitable for comparing meas. methods 2-52973  
 solar diffuse radiation distrib. over sky, mapping technique 2-14617  
 solar radiation absorption by water vapour, efficient computation method 2-14601  
 solar radiation diffuse fluxes on oriented sloping surfaces, improved Monte Carlo approximations 2-18495  
 spectral analysis method for finite-length wave spectra 2-10114  
 stack gas concentration meas. in 1-6  $\mu$ m wavelength region 2-2834  
 statistical weather forecasting, appl. to radiation and radiation-advective fogs 2-23089  
 stereo presentation technique for meteorological data 2-23120  
 stratosphere/mesosphere, tidal and gravity wave anal., use of temp. and density obs. 2-37990  
 stratospheric, vertical transport meas. using turbulence external scale derived from vertical O<sub>3</sub> profile 2-14553  
 summer monsoon rainfall in India, long range forecasting using meridional wind index 2-3060  
 sunlight, predeterm. of irradiation on inclined surfaces for different European centres 2-6423  
 sunshine duration, evaluation using cloudiness obs. 2-14556  
 synoptic fronts and H<sub>2</sub>O content, determin. by Seasat microwave method 2-37957  
 temperature and humidity meas. using remote tunable IR lidar 2-10179  
 temperature and simultaneous humidity meas. by lidar technique 2-3096  
 temperature of boundary layer, measurable by acoustic sounding (*Russian*) 2-48026  
 temperature remote sensing by satellite microwave radiometry 2-28236  
 temperature remote sensing from satellite, to subpixel resolution 2-18605  
 thermosphere composition, use of F<sub>1</sub>-layer data 2-48058  
 thermospheric electrostatic field calc. method 2-14639  
 Thornthwaite-Holzman eqns. for sensible and latent heat fluxes over crop and forest canopies, error anal. 2-14550  
 thunderstorm location, use of groundbased automatic single station technique 2-32614  
 thunderstorms analysis, relation of satellite-based intensity to radar-estimated rainfall 2-14555  
 tilt of EM waves propagating above a rough sea 2-52918  
 transport tensor for two-dimens. Eulerian model 2-28229  
 trichlorofluoromethane used as tracer of urban air masses 2-9711  
 turbidity measurement, intercomparison of integrating nephelometer meas. 2-9751  
 turbulence dissipation rates in thin layers, radar meas. 2-42486  
 turbulence properties in boundary layer, measurable by obs. of elec. charge turbulence 2-42424  
 twilight airglow spectra anal. appl. of ratioing technique to obs. of Fe I 386 nm emission time 2-6486  
 USA meteorological rocketsonde temp. meas., repeatability and uncertainty 2-37989  
 vertical profile of near-IR absorbing components by inversion of satellite brightness data (*Russian*) 2-38001  
 vertical refraction angle from angle-of-arrival variance 2-6434  
 vertical temperature structure, remote monitoring 2-6471  
 waterspout velocity measurement by airborne Doppler lidar method 2-14616  
 weather forecasting, characts. of radar echoes from pre-monsoon squalls over Dum Dum, India 2-3066  
 weather forecasting, verification of fixed-width credible interval temp. forecasts 2-10111  
 weather prediction, statistical forecasting of heavy rain and floods in River Teesta, NE. India 2-3044  
 wind, data sampling techniques for mean wind speed estimation 2-14557  
 wind and deformation meas., on high radio tower 2-6470  
 wind determination using SEASAT satellite 2-28188  
 wind measurement, satellite borne microwave radar method 2-37993  
 wind measurement by satellite method, for surface winds over oceans 2-14619  
 wind measurement by Seasat radar, anomalous results due to mid-level dynamics 2-37956  
 wind measurements by temporal cross-correl. of optical scintillations 2-28212  
 wind stress over ocean during monsoon, cloud motion determination method 2-23053  
 wind vane testing procedure for dynamic response 2-14626  
 wind velocity determination in turbulent atm., coherence analysis of optical meas. 2-42484



**atmospheric techniques continued**

- <sup>10</sup>Be/<sup>7</sup>Be ratio used to analyse transport processes between stratosphere and troposphere 2-28226
- CO monitoring system, using nondispersive IR analyser 2-32159
- CO<sub>2</sub> global atmospheric meas., using computer-based meas. systems 2-14635
- H<sub>2</sub>O content of troposphere, meas. by satellite IR radiance method 2-14620
- O profile measurement in lower thermosphere, nightglow obs. method 2-32674
- O<sub>3</sub> and aerosol profile meas. in lower troposphere using NASA Langley airborne DIAL lidar system 2-3108
- O<sub>3</sub> in nighttime stratosphere, observable by means of UV reflected from Moon 2-42477
- O<sub>3</sub> measurement in stratosphere, comparison of mass spectrometer and UV absorpt. meas. 2-28131

**atmospheric temperature**

- see also *atmospheric thermodynamics*
- N America, solar cycle signal in air temp., amplitude, gradient, phase and distrib. 2-14539
- Appalachian Mountains summits, average temp. estimation 2-28163
- Apsheron Peninsula (Baku), wind speed and vertical temp. profile rel. to air pollution forecasting 2-22684
- Arabian Sea monsoons, temp inversion detect. from 1000-850 mbar layer mean temp. 2-32616
- atmosphere convective boundary layer upper regions, refr. index fluctuations, temp. and humidity effects 2-28234
- aurorae, plasma meas. in pulsating events 2-3125
- Bay of Bengal, statistical struct. of meteorological parameters during Monsoon-77 expt. 2-3063
- Beijing winter temperature, correspondence factor analysis method 2-47991
- boundary layer, convective, temp. and humidity struct. parameters from turbulence closure model 2-14536
- boundary layer of desert with low relief, nocturnal temp. jumps 2-23054
- boundary layer temp. struct., measurable by acoustic sounding (*Russian*) 2-48026
- Bowen ratio of boundary layer, meas. apparatus 2-10181
- S. Britain, cold spells of 1981 and 1908 in April, anal. 2-52915
- S. Chile, temp. and precipitation extended to 43000 yr BP 2-18563
- China, surface temp. rel. to 5-day mean circulation at 500 mb level (*Chinese*) 2-32557
- Christchurch, New Zealand, urban heat island model 2-14561
- cirrus, albedo to solar radiation and influence on atmos. heat budget 2-3091
- cirrus, optical props. and gross struct., lidar and IR obs. 2-28144
- credible interval temperature forecasting, new scoring scheme for verification of 2-10111
- distribution, climatic theory based on energy balance 2-48166
- diurnal temperature variation curve calc. for cloudless sky 2-28176
- drainage wind from large area, temp. and vel. oscils. 2-14560
- central England, cold winter occurrence during 1861 to 1980 period 2-23103
- England, urban and topography affects on surface temp., satellite obs. 2-23095
- equatorial electrojet E-region, Joule heating, rel. to electron and neutral gas temps. 2-32732
- Europe, ambient and dewpoint temps. meas. rel. to visible spectrum contrast transmittance modelling 2-32645
- Evora region statistical correlation between overall daily radiation and mean daily temp. (*Portuguese*) 2-37924
- F<sub>2</sub>-layer, electron temp. var. above Ruili, China, during solar eclipse (1980 February 16) (*Chinese*) 2-3122
- F-region, use of auroral O I as tracer 2-48062
- global measurement, advanced instrumentation for remote sensing 2-42480
- global surface temperature, 1600-1950, rel. to atmospheric <sup>14</sup>C activity and solar activity 2-47948
- global temperature, semi-empirical Budyko-Sellers class model 2-14599
- global temperature 2-10166
- global warming, man-made, possible climatic consequences 2-6424
- greenhouse effect due to pollutant trace gases increase in 1970s decade 2-37926
- ground-level temperature, control of time var. by quasi-biennial periodicity in solar phenomena 2-37952
- heat balance statistics derived from general circulation model 2-47961
- heating of stratosphere due to O<sub>3</sub> absorbing solar radiation 2-52902
- inversions in lower atmosphere obs. using echo sounding 2-23135
- ionosphere, auroral, effect of non-Maxwellian vel. distrib. on radar waves incoherent scatt. 2-10243
- ionosphere, effect of thermal motion of ions in determining ion distrib. behind satellite 2-6502
- ionosphere, electron density and temp. rel. to var. of electron collision freq. 2-23166
- ionosphere, electron temp. determ. by plasma line technique 2-18596
- ionosphere, positive ion temp. by K-9M-67 sounding rocket (*Japanese*) 2-6491
- ionosphere, topside, equatorial, night-time electron temp. troughs satellite 2-32731
- ionospheric ion temp. vertical profile, sounding rocket obs. 2-52948
- ITCE in Australia, 1976 flux-profile obs. interpretation 2-28160
- Johannesburg, S. Africa, urban heat plume dynamics 2-10119
- Kali river estuary interaction with pre-monsoon air 2-37925
- lapse rates, radaracoustic sounding, estimation of Doppler freq. pulsation energy spectra (*Russian*) 2-44517
- lidar technique for simultaneous temp. and humidity meas. of troposphere 2-3096
- local temperature field disturbances, effects on geodetic-astronomical obs. with Danjon astrolabe (*German*) 2-9907
- magnetosphere, relation between energetic particles and plasmas in distant plasma sheet 2-28291
- marine boundary layer, warm air advection over cool sea, humidity and temp. var. 2-14521
- marine boundary layer, wind, temp. and humidity values rel. to optical props. 2-32641
- mesosphere, equatorial long term var. 2-6414
- mesosphere, radiative-photochem. response to dynamical forcing 2-10135
- mesosphere, temps. and ion-neutral collision freqs. over Areibo 2-42504
- mesosphere thermal horizontal structure, OH(8-3) band emission obs. 2-47980

**atmospheric temperature continued**

- methane increases leading to global warming due to modified stratosphere 2-2820
- micrometeorological temperature profile, optical data, linear and nonlinear inversion 2-32636
- microwave radiometry remote sensing from satellite, effect of cloud and rain 2-28236
- middle atmosphere, wind and temp. fluctuations in 2-day wave simulation 2-32601
- middle atmosphere traveling two day wave, temp. obs. 2-37941
- Moscow, heat island effect, annual mean temp. 2-28177
- nocturnal jet evolution and breakup, assoc. wind and temp. 2-32627
- North America air temperature, effect of lunar tides in atm. 2-47971
- North hemisphere stratosphere, pressure geopotential height and temp. var. (1957 to 1979) 2-32589
- Northern Hemisphere, mean annual air temp. between 1891 and 1976 AD (*Russian*) 2-37933
- northern hemisphere ground level air temp., climatic changes (1881-1978) 2-14598
- ocean frontal formation due to shallow water cooling effects, air temp. role 2-47892
- Quebec City, urban heat island obs. during winter (*French*) 2-22682
- rain, attenuation coeffs., absorpt. coeffs. and radar refl. factor, depend. on freq. and temp. 2-47989
- records and extremes in recent years 2-14595
- remote meas. using tunable IR lidar 2-10179
- remote sensing from satellite, to subpixel resolution 2-18605
- remote sounding of atmosphere and ocean, for climate research 2-3102
- Roque de los Muchachos Observatory, Palma, microthermal fluctuations rel. to seeing conditions 2-14768
- rotational temperature variations in pulsating auroras 2-3119
- Santorini, temp. during April 29, 1976, annular solar eclipse 2-28158
- Saurashtra cyclone (1978), cloud top temp. structural changes during storm life-cycle 2-3056
- smog forecasting, accurate Doppler radar meas. of atmospheric speed of sound (*Russian*) 2-44516
- solar cycle influence on atm., altitude depend. 2-18551
- solar cycle influence on temp. of Earth's atmos. (*French*) 2-42434
- solar parameters related to lower atm. behaviour with 12-150 day periods 2-18628
- solar rotation period evident in stratosphere temp. and dynamics 2-18552
- Southern Hemisphere, atmos. temp. seasonal variations, 25-80 km altitude 2-23092
- Southern Hemisphere flows, linear theory of temp. disturbances 2-14532
- stability rel. to wind direction over N. Switzerland 2-42455
- storms, layered activity in channels, temperature boundaries 2-32596
- stratopause altitude variability during summer 2-32608
- stratosphere, chemical and thermal response to long-term solar UV irradiance var. 2-18531
- stratosphere, diagnostic study of wavenumber-2 sudden warming in transformed Eulerian-mean formalism 2-14541
- stratosphere, equatorial long term var. 2-6414
- lower stratosphere, wavelike temp. anomalies with short meridional and large zonal scales 2-28145
- stratosphere chemical transport parameterisation by eddy diffusion, effect of temp./chemistry coupling 2-32588
- stratosphere temperature field between 50 and 10 mbars solar activity effect 2-37946
- stratosphere temperature perturbations relax. rate, effect of O<sub>3</sub> advection, radiative transfer and photochemistry 2-37939
- stratosphere tropics, wind correl. with Indian summer monsoon rainfall 2-37944
- stratosphere warming model, Eulerian and Lagrangian diagnostics 2-14540
- stratosphere/mesosphere, tidal and gravity wave anal., use of temp. and density obs. 2-37990
- stratosphere/mesosphere warmings, temp. changes and planetary scale waves activity 2-37942
- subtropical high (1977) northward shift, thermal wind adjustment anal. 2-32622
- subtropical regions, temp. conditions rel. to heat content of subequatorial Atlantic waters (*Russian*) 2-10072
- surface inversions rel. to abnormal atmospheric refr. phenomena 2-6436
- surface layer, temp. and press. rel. to astronomical refr. vars. 2-6429
- surface layer over melting snowpeak, anomalous temp. profiles obs. 2-14551
- surface temp. sensitivity in global models with variable cloud cover 2-28187
- surface temperature, estimation of vars. due to changes in sky and solar flux with elevation 2-32521
- surface temperature, long term stabilisation by negative feedback mechanism 2-37950
- surface temperature, sensitivity to increased atmospheric CO<sub>2</sub> 2-18562
- surface temperature increase due to pollutant methane conc. increase 2-32143
- thermosphere, numerical model of thermal conditions 2-52969
- thermosphere, solar UV radiation penetration and absorpt., solar activity influence 2-18614
- thermosphere disturbed by magnetic storms, temp. and composition model 2-10215
- thermosphere perturbed by geomagnetic storms theory 2-10216
- lower thermosphere props. from incoherent radar obs., review 2-52972
- thermosphere temperature characteristics, model of daily vars. 2-6485
- thermosphere temperature profiles on solar corpuscular fluxes penetration of middle ionosphere 2-6484
- thermospheric temperature and wind meas., Fabry-Perot interferometer max.-likelihood optimisation 2-52945
- topside ionosphere temp. profile from high latitude ionisation hole anal. 2-3141
- tropopause height and temp. annual variation in tropical regions 2-47962
- troposphere, effects of atmospheric CO<sub>2</sub> and chlorofluoromethanes on temp. 2-32142
- troposphere, mean virtual temp. distrib. rel. to limits of subtropical jet stream 2-18494
- troposphere polar warming during January 1977 stratospheric warming 2-23060
- troposphere variations due to solar flare effects 2-18553
- turbulence, IR radiation effect, spectral struct. and dissipation rate (*French*) 2-37921
- Uccle station, Belgium (1976-1980) 2-28128



**atmospheric temperature continued**

- United States (Midwest), weather influenced by aircraft contrails 2-14567
- upper atmosphere, temp. gradient between ionosphere and plasmasphere rel. to  $O^{+4}/O^{+}$  ratio 2-6498
- upper atmosphere temp. at midlatitude F-region altitudes 2-32697
- upper atmosphere, diurnal temp. amplitude from cosmic ray vars. at solar freq. 2-10279
- urban heat island over Christchurch, New Zealand 2-14561
- urban heat islands, effects on astronomical refr. 2-6428
- midwestern USA, severity of winters of 1977 and 1978 AD 2-23050
- USA, winter mean temp., climatic noise and pot. predictability 2-32590
- USA meteorological rocketsonde temp. meas., repeatability and uncertainty 2-37989
- vertical distribution, statistical features, appl. to numerical weather prediction model 2-32626
- vertical temperature structure, remote monitoring 2-6471
- S Victoria Land, Antarctica, microclimate and temp. of a dry valley 2-47979
- Washington Airport (USA), unrepresentativity of site for temp. observations 2-23121
- wind shear and gustiness at the Mod-1 site, Boone, North Carolina 2-32611
- zonal fluctuations, space time correlations, stochastic model (Russian) 2-10128
- CO<sub>2</sub> increase causing atmos. warming, model of ocean-atmos. system 2-28191
- CO<sub>2</sub> increase due to man's activities, climate changes 2-23102
- I vapour, deposition velocity, air temperature depend. 2-42062
- O<sub>2</sub> absorption band, determ. of temperature probing of atmosphere 2-42451

**atmospheric thermodynamics**

see also atmospheric temperature

- air-sea transfers of heat and momentum, bulk aerodynamic method 2-18458
- Arabian Sea monsoon depression, formation and struct., case study 2-32623
- N Bay of Bengal, surface energy exchange processes rel. to subsurface thermal struct. and mixed layer depth 2-3027
- changes caused by solar power plant with central receiver 2-27759
- cirrus, albedo to solar radiation and influence on atmos. heat budget 2-3091
- cloud ensemble model construction involving moist convection and radiative cooling (Russian) 2-18507
- Denver, Colorado, aerosol warming and cooling effects in emission spectrum 2-18156
- dry thermal dynamics, initiated by active admixture (Russian) 2-47951
- equatorial electrojet E-region, Joule heating, rel. to electron and neutral gas temps. 2-32732
- Europe, Earth-atmosphere system, energy budget 2-14604
- general circulation, effects of boundary conditions on vacillation in thermally driven rotating flow 2-16331
- global climatic model, incorporation of thermal energy advection (Spanish) 2-10156
- global energy and entropy fluxes and spectra, diagnostic study 2-14606
- greenhouse effect due to pollutant trace gases increase in 1970s decade 2-37926
- greenhouse problem, effects of increased CO<sub>2</sub> concs. 2-10166
- heat exchange and radiative transfer (Russian) 2-48005
- heat fluxes, sensible and latent, over crop and forest canopies, error anal. of Thornthwaite-Holzman eqns. 2-14550
- heating of stratosphere due to O<sub>3</sub> absorbing solar radiation 2-52902
- Hurricane Ella, heat flux from ocean 2-10077
- inclined terrain, geostrophic drag and heat transfer 2-32580
- India, atmospheric energetics during drought and normal monsoons 2-3064
- ionosphere lower regions, corpuscular heating during active Sun periods 2-6483
- ionosphere polar region, O heating 2-23159
- IR radiative transfer in cloudy atm., used to find thermodynamic props. 2-3090
- marine boundary layer, momentum, heat and moisture fluxes rel. to optical props. 2-32641
- mesoscale variables rel. to convective precipitation 2-32569
- mesosphere, radiative-photochem. response to dynamical forcing 2-10135
- northern hemisphere, seasonal var. of atmospheric heat sources and sinks in troposphere (Chinese) 2-23048
- ocean-atmosphere heat transfer, rel. to ocean dynamic topography vars. west of Mid-Atlantic Ridge (French) 2-6368
- ocean-ice-atmosphere systems of N.Pacific and N.Atlantic, monthly and seasonal variability 2-32529
- planetary boundary layer, use of detailed model for parameterisation purposes 2-14538
- rain condensation, latent heat release causing convergence zone and sub synoptic vortex form. (Chinese) 2-32553
- sea surface effective long wave radiation, estimates for Bay of Bengal 2-3025
- sensible heat meridional fluxes in troposphere and stratosphere 2-47944
- snow albedo feedbacks in atmospheric models, linear and nonlinear aspects 2-18539
- soil moisture as regulator of heat fluxes between atm. and ground 2-32598
- solar heating effects 2-14530
- solar radiation absorption by water vapour, efficient computation method 2-14601
- Southern Hemisphere flows, linear theory for disturbances and eddy fluxes 2-14532
- stratosphere, diagnostic study of wavenumber-2 sudden warming in transformed Eulerian-mean formalism 2-14541
- stratosphere, sudden warming, 3-dimens. spectral quasi-geostrophic model 2-28154
- stratosphere sudden warmings and jet occurrence, transformed Eulerian mean approach 2-37943
- stratosphere warming model, 'Eulerian' and 'Lagrangian' diagnostics 2-14540
- stratosphere/mesosphere warmings, temp. changes and planetary scale waves activity 2-37942
- summer monsoon circulation in India, pre-onset phase thermodynamic forcing 2-3055

**atmospheric thermodynamics continued**

- surface energy budget, rel. to surface temp. sensitivity to increased atmospheric CO<sub>2</sub> 2-18562
- surface layer over melting snowpeak, anomalous behaviour obs. 2-14551
- temperature distribution, climatic theory based on energy balance 2-48166
- thermal balance from atmospheric and oceanic CO<sub>2</sub> data 2-14635
- thermosphere, model of daily vars. of thermodynamic characts. 2-6485
- thermosphere Joule heating, effect of ionosphere elec. field 2-23148
- tornado hydrodynamics and thermodynamics 2-14547
- troposphere energy budget, effect of sunlight absorpt. by stratosphere aerosol 2-37948
- troposphere polar warming during January 1977 stratospheric warming 2-23060
- Visakhapatnam, India, surface to air heat transfer causing thermal turbulence, acoustic radar detect. 2-42411
- waterspout hydrodynamics and thermodynamics 2-14547
- winter mean meridional circulation, sensitivity to heat and momentum sources 2-14590

**atmospheric turbulence**

- adaptive optics, state-of-the-art report, atm. turbulence and thermal blooming correction 2-25085
- anisoplanatic error reduction for propag. through turbulent atm. 2-24969
- Atlantic tropical Experiment (GATE), atmos. large-scale mean state 2-23081
- baroclinic instability influenced by topography 2-23074
- barotropic boundary layer, model temp. profiles 2-52892
- boundary layer, oscillations in a turbulent Ekman layer 2-52882
- boundary layer, turbulence props. measurable by obs. of elec. charge turbulence 2-42424
- boundary layer, wind longitudinal r.m.s. velocities, terrain depend. 2-18543
- boundary layer convection, comparison of struct. parameter scaling expressions with turbulence closure model predictions 2-14536
- boundary layer pollution propagation and turbulent diffusion 2-6440
- boundary layer Reynolds number and kinetic energy balance 2-14515
- boundary layer turbulence models, note on upper boundary conditions 2-52887
- boundary layer turbulent transport processes, effects of buoyancy 2-3073
- camera optical performance under aircraft internal-compartment turbulence effects 2-48814
- clear air turbulence, Doppler-radar meas. at 1290 MHz 2-14552
- clear air turbulence prediction and monitoring, use of rawinsonde system 2-28233
- clear air turbulence warning system for aircraft, IR radiometry system 2-23143
- cloud cluster (GATE) low-level vertical fluxes 2-47965
- cloud droplet turbulent mixing (Russian) 2-47954
- cloud turbulent jet theory appl. to local precipitation increase (Russian) 2-18508
- coastal site boundary layer, turbulence props. 2-47978
- coherent optics, conditions for effective phase adaption (Russian) 2-847
- convection plume model, turbulence at planetary boundary layer 2-3070
- daytime boundary layer turbulence, Lagrangian and Eulerian time-scale relations 2-14549
- dissipation rates in thin layers, radar meas. 2-42486
- eddy motions, particle motions in large-amplitude wave fields 2-18440
- EM beam mutual-coherence function in turbulence, two-position, two-freq. 2-42467
- EM beam wave propag., systematic perturbation approach 2-15942
- environmental fluid mechanics 2-18558
- equatorial electrojet plasma instabilities, cross-field conditions 2-10235
- equatorial electrojet plasma instabilities, two-stream conditions 2-10236
- F-region, equatorial, interferometer studies of plasma turbulence 2-28270
- F-region equatorial spread-F, assoc. turbulent plasma obs. 2-23161
- gravity wave effect on turbulence of planetary boundary layer 2-23076
- gravity wave interaction with planetary boundary layer 2-23075
- Hawaii, vortices in downwind zone, HAMEC project obs. 2-32604
- IDM measurements at Uppsala, turbulence effects 2-6435
- imaging through atm., desert dust spectral effects 2-14607
- imaging through atmospheric turbulence with annular pupils 2-849
- India, meridional circulation eddy component during drought and normal monsoons 2-3064
- interferometric image reconstruction through the turbulent atmosphere 2-42465
- ionosphere, auroral, spectral form of small-scale plasma turbulence 2-10248
- isotropic Kolmogorov turbulence suggested by scintillation data 2-3087
- ITCE in Australia, 1976 flux-profile obs. interpretation 2-28160
- laser beam propagation, modal compensation of turbulence induced wavefront aberrations 2-48001
- light propagation in turbulence and particulate media, multiple scatt. effects 2-32640
- light scattering by atmospheric aerosol, turbulence parameter determ. using laser method 2-42487
- marine boundary layer, meteorological descriptions for optical turbulence 2-32641
- marine boundary layer mixing by trade-wind cumuli 2-28141
- mesosphere turbulence and stress due to gravity waves and tidal breakdown 2-38011
- optical adaptive system resolving power evaluation through turbulent atm. 2-24948
- optical astronomy, atmospheric turbulence effects, book contrib. 2-52929
- optical turbulence effects on interference images, rel. to active control for Michelson stellar interferometers 2-53087
- optical turbulence measurement, remote sensing of C<sub>N</sub><sup>2</sup> by multidimensional anal. of stellar scintillation 2-32647
- optical turbulence on imaging and pseudo-imaging systems, nature and quantification 2-52932
- particle diffusion, time depend. problem 2-42429
- planetary boundary layer, convective, turbulent scaling parameters 2-14518
- planetary boundary layer, use of detailed model for parameterisation purposes 2-14538
- planetary boundary layer clear air roll vortices and turbulent motion. meas. with two techniques 2-28232
- planetary boundary layer stabilised by surface buoyancy, similarity theory 2-23051
- plume rise dynamics, ambient turbulence effects on bent-over plume (Chinese) 2-18483



**atmospheric turbulence continued**

- scintillation in Shanghai, effects on laser engineering (*Chinese*) 2-44359  
 scintillation saturation resistance and inner-scale resistance of large-aperture scintillometer 2-20253  
 solar speckle pattern temporal autocorrel. function study, atm. turbulence effects 2-23227  
 Southern Hemisphere flows, linear theory for disturbances and eddy fluxes 2-14532  
 speckle field, discrete-spectrum polychromatic, intensity variance after turbulent atm. propag. 2-11644  
 speckle interferometry, ang. dependence of atmospheric turbulence effect 2-53110  
 stellar interferometry, speckle image reconstruction problem, wave-front correl. function and deterministic wave-front aberration influence 2-18714  
 stratosphere clear air turbulence, determ. from vertical O<sub>3</sub> profile rel. to vertical transport meas. 2-14553  
 subgrid scale turbulence in 3-D cloud convection model (*French*) 2-52889  
 surface boundary layer, turbulence statistics 2-23055  
 surface layer, numerical simulation of particle trajectories 2-52883  
 surface layer, numerical simulation of particle trajectories 2-52884  
 surface layer, spatial coherence of temp. fluctuations showing ramp-structure 2-52885  
 surface layer, turbulent shear flow struct. functions 2-6418  
 surface layer, vertical refraction angle from angle-of-arrival variance 2-6434  
 surface layer of atmos., effect of change of roughness and heat flux 2-23052  
 surface layer over sea, turbulence spectral characts. 2-3074  
 temperature turbulence, IR radiation effect, spectral struct. and dissipation rate (*French*) 2-37921  
 troposphere, turbulence rel. to refr. index fluctuations 2-32644  
 troposphere, turbulence rel. to spectral anal. of aerosol size distrib. fluctuations 2-18547  
 troposphere/lower stratosphere, wind and clear air turbulence, radar obs. in different modes 2-37937  
 upper atmosphere, seasonal-latitudinal vars. 2-14640  
 Visakhapatnam, India, surface to air heat transfer causing thermal turbulence, acoustic radar detect. 2-42411  
 VLF wind-generated turbulence noise beneath ocean surface 2-37887  
 wind measurements by temporal cross-correl. of optical scintillations 2-28212  
 wind velocity determination in turbulent atm., coherence analysis of optical meas. 2-42484  
 He-Ne laser-light scatt. in atm. turbulence, measured statistics 2-42466

**atmospheric wind see wind****atmospherics**

- see also *atmospheric electromagnetic wave propagation; whistlers*  
 S America, atmospherics occurrence and variability, 1971 to 1972 obs. 2-52903  
 atmospherics, dispersive propagation in land and sea-ionosphere waveguide 2-32602  
 auroral kilometeric radiation, rel. to auroral plasma cavity 2-18634  
 chorus emission, role of hiss 2-18639  
 chorus-related electrostatic bursts in outer magnetosphere 2-38033  
 ELF noise intensity modulations rel. to geomag. and electron precipitation 2-48108  
 ELF radio noise, 1-D distrib. function of vertical elec. component 2-38026  
 ionosphere, auroral, intense wave-particle event obs. 2-32719  
 lightning, amplitude spectra in interval from 100 kHz to 20 MHz 2-18499  
 VHF lightning sources, two-dimensional interferometric positions 2-18540  
 VHF radio pictures of location of cloud flashes 2-3051  
 VLF chorus and electron microbursts during substorm electron precipitation 2-14721  
 VLF emissions in magnetosphere, effect of MHD waves on threshold wave field 2-6510  
 VLF hiss in upper ionosphere, modulation 2-14655  
 VLF ionosphere propagation, nighttime group delaytime difference depend. on azimuth, atmospherics anal. 2-42517  
 whistler range noise in magnetically conjugate subauroral regions 2-14684  
 whistlers, low-frequency, propag. in magnetosphere and upper ionosphere 2-3148

**atom-atom collisions**

- includes *reactive collisions*  
 heavy particle collision ionisation, multichannel treatment with discretisation of electronic continuum 2-44076  
 inert gas Rydberg atom collisions, semiclassical and quantum form factors 2-34529  
 low-energy at. collisions, ionisation processes 2-49566  
 Penning ionisation collision, light absorpt., chemiluminescence 2-39484  
 photon assisted radiative collisions, interatomic pots. 2-44059  
 resonance fluorescence and resonance light scatt., intensity depend., theory, book contrib. 2-49328  
 Ag+Cd, population transfer cross sections 2-29690  
 Al I+He I, van der Waals scatt. cross section meas. for Al I 3s<sup>2</sup>3p<sup>2</sup> 3p<sup>2</sup>-3s3p<sup>2</sup> <sup>2</sup>P multiplet 2-10308  
 Ar, collision-induced light scatt. spectra 2-34525  
 Ar+Ar, inelastic collisions, fine-struct. transitions rot. coupling, transition probability calc. 2-15873  
 Ar+Ar(3p<sup>5</sup>3p), radiative lifetimes and collisional energy transfer rate consts. 2-39359  
 Ar+Ar(3p<sup>5</sup>3p), radiative lifetimes and collisional energy transfer rate consts. 2-39359  
 Ar+He, total ionisation cross section, mass anal. 2-34544  
 Ar+He\*(2's, 2's), total integral collision and ionisation cross sections in thermal energy region (*German*) 2-7624  
 B+Ar, interatomic pots., non-adiabatic matrix, ArB form., ab initio CI calcs. 2-24825  
 Br+Br, radiative recombination, free-bound transitions 2-9543  
 Ca+He, Ca atomic spectra, principal series lines, collision broadening meas. 2-49335  
 Ca+Kr, collision broadening of principal series line 2-43831  
 Ca+Sr(S), energy transfer rate, laser induced fluoresc. 2-20158  
 Cd II+He metastable atoms, Penning excitation cross-sections determ. 2-34546

**atom-atom collisions continued**

- Cd(P+Cd(S<sub>0</sub>)) <sup>3</sup>P<sub>1</sub>→<sup>3</sup>P<sub>0</sub> transition, multichannel distorted-wave approx. 2-15874  
 Ce+NH<sub>3</sub>, reaction in NH<sub>3</sub> and NH<sub>3</sub>/Xe matrices, <sup>57</sup>Fe Mossbauer study 2-19984  
 Cl+Pb, K-shell ionisation process, trajectory, binding and relativistic effects 2-44041  
 Cu+Fe collisions, K-shell X-ray prod. probability, target thickness effect 2-33697  
 H+alkali metal atoms, interaction pots. and collision integrals 2-34533  
 H+atoms, collisions, charge transfer and ionisation, review 2-24851  
 H+D, excitation transfer rate 2-44825  
 H+H+He→H<sub>2</sub>+He three body recombination, quantum theory 2-6023  
 He+Ar(Kr), He metastable states; chemi-ionisation velocity depend. 2-44069  
 He+He, simultaneous excitation cross-sections 2-20167  
 He+He(1 S), excitation of autoionising states, electron spectra 2-24838  
 He+Rb, atomic fine struct. transitions nonadiabatic coupling 2-34535  
<sup>4</sup>He+<sup>4</sup>He low energy cross section, interatomic pot. and vel. depend. 2-49545  
 He\*(2'S)+H, Penning ionisation, H<sup>+</sup> vel.-angle distrib., crossed beam meas. 2-29702  
 Hg+alkali metal atoms, collisional electronic excitation, integral cross section calcs., close coupling approx. 2-7634  
 Hg+Cd, population transfer cross sections 2-29690  
 Hg+He(Ar)(Xe), collisional perturbation of 6s6d levels of Hg 2-39471  
 Hg+Hg+M→Hg<sub>2</sub>\*M, rate coeff. of combination reaction 2-31908  
 Hg+rare gas, collisional perturbation of 6'D, and 6'D<sub>2</sub> levels of Hg 2-39470  
 Hg+Zn, population transfer cross sections 2-29690  
 Hg(P<sub>1</sub>)+Hg(S<sub>0</sub>), <sup>3</sup>P<sub>1</sub>→<sup>3</sup>P<sub>0</sub> transition, multichannel distorted-wave approx. 2-15874  
 I+I in CCl<sub>4</sub>, liq. state chem. reaction dynamics, R-depend. correl. functions 2-41881  
 K+He collisions, K P<sub>3/2</sub>-P<sub>1/2</sub> fine struct. transition, polarisation effects 2-49547  
 K+Mu, quenching of resonance state 2-29548  
 K+Ne, K 4S-5P doublet, quasistatic wings and blue satellite investig. 2-20001  
 K<sup>+</sup>+K<sup>+</sup>, inelastic collision cross section meas., charge exchange 2-4380  
 Li+He(Ne)(Ar)(Xe), Li excitation, time of flight spectra vector polarisation anal. 2-784  
 Na+Ar, high Rydberg Na s states, collisional depopulation cross section 2-24821  
 Na+Ar, scatt. cross section meas., pot. energy functions (*German*) 2-29685  
 Na+Ar+hω<sub>1</sub>+hω<sub>2</sub> collisions computational study 2-34547  
 Na+Ba, two-photon radiative ionisation collision obs. 2-44049  
 Na+He, broadening of NaD lines model pots., temp. depend. 2-24650  
 Na+Na, energy pooling collisions, form. of Na5s and Na4d, rate const., associative ionisation 2-44058  
 Na+Na, excited states, associative ionisation, rate consts. 2-47334  
 Na+Na, Na<sub>2</sub><sup>+</sup> and Na<sup>+</sup> prod., associative and Penning ionisation 2-15889  
 Na+Xe(S<sub>0</sub>) interaction pot. from differential scatt. cross-section 2-34550  
 Na<sup>+</sup>+Na<sup>+</sup>, inelastic collision cross section meas., charge exchange 2-4380  
 Na<sup>+</sup>+K, Penning and associative ionisations 2-29701  
 Ne+H, interaction pot. determ. from absolute integral cross section meas. 2-15871  
 Ne+Ne, inelastic collisions, fine-struct. transitions rot. coupling, transition probability calc. 2-15873  
 Ne+Ni, K-shell ionisation process, trajectory, binding and relativistic effects 2-44041  
 Ne(P<sub>2</sub>, <sup>3</sup>P<sub>1</sub> and <sup>3</sup>P<sub>0</sub>), de-excitation rate const. by atoms and mols., pulse radiolysis study 2-29704  
 Rb, highly excited S state, collisional ions. 2-20168  
 Rb, inelastic collisions between selectively excited and ground states 2-49323  
 Rb+He, collisional quenching of Rb Rydberg levels 2-34530  
 Rb+He(Ar), collision broadening and shift of Rb S and D Rydberg levels 2-49337  
 Rb<sup>+</sup>+Rb<sup>+</sup>, inelastic collision cross section meas., charge exchange 2-4380  
 S V, collision strengths, radiative decay rates and level populations 2-28428  
 S<sup>2+</sup>+H, charge transfer, pot. energy curves, ab initio MO calcs. 2-20177  
 Sr+inert gas atoms, quenching rate, lifetimes, orbiting method, fluoresc. 2-20158  
 Xe+He, initiated inelastic collision channel (*Russian*) 2-11563  
 Xe+He(Ne)(Al)(Xe), interaction pots., IR spectra, line shift, and broadening 2-20004  
<sup>131</sup>Xe+Rb, quadrupole nuclear spin relax. 2-11522  
 Zn(II)+He 2'S(2'S) metastable atoms, Zn(II) Penning excitation cross-section meas. 2-49563  
 Zn(P<sub>1</sub>)+Zn(S<sub>0</sub>), <sup>3</sup>P<sub>1</sub>→<sup>3</sup>P<sub>0</sub> transition, multichannel distorted-wave approx. 2-15874

**atom-ion collisions**

- includes *reactive collisions*  
 see also *charge exchange*  
 asymmetric collisions, electron capture, impulse approx. 2-15892  
 asymptotic form of three-electron exchange in slow collisions of atoms and ions 2-29707  
 atoms+H collisions, charge transfer and ionisation 2-24851  
 charge transfer, electron capture, cross sections impact parameter method 2-4381  
 charge transfer coupling elements, second order asymptotic electronic wavefunction 2-34556  
 charge-state depend. of inner-shell vacancy prod. in heavy ion-atom collisions 2-7630  
 cross section scaling laws for charge exchange, ionisation and electron loss atom-highly charged ion collisions 2-7638  
 electron capture by slow multiply charged Mg, Al, Cs, Pb and Bi ions from He, Ne, Kr and H<sub>2</sub> 2-7631  
 electron detachment theory, negative ion-atom collisions, close-coupling formalism 2-20169  
 electron ejection, ang. and energy distrib. calcs. 2-44071  
 electron transfer, double K-shell to K-shell cross sections 2-24850



## atom-ion collisions continued

- exchange interaction between an atom and a multiply charged ion 2-29708  
 fission fragments effective charge on stopping in  $\text{CO}_2$ ,  $\text{CF}_2\text{Cl}_2$ ,  $\text{CF}_4$  and  $\text{SF}_6$  2-15891  
 heavy atoms,  $\text{H}^+$ -induced alignment of  $\text{L}_3$ -subshell 2-49550  
 heavy atoms, light-ion induced alignment of  $\text{L}_3$  subshell, semiclassical calcs. 2-49551  
 heavy ion+atom collisions, dynamic inner-shell ionisation 2-34549  
 heavy ion+atom collisions, electronic screening 2-20171  
 heavy ions, multicharged, charge-changing collision in gaseous media (Japanese) 2-49569  
 heavy symmetric atom+ion collisions,  $2p_x$ - $2p_y$  crossing, level struct. 2-49345  
 inert gas ion+atom collisions, stopping power in 40 to 200 keV range 2-24820  
 inner shell electrons dynamics 2-44082  
 inner shell ionisation by light ions, conference, Linz, Austria (March 1981) 2-42774  
 inner-shell excitation, atomic and nuclear processes 2-15875  
 ionisation probability measurement with MWPC 2-19852  
 K-shell ionisation by protons and deuterons, Coulomb deflection factors, role of dipole amplitudes 2-44040  
 K-shell ionisation cross sections and relative X-ray emission rates of Sn, Ho, Tm, Au, Pb and Bi bombarded with 9-155 MeV alpha particles 2-777  
 K-shell ionisation of atoms by relativistic ions 2-34545  
 L-shell ionisation by low energy protons and alpha particles 2-39364  
 low energy light ion impact ionisation, double collision mech. 2-4373  
 M-shell X-ray production cross sections in the proton energy range 250-400 keV 2-7520  
 many particle systems, violent collisions in atomic sphere 2-44080  
 multielectron atom+bare projectile, electron capture, eikonal approx. 2-34561  
 $\text{N}_2^+(\text{B}^2\Sigma) + \text{N}_2(\text{H}_2)$ , relative vibr. quenching 2-15880  
 Ag, K-shell ionisation by protons 2-43875  
 $\text{Ag} + \text{H}^+(\text{He})(\text{N})(\text{Ne})$ , L-shell X-ray cross section meas. in energy range 0.125-4 MeV/amu 2-39487  
 $\text{Ar}-\text{H}^+$ , K-shell ionisation probability meas. 2-24840  
 $\text{Ar} + \text{B}^+( \text{C}^+ ) ( \text{N}^+ ) ( \text{O}^+ ) ( \text{Ne}^+ )$ , K- and L-shell excitation cross sections 2-24843  
 $\text{Ar} + \text{Cl}^+$ , tests of interaction pots., ion mobility and diffusion coeff. calcs. 2-34539  
 $\text{Ar} + \text{H}_2^+$ , vibr. effects in proton and charge transfer 2-2695  
 $\text{Ar} + \text{H}^+$ , electron detachment, cross sections, form. of excited H atoms 2-24841  
 $\text{Ar} + \text{UF}_6$  ( $\text{MoF}_6$ ), internal excitation, kinetic energy distrib. 2-4366  
 $\text{Ar}^+ + \text{Ar}$ , L X-ray fluoresc., coincidence technique 2-44079  
 $\text{Ar}^{2+} + \text{Ne}$ , single electron capture functions meas., energy loss spectra 2-44052  
 $\text{Ar}^{4+} + \text{He}(\text{Ne})$ ,  $q=1,2,3$ , projectile excitation, radiative emission cross sections 2-44073  
 $\text{Ar}^+(\text{P}) + \text{Ar}(\text{S}_0)$  collision, fine struct. transitions in 60 to 1500 eV range 2-24837  
 $\text{Ar}^{2+} + \text{Ar}(\text{Kr})(\text{Xe})$ , low energy charge transfer reactions, time of flight study 2-15888  
 Au, K-shell ionisation by protons 2-43875  
 $\text{Be} + \text{H}^+$ , quasifree electron bremsstrahlung 2-19990  
 $\text{C}^{8+} + \text{H}_2$ , X-ray emission during electron capture (Russian) 2-11430  
 $^{12}\text{C} + \text{H}^+$ , K-shell ionisation theory 2-49565  
 $\text{Ca}^+ + \text{Sr}$ , laser induced charge transfer collisions 2-20179  
 $\text{Cd}(\text{II}) + \text{Ne}$ , Penning excitation rates, cross section meas. 2-15887  
 Co, nuclear Coulomb, energy-loss and relativistic effects in  $\text{H}^+$  and proton-induced K-shell ionisation 2-44081  
 $\text{Cs}^+ + \text{Cs}^+$  2-44086  
 Cu, K-shell ionisation by protons 2-43875  
 H like atoms, ionisation by slow ions (Russian) 2-24828  
 $\text{H} + \text{A}^{2+}$ , electron capture collisions, nl distrib. 2-20178  
 $\text{H} + \text{Be}(\text{B})(\text{C})$  ions, charge exchange cross sections calc. by fully quantal perturbation stationary state method 2-49568  
 $\text{H} + \text{H}^+$ , electron detachment, cross sections, form. of excited H atoms 2-24841  
 $\text{H} + \text{H}^+$ , classical trajectory calcs. using Wigner function 2-20160  
 $\text{H} + \text{H}^+$ , differential charge transfer cross sections calc. using classical trajectory Monte Carlo method 2-34557  
 $\text{H} + \text{H}^+$ , total charge transfer cross-section calc. 2-788  
 $\text{H} + \text{H}^+(\text{C}^+)$ , charge transfer and ionisation cross sections, quantal study, finite-elemental 2-39485  
 $\text{H} + \text{H}^+(\text{C}^+)(\text{O}^{3+})(\text{Fe}^{24+})$ , electron capture, cross sections, eikonal calcs. 2-34560  
 $\text{H} + \text{H}^+(\text{He}^{2+})$ , electron capture into excited s and p states 2-24846  
 $\text{H} + \text{H}^+(\text{Li}^{3+})(\text{B}^{3+})(\text{C}^{4+})(\text{Si}^{14+})$ , ionisation, excitation and charge transfer cross section calcs. 2-44089  
 $\text{H} + \text{He}^{+2}(\text{H}^+)$ , laser-induced charge transfer, photon-induced cross section 2-4379  
 $\text{H} + \text{He}^{2+}$ , electron capture, close-coupling calcs. 2-20175  
 $\text{H} + \text{highly charged ions}$ , single electron capture, cross section,  $\sigma(\text{H}_2)/\sigma\text{H}$  ratio 2-20183  
 $\text{H} + \text{Li}^{3+}$ , charge transfer and excitation cross-section calcs. 2-44085  
 $\text{H} + \text{Li}^{2+}(\text{N}^{1+})(\text{Ne}^+)$ , electron capture cross section meas. 2-787  
 $\text{H} + \text{He}$ , electron detachment, differential elastic cross section, detachment cross section 2-20170  
 $\text{H}^+ + \text{Cu}(\text{Ag})(\text{Au})$ , K-shell ionisation, impact parameter depend. 2-44042  
 $\text{H}^+ + \text{H}$ , 1s-1s electron capture, exact second Born calcs. 2-15893  
 $\text{H}^+ + \text{H}$  scatt. at low energies, phase shifts and differential cross sections 2-34551  
 $\text{H}^+ + \text{H}^+$  collisions, one-electron treatment 2-11570  
 $\text{H}^+ + \text{H}(\text{Is})$ , collisions at 1 to 7 keV, direct and charge exchange excitation processes 2-20181  
 $\text{H}^+ + \text{H}(\text{Is})$ , evaluation of second Born amplitude as two dimensional integral 2-49546  
 $\text{H}^+ + \text{He}$ , resolution dependence and asymmetry of electron capture to the continuum spectra 2-20182  
 $\text{H}^+ + \text{He}^+$ , charge exchange excitation cross sections, mol. state study 2-34563  
 $\text{H}^+ + \text{Ph}(\text{Dy})$ , L-shell X-ray prod. cross sections meas. 2-44043  
 $\text{H}^+ + \text{Ti}(\text{Cr})(\text{Co})(\text{Ni})(\text{Cu})(\text{Zn})$ , K-shell ionisation, total and differential cross sections meas. 2-44039  
 $\text{H}^+ + \text{X}^{(Z-1)+} \rightarrow \text{H}^+ + \text{X}^{Z+}$ , modified Coulomb-Born approx. and charge transfer 2-34554  
 $\text{He} + \text{C}(\text{N})(\text{O})(\text{F})$  ions, one-electron ions ionisation and capture 2-7636

## atom-ion collisions continued

- $\text{He} + \text{H}_2^+$ , quasiclassical trajectory study using HF and CI pot. energy surfaces 2-24815  
 $\text{He} + \text{H}^+$ , electron detachment, cross sections, form. of excited H atoms 2-24841  
 $\text{He} + \text{H}^+(\text{Br}^-)$ , tests of interaction pots., ion mobility and diffusion coeff. calcs. 2-34539  
 $\text{He} + \text{H}^+$ , impact excitation, differential cross sections calcs., Glauber approx. 2-24844  
 $\text{He} + \text{Ne}^+$ , 1s4f F and 1s5f F level of HeI, radiative lifetimes and tensor polarisabilities 2-24657  
 $\text{He} + \text{Ne}^+(\text{Kr}^+)$ , ion mobility meas. at 294K 2-50361  
 $\text{He}^+ + \text{H}^+$ , electron transfer collisions, cross sections, Sturmian basis 2-44088  
 $\text{He}^+ + \text{He}$ , ionisation, autoionising states, electron spectra 2-44077  
 $\text{He}^+ + \text{He}$  reson. charge transfer collision, diabatic mol. representation 2-34553  
 $\text{He}^+ + \text{He}(\text{Ne})$ , photon-ion ang. correl. investig. 2-49549  
 $\text{He}^{2+} + \text{H}$ , charge exchange excitation cross sections, mol. state study 2-34563  
 $\text{He}^{2+} + \text{H}$ , electron transfer collisions, cross sections, Sturmian basis 2-44088  
 $\text{He}^{2+} + \text{H}$ , translation factors for approx. mol. wavefunctions, charge exchange cross section calc. 2-34558  
 $\text{H}_2^+(v) + \text{Ar} \rightarrow \text{ArH}^+ + \text{H}$ ,  $\text{Ar}^+ + \text{H}_2$ , reactions, CT cross sections near reson. TESICO study 2-17886  
 In, nuclear Coulomb, energy-loss and relativistic effects in  $\text{H}^+$  and proton-induced K-shell ionisation 2-44081  
 $\text{Kr}^+ + \text{Kr}(\text{Ar})$ , collision broadening in MO-electron spectra 2-11568  
 $\text{Kr}^{4+} + \text{Kr}$ , oscillations in coincident MO Auger spectra emitted in 450 keV 2-24842  
 $\text{Li} + \text{He}^{2+}(\text{He}^+)$ , electron capture cross sections 2-34559  
 $\text{Li}^{2+} + \text{H}_2(\text{He})$ , electron capture cross-sections 2-20176  
 $\text{Li}^{3+} + \text{H}$  collisions, CT cross sections 2-34564  
 $\text{Li}^{3+} + \text{H}_2(\text{He})$ , electron capture cross-sections 2-20176  
 $\text{Li}^{3+} + \text{H}(\text{Is}) - \text{Li}^{2+} + \text{H} + e$ , crossed beam obs. 2-44072  
 $^7\text{Li}^+$  and  $^6\text{Li}^+$ , form. of  $^7\text{Li}^{2+}$ , cross sections, scaling laws 2-783  
 Mg ions, gas phase chemistry, flowing afterflow studies 2-2704  
 $\text{N}_2^+ + \text{Ar}$ , charge exchange,  $\text{N}_2^+(\text{X} \rightarrow \text{A})$  Meinel bands, visible spectra 2-34552  
 $\text{Na} + \text{He}^+(\text{Ne}^+)(\text{Ar}^+)$ , Rydberg atom l-change near matching vel. region 2-4374  
 $\text{Ne} + \text{Ar}^{4+}$ , low energy collisions, charge transfer, ionisation, cross section meas. 2-34562  
 $\text{Ne} + \text{H}^+$ , electron detachment, cross sections, form. of excited H atoms 2-24841  
 $\text{Ne}^+ + \text{Ne}$  collisions, electron emission, continuous energy distrib. 2-29705  
 $\text{O}^{6+} + \text{H}_2$ , X-ray emission during electron capture (Russian) 2-11430  
 $\text{Pb} + \text{Cl}$  ions, K shell ionisation, role of relativistic and binding energy effects 2-34548  
 Sb, nuclear Coulomb, energy-loss and relativistic effects in  $\text{H}^+$  and proton-induced K-shell ionisation 2-44081  
 $^{88}\text{Sr} + \text{H}^+$ , K-shell ionisation probability across nuclear elastic scatt. reson. 2-7635  
 $\text{Ta} + \text{H}^+$ , L-X-ray prod. at 280 to 400 keV 2-20172  
 $\text{Ta} + \text{H}(\text{He})(\text{N})(\text{Ne})$ , L-shell X-ray cross section meas. in energy range 0.125-4 MeV/amu 2-39487  
 $\text{Xe} + \text{He}$ , recombination luminesc., applied elec. field effect 2-50369  
 $\text{Zn}(\text{II}) + \text{Ne}$ , Penning excitation rates, cross section meas. 2-15887

## atom-molecule collisions

- see also atom-molecule reactions; molecular rotational-vibrational energy transfer  
 alkali atoms+diatomic mols., atomic fine struct. transitions nonadiabatic coupling 2-34535  
 atom+diatom state-to-state rearrangement collisions, distorted wave Born approx. of angular distrib. 2-44057  
 atom-diatom molecule, very low energy collision, adiabatic and effective pot. approx. calcs. 2-39469  
 C Ne+ methane, energy transfer collisions, photoacoustic study 2-44062  
 classical path sudden approx. 2-775  
 collisional dissociation of dimers by monomers in rare gases 2-44047  
 exact classical scaling formalism for nonreactive processes 2-762  
 ferrocene, Penning ionisation and electron spectrum, steric effect on electronic interaction 2-20166  
 inert gases+HCl, HCl rot. vibr. line intensity modification at moderate press. 2-39371  
 quantum mechanical model of vibrational-electronic energy exchange during collisions 2-44067  
 reorientation cross section for cylindrically symmetric velocity distributions 2-761  
 transition amplitudes, three-term model (Russian) 2-20139  
 vibr. energy transfer, multiquantum transition probability calcs. 2-44064  
 vibrational scattering, nuclear relax. ab initio calcs. 2-24834  
 $\text{Ar} + \text{azulene}^*$ , collisional energy transfer, IR fluoresc. obs. 2-34467  
 $\text{Ar} + \text{BH}$ , rot. states, energy transfer, cross sections, lifetime meas. 2-44065  
 $\text{Ar} + \text{C}_2\text{O}$ , fluoresc. decay and bimolecular electronic quenching behaviour 2-15842  
 $\text{Ar} + \text{CO}$ , relaxation of rotational energy over temp. range 300 to 1040K 2-4370  
 $\text{Ar} + \text{CO}_2$ , laser excitation study, fluoresc., lifetime meas., vibr., rot. depend. perturbation 2-24788  
 $\text{Ar} + \text{H}_2(\text{D}_2)$ , metastable atoms, collisional de-excitation cross sections expt. 2-24822  
 $\text{Ar} + \text{HF}$ , state to state cross sections for energy transfer, modified infinite-order sudden theory 2-29698  
 $\text{Ar} + \text{HF}$ , vibr. and rot. energy transfer 2-39475  
 $\text{Ar} + \text{I}_2$ , very low energy collision, adiabatic and effective pot. approx. calcs. 2-39469  
 $\text{Ar} + \text{methane}$ , energy transfer collisions, photoacoustic study 2-44062  
 $\text{Ar} + \text{N}_2$ , inelastic scatt., energy-adjusted sudden approx. 2-39481  
 $\text{Ar} + \text{N}_2(\text{CO})(\text{O}_2)$ , The metastable states; chemi-ionisation velocity depend. 2-44069  
 $\text{Ar}_2 + \text{Ar}$ , atom exchange, dissociation, quasiclassical trajectory and statistical study 2-47315  
 $\text{CO} + \text{He}^+(\text{He})$ , vibr. relax., semiclassical calcs., deactivation rate const. determ. 2-49544  
 $\text{Cd} + \text{alkane hydrocarbons}$ , collisional intramultiplet relax. 2-44048



## atom-molecule collisions continued

- Cs+CO(N<sub>2</sub>), cross sections for form. of electrons and negative ions, orientational effects 2-24812  
 Cs+H<sub>2</sub>, Cs second reson. doublet broadening 2-20002  
 Cs+H<sub>2</sub>(N<sub>2</sub>)(methane)(methane-d<sub>4</sub>), excitation transfer and quenching, temp. depend. of cross sections, fluoresc. 2-49553  
 CsI-Kr(Xe), collision induced dissociation, ion pair form. 2-44046  
 D+O<sub>2</sub>-OD+O, kinetic isotope effects, thermal rate coeffs., quasiclassical trajectory calcs. 2-27424  
 Eu+HCl, laser induced 2-4377  
 H+CO<sub>2</sub>(N<sub>2</sub>O), laser photolysis of hot H, vibr. excitation collisions, IR obs. 2-24830  
 H+Cl<sub>2</sub>, evaluation of classical phase for reactive molecular collisions in semiclassical collision theory 2-13939  
 H+D<sub>2</sub>, interaction pot. determ. from absolute integral cross section meas. 2-15871  
 H+H<sub>2</sub>, cross sections, rotationally averaged quantum calcs. 2-15872  
 H+H<sub>2</sub>, fine struct. in depend. of final conditions on initial conditions 2-44045  
 H+H<sub>2</sub>, 'hot' H atom, energy transfer, time resolved IR fluoresc. obs. 2-24831  
 H+NH<sub>3</sub>, polarised fluoresc., inelastic energy transfer, reorientation, spin correlation interaction 2-49554  
 H<sub>2</sub>+Cs, form. of H<sup>+</sup>, dissociation and dissociative attachment 2-34528  
 H<sub>2</sub>+OH, reaction rate, vibr. excitation effect, EPR spectra 2-2701  
 HF+Ne(Ar)(Kr), rot. to translational energy transfer, state-to-state cross sections 2-39480  
 He-methane, energy transfer collisions, photoacoustic study 2-44062  
 He+<sup>1</sup>B<sub>2</sub> toluene (<sup>1</sup>B<sub>2</sub> fluorobenzene), low energy collision, vibr. relax. cross sections 2-24813  
 He+BH, rot. states, energy transfer, cross sections, lifetime meas. 2-44065  
 He+CO<sub>2</sub>, vibr. modes decoupling, vibr. close coupling infinite order sudden calc. 2-20161  
 He+H<sub>2</sub>, inelastic scatt., energy-adjusted sudden approx. 2-39481  
 He+H<sub>2</sub>, ro-vibr. transitions, cross sections and relax. rates, close coupling calc. 2-15869  
 He+H<sub>2</sub>, rovibrational excitation cross sections, close coupling calcs. 2-34531  
 He+H<sub>2</sub>(Cl<sub>2</sub>), pseudochannels, converging coupled-channel scatt. calcs. 2-44066  
 He+I<sub>2</sub>, very low energy collision, adiabatic and effective pot. approx. calcs. 2-39469  
 He+Na<sub>2</sub>, rot. inelastic integral cross sections, energy depend., dynamic thresholds and quantum undulations 2-24818  
 He+SF<sub>6</sub>, vibr. excitation, integral and differential cross section 2-44044  
 He+SO<sub>2</sub>, vibr. excitation, pot. energy surfaces, quantum calcs. 2-11565  
 He+toluene, collisional deactivation obs. using time-resolved UV spectroscopy 2-24814  
 He\*+D<sub>2</sub>(H<sub>2</sub>), collisional dissociation, metastable atom prod. 2-37068  
 He\*+O<sub>2</sub>, Penning ionisation, electron spectrosc. obs. 2-49567  
 K+CsF, ang. momentum conservation representation in energy space 2-39464  
 K+H<sub>2</sub> (4P) fine struct. transition 2-44054  
 K+N<sub>2</sub>, collisional, vibr. excitation activation threshold 2-29703  
 K+O<sub>2</sub> nonadiabatic collisions, electronic-vibr. translational energy exchange, coupled channel calc. 2-15881  
 K+TeF<sub>6</sub>, mol. beam scatt. 2-39482  
 Kr+H<sub>2</sub>(D<sub>2</sub>), metastable atoms, collisional de-excitation cross sections expt. 2-24822  
 Li+CO<sub>2</sub>(N<sub>2</sub>O), energy transfer, vibr. and rot. excitation cross sections calcs. 2-20163  
 NH<sub>3</sub>+He, bending mode and inversion motion interaction pot., vibr. depend. 2-20159  
 Na+H<sub>2</sub>, quenching process, energy transfer, ab initio RHF-SCF and PNO-CEPA calcs. 2-29699  
 Ne+benzene(ethylene)(ethylene), collisional ionisation obs. 2-44068  
 Ne+I<sub>2</sub>, very low energy collision, adiabatic and effective pot. approx. calcs. 2-39469  
 Ne+Na<sub>2</sub>, coupled states, cross sections rotational rainbows, power gap model validity 2-15884  
 Ne+Na<sub>2</sub>, rot. inelastic integral cross sections, energy depend., dynamic thresholds and quantum undulations 2-24818  
 Ne+Na<sub>2</sub>, scatt., rot. rainbow struct., Cl pot. surface calcs. 2-39468  
 Ne+O<sub>2</sub>, afterglow, quenching rate constants, O I spectra 2-43973  
 Ne(<sup>2</sup>P<sub>1</sub>, <sup>3</sup>P<sub>1</sub> and <sup>3</sup>P<sub>2</sub>), de-excitation rate const. by atoms and mols., pulse radiolysis study 2-29704  
 O+halomethanes, O(<sup>1</sup>D<sub>2</sub>) collisional deactivation, reaction efficiency determ. 2-7719  
 O+I<sub>2</sub>, ang. momentum conservation representation in energy space 2-39464  
 O+N<sub>2</sub>, rate const. for deactivation 2-2702  
 O(<sup>1</sup>D<sub>2</sub>)+H<sub>2</sub>, ang. and vel. distrib. determ. by crossed mol. beam study 2-773  
 O(S<sup>+</sup>)+O<sub>2</sub>(<sup>1</sup>Δ<sub>g</sub>), O quenching 2-32700  
 PH(b<sup>1</sup>Σ<sup>+</sup>)+inert gases, collisional deactivation 2-15870  
 Rb+H<sub>2</sub>, atomic fine struct. transitions nonadiabatic coupling 2-34535  
 S<sub>2</sub>Cl<sub>2</sub>+Ar(<sup>3</sup>P<sub>2</sub>)(Ne(<sup>3</sup>P<sub>2</sub>))(He(<sup>2</sup>S<sup>+</sup>)), energy transfer reactions, UV and visible emission 2-27426  
 Xe+Cl<sub>2</sub>, chemically relative collisions, fluoresc. bands obs. 2-20157  
 Xe+Cl<sub>2</sub>, radiative lifetimes and quenching rate const. 2-746  
 Xe+H<sub>2</sub>(D<sub>2</sub>), metastable atoms, collisional de-excitation cross sections expt. 2-24822  
 Yb+HCl, laser induced 2-4377

## atom-molecule reactions

see also atom-molecule collisions

- A<sub>3</sub>+A→A<sub>2</sub>+A<sub>2</sub>, rot.-vibr. wave function classification of product, permutation-inversion group 2-27416  
 atom+diatom light-heavy-light chem. reactions, quantum dynamical approx. in three dims. 2-37064  
 bromoethane+K, differential reaction cross section 2-37067  
 collisional dissociation of dimers by monomers in rare gases 2-44047  
 computational approach to the Green function in reactive scattering 2-47318  
 inert gas atoms+CrO<sub>2</sub>Cl<sub>2</sub>, IR multiphoton excitation, visible chemiluminesc. 2-47345  
 inert gas dibromomethanes, chloride, bromide formation in quasi-stationary discharge (Russian) 2-13944  
 inert gas dichlorodifluoromethanes, chloride, bromide formation in quasi-stationary discharge (Russian) 2-13944

## atom-molecule reactions continued

- iodoethane+K, differential reaction cross section 2-37067  
 iodomethane+K, differential cross sections, weight function calc., Monte Carlo methods 2-41870  
 muonium atoms, reaction in micelles, rate constants, spin rot. technique 2-11591  
 rotating rod model of collinear reaction probabilities, opacity excitation, deflection and angular distrib. function 2-31910  
 tetrachloromethane+Na reaction, C<sub>2</sub>\* (d<sup>11</sup>Π<sub>g</sub>-a<sup>11</sup>Π<sub>g</sub>) prod. 2-31924  
 Ag+O<sub>3</sub>, form. of AgO and AgO<sub>2</sub> products isotope shifts, IR obs. 2-6028  
 ArKr+Ar, atom exchange, dissociation, quasiclassical trajectory and statistical study 2-47315  
 B+H<sub>2</sub>O interaction, chemiluminesc. 2-22453  
 Br+IBr, transformation of spin-orbit excited states 2-52180  
 C+SO<sub>2</sub>→SO(A<sup>3</sup>Π)+CO chemiluminesc. reaction, mol. beam study 2-2714  
 C<sup>+</sup>+CO<sub>2</sub>, reaction rate constants for energies 0.04-2.5 eV, appl. to Venus ionosphere 2-38089  
 Ca(<sup>1</sup>P<sub>1</sub>)+HCl, chemiluminesc. reaction, atomic reagent approach geom. effect on electronic branching 2-2707  
 Cl+HOCl, product channels, reaction rate constants 2-9537  
 Cs(7P)+H<sub>2</sub>, laser fluoresc., reaction rate coeff. 2-9540  
 D+Br<sub>2</sub>(CF<sub>3</sub>I)(C<sub>2</sub>F<sub>3</sub>I)(C<sub>2</sub>F<sub>5</sub>I), reactive scatt. of supersonic at. beam 2-37066  
 D+ClF, reaction products, influence of isotope effect on energy distrib. 2-17889  
 D+HBr, reactive cross section, classical trajectory study 2-41877  
 D+HBr, reactive differential cross sections obtained from high averaged trajectory data 2-52178  
 D+HCl(v=0,j)→DCI(v≤1,j')+H light-heavy-light reaction, quantum dynamical approx. 2-37065  
 D+HF(HCl), exchange reactions barrier heights, generalized reson. VB calc. 2-2708  
 Eu+HCl, laser induced 2-4377  
 F+Br<sub>2</sub>, transformation of spin-orbit excited states 2-52180  
 F+H<sub>2</sub>, reaction, approx. quantum differential cross sections 2-52182  
 F+H<sub>2</sub>→FH+H, reaction path calcs. 2-9544  
 F+H<sub>2</sub>→H+HF reaction, quantum mech. state-to-state differential cross section calc. 2-37069  
 F+HBr(DBr), nonadiabatic reactions, dynamics, isotope effect, pot. energy surface 2-9538  
 F+HBr(HI), time resolved vibr. chemiluminesc., reaction rate const. 2-37049  
 F+HNF, IR chemiluminesc. obs., heat of form., ab initio and statistical calcs. 2-37077  
 F+isocyanic acid, IR chemiluminesc. obs. 2-37077  
 F+Na<sub>2</sub>, emission spectra from transition state 2-37055  
 F<sub>2</sub>+H(Mu), exoergic reactions, mass variation invest., rate const. 2-22430  
 F<sub>2</sub>+Mu(H)(D)(T), distorted wave method, vibr.-rot. product distrib. 2-47314  
 H+Cl<sub>2</sub>, evaluation of classical phase for reactive molecular collisions in semiclassical collision theory 2-13939  
 H+DBr, reactive cross section, classical trajectory study 2-41877  
 H+FH(H<sub>2</sub>)(MuH), stabilisation calcs. of resonance energies using SCF and CI trial functions 2-47324  
 H+H<sub>2</sub>, fine struct. in depend. of final conditions on initial conditions 2-44045  
 H+H<sub>2</sub>, isotopic substitution, classical anal. of quantum reson. 2-52177  
 H+H<sub>2</sub>, reactive differential cross sections obtained from high averaged trajectory data 2-52178  
 H+HO<sub>2</sub>, reaction rate constants, LMR spectrosc. determ. 2-15821  
 H<sub>2</sub>+A<sub>2</sub> (A=Li-F), exchange reactions, pot. surfaces, nonempirical calcs. 2-22435  
 H<sub>2</sub>+Cl, rate constants, fluoresc.-flash photolysis, kinetics study 2-27423  
 H<sub>2</sub>+NiO(Fe<sub>2</sub>O<sub>3</sub>)(Co<sub>2</sub>O<sub>3</sub>), reduction, external mag. field effects 2-9539  
 H<sub>2</sub>+OH, reaction rate, vibr. excitation effect, EPR spectra 2-2701  
 HAT+Br, reactive scatt., H transfer, cross section meas., pot. hypersurfaces 2-47317  
 He\*+NO(O<sub>2</sub>), dissociative excitation, O(3s<sup>3</sup>S) translational energy determ. 2-29537  
 I<sup>+</sup>+Br<sub>2</sub>, transformation of spin-orbit excited states 2-52180  
 K HCl(v=0,1), endothermic reactions, vibr. and translational enhancement 2-47309  
 K+HF(v=0,1), endothermic reactions, vibr. and translational enhancement 2-47309  
 K+RbCl, RRM unimol. decomposition in mol. beam expts., angular distrib. and cross sections 2-6024  
 Li+HF→LiF+H, vibr. distrib., pot. energy surfaces, collinear quasiclassical study 2-22426  
 Mg+H<sub>2</sub>, rot. quantum state distrib., microscopic branching, fluoresc. obs. 2-6027  
 Mu+O<sub>2</sub>(NO), spin exchange reaction, rate constants, temp. depend. study 2-24896  
 NF<sub>3</sub>+F+Ne→NF<sub>3</sub>+Ne, mol. recombination in laser media, theoretical study 2-47312  
 NF<sub>3</sub>+F+Ne→NF<sub>3</sub>+Ne, mol. recombination in laser media, expt. study 2-47313  
 Na+SF<sub>6</sub>, reaction rate, vibr. and total energy depend. 2-17881  
 Ne<sub>2</sub>+Ar, atom exchange, dissociation, quasiclassical trajectory and statistical study 2-47315  
 O+D<sub>2</sub>Se(D<sub>2</sub>Te), chemiluminescence, b<sub>0</sub><sup>+</sup>→X<sub>2</sub><sup>1</sup>g emissions of Se<sub>2</sub> and Te, 2-52211  
 O+H<sub>2</sub>→OH+H, reaction path calcs. 2-9544  
 O+halomethanes, O(<sup>1</sup>D<sub>2</sub>) collisional deactivation, reaction efficiency determ. 2-7719  
 O+H<sub>2</sub>(D<sub>2</sub>), rate constants, meas., O conc., resonant absorpt. meas. 2-47316  
 O+N<sub>2</sub>, rate const. for deactivation 2-2702  
 O(<sup>1</sup>D<sub>2</sub>)+H<sub>2</sub>, ang. and vel. distrib. determ. by crossed mol. beam study 2-773  
<sup>16</sup>O(<sup>1</sup>D<sub>2</sub>)+H<sub>2</sub><sup>18</sup>O, energy partitioning, microscopic probabilities for coincident pairs 2-2703  
 O(<sup>3</sup>P)+ethylene, ab initio HF and multiconfig. HF calcs. 2-41875  
 O(<sup>3</sup>P)+H<sub>2</sub>, high energy classical trajectory study, cross sections and rate const., exchange and dissociation processes 2-37048  
<sup>16</sup>O+H<sub>2</sub><sup>18</sup>O→<sup>16</sup>OH+<sup>18</sup>OH energy partitioning reaction 2-47330  
 PN+Ni(Cu) interactions, ab initio MO calcs. 2-13946  
 Rb+methyl iodide, crossed beam reaction, steric factor and reactive asymmetry versus scatt. angle 2-52179  
 Sr\*+ICl(Cl<sub>2</sub>)(CCL<sub>4</sub>)(HCl), SrCl (A-X, B-X) bands chemiluminesc. 2-41903



**atom-molecule reactions continued**

- Xe-Br<sub>2</sub>, mixture, chloride, bromide formation in quasi-stationary discharge (*Russian*) 2-13944  
 Xe+Cl<sub>2</sub>, radiative lifetimes and quenching rate const. 2-746  
 Xe+Cl<sub>2</sub> (carbon tetrachloride)(phosgene), state-to-state relax. processes, emission spectra 2-15878  
 Xe(<sup>2</sup>P<sub>3/2</sub>) + methyl bromide, translational energy threshold and product rot. alignment 2-37063  
 Yb+HCl, laser induced 2-4377

**atom probe field ion microscopy**

- metal surface, atomic processes, quantitative investigation at atomic resolution, review 2-30726  
 metal-metal interfaces, FEM, FIM and atom-probe studies (*Japanese*) 2-26238  
 metallurgical studies, review (*Japanese*) 2-5031  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, atom probe FIM study of microstruct. after annealing 2-36874  
 Ga-Mo interface, comp. and surface atom stability, high mass resolution atom probe anal. 2-35898  
 Ga-W(Mo), interface struct., FEM, FIM and atom-probe studies (*Japanese*) 2-26238  
 In-W(Mo), interface structure FEM, FIM and atom-probe studies (*Japanese*) 2-26238  
 Rh, surface distrib. of field adsorbed H, imaging atom-probe study 2-8711  
 Sn-Ir interface, comp. and surface atom stability, high mass resolution atom probe anal. 2-35898  
 Sn-W(Mo), interface structure, FEM, FIM and atom-probe studies (*Japanese*) 2-26238  
 TiC coating on WC-Co, atom probe microanal. 2-13859  
 W ions, field-evaporated, multiple post-ionisation 2-2420  
 W surface, (110), <sup>3</sup>He and <sup>4</sup>He atoms reflection coeffs., atom probe FIM study 2-27043

**atom-surface impact**

- see also sputtering*  
 atomic vapour near solid interface, light absorpt. and dispersion 2-11422  
 film, atomic beam deposited, integrated sticking coeff. calc. 2-12937  
 gas atom multiple refl. function from weakly rough surface, asymptotic expansion (*Russian*) 2-2404  
 graphite, adsorbed He, selective adsorption intensity features, perturbative calcs. 2-41480  
 graphite, anisotropic pot. energy functions for C atoms, rel. to interaction with He 2-15868  
 graphite, scatt. of He<sub>2</sub> and adsorption, anisotropic pair pot. and band struct. effects 2-1772  
 graphite, surface atomic displacements, He atom scatt. study 2-36748  
 graphite surface phonon dispersion, He atoms reson. scatt. study 2-50983  
 inelastic scattering, model surface phonon dispersion relations 2-1727  
 inelastic scattering of atoms, electron-hole pair, phonon model, self-consistent semiclassical approach 2-17586  
 long-range interaction, asymptotic dispersion interaction coeff. 2-2402  
 metal, nonadiabatic scatt., X-ray edge model 2-2399  
 metals, thermal He desorption spectrometry, defect chemistry 2-45719  
 nonrelativistic particle, quantum-mechanical scattering by impenetrable periodic surfaces 2-33347  
 quantitative investigation at atomic resolution, review 2-30726  
 selective adsorption intensity features, perturbative calcs. 2-41480  
 surface structure studies using He diff. 2-31597  
 Au, sputtering yield of heavy atomic and mol. ion bombardment, influence of bombarding angle 2-22135  
 Cs, interaction with Au surface, van der Waal forces 2-44036  
 Cu (001), clean and with adsorbed CO and Xe, off-specular coherent and incoherent elastic scatt. of He 2-2396  
 Cu (117) surface, diff. of thermal beam of Ne atoms 2-9236  
 Cu, (117) surface, diffraction of thermal beam of Ne atoms (*French*) 2-36752  
 Cu, adsorbed Xe ordered layer, He atom scatt. with energy anal. 2-41482  
 H, solid surface interaction, surface states 2-26464  
<sup>4</sup>He(<sup>3</sup>He) microdroplets, transparency in heavy atom collisions 2-30683  
 KCl (001) surface phonons, inelastic atom scatt. time of flight spectra study 2-50982  
 Li clusters, multibody effects, unrestricted HF study and their relevance to atom-surface interactions 2-11610  
 LiF (001) surface phonons, inelastic atom scatt. time of flight spectra study 2-50982  
 Ni (111) surface, clean and molecularly covered, He <sup>23</sup>S interaction, electron ejection mechanism 2-13610  
 Ni surface (110), He atom diff. 2-51758  
 Ni(111) surface, Ne atom scatt., momentum transfer cutoff, acoustic wave interaction 2-2395  
 Si 2-36123  
 Xe adsorbed layer on graphite, H atom diffractive scatt. 2-2400

**atomic absorption spectroscopy**

- analytical at. spectroscopy, lamps and sources, review 2-47407  
 background correction using Zeeman effect 2-17930  
 flame atomic absorpt. spectrometry internal standard method 2-17947  
 flame atomic absorpt. spectrophotometry using a flame atomiser, polarised Zeeman effect 2-15209  
 Group V elements, determ. in luke water using hydride at. absorpt., valence state effects 2-17931  
 lubricating oils, metallic particle transport 2-9578  
 methylantimony cpds., determ. in natural waters by chromatography-AAS 2-31955  
 multiphoton reson. excitation and ionisation, laser appls. 2-31973  
 sample pretreatment system using flow injection analysis 2-9593  
 seawater Cd, Pb and Ag simultaneous determ. by at. absorpt. spectrosc. 2-48039  
 Al, vaporisation, graphite furnace AAS 2-31974  
 Ba, vaporisation, graphite furnace AAS 2-31974  
 Be, vaporisation, graphite furnace AAS 2-31974  
 Ca, vaporisation, graphite furnace AAS 2-31974  
 Cu, optogalvanic resonance detection of pulsed dye laser atomic absorption 2-2744  
 Cu<sub>2</sub>CdS polycrystalline heat-treated solar cells, atomic absorption anal. and auger depth profiles 2-37325  
 Ge determ. method 2-14034  
 Li, optogalvanic resonance detection of pulsed dye laser atomic absorption 2-2744  
 Mg, vaporisation, graphite furnace AAS 2-31974

**atomic absorption spectroscopy continued**

- Na, optogalvanic resonance detection of pulsed dye laser atomic absorption 2-2744  
 Sb III determ. in natural waters by chromatography-AAS 2-31955  
 SbV determ. in natural waters by chromatography-AAS 2-31955  
 Sr, vaporisation, graphite furnace AAS 2-31974  
 Zn, electrowinning, effect of Cd impurities 2-27104

**atomic beam electric resonance**

No entries

**atomic beam magnetic resonance**

- moving atoms, energy levels, Zeeman splitting, relativistic effect 2-43812  
 Ga compounds, nucl. mag. shielding investig. and theory 2-4231  
 Pr I, hyperfine struct., laser-RF double resonance, fluoresc. 2-19995  
<sup>4</sup>Re, A=185, 187, high precision hyperfine struct. meas., at. beam mag. resonance 2-24638

**atomic beams**

- see also atom-molecule reactions; atom-surface impact; atomic beam electric resonance; atomic beam magnetic resonance; particle velocity analysis; plasma-beam interactions*  
 alkali atom optical pumping process and polarised alkali ion sources 2-575  
 line shapes for collision broadening, at. beam excitation, 2-43856  
 metastable atomic beam TOF machine, performance as thermal plasma diagnostic apparatus 2-35320  
 momentum flux direct detection using microphone 2-44140  
 resonant two-photon spectroscopy in fast accelerated beam 2-29557  
 review of atomic physics, beam expts. 2-49313  
 stepped HV pulse generator for plasma probe trajectory sweep 2-50452  
 thermal-suprathermal energy, for collision studies (*French*) 2-49602  
 Cs crossed beams, Hanle signal shape 2-20013  
 Cs, multiphoton ionis. rel. to Cs<sub>2</sub> laser photodisc. comp. 2-20146  
 Cu (117) surface, diff. of thermal beam of Ne atoms 2-9236  
 D+Br<sub>2</sub>(CF<sub>3</sub>I)(C<sub>2</sub>F<sub>4</sub>I)(C<sub>2</sub>F<sub>2</sub>I), reactive scatt. of supersonic at. beam 2-37066  
 H, RF discharge beam source 2-23772  
 He, metastable beam, intensity control 2-49601  
<sup>39,40,41</sup>K, D<sub>1</sub> and D<sub>2</sub> lines, isotope shifts, hyperfine struct., laser spectra 2-15745  
<sup>4</sup>K, A=38,39,41-47, isotope shifts and HFS by laser spectroscopy 2-49341  
 Kr, beam, metastable states, excitation to Rydberg level, field ionisation detection 2-15733  
 Li, electron impact ionisation, cross section, optical pumping, crossed beam expt. 2-15903  
 N beam, characts. by mag. selection and mass spectrometry 2-22504  
 Na beam, radiational slowing down and monochromaticity in opposing laser beam (*Russian*) 2-11440  
 Na beam, scatt. by short light pulse 2-15749  
 Na beam-laser field interactions, precision at.-beam studies 2-15876  
 Na+He<sup>+</sup>(Ne<sup>+</sup>)(Ar<sup>+</sup>), Rydberg atom l-change near matching vel. region 2-4374  
<sup>23</sup>Na, nuclear spin polarised beam prod. using optical pumping 2-24895  
 Ne, diffraction by Cu (117) surface (*French*) 2-36752

**atomic clocks**

- see also frequency measurement; time measurement*  
 international time scale comparisons, temperature-correlated Loran C signal propagation delays influence 2-33488  
 precision improvement, cooling atomic ions with lasers 2-15135  
 synchronisation expt. via SYMPHONIE satellite 2-23613  
 synchronisation technique, for tracking and controlling deep space probes 2-18679  
 H maser, CSIRO development 2-34709

**atomic clusters**

- 3d-metal atom clusters, electronic struct., EHT and SW-X<sub>α</sub> calcs. (*German*) 2-49298  
 4d-metal atom clusters, electronic struct., EHT and SW-X<sub>α</sub> calcs. (*German*) 2-49298  
 5d-metal atom clusters, electronic struct., EHT and SW-X<sub>α</sub> calcs. (*German*) 2-49298  
 amorphous group V semiconductors, defects, theoretical study using atomic clusters 2-1859  
 Cu, atoms and clusters, matrix isolated, UV photoemission study 2-24661  
 III-V semiconductor material design for electronic devices used under unusual conditions (*Japanese*) 2-8618  
 inert gas microclusters, two-dimens. and adsorbed, struct., mol. dynamics method 2-1775  
 Monte Carlo computer simulation of microclusters, surfaces, and interfaces 2-21478  
 Ag<sub>n</sub> clusters, luminesc. and enhanced Raman spectra 2-46658  
 Ar<sub>n</sub> clusters, photoionisation efficiency curves 2-39521  
 B<sub>12</sub> icosahedral cluster, electronic struct. and binding energy 2-39523  
 Cn clusters, n=2 to 6, struct. and props., HF calc. 2-49617  
 Cu, clusters, struct., ab initio SCF calcs. 2-4435  
 Cu, clusters, struct., ab initio SCF calcs. 2-7694  
 Cu-Ni, elec. resist., coexisting at. and mag. clustering effects 2-1887  
 H<sub>3</sub><sup>+</sup> cluster, electronic states, ab initio CI calcs. 2-24910  
 He vapour, positive ion droplet size comparison with Thomson eqn. 2-35657  
<sup>3</sup>He, electron bombard., positive cluster ion ejection 2-29719  
<sup>4</sup>He atomic clusters, binding energy 2-34612  
<sup>4</sup>He, electron bombard., positive cluster ion ejection 2-29719  
 Hg microclusters, low temp. phase transition in mag. field 2-31138  
 Li clusters, binding energy, ionisation pot., CNDO/BW study 2-815  
 Li clusters, multibody effects, unrestricted HF study and their relevance to atom-surface interactions 2-11610  
 MgO, electronic state of O<sup>2-</sup> by Compton profile method 2-43796  
 Ni atomic clusters in alkane media, mag. and chem. props. 2-7693  
 Pb microclusters, magic numbers 2-44160  
 Pd cluster absorption on amorphous and crystalline surfaces of Pt, mol. dynamics study 2-8709  
 Pt cluster absorption on amorphous and crystalline surfaces of Cu, mol. dynamics study 2-8709  
 Sb clusters, magic number obs., tetrahedra packings 2-44161  
 Ti, chemisorption theory, surface localised orbitals for (0001) clusters 2-40688  
 Xe atomic microclusters, magic numbers for sphere packings 2-814



**atomic collision processes** *see* **atomic inelastic collisions; elastic scattering of atoms and molecules**

**atomic electric moment**

- alkali metal, highly excited states, review (*French*) 2-49304
- anapoles and parity non-conservation, electron interaction with subsystem 2-44128
- core exchange polarisation effects calc. using SCF X $\alpha$  wave functions 2-43800
- C<sup>6+</sup> gas excited ions, prompt and time delayed electron decay-in-flight spectra 2-4353
- He<sup>+</sup>, spin-polarised 2s<sub>1/2</sub> ion, E1-E1 damping interference in elec. field quenching 2-49325
- He<sup>+</sup>(2s<sub>1/2</sub>), spin-polarised, electric field quenching, E1-M1 interference effect meas. 2-43839

**atomic electron configuration interactions** *see* **atomic electron correlations**

**atomic electron correlations**

- 4d shell atoms, hyperfine struct. configuration interaction 2-24624
  - alkaline earths, excited electron correlations mapping 2-24622
  - atoms, free, off-diagonal HFS interaction between (3d+4s)<sup>N+2</sup> config. far config. mixing effects 2-39501
  - closed shell atoms and ions, quadrupole polarisabilities and Steinheimer antishielding factors 2-49253
  - double excited electrons, radial and angular correl. 2-43811
  - Gaussian basis sets for mol. electronic struct. calcs., review 2-4211
  - interacting atomic system, critical phenomena in cooperative resonance fluorescence (*Russian*) 2-49327
  - semiclassical approach to electron-electron correl. in electron impact ionisation of atoms 2-34574
  - transition metal atoms and ions, excitation energies, ionisation pots., HF calcs., relativistic contrib. 2-7509
  - transition metals, first row atoms, CI calcs. 2-39334
  - two-electron correlations, group theoretic approach 2-662
  - Ar, 3s photoelectron satellites, CI calcs. 2-24621
  - Ba, config. interaction between autoions. and Stark state resons. 2-34318
  - Ba, natural radiative lifetimes meas. in perturbed 6snd <sup>1</sup>D<sub>2</sub> sequence 2-39362
  - Be, correlation coeffs. for electronic shells, Coulomb holes, wave function anal. 2-658
  - Be isoelectronic series, correlation energies, CI and perturbation calcs. 2-7510
  - Be, isoelectronics sequence, spin-forbidden transitions between 2p<sup>2</sup> and 2s2p states 2-11413
  - Be<sup>-</sup>, spectrum, wavelengths and transition probabilities 2-34335
  - Be-like ions, resonance transitions and excitation energies calc., multiconfig. relativistic random phase approx. 2-49303
  - C III, intershell transitions, theoretical study 2-39363
  - Ca<sup>2+</sup>, s-hole states, CI calcs. 2-43809
  - Co<sup>2+</sup>, s-hole states, CI calcs. 2-43809
  - Cs, static electric dipole polarisabilities, SCF and CI calcs. 2-39329
  - Cu, near 3p threshold, photoabsorpt. and photoemission, CI and inelastic scatt. effect 2-11442
  - F, atom and ions, correlation energies, effective valence shell convergence, many-body perturbation theory 2-7508
  - F-like ions, intershell correlation corrections to energy levels of n=2 states 2-43810
  - Fe atom, internal conversion coeff. depend. on state 2-34364
  - Fe<sup>2+</sup>, s-hole states, CI calcs. 2-43809
  - He, correlated CI wave functions using corr. Gaussians 2-11408
  - He, electron correl. functions, Fermion Monte Carlo variational method appl. 2-24619
  - He, pair polarisability, direct CI calcs. 2-49302
  - He, rational orbitals for two-electron <sup>1</sup>S states CI calc. 2-15729
  - He<sup>+</sup>(<sup>4</sup>P<sup>o</sup>), metastable state, photodetachment cross section, CI wave functions 2-20016
  - <sup>4</sup>He+<sup>4</sup>He low energy cross section, interatomic pot. and vel. depend. 2-49545
  - He<sup>\*\*</sup>, electron correl. and Kellman-Herrick quantisation 2-661
  - In IV, config. anal., CI calcs., UV obs. 2-11427
  - K<sup>+</sup>, s-hole states, CI calcs. 2-43809
  - Kr, (e,2e) valence separation energy spectra, electron correl. effects 2-7528
  - LaCl<sub>3</sub>:Pr<sup>3+</sup>(Eu<sup>3+</sup>), f<sup>N</sup> systems, forced electric dipole transition probabilities, electron correl. effects, hypersensitive transitions 2-21519
  - Li-like ions, intershell correlation corrections to energy levels of n=2 states 2-43810
  - Mn<sup>2+</sup>, s-hole states, CI calcs. 2-43809
  - Na<sup>+</sup>, s-hole states, CI calcs. 2-43809
  - NiH, incorporation of atomic correl. in all-electron MC SCF/CI calcs., pot. curve props. 2-49299
  - Rb, static electric dipole polarisabilities, SCF and CI calcs. 2-39329
  - Sn V, config. anal., CI calcs., UV obs. 2-11427
  - Zn and Zn<sup>2+</sup>, second order electron correl. energies 2-39333
- atomic electron impact excitation**  
*see also* **electron spectra**
- atoms, electron excitation to metastable levels, ground state detect. 2-49578
  - bremsstrahlung cross section close to high freq. limit for short range pot., resonance theory 2-15899
  - cross sections for ionisation of atoms and ions by electron impact at low energies 2-793
  - dense plasma, inelastic electron-ion scatt., Born approx. 2-25492
  - electron and positron excitation, orientation vector, perturbation-expansion approach 2-39494
  - electron-photon coincidences, spin-orbit coupling, excitation process 2-4392
  - elementary processes from Franck-Hertz expt. of electron-photon ang. correl. (*German*) 2-20193
  - inert gas metastable state excitation by electron impact (*Russian*) 2-11574
  - inert gas mixtures, positron annihilation, electric and mag. field effects 2-7654
  - ion photorecombination with excitation 2-11573
  - iterative deconvolution method for electron impact expt. 2-15906
  - K-shell ionisation by heavy charged particles, cross sections 2-44096
  - local exchange potentials, use in inelastic scatt. 2-39493
  - multichannel scattering, cross section calcs., R-matrix and Hulthen-Kohn methods 2-34565
  - multicharged ion-electron collisions, excitation and ionisation processes 2-49582

**atomic electron impact excitation continued**

- multiply charged ions, electron impact excitation of dipole transitions, calcs. 2-44103
- rydberg to plasma evolution in a dense gas of very excited atoms 2-44097
- scattering in crossed electric and magnetic fields, transition amplitude 2-34582
- scattering phenomena in strong radiation fields 2-20191
- two-electron correlations, group theoretic approach 2-662
- Ar, electron bombardment, bremsstrahlung fluoresc. obs. 2-19996
- Au atomic resonance lines, electron-impact excitation, effective cross sections 2-15904
- Be-like ions, electron impact excitation, coupling collision strengths, fine struct. transitions 2-29718
- Be-like ions, electron-ion scatt., cross sections, weak-coupling approx. 2-44115
- Bi, electron impact excitation cross sections of spectral transitions 2-34579
- Bi<sup>n+</sup>, electron impact excitation cross sections of spectral transitions 2-34579
- C III, electron impact excitation, fine struct., collision strength, data table 2-38368
- C<sup>3+</sup>, electron-impact excitation, pseudostate expansion, cross section and rate calcs. 2-24870
- Ca<sup>+</sup>, electron impact excitation cross sections at low energies 2-34572
- Cd, excited levels population in electron beam, electron stimulated desorpt. effects 2-44104
- Cd I 5-10 <sup>1</sup>D<sub>2</sub>, <sup>3</sup>D<sub>3</sub> levels excited by electron impact, visible and UV spectra, Hanle effect, lifetime meas. 2-15900
- Cl<sup>2+</sup>, electron impact Stark widths, semiclassical calcs. 2-43845
- Cl<sub>2</sub>, supersonic flow, adiabatically expanding, spectral and kinetic props. 2-44757
- Cu, atomic, photoabsorpt. and photoemission with reson. two electron excitation 2-34583
- Fe<sup>22+</sup>, electron impact excitation, collision strengths, line strengths, spectra 2-34581
- Ga, excitation cross-section by low-energy electrons (*Russian*) 2-4393
- Ga<sup>+</sup>, electron impact excitation autoionisation 2-44110
- H atom, electron collisions in mag. field (*Russian*) 2-20189
- H atom, excitation by electron and photon joint collision 2-7647
- H, Compton profiles for ejected electrons, momentum densities determ. 2-24864
- H, elastic and inelastic scatt., close coupling calcs. 2-49576
- H, electron and positron collisions, elastic scatt., impact excitation, eikonal-Born approx. 2-4386
- H, electron impact excitation, multichannel free-free transitions, resonance effects 2-24868
- H, electron inelastic scattering, static exchange approx., Schwinger variational principle 2-24871
- H, positron impact cross sections calc. for n=2 levels 2-34575
- H, use of local exchange pots. in model calc. of 2p state excitation 2-39493
- H-like atoms, electron inelastic collisions, stimulated bremsstrahlung radiation (*Russian*) 2-39497
- H-like ions, electron-ion scatt., cross sections, weak-coupling approx. 2-44115
- H-like ions in dense plasmas, electron impact excitation and ionisation 2-50381
- He, Compton profiles for ejected electrons, momentum densities determ. 2-24864
- He, electron impact excitation of <sup>3</sup>P, electron-photon coincidence meas. 2-39483
- He isoelectronic sequence, electron impact excitation, oscillator strengths calc. 2-20192
- He, positron excitation cross sections at intermediate energies, pseudostate effects 2-34576
- He<sup>+</sup>, electron impact autoionisation reson., complex coord. calcs. with complex basis sets 2-4394
- He-like ions, electron impact excitation, coupling collision strengths, fine struct. transitions 2-29718
- He-like ions, electron-ion scatt., cross sections, weak-coupling approx. 2-44115
- He<sup>+</sup> positron, low energy total cross section anal. 2-49542
- HeII lines in plasma, electron scatt. contrib. to red shift 2-15746
- Hg, asymmetry of polarised electrons scatt. inelastically reson. features and fine-struct. effect 2-7652
- Hg, electron impact excitation, polarisation of the 6<sup>3</sup>P<sub>1</sub>-6<sup>1</sup>S<sub>0</sub> line 2-15901
- Hg, electron impact excitation, 6<sup>1</sup>S<sub>0</sub>-6<sup>3</sup>P<sub>1</sub> transition, Percival-Seaton hypothesis 2-39495
- In (I) and In (II), electron impact excitation, autoionising transitions, ejected electron spectrum 2-44098
- In, excitation cross-section by low-energy electrons (*Russian*) 2-4393
- K, excited state, electron scatt. cross-sections calcs. 2-44101
- Kr, electron bombardment, bremsstrahlung fluoresc. obs. 2-19996
- Li isoelectronic sequence, electron impact excitation 2-7653
- Li, low-energy electron scatt. and impact excitation, absolute total cross sections 2-4388
- Li-like ions, electron-ion scatt., cross sections, weak-coupling approx. 2-44115
- Mn, electron impact excitation cross sections meas. 2-34578
- Mn I, electron impact excitation of spectral transitions 2-49315
- Mn II, electron impact excitation of spectral transitions 2-49315
- Mn XVII to XXIII, atomic data and level populations calc. 2-42797
- N atom, slow electron scatt., total cross-section calc. 2-29717
- Na, electron impact excitation, electron photon ang. parameters, inclusion of fine and hyperfine effects 2-44111
- Na, electron impact optical excitation functions 2-4397
- Na-like ions, electron impact ionisation, excitation and autoionisation, cross sections and rate coeff. 2-4395
- Na(nd), electron impact state changing 2-44108
- Ne, 1s<sub>2</sub> and 1s<sub>3</sub> levels, electron excitation cross sections, laser induced fluoresc. 2-49581
- Ne atom, slow electron scatt., total cross-section calc. 2-29717
- Ne, electron bombardment, bremsstrahlung fluoresc. obs. 2-19996
- Ne, positron annihilation and slowing down in gas, time spectra (*Russian*) 2-39496
- Ne VII, electron impact excitation, fine struct., collision strength, data table 2-38368
- Ni<sup>24+</sup>, electron impact excitation, collision strengths, line strengths, spectra 2-34581



**atomic electron impact excitation continued**

- O atom, slow electron scatt., total cross-section calc. 2-29717
- O II, electron impact excitation cross sections and oscillator strengths 2-24863
- O III, electron impact excitation of auroral line 2-24867
- O<sub>+</sub>, positron bremsstrahlung spectra obs. 2-20194
- O<sub>+</sub><sup>+</sup>, electron impact excitation, pseudostate expansion, cross section and rate calcs. 2-24870
- OV, electron impact excitation, fine struct., collision strength, data table 2-38368
- Pb(I) and (II), electron impact excitation, autoionising levels, electron spectra 2-24866
- S<sup>2+</sup>, electron impact Stark widths, semiclassical calcs. 2-43845
- S<sup>3+</sup>, electron impact Stark widths, semiclassical calcs. 2-43845
- Si XI, electron impact excitation, fine struct., collision strength, data table 2-38368
- Tl, excitation cross-section by low-energy electrons (*Russian*) 2-4393
- Tm excitation cross-sections and oscill. strengths 2-43857
- U, positron bremsstrahlung spectra obs. 2-20194
- V<sup>15+</sup>, electron impact excitation, collision strengths, line strengths, spectra 2-34581
- Xe, autoionising states, electron impact excitation 2-24865
- Xe, electron bombardment, bremsstrahlung fluoresc. obs. 2-19996
- Xe\* deexcitation cross-section from electron distrib. function in glow discharge 2-24628
- Yb I electron impact excitation, spectral lines obs. 2-49580
- Zn II, electron impact excitation, collision strength calcs., close coupling calcs. 2-44113
- Zn<sup>+</sup>, electron impact excitation, absolute emission cross sections 2-44112

**atomic electron impact ionisation**

- see also electron spectra*
- alkali vapours, CW dye laser irr. plasma prod., electron impact ionisation enhancement 2-40136
- atomic cation, two electron double escape, depend. on states, Wannier theory 2-44105
- cross sections for ionisation of atoms and ions by electron impact at low energies 2-793
- (e,2e) spectroscopy, reaction mechanism 2-44116
- electron scattering, laser field effect, appl. of results to photoionisation 2-4389
- empirical approach to K-shell ionisation cross sections by electrons 2-34366
- inert gas metastable state excitation by electron impact (*Russian*) 2-11574
- ionisation cross sections, threshold behaviour 2-34570
- ions, electron impact ionisation, review 2-29722
- ions, electron impact ionisation in plane-wave Born approx. 2-44109
- iterative deconvolution method for electron impact expt. 2-15906
- K-shell partial cross-section, for electron energy-loss spectrometry 2-29720
- multicharged ion-electron collisions, excitation and ionisation processes 2-49582
- photoelectron angular distributions and photoionization cross-sections in the vacuum ultraviolet, book contrib. 2-34494
- positron impact threshold ionisation 2-34573
- positronium, electron collisions, effect on mag. quenching 2-29733
- rydberg to plasma evolution in a dense gas of very excited atoms 2-44097
- scattering phenomena in strong radiation fields 2-20191
- screening effects on Wannier's theory of atomic threshold ionisation 2-7649
- semiclassical approach to electron-electron correl. in electron impact ionisation of atoms 2-34574
- Ag, inner shell ionisation by electron impact, 60-600 keV region 2-20190
- Al<sup>2+</sup>, electron impact ionisation absolute cross section meas. 2-44106
- Al<sup>2+</sup>, electron impact ionisation, excitation autoionisation effect, distorted-wave approx. 2-44107
- Ar, electron impact ionisation cross sections, theoretical 2-34571
- Ar mixtures, self-focusing of pulsed electron beam, ionisation 2-7648
- Ba, electron impact, absolute and total ionisation functions determ. 2-44099
- Be-like ions, electron impact ionisation, cross section calcs. 2-4391
- Be-like ions, electron impact ionisation cross sections and rates 2-4396
- C ions, electron impact ionisation in plane-wave Born approx. 2-44109
- Cr, do 2-34577
- F ions, electron impact ionisation in plane-wave Born approx. 2-44109
- Fe<sup>15+</sup>, electron impact ionisation, electron capture, resonant state, Auger emission 2-20195
- Ga<sup>+</sup>, electron impact excitation autoionisation 2-44110
- Ga<sup>+</sup>, electron impact ionisation cross section meas. 2-44114
- H atom, electron collisions in mag. field (*Russian*) 2-20189
- H, atomic, electron momentum probability distrib. meas. 2-15719
- H, electron impact ionisation in reson. EM field 2-44102
- H, triple differential ionisation cross sections in second Born approximation 2-49579
- H-like ions, electron impact ionisation, cross section and rates, appl. to plasmas 2-7651
- H-like ions, Stark effect appl. 2-49330
- H-like ions in dense plasmas, electron impact excitation and ionisation 2-50381
- H+e-H<sup>+</sup>+2e, nonrelativistic many-particle scattering theory for stripping reactions 2-33993
- He, (e,2e) spectroscopy 2-44116
- He, ejected-electron scattering cross sections, Compton diffusion (*French*) 2-39492
- He, electron impact ionisation, differential cross sections, Born approx. 2-4390
- He, electron impact ionisation, coincidence cross sections meas. 2-7650
- He, electron impact ionisation, cross sections, Coulomb-projected Born approx., calcs. 2-24869
- He mixtures, self-focusing of pulsed electron beam, ionisation 2-7648
- He, triple differential ionisation cross sections in second Born approximation 2-49579
- He<sup>+</sup>, electron impact autoionisation reson., complex coord. calcs. with complex basis sets 2-4394
- He-like ions, electron impact ionisation, cross section and rates, appl. to plasmas 2-7651
- <sup>3</sup>He clusters, electron bombard., positive cluster ion ejection 2-29719
- <sup>4</sup>He clusters, electron bombard., positive cluster ion ejection 2-29719

**atomic electron impact ionisation continued**

- Hf<sup>2+</sup>, electron impact ionisation, excitation-autoionisation contributions 2-792
- Kr, electron impact ionisation yield 2-29721
- Kr, M subshells, ionisation cross sections by electron impact 2-34580
- Li, electron impact ionisation, cross section, optical pumping, crossed beam expt. 2-15903
- Li-like ions, electron impact ionisation, cross section calcs. 2-4391
- Li-like ions, electron impact ionisation, cross section and rates, appl. to plasmas 2-7651
- Mg<sup>+</sup>, electron impact ionisation absolute cross section meas. 2-44106
- Mg<sup>+</sup>, electron impact ionisation, excitation autoionisation effect, distorted-wave approx. 2-44107
- N ions, electron impact ionisation in plane-wave Born approx. 2-44109
- Na, vapour, super-elastic effects in laser-induced 2-15902
- Na-like ions, electron impact ionisation, excitation and autoionisation, cross sections and rate coeff. 2-4395
- Ne, (e,2e) spectroscopy 2-44116
- Sb, inner shell ionisation by electron impact, 60-600 keV region 2-20190
- Se, inner shell ionisation by electron impact, 60-600 keV region 2-20190
- Si<sup>2+</sup>, electron impact ionisation absolute cross section meas. 2-44106
- Si<sup>2+</sup>, electron impact ionisation, excitation autoionisation effect, distorted-wave approx. 2-44107
- Ti<sup>3+</sup>, electron impact ionisation, excitation-autoionisation contributions 2-792
- Xe, (e,2e) spectroscopy 2-44116
- Zn<sup>+</sup>, electron impact ionisation cross section meas. 2-44114
- Zr<sup>3+</sup>, electron impact ionisation, excitation-autoionisation contributions 2-792

**atomic electron scattering** *see atomic electron impact excitation; atomic electron impact ionisation; elastic scattering of electrons by atoms and molecules*

**atomic emission spectroscopy**

- cross-correlation masks for automatic detection of spectral information 2-9600
- DC plasma echelle emission spectrometer computing, biological and geological appl. 2-2745
- discharge lamps, electrodeless, RF excited, as atomic fluorescent spectroscopy sources 2-9599
- fission reactor fuel, analysis by inductively coupled plasma spectroscopy 2-7194
- gas chromatography/emission spectroscopy, cavities for microwave induced plasma generation 2-9598
- geological materials, sequential scanning ICP emission spectrosc. anal. 2-18583
- ICP baseline structure, reduction using torch extension 2-17933
- inductively coupled plasma, spectral interferences and line intensities 2-9595
- inductively coupled plasma discharge, gas flow dynamics 2-9597
- inductively coupled plasma source, optimisation by sequential simplex method 2-9596
- isotopic selectivity to one part in 10<sup>14</sup>, combined ion mass spectroscopy and laser induced fluoresc. 2-37124
- metal chelates, ICP-AES multielement detection, separation by HPLC 2-31959
- metallic elements determ. in steel by ICP-AES 2-17946
- nuclear dissolver tank solutions safeguards, remote plasma atomic emission spectroscopy appl. 2-6084
- saturation of energy levels in analytical atomic fluorescence spectrometry 2-41959
- Ar-O<sub>2</sub> RF sputtering glow discharge, excited states, optical emission spectroscopy study 2-20953
- C, partial photoionisation cross sections, subshell branching ratios 2-7529
- Nb-Pb thin film Josephson junctions, AES, XPS investigation 2-21727
- Pb sensitive atomic anal. using saturated double-reson. emission spectroscopy 2-19988
- Pt-Si, single cryst., O induced dissolution and Si segregation, Auger spectra study 2-8696
- Sn, partial photoionisation cross sections, subshell branching ratios 2-7529

**atomic energy** *see nuclear power*

**atomic excited states**

- see also atomic metastable states; atomic resonant states*
- alkali metal, highly excited states, review (*French*) 2-49304
- alkali metal, optically pumped, pulse study method 2-15750
- atomic cation, two electron double escape, depend. on states, Wannier theory 2-44105
- collisional relax. by optical orientation 2-34534
- depolarisation of negative muons in H (*Russian*) 2-49611
- electron scatt., elementary processes from Franck-Hertz expt. of electron-photon ang. correl. (*German*) 2-20193
- harmonic oscillator atom, level shift perturbation calc. 2-28701
- harmonic oscillator coupled to quantised, massless scalar field, model 2-28700
- hydrogenic atoms, invariable field highly-excited, tunnel ionisation 2-43820
- inert gas Rydberg atom collisions, semiclassical and quantum form factors 2-34529
- mesoatomic cascades, interference between transitions (*Russian*) 2-24898
- multiconfiguration ground state, photo-excitation and ionisation, relativistic RPA 2-43873
- nonorthogonal radial orbitals, graphical determ. rules 2-34327
- optical oscillator strengths, Born approx. and LS coupling calc. 2-29551
- radiation width reduction 2-11438
- radiative collisions, two photon laser induced 2-20162
- radiative transition probabilities, asymptotic region contribs. 2-20000
- Rydberg atoms, charge-transfer collisions 2-7637
- Rydberg atoms, MM and sub-MM waves interaction 2-39341
- Rydberg gas, dense, spectral line broadening due to interaction between excited atoms 2-15743
- Rydberg states, optical detection, fluorescence meas. 2-24626
- Rydberg states, transition to core states, dipole matrix element 2-29538
- rydberg to plasma evolution in a dense gas of very excited atoms 2-44097
- steady-state quantum interference in resonance fluorescence 2-34342
- transition metal atoms and ions, excitation energies, ionisation pots., HF calcs., relativistic contrib. 2-7509
- transition metals, first row atoms, excited states, valence correlation, MCSCF and CI calcs. 2-4229
- two- and three-electron atoms, semiclassical model for atoms 2-24573



**atomic excited states continued**

- two-atom systems, radiative decay, projection operator method 2-49305  
 two-electron correlations, group theoretic approach 2-662  
 Ar VIII, beam-foil excitation, relative level populations 2-43880  
 Ar<sup>+</sup>(P<sub>1</sub>) + Ar(S<sub>0</sub>) collision, fine struct. transitions in 60 to 1500 eV range 2-24837  
 B II, excited single k-vacancy terms, Auger rates and fluoresc. yields 2-19991  
 B-like ions, 2P<sub>3/2</sub><sup>0</sup> state populations rel. to line intensities from 2P<sub>3/2</sub><sup>0</sup> to 2P<sub>1/2</sub><sup>0</sup> transition 2-48216  
 Ba, natural radiative lifetimes meas. in perturbed 6snd <sup>1</sup>D<sub>2</sub> sequence 2-39362  
 Ba sputtered atoms in excited state, vel. distrib. 2-49306  
 Be II, doubly excited quartet states, visible and UV obs. 2-671  
 Be II, doubly excited quartet states 2-43834  
 Be II, quartet spectrum, model pot. calc. 2-43833  
 Be-like ions, resonance transitions and excitation energies calc., multiconfig. relativistic random phase approx. 2-49303  
 C III, intershell transitions, theoretical study 2-39363  
 C<sup>IV</sup>, gas excited ions, prompt and time delayed electron decay-in-flight spectra 2-4353  
 Ca plasma, doubly excited levels near first ionisation limit, spectroscopic meas. 2-43819  
 Cd, excited levels population in electron beam, electron stimulated desorpt. effects 2-44104  
 Cd II+He metastable atoms, Penning excitation cross-sections determ. 2-34546  
 Cs, 6S<sub>1/2</sub>-5D<sub>5/2</sub> satellite line, rare gas perturbation study 2-24653  
 Cu, excited state radiation lifetimes investig. 2-49338  
 Cu II, excited state radiation lifetimes investig. 2-49338  
 D, Rydberg const. determ. by crossed laser beam spectroscopy 2-11416  
 Er I, oscill. strength and excited level lifetimes 2-43855  
 Er II, oscill. strength and excited level lifetimes 2-43855  
 Gd<sup>3+</sup> excited state in aq. soln., chem. behaviour 2-43828  
 H atom, excitation by electron and photon joint collision 2-7647  
 H atom, nlm-n'l'm' transition amplitude 2-39339  
 H, excited state translational energy distrib., prod. from CH<sub>4</sub>-electron disoc. 2-29535  
 H, excited states, radiative cascades 2-43825  
 H, highly excited formation in beam-foil interaction 2-44074  
 H, in elec. field, generator coord. method calcs. 2-19957  
 H, in strong mag. field, third integral of motion 2-34256  
 H, integral of motion in mag. field (*Russian*) 2-4234  
 H, Rydberg const. determ. by crossed laser beam spectroscopy 2-11416  
 H-like atoms, spin-orbit interaction and single-electron excitation 2-6755  
 H-like ions, spectra and energy levels in mag. field of neutron star 2-28490  
 H+H<sup>+</sup>(He<sup>2+</sup>), electron capture into excited s and p states 2-24846  
 He 3'D level excited by nanosecond discharge, decay rates 2-4367  
 He, excited state, 1s3d <sup>1</sup>D non-relativistic total energy 2-43817  
 He, excited states, 3'D, 4'D, 5'D, 4'D, 5'D and 6'F, variational calc. 2-43816  
 He, in elec. field, generator coord. method calcs. 2-19957  
 He+He, simultaneous excitation cross-sections 2-20167  
 HeI, 1s4f<sup>1</sup>F and 1s5f<sup>1</sup>F level, polarisabilities 2-24657  
<sup>4</sup>He-isotope, nonrelativistic energies for lowest singlet and triplet S-states 2-24877  
 He\*, electron correl. and Kellman-Herrick quantisation 2-661  
 Hg, 7<sup>2</sup>S<sub>1/2</sub> level lifetime, pulsed excitation method meas. 2-34351  
 In, excited, diabatic field ionisation, elec. field slew rate 2-43867  
 In Rydberg series study by two-photon laser spectroscopy 2-29676  
 K, excited state, electron scatt. cross-sections calcs. 2-44101  
 Kr, bound odd-purity spectrum, Rydberg series, multichannel quantum defect theory 2-15734  
 Kr II, excited states, radiative lifetime meas., delay coincidence method 2-24651  
 Kr VIII, beam-foil excitation, relative level populations 2-43880  
 Li atom, inner shell excitation freq., spin flipping operator effects anal. (*Spanish*) 2-665  
 Li<sup>+</sup>, metastable levels, laser extreme UV obs. 2-29543  
 Li<sup>+</sup>, metastable levels, laser extreme UV obs. 2-29543  
 Li+He(Ne)(Ar)(Xe), Li excitation, time of flight spectra vector polarisation anal. 2-784  
 Mg, 2p<sup>3</sup>s<sup>2</sup> excited levels, Auger rates calcs. 2-20018  
 Mg plasma, doubly excited levels near first ionisation limit, spectrophotographic meas. 2-43818  
 Na, 2p<sup>3</sup>s<sup>2</sup> excited levels, Auger rates calcs. 2-20018  
 Na, collision induced four wave coherent signal, Raman obs. 2-19985  
 Na, degenerate four wave mixing of optical pulses 2-34848  
 Na excited state, resonant CARS and coherent Stokes Raman scatt. 2-11425  
 Na, excited states, blackbody-radiation-induced transfer 2-43866  
 Na, excited states, quantum beat spectra (*Chinese*) 2-39349  
 Na, laser-excited, superelastic electron scatt., spin polarisations 2-44093  
 Na, Rydberg states lifetimes meas. in cooled environment 2-20005  
 Na vapour-Ar mixture, degenerate four-wave mixing in excited states, collision assisted transitions 2-29852  
 Na-like ions, dielectronic recombination involving high Rydberg states 2-677  
 Na+Ar, high Rydberg Na s states, collisional depopulation cross section 2-24821  
 Na+Ar, scatt. cross section meas., pot. energy functions (*German*) 2-29685  
 Na+H<sub>2</sub>, quenching process, energy transfer, ab initio RHF-SCF and PNO-CEPA calcs. 2-29699  
 Na+He<sup>+</sup>(Ne<sup>+</sup>)(Ar<sup>+</sup>), Rydberg atom l-change near matching vel. region 2-4374  
 Na+Na, energy pooling collisions, form. of Na5s and Na4d, rate const., associative ionisation 2-44058  
 Na+Na, excited states, associative ionisation, rate const. 2-47334  
 Na(nd), electron impact state changing 2-44108  
 Ne, excited 3p state, photoionisation, many-body perturbation theory calc. 2-43869  
 Ne short-lived states excited by microwave discharge, dye laser intracavity absorpt. obs. 2-11435  
 Ne<sup>q+</sup>(Ne), q=1-4, autoionising states calc. 2-11414  
 O, translational energy determ. excited in He+O<sub>2</sub>(NO) dissociative excitation 2-29537  
 Rb, highly excited S state, collisional ionis. 2-20168  
 Rb, hyperfine interactions in excited S states, one and many-electron contrib., relativistic treatment 2-7513

**atomic excited states continued**

- Rb+He, collisional quenching of Rb Rydberg levels 2-34530  
 Sc, excited states, lifetimes determ. using selective pulsed laser excitation 2-34346  
 Si II, Si X, 2P<sub>3/2</sub><sup>0</sup> state populations rel. to line intensities from 2P<sub>3/2</sub><sup>0</sup> to 2P<sub>1/2</sub><sup>0</sup> transition 2-48216  
 Sr, isotope shifts, hyperfine induced singlet-triplet mixing in <sup>1</sup>S<sub>0</sub> Rydberg states 2-24656  
 Ti sputtered excited atoms, energy parameters meas. 2-11432  
<sup>238</sup>U<sup>+</sup>, transition energies and excited state lifetimes meas. 2-19986  
 Xe selected states, time-resolved laser-induced fluoresc. spectroscopy 2-678  
 Xe+He, initiated inelastic collision channel (*Russian*) 2-11563  
 Xe+He(Ne)(Ar)(Xe), interaction pots., IR spectra, line shift, and broadening 2-20004  
 Y, excited states, lifetimes determ. using selective pulsed laser excitation 2-34346  
 Yb, low-lying autoionisation states, energies and widths 2-7527  
 Zn II, electron impact excitation, collision strength calcs., close coupling calcs. 2-44113  
 Zn<sup>+</sup>, electron impact excitation, absolute emission cross sections 2-44112
- atomic explosions** see *nuclear explosions*
- atomic fine structure**  
 alkali atoms+diatomic mol., atomic fine struct. transitions nonadiabatic coupling 2-34535  
 alkali metal atoms, core polarisation and relativistic effects, fine struct., oscillator strengths, HF calcs. 2-24601  
 Dirac equation, Moore's new method of obtaining approximate solns. 2-19939  
 fine struct. inversions explained as first order relativistic corrections to HF energy 2-49259  
 Ar+Ar, inelastic collisions, fine-struct. transitions rot. coupling, transition probability calc. 2-15873  
 Ar<sup>+</sup>(P<sub>1</sub>) + Ar(S<sub>0</sub>) collision, fine struct. transitions in 60 to 1500 eV range 2-24837  
 Be isoelectronics sequence, spin-forbidden transitions between 2p<sup>2</sup> and 2s2p states 2-11413  
 Be-like ions, electron impact excitation, coupling collision strengths, fine struct. transitions 2-29718  
 C III, electron impact excitation, fine struct., collision strength, data table 2-38368  
 Fe<sup>2+</sup> in reaction centres from Rhodospseudomonas sphaeroides, electronic struct., EXAFS obs. 2-52428  
 He, fine and hyperfine struct. 2-19966  
 He fine structure transitions, IR diode laser spectroscopy obs. 2-43826  
 He-like ions, electron impact excitation, coupling collision strengths, fine struct. transitions 2-29718  
 Hg, asymmetry of polarised electrons scatt. inelastically reson. features and fine-struct. effect 2-7652  
 Hg inelastic electron scatt., electron spin polarisation 2-44100  
 Hg+alkali metal atoms, collisional electronic excitation, integral cross section calcs., close coupling approx. 2-7634  
 In Rydberg series study by two-photon laser spectroscopy 2-29676  
 K, excited state, electron scatt. cross-sections calcs. 2-44101  
 K fine structure transitions P<sub>3/2</sub>-P<sub>1/2</sub>, from He collisions 2-49547  
 K+H<sub>2</sub> (4P) fine struct. transition 2-44054  
 Kr, beam, metastable states, excitation to Rydberg level, field ionisation detection 2-15733  
 Kr, bound odd-purity spectrum, Rydberg series, multichannel quantum defect theory 2-15734  
 Li<sup>+</sup>, fine and hyperfine struct. 2-19966  
 Li-like ions, 1s2s2p config., relativistic Auger and X-ray emission rates, multiplet fluoresc. 2-11447  
 N, F<sub>2</sub> (nu=0) B<sup>2</sup>Π<sub>1/2</sub> state hyperfine struct. 2-43865  
 Na, electron impact excitation, electron photon ang. parameters, inclusion of fine and hyperfine effects 2-44111  
 Ne VII, electron impact excitation, fine struct., collision strength, data table 2-38368  
 Ne+Ne\*, inelastic collisions, fine-struct. transitions rot. coupling, transition probability calc. 2-15873  
 NeI 2p<sup>3</sup>3p configuration, fine struct. states, precision lifetime meas. 2-20199  
 Ni, K<sub>α</sub> and K<sub>β</sub> spectra, resolution enhanced by the deconvolution method 2-15738  
 OV, electron impact excitation, fine struct., collision strength, data table 2-38368  
 Rb, inelastic collisions between selectively excited and ground states 2-49323  
 Rb+H<sub>2</sub>(He), atomic fine struct. transitions nonadiabatic coupling 2-34535  
<sup>121</sup>Sb, Mossbauer spectra, effects of hyperfine interactions between nucleic and electronic props. 2-39350  
 Si XI, electron impact excitation, fine struct., collision strength, data table 2-38368  
 U, partial photoionisation cross sections, subshell branching ratios 2-7529
- atomic fluorescence**  
 air, anomalous Cherenkov radiation 2-19993  
 alkali metal, highly excited states, review (*French*) 2-49304  
 alkali vapours, CW dye laser irr. plasma prod., fluorescence behaviour 2-40136  
 atomic coherent state representation, state multipoles, generalised phase space distrib. 2-34706  
 average satellite and hypersatellite yields 2-19992  
 Dicke model non-resonant effects, exact steady state anal. 2-34341  
 dressed state collisional kinetics, effect of stimulated processes 2-49358  
 highly stripped atoms, relativistic Auger and X-ray deexcitation rates 2-11446  
 interacting atomic system, critical phenomena in cooperative resonance fluorescence (*Russian*) 2-49327  
 ion photorecombination with excitation 2-11573  
 K-shell fluorescence and photoionisation in elements 28≤Z≤53 2-29549  
 laser atomic spectroscopy appls. in nuclear physics 2-3628  
 M-shell X-ray production cross sections in the proton energy range 250-400 keV 2-7520  
 mean field theory of superfluorescence with transverse effects 2-877  
 metastable state [1s2s2p<sup>3</sup>P<sup>3</sup>J=5/2], lifetimes, transition energies and line fluoresc., calc. 2-24629  
 multiphoton scatt., time depend. 2-43879  
 photo-count distrib. in nonlinear resonance fluorescence (*Russian*) 2-24641



**atomic fluorescence continued**

resolution beyond natural linewidth via fluorescence in modulated beams 2-49322  
 resonance fluorescence and cooperative states 2-19994  
 resonance fluorescence and resonance light scatt., intensity depend., theory, book contrib. 2-49328  
 Rydberg states, optical detection, fluorescence meas. 2-24626  
 saturation of energy levels in analytical atomic fluorescence spectrometry 2-41959  
 single atom detection methods, using laser beams, review 2-7685  
 steady-state quantum interference in resonance fluorescence 2-34342  
 strong field, resonances and spontaneous transitions in atomic two-, three- and four-level systems 2-7521  
 superfluorescent pulses spectral props. 2-874  
 theoretical aspects, review 2-46665  
 third harmonic generation freq. distrib. in at. systems 2-43838  
 three-level atom, optical mixing of freq. of strong trichromatic field interaction 2-43837  
 three-level systems, multiphoton transitions and reson. fluoresc., interference 2-34368  
 two level system, coherent optical transients and fluorescence, correlation function anal. 2-11769  
 two-level atom, polarisation props. of reson. fluoresc. 2-11431  
 two-level atom, two-time photon correlations in resonance fluorescence 2-676  
 two-level paramagnetic system, dynamic Zeeman effect, atomic fluorescence 2-43843  
 two-level system with crossing term, damping of states 2-44055  
 two-level systems, multiphoton transitions and reson. fluoresc., interference 2-34368  
 Ar, electron bombardment, bremsstrahlung fluoresc. obs. 2-19996  
 Ar+Ar( $3p^25p$ ), radiative lifetimes and collisional energy transfer rate consts. 2-39359  
 Ar+Ar( $3p^25p$ ), radiative lifetimes and collisional energy transfer rate consts. 2-39359  
 Ar<sup>+</sup>+Ar, L X-ray fluoresc., coincidence technique 2-44079  
 Ar<sup>+</sup>+He(Ne),  $q=1,2,3$ , projectile excitation, radiative emission cross sections 2-44073  
 Ba II fluorescence from Ba atoms resonantly photoionised by 584-Å radiation 2-39353  
 Bi I, radiative lifetimes of  $^2P_{3/2}$  and  $^2P_{1/2}$  states, fluorescence decay meas. 2-24646  
 Br vapour, anomalous Cherenkov radiation 2-19993  
 Ca, atomic fluorescence polarisation due to coherence effect in photodissociation of Ca, mols. 2-39354  
 Ca, linear polarisation correl. in radiative cascade, Bell's theorem 2-73  
 Ca, photoionisation, fluoresc., matrix isolation obs. 2-669  
 Ca<sup>+</sup>, ionisation of Ca, matrix isolation Ar, fluoresc. obs. 2-669  
 Ca+Sr( $^1S$ ), energy transfer rate, laser induced fluoresc. 2-20158  
 Eu<sup>3+</sup> in heavy water soln., anion effect on fluorescence intensity 2-15739  
 H, fluorescence excitation by excimer lasers 2-43841  
 He<sup>+</sup>, spin-polarised  $2s_{1/2}$  ion, E1-E1 damping interference in elec. field quenching 2-49325  
 He<sup>+</sup>+He(Ne), photon-ion ang. correls. investig. 2-49549  
 HeI,  $1s4f^1F$  and  $1s5f^1F$  level, polarisabilities 2-24657  
 Hg,  $6^3P_1$  state, time-resolved spectrosc. 2-34340  
 K, D-line fluoresc. 2-49481  
 K+Ne, K 4S-5P doublet, quasistatic wings and blue satellite investig. 2-20001  
 Kr, electron bombardment, bremsstrahlung fluoresc. obs. 2-19996  
 Kr<sup>+</sup> levels populated by two-photon absorpt. using ArF laser, fluoresc., radiative lifetimes 2-24640  
 Li-like ions,  $1s2s2p$  config., relativistic Auger and X-ray emission rates, multiplet fluoresc. 2-11447  
 Mo I, radiative lifetimes and oscillator strengths 2-681  
 N atom detection by two-photon laser-induced fluoresc. 2-688  
 N atom near Ag grating, light emission, angular resonances 2-49326  
 N-like atoms, fluoresc. radiation polarisation subsequent to inner-shell photoionisation, LS coupling formulas 2-49324  
 Na atoms, sputtered from NaCl, vel. distrib., Doppler shift laser fluorescence meas. 2-41471  
 Na, D-line fluoresc. 2-49481  
 Na, depolarization ratios of near-resonance scattered light 2-4242  
 Na, electron impact optical excitation functions 2-4397  
 Na laser induced fluoresc. saturation charact. in propane-air flame 2-47343  
 Na vapour, anomalous Cherenkov radiation 2-19993  
 Na-like ions, dielectronic recombination involving high Rydberg states 2-677  
 Na-N<sub>2</sub> system, laser excited, temporal behaviour, appl. to N<sub>2</sub> number density meas. at low densities 2-24829  
 Ne,  $1s_2$  and  $1s_4$  levels, electron excitation cross sections, laser induced fluorescence, 2-49581  
 Ne  $2p_2$  level, lifetime and collision cross section meas. for depopulation and disalignment 2-24654  
 Ne, electron bombardment, bremsstrahlung fluoresc. obs. 2-19996  
 NeI  $2p^33p$  configuration, fine struct. states, precision lifetime meas. 2-20199  
 O atom detection by two-photon laser-induced fluoresc. 2-688  
 Pb, L-subshell fluoresc. yields 2-39355  
 Pr I, hyperfine struct., laser-RF double resonance, fluoresc. 2-19995  
 Rb, inelastic collisions between selectively excited and ground states 2-49323  
 Sr+inert gas atoms, quenching rate, lifetimes, orbiting method, fluoresc. 2-20158  
 Ti sputtered excited atoms, energy parameters meas. 2-11432  
<sup>238</sup>U, Doppler-free two-photon excitation 2-20020  
 W I, radiative lifetimes meas. using time-resolved laser-induced fluoresc. and atomic beam source 2-29547  
 Xe, electron bombardment, bremsstrahlung fluoresc. obs. 2-19996  
 Xe, excited by <sup>252</sup>Cf fission fragments, electron thermalisation, recombination luminesc. 2-43840  
 Xe selected states, time-resolved laser-induced fluoresc. spectroscopy 2-678  
 Xe-N mixtures, excited by <sup>252</sup>Cf fission fragments, electron thermalisation, recombination luminesc. 2-43840  
 Xe+Cl<sub>2</sub>, chemically reactive collisions, fluoresc. bands obs. 2-20157  
 Zr, sputtered atom vel. distrib., laser induced fluoresc. spectroscopy determ. 2-2403

**atomic fluorescence spectroscopy** *see atomic emission spectroscopy***atomic forces**

atoms embedded in electron gas, immersion energies 2-24576  
 inert gas atoms, dispersion forces 2-7623  
 inert gas atoms, interaction energies, modified statistical methods calcs. 2-15864  
 molecular vibration, local mode model, intra- and intermolecular forces 2-20033  
 molecules, complex, intramolecular forces energy derivative calcs., generalised coordinate method 2-20153  
 Ar, pair polarisability, SCF calcs. 2-49285  
 Ar-Ar interaction energies, modified statistical methods calcs. 2-15864  
 H<sub>2</sub> molecule, forces, virial theorem in density-functional formalism 2-43794  
 He, pair polarisability, direct CI calcs. 2-49302  
 He-Ar, interaction energies, modified statistical methods calcs. 2-15864  
 He-Be string, interaction pot., ab initio calc. 2-44026  
 Ne-Ar interaction energies, modified statistical methods calcs. 2-15864

**atomic hyperfine structure***see also Lamb shift*

3d-shell atoms, hyperfine struct., SCF calcs. 2-43766  
 4d shell atoms, hyperfine struct. configuration interaction 2-24624  
 alkali metal, optically pumped, pulse study method 2-15750  
 atoms, free, off-diagonal HFS interaction between  $(3d+4e)^{N+2}$  config. far config. mixing effects 2-39501  
 free atoms, hyperfine struct. contact term, LSD function approx. 2-39500  
 Ba<sup>+</sup>, shift of  $^2S_{1/2}$  hyperfine splittings due to blackbody radiation 2-49332  
 Cs atom, obs. of quantum beats in superradiance in  $5^2D_{3/2}-6^3P_{1/2}$  transition 2-20023  
 Cs, forbidden 6S-7S transition, meas. with and without elec. field 2-4403  
<sup>133</sup>Cs, A=118-145 and isomers, hyperfine struct., D<sub>2</sub> isotope shift, nuclear moments, charge radii and deformation 2-29186  
<sup>151</sup>Eu II hyperfine struct. meas. by collinear laser ion beam technique 2-24880  
 Eu I,  $4f^75d6s$ ,  $^{10}D$ -term isotope shift 2-34597  
 Eu I,  $4f^75d6s-4f^75d6p$  transitions, laser atomic beam spectroscopy 2-24637  
 Eu, UV transitions obs. using freq. doubled CW ring dye laser 2-673  
 H, frozen aq. solns. of acid, hyperfine interaction, INDO calcs. 2-49293  
 H in presence of He buffer gas, hyperfine freq. shift 2-49596  
 H, trapped atoms in H<sub>2</sub>SO<sub>4</sub> at 77K, ESR 2-4240  
 He, fine and hyperfine struct. 2-19966  
<sup>3</sup>He, muonic atom, hyperfine struct. calcs. 2-20209  
 Hg<sub>2</sub>,  $6^3P_1$  state, time-resolved spectrosc. 2-34340  
 Hg<sup>+</sup>, shift of  $^2S_{1/2}$  hyperfine splittings due to blackbody radiation 2-49332  
 In, magnetic-dipole hyperfine struct. 2-7663  
<sup>39,40</sup>K, D<sub>1</sub> and D<sub>2</sub> lines, isotope shifts, hyperfine struct., laser spectra 2-15745  
<sup>41</sup>K, A=38,39,41-47, isotope shifts and HFS by laser spectroscopy 2-49341  
 Li<sup>+</sup>, fine and hyperfine struct. 2-19966  
<sup>2</sup>Mg<sup>+</sup>, hyperfine const., g-factor optical-pumping double resonance 2-20038  
 Na, electron impact excitation, electron photon ang. parameters, inclusion of fine and hyperfine effects 2-44111  
 Na vapour, Zeeman and hyperfine splitting detect. in ground state  $3^2S_{1/2}$  using synchronised qu-antum beat spectroscopy 2-3626  
 Nb<sup>4+</sup>, energy levels and spectrum meas. and analysis 2-11426  
 Pr I, hyperfine struct., laser-RF double resonance, fluoresc. 2-19995  
 Rb, hyperfine interactions in excited S states, one- and many-electron contrib., relativistic treatment 2-7513  
 Rb, two-photon absorpt. heterodyne doppler-free spectra 2-24665  
<sup>85</sup>Re, A=185, 187, high precision hyperfine struct. meas., at beam mag. resonance 2-24638  
 Sb, magnetic-dipole hyperfine struct. 2-7663  
<sup>151</sup>Sm II, hyperfine struct., nuclear moments, collinear laser spectroscopy 2-24125  
 Sn, magnetic-dipole hyperfine struct. 2-7663  
 Sr isotope shifts, hyperfine induced singlet-triplet mixing in <sup>1</sup>S<sub>0</sub> Rydberg states 2-24656

**atomic inelastic collisions**

*see also atom-atom collisions; atom-ion collisions; atom-molecule collisions; atom-molecule reactions; atomic electron impact excitation; atomic electron impact ionisation; beam foil spectra; ionisation of atoms*  
 A(x, x+y)B, ionisation process, Coulomb interaction in final state 2-24823  
 alkali metal atom ground state, impact relax. of polaris. in dense gases 2-34590  
 atom+heavy charged particles, inner-shell electron ionisation, classical model, relativistic effects 2-20173  
 atomic beam excitation, line shapes for collision broadening 2-43856  
 binary collision problem, unitary approx., formulas for transition probabilities 2-4362  
 charge exchange, Born approximation, single and double electron scatt. 2-24849  
 colliding atoms, nonlinear optical phenomena 2-29689  
 collision broadened line shapes, exponentially decreasing 2-44007  
 collisionally perturbed Zeeman degenerate atomic transition, 2-state model rel. to optical bistability 2-20010  
 Coulomb potentials, truncated and screened, analytical phase shifts 2-34522  
 depolarisation of negative muons in H (Russian) 2-49611  
 depolarising collisions, scatt. amplitudes using semiclassical scatt. theory, appl. to studies using laser spectroscopy 2-11562  
 dressed state collisional kinetics, effect of stimulated processes 2-49358  
 electron scattering and charge cloud polarisation 2-7642  
 excited state collisional relax. by optical orientation 2-34534  
 Fourier transform method for collision dynamics 2-29686  
 inert gas mixtures, collision induced absorpt., correl. functions and spectral densities 2-34332  
 inert-gas mixtures, collision-induced far-IR absorpt. 2-44824  
 intermediate ionic states, influence on spectral line broadening 2-43861  
 K-shell ionisation cross sections and relative X-ray emission rates of Sn, Ho, Tm, Au, Pb and Bi bombarded with 9-155 MeV alpha particles 2-777  
 laser radiation collisional redistrib. 2-684



**atomic inelastic collisions continued**

- nonadiabatic transitions, rotationally induced, semiclassical theory 2-34538  
 noncoherent scatt. in subordinate lines, collisional redistrib. 2-34532  
 one dimensional double well and anharmonic potentials, Fourier transform method appl. 2-29687  
 optical collision dynamics in intense laser fields 2-34353  
 optical pumping, velocity selective, rel. to atomic props. 2-49343  
 particle scatt. in strong multimode laser field, theory 2-20014  
 radiative collisions, two photon laser induced 2-20162  
 rotationally inelastic collisions, pot. energy surface polarisation, trajectory calcs. 2-39476  
 Rydberg atoms, charge-transfer collisions 2-7637  
 scattering phenomena in strong radiation fields 2-20191  
 spin polarised gas, transport props. 2-50350  
 spin polarised gas, transport props. 2-50351  
 two-level system with crossing term, damping of states 2-44055  
 unitarised capture cross sections in the impact parameter representation 2-52187  
 Ar, collision-induced light scattering spectral moments, density depend. 2-29539  
 Ar excited by  $\alpha$ -particles, recombination luminesc. at high-pressure, time depend. 2-50368  
 Ar, gas, binary collision-induced light scatt. 2-15798  
 Cu, near 3p threshold, photoabsorpt. and photoemission, CI and inelastic scatt. effect 2-11442  
 H, spin-polarised, nuclear polarisation 2-11521  
 H-like atom + bare charge, electron capture to continuum states, distrib. anisotropies 2-786  
 H<sup>+</sup> + C-foil collisions, K-Auger emission meas. 2-44078  
 He, 1'S-n'P excitation, Glauber scatt. amplitude 2-24835  
 He 3'D level excited by nanosecond discharge, decay rates 2-4367  
 He, collisions with nuclei, ionisation processes, electron approx. 2-24839  
 He + Ne, interaction pots. and energy transfer cross-sections 2-49548  
<sup>3</sup>He-<sup>4</sup>He isotope mixture, metastability exchange (*Russian*) 2-11564  
 Hg 253.7 spectral line, perturbed by He(Ne), exptl. shape (*French*) 2-39360  
 Kr excited by  $\alpha$ -particles, recombination luminesc. at high-pressure, time depend. 2-50368  
 Li, <sup>2</sup>D resonance, elastic and inelastic scatt., autoionising state saddle-point techniques 2-20156  
 Na, collision induced coherent signal, Raman obs. 2-19985  
 Na, scattering by a short standing wave pulse (*Russian*) 2-11439  
 Na + Ar, excitation transfer collisions and electron seeding processes 2-776  
 Ne 2p<sub>2</sub> level, lifetime and collision cross section meas. for depopulation and disalignment 2-24654  
 Ne, optically forbidden 3p<sub>2</sub>-3p<sub>2</sub> transition, relax. characts. 2-44056  
 Ti<sup>+</sup> + Ti<sup>2+</sup>, inelastic collisions meas. 2-44050  
 U ionisation and excitation in hollow-cathode lamp, carrier gas influence 2-15886  
 Xe, excited by <sup>252</sup>Cf fission fragments, electron thermalisation, recombination luminesc. 2-43840  
 Xe excited by  $\alpha$ -particles, recombination luminesc. at high-pressure, time depend. 2-50368  
 Xe-N mixtures, excited by <sup>252</sup>Cf fission fragments, electron thermalisation, recombination luminesc. 2-43840

**atomic magnetic moment**

- see also gyromagnetic ratio  
 core exchange polarisation effects calc. using SCF X $\alpha$  wave functions 2-43800  
 He<sup>+</sup>(2s<sub>1/2</sub>), spin-polarised, electric field quenching, E1-M1 interference effect meas. 2-43839  
 In, magnetic-dipole hyperfine struct. 2-7663  
 Sb, magnetic-dipole hyperfine struct. 2-7663  
 Sn, magnetic-dipole hyperfine struct. 2-7663

**atomic mass**

- see also isotopes; mass spectra; nuclear mass  
 A=79-87, neutron deficient isotopes, Q<sub>B</sub> meas. and mass excess values 2-19488  
 exotic nuclei mass meas. using ( $\pi^+$ ,  $\pi^-$ ) reactions 2-15421  
 rare-earth isotopes, A=146 to 178, at. masses 2-19487  
<sup>140</sup>Dy decay, at. mass from Q-value meas. 2-33964  
<sup>153</sup>Gd, at. mass determ. using <sup>153</sup>Gd(n<sub>th</sub>,  $\alpha$ )<sup>150</sup>Sm reaction 2-20197  
 In, A=103-105, neutron-deficient isotopes, beta-decay energies study following mass separation 2-19485  
<sup>8</sup>Rb, A=76-78, mass meas. using beta endpoints 2-19486  
 Sn region, A=105-122, nuclide masses close to proton drip line 2-19435  
<sup>148</sup>Tb(T<sub>1/2</sub>=2.2 min) decay, at. mass from Q-value meas. 2-33964  
<sup>235</sup>Th, at. mass determ. using <sup>238</sup>U(n<sub>th</sub>,  $\alpha$ )<sup>235</sup>Th reaction 2-20197  
<sup>235</sup>U mass meas. in large vol. multiplicated fission ionisation chamber 2-38938  
<sup>50</sup>V-<sup>50</sup>Ti mass difference determ. using <sup>50</sup>V(n<sub>th</sub>, p)<sup>50</sup>Ti reaction 2-20197

**atomic metastable states**

- 1s2s2p<sup>3</sup>PJ=5/2, lifetimes, transition energies and line fluoresc. calc. 2-24629  
 atoms, electron excitation to metastable levels, ground state detect. 2-49578  
 atoms, free, off-diagonal HFS interaction between (3d+4s)<sup>N+2</sup> config. far config. mixing effects 2-39501  
 hydrogenlike ions, metastable 2s<sub>1/2</sub> level, lifetime meas. 2-34354  
 inert gas metastable state excitation by electron impact (*Russian*) 2-11574  
 Ar imploded microballoon plasma, dielectronic satellite spectral lines, inner shell excitation 2-44905  
 Ar + Ar, inelastic collisions, fine-struct. transitions rot. coupling, transition probability calc. 2-15873  
 Ar + H<sub>2</sub>(D<sub>2</sub>), metastable atoms, collisional de-excitation cross sections expt. 2-24822  
 Ar + He, total ionisation cross section, mass anal. 2-34544  
 Ar<sup>+</sup> + Ar(Kr)(Xe), low energy charge transfer reactions, time of flight study 2-15888  
 Ba sputtered atoms in excited state, vel. distrib. 2-49306  
 Be-like ions, electron impact ionisation cross sections and rates 2-4396  
 Bi I, radiative lifetimes of <sup>2</sup>P<sub>3/2</sub> and <sup>2</sup>P<sub>1/2</sub> states, fluorescence decay meas. 2-24646  
 Cd I, metastable state alignment in gas discharge 2-44931  
 Cd metastable levels effects on line intensities of Ca(Mg) in hollow cathode discharge 2-52260  
 Cd(II) + Ne, Penning excitation rates, cross section meas. 2-15887

**atomic metastable states continued**

- Cr I, lifetime meas. by laser excitation from metastable states 2-24647  
 Eu I, 4f<sup>7</sup>5d6s-4f<sup>7</sup>5d6p transitions, laser atomic beam spectroscopy 2-24637  
 H-like systems, s states, transition polarisabilities, Raman intensities 2-15735  
 He, elastic low energy electron scatt., cross sections calc. using extended HF theory 2-11572  
 He, metastable beam, intensity control 2-49601  
 He, plasma, fluctuating elec. field meas. using He forbidden transition 2-16509  
 He<sup>+</sup>, spin-polarised 2s<sub>1/2</sub> ion, E1-E1 damping interference in elec. field quenching 2-49325  
 He-Zn, hollow cathode laser discharge, excitation processes (*Japanese*) 2-49733  
 He + Ar(Kr)(N<sub>2</sub>)(CO)(O<sub>2</sub>), He metastable states; chemi-ionisation velocity depend. 2-44069  
 He + He(1<sup>1</sup>S), excitation of autoionising states, electron spectra 2-24838  
 He + Ne, interaction pots. and energy transfer cross-sections 2-49548  
 He + Zn(II), He 2<sup>1</sup>S(2<sup>1</sup>S) metastable atoms, Zn(II) Penning excitation cross-section meas. 2-49563  
 He (<sup>3</sup>P<sup>o</sup>), metastable state, photodetachment cross section, CI wave functions 2-20016  
<sup>3</sup>He-<sup>4</sup>He isotope mixture, metastability exchange (*Russian*) 2-11564  
 He\* + D<sub>2</sub>(H<sub>2</sub>), collisional dissociation, metastable atom prod. 2-37068  
 He\* + O<sub>2</sub>, Penning ionisation, electron spectrosc. obs. 2-49567  
 He\*(2<sup>1</sup>S) + H, Penning ionisation, H<sup>+</sup> vel.-angle distrib., crossed beam meas. 2-29702  
 He<sup>+</sup>(2s<sub>1/2</sub>), spin-polarised, electric field quenching, E1-M1 interference effect meas. 2-43839  
 Kr, beam, metastable states, excitation to Rydberg level, field ionisation detection 2-15733  
 Kr + H<sub>2</sub>(D<sub>2</sub>), metastable atoms, collisional de-excitation cross sections expt. 2-24822  
 Kr<sup>+</sup> levels populated by two-photon absorpt. using ArF laser, fluoresc., radiative lifetimes 2-24640  
 N beam, characts. by mag. selection and mass spectrometry 2-22504  
 Na<sup>+</sup> + K, Penning and associative ionisations 2-29701  
 Na + Ne, inelastic collisions, fine-struct. transitions rot. coupling, transition probability calc. 2-15873  
 p<sup>14+</sup>, metastable 2s<sub>1/2</sub> level, lifetime meas. 2-34354  
 S<sub>2</sub>Cl<sub>2</sub> + Ar(<sup>3</sup>P<sub>0,2</sub>)(Ne(<sup>3</sup>P<sub>0,2</sub>))(He(2<sup>1</sup>S)), energy transfer reactions, UV and visible emission 2-27426  
 Sr<sup>+</sup> + ICL(Cl<sub>2</sub>)(CCL<sub>4</sub>)(HCl), SrCl (A-X, B-X) bands chemiluminesc. 2-41903  
 Ti metastable inversion by TICI photodissoc., anti-Stokes Raman laser 2-49738  
 W<sup>+</sup>, radiative lifetimes meas. using time-resolved laser-induced fluoresc. and atomic beam source 2-29547  
 Xe + H<sub>2</sub>(D<sub>2</sub>), metastable atoms, collisional de-excitation cross sections expt. 2-24822  
 Xe(<sup>3</sup>P<sub>0,2</sub>) + methyl bromide, translational energy threshold and product rot. alignment 2-37063  
 Xe\* deexcitation cross-section from electron distrib. function in glow discharge 2-24628  
 Zn(II) + Ne, Penning excitation rates, cross section meas. 2-15887

**atomic orbitals see atomic structure****atomic orbitals calculations**

- see also GO calculations; GTO calculations; STO calculations  
 corrected coupled states, l-averaged coupled states and close coupling results for model system 2-24570  
 electron scatt., elementary processes from Franck-Hertz expt. of electron-photon ang. correl. (*German*) 2-20193  
 energy gradients, MC SCF LCAO wavefunction, basis set considerations 2-634  
 linear-combination-of-atomic-orbitals density-functional calcs., Coulomb pot. var. fitting 2-43792  
 metastable state |1s2s2p<sup>3</sup>PJ=5/2), lifetimes, transition energies and line fluoresc., calc. 2-24629  
 N-fermion system, relation between Hellmann energy functional and ground state energy 2-10709  
 Racah method for evaluation of coeff. of fractional parentage for mixed electronic config. 2-620  
 relativistic bond length contractions, d-orbitals effect 2-19940  
 scaling, Padé approximants and variation principles in the many-body perturbation theory of atomic and molecular properties 2-11376  
 semiclassical model for atoms 2-24573  
 transition metals, second row elements, flexible Gaussian d basis sets calc. 2-19956  
 two centre, two electron integrals over Slater-type atomic orbitals 2-39282  
 Al, Clementi Roetti atomic HF wave functions, improved local accuracy using global constraints 2-39300  
 Be isoelectronic sequence, spin-forbidden transitions between 2p<sup>2</sup> and 2s2p states 2-11413  
 C III, intershell transitions, theoretical study 2-39363  
 He to Ar, wave functions, relativistic HF-Dirac SCF calc. (*Russian*) 2-15720  
 He, Z 2-39300  
 He-isoelectronic series, lower bound of ground states, HF functions 2-19950  
 Kr, (e,2e) valence separation energy spectra, electron correl. effects 2-7528  
 Li atom, inner shell excitation freq., spin flipping operator effects anal. (*Spanish*) 2-665  
 Li, Clementi Roetti atomic HF wave functions, improved local accuracy using global constraints 2-39300  
 Ne, linear-combination-of-atomic-orbitals density-functional calcs., Coulomb pot. var. fitting 2-43792  
 Sc, 3dng configurations, energy levels calc. using semi-empirical and HF method 2-43762

**atomic polarisability**

- alkali metal negative ions, photorecomb., at. polaris effects 2-49348  
 closed shell atoms and ions, quadrupole polarisabilities and Steinheimer antishielding factors 2-49253  
 hydrogenic atoms, polarisabilities in mag. fields, implications for impurity atoms in semiconductors, white dwarfs and neutron stars 2-34595  
 negative ion photorecomb., at. polaris. effects 2-49348  
 open shell atoms, bound-perturbation theory method, dipole polarisability calc. appl. 2-7662



**atomic polarisability continued**

- optical triable system, self-sustained spin precession 2-34343  
static dipole polarisabilities, relativistic effects, appl. to electron and positron scatt. 2-4412  
Ar, collision-induced light scattering spectral moments, density depend. 2-29539  
Ar, dynamic dipole polarisabilities calc. using R-matrix approach, oscillator strengths 2-15917  
Ar, pair polarisability, SCF calcs. 2-49285  
C (<sup>2</sup>D), dynamic polarisability 2-7661  
Ca, linear polarisation correl. in radiative cascade, Bell's theorem 2-73  
Cs I, semiclassical parameterisation of  $l \geq 3$  energy levels 2-15691  
Cs, scalar polarisability determ. in 6S-7S transition 2-24879  
Cs, static electric dipole polarisabilities, SCF and CI calcs. 2-39329  
F<sup>-</sup>, dipole polarisability using elect. field variant Gaussian-type orbitals, perturbation theory 2-39305  
H, in elec. field, generator coord. method calcs. 2-19957  
H-like systems, s states, transition polarisabilities, Raman intensities 2-15735  
He, in elec. field, generator coord. method calcs. 2-19957  
He, multipole polarisabilities, spectral sums, dispersion coeffs., perturbation theory, GCM appl. 2-7660  
He, pair polarisability, direct CI calcs. 2-49302  
He<sup>+</sup> beam-foil excited state formation, surface interaction effects 2-785  
HeI, 1s4f<sup>2</sup>F and 1s5f<sup>2</sup>F level, polarisabilities 2-24657  
Hg, electron impact excitation, polarisation of the  $6^3P_1$ - $6^1S_0$  line 2-15901  
I, semiempirical estimate of ground state polarisability 2-24878  
Na, depolarization ratios of near-resonance scattered light 2-4242  
Na, electron impact optical excitation functions 2-4397  
Ne, dynamic dipole polarisabilities calc. using R-matrix approach, oscillator strengths 2-15917  
O (<sup>2</sup>P), dynamic polarisability 2-7661  
Rb, static electric dipole polarisabilities, SCF and CI calcs. 2-39329

**atomic positron scattering** *see atomic electron impact excitation; atomic electron impact ionisation; elastic scattering of electrons by atoms and molecules*

**atomic power** *see nuclear power*

**atomic reactors** *see fission reactors*

**atomic resonant states**

- absorption resonance intensity, linear, for atoms trapped in an anharmonic potential 2-34356  
correlation properties of resonantly scattered light (*Russian*) 2-11424  
electron entrainment by reson. light and quadrupole reson. 2-15759  
fluorescence and light scatt., intensity depend., theory, book contrib. 2-49328  
frozen three-level atomic system, resonant Raman scatt., multipoles vs. excitons 2-4253  
interacting atomic system, critical phenomena in cooperative resonance fluorescence (*Russian*) 2-49327  
low-energy at. collisions, ionisation processes 2-49566  
multicharged ion-electron collisions, excitation and ionisation processes 2-49582  
noncoherent scatt. in subordinate lines, collisional redistrib. 2-34532  
photon echo stimulated in gas, spectroscopic characts. of resonant levels 2-20817  
resonance spectral lines, broadening and displacement collisional consts. 2-34350  
strong field, resonances and spontaneous transitions in atomic two-, three- and four-level systems 2-7521  
two-level particle medium, self-oscills. and multistability (*Russian*) 2-24644  
 $\Sigma$  p atom, resonance states of light nuclei, atomic level breadth (*Russian*) 2-4420  
Ba, atomic, many-photon two electron ionisation, freq. depend. 2-29556  
Be-like ions, resonance transitions and excitation energies calc., multiconfig. relativistic random phase approx. 2-49303  
BrI, inner shell transitions in extreme UV 2-4241  
Cs+H<sub>2</sub>, Cs second reson. doublet broadening 2-20002  
Cu, atomic, photoabsorpt. and photoemission with reson. two electron excitation 2-34583  
Fe<sup>13+</sup>, electron impact ionisation, electron capture, resonant state, Auger emission 2-20195  
H, electron impact excitation, multichannel free-free transitions, resonance effects 2-24868  
H spectra, Stark effect in crossed static and dynamic fields 2-15740  
H, Stark effect, high-order perturbation theory of imaginary part of resonance eigenvalues 2-11434  
He isoelectronic sequence, reson. transition, electron impact excitation, oscillator strength calc. 2-20192  
He<sup>+</sup>, electron impact autoionisation reson., complex coord. calcs. with complex basis sets 2-4394  
Hg, asymmetry of polarised electrons scatt. inelastically reson. features and fine-struct. effect 2-7652  
Li, <sup>2</sup>D<sup>2</sup> resonance, elastic and inelastic scatt., autoionising state saddle-point techniques 2-20156  
Lu, single photon photoionisation mass spectroscopy via autoionising resonances 2-49587  
Na, degenerate four wave mixing of optical pulses 2-34848  
Na, depolarization ratios of near-resonance scattered light 2-4242  
Na, electron impact optical excitation functions 2-4397  
Ne two-particle two-hole type resonances, influence of interchannel interactions upon characts. 2-666  
Sr, atomic, many-photon two electron ionisation, freq. depend. 2-29556  
Yb, single photon photoionisation mass spectroscopy via autoionising resonances 2-49587

**atomic scattering factors** *see crystal atomic structure; crystallography; lattice dynamics*

**atomic spectra**

- see also atomic fluorescence; atomic hyperfine structure; atomic spectral line breadth; atomic structure; beam-foil spectra; conversion electron spectra; radiative corrections; Russell-Saunders coupling; Stark effect; Zeeman effect*  
absorption coeff. of electrons in short range pot. as function of interaction parameter 2-15732  
absorption spectra of accelerated atoms, Landau-Zener type nonlinear effects (*Russian*) 2-15736  
air, atm., moist, IR absorpt. and ion content 2-43900  
Al I, meas. of oscillator strengths and autoionisation widths of  $3s^2 3p^1$ - $3s3p^2$  <sup>2</sup>P multiplet 2-10308

**atomic spectra continued**

- aligned atoms in strong oscillating RF field, simple treatment by continued fraction of  $2 \times 2$  matrices 2-34331  
alkali metal, highly excited states, review (*French*) 2-49304  
alkali metal atoms, core polarisation and relativistic effects, fine struct., oscillator strengths, HF calcs. 2-24601  
alkali metals ionisation in CO flames, RF reson. study and RF system design 2-4238  
alkali-metal-atom doublet anomalies and the relation between relativistic and nonrelativistic theories 2-49381  
astrophysical appl. 2-32838  
atomic beam, fast, accelerated, reson, two-photon spectrosc. 2-29557  
atomic vapour near solid interface, light absorpt. and dispersion 2-11422  
autoionisation, photon-catalysed rate consts., fragment yield 2-44017  
blackbody radiation inhibited absorpt. 2-34358  
coherent field interaction with two-level and three-level atoms 2-683  
correlation properties of resonantly scattered light (*Russian*) 2-11424  
data rel. to GRIST observing programs 2-32837  
data table of wavelengths and transition probabilities for atomic and atomic ion spectra 2-4237  
difference, digital technique for the study of narrow structure in electron-atom and electron-molecule scattering 2-7684  
electron-photon coincidences, spin-orbit coupling, excitation process 2-4392  
Fe group atoms,  $3d^n 4p$ ,  $3d^n 1s 4s 4p$ ,  $3d^n 2s 4s 4p$  configs. first spectra calcs. 2-670  
generalised antisymmetrised geminal power ground state, excitation spectra 2-43889  
glow discharges formed in low press. upper atm. gases, IR emission spectroscopy 2-50462  
Heisenberg picture formalism in atom-radiation interaction theory 2-682  
highly ionised atoms spectra classification during last seven years 2-24632  
inert gas mixtures, collision induced absorpt., correl. functions and spectral densities 2-34332  
inert-gas mixtures, collision-induced far-IR absorpt. 2-44824  
isotope separation using RF spectroscopy 2-49586  
 $1^n-1^m$  configuration, electrostatic interactions 2-15696  
laser atomic spectroscopy appls. in nuclear physics 2-3628  
laser physics, summer school, Hamilton, New Zealand (1980) 2-3322  
laser radiation collisional redistrib. 2-684  
laser spectroscopy, sub-Doppler, quantum metrology appl. 2-6905  
metal halide lamps with rare earth halide additives, radiation characts. (*Japanese*) 2-49320  
multiphoton scatt., time depend. 2-43879  
muonic Lyman X-ray intensities in pure elements 2-49609  
polarisation spectroscopy of gaseous atoms, high-resolution, review (*Japanese*) 2-39508  
resonance EM field effect on autoionisation states (*Russian*) 2-49346  
resonance fluorescence and resonance light scatt., intensity depend., theory, book contrib. 2-49328  
resonance Raman spectra in strong radiation fields, non-impact collisional broadening 2-43853  
Rydberg atoms, MM and sub-MM waves interaction 2-39341  
Rydberg gas, dense, spectral line broadening due to interaction between excited atoms 2-15743  
Rydberg states, transition to core states, dipole matrix element 2-29538  
space translation method at high laser field intensities 2-29553  
spontaneous radiation trains, elementary lengthening processes 2-34707  
theoretical aspects, book 2-7485  
third-row elements, ( $3d+4s$ )<sup>n</sup>4p at. configs., energy levels, first spectra 2-10555  
three-level atom, excitation spectra arising from third order mixing of freq. of two laser fields 2-49342  
three-level atom, optical mixing of freq. of strong trichromatic field interaction 2-43837  
two level atom, reson. line level population densities, partial freq. redistribution effects 2-32989  
two-level atom, decaying pulse excitation 2-39351  
two-level atoms, reson. transitions, optical pumping and mag. reson. in periodic field 2-34338  
two-level atoms ensemble, mag. reson. theory, interference of nondegenerate quasienergy states 2-34337  
two-level system, EM field interaction, equilibrium approach, multiphoton effects 2-29540  
vapours and gases, anomalous dispersion, band-shift meas., random errors 2-16420  
X-ray absorpt. edge, synchrotron-Cerenkov radiation study 2-19989  
Ag I isoelectronic series, I VII to La XI, wavelengths, energy levels and pot. energies 2-24635  
Ag IV,  $4d^8$ - $4d^5 5p$  transition anal. 2-43827  
AgI isoelectronic series, Ce XII to Ho XXI and W XXVIII; wavelengths, energy levels and pot. energies 2-24636  
Al, ions, config. mixing effect on radiation spectrum struct. 2-34336  
Al XII, lifetime meas., cascade model, X-ray obs. 2-4243  
Al-like ions, electric dipole transitions, oscillator strengths, relativistic energy levels 2-679  
Ar, collision-induced light scatt. spectra 2-34525  
Ar, refractivity virial coeff. determ., visible spectrum 2-30272  
Ar, Rydberg states, colour centre laser optogalvanic spectroscopy in hollow cathode discharges 2-49316  
Ar, selective population of levels in afterglow 2-49317  
Ar, singly ionised gas, model for satellite struct. in atomic spectra 2-43823  
Ar, XPS shake up studies 2-43870  
B-like ions, intensities of lines from low-lying levels 2-48216  
Ba, Ba<sup>+</sup> and Ba<sup>2+</sup>, vacuum-UV photoabsorpt. spectra, radical redistrib. of 4d oscillator strength obs. 2-675  
Ba, forbidden radiative transition probabilities 2-43854  
Ba, Rydberg states, colour centre laser optogalvanic spectroscopy in hollow cathode discharges 2-49316  
Be II, doubly excited quartet states, visible and UV obs. 2-671  
Be II, quartet spectrum, model pot. calc. 2-43833  
Be<sup>+</sup>, spectrum, wavelengths and transition probabilities 2-34335  
Be-like ions, electron impact excitation, coupling collision strengths, fine struct. transitions 2-29718  
Be-like ions, resonance transitions and excitation energies calc., multiconfig. relativistic random phase approx. 2-49303  
BrI, inner shell transitions in extreme UV 2-4241  
C I to Ca XV isoelectronic series, oscillator strengths 2-15741



## atomic spectra continued

- C II, obs. of 1335 Å dielectronic recomb. lines in planetary nebula (IC 418) 2-6657  
 C II 2324.69 Å, oscillator strength rel. to interstellar C abundance toward δ Scorpii 2-42733  
 C, VUV spectrum by, flash-pyrolysis 2-29545  
 $\text{C}^3+$  +  $\text{H}_2$ , X-ray emission during electron capture (Russian) 2-11430  
 Ca atomic cascade, Bell's inequalities and the four-coincidence experiment 2-23486  
 Ca II chromospheric emission vars. in stars, dynamo theory interpretation 2-33000  
 Ca plasma, doubly excited levels near first ionisation limit, spectroscopic meas. 2-43819  
 Cd I 5-10  $\text{D}_2$ ,  $\text{D}_3$  levels excited by electron impact, visible and UV spectra, Hanle effect, lifetime meas. 2-15900  
 Cd( $\text{P}^1 + \text{Cd}(\text{S}_0)$ )  $\text{P}_1 \rightarrow \text{P}_0$  transition, multichannel distorted-wave approx. 2-15874  
 $^{40}\text{Ca}$ , A=106-116, stable even isotopes, subshell effect in mean square charge radii 2-24111  
 Ce I to XVI, plasma, ground state configs., 4d-4f emission obs. 2-43835  
 Cr, do 2-34577  
 Cr I, lifetime meas. by laser excitation from metastable states 2-24647  
 Cr II, spectral lines, prod. by electron impact, excitation cross-sections 2-34577  
 $\text{Cr}^3+$ , ionisation rate const. in CO flames, RF reson. determ. 2-4239  
 $^{133}\text{Cs}$  vapour, mag. reson. signal obs. with laser pumping 2-15754  
 Cu atoms isolated in various matrices, UV-visible spectra 2-49319  
 Cu I 578.2 nm transition Doppler-free spectra using polarisation intermodulated excitation spectroscopy 2-7518  
 Cu isoelectronic series spectra,  $\text{Ba}^{27+}$  to  $\text{W}^{45+}$ , wavelengths, energy levels and ionisation energies 2-24634  
 D, Rydberg const. determ. by crossed laser beam spectroscopy 2-11416  
 Dy, isotope shifts, visible-UV obs. 2-49318  
 Eu I, 4f<sup>5</sup>d<sub>6</sub>-4f<sup>5</sup>d<sub>6</sub> transitions, laser atomic beam spectroscopy 2-24637  
 Eu, UV transitions obs. using freq. doubled CW ring dye laser 2-673  
 Fe I lines, oscillator strengths and abundance for photosphere 2-32973  
 Fe II, semiempirical calc. of gf values 2-7516  
 Fe II, sextet transitions, astronomical significance 2-38047  
 Fe II emission in quasars and Seyfert I galaxies 2-38330  
 Fe II spectrum of Seyfert I galaxies and quasars 2-38299  
 Fe plasma temp. meas. by photoelec. scanning spectrometry, spectral line and transition probability selection 2-16513  
 Fe XIII to XVI, beam-foil lifetimes, decay curve anal. 2-39368  
 Fe XXIII, UV and X-ray lines, electron-ion scatt. in distorted wave approx. 2-32966  
 Fe XXV, dielectronic satellite spectra theory with improved inner-shell and He-like excitation rates 2-38052  
 $\text{Fe}^{22+}$ , electron impact excitation, collision strengths, line strengths, spectra 2-34581  
 $^{57}\text{Fe}$ , matrix isolated in  $\text{NH}_3$  and  $\text{NH}_3/\text{Xe}$  matrices, reactions, Mossbauer study 2-19984  
 $\text{Gd}^{3+}$ , excited state in aq. soln., chem. behaviour 2-43828  
 H atom, four Euclidean conformal group approach to multiphoton processes 2-34266  
 H atom, nlm-n'l'm' transition amplitude 2-39339  
 H, excited states, radiative cascades 2-43825  
 H, ground state energy correction in superintense laser fields 2-24658  
 H, multiphoton emission during UV and X-ray absorption in intense laser fields 2-24666  
 H, Rydberg const. determ. by crossed laser beam spectroscopy 2-11416  
 H spectra, Stark effect in crossed static and dynamic fields 2-15740  
 H<sup>+</sup>, form. from electron impact dissociation of  $\text{H}_2^+$ , decay to ground state 2-4398  
 H<sup>+</sup>, UV transitions and struct. investig. using relativistic doppler effect 2-7517  
 H-like ions, 2s-2p transitions, wavelength meas. 2-11423  
 H-like ions, spectra and energy levels in mag. field of neutron star 2-28490  
 H-like ions, spectral broadening in intense mag. field 2-43846  
 H-like ions, Stark effect appl. 2-49330  
 H-like ions, Z=6 to 33, dielectronic satellite spectra for (2l3l'<sup>n</sup>-1s2l, 2l3l'-1s3l) transitions 2-34344  
 H-like systems, s states, transition polarisabilities, Raman intensities 2-15735  
 He 294.5 and 667.8 nm line absorpt. calcs. for Voigt profile 2-49334  
 He, fine and hyperfine struct. 2-19966  
 He fine structure transitions, IR diode laser spectroscopy obs. 2-43826  
 He II 4686 Å emission rel. to quasar and Seyfert galaxy reddening 2-38331  
 He like systems, spectra in superstrong mag. field 2-34334  
 He, multipole polarisabilities, spectral sums, dispersion coeffs., perturbation theory, GCM appl. 2-7660  
 He-like ions, electron impact excitation, coupling collision strengths, fine struct. transitions 2-29718  
 He-like ions, Tokamak plasma, UV spectra 2-672  
 He-like ions, Z=6 to 33, dielectronic satellite spectra for (1s2l3l'-1s2l, 1s2l3l'-1s3l) 2-34344  
 He-like ions line ratios used for X-ray source density and temp. diagnostics 2-10528  
 $^3\text{He}$ , n=6,7- $^3\text{D}$  states, anticrossing spectroscopy 2-49357  
 $\text{He}^*(2s_{1/2})$ , spin-polarised, electric field quenching, E1-M1 interference effect meas. 2-43839  
 Hg, electron impact excitation, polarisation of the  $6^3\text{P}_1$ - $6^1\text{S}_0$  line 2-15901  
 Hg, electron impact excitation,  $6^1\text{S}_0$ - $6^1\text{P}_1$  transition, Percival-Seaton hypothesis 2-39495  
 Hg( $\text{P}^1 + \text{Hg}(\text{S}_0)$ )  $\text{P}_1 \rightarrow \text{P}_0$  transition, multichannel distorted-wave approx. 2-15874  
 In IV, config. anal., CI calcs., UV obs. 2-11427  
 In, meas. and reassignment of 252.134 nm line with scanning echelle monochromator 2-20007  
 In three-level system, laser-induced polarisation anisotropy 2-49314  
 K, anti-Stokes scatt., XUV radiation source, spectra 2-29542  
 K, ionisation rate const. in CO flames, RF reson. determ. 2-4239  
 K+Ar, perturbed emission line, line shift, width and asymmetry, temp. depend. 2-43850  
 $^{39,40}\text{K}$ , K<sub>1</sub> and D<sub>2</sub> lines, isotope shifts, hyperfine struct., laser spectra 2-15745  
 Kr, beam, metastable states, excitation to Rydberg level, field ionisation detection 2-15733

## atomic spectra continued

- Kr, bound odd-purity spectrum, Rydberg series, multichannel quantum defect theory 2-15734  
 Kr II, excited states, radiative lifetime meas., delay coincidence method 2-24651  
 Kr selective population of levels in afterglow 2-49317  
 Kr, singly ionised gas, model for satellite struct. in atomic spectra 2-43823  
 Kr, X-ray absorpt. edge, synchrotron-Cerenkov radiation study 2-19989  
 Kr, XPS shake up studies 2-43870  
 La I to XVI, plasma, ground state configs., 4d-4f emission obs. 2-43835  
 Li, ionisation rate const. in CO flames, RF reson. determ. 2-4239  
 Li, metastable levels, laser extreme UV obs. 2-29543  
 Li, Rydberg states, colour centre laser optogalvanic spectroscopy in hollow cathode discharges 2-49316  
 $\text{Li}^+$ , fine and hyperfine struct. 2-19966  
 $\text{Li}^+$ , metastable levels, laser extreme UV obs. 2-29543  
 Li+He(Ne)(Ar)(Xe), Li excitation, time of flight spectra vector polarisation anal. 2-784  
 Mg I, two-photon spectroscopy of 3snd  $\text{D}_2$  Rydberg states 2-34369  
 Mg ions, config. mixing effect on radiation spectrum struct. 2-34336  
 Mg plasma, doubly excited levels near first ionisation limit, spectrophotographic meas. 2-43818  
 Mg XI, lifetime meas., cascade model, X-ray obs. 2-4243  
 Mg XI, line identifications in 9.14 to 9.33 Å region of high-resolution solar X-ray spectra 2-3229  
 Mn I, electron impact excitation of spectral transitions 2-49315  
 Mn II, electron impact excitation of spectral transitions 2-49315  
 Mn XVII to XXIII, atomic data and level populations calc. 2-42797  
 Mo XVI 3d<sup>5</sup>-3d<sup>4</sup> spectra, line identification 2-43832  
 N I isoelectronic sequence, forbidden line transition probabilities 2-38050  
 N II 2145 Å feature in aurora, excitation 2-32701  
 Na, collision induced coherent signal, Raman obs. 2-19985  
 Na, D<sub>1</sub> and D<sub>2</sub> lines, absolute wavelengths of hyperfine compounds determ. by using CW tunable dye laser 2-34333  
 Na, excited states, quantum beat spectra (Chinese) 2-39349  
 Na, ionisation rate const. in CO flames, RF reson. determ. 2-4239  
 Na vapour, resonance excitation transport, line profiles and intensities 2-43824  
 Na vapour, Zeeman and hyperfine splitting detect. in ground state  $3^2\text{S}_{1/2}$  using synchronised quantum beat spectroscopy 2-3626  
 Na vapour-Ar mixture, degenerate four-wave mixing in excited states, collision assisted transitions 2-29852  
 Na+Ar, excitation transfer collisions and electron seeding processes 2-776  
 NaD<sub>1</sub> line spectrum using modified saturation spectroscopy 2-3627  
 Nb XII-XVII spectra from low inductance vac. spark 2-43829  
 Nb<sup>4+</sup>, energy levels and spectrum meas. and analysis 2-11426  
 Ni I to XVI, plasma, ground state configs., 4d-4f emission obs. 2-43835  
 Nd II, isotope shifts in energy levels 2-20006  
 Ne, enhanced optogalvanic effect in pulsed optical double resonance spectroscopy 2-674  
 Ne, optically forbidden 3p<sub>2</sub>-3p<sub>2</sub> transition, relax. characts. 2-44056  
 Ne, Rydberg states, colour centre laser optogalvanic spectroscopy in hollow cathode discharges 2-49316  
 Ne short-lived states excited by microwave discharge, dye laser intracavity absorpt. obs. 2-11435  
 Ne, singly ionised gas, model for satellite struct. in atomic spectra 2-43823  
 Ne, XPS shake up studies 2-43870  
 Ne+O<sub>2</sub>, afterglow, quenching rate constants, O I spectra 2-43973  
 Ne( $^2\text{P}_{3/2}$ ,  $^2\text{P}_{1/2}$  and  $^4\text{P}_0$ ), de-excitation rate const. by atoms and mols., pulse radiolysis study 2-29704  
 Ni I, solar  $^{58}\text{Ni}/^{60}\text{Ni}$  from near-IR lines 2-10376  
 Ni, K<sub>α</sub> and K<sub>β</sub> spectra, resolution enhanced by the deconvolution method 2-15738  
 Ni<sup>24+</sup>, electron impact excitation, collision strengths, line strengths, spectra 2-34581  
 O atoms in flames, coherent anti-Stokes Raman spectra 2-10879  
 O I 557.7 nm emissions in night airglow of terrestrial planets, excitation 2-10224  
 O I forbidden lines in comets 2-28409  
 O III, electron impact excitation of auroral line 2-24867  
 O, translational energy determ. excited in He+O<sub>2</sub>(NO) dissociative excitation 2-29537  
 O<sup>+</sup> EUV emission spectra branching ratios 2-10221  
 O+Hz(D<sub>2</sub>), rate const. meas., O conc., resonant absorpt. meas. 2-47316  
 O<sup>6+</sup>+H<sub>2</sub>, X-ray emission during electron capture (Russian) 2-11430  
 O( $\text{P}^3$ ) 1304 Å triplet intensity ratios in airglow 2-42509  
 P I isoelectronic sequence, forbidden line transition probabilities 2-38051  
 P<sup>+</sup>+C foil, Auger electron spectra 2-49355  
 Pb sensitive atomic anal. using saturated double-reson. emission spectroscopy 2-19988  
 Pd, K Auger spectrum, KLL, KLM, KMM, KMN and KNN lines, relative intensities determ. 2-34365  
 Pr I to XVI, plasma, ground state configs., 4d-4f emission obs. 2-43835  
 Pt, decay branching ratios meas., transition probabilities determ. 2-34348  
 Rb, two-photon absorpt. heterodyne doppler-free spectra 2-24665  
 S V, collision strengths, radiative decay rates and level populations 2-28428  
 Si II, Si X, intensities of lines from low-lying levels 2-48216  
 Si II dielectronic recombination in P Cygni, implications of P Cygni line profiles 2-38197  
 Si ions, config. mixing effect on radiation spectrum struct. 2-34336  
 Sm, anomalous isotope shifts, mass effect, phenomenological approach 2-15744  
 Sn V, config. anal., CI calcs., UV obs. 2-11427  
 Ta, analytic depend. of spectral emissivity on wavelength and temp. 2-7515  
 Ta with deformed nucleus, K X-ray and γ-ray emission correl. 2-4251  
 Th, 300-700 nm atlas of emission lines 2-24639  
 Th III, sliding spark UV spectrum 2-29544  
 Ti, spontaneous-emission rates meas. 2-49329  
 Tm with deformed nuclei, K X-ray and γ-ray emission correl. 2-4251  
 Tm XII, XLIII, Cu-like and Co-like X-ray spectra from laser-produced plasmas 2-11428  
 U, high-lying excited autoionising levels and Rydberg progressions, spectroscopic data 2-43830  
 U ionisation and excitation in hollow-cathode lamp, carrier gas influence 2-15886  
 U, soft X-ray total attenuation coeff. 2-29546



**atomic spectra continued**

$^{238}\text{U}^+$ , transition energies and excited state lifetimes meas. 2-19986  
 $\text{V}^{19+}$ , electron impact excitation, collision strengths, line strengths, spectra 2-34581  
 W XLVI, XLVIII, Cu-like and Co-like X-ray spectra from laser-produced plasmas 2-11428  
 Xe, photoabsorpt., quantum hydrodynamics 2-34374  
 Xe, selective population of levels in afterglow 2-49317  
 Xe, singly ionised gas, model for satellite struct. in atomic spectra 2-43823  
 Xe XLIV-XLVII, spectral line obs. in 2.5-3.0 Å range from laser-imploded targets 2-15737  
 Xel lines, Stark broadening 2-19999  
 Zn I to XVI, plasma, ground state configs., 4d-4f emission obs. 2-43835  
 $\text{Zn}^+$ , electron impact excitation, absolute emission cross sections 2-44112  
 $\text{ZnI}$ , 4s4p $^2$ -4p $^2$   $^3\text{P}$  multiplet, transitions oscillator strengths 2-24649  
 $\text{Zn}(^3\text{P}_1) + 2\text{n}(^1\text{S}_0)$ ,  $^3\text{P}_1 \rightarrow ^3\text{P}_0$  transition, multichannel distorted-wave approx. 2-15874  
 Zr, I, II, solar abundance from, equivalent width, radiative lifetimes and oscillator stress data 2-7522

**atomic spectral line breadth**

absorption resonance intensity, linear, for atoms trapped in an anharmonic potential 2-34356  
 Al I, meas. of oscillator strengths and autoionisation widths of 3s $^2$ 3p $^2$ -3s3p $^2$   $^2\text{P}$  multiplet 2-10308  
 alkali atoms, self-shift and broadening of Doppler-free Rydberg  $^2\text{S}$  spectral lines 2-49336  
 alkali like ions, Stark linewidths, appl. of modified semi-empirical formula 2-14763  
 alkali-metal-atom doublet anomalies and the relation between relativistic and nonrelativistic theories 2-49381  
 asymmetries in spectrum of FS IV-V star Procyon 2-38174  
 atomic beam excitation, line shapes for collision broadening 2-43856  
 collision broadened line shapes, exponentially decreasing 2-44007  
 conical bottom hollow-cathode discharge, Hanle signal and spectrosc. effects 2-4247  
 correlation properties of resonantly scattered light (*Russian*) 2-11424  
 discharge lamps, electrodeless, RF excited, as atomic fluorescent spectroscopy sources 2-5999  
 Doppler free heterodyne spectroscopy via collinear-wave mixing in two- and three-level systems 2-39366  
 emission line ratios, asymptotic escape probabilities, Stark broadening in quasar spectra 2-38329  
 emission spectral-line shift in nonequilibrium, partially ionized plasma 2-30339  
 gases, collision induced depolarised light scatt., asymptotic line shape 2-1290  
 hydrogenic ions, stark broadening of Lyman- $\beta$  line by low freq. fields in dense plasmas 2-49331  
 inductively coupled plasma-atomic emission spectra, spectral interferences 2-9595  
 intermediate ionic states, influence on spectral line broadening 2-43861  
 laser spectroscopy, sub-Doppler, quantum metrology appl. 2-6905  
 line shape analysis for Fabry-Perot interferometer measurements 2-43847  
 multilevel atomic system, coherent excitation, weak probe-field approx. 2-15753  
 noncoherent scatt. in subordinate lines, collisional redistrib. 2-34532  
 optical pumping, velocity selective, rel. to atomic props. 2-49343  
 radiation width reduction 2-11438  
 radiative collisions, two photon laser induced 2-20162  
 Raman linewidths, slit width effect correction, Lorentzian convolution eqn. 2-11437  
 rare earth metal ions, 3d-4f transition, spectral profiles and linewidths 2-24652  
 resolution beyond natural linewidth via fluorescence in modulated beams 2-49322  
 resonance emission lines, far UV, meas. using inverse Zeeman scanning 2-43842  
 resonance Raman spectra in strong radiation fields, non-impact collisional broadening 2-43853  
 resonance spectral lines, broadening and displacement collisional consts. 2-34350  
 resonantly scattered light, anomalous correlator 2-44381  
 Rydberg gas, dense, spectral line broadening due to interaction between excited atoms 2-15743  
 subnatural linewidth and transient dip spectroscopy, time-delayed meas. 2-11590  
 two level system, coherent transient theorem, comment 2-20374  
 two-level atom, decaying pulse excitation 2-39351  
 two-level systems, coherent transients, reply to comment 2-20375  
 Voigt spectral line profiles, optimised rational approx. calcs. 2-15851  
 B-like ions, intensities of lines from low-lying levels 2-48216  
 Ba  $6\text{P}_{1/2}$  states, spectroscopic decay-rate meas. below the laser linewidth 2-43868  
 Ba, forbidden radiative transition probabilities 2-43854  
 Ca, collisional line broadening and shift, emission line 2-20003  
 Ca I, oscillator strengths and collisional damping param. 2-34345  
 Ca+He, Ca atomic spectra, principal series lines, collision broadening meas. 2-49335  
 Ca+Kr, collision broadening of principal series line 2-43831  
 Cd, resonance emission lines, far UV, meas. using inverse Zeeman scanning 2-43842  
 $\text{Cl}^{2+}$ , electron impact Stark widths, semiclassical calcs. 2-43845  
 Cs,  $6\text{S}_{1/2}$ - $5\text{D}_{3/2}$  satellite line, rare gas perturbation study 2-24653  
 Cs, resonant multiphoton ionisation at 1.059  $\mu\text{m}$ , laser temporal-coherence effects 2-15757  
 Cs+H $_2$ , Cs second reson. doublet broadening 2-20002  
 Cu, collisional line broadening and shift, emission line 2-20003  
 Eu $^{3+}$  in amorphous hosts at high temp.,  $^3\text{D}_0$ - $^7\text{F}_0$  transition, homogeneous linewidth, temp. depend. 2-24631  
 Fe II UV line profiles, balloon-borne obs. of  $\alpha$  Cygni, mass loss determ. 2-48237  
 Fe plasma temp. meas. by photoelec. scanning spectrometry, spectral line and transition probability selection 2-16513  
 H, Balmer beta line, Stark broadening, spectra 2-4245  
 H I Balmer alpha line widths in solar limb prominences 2-10388  
 H I Balmer  $\alpha$  and Lyman  $\alpha$  profiles in quasars, cloud models 2-38334  
 H I Balmer  $\alpha$  line profiles during impulsive phase solar flare 2-53209  
 H-like ions, spectral broadening in intense mag. field 2-43846  
 He 294.5 and 667.8 nm line absorpt. calcs. for Voigt profile 2-49334

**atomic spectral line breadth continued**

He, absorption line shape inside dye laser cavity, super-regen model 2-680  
 He, nonlinear broadening obs. at moderate densities 2-34352  
 He-Ne laser line profile and width meas. at 6328 Å using optogalvanic spectroscopy (*Chinese*) 2-24991  
 Hg 253.7 spectral line, perturbed by He(Ne), exptl. shape (*French*) 2-39360  
 Hg, 6  $^1\text{S}_0$ -6  $^3\text{P}_1$  line perturbed by Ar, spectral profile 2-24648  
 Hg, perturbation by noble gases 2-29552  
 I laser transition at high press., saturation energy density and line profile 2-906  
 In, meas. and reassignment of 252.134 nm line with scanning echelle monochromator 2-20007  
 K, collisional line broadening and shift, emission line 2-20003  
 K+Ar, perturbed emission line, line shift, width and asymmetry, temp. depend. 2-43850  
 K+Ne, K 4S-5P doublet, quasistatic wings and blue satellite investig. 2-20001  
 $\text{Kr}^+ + \text{Kr}(\text{Ar})$ , collision broadening in MO-electron spectra 2-11568  
 Mn, collisional line broadening and shift, emission line 2-20003  
 Na, collisional line broadening and shift, emission line 2-20003  
 Na, D $_1$  and D $_2$  lines, absolute wavelengths of hyperfine compounds determ. by using CW tunable dye laser 2-34333  
 Na D $_2$  lines, obs. of subnatural linewidths 2-49339  
 Na vapour, resonance excitation transport, line profiles and intensities 2-34824  
 Na+He, broadening of NaD lines model pots., temp. depend. 2-24650  
 Ne, optically forbidden 3p $_4$ -3p $_2$  transition, relax. characs. 2-44056  
 O III 5007 Å forbidden line profiles in QSOs 2-48350  
 Pd, K Auger spectrum, KLL, KLM, KMM, KMN and KNN lines, relative intensities determ. 2-34365  
 Rb, self-shift and broadening of Doppler-free Rydberg  $^2\text{S}$  spectral lines 2-49336  
 Rb+He(Ar), collision broadening and shift of Rb S and D Rydberg levels 2-49337  
 $\text{S}^{2+}$ , electron impact Stark widths, semiclassical calcs. 2-43845  
 $\text{S}^{3+}$ , electron impact Stark widths, semiclassical calcs. 2-43845  
 Si II, Si X, intensities of lines from low-lying levels 2-48216  
 Tl, perturbation by noble gases 2-29552  
 $^{238}\text{U}$ , Doppler-free two-photon excitation 2-20020  
 Xe+He(Ne)(Ar)(Xe), interaction pots., IR spectra, line shift, and broadening 2-20004  
 Xel lines, Stark broadening 2-19999  
 Yb I electron impact excitation, spectral lines obs. 2-49580  
 Zn, resonance emission lines, far UV, meas. using inverse Zeeman scanning 2-43842

**atomic structure**

see also atomic electron correlations; atomic excited states; atomic fine structure; atomic orbitals calculations; atomic polarisability; atomic spectra; nuclear screening; Russell-Saunders coupling; triplet state  
 asymptotic form of two-particle density matrix 2-24584  
 atoms and ions, charge distrib., classical Coulomb energy 2-7488  
 atoms and ions, interelectronic interaction and electrostatic pot. at nucleus, HF calc. 2-19942  
 atoms and ions, second differences in Hartree Fock SCF energies 2-49258  
 atoms embedded in electron gas, immersion energies 2-24576  
 bonding, character of MO from electronegativity of MO and AO 2-11381  
 closed shell systems, coupled-pair many-electron theory, LS coupled adapted theory 2-24585  
 complex energy resonance states, Milne method for calc. bound-state energies and wavefunctions 2-34265  
 convergence of Rayleigh-Ritz method, SCF and MCSCF calcs., atoms and mol. struct. 2-11380  
 curved space-time, atom as probe 2-10658  
 density function, lower bounds to Weizsacker correction 2-43767  
 density functional theory, Weissacker term 2-617  
 density functionals from models of the electronic charge density 2-29495  
 Dirac equation, Moore's new method of obtaining approximate solns. 2-19939  
 electron density and electron momentum density, direct and reverse transformation 2-34263  
 electronic structure theory, review 2-35919  
 exchange energy as a density functional 2-29494  
 Fe group atoms, 3d $^n$ 4p, 3d $^{n-1}$ 4s4p, 3d $^{n-2}$ 4s $^2$ 4p configs. first spectra calcs. 2-670  
 Feshbach-Rubinow single variable var. method, generalised symmetrisation 2-39303  
 free atoms, ionisation pot. calcs., LSD approx. 2-39502  
 genealogy in steady state perturbation theory 2-49262  
 generalised antisymmetrised geminal power ground state, excitation spectra 2-43889  
 gradient expansion, local kinetic energy 2-49261  
 heavy atoms, Breit interaction effect on K X-ray hypersatellite spectra 2-43836  
 highly ionised atoms spectra classification during last seven years 2-24632  
 hydrogenic atoms, invariable field highly-excited, tunnel ionisation 2-43820  
 hydrogenic atoms, radial probability density and normalisation, theory 2-14996  
 inert gas atoms, exchange and correl. energy, gradient expansion quantum corrections 2-49260  
 inert gas atoms, transition states of many-electron systems on basis of quantum statistical ab initio theory 2-19949  
 inert gas liq. mixture, nonlinear UV excitation 2-49344  
 inert gas Rydberg atom collisions, semiclassical and quantum form factors 2-34529  
 intermediate ionic states, influence on spectral line broadening 2-43861  
 internally folded densities 2-29491  
 interpolation limits for electronic energies 2-7501  
 ionisation potentials, atomic props., Thomas-Fermi models 2-7489  
 kinetic energy density, first order density matrix, asymptotic form 2-627  
 kinetic energy density functional, sixth order term of gradient expansion 2-19963  
 kinetic energy functionals with full Weizsacker correction 2-43759  
 $1^0-1^1$  configuration, electrostatic interactions 2-618  
 $1^0-1^1$  configuration, electrostatic interactions 2-15696



**atomic structure continued**

linear-combination-of-atomic-orbitals density-functional calcs., Coulomb pot. var. fitting 2-43792  
 logarithmic energy functions in  $Z^{-1}$  perturbation theory 2-29493  
 many-electron atom, config. space Hamiltonian, relativistic effects 2-34325  
 many-electron systems, transition states, on basis of quantum statistical ab initio theory 2-19949  
 matrix element reduction, overlap integrals, Hartree-Fock-Roothaan method approx. 2-39292  
 muonic atoms, energy levels, review 2-49610  
 muonic atoms hadronic vacuum polarisation correction 2-11594  
 noninteracting particle Green's function, Sturm representation 2-7495  
 $pd^N$  electron system in cubic field, p-electron spin-orbit interaction 2-24567  
 perturbation theory, large order in at. and mol. physics 2-49264  
 potentials, sectionally defined, virial theorem, variational principles 2-11370  
 quantum defect formula, exactly soluble model 2-628  
 relativistic local-density theory, Breit and transverse interactions effect correl. 2-43814  
 relativistic single-channel quantum-defect theory 2-34323  
 Rydberg states, transition to core states, dipole matrix element 2-29538  
 scaling relations for free and bonded atoms 2-39281  
 small atoms, 4 to 10 electrons, state study via  $Z$  expansion 2-43813  
 spectra of atoms and atomic ions, wavelengths and transition probabilities, data table 2-4237  
 statistical atomic models with minimal-basis-set-type electron densities 2-43765  
 theoretical aspects, book 2-7485  
 third-row elements,  $(3d+4s)^24p$  at. configs., energy levels, first spectra 2-10555  
 three-level atom, optical mixing of freq. of strong trichromatic field interaction 2-43837  
 transition metals, first row atoms, CJ calcs. 2-39334  
 transition metals, first row atoms, excited states, valence correlation, MCSCF and CI calcs. 2-4229  
 two-particle-hole Tamm-Dancoff approx. calcs. 2-19946  
 valence state, orbital energy, use in MO calcs. 2-39287  
 wave function orthogonality, Brillouin theorem of electron configuration 2-11383  
 Ag, exchange interaction between valence and core electrons, model pot. calcs., local approx. 2-19948  
 Ag I isoelectronic series, I VII to La XI, wavelengths, energy levels and pot. energies 2-24635  
 Ag I isoelectronic series, Ce XII to Ho XXI and W XXVIII, wavelengths, energy levels and pot. energies 2-24636  
 Al, Clementi Roetti atomic HF wave functions, improved local accuracy using global constraints 2-39300  
 Al XII, lifetime meas., cascade model, X-ray obs. 2-4243  
 Al-like ions, electric dipole transitions, oscillator strengths, relativistic energy levels 2-679  
 Ar, XPS shake up studies 2-43870  
 ArI, nonresonant levels, radiative lifetime meas. 2-43859  
 Be, correlated wave functions, Monte Carlo var. study 2-39285  
 Be, correlation coeffs. for electronic shells, Coulomb holes, wave function anal. 2-658  
 Be, ground state, coupled-pair many-electron theory, CEPA approx. 2-24574  
 Be, ground state, LS-adapted coupled-pair many-electron theory 2-24602  
 Be II, doubly excited quartet states, visible and UV obs. 2-671  
 Be, integrals from atomic spinors, Dirac HF calcs. 2-39295  
 Be, localised electronic interactions, density matrix treatment 2-7499  
 C, ab initio effective spin-orbit operators for struct. calc. 2-43782  
 C, VUV spectrum by, flash-pyrolysis 2-29545  
 Ca I, oscillator strengths and collisional damping param. 2-34345  
 Cd I, Landau factors meas. of  $5s5p$ ,  $5s5d$  config. levels (French) 2-49588  
 Cd( $P_1+Cd(S_0)$ )  $^3P_1 \rightarrow ^3P_0$  transition, multichannel distorted-wave approx. 2-15874  
 Co, atom level structure calcs. 2-29516  
 Co, transition probabilities and oscillator strengths, data compilations 2-7523  
 Cr, atom level structure calcs. 2-29516  
 Cs and  $Cs^+$ , SCF wave functions 2-43793  
 Cs I, semiclassical parameterisation of  $\geq 3$  energy levels 2-15691  
 Cu, atom level structure calcs. 2-29516  
 Cu isoelectronic series spectra,  $Ba^{27+}$  to  $W^{45+}$ , wavelengths, energy levels and ionisation energies 2-24634  
 D, Rydberg const. determ. by crossed laser beam spectroscopy 2-11416  
 Eu, atomic states involving f electrons 2-15692  
 F, Van der Waals radius, mean statistical value 2-4364  
 F-like ions, intershell correlation corrections to energy levels of  $n=2$  states 2-43810  
 Fe, atom level structure calcs. 2-29516  
 Fe, transition probabilities and oscillator strengths, data compilations 2-7523  
 Fe XXIII, UV and X-ray lines, electron-iron scatt. in distorted wave approx. 2-32966  
 $Gd^{2+}$  excited state in aq. soln., chem. behaviour 2-43828  
 H atom, excited bound states, 3-dimens. reduced Coulomb Green's function 2-625  
 H atom, four Euclidean conformal group approach to multiphoton processes 2-34266  
 H atom, partial wave components of the reduced Coulomb Green's function 2-626  
 H, atomic, electron momentum probability distrib. meas. 2-15719  
 H chemisorption on diamond face (100), ab initio SCF model calcs. 2-21440  
 H, electron impact excitation, multichannel free-free transitions, resonance effects 2-24868  
 H, energy in Stark effect and negatively anharmonic oscill., perturbation series 2-49265  
 H, ground state energy correction in superintense laser fields 2-24658  
 H, in elec. field, generator coord. method calcs. 2-19957  
 H, in strong mag. field, third integral of motion 2-34256  
 H, integral of motion in mag. field (Russian) 2-4234  
 H, one-dimensional atom, potentials, comments and reply 2-18843  
 H, perturbation theory via the Riccati equation 2-48539  
 H, relativistic atom, Dirac and EM fields interaction 2-48519  
 H, Rydberg const. determ. by crossed laser beam spectroscopy 2-11416

**atomic structure continued**

$H^-$ , Feshbach-Rubinov single variable var. method, generalised symmetrisation 2-39303  
 He, Clementi Roetti atomic HF wave functions, improved local accuracy using global constraints 2-39300  
 He, electron impact excitation of  $3^1P$ , electron-photon coincidence meas. 2-39483  
 He, ground state, Coulomb integral, local density functional theory 2-11371  
 He, in elec. field, generator coord. method calcs. 2-19957  
 He isoelectronic structure, limiting behaviour of  $\langle r_{12}^{-1} \rangle / \langle r_1^{-1} \rangle$  in HF framework 2-11391  
 He, L-limit energy, interference effects 2-639  
 He to Ne, expectation values in equalities, momentum density monotonicity, HF calcs. 2-39302  
 He-like ions, Tokamak plasma, UV spectra 2-672  
 He-like spectra, Na X through to Ar XVII, series formulae 2-24633  
 $^3He$ ,  $n=6,7,^3D$  states, anticrossing spectroscopy 2-49357  
 $^4He$ -isotope, nonrelativistic energies for lowest singlet and triplet S-states 2-24877  
 Hg,  $6^3P_1$  state, time-resolved spectrosc. 2-34340  
 $Hg(^3P_1)+Hg(S_0)$ ,  $^3P_1 \rightarrow ^3P_0$  transition, multichannel distorted-wave approx. 2-15874  
 In IV, config. anal., CI calcs., UV obs. 2-11427  
 Kr, expectation values, momentum density, inequalities, comment 2-39301  
 Kr, XPS shake up studies 2-43870  
 La, atomic states involving f electrons 2-15692  
 Li,  $D^2$  resonance, elastic and inelastic scatt., autoionising state saddle-point techniques 2-20156  
 Li, Clementi Roetti atomic HF wave functions, improved local accuracy using global constraints 2-39300  
 Li isoelectronic sequence, improved Hylleraas calc. for ground state energies 2-24592  
 $Li^+$ , ground state, Coulomb integral, local density functional theory 2-11371  
 Li-like ions, intershell correlation corrections to energy levels of  $n=2$  states 2-43810  
 Mg XI, lifetime meas., cascade model, X-ray obs. 2-4243  
 Mn, atom level structure calcs. 2-29516  
 N,  $F^+6$  ( $nu=0$ )  $B^1\Pi_g$  state hyperfine struct. 2-43865  
 $Nb^{4+}$ , energy levels and spectrum meas. and analysis 2-11426  
 Nd II, isotope shifts in energy levels 2-20006  
 Ne, elastic electron scatt., bound and scatt. states, velocity depend. pot. 2-34569  
 Ne, expectation values, momentum density, inequalities, comment 2-39301  
 Ne, XPS shake up studies 2-43870  
 Ni atom level structure calcs. 2-29516  
 Ni, transition probabilities and oscillator strengths, data compilations 2-7523  
 O, elastic electron scatt., bound and scatt. states, velocity depend. pot. 2-34569  
 Rb, exchange interaction between valence and core electrons, model pot. calcs., local approx. 2-19948  
 S V, collision strengths, radiative decay rates and level populations 2-28428  
 Sc, 3dng configurations, energy levels calc. using semi-empirical and HF method 2-43762  
 Si, ab initio effective spin-orbit operators for struct. calc. 2-43782  
 Sn V, config. anal., CI calcs., UV obs. 2-11427  
 Tl, spontaneous-emission rates meas. 2-49329  
 U, soft X-ray total attenuation coeff. 2-29546  
 Xe, 5p spin-orbit components, angular distrib. of photoelectrons 2-20127  
 Zn( $^1P_1+Zn(^1S_0)$ )  $^3P_1 \rightarrow ^3P_0$  transition, multichannel distorted-wave approx. 2-15874

**atomic structure, crystals** *see crystal atomic structure*

**atomic weight** *see atomic mass*

**atoms**

*see also exotic atoms; helium atoms; hydrogen neutral atoms; positronium*  
 No entries

**attaching** *see joining processes*

**attenuation** *see absorption; dispersion (wave); scattering; transmission*

**attenuation measurements**

characteristics and measurements of the properties of optical fibres used in telecommunications (French) 2-44480  
 communications optical fibre measurement techniques and international standards (French) 2-4607  
 fibre attenuation measurements, technique for minimising effect of detector inhomogeneity 2-49918  
 microwave characteristics of soils, wideband meas. 2-52848  
 multimode attenuation measurements, accuracy affected by source near- and far-field variations 2-49917  
 optical fibre waveguide, ring-type, three-layer, attenuation and pulse broadening 2-1029  
 pulse-echo US interferometer for automatic meas. of vel. and attenuation changes 2-8006

**attitude control**

artificial satellites, attitude dynamics, nonlinear plane vibrations (Chinese) 2-42567  
 artificial satellites, dual spin, subject to gravit. torques, stabilisation due to gyroscopic coupling 2-42568  
 Bhaskara remote sensing satellite, orbit and attitude determ. 2-48139  
 flight dynamics, conf., Darmstadt, Germany (May 1981) 2-38364  
 magnetospheric satellite, MAGSAT, control system for magnetometer boom 2-52949  
 satellite, IR radiance model validation by sensor flight measurements 2-38041  
 satellite anomalous attitude motion computing 2-42578  
 satellite in circular orbit, optimal reorientation 2-23423  
 Sirio-2 satellite program, MDD and Lasso missions 2-14754  
 superlight rotating reflectors in space, orientation and position control 2-9625

**audio acoustics**

*see also audio recording; hearing; speech*  
 acoustic space parameter simulation (German) 2-34996



**audio acoustics** continued  
loudspeakers, three-dimensional energy plots in the frequency domain 2-50029  
scale acoustic models, speech imitation source 2-25199

**audio discs** *see video and audio discs*

**audio equipment**  
*see also gramophones; loudspeakers; microphones; pick-ups; video and audio discs*  
duplex film unit for correction of rerecording audio-control console (*Russian*) 2-15254  
electroacoustic systems, freq. characts. meas. using pulse method (*Czech*) 2-29966  
hi-Fi analogue reverberation system 2-35011  
laser displays, audio-controlled 2-25059  
psychoacoustics and sound quality evaluation (*Japanese*) 2-18214

**audio recording**  
*see also video and audio discs*  
cinematography, shooting techniques, sound recording and reproduction film materials and picture distribution (*Russian*) 2-242  
cinematography soundtrack, comtrak— combination photographic soundtrack 2-10899  
digital 4-channel PCM recording opera perf. (*Italian*) 2-4657  
electroacoustic systems, freq. characts. meas. using pulse method (*Czech*) 2-29966  
electronic Pianocorder Reproducing System kit, Marantz pianos appl. 2-50018  
film sound recording studio reconstruction, acoustic features 2-1091  
mixdown control room design 2-50002  
piano acoustics in studio, overview 2-7989  
reconstruction Atlantic recording studios 2-50000  
separation of several speakers recorded by two microphones 2-7982  
Sonex acoustic soundproofing material, use in Alpha Audio sound recording studio 2-44561  
sound insulation for recording studio built in residential area 2-44563  
sound motion picture film conversion in another projection freq. (*Russian*) 2-29864  
sound studio design, architect's viewpoint 2-50001  
studio, control room design problems 2-49999  
studio control rooms, guidelines for obtaining good acoustic characts. 2-44575  
timbre perception in sound reproduction, evaluation (*Japanese*) 2-18215  
violin sound quality, problems in recordings for listening evaluation 2-29952

**auditory activity** *see hearing*

**auditory perception** *see hearing*

**Auger effect**  
AES and XPS study 2-45784  
alloys, sputtered coatings, composition, AES and SIMS study 2-45783  
atoms, photoelectron spectra, resonant Auger effect, multichannel scatt. theory 2-43877  
atoms and solid, binding energy, Auger and photoelectron spectra 2-34367  
binary metal alloys, matrix effects in quantitative AES 2-37128  
calculation of Auger electron spectra 2-49353  
catalysts, heterogeneous, parameter anal., research techniques, overview 2-15233  
chemical analysis, depth resolution factor of static Gaussian ion beam 2-47412  
covering layer on solid, thickness and composition determ. by XPS or AES 2-38633  
crystal, single impurity, Wolff-Clogston model, Auger spectrum 2-41459  
depolarisation of negative muons in H (*Russian*) 2-49611  
double layer, sputter effects on SIMS/AES profiles (*German*) 2-13616  
elastic peak electron spectroscopy for AES and EELS, eval. procedure 2-27506  
emission and scattering techniques, cong., Alghero, Italy (Sept. 1980) 2-42795  
enamel/metal interface, X-ray Auger microanalysis of Fe 2-35900  
equilibrium segregation of P at grain boundaries 2-5881  
film growth, Auger signal, background influence 2-27033  
fine structures in high resolution Auger electron spectroscopy, theoretical fundamentals 2-39365  
free atoms, Auger effect, nonradiative transitions, electron binding energy (*Flemish*) 2-13597  
graphite, Auger line shape construction 2-27031  
guanidine aluminium sulphate hexahydrate, coating influence on ferroelec. domains, SEM study 2-36579  
high resolving spectrometer for energy anal. of electrons backscatt. from solid surface (*German*) 2-3657  
highly stripped atoms, relativistic Auger and X-ray deexcitation rates 2-11446  
interaction after heating, surface phase form., LEED, EELS, AES, TEM, and photoelectron spectra 2-35747  
ionisation cross-section and backscatt. factor 2-2384  
Kovar/glass bonding, new technique for surface prep. of metal 2-22370  
MBE film growth, surface and kinetic effects, review 2-12929  
metal, Auger spectra, complete breakdown of one-electron picture 2-13595  
metal, narrow-band, with impurities, intraatomic CVV Auger spectrum 2-41461  
metal monolayer on metal substrate, quantitative AES 2-36741  
metal surface, adsorbed S, interatomic and quasiatomic Auger spectra 2-17579  
metallic thin film growth, AES and LEED studies (*Japanese*) 2-1788  
metals, Auger effect, nonradiative transitions, electron binding energy (*Flemish*) 2-13597  
methane, Auger electron spectrum, semi-empirical HAM/3 MO calc. 2-632  
methane, Auger transition rates, semi-internal CI calcs. 2-49525  
micro-area AES, modulation technique for discrimination against ion induced Auger electrons 2-33692  
narrow-gap semiconductors, Auger recomb. and ionisation rates, Lax band struct. 2-8813  
Nimonic 80A bolts, for elec. generating plant, grain boundary particle anal. by scanning Auger microscopy 2-16657  
paper, AES analysis, method to minimize charging and thermal damage 2-51751  
physical electronics conf., Bozeman, MT, USA (June/July 1981) 2-10547  
review, Auger electron spectroscopy 2-52265

**Auger effect** continued

scanning Auger electron microscope equipped with field emission gun, development 2-33686  
segregation intergranular and surface kinetics during annealing, AES 2-51906  
self-deconvolutions, sequential and Fourier transform methods 2-15271  
SEM, UHV, image contrasts 2-28940  
semiconductor characterisation problems, chem. analysis techniques, capabilities and limitations 2-17943  
semiconductor devices, Auger sputter profiling technique, capabilities and limitations 2-51763  
semiconductors, Auger recombination with deep impurities 2-40929  
semiconductors, laser radiation, submicron, from exciton transitions excited by external source 2-44306  
semiconductors, narrow band gap, Auger recombination rate 2-40930  
semiconductors and oxides, H<sub>2</sub> plasma etching, expt. study 2-52078  
solid surfaces, rel. to disappearance potential spectroscopy (*Japanese*) 2-51746  
spectroscopy, electron backscatt. effect, Monte Carlo calc. 2-47410  
spectroscopy, surface analysis technique selection 2-31966  
spectroscopy appl. in materials analysis, book contrib. 2-36742  
spectroscopy of solids and surfaces, high resolution, book contrib. 2-36743  
stainless steel-Mo, passive film, AES anal. (*French*) 2-14039  
steel, Cr-Mo, cyclic crack growth at low stress intensities, influence of fatigue underloads 2-27278  
steel, Cr-Mo (2.25, wt.%), stress relief cracking, multicomponent segregation effects 2-52005  
steel, ductility at high temps. 2-41688  
steel, ferritic stainless, crevice corrosion initiation resist., influence of selective oxidation 2-13839  
steel, stainless, type 304, grain boundaries comp. in low temp. sensitisation 2-40415  
steel sheet, uncoated and galvanised, depth profiling, Auger spectra 2-45235  
surface, (111) and (100), HBr(HCl) adsorpt., superlattice formation, expt. study 2-45726  
surface analysis using AES 2-6083  
surface studies, electron spectroscopy techniques, review (*Rumanian*) 2-17944  
TCNQ-Cu charge transfer salt, semicond. film, vibr. and XPS spectra, Auger obs. 2-31600  
TGS, coating influence on ferroelec. domains, SEM study 2-36579  
thin film formation, substrate surface characterization 2-50975  
time of flight analysis of metastable products from a gas discharge 2-35320  
Tokamak, electron cyclotron resonance discharge cleaning (*Japanese*) 2-25633  
transition metal dil. alloys, trace elements depth profiles, AES spectrum subtraction method 2-41949  
transition metals, XVV Auger spectra model, comparison with photoemission data 2-9228  
vacuum deposited ultrathin films, growth modes, AES anal. 2-5779  
Ag (100), coadsorption of K, Cl and O LEED, AES, work function, and thermal desorption meas. 2-1745  
Ag epitaxial growth, on GaAs(001) surfaces 2-26248  
Ag film growth on SiO<sub>2</sub>, AES and RHEED study 2-45759  
Ag films, on Pd substrates, growth study by Auger spectrometry as function of temp. 2-51025  
Ag, monocrystalline film and epitaxial layer growth, Auger doublet line broadening anal. 2-2386  
Ag-Au, surface segregation region, comp. and thickness, AES method 2-12889  
Ag-Ni, solid solution, segregation of low tensioactive element (*French*) 2-17680  
Ag-Pd, matrix effects in quantitative AES 2-37128  
Al alloy, surface characterization and gas desorpt. meas. (*Japanese*) 2-21432  
Al, MBE growth on GaAs (110) 2-51812  
Al, surface, heavy-ion bombardment, Auger electron emission 2-27046  
Al/GaAs, plasma anodisation, composite oxide film formation, AES study 2-52075  
Al/Si (111) cleaved interface, photoemission, Auger electron yield, and AES study 2-5797  
Al-Ag system evap. at 10<sup>-4</sup> Torr, Rutherford backscatt. and AES analysis of O distrib., diffusion barrier form. 2-27032  
Al-Cu alloy, 2024-T3, anodisation in H<sub>3</sub>PO<sub>4</sub>, AES and Rutherford backscatt. study 2-22392  
Al-Si(111)(2×1) interface electron struct., L<sub>1</sub>L<sub>2</sub><sub>3</sub>V AES study 2-13594  
Al<sub>2</sub>Ga<sub>1-x</sub>As, epitaxial layer, MBE growth, AES study 2-21469  
AlN coatings on Mo, prep. by RF reactive ion plating, deposition mech., struct., chemical state and composition determ. 2-13658  
AlN film prep. by ion implantation, AES and low-energy EELS studies 2-12613  
β'-Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, AES study 2-9229  
β'-Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-CaO, fast ion cond., Ca segregation at grain boundaries 2-26129  
Al(111) surfaces, oxidation initial stages, LEED and AES study 2-45724  
As<sub>2</sub>Se<sub>3</sub>:Ag amorphous film, XPS study, core electron binding energy 2-46872  
Au disordered film, inelastically reflected electron energy spectra 2-5784  
Au epitaxial film on Pt (100), surface struct., LEED and AES meas. 2-1718  
Au, submonolayer growth on GaAs (001)c(4×4), AES and RHEED study 2-1793  
Au surfaces, steam condensation, use of electroplating bath and vacuum vapour deposition 2-50071  
Au/Ni/Sn/Ni-n-GaAs interface, ohmic contact form. 2-41010  
Au/Si (111) interface, growth mode, energetics, structural and electronic props. 2-2002  
Au-Ag thin film couples, interfacial reactions, Auger depth profiling, TEM, and contact resist. meas. 2-8678  
Au-Ge laser-annealed ohmic contacts on GaAs, microstruct. and resistivity 2-21675  
Au-Ni (18 wt.%), braze alloy spreading high temp. obs. by oxide penetration on stainless steel 2-5984  
Au-Si surface phases, LEED, AES, and sputter depth profiling 2-1714  
B II, excited single k-vacancy terms, Auger rates and fluoresc. yields 2-19991



## Auger effect continued

- Ba, disappearance potential spectroscopy, of solid surfaces, rel. to AES (*Japanese*) 2-51746
- Ba disordered film, inelastically reflected electron energy spectra 2-5784
- Ba getter film, residual gas interactions, AES and XPS study 2-48711
- BaO on Ir, orientation depend. of work function for thermionic cathodes 2-5453
- Be, surface, slowly oxidised, electron spectroscopic studies 2-9230
- $C_{n+}^+$ , gas excited ions, prompt and time delayed electron decay-in-flight spectra 2-4353
- $C_6$ Cs, Auger line shape construction 2-27031
- $C_6$ Li, Auger line shape construction 2-27031
- CaF<sub>2</sub>, ion bombarded, surface decomposition, electron beam induced, AES, EELS and XPS study 2-25931
- Cd, metallic, many-electron interactions in  $M_{45}$ -NN Auger spectrum 2-41460
- Cd, oxidation initial stages, low-energy EELS and AES study 2-13603
- Cd, valence Auger lineshapes, rel. to photoemission spectra 2-46841
- CdFe<sub>2</sub>Mn metal-semiconductor junction, luminesc. impact excitation, spatial profiling 2-46761
- $Cd_{0.8}Hg_{0.2}Te$ , anodic surface layer, surface and in-depth anal. 2-51063
- Cd,  $Hg_{1-x}Te$ , molecular beam epitaxy on CdTe 2-2451
- CdO, valence Auger lineshapes, rel. to photoemission spectra 2-46841
- CdSe:Co<sup>2+</sup>, zero-phonon lines in optical spectra 2-46650
- CdTe, molecular beam epitaxy on CdTe (100) and (100) 2-2450
- Co adsorbed on Cu surface, reconstruction, CDW, surface mag. and O<sub>2</sub> adsorption 2-12911
- Co-Fe-Cr films, mag. props. variation during electron bombard., surface comp. (*Russian*) 2-21844
- Co-P amorphous multilayered films, prep., struct. and mag. props. 2-36800
- Cr, disappearance potential spectroscopy, of solid surfaces, rel. to AES (*Japanese*) 2-51746
- Cr thin films, crystallographic structure and anal. 2-1789
- Cr-Fe, matrix effects in quantitative AES 2-37128
- CsI monocryst., electron irradi., surface dissoc. and secondary emission investig. 2-21184
- Cu, adsorption of ethylene and acetylene, AES study 2-51002
- Cu, atomic, photoabsorpt. and photoemission with reson. two electron excitation 2-34583
- Cu, chemisorbed CO, Auger spectra 2-51003
- Cu, diffusion of Al along dislocations 2-8674
- Cu,  $L_{23}M_{45}M_{45}$  principal and satellite Auger spectra 2-49356
- Cu mirrors, optical effects of energetic Cu-ion irradi. 2-25942
- Cu, resonant photoemission model 2-46869
- Cu, wear, mechanicochem., surface layers struct. and comp. 2-17741
- Cu-Ni alloy, surface modification through chemisorption of hydrocarbons 2-51004
- Cu-Ni alloys, sputter-induced solute segregation in surface layer during A ion bombardment (*Japanese*) 2-2515
- Cu-Ni-Sn, laser surface melting, AES study and corrosion resist. 2-47264
- Cu-Pd (9-86 at.%) sputter-induced surface composition change, Auger study 2-46849
- Cu-Sn thin film diffusion couple, Marker shift obs. by AES 2-50932
- Cu<sub>2</sub>Cd polycrystalline heat-treated solar cells, atomic absorption anal. and auger depth profiles 2-37325
- CuInSe<sub>2</sub>, oxidation, AES, SIMS and XPS studies 2-27315
- CuInSe<sub>2</sub>, oxidation stability studies, AES 2-27700
- CuInSe<sub>2</sub>, thin films, ion-beam sputtered, characterisation 2-8737
- Cu<sub>2</sub>O, exciton luminescence 2-46709
- Fe atom, internal conversion coeff. depend. on state 2-34364
- Fe, disappearance potential spectroscopy, of solid surfaces, rel. to AES (*Japanese*) 2-51746
- Fe, fracture, intergranular, cathodic pot., effect of grain boundary chem. 2-9406
- Fe, initial oxidation at 200 and 300°C and surface S effect 2-47250
- Fe, passivation films, phys. and chem. props. (*French*) 2-47245
- Fe polycrystalline surface, interactions with K, O<sub>2</sub> and N<sub>2</sub>, AES, work function and thermal desorption meas. 2-16939
- Fe surface,  $N_2+3H_2 \rightarrow 2NH_3$  catalysis, AES and thermal desorpt. study 2-41922
- Fe<sup>15+</sup>, electron impact ionisation, electron capture, resonant state, Auger emission 2-20195
- Fe-Al bronzes, laser surface melting from homogenisation 2-2539
- Fe-C-P, equilibrium segregation of P at grain boundaries 2-5881
- Fe-Cr-C-P, equilibrium segregation of P at grain boundaries 2-5881
- Fe-Ni-Co, oxidation mechanism 2-47249
- Fe-P, equilibrium segregation of P at grain boundaries 2-5881
- Fe-P alloys, P segregation, rel. to grain boundary struct. 2-22222
- Fe<sub>0.8</sub>B<sub>0.2</sub>, glassy metals, corrosion and dissoln. 2-31858
- Fe<sub>0.8</sub>Ni<sub>0.2</sub>B<sub>0.2</sub>, glassy metals, corrosion and dissoln. 2-31858
- Ga<sub>1-x</sub>Al<sub>x</sub>As/Ga<sub>1-x</sub>Al<sub>x</sub>As DH lasers, facet degradations 2-44294
- GaAs, laser induced Pt thin film deposition, Auger electron anal. 2-51836
- GaAs, laser oxidation, expt. study 2-17751
- GaAs, MIS solar cell, degradation, metal-oxide interfacial reaction, AES study 2-52343
- n-GaAs, passivation and interface state studies 2-17747
- GaAs:Cr, compensated, nonequib. carrier recomb., Cr impurity centre role, photoelec. props. and luminesc. 2-30928
- GaAs-oxide interface states: gigantic photoionization via Auger-like process 2-26510
- GaInAs-AlInAs structures grown by molecular beam epitaxy 2-21456
- (GaIn)AsP lasers, temp. sensitivity 2-49754
- GaP amorphous thin films, struct. and optical props. 2-5329
- GaP films, amorphous and cryst., core levels, disorder effects, XPS and AES 2-46173
- p-GaSb:Zn, Auger recombination nonradiative lifetimes 2-46840
- Ge (111), adsorption of O<sub>2</sub>, AES, thermal desorption, work function, and EELS study 2-12917
- Ge (111), alkali metal covered, adsorption of O<sub>2</sub>, AES, EELS, thermal desorption, and work function meas. 2-12918
- Ge-Se:Ag films, photo and electrochem. doping, AES and XPS study 2-45051
- GeS (001), density of empty states meas. in cond. band 2-8746
- GeSe (001), density of empty states meas. in cond. band 2-8746
- H<sup>+</sup>+C-foil collisions, K-Auger emission meas. 2-44078
- HF, Auger electron spectrum, semi-empirical HAM/3 MO calc. 2-632
- H<sub>2</sub>O, Auger electron spectrum, semi-empirical HAM/3 MO calc. 2-632
- HgCdTe, recombination processes in 3 to 5  $\mu$ m 2-21529

## Auger effect continued

- $Hg_{0.8}Cd_{0.2}Te$ -oxide interface, anodic oxide composition and Hg depletion 2-26237
- p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, electron irradi. and annealed, carrier lifetime and recomb. props. 2-17090
- p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, nonequib. carrier recomb., Auger recomb., carrier lifetime 2-51204
- Hg<sub>1-x</sub>Cd<sub>x</sub>Te surface, in vac. and under O<sub>2</sub> exposure, stability 2-36991
- In-Pb alloy, ion sputtered, surface comp., AES study 2-26197
- In-Sn alloy, ion sputtered, surface comp., AES study 2-26197
- InAlAs/InGaAs MBE layer structs., ion beam anal. 2-35906
- InAs, anodic oxide films, Auger spectroscopic anal. 2-9586
- In<sub>1-x</sub>Ga<sub>x</sub>P<sub>1-y</sub>, laser transitions, Auger recombination mechanisms 2-44295
- InP, AES study 2-9229
- InP, laser induced Pt, Au and Ni thin film deposition, Auger electron anal. 2-51836
- <sup>113</sup>In, internal conversion, double electron ejection 2-49354
- Ir (110), chemisorption and decomp. of NO, thermal desorption, XPS, UPS, AES, LEED, and contact pot. meas. 2-12913
- Ir (110), chemisorption of N<sub>2</sub> and coadsorption of H<sub>2</sub>, thermal desorption, XPS, UPS, AES, and LEED meas. 2-12914
- Kr, adsorbed on Pd, layer-dependent core-level shifts 2-2014
- Kr<sup>+</sup>+Kr(Ar), collision broadening in MO-electron spectra 2-11568
- Kr<sup>4+</sup>+Kr, oscillations in coincident MO Auger spectra emitted in 450 keV 2-24842
- La, disappearance potential spectroscopy, of solid surfaces, rel. to AES (*Japanese*) 2-51746
- La-B films on Ta substrate, AES and work function changes 2-40743
- LaRB<sub>2</sub> (R=Ce, Pr, Sm, Dy), surface composition, temp. depend. Auger spectra obs. 2-30723
- Li-like ions,  $1s2s2p$  config., relativistic Auger and X-ray emission rates, multiplet fluoresc. 2-11447
- Li-like ions, photo-Auger ionisation, cross sections, isolated resonance approx. 2-43878
- LiNbO<sub>3</sub>(TaO<sub>3</sub>), electron and ion bombard., electron spectra 2-41462
- Mg, 2p<sup>3</sup>3s<sup>2</sup> excited levels, Auger rates calcs. 2-20018
- Mg, surface, slowly oxidised, electron spectroscopic studies 2-9230
- n-Mg<sub>1-x</sub>Cd<sub>x</sub>Te, degenerate, carrier conc. depend. of Auger lifetime 2-36059
- Mo, AES anal. of embrittlement in oxidizing atmosphere 2-47232
- Mo-Fe, matrix effects in quantitative AES 2-37128
- Na, 2p<sup>3</sup>3s<sup>2</sup> excited levels, Auger rates calcs. 2-20018
- Na-like ions, dielectronic recombination involving high Rydberg states 2-677
- Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glasses, Na depletion on surface during Auger anal. 2-13596
- Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glasses, SnO<sub>2</sub> coated, effects of alkaline solns. on surface 2-52074
- Nb, adsorbed O<sub>2</sub>, submonolayer oxidation phases on (110) face 2-40697
- Nb films, impurity distrib., AES and photon simulated ion desorpt. study 2-35526
- Nb-Nb<sub>2</sub>O<sub>5</sub>-Pb Josephson tunnel junction, structural anal., for voltage standard 2-5505
- Nb-NbO<sub>5</sub>-Pb, tunnel junctions, Nb energy gap and critical currents, temp. depend., base electrode annealing effects 2-36242
- Nb<sub>2</sub>Sn 2-35526
- Nb<sub>2</sub>Sn diffusion layers, composition profiles, Auger study 2-13598
- Ni (001), adsorption of S and Se, angle resolved XPS and AES from core levels 2-41495
- Ni (001), clean and O covered, low energy He<sup>+</sup> ion scatt. spectroscopy, neutralisation 2-13612
- Ni, Auger spectrum, conduction band X-ray photoelectron spectra 2-13593
- Ni, photoelectron cross section near core-electron resons., coherent and incoherent contribs., sum rule test 2-46875
- Ni, photoelectron spin-polarisation anal., nature of resonant 6 eV satellite 2-13621
- Ni, resonant photoemission model 2-51770
- Ni surface, (110), O<sub>2</sub> chemisorption and NiO growth, LEED and AES study 2-26229
- Ni surface, O<sub>2</sub> and C coadsorpt., residual gases electron beam bombard. effects 2-40670
- Ni, surface (100), alkali metal covered, CO adsorpt. 2-40696
- Ni-Co film and Ni-Co/Cu struct., AES, digital data processing 2-22517
- Ni-Cr films, segregation, AES, electron diff. and elec. cond. study 2-45786
- Ni-Mg, matrix effects in quantitative AES 2-37128
- Ni-Zn(Al), Auger spectrum, conduction band X-ray photoelectron spectra 2-13593
- P<sup>+</sup>+C foil, Auger electron spectra 2-49355
- Pb chalcogenide layers and their solid solutions, controllable epitaxial growth 2-2448
- Pb, Kalpha X-ray spectrum, energy-dispersive study 2-34339
- Pb, monolayer on Ni, Cu, Al or Au, quantitative AES 2-36741
- Pb-Sn (3 wt.%), AES study of oxidation 2-27319
- Pd (331) stepped surface, struct. stability and chemisorption props. of O<sub>2</sub> and NO 2-1746
- Pd, K Auger spectrum, KLL, KLM, KMM, KMN and KNN lines, relative intensities determ. 2-34365
- Pd<sub>2</sub>Si epitaxial film, surface struct. 2-45689
- Pd<sub>2</sub>Si form. on slightly oxidised Si, oxide effects, TEM and Auger spectroscopy obs. 2-16958
- Pt, adsorption of ethylene and acetylene, AES study 2-51002
- pt, chemisorbed CO, Auger spectra 2-51003
- Pt epitaxial film on Au (100), surface struct., LEED and AES meas. 2-1718
- Pt, photoelectron cross section near core-electron resons., coherent and incoherent contribs., sum rule test 2-46875
- PtO<sub>2</sub>, surface struct. and stability, LEED and AES study 2-45696
- PtSi form. on slightly oxidised Si, oxide effects, TEM and Auger spectroscopy obs. 2-16958
- Pt(110), adsorption of SO<sub>2</sub>, AES, flash desorption and CO titration studies 2-16940
- Rh surface, (100), adsorpt. of Ag, thermal desorption and AES study 2-26225
- Rh/Ag surface (100), chemisorption of O<sub>2</sub>, N<sub>2</sub>O, AES study 2-26225
- Rh(110), adsorption of SO<sub>2</sub>, AES, flash desorption and CO titration study 2-16940
- Si (100)-SiO<sub>2</sub> interface Auger LVV line shape, 2-22124



**Auger effect continued**

- Si (111), nitridation by N atoms, LEED, AES, desorption, and mass spectra meas. 2-17757  
 Si (111), oxidation, catalytic action of Au, AES, EELS, and ion depth profiling 2-13836  
 Si (111)/Au interface, AES, EELS, LEED and depth profiling study, UHV conditions 2-21446  
 Si (111)-Ag interface, struct. and electronic props., LEED, photoemission and Auger meas. 2-21448  
 Si, adsorption of O<sub>2</sub> and CO, mechanisms studied by AES 2-40693  
 Si, amorphous films, compositional and structural characterisation techniques 2-45043  
 Si, Auger recombination at low temp. 2-40931  
 n-Si, electron pulse irradi., transient process kinetics 2-36060  
 Si, laser-induced amorphous, adsorption of O, expt. study 2-45268  
 Si MIS solar cell, AES study of stability 2-9654  
 Si, oxidation of (111) surface, high resolution AES, SiO<sub>2</sub> spectrum shape 2-5973  
 Si, photoelectric effects, lux depends. under surface and bulk Auger recomb. conditions 2-13133  
 Si powder, plasma sprayed, preparation and characterisation, for application as base material in solar cell fabrication 2-18074  
 Si surface, (111), Ag growth and surface struct., expt. study 2-45727  
 Si, surface, heavy-ion bombardment, Auger electron emission 2-27046  
 Si surface (111), Ag deposited, ( $\sqrt{3} \times \sqrt{3}$ ) surface phase form., impurity effect 2-40656  
 Si, surface composition, pulsed laser irradi. effects, AES 2-50968  
 Si wafer, reactive sputter etching characteristics of wafer with CF<sub>4</sub> and O<sub>2</sub> mixed gas 2-31807  
 Si:Al, Auger recombination with deep impurities 2-40929  
 Si:B, ion implanted, Auger study 2-45224  
 Si:B(Al), junction solar cell, emitter layer minority carrier lifetime photo-voltaic obs. 2-52339  
 Si:B<sup>+</sup>, single crystal, TEM and AES study of ion bombardment 2-25913  
 Si-Au-Ag interface, AES and EELS meas. 2-40698  
 Si-F-H amorphous film, Schottky-barrier and MIS solar cell appls. 2-37344  
 Si-SiO<sub>2</sub>-Al structure, Al-SiO<sub>2</sub> and Si-SiO<sub>2</sub> interlayer characts., ellipsometry, C-V meas., and AES study 2-5470  
 SiC fibre reinforced Ti, micro-area Auger anal. 2-16959  
 SiC thin layers formed by C ion implantation in Si, struct. and annealing props. 2-8733  
 Si<sub>3</sub>N<sub>4</sub> film, CVD or thermally grown, Rutherford backscatt., AES and ellipsometric study 2-51021  
 Si<sub>3</sub>N<sub>4</sub> formation by N ion implantation of Si, AES and EELS studies 2-40422  
 Si<sub>3</sub>N<sub>4</sub>/SiO<sub>2</sub>, double layer, sputter effects on SIMS/AES profiles (*German*) 2-13616  
 Si<sub>3</sub>N<sub>4</sub>-SiO<sub>2</sub>-Si structure, Auger depth profiling, relative thickness of oxide layers 2-8717  
 SiO<sub>2</sub> layers on annealed InP, cracking 2-8741  
 SiO<sub>2</sub>, surface composition, pulsed laser irradi. effects, AES 2-50968  
 SiO<sub>2</sub>-Si interface, local atomic order and electronic struct. theory (*French*) 2-17127  
 Sn, monolayer on Ni, Cu, Al or Au, quantitative AES 2-36741  
 SnO and SnO<sub>2</sub>, oxidation states of Sn, AES study 2-2385  
 SnO<sub>2</sub> film, electron beam induced dissociation and conductivity 2-25930  
 SnO<sub>2</sub>-Sb film, platinized, prep., surface composition and electronic struct. 2-51799  
 SnO<sub>2</sub>-GaAs MIS solar cell, interface, Auger study 2-14084  
 Ta, surface, secondary-ion emission, influence of O<sub>2</sub>, mass spectra 2-41483  
 Ta with deformed nucleus, K X-ray and  $\gamma$ -ray emission correl. 2-4251  
 Ta<sub>2</sub>O<sub>5</sub>, AES sputter yield, standard material appl. 2-47413  
 Ta<sub>2</sub>O<sub>5</sub>, surface (001), secondary-ion emission, influence of O<sub>2</sub>, mass spectra 2-41483  
 Ta<sub>2</sub>O<sub>5</sub> thin films, elec. props. and XPS-AES anal. for thermal, reactive and anodic types 2-17177  
 Th, photoexcited Auger two-electron resonance 2-36740  
 Ti (001) surface, adsorbed O<sub>2</sub>, photo stimulated desorption, Auger spectra 2-40689  
 Ti, disappearance potential spectroscopy, of solid surfaces, rel. to AES (*Japanese*) 2-51746  
 Ti-Zr-Mo alloy, AES anal. of embrittlement in oxidizing atmosphere 2-47232  
 TiC film, reactive sputtering (*Japanese*) 2-27087  
 Ti<sub>65</sub>Ni<sub>35</sub>, amorphous, H absorption and desorption characts., surface oxide and metalloid element effects 2-30752  
 TiO<sub>2</sub>, absorpt. of H<sub>2</sub>O, SIMS and Auger study, surface stoichiometry determ. 2-52246  
 TiO<sub>2</sub>, surface composition, pulsed laser irradi. effects, AES 2-50968  
 Ti(0001) chemisorption of O<sub>2</sub>, surface states study 2-26221  
 Tm with deformed nuclei, K X-ray and  $\gamma$ -ray emission correl. 2-4251  
 U, disappearance potential spectroscopy, of solid surfaces, rel. to AES (*Japanese*) 2-51746  
 UO<sub>2</sub>-liquid steel, influence of Na vapour on wetting, scanning Auger spectroscopy 2-45683  
 V<sub>2</sub>O<sub>5</sub> thin films, pyrolytically deposited, struct. and electronic cond. props. 2-1798  
 V<sub>2</sub>O<sub>5</sub> thin films, pyrolytically deposited, struct. and electronic cond. props. 2-5323  
 V<sub>2</sub>Si layers, supercond. transition temp. and normal resistivity, proximity and annealing effects 2-51367  
 W surface, reaction with Br<sub>2</sub> pit formation, scanning Auger microprobe study 2-5985  
 W(100) and (110), surface phase study of C monolayers 2-26191  
 Xe, adsorbed on Pd, layer-dependent core-level shifts 2-2014  
 Xe, post-collision interaction in inner shell ionisation 2-20019  
 Xe<sup>+</sup>(D<sub>2</sub>), photoionisation, photoelectron and Auger electron asymmetries 2-20015  
 Y-Si Schottky barrier diode, barrier height and Auger depth profile 2-21656  
 YIG, surface activation and deactivation, electron microscopic decoration, AES and SIMS obs. 2-45710  
 YSi<sub>2</sub>-Si Schottky barrier diode, barrier height and Auger depth profile 2-21656  
 ZnO, effects of impurity struct. on brittle fracture 2-45331  
 ZnS crystals, active surfaces produced by brittle fracture, AES study 2-41458  
 ZnS, effects of impurity struct. on brittle fracture 2-45331

**Auger effect continued**

- ZnSe (110), oxidation model based on anal. by 21 eV photoemission spectroscopy, contact-potential difference and AES 2-41766  
 ZnSe, heteroepitaxial growth from vapour on GaAs substrates, characterisation 2-31636  
 ZnTe (110), oxidation model based on anal. by 21 eV photoemission spectroscopy, contact-potential difference and AES 2-41766  
 Zr, Auger spectrum and work function, contamination effects 2-51283  
 Zr-O-W(100) emitter, coadsorption of Zr and CO 2-22139  
 ZrCr<sub>2</sub>, H<sub>2</sub> absorbing cpd., XPS and SAM studies 2-22146  
 ZrMn<sub>2</sub>H, nonstoichiometric, stability, mag. props. 2-41126

**Auger electrons** *see Auger effect***Auger recombination** *see Auger effect; electron-hole recombination***Auger showers** *see cosmic ray showers and bursts***Auger spectra** *see Auger effect***Auger spectroscopy** *see Auger effect***augmented plane wave calculations** *see APW calculations***AURORA***see also airglow; atmospheric electron precipitation; atmospheric proton precipitation; atmospheric spectra*

- afternoon sector auroras, characts. and config. 2-28263  
 arc, electric field, ion and electron temps. obs. 2-18617  
 arcs, electric currents and cond., obs. 2-28264  
 arcs, optical emissions, rapid fluctuations of random nature 2-48061  
 artificial auroral streak widths, determ. using guiding centre diffusion theory 2-6489  
 auroral electron beams, elec. currents and energy sources 2-23177  
 auroral electron beams at 200-250 km altitude, stability and accel. 2-23176  
 borealis data 1535-1625 rel. to solar rotation rate 2-10379  
 bremsstrahlung produced X-rays deposition in stratosphere and mesosphere 2-28266  
 diffuse aurora, current convective instability theory for auroral ionosphere 2-6503  
 diffuse aurora, intense wave-particle event obs. 2-32719  
 diffuse radar aurora, 53.5 MHz obs., power spectrum 2-14649  
 discharge process and recent advances in knowledge 2-28261  
 discrete aurora, theory 2-48088  
 discrete prebreakup arc electrodynamics and elec. fields 2-53001  
 electric fields, tangential, meas. in drifting auroral arc 2-28262  
 electrical conductivities of auroral ionosphere, computer vars, during magnetospheric substorms 2-23158  
 electron energies from O I/N<sub>2</sub><sup>+</sup> technique 2-3117  
 electron precipitation, rel. to field-aligned elec. fields on auroral lines of force 2-6493  
 electrostatic ion cyclotron instability, current-driven, along auroral field lines, simulation 2-32754  
 energetic electron flux meas. spectrometer for Spacelab 1 2-32807  
 field-aligned currents assoc. with auroral arcs, anal. for polar magnetosphere and ionosphere 2-3133  
 fluctuating arcs, model of oscillating electron acceleration region 2-10237  
 formation of visible shape through instabilities (*German*) 2-6531  
 geomagnetic activity in auroral zone, solar wind control 2-18633  
 intense pulsating aurora, ionisation profile and optical emission obs. 2-18616  
 ionisation profiles, appl. to determ. of energy spectra of incident electrons 2-32730  
 ionospheric electron content, pulsating aurora effects 2-3116  
 IR radiation, recent auroral and airglow meas. 2-32703  
 kilometric radiation, rel. to auroral plasma cavity 2-18634  
 latitudinally propagating on-off switching and assoc. magnetic pulsations 2-3118  
 midday oval gap rel. to electron precipitation anal. 2-10231  
 morphology, electrostatic shocks, plasma wave emission, particle distribution and precipitation boundaries 2-10225  
 nightside poleward expanding aurora during substorm, F-region characts. determ. 2-48062  
 optical emission studies of nightglow, aurora borealis and noctilucent clouds from manned Soviet spacecraft (1961-1981) 2-52976  
 Pi B correlation with auroras and equivalent current struct. during substorms 2-10271  
 plasma measurements in pulsating auroras 2-3125  
 plasma stimulation by high power pulsed HF radiowave transmitting system 2-28265  
 polar cap arcs rel. to diffuse auroral oval, interplanetary mag. field effect 2-48063  
 polar cusp, H I Balmer  $\alpha$  and  $\beta$  emissions, model calc. 2-23154  
 potential structure, rel. to newly emerging model of magnetospheric substorms 2-14728  
 precipitation mechanism, explosive charge ionosphere disturbance expt. 2-14660  
 Project Waterhole, auroral modification expt., prelim. results 2-3120  
 pulsating aurora, rocket meas. of particle pulsation 2-14648  
 pulsating aurorae, ionosonde obs. 2-6487  
 pulsating aurorae, latitudinal and temporal characts. 2-3115  
 red arc emission mechanism 2-3153  
 relativistic electron precipitation event, rel. to middle atmospheric 2-18498  
 rotational temperature variations in pulsating auroras 2-3119  
 solitary arc generation 2-42511  
 stable auroral red (SAR) arc, occurrence in 1968 to 1978 period 2-10226  
 substorm recovery phase, auroral zone three-dimensional current flow in morning sector 2-32742  
 theory, review 2-42512  
 torch structure, pulsating aurora activity centre 2-6488  
 type B, red lower border, mechanism involving N<sub>2</sub> excitation 2-32702  
 visual arcs, assoc. ionosphere ion convection and elec. fields 2-23155  
 westward travelling surge, assoc. spectral hardening of precipitating particles 2-10227  
 N II 2145 Å feature, excitation 2-32701  
 N<sub>2</sub><sup>+</sup> excitation and first negative system, vibrational enhancement 2-42510  
 NO<sub>2</sub><sup>-</sup> ion production by aurora, rel. to use of nitrate in Antarctic firn as solar activity marker 2-18473  
 O(<sup>1</sup>S) quenching by O<sub>2</sub> (a<sup>1</sup> $\Delta_g$ ) 2-32700
- auroral ionisation** *see aurora*  
**autenitic stainless steel**  
 AGR boiler materials, type 316, design and construction in UK 2-4014



**austenitic stainless steel continued**

bicrystals, intergranular fracture 2-52004  
 blistering and simultaneous  $D^+$  and  $He^+$  irradiation 2-29428  
 casting, US inspection, heat treatment effect 2-17865  
 cavitation erosion resistance, effect of laser quenching surfaces 2-31803  
 corrosion fatigue, type 316, crack initiation, current transient method 2-17769  
 corrosion fatigue and AE anal. in type 304 (Japanese) 2-47235  
 crack depth meas. in overlays by US testing 2-9518  
 crack propagation, in high-temp. low-cycle fatigue 2-22324  
 creep, Bailey-Orowan eqn. 2-47122  
 creep, high temp., grain boundary sliding in precipitate-free specimens 2-27255  
 creep, high temp., precip. free specimens, appl. of deform. mechanism maps 2-17710  
 creep, high-temp., form. of multipoles 2-9368  
 creep and fatigue fracture, of type 304 plate with crack 2-51977  
 creep curves, intergranular microvoids 2-31731  
 creep-fatigue, structural degradation of type 316, metallographic assessment 2-5995  
 cryogenic struct. materials, mech. and phys. props. requirements (Japanese) 2-43026  
 cyclic creep and endurance under plane stress state conditions 2-2570  
 cylinder, thermoelastoplastic creep, external load effect 2-12052  
 dislocation emission, strain-induced, from grain boundaries 2-25882  
 fatigue, biaxial low-cycle, crack propag. behaviour at elevated temp. (Japanese) 2-22312  
 fatigue crack arrest threshold, influence of various parameters 2-27264  
 fatigue crack propag., in neutron irradiated type 316 2-47159  
 fatigue life, high temp., effect of strain wave shape, appl. of strain range partitioning method 2-13821  
 fatigue life, low-cycle, notch sensitivity, effect of hold-time at elevated temps. (Japanese) 2-36949  
 fine-grained, creep, influence of pipe diffusion 2-25978  
 fracture and strength, at cryogenic temps. 2-9390  
 fracture modes, creep and hot working 2-41731  
 fretting, high temps. 2-22335  
 fretting, wear, in LMFBR boiler 2-15499  
 fretting wear, SUS 304 2-9432  
 fusion reactor materials, radiation damage 2-24424  
 grain boundaries comp. in low temp. sensitisation, type 304 2-40415  
 grain boundary dislocations, extrinsic, effect on state of random boundaries 2-35512  
 interaction with Li, effect on struct. and mech. props. 2-41798  
 intergranular corrosion, dislocation struct. influence 2-17779  
 intergranular corrosion, influence of Si additions 2-47241  
 internal friction peaks of cold worked samples 2-47077  
 internal stress during high temp. creep in type SUS 304 (Japanese) 2-27230  
 irradiation creep, interrelation with swelling 2-22269  
 irradiation induced swelling and creep in fission reactor 2-29340  
 liquid metal embrittlement, Te-Cr mixture 2-36966  
 LMFBR boiler, fretting and wear 2-15499  
 load-creep-fatigue props., of 1.4919 and 1.4948 at 550° (German) 2-469  
 low C, corrosion behaviour in mineral acids 2-31838  
 magnetic character 2-21782  
 magnetic properties of Fe-Cr-Ni (17 wt.%) at low temp., Cr conc. effect 2-41112  
 $\epsilon$ -martensite, H-induced, TEM invest. 2-31695  
 martensitic transformation temperature, comp. depend., cryogenic temps. 2-27175  
 materials requirements for PWR steam generator tubing 2-4009  
 measurement of martensite content, Ferro-gauge design and operation 2-41862  
 mechanical, magnetic and microstructure props., of N strengthened steel, for cryogenic magnet structs. 2-22331  
 mechanical properties, influence of controlled hot transformation (German) 2-31718  
 microstrain measurement at up to 800°C, coord. grid appl. 2-9482  
 multispecimen fatigue crack propagation testing 2-31893  
 neutron irradiated, creep-fatigue crack propagation, cavity form. and linkage 2-31771  
 nitriding, Na effect, reaction kinetics, AISI 316 2-6017  
 Nitronic 40, residual strength and microstruct., effect of shock deform. 2-47139  
 nuclear reactor pressure vessels, influence of austenitic stainless steel internal cladding on H embrittlement resistance 2-19633  
 oxidation, of type 12Kh18N10T and 09Kh16N15M3B, in  $N_2O_4$  coolant, ESCA study 2-9471  
 passive film, glow discharge spectroscopy (French) 2-52101  
 pipe welds in BWRs, intergranular stress corrosion cracking, causes and crack age determ. 2-27356  
 pitting potential study using potentiodynamic technique 2-41780  
 porous, gas flow charact., porosity and particle size effects 2-44781  
 precipitation, cellular, during heat treatment, effect on mech. props., types H18AG10F, H18AG20F (Russian) 2-31696  
 precipitation, influence of  $\delta$ -ferrite in 316 welds, thermal ageing 2-5880  
 radiation damage anisotropy of type OOKh16N15MB by high-voltage electron microscopy 2-16680  
 rod, energy dissipation with independent flexural-torsional vibrs. 2-52158  
 rods, energy dissipation with interconnected bending and torsional vibrs., static stresses effect 2-41699  
 single crystal, faceting dissoln. and stress corrosion cracking in  $H_2SO_4$ - $NH_4SCN$  soln. (Japanese) 2-2618  
 spring, corrosion resistant, thermal stability 2-27245  
 steel, stainless, 316, grain boundary precipitate study, metallographic techniques (German, English) 2-41849  
 storage material for  $H$  2-43567  
 stress corrosion cracking, effect of Si addition on type 304 2-22378  
 stress corrosion cracking,  $MgCl_2$  soln., influence of alkali halide additions 2-13841  
 stress corrosion cracking, nuclear reactor decontamination reagent effects 2-39138  
 stress corrosion cracking, transgranular, orientation of cracks, tested in  $MgCl_2$  soln. 2-5977  
 stress corrosion cracking, welded joint, relationship between polarisation behaviour and susceptibility (Japanese) 2-22379  
 stress corrosion cracking and localised corrosion in  $CO_2/H_2S$  environment 2-22364  
 stress corrosion cracking in 3%NaCl, electrochem., study by potentiostatic CERT method (Japanese) 2-47233

**austenitic stainless steel continued**

stress corrosion cracking monitoring, by acoustic emission 2-41861  
 stress corrosion cracking susceptibility, effect of plastic deformation and recrystn. treatments 2-51872  
 stress relaxation, 290°C 2-36895  
 structural temperature-strain diagrams 2-51990  
 subgrain strengthening 2-41619  
 surface brightness deterioration, due to surface roughening of vac. heated SUS 304, 316 (Japanese) 2-52100  
 surface texture, of AISI 304, annealed, etched by aq.  $FeCl_3$ -HCl- $H_2O$  solns. 2-2631  
 temperature rise on cryogenic impact test, in type 1Gr18Ni9Ti (Chinese) 2-17794  
 tensile response, influence of shock-loading temp. and pulse duration 2-47140  
 tensile tests on AISI 304L steel, heating effects at 4K 2-22403  
 tool steel, AISI-T8, wear resistance improvement by cryogenic treatment 2-22344  
 tool steel cold working, secondary hardening and ductility investig. (German) 2-22289  
 type 304, H and D transport at elevated temp. 2-5276  
 Type 316, nonelastic deform., unified phenomenological model 2-41671  
 Type 316, nonelastic deform., unified phenomenological model 2-41672  
 US detection and meas. of defects, literature survey 2-13870  
 US flaw detection technique for welds 2-17802  
 US testing, signal enhancement by noise elimination by transit time meas. data (German) 2-41841  
 US velocity meas. in type 316 welds 2-13869  
 weld, texture study using SAW 2-31878  
 weld, US charact. 2-17864  
 weld, US inspection 2-13917  
 welds, US evaluation using shear horizontal waves 2-41820  
 work hardening, effect of H 2-36881  
 yielding, role grain boundaries 2-31733  
 yielding, temp. depend. 2-22293  
 Al steel, temperature rise on cryogenic impact test (Chinese) 2-17794  
 $Al_2O_3$  coated, plasma-sprayed, degradation in physiological media 2-2616  
 Cr-Mn, mech. props. and phase transforms. at +20 and -196°C 2-27240  
 Cr-Ni (25, 20 wt.%), internal friction during steady state creep 2-47082  
 Cr-Ni-Mo (16, 14, 2.5 wt.%), phase shifts by long-term isothermal holding rel. to N conc. (French) 2-2544  
 Cr-Ni-(Cu), drawing texture, pole figures (Japanese) 2-5893  
 H solubility, effect of thermomech. treatment and surface condition 2-35700  
 H trapping, and radiation-induced detrapping in type 316 exposed to liq. Li 2-45272

**austenitic steel**

see also austenitic stainless steel  
 alloy, 9Kh2MF, austenite decomposition kinetics 2-36863  
 alloy, metastable austenite, fatigue failure 2-41725  
 alloy, metastable austenite, mech. behaviour during tensile test near  $M_s$  point 2-31736  
 alloy carbide particle growth 2-13732  
 austenitic weldment, US inspection of fatigue cracks using shear wave probe 2-52125  
 casings for carbide fuel rods, carburisation anal. (German) 2-11199  
 corrosion in flowing high temp. water 2-17790  
 creep, high temp., effect of precip. of intragranular  $M_{23}C_6$  particles 2-22272  
 creep, radiation-induced, and swelling between 400 and 500°C (German) 2-47130  
 decomposition of martensite formed during tempering, X-ray diffr. obs. (Russian) 2-27136  
 fission reactor feed-water duct, automatic welding appl. (German) 2-475  
 heat resistant 21-4N containing carbide precipitates, internal stress during high temp. creep (Japanese) 2-27230  
 heat-treated, residual austenite determ. 2-37016  
 martensitic transform., martensite cryst. struct. 2-47030  
 mech. degradation in prototype large breeder reactor 2-49132  
 oxidation in reversing rubbing 2-5986  
 oxidation process of type EP-838 steel (Russian) 2-2615  
 spring, corrosion resistant, thermal stability 2-27245  
 strain hardening rate, changes during adsorption and desorption of H during cathodic charging 2-22243  
 stress corrosion cracking in PFR steam generator superheater 2-15500  
 weld, coarse grained material, US testing, signal to noise ratio improvement by signal averaging 2-17866  
 wrought, low C Cr-Ni, austenitic stabilisation during tempering (Czech) 2-47063  
 C diffusion 2-5266  
 Cr-Mn, containing ferrite and  $N_2$ , precipitation and corrosion processes after isothermal annealing 2-2518  
 Cr-Mn, surface  $\gamma$ - $\alpha$  phase transition during oxidation (Russian) 2-50966  
 Cr-Mn, surface topography after He ion bombardment 2-25946  
 Cr-Ni, deform. anisotropy of yield strength, temp. effect 2-41707  
 Cr-Ni, deform. history effect on creep (Czech) 2-47137  
 Cr-Ni, forgings for low temp. appls. (German) 2-46978  
 Cr-Ni, heat-resistant, endurance, effects of loading freq., temp. and cycle asymmetry 2-41754  
 Cr-Ni-Mn, corrosion-mech. strength in aq. media 2-27345  
 Cr-Ni-Mn, mech.-corrosion strength, plastic deform. and tempering influence 2-17775  
 Cr-Ni-Mn type, martensite transform. effect on cyclic strength and damping during deform. 2-52048  
 Fe-Cr-Mn, unstable austenitic, deform. induced  $\gamma \rightarrow \epsilon \rightarrow \alpha$  transition and mech. props. (Russian) 2-51900  
 Mn, explosion processing effect on phase transition temp. ranges and vol. effects 2-22215  
 Mn, strengthening by deform. and ageing 2-36891  
 Mn-Cr-Ni, SCC and stacking fault energy (Czech) 2-31842  
 Ni-Ti, metastable, surface hardening, wear resist. 2-2525

**autoionisation**

see also Auger effect  
 acetylene, photoionisation mass spectrometric study in VUV region, ab initio calcs., autoionisation 2-34507  
 acetylene, valence shell photoionisation cross section, strong autoionisation in partial channel 2-7611  
 Al  $L$  meas. of oscillator strengths and autoionisation widths of  $3s^2 3p^0$ - $3s3p^2$   $^2P$  multiplet 2-10308



**autoionisation continued**

- atom, magic-angle photoionisation, Zeeman inhomogeneity elimination 2-34363  
 atoms, autoionisation, photon-catalysed rate consts., fragment yield 2-44017  
 atoms, electron entrainment by reson. light and quadrupole reson. 2-15759  
 atoms, photoelectron spectra, resonant Auger effect, multichannel scatt. theory 2-43877  
 atoms, photoionisation in a static mag. field 2-34362  
 atoms, resonance EM field effect on autoionisation states (Russian) 2-49346  
 diatomic molecules, spectra, perturbation effects, predissoc., autoionisation 2-7532  
 1,2-dimethoxyethane aq. soln., thermodynamics of autoionisation, structuredness of solvents 2-45595  
 methyl bromide, UV and visible spectrum, autoionisation reson., ionisation pot. 2-34429  
 molecular photoionisation, reson. phenomena, synchrotron radiation impact 2-49529  
 molecules, photon-catalysed predissociation and autoionisation, rot. line strengths 2-44017  
 multiphoton ionisation spectrum, laser-induced narrowing and shift of autoionising resons. 2-4248  
 quasimolecules, collisionally excited, autoionisation, nonperturbative treatment 2-49522  
 single atom detection methods, using laser beams, review 2-7685  
 tetrahydrofuran aq. soln., thermodynamics of autoionisation, structuredness of solvents 2-45595  
 N,N,N',N'-tetramethyl-p-phenylenediamine, multiphoton ionisation, two-photon fluoresc. spectrum 2-24804  
 Z=5 to 30 ions, 213l' autoionis. states, transition probabilities calcs. 2-34359  
 Al<sup>2+</sup>, electron impact ionisation absolute cross section meas. 2-44106  
 Al<sup>2+</sup>, electron impact ionisation, excitation autoionisation effect, distorted-wave approx. 2-44107  
 Ar<sub>3</sub>, photoionisation cross section, mass spectra 2-49532  
 Ar<sub>3</sub>, relative photoionisation cross sections between <sup>2</sup>P<sub>3/2</sub><sup>0</sup> and <sup>2</sup>P<sub>1/2</sub><sup>0</sup> fine struct. thresholds 2-29661  
 Ba 6P<sub>1/2</sub> states, spectroscopic decay-rate meas. below the laser linewidth 2-43868  
 Ba, config. interaction between autoionis. and Stark state resons. 2-34318  
 C IV, photoionisation cross sections, close coupling calcs., autoionizing reson. 2-43872  
 C ions, electron impact ionisation in plane-wave Born approx. 2-44109  
 CO<sup>+</sup> branching ratio through autoionisation from X<sup>2</sup>Σ<sup>+</sup> to B<sup>2</sup>Σ<sup>+</sup> state 2-24799  
 Ca plasma, doubly excited levels near first ionisation limit, spectroscopic meas. 2-43819  
 F ions, electron impact ionisation in plane-wave Born approx. 2-44109  
 Ga, gas phase high temp. photoelectron spectra 2-34360  
 Ga<sup>+</sup>, electron impact excitation autoionisation 2-44110  
 H-like ions, Z=6 to 33, dielectronic satellite spectra for (2l'3l'-1s2l, 2l'3l'-1s3l) transitions 2-34344  
 H-like ions in dense plasmas, electron impact excitation and ionisation 2-50381  
 H<sub>2</sub>S, multiphoton ionisation mass spectrum, dissoc. 2-15859  
 He, photoionisation, partial cross section meas. and autoionisation to He<sup>+</sup>(N=2) 2-49349  
 He<sup>+</sup>, electron impact autoionisation reson., complex coord. calcs. with complex basis sets 2-4394  
 He-like ions, Z=6 to 33, dielectronic satellite spectra for (1s2l'3l'-1s2l, 1s2l'3l'-1s3l) 2-34344  
 He+He(1<sup>1</sup>S), excitation of autoionising states, electron spectra 2-24838  
 He<sup>+</sup>+He, ionisation, autoionising states, electron spectra 2-44077  
 HeBe<sup>+</sup>-like system, autoionising quasi-molecular states, decay rates 2-24660  
 Hf<sup>3+</sup>, electron impact ionisation, excitation-autoionisation contributions 2-792  
 Hg, 6s<sup>2</sup> photoionis., autoionisation resons. meas. by photoelectron polarisation 2-49352  
 In (I) and In (II), electron impact excitation, autoionising transitions, ejected electron spectrum 2-44098  
 Kr<sup>+</sup>+Kr(Ar), collision broadening in MO-electron spectra 2-11568  
 Kr<sup>4+</sup>+Kr, oscillations in coincident MO Auger spectra emitted in 450 keV 2-24842  
 Kr<sub>2</sub>, relative photoionisation cross sections between <sup>2</sup>P<sub>3/2</sub><sup>0</sup> and <sup>2</sup>P<sub>1/2</sub><sup>0</sup> fine struct. thresholds 2-29661  
 Li, <sup>2</sup>D<sup>2</sup> resonance, elastic and inelastic scatt., autoionising state saddle-point techniques 2-20156  
 Li atom, inner shell excitation freq., spin flipping operator effects anal. (Spanish) 2-665  
 Li like atoms, photoionisation cross sections, close coupling calcs., autoionizing reson. 2-43872  
 Lu, single photon photoionisation mass spectroscopy via autoionising resonances 2-49587  
 Mg<sup>+</sup>, electron impact ionisation absolute cross section meas. 2-44106  
 Mg<sup>+</sup>, electron impact ionisation, excitation autoionisation effect, distorted-wave approx. 2-44107  
 N ions, electron impact ionisation in plane-wave Born approx. 2-44109  
 N V, photoionisation cross sections, close coupling calcs., autoionizing reson. 2-43872  
 Na-like ions, electron impact ionisation, excitation and autoionisation, cross sections and rate coeff. 2-4395  
 Ne<sup>+</sup>+Ne collisions, electron emission, continuous energy distrib. 2-29705  
 Ne<sup>4+</sup>(Ne), q=1-4, autoionising states calc. 2-11414  
 O ions, electron impact ionisation in plane-wave Born approx. 2-44109  
 O VI, photoionisation cross sections, close coupling calcs., autoionizing reson. 2-43872  
 O<sub>2</sub>+O<sub>2</sub>(N<sub>2</sub>), autoionisation, reaction rate const. 2-7626  
 Pb(I) and (II), electron impact excitation, autoionising levels, electron spectra 2-24866  
 Si II dielectronic recombination in P Cygni, implications of P Cygni line profiles 2-38197  
 Si<sup>3+</sup>, electron impact ionisation absolute cross section meas. 2-44106  
 Si<sup>3+</sup>, electron impact ionisation, excitation autoionisation effect, distorted-wave approx. 2-44107  
 Ti<sup>3+</sup>, electron impact ionisation, excitation-autoionisation contributions 2-792

**autoionisation continued**

- U, high-lying excited autoionising levels and Rydberg progressions, spectroscopic data 2-43830  
 Xe, autoionising states, electron impact excitation 2-24865  
 Xe<sub>2</sub>, relative photoionisation cross sections between <sup>2</sup>P<sub>3/2</sub><sup>0</sup> and <sup>2</sup>P<sub>1/2</sub><sup>0</sup> fine struct. thresholds 2-29661  
 Yb atom, low-lying autoionisation states, energies and widths 2-7527  
 Yb, single photon photoionisation mass spectroscopy via autoionising resonances 2-49587  
 Zr<sup>3+</sup>, electron impact ionisation, excitation-autoionisation contributions 2-792
- automatic frequency control**  
 crystal oscillator, Loran-C system appl. 2-3556  
 GaAlAs laser frequency stabilisation using automatic freq. control system 2-4527
- automatic gain control**  
 adaptive signal detection in fluctuating noise, general detection and estimation theory 2-44590
- automatic test equipment**  
 batteries for photovoltaic power systems, computerised testing 2-22577  
 calorimetric analyzer, for C and S determ. in metals 2-9580  
 computerised US scan system, automated inspection with interactive graphics displays 2-52143  
 defibrillator analyser, microprocessor-based, precision calibrator and tester appl. 2-18340  
 digital thickness gauge construction with automatic selection and measurement range switching 2-3564  
 fatigue testing machine, computer controlled, lifetime and crack growth meas. 2-37038  
 flaw location, shape and dimensioning using ALOK system, remote controlled automated US inspection 2-52139  
 hot workability testing apparatus, for flow stress determ. and fracture 2-2649  
 mechanical testing in nuclear reactor channels, automated unit 2-37012  
 metal internal friction and elastic modulus temp. characts. determ. using automatic apparatus 2-9488  
 micromechanical props. anal., automatic system 2-43005  
 Neutron-8 unit for intrareactor tensile tests of constructional materials over wide deform. rate and temp. range 2-52160  
 network analyser, automatic, dual 6-port, for determ. of biological effects of RF and microwave radiation 2-47767  
 nonmagnetic coatings on heavy cylindrical steel parts, PKN-40 semiautomatic unit for thickness meas. 2-163  
 potentiostat programmers for automatic inspection of intergranular corrosion tendency of stainless steel 2-37017  
 refractories, high-temperature strength, testing 2-31891  
 RF permittivity meas. of biological tissues with open-ended coaxial lines 2-42238  
 RF permittivity meas. of biological tissues with open-ended coaxial lines 2-42239  
 solid-state computer-controlled system for swept-freq. meas. of dielectric props. at microwave frequencies 2-42241  
 tensile testing, servocontrols for automation 2-2650  
 three dimensional charact. of US sound field by computer controlled rotational scanning 2-52138
- automatic testing**  
 batteries for photovoltaic power systems, computerised testing 2-22577  
 butt weld, automatic interpretation of radiographic monitoring 2-2671  
 material defects detection, using TV camera 2-52165  
 process analysis, computer-based evaluation system 2-31991  
 surface gloss meas. specular reflection device (Japanese) 2-43069  
 tensile testing, servocontrols for automation 2-2650  
 tightness inspection, automated, reliability 2-6007
- automation, social aspects** see *social aspects of automation*
- automobile industry**  
 computer-based length meas. system (German) 2-10787  
 power press die and tooling noise 2-9741
- automobiles**  
 assessment of flywheel system benefits in selected vehicle applications 2-22666  
 exhaust air pollution, prediction using inhomogeneous stratified medium 2-42061  
 exhaust noise, elliptic cylindrical muffler chamber, internal distrib. of sound pressure, calc. 2-20470  
 fuel economy standards 2-17960  
 hot exhaust, radiated sound meas. and comparison with calcs. for cold pipe flow 2-8003  
 insertion loss studies on models of automotive exhaust systems 2-20463  
 liquid H<sub>2</sub> as automotive fuel, storage and refueling 2-6196  
 noise assessment procedure 2-9719  
 on-board fuel storage systems of hydrogen powered vehicles, comparison of expenses 2-37464  
 repetitive noise and vibration due to diesel engine exhaust, cancellation, self-adaptive electronic systems 2-4655  
 solar-electric cars using storage batteries, feasibility in the near future 2-42005  
 sound pressure radiated from automotive exhaust system, predicted scheme 2-20464  
 speed-distance sound level test procedure 2-9720  
 substitute natural gas as automotive fuel 2-17972  
 truck tire vibration sound 2-4643  
 truck tyre noise due to air pumping and carcass vibration, quantitative analysis 2-1085  
 truck tyre noise sources, identification and quantification under on-the-road operating conditions 2-1084  
 truck tyre/pavement interaction noise, effect of tread wear 2-4642  
 truck noise sensed in passenger cars-characteristics, sources, strategies for control 2-4644  
 tyre vibration noise 2-4640  
 tyre/road noise, generating mechanisms and reduction techniques 2-1083  
 tyre/road noise, influence of road surface, Belgian Road Research Centre research program results 2-4641  
 tyre/road noise generated by an aggregation of vehicles interacting with thirteen different road surfaces 2-4645  
 H<sub>2</sub> fueled automotive vehicles, fuel cell substitution for internal combustion engines 2-6194  
 O<sub>2</sub> sensor, oscillatory mode for air/fuel ratio monitoring 2-33509



autoresonant accelerators *see collective accelerators*

avalanche diodes

*see also avalanche photodiodes; IMPATT diodes*

No entries

avalanche photodiodes

- detectors, p-i-n and avalanche photodiode, for 1.1 to 1.6  $\mu\text{m}$  operation, state of the art 2-3622
- fibre optic detectors, design considerations 2-4608
- MIS structure operating under avalanche multiplication conditions, light detect. 2-33634
- optoelectronic downconverter 2-43087
- triggered avalanche detection of IR photons 2-23724
- $\text{Al}_{1-x}\text{Ga}_x\text{As-GaAs}$ , superlattice avalanche photodiode, large ionisation rate ratio 2-51289
- $\text{Ga}_{0.47}\text{In}_{0.53}\text{As}$ , low temp. LPE growth 2-17637
- Si avalanche photodiodes, crystal defects, electron channelling imaging with SEM 2-12605
- Si, optical receiver for fibre-optic digital communication system equipment 2-7880

avalanches, carrier *see impact ionisation*

avalanches, electron *see electron avalanches*

avalanches, electron-hole *see impact ionisation*

avionic systems *see aircraft instrumentation*

Avogadro's number *see constants*

axions *see lenses*

axiomatic field theory

- $\text{O}^4$  model, isotropic, N-component, coexistence, Goldstone modes, renormalisation method 2-3680
- $1/4\lambda|\phi|^4$  relativistic field theory, zero coupling constant point, orbital classical solns., singularity 2-43195
- $\lambda\phi_4^4$  and  $\sigma$ -model triviality, critical point approach in  $d \geq 4$  dims. 2-43187
- $\lambda\phi^4$  field theory, in curved space-time, momentum space, two-loop renormalisability 2-38547
- $\sigma$ -model, nonlinear, instanton effect 2-38770
- $\Phi_2^4$  quantum field theory, Borel transform local existence 2-28976
- $\phi_4^4$  massive theory, constrained instantons 2-15284
- $\phi^4$  5-loop diagram, 4-loop  $\beta$ -functions, integration by parts 2-23829
- $\phi^4$  model, critical exponent renormalisation calc. for free surface 2-33708
- $\phi^4$  models with global  $\text{O}(N)$  symmetry, renormalisation group 2-33707
- a classical gauge theory, Riemann geometry, analogy with general relativity 2-23858
- Anderson model, nonlinear  $\sigma$  theory, asymptotic gauge invariance 2-40815
- Atiyah-Singer index theorem and quantum field theory 2-43214
- axially symmetric stationary gravit. field eqns. and pseudospherical surfaces 2-48592
- axially symmetric Yang-Mills-Higgs monopoles, explicit expression 2-10971
- baryon masses in broken chiral quark bag model 2-43320
- $C^*$  algebra approach in quantum field theory 2-33738
- $C^*$ -algebra, simple, outer automorphisms and reduced cross products 2-3677
- chiral  $\sigma$  model, with quarks and gluons, strong CP violation 2-48866
- chiral invariant lattice QCD, absence of neutrinos, intuitive topological proof 2-43270
- chiral model, hidden symmetry, explicit approach to group structure 2-43225
- chiral models, generating function for hidden symmetries 2-43192
- cluster expansion in field theory 2-33718
- compact QED, Wilson loop weak coupling expansion, plaquette average, compact length 2-15311
- composite gauge fields 2-29007
- confinement and chiral symmetry breakdown 2-43289
- constructive and Euclidean field theory and connections to statistical mechanics 2-33737
- continuous spin Ising model, renormalisation group anal. 2-270
- continuum Thirring model, renormalisation and dynamical mass generation 2-48884
- $\text{CP}^{n-1}$  model, Dirac eqn. classical solns., Green functions 2-33712
- $\text{CP}^{n-1}$  model, supersymm., charge anomaly cancellation 2-48893
- critical exponents from a regularized field theoretical model 2-48655
- critical lattice model, renormalisation group study, convergence to line of fixed points 2-28983
- decoupling theorem, renormalisation and scaling 2-28988
- Dirac dynamics on stochastic phase spaces for spin 1/2 particles 2-264
- dispersion relation for Gell-Mann-Low function, spectrality condition and invariant charge asymptotic behaviour 2-263
- dynamical selection rules 2-33744
- $E_{\gamma}^{2n}$  geometry, spinor formulation, extended supersymm. genesis 2-23857
- effective action, fermionic contrib., Monte Carlo simulation combined with a hopping parameter expansion 2-10963
- effective gluon mass, Monte Carlo evaluation 2-43283
- Euclidean, type-D Lorentz soln., gravit. instantons 2-3463
- Euclidean  $\text{O}_4^+$  perturbative field theory, Borel transform local existence 2-23810
- Euclidean and Hamiltonian lattice QCD, scales and string tension 2-43271
- Euclidean boson field theories, Legendre transforms and r-particle irreducibility 2-28977
- Euclidean boson theory, connected Green functions, generating functional Legendre transform. 2-33699
- Euclidean Fermi fields, covariance 2-33726
- Euclidean field theory, Markov processes, random fields and Dirichlet spaces 2-23570
- Euclidean functional approach, Gibbs average 2-3691
- Euclidean lattice and continuum QCD,  $q\bar{q}$  A parameter relationship 2-11020
- Euclidean lattice gauge theories without fermions, phase structure, chiral symmetry breaking 2-19244
- euclidean lattice QCD, Susskind fermions,  $\text{U}(1)$  axial current 2-23922
- Euclidean Yang-Mills and related equations 2-273
- exact axially symmetric multimonomole solns. construction 2-10970
- exact multimonomole solns. construction in Yang-Mills-Higgs system 2-10973
- factorised S-matrices, triangle eqns., plane square lattice statistical model partition function 2-15292
- FCC lattice-QED, anisotropy, renormalisation 2-28996
- fermionic contribution to  $\Lambda_{\text{lattice}}$ , direct evaluation 2-38786

axiomatic field theory continued

- finite lattice gauge theories, boundary value effects on Wilson loop average 2-43190
- four-dimensional lattice gauge theories and two-dimensional spin systems, exact relation 2-48873
- free scalar field theory, nonlocal stochastic model 2-10934
- $g\phi^3$  theory, renormalisation in six-dimens. conformally flat space-time 2-6963
- $g\phi^4$  field theory, modified normalisation conditions, general formalism and physical implication 2-10950
- $g\phi^4$  field theory, one-loop corrections 2-48891
- $g\phi^4$  field theory, renormalized effective pot., strong coupling expansion, high-order terms 2-29010
- $g\phi^2$  field theory, weak and strong coupling perturbation, renormalisation 2-48890
- geometric methods in classical field theory 2-6966
- hadron masses in lattice gauge theories with fermions, Monte Carlo evaluation 2-48880
- Heisenberg spin chain, classical anisotropic, eqn. of motion 2-51391
- Higgs and lattice gauge theories with quark fields, confinement test, disorder parameter 2-43185
- historical survey and recent results 2-38806
- Klein-Gordon eqn., compactness and variational principle for stationary states 2-48862
- ladder  $\phi^3$  model, integral eqn. for causal distrib. and their self-similar asymptotic behaviour 2-10977
- lattice  $\sigma$  models, topological susceptibility, scaling 2-38767
- lattice chiral fermion regularisation, no-go theorem 2-6972
- lattice compact QED, finite temp. behaviour of topological excitations 2-43264
- lattice  $\text{CP}^{N-1}$  models and their large-N behaviour 2-23834
- lattice field theories, equivalence to local gauge, massless photons 2-23855
- lattice field theories, fermions, gauge fields and supersymmetry 2-23817
- lattice field theory in quasicontinual representation 2-255
- lattice gauge and chiral models, large N phase transition, 4d lattice QCD 2-38763
- lattice gauge models, phase struct. 2-38743
- lattice gauge systems with fermions, mean field theory 2-33731
- lattice gauge theories, ground state energies, perturbative variational calcs. 2-43191
- lattice gauge theories, renormalisation transform., Monte Carlo calcs. 2-28998
- lattice gauge theories,  $\text{U}(1)$ ,  $\text{SU}(2)$ ,  $\text{SO}(3)$ , phase transitions, plaquette energies, mean field methods 2-3687
- lattice gauge theories in 4-dimens., decoupling points and dual symmetric perturbation theory 2-19241
- lattice gauge theories with continuous gauge groups, cross-over points 2-6952
- lattice gauge theory, concept and props. 2-6956
- lattice gauge theory, in  $\text{SU}(3)$ , four dimensions., modified Wilson action 2-38780
- lattice gauge theory, quark confinement using Monte Carlo calcs. 2-6993
- lattice gauge theory and surface roughening 2-33736
- lattice gauge theory on discrete groups, Migdal recursion eqn. 2-33725
- lattice Gross-Neveu model, phase transition for chiral symmetry breaking 2-48886
- lattice gauge theory, Wilson loop weak coupling perturbative calcs., string tension 2-6945
- lattice model, in two-dimens., spin waves, vortices, fermions, duality 2-23804
- lattice models with finite subgroups of  $\text{SU}(3)$ , Monte Carlo simulation 2-38791
- lattice  $\text{O}(3)$   $\sigma$ -model, dislocations and topological background, scaling 2-10961
- lattice  $\text{O}(N)$  models, 2-dimens., non-perturbative effects renormalisation eqns. 2-23837
- lattice QCD,  $1/N$  topological expansion 2-43280
- lattice QCD,  $\Lambda_{\text{lattice}}$  fermionic contrib. 2-29014
- lattice QCD, hadron mass spectrum calc. 2-29095
- lattice QCD, renormalisation, Wilson loop, Monte Carlo calcs. 2-23935
- lattice QCD,  $\text{SU}(3)$  and  $\text{U}(3)$  invariant group integrals 2-23918
- lattice QCD vacuum in large-N limit 2-43273
- lattice renormalization in quantum field theory 2-48911
- lattice renormalization of non-perturbative quantum field theory 2-269
- lattice Schwinger model, topological charge 2-38776
- lattice systems, off-axis string tension and rot. symm. restoration 2-6805
- localised states in disordered systems field theory formulation 2-8772
- low temp.  $\text{P}(\phi)$  models, phase diagrams and cluster expansions 2-23813
- mass and IR regularisation in nonlikelike axial gauge 2-19260
- massive Thirring model, inverse scattering problem for systems with anti-commuting variables 2-6968
- massless  $\lambda\phi^4$  theory, symmetry breaking due to quantum fluctuations 2-43168
- massless lattice field,  $\lambda(\Delta\phi^4)$  perturbation, cluster expansion 2-3508
- massless lattice field,  $\lambda(\Delta\phi^2)$  perturbation, cluster expansion convergence 2-3509
- massless QCD, lattice and continuum  $\Lambda$  scale parameters, comparison 2-11015
- mean-field solution of a spin-1 Ising-like model 2-23825
- Minkowski space Yang-Mills fields from solutions of equations in the three-dimensional Euclidean space 2-23821
- modern field theories, symp. Stockholm, Sweden (Sept. 80) 2-33227
- non-Abelian gauge theories, vector pot. orbit space study 2-33733
- non-Abelian lattice gauge theories, specific heat phase transitions, spherical model 2-29002
- nonAbelian symmetry group, disorder variables for 2D stat. mechanical systems 2-23586
- noncompact gauge transformations and gauge fixing 2-33742
- nonlinear  $\sigma$ -model, global definition and some consequences 2-19239
- $\text{O}_N$ -symmetric theory in large N limit, strong-coupling expansion 2-43180
- $\text{O}(3)$  Heisenberg model, two-dimens., correlation length 2-33728
- $\text{O}(3)$  Heisenberg model, two-dimens., low temp. behaviour 2-33727
- $\text{O}(n)$  Skyrme model, path-integral quantisation 2-48876
- order and disorder in two-dimensional systems, fields with generalised statistics 2-48907
- $\text{P}(\phi)$ , low temp. models, phase diagrams and cluster expansion, Schwinger functions 2-28981
- periodic QED in 2+1 dims., scatt. in lattice gauge theory 2-38788
- plane waves on sphere and some appl. 2-10979



**axiomatic field theory continued**

- Potts lattice gauge model, many-component limit, mean field approx. 2-28982  
 Q-state Potts model in (1+1)-dimensional Hamiltonian field theory for  $Q \geq 4$  2-10734  
 QCD, fractional topological charge and chirality selection rules 2-43290  
 QCD, gluon propagator in axial gauge 2-43275  
 QCD,  $U_A(1)$  breaking evidence from lattice calcs. 2-29071  
 QCD external field problem in  $SU(N)$  lattice gauge theories 2-23924  
 QED, continuum strong coupling expansion 2-29012  
 quantum field theory, affine Lie algebra representations and boson-fermion correspondence 2-33720  
 quantum Hamiltonians associated with finite-dimensional Lie algebras and factorized S matrices 2-275  
 quantum Potts gauge-matter systems at finite temperature 2-38772  
 reduction chiral models, geometric Lund-Regge model, gauge transform. 2-10946  
 relativistic quantum field theoretical model for nuclear slab collision dynamics 2-38969  
 scale covariance nonrenormalizable interactions and high-temperature expansions 2-29003  
 scaling properties of the confined  $\phi^4$  theory 2-43199  
 Schwinger model and lattice gauge theories, Monte Carlo calculations with fermions 2-23835  
 sine-Gordon model, ground state solns. with finite soliton density 2-33417  
 sine-Gordon model and Fermi-Bose relation 2-3685  
 SO(10) model with harmless axion, baryon nonconservation 2-48923  
 SO(2,1)-invariant nonlinear  $\sigma$  model, two-dimens., Backlund transform. 2-10945  
 spin-1/2 systems, vector lattice description 2-42880  
 static nuclear axial polarisability and  $\alpha + \alpha$  interaction 2-38957  
 stochastic quantum field theory for extended particles, general aspects 2-256  
 strong-coupling expansions, problems with continuum regulation 2-48881  
 strongly coupled lattice gauge theories, composite massless fermions 2-23831  
 strongly coupled lattice QCD, effective Lagrangian and dynamical symmetry breaking 2-23921  
 SU(11) model, invisible axion and neutrino oscill. 2-33774  
 SU(2)  $\times$  SU(2) spin system in 2-dimens. on rectangular lattice, phase structure 2-48885  
 SU(2) and SU(3) lattice gauge theories, phase struct. 2-23840  
 SU(2) and Z(2) lattice gauge model, roughening effect in small Wilson loops 2-6940  
 SU(2) lattice gauge model, four-dimens. partition function complex zeros 2-38778  
 SU(2) lattice gauge theory, finite size Wilson loops 2-10953  
 SU(2) lattice gauge theory, gluon condensation 2-38864  
 SU(2) lattice gauge theory, high-temp. nonAbelian mag. field 2-48897  
 SU(2) lattice gauge theory, link between strong and weak coupling expansions 2-23836  
 SU(2) lattice gauge theory, meson mass calc. 2-28999  
 SU(2) lattice gauge theory, Monte Carlo simulation program 2-23814  
 SU(2) lattice gauge theory, topological charge fluctuation 2-38777  
 SU(2) lattice gauge theory, with four dimens. fermion lattice, Monte Carlo simulation 2-38771  
 SU(2) lattice gauge theory,  $\psi$  meson mass 2-38775  
 SU(2) lattice gauge theory, weak and crossover region calcs., Wilson loops 2-6953  
 SU(2) pure lattice gauge theory mean field approx., phase struct. 2-6946  
 SU(2) vs. SU(2)/Z<sub>2</sub> lattice gauge theory, crossover from weak to strong coupling 2-48872  
 SU(2) Yang-Mills-Higgs monopole solns. 2-10972  
 SU(4) four-dimensional lattice gauge theory, phase transition 2-19249  
 SU(5) gauge theory on four-dimens. lattice, high-temp. expansion 2-3689  
 SU(n+1) periodic Toda lattice, two-dimens., associated Kac-van Moerbeke eqns. 2-33717  
 SU(N) chiral models in three dimens., mean field and Monte Carlo studies 2-38773  
 SU(N) Higgs models, Z<sub>N</sub> topology and charge confinement 2-19332  
 SU(N) lattice gauge theory, large N phase structure 2-43204  
 SU(N) lattice gauge theory with Villain's action 2-43179  
 supersymmetry, extended superfields decomposition into irreducible representations 2-38813  
 Thirring model, Wightman functions 2-43208  
 three-dimensional lattice Yang-Mills field with gauge group U(1), bound states of Hamiltonian 2-3711  
 three-dimensional U(1) lattice gauge theory, static quark confinement 2-48949  
 TMMC, quantum effects in quasi-one-dimensional magnetic systems 2-8987  
 Toda field theory discretisation, factorisation eqn. soln. 2-19242  
 translationally invariant states and ideal spectrum in algebra of test functions 2-3676  
 two-dimensional gauge field with independent values of field tensor at every point 2-6967  
 two-dimensional interacting Fermi field on lattice, probabilistic ideas 2-48879  
 two-dimensional abelian spin systems and Coulomb gas, Kosterlitz-Thouss transition 2-6802  
 two-soliton systems, perturbation approach 2-23846  
 U(1) compact gauge on four dimens. lattice, critical exponent meas. 2-29063  
 U(1) compact theory on four dimens. lattice, plaquette-plaquette correlation 2-29062  
 U(1) lattice gauge field theory, glueball excitations, boson representation 2-38796  
 U(1) lattice gauge model, Monte Carlo study 2-48898  
 U(1) lattice gauge theories, small coupling expansions 2-48910  
 U(1) lattice Higgs models, phase diagrams in compact QED 2-10962  
 U(2) chiral model, Monte Carlo study 2-15283  
 U(co) lattice gauge theory in two-dimens., Wilson loop functional 2-3690  
 U(N) lattice gauge theory, four-dimens., phase transitions, Monte Carlo calc. 2-38802  
 U(N) lattice gauge theory, one-link integral 2-10942  
 U(N) lattice gauge theory, spontaneous chiral symmetry breaking 2-19240  
 universal Wightman fields for local and nonlocal theories (Russian) 2-19270

**axiomatic field theory continued**

- vacuum bubble, radiation, two-dimens. case 2-3699  
 variant actions and phase structure in lattice gauge theory 2-38787  
 vector model with hyperbolic symmetry on chain, divergences 2-3713  
 von Neumann's theorem to nonreproducible meas., generalization in quantum field theory framework 2-19265  
 Wightman theory, universal, local topologisation (Russian) 2-23850  
 Wilson and Polyakov confinement tests, elementary derivation from Hamiltonian formulation 2-23943  
 Yang-Mills equations, classical solns., Minkowski-to-Euclidean space mapping 2-43170  
 Yang-Mills theory, three-dimensional Euclidean functional formulation 2-43215  
 Yang-Mills-Higgs system in 2+1 dimens., quantum gauge fields topology and duality 2-29000  
 Yang-Mills-Higgs theory, axisymmetric multimonomopole soln. 2-19256  
 Z<sub>2</sub> and U(1) lattice gauge theories, phase transitions and critical point 2-6947  
 Z<sub>2</sub> gauge model on truncated tetrahedron lattice, spin system equivalence 2-38756  
 Z<sub>2</sub> lattice gauge theory, continuum limit 2-38769  
 Z<sub>n+1</sub>  $\times$  Z<sub>n+1</sub> symmetric generalisation of the XXZ model, exact soln. 2-43186  
 Z(2) gauge and spin models, canonical and gauge symmetries of phase transitions 2-48883  
 Z(2) lattice gauge theory, finite size Wilson loops 2-23841  
 Z(2) lattice gauge theory, phase diagram, role of gauge invariance, variational and mean field calcs. 2-29001  
 Z(5) model, real-space renormalisation group study 2-6808  
 Z(n) bubble anal. of SU(n) gauge theories at finite temp. 2-19235  
 Z(N) lattice gauge models, phase struct. and generalized actions 2-43189  
 Z(N) theory, hidden parafermions 2-3696  
 Z(N) vector Potts spin model, renormalisation group and mean-field methods 2-19261  
 K<sup>+</sup>  $\rightarrow \pi^+ a$ ,  $a = \text{axion}$ , lower bound for branching ratio and Peccei-Quinn axion non-existence 2-48978  
 $\sigma$ -meson mass in QCD and dynamical symmetry breaking 2-48943  
 CsNiF<sub>4</sub>, quantum effects in quasi-one-dimensional magnetic systems 2-8987

**backscatter**

- see also particle backscattering*  
 bistatic wave scatt. from layer of Rayleigh scatterers with irregular interface 2-15940  
 clouds, depolarisation and multiple scatt. meas. by lidar system 2-32643  
 clouds, time-dependent multiple backscattering 2-28203  
 electrojet, equatorial, magnetic storm time elec. field changes, VHF backscatter from plasma irregularities 2-6504  
 EM wave scatt. from half-space of dielec. mixture, strong fluctuation random medium theory, effective permitt., backscatt. 2-49630  
 equatorial spread-F, gravity wave initiation, case study, backscattering maps 2-32723  
 ionosphere radiowave, scattering by equatorial and high latitude waves and irregularities 2-28277  
 IR differential absorption lidar, aerosol backscatter implications 2-28197  
 microwave COMSTAR beacon, ice depolarization at 28.56 GHz during low fades, radar backscatter correl. 2-52899  
 monomode fibre, Rayleigh backscattered signals obs. using multichannel photon counting technique 2-16118  
 multimode optical fibres, backscattered power level variation with numerical aperture 2-44463  
 ocean inhomogeneities, acoustic backscatter and one-way propagation effects 2-47917  
 optical fibre backscatter loss signature determ., long-range, using two-point processing 2-39753  
 optical fibre backscatter meas. using optical time domain reflectometer 2-20429  
 optical fibre gyro, backscatt. error reduction 2-1041  
 optical fibre high resolution measurement of diameter variations by backscatter method 2-25123  
 optical fibre mode power distrib., with fluctuation in physical parameters and appl. to backscattering signal anal. 2-20419  
 optical single-mode fibres, long-range backscatt. expts. 2-34917  
 radar backscatter meas., X-band FM/CW, North Sea Platform Noordwijk project 2-47879  
 radar surveillance of sea-state, surface current and surface wind 2-42498  
 Raman backscatter and fluorescence from chlorophyll a in seawater 2-10178  
 sea ice broad-band backscatter meas. from low-altitude 2-47883  
 sea sediment identification 2-48052  
 sea surface, basic concepts 2-28248  
 sea surface backscattering, theory of multiple scatt. of collimated irradiance 2-32538  
 Seasat-A satellite scatterometer meas. verification 2-10057  
 single-mode fibres, meas. of backscatter factor 2-29878  
 stimulated Brillouin backscattering, Zakharov-Manakov soln. of inverse scatt. transform method 2-44384  
 stratosphere, lidar backscattering by volcanic aerosol during La Soufriere 1979 event 2-32600  
 US backscattering from arrays of cylinders, spherical wave model 2-7916  
 VHF backscatter from sporadic E-layer over Central Europe 2-38018

**backward wave oscillations** *see backward wave tubes; electromagnetic oscillations*

**backward wave tubes**

*see also carcinotrons*  
 No entries

**bagging** *see packaging*

**balance (physiological)** *see mechanoreception*

**balanced amplifiers** *see differential amplifiers*

**balanced input amplifiers** *see differential amplifiers*

**balances**

*see also weighing*  
 automatic, digital, nonlinear theory 2-6837  
 electronic, Delta Range series, laboratory automation 2-3565  
 electronic load cells, for bulk materials quantities meas. 2-164  
 humidity effect on double knife-edge balance readings 2-42989  
 load cell mass comparator 2-43003



**balances continued**

magnetic, with superconducting magnet and pair of gradient coils (Japanese) 2-15202  
rotary, development and trial for low-speed wind tunnels 2-19100

**ball lightning** *see lightning***ballistics**

*see also impact (mechanical); military equipment*  
dynamically controlled system with variable masses, motion control 2-6732  
education, shot put range maximisation without calculus 2-48454  
synchro-ballistic photography principles and improvements 2-6914

**balloons**

*see also aircraft*  
airship for geosciences monitoring, very large stratosphere solar heated craft 2-6480  
atmosphere, technique for measuring atmos. elec. pot. 2-42478  
atmospheric elec. potential measurement technique using tethered balloon 2-42479  
balloon-borne ion mass spectrometer, control and data transmission system 2-15267  
data collection platforms for local Earth data transmission to satellites, problems (German) 2-37973  
meteorological balloon (super-press. type) motion in convective boundary layer 2-14564  
solar cells, balloon calibrated, with narrow band-pass filters, simulator spectral characterisation 2-27689

**band gap** *see energy gap***band model of magnetism**

*see also Hubbard model*  
amorphous itinerant electron ferromagnet model, magnon energy, scattering, stiffness constant and wavelength 2-26607  
antiferromagnet, itinerant-electron, short-range ferromag. order influence 2-46231  
antiferromagnet, one-dimensional, itinerant magnetism approach 2-31131  
antiferromagnets, spin wave spectrum energy gap origin 2-36336  
band model, stability with exchange interactions between localised and collective electrons (Russian) 2-13284  
band models with Coulomb interaction, cluster approx. and perturbation theory 2-40753  
CC, Fe, short range mag. order 2-31127  
electronic structure calculations of mag. materials, developments 2-8747  
exciton dielectric, mag. props., ferromagnetism (Russian) 2-46232  
Fermi liquid, itinerant nearly mag., two-dimens. mag., confined geom. effects 2-16921  
ferromagnetic, exchange splitting in local pot. approx. 2-21520  
ferromagnetic metals, thermal expansion due to magneto-volume effect 2-31189  
ferromagnetic transition metals, magnetovolume effects 2-41173  
ferromagnetism, itinerant, complex order parameter at excitonic phase transition 2-36302  
ferromagnetism, itinerant electron, phonon effect on magnetisation 2-13270  
Hubbard model, ground state, self consistent binary alloy approx. 2-2049  
Hubbard model, strongly correlated, mag. susceptibility 2-31132  
Invar, magnetovolume effects, fluctuating local band model 2-41173  
itinerant electron antiferromagnetism, and spin glasses, coexistence 2-17289  
itinerant electron metamagnetism 2-41100  
itinerant electron surface magnetism, review 2-13269  
itinerant electron systems, spin fluctuation theory, single site approx. 2-31125  
itinerant ferromagnet, low temp. props., functional integral approach 2-31128  
magnetic phases of strongly correlated electrons in a nearly half-filled narrow band 2-41101  
metal, itinerant electron ferromagnet, electron-phonon coupling 2-21761  
narrow band systems, electron correlation and magnetism, conf., Mount Fuji, Japan (Nov. 1980) 2-28609  
single-band Hubbard model, magnetism in strong correl. limit 2-21762  
spin fluctuation effective energies, calc. and meaning 2-31166  
transition metals, ferromagnetism, many-body effect 2-31130  
transition metals, local mag. moments, itinerant model 2-21760  
transition metals, mag. at finite temp., one-electron-like Hartree-Fock-like model 2-36300  
Cr alloys, itinerant antiferromagnets, elementary excitations 2-31122  
Cr-Cr alloy, spin density waves, neutron diff. study 2-26585  
Fe cluster, magnetism and electronic struct. 2-41102  
Fe, ferromagnetic, itinerant-electron system, Ising model and Bethe approx. 2-26642  
Fe, ferromagnetism, fluctuating band picture 2-31126  
Fe, magnetic properties calc. by functional integral method, review 2-31124  
Fe, magnetovolume effects, local-band theory 2-26719  
Fe, magnetovolume effects, fluctuating local band model 2-41173  
Fe, thermodynamic excitations, spin waves and Curie temp., d-band model 2-36301  
Fe<sub>3</sub>Ni<sub>15</sub>, Invar alloy, magnetovolume effects, local-band theory 2-26719  
Gd<sub>2</sub>Y<sub>2</sub>-Co<sub>3</sub>, magnetic behaviour and exchange interactions 2-46262  
Ge surface, vacuum cleaned (111), reconstruction and itinerant magnetism 2-17258  
H atom lattice, metal-insulator and mag. transitions, self consistent band struct. theory 2-30802  
Mn alloys, itinerant antiferromagnets, elementary excitations 2-31122  
γ-Mn, magnetic phases, vol. conserving axial press. calc. 2-8956  
Ni, ferromagnetic, itinerant-electron system, Ising model and Bethe approx. 2-26642  
Ni, ferromagnetism, fluctuating band picture 2-31126  
Ni, magnetic properties calc. by functional integral method, review 2-31124  
Ni, magnetovolume effects, local-band theory 2-26719  
Ni, magnetovolume effects, fluctuating local band model 2-41173  
Ni, short range mag. order 2-31127  
Ni-Ru, ferromagnetic, electronic struct., multi-band CPA calc. 2-5344  
NiMn, theory of finite temp. magnetism, local environment effect and glass-like phase 2-46295  
Si surface, vacuum cleaned (111), reconstruction and itinerant magnetism 2-17258  
UNi<sub>2</sub>, origin of magnetism, simple band approach 2-31149

**band-pass filters**

*see also crystal filters; vocoders*

balloon calibrated solar cells with narrow band-pass filters, simulator spectral characterisation 2-27689  
birefringent narrow bandpass large field of view optical filters, review 2-25105  
dielectric-metal-dielectric filter design for thermophotovoltaic conversion 2-37217  
electro-optical light modulators (Russian) 2-34881  
metallic mesh interference filters, high freq. pass 2-4577  
optical multi/demultiplexers for single-mode fibre transmission 2-16120  
SAW filter, design 2-35027  
SAW IDT filters design, errors due to diffraction compensation 2-8011  
selectivity increase, for band-pass filtered false-coloured photos (Hungarian) 2-10893  
single-mode fibre recirculating delay lines, filter response 2-44461  
zero-frequency elimination wing vol. grating filtering characts. 2-4580

**band structure**

*see also band structure of crystalline metals and alloys; band structure of crystalline semiconductors and insulators; band structure of semimetals; band theory models and calculation methods; Brillouin zones; conduction bands; degenerate semiconductors; electron energy states of amorphous solids; electron energy states of liquid metals; electron energy states of liquid semiconductors; energy gap; Fermi surface; many-valley semiconductors; valence bands*  
comparison of s band struct. of FCC and HCP solids 2-26267  
electronic structure theory, review 2-35919  
FCC and HCP solids, s band struct., energy correspondence 2-21491  
graphite intercalation compound, review 2-26269  
graphite intercalation compound, synthetic metal, band length change and cond., review 2-26270  
graphite intercalation compounds, single-staged, magnetorefr. and Shubnik-de Haas expts. 2-22002  
graphite intercalation cpds., electronic dispersion relations, energy bands 2-12956  
incommensurate lattice pots., band struct., exotic elec. cond. 2-26352  
layered ultrathin coherent struct., electronic struct., tight binding calc. 2-30789  
translationally invariant systems, band centre conservation 2-51072  
Xalpha SW method appl. to periodic models of solids (Russian) 2-16978  
B, borides and related compounds, conf., Uppsala, Sweden (June 1981) 2-38358  
Ce pnictides, anomalous anisotropies, behaviour under high mag. field 2-26338  
EuB<sub>6</sub>, anomalous anisotropies, behaviour under high mag. field 2-26338  
H atom lattice, metal-insulator and mag. transitions, self consistent band struct. theory 2-30802  
KC<sub>8</sub>, graphite intercalation cpd., back-folded graphite band excitations, EELS study 2-41467  
LiC<sub>8</sub>, graphite intercalation cpd., electronic struct. calc. 2-12955  
NbS<sub>2</sub>, valence band struct., XPS study 2-9249  
Ni-Zn(Al), Auger spectrum, conduction band X-ray photoelectron spectra 2-13593  
P, black, structure by bond-breaking processes from rock salt, band struct. calc. and gauche effect 2-25810  
TaS<sub>2</sub>, valence band struct., XPS study 2-9249  
TiS<sub>2</sub>, valence band struct., XPS study 2-9249

**band structure of crystalline metals and alloys**  
*for band structure of semiconductor alloys see band structure of crystalline semiconductors and alloys or electron energy states of amorphous solids*  
alloy, modern theory 2-45818  
APW method, universal model pot. 2-51073  
covalent solids, tight-binding parameters by Louie peripheral states 2-40754  
energetic zone structure, of 5d transition metals (Russian) 2-8751  
ferromagnetic, exchange splitting in local pot. approx. 2-21520  
fine metallic particles, structure and props. 2-51069  
lanthanides, cohesive energy, 4f-electrons effect 2-16617  
local electron mobility edge 2-26284  
many-electron effects, pseudopot. theory 2-45804  
metal particles, XPS study 2-46881  
metals, electrical conductivity, mixing of electron and impurity states (Russian) 2-45938  
muffin-tin alloys, band calc., variational formulation of multiple scatt. 2-35920  
partially ordered alloys, elec. struct. 2-45800  
photoelectron emission spectroscopy, ang. resolved, appl. to bulk and surface props. of metals 2-41500  
pseudopotential calc. of electronic structure differential characteristics (Russian) 2-12957  
rare earth intermetallic compound, RAl<sub>2</sub>Si<sub>2</sub>, electron struct., XPS study (Russian) 2-26285  
transition metal alloys, binary FCC, ordered struct., perturbation method 2-30435  
transition metals, band struct., model Green function and density response function, reson. model pot. method 2-12961  
transition metals, correlation effects on Auger spectra 2-9228  
transition metals, electron struct., beginning and end of third period, X-ray emission props. (Russian) 2-36736  
3d transition metals, electronic struct. 2-40774  
transition metals, electronic structure, tight-binding approx. appl. 2-40756  
transition metals, model Hamiltonian method appl. 2-51074  
tunneling into metals with a flat region in the band structure 2-17145  
X-ray spectroscopy, empty states in conduction bands (Polish) 2-46824  
Ac, band struct., effect of correl., relativistic APW calc. 2-26283  
Ag, cyclotron mass anisotropy and electron-phonon interaction 2-45810  
Ag, optical props., empirical band calc. 2-21970  
Ag, pseudopotential study of energy gaps and resistivities 2-26282  
Ag<sub>1-x</sub>Co<sub>x</sub>, optical props. and band struct., empirical band calc. 2-21971  
Al, modified Ashcroft pseudopotential 2-35616  
Al, positron annihilation, effects of electron-positron correlation, band struct. 2-51740  
Al-C-B interstitial solid soln., mixing energy (Russian) 2-5228  
Ar, solid, transition to metallic state, band struct. 2-26300  
Au, electron irradiated, cathodoluminescence study 2-46786  
Au, optical props., empirical band calc. 2-21970  
Au, pseudopotential study of energy gaps and resistivities 2-26282  
Be, electronic structure calc. 2-51078



**band structure of crystalline metals and alloys continued**

- Cd, magnetic props. and energy spectrum, homovalent impurities and press. effects (*Russian*) 2-5523  
 Cd, valence Auger lineshapes, rel. to photoemission spectra 2-46841  
 Cd<sub>5</sub>Hg<sub>35</sub>, electronic struct. near phase transition 2-40776  
 Co, ferromag., effect of Coulomb correlations on energy bands 2-51079  
 Co film, optical absorpt. and props. elec. cond.,  $\alpha$ - $\beta$  transition 2-5763  
 Co-Al, valence band density of states, XPS study 2-22147  
 CoAl, electron momentum distrib. and charge transfer, Compton scatt. study 2-26281  
 Co<sub>9</sub>Ga<sub>90-x</sub>, electronic band struct. and localised states, rel. to elec. props. 2-40813  
 Cu (001), k-resolved inverse photoemission, UV isochromat spectra 2-46811  
 Cu (100), s-p bands, angle-resolved photoemission study 2-17604  
 Cu, band struct., angle-resolved photoemission study 2-31605  
 Cu, band structure calc., pseudopotential method, interpolation scheme 2-16984  
 Cu, electron irradiated, cathodoluminescence study 2-46786  
 Cu, electron-electron interaction and single-particle props. 2-40775  
 Cu, electronic band struct., angle-resolved photoemission study 2-27054  
 Cu, optical props., empirical band calc. 2-21970  
 Cu, photoemission intensity calcs. for (111) surface 2-22148  
 Cu, pseudopotential study of energy gaps and resistivities 2-26282  
 $\alpha$ -Cu-Ge alloys, Fermi surface dimensions, nonlinear composition depend. 2-40758  
 Cu<sub>9</sub>Al<sub>0.1</sub> (100) surfaces obs. of Tamm-type state, angle-resolved photoemission study 2-13149  
 Cu<sub>3</sub>Au, ordered, Fermi surface and electronic struct. 2-40761  
 DyCo<sub>2</sub>-DyAl<sub>2</sub>, soft X-ray emission spectrum 2-46830  
 Fe cluster, magnetism and electronic struct. 2-41102  
 Fe, EELS study, interband transitions 2-5780  
 Fe, EELS study, interband transitions 2-9233  
 $\alpha$ -Fe, electronic struct. and dislocation splitting, alloying elements influence (*Russian*) 2-51077  
 Fe, ion irradiated, Doppler broadening of positron annihilation lines, struct. characts. 2-22111  
 Fe, positron annihilation, band struct. and Fermi surface 2-46814  
 Fe-Co-Mn (46-51, 3-10 at.%), mag. moment, Hall const., outer electron band filling 2-51080  
 Fe-Co-Ni (38-48, 3-11 at.%), mag. moment, Hall const., outer electron band filling 2-51080  
 Fe<sub>3-x</sub>M<sub>x</sub> Si (M=transition metal), spin echo NMR study 2-9056  
 FeAl, electron momentum distrib. and charge transfer, Compton scatt. study 2-26281  
 FeAl(Ti), positron annihilation, band struct. and Fermi surface 2-46814  
 Fe<sub>2</sub>B and FeB, bonding rel. to struct. and mag. props., photoemission meas. and ab initio calcs. 2-13628  
 FeCo alloy, change in electron bands in order-disorder transition (*Russian*) 2-8752  
 Fe<sub>51.5</sub>Rh<sub>48.5</sub>, ferromagnetic, press. induced antiferromagnetism 2-46282  
 In, electronic struct., X-ray spectra and XPS 2-40781  
 Ir, optical cond., optical spectra and band struct. (*Russian*) 2-21964  
 Ir, relativistic APW calcs. of X-ray emission spectrum 2-22122  
 Kr, solid, transition to metallic state, band struct. 2-26300  
 La(Ni<sub>2</sub>Al<sub>3</sub>)<sub>2</sub> and La(Ni<sub>2</sub>Cu<sub>3</sub>)<sub>2</sub> 2-35697  
 LaSn<sub>3</sub>, band struct., self consistent APW calc. 2-16983  
 LaSn<sub>3</sub>, de Haas-van Alphen effect and linear muffin-tin orbital band struct. 2-40757  
 LiAl, electronic struct., self consistent calc. 2-12962  
 LiCd(Zn), self-consistent linear muffin-tin orbital calcs. 2-21496  
 Mg, coherent mag. breakdown, de Haas-van Alphen study 2-45809  
 $\gamma$ -Mn, magnetic phases, vol. conserving axial press. calc. 2-8956  
 MnAs, ferromagnetic, optical, props. and band struct. (*Russian*) 2-13504  
 MnSi, electronic band struct. and helical spin density wave 2-30792  
 Mo<sub>2</sub>Ge(Si), ion irradiated, superconducting T<sub>c</sub>, specific heat, elec. cond. 2-36180  
 MoN and MoC, superconducting transition temp. prediction 2-31004  
 Na<sub>2</sub>WO<sub>3</sub>, bronze applicability of the rigid band model 2-30790  
 Nb-Mo alloys, electron-phonon interaction calc. 2-40806  
 Nb-Zr-C, electronic struct., dispersion hardening, interatomic bonds 2-45822  
 Nb<sub>3</sub>Sn, tetragonal, band struct. 2-45819  
 Ne, solid, transition to metallic state, band struct. 2-26300  
 Ni (001), k-resolved inverse photoemission, UV isochromat spectra 2-46811  
 Ni, Auger spectrum, conduction band X-ray photoelectron spectra 2-13593  
 Ni, correlation effects in photoelectron spectra, 3d-states 2-31604  
 Ni, Coulomb correlations in nickel within the alloy analogy of the Hubbard model 2-35928  
 Ni, electronic struct., self-energy contribs. 2-45820  
 Ni, ferromag., effect of Coulomb correlations on energy bands 2-51079  
 Ni film, discontinuous, photoelectron spectroscopy 2-41499  
 Ni-Ru, ferromagnetic, electronic struct., multi-band CPA calc. 2-5344  
 NiAl, electron momentum distrib. and charge transfer, Compton scatt. study 2-26281  
 Ni<sub>3</sub>(Fe,Ti), Hall constant, electron configurations 2-40874  
 Ni<sub>3</sub>(Mn,Ti), Hall constant, electron configurations 2-40874  
 NiZr<sub>2</sub>, electronic struct., recursion method 2-45817  
 Os, ultrasoft X-ray emission interpretation (*Ukrainian*) 2-27026  
 Pd, effective cyclotron masses, many body effects 2-35927  
 $\alpha$ -Pd hydrides, tight binding estimate of dipole force tensor 2-40418  
 Pd, metamagnetism, self consistent spin polarised band struct. calc. 2-31186  
 Pt surfaces, direct optical interband transitions in bremsstrahlung isochromat spectra 2-46810  
 Re, ultrasoft X-ray emission interpretation (*Ukrainian*) 2-27026  
 Rh, FCC crystal, change of volume effects on electronic bandstructure 2-40773  
 Rh, optical cond., optical spectra and band struct. (*Russian*) 2-21964  
 Sb, electronic structure differential characteristics, pseudopot. study (*Russian*) 2-12957  
 Ta, ion irradiated, Doppler broadening of positron annihilation lines, struct. characts. 2-22111  
 Ta, ultrasoft X-ray emission interpretation (*Ukrainian*) 2-27026  
 Ta-W, elastic constants 2-50737  
 Tb film, transmission spectra, direct optical transitions, mag. ordering effects 2-17562  
 Th(Ni<sub>2</sub>Al<sub>3</sub>), absorpt. of H<sub>2</sub>, electron conc. effect 2-35697  
 TiNi, elec. cond., mag. susceptibility, CDW formation 2-45935

**band structure of crystalline metals and alloys continued**

- TiNi, electronic struct. calcs. 2-45821  
 V, superconducting transition temperature, press. depend. calc. 2-31008  
 V<sub>2</sub>Si, electronic struct. and quadrupole interactions, cluster model 2-26349  
 W, electrons in planar channel, band struct. and level populations 2-25962  
 W, electrons undergoing channelling, band struct. 2-21199  
 W, ultrasoft X-ray emission interpretation (*Ukrainian*) 2-27026  
 Xe, solid, transition to metallic state, band struct. 2-26300  
 Y, Fermi surface cross-sections under press., mag. struct. (*Russian*) 2-26274  
 Y(Ni<sub>2</sub>Al<sub>3</sub>), absorpt. of H<sub>2</sub>, electron conc. effect 2-35697  
 Zn, free electron-like bulk and surface states for (0001) 2-1818
- band structure of crystalline semiconductors and insulators**  
*see also conduction bands; energy gap; valence bands*  
 antiferromagnetic semiconductor, multivalley, energy spectrum and kinetic characts. of band electrons (*Russian*) 2-26291  
 composition dependence of energy gap of (CdTe)<sub>1-x</sub>(In<sub>2</sub>Te)<sub>x</sub> with  $x < 0.02$  2-40780  
 covalent solids, tight-binding parameters by Louie peripheral states 2-40754  
 cubic, valence electron densities, Thomas-Fermi approx. 2-40811  
 cubic A<sub>3</sub>B<sub>5-N</sub> semiconductors, least bound core electron excitations, binding energies, chemical shifts 2-26286  
 cubic semiconductors, band structure calc. program using Lowdin perturbation method 2-26272  
 D<sup>-</sup> band theory 2-21481  
 degenerate semiconductor, band splitting under laser irradiation 2-41316  
 diamond, correlated ground state 2-45870  
 1,4-dibromonaphthalene, quasi-1D mol. system, exciton dynamics 2-13056  
 dipole-ordered crystals, modulation spectroscopy in VUV region 2-36663  
 ferroelectric semiconductors, fluctuon electronic states, photoferroelectric phenomena 2-45825  
 ferromagnetic polymers with conjugated bonds, electronic struct. 2-45831  
 graphite, energy bands, smooth interpolation with gradient utilisation 2-45803  
 II-V compounds, conf., Mogilany, Poland (Sept. 1980) 2-23375  
 II-V compounds, phase diagrams, transport props., pressure investigations 2-27161  
 II-V compounds, properties, structure, appls. and prep., review 2-25851  
 ionic solids, relative stability of zinc-blende and rocksalt structs., pseudopot. and crit. ionicity 2-30432  
 IV-VI semiconductors, basic properties, evolving perspectives and unifying characts. 2-17066  
 2H layer compound, 3×3 CDW state, band struct., density of states and total band struct. energy 2-8764  
 metal-GaAs junctions, transition region, diffusion profile 2-2004  
 narrow and wide gap materials, optical and electronic props., model based studies 2-31441  
 narrow gap semicond., quasienergy spectrum, high power laser irradiation 2-51084  
 narrow-gap semiconductor film, intraband magneto-optical transitions 2-9134  
 narrow-gap semiconductors, Auger recomb. and ionisation rates, Lax band struct. 2-8813  
 piezoelectric semicond., degenerate magnetoacoustic phenomena, transverse US propag. effects 2-51240  
 rare earth chalcogenides, computer-aided prediction of cryst. struct. rel. to electron struct. 2-5080  
 rare earth particles, electronic struct. and magnetism 2-30794  
 semiconductor, electronic energy levels, statistical mechanical treatment 2-35931  
 semiconductor, electronic structure, tight-binding approx. appl. 2-40756  
 semiconductor, exciton-plasma transition, band struct. effects 2-35951  
 semiconductor, many-electron effects, pseudopot. theory 2-45804  
 semiconductor, multilayered, screening of elec. fields potential profile 2-51293  
 semiconductor, quasienergy spectrum, EM wave influence 2-9118  
 semiconductor superlattices, electronic props. calc. method using complex band struct. 2-26273  
 semiconductor thin film, influence of band bending on transport processes 2-17176  
 semiconductors, complex, band struct. calc. using localised orbitals 2-40755  
 semiconductors, disordered, band struct. and transport props. 2-45799  
 semiconductors, microscopic exam. by transmission EELS technique 2-31596  
 semiconductors, statistical mechanics of band states and impurity states 2-12967  
 semiconductors, ultrasonic absorpt. oscils. in crystals with inverted band struct. 2-16726  
 semiconductors with diamond-type struct., tunnelling, band struct. 2-40999  
 solar cell, band gap narrowing evaluation methodology based on measurements of emitter and base lifetimes and relaxation time 2-42012  
 SOS, heteroepitaxial, electronic characterization by surface photovoltage spectroscopy 2-41030  
 TCNQ salt, 2,5-difluoro TCNQ, electron acceptor, cryst., mol. and electronic struct. 2-50617  
 ternary semiconductors, review 2-26292  
 transition metal compounds, valence band photoelectron spectroscopy, review 2-46878  
 transition metal diborides, electronic struct. 2-40778  
 transition metal dioxides, electronic struct. and XPS, discrete-variation X $\alpha$  cluster method 2-30796  
 unipolar semicond. with nonstandard band structure, acoustomagneto-electric effect 2-5443  
 X-ray spectroscopy, empty states in conduction bands (*Polish*) 2-46824  
 AgCl, APW-LCAO energy bands and fundamental absorpt. 2-26288  
 AgI, optical props. and band struct., press. depend. 2-13448  
 AgSbTe<sub>2</sub>, thermoelec. hole spectrum model of transport props. 2-26424  
 B electronic structure and bonding in crystalline forms 2-45107  
 $\beta$ -B, rhombohedral single cryst., optical props. in fundamental absorpt. range 2-41321  
 B<sub>13</sub>C<sub>2</sub>, electronic struct. and semicond. behaviour 2-45826  
 BN, band and cryst. struct., LCAO SCF ab initio HF calc. 2-35935  
 BN, energy bands, smooth interpolation with gradient utilisation 2-45803  
 BaTiO<sub>3</sub>, electronic struct. calc. by PBX<sub>9</sub> method 2-51086



# band structure of crystalline semiconductors and insulators continued

BaTiO<sub>3</sub>, phase transition calcs. 2-46499  
BaTiO<sub>3</sub>:Co, optical absorpt., elec. cond., electronic struct. 2-46640  
BeAl<sub>2</sub>O<sub>3</sub>, chrysoberyl, electronic struct. and spectra 2-46634  
Be<sub>3</sub>Al<sub>2</sub>Si<sub>2</sub>O<sub>18</sub>, beryl, electronic struct. and spectra 2-46634  
Bi<sub>1-x</sub>Sb<sub>x</sub> alloys, carrier dispersion relation 2-5347  
Bi<sub>1-x</sub>Sb<sub>x</sub>, thermoelectric power of holes, anomalous temp. depend. 2-51221  
Bi<sub>2</sub>Te<sub>3</sub>, band struct., magnetoresist. and Hall effect study 2-46042  
CaAs(Se), single cryst. growth in floating zone arc image furnace, opt. props. and band struct. (*Japanese*) 2-9271  
CaO, electronic band struct. at lower mantle press. 2-52831  
CaTiO<sub>3</sub>, electronic struct. calc. by PBX<sub>8</sub> method 2-51086  
Cd<sub>3</sub>As<sub>2</sub>, band structure, UPS and EELS meas. 2-26294  
Cd<sub>3</sub>As<sub>2</sub>, energy band struct., pseudopotential method 2-26293  
Cd<sub>3</sub>As<sub>2</sub>, valence band spin-orbit splitting, magnetophonon oscillations study 2-17100  
CdCr<sub>2</sub>S<sub>4</sub>, ferromagnetic semicond., cathodolum. characts. of electron spectrum 2-46785  
CdCr<sub>2</sub>Se<sub>4</sub>, cathodolum., band struct., impurity states 2-31562  
CdCr<sub>2</sub>Se<sub>4</sub>(S<sub>2</sub>), photoluminescence and elec. struct. 2-46687  
Cd<sub>1-x</sub>Ga<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, cathodolum., band struct., impurity states 2-31562  
CdGa<sub>2</sub>S<sub>4</sub>, fundamental optical transitions study 2-46546  
CdGa<sub>2</sub>S<sub>4</sub>, linear susceptibility in transparency range, band calc. 2-9124  
CdGa<sub>2</sub>Se<sub>4</sub>, energy band struct.,  $\lambda$ -modulated reflectivity 2-16989  
Cd<sub>1-x</sub>Hg<sub>x</sub>Te, density of states calcs. 2-21486  
Cd<sub>1-x</sub>In<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, cathodolum., band struct., impurity states 2-31562  
Cd<sub>1-x</sub>Mn<sub>x</sub>Te(S<sub>2</sub>), elec. and mag. props. in mag. fields 2-30799  
CdO, valence Auger lineshapes, rel. to photoemission spectra 2-46841  
CdP<sub>2</sub>-metal Schottky diodes, band struct., wavelength modulated photocond. and photoresponse meas. 2-30932  
Cd<sub>1-x</sub>Pb<sub>x</sub>S (x=0.0625, 0.15625) superstructural thin film, props. 2-13205  
CdS-CdSe film n-n heterojunction, photovoltaic effect 2-51235  
CdSe-HgSe solid soln., fund. absorpt. and absorpt. by free carriers, lattice disorder influence 2-13465  
n-CdSnAs<sub>2</sub>, Shubnikov-de Haas effect, band struct., spin-orbit and cryst. field splitting 2-40934  
CdTe, electronic band struct. calcs. 2-40782  
Cd<sub>1-x</sub>Zn<sub>x</sub>As<sub>2</sub>, conduction and valence band struct., Hall effect, resistivity and magnetoresistance meas. 2-26421  
CeCo<sub>2</sub>Si<sub>2</sub>, effect of 3d element on Ce electronic state (*Russian*) 2-30798  
CeFe<sub>2</sub>Si<sub>2</sub>, effect of 3d element on Ce electronic state (*Russian*) 2-30798  
CeNi<sub>2</sub>Si<sub>2</sub>, effect of 3d element on Ce electronic state (*Russian*) 2-30798  
CeS(P), resonant photoemission, 4f level and valence band emission features 2-13624  
CoB, band structure and bonding 2-40779  
CoCl<sub>2</sub>, X-ray Cl L<sub>2,3</sub> spectra and electronic struct. 2-27027  
CrP, band struct. and mag. props. 2-30797  
Cs<sub>3</sub>Bi<sub>2</sub>Br<sub>9</sub>, luminescence and photocond. 2-46676  
CsPbCl<sub>3</sub>(Br<sub>3</sub>), electronic struct., optical and photoemission spectra 2-40783  
CuCl, band struct. at high press., disproportionation effects 2-35938  
CuCl(Br)(I), optical props. and band struct., press. depend. 2-13448  
CuFeS<sub>2</sub>, band struct., self consistent discrete variational X $\alpha$  calc. 2-12969  
Cu<sub>2</sub>S thin films, struct. and optical props. 2-51034  
EuB<sub>6</sub> single cryst., optical consts., and electronic structure 2-41320  
Fe, ferromag., effect of Coulomb correlation on energy bands 2-51079  
FeB, band structure and bonding 2-40779  
FeCl<sub>2</sub>, X-ray Cl L<sub>2,3</sub> spectra and electronic struct. 2-27027  
 $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, haematite, energy spectrum, photoemission, opt. spectra and elec. cond. obs. 2-5790  
FeSi, acoustic wave vel., temp. depend. (*Russian*) 2-50769  
Ga<sub>1-x</sub>Al<sub>x</sub>Sb<sub>2</sub>Te, high field magnetotransport props. under hydro-static press., direct-indirect band transition 2-8828  
GaAs, electronic band struct. calcs. 2-40782  
GaAs, impact ionisation, band struct. depend. 2-45994  
p-GaAs, polarisation of hot photoluminescence spectra, role of split-off subband 2-17542  
GaAs:Te(Si), Cr<sup>2+</sup>, surface (110) photovoltage spectroscopy of Cr<sup>2+</sup> 2-26462  
GaAs-Al<sub>0.1</sub>Ga<sub>0.9</sub>As superlattice, energy levels and cond. in appl. mag. field 2-8866  
GaAs-Al<sub>0.1</sub>Ga<sub>0.9</sub>As superlattice, mag. quantisation and transport 2-26492  
GaAs-GaAlAs superlattices, band struct. calcs. 2-40784  
GaAs(P), electronic struct., first principles calc. 2-30793  
Ga<sub>1-x</sub>In<sub>x</sub>As, electron drift, electric field depend., Monte Carlo calc. 2-51196  
GaN epitaxial layers, refl., 5 to 30 eV, dielec. function and electron energy loss function 2-22045  
GaP, As<sub>1-x</sub>P<sub>x</sub>, band gaps, direct and indirect, conc. depend. 2-51082  
GaP(Se)(Te), opto-electronic props. 2-36587  
GaSb band structure, from tunnel diode pressure effect 2-26290  
GaSb, electron transport and conduction band struct. 2-46012  
GaSe, optical dielectric function, band struct. calcs. 2-17387  
GaSe, polymorphic stability, band struct. and phonon spectra study 2-40786  
Ge, band-gap narrowing, impurity conc. depend. 2-1821  
p-Ge, deformation pot. consis. from piezoresist. temp. depend., 77 to 300K 2-17068  
Ge, donor-bound multi-exciton complexes, theory 2-1840  
Ge, electronic struct., first principles calc. 2-30793  
Ge, electronic struct., quantitative disorder effect 2-21495  
Ge, electronic struct. and total energy, self consistent local pseudopot. method 2-45823  
Ge, energy gap, impurity depend. 2-12964  
Ge, tunnelling, band struct. 2-40999  
p-Ge, two-wave saturation spectroscopy with subpicosecond rel-ax. time, theory 2-7840  
Ge:Zn, second impurity level, activation energy, random field effects 2-51124  
Ge-Si, spectral distrib. of quantum yield (*Russian*) 2-1942  
Ge<sub>3</sub>N<sub>2</sub>O, electronic band struct. calcs. 2-40785  
Ge<sub>1-x</sub>Si<sub>x</sub> solid soln., valence band spin-orbit splitting, electrorreflectance study 2-17445  
GeTe, thermoelec. hole spectrum model of transport props. 2-26424  
HNb<sub>1-x</sub>I<sub>x</sub>, cluster compound, spin-crossover transition 2-2053  
HgCr<sub>2</sub>Se<sub>4</sub>, band struct., self consistent discrete variational X $\alpha$  calc. 2-12970

# band structure of crystalline semiconductors and insulators continued

HgCr<sub>2</sub>Se<sub>4</sub>, ferromagnetic semicond., cathodolum. characts. of electron spectrum 2-46785  
Hg<sub>1-x</sub>Mn<sub>x</sub>Te, zero gap, conduction-valence band overlap in mag. field Hall coeff. and cond. meas. 2-45827  
Hg<sub>1-x</sub>Mn<sub>x</sub>Te(S<sub>2</sub>), elec. and mag. props. in mag. fields 2-30799  
HgSe:Mn<sup>2+</sup>, magnetospectroscopy, spin doping, band struct. investigation 2-1820  
InAs-GaSb superlattices in high magnetic fields, band struct., elec. and optical props. 2-21669  
InAs-GaSb superlattices, band struct. calcs. 2-40784  
(InAs)<sub>1-x</sub>(GaAs)<sub>x</sub>(GaSb)<sub>1-x</sub>(GaAs)<sub>x</sub>, superlattices, electronic and at. struct., phase separation effects 2-16969  
InGaAsP-InP DH laser, elec., threshold and temp. characts. analysis 2-913  
InN(N<sub>1-x</sub>N<sub>2</sub>)(P)(As)(Bi), electronic struct., X-ray spectra and XPS 2-40781  
InP, electronic band struct. calcs. 2-40782  
p-InP, polarisation of hot photoluminescence spectra, role of split-off subband 2-17542  
InP, props., prep. and device appls., review 2-51087  
InP:Cr, deep level states, press. depend. and k-space localisation 2-35967  
In<sub>2</sub>S<sub>3</sub>(O<sub>3</sub>), electronic struct., X-ray spectra and XPS 2-40781  
InSb, electronic struct. in zinc-blende and rocksalt phases 2-12968  
InSb, narrow band gap semicond., space charge layer, multiband effective Hamiltonian anal. 2-51313  
InSb, wavelength modulation reflectance spectroscopy, band struct. study 2-51623  
(InSb)<sub>1-x</sub>(CdTe)<sub>x</sub>, solid soln., valence band spin-orbit splitting, electrorreflectance study 2-17445  
KNbO<sub>3</sub>, spontaneous polarisation calcs. 2-46462  
KNbO<sub>3</sub>, tetragonal, band struct. and spontaneous polarisation 2-8753  
La compounds, inner level and vacancy electronic spectra structure 2-1825  
LaBr<sub>3</sub> single cryst., optical consts., and electronic structure 2-41320  
LaCl<sub>3</sub>(LaBr<sub>3</sub>):Np<sup>3+</sup> 2-1871  
LiGaSe<sub>2</sub> single cryst. growth and characterization 2-13637  
LiH, electronic struct., XPS study 2-27049  
n-Mg<sub>1-x</sub>Cd<sub>x</sub>Te, degenerate, carrier conc. depend. of Auger lifetime 2-36059  
MgCl<sub>2</sub>:Ti<sup>2+</sup>, Ti-Ti interactions, temp. effects 2-31520  
Mg<sub>3</sub>N<sub>2</sub>, forbidden band width, refl., luminesc. and excitation spectra, thermochromic transitions 2-8754  
MgO, positron states and electron energy bands, restricted Hartree-Fock method 2-8775  
MnB, band structure and bonding 2-40779  
MnO<sub>2</sub> electrodes, Li insertion stoichiometry 2-27585  
MnO<sub>2</sub>, variation of cond. with Li insertion 2-9644  
MnP, band struct. and mag. props. 2-30797  
(NH<sub>4</sub>)<sub>2</sub> thermoelec. hole spectrum model of transport props. 2-26424  
(NH<sub>4</sub>)<sub>2</sub>InF<sub>6</sub>, electronic struct., X-ray spectra and XPS 2-40781  
NaCl, SCF APW-k.p. calc. of band struct. 2-12952  
NaCrS<sub>2</sub>, photoemission and mag. effects 2-36755  
NaCrS<sub>2</sub>, reflectivity spectrum, Kramers-Kronig anal., optical functions, band struct. 2-26935  
NaF, positron states and electron energy bands, restricted Hartree-Fock method 2-8775  
Nb<sub>6</sub>I<sub>11</sub>, cluster compound, spin-crossover transition 2-2053  
NbN, film, electronic struct., XPS study 2-35934  
NiCl<sub>2</sub>, X-ray Cl L<sub>2,3</sub> spectra and electronic struct. 2-27027  
Ni<sub>1-x</sub>Cu<sub>x</sub>S<sub>2</sub>, elec. cond., Hall effect, thermoelectric power 2-26388  
NiO, band struct. calc. using localised orbitals 2-40755  
NiO, positron states and electron energy bands, restricted Hartree-Fock method 2-8775  
NiSi, electronic struct., chemical bond 2-35933  
NiSi<sub>2</sub>, electronic struct., chemical bond 2-35933  
Ni<sub>3</sub>Si, electronic struct., chemical bond 2-35933  
P, black, electronic struct., tight binding approach 2-16985  
PbO<sub>2</sub>, partially reduced, semicond. and electrochem. props. (*German*) 2-3457  
Pb<sub>1-x</sub>Sn<sub>x</sub>Se single crystal, photoelectron spectra, rel. to band struct. 2-51765  
Pb<sub>1-x</sub>Sn<sub>x</sub>Te, density of states calcs. 2-21486  
Pb<sub>1-x</sub>Sn<sub>x</sub>Te, hole mobility and band struct. at 77K 2-1923  
PbTe, indirect exchange interaction between embedded mag. ions 2-51140  
PbTiO<sub>3</sub>, electronic struct. calc. by PBX<sub>8</sub> method 2-51086  
PdSi, electronic struct., chemical bond 2-35933  
Pd<sub>2</sub>Si, electronic struct., chemical bond 2-35933  
PtSi, electronic struct., chemical bond 2-35933  
Pt<sub>2</sub>Si, electronic struct., chemical bond 2-35933  
(SN)<sub>1-x</sub>, energy band struct. and Fermi surface 2-30795  
(SNBr)<sub>1-x</sub>, energy band struct. and Fermi surface 2-30795  
ScP, band struct. and mag. props. 2-35939  
Si, band struct. calc. using nonlocal density approx. to exchange and correl. 2-12965  
Si, band structure and cryst. struct., LCAO SCF ab initio HF calc. 2-35929  
n-Si, band-gap narrowing, impurity conc. depend. 2-1821  
Si, conduction and valence bands, donor impurities effect, partial wave anal. 2-51081  
Si, cryst., electron irradi., coherent bremsstrahlung, planar channelling radiation, band struct. 2-13584  
Si, density of states near bound edge, donor impurities effect 2-17008  
Si, electronic struct., first principles calc. 2-30793  
Si, electronic struct., quantitative disorder effect 2-21495  
Si, electronic struct. and total energy, self consistent local pseudopot. method 2-45823  
Si, electrons in planar channel, band struct. and level populations 2-25962  
Si, electrons undergoing channelling, band struct. 2-21199  
Si, energy gap, impurity depend. 2-12964  
Si, impact ionisation, band struct. depend. 2-45994  
p-Si, SCL current flow, hot holes and noise 2-51183  
Si-SiO<sub>2</sub>-Al structure, Fowler-Nordheim electron tunnelling 2-26503  
Si<sub>3</sub>N<sub>4</sub>, insulating film, electronic struct. and total-current spectra 2-13208  
Si<sub>2</sub>N<sub>2</sub>O, electronic band struct. calcs. 2-40785  
SiO<sub>2</sub>, insulating film, electronic struct. and total-current spectra 2-13208  
SiO<sub>2</sub>, electronic struct., self-consistent cluster-Bethe-lattice method 2-45828



**band structure of crystalline semiconductors and insulators continued**

- SmB<sub>6</sub> single cryst., optical consts., and electronic structure 2-41320  
 SmS, electron-electron interaction and interpretation of optical spectra of permittivity 2-51083  
 SmS, semiconducting, cond. band deformation pot. and semicond.-metal transition 2-1824  
 $\alpha$ -Sn, electronic struct. and total energy, self consistent local pseudopot. method 2-45823  
 $\alpha$ -Sn, semicond., electronic struct. of bulk and (111) surface, self-consistent pseudopot. calcs. 2-46091  
 (SnTe)<sub>1-x</sub>(PbSe)<sub>x</sub> epitaxial layers, band struct. parameters (*Russian*) 2-21499  
 SrS(Se), single cryst. growth in floating zone arc image furnace, opt. props. and band struct. (*Japanese*) 2-9271  
 SrTiO<sub>3</sub>, electronic struct. calc. by PBX, method 2-51086  
 ThCl<sub>4</sub>, gas phase and solid state, valence electronic struct., XPS study 2-7600  
 ThF<sub>4</sub>, gas phase and solid state, valence electronic struct., XPS study 2-7600  
 TiB, Z 2-40779  
 TiH<sub>2</sub>, band struct., NMR study 2-40777  
 TiN, bulk energy band struct., APW calc. and angle-resolved-photoemission meas. 2-1823  
 TiO<sub>2</sub> and Ti<sub>2</sub>O<sub>3</sub>, electronic struct., EELS and optical reflectivity data 2-5783  
 TiO<sub>2</sub>:Nb, electoreflection spectra obs. (*Russian*) 2-17441  
 TiSe, energy band struct. 2-40788  
 TiSe, optical refl. spectra inside fundamental absorpt. region 2-31525  
 UCl<sub>4</sub>, gas phase and solid state, valence electronic struct., XPS study 2-7600  
 UF<sub>4</sub>, gas phase and solid state, valence electronic struct., XPS study 2-7600  
 UO<sub>2</sub>, low-energy electron X-ray spectra 2-17606  
 UO<sub>2</sub>, magneto-optical band struct. study 2-35937  
 $\gamma$ -UO<sub>3</sub>, low-energy electron X-ray spectra 2-17606  
 V-O systems, X-ray and X-ray photoelectron spectra 2-12966  
 VO, optical props., 0.1 to 3 eV, rel. to electronic struct. (*Russian*) 2-21965  
 VO<sub>2</sub> and V<sub>2</sub>O<sub>3</sub>, electronic struct., EELS and optical reflectivity data 2-5783  
 VP, band struct. and mag. props. 2-30797  
 Zn<sub>3</sub>As<sub>2</sub>, band structure at Brillouin zone centre 2-45830  
 Zn<sub>3</sub>As<sub>2</sub>, thin film and single cryst., band gap, absorpt. spectra and refl. meas. 2-26926  
 (Zn,Cd)<sub>1-x</sub>P<sub>2</sub> solid soln. electron struct. XPS and X-ray spectral studies 2-27029  
 ZnGa<sub>2</sub>S<sub>4</sub>, band struct. 2-5346  
 ZnGa<sub>2</sub>Se<sub>4</sub>, band struct. 2-5346  
 ZnGeP<sub>2</sub>, pseudopotential calcs. of band struct. 2-1822  
 ZnP-metal Schottky diodes, band struct., wavelength modulated photocond. and photoresponse meas. 2-30932  
 Zn<sub>3</sub>P<sub>2</sub>, band struct. and photoelec. props. 2-26295  
 Zn<sub>3</sub>P<sub>2</sub>, band structure at Brillouin zone centre 2-45830  
 ZnP-metal Schottky diodes, band struct., wavelength modulated photocond. and photoresponse meas. 2-30932  
 ZnS(F<sub>2</sub>):Mn, collision excitation cross-sections and energy levels of deep and very deep centers in electroluminescence 2-46762  
 ZnS(Se), electronic struct., first principles calc. 2-30793  
 ZnSe, self-activated luminescence anisotropic centre symm. (*Russian*) 2-13561  
 ZnSiAs<sub>2</sub>, pseudopotential calcs. of band struct. 2-1822  
 ZrN, band struct. calcs. 2-45829  
 ZrO<sub>2</sub>, electronic struct., DV X $\alpha$  cluster method 2-16990  
 ZrO<sub>2</sub>:Y<sub>2</sub>O<sub>3</sub>, solid solutions, nature of elec. cond. 2-12818

**band structure of semimetals**

- graphite, magnetostriction and deformation potentials 2-9019  
 As, band structure, temp. depend. 2-16987  
 As, structure by bond-breaking processes from rock salt, band struct. calc. and gauche effect 2-25810  
 Bi, Fermi surface and band parameters, press. depend. magnetoref. studies 2-13457  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, alloys, carrier dispersion relation 2-5347  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, Fermi surface and band parameters, press. depend. magnetoref. studies 2-13457  
 Fe-Rh, pressure-temp. mag. phase diagram 2-36347

**band theory models and calculation methods**

- see also APW calculations; band model of magnetism; band structure; cellular method; free-electron approximation; Hubbard model; KKR calculations; k.p. calculations; Kronig-Penney model; muffin-tin potential; nearly-free-electron approximation; OPW calculations; pseudopotential methods; relativistic band structure calculations; tight-binding calculations  
 alloys, disordered, Coulomb correlations, Green's function study 2-12953  
 alloys, muffin-tin, band calc., variational formulation of multiple scatt. 2-35920  
 band Jahn-Teller model, shear elastic mode, press. depend. near struct. transition 2-50740  
 band models with Coulomb interaction, cluster approx. and perturbation theory 2-40753  
 Bloch electrons dynamics in external elec. field, bounds for interband transitions 2-1807  
 chalcogenide thin films, amorphous, high field short pulse behaviour, band model 2-13084  
 covalent solids, tight-binding parameters by Louie peripheral states 2-40754  
 cubic semiconductors, band structure calc. program using Lowdin perturbation method 2-26272  
 deep levels due to nonsubstitutional impurity cluster, MTO calc. 2-30820  
 edge dislocation, electronic struct. calc., KKR approach 2-30819  
 four-atom generalised Hubbard model, ground-state behaviour 2-21482  
 Green function solution for two hybridised electronic bands 2-30788  
 magnetic materials, electronic struct. calc. developments 2-8747  
 partially ordered alloys, elec. struct. 2-45800  
 Poisson's eqn. soln. for arbitrary periodic charge distrib. 2-33457  
 polymers, exact-exchange asymptotics in Hartree-Fock calcs. 2-26287  
 semiconductor, quasienergy spectrum, EM wave influence 2-9118  
 semiconductor superlattices, electronic props. calc. method using complex band struct. 2-26273  
 semiconductors in strong variable EM wave field, Kanes model two band eqn. soln. 2-21595

**band theory models and calculation methods continued**

- single energy band, density of states, substitutional impurity cluster effect, MTO calc. 2-30785  
 smooth interpolation with gradient utilisation 2-45803  
 surface electronic states, localised orbital basis functions method 2-8849  
 Al, positron annihilation, effects of electron-positron correlation, band struct. 2-51740  
 Au surface (112), angle-resolved photoemission calc. 2-2415  
 Na<sub>2</sub>WO<sub>3</sub>, bronze applicability of the rigid band model 2-30790  
 Si, electrons undergoing channelling, band struct. 2-21199  
 W, electrons undergoing channelling, band struct. 2-21199

**bands (kink) see kink bands****bang-bang control**

- PNP 3000 pebble-bed reactor; spatial flux trimming, bang-bang control (*German*) 2-487

**Bardeen-Cooper-Schrieffer theory see BCS theory****barium**

see also nuclei with .....

- adsorbed layer on W, field emission spectroscopy study 2-17609  
 adsorption on Mo (112) and Re (1010), work function, thermal stability, LEED and contact pot. meas. 2-45731  
 atom, config. interaction between autoionis. and Stark state resons. 2-34318  
 atom, electron impact, absolute and total ionisation functions determ. 2-44099  
 atom, forbidden radiative transition probabilities 2-43854  
 atom, many-photon two electron ionisation, freq. depend. 2-29556  
 atom, natural radiative lifetimes meas. in perturbed 6snd <sup>1</sup>D<sub>2</sub> sequence 2-39362  
 atom, nonlinear two-electron ionisation process, depend. on laser radiation polarisation 2-49347  
 atom, photoionisation cross sections, mass spectra study 2-24662  
 atom, Rydberg states, colour centre laser optogalvanic spectroscopy in hollow cathode discharges 2-49316  
 atom, term dependent hybridisation of the 5f wave function 2-39311  
 atoms, 6P<sub>1/2</sub>ns states, spectroscopic decay-rate meas. below the laser linewidth 2-43868  
 atoms, oscillations in superradiance with long-duration pumping pulses 2-39367  
 atoms, valence electron spin-orbit splitting, Slater transition state calcs. 2-34283  
 disappearance potential spectroscopy, rel. to AES (*Japanese*) 2-51746  
 disordered film, inelastically reflected electron energy spectra 2-5784  
 EELS, dynamic effects, localised states 2-27036  
 3d electron excitation energies, relativistic HF calc. 2-12991  
 getter film, residual gas interactions, AES and XPS study 2-48711  
 intercalation compound with GaSe, electoreflection spectra 2-13453  
 ion cloud, radially injected, numerical simulation 2-42531  
 liquid, thermophysical props. 2-35562  
 nucleosynthesis in Galaxy disk and star form. abundances 2-28551  
 phonon dispersion calc. 2-50802  
 plasma, laser prod., and magnetised, reson, shadowgraph and schlieren studies 2-8283  
 preparation of high purity samples by metallothermic reduction of oxides 2-9309  
 r-process enrichment factors for Allende meteorite 2-23265  
 solids and liquids, heat capacity and heat of phase transition meas. using pulsed differential method 2-16809  
 sputtered atoms in excited state, vel. distrib. 2-49306  
 surface energy, work function, variational calc. 2-30741  
 vapourisation, graphite furnace AAS 2-31974  
 Ba, Ba<sup>+</sup> and Ba<sup>2+</sup>, vacuum-UV photoabsorpt. spectra, radical redistrib. of 4d oscillator strength 2-675  
 Ba II fluorescence from Ba atoms resonantly photoionised by 584-Å radiation 2-39353  
 Ba<sup>+</sup>, shift of <sup>2</sup>S<sub>1/2</sub> hyperfine splittings due to blackbody radiation 2-49332  
 Ba<sup>2+</sup>, term dependent hybridisation of the 5f wave function 2-39311  
 Ba+Na, two-photon radiative ionisation collision obs. 2-44049  
 Ba+O<sub>2</sub> low press. flames, chemiluminesc., rule of BaO<sub>2</sub> 2-31919  
 KCl:Ba, thermoluminescence and D<sub>3</sub> and F-centre stability 2-9204  
 Ti-Ba thin film system, unoriented and oriented, struct. and phase transitions study 2-40705

**barium alloys**

see also barium compounds

No entries

**barium compounds**

see also barium alloys

- BaCl<sub>2</sub>, freezing of ionic melt into superionic phase 2-26022  
 ferrite films with perpendicular mag. anisotropy, DC sputtering prep. 2-27083  
 hexammines, anomalous mag. susceptibilities 2-36305  
 stearate film in MIM struct., temp. depend. of internal voltage 2-5471  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-BaO, cryst. struct., X-ray diff. study 2-25844  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-BaO, divalent cation cond. 2-26130  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-BaO, ion exchange prep., ionic cond. props. 2-12835  
 Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub>-MgO(CaO)(SrO)(BaO), based high-refractory cements, reaction kinetics 2-41571  
 B<sub>2</sub>FeNpO<sub>6</sub>, mag. props., Mossbauer spectrosc. obs. 2-21927  
 B<sub>2</sub>O<sub>3</sub>-BaTiO<sub>3</sub>-Na<sub>2</sub>O glasses, Raman spectra, anomalous refr. index and density 2-13470  
 (Ba,Pb)(NO<sub>3</sub>)<sub>2</sub> crystals, growth from aq. soln., distrib. of elements 2-31616  
 (Ba, Sr, Ca)CO<sub>3</sub> powder, surface reaction with Ni-W-Zr alloy plate (*Japanese*) 2-13849  
 (Ba,Sr,Ca)O<sub>3</sub> powder, chemical cpds. formed at interface with (Ba,Sr,Ca)CO<sub>3</sub> powder (*Japanese*) 2-13850  
 (Ba,Sr)TiO<sub>3</sub>, complex ferroelectric thin films, growth by plasma-ion sputtering 2-27099  
 Ba chelate, EDTA-BaCl<sub>2</sub>, US vel., temp. depend. 2-35596  
 Ba complex, Ba(Pd(NH<sub>2</sub>CH<sub>2</sub>COO)Cl<sub>2</sub>)<sub>2</sub>·2H<sub>2</sub>O, X-ray diff., struct. 2-12559  
 Ba complex 1-phenyl-3-methyl-4-acetyl-pyrazolone-5, struct., IR and NMR spectra, cond. meas. 2-31503  
 Ba complex of 1-phenyl-3-methyl-4-benzoyl-pyrazolone-5, synthesis, struct., IR and NMR spectra 2-26908  
 Ba ferrite, anisotropic permanent magnets, force anal. 2-21829  
 Ba-Fe-S system, ternary compounds, phase relations 2-27157  
 Ba<sub>9</sub>Al<sub>7</sub>F<sub>24</sub>, anion-excess fluoride related struct. (*French*) 2-8495  
 BaAs<sub>3</sub>, cryst. struct., elec., optical, and mag. props. 2-8494



## barium compounds continued

- BaAs<sub>3</sub>, IR study of phonons and free carriers 2-36627  
 BaB<sub>2</sub> single crystals, growth and props. 2-27075  
 BaCO<sub>3</sub>, hydrothermal synthesis, lattice constants 2-9261  
 BaCO<sub>3</sub> mineraliser, influence on sintering, struct. and props. of mullite porcelain 2-17651  
 BaC<sub>2</sub>O<sub>4</sub>·nH<sub>2</sub>O, morphologic, crystallographic charact. and surface props., grinding effect (French) 2-9299  
 BaC<sub>2</sub>O<sub>4</sub>·nH<sub>2</sub>O, phase modification by grinding 2-13736  
 Ba<sub>0.8</sub>Ca<sub>0.2</sub>TiO<sub>3</sub>, single crystals, and ceramic, elec. cond. variation with dopant conc. 2-5404  
 BaCaWO<sub>6</sub>, quadrupole interactions, <sup>182</sup>W Mossbauer spectra (French) 2-5612  
 BaCeO<sub>3</sub> X-ray characterisation 2-30443  
 BaCl<sub>2</sub> aqueous solutions, isopiestic molality obs. at elevated temps. 2-37090  
 BaClF, U-centre localised and reson. modes, Green's function study 2-45490  
 Ba(ClO<sub>4</sub>)<sub>2</sub>·HClO<sub>4</sub>·H<sub>2</sub>O, Raman spectra obs. (Russian) 2-17488  
 Ba(ClO<sub>4</sub>)<sub>2</sub>·Pb(ClO<sub>4</sub>)<sub>2</sub>, Raman spectra obs. (Russian) 2-17488  
 BaCoFe<sub>16</sub>O<sub>27</sub>, hexagonal ferrite, magneto-optical spectra 2-31458  
 BaCo<sub>2</sub>Ti<sub>2</sub>Fe<sub>12-2x</sub>O<sub>19</sub>, type M, hexagonal, splitting of mag. helix 2-46250  
 Ba<sub>2</sub>CoWO<sub>6</sub>, quadrupole interactions, <sup>182</sup>W Mossbauer spectra (French) 2-5612  
 BaCrO<sub>4</sub>, elec. quadrupole interaction, TDPAC obs. 2-36483  
 BaCrO<sub>4</sub> powders, precipitation from aq. solns. at different pHs: nucleation, cryst. no. and sizes 2-13666  
 BaCr<sub>2</sub>O<sub>7</sub>, elec. quadrupole interaction, TDPAC obs. 2-36483  
 BaCuF<sub>4</sub>, Jahn-Teller cooperative effect, mag. props. influence (French) 2-2126  
 BaF, E<sup>2+</sup> and F<sup>2+</sup> states, optical-optical double resonance spectroscopy 2-4338  
 BaF<sub>2</sub> crystal plate, optical deform. due to continuous CO<sub>2</sub> laser irradiation 2-49805  
 BaF<sub>2</sub> crystals, ionic conductivity 2-45612  
 BaF<sub>2</sub>, deform. pot., one-phonon Raman scatt. 2-51586  
 BaF<sub>2</sub>, dislocation outcrop images and etch pits, optical and X-ray topographic obs. 2-35501  
 BaF<sub>2</sub> double layer antireflection coatings on Ge, performance eval. 2-20395  
 BaF<sub>2</sub> film, MBE grown dielectric 2-26820  
 BaF<sub>2</sub>, rare earth doped, R=rare earth, cluster relaxation meas. 2-9079  
 BaF<sub>2</sub>, single crystals, selective etching and solution in salts and acids 2-13828  
 BaF<sub>2</sub>, superionic cond., thermal expansion and refractive index 2-17437  
 BaF<sub>2</sub>, undoped and U doped, neutron irradiated, F-aggregate centres 2-35548  
 BaF<sub>2</sub>, use in solid-state galvanic cells 2-32051  
 BaF<sub>2</sub> with trivalent R ions, Faraday effect and optical recording of EPR, laser polarimetry method 2-36411  
 BaF<sub>2</sub>·LaF<sub>3</sub>, polarisation effects associated with space charges, ionic thermal current meas. 2-13400  
 BaF<sub>2</sub>·R (R=rare earth), dipole complex relax. 2-17393  
 BaF<sub>2</sub>·R (R=rare earth), dopant-interstitial binding energies, lattice simulation calc. 2-40428  
 BaF<sub>2</sub>·Y<sup>3+</sup>, induced IR absorpt. (French) 2-46648  
 BaF<sub>2</sub>·CaF<sub>2</sub>·AlF<sub>3</sub>·BeF<sub>2</sub> glasses, Raman spectroscopic study 2-31484  
 BaF<sub>2</sub>·CaF<sub>2</sub>·YF<sub>3</sub>·AlF<sub>3</sub> glass for IR optical fibres, material dispersion meas. 2-49846  
 BaF<sub>2</sub>·GdF<sub>3</sub>·ZrF<sub>4</sub> glass for IR optical fibres, material dispersion meas. 2-49846  
 BaFBr, lattice dynamics, normal coord. and force const. calcs. 2-26004  
 BaFCl(Br)(I):Eu<sup>2+</sup>, EPR study of Eu<sup>2+</sup> ground state splitting 2-36420  
 Ba<sub>2</sub>Fe<sub>2</sub>Ge<sub>2</sub>O<sub>14</sub>, struct. determ. 2-21098  
 BaFe<sub>12-2x</sub>In<sub>x</sub>O<sub>19</sub>, cryst. and mag. struct., Mossbauer study 2-21920  
 BaFe<sub>2</sub>O<sub>19</sub>, ferrite particles, microwave absorpt. along hysteresis loops 2-21837  
 BaFe<sub>2</sub>O<sub>19</sub>, hexagonal ferrite, magneto-optical spectra 2-31458  
 BaFe<sub>2</sub>O<sub>19</sub>, hexagonal ferrite, mag. moments, magnetisation, and mag. struct., neutron irradiation effects, neutron diff. obs. 2-36317  
 BaFe<sub>2</sub>O<sub>19</sub>·SiO<sub>2</sub>, coprecipitated, uniaxially hot pressed, coercivity and texture 2-21838  
 BaFe<sub>12-2x</sub>Ru<sub>x</sub>O<sub>19</sub>, single crystal mag. anisotropy 2-13288  
 BaFe<sub>12-2x</sub>Sc<sub>x</sub>O<sub>19</sub>, cryst. and mag. struct., Mossbauer study 2-21920  
 BaGa<sub>2</sub>Se<sub>4</sub>Er<sup>3+</sup>, luminesc. props., energy transfer 2-46721  
 BaGd<sub>2</sub>·Nd<sub>2</sub>(MoO<sub>4</sub>)<sub>4</sub> single crystals, luminesc. and stimulated emission 2-5748  
 Ba<sub>2</sub>Ge<sub>2</sub>TiO<sub>8</sub>, glass-ceramic and single crystals, piezoelec. props. 2-51529  
 Ba(HCOO)<sub>2</sub>, lattice energy calcs. 2-1435  
 BaI C-X system, rot. anal. of congested spectra, population labelling technique appl. 2-24680  
 Ba<sub>3</sub>La<sub>3</sub>Cu<sub>6</sub>O<sub>14+y</sub>, electric transport and mag. props., progressive semi-conduct-semimetallic transition 2-40977  
 Ba<sub>3</sub>La<sub>3</sub>Cu<sub>6</sub>O<sub>14+y</sub>, progressive semiconductive-semimetallic transition, struct. aspects and energy levels 2-40359  
 Ba<sub>0.55</sub>La<sub>0.45</sub>F<sub>2.45</sub>, use in solid-state galvanic cells 2-32051  
 Ba<sub>1-x</sub>La<sub>x</sub>F<sub>2+x</sub>, small-signal AC response, 300 to 820K 2-40594  
 Ba<sub>1-x</sub>La<sub>x</sub>F<sub>2+x</sub>, superionic cond., cond. enhancement and dielec. response 2-16884  
 Ba<sub>1-x</sub>La<sub>x</sub>F<sub>2+x</sub>, superionic cond., <sup>19</sup>F NMR relax. and ionic thermocurrents study 2-17362  
 BaMnF<sub>4</sub>, antiferromag., pure exciton and magnon sideband optical transitions 2-2332  
 BaMnF<sub>4</sub>, incommensurate, Raman spectrum, soft mode behaviour 2-22029  
 BaMnF<sub>4</sub>, incommensurate phase, permittivity, 3 to 30 cm<sup>-1</sup> 2-31362  
 BaMnF<sub>4</sub>, magnetoelectric, Landau theory predictions 2-41170  
 BaMnFeF<sub>7</sub>, cryst. struct. 2-21086  
 Ba<sub>2</sub>Mn<sub>2</sub>NpO<sub>6</sub>, mag. props., Mossbauer spectrosc. obs. 2-21927  
 BaMoO<sub>4</sub>, precipitation from aq. soln., cryst. growth kinetics 2-25772  
 BaMoO<sub>4</sub>(WO<sub>4</sub>)<sub>2</sub>(CrO<sub>4</sub>), Raman spectra, high press. effects 2-2258  
 Ba<sub>2</sub>Mo<sub>2</sub>Si<sub>9</sub>, struct. and supercond. props. 2-17244  
 Ba<sub>2</sub>Mo<sub>2</sub>Se<sub>9</sub>, struct. and supercond. props. 2-17244  
 Ba(NO<sub>2</sub>)<sub>2</sub>, anhydrous and hydrated, IR spectra 2-22015  
 Ba(NO<sub>3</sub>)<sub>2</sub>, US absorpt. and Brillouin scatt. 2-35603  
 Ba<sub>2</sub>NaNb<sub>2</sub>O<sub>15</sub>, ferroelectric, surface photoluminesc. 2-26982  
 BaNaNb<sub>2</sub>O<sub>15</sub>, cryst., laser pumped, parametric light source 2-39711  
 BaNaNb<sub>2</sub>O<sub>12</sub>, ferroelectric, photoluminescence 2-2342  
 Ba<sub>2</sub>NaNb<sub>2</sub>O<sub>15</sub>, commensurate-incommensurate transition, ferroelastic transition 2-45567

## barium compounds continued

- Ba<sub>2</sub>NaNb<sub>2</sub>O<sub>15</sub>, ferroelec. and ferroelastic domains, electron microscopic study 2-9115  
 Ba<sub>2</sub>NaNb<sub>2</sub>O<sub>15</sub>, ferroelectric, photorefractive (Russian) 2-21974  
 Ba<sub>2</sub>NaNb<sub>2</sub>O<sub>15</sub>, ferroelec. insulator, incommensurate phases (French) 2-27172  
 Ba<sub>2</sub>NaNb<sub>2</sub>O<sub>15</sub>, ferroelectric 2-41280  
 Ba<sub>2</sub>NaNb<sub>2</sub>O<sub>15</sub>, Raman scatt. study of low freq. phonon polaritons 2-46559  
 Ba<sub>2</sub>NaNb<sub>2</sub>O<sub>15</sub>, soft phonon valley near tetragonal-incommensurate phase transition 2-45514  
 Ba<sub>2</sub>NaNb<sub>2</sub>O<sub>15</sub>:Fe(Mo), photoelec. and photorefractive props. 2-36102  
 BaNd(PO<sub>3</sub>)<sub>5</sub> laser, spectral generation investigation 2-4513  
 BaNd<sub>2</sub>Ti<sub>2</sub>O<sub>10</sub>, space group determ. by convergent-beam diffraction with high resolu. imaging 2-6932  
 BaNiF<sub>4</sub>, two-dimensional antiferromag., linear mag. birefringence and double-excitonic transitions 2-5661  
 BaNi<sub>2</sub>Fe<sub>2</sub>O<sub>22</sub>, hexagonal ferrite, cycloidal spin ordering 2-46251  
 BaO, adsorbed layer on W, Z 2-17609  
 BaO, Debye temp. of oxides with NaCl struct. 2-16744  
 BaO film, nucleation depend. on crystallographic orientation of substrate 2-51035  
 BaO on Ir, orientation depend. of work function for thermionic cathodes 2-5453  
 BaO·Al<sub>2</sub>O<sub>3</sub>·ZrO<sub>2</sub> based high-refractory cements, reaction kinetics 2-41571  
 BaO·B<sub>2</sub>O<sub>3</sub> glass, equilib. viscosity, temp. depend. 2-12805  
 BaO·B<sub>2</sub>O<sub>3</sub> glasses, low freq. IR refl. spectra and optical consts. 2-26922  
 BaO·Eu<sub>2</sub>O<sub>3</sub>·TiO<sub>2</sub> system, investigation of compounds 2-50592  
 BaO·Nd<sub>2</sub>O<sub>3</sub>·TiO<sub>2</sub> system, investigation of compounds 2-50592  
 BaO·Pr<sub>2</sub>O<sub>3</sub>·TiO<sub>2</sub> system, investigation of compounds 2-50592  
 BaO·Sm<sub>2</sub>O<sub>3</sub>·TiO<sub>2</sub> system, investigation of compounds 2-50592  
 BaO·SrO·Na<sub>2</sub>O·Nb<sub>2</sub>O<sub>5</sub>, solid solution, phase equilib. study, Curie point and lattice consts. 2-17667  
 BaO·V<sub>2</sub>O<sub>5</sub>:Mn(Fe)(Co)(Cr)(Cu) glass, elec. cond. and EPR spectra 2-46365  
 BaO·WO<sub>3</sub>·P<sub>2</sub>O<sub>5</sub> system, phase equil. and vitrification, liquidus surface, phase comp. 2-9337  
 BaO<sub>2</sub>·Al<sub>2</sub>O<sub>3</sub>·SiO<sub>2</sub>, celsian ceramic, DC cond., dielec. loss 2-5890  
 BaOH, thermochem. props. 2-22431  
 BaO<sub>2</sub>, role in chemiluminesc. of low press. Ba-O<sub>2</sub> flames 2-31919  
 Ba(PO<sub>3</sub>)<sub>2</sub>·MgF<sub>2</sub> glass, effect of MgF<sub>2</sub> additions on physicochemical props. 2-26391  
 BaPb<sub>0.7</sub>Bi<sub>0.3</sub>O<sub>3</sub> film, grain boundary Josephson current 2-2035  
 BaPb<sub>1-x</sub>Bi<sub>x</sub>O<sub>3</sub>, real space electron pairing, transition to k-space pairing 2-31036  
 BaPb<sub>1-x</sub>Bi<sub>x</sub>O<sub>3</sub>, superconductivity near metal-semiconductor transition 2-17187  
 BaPb<sub>1-x</sub>Bi<sub>x</sub>O<sub>3</sub>, thin superconducting film, preparation by RF sputtering (Japanese) 2-2445  
 Ba(Pt(CN)<sub>4</sub>)<sub>4</sub>·4H<sub>2</sub>O quasi-one-dimens. cond., emission quenching by (Ni(CN)<sub>4</sub>)<sup>2-</sup> dopants and interpret. 2-31535  
 Ba<sub>2</sub>Mn<sub>2</sub>O<sub>7</sub>, R=rare earth, synthesis and cryst. struct. (French) 2-25824  
 BaRhO<sub>4</sub> polycryst., prep. and cryst. struct. 2-1455  
 BaS laser induced fluoresc., perturbations 2-39439  
 BaS:Cu, Bi phosphors, elec. cond. 2-51166  
 BaSO<sub>3</sub>, new crystalline phases 2-1462  
 BaSO<sub>3</sub> paint coatings, absolute luminance coeffs. 2-49843  
 BaSO<sub>4</sub> seed crystals, growth kinetics in suspension, cryst. size distrib. 2-25774  
 BaSO<sub>4</sub>(Eu) thermoluminophor fabrication and characts., thermoluminescent dosimeters appl. 2-19774  
 α-BaSiO<sub>3</sub> platelets, crystn. by saturated soln. slow cooling in metal chloride melt 2-35418  
 BaSn<sub>0.9</sub>Fe<sub>0.1</sub>O<sub>3</sub>, six-layer struct., mag. props. 2-50599  
 BaSnSi<sub>3</sub>O<sub>6</sub>:Ti<sup>4+</sup>, luminesc. and lattice param. 2-22070  
 Ba<sub>0.39</sub>Sr<sub>0.61</sub>Nb<sub>2</sub>O<sub>6</sub>, ferroelec. tungsten bronzes, higher order electrostriction 2-26822  
 Ba<sub>0.45</sub>Sr<sub>0.55</sub>Nb<sub>2</sub>O<sub>6</sub>, dielec. anomalies 2-26813  
 Ba<sub>0.45</sub>Sr<sub>0.55</sub>Nb<sub>2</sub>O<sub>6</sub>:Pr<sup>3+</sup>, fluorescence lifetime study 2-17524  
 Ba<sub>0.5</sub>Sr<sub>0.5</sub>Nb<sub>2</sub>O<sub>6</sub>, ferroelec. thin film, electrooptical props. 2-31454  
 Ba<sub>0.5</sub>Sr<sub>0.5</sub>TiO<sub>3</sub> multifunctional ceramic temp.-humidity sensors 2-33557  
 Ba<sub>0.8</sub>Sr<sub>0.2</sub>TiO<sub>3</sub>, phonon dispersion curves 2-45433  
 Ba<sub>0.8</sub>Sr<sub>1-x</sub>TiO<sub>3</sub>, films, microwave dielec. props., broad phase transition 2-46460  
 BaTiO<sub>3</sub>, angular depend. of Raman scatt. spectra 2-46561  
 BaTiO<sub>3</sub>, Curie temp., external mag. field effect, thermographic study 2-9101  
 BaTiO<sub>3</sub>, Debye-Waller factors, temp. depend. 2-45503  
 BaTiO<sub>3</sub>, dielectric dispersion, Brillouin spectra study 2-46456  
 BaTiO<sub>3</sub>, dispersion curves for phonon-polaritons associated with an overdamped vibration mode 2-21246  
 BaTiO<sub>3</sub>, domain wall dynamics, acoustic emission study 2-45386  
 BaTiO<sub>3</sub>, electronic struct. calc. by PBX, method 2-51086  
 BaTiO<sub>3</sub>, ferroelec., lattice strain at 180° domain wall, X-ray topographic study 2-17427  
 BaTiO<sub>3</sub>, ferroelec. meas., digital computation methods 2-31431  
 BaTiO<sub>3</sub>, ferroelec. phase transitions, Devonshire theory 2-31401  
 BaTiO<sub>3</sub>, ferroelec. surface, ion beam refl. and chemical etching study 2-30722  
 BaTiO<sub>3</sub>, ferroelec. transition, hyper Raman scatt. study 2-46581  
 BaTiO<sub>3</sub>, ferroelectric, electroluminescence phase rot., elec. field amplitude effect 2-31560  
 BaTiO<sub>3</sub>, ferroelectric semiconductor, fluctuonic electron states, photoferroelectric phenomena 2-45825  
 BaTiO<sub>3</sub> film, dielectric props. depend. on coherent scatt. region 2-5648  
 BaTiO<sub>3</sub> film, permittivity microwave meas. by input impedance method 2-15194  
 BaTiO<sub>3</sub> film form. from laser plasma, operating mode investigation 2-46913  
 BaTiO<sub>3</sub> films, preparation and struct. 2-46917  
 BaTiO<sub>3</sub>, heteroepitaxial films, ferroelectric transition 2-46477  
 BaTiO<sub>3</sub>, mag. field influence on paraelectric-ferroelectric transition 2-46506  
 BaTiO<sub>3</sub>, O 2P- valence band, electronic struct., DV-Xα calcs., XPS 2-21498  
 BaTiO<sub>3</sub>, opalescence at tetragonal-orthorhombic phase transition 2-9116  
 BaTiO<sub>3</sub>, perovskites, SHG study of paraelectric transitions 2-31424  
 BaTiO<sub>3</sub>, phase transition calcs. 2-46499  
 BaTiO<sub>3</sub>, phase transition calcs. 2-46503  
 BaTiO<sub>3</sub>, phonon dispersion curves 2-45433



## barium compounds continued

- BaTiO<sub>3</sub> photorefractive-index gratings formed by nanosec. optical pulses 2-4668  
 BaTiO<sub>3</sub>, photovoltaic, pyroelec., and piezoelec. outputs under pulsed laser illum. 2-36084  
 BaTiO<sub>3</sub>, porous ceramic, stoichiometry effect on positive TCR 2-51172  
 BaTiO<sub>3</sub> powder, dielec. and cond. meas. using two-phase mixture system (Japanese) 2-36499  
 BaTiO<sub>3</sub>, pure and doped, symm. problems on Raman scatt. 2-46558  
 BaTiO<sub>3</sub> pyrolysed, ultrafine particle size depend. on quenching and reaction temp. 2-46963  
 BaTiO<sub>3</sub>, Raman scatt. study of low freq. phonon polaritons 2-46559  
 BaTiO<sub>3</sub>, refractive index above T<sub>c</sub> 2-46526  
 BaTiO<sub>3</sub>, single crysts. growth, by travelling solvent zone technique 2-27077  
 BaTiO<sub>3</sub> single-domain crystal, optical beam asymmetric self-defocusing from photorefr. effect 2-44414  
 BaTiO<sub>3</sub> sputtered films, temp. effect on props. 2-46918  
 BaTiO<sub>3</sub>, static shell model calcs. of electrostriction 2-46484  
 BaTiO<sub>3</sub>, surface electronic struct. and composition at 1500K in high vac. 2-50974  
 BaTiO<sub>3</sub>, T-E phase diagram 2-46509  
 BaTiO<sub>3</sub>, tetragonal-cubic phase transition, Raman study 2-46505  
 BaTiO<sub>3</sub>, thick films, dielec. const., grain size depend. 2-17383  
 BaTiO<sub>3</sub>, undoped, nonstoichiometry 2-17064  
 BaTiO<sub>3</sub>(Cr to Ni), reversible wt. change after annealing, 700 to 1300°C 2-31712  
 BaTiO<sub>3</sub>:Co, diffuse phase transition, dielec. meas. 2-9104  
 BaTiO<sub>3</sub>:Co, optical absorpt., elec. cond., electronic struct. 2-46640  
 BaTiO<sub>3</sub>:Cr(Sn), contact voltammetry investig., acceptor defects form., dielec. nonlinearity rel. to synthesis conditions 2-41283  
 BaTiO<sub>3</sub>:Fe, dielectric and optical props. 2-46457  
 BaTiO<sub>3</sub>:Fe<sup>3+</sup>, effect of Fe content on resistivity anomaly (Czech) 2-30898  
 BaTiO<sub>3</sub>:H(D), impurity IR-absorpt. study 2-46639  
 BaTiO<sub>3</sub>:Mn, EPR study of Mn oxidation states, elec. cond. 2-45880  
 BaTiO<sub>3</sub>:Nb, elec. and optical props. 2-45961  
 BaTiO<sub>3</sub>:Pt<sup>4+</sup>, ESR spectrum, phase transition and Jahn-Teller effects 2-17333  
 BaTiO<sub>3</sub>:Sb, PTC effect as function of 3d element doping, elec. resist., grain sizes, carrier density 2-30887  
 BaTiO<sub>3</sub>-based ferroelec. solid solns., Vegard's law validity, X-ray diffr. meas. 2-16631  
 BaTiO<sub>3</sub>:Sb<sub>2</sub>O<sub>3</sub> semiconducting ceramics, positive temp. coeff. of resist., microstruct. effect 2-36040  
 BaTi<sub>1-x</sub>Sn<sub>x</sub>O<sub>3</sub>, phase transitions, dielectric props. 2-46510  
 BaTi<sub>1-x</sub>Zr<sub>x</sub>O<sub>3</sub>, phase transitions, dielectric props. 2-46510  
 BaWO<sub>4</sub>, quadrupole interactions, <sup>182</sup>W Mossbauer spectra (French) 2-5612  
 BaYbF<sub>6</sub>:Ho<sup>3+</sup> crystal energy transfer mechanism to 2-μ laser channel 2-34771  
 BaZnF<sub>4</sub>:Mn, growth, EPR and luminescence 2-26735  
 Ba<sub>2</sub>ZnNbO<sub>6</sub>, mag. props., Mossbauer spectrosc. obs. 2-21927  
 Ba<sub>2</sub>Zn<sub>3</sub>P<sub>10</sub>O<sub>30</sub>, cryst. struct., decametaphosphate ring 2-40351  
 Ba<sub>2</sub>ZnS<sub>3</sub>, additive to ZnS powder, sintering 2-51859  
 BaZrF<sub>6</sub>, anion-excess fluorite related struct. (French) 2-8495  
 BaZrSi<sub>3</sub>O<sub>9</sub>:Ti<sup>4+</sup>, luminesc. and lattice param. 2-22070  
 Bi<sub>1-x</sub>Ba<sub>x</sub>O<sub>(1-x)/2</sub>, cryst. chemistry anal. elec. props. 2-21383  
 Bi<sub>2-x</sub>Ba<sub>x</sub>O<sub>3/2</sub>, solid soln., cryst. struct. 2-12571  
 BiFeO<sub>3</sub>-BaTiO<sub>3</sub> solid solns., magnetoelec. effect, ferroelec. props. 2-36406  
 (Ca,Ba)<sub>2</sub>S<sub>2</sub>Cu<sub>2</sub>Nd phosphor, electrolum. behaviour 2-22093  
 GeO<sub>2</sub>-BaO amorphous thin films, optical absorpt. edge, optical band gap 2-46804  
 HfF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glasses, influence of processing conditions of IR edge absorpt. 2-5680  
 HfF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glasses, influence of processing conditions of IR edge absorpt. 2-13475  
 HfF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glass, material dispersion characts. determ. 2-17430  
 K<sub>2</sub>Ba(NO<sub>2</sub>)<sub>4</sub>, thermal props., rel. to phase transitions 2-50879  
 La<sub>4-x</sub>Ba<sub>2+2x</sub>Cu<sub>2-x</sub>O<sub>10-2x</sub>, cryst. struct. (French) 2-8496  
 MgMn-ferrite/BaTiO<sub>3</sub>, ferroelectric ferromagnetics 2-51863  
 Na<sub>4</sub>BaTi<sub>2</sub>B<sub>2</sub>Si<sub>10</sub>O<sub>30</sub>, leucosphenite, cryst. struct. determ. 2-40356  
 Na<sub>2</sub>O-BaO-Al<sub>2</sub>O<sub>3</sub>-P<sub>2</sub>O<sub>5</sub> glasses, elec. cond., mixed alkali effect 2-12825  
 Na<sub>2</sub>O-BaO-Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> glasses, alkaline durability 2-52085  
 Nb<sub>2</sub>O<sub>5</sub>-BaO-B<sub>2</sub>O<sub>3</sub>, very pure glass, absorption curve, high index, colour (Japanese) 2-41380  
 (Pb,Ba)Ge<sub>4</sub>O<sub>9</sub>, ferroelec., cryst. struct. and props. 2-46492  
 Pb<sub>5-x</sub>Ba<sub>x</sub>Ge<sub>3</sub>O<sub>11</sub>, domain wall dynamics, acoustic emission study 2-45386  
 SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-BaO-Na<sub>2</sub>O glass system for high numerical-aperture optical fibres 2-49848  
 Sm<sub>1-x</sub>Ba<sub>x</sub>B<sub>6</sub>, solid solutions, valence state of Sm ions, cryst. struct. 2-30841  
 (Sr,Ba)Nb<sub>2</sub>O<sub>6</sub> ceramics, hot-pressed, props. 2-26806  
 Sr<sub>0.6</sub>Ba<sub>0.4</sub>Nb<sub>2</sub>O<sub>6</sub> ferroelec. ceramics, Cu doped, spectral photovoltaic response 2-26431  
 Sr<sub>0.6</sub>Ba<sub>0.4</sub>Nb<sub>2</sub>O<sub>6</sub>:Cu ceramics, ageing study through photovoltaic effect 2-26432  
 Sr<sub>0.6</sub>Ba<sub>0.4</sub>Nb<sub>2</sub>O<sub>6</sub>:Pr<sup>3+</sup>, photoinduced elec. props. 2-1944  
 Sr<sub>0.6</sub>Ba<sub>0.39</sub>Nb<sub>2</sub>O<sub>6</sub>, high freq. elastic waves 2-5184  
 Sr<sub>0.6</sub>Ba<sub>0.4</sub>Nb<sub>2</sub>O<sub>6</sub>:Pr<sup>3+</sup>, diffuse ferroelec. transition, X-ray diffr. study 2-9100  
 Sr<sub>0.6</sub>Ba<sub>0.39</sub>Nb<sub>2</sub>O<sub>6</sub>, ferroelec., SAW transduction and poling 2-25210  
 Sr<sub>0.6</sub>Ba<sub>0.39</sub>Nb<sub>2</sub>O<sub>6</sub>, ferroelec. single cryst., piezoelec., HF dielec. and SAW props. 2-26821  
 Sr<sub>0.6</sub>Ba<sub>0.39</sub>Nb<sub>2</sub>O<sub>6</sub> single cryst., microwave dielec. props. at 35 and 58 GHz 2-26841  
 (Sr<sub>1-x</sub>Ba<sub>x</sub>)<sub>1-y</sub>(Nb<sub>2</sub>O<sub>6</sub>)<sub>y</sub>/Ce, holographic sensitivity depend. on Ce conc. 2-4469  
 Sr<sub>1-x</sub>Ba<sub>x</sub>Nb<sub>2</sub>O<sub>6</sub>, electrets and photoelectrets 2-46463  
 Sr<sub>1-x</sub>Ba<sub>x</sub>Nb<sub>2</sub>O<sub>6</sub>, inhomogeneous cryst., polarisation reversal 2-26810  
 SrCeO<sub>3</sub>-BaCeO<sub>3</sub> solid soln., crystallographic characts. 2-50591  
 TeO<sub>2</sub>-ZnCl<sub>2</sub>-BaO<sub>3</sub> glass, opt. consts. and spectral props. 2-13444  
 ThF<sub>4</sub>-AlF<sub>3</sub>-YF<sub>3</sub>-BaF<sub>2</sub> system glasses, with large optical transmission band, high chem. resist. (French) 2-13512  
 Ti-BaO<sub>3</sub> thin film system, unoriented and oriented, struct. and phase transitions study 2-40705  
 TiO<sub>2</sub>-BaO-B<sub>2</sub>O<sub>3</sub> glass, high-index, colour (Japanese) 2-51628  
 VaF<sub>2</sub> single crysts., dissolution studies 2-21314

## barium compounds continued

- ZrF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub>, influence of processing conditions of IR edge absorpt. 2-5680  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub>, influence of processing conditions of IR edge absorpt. 2-13475  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glass, material dispersion characts. determ. 2-17430  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-ThF<sub>4</sub> glass, US propag., two-level tunnelling system 2-35602  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-ThF<sub>4</sub>:TbF<sub>3</sub> glasses, luminesc. props. 2-26962  
 ZrF<sub>4</sub>-ThF<sub>4</sub>-BaF<sub>2</sub> system glasses, elastic constants 2-12660
- Barkhausen effect**  
 ferrites, polycrystalline, distrib. of amplitudes of magnetisation jumps (Russian) 2-26672  
 ferroelectrics, polarisation reversal, dielectric. viscosity effects 2-31428  
 ferromagnet, 180° Bloch wall motion in imperfect cryst., Barkhausen noise characts. 2-46334  
 ferromagnetic material, domain walls and irreversible magnetisation processes 2-51432  
 ferromagnets, Barkhausen effect relationship with hysteresis loop parameters (Russian) 2-51434  
 Fe-Ni-B-Si, amorphous, annealing effect on Barkhausen impulses 2-8999  
 Fe-Si (3 wt.%) single crystals, Barkhausen noise and domain struct. dynamics 2-51433  
 FeTi<sub>2</sub>S<sub>2</sub>, mag. aftereffect and domain walls 2-36390  
 β-NaH(SeO<sub>3</sub>)<sub>2</sub> crystal, ferroelec. and ferroelastic domain struct. dynamics 2-36573  
 Ni-Fe-B-Si, amorphous, Barkhausen noise, power spectrum 2-8998  
 SmCo<sub>5</sub> sintered mag. alloys, domain wall pinning and nucl., mag. viscosity obs. 2-21819
- Barnett effect** see gyromagnetic effect; magnetisation
- barometers**  
 battery-operated with digital indication (German) 2-10185  
 vibrating wire barometer (Chinese) 2-52938
- barometric pressure** see atmospheric pressure and density
- barrages** see dams
- barrel distortion** see aberrations
- barretters** see thermistors
- baryon-baryon interactions**  
 see also baryon-baryon scattering; hyperon-nucleon interactions; nucleon-nucleon interactions  
 leading particle effect in hadron physics 2-43370  
 short range part in nonrelativistic quark model 2-48950  
 short range part in nonrelativistic quark model 2-48951
- baryon-baryon scattering**  
 see also baryon-baryon interactions; hyperon-nucleon scattering; nucleon-nucleon scattering  
 No entries
- baryon decay**  
 see also baryon hadronic decay; baryon leptonic decay; hyperon decay  
 baryon conservation, nucleon lifetime limit testing 2-29039  
 electroweak interactions and unified theories, Rencontre de Moriond, Les Arcs, Savoie, France (March, 1980) 2-14977  
 Friedmann Universe, expanding matter annihilation 2-6694  
 gauge theories, massive neutrinos and proton decay, Orbis Scientiae, Coral Gables, FL, USA (Jan. 1981) 2-42794  
 ground unification and proton stability in chiral SU(8) theory 2-43247  
 GUT, effective baryon-lepton coupling and the proton decay modes 2-29044  
 neutrons, beta decay in strong EM field 2-19375  
 nonlocal quark model predictions (Russian) 2-298  
 nuclear decay candidate events in Kolar Gold field expt. 2-19374  
 nucleon decay, supersymm. unified theories 2-6973  
 proton decay effects on cosmological future 2-38345  
 proton decay in SU(5) in field-theoretic quark model 2-48987  
 proton lifetime, nuclear contributions 2-48985  
 proton lifetime in asymptotically free grand unification model (Russian) 2-10975  
 semileptonic baryon decay, weak elec. coupling, quark model calc. 2-48986  
 semileptonic decays, radiative corrections 2-43341  
 semileptonic decays in quark model 2-33835  
 SU(7) GUT with nonstandard charged quarks, leptons, low mass mag. monopole, p decay 2-6982  
 subconstituent models satisfying t'Hooft anomaly conditions and approx. proton stability 2-43304  
 twq body decays, proton lifetimes in GUT 2-43236  
 Λ<sup>+</sup> charmed hadrons lifetime meas. review 2-15336  
 n→e<sup>+</sup>π<sup>+</sup>, nucleon decay in nucleus 2-43342  
 n→e<sup>+</sup>π<sup>+</sup>, Soudan mine expt. for baryon decay study 2-43753  
 n-meson+antilepton, SU(5) theory 2-23977  
 n→p(pe<sup>+</sup>)X<sup>0</sup>, charge nonconserving decays, geophysical obs. 2-23978  
 N→pe<sup>+</sup>γ, axial-vector to vector amplitude ratio 2-33835  
 n→pe<sup>+</sup>ν<sub>e</sub>, beta stability in neutron stars 2-23319  
 p decay, baryon- and lepton-number non-conserving processes and intermediate mass scales 2-11003  
 p decay, dedicated experiments, review 2-38880  
 p decay, in superunified models, rel. to cosmology 2-38824  
 p decay probability and matrix elements in SU(5) GUT 2-7028  
 p→e<sup>+</sup>π<sup>0</sup>, Soudan mine expt. for baryon decay study 2-43753  
 p→e<sup>+</sup>π<sup>0</sup>(e<sup>+</sup>ν), nucleon decay in nucleus 2-43342  
 p-meson+antilepton, SU(5) theory 2-23977  
 p→ω<sup>+</sup>(ρ<sup>+</sup>e<sup>+</sup>)(η<sup>+</sup>), scalar-mediated proton decay study 2-43343  
 p→π<sup>+</sup>e<sup>+</sup>(e<sup>+</sup>ν), deep underground detector for nucleon stability study 2-43754  
<sup>16</sup>O, inclusive proton decay in a nucleus 2-33833
- baryon hadronic decay**  
 charmed baryons lifetimes 2-33834  
 hyperon decays, quark decay topologies, factorisation with vacuum insertion 2-43336  
 hyperon nonleptonic decays, in weak interaction theories 2-48983  
 a(1S)<sub>1</sub>→a(1-1S-1)+π, exotic baryon reson. decay width calc. (Russian) 2-48963  
 Δ→Nγ, quadrupole transition in quark model (Russian) 2-33845  
 Δ-Nγ, strong isospin violation and π-π mixing in |ΔS|=1 weak transition 2-33832  
 Λ<sub>b</sub>, two body weak non-leptonic decays 2-19373  
 Λ<sub>c</sub>→Σ<sup>+</sup>π<sup>+</sup>, decay mode in neutrino-induced events 2-48984  
 Ω<sup>-</sup>→Σ<sup>-</sup>π<sup>0</sup>(Σ<sup>0</sup>π<sup>0</sup>)(AK<sup>-</sup>), branching ratios calc. from gravitational model of baryons 2-43340



**baryon hadronic decay continued**

- $\Sigma$ -decay, strong isospin violation and  $\pi\pi$  mixing in  $|\Delta S|=1$  weak transition 2-3832  
 $\Xi$ -decay, strong isospin violation and  $\pi\pi$  mixing in  $|\Delta S|=1$  weak transition 2-3832

**baryon interactions** *see baryon-baryon interactions; lepton-hadron interactions; meson-baryon interactions; photon-hadron interactions***baryon leptonic decay**

No entries

**baryon mass**

*see also hyperon mass*

- broken chiral quark bag model, mass spectrum 2-43320  
 decuplet, interrelations between Regge trajectory parameters and mass formulas (*Russian*) 2-38870  
 flavour-degenerate baryons, wave function mixing 2-43305  
 $N=3$  baryon spectrum, masses, compositions, hyperfine interactions in D35, G37 and G39 sectors 2-3782  
 $\Delta$ , mass calc. in QCD from quark currents 2-19338  
 $N$ , mass calc. in QCD from quark currents 2-19338

**baryon photoproduction**

*see also hyperon production; neutron production; proton production*

- $\gamma\gamma \rightarrow pp$ , 2.0-2.6 GeV, exclusive pair prod. 2-38918  
 $\gamma N$ , charmed mesons and baryons inclusive photoproduction cross section 2-29116  
 $\gamma N \rightarrow FX$ , 75-200 GeV, inclusive prod. cross-section 2-326

**baryon production**

*see also baryon photoproduction; hyperon production; neutron production; proton production*

- cosmological baryon production at TeV temps., unified theory 2-23901  
 inclusive baryon production, polarisation asymm., parton recomb. with SU(6) symm. 2-24056  
 $\Delta(1950)$ ,  $F_{37}$ , resonance, coupling const. and Breit-Wigner parameter from  $\gamma p \rightarrow \pi^+ p$  2-33849  
 $e^+e^- \rightarrow q\bar{q}$ , inclusive prod. of baryons in quark jets 2-19350  
 $e^+e^-$  annihilations, fast baryon prod., combinatorial rules 2-49001  
 $\gamma d \rightarrow$  small mass dibaryon resonance,  $Q < 2.3$  GeV 2-3796  
 $\gamma N \rightarrow N^+ N^+$ , nucleon resonances neutrino excitation in relativistic harmonic oscillator quark model 2-11040  
 $hh$ , secondary particles average multiplicities, quark combinatorics predictions expt. test (*Russian*) 2-48956  
 $K^- d \rightarrow K^+ MM$ , 1.4 GeV, strange dibaryon system search 2-11069  
 $K^- p \rightarrow K^- p \pi^+ \pi^- (K^- p K^+ k^-) (K^- p p)$ , 32 GeV/c, reson. prod. mechanism in four-particle final states (*Russian*) 2-29136  
 $pN$ , 240-500 MeV, pion spectra, dibaryon prod. 2-38894  
 $pp(pp) \rightarrow \Delta^{++} X$ ,  $\Delta^{++}$  isobar inclusive spectra (*Russian*) 2-24050  
 $\pi d \rightarrow$  dibaryon resonances, expt. search 2-3806  
 $\pi N$ , baryon resonance production up to 10 GeV 2-15351  
 $\pi^+ p \rightarrow \rho \Delta^{++}$ , 10 GeV/c OZI rule violation 2-24023  
 $\pi^+ p$ , 15 GeV/c, inclusive  $\rho^0$  and  $\Delta^{++}$  prod. study in off-mass-shell interactions 2-348  
 $\pi^+ p \rightarrow \Delta^{++} X$ ,  $\Delta^{++}$  isobar inclusive spectra (*Russian*) 2-24050  
 $\pi^+ \pi^- \gamma$ , 15 GeV/c, inclusive  $\rho^0$  and  $\Delta^{++}$  prod. study in off-mass-shell interactions 2-348

**baryon resonances**

*see also hyperon resonances*

- decuplet, interrelations between Regge trajectory parameters and mass formulas (*Russian*) 2-38870  
 dibaryon colour isomers 2-23940  
 dibaryon search in  $K^- d \rightarrow K^+ MM$  1.4 GeV interaction 2-11069  
 dibaryons, from particle physics 0-31 GeV 2-38900  
 diquark deuterons with  $J^P = 0^-$  2-29084  
 exotic baryon reson. with isospins  $\geq 5/2$ , props. study (*Russian*) 2-48963  
 flavour-degenerate baryons, wave function mixing 2-43305  
 four- $\Delta$  bound state, from Heitler-London  $\pi\pi NN$  dibaryon model 2-48968  
 ground and low-lying excited baryon states, quark model with hyperfine interactions 2-48953  
 mass formulas, heavy vector meson, nucleon resonances 2-38871  
 $N=3$  baryon spectrum, masses, compositions, hyperfine interactions in D35, G37 and G39 sectors 2-3782  
 nonrelativistic quark model, baryon-baryon interaction short range part 2-48951  
 nucleon resonances in  $\pi N$  scatt., quark models 2-24024  
 SU(4) symmetry, baryon-baryon interaction, short range part in nonrelativistic quark model 2-48950  
 $\Delta(1232)$ , Pauli effects and short-range correlations in nuclear matter 2-38966  
 $\Delta(1232)$  resonance width,  $\pi N \Delta$  coupling effects, vertex form factors, quark model 2-33806  
 $\Delta(1236)$ -hole quenching mechanism in pionic state 2-19455  
 $\Delta(1950)$ ,  $F_{37}$ , resonance, coupling const. and Breit-Wigner parameter from  $\gamma p \rightarrow \pi^+ p$  2-33849  
 $\Delta \rightarrow N\gamma$ , quadrupole transition in quark model (*Russian*) 2-33845  
 $e^+e^- \rightarrow hh$ ,  $h$ =baryon resonance with spin 5/2, differential cross section calc. 2-3800  
 $\gamma d \rightarrow pn$ , 0.18 to 0.6 GeV, differential cross section meas., dibaryon effects 2-43364  
 $\gamma d \rightarrow \pi^+ d$ , dibaryon resonance effects on differential cross section (*Russian*) 2-3794  
 $\gamma d \rightarrow \pi^+ d$ , linearly polarised photon absorpt., dibaryon resonances (*Russian*) 2-19385  
 $\gamma d \rightarrow$  small mass dibaryon resonance,  $Q < 2.3$  GeV 2-3796  
 $\gamma N \rightarrow N^+ N^+$ , nucleon resonances neutrino excitation in relativistic harmonic oscillator quark model 2-11040  
 KN resonances, phase shift anal., review 2-10993  
 $K^- p \rightarrow K^- p \pi^+ \pi^- (K^- p K^+ k^-) (K^- p p)$ , 32 GeV/c, reson. prod. mechanism in four-particle final states (*Russian*) 2-29136  
 $NN$ , 590 MeV, phase-shift anal. (*Russian*) 2-38895  
 $NN$   $^1D_2$ , scatt. amplitude, reson. free  $N/D$  model 2-19454  
 $NN$  scattering,  $^1S_0$  effect of  $N^*$  (Roper) and  $\Delta$  resonances on phase shift up to 1 GeV 2-7042  
 $pN$ , 240-500 MeV, pion spectra, dibaryon prod. 2-38894  
 $pp(pp) \rightarrow \Delta^{++} X$ ,  $\Delta^{++}$  isobar inclusive spectra (*Russian*) 2-24050  
 $pp$  scatt., 300-800 MeV,  $\Delta_{31}$  total cross section differences,  $^1D_2$  and  $^3F_3$  diproton resonances 2-38853  
 $\pi d \rightarrow$  dibaryon resonances, expt. search 2-3806  
 $\pi d$  elastic scatt. complete set of observables and dibaryon resonances 2-7045  
 $\pi d_{\text{pol}}$ , 138 MeV, dibaryon signals search by tensor polarisation meas. 2-49084

**baryon resonances continued**

- $\pi N$  data, dispersion relations, partial wave anal., resonances 2-10991  
 $\pi N$  resonances, phase shift anal., current status 2-10990  
 $\pi^+ N \rightarrow \pi^+ \pi^- N$ , 555 MeV/c,  $\Delta^- \Delta^{++}$  EM mass difference 2-7033  
 $\pi^+ p \rightarrow \rho \Delta^{++}$ , 10 GeV/c OZI rule violation 2-24023  
 $\pi^+ p$ , 15 GeV/c, inclusive  $\rho^0$  and  $\Delta^{++}$  prod. study in off-mass-shell interactions 2-348  
 $\pi^+ p \rightarrow \Delta^{++} X$ ,  $\Delta^{++}$  isobar inclusive spectra (*Russian*) 2-24050  
 $\pi^+ \pi^- \gamma$ , 15 GeV/c, inclusive  $\rho^0$  and  $\Delta^{++}$  prod. study in off-mass-shell interactions 2-348

**baryon scattering** *see baryon-baryon scattering; lepton-hadron scattering; meson-baryon scattering; photon-hadron scattering***baryon spin and parity**

*see also hyperon spin and parity*

- ground and low-lying excited baryon states, quark model with hyperfine interactions 2-48953  
 $pp$ -scattering, spin-spin correlation energy depend. at 550-950 MeV (*Russian*) 2-24020

**baryons**

- see also baryon resonances; baryon spin and parity; hyperons; nucleons*  
 antibaryon-baryon pair prod., baryon configurations of arbitrarily small mass 2-3767  
 baryogenesis without the out-of-equilibrium decay of superheavy bosons 2-53402  
 colour-bearing scalar quanta, dynamic effects in baryons 2-23929  
 excited states, Bethe-Salpeter model with harmonic oscil. interaction 2-29019  
 ground and low-lying excited baryon states, quark model with hyperfine interactions 2-48953  
 magnetic moment, in chiral bag model (*Russian*) 2-11023  
 magnetic moments, spectrum-generating group theory 2-3784  
 magnetic moments, spin depend. quark-quark interaction 2-48991  
 matter-antimatter domains in the Universe, vacuum walls soln. baryon asymmetry in GUTs 2-10540  
 relativistic bound states of fermions and antifermions, baryons 2-33809  
 SO(10) left-right symmetric GUT, neutrino mass and cosmological baryon excess 2-23887  
 spectroscopy with QCD sum rules 2-29081  
 structure functions in covariant quark-parton model with confinement 2-43302  
 $SU(2)_L \times U(1) \times SU(3)_C$  model, spontaneous breaking of global baryon number symmetry 2-23873  
 $SU(6)$  'unitary energy band' structure in the tribaryon system (*Chinese*) 2-33822  
 unified nonrelativistic  $qq$  pot. for mesons and baryons 2-23944  
 Wilson loop average in large- $N$  limit 2-6948  
 $q\bar{q}$  baryons, phase consistency and dissociated wave functions 2-48954

**barysphere** *see Earth core***basicity** *see pH***bathymetry**

- Atlantic Ocean, isostasy of fracture zones from gravity and topography profiles 2-32487  
 Atlantic Ocean basement relief and morphological charact., tectonic interpretation 2-6346  
 Barents Sea, geomorphological signs of ice sheet movements 2-47911  
 Bathymetric Data Reduction Subsystem (BDRS) 2-52821  
 Caribbean Sea, bottom topography rel. to optical props. and water dynamics (*Russian*) 2-10073  
 Mid-Cayman Rise, rift valley topography rel. to anomalously thin oceanic crust 2-14456  
 $N$  Eurasian continental slope, boundary and morphological features 2-22971  
 Gippsland Lakes, tidal scour, erosion mechanisms 2-18422  
 GLORIA side scan sonar program 2-52933  
 gravity observations at sea, topographic-isostatic reduction of profile gravimetric obs. 2-6302  
 Hess Rise, N Pacific Ocean, bathymetry, surface sediment distrib. and environment of deposition 2-42349  
 central Maldiva Ridge (Eight Degree Passage), bottom topography studies (*Russian*) 2-10036  
 Marquesas-Line Islands region of Pacific, tectonics rel. to crust thickness 2-52777  
 $S$  Mid-Atlantic Ridge isostasy transfer function from gravity and topography anal. 2-42329  
 midocean ridge bottom relief rel. to spreading rates 2-47850  
 New Zealand region, effects of bathymetry on locations of oceanic fronts 2-6371  
 North Sea, residual vorticity induced by tidal currents in combination with bottom topography 2-18442  
 ocean circulation interaction, resonant flows induced by Rossby lee waves 2-18503  
 ocean floor bathymetry and heat flow, effects of lithosphere rigidity 2-18418  
 SE Pacific, Early Cinozoic plate tectonic history 2-52801  
 Pacific Ocean, volcanotectonic provinces identification, lateral resolution effects from satellite obs. 2-23242  
 sea bed stereoscopic visualisation and contour mapping, using bathymetric sidescan sonar 2-48053  
 Shag Rocks Passage, Scotia Ridge, bathymetry rel. to bottom water overflow events 2-23018  
 shallow ocean, residual vorticity generation from wind action and bottom topography 2-6394  
 SLAR imagery of sea, research results until 1978 2-6456  
 Society Islands lithosphere flexure from island uplift, bathymetry and geoid height obs. 2-6339  
 Southern Ocean abyssal plains, formation and sediment origin 2-22970  
 topographic forcing of supercritical thermal convection in porous layer of oceanic crust 2-14454

**batteries** *see cells (electric); primary cells; secondary cells; solar cells***Bauschinger effect**

- anisotropic materials, hardening model 2-31743  
 metals, deformation induced rotation, plastic behaviour, constitutive eqns. 2-20545  
 Zircaloy-2, Bauschinger effect 2-47129  
 Al-Ag(Cu), two-phase alloys, plastic anisotropy in load reversal tests 2-51976  
 Cu, Bauschinger effect, pure and dispersion hardened specimens 2-2548



Bayard-Alpert gauges *see ionisation gauges*

## Bayes methods

- fission reactor component failure, scarce data anal. 2-11254
- frequency line tracker for US Navy passive tracking algorithm program, Bayesian approach 2-44537

bays (magnetic) *see geomagnetic variations*

## BCS theory

*see also many-body problems*

- A=180-200, deformation and spectroscopic props. from self-consistent calcs. 2-15363
- A=85, 87, 89, 91, core polarisation effect on mag. moment 2-24122
- anisotropic superconductor, with repulsive average interaction, impurity effects 2-21714
- antiferromagnetic superconductor, ground state in presence of homogeneous mag. field 2-26547
- antiferromagnetic superconductor, one-dimensional, electron pairing in homogeneous mag. field 2-51369
- antiferromagnetic superconductor, pairing, mean field theories 2-13233
- correlated BCS theory for strongly interacting fermion system 2-28759
- deformation props. from self-consistent calcs. 2-15362
- Fermi liquids, strongly correlated, pairing phenomena 2-42940
- ferromagnetic superconductor, Vonsovsky-Zener type model, multicritical behaviour 2-31060
- impure anisotropic superconductor,  $T_c$ , BCS theory 2-31005
- 2H layer compound,  $3 \times 3$  CDW state, band struct., density of states and total band struct. energy 2-8764
- metallic supercond., ground state energy calc. using BCS theory 2-21716
- nonequilibrium supercond., depairing influence on charge imbalance 2-36246
- nonequilibrium superconductivity, temp. depend. solns., excess distrib. functions, variational approach 2-21715
- nuclear level densities with pairing are self-consistent ground-state shell effects 2-19450
- one-dimensional metal, competition between supercond. and insulating phases 2-21574
- pairing theory, quasiclassical Green's function 2-31035
- quark masses from phenomenological qq pot. 2-23947
- quasiclassical Green's function in the BCS pairing theory 2-26546
- real space electron pairing, transition to k-space pairing 2-31036
- scattering in superconducting state, theory 2-46196
- superconductivity, macroscopic manifestations, theory 2-13234
- two-band superconductors with Anderson impurities, sp. ht. discontinuity 2-13237
- $^3\text{He}$ - $^4\text{He}$  mixtures, superfluidity proximity effect 2-21422
- $^3\text{He}$ -A, hydrodynamic order-parameter, static susceptibility 2-45662
- $\text{La}_{10}\text{Cu}_{30}$ , amorphous, supercond. penetration depth 2-31046
- $\alpha$ Os, A=184-196, deformation props. from self-consistent calcs. 2-15362
- $\alpha$ Pt, A=182-196, deformation props. from self-consistent calcs. 2-15362
- Th-Dy, dil.,  $\text{Dy}^{3+}$  electronic spin relax. in supercond. state, Mossbauer study 2-36213

## beam choppers

No entries

## beam-foil spectra

- molecular ion beams from tandem accelerators 2-11324
- molecular ions dissociation by thin foils, interatomic separation and rel. vel. distrib., Monte Carlo calc. 2-4375
- Ar VIII, beam-foil excitation, relative level populations 2-43880
- $\text{Ar}^{12+} + \text{C}$  foil, K X-ray prod. foil thickness effect 2-33696
- Be II, doubly excited quartet states 2-43834
- C stripper foils made by DC glow discharge process, physical props. and structure 2-11334
- Ca, charge states, wavelengths and lifetimes of unidentified transitions 2-20022
- Cu+Fe collisions, K-shell X-ray prod. probability, target thickness effect 2-33697
- Fe XIII to XVI, beam-foil lifetimes 2-24667
- Fe XIII to XVI, beam-foil lifetimes, decay curve anal. 2-39368
- H atoms, highly excited, formation in beam-foil interaction 2-44074
- $\text{H}^+ + \text{C}$ -foil collisions, K-Auger emission meas. 2-44078
- $\text{H}_2^+$ , Lyman- $\alpha$  radiation enhancement following foil-induced dissoc. 2-44075
- $\text{H}_2^+$ , Lyman- $\alpha$  radiation enhancement following foil-induced dissoc. 2-44075
- $\text{He}^+$  beam-foil excited state formation, surface interaction effects 2-785
- Kr VIII, beam-foil excitation, relative level populations 2-43880
- N IV,  $2s2p$   $^3\text{P}$  level, lifetimes, beam foil spectra cascade anal. 2-11436
- $^{23}\text{Na}$ , nuclear spin polarised beam prod. using optical pumping 2-24895
- O V,  $2s2p$   $^3\text{P}$  level, lifetimes, beam foil spectra cascade anal. 2-11436
- $\text{P}^+ + \text{C}$  foil, Auger electron spectra 2-49355

## beam-foil spectroscopy

- molecular effects in optical beam foil spectroscopy using  $\text{H}^+(\text{H}_2^+)(\text{H}_3^+)(\text{D}^+)(\text{D}_2^+)(\text{D}_3^+)(\text{HD}^+)(\text{HeH}^+)$  projectiles 2-49564
- Au foil,  $^4\text{He}^+$  energy straggling meas. by backscattering technique, foil nonuniformity correction 2-4181
- C foil+highly stripped ions, equilibrium charge-state distrib. 2-20165

## beam handling equipment

*see also particle beam diagnostics*

- Antiproton Accumulator, magnet fabrication and structural design 2-7421
- Antiproton Accumulator magnets, automatic measuring system 2-7422
- Berkeley SuperHilac, fast-closing vacuum valve 2-49207
- CHEER RF system 2-24470
- chromatic aberration electron monochromator 2-43142
- cyclotron heavy-ion beam sweeping apparatus for uniform irradiation of samples 2-43653
- cyclotron magnets, fast field mapping device 2-168
- Daresbury Synchrotron Radiation Source, multipole magnet design and testing 2-7420
- DESY, beam lines and instruments for synchrotron radiation expts. 2-4160
- DM2 solenoidal detector at DCI, realisation, main parameters 2-7419
- electron beam circular scanning in dissector, parameters meas. using CRT 2-23771
- electron beam device for extracting particles into longitudinal inhomogeneous plasma 2-15268
- electron beam device for extracting particles into longitudinal inhomogeneous plasma 2-19210
- electron beam exposure sytem, positioning stage driven by hydraulic cylinder 2-28930
- electron monochromator, low-energy electrostatic lenses system 2-43143

## beam handling equipment continued

- electrostatic ellipsoidal mirror, fast separator for recoiling and highly charged particle 2-15660
- electrostatic mass spectrometer, with time-of-flight detector 2-43126
- electrostatic on-line collection system 2-20198
- external beam proton microprobe, for materials anal. 2-43648
- FN tandem accelerator, two-loop beam energy stabiliser 2-11321
- head magnet for cancer therapy electron accel. 2-43665
- heavy ion linear accelerator, resonant cavities, energy gain meas. 2-565
- high current relativistic electron accelerators, vacuum diodes, stability of operation 2-39259
- high gradient pulsed proton beam accelerating equipment, 250 keV, design and testing (Chinese) 2-34228
- high vacuum accelerator tubes, prebreakdown and breakdown processes, review 2-11310
- inertial confinement heavy ion fusion, RF linac driver 2-15615
- ion impact spectrometer (Japanese) 2-19215
- ion sources, neutral beam injection, prototype for high current density ion beam production 2-48837
- ion storage ring, electron cooling 2-24467
- iris cavities, circularly symmetric EM fields theory 2-24453
- Isabelle magnet tubes, choice of steel, low temp. mech. props. 2-19832
- ISR axial field spectrometer magnet, polar coord. mag. field meas. system 2-169
- ISR low- $\beta$  quadrupoles, protection and monitoring 2-579
- ISR superconducting quadrupoles, mag. meas. 2-7424
- JAERI heavy ion tandem accelerator 2-11298
- KEK superconducting solenoid and its cooling system for pulsed muon channel 2-7426
- large aperture analysis magnet with Al coils 2-11345
- LELA undulator design 2-19814
- LEP, beam handling equipment and ring history (Dutch) 2-24460
- LURE, Orsay, beam lines and new experiments 2-4161
- magnetic deflector systems for electron beam instruments, variety and classification (Russian) 2-247
- magnetic field design for a high energy physics detector 2-7444
- MAX, beamline I modifications for synchrotron radiation research 2-4162
- microprocessor-based beam sweep control unit 2-7415
- molecular beam valve, electromagnetic, producing 70 microsec. pulse 2-10921
- multifilamentary A15 superconductors, development at Airco (USA) 2-17255
- multiple beam electrostatic quadrupole focused linac, heavy ion fusion appls. 2-15642
- multisegment ring magnet, multipole field calc. (Chinese) 2-34225
- neutron polarisation, DC current spin-flip device 2-19812
- NMR magnet regulator cct., search and lock regulation circuitry for accelerator bending magnets 2-11355
- NSF, high gradient, high vacuum accelerator tube development 2-11311
- Oak Ridge 25 MV tandem heavy ion accelerator, status report 2-11299
- particle accelerator, pulsed magnet supercond. cable (Chinese) 2-19819
- periodic accel. tube discharges investigation with capacitive pickup array 2-11314
- pressured Pierce type high gradient accelerating tube, 250 keV, design and testing (Chinese) 2-34227
- proton beam production and focusing in pinch-reflex diode 2-24472
- proton microprobe beam line, with supercond. final lens, for Van de Graaff accelerator 2-43647
- PTB, synchrotron radiation facility 2-4163
- Saclay NN polarised beam target expt., mag. system 2-7425
- sector magnet for IPCR separated sector cyclotron 2-7418
- sectorial electromagnet, mag. field inhomogeneity 2-24466
- shielded beam channel septum magnet 2-580
- slit-stabilised electrostatic accelerators, automatic energy scanning system 2-43646
- Stony Brook FN tandem operation 2-11305
- superconducting magnets, appl. (French) 2-24422
- superconducting magnets, end field multipoles, orbit effects 2-43651
- superconducting magnets for high energy accelerators, harmonic meas. 2-567
- superconducting magnets for high energy accelerators 2-581
- surface muon beam at SIN 2-43649
- synchrotron, matched race-track with quadrupole lenses 2-7414
- tandem accelerator straight field tube, field pattern choice and optical characts. 2-11315
- tandem accelerator tube leaking procedure using low voltage arc discharge 2-11312
- wiggler magnet, ST, for storage ring, design, construction, testing 2-39258
- XTU tandem Van de Graaff accelerator, progress report 2-11297
- Al anodised strip excitation coils for LEP magnets 2-7423
- C, amorphous and graphitised foils, differences in stripper qualities 2-11336
- C stripper foil behaviour in  $^{127}\text{I}$  beam 2-11338
- C stripper foils, radiation lifetimes and failure mechanisms 2-11335
- C stripper foils comparative performance in Argonne FN tandem 2-11337
- C stripper foils made by DC glow discharge process, physical props. and structure 2-11334
- He atomic metastable beam, intensity control 2-49601
- Li lens for high energy particle beams axially symmetric focusing 2-24465
- Nb 500 MHz supercond. cavity, expts. at CERN 2-24468
- Nb, elliptically shaped RF cavities, expt. and theoretical results 2-15648

## beam handling techniques

*see also mass spectroscopy; particle beam diagnostics; particle optics*

- accelerator theory 2-29469
- antiproton prod. within fixed acceptance, optimisation and efficiency 2-39256
- betatron electron energy control and stabilisation system 2-43641
- charged particle beam monochromatisation by laser in undulator (Russian) 2-24474
- charged particle beams, post acceleration systems (Russian) 2-29476
- charged particle differential collision terms in  $S_q$  appl. 2-34222
- CNEA 20UD tandem accelerator, microcomputer based communication system 2-11318
- collisionless relaxation of phase oscillations of particles trapped by accelerating waves (Russian) 2-24475



**beam handling techniques continued**

crystal septum, efficiency of ultrarelativistic particle beam deflection, channelling mode 2-15652  
 current limitation in an accelerator with variable-phase focusing 2-15656  
 diode, magnetically insulated, high-current ion flux generation 2-39261  
 dipole magnetic calc. for vel. filter SHIP and fusion expts. computer simulation 2-245  
 electron beam, relativistic, transport in irregular waveguide, transient phenomena 2-29473  
 electron cooling, principles and fundamental props., book contrib. 2-29477  
 electrostatic accelerator control systems developments 2-11317  
 electrostatic ellipsoidal mirror, fast separator for recoiling and highly charged particle 2-15660  
 electrostatic ion optics and beam transport for ion implantation 2-834  
 EM isotope separator ion optics 2-4046  
 emission source for molecular ion studies 2-38712  
 epithermal neutron beams for medical applications using research reactors 2-19719  
 ETA gun characts. 2-564  
 FN tandem accelerator, supercond. linear accelerator booster project status report 2-11308  
 FN tandem accelerator, two-loop beam energy stabiliser 2-11321  
 heavy ion beams, laser cooling 2-7427  
 heavy ion fusion, transverse emittance requirements 2-4156  
 Heidelberg proton microprobe using 6 MV tandem Van de Graaff accelerator 2-14044  
 high intensity heavy ion sources, physics, chemistry and technology aspects 2-4157  
 high-current relativistic charge-neutralised electron beam, pinching in mag. fields 2-10918  
 in-situ implantation system in ANL HVEM-tandem facility 2-7413  
 inertial confinement fusion using light ion beams 2-15614  
 inertial confinement fusion, ion beam drivers 2-15613  
 ion accelerator facility for nuclear bombardment target prep. 2-7412  
 ion beam, axial focusing in mag. analyser with nonuniform field and electrostatic lens 2-20245  
 ion beam collective focusing 2-40186  
 ion extraction optics, slot end effect 2-11630  
 ion implantation, beam optics design, overview 2-4447  
 ions small angle multiple scatt. for Moliere pot. 2-42881  
 JAERI heavy ion tandem accelerator 2-11298  
 JAERI magnetic spectrograph design for heavy-ion reaction studies 2-4168  
 LELA undulator design 2-19814  
 LEP, polarised electron/positron beam prospect survey 2-43640  
 linear accelerator, single bunch electron beam radiation loss expt. obs. 2-7411  
 magnet design, automated optimisation using boundary integral method 2-48728  
 magnet optics, beam transport for ion implantation processes 2-4448  
 magnetic spectrograph ion-optical system, induced aberrations optimisation 2-4169  
 magnetic spectrograph SPES. 4 for particle identification up to 4 GeV/c 2-15661  
 MAMI microtron, beam optics and magnet technology 2-4152  
 microprocessor-based beam sweep control unit 2-7415  
 multiple foil bremsstrahlung sources, theoretical and expt. studies 2-29471  
 Munich MP-tandem accelerator improvements 2-11304  
 negative-ion injectors, recuperator, expt. simulation 2-14121  
 Oak Ridge 25 MV tandem heavy ion accelerator, status report 2-11299  
 optical beam, sequential estimation of position 2-6834  
 particle acceleration in an HF field inhomogeneous over its cross section 2-15654  
 particle beam guidance systems design, ray optics and phase ellipse optics development 2-571  
 particle moving in external field, photon spectrum equivalent to field 2-34221  
 permanent magnet quadrupoles, variable strength focusing 2-4155  
 physics reviews, book 2-28617  
 proton beam, intense, space charge neutral, compression by axial mag. field 2-25602  
 proton-proton (antiproton) storage ring, amplitude growth 2-566  
 pulse injected ions, RF quadrupole trapping 2-48836  
 Pulselac C inductive linear accelerator, space charge neutralised ion beam for inertial fusion 2-4150  
 Rehovot 14 UD Pelletron status report 2-11306  
 relativistic beam, high-current, waveguide buncher optimisation 2-19830  
 relativistic electron beam focusing in high-voltage diode, mag. fields observation 2-15657  
 relativistic electron bunch acceleration, problems of energy extraction 2-29474  
 relativistic particles, in mag. or electric sector fields, quadrupoles, transfer matrices 2-19807  
 Rutherford backscattering spectrometry, automatic beam alignment for channelling meas. 2-19815  
 second-order magnetic achromat, matrix element vanishing 2-20239  
 sector magnet, second order image aberration meas. 2-572  
 SIMS beam optics 2-246  
 Stony Brook FN tandem operation 2-11305  
 Strasbour MP-10 accelerator upgrading 2-11296  
 superconducting magnets, end field multipoles, orbit effects 2-43651  
 surface muon beam at SIN 2-43649  
 Tandem project, 20 MV electrostatic accelerator development 2-11302  
 tandem accelerator straight field tube, field pattern choice and optical characts. 2-11315  
 tandem beam bunching system, design consideration and present status 2-11319  
 tandem Dynamitron, intense low energy heavy ion beams 2-11326  
 tandem Van de Graaff accelerator pulsed beam 2-11320  
 TRANSOPT, second order beam transport design code with optimisation and constraints 2-573  
 two-magnet doubly achromatic beam deflection system for electron linac beam 2-4154  
 Van de Graaff accelerator, bremsstrahlung characts. and particle trajectories in inclined field tubes 2-11313  
 VIVITRON, Strasbourg MP-10 electrostatic accelerator upgrading 2-11327  
 XTU tandem Van de Graaff accelerator, progress report 2-11297  
 He<sup>+</sup> bunched ion beam, generation and time compression 2-15650

**beam handling techniques continued**

Li lens for high energy particle beams axially symmetric focusing 2-24465  
 S, highly stripped ions prod. using dual MP tandem facility in accel-decel mode 2-11325  
 Sc filtered neutron beam using separated isotopes as, secondary filter 2-15647

**beam-trapping** *see self-trapping*

**bearings (machine)** *see machine bearings*

**behavioural sciences** *see social and behavioural sciences*

**behavioural sciences computing** *see social and behavioural sciences computing*

**bells**  
*see also musical instruments*  
 Beijing 'Great Bell' thickness meas. by US pulse overlap (Chinese) 2-50024

**bending**  
*see also bending strength; buckling; stress analysis; torsion*  
 bar, thin walled, of open cross-section, second order strains and instability 2-25281  
 bars, thick, curved, subject to bending, tension and shear, complete yield at collapse (Polish) 2-20555  
 beam, rectangular, bending, damping and fatigue 2-30033  
 beam, rigid-plastic shallow curved large deflections 2-50119  
 beam, thin-walled pretwisted, displacement and strain fields for extension, bending, torsion and warping 2-1127  
 beam in random temp. field, deflection and reactions 2-50123  
 beam tapering in accordance with fourth-order parabola, bending oscills. 2-1138  
 beams, prismatic, with central circular cavity, torsion (Russian) 2-12042  
 beams with arbitrary constraints at supports under arbitrary loads, plane flexure stability 2-50132  
 Bernoulli-Euler beam, creep, relaxation and cyclic behaviour using state-variable constitutive model 2-4734  
 blade, cantilever, pre-twisted, coupled bending-bending vibrs., shear deflection, rotary inertia, Reissner method 2-39847  
 blank production by breaking, loading parameters effect on metal fracture process 2-51940  
 bone, wet, cantilever bending, streaming pot. and piezoelectric mechanism comparison 2-22718  
 brittle materials, fracture surface energy determination, conditions selection 2-9477  
 cantilever beams, large deflections 2-39815  
 cantilever cylindrical shell under impulsive load at free edge, transient response 2-1118  
 ceramics, transient creep in bending tests 2-47119  
 cladding tube ballooning problem with account of displacement and bending components 2-39112  
 composite, reinforced shells, polymeric, optimisation 2-35063  
 composite materials discs, stress conc. around circular aperture during flexure 2-35066  
 constructional materials, unit for mech. props. determ. at low temps. 2-5997  
 continua, rigid-perfectly plastic, limit anal., mixed formulation and mixed finite elements 2-50081  
 cord-rubber composites, mech. props. 2-47147  
 Cosserat plate theory 2-39841  
 creep crack growth, critical anal. 2-30518  
 curved bars, out-plane vibrs., shear deformation, rotatory inertia 2-20572  
 cylinder, infinite solid, under bending by conc. load, stress state 2-4726  
 cylinder, thin-walled, internally pressurised, bending and torsion with creep 2-12053  
 damped beam with general end conditions, derivation of eigenvalues and mode shapes for bending motion 2-35061  
 dislocations effect on Pendellosung fringes in bent cryst. 2-35508  
 double chord RHS T joints modelling 2-50108  
 drilling freedom problem finite element formulation 2-50110  
 dynamic viscoelastic characteristics determination, by mech. impedance method 2-20616  
 elastic ring reinforced by very rigid fibres, boundary value problems, asymptotic behaviour 2-30020  
 electron microscope study of bend-contour arrangement and bend geometry 2-50491  
 fibre reinforced composite, bending during pressing into Pb plastic medium (Russian) 2-9366  
 fibre reinforced cylinders, elastic-plastic deformations 2-16249  
 fibre-optic microbending acoustooptic sensor design optimisation 2-1037  
 flange connections, fatigue strength under simultaneous cyclic bending and tension (Russian) 2-30063  
 glassy rod, bending motions, volume viscosity, compressibility, shear behaviour, rheological and thermodynamic models 2-25225  
 graphite, fracture surface energy determination, conditions selection 2-9477  
 integrated optics, low-loss bends 2-25147  
 laminated shell structures, finite element analysis 2-20564  
 membrane approximation of the behaviour of the drop shaped tank under symmetrical loading 2-39819  
 metallic fibre reinforced composites, deform. characts. and fracture 2-36918  
 mirrors, cylindrical, parabolic, made by bending thin glass she ets 2-20433  
 mixed plate bending analysis, spline functions with multiple knots (German) 2-50116  
 Naghdi-Reissner model for bending plate, finite element method. (French) 2-18901  
 nuclear fuel pin cladding, creep relaxation, bending and ovalling stresses 2-39158  
 optical fibre waveguide, bent, optical characts. 2-34922  
 optical fibres, graded-index, mode coupling due to microbending 2-20415  
 optical fibres, single mode, microbending loss in a loose tube coating 2-1026  
 optical multimode fibres, curvature loss 2-39749  
 optimum design of stiffened conical shells with natural frequency constraints 2-10612  
 panels, elastic, in a supersonic gas flow, parametric oscills. 2-44667  
 parametric dynamic systems, multiple degree of freedom, instability study 2-44675  
 path-stability of a crack crossing a beam in bending 2-44688  
 piezoceramic shell, free, eqns. of electroelasticity 2-26823  
 pipe, bending and torsion, with creep 2-24320



**bending continued**

- pipe, thin-shelled, stability over elastic limit under torsion (*Russian*) 2-12058
- pipes, circumferentially cracked, wall breakthrough, plastic fracture instability analysis 2-30072
- plate, anisotropic elastic, finite torsion and flexure, one-dimens. theory 2-50103
- plate, circular equilibrium and stability, nonlinear finite element computation 2-1131
- plate, elastic, bending, Reissner's model, boundary integral eqn. soln. 2-44652
- plate, elastic isotropic finite curvilinear clamped, deflection under isolated force at arbitrary point 2-12039
- plate, elliptic, anisotropic, arbitrarily laminated, under uniform press., closed-form soln. 2-16236
- plate, least squares anal. (*Chinese*) 2-25280
- plate, nonlinear, bending problems, analytic method 2-50130
- plate, nonuniform, infinite, contact interaction with asymmetrically supporting elastic element 2-50200
- plate, rectangular, elastic/perfectly plastic, springback after biaxial pure bending, result range of applicability 2-44658
- plate, rectangular, springback after biaxial elastic-plastic pure bending 2-44657
- plate, rigid/linear work-hardening, press-brake bending 2-25269
- plate, round multilayered, bending, and stress/strain state 2-50128
- plate, simply supported laterally loaded, loss of contact in right-angle corner vicinity 2-50204
- plate, thin, elastic, flexural motion, nonlinear boundary layer theory near edge 2-12077
- plate, thin, elastic, flexural motions, nonlinear theory 2-12076
- plate bending anal. discrete and non-discrete mixed methods 2-39826
- plate bending element 2-50109
- plate bending finite element formulation 2-18891
- plate bending theory, biharmonic problem, numerical method 2-18896
- plate problems, hybrid anal. 2-50114
- plate subject to pure bending, shear band development 2-25270
- plate thick, with central crack, stress intensity factor 2-39856
- plate with through flaw, bending, hybrid stress finite element anal. 2-50118
- plates, rectilinear, with mixed attachment condition along the contour, bending problems, homogeneous solns. 2-44664
- plates thin elastic, weakened by cracks, bending 2-4768
- polyamides, constructional, natural ageing, effect on mech. props. 2-17758
- polycarbonate, surface craze growth kinetics after exposure to n-heptane 2-47205
- polymer, nonlinear elastic bar, stability on bending (*Russian*) 2-2556
- rectangular plates, semi numerical analysis 2-39817
- rod, cantilever circular, non-linear anal. due to bending 2-25268
- rod, energy dissipation with independent flexural-torsional vibrs. 2-52158
- rods, flexural waves, within axial plastic compressive wave 2-12082
- shaft, rotating asymm., flexibly supported, forced flexural vibr. (*Polish*) 2-8077
- shell, incomplete toroidal, symmetric finite deformations, kinematics and statics 2-25266
- shell, incomplete toroidal, symmetric finite plastic deformations, constitutive eqns. 2-25267
- shell, thin-walled cylindrical viscoelastic, dynamic stability 2-35073
- shell heavy elastic cylindrical, equilb. shape 2-50102
- shell of rotation, boundary conditions at pole (*Russian*) 2-30034
- shells, cylindrical, laminated, composite, thermoelasticity 2-30021
- shells, cylindrical, with elastic frames, stability, expt. investigation 2-8059
- shells, ruled surface, based on circle, bending state (*Polish*) 2-20556
- simply supported rhombic plate, stress meas., bending moments 2-25337
- slabs, limit state design 2-44656
- steel, austenitic stainless, rods, energy dissipation with interconnected bending and torsional vibrs., static stresses effect 2-41699
- steel, C, type S10C and S45C, fatigue life under rot. bending and reversed torsion, understress effect 2-5923
- steel, fatigue crack propagation of SNCM8 in rotating bending, effect of environment (*Japanese*) 2-9402
- steel, ferritic, R curve determ., appl. of AC pot. drop technique 2-13873
- steel, ferromag., rods, energy dissipation with interconnected bending and torsional vibrs., static stresses effect 2-41699
- steel, forging, low-cycle fatigue evaluation with strain criteria for fracture 2-13910
- steel, low C, brittle-ductile state diagram in impact bending 2-52044
- steel, low C, plate, fatigue strength with a sharp notch and precrack under plane bending 2-5925
- steel, medium C, press-fitted specimens, fatigue strength, influence of varying stress amplitude (*Japanese*) 2-9401
- steel, mild, crack tip plastic flow, expt. study 2-13794
- steel, stainless, structural stability, rel. to physico-mech. props. 2-17719
- steel reinforced concrete, impact bending stress (*German*) 2-47117
- steel tubes, resist. to external pressure, effect of a bend (*Russian*) 2-31719
- stiffness matrices, derivation from integral equations 2-25245
- strip with series of holes or inclusions, flexure 2-8035
- structural materials, critical stress intensity factor determ., from allowance for load-displacement graph 2-47280
- surface fluids, bending strain, constitutive relations, corotational time derivatives 2-35100
- surface stresses, X-ray scatt. diagnostic technique (*Russian*) 2-44974
- symmetric linearised eigenvalue problems simultaneous inverse iteration 2-10607
- tapered cantilever beams, flexural vibr., Reissner method anal. 2-25292
- test method for small plastic strains in materials during flexure 2-37022
- testing, samples flexing simulation 2-9480
- thin elastic plates, appl. of theory of curved finite elements to boundary value problems 2-18902
- thin-walled member with open cross section, non-linear theory 2-50136
- tube, thin-walled long, with slightly bent axis, elastic buckling (*Russian*) 2-1132
- two-cell anisotropic tube, stiffness 2-50104
- Al film, plasma vapour deposited, adhesion failure by repeated bending of substrate 2-2689
- B fibre reinforced Al, deform. characs. and fracture 2-36918
- Bi film, plasma vapour deposited, adhesion failure by repeated bending of substrate 2-2689
- Cu crystal, bent, elec. resistivity, annealing effect 2-13827

**bending continued**

- Cu, diffusion of Al along dislocations 2-8674
- LiF film, vac. evap., intrinsic stress determ. using cantilevered plate technique 2-21472
- Mn-Cu rods, energy dissipation with interconnected bending and torsional vibrs., static stresses effect 2-41699
- Nb<sub>3</sub>Sn multifilamentary superconductor, strain-scaling law, uniaxial and bending strains 2-8929
- Ni, fatigue, bending, surface hardening 2-41738
- Ni plate, neutron irradiated, stress meas. by X-ray  $\sin^2\psi$  method 2-50221
- (Pb<sub>1-(3x/2)+(7/2)Nd<sub>3</sub></sub>)(Ti<sub>1-y-z</sub>Mn<sub>y</sub>In<sub>z</sub>)O<sub>3</sub> piezoelectric ceramics SAW vel., strain effects 2-12899
- Se thin film, bend-contour arrangement and bend geometry, electron microscope study 2-50491
- Si, elastically bent, multiple diffr. lines in synchrotron X-ray topographs 2-40223
- Si plane-parallel plate, V-shaped pendellosung fringes associated with inhomogeneous bending 2-50480
- SiO film, plasma vapour deposited, adhesion failure by repeated bending of substrate 2-2689
- Zn single cryst., internal friction under impact loading 2-45347
- ZnS film, vac. evap., intrinsic stress determ. using cantilevered plate technique 2-21472
- bending of light** see *gravitation; light*
- bending strength**
- beam, brittle fracture, local probability of failure, statistical theory 2-25300
- $\alpha$ -brass, ductile, significance of initiation, propagation and closure of microcracks in high cycle fatigue 2-52019
- ceramics, expanded ring flexure tests, Weibull statistics 2-13780
- ceramics, time to failure, neutron and gamma irradi. effects 2-5961
- composite material, simultaneous determ. of shear and Young's moduli 2-9497
- fibre-optic flexible elements, resist. to mech. stimuli, ambient environment influence 2-11835
- glass, devitrified and technical, strength, seawater influence 2-5918
- glass, ion exchanges, bending strength, surface damage effect 2-13818
- glass fibre reinforced polyester, interlaminar fracture energy and compliance 2-22307
- glass light filters, strengthening by ionic exchange method 2-20387
- graphite, nucl. grade, NDT eval. of fatigue damage using US meas., phys. and mech. props. correl. 2-41832
- graphite reinforced laminated composite plate subject to low velocity impact, structural integrity 2-13812
- metal, damping and mech. props. 2-51970
- mica flake integrated sheet/epoxy laminates, mech. and elec. props. 2-27222
- plastics, flake-filled, flexural modulus (*Japanese*) 2-5911
- polycarbonate, yield behavior in bending (*Japanese*) 2-9371
- polymers, amorphous, hydrostatic extrusion, extrudate props. 2-47135
- polypropylene, filled, flexibility without loss of dimens. stability, heat distortion or tensile modulus 2-31756
- polystyrene-polyethylene, high density, dispersed composite blend, mech. props. (*Japanese*) 2-31755
- PVC, yield behavior in bending (*Japanese*) 2-9371
- quartz sand aqueous suspensions based refractories, props. 2-36933
- sand, moulding and core, universal apparatus for strength meas. 2-37034
- sapphire, strength and transmittance, surface treatment effects 2-17717
- steel, 4340, Charpy tests, relationship of toughness, fracture initiation energy and specimen deflection 2-13806
- steel, alloy, thin-sheet, durability, effect of corrosion protective coatings 2-27351
- steel, austenitic stainless, stress corrosion cracking, MgCl<sub>2</sub> soln., influence of alkali halide additions 2-13841
- steel, high-speed, struct. and mech. props. with isothermal deform. 2-2568
- steel, high-speed, struct. and props. after cold treatment 2-27196
- steel, mild, ductile, significance of initiation, propagation and closure of microcracks in high cycle fatigue 2-52019
- steel, tool, cold working, ductility after heat treatment in salt soln. (*German*) 2-22288
- steels, high-speed, powder-processed, rel. between microstruct. and strength 2-9387
- wood, bending strain energy, effect of moisture content (*Japanese*) 2-9372
- Al alloy, selective reinforcement by adhesive bonding with uniaxially aligned C fibre reinforced epoxy 2-27221
- Al alloys, ductile, significance of initiation, propagation and closure of microcracks in high cycle fatigue 2-52019
- Al<sub>2</sub>O<sub>3</sub>, crack-void interaction, bending strength of polycryst. samples 2-13798
- Al<sub>2</sub>O<sub>3</sub>, dense, aged in water and physiological media, Ca migration 2-50686
- Al<sub>2</sub>O<sub>3</sub>, plasma sprayed, applied to metallic substrates, delayed failure 2-52077
- Al<sub>2</sub>O<sub>3</sub> refractories, PO<sub>4</sub>-bonded, strength and microstruct. 2-31728
- Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub>, strength and thermal expansion obs. (*Japanese*) 2-31729
- Al<sub>2</sub>TiO<sub>3</sub>-Fe<sub>2</sub>TiO<sub>3</sub>, strength and thermal expansion obs. (*Japanese*) 2-31729
- Al<sub>2</sub>TiO<sub>3</sub>-MgTi<sub>2</sub>O<sub>5</sub>, strength and thermal expansion obs. (*Japanese*) 2-31729
- Al<sub>4</sub>Zn<sub>1.6</sub>Mg, aged, low-cycle fatigue, plastic strain change effects (*Serbian*) 2-9389
- Be, viscous boundary glide and plasticity, low temp. (*Russian*) 2-21210
- C fibre reinforced Al, component reactions, matrix comp. effect 2-36920
- C fibre reinforced composites, reinforcement properties realisation 2-36925
- C fibre reinforced plastics, deform. and strength props. under var. loading conditions 2-36927
- C-LaB<sub>6</sub> system, powder, hot-pressing 2-51845
- Cu, fatigue life, high cycle, single crystals, tested under plastic-strain controlled conditions 2-27277
- HfO<sub>2</sub>-TiO<sub>2</sub> system, phase diagram and characterisation 2-5860
- Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub>-SiO<sub>2</sub> and Li<sub>2</sub>O-K<sub>2</sub>O(Ag<sup>+</sup>)-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass ceramics, deform. rate influence on bending strength and failure 2-52046
- Mo, ductilisation of electron-beam welds, C addition effects 2-47158
- SiC base refractories, high-temp. strength 2-52008
- SiC fibre reinforced Al alloy, high-temp. strength 2-13779



**bending strength continued**

- SiC fibre reinforced resin composites, mech. props., thermal expansion behaviour 2-47121  
 SiC self-bonded, joining by Ge metal 2-9521  
 $\alpha$ -SiC, sintered, fracture phenomena 2-9413  
 SiN hot-pressed, influence of phase comp. and grain struct. on thermal shock resist. 2-9355  
 $\text{Si}_3\text{N}_4$ , energy-absorbing reaction-sintered surface layers on hot-pressed substrates 2-52007  
 $\text{SiO}_2\text{-Na}_2\text{O-CaO-MgO-Al}_2\text{O}_3$  glass, strength props., for large dimension designs 2-31762  
 Ti, oxidation effect on surface crack form. and mech. props. (German) 2-13866  
 Ti-Al-Sn(V)(Mo)(V-Sn), oxidation effect on surface crack form. and mech. props. (German) 2-13866  
 TiC, polycrystalline, mech. props. 2-51984  
 WC-Co, sintered, strength, scale factor effect 2-41704  
 $\alpha$ -Zr, fatigue, cold work effect at elev. temp. 2-31772  
 $\text{ZrO}_2\text{-Y}_2\text{O}_3$  solid electrolyte, phase change and mech. props. after ageing 2-13715  
 $\text{ZrO}_2\text{-(Al}_2\text{O}_3\text{)-Y}_2\text{O}_3\text{-CeO}_2$  composites, transform. toughening and fracture toughness, effect of alloying additions and temp. 2-51926

**berkelium**

- see also nuclei with .....  
 No entries

**berkelium compounds**

- $\text{BkF}_3$ , cryst., absorpt. spectrophotometric obs. 2-2308  
 $\text{BkF}_4$ , cryst., absorpt. spectrophotometric obs. 2-2308

**beryllium**

- see also nuclei with .....  
 adsorbed on W, field emission spectroscopy study 2-9254  
 atom, core exchange polarisation effects calc. using SCF Xalpha wave functions 2-43800  
 atom, correlated wave functions, Monte Carlo var. study 2-39285  
 atom, correlation coeffs. for electronic shells, Coulomb holes, wave function anal. 2-658  
 atom, electron and positron scatt., static exchange on a polarisation calcs. 2-15896  
 atom, expectation values in equalities, momentum density monotonicity, HF calcs. 2-39302  
 atom, ground state, coupled-pair many-electron theory, CEPA approx. 2-24574  
 atom, ground state, LS-adapted coupled-pair many-electron theory 2-24602  
 atom, integrals from atomic spinors, Dirac HF calcs. 2-39295  
 atom, isoelectronic sequence, spin-forbidden transitions between  $2p^2$  and  $2s2p$  states 2-11413  
 atom, localised electronic interactions, density matrix treatment 2-7499  
 crystal, transversely isotropic half-space, epicentre and epicentral axis motion 2-16238  
 electronic structure calc. 2-51078  
 film, on  $\text{SrF}_2\text{Sm}^{2+}$ , phonon fluoresc. spectra excited by elec. current pulses 2-36699  
 galvanomagnetic coefficients by path integration 2-51150  
 igneous rock reference sample, Be content of NIMROC 2-52767  
 ion bombard., at. excitations, photon emission study 2-13575  
 isoelectronic sequence, outer-shell photoionisation calc. 2-685  
 isoelectronic series, correlation energies, CI and perturbation calcs. 2-7510  
 isoelectronic series, electron impact ionisation cross sections and rates 2-4396  
 K-shell partial cross-section, for electron energy-loss spectrometry 2-29720  
 laser pulse melting, epitaxy and allotropy, expt. study 2-50702  
 liquid metal field-emission ion sources 2-578  
 molecule, integrals from atomic spinors, Dirac HF calcs. 2-39295  
 nucleosynthesis review 2-3192  
 physical vapour deposition of coatings on zircalloy sheets, production scale appls. 2-9276  
 plasma, laser produced, X-ray flux meas., photoionisation method 2-1347  
 plasmon excitations, photoemission spectroscopy (German) 2-17598  
 positron band strcuts. 2-13021  
 shock wave profile, elastic-viscoplastic constitutive model 2-1558  
 single crystal, small angle X-ray scatt. anisotropy 2-36731  
 solid, thermal neutron transport, lattice struct. effect 2-7154  
 substrate for B CVD 2-13655  
 superplasticity and built-in zones 2-17717  
 surface, slowly oxidised, electron spectroscopic studies 2-9230  
 thermal parameters, in cryst. struct. refinement, accuracy implications 2-25812  
 thermal vibration temp. depend. 2-45430  
 threshold exponents in X-ray spectra 2-46818  
 vacuum deposited coatings, oxidation, ellipsometric study (German) 2-9468  
 vaporisation, graphite furnace AAS 2-31974  
 viscous boundary glide and plasticity, low temp. (Russian) 2-21210  
 wire, high-strength, mech. props. and elec. cond. 2-2567  
 wire, recryst. and grain growth in annealing 2-2526  
 $n\text{-AlGaAs:Be}$ , p-n junction formation by  $\text{Be}^+$  implantation 2-51287  
 Be II, doubly excited quartet states, visible and UV obs. 2-671  
 Be II, doubly excited quartet states 2-43834  
 Be II, quartet spectrum, model pot. calc. 2-43833  
 Be ion+H, charge exchange cross sections calc. by fully quantal perturbation stationary state method 2-49568  
 Be $^+$  spectrum, wavelengths and transition probabilities 2-34335  
 Be-Al composite diaphragm for dome-type loudspeaker, vacuum deposition production method (Japanese) 2-25219  
 Be-like ions, electron impact ionisation, cross section calcs. 2-4391  
 Be-like ions, electron impact excitation, collision strengths, line strengths, spectra 2-34581  
 Be-like ions, electron impact, collision strengths, data compilation 2-38368  
 Be-like ions, electron-ion scatt., cross sections, weak-coupling approx. 2-44115  
 Be-like ions, resonance transitions and excitation energies calc., multiconfig. relativistic random phase approx. 2-49303  
 $\text{Be}^{2+}\text{-NH}_3\text{(H}_2\text{O)(HF)}$ , complex form., electronic struct., FSGO method 2-41918  
 $\text{Be+H}_2$ , exchange reactor, pot. surfaces, nonempirical calcs. 2-22435  
 $\text{Be+H}^+$ , quasifree electron bremsstrahlung 2-19990

**beryllium continued**

- Be in sediments of rivers and coastal regions, use in sedimentation dynamics 2-10184  
 $^{10}\text{Be}$  in continental sediments of Louisiana, USA and Gulf of Mexico 2-37791  
 $^{10}\text{Be}/^7\text{Be}$  ratio used to analyse transport processes between stratosphere and troposphere 2-28226  
GaAs:Be MBE layer photocathode struct., photoelectron spin polarisation 2-46867  
GaAs:Be MBE layers, photoluminescence study 2-31543  
GaAs:Be metalorganic epitaxial layers, Be doping 2-50679  
He-Be string, interaction pot., ab initio calc. 2-44026  
ZnTe:Be, effect of cation isoelectronic impurity of photoluminescence 2-26969

**beryllium alloys**

- see also beryllium compounds  
 $\beta$ -Fe-Be alloys, pseudoelastic force balance and appl. 2-5873  
Al-Be, irradi., interstitial-solute complexes, configs. and binding energies 2-30483  
Be-Cu foil-substrate system, photoacoustic effect, substrate effects 2-30533  
Be-Mo-Zr, amorphous, NMR, elec. resist. and supercond. props. 2-36460  
Be-Nb-Zr, amorphous, NMR, elec. resist. and supercond. props. 2-36460  
Cu-Be,  $\alpha$ -solid, soln. neutron bombarded, decomposition study (Russian) 2-12644  
Cu-Be-Co (2 wt.%, 0.3 wt.%), phys. props. 2-17684  
 $\text{Fe}_2\text{B}_{18-19}\text{Be}_x$  metallic glasses,  $^{57}\text{Fe}$  Mossbauer spectra study 2-17375  
GdBe $_{13}$ , mag. struct., neutron diffr. study 2-36315  
TiBe $_2$ , itinerant electron metamagnetism 2-41100  
TiBe $_2$ , paramagnon model, spin-density waves, mag. susceptibility meas. 2-26583  
TiBe $_2$ , weak itinerant antiferromag., anomalous sp. ht. and resist. study 2-31198  
TiBe $_2\text{-Cu}_x$ , magnetisation curves for large x 2-41163  
Ti $_{10}\text{Be}_{40}\text{Zr}_{50}$  amorphous alloy, spring material appl., stress relaxation tests 2-13759  
TiCu $_2\text{FeBe}_{1-x-y}$ , itinerant magnetism, magnetisation and Mossbauer studies 2-31151  
(Tm, $\text{La}_{1-x}$ )B $_{13}$  susceptibility and magnetisation, cryst. field and exchange effects (French) 2-5521

**beryllium compounds**

- see also beryllium alloys  
acetate, vibr. struct., IR and Raman study 2-13486  
beryllaboranes,  $^7\text{Be}$  NMR obs. 2-11513  
beryllium acetylacetonates, solubility parameters calc. from viscosity meas. 2-1626  
beryllosilicate minerals, BeOSi bond role in struct. 2-21075  
formate, vibr. struct., IR and Raman study 2-13486  
 $\text{BaF}_2\text{-CaF}_2\text{-AlF}_3\text{-BeF}_3$  glasses, Raman spectroscopic study 2-31484  
Be complex 1-phenyl-3-methyl-4-acetyl-pyrazolone-5, struct., IR and NMR spectra, cond. meas. 2-31503  
Be complex of 1-phenyl-3-methyl-4-benzoyl-pyrazolone-5, synthesis, struct., IR and NMR spectra 2-26908  
Be complex of 1-phenyl-3-methyl-4-trifluoroacetyl-pyrazolone-5, synthesis, struct., IR and NMR spectra, cond. meas. 2-26909  
Be-like ions, electron impact excitation, coupling collision strengths, fine struct. transitions 2-29718  
 $\text{BeAl}_2\text{O}_4$ , chrysoberyl, synthetic single crystals, X-ray topographic obs. of dislocations 2-21155  
 $\text{BeAl}_2\text{O}_4$ , chrysoberyl, electronic struct. and spectra 2-46634  
 $\text{BeAl}_2\text{O}_4\text{-Cr}^{3+}$ , alexandrite, ground-state and excited-state absorpt. meas. in lasing region 2-7776  
 $\text{BeAl}_2\text{O}_4\text{-Cr}^{3+}$ , alexandrite laser characts. 2-7778  
 $\text{BeAl}_2\text{O}_4\text{-Cr}^{3+}$ , spectroscopic and lasing props. 2-17538  
 $\text{Be}_3\text{Al}_2\text{Si}_6\text{O}_{18}$ , beryl, electronic struct. and spectra 2-46634  
 $\text{Be}_3\text{Al}_2\text{Si}_6\text{O}_{18}\text{:Mn}$ , Morganite, colour centres, EPR 2-46364  
 $\text{BeAr}^+$ , A-X system, Frank-Condon factor, rot. depend., pot. energy curves 2-24792  
 $\text{BeCl}_2$  concentrated aq. solns., Raman spectra, isotopic substitution effects 2-5694  
 $\text{BeF}_3$  based glasses, rare-earth doped, struct., mol. dynamics simulation 2-8441  
 $\text{BeF}_3$ , electron capture to form anion, pot. energy surface, force consts. 2-646  
 $\text{BeF}_3$  glasses, vacuum UV props. 2-17502  
 $\text{BeF}_2$ , mol. pot. energy change, continuous phase transitions 2-667  
 $\text{BeF}_2$ , ground state, geometry, force consts, ab initio HF calcs. 2-646  
 $\text{BeF}_2\text{-LiF}$ , molten, interaction with stainless steel 2-41800  
 $\text{BeF}_2\text{-NaF}$ , fluid and glass, defects and F diffusion, mol. dynamics study 2-8663  
 $\text{BeH}$ , rot. const. vibr. const. and binding energies calc. using Born-Mayer interaction pot. model 2-15766  
 $\text{Be}_2\text{H}_3^+$ , geometrical struct. and force field, SCF MO LCAO calcs. 2-34291  
 $\text{Be}_2\text{H}_4$ , geometrical struct. and force field, SCF MO LCAO calcs. 2-34291  
 $\text{Be}_2\text{H}_5^+$  anion, struct. and stability, ab initio calcs. 2-29502  
 $\text{BeH}_2$ , ground and ionised states, force consts, ionisation pots., CI SCF MO calcs. 2-24616  
 $\text{BeKr}^+$ , A-X system, Frank-Condon factor, rot. depend., pot. energy curves 2-24792  
 $\text{BeMg}$ , pot. energy curves, SCF calcs. 2-39344  
BeO based compositions, heat cond. at low temps. 2-35754  
BeO, cryst. moderator, thermal neutron scatt. anisotropy 2-39092  
BeO crystal, luminesc. excitation in fundamental absorpt. region 2-51706  
BeO, ion implantation, projected ranges and standard deviations (Japanese) 2-12653  
BeO photostimulated exoelectron emission, external factors effect 2-46884  
BeO, photostimulated exoelectrons, energy distrib. at low temps., after electron bombardment 2-46885  
 $\text{BeO-CeO}_2\text{-ZrO}_2$ , phase rels. reinvestigated via metallorganic precursors, 1200 $^\circ$ -1400 $^\circ\text{C}$  2-5867  
 $\text{Be(OH)}_2$ , dissolution and crystn. mechanism from NaOH soln., ionic equilibria and cryst. phases 2-30426  
 $\text{BeSO}_4\cdot 4\text{H}_2\text{O}$ , diffusion of  $\text{H}_2\text{O}$  molcs.,  $^1\text{H}$  NMR study 2-41211  
 $\text{BeSO}_4\cdot 4\text{H}_2\text{O}$ , electro-optical effect, Raman scatt. and SHG 2-2221  
 $^7\text{Be}$  NMR obs. 2-11513  
 $\text{Ce}_2\text{Al}_2\text{-}_3\text{Fe}_2\text{O}_{18}$ , beryl, exchange-coupled pairs of  $\text{Fe}^{3+}$  ions, EPR study 2-36418



## beryllium compounds continued

- $\text{In}_2\text{O}_3/\text{BeO}/\text{SiO}_2/\text{p-Si}$ , heterojunction solar cell, effects of absorbed  $\text{H}_2\text{O}$ , trap-assisted tunnelling model 2-52344  
 $\text{La}_2\text{Be}_2\text{O}_7$ :Nd, x-axis laser, Q-switched operation, comparison with Nd:YAG laser 2-16040  
 $\text{LiF}-\text{BeF}_2$  eutectic mixture, viscosity at elev. temp., 812.5 to 1573K 2-30644  
 $(\text{NH}_4)_2\text{BeF}_4$ , ferroelectric phase transitions, X-ray dilatometric study 2-21954  
 $\text{Nd}_2\text{O}_3-\text{BeO}$ , phase equilibrium study 2-40516  
 $\text{Zn}_2\text{SiO}_4-\text{Be}_2\text{SiO}_4$  system, Mn-activated solid soln. form and characts. 2-40552

## Bessel differential equation see Bessel functions

## Bessel functions

- complex semisimple Lie algebra, multiplicity problem, general Bessel series 2-23865  
 computation with real order, complex argument 2-15008  
 Fourier-Bessel transform, calc. algorithm 2-3366  
 ideal relativistic Bose gas, thermodynamic props. 2-15105  
 optical implementation of integral transforms with Bessel function kernels 2-49695  
 wave equations, one-dimensional, method of solution (Russian) 2-15059  
 zeros of Bessel functions, rational minimax approx. 2-18866

## beta-decay

- see also beta-decay theory; beta-ray spectra; nuclear electron capture  
 $\beta^-$  decay, laser enhancement 2-11114  
 $A=12$ , core polarisation, exchange current effects, axial vector current time component 2-3874  
 $A=147$ , neutron rich nuclei, nuclear spectroscopy 2-15381  
 $A=52-55$ , configuration mixing effects on predominantly  $f_{7/2}^n$  states 2-38954  
 $A=65$  to 121, delayed-proton precursors, beta and gamma strength functions 2-19491  
 $A=6-40$ ,  $\beta$ -decay and isovector M1 transition 2-24177  
 $A=79-84$ ,  $N \approx Z$ , spectroscopic and decay energy meas. 2-24193  
 $A=79-87$ , neutron deficient isotopes,  $Q_\beta$  meas. and mass excess values 2-19488  
 $A=90$  mass region, nuclei far from stability,  $\beta^-$  strength function 2-19504  
 $A=93-98$ , 127-131, 142-148, delayed neutron emission probability,  $\beta^-$  activity, half-lives 2-33958  
 $A=96$  to 117, neutron-deficient isotopes, beta-delayed particle emission study 2-19489  
 angular  $\beta\gamma$ -correlation induced by magnetic interaction 2-33954  
 astrophysical  $r$ -process, beta strength functions and neutron capture rate depend. 2-23218  
 atomic nucleus structure and nuclear spectroscopy, conf., Leningrad, USSR (March, 1980) 2-33209  
 $\text{CC}^{153}\text{Dy}-^{153}\text{Tb}$ ,  $\gamma$ -ray, internal conversion electron and  $e\gamma$ -coincidence spectra study 2-24157  
 charge-exchange nuclear excitation, strength function 2-19498  
 collective isospin-spin excitation and Gamow-Teller strength 2-19544  
 conference, nuclear physics topics, Peking, China (Dec. 1980-Jan. 1981) 2-23380  
 delayed fission review, K-capture  $\beta^-$ -decay, nucleosynthesis (Russian) 2-29300  
 double beta decay, Majorana neutrinos, CP properties influence 2-19277  
 double beta-decay and Majorana neutrinos 2-43459  
 endpoint energy determ. using Ge detector 2-43682  
 exotic nuclear beta transition, astrophysical examples 2-19508  
 fission, beta-delayed, beta strength function calc. 2-19495  
 fission products, short-lived nuclear data appl. 2-19586  
 fission products decay heat calcs. for  $\beta$  and  $\gamma$  energies 2-24288  
 Gamow-Teller resonance position, Wigner  $\text{SU}_4$  symm. reduction (Russian) 2-11115  
 Gamow-Teller states, spin-isospin and pairing props. of modified Skyrme interactions 2-29195  
 K-shell internal ionisation in beta decay 2-29231  
 mass parabola curvature, beta stable line location (Chinese) 2-33967  
 neutrinoless double beta decay in gauge models 2-28997  
 neutrinoless double- $\beta$  decay, nucleon reson. transitions, Majorana neutrinos 2-33966  
 neutrinoless double- $\beta$  decay, SO(10) grand unified theory and parity restoration at low energies 2-48925  
 neutron stars, beta stability 2-23319  
 neutrons, beta decay in strong EM field 2-19375  
 nuclei far from stability, beta-decay lifetime meas. 2-19572  
 nuclei far from stability, half-life periods and  $\beta$ -decay strength function structure (Russian) 2-43458  
 positronium molecule, decay into positronium + photon 2-24897  
 rare-earth isotopes,  $A=146$  to 178, at. masses 2-19487  
 short-lived fission products, average beta-ray energies 2-38983  
 spherical nuclei, Gamow-Teller resonances and collective isobaric  $1^+$  states, microscopic description (Russian) 2-29240  
 stellar interiors, neutrino energy emission in  $\beta$ -decay in presence of quantising mag. field 2-6534  
 $Z>68$ , point nuclei instability due to inverse  $\beta$ -decay and spontaneous  $\pi^+$  prod. 2-33961  
 $A=144$ , 146, 148, 150 nuclei, beta-decay scheme study using nuclear spectroscopy 2-19494  
 $A_{\text{Ag}}$ ,  $A=116-121$ , fission product  $Q_\beta$  values 2-24103  
 $A_{\text{Ag}}$  first forbidden beta decay, nuclear matrix elements 2-38989  
 $A_{\text{Ag}}$ ,  $\beta$ -decay strength function meas. using  $\gamma$ -ray total absorpt ion spectrometer 2-19834  
 $A_{\text{Al}}$ , dynamically polarised in  $\text{Li}^{28}\text{Al}$ ,  $\beta$ -decay and mag. moment 2-31325  
 $A_{\text{As}}=^{84}\text{Se}$ , beta strength function study, gamma-ray spectroscopy 2-19506  
 $A_{\text{Au}}$  structure, complex radioactive decay schemes far from beta stability 2-15390  
 $A_{\text{Ba}}$ , beta-decay study, nuclear spectroscopy 2-15387  
 $A_{\text{Be}}$  excited states, beta recoil and width influence on delayed particle spectra 2-19503  
 $A_{\text{Br}}$ ,  $A=89, 90$ , fission product  $Q_\beta$  values 2-24103  
 $A_{\text{Br}}$ ,  $\gamma$ -transitions, half-life, decay scheme 2-24192  
 $A_{\text{Br}}$ , beta-delayed neutron precursor, neutron reson. study 2-19507  
 $A_{\text{Ca}}$ ,  $A=51, 52$ , neutron rich nuclei, decay props. 2-24190  
 $A_{\text{Ca(p,n)}}$ , 160 MeV, missing Gamow-Teller strength, shell model calcs. 2-43490  
 $A_{\text{Ca}}$ , internal bremsstrahlung accompanying  $\beta$ -decay 2-43450

## beta-decay continued

- $^{48}\text{Ca}$ — $^{48}\text{Ti}$ , double  $\beta$  decay, limit on neutrino masses 2-49056  
 $^{109}\text{Cd}$ ,  $A=119, 121$ , fission product  $Q_\beta$  values 2-24103  
 $^{131}\text{Ce}$  decay,  $^{131}\text{La}$  excited state lifetime,  $I$ -forbidden M1 transitions, deformation 2-7074  
 $^{144}\text{Ce}$ , gamma ray emission probabilities 2-38979  
 $^{255}\text{Cf}$ , beta-decay lifetime, from  $(n,\gamma)$  2-43457  
 $A_{\text{Cl}}$ ,  $A=41-43$ , neutron rich nuclei, decay props. 2-24190  
 $A_{\text{Cl}}$ ,  $\beta^+$  decay (French) 2-24179  
 $A_{\text{Cl}}$ — $^{38}\text{Ar}$ , Gamow-Teller strength functions 2-29234  
 $A_{\text{Co}}$ ,  $A=56, 58$ ,  $\beta$ -transitions matrix elements determ. 2-24162  
 $A_{\text{Cs}}$  neutron rich isotopes, beta decay energies, nuclear masses 2-24186  
 $A_{\text{Cs}}$ ,  $A=114, 116$ , beta-delayed proton and alpha emission 2-19490  
 $A_{\text{Cs}}$ ,  $A=117, 119, 121$ , beta-decay, Xe low-lying levels 2-19453  
 $A_{\text{Cs}}$ ,  $A=119-128$ ,  $\beta^+$  decay, beta strength function structure 2-19492  
 $A_{\text{Cs}}$ , beta-decay study, nuclear spectroscopy 2-15387  
 $A_{\text{Dy}}$  decay, at. mass from  $Q$ -value meas. 2-33964  
 $A_{\text{Dy}}$ ,  $\gamma$ -ray, internal conversion electron and  $e\gamma$ -coincidence spectra study 2-24153  
 $A_{\text{Dy}}$ — $^{153}\text{Tb}$ ,  $\gamma$ -ray, internal conversion electron and  $\gamma$ -coincidence spectra study 2-24157  
 $A_{\text{Dy}}$  decay diagram investigation 2-19479  
 $A_{\text{Er}}$ — $^{155}\text{Ho}$ ,  $\beta$ -decay and  $^{155}\text{Ho}$  excited levels 2-19480  
 $A_{\text{Es}}$ , beta-decay lifetime, from  $(n,\gamma)$  2-43457  
 $A_{\text{Fe}}$  decay rate for  $^{56}\text{Fe}$  Mossbauer transition determ. (Flemish) 2-11117  
 $A_{\text{Fr}}$ ,  $A=224, 226, 228, 230$ , beta-decay to  $^{223}\text{Ra}$ , collective excitations 2-15361  
 $A_{\text{Ga}}$   $\beta$ -decay,  $^{79-82}\text{Ge}$  levels,  $J^\pi$ ,  $T_{1/2}$  and transitions 2-33959  
 $A_{\text{Ga}}$ ,  $A=79, 81$ , fission product  $Q_\beta$  values 2-24103  
 $A_{\text{Ga}}$ ,  $A=80, 81$ , total  $\beta$ -decay energies and masses 2-11118  
 $A_{\text{Ga}}$ , decay props.,  $p_{1/2}$  state abnormal energy shift 2-24194  
 $A_{\text{Ge}}$   $\beta$ -decay,  $^{79-82}\text{As}$  levels,  $J^\pi$ ,  $T_{1/2}$  and transitions 2-33959  
 $A_{\text{Ge}}$ ,  $A=79, 81, 82$ , fission product  $Q_\beta$  values 2-24103  
 $A_{\text{Ge}}$ ,  $A=79, 81, 82$ , total  $\beta$ -decay energies and masses 2-11118  
 $A_{\text{Ge}}$ ,  $T_{1/2}=1/2$   $\beta$ -delayed proton decay study 2-24180  
 $A_{\text{Ge}}$ , decay props.,  $p_{1/2}$  state abnormal energy shift 2-24194  
 $A_{\text{H}}$ , beta decay, neutrino mass meas. 2-11116  
 $A_{\text{H}}$ ,  $\beta$ -decay spectrum,  $\bar{\nu}_e$  rest mass determ. (Russian) 2-19484  
 $A_{\text{H}}$  decay, heavy neutrinos, limits on emission 2-33965  
 $A_{\text{H}}$ — $^{3\text{H}}$  mass difference, rel. to  $^{3\text{H}}$   $\beta$ -ray end point energy 2-43415  
 $A_{\text{He}}$  half life from  $^{7\text{Li}}$  ( $^{7\text{Li}}$ ,  $^{8\text{Be}}$ ) 2-38984  
 $A_{\text{Hf}}$ ,  $A=162-165$ , refractory isotopes on-line separation at ISOCELE separator 2-19692  
 $A_{\text{Hg}}$  decay, low-spin states in  $^{185}\text{Au}$  as model levels probe 2-15389  
 $A_{\text{Hg}}$ — $^{207}\text{Tl}$ ,  $^{207}\text{Hg}$  decay schemes and  $^{207}\text{Tl}$  excited levels 2-15391  
 $A_{\text{Ho}}$ , beta-decay to transitional nucleus  $^{153}\text{Dy}$ , level scheme study 2-15382  
 $A_{\text{Ho}}$ — $^{166}\text{Er}$ ,  $\gamma\gamma$ -directional correl. meas. 2-38978  
 $A_{\text{I}}$  decay,  $^{121}\text{Te}$  excited states and transitions 2-33955  
 $A_{\text{In}}$ , fission product  $Q_\beta$  values 2-24103  
 $A_{\text{In}}$ ,  $A=103-105$ , neutron-deficient isotopes, beta-decay energies study following mass separation 2-19485  
 $A_{\text{In}}$ — $^{102}\text{Cd}$ ,  $A=102, 103$ , Cd isotopes study using in-beam gamma-ray spectroscopy 2-19509  
 $A_{\text{Ir}}$ , gamma ray emissions in beta decay 2-43455  
 $A_{\text{K}}$ ,  $A=45, 47, 48, 50, 51, 52$ , neutron rich nuclei, decay props. 2-24190  
 $A_{\text{K}}$ , positron endpoint energy of 7.7 min activity 2-19481  
 $A_{\text{K}}$  beta decay, neutron and gamma spectroscopy 2-24191  
 $A_{\text{Kr}}$ ,  $T_{1/2}=1/2$   $\beta$ -delayed proton decay study 2-24180  
 $A_{\text{La}}$ ,  $A=141, 2$ ,  $\gamma$ -ray emission probabilities 2-3873  
 $A_{\text{La}}$ ,  $A=142, 144, 146, 148$ , decay to transitional Ce nuclide, excited  $0^+$  level, ang. correl. studies 2-15379  
 $A_{\text{La}}$ ,  $A=142, 144$ , beta-decay to Co isotopes,  $\gamma$ -ray transition study 2-15380  
 $A_{\text{La}}$ ,  $A=142, 144$ ,  $\beta$ -decay,  $^{142, 144}\text{Ce}$  levels,  $J^\pi$ , mixing ratios and transitions 2-38982  
 $A_{\text{La}}$  decay,  $^{133}\text{Ba}$  excited state lifetime,  $I$ -forbidden M1 transitions, deformation 2-7074  
 $A_{\text{La}}$  decay scheme, X-ray obs. 2-374  
 $A_{\text{La}}$ , low-spin isomers, beta-decay to  $^{146}\text{Ce}$ , level structure study 2-15368  
 $A_{\text{La}}$ , beta-decay study, nuclear spectroscopy 2-15387  
 $A_{\text{La}}$  mass separated, decay to  $^{146}\text{Ce}$ , band structure study 2-15369  
 $A_{\text{Li}}$ ,  $A=9, 11$ , beta-delayed charge particle emission study 2-19500  
 $A_{\text{Li}}$ , beta-delayed two-neutron and three-neutron emission 2-19496  
 $A_{\text{Lu}}$ ,  $A=158, 160-5$ , neutron-deficient isotopes decay study 2-15388  
 $A_{\text{Lu}}$ ,  $A=163-173$ ,  $\beta^+$  decay, beta strength function structure 2-19492  
 $A_{\text{Mo}}$ (CO) $_6$ ,  $\beta^-$  decay, chem. effects 2-52240  
 $A_{\text{Mo}}$ , prod. and decay,  $\gamma$ -ray spectra, level schemes 2-24197  
 $A_{\text{Mo}}$ — $^{99\text{m}}\text{Tc}$ , chemical effect of Tc K $\alpha$  X-ray intensity 2-19483  
 $A_{\text{N}}$ — $^{16}\text{O}+e^-+\bar{\nu}_e$ , 2p-2h states role in weak transitions 2-38985  
 $A_{\text{N}}$ — $^{16}\text{O}$ ,  $\beta$  decay and T=2 states 2-38987  
 $A_{\text{Na}}$ ,  $A=27-31$ , beta-delayed neutron energy spectra 2-19505  
 $A_{\text{Na}}$ ,  $A=27-34$ ,  $\gamma$ -activities from  $\beta$ -decay 2-24188  
 $A_{\text{Na}}$ ,  $A=28-34$ , half-life meas. 2-24187  
 $A_{\text{Na}}$ ,  $A=30-32$ , beta-delayed two-neutron emission 2-19496  
 $A_{\text{Na}}$ ,  $A=30-34$ , beta-delayed neutron emission time spectrum study 2-19501  
 $A_{\text{Na}}$ , beta-delayed particles kinematic shifts as probe of  $\beta$ - $\gamma$  ang. correl. 2-19502  
 $A_{\text{Na}}$ , beta-delayed three-neutron emission study 2-19499  
 $A_{\text{Np}}$   $\beta$ -decay,  $^{238}\text{Pu}$  levels,  $J^\pi$ ,  $T_{1/2}$  and E1 transition probabilities 2-7079  
 $A_{\text{Np}}$  decay scheme,  $\gamma$ -ray spectra 2-29237  
 $A_{\text{O}}$  beta-decay, branching to  $^{14}\text{N}$   $1^+$  level, GT strength 2-29236  
 $A_{\text{O}}$   $\beta^+$  Fermi decay  $Q$ -value, absolute determ. from  $^{14}\text{N(p,n)}$  2-7082  
 $A_{\text{Os}}$ , nuclear excitation by electron transition following K-shell ionisation by bremsstrahlung 2-7081  
 $A_{\text{P}}$  beta decay, half life,  $\gamma$ -ray obs. 2-24189  
 $A_{\text{Pd}}$ , proton rich nuclei decay, nuclear spectroscopy, 14s high spin isomer 2-19494  
 $A_{\text{Pd}}$ , production and decay,  $\gamma$ -ray spectra, level schemes 2-24197  
 $A_{\text{Pd}}$  decay,  $^{97}\text{Rh}$  instantaneous  $\gamma$ -transitions, energies and intensities 2-33944  
 $A_{\text{Pm}}$ — $^{138}\text{Nd}$ ,  $^{138}\text{Nd}$  structure study from  $\beta^+$ -decay 2-24185  
 $A_{\text{Pr}}$ , gamma ray emission probabilities 2-38979  
 $A_{\text{Pr}}$  decay scheme, X-ray obs. 2-374  
 $A_{\text{Pt}}$ , nuclear orientation, gamma-ray anisotropy, multipole mixing ratios 2-29226  
 $A_{\text{Pu}}$  fission products beta-decay, antineutrino spectrum 2-38988



**beta-decay continued**

- Rb—Kr, deformed ground state studies 2—29233  
 Rb neutron rich isotopes, beta decay energies, nuclear masses 2—24186  
<sup>87</sup>Rb, A=76-78, mass meas. using beta end-points 2—19486  
<sup>87</sup>Rb, A=88, 94, 96, 98, beta ray and point energies for fission products 2—24104  
<sup>87</sup>Rb, A=96-99, beta-delayed two-neutron decay studies 2—19497  
<sup>78</sup>Rb  $\beta^-$  decay, <sup>78</sup>Kr level scheme and  $\gamma$ -spectra 2—24183  
<sup>96</sup>Rb, half-life and  $\gamma$ -ray intensity per decay 2—29229  
<sup>96</sup>Rb, beta-delayed two-neutron emission 2—376  
<sup>100</sup>Rb, beta-delayed neutron emission 2—19496  
<sup>82m</sup>Rb—<sup>82</sup>Kr,  $\gamma$ -ray spectrum study 2—24151  
<sup>106</sup>Rh, gamma ray energies and intensities following beta decay 2—43454  
<sup>103</sup>Ru, half-life and  $\gamma$ -ray intensity per decay 2—29229  
<sup>103</sup>Ru, new determ. of half-life 2—29230  
<sup>103</sup>Ru—<sup>103</sup>Rh, beta ray spectrum, ground state spin and parity 2—43456  
<sup>93m</sup>Ru, beta-delayed proton precursor study 2—19493  
<sup>124</sup>Sb,  $\beta$ -decay strength function meas. using  $\gamma$ -ray total absorption spectrometer 2—19834  
<sup>52</sup>Sc, neutron rich nuclei, decay props. 2—24190  
<sup>151</sup>Sm, internal ionisation probability in beta decay 2—29232  
 Sn region, A=105-122, nuclide masses close to proton drip line 2—19435  
<sup>119</sup>Sn, A=103, 105, beta-delayed proton precursors from (<sup>38</sup>Ni,X) 2—24184  
<sup>151</sup>Sn decay,  $\gamma$ -ray spectra, <sup>151</sup>Sb levels 2—29235  
<sup>87</sup>Sr, A=95, 97, level schemes from  $\beta$ -decay 2—24195  
<sup>87</sup>Sr beta-decay positron spectra, annihilation interference in Ge counter 2—19844  
 T, real-time imaging by secondary electron emission detection 2—7331  
<sup>180</sup>Ta, partial half-lives against electron capture and  $\beta^-$  decay 2—38980  
<sup>148</sup>Tb, A=145-147, beta-decay, GT branch, Gd level population 2—19431  
<sup>148</sup>Tb (T<sub>1/2</sub>=2.2 min) decay, at. mass from Q-value meas. 2—33964  
<sup>154</sup>Tb,  $\beta$ -decay strength function meas. using  $\gamma$ -ray total absorption spectrometer 2—19834  
<sup>155</sup>Tb—<sup>155</sup>Gd, 180-86 keV cascade in <sup>155</sup>Gd, ang. correl. perturbation study 2—24152  
<sup>155</sup>Tb—<sup>155</sup>Gd,  $\gamma$ -ray, internal conversion electron and  $\epsilon\gamma$ -coincidence spectra study 2—24154  
<sup>90</sup>Tc  $\beta^-$  beta decay, <sup>90</sup>Mo level structure study 2—38990  
<sup>130</sup>Te, neutrino-suppressed double  $\beta$ -decay study 2—24178  
<sup>130</sup>Te, A=157-163,  $\beta^+$  decay, beta strength function structure 2—19492  
<sup>130</sup>Te—<sup>130</sup>Er, A=161, 163, 165, Er excited states 2—24172  
<sup>130</sup>Te—<sup>130</sup>Er, A=161, 162, 165, internal conversion and  $\gamma$ -ray spectra study 2—24158  
<sup>166</sup>Tm—<sup>166</sup>Er,  $\gamma$ -transition multiplicity of <sup>166</sup>Er states 2—24155  
<sup>125</sup>Xe decay,  $\gamma$ -ray and  $\epsilon\gamma$ -coincidence spectra study 2—24159  
<sup>125</sup>Xe, A=95, 97, 99, level schemes from  $\beta$ -decay 2—24195  
<sup>102</sup>Y—<sup>102</sup>Zr, beta decay, half-life 2—24196

**beta-decay theory**

- see also *beta-decay; beta-ray spectra*  
 asymmetry in implanted system (Dutch) 2—15386  
 Gamow-Teller  $\beta$ -decay giant resonances, statistical method 2—33960  
 liquid scintillators, beta-ray detection efficiency calc. program 2—4174  
 one-phonon strength function and its moments calc. 2—33932  
<sup>26</sup>Mg—<sup>26</sup>Al, Gamow-Teller strength function, shell model study 2—33962

**beta-particles** see *beta-rays***beta-radiation** see *beta-rays***beta-ray absorption**

- see also *electron absorption*  
 N<sub>2</sub>, external absorpt. coeff. for <sup>14</sup>C  $\beta$ -particles 2—16422  
 O<sub>2</sub>, external absorpt. coeff. for <sup>14</sup>C  $\beta$ -particles 2—16422

**beta-ray angular distribution**

- see also *beta-ray spectra*  
 No entries

**beta-ray detection and measurement**

- see also *beta-ray spectrometers; radioactivity measurement*  
 Harshaw Model 2000D TL analyser system adapter 2—15637  
 liquid scintillators, beta-ray detection efficiency calc. program 2—4174  
 multiple channel  $4\pi\beta\gamma$  anti-coincidence counting 2—24528  
 MWPC with cathode coupled delay line read-out for DNA repair studies 2—42237  
 position sensitive proportional counter, for  $\beta$ -ray spectrometer 2—19843  
 radio-chromatographic TLC tests, linear analyser and Beta camera developments 2—6078  
 standard sources testing, systematic error estimation 2—24473  
 thermoluminescent dosimeter, LiF powder, deexcitation meas. instrument 2—19773  
 tritium concentration in tritium targets determ., by beta particles bremsstrahlung recording 2—19825  
 Ar-ethane (methane) mixtures props. in proportional counters 2—15668  
<sup>14</sup>C as CaCO<sub>3</sub>, method for counting in liq. scintillator with improved precision 2—43744  
 Ge detectors, response to monoenergetic electron, positron and gamma ray beams 2—39267  
 Ge intrinsic detector, positron spectra, interference of annihilation 2—19844  
 T, real-time imaging by secondary electron emission detection 2—7331

**beta-ray effects**

- see also *electron beam effects*  
 germ cell population dynamics in the adult male Indian gerbil exposed to internal  $\beta$ -irrad 2—27839  
 germ cells of male mice, genetic effect of <sup>14</sup>C (Russian) 2—52565  
 intestinal epithelium of developing Swiss albino mice, effect of T 2—52574  
 lymphoid tissue, cell number changes during chronic exposure to <sup>3</sup>H and  $\gamma$ -rays (Russian) 2—52559  
 ovaries of foetal and young mice, influence of <sup>90</sup>Sr-contaminated milk 2—52550  
 Tradescantia inflorescence, <sup>131</sup>I appl., calc. of  $\beta$ -ray absorbed dose rate 2—18265  
 yeast,  $\beta$ -ray-induced gene conversion 2—32271

**beta-ray polarisation**

- No entries

**beta-ray scattering** see *beta-ray effects; collision processes; energy loss of particles; particle backscattering; potential scattering; transport processes***beta-ray spectra**

- see also *beta-decay theory*  
 A=80 nuclei,  $\beta^+$  energy spectra anal. (French) 2—15385  
 beta spectroscopy experiment for students 2—38385

**beta-ray spectra continued**

- end-point energy determ. using Ge detector 2—43682  
 liquid scintillators, beta-ray detection efficiency calc. program 2—4174  
<sup>3</sup>H decay, heavy neutrinos, limits on emission 2—33965  
<sup>239</sup>Pu fission products beta-decay, antineutrino spectrum 2—38988  
<sup>82</sup>Sr beta-decay positron spectra, annihilation interference in Ge counter 2—19844  
<sup>130</sup>Te, neutrino-suppressed double  $\beta$ -decay study 2—24178

**beta-ray spectrometers**

- see also *beta-ray spectra; electron spectrometers*  
 focusing, position sensitive proportional counter appl. 2—19843

**beta-rays**

- see also *electrons*  
 No entries

**beta spectrometers** see *beta-ray spectrometers***betatrons**

- electron energy control and stabilisation system 2—43641  
 energy control system, D/A converter design 2—19802  
 pulsed electron source for energies 1 to 6 MeV, based on betatron 2—19821  
 radiation therapy of malignant neoplasms, development trends, linear accelerator and betatron use (Russian) 2—37649  
 relativistic electrons, undulator radiation 2—29467  
 relativistic electrons in plane mag. undulator, polarisation angle props. of radiation 2—29466

**Bethe-Salpeter equation**

- 4D gauge theory dynamical symmetry breaking, closed form bound state effective pot. 2—23871  
 baryon excited states, Bethe-Salpeter model with harmonic oscill. interaction 2—29019  
 charmonium M1 transitions and charm quark anomalous mag. moment 2—33844  
 crystals, quantum field theory, two-band model in one-dimensional fermion systems 2—50785  
 crystals, quantum field theory 2—50784  
 Euclidean boson field theories, Legendre transforms and r-particle irreducibility 2—28977  
 many particle systems, Bethe-Salpeter and Schrodinger wave function relation 2—43194  
 many-body relativistic equation of motion, B-S eqn. kernel (Chinese) 2—33745  
 mesons, quark binding force, from Bethe-Salpeter eqn. 2—11026  
 nonrelativistic limit with combining kernel, linear pot. constant 2—23854  
 pseudoscalar mesons, chiral-symmetry breakdown and spectrum in QCD 2—7000  
 relativistic bound states of fermions and antifermions, mesons 2—33810  
 relativistic composite particle systems, unified models 2—38804  
 relativistic equal-time eqn. for composite particles 2—3715  
 relativistic qq spectra from Bethe-Salpeter premises 2—3748  
 relativistic wave function at origin and pion decay constant 2—43206  
 Rowe's renormalised RPA, derivation from Bethe-Salpeter eqn. 2—3478  
 three-magnon bound-state eqn. in one dimens. 2—38484  
 NN scatt., ladder approx., operator Pade approx. for perturbative expansions 2—33852  
 $\sigma$ -meson mass in QCD and dynamical symmetry breaking 2—48943  
<sup>2</sup>H(e,e), deuteron mag. structure function, relativistic effects 2—33899

**Bethe-Uhlenbeck equations** see *quantum statistical mechanics***betatrons** see *synchrotrons***bicrystals**

- bicrystal, symmetrical, energy and elastic field of dislocation arrays, anisotropic elasticity theory 2—5115  
 dislocation spacing in pile-ups at grain boundaries, calc. 2—45197  
 glide-induced steps, in periodic grain boundaries 2—40408  
 intergranular equilb. segregation, by non-destructive method (French) 2—41614  
 metal, high freq. props., effects of planar defects (Russian) 2—17105  
 Pb chalcogenides, epitaxial bicrystals., elastic deform. and stress. 2—51007  
 plastic accommodation of stress conc. at step on sliding grain boundary 2—30508  
 semiconductor, electronic response to illumination, surface effects 2—17111  
 steel, austenitic stainless, intergranular fracture 2—52004  
 thermal cond. signals produced by freq. crossing between reson. scatt. centres 2—50935  
 Al, stress induced migration of symmetric tilt boundaries 2—8676  
 Al<sub>2</sub>O<sub>3</sub>:Fe<sup>2+</sup>, V<sup>2+</sup> bicrystal, freq. crossing and inelastic scatt. at surfaces 2—45644  
 Au/AuPd bicrystals., hexagonal dislocation networks, TEM contrast 2—25887  
 Ge, grain boundary levels, transient capacitance meas. 2—51117  
 LiNbO<sub>3</sub> bicrystal, thermal bonding, influence of planar diffusion bonded boundaries on props. 2—26840  
 Mo bicrystal interface, galvanomag. phenomena 2—40873  
 Mo-Au bilayer epitaxial films, phase boundaries form. in high condensation temp. ranges 2—45741  
 Pb bicrystal interface, galvanomag. phenomena 2—40873  
 PbS/PbSe bicrystals, misfit dislocations distrib. determ. by energetic He ion channelling 2—40398  
 PbS/PbSe(Te) epitaxial bicrystals, growth spirals on phase boundaries, electron microscopic discernment 2—45740  
 Pd/Au bicryst. film, pseudomorphic epitaxial growth, deposit thickness depend., TEM study 2—35909  
 Pd-Au/Au bicryst. film, pseudomorphic epitaxial growth, deposit thickness depend., TEM study 2—35909  
 Pt-Au(Pd) bilayer epitaxial films, phase boundaries form. in high condensation temp. ranges 2—45741  
 Si, carrier recombination at grain boundaries 2—1924  
 Zn, bicrystal, incompatible, work hardening 2—17691  
 Zn, bicrystal, plastic strain incompatibility effect on 0.1% proof stress 2—13786

**biexcitons** see *excitonic molecules***big-bang theory** see *cosmology***bimetallic strips** see *bimetals***bimetallic wire** see *bimetals***bimetals**

- strength and reliability, parts with metal coatings 2—2627  
 transition zone in bimetals (Russian) 2—1678



## bimetals continued

- Al-Cu bimetal wire conductor, elec. resistivity stability, operating conditions effect 2-51145  
Al-stainless steel bimetal, mech. strength and heat resist. 2-27251

binaries (stellar) *see* binary stars

## binary stars

- see also cataclysmic binary stars; eclipsing binary stars; X-ray binary stars*  
ADS 1737, 2446, 2612, 2799, visual binary stars, orbital elements (French) 2-3273  
ADS 221 and 1762, visual binaries, orbital elements and masses, distance, astrometry anal. 2-42717  
21 Arietis (Couteau 79), identification as possible multiple system 2-48276  
BD+26°730, BY Draconis star, starspot cycle evidence, spectral/photometric anal. 2-10425  
bipolar nebula model, primary giant mass ejection 2-14901  
black hole binary systems in active galactic nuclei, form. through galaxy mergers 2-38302  
54 Camelopardalis, RS CVn star, V-photometry obs. 2-33070  
Cancer AB, image reconstruction using speckle interferometry 2-53112  
Carinae (K0II+B), soft X-ray emission detected 2-28439  
Cassiopeiae, unresolved binary star, astrometric anal. from Sproul 61 cm refractor photographs 2-3270  
V509 Cassiopeiae (HR 8752), IUE spectrum of G-type supergiant 2-38175  
central star of NGC 2346 and reddening of planetary nebula 2-28494  
Cepheids, companion stars detection, companion effect on CORS method 2-14784  
5 Ceti (HR 14), new and pulsing variable star, photoelectric photometry 2-3277  
chemically peculiar stars of upper main sequence, membership of binary systems and clusters 2-23308  
close binaries, formation, fission and fragmentation processes 2-3279  
close binaries, intermediate and high mass, evolution 2-3280  
close binaries evolution and pulsar form. 2-6645  
close binary central stars of planetary nebulae, formation model 2-42728  
close binary in three-body problem, non-planar stellar case, asymptotic soln. 2-18693  
disruption following supernova of a component 2-53317  
double stars, position angle and distance from standard coords. 2-14879  
BY Draconis, B-star duplicity discovered (Russian) 2-33084  
FY Draconis stars, spectroscopic binaries, H $\alpha$  and photometry obs. 2-10422  
encounter with single star, impact vel. and masses effect, computer simulation 2-53320  
evolution of binary and single stars, review (Russian) 2-23295  
excretion disk outer region round close binary, gas streamlines, periodic orbit anal. 2-28500  
FK4 stars, kinematics in FK4, kinematics 2-18757  
formation, collapse of rotating non-axisymmetric isothermal interstellar cloud 2-14847  
formation by fragmentation of rotating protostar, re-examination of comparison calcs. 2-14848  
Gliese 867 A, UV Ceti binary star in solar neighbourhood, chromosphere emission, UV obs. 2-33042  
gravitational spin precession 2-38248  
HD 108, 149404, and 163181, IUE spectroscopy of hot binaries 2-33083  
HD 12180B (ADS 1581B), identification as double lined binary from spectroscopic obs. 2-48279  
HD 129708 binary Cepheid, radial velocity, radius and pulsations, visible spectra obs. 2-53289  
HD 15144, Ap star, mag. field var., model and visible spectral obs. 2-53294  
HD 152270, Wolf Rayet star, expanding C III envelope model 2-42688  
HD 21018, 30021, 158837, 190658, spectroscopic orbits from photoelectric radial vels. 2-48275  
HD 225292, spectroscopic orbit 2-53327  
HD 27144, spectroscopic binary orbit from photoelectric radial vels. 2-6641  
HD 72127, differences in interstellar Ca II line between components 2-42732  
o Herculis, B-star duplicity discovered (Russian) 2-33084  
HR 551, giant spectroscopic binary, orbit and radial vel. obs. 2-38252  
HR 7135, spectroscopic binary, orbit and radial vel. 2-53329  
HR 7338, abundance analysis 2-33046  
HU 225, visual binary, orbit 2-53333  
Illinois occultation summary for 1979, obs. 2-53054  
inclinations, polarimetric estimators, statistical bias 2-38062  
interferometry at high ang. resolution, appls. and limitations 2-53106  
light velocity measurement outside Solar System, use of visual binary stars 2-53099  
luminosity function of new low mass stars 2-53261  
Lyrae, B-star duplicity discovered (Russian) 2-33084  
M 1-2 central star, high-speed photometry of marginal B star 2-33022  
main-sequence spectroscopic binary stars, effects of duplicity on Ca II H and K emission 2-6591  
mass accreting component in close binary, spin up, evolution implications 2-14877  
mass loss in close binary systems 2-28506  
massive binaries, evolution model to post supernova state 2-53317  
massive close binaries, accreting component evolutionary time scale 2-33068  
massive close binary stars with primary masses between 20  $M_{\odot}$  and 160  $M_{\odot}$ , evolutionary scenario 2-48222  
nova mass loss rates and terminal vels. 2-23300  
occulted stars, timing, ang. diameters and double star data, visible obs. 2-32808  
OL 22, visual binary, orbit 2-53333  
orbital parallax catalogue 2-53321  
parallaxes and masses of binaries in unknown orbits, statistical method (French) 2-38237  
EQ Pegasi, flare star, preflare diminution in quiescent flux 2-42692  
o Persei, UV spectroscopy of Be-binary 2-48260  
UV Piscium, 1981 UBVR photometry of short-period RS CVn binary 2-53325  
pulsar binaries, dynamics and evolution 2-3267  
pulsars in binary systems, neutron star mass and formation studies 2-6627  
radiation damping due to gravitational wave emission (Chinese) 2-28508

## binary stars continued

- radio pulsar systems formation 2-6645  
relativistic celestial mechanics in postNewtonian approx. 2-10483  
relativistic mechanics, inertial and rest masses 2-10484  
Roche coordinate system for tidally distorted models 2-42725  
Roche harmonics construction 2-14783  
RST 321, visual binary, orbit 2-53333  
runaway stars, comparison black holes or neutron stars existence 2-53317  
scattering accretion discs in binary systems, linear polarisation and radiation intensity 2-6643  
speckle interferometric observations, signal to noise ratio 2-53108  
speckle interferometry, ang. dependence of atmospheric turbulence effect 2-53110  
spectroscopic binaries, statistical models 2-18777  
spectroscopic binary stars, new discoveries from composite spectra, radial vels. and orbital elements 2-10476  
supermassive binary model of active galactic nuclei and quasars 2-14936  
V711 Tauri, RS Canum Venaticorum binary, light curve vars. rel. to long-term starspot activity 2-53316  
V711 Tauri (=HR 109.9), RS CVn star, light curve, UVB obs. 2-28503  
V711 Tauri (HR 1099), RS Canum Venaticorum binary, dramatic change in light curve 2-6600  
4U/MXB 1636-53, X-ray burster orbital period 2-38251  
65 Ursae Majoris, period of eclipsing binary component DN Ursae Majoris (HR 4560) 2-38246  
DM Ursae Majoris, photometric wave and starspot model for RS CVn binary 2-38232  
BE Ursae Majoris, red+white dwarf, spectral variability anal., visible obs. 2-10458  
 $\gamma^2$  Velorum (WC8+09 I), obs. of hot stellar wind in UV C lines 2-53267  
 $\gamma$  Virginis, multidimensional anal. of scintillation rel. to optical C $\lambda$  2 remote sensing in atmosphere 2-32647  
visual binary stars, interferometric obs. (Russian) 2-53335  
visual binary stars, orbit, parallax, masses and planetary detect. capability 2-53318  
visual binary stars, orbit determ. from parameters of apparent motion over short arc 2-6642  
visual double stars, ang. astrometric separation and position angle, visible obs. 2-42716  
visual doubles, Nice meas. (1969-71, 80) 2-18778  
white dwarf accreting interstellar matter, H burning 2-33069  
white dwarfs, accreting C-O, long term evaluation in binary systems (French) 2-42681  
Wolf 630, masses from astrometric anal. 2-53319  
Wolf 630, proper motion companion van Biesbroeck 8, reddest red dwarf 2-23297  
X-ray bursters, burst emission process (Russian) 2-48287

## binding energy

- see also lattice energy; nuclear binding energy; nuclear forces*  
acetylene, valence electron binding and relaxation energies, ab initio SCF, HF, LCAO and CI calcs. 2-29521  
alkali and heavy metal halides, diatomic mols. binding energy 2-24890  
alkali halides, stability of NaCl, CsCl, and cubic ZnS cryst. structs. 2-45108  
alkali halides gases, props. calc. in equil. position, Hellmann interioric pot. model 2-29560  
alkali metals, electronic props., exchange and correlation effects, pseudo-potential model 2-30813  
alloys, thermochem. data from photoelectron spectra 2-6050  
Anderson model, periodic, with Falicov-Kimball type interaction, valence transition 2-51131  
atom+heavy charged particles, inner-shell electron ionisation, classical model, relativistic effects 2-20173  
atomic sensitivity factors for ESCA, empirical set 2-27508  
atoms, relativistic local-density theory, Breit and transverse interactions effect correl. 2-43814  
atoms, Thomas-Fermi model, second correction, appl. to binding energy 2-24575  
atoms and solid, binding energy, Auger and photoelectron spectra 2-34367  
chalcogenide crystals, II-VI, cohesive energy evaluation 2-1436  
chemisorption on stepped surfaces theory, adatom binding energies, LEED intensity expression 2-1770  
CNDO/2 calculation of binding energy for AH $_2$  systems 2-7672  
core level photoelectron spectroscopy 2-46879  
Cottrell binding energy between dislocation and vacancy, US attenuation meas. 2-35530  
cryptand (2,2,2) complexes, core electron binding energies, ESCA obs. 2-12989  
cryptand (2,2,2) complexes, core electron binding energies, ESCA obs. 2-12989  
crystal covalent bonding, iteration-perturbation theory 2-21061  
cubic A $_3$ B $_8$ -N semiconductors, least bound core electron excitations, binding energies, chemical shifts 2-26286  
cyclobutadiene, ground and core ionised states, nonempirical LCAO MO SCF calcs. 2-29509  
diamond, ground state props., ab initio density functional pseudopot. method 2-40318  
diamond, struct.-energy calcs. using pseudopot. and localised Gaussian orbitals 2-30815  
dilute alloys, impurity binding energy, correlation with heat of formation 2-1497  
(e,2e) spectroscopy, reaction mechanism 2-44116  
electron capture by slow multiply charged Mg, Al, Cs, Pb and Bi ions from He, Ne, Kr and H $_2$  2-7631  
ethane, valence electron binding and relaxation energies, ab initio SCF, HF, LCAO and CI calcs. 2-29521  
ethyl methyl phosphate conformational energy, ab initio SCF-MO calcs. 2-39306  
graphite intercalated with SbF $_3$ , XPS studies 2-41497  
graphite intercalation compound with K, charge distrib. 2-1852  
group V trihydrides, local valence forces, rel. to III-V semiconductor (110) surface reconstruction 2-12895  
heavy positive ions, binding energies, relativistic theory 2-619  
hydrides, rot. const. vibr. const. and binding energies calc. using Born-Mayer interatomic pot. model 2-15766  
III-V semiconductors, surface core excitons, binding energies and oscill. strengths 2-8852  
inert gas atoms, binding energy, SCF calcs. 2-20200



## binding energy continued

inert gas crystals, binding energy and interat. pot. 2-45875  
 ionic crystals, electrostatic bonding energy, electrostatic interaction during growth 2-25806  
 ionic crystals, electrostatic field at surface, electrostatic interaction during growth 2-25807  
 lanthanides, cohesive energy, 4f-electrons effect 2-16617  
 metal, core electron binding energy shift due to chem. combination, rel. to X-ray absorpt. chem. shift 2-41451  
 metal-metal interfaces, FEM, FIM and atom-probe studies (*Japanese*) 2-26238  
 metals:He, implanted, self-trapping study 2-40427  
 metals, 5th period elements, core-hole ground state energies, XPS determ. 2-17602  
 metals, Auger effect, nonradiative transitions, electron binding energy (*Flemish*) 2-13597  
 metals, XPS core level binding energies, surface chemical shift 2-22145  
 methane, valence electron binding and relaxation energies, ab initio SCF, HF, LCAO and CI calcs. 2-29521  
 methanol, valence orbitals, momentum distrib. and binding energies 2-29730  
 negative ion formation by surface exciton 2-35948  
 noninteracting particle Green's function, Sturm representation 2-7495  
 one-dimensional crystal, loss of stability mechanisms 2-45508  
 pentacene, solid, CT transition studied by electroabsorpt. 2-30837  
 polaron effect enhancement in dielec. thin film 2-21506  
 polymers, core electron photoionisation, binding and relax. energies, XPS 2-29739  
 polyphenyls,  $\pi$  electron delocalisation, XPS study, rel. to acenes and polystyrene 2-41498  
 $\alpha$ -Pu, valence levels, XPS obs. 2-45816  
 quartz, shock-loaded, XPS obs. of binding energies and interpret. 2-36760  
 rare gas solids, cohesion and many-body forces 2-1444  
 rare gases, core levels, photoemission spectroscopy (*German*) 2-17598  
 semiconductor, excitons bound to neutral donors, props. 2-1838  
 semiconductor thin films, exciton binding energy, metal-dielec. transition 2-26524  
 semiconductors, doped, dielectric function model 2-35957  
 semiconductors, quantum well, hydrogenic impurity states, optical props., variational calc. 2-51121  
 semiconductors, zinc-blende, core exciton binding energies 2-40800  
 simple ionic crystals structures, semi-quantitative theory 2-1459  
 TCNQ-Cu charge transfer salt, semicond. film, vibr. and XPS spectra, Auger obs. 2-31600  
 tetraazoporphyryns, free base and transition metal, struct., optical transition, binding energies, hyperfine fields 2-34282  
 tetracene, solid, CT transition studied by electroabsorpt. 2-30837  
 tetrahydrene, ground and core ionised states, nonempirical LCAO MO SCF calcs. 2-29509  
 transition metal hydrides, heat of form., bond anal., local density functional approx. 2-35433  
 4d transition metals, X-ray  $L_1$ ,  $L_2$  and  $L_3$  absorpt. limits 2-51744  
 Wigner crystal, two-dimensions, defect states and melting transition, theory 2-1848  
 $XY_2$  molecular system, vibr. mixing parameter from average bending energy criterion 2-694  
 AgCl(Br), ionic transport, anomalously high, defect mechanisms 2-21399  
 Al-Be(Ca)(K)(Li)(Mg), irradi., interstitial-solute complexes, configs. and binding energies 2-30483  
 Al-Mg (5.5 at.%), cold worked, recovery, role of Mg atoms 2-47051  
 Al<sub>2</sub>, relative photoionisation cross sections between  $^2P_{3/2}^0$  and  $^2P_{1/2}^0$  fine struct. thresholds 2-29661  
 As<sub>2</sub>Se<sub>3</sub>, crystalline, excitonic gaps and Urbach tail, absorpt. and electroabsorpt. 2-35946  
 As<sub>2</sub>Se<sub>3</sub>:Ag amorphous film, XPS study, core electron binding energy 2-46872  
 B<sub>12</sub> icosahedral cluster, electronic struct. and binding energy 2-39523  
 BH<sub>3</sub>NH<sub>3</sub>, binding energy, ab initio calculations 2-15713  
 Ba, 3d electron excitation energies, relativistic HF calc. 2-12991  
 BaF<sub>2</sub>:R (R=rare earth), dopant-interstitial binding energies, lattice simulation calc. 2-40428  
 ClF, cone and valence binding energies, SCF and MCSCF/CI calc. 2-19977  
 CO, free and coordinated, core ionisation, XPS study of intensity borrowing 2-15848  
 CO<sub>2</sub>, dimers and clusters, photoionisation study 2-15852  
 CaF<sub>2</sub>:R (R=rare earth), dopant-interstitial binding energies, lattice simulation calc. 2-40428  
 CaF<sub>2</sub>-CaO-SiO<sub>2</sub> glasses, struct. study by XPS, X-ray emission, IR spectra, and F ionic refr. 2-30403  
 Cd, atom and ions, binding energy, SCF calcs. 2-20200  
 CeN, 4f surface chemical shift, mixed valence 2-46876  
 CeP(As)(Bi), 4f photoemission satellites 2-17600  
 Cs, atom and ions, binding energy, SCF calcs. 2-20200  
 Cs, structural and thermodynamic props. using local transition metal pseudopot. 2-8472  
 Cs-K(Br), solid solution, total binding energy electronic theory 2-26319  
 CsPbCl<sub>3</sub>(Br<sub>3</sub>), ferroelec., exciton absorpt., luminesc. and reson. Raman scatt. 2-46638  
 Cu (001), charge state of adsorbed I, XPS study 2-41494  
 Cu,  $L_{2,3}M_{4,5}$  principal and satellite Auger spectra 2-49356  
 Cu<sup>+</sup> complex with DNA, melting and binding, UV spectra study 2-6214  
 CuBr, Raman study of excitonic molecule excited states 2-46568  
 Cu(II) complex, bi-chelate series, ligand mutual influence effect, struct., CNDO calcs. 2-34304  
 Dy, binding energy, contris. for various structs. 2-8470  
 Eu, 4f surface binding energy shift, synchrotron radiation excited photoemission spectra 2-51769  
 Eu-Au, surface core level binding energy, chem. shift, surface segregation 2-51272  
 $\alpha$ -Fe, interaction energy of Al-C pair from mag. permeability disaccommodation (*Polish*) 2-36396  
 Fe, ion implanted, trapping of Sb by TaC and Cu precipitates 2-2513  
 Fe(II) complex, bi-chelate series, ligand mutual influence effect, struct., CNDO calcs. 2-34304  
 Fe<sub>2</sub>O<sub>3</sub>·H<sub>2</sub>O, amorphous, competitive adsorption of Cd, Cu, Zn and Pb 2-35887  
 GaAs, surface chemistry and interface Fermi level position, single defect model 2-26460

## binding energy continued

GaAs, surface core level shifts, Madelung pot. effect 2-30949  
 GaP, struct.-energy calcs. using pseudopot. and localised Gaussian orbitals 2-30815  
 GaP:Cu, photoluminescence spectrum 2-46694  
 Gd 4f surface binding energy shift, synchrotron radiation excited photoemission spectra 2-51769  
 Ge, donor local field corrections to binding energies 2-21536  
 Ge<sub>2</sub>, uniaxially stressed, luminescence of excitonic molecules 2-46692  
 H<sub>3</sub><sup>+</sup>, collisional dissociation and binding energy, translational spectrosc. meas. 2-34537  
 H<sub>2</sub>(HD)(D<sub>2</sub>), B'  $^1\Sigma_u^+$  states, adiabatic correction and pot. energy curve 2-7535  
 (H<sub>2</sub>S)<sub>n</sub>, n=1 to 7, mol. beam photoionisation 2-20141  
 He, sticking probabilities and binding energy of H 2-1694  
 He-H<sub>2</sub> mixture film, heat capacity 40 to 350 mK, doubly two-dimens. behaviour, bound state 2-1695  
 He, liquid, ground state, hard-core square well pot. parameters redetermined 2-50950  
 HgCdTe, luminescence 2-26957  
 Ir(332), intrinsic step related surface states and 4f core levels, photoemission meas. 2-13158  
 K, atom and ions, binding energy, SCF calcs. 2-20200  
 K dimers and trimers, electronic properties, pseudopot. spin density functional calc. 2-11586  
 K, structural and thermodynamic props. using local transition metal pseudopot. 2-8472  
 Kr<sub>2</sub>, relative photoionisation cross sections between  $^2P_{3/2}^0$  and  $^2P_{1/2}^0$  fine struct. thresholds 2-29661  
 Li clusters, binding energy, ionisation pot., CNDO/BW study 2-815  
 LiF<sup>+</sup>, electronic states, binding energy, MO calcs. 2-7498  
 Mg, atom and ions, binding energy, SCF calcs. 2-20200  
 Mg, positron trapping at vacancies PALS 2-50628  
 MgH<sub>2</sub>, crystal, covalent bonding, iteration-perturbation theory 2-21062  
 Mo, adsorption of F, Cl, and Br, binding energies 2-40695  
 NO, mol. orbital momentum distrib. and binding energies 2-39498  
 N<sub>2</sub>O, dimers and clusters, photoionisation study 2-15852  
 Na<sup>+</sup> complex with 18-crown-6 polyether, conformational props., CNDO calc. 2-4220  
 Na<sub>1-x</sub>Zr<sub>x</sub>Si<sub>3</sub>P<sub>3-x</sub>O<sub>12</sub>, struct. by rigid-ion model 2-25849  
 Ni, Cu<sub>1-x</sub>, surface core-level binding energy shifts 2-21648  
 Ni(II) complex, bi-chelate series, ligand mutual influence effect, struct., CNDO calcs. 2-34304  
 NiO, chemisorption of O, Hartree-Fock calcs. 2-35894  
 O adsorbed on stepped W (110) surface, chemisorption theory and adatom binding energies 2-1770  
 O<sub>1</sub>, core binding energy, ab initio SCF calcs. 2-34280  
 OF<sub>2</sub>, core binding energy, ab initio SCF calcs. 2-34280  
 P<sub>2</sub>, pseudopotential calcs. 2-29507  
 P<sub>2</sub>, pseudopotential calcs. 2-29507  
 P<sub>2</sub>, pseudopotential calcs. 2-29507  
 P<sub>2</sub>H<sub>4</sub>, pseudopotential calcs. 2-29507  
 Pb, electronic and lattice-mechanical properties, pseudopotential theory 2-16619  
 Pb+Cl ions, K shell ionisation, role of relativistic and binding energy effects 2-34548  
 Pd, Ag<sub>1-x</sub>, surface core-level binding energy shifts 2-21648  
 Rb, atom and ions, binding energy, SCF calcs. 2-20200  
 Rb, structural and thermodynamic props. using local transition metal pseudopot. 2-8472  
 Rb-K, solid solution, total binding energy electronic theory 2-26319  
 Se film, amorphous to crystalline transition, thickness depend. 2-40720  
 Si (111)-Ga(Sb) interface Schottky barrier formation study 2-41011  
 Si, donor local field corrections to binding energies 2-21536  
 Si, electron-hole droplet nucleation, role of shallow impurities and defects, photolum. study 2-2339  
 Si, struct.-energy calcs. using pseudopot. and localised Gaussian orbitals 2-30815  
 Si surface (001), surface atomic geometry 2-1715  
 Si, surface oxidation, O and O<sub>2</sub> chemisorpt. 2-27474  
 Si, X-centres (C-acceptor pair centres) 2-1475  
 Si:H(F), amorphous, chem. bonding environment of Si and dopant 2-40275  
 Si/Ni(Pd) systems, local chemical struct., XPS study 2-9246  
 Si-SiO<sub>2</sub> interface study using XPS 2-45745  
 SiO<sub>2</sub>-Si interface, local atomic order and electronic struct. theory (*French*) 2-17127  
 SrF<sub>2</sub>:R (R=rare earth), dopant-interstitial binding energies, lattice simulation calc. 2-40428  
 Te<sub>2</sub>, XPS, 3d levels, core binding energies 2-20124  
 Ti surface, chemisorpt. of H<sub>2</sub>, embedding theory and small cluster calc. 2-45729  
 TiB<sub>2</sub>N<sub>1-x</sub>, core level binding energies, photoelectron spectroscopy 2-41488  
 TiC film, reactive sputtering (*Japanese*) 2-27087  
 V, complex, dinitrosylbis(1,10-phenanthroline)vanadium(II) perchlorate, binding energy, XPS 2-11549  
 W, surface (100), chemisorption of H, localised electronic interactions, density matrix treatment 2-7499  
 Xe<sub>2</sub>, relative photoionisation cross sections between  $^2P_{3/2}^0$  and  $^2P_{1/2}^0$  fine struct. thresholds 2-29661  
 Yb-Au, surface core level binding energy, chem. shift, surface segregation 2-51272  
 Zn, atom and ions, binding energy, SCF calcs. 2-20200

## Bingham plastics and solids see rheology

## bioacoustics

see also biological effects of acoustic radiation; biomedical ultrasonics; hearing; sonar  
 acetabulum, human, improved US techniques for geometry and press. distrib. meas. 2-14367  
 acoustic impedance of major bovine blood vessel walls 2-47627  
 blood deer, sickle cell absorption of ultrasound 2-14283  
 bone, compact, permanent deform. monitored by acoustic emission 2-6241  
 bone-conducted sound in human head, propag. velocity 2-22790  
 breath sounds, use in pulmonary diagnosis, review 2-32292  
 cardiac acoustic emission, freq. shift rel. to heart function 2-32293  
 diffuse US exposure field, average dose absorption by biological specimens 2-32336



**bioacoustics continued**

- dipalmitoyl phosphatidylcholine liposomes, phase transition, US study 2-14210
- echolocating Atlantic bottlenose dolphins, target detection in noise 2-14264
- human tissue, ultrasonic attenuation coeff. meas. 2-14284
- phonocardiography, first and second heart sound freq. spectra temporal variation 2-27858
- pulmonary sounds, diagnostic value, preliminary study by CAA 2-14299
- red blood cells, US meas. of back-scatt. cross-section (*French*) 2-32251
- respiratory sound, digital spectrum anal. 2-14303
- sodium deoxycholate, conc. aq. soln., viscoelasticity, US meas. 2-37619
- underwater sounds recorded from migrating bowhead whales 2-47614
- US velocities of several biological tissues 2-37623
- US velocity in muscle 2-47625
- US waves, longitudinal, attenuation in sheep tissue 2-9832
- US waves and tissue interaction, overview rel. to cardiology 2-6247
- velocity and attenuation of sound in arterial tissues 2-47626

**biocommunications**

- see also *biocybernetics; hearing; learning systems; speech*
- vibratory communication through living plants by a tropical wandering spider 2-37592

**biocontrol**

- see also *biocommunications; biocybernetics*
- eye, servo controlled, human and primate, response to confined visual environment 2-47596
- human lens accommodation, nonlinear anal. 2-52481
- intracranial pressure, closed-loop control 2-27927
- locomotor system control, functional electrical stimulation 2-32360
- neural control prostheses, appls. in humans 2-27932
- neuromuscular system, mechanical impedance of human forearm 2-52530
- oculomotor control system, dynamic characteristics estimation using band-limited pseudo random signals (*Korean*) 2-27805
- orthoses, single neuron recording from motor cortex and possible signal source 2-27933

**biocybernetics**

- see also *artificial intelligence; brain models; learning systems; man-machine systems; neural nets*
- artificial limbs, cybernetic prosthesis, historical development, current status and future prospects 2-32359
- bionics, general discussion of appls. in surgery and medical research (*German*) 2-27918
- cellular sorting, classical molecular approach to computer simulation 2-52458
- epileptic unit activity, modelling variability of interspike intervals 2-14224
- evoked potentials, averaged, a posteriori time varying filtering 2-14179
- evoked potentials, averaged, a posteriori time varying filtering 2-14180
- fly, *Musca domestica*, asymptotic oscillations in tracking behaviour 2-14249
- heart, atrio-ventricular valves, dynamic response anal. using membrane model 2-37614
- molluscan neurone, response to cyclic input, entrainment and phase locking 2-14223
- muscle force, dynamic estimation from EMG 2-27824
- natural self-regulating systems, cybernetics approach 2-3354
- retinal neurons, catfish, spatio-temporal cross-correlation analysis 2-14241
- vertebrate cone retina, cybernetic model 2-22727

**biodiffusion**

- air bubbles, growth in tissue by rectified diffusion, US irradi. 2-52540
- embryonic muscle cell membrane, rapid lateral diffusion of functional ACh receptors 2-47588
- epithelial cell plasma membrane, tight junction as diffusion barrier 2-37508
- eye, vitreous humour, math. model of diffusion 2-42091
- haemoglobin diffusion coeffs., artifacts in meas. by intensity fluctuation spectroscopy 2-6289
- light beating spectroscopy developments, diffusion coeffs. meas. 2-230
- macromolecule diffusion across arterial wall in presence of multiple endothelial injuries 2-42079
- membrane protein rotational diffusion rel. to time-dependent absorpt. anisotropy 2-9779
- molecular motion, rot. diffusion, biophysics appl., Pade approximants 2-14185
- phospholipid barrier, transport of organic solutes 2-27779
- plasma, human, bubble dissolution following recompression, holographic obs. 2-22785
- protein, in biological membranes, matrix control, review 2-32192
- pulmonary diffusing capacity, nonlinear increases during exercise by seated and supine subjects 2-52522
- rod outer segment membrane, Gekko gekko, fluidity and ordering, temp. effect 2-9786
- sarcoplasmic reticulum membranes, area limitation of lipid lateral diffusion 2-27780
- O<sub>2</sub> diffusion problem involving moving boundary, complete numerical soln. 2-32165

**bioelectric phenomena**

- see also *bioelectric potentials; biomagnetism*
- acupuncture, elec., regulation of cAMP/GMP level in normal and arrhythmic cardiac muscles of rats (*Chinese*) 2-22864
- acupuncture, elec., treatment of expt. arrhythmia in rats (*Chinese*) 2-22863
- admittance plethysmography, limb blood flow meas., evaluation of parallel conductor theory 2-37699
- antibacterial effects of Ag electrodes 2-22871
- ATP synthesis and  $\Delta\mu_{\text{H}^+}$  formation, role of elec. field, book contrib. 2-37514
- axon, giant, K<sup>+</sup> current dynamics in crayfish 2-37522
- axons, giant, squid, anomalous K<sup>+</sup> channel-gating rates 2-52463
- axons, giant, squid, spike initiation by intracellularly perfused Ca<sup>2+</sup> 2-9796
- bacterial culture, growing, impedance meas. of soln., 2- and 4-electrode methods (*Japanese*) 2-47771
- bacterial testing system, microcomputerised, simultaneous meas. of elec. impedance and turbidity (*Japanese*) 2-47770
- black lipid membranes, voltage dependence of capacitance and area 2-18184
- blood, Copley-Scott Blair phenomenon and electric double layer 2-37596
- bone, DC stimulation of non-unions 2-18332

**bioelectric phenomena continued**

- bone, endogenous electricity 2-22715
- bone, mechano-electrical props. 2-42080
- bone, wet, electromech. response, streaming pot. or piezoelectricity 2-22718
- bone formation in rats, electret-induced 2-22716
- bone graft, autoclaved, healing with direct current stimulation, dog expts. 2-22717
- bone healing, elec. enhancement, human skeleton inherent polarisation pattern 2-37526
- bovine serum albumin, hydrated, elec. charge mobility 2-52476
- brain electrical stimulation and heart rate control in monkeys 2-37531
- cardiac cells, cultured, inward current channels activated by intracellular Ca 2-37516
- cardiac mitochondria, rat, inhibition and stimulation of respiration-linked Mg<sup>2+</sup> efflux 2-47587
- cardiac ventricular fibres, porcine, response to electric stimuli after long periods of cold storage (*Chinese*) 2-27799
- cells, natural RF electric oscill. 2-47583
- chlorophyll and its analogues, pulse photoconductivity 2-2846
- conductimetry, non-contacting, for biological materials, theoretical investigation (*German*) 2-18312
- corneal endothelium, rabbit, elec. props. determ. from impedance meas. 2-37535
- coupled nerve fibres, pulse evolution 2-14220
- currents induced in humans and baboons exposed to 60 Hz elec. fields, numerical determ. 2-22789
- dipalmitoyl phosphatidyl ethanolamine, charge transport in thin biological films grown by the Langmuir-Blodgett technique 2-9763
- E coli, cell surface charge and cell division after X-irrad. 2-47650
- electroconvulsive shock, increase in tyrosine hydroxylase activity in rat brain and adrenal gland 2-47594
- electrodes used in electrophysiological expts., Pt, PtIr and Ir-AIROF, comparison of impedances 2-47776
- electron transfer across membranes, electrostatic control of efficiency 2-52448
- electrotactile sensation and pain thresholds, freq. response 2-18354
- epileptic discharge, cats, spread restriction by Bragg peak intracranial irradi. by Ne ions 2-52568
- epileptic unit activity, modelling variability of interspike intervals 2-14224
- erythrocyte cytoplasm, elec. conductivity obs. 2-14213
- erythrocytes, electrophoretic mobility changes after exposure to ionising radiations of various LET 2-42166
- excited membranes, exptl. meas. of ionic permeability, electronic and computing subsystems (*Russian*) 2-47754
- field problems in physiology, soln. methods 2-37527
- fish, electric, efference copy which is modified by reafferent input 2-37725
- forearm musculature, paralysed, controlled prehension and release in quadrupeds by functional elec. stimulation 2-27926
- gastrointestinal signals, elec. control activity, parametric spectral estimation methods 2-14234
- grazing dynamics monitoring using multiple electrode impedance plethysmography system 2-47785
- guarded-electrode medical technique, limitations 2-18323
- heart, helical excitation waves, refractoriness of heart tissue and mechanism of loss of sources 2-2861
- heart cell clusters, spherical, linear elec. props. of passive and active currents, chick embryo expt. 2-9789
- heart muscle, intracellular K<sup>+</sup> and inward-going rectification 2-9792
- helical wave, freq. of circulation and form of excitation impulse 2-14177
- hindlimb electrical stimulation rel. to increased neuronal cell death in chick embryos 2-37529
- horizontal cell membrane, ionic mechanisms underlying nonlinearity 2-22732
- hyperthermic-induced seizures in rat pups, model for febrile convulsions in children 2-22713
- impedance plethysmography, overview of theory and appls. 2-14354
- impedance plethysmography method for automatic determ. of cardiac output (*Japanese*) 2-52655
- intracellular perfusion, review of method for neuron current recording 2-42247
- limb blood flow meas. by admittance plethysmography, evaluation of parallel conductor theory (*Japanese*) 2-52653
- macrophages from mouse spleen cultures, voltage clamp studies 2-37533
- membrane, kinetic ion current investig. during spike by potential clamping method (*Russian*) 2-47755
- membrane components, in situ electrophoresis, review, book contrib. 2-27798
- membrane patches, isolated, nerve and muscle cells, high-resolution current meas. 2-47762
- molluscan brain, single neuron, quasi-electrostatic influence, freq. modulation 2-14218
- molluscan neuron soma, time-dependence of Ca<sup>2+</sup>-activated K<sup>+</sup> current 2-9791
- molluscan neurons, voltage-gated delayed K<sup>+</sup> current, kinetic model 2-37520
- motoneurons, cat hindlimb, discharge patterns during normal locomotion 2-14232
- muscle, acetylcholine receptor ion channels, single, fluctuations in  $\mu\text{s}$  time range of current 2-22712
- muscle, embryonic cells, multiple conductance states of single acetylcholine receptor channels 2-22709
- muscle, skeletal fibres, asymmetrically activated, Ca<sup>2+</sup> transients 2-37519
- muscle cell culture, rat, single, channel recordings of Ca<sup>2+</sup>-activated K<sup>+</sup> currents 2-9790
- muscle fibre, cultured, electrotonic length const. meas. 2-18190
- myotube cultures, rat, single K<sup>+</sup> channel currents of anomalous rectification 2-42077
- narcosis, statistical depend. of background pulse activity of single neuron (*Russian*) 2-47589
- nerve pulse, active, of single unmyelinated fibre, dynamic anal. 2-27801
- neuron, pond snail, driven by maintained currents, repetitive activity, supercritical bifurcation 2-52464
- neuron activity dynamics hardware-software complex, human brain appl. (*Russian*) 2-47730
- neuron membranes computerised investig. of volt-amp and inactivation characts. of ionic channels (*Russian*) 2-47590



**bioelectric phenomena continued**

- parallel fibre excitability, modulation by postsynaptically mediated changes in extracellular  $K^+$  2-37530
- pathological processes, change in elec. charact., mouse expts. 2-2862
- photosynthetic reaction centre, mechanisms of charge separation 2-2854
- Ranvier node membrane, nodal gap resistance, effect on ionic current meas. 2-37523
- retina, catfish, direct elec. connections between transient amacrine cells 2-37547
- sera from patients with different pathological conditions, differences in dielec. constant 2-47593
- skeletal muscle fibres, insect, Ca dependence of Ca currents inactivation 2-14231
- skin, human, pyroelectricity rel. to physiological props. 2-37525
- somatic membrane  $Ca^{2+}$  current during action pot., math. modelling 2-2860
- spinal cord regeneration in Lamprey, enhancement by appl. elec. fields 2-18243
- Teorell oscillator system with fine pore membranes 2-9895
- thoracic impedance measurement using differential impedance plethysmography 2-47739
- transcutaneous electrostimulation, tissue equivalent circuit 2-32195
- truncate egg cell, anomalous rectifier, single channel  $K^+$  currents 2-27796
- unmyelinated parallel axons, pulse trapping, ephaptic transmission, model 2-14233
- vagal stimulus, constant inspiratory-terminating, temporal changes in effectiveness 2-52472
- visual pigment, local elec. field as spectroscopic and photochem. determinants 2-14246
- voltage-current characteristic of neuron input with even shift in clamped pot. of soma 2-14219
- wave in 2D excitable medium, speed rel. to frontal curvature 2-2837
- $K^+$  channels in *Drosophila* Shaker mutants, genetic modification 2-9795
- $K^+$  conductance, voltage-sensitive, lack of in myelinated central vertebrate axon 2-6222

**bioelectric potentials**

- see also *contact potential; electrocardiography; electroencephalography*
- auditory action potential tuning curves, forward-masking in normal and acoustically traumatized ears 2-27809
- auditory brainstem evoked response, review of expt. studies 2-18218
- auditory brainstem responses, analogue and digital filtering 2-2971
- auditory brainstem responses, conf., Stockholm, Sweden (Apr. 81) 2-14974
- auditory brainstem responses in cats, latency rel. to stimulus polarity, intensity and acoustic waveform 2-18220
- auditory evoked cortical pots., attenuation by knowledge of stimulus timing 2-37584
- auditory evoked EEG response, maturational effects on middle components 2-2878
- auditory evoked potential of freely moving cats during repeated d-amphetamine, cross correlation analysis 2-22775
- auditory evoked potentials, intracranially recorded responses from the human auditory nerve 2-37585
- auditory evoked response, wave I identification using an atraumatic ear canal electrode 2-18319
- auditory fatigue of the whole nerve action potential, calculation 2-14260
- auditory short-term adaptation in normal and acoustically traumatized ears, action potential meas. 2-22769
- auditory stimuli, cross correlation analysis of averaged slow wave field potentials 2-47612
- automated data processing in expt. electrophysiology (*Russian*) 2-47758
- bacteriorhodopsin incorporated into flat phospholipid membranes, action spectrum of EMF photogeneration 2-14209
- bacteriorhodopsin liposomes, mosaic equilibrium thermodynamics, ion movement and energy transduction 2-32191
- brain, human, elec. source location, visually evoked scalp potential 2-14237
- brain, human, slow pot. shifts during forewarned reaction, auditory and visual stimuli 2-18188
- brain dynamic electrical patterns of cognition 2-14236
- brain potential, event related, improved classification using preprocessing 2-22759
- brain potentials, investig. of local field non-uniformities (*Russian*) 2-47756
- brainstem acoustic response, inferred patterns of surface pot. distrib. on cat skull 2-18224
- brainstem acoustic response in diagnosis of acoustic neuroma 2-9843
- brainstem auditory evoked elec. response in cochlear hearing loss 2-18221
- brainstem auditory evoked potentials recorded in sleep apnoeics 2-2876
- brainstem auditory evoked potentials recorded in sleep apnoeics 2-6226
- brainstem auditory evoked pots., acute effects of electroconvulsive therapy 2-52495
- brainstem auditory evoked pots., Bessel filtering 2-2978
- brainstem auditory evoked responses, fast meas. method using maximum length sequences 2-22774
- brainstem evoked potential, appl. of Wiener filtering 2-18314
- brainstem response audiometry, ear-canal rel. to mastoid electrode placement 2-18317
- brainstem response audiometry, improved recording technique using a meatal electrode 2-18318
- brainstem response audiometry, normative clinical data 2-18322
- brainstem response audiometry, problems in analogue filtering 2-18321
- brainstem response audiometry and electronystagmography in auditory pathway lesion diagnosis, comparative study 2-9844
- brainstem response audiometry and gestational age in the newborn 2-9817
- brainstem response audiometry following severe head trauma 2-9814
- brainstem response audiometry in brainstem lesions 2-9813
- brainstem response audiometry in chronic alcoholism 2-9815
- brainstem response audiometry in operatively verified cerebello-pontine angle tumours 2-9812
- brainstem response audiometry in paediatrics 2-9845
- brainstem response in conductive hearing loss 2-18222
- brainstem response to clicks in normal hearing and steep high-freq. hearing loss 2-18223
- brainstem responses in multiple sclerosis, comparison of auditory and visual responses 2-9816

**bioelectric potentials continued**

- brainstem responses to filtered sine-waves for freq. specific determ. of auditory sensitivity, animal expts. 2-18219
- cerebral activity temporally defined code preceding speech, computer extraction 2-22776
- cerebral evoked potential by elec. stimulation of human peripheral nerves 2-18226
- chromatophores of photosynthetic bacteria, light-induced transmembrane pot. difference 2-27791
- click-evoked electric brainstem responses, use in audiological diagnosis 2-2972
- conference, London, England (Jan. 1981) 2-23359
- Czechoslovakian EEG and clinical neurophysiology, conf., Bratislava, Czechoslovakia (May 1980) 2-32211
- decreased bilayer stability due to transmembrane potentials 2-22704
- digital image processing techniques (*Italian*) 2-22802
- digital processing, basis (*Japanese*) 2-52656
- EEG and evoked potential modelling, hierarchical approaches 2-22714
- electroarteriography, noninvasive blood velocity determ. 2-14235
- electrocereogram of *Periplaneta americana* cockroach unit receptor (*Chinese*) 2-22777
- electrogastrographic signals, canine, adaptive filtering, filter performance 2-14370
- electrogastrographic signals, canine, adaptive filtering, system design 2-14369
- EMG, dynamic estimation of muscle force 2-27824
- EMG, LF spectral anal. 2-14351
- EMG, mass, processing for estimation of motor units number (*Japanese*) 2-52683
- EMG, surface, dT-dL anal. of loading effect 2-14226
- EMG aspects of facial muscles reinnervation after 7th nerve autogenous grafts 2-42083
- EMG of quadriceps femoris muscle, function in concentric work 2-9822
- EMG of small intestine, analogue automated anal. 2-47777
- EMG pattern discriminator for artificial arm (*Japanese*) 2-47751
- EMG preamplifier system for biomechanical studies 2-6291
- EMG signal, influence of motor unit action potential morphology 2-37528
- EMG signs of shoulder muscle fatigue in 2 elevated arm positions 2-22710
- EMG spectral shift with muscle length, tension, and fatigue 2-52478
- EMG studies of orofacial and mandibular muscles, procedures for verification of electrode placement 2-32372
- EMG study of quadriceps femoris, in man 2-42082
- EMG study of trapezius and rhomboideus major muscles during arm movements 2-14227
- EMG study of trapezius and rhomboideus major muscles during arm movements 2-14228
- EMG-reward system for biofeedback training of children, automated 2-27930
- EMGs, processing for computer anal. 2-6271
- ERG, chicken, colour coding expts. 2-22741
- ERG, slow PIII, math. model, stimulus duration variation 2-22755
- ERG in grasshopper, *Romalea microptera*, adaptation props. 2-32202
- ERG off-effects produced by short duration stimuli 2-52482
- ERG waves, origins in terms of retinal cell function 2-22753
- evoked potential discrimination, information, preliminary obs. 2-22757
- evoked potential enhanced resolution, constrained deconvolution 2-22850
- evoked potential processing, linear estimation and detection theory appls. 2-18195
- evoked potential processing, linear estimation and detection theory appls. 2-14238
- evoked potential research, appls. of filtering and pattern recognition in signal processing 2-37719
- evoked potential research, signal processing, averaging and modelling 2-22843
- evoked potentials, averaged, a posteriori time varying filtering 2-14179
- evoked potentials, averaged, a posteriori time varying filtering 2-14180
- evoked potentials, monograph on EEG-brain dynamics 2-13
- evoked response, spectral analysis, prediction and extrapolation 2-32341
- evoked responses, averaged, rel. to psychometric intelligence 2-52508
- heart, action potential propagation meas., laser scanning system 2-37723
- heart muscle, intrinsic birefringence signal preceding the onset of contraction 2-18191
- interactive neural populations, spatially localized, math. model 2-14222
- interval detector for bioelectric signals 2-2960
- membrane potentials determination by EPR, review, book contrib. 2-27962
- microcomputer based clinical evoked response system 2-6281
- micropower filter for rejection of monophasic and biphasic artefact and noise 2-2965
- motor command estimation from EMTs appl. to fast forearm movements (*Japanese*) 2-37534
- motor units in human m. triceps surae, vol. conducted pots. investigations 2-14229
- multisphere volume conductor, biopotentials, finite difference soln. 2-14230
- multiunit neural signals, real-time classification using reduced feature sets 2-27943
- muscle potentials, ontogenetic differences and their potentiation following tetanic stimulation, rat expt.s. 2-9793
- muscle potentials, spreading, investigation by averaging the summated EMG 2-42081
- myocardial infarction estimation from unipolar epicardial QRS pots. 2-22846
- myocardium mechanical state assessment using action potential 2-22719
- myoelectric signal, procedure for decomposition into constituent action pots. 2-42230
- myoelectric signal, procedure for decomposition into constituent action pots. 2-42231
- nerve signals evoked and recorded using surface electrodes, stimulus artefact 2-42229
- neural spike trains, spectral anal. 2-47549
- neuromuscular bioelectric events, real time data acquisition and analysis using microcomputer system 2-22847
- neurophysiology expts., computer-controlled meas. system using FM tape (*German*) 2-9896
- pattern visual evoked pot., age-dependent changes in amplitude 2-18201
- Phormidium uncinatum, energy transport by transmission of elec. pot. along the trichome 2-52461



**bioelectric potentials continued**

- photoreceptors of gastropod mollusc, *Hermisenda crassicornis*, discrete pot. waves 2-42102  
processing, parallel computer systems for processing rat's long-term locomotor activity, EEG, EOG, and EMG (*Japanese*) 2-52682  
protonic potential role, membrane integrating functions, book contrib. 2-37509  
pyramidal cells electrotonic coupling, rat hippocampus expts. 2-32200  
retinal S-potentials, control in dark adapted and leached fish retinae 2-22734  
somatosensory evoked potentials during whole body hyperthermia in humans 2-52440  
somatosensory evoked potentials in cats, effect of selective serve fibre group activation 2-18227  
somatosensory evoked potentials to peroneal nerve stimulation, cortical and subcortical 2-37591  
somatosensory evoked response to contralateral pudendal nerve stimulation 2-42117  
sympathetic ganglia, excitation transmission, hypergeometric distribution role 2-22711  
thoracic spinal cord, human, finite element modelling of pots. due to elec. stimulation 2-18194  
transient potentials in neurons with branching dendritic trees, analytical method for investigation 2-9760  
visual evoked cerebral pots. in humans by moving dynamic random dot stereograms 2-37543  
visual evoked cortical pot. responses to, target flashes, photopic annulus luminance level effects 2-42093  
visual evoked cortical potential recording and analysis system, microprocessor based 2-22841  
visual evoked potential, age-related changes in latency, influence of check size 2-2865  
visual evoked potential, automatic detect., meas., and documentation: microprocessor appl. 2-52648  
visual evoked potential of strabismic amblyopes, binocular facilitation 2-52483  
visual evoked potential testing, half-field pattern, sequential technique 2-2962  
visual evoked potentials, average and single, dipole localisation 2-37545  
visual evoked potentials, comparison of 2 types: pattern reversal and eye movement 2-37544  
visual evoked potentials, human, insights from information theory 2-22756  
visual evoked potentials, human, nonlinear anal. 2-22758  
visual evoked potentials, regional relationship in infants and school-aged children 2-37541  
visual evoked potentials, steady state, psychophysical correlates 2-52491  
visual evoked potentials and reaction times to the offset and contrast reversal of sinusoidal gratings 2-37558  
visual pattern reversal evoked pots., effects of spatially structured stimulus fields 2-18200  
visual receptor potential and slow  $P_{III}$  component to light and dark flashes, rabbit retina expts. 2-22760  
volume conductor, control methods for extracellularly recorded stimulating artifacts, electronic approach 2-47782

**bioenergy conversion**

- algae conversion to ethyl alcohol, theoretical and economic aspects 2-6156  
alternative energy sources, conf. Kuwait, Feb. 1980 2-52270  
alternative energy technologies occupational and public health and safety implications 2-17959  
biogas plants for rural Egypt, design and operational aspects 2-6183  
biogas technology, energy planning role in India 2-6184  
biogasification of municipal solid wastes, experiments and results 2-32014  
biomass derived energy in Dominican Republic, potential assessment 2-6095  
biomass derived energy in United States, social, legal and economic obstacles 2-6096  
biomass energy conversion systems, present and future (*French*) 2-37454  
biomass gasification of wood using catalysts, technical and economic feasibility 2-6105  
biomass gasification project at University of Florida 2-6185  
biomass hydrothermolysis to produce source material for liquid fuel 2-6102  
biomass resources and conversion technologies (*Spanish*) 2-41973  
biosynthesis of neutral solvents, economic advantages 2-6100  
cellulose conversion to liquid fuel by aqueous, alkaline, thermal degradation 2-6104  
commercial and industrial biomass programme, Tennessee Valley Authority, USA 2-27529  
electricity and some new energy sources (*French*) 2-32031  
energy from wood, technical and economic viability, fourteen industrial case studies 2-6109  
energy management for 110 villages in the Silora area, Rajasthan in India 2-22520  
energy planning and economy in US (*Hungarian*) 2-27540  
ethanol, large-scale renewable systems, design considerations 2-52282  
ethanol from biomass, process commercialisation and economic projections 2-52307  
ethanol fuels from biomass projects 2-27528  
ethanol production by cellulose acid hydrolysis 2-6097  
fluidized bed biomass gasification 2-2760  
forest biomass inventory, productivity and availability 2-22530  
fuel cell power plant using methane-rich gas from anaerobic digestion of raw sewage, design, application and cost 2-18048  
fuel grade ethanol from sugar beet, industrial model 2-32121  
gasification of rice husk 2-27526  
gasohol program, biomass conversion to liquid fuels 2-14120  
liquid fuels from biomass, assessment of technology for production 2-27527  
liquid fuels produced by thermochemical liquefaction of various biomass materials, chemical comparisons 2-6103  
logging residues as energy source, feasibility study 2-6108  
methane gas production by anaerobic digestion of industrial waste, process enhancement 2-17981  
methane gas production by anaerobic digestion of industrial wastes 2-17982  
methane-based fuel gas production, cost effectiveness (*German*) 2-9609  
microalgae as source of fuel oils, production economics 2-6106

**bioenergy conversion continued**

- municipal solid waste anaerobically digested gas characterisation and anal. 2-17980  
oil shale deposits and resources in USA and rest of the world 2-17973  
organic refuse bio-chemical conversion to synthetic fuel and electric power, simulating criterion 2-18141  
pilot biogas plant using agricultural waste, France (*French*) 2-32005  
Pompano Beach Florida prototype demonstration plant for production of methane from municipal solid waste 2-17979  
power generation from biomass fuels, potential in Dominican Republic 2-6099  
sludge purification, development of biogas in an industrial installation (*French*) 2-32006  
sweet sorghum as feedstock for ethanol production, potential assessment 2-6098  
synthetic, production, water and energy requirements 2-17970  
synthetic fuels production from biomass energy resources, state-of-the-art in USA 2-52286  
technological assessment of solar and biomass technologies 2-22550  
transportation fuels from wood, production methods 2-6110  
US Department of Energy biomass program, review 2-27731  
wood energy resource, availability, characts., conversion 2-32008  
wood fuel processing methods, economic assessment 2-6107  
wood gasification demonstration project for hospital 2-6186  
 $H_2$  from biomass depolarised water electrolysis 2-27739

**biographical dictionaries** see *biographies***biographies**

- Bohr, Niels (1885-1962) 2-23398  
Gabor, Dennis, biographical memorial lecture 2-33263  
holography, Dennis Gabor memorial symposium, Haifa, Israel (Mar. 1980) 2-32316  
Le Blon, J.C., discoverer of red-yellow-blue principle of colour printing and mixture 2-10575  
Maxwell, James Clerk, (1831-79) 2-14999  
Ross, James Clark and North Magnetic Pole location 2-25  
Smith, A.M.O., boundary layer research 1945-75 2-42838

**biological cybernetics** see *biocybernetics***biological effects of acoustic radiation**

- see also *biomolecular effects of radiation*; *cellular effects of radiation*  
air bubbles, growth in tissue by rectified diffusion, US irradi. 2-52540  
cardiovascular and behavioral effects of community noise 2-27751  
cell lysis, US induced, press.-mediated reduction 2-52541  
ear, middle, guinea pig, changes in acoustic impedance after exposure to impulse noise and air blast 2-32252  
gas-filled micropores, investigation of response to US 2-47629  
hearing, temporary threshold shift due to exposure to noise, RMS sound press. consideration 2-14256  
hearing loss, early, noise-induced, in teenage boys 2-2893  
hind-limb, guinea-pig, US induced cavitation in vivo, stable bubble prod. 2-18249  
industrial noise, amplitude distributions and effects on hearing damage 2-11940  
liver, mouse, in contact with an aq. coupling medium, in vivo 2-2895  
man, radiation effects 2-9839  
neoplastic tissues, hyperthermia prod. by US, effects of some phys. factors 2-32254  
noise rel. to hearing loss and high blood press. 2-2881  
noise-induced hearing loss, equivalent continuous sound level for impulse noise 2-11941  
noiseload judgement by acoustical meas. anal. (*Hungarian*) 2-50032  
ocular tissue, effects of pulsed US 2-2894  
phagocytosis, depression by US, mouse expts. 2-2896  
plasma angiotensin II changes with noise exposure at three levels of ambient temperature 2-22791  
potato tuber tissues, determ. of cavitation threshold from luminesc. appearing on US exposure 2-9834  
recreational noise exposure, occupational hazard for audio engineers 2-4633  
thymus DNA, calf, US irradi. effect on template activity 2-47630  
thyroid gland, investigation of functional state after exposure to US 2-14285  
traffic noise, annoyance in persons with normal and impaired hearing 2-14165  
tumour cell responses to US, influences of growth conditions and cell-cell contact 2-32253  
US cavitation during low-power exposure, detect. of resonant bubbles by second-harmonic emission 2-18350  
US cutting efficiency for soft biological tissue 2-22792  
US irradiated tissue, transient cavitation during hyperthermia 2-47631  
wind-induced sound pressures at the human ear 2-11939

**biological effects of gamma-rays**

- see also *biomolecular effects of radiation*; *cellular effects of radiation*  
acetylcholinesterase of human erythrocytes, determ. of mol. activity (*Russian*) 2-42151  
Bacillus stearothermophilus, permeable cells, effects of  $\gamma$ - and UV-radiation on DNA synthesis (*Russian*) 2-52552  
buckwheat grown from irradi. seeds, changes in photosynthetic activity and assimilates transport (*Russian*) 2-42148  
cervical spinal cord, canine, effects of fractionated doses of fast neutrons or photons 2-52533  
chromosomal nonhistone protein-DNA complexes, cell specific, in HeLa chromatin,  $\gamma$ -ray induced crosslinking 2-22798  
chromosome loss,  $\gamma$ -ray induced, in mutagen-sensitive *Drosophila melanogaster*, effect of hyperthermia 2-22702  
chronic irradiation of dogs in low doses, delayed effects (*Russian*) 2-52555  
Crepis capillaris, seeds and seedlings, absence of additivity in combined effect of  $\gamma$ -rays and neutrons (*Russian*) 2-42157  
DNA,  $\gamma$ -radiolysis of oxygenated aq. solns., alterations at the sugar moiety 2-42160  
E. coli, repair of  $\gamma$ -induced single- and double-strand DNA breaks (*Russian*) 2-52553  
E. coli photoreactivable lethal damage after X- or  $\gamma$ -irrad. rel. to Cherenkov UV radiation 2-42164  
erythrocyte membrane,  $\sigma$ -irrad. effect on spin-labelled compounds transport 2-52586  
erythrocytes, electrophoretic mobility changes after exposure to ionising radiations of various LET 2-42166  
erythrocytes, nucleated and anucleated, radioprotection by oxide-reduction coenzymes 2-18268



**biological effects of gamma-rays continued**

- eucaryotic cells, DNA double-strand breaks induction, dose rate effect 2-47652  
gastric secretion of dogs in response to  $\gamma$ -neutron- and X-irrad. (Russian) 2-42145  
germ cells of CBA male mice, dominant lethal mutations (Russian) 2-42144  
germ cells of embryos and fry of fish, *Oryzias latipes*, response to continuous irrad. 2-52571  
globin, borine,  $\alpha$  and  $\beta$  chains 2-22799  
glycoprotein destruction in  $\gamma$ -irrad. aq. solns., major directions (Russian) 2-52558  
haemoglobin, borine,  $\alpha$  and  $\beta$  chains 2-22799  
HeLa S3 cells, DNA polymerase  $\alpha$  and  $\beta$  activity after irrad. 2-37629  
hepatocytes, giant, form. in  $\gamma$ -irrad. Swiss albino mice 2-37624  
jasmine, gamma ray induced mutants, leaf spot resistance and dwarf mutants 2-18269  
leukocyte DNA of rate peripheral blood, repair after total body  $\gamma$ -irrad. (Russian) 2-42141  
life shortening in mice exposed to fission neutrons and  $\gamma$ -rays, single and short-term fractionated exposures 2-27846  
life shortening in mice exposed to fission neutrons and  $\gamma$ -rays, life and long-term fractionated exposures 2-27847  
lung cells, repair of sublethal and potentially lethal damage after irrad. 2-27831  
lymphocytes, human, first two mitotic cycles after irrad. at different stages (Russian) 2-52557  
lymphoid tissue, cell number changes during chronic exposure to  $^3\text{H}$  and  $\gamma$ -rays (Russian) 2-52559  
melanomas, human, transplanted into nude mice, hypoxic fraction and repair of pot. lethal damage 2-52577  
membranes, changes induced in liposomes and lecithin 2-42162  
methaemoglobin modified by  $\gamma$ -rays, sedimentation vel. studies 2-2904  
Micrococcus radiodurans, release of membrane-bound polysaccharide and exonuclease 2-27853  
Micrococcus radiodurans cells, formation and repair of  $\gamma$ -irrad.-induced DNA breaks (Russian) 2-42140  
multicellular spheroids, radiobiological studies using a sequential trypsinisation technique 2-27842  
mutagenicity of filleted fish exposed to  $\gamma$ -radiation and fed to rats (Russian) 2-42154  
neutrophil count, dose evaluation and time course prognosis by haematological indices rel. to  $\gamma$ -irrad. (Russian) 2-32329  
pancreatic cancer, radiotherapy, irrad. dose efficacy (Russian) 2-42194  
phage M13, single-stranded DNA, radiation-induced base substitution mutagenesis 2-22794  
phages, survival rate in  $\gamma$ -irrad., external VHF field effect 2-14296  
protoplasts from wild Nicotiana species,  $\gamma$ -ray and fast neutron irrad. 2-52569  
radiation in human environment, sources and derived exposure 2-27855  
skin, animal, reaction to local irrad., depend. on dose and fractionation pattern (Russian) 2-32262  
skin, pig, low vs. high dose rates of  $^{60}\text{Co}$ - $\gamma$ -rays in acute reaction 2-2905  
skin wound-enhanced survival and myelocytopenia in mice after whole-body irrad. 2-6253  
spermatogonial killing, RBE of high-Z, high-LET charged particles compared to  $^{60}\text{Co}$ - $\gamma$ -rays 2-52580  
stem spermatogonia, survival and renewal following  $^{60}\text{Co}$ - $\gamma$ -irrad. 2-22796  
testes of house sparrow, effect of external  $^{60}\text{Co}$  irrad. 2-47640  
thymus, mouse, absence of late effects of radiation on cellularity 2-37632  
tumour blood flow, effects of single-dose  $^{60}\text{Co}$  irrad., rat expts. 2-42169  
vibrios, antibiotic-resistant mutation induction (Russian) 2-42143  
wing discs, imaginal, of *Drosophila melanogaster*, cell death and mitotic inhibition 2-47644  
yeast, diploid, rad. mutants, comparison of sensitivity to heat and  $\gamma$ -radiation 2-32266

**biological effects of ionising particles**

- see also *biomolecular effects of radiation; cellular effects of radiation*  
bladder, mouse, repair during fractionated electron irrad. 2-2902  
cells, water radiolysis high-LET tracks, O prod. radiobiological implications 2-22795  
conference, Hannover, Germany (Oct. 81) 2-48398  
crotonin complex, thin cryst. at 4K, electron radiation damage 2-27856  
cyclic nucleotides in brain, synthesis and degradation after a high dose of ionising radiation 2-18267  
electron irradiation damage to negatively stained helical struct., low dose method obs. 2-27945  
epileptic discharge, cats, spread restriction by Bragg peak intracranial irrad. by Ne ions 2-52568  
epithelioma cells, murine, survival after pion irrad. by TRIUMF cyclotron 2-32277  
ergosterol, charge state depend. of desorption induced by fast heavy ions 2-14298  
erythrocytes, electrophoretic mobility changes after exposure to ionising radiations of various LET 2-42166  
germ cell population dynamics in the adult male Indian gerbil exposed to internal  $\beta$ -irrad 2-27839  
germ cells of male mice, genetic effect of  $^{14}\text{C}$  (Russian) 2-52565  
glycylglycine, charge state depend. of desorption induced by fast heavy ions 2-14298  
graft tissues, frozen, radiation sterilisation using electron accelerator 2-14292  
heavy ions, accelerated, effects of single doses in normal tissue, tumours and cells in vivo 2-27844  
heavy ions, accelerated, fractionated irrad. of intestinal crypt cells 2-27845  
heavy ions, single hitting, statistical approach to effect anal. (Russian) 2-52560  
intestinal epithelium of developing Swiss albino mice, effect of T 2-52574  
low level effects, BEIR III report 2-32264  
lymphoid tissue, cell number changes during chronic exposure to  $^3\text{H}$  and  $\gamma$ -rays (Russian) 2-52559  
mammalian cells, sequential exposures to low- and high-LET radiations 2-32272  
ovaries of foetal and young mice, influence of  $^{90}\text{Sr}$ -contaminated milk 2-52550  
plasma apolipoproteins, rabbit, changes following whole-body electron irrad. 2-47647

**biological effects of ionising particles continued**

- radiation protection, effects and dose levels (Danish) 2-27910  
secondary particle tracks produced by energy absorpt. in biological microvols., spatial correl. (Russian) 2-42155  
spermatogonial killing, RBE of high-Z, high-LET charged particles compared to  $^{60}\text{Co}$ - $\gamma$ -rays 2-52580  
spermatogonial survival in mice, effects of negative pions 2-42158  
Tradescantia inflorescence,  $^{131}\text{I}$  appl., calc. of  $\beta$ -ray absorbed dose rate 2-18265  
tumour cells, human, cultured, inactivation by cyclotron neutrons and protons 2-27838  
tumour multicellular spheroids, response to multiple fractions of negative pions and X-rays 2-42167  
yeast,  $\beta$ -ray-induced gene conversion 2-32271  
 $^{14}\text{C}$ , radiation hazard 2-18270

**biological effects of microwaves**

- see also *biomolecular effects of radiation; cellular effects of radiation*  
acoustic resonances, microwave pulse-induced, in spherical head models 2-6249  
animal study results overview (French) 2-52546  
antibody response, circulating, alteration in mice exposed to 9-GHz pulsed microwaves 2-18252  
biogenic steroid at microwave frequencies, dielectric loss 2-18256  
cardiac, muscle cells, in vitro microwave irrad. effects 2-27827  
erythrocyte ghost membranes, fluoresc. probe monitoring instrumentation 2-42246  
exposure limits, standardisation world's development trends 2-32255  
exposure system, environmentally controlled, for irradiation of mice at frequencies below 500 MHz 2-37724  
eye, compound, crayfish expts. 2-47635  
facility for unitesed irrad. and behavioural evaluation of rats 2-18343  
fibrosarcoma cells, hamster PARA-7, heat and microwave treatment, antibody-complement cytotoxicity enhancement 2-52547  
haemopoiesis in mice, microwave irrad. effect on resistance to ionising radiation (Russian) 2-42134  
hearts of embryonic quails, 2.45 GHz irrad. effects 2-18251  
honey bee broods following exposure to 2.45 GHz continuous wave radiation, survival development and teratology 2-47624  
honey bee colony, chronic exposure to 2.45 GHz continuous wave microwaves 2-47623  
hyperthermia, expt. set-up for rat studies, temp. controller 2-52689  
hypothermic mice, 5-hydroxytryptamine-induced, detect. of microwave heating 2-52548  
long-term exposure to radiation, review of possible hazards and effects 2-27911  
lymphocytes, T and B, of guinea pigs and mice, effect of single microwave irrad. (Russian) 2-42135  
mast cells and basophils, rat, acute in vivo exposure to 2450 MHz microwave radiation 2-27829  
microprocessor-based instrumentation to monitor microwave interactions with physiological activities 2-18344  
network analyser, automatic, dual 6-port, for determ. of biological effects of RF and microwave radiation 2-47767  
radiation from solar power satellites, biological effects and exposure standards 2-52544  
radio and microwave frequency thermotherapy in cancerology (French) 2-52600  
red blood cells, effect of high power microwave pulses, transmembrane thermal gradients 2-47633  
resonant thin-wire antenna, thermal response of human in near zone 2-47634  
solar power satellites, health and environmental risk evaluation 2-52543  
spleen cells, complement receptor-positive, mechanisms controlling susceptibility to microwave-induced increases 2-18253  
testis, mouse, 2.45 GHz continuous-wave microwave irrad., cytological studies 2-32257  
thermal effects at macroscopic, cellular and molecular levels 2-32256  
UHF radiation exposure, evaluation of body thermal state 2-14207

**biological effects of radiation**

- see also *biological effects of acoustic radiation; biological effects of gamma-rays; biological effects of ionising particles; biological effects of microwaves; biological effects of ultraviolet radiation; biological effects of X-rays; biomolecular effects of radiation; cellular effects of radiation; dosimetry; radiation therapy*  
anaesthesia of expt. equines using He-Ne laser (Chinese) 2-18254  
bacteriorhodopsin incorporated into flat phospholipid membranes, action spectrum of EMF photogeneration 2-14209  
BEIR III report, review 2-32260  
bone cancers from Ra, dose-response anal. 2-32282  
brain, tolerance to multiple courses of radiation therapy 2-2900  
building material radiation, cancer deaths in Poland 2-14293  
cancer, minimising excess deaths after a nuclear attack 2-9838  
cancer fatalities following accident at large reactor 2-29447  
carcinogenesis experiments, review of lessons learned 2-27850  
carcinogenic effects of Rn daughters, U ore dust and cigarette smoke in beagle dogs 2-47639  
cerebral blood flow and central haemodynamics in long-term period of chronic radiation disease (Russian) 2-27812  
chronic hypoxic conditions, effect on organism radiation response (Russian) 2-52554  
collective dose, appl. to population health risk prediction 2-39246  
conference, Delft, Netherlands (Mar. 1981) 2-33218  
conference, London, England (June 1981) 2-38363  
conference, Nagasaki, Japan (Oct. 1980) 2-23360  
conference on radiation research, Minneapolis, USA (Jun. 81) 2-23362  
electric fields, 60 Hz, currents induced in humans and baboons, numerical determ. 2-22789  
electromagnetic coupling between apertures and biological structures 2-42137  
ELF EM fields and health risks from HV transmission lines 2-32259  
EM radiation, possible dangers, acceptable levels, biological effects (French) 2-32258  
embryos, mouse, comparative effects of fission neutron and X-irrad. 2-32276  
gastric secretion of dogs in response to  $\gamma$ -neutron- and X-irrad. (Russian) 2-42145  
head, human, solar radiation effect, analytical model 2-27826  
Hiroshima and Nagasaki, implications of new dose estimates, cancer risks and neutron RBE 2-22829



**biological effects of radiation continued**

- hyperthermia radiosensitising effects, importance of intratumour temperature uniformity 2-32182  
 ionising radiation, methods of human exposure, effects and mechanisms of effects (*French*) 2-32270  
 ionising radiation, review of biological effects 2-52587  
 ionising radiation, review of risks in medical use (*German*) 2-52551  
 ionising radiation at low dose and low dose rate, conf., New Orleans, USA (Jun. 1980) 2-23361  
 ionising radiation risks, informing the public 2-18859  
 kidney, low dose irradi., effect on enlargement in children following nephrectomy for Wilms' tumour 2-6252  
 laryngeal cancer, radiation pathomorphism (*Russian*) 2-42138  
 laser diodes safety aspects, hazard identification 2-14340  
 life shortening in mice exposed to fission neutrons and  $\gamma$ -rays, single and short-term fractionated exposures 2-27846  
 life shortening in mice exposed to fission neutrons and  $\gamma$ -rays, life and long-term fractionated exposures 2-27847  
 liver, gluconeogenesis inhibition in rats (*Russian*) 2-42142  
 liver, mouse, quantitative technique for Pu distrib. and fission fragment range 2-47780  
 magnetic field effects, in vivo, on animals, review (*French*) 2-9831  
 magnetic fields, role of water 2-2883  
 metabolism following irradi., exercise effect, rats 2-14295  
 microdosimetry, conf., Oxford, England (Sep. 1980) 2-33233  
 monitoring and protection 2-47728  
 neutron therapy for pelvic tumours, dose-effect relations for tumour control and complication rate 2-2930  
 optical radiation effects on human bodies, measurement (*Japanese*) 2-9836  
 osteosarcomas induced by  $^{239}\text{Pu}$  in St. Bernards 2-52582  
 physical fitness following irradi., rats 2-14294  
 plant roots, OER and RBE variation between p(75)-Be and d(50)-Be neutron beams 2-2892  
 pneumonitis following a large single dose irradi. 2-27834  
 population doses and risk estimates from occupational exposures in Japan, 1978 2-47719  
 population doses and risk estimates from occupational exposures in Japan, 1978 2-47720  
 power overhead lines, biological effects of electromagnetic fields (*Norwegian*) 2-52535  
 radiation protection standards, radiobiological input 2-33204  
 radioactive waste, high-level, effects of ICRP Publication 30 and 1980 BEIR report on hazard assessment 2-52643  
 radioisotope toxicity in beagles, lifetime studies of  $^{226}\text{Ra}$  and  $^{90}\text{Sr}$  2-27843  
 radiotoxicology of I, review 2-52573  
 retinal protection from solar photic injury, protective filter performance 2-37686  
 RF CW radiation, 100 MHz, chronic exposure of rats 2-27828  
 risks of radiation exposure and radiation protection standards 2-9840  
 roots of *Pisum sativum*, growth inhibition rel. to 60 Hz elec. field parameters 2-32249  
 significance of ionising, nonionising radiation to man, pollution control appl. 2-52398  
 soft-tissue reactions following irradi. of primary brain and pituitary tumours 2-27833  
 somatic risk factors from low-dose exposures, late effects 2-29449  
 spinal cord regeneration in Lamprey, enhancement by appl. elec. fields 2-18243  
 thermal enhancement ratios for fast neutron and X-irrad. of normal rodent tissues 2-42159  
 time factor in determining equiv. conditions of exposure of man and lab. animals to ionising radiation (*Russian*) 2-52566  
 VDT operations, radiation and industrial hygiene survey 2-27825  
 $^{239}\text{Pu}$ , effect of intratracheal administration of sex function of female rats and their progeny (*Russian*) 2-42156  
 $^{239}\text{PuO}_2$ , high fired, inhalation carcinogenesis of repeated exposures in rats 2-22793  
 $^{222}\text{Rn}$  daughters associated with Rn spas, carcinogenic risk 2-37625  
 $^{72}\text{Se}$  in  $\text{Na}_2\text{SeO}_3\cdot\text{Sh}_2\text{O}$ , reaction of male rat endocrine system (*Russian*) 2-42147

**biological effects of ultraviolet radiation**

- see also biomolecular effects of radiation; cellular effects of radiation  
 atmospheric  $\text{O}_3$  depletion, amplification factor for estimation of biological damage 2-27841  
*Bacillus stearothermophilus*, permeable cells, effects of  $\gamma$ - and UV-radiation on DNA synthesis (*Russian*) 2-52552  
 bacteriochlorophyll-a, photoionisation in negatively charged micelles by UV light 2-52567  
 Balb/c-3T3 cells, differential mutagenic response of G1 phase variants 2-22797  
 chlorophyll-a, photoionisation in negatively charged micelles by UV light 2-52567  
 conference, Hannover, Germany (Oct. 81) 2-48398  
 DNA bases, efficiency of two-stage photolysis by high-power UV laser radiation 2-37633  
 DNA-protein cross-links and the possibility of elimination thereof (*Russian*) 2-42149  
*E. coli* photoreactivable lethal damage after X- or  $\gamma$ -irrad. rel. to Cherenkov UV radiation 2-42164  
 human bodies in optical radiation environment (*Japanese*) 2-9836  
 messenger RNA from UV-irrad. T4 phage, mol. size alterations 2-27772  
 phage M13, single-stranded DNA, radiation-induced base substitution mutagenesis 2-22794  
 photoelectron microscopy, contrast effects, UV dose-depend. quantum yields of biological surface components 2-9837  
 Physarum polycephalum, effects of 163 nm vacuum UV irradi. on mitosis initiation 2-52579  
 pi-phages, UV-induced reactivation and mutagenesis after DNA lesion prod. 2-52584  
 plasmodia of *Physarum polycephalum*, preferential synthesis of low-mol. wt. RNA 2-52576  
 yeast, cell size rel. to UV-induced cell cycle variation in lethality and mitotic recombination 2-32269

**biological effects of X-rays**

- see also biomolecular effects of radiation; cellular effects of radiation  
 adenocarcinoma of rat small bowel, antibody-dependent cell-mediated cytotoxicity 2-47649  
 ascites tumour cells, mouse, in vivo and in vitro radiosensitivities 2-18266

**biological effects of X-rays continued**

- blood, extracorporeal irradiation in a rat model for human myelocytic leukemia 2-18260  
 blood cells, human, binding of concanavalin A after in vitro irradi. 2-37628  
 blood cells of X-irrad. mice, plasma membrane alterations, binding of concanavalin A 2-37627  
 bone tumours induced in guinea-pigs 2-52570  
 brain, rat, histology in 1st post-irrad. year 2-47636  
 brain, tolerance of mature human central nervous system to photon irradi. 2-2901  
 cartilage, baby rat tail, radiation enhancement of lysosomal response following hyperthermia 2-27852  
 cells, partition coefficient, X-ray induced changes in polymer aqueous phases 2-14297  
 cerebellar neurons, DNA struct. alterations after whole-brain irradi., rat expts. 2-18259  
 cerebrospinal fluid of primates, effects on cyclic AMP, cyclic GMP and amino acid levels 2-32279  
 chromosome aberrations and sister chromatid exchanges induced in mouse  $10\text{T}^{1/2}$  cells 2-47643  
 collagen, effects on antigenic props. calf skin expts. 2-14291  
 conference, Hannover, Germany (Oct. 81) 2-48398  
 DNA damage, immunological detect. 2-52585  
 DNA strand breaks, normal rejoining in ataxia telangiectasia fibroblast lines after low X-ray exposure 2-27848  
 Don cells, Chinese hamster, inactivation by  $^3\text{H}$  decays, comparison with X-rays 2-32273  
*E. coli*, cell surface charge and cell division after irradi. 2-47650  
*E. coli* photoreactivable lethal damage after X- or  $\gamma$ -irrad. rel. to Cherenkov UV radiation 2-42164  
 Ehrlich's ascites tumour cells, X-ray induced cytoproteins increase rel. to UV-fluoresc. (*Russian*) 2-42153  
 embryos, mouse, comparative effects of fission neutron and X-irrad. 2-32276  
 epidermal cells of Saintpaulia, repair of sublethal and pot. lethal damage 2-42163  
 erythrocytes, bovine, efflux of  $\text{K}^+$  and haemoglobin at low doses and low dose-rates 2-42165  
 erythrocytes, mechanism of  $\text{K}^+$  transport disturbance on irradi. (*Russian*) 2-52563  
 fibroblasts, human, deficient in glutathione, induction and repair of single-strand DNA breaks 2-42161  
 gastric secretion of dogs in response to  $\gamma$ -neutron- and X-irrad. (*Russian*) 2-42145  
 haemopoietic stem cells from control and preirrad. infant mice, in vitro radiosensitivity 2-32281  
 head irradiation effects in  $\text{C}_3\text{H}/\text{He}$  mice 2-22800  
 HeLa cells, Q-banding anal. of long acrocentric chromosomes after irradi. 2-2906  
 hypothermic response, endotoxin-induced, alteration by 2450 MHz microwave irradi., rat expts. 2-18250  
 leukaemia cells, mouse, hyperthermic potentiation of X-ray effects on survival and DNA 2-32274  
 liver erythroid cells, foetal mouse, in vitro irradi. effects 2-52378  
 liver regenerative processes, X-ray abolition of tumour inhibitory effect (*Russian*) 2-32261  
 lung, mouse, cell proliferation, effects of neutron and X-irrad. 2-18262  
 lung, mouse, repair after split dose irradi. 2-32278  
 lymphocyte survival after X-irrad., dose-rate effects 2-47641  
 lymphocytes, peripheral, sister chromatid exchanges after preoperative mammography 2-47651  
 lymphoma cells, murine, response to X-rays under oxic and hypoxic conditions 2-47646  
 mammalian cells, biological importance of selective absorpt. of ultrasoft X-rays 2-18258  
 mammalian cells, chromosome aberrations and cell survival 2-18264  
 mammalian cells, dose-survival curves shape and pot. lethal damage repair 2-47648  
 mammalian cells, sequential exposures to low- and high-LET radiations 2-32272  
 mammalian cells, single-hit pot. lethal damage, repair, X-ray or fission neutron irradi. 2-47645  
 mammary adenocarcinoma, tumour cell subpopulations, differential RBE values, neutron and X-irrad. 2-52532  
 mouse ovary, X-irrad., effect on DNA synthetic activity 2-32265  
 pepsin and its serum inhibitor, investigation of activity after X-irrad. and expt. therapy (*Russian*) 2-52564  
 plasma membrane, sensitive target in radiation-induced cell injury and death, ultrastruct. study 2-32268  
 rhabdomyosarcoma, rat, cell population kinetics after irradi. 2-47637  
 risks of radiation exposure and radiation protection standards 2-9840  
 sarcoplasmic reticulum vesicles, isolated from skeletal muscle 2-18261  
 skin, animal, reaction to local irradi., depend. on dose and fractionation pattern (*Russian*) 2-32262  
 small intestinal villi, multinucleate, giant enterocyte form after X- or neutron irradi., SEM, TEM, optical microscopy 2-27840  
 spinal cord, guinea-pig, effects of single dose irradi. 2-32267  
 spinal cord, proliferative cells turnover after X-irrad. and rel. to time-dependent damage repair 2-32263  
 synergism of X-irrad. and radiographic contrast medium, rabbit expts. 2-2903  
 thermal enhancement ratios for fast neutron and X-irrad. of normal rodent tissues 2-42159  
 thymocytes, rat, in vivo X-irrad., chromatin internucleosomal breakage obs. 2-18263  
 thymus cells, rat, effect of X-irrad. and cortisol on RNA synthesis in isolated nuclei (*Russian*) 2-52561  
 tRNA, effects on capacity to act as substrate for guanine-tRNA transferase 2-27854  
 tumour multicellular spheroids, response to multiple fractions of negative pions and X-rays 2-42167  
 xeroderma pigmentosum and medulloblastoma, chromosomal damage to lymphocytes during radiotherapy 2-52583

**biological fluid dynamics**

- see also biochemistry; haemodynamics  
 amniotometry, amniotic fluid pressure determ. (*German*) 2-32231  
 bilayer membrane formation, hydrodynamic theory 2-9776  
 cerebrospinal fluid, instrumentation for hydrodynamic studies in man 2-47738



**biological fluid dynamics continued**

- egg albumen aq. soln., hydrodynamic resist. in turbulent flow 2-2890
- hydrodynamic features of pulmonary air embolism: a model study 2-52527
- insect flapping flight, flow calculation around lifting surface with large deformation 2-4832
- intracranial pressure, batteryless on-demand-sampling active radiosonde for meas. 2-14312
- intracranial pressure, closed-loop control 2-27927
- intracranial pressure, microprocessor-based monitoring and trending system 2-9888
- intracranial pressure recording, microprocessor based analyser 2-42234
- intracranial pressure telemetry system, animal testing 2-52592
- intracranial pressure telemetry system, hardware development 2-52591
- renal medulla multistage modelling, mass balance in a single stage 2-32385
- review of physiological fluid mechanics 2-18240
- sap ascent in plants, review 2-14277
- US cavitation during low-power exposure, detect. of resonant bubbles by second-harmonic emission 2-18350
- vascular endothelium, shear strength meas., appl. of laminar jet impingement technique 2-39963

**biological macromolecules see macromolecules; molecular biophysics****biological sciences see biology****biological specimen preparation**

- cell nuclear components, identification and selective microprep. using Zeiss IM 35 inverted microscope 2-52693
- cryofixed specimens, cooling chain for STEM and X-ray microanal. 2-9900
- dissecting microscope, dark-field illuminator cone 2-27954
- electron microscope fixation, staining and embedding procedures, effects on periodic struct. of collagen fibril cross sections 2-32177
- electron microscopy, simple method for whole-cell prep. 2-52688
- freeze-fractured model membranes, ice crystals specifically decorate hydrophilic sites 2-27959
- heating, during sputter-coating, for SEM 2-48689
- laser micromanipulation and prep. of biological tissue sections and cells in vitro 2-32366
- microdissection of biological specimen during obs. in SEM 2-18349
- pipetting device, for staining electron microscopic grids 2-32376
- propane-jet freezing, ultra rapid freezing method for temp. dependent lipid phases preservation 2-32373
- rapid freezing, use of propane/isopentane mixtures 2-32374
- SEM, rel to TEM and light microscopy requirements 2-27966
- thin biological samples, ultrarapid freezing 2-32382
- tissue sections, embedded in glycol methacrylate, Quetol 523, and methyl methacrylate, light and electron microscopy 2-27947

**biological techniques and instruments**

- see also biological specimen preparation; biomedical equipment; biomedical measurement; microelectrodes; specimen preparation
- accelerometer, miniature, low-cost, appl. to speech nasalisation 2-52684
- acoustic input immittance meas. for human ear 2-32368
- aerosolisation method using radioisotopes for dog alveolar-capillary membrane permeability assessment 2-52680
- analytical ultracentrifuge data, anal. by nonlinear least-squares techniques 2-37484
- autofluorescence intensity meas., appl. to neuronal lipofuscin accumulation in human brain 2-32189
- autoradiography using <sup>99m</sup>Tc, appl. to grain fungicide coating uniformity 2-2982
- bacteria detection automation 2-2981
- bacteria discrimination, by laser turbidity meas. (Russian) 2-14361
- bacterial testing system, microcomputerised, simultaneous meas. of elec. impedance and turbidity (Japanese) 2-47770
- balance platform measurements, effects of subject position 2-42233
- Bessel filtering of brainstem auditory evoked pots. 2-2978
- biofeedback and psychophysiology computer-based system 2-37711
- biophysical chemistry at high pressure 2-2983
- biosensors, biological membranes (Japanese) 2-14372
- blood pressure automated control using self-tuning regulator, dog expt. 2-22872
- body joint motion meas. and description technique, human spine appl. 2-32370
- brain movements in rabbits, recording technique 2-18351
- brain potentials, investig. of local field non-uniformities (Russian) 2-47756
- catheter-tip and sidewall miniature press. sensors using Si diaphragm, fabrication 2-37698
- cell morphological analysis using wide-angle laser scatt. intensity distrib. 2-841
- centre of volume of humans, technological development for meas. 2-14366
- chiroptical techniques, fast kinetic studies, stopped flow circular dichroism and related methods 2-14373
- circulation demonstration model, human appl. 2-38388
- coherent/Compton scattering method using an X-ray tube for trabecular bone mineral content meas. 2-52690
- compression method for meas. of stress-relax. props. of plant cell walls 2-37714
- computer assisted planimetry for left ventricular perfusion distrib. performance evaluation 2-32384
- computing, parallel systems for processing rat's long-term locomotor activity, EEG, EOG, and EMG (Japanese) 2-52682
- conference, biomedical sciences instrumentation, Laramie, WY, USA (April 1981) 2-42787
- contamination measurements with quadrupole mass spectrometer 2-37131
- control methods of stimulating artifacts recorded extracellularly in vol. conductor, electronic approach 2-47782
- cultured cells, whole mount obs. by ultrahigh resolution TEM 2-27946
- current flowing through isolated membrane patches, high-resolution meas. 2-47762
- cytostometric, 2-station multidimensional slit-flow system 2-42243
- densitometric measurement of cellular parameters, secretory activity of subcommissural organ 2-29555
- differential laser microanemometer, contactless meas. of flow velocity distrib. 2-20776
- ECGs of isolated rat hearts as a meas. of viability after cooling 2-6292
- EEG, auditory driving by complex stimuli, methods for finding single generators 2-42115
- electret-induced bone form. in rats 2-22716

**biological techniques and instruments continued**

- electric acupuncture, regulation of cAMP/cGMP level in normal and arrhythmic cardiac muscles of rats (Chinese) 2-22864
- electric acupuncture, treatment of experimental arrhythmia in rats (Chinese) 2-22863
- electroarteriography, noninvasive blood velocity determ. 2-14235
- electrodes, miniature dry pH, construction and testing 2-47783
- electrodes used in electrophysiological expts., Pt, PtIr and Ir-AIROF, comparison of impedances 2-47776
- electrogastrographic signals, canine, adaptive filtering, filter performance 2-14370
- electrogastrographic signals, canine, adaptive filtering, system design 2-14369
- electrolysis and surgery in treatment of expt. rat tumours 2-27941
- electron accelerator-based cancer therapy system, two-magnet doubly achromatic beam deflection system 2-4154
- electron energy loss selected imaging, spatial resolution and detection sensitivity in microanalysis 2-6927
- electron irradiation damage to negatively stained helical struct., low dose method obs. 2-27945
- electron micrograph, support film contrast transfer function, accumulated dose depend. 2-50493
- electron microscopy, biological appls., conf., Detroit, MI, USA (May 1981) 2-33222
- electron microscopy, conf., Johannesburg, South Africa (Dec. 1980) 2-23373
- electron microscopy, low temp., review, book contrib. 2-27960
- electron microscopy instrumentation for 3D reconstruction of cellular organelles 2-27958
- electron probe analysis, of microdroplets, X-ray intensity and conc. proportionality 2-32375
- electron probe microanalysis quantisation, electron irradiation effects 2-32380
- electronic analogue for nerve cell teaching 2-10574
- electronic and vibrational, chem. and biological appls. 2-225
- electronic speckle pattern interferometry, appl. to basilar membrane vibr. meas. 2-42114
- electrophoregrams of brain struct., proteins, automatic processing (Russian) 2-47757
- electrophysiology, exptl., automated data processing (Russian) 2-47758
- EM movement detector for internal organs, use of circular planar coil 2-47778
- EMG, mass, processing for estimation of motor units number (Japanese) 2-52683
- EMG of small intestine, analogue automated anal. 2-47777
- EMG preamplifier system for biomechanical studies 2-6291
- EMG studies of orofacial and mandibular muscles, procedures for verification of electrode placement 2-32372
- endoprosthesis measurement techniques for meas. of human acetabulum articular surface pres-s. distrib. and geometry 2-6290
- EPR, saturation-transfer, comparison of resolution-enhancement methods 2-52672
- EPR determination of membrane pots., review, book contrib. 2-27962
- ESR spectroscopy, using computer-controlled high-speed data receiver-processor 2-19148
- excited membranes, exptl. meas. of ionic permeability, electronic and computing subsystems (Russian) 2-47754
- feedback controlled nerve fiber impalement device 2-52679
- fibre diffraction, rapid analytic approxs. for disorientation integrals 2-47768
- flow cytometry, slit-scan, restoration of profiles 2-42242
- flow microcalorimeter system for meas. of dynamic energy variables of isolated perfused hearts 2-18347
- flow plethysmograph, fast-integrated, for small mammals 2-2979
- fluctuation X-ray scattering, using synchrotron radiation 2-32378
- fluorescence EXAFS detection, hardware software and operational experience at EMBL, Hamburg 2-32369
- fluorescence microscopy of FITC conjugated dextran, macromol. leakage obs. through semipermeable membrane 2-14216
- fluorescence recovery after photobleaching, membrane rotational motion meas. appl. 2-9894
- fluorescent probe monitoring instrumentation, erythrocyte ghost membranes, appl., microwave irradi. expts. 2-42246
- foetal heart rate monitoring in cattle and sheep using repeater telemetry methods 2-47786
- Gammacell 220 drawer transit doses, magnitude and position dependence 2-9878
- grazing dynamics monitoring using multiple electrode impedance plethysmography system 2-47785
- halothane concentration measurement during anaesthesia from UV light absorb. 2-22818
- Heidelberg proton microprobe using 6 MV tandem Van de Graaff accelerator 2-14044
- holographic recording of bubble dissolution in human plasma following recompression 2-22785
- HPLC appl. to biological matrices compounds characterisation 2-14362
- HVEM, appl. to muscle cell membrane obs. 2-27953
- HVEM applications to botanical ultrastructure 2-27952
- image processing from photodiode array, using variable-threshold digitiser 2-27944
- impedance measurement of growing bacterial culture soln., 2- and 4-electrode methods (Japanese) 2-47771
- intensity fluctuation spectroscopy, artifacts in meas. of haemoglobin diffusion coeffs. 2-6289
- intracellular perfusion, review of method for neuron current recording 2-42247
- ion beam anal. in biological science 2-47691
- ion chamber for neutron dosimetry, book 2-18823
- IR, determ. of absorption coeffs. of biological tissues, technique and theory 2-14365
- laser application in photobiology and photomedicine, review 2-22811
- laser applications in biology and medicine, overview 2-18283
- laser Doppler velocimetry freq. shifting by moving wedged glass for blood velocity meas. 2-22862
- laser light scattering, microprocessor anal., human sperm motility study apparatus 2-47779
- laser microsurgery in cell and developmental biology 2-27957
- laser scanning system for cardiac action potential propagation meas. 2-37723
- laser turbidity meter, two-parameter, fat and protein concs. meas. (Russian) 2-10930



**biological techniques and instruments continued**

- lateral contraction measurement technique, small specimens appl. 2-27949
- LED dark adaptometer, microprocessor-controlled 2-47775
- light beating spectroscopy developments 2-230
- light scattering, appl. to judgement of struct. and aggregation stability of lecithin liposomes 2-14208
- light scattering as sensitive probe of photoreceptor cell static and dynamic props. 2-52675
- lipid monolayers, method of transferring to alkylated planar glass surfaces for phys. props. study 2-18345
- liquid phantoms, formulation method, expt. radiation phys. appl. 2-37721
- lymphocyte activation, fluoresc. probe obs. 2-47764
- macrophages, rat lung  $^{144}\text{Ce}$  autoradiogram meas. by densitometry or photometry 2-6293
- mass spectroscopic analysis of large molecules, fast-atom bombardment method appl. 2-41954
- material isolated by use of Er (III)-induced mag. susceptibilities 2-18348
- mechanical properties measurement of lumbar intervertebral joint, role of secondary variables 2-42250
- microcomputer-based data acquisition, display, and control system for vestibulo-spinal Hoffmann reflex experiments 2-18352
- microdissection within SEM using new micromanipulator 2-27948
- micromechanical oscillators and techniques for determ. of cortical bone dynamic moduli 2-42251
- microprocessor-based instrumentation to monitor microwave interactions with physiological activities 2-18344
- microretardometer-nephelometer for flash-bleached rod outer segment birefr. and forward light-scatt. meas. 2-42090
- microscope, compact transmitted-light KM, design concept 2-10865
- microscope photometry, by voltage to freq. conversion, analogue meas. and digital processing 2-48741
- microscope photometry, high resolution, use in discrimination of chromosome bands 2-52686
- microscope Zeiss Axiomat, myocardial cells in culture morphology and physiology obs. 2-14374
- microscope-TV system, cell image scanning conditions (German) 2-27956
- microscope-TV system, intravital, improvement by 1-bit correlator, microvascular blood flowmetry appl. (Japanese) 2-47772
- microscopic equipment, methods and apps., bibliography 2-23396
- microwave diathermy, anal. of minimally perturbing temp. probe and thermographic meas. 2-47766
- microwave exposure system, environmentally controlled, for irradiation of mice at frequencies below 500 MHz 2-37724
- microwave facility for unutilised irradiation and behavioural evaluation of rats 2-18343
- microwave imaging using algebraic reconstruction technique, sensitivity and resolution 2-32377
- microwave-induced hyperthermia, expt. set-up for rat studies, temp. controller 2-52689
- moire method development review, appl. to biostereometrics 2-52597
- molecular probes of proximal and distal effects in haemoglobin and myoglobin 2-52677
- molecular replacement method, phasing electron diffraction amplitudes appl. to purple membrane protein, bacteriorhodopsin 2-47759
- molecules exam. using circular dichroism spectroscopy 2-6288
- multiunit neural signals, real-time classification using reduced feature sets 2-27943
- muscle mechanics, simple digital instrument for time meas. 2-14371
- MWPC with cathode coupled delay line read-out for DNA repair studies 2-42237
- needle catheter, implanted, use for chick embryo blood press. meas. 2-52681
- network analyser, automatic, dual 6-port, for determ. of biological effects of RF and microwave radiation 2-47767
- neuron membranes computerised investig. of volt-amp and inactivation characts. of ionic channels (Russian) 2-47590
- neurophysiology expts., computer-controlled meas. system using FM tape (German) 2-9896
- neuroscience recording, electrode penetration artifact, retinal appl. 2-42094
- neutron induced autoradiography, appl. to  $^{239}\text{Pu}$  distrib. and fission fragment range meas. in mouse liver 2-47780
- NMR,  $^{13}\text{C}$ , appl. to in vivo studies of mammals 2-47781
- NMR imaging of abnormal live rats, correl. with tissue characts. 2-42249
- NMR techniques using  $^{31}\text{P}$ , appl. to membrane lipid struct., implications for membrane fusion mechanisms 2-52676
- nondestructive method for bulk material scatt. coeff. meas., rel. to dental enamel mineralisation 2-22870
- nucleotide conformational anal. by  $^{31}\text{P}$  NMR spectroscopy, review, book contrib. 2-27963
- online microcomputer anal. of auditory neuron response characteristics 2-6295
- optical diffractometric method for human erythrocyte deformability meas. 2-22707
- optical fibre high-resolution laser Doppler velocimeter for pulsatile blood flow meas. 2-9901
- optical methods for neuron activity investigation (Russian) 2-47753
- optical microscopy, new morphological methods for representation of single neurons 2-52695
- optical microscopy, rotating mirror, continuous recording of microvascular dimensions 2-52687
- optical microscopy automated reticulocyte counting system (Japanese) 2-47769
- oscillation data collection system, for high resolu. protein crystallography 2-2976
- oscillographic intensification system, multichannel z-modulation, for improving the contrast of photographed neurophysiological signals 2-14368
- perfusion system, constant temp., for myocardial energetics study 2-18346
- phase extension and refinement, appl. to metmyoglobin 2 Å data 2-47761
- photoacoustics, life sciences appl., review 2-22869
- photoelectron microscopy, contrast effects, UV dose-depend. quantum yields of biological surface components 2-9837
- photokinesigraphy, appl. to bull spermatozoa motility investig. 2-32367
- photomicrography, automation of microprocessor electronic flash 2-28915
- physiological parameters measurement systems 2-14363
- PIC system, digital image processing of electron micrographs 2-50495

**biological techniques and instruments continued**

- PICTOVAL microprojection instrument, appl. to urinary calculus research, micrograph anal. 2-9897
- piezoceramic transducer matrix system, computer-controlled for presentation to the skin of complex spatiotemporal patterns 2-52670
- piezoelectric device to aid penetration of small nerve fibres with microelectrodes 2-42248
- potential clamping method, membrane kinetic ion current during spike appl. (Russian) 2-47755
- potential-sensitive fluorescent probes, appl. to sarcoplasmic reticulum membrane permeability study 2-14364
- protein electron-density maps, improvement by density-modification method 2-47760
- proteins, intensity data set using a DARK-2, 0 diffractometer 2-52691
- proteins chromatographic separation, using HPLC technique 2-9898
- proteoglycans, hydrated, ultrastruct. using pulsed plasma source 2-2845
- proton imaging for in vivo blood flow and  $\text{O}_2$  consumption meas. 2-27950
- quasi-elastic light scattering, biochem. and biology appls., review, book contrib. 2-27964
- radioactive aerosol, retention in rabbit lung, system for in vivo meas. 2-47765
- radioactive Au colloid as tracer of macromol. transport 2-37713
- radioisotope deposition techniques for expts. on post-mortem trabecular bone specimens 2-37722
- radioisotope measurement of regional ventilation in mech. ventilated dogs using  $^{13}\text{N}$  and  $^{81\text{m}}\text{Kr}$  2-42119
- radiotelemetry and Remler recorder meas. in arterial blood press. monitoring 2-37718
- radiotelemetry of direct blood press. meas. in the arterial and pulmonary circulation 2-37716
- Raman spectroscopy appl., resonance, carotene-containing biomolecules and microorganisms analysis 2-2977
- Raman spectroscopy of micro-organisms, expt. aspects 2-52678
- reflection-contrast microscopy, appl. to adhesion of liver cells to glass surfaces 2-52694
- resazurin colour tone meas. instrument for estimating bacteria in milk using optical fibre detector (Japanese) 2-18341
- resonance-thrombography, theoretical and practical elements, blood rheology appl. 2-37715
- RF permittivity meas. of biological tissues with open-ended coaxial lines 2-42238
- RF permittivity meas. of biological tissues with open-ended coaxial lines 2-42239
- S-band waveguide technique for the calibration of miniature implantable electric-field probes for use in microwave-bioeffects studies 2-42240
- SEM and optical macroscopy techniques combination 2-3660
- SEM autoradiography, of critical point dried biological samples 2-32383
- SEM photogrammetry, meas. of cell vol. and surface area 2-52685
- signal processing in evoked potential research, appls. of filtering and pattern recognition 2-37719
- signal processor for real-time meas. in neurophysiology 2-9899
- skeleton, double stain technique for photographic appl. 2-27942
- small intestinal villi, multinucleate, giant enterocyte form after X- or neutron irradiation, SEM, TEM, optical microscopy 2-27840
- soft X-ray contact microscopy, ultrastructure, elemental imaging of biological specimens 2-32379
- solid-state computer-controlled system for swept-freq. meas. of dielectric props. at microwave frequencies 2-42241
- southern bear mosaic virus, struct. determ., techniques used at 2.8 Å resolu. 2-22696
- speckle-pattern photographic measurements of protoplasmic streaming velocities 2-18342
- spectral analysis methods for gastrointestinal signal elec. control activity 2-14234
- spectrochemical analysis of ashed samples computing 2-2745
- spectrometer for laser-light scatt. meas. of macromol. and subcellular particle motions 2-47774
- SQUID, flat DC thin film, appl. and technique for biomag. meas. 2-22865
- STEM, annular type darkfield method, for obs. of low contrast biological specimens 2-37720
- STEM coupled to minicomputer, for mass meas. of biological specimens 2-27967
- STEM images of tobacco mosaic virus, computer image processing 2-52692
- stereo micrographic techniques for nerve cell studies 2-22867
- stereological methods, appl. to red cell aggregation 2-37598
- sterile solutions freeze-drying accessory 2-47773
- stop-flow apparatus, improved, to meas. permeability of human red cells and ghosts 2-22868
- strain gauge system, techniques for in vivo implanting in bone 2-32371
- submersible fluorimeter for chlorophyll detection 2-42495
- telemetry, microminiature hybrid multichannel implantable system 2-52674
- telemetry of left ventricular press. of conscious dogs 2-37717
- telemetry systems, implantable, survey 2-52673
- temperature scanning pH-stat titration, protein thermal stability anal. appl. 2-27951
- Teorell oscillator system with fine pore membranes 2-9895
- time-resolved fluorescence spectroscopy in biochemistry and biology, NATO Advanced Studies Institute report 2-15241
- total rate imaging with X-rays, non-projection X-ray image in SEM 2-32381
- trace element detection by high energy heavy ion induced X-ray emission 2-47397
- trace elements distrib. in mature wheat seed using Melbourne proton microprobe 2-47763
- tracheal pressure measurement, fluid dynamic factors 2-42245
- tracking of Florida manatee, automated remote tracking system config. 2-47784
- ultrasonic auditory stimulator 2-37712
- US cavitation during low-power exposure, detect. of resonant bubbles by second-harmonic emission 2-18350
- US techniques for meas. of geometry and press. distrib. of human acetabulum 2-14367
- velocity tomography, imaging method cardiac appl. 2-2980
- venous compliance measurement, appl. of transient process of circulatory equilib. (Japanese) 2-52529
- ventilator,  $\text{pH}_a$  servo-controlled, dead space ventilation meas. 2-42244
- video techniques, computer controlled, for bull sperm cell motility evaluation 2-14217



**biological techniques and instruments continued**

- visual grating displays, computer-controlled function generator 2-52669
- X-ray and neutron diff., determ. of membrane biochem. profiles 2-52671
- X-ray detection efficiencies for  $^{103}\text{Pd}$  lungs, synthesis of data from two labs. 2-22866
- X-ray microscopy, soft, improved detail, blood platelets study 2-6294
- X-ray microscopy using Fresnel zone plates 2-28956
- X-ray resonance scattering, appl. to spatial relationships between metal atoms in non-cryst. macromols., book contrib. 2-27965
- Ag electrodes, antibacterial effects 2-22871
- $^{13}\text{C}$  NMR, appls. to metabolic studies, review, book contrib. 2-27961
- $\text{UO}_2\text{SO}_4 \cdot 3\text{H}_2\text{O}$ , negative stain for electron microscopy 2-48845

**biology**

- see also *biological fluid dynamics; biological techniques and instruments; biophysics; blood; cardiology; ecology; evolution (biological); medicine; physiology; zoology*
- Caribbean Sea, biological productivity rel. to optical props. and water dynamics (Russian) 2-10073
- growth and spread, conf., Heidelberg, Germany (July 1979) 2-6709
- Heligoland Bright, effects of plankton on underwater visibility 2-32544
- intestinal permeability to low molecular weight probes (polyethyleneglycol 400), multicompartmental model, simulation 2-32186
- molecular biology, rigid-body least squares program with angular and translation scan facilities 2-40217
- oceanic surface layer suspended matter, vertical distrib. hydrophysical parameters and hydro-optical characts. (Russian) 2-10052
- tree ring widths, appl. to reconstruction of annual precip. amounts in Iowa since 1680 2-23100

**biology computing**

- see also *computerised instrumentation; computerised signal processing*
- arterial tree input impedance models, computer identification 2-47552
- arterial walls, energy density polynomial determ. by numerical method 2-14279
- blood pressure waveforms, planimetry for left ventricular perfusion distrib. performance evaluation 2-32384
- cardiotachometer using KIM-1 single board computer 2-27864
- electromagnetic coupling between apertures and biological structures 2-42137
- electron micrographs, stereological data collection and processing, BASIC microcomputer program 2-48688
- EMG of small intestine, analogue automated anal. 2-47777
- fibre diffraction, rapid analytic approxs. for disorientation integrals 2-47768
- filtering capillary network, pressure and flow distrib. 2-32237
- knee joint biomechanics, permutation method soln. 2-27814
- molecular plotting program 2-44966
- motor command estimation from EMTs appl. to fast forearm movements (Japanese) 2-37534
- multiphase volume conductor, biopotentials, finite difference soln. 2-14230
- neurophysiology expts., computer-controlled meas. system using FM tape (German) 2-9896
- oculomotor system saccadic and smooth pursuit movements, stochastic sampled data model simulation using MIMIC (Korean) 2-32203
- parallel systems for processing rat's long-term locomotor activity, EEG, EOG, and EMG (Japanese) 2-52682
- PIC system, digital image processing of electron micrographs 2-50495
- proximal respiratory airways, finite element simulation of gas transport 2-37615
- sperm motility study apparatus, microprocessor anal. of scatt. laser light 2-47779
- tobacco mosaic virus, STEM images, computer image processing 2-52692

**biomagnetism**

- auditory evoked magnetic fields, dipole orientation 2-52494
- bacteria, aquatic, mag. navigation 2-42118
- blood, high gradient mag. separation, inviscid approx. trajectories, expt. study 2-52512
- blood flow through bifurcation in presence of transverse magnetic field, mathematical simulation 2-9830
- cardiac volume changes, mag. meas. 2-37640
- chlorophyll-a, photocond. modulation in applied mag. field, non-equilib. spin processes 2-17110
- delphin, common Pacific, mag. material in head 2-37593
- field effects, in vivo, on animals, review (French) 2-9831
- haemoglobin, oxy- and carbonmonoxy, low lying paramagnetic states 2-9819
- human homing by mag. sense, unsuccessful expts. 2-6228
- magnetocardiographic lead fields, effects of torso geometry 2-14308
- malarial parasite concentration, bench top mag. separator 2-22807
- material isolated by use of Er (III)-induced mag. susceptibilities 2-18348
- measurements using SQUIDS 2-2915
- modulation transfer functions of human visual system, mag. field meas. 2-42086
- nerve trunk stimulation method using time-varying mag. fields 2-47669
- physiotherapy department equipment, LF magnetotherapy 2-22853
- pigeons, homing, with deficient sun compass, use of mag. compass 2-37594
- retina, frog, alternating mag. field effects, special ref. to ganglion cell activity 2-14282
- sickle cells, rot. in homogeneous mag. fields 2-18242
- SQUID, flat DC thin film, appl. and technique for biomag. meas. 2-22865
- SQUID magnetometer appl., using Nb thin-film microbridge 2-23679
- SQUID magnetometer detection of magnetocardiogram, clinical magneto-cardiology approach (Japanese) 2-22809
- water role in mag. field action 2-2883

**biomass conversion see bioenergy conversion****biomechanics**

- see also *biological fluid dynamics; biorheology*
- acetabulum, human, improved US techniques for geometry and press. distrib. meas. 2-14367
- Achilles tendon reflex meas., microprocessor-based instrument 2-14313
- ankle dorsiflexion rel. to joint position in humans 2-42127
- aorta, pig, effects of normal stress on surface stretching and permeability 2-9824
- aorta of octopus, elastic behaviour to aid blood flow 2-32245
- aortas and pulmonary arteries of calves implanted with cardiac prostheses, mech. props. 2-6237
- aortic valve tissue, viscoelastic props. 2-22783

**biomechanics continued**

- arm movements, EMG study of the trapezius and rhomboideus major muscles 2-14227
- arm movements, EMG study of the trapezius and rhomboideus major muscles 2-14228
- arterial walls, energy density polynomial determ. by numerical method 2-14279
- arteries, elastic props., nonlinear 2-layer cylindrical model 2-6239
- artery, non-linear elastic parameters, anal. for in vivo determ. 2-18229
- articular surface of human acetabulum, press. distrib. and geometry, instrumented endoprosthesis meas. techniques 2-6290
- balance platform measurements, effects of subject position 2-42233
- basilar membrane stiffness in guinea pig, direct meas. 2-22768
- birds, forward flight, unsteady lifting line theory of flapping wings 2-32240
- body joint motion meas. and description technique, human spine appl. 2-32370
- bone, diaphysal surfaces, remodelling due to constant load 2-32242
- bone, mechano-electrical props. 2-42080
- bone, wet, electromech. response, streaming pot. or piezoelectricity 2-22718
- bone strain gauge system, techniques for in vivo implanting 2-32371
- bone-cement interface, analytical modelling and failure prediction 2-2886
- bone-composite interfacial strengths, anal. 2-14269
- bouncy knee concept for above-knee amputees 2-27939
- brain movements in rabbits, recording technique 2-18351
- cardiac contractility evaluation through maximal isovolumic elastance, left ventricular identification in dog 2-32228
- cardiac muscle, stress/strain relation determ. from ventricular press./time relationships 2-9827
- cartilage roughness, effect on lubrication of human joints 2-27822
- centre of volume of humans, technological development for meas. 2-14366
- collagen, struct. role and biomech. props. 2-6245
- computerized system for determ. of reaction time, movement time and movement accuracy 2-2964
- conference, Burlington, USA (Oct. 1980) 2-28600
- cortical bone, human, uniaxial fatigue rel. to tissue phys. characts. 2-32241
- cortical bone dynamic moduli, micromech. oscillators and techniques for determ. 2-42251
- dental implant system, stress anal. 2-27940
- dinosaur speed estimated from footprints 2-37618
- displacement cardiograph including a device sensitive to torso resistivity variations, phys. principles 2-2918
- dura mater, human, mech. props. and effects of storage media 2-42120
- elastic tubes, curved, simulating the aortic arch, clinical implications of press.-deform. anal. 2-47618
- elbow, joint forces rel. to prosthesis design 2-32238
- elbow movement meas., discrete step goniometer 2-32342
- EM movement detector for internal organs, use of circular planar coil 2-47778
- EMG preamplifier system for biomechanical studies 2-6291
- energy expenditure during load carriage at high altitude 2-42121
- extrapericardial and oesophageal press. with positive end-expiratory press. in dogs 2-52520
- eye, horizontal movements in man, composition of central programs 2-52484
- eye, human, math. modelling of work of muscular apparatus 2-6223
- eye movement patterns, development in human foetuses 2-18202
- feet position during human locomotion, monitoring system 2-14350
- femoral bone, bovine, US meas. of orthotropic elastic constants 2-18237
- femoral head, mech. behaviour in Legg-Perthes disease, 3D finite element model 2-14268
- flagella, direct meas. of microtubule sliding force 2-14215
- foetal movement, meas. using a strain-gauge transducer 2-14347
- foot, dynamic vertical force distrib. beneath, characterisation methods 2-47732
- gait analysis, method for force vector course representation (German) 2-32230
- gait analysis, three dimens., using simple and inexpensive data acquisition 2-22817
- gastrocnemius muscle, cat, force-vel. relationship rel. to initial length, elec. activity and temp. 2-6231
- hand function, biomechanics and disability, metacarpophalangeal joint replacement assessment 2-18234
- heart, atrio-ventricular valves, dynamic response anal. using membrane model 2-37614
- heart, biomechanical model as integral musculo-vascular organ, preconditions 2-22784
- heart rate fluctuation, power spectrum anal., beat-to-beat cardiovascular control 2-14278
- hip and ankle, comparative mechanics 2-14267
- hip joint articular surface, stress in healthy adults and persons with idiopathic osteoarthritis 2-6235
- joint motion (Chinese) 2-27811
- joint stiffness quantification, finger arthrograph 2-32343
- joint surgery patients, biomech. assessment 2-32243
- knee joint, ratio of tensions along quadriceps tendon and patellar ligament 2-18232
- knee joint biomechanics, permutation method soln. 2-27814
- knee ligament injury assessment and repair, instant centre pathway as joint motion parameter 2-18233
- lateral contraction measurement technique, small specimens appl. 2-27949
- left ventricle myocardium, contraction and relax., role of internal stresses (Ukrainian) 2-14270
- left ventricular midwall dynamics, right anterior oblique projection, human expts. 2-14273
- limb movement monitoring, US microprocessor-based system 2-32287
- lower jaw movement, dynamic meas. system 2-27919
- lumbar intervertebral joint, role of secondary variables in mech. props. meas. 2-42250
- lung, relations between recoil press., surface area and surface tension 2-2887
- lung deformation, isotropy and homogeneity, dog expts. 2-14274
- motion, human, comprehensive model for simulation, appl. to long jump take-off phase 2-6233
- motion, human, procedure for simulation 2-14271
- motion analysis and nerve stimulators (Swedish) 2-47750
- movement detector using closed-circuit TV 2-14314



# biomechanics continued

muscle, skeletal, cat, passive elastic force-vel. relationship, influence on max. contractile element vel. 2-6240  
muscle, striated, bulk modulus of myofibril liq. cryst., X-ray diffr. study 2-22781  
muscle contraction, voluntary under physiological conditions, motor unit synchronisation 2-22787  
muscle force, dynamic estimation from EMG 2-27824  
muscle forces prediction during human gait, optimisation models evaluation 2-27817  
muscle mechanics, simple digital instrument for time meas. 2-14371  
muscle quadriceps femoris, function in concentric work, EMG obs. 2-9822  
myocardium, contractile anal. and kinetic energy 2-14266  
myocardium, excised canine, passive biaxial stress-strain props. 2-14280  
myocardium mechanical state assessment using action potential 2-22719  
neuromuscular system, mechanical impedance of human forearm 2-52530  
oesophageal accelerometer, indication of cardiovascular function 2-42232  
pancreatic pseudocyst, mech. props. 2-14272  
photo-optical gait recording technique 2-32302  
prosthetic bio-compatibility tests, effects of mech. factors 2-2974  
red blood cell deformability meas., single pore membrane prod. for meas. device 2-22842  
scleral creep in vitro resulting from cyclic pressure pulses, appls. to myopia 2-37537  
sinusoidal work anal., min. phase considerations 2-27816  
skeletal force generation, two models 2-22786  
skeletons of young healthy persons, attenuation of shock waves 2-14275  
skin, human, in vitro, width, thickness, volume and load rel. to extension 2-18230  
skin, human, in vivo, load extension relation, initial low stiffness phase interpretation 2-18231  
soft tissues, large deform. anal. 2-18238  
spider orb webs, vibr. signal transmission 2-9829  
spinal cord of anaesthetized cats, stress/strain relationship obs. 2-14276  
spongy bone tissue at coxal human femur, material props. and strength behaviour (German) 2-32229  
swimming, simple analytical model for the crawl stroke 2-27819  
swimming, tethered forces in the crawl, breast and back strokes 2-27818  
tendons in chickens with scoliosis, stress relax. expts. 2-6243  
treadmill walking, power requirements and mech. efficiency 2-6236  
two-legged walker, vertical oscils. role, simple integrable model (Russian) 2-2891  
vertebrate ventricle, twitch tension frequency as mechanical autoregulation performance 2-2884  
walking, dynamic pointwise vertical force meas. using load cell and sole assembly 2-27914  
walking at different speeds, anal. of linear displacement of head and trunk 2-6242  
walking human, energetically optimal regulation, certain mechanisms 2-14265  
wound closing, determ. of forces and stresses, finite element anal. appl. 2-27820

**biomedical applications of computing** see *medical computing*

# biomedical electronics

see also *electrocardiography; electroencephalography; microelectrodes; patient monitoring; patient treatment; prosthetics; sensory aids*  
bionics, general discussion of applns. in surgery and medical research (German) 2-27918  
bullet detector, based on eddy current detection 2-18281  
capacitive pressure transducer, designed into chip for biomedical appl. 2-18325  
cochlear prosthesis thin-film multielectrode arrays 2-37709  
electrical engineering in medicine, perspectives (Slovenian) 2-52646  
foetal bradycardias automatic diagnosis, using autocorrelation function 2-18327  
heart-rate telemetry, short-distance, capacitive, sports and health care appl. 2-18282  
magnetic field generator, amplitude and phase regulating, for an eye movement monitor 2-42181  
negative ion generator cct., claimed to alleviate some medical conditions 2-28254  
neural prostheses and microelectronics 2-27931  
radiography, electronic layer picture (German) 2-9870  
review of development (Finnish) 2-27913  
RF-powered dual channel stimulator, implantable, hip stabilisation appl. 2-52593  
simulator for human maximal expiratory flow-vel. curve 2-14352  
SQUID magnetometer, using Nb thin-film microbridge, biomagnetic appl. 2-23679  
US pulse echo instrumentation, FET spike pulse generator 2-18274  
Ti ICs, blood compatibility of components and materials 2-9890  
Ti as construction material in biomedical electronics (Czech) 2-52650

# biomedical engineering

see also *biomedical electronics; biomedical equipment; orthotics; patient treatment; prosthetics; sensory aids*  
Chinese biomedical engineering, general description 2-52645  
coherent optics and holography appl., review 2-37644  
conference, biomedical sciences instrumentation, Laramie, WY, USA (April 1981) 2-42787  
education, risks of misuse of technical language 2-32344  
frontiers of engng. in health care, conf., New York, USA (Sept. 1981) 2-14976  
health care engineering organisations, management model 2-22873  
history of heat and mass transfer in bioengineering 2-15003  
hospital installations power supplies and back-up sources in case of failure 2-47472  
hospitals, the risk of elec. shocks, review 2-6274

# biomedical equipment

see also *biomedical electronics; biomedical measurement; orthotics; prosthetics; radiography; radioisotope scanning and imaging; sensory aids*  
A-150 tissue-equivalent plastic, thermal defect obs. 2-50065  
Achilles tendon reflex meas., microprocessor-based instrument 2-14313  
anaesthesiological measures in operating theatre, range of diagnostic, therapeutic equipment 2-32353  
Anger camera, flood field uniformity anal. using order statistics 2-47696  
arrhythmia monitoring system, computerised dynamic 3D joint interval histogram display 2-47736

# biomedical equipment continued

artificial mastoid instrument for bone-conduction receiver calibration over extended freq. range 2-32285  
audiometers, bone-conduction, calibration survey 2-27920  
auditory bone conduction vibrators, loudness balance calibration 2-52657  
blood flow monitor, for heart monitoring 2-52622  
blood gases monitoring electrode, combined pO<sub>2</sub>-pCO<sub>2</sub>, 2-52651  
bullet detector, based on eddy current detection 2-18281  
camera, rotating laminar emission, with Ge-detector, anal. 2-37662  
camera, rotating laminar emission, with Ge-detector, expt. results 2-37661  
cardiac electrophysiology instrumentation, microcomputer based data acquisition systems 2-18324  
cardiac stimulator, for investigating atrial and ventricular vulnerability (German) 2-18310  
cardiological service, instrumentation for resuscitation and intensive care departments 2-22852  
cardiopulmonary data-acquisition system, computerised control of stress rates 2-2969  
cardiotachometer, microprocessor-based, heart rate meas. in rest or exercise stress testing 2-2970  
cardiotachometer using KIM-1 single board computer 2-27864  
cardiovascular signal recorder, dual microprocessor data handling system 2-52604  
cerebrospinal fluid, instrumentation for hydrodynamic studies in man 2-47738  
charcoal trap, refrigerated, for <sup>133</sup>Xe, performance 2-37665  
collimators and X-ray generators, semi-automatic and automatic, operational characts., Medior works 2-27897  
communication aids for the severely physically disabled, design considerations 2-14355  
computerised tomography, performance characts. of 7-pinhole system 2-47690  
computerised tomography, systems from 10 manufacturers, evaluation 2-32312  
computerised tomography scanner principles, reconstruction technique and detectors (Japanese) 2-18298  
computerized system for determ. of reaction time, movement time and movement accuracy 2-2964  
conference, biomedical sciences instrumentation, Laramie, WY, USA (April 1981) 2-42787  
constant flow injector, inexpensive system 2-6272  
cornea and contact lens instrumentation, symposium, Anaheim, CA, USA (Dec. 1979) 2-32207  
corneoscleral coagulator based on Yb-Er-glass laser 2-47670  
cortical bone simulator, conducting plastic, radiation appls. 2-37702  
cyclotron, design for a multiple target system 2-2947  
cytometer, 2-station multidimensional slit-flow system 2-42243  
DC ocular rheography, microprocessor-controlled differentiator for signal processing 2-14346  
dental radiograph numbering system 2-52619  
diathermy and cautery equipment, review 2-18328  
digital vascular imaging system 2-6259  
displacement cardiograph including a device sensitive to torso resistivity variations, phys. principles 2-2918  
dual membrane module system for intractable acites treatment 2-18333  
dual tomographic scanner, image intensity settings 2-6258  
ECG, optimal QRS detector 2-32347  
ECG recorder design, portable powerline-operated, student-faculty project 2-42837  
ECG recorders of the Holter type, continuously worn machines, review (French) 2-6275  
EEG equipment test device 2-52658  
electrodes, miniature dry pH, construction and testing 2-47783  
electrodes, surface, movement-induced pots., ECG recording appl. 2-47737  
electron accelerator-based cancer therapy system, two-magnet doubly achromatic beam deflection system 2-4154  
electron-optical X-ray image intensifiers under clinical conditions, conversion factor meas. (German) 2-18299  
EM flowmeter, effect of blood vessels on sensitivity 2-52598  
EM noninvasive flowmetry of blood flow rate, principles, math. models, instrumentation and methods 2-14309  
EMG-reward system for biofeedback training of children, automated 2-27930  
emission tomograph for noninvasive meas. of brain blood perfusion 2-32327  
encephalovolumeter, noninvasive meas. of changes in brain volume of cerebral pulsation 2-37705  
endoscope, flexible, controlling mechanisms 2-18285  
epithelial neutron beams for medical applications using research reactors 2-19719  
feet position during human locomotion, monitoring system 2-14350  
fibre optic sensors for medical and electrotech. appls. using bifurcated fibre bundles 2-7878  
film-foil systems, rare element, review of appls. (German) 2-9867  
finger arthograph for the quantification of joint stiffness 2-32343  
fluoroscopic X-ray systems, added quality control meas. 2-32323  
foetal breathing monitoring, new phase-lock tracking instrument 2-47657  
foetal ECG analysis, microprocessor-based signal averager 2-47741  
gamma camera data anal. systems, evaluation of count rate losses due to dead time 2-32315  
gamma camera interfacing to DEC Gamma-11 data processing system for emission tomography 2-52620  
gamma camera motion corrector, evaluation of characts. (Japanese) 2-14325  
gamma-ray image intensifier camera, performance study 2-27878  
Gammacamera, Toshiba mobile model GCA-50A, diagnostic appls., operation 2-32326  
gastrointestinal X-ray exam. unit, Medior works 2-27895  
gastroscope, luminesc., for viewing stomach mucous membrane, malignant neoplasm diagnosis 2-2920  
goniometer, discrete step, for elbow movement meas. 2-32342  
head magnet for cancer therapy electron accel. 2-43665  
heat-sink calorimeter of 5.8 m<sup>2</sup> for humans with online data acquisition, processing and control 2-47734  
Holter monitoring, review 2-6278  
human digital arteries, noninvasive pulsed Doppler blood vel. meas. and calc. flow 2-32339  
injector pulse counter for a linear accelerator 2-39274  
integrated monitors for neonatal intensive care, review 2-2973



**biomedical equipment continued**

- intensifying foils for X-ray diagnostics (*German*) 2-52621  
 international safety standards 2-37697  
 international standards and safety status, trends and evaluation 2-47748  
 interval detector for bioelectric signals 2-2960  
 intracranial pressure, microprocessor-based monitoring and trending system 2-9888  
 intracranial pressure recording, microprocessor based analyser 2-42234  
 intracranial pressure telemetry system, animal testing 2-52592  
 intracranial pressure telemetry system, hardware development 2-52591  
 intraocular pressure, instrument for self-meas. using optoelectronic probe 2-42192  
 ion chamber for neutron dosimetry, book 2-18823  
 ionisation chambers, fast neutron beam dosimetry physics group experiences in USA, book contrib. 2-22833  
 laser coagulation equipment for endoscopic haemostasis in gastro-intestinal tract for skin vascular anomalies treatment 2-9848  
 laser scanner microscope, ultrafast, for digital image anal., cytology appl. 2-42188  
 lensometer, optical power calc. for contact lens wet cells 2-32299  
 LEYTAS, use in analytical and quantitative cytology 2-42189  
 light torch for the transillumination of female breast tissues 2-42184  
 limb movement monitoring, US microprocessor-based system 2-32287  
 linear tomographic alignment test object 2-42213  
 load cell and sole assembly for dynamic pointwise vertical force meas. in walking 2-27914  
 lower jaw movement, dynamic meas. system 2-27919  
 magnetic susceptibility measurements using biomedical SQUID system 2-28868  
 malarial parasite concentration, bench top mag. separator 2-22807  
 mass spectrometer, modified ion-source cage 2-14323  
 Maximus TM 100: a generator with fast dose-rate control 2-2936  
 Mediocornea B.C. Tronic unit, clinical use for soft lens meas. 2-32356  
 microcomputer system for data acquisition and analysis of synaptic relationships 2-47745  
 microhaematocrit centrifuge, special-purpose medical device 2-37703  
 microprocessor based monitoring system for neurosurgical intensive care unit 2-52665  
 microprocessor based visual evoked cortical potential recording and analysis system 2-22841  
 microscope, Zeiss operation OPMI 99, design and configs. 2-14315  
 microscopic equipment, methods and appls., bibliography 2-23396  
 microwave diathermy applicators, evaluation using free space elec. field mapping 2-18284  
 microwave radiometer for medical use, automatic E-H tuner 2-27865  
 movement detector using closed-circuit TV 2-14314  
 multiprocessor architecture for rapid EEG frequency analysis 2-37701  
 neutron dosimetry, experience with ionisation chamber by ECNEU group, book contrib. 2-22834  
 NMR flowmeter for blood flow meas. in human legs 2-14317  
 noise problems in biomedical instrumentation 2-2961  
 nuclear medicine imaging with semiconductor gamma cameras 2-47705  
 nuclear medicine Xe holdup filters, factors affecting trapping performance 2-47699  
 oesophageal accelerometer, indication of cardiovascular function 2-42232  
 ophthalmoscope, Stereo 110, of Jena optical works, simultaneous stereo photography 2-9846  
 ophthalmoscope, Stereo 110 and RETINOPHOT 211, use of colour filters 2-9847  
 oscilloscope, digital variable persistence,  $\gamma$ -camera appl. 2-18296  
 oximeter, IL-182 CO, calculator/computer-assisted calibration and use 2-52595  
 pacemaker analysis, improved instrument based on charge-coupled device 2-42236  
 photographic lens, Yashica Medical 100, review 2-32303  
 photoluminescent thermometer based on Eu activated CaS phosphor, medical appl. 2-33524  
 physiological parameters measurement systems 2-14363  
 physiotherapy department equipment 2-22853  
 piezoresistive type flow-through transducer 2-22844  
 plexiglas helmet for location of EEG scalp electrodes in spherical coords. 2-27915  
 pneumotachograph calibration for inspiratory and expiratory flows during HeO<sub>2</sub> breathing 2-52652  
 positron computed tomography, quad BGO detector, timing and positioning discriminators 2-49216  
 positron emission systems using time-difference information meas., image reconstruction technique 2-47709  
 positron emission tomography, detectors, shielding, sampling, electronics 2-47707  
 positron emitters on-line radioassay of clinical sources 2-47713  
 pressure transducers for use at body/support interfaces, design criterion 2-18315  
 projection comparator, Sohnges Kontr-Mess system, clinical use for contact lens meas. 2-32298  
 proton linac, 500  $\mu$ A, 70 MeV, for medical radioisotope prod. 2-43639  
 psychophysiological investigation automation set of instruments based on programmed keyboard computer 2-32350  
 radiation therapy, correspondence of light beam and radiation field, simple test tool for checking 2-27880  
 radiation therapy of malignant neoplasms, development trends (*Russian*) 2-37649  
 radiographic digital devices, appl. to blood vessel diameter and I conc. estimation 2-2939  
 radiographic film changers, rapid, comparison of C-fibre and AI front plates 2-22822  
 radiographic intensifying screens with two-band Titan 2 phosphor universal to all films 2-52607  
 radiographic screen-film systems, effect of crossover exposure on image quality 2-14330  
 radiography, grid selection for oral cholecystography 2-14329  
 radiography, lightweight cassette for mobile-units 2-32324  
 radiography, performance of automatic exposure controls when used with rare-earth intensifying screens 2-32322  
 radioisotope cameras, view distortion introduced by multiformat imagers 2-2944  
 radiopharmaceuticals, automatic dispenser and preparation units 2-47708  
 radiotherapy, <sup>60</sup>Co unit for large field irradi. 2-42203  
 radiotherapy absorbers, gravity-oriented, for dynamic dose-shaping in total lymph node irradi. 2-42221

**biomedical equipment continued**

- radiotherapy planning, patient beam positioning system using CT images 2-52615  
 radiothermograph, meas. of intrinsic microwave radiation from human body 2-37646  
 radioscope for centre thickness meas. of hydrogel contact lenses 2-32357  
 recorder's lower 3 db point, simple technique for determ. 2-9889  
 respiratory deadspace, apparatus for automatic assessment 2-47735  
 RF coil for NMR head imaging 2-52599  
 RF surgery equipment, appls., technical possibilities and safeguarding problems (*German*) 2-52663  
 RF surgery equipment, appls. and technical scope, safety problems (*German*) 2-27928  
 RF surgery equipment, review of hazards 2-18329  
 risk of electrical danger in medicine, conf. RELMED 1981 2-47742  
 saccadic eye movement disorders, quantitative evaluation, computerized system 2-42235  
 scintillation camera, collimator and detector response comparison 2-52610  
 scintillation camera, recommendation for quality control (*Japanese*) 2-14327  
 scintillation camera collimators, accuracy of PSF and MTF computation by Fourier anal. 2-52614  
 scintillation camera performance phantoms (*Japanese*) 2-14326  
 scintillation cameras, standardisation of performance meas. 2-52608  
 scoliosis radiography, improved film cassette 2-42214  
 sensor for noninvasive CO<sub>2</sub> monitoring 2-2966  
 single pore membrane probe for red blood cell deformability meas. 2-22842  
 Sinuscan, instrument for maxillary and frontal sinusitis detect. 2-42172  
 soft lens analyser, clinical appls. 2-32355  
 SQUID, flat DC thin film, appl. and technique for biomag. meas. 2-22865  
 SQUID magnetometer, 7-channel, for brain research 2-32351  
 SQUID magnetometer, using Nb thin-film microbridge, biomagnetic appl. 2-23679  
 SQUID magnetometer detection of magnetocardiogram, clinical magnetocardiography approach (*Japanese*) 2-22809  
 stabilometer, instrumented, for dynamic balance studies 2-47733  
 superconducting Pion Facility for medical application 2-2932  
 surgical diathermy, principles, hazards and safety counter measures 2-47749  
 telemetric neurological analyser, stimulation and monitoring of patients 2-52603  
 teletherapy machines, <sup>60</sup>Co and high-energy, use of FBX dosimeter for calibration 2-52639  
 thermometer arrays, thin, linear, for use in localised cancer hyperthermia 2-37704  
 tissue-equivalent organic liq. scintillator, miniaturised, for fast-neutron spectrometry 2-37672  
 TV application, present development state and future prospects (*German*) 2-9868  
 ultrasound multiplexed Doppler microcomputer combination as noninvasive blood flowmeter 2-47666  
 urologic X-ray equipment range, Medisor works 2-27894  
 US B-scan Doppler imaging system for scanning peripheral anatomy 2-47659  
 US biomedical transducers, multiple scatt. contribution to observed back-scattered intensity 2-32284  
 US diagnostic instrument types for use in different medical fields 2-22805  
 US Doppler unit, intersecting zone, blood flow detect. 2-37637  
 US instrument for organ multi-dimension meas. 2-47664  
 US multichannel pulsed Doppler blood flowmeter, minicomputer-based 2-18280  
 US test objects, resonance by rod-shaped reflectors 2-14306  
 US transducers, design using new piezoelec. ceramic materials 2-2912  
 US transducers, elec. excitation for short pulse generation 2-2913  
 US transducers, wideband, opto-acoustic and acousto-elec., atherosclerosis appl. 2-11999  
 vision testing, the LAIR dark adaptometer, solid-state apparatus 2-9856  
 visual field examination, instrument for monitoring eye fixation and pupil size 2-47674  
 visual subjective refractor, American Optical SR III system, clinical evaluation 2-37689  
 Wisconsin kVp test cassette with orthochromatic film 2-47700  
 X-ray computed tomography, imaging, image reconstruction and equipment, review (*Japanese*) 2-18293  
 X-ray generator development trends 2-27892  
 X-ray image transmission system, qualifying measurements in the Medisor works 2-27891  
 X-ray microscope of living tissue, focusing system (*French*) 2-27898  
 X-ray transformer design and anal. 2-27896  
 X-ray tube, revolving anode, with a microburn trace (*German*) 2-9871  
 X-ray TV system, resolution and transmission problems 2-27893  
 CdTe detectors, portable, appl. to meas. of external <sup>51</sup>Cr-EDTA clearance 2-47692  
<sup>125</sup>I generator/iodination kit 2-52630

**biomedical measurement**

- see also biological techniques and instruments; biomedical equipment; electrocardiography; electroencephalography; radiography; X-ray apparatus  
 ambulatory patients, assessment of circadian rhythm of blood press. and heart rate 2-37695  
 arterial blood press. meas., comparison of direct and indirect methods 2-9887  
 auditory evoked response, wave I identification using an atraumatic ear canal electrode 2-18319  
 balance platform measurements, effects of subject position 2-42233  
 blood, Doppler US flow meas., max. freq. indication 2-42174  
 blood, human, reflectance var. under mag. field at Ar<sup>+</sup> laser line, clinical diagnosis feasibility 2-14310  
 blood, US CW flow metering principles and appl. to peripheral arterial system study (*Italian*) 2-52588  
 blood flow, regional cerebral, meas. using NMR flowmeter focusing techniques 2-14318  
 blood flow in common-carotid artery, transcutaneous meas. using US 2-37635  
 blood flow in therapeutic arteriovenous fistulas, Doppler US evaluation 2-27859



**biomedical measurement continued**

- blood flow measurement in human legs using NMR noninvasive flowmeter 2-14317
- blood flow patterns, normal and abnormal renal artery, US echo-Doppler scanning meas. 2-47667
- blood flow rate, EM noninvasive flowmetry, principles, math. models, instrumentation and methods 2-14309
- blood pressure, direct meas., radiotelemetry 2-37642
- blood pressure, direct meas. by liq.-filled catheter manometer systems 2-47744
- blood pressure, radiotelemetry and standard exercise tests 2-37643
- blood pressure indirect measurement with two-probe US system (German) 2-22804
- blood pressure segmental meas., timesaving method using Doppler US 2-14305
- blood sample  $P_{50}$  calc., computer algorithm 2-22845
- blood velocity measurement by fibre optic laser Doppler anemometry 2-42191
- blood vessel patterns in colour ocular fundus images, computerised extraction and labelling methods 2-22815
- body/support interfaces, design criteria for pressure meas. 2-18315
- brainstem auditory evoked responses, fast meas. method using maximum length sequences 2-22774
- brainstem evoked response audiometry, technical aspects of stimulation, recording and signal processing 2-18316
- brainstem response audiometry, ear-canal rel. to mastoid electrode placement 2-18317
- brainstem response audiometry, improved recording technique using a meatal electrode 2-18318
- brainstem response audiometry, normative clinical data 2-18322
- brainstem response audiometry, problems in analogue filtering 2-18321
- brainstem response audiometry, waveform variation anal., FFT and inverse FFT appl. 2-18320
- breath-to-breath gas exchange meas., sensitivity to expiratory flow errors 2-14345
- capacitive pressure transducer, designed into chip for biomedical appl. 2-18325
- cardiac activity, human, at apex region, laser speckle interferometric obs. 2-2917
- cardiac output, automatic determ., impedance plethysmography method (Japanese) 2-52655
- cardiac stroke volume assessment, beat-by-beat, by pulsed Doppler US in exercise 2-52589
- cardiac volume changes, mag. meas. 2-37640
- cardiotachometer, microprocessor-based, heart rate meas. in rest or exercise stress testing 2-2970
- carotid artery flow, transcutaneous meas. by US volume flowmeter 2-14307
- carotid versus femoral Doppler velocity patterns rel. to cerebral artery flow disturbance 2-22788
- catheter-tip and sidewall miniature press. sensors using Si diaphragm, fabrication 2-37698
- conductimetry, non-contacting, for biological materials, theoretical investigation (German) 2-18312
- contactile events in cardiac and skeletal muscles, non-invasive meas., birefringence changes obs. 2-18289
- corneal endothelial observation techniques using biomicroscope and specular microscope 2-32296
- coronary blood flow, angiographic meas. by video dilution technique 2-27872
- DC ocular rheography, microprocessor-controlled differentiator for signal processing 2-14346
- defibrillator analyser, microprocessor-based, precision calibrator and tester appl. 2-18340
- diagnostic X-ray backscatter measurement by an ion chamber method 2-47701
- dimensional measurement, accuracy in real-time US scanning 2-27860
- echard shape, computerised moire fringe interactive analysis 2-213
- echocardiographic meas. in children, normal values calc., pocket calculator program 2-14301
- EM flowmeter, effect of blood vessels on sensitivity 2-52598
- emission tomograph for noninvasive meas. of brain blood perfusion 2-32327
- eye movements recording, remote oculometer technique 2-37648
- flow cytometry, slit-scan, restoration of profiles 2-42242
- foetal aortic blood flow, human, Doppler US meas. 2-47665
- foetal movement, meas. using a strain-gauge transducer 2-14347
- foot, dynamic vertical force distrib. beneath, characterisation methods 2-47732
- gait analysis, three dimens., using simple and inexpensive data acquisition 2-22817
- gonioscopy, indications for and assessment of gonioscopic signs in optometric practice 2-42182
- guarded-electrode medical technique, limitations 2-18323
- haemodynamic applications of NMR, review (French) 2-32306
- halothane concentration measurement during anaesthesia from UV light absorb. 2-22818
- impedance plethysmography, overview of theory and appls. 2-14354
- intestinal pressure recordings, automated computer anal. 2-14344
- intracranial pressure, batteryless on-demand-sampling active radiosonde 2-14312
- intracranial pressure recording, microprocessor based analyser 2-42234
- intracranial pressure telemetry system, animal testing 2-52592
- intracranial pressure telemetry system, hardware development 2-52591
- intracranial pressure, instrument for self-meas. using optoelectronic probe 2-42192
- intrauterine volume, estimation from US scans by polyhedral approx. methodology 2-47653
- ion beam anal. in biological science 2-47691
- kidney, polycystic disease, vol. estimation from computerised tomography 2-47688
- laser application in photobiology and photomedicine, review 2-22811
- limb blood flow meas. by admittance plethysmography, evaluation of parallel conductor theory (Japanese) 2-52653
- linear prediction applied to medical signals 2-27921
- lower jaw movement, dynamic meas. system 2-27919
- lumbar spinal canal, meas. by diagnostic US 2-2908
- lung compliance, meas. by pulse-flow method, transient elevations 2-52519
- lung water content, microwave meas. method 2-27866
- moire method development review, appl. to biostereometrics 2-52597

**biomedical measurement continued**

- motion analysis and nerve stimulators (Swedish) 2-47750
- multispectral photography appls. 2-32301
- nerve signals evoked and recorded using surface electrodes, stimulus artifact 2-42229
- neuroangiology, mag. fields appls. (Russian) 2-22808
- neutron activation analysis, in vivo clinical appl. 2-2946
- noise and biological signals 2-27923
- ophthalmic instruments, TV appl. (Japanese) 2-22810
- optical fibre technique for He-Ne laser screening of the human body 2-47675
- organ multi-dimension meas. using US instrument 2-47664
- photo-optical gait recording technique 2-32302
- photoelectric plethysmography, fundamental aspects of reflection and transmission methods 2-42186
- red blood cell deformability meas., single pore membrane prod. for meas. device 2-22842
- remote temperature sensing in organic tissue by garnet sphere ferrimagnetic resonance freq. meas. 2-47680
- risk of electrical danger in medicine, conf. RELMED 1981 2-47742
- scoliosis evaluation utilising truncal cross-sections, laser scanning 2-47676
- SEM, biomedical research and routine pathology, review 2-27887
- signal processor for real-time meas. in neurophysiology 2-9899
- signal variability, nature, extent and origins 2-27922
- sleep apnea relationships of infants, Haar transform appl. 2-14353
- spinal mineral anal., low-dose CT scanning 2-47704
- spleen, vol. and mass determ. from computerised tomography scans 2-47689
- surgical vascular clips, compression force determ. by clinically useable variable depth dynamic sensor 2-14356
- temperature, thin linear thermometer arrays for use in localized cancer hyperthermia 2-37704
- temperature profile of patient's body, microwave meas. method 2-52601
- thermometry, hydrated salts transition temps. as fixed points 2-6852
- thoracic impedance measurement using differential impedance plethysmography 2-47739
- thyroid, I distrib. and content, appl. of X-ray fluoresc. for study 2-42201
- tongue motion during speech, US visualisation 2-14304
- transcutaneous gas tension meas. by mass spectroscopy, response improvement (Japanese) 2-52590
- transcutaneous  $PO_2$  in post-cardiac surgery, peripheral perfusion status 2-14357
- US blood velocity Doppler signals, instantaneous freq., mean freq. and variance of mean freq. estimators 2-14302
- US plethysmograph, microprocessor-controlled, limb cross-section area meas. 2-2910
- visual evoked cortical potential recording and analysis system, microprocessor based 2-22841
- visual evoked potential testing, half-field pattern, sequential technique 2-2962
- volume of hollow objects, meas. using serial US tomograms 2-14300
- walking, dynamic pointwise vertical force meas. using load cell and sole assembly 2-27914
- CdTe detectors, portable, appl. to meas. of external  $^{51}Cr$ -EDTA clearance 2-47692

**biomedical phenomena**

see also biomagnetism

No entries

**biomedical ultrasonics**

- arterial pulse velocity rel. to intracranial press. 2-32294
- B-scan Doppler imaging system for scanning peripheral anatomy 2-47659
- B-scan images, resolution enhancement by deconvolution 2-47655
- backscattering from trachea, effect of freq. and orientation angle 2-18248
- bibliography from 1st Jan. 1971 2-20
- bibliography from Jan. 1971 2-33258
- blood, Doppler US flow meas., max. freq. indication 2-42174
- blood flow detect. by intersecting zone Doppler unit 2-37637
- blood flow in common carotid artery, transcutaneous meas. using US 2-37635
- blood flow in therapeutic arteriovenous fistulas, Doppler US evaluation 2-27859
- blood flow patterns, normal and abnormal renal artery, US echo-Doppler scanning meas. 2-47667
- blood flowmeter, Doppler, minicomputer-based, with multichannel data acquisition 2-18280
- blood flowmeters using Doppler effect (Spanish) 2-6284
- blood pressure indirect measurement with two-probe US system (German) 2-22804
- blood pressure segmental meas., timesaving method using Doppler US 2-14305
- blood velocity Doppler signals, instantaneous freq., mean freq. and variance of mean freq. estimators 2-14302
- blood velocity measurement, waveform anal. of Doppler US signals 2-42173
- blood velocity measurements, US scattering, theoretical study 2-47628
- blood vessel parallel to a circular transceiver, echoes from near and far walls 2-7991
- blood vessels, small, and flat boundaries of soft tissues, detectability in US pulse echo method 2-32283
- bloodflow meas., simulation study and theoretical comparison of various processing techniques 2-18278
- breast disease examination by X-rays and US (German) 2-9873
- cardiac catheterisation and 2D US techniques, 3D time-varying reconstruction of human left ventricle 2-22806
- cardiac stroke volume assessment, beat-by-beat, by pulsed Doppler US in exercise 2-52589
- carotid artery flow, computerised Doppler tomography and spectrum anal. 2-47668
- carotid versus femoral Doppler velocity patterns rel. to cerebral artery flow disturbance 2-22788
- compound scanning with an electrically steered beam 2-18279
- computer reconstruction techniques in compound scan pulse-echo imaging 2-18275
- computerised tomography, US, for medical investigations (Swedish) 2-47654
- computerised tomography (Japanese) 2-27924
- computerised US tomography of human head, experimental results 2-47662



**biomedical ultrasonics continued**

- conference, biomedical sciences instrumentation, Laramie, WY, USA (April 1981) 2-42787
- conical US radiators for medical imaging, acoustic field calc. 2-44624
- contrast-detail analysis of diagnostic US imaging 2-47656
- cutting efficiency for soft biological tissue 2-22792
- diagnostic instrument types for use in different medical fields 2-22805
- diffraction tomographic reconstruction techniques for microwave and US diagnostics 2-14320
- dimensional measurement, accuracy in real-time scanning 2-27860
- Doppler examination of the peripheral blood vessel system (German) 2-42180
- Doppler sonography of extra-cranial arteries supplying the brain (German) 2-42179
- echocardiographic meas. in children, normal values calc., pocket calculator program 2-14301
- echocardiography in aeronautical medicine, review (French) 2-6268
- echographic diagnostics in cases of thyroid and para-thyroid gland diseases (German) 2-42175
- echotomographic technique, fundamentals (Italian) 2-22803
- equipment design for clinical appl. (Japanese) 2-27863
- eye, human, thin tissue layer exam., US A-scan analysis 2-32288
- flow metering principles, CW, and appl. to peripheral arterial system study (Italian) 2-52588
- flowmeter, transcutaneous meas. of carotid artery volume flow 2-14307
- foetal aortic blood flow, human, Doppler US meas. 2-47665
- foetal body movements during last 10 weeks of pregnancy, US observations 2-47661
- foetal breathing monitoring, new phase-lock tracking instrument 2-47657
- grey-scale US, slice-thickness artifacts 2-42170
- high resolution method for testicles and epididymitis exam. (German) 2-42178
- image luminance, enhancement by aqueous solns. with high speed of sound 2-47660
- intrauterine volume, estimation from US scans by polyhedral approx. methodology 2-47653
- limb movement monitoring, US microprocessor-based system 2-32287
- localised heat generation in lossy cylinders and spheres 2-44541
- logarithm-differential processing method for US images 2-47658
- lumbar spinal canal, meas. by diagnostic US 2-2908
- lumbar spinal canal quantification, appraisal of the use of diagnostic US 2-2907
- lung imaging, transmission of contrast 2-37638
- multiplexed ultrasound Doppler-microcomputer combination as noninvasive blood flowmeter 2-47666
- needle immersed in liq., acoustic wave propag., biopsy conditions 2-32250
- optical elaboration of images (Italian) 2-4457
- organ multi-dimension meas. using US instrument 2-47664
- physiotherapy department equipment, US source prod. 2-22853
- plethysmograph, microprocessor-controlled, limb cross-section area meas. 2-2910
- pulsatile echoencephalography, review 2-37636
- pulsatility index, role in clinical assessment of lower limb ischaemia from US waveforms 2-2909
- pulse echo instrumentation, FET spike pulse generator 2-18274
- pulse-echo diagnostics, simulation model for echo patterns 2-18273
- pulse-echo imaging system, speckle characts. of image 2-18272
- review of echo-sounding equipment techniques (German) 2-32289
- review of medical imaging methods 2-27870
- serial US tomograms, hollow object vol. meas. appl. 2-14300
- Sinusan, instrument for maxillary and frontal sinusitis detect. 2-42172
- sonographic diagnosis of kidneys and retroperitoneal space, review (German) 2-32291
- sonographic diagnostics of pelvis diseases (German) 2-42177
- sonographic technique for internal mammary chain depth determ., radiotherapy planning appl. 2-27861
- sonography, appl. to abdomen liver, gallbladder and pancreas (German) 2-42176
- sonography of the thorax, state-of-the-art survey (German) 2-32290
- test objects, resonance by rod-shaped reflectors 2-14306
- textural variations in B-mode ultrasonography, a stochastic model 2-18276
- texture analysis of US signals, comparison of RF and demodulated A-scan data 2-47663
- tibia, human, fracture and coxarthrosis, meas. using exponential US concentrators 2-37634
- tissue-like phantom material, reticulated foam 2-42171
- tomography reconstruction using transducer arrays, acoustical fan beam meas. 2-9841
- tongue motion during speech, US visualisation 2-14304
- transducers, design using new piezoelec. ceramic materials 2-2912
- transducers, elec. excitation for short pulse generation 2-2913
- transducers, wideband, opto-acoustic and acousto-elec., atherosclerosis is appl. 2-11999
- transkull visualisation, description of instrumentation 2-32286
- ultrasound imaging techniques (Japanese) 2-27862
- US biomedical transducers, multiple scatt. contribution to observed back-scattered intensity 2-32284
- US CW Doppler FHR signals, meas., extraction and processing (Chinese) 2-9842
- US hyperthermia, local, design of transducers 2-37639
- vortex characterisation and identification by Doppler ultrasound 2-18277
- wide-band reflection-mode US attenuation imaging system, preliminary results 2-29961

**biomembrane transport**

- see also osmosis
- alveolar-capillary membrane permeability assessment, dog, aerosolisation method using radioisotopes 2-52680
- axon membrane, squid, currents recorded through small areas with voltage-clamp apparatus 2-37524
- axon membrane, squid, dynamics of  $K^+$  currents 2-37521
- bacteriorhodopsin liposomes, mosaic equilibrium thermodynamics, ion movement and energy transduction 2-32191
- cardiac cells, cultured, inward current channels activated by intracellular  $Ca^{2+}$  2-37516
- cationic selectivity of BLM in the 'stress' state 2-2852
- complex ion transport mechanism for biomembranes, discrete system model 2-47578

**biomembrane transport continued**

- E. coli outer membranes, clusters of channels in a native environment, matrix protein 2-2853
- electron transfer across membranes, electrostatic control of efficiency 2-52448
- electrophoresis of membrane components, in situ, review, book contrib. 2-27798
- embryonic muscle cell membrane, rapid lateral diffusion of functional ACh receptors 2-47588
- epithelial cell plasma membrane, tight junction as diffusion barrier 2-37508
- erythrocyte membrane,  $\alpha$ -irrad. effect on spin-labelled compounds transport 2-52586
- erythrocytes, bovine, efflux of  $K^+$  and haemoglobin at low doses and low dose-rates 2-42165
- erythrocytes, human,  $Ca^{2+}$  permeability enhancement by physiological shear stresses 2-37515
- erythrocytes, water exchange, NMR, age depend. 2-2859
- excited membranes, exptl. meas. of ionic permeability, electronic and computing subsystems (Russian) 2-47754
- fluidity of cell membranes and its regulation 2-32193
- gramicidin channel in bilayer lipid membranes; effect of thickness, composition and tension 2-2851
- horizontal cell membrane, ionic mechanisms underlying nonlinearity 2-22732
- HPR phosphocarrier protein, alkylated nanosecond fluorescence spectra 2-47571
- intestinal permeability to low molecular weight probes (polyethyleneglycol 400), multicompartmental model, simulation 2-32186
- kinetic ion current investig. during spike by potential clamping method (Russian) 2-47755
- lipid bilayer membranes, drag coefficient, trans. and rot., Navier Stokes equations 2-6219
- macromolecular leakage through semipermeable membrane, in vitro expt. model, fluoresc. microscopy obs. 2-14216
- microsome and proteoliposome system, intermembrane electron transfer efficiency 2-52446
- muscle fibre, cultured, electrotonic length const. meas. 2-18190
- nerve cell membrane proton receptor, rats 2-52447
- neuron membrane, mollusk,  $Ca$  channel energy profile 2-52466
- neuron membranes computerised investig. of volt-amp and inactivation characts. of ionic channels (Russian) 2-47590
- patches, isolated, nerve and muscle cells, high-resolution current meas. 2-47762
- Phormidium uncinatum, energy transport by transmission of elec. pot. along the trichome 2-52461
- phospholipid barrier, transport of organic solutes 2-27779
- phospholipid membranes, divalent cation-transport mechanism of ionophore A23187, fluoresc. study 2-18182
- phospholipid vesicles,  $H^+$  and  $OH^-$  permeability 2-27797
- phospholipids, lamellar phases, 2-D ensemble of double cylinders, mol. dynamics calc. 2-14182
- plant cell wall permeability to macromolecules of various sizes 2-32194
- polyfunctional macrocyclic  $K^+$  complex, cryst. struct. as solid-state model of  $K^+$  channel 2-52432
- polymeric membrane having mechanochemically expanding and contracting pores, function of chemical value 2-9780
- protein, drag force in cell membrane, model calc. 2-30221
- protein diffusion, matrix control, review 2-32192
- protein rotational diffusion rel. to time-dependent absorpt. anisotropy 2-9779
- Ranvier node membrane, nodal gap resistance, effect on ionic current meas. 2-37523
- sarcolemmal reticulum membranes, reconstituted, functional characts. rel. to lipid-to-protein ratio 2-9777
- sarcolemmal reticulum, membrane permeability study using pot.-sensitive fluoresc. probes 2-14364
- sarcolemmal reticulum membranes, area limitation of lipid lateral diffusion 2-27780
- skeletal muscle fibres, insect,  $Ca$  dependence of  $Ca$  currents inactivation 2-14231
- somatic membrane  $Ca^{2+}$  current during action pot., math. modelling 2-2860
- thermodynamics second law applicability, limitations rel. to macrostate-microstate transition 2-10756
- $Ca^{2+}$ , uptake and release by mitochondria 2-37517

**biomembranes**

- see also biomembrane transport; lipid bilayers
- basilar membrane stiffness in guinea pig, direct meas. 2-22768
- basilar membrane vibration meas. using electronic speckle pattern interferometry 2-42114
- bilayer membranes, planar, containing bacterial reaction centres, photoelec. currents across 2-52450
- biochemical profiles, determ. from X-ray and neutron diff. 2-52671
- biophysical chemistry at high pressure 2-2983
- biosensors, biological membranes (Japanese) 2-14372
- black lipid membranes, voltage dependence of capacitance and area 2-18184
- black membranes, artificial, from bipolar lipids of thermophilic archaeobacteria 2-52445
- blood cells, human, binding of concanavalin A after in vitro X-irrad. 2-37628
- blood cells of X-irrad. mice, plasma membrane alterations, binding of concanavalin A 2-37627
- capsule freely suspended in linear shear flow, time dependent deformation 2-35207
- chlorophyll a/b-light-harvesting protein, form. of cryst. arrays by membrane reconstruction 2-47565
- chloroplast active-immobilised membranes, photoacoustic spectroscopy 2-47574
- chromatophores of photosynthetic bacteria, light-induced transmembrane pot. difference 2-27791
- E. coli K1060, membrane fluidity and radiosensitivity 2-37630
- EPR spectra of nitroxide spin label probes, O effect 2-15825
- erythrocyte ghost membranes, fluoresc. probe monitoring instrumentation, microwave irrad. expts. 2-42246
- erythrocyte membranes of rats, activity of ATPases after irrad. (Russian) 2-42150
- freeze-fractured model membranes, ice crystals specifically decorate hydrophilic sites 2-27959



**biomembranes continued**

- gamma-irradiation, changes induced in liposomes and lecithin 2-42162  
heart, aortic ventricular valves, dynamic response anal. using membrane model 2-37614  
integrating functions and protonic pot. role, book contrib. 2-37509  
lecithin liposomes, struct. and aggregation stability as judged by light scatt. 2-14208  
lipid chains, excluded vol. effects, conformation changes of hydrocarbon chain 2-47577  
lipid monolayers, method of transferring to alkylated planar glass surfaces for phys. props. study 2-18345  
lipid structure, appl. of  $^{31}\text{P}$  NMR techniques, implications for membrane fusion mechanisms 2-52676  
lipid-protein interaction, critical effects, expt. results interpretation 2-18181  
lipid-protein interaction, critical effects, theoretical description 2-18180  
lipid-protein interactions in membranes, ESR spin-label studies 2-47556  
lung cells, lack of correl. between hyperthermic killing, thermotolerance, and membrane lipid fluidity 2-27793  
muscle cell membrane obs. using biological HVEM 2-27953  
nerve membrane, noise-induced transitions 2-6212  
neuron activity investig. by optical methods (*Russian*) 2-47753  
oral epithelial cells, effects of mechanical loading on cell membrane 2-27786  
peptides, model, conformations in membrane-mimetic environments 2-47562  
phospholipid bilayer, lattice model, phase transitions and crit. behaviour 2-16768  
phospholipid phase behaviour at air-water interface 2-18183  
photosynthetic membrane of *Rhodospseudomonas viridis*, variable planar particle arrangements 2-32185  
photosynthetic membranes, glow curves, electron trap parameters, thermoluminesc. and light emission meas. 2-2857  
plasma membrane, sensitive target in radiation-induced cell injury and death, ultrastruct. study 2-32268  
potentials determination by EPR, review, book contrib. 2-27962  
protein-lipid interactions in membranes, conf., Airlie, USA (Oct. 1981) 2-42771  
purple membrane of *Halobacterium halobium*, photochem. transients, low temp. photoacoustic spectra 2-47575  
purple membrane protein, bacteriorhodopsin, phasing electron diff. amplitudes with mol. replacement method 2-47759  
purple membranes of *Halobacterium halobium*, photoacoustic photocalorimetry and spectroscopy 2-52444  
pyrene, fluorescence quenching in erythrocyte membrane, by liposoluble quenchers (*French*) 2-11540  
red blood cells, effect of high power microwave pulses, transmembrane thermal gradients 2-47633  
rod outer segment disk membranes, bovine,  $^1\text{H}$  NMR relax. study of bound water 2-52434  
rod outer segment membrane, Gekko gekko, fluidity and ordering, temp. effect 2-9786  
rotational motion, meas. using fluoresc. recovery after photobleaching 2-9894  
sarcolemmal reticulum and phospholipid vesicles,  $^1\text{H}$  NMR  $T_1$ ,  $T_2$  and  $T_{\rho}$  relax. studies 2-47576  
sarcolemmal reticulum membrane, rot. dynamics of protein and boundary lipid 2-47554  
stomach mucous membrane viewing with luminesc. gastroscope, malignant neoplasm diagnosis 2-2920  
Tetrahymena pyriformis membrane, chemoreception, fluoresc. probe study 2-47615  
thylakoid membrane phase transition temp., effect of spinach chloroplast ageing 2-27777  
thylakoid membranes, of chloroplasts, proton spin-lattice relax., proton dilution studies 2-32187  
thymocyte plasma membrane proteins and lipids, thermal transitions, concanavalin A effect 2-14211  
X-ray diffraction, deconvolution anal. using continuous Fourier transform modulus 2-40213  
X-ray diffraction, determ. of first-order phase using electron density strip models 2-40214

**biomolecular effects of radiation**

- see also biological effects of ... (type of radiation)*  
*see also photosynthesis*  
acetylcholinesterase of human erythrocytes, determ. of mol. activity after  $\gamma$ -irrad. (*Russian*) 2-42151  
bone, healing, elec. enhancement, human skeleton inherent polarisation pattern 2-37526  
carboxymyoglobin, mechanisms for excited state relax. and dissociation 2-2899  
collagen, antigenic properties, X-ray irrad. effects, calf skin expts. 2-14291  
crotoxin complex, thin cryst. at 4K, electron radiation damage 2-27856  
cyclic nucleotides in brain, synthesis and degradation after a high dose of ionising radiation 2-18267  
DNA,  $\gamma$ -radiolysis of oxygenated aq. solns., alterations at the sugar moiety 2-42160  
DNA bases, efficiency of two-stage photolysis by high-power UV laser radiation 2-37633  
DNA damage, immunological detect. 2-52585  
DNA secondary structure, initiation of defects by laser irrad. 2-2897  
DNA-proflavine complexes, mechanism for strand-break induction after visible light exposure 2-42136  
ergosterol, charge state depend. of desorption induced by fast heavy ions 2-14298  
globin, bovine,  $\alpha$  and  $\beta$  chains,  $\gamma$ -irrad. effect 2-22799  
glycoprotein destruction in  $\gamma$ -irrad. aq. solns., major directions (*Russian*) 2-52558  
glycylglycine, charge state depend. of desorption induced by fast heavy ions 2-14298  
haemoglobin, bovine,  $\alpha$  and  $\beta$  chains,  $\gamma$ -irrad. effect 2-22799  
isozymes in rice sprouts, changes produced by laser irrad., electrophoretic analysis (*Chinese*) 2-18255  
melanoprotein granules of animal eye pigmented epithelium, photoinduced structural changes 2-52545  
messenger RNA from UV-irrad. T4 phage, mol. size alterations 2-27772  
methaemoglobin modified by  $\gamma$ -rays, sedimentation vel. studies 2-2904  
microwaves and radio waves thermal effects and exposure limits 2-32256

**biomolecular effects of radiation continued**

- oxymyoglobin, mechanisms for excited state relax. and dissociation 2-2899  
phage M13, single-stranded DNA, radiation-induced base substitution mutagenesis 2-22794  
phages, survival rate in  $\gamma$ -irrad., external VHF field effect 2-14296  
photophysics of light transduction in rhodopsin and bacteriorhodopsin, review, book contrib. 2-27806  
pi-phages, UV-induced reactivation and mutagenesis after DNA lesion prod. 2-52584  
proteins, interpretation of the Mossbauer effect 2-14289  
protons, fast, nm sites irrad., Monte Carlo calcs. 2-47642  
thymus DNA, calf, US irrad. effect on template activity 2-47630  
tRNA, effects on capacity to act as substrate for guanine-tRNA transferase 2-27854  
virus particles, laser radiation effect rel. to struct. of dye present 2-14286
- biomolecules** *see macromolecules; molecular biophysics*
- bionics** *see biocybernetics*
- biophysics**  
*see also aerospace biophysics; biological fluid dynamics; biomechanics; cardiology; cellular biophysics; haemodynamics; hearing; molecular biophysics; speech; vision*  
birefringence and dichroism theory, for biological tissue or composites of aligned particles 2-11634  
conference, Boston, USA (Feb. 1982) 2-48388  
conference, Hannover, Germany (Oct. 81) 2-42772  
EM absorption in a multilayered slab model of tissue under near-field exposure conditions 2-18245  
EM energy absorption in man, empirical relationship for near-field exposure conditions 2-18246  
EM wave absorption calculation under near-field exposure conditions, plane-wave spectrum approach 2-18244  
epithelial mosaics, correlation between cell shape and size 2-52420  
fluctuations, 1/f, and human perception 2-52421  
health physics in China, bibliography 2-18829  
liver, fresh bovine, phase insensitive US attenuation coeff. determ. 2-6248  
membrane diffraction, deconvolution anal. using continuous Fourier transform modulus 2-40213  
muscle, striated, light diff. intensity rel. to incident angle 2-37621  
phenomenological space-time: toward an experiential relativity 2-18353  
plant canopy biomass and reflectance interrelationships, simple radiative transfer model 2-52419  
point processes, math. props. of descriptors 2-47551  
review of biophysics and bioengineering, book 2-23384  
vibration modes in biological systems, space time symmetry 2-9902  
X-ray diffraction, determ. of first-order phase using electron density strip models 2-40214
- bioreology**  
alveolar epithelium, bullfrog, transport of water and solutes 2-52517  
atelectatic lobe blood flow: open vs. closed chest, positive press. vs. spontaneous ventilation 2-2889  
blood, Copley-Scott Blair phenomenon and electric double layer 2-37596  
blood, erythrocyte shape and rigidity rel. to viscosity 2-37607  
blood, fresh, rheological modelling from transient press. meas. 2-37603  
blood, high gradient mag. separation, inviscid approx. trajectories, expt. study 2-52512  
blood, human, viscoelasticity and thixotropy 2-37602  
blood, Poiseuille flow, study of couple stress fluid 2-32233  
blood, resonance-thrombography, theoretical and practical elements 2-37715  
blood, rheological charact. rel. to menstrual cycle 2-37604  
blood, rheological constitutive eqns. for whole human blood 2-32236  
blood, rheological model for studying red cell-red cell and red cell-protein interactions 2-37605  
blood, rheology of thrombotic processes, interaction of erythrocytes and thrombocytes 2-37600  
blood, transient flow rheology, appl. to abnormal human bloods study 2-37601  
blood, transient viscoelastic behaviour, effect of steady flow 2-37599  
blood cells, 2-body collisions, model expts. 2-37606  
blood flow, pulsatile, microdeformable fluid model 2-47620  
blood flow through small diameter tubes, 2-fluid model 2-32234  
blood plasma, human, flow velocity profile meas. using differential laser microanemometer 2-20776  
blood velocity in microcirculation, LDV meas. using freq. shifting by moving wedged glass 2-22862  
blood viscosity, effect of flow instability and anti-instability props. 2-32232  
bone, compact, permanent deform. monitored by acoustic emission 2-6241  
bone, fluid props. and stress generated electric pots. 2-22715  
capillary flow: history, experiments and theory 2-37595  
capillary networks, microhaemodynamics 2-37612  
capillary orifice, model studies of phase separation 2-37597  
cartilage, articular, stress behaviour, nonlinear strain-dependent permeability and compression rate effects 2-18236  
cartilage, swelling press., meas. and rel. to osmotic press. of constituent proteoglycans 2-37608  
DC ocular rheography, microprocessor-controlled differentiator for signal processing 2-14346  
distensible tubes, non-uniform, peristaltic pumping 2-6229  
emission tomograph for noninvasive meas. of brain blood perfusion 2-32327  
erythrocyte sedimentation, math. model 2-32235  
fibrin clots, rheological study of network struct. under various conditions 2-9821  
filtering capillary network, pressure and flow distrib. 2-32237  
haemodiafiltration, mass balance and kinetic modelling (*German*) 2-52513  
heart, left ventricle, effects of inertia and viscoelasticity in late rapid filling 2-6244  
Hele-Shaw lamina flow of neutrally buoyant particles, blood appl. 2-35219  
intestinal contractions induced flow, finite element anal. 2-6238  
intestinal pressure recordings, automated computer anal. 2-14344  
joints, human, lubrication, effects of cartilage roughness 2-27822  
joints, human, viscoelastic fluid film lubrication 2-27823  
leukocytes, human, passive mech. props., rheological study 2-9785  
liquid crystal structures rel. to bioreological phenomena 2-37611



**bioheology continued**

- liver viscoelastic properties, rat obs. using deform. by compression 2-2885
- lung, gaseous uptake dynamics, conc. and 2nd gas effects 2-27815
- lung, intra-alveolar fluid press. and interdependence in dogs, oedema effects 2-52524
- lymphatic flow, microcirculation and substance exchange through it (Japanese) 2-47617
- macromolecular transport, radioactive Au colloid as tracer 2-37713
- microvascular blood flowmetry using intravital microscope-TV system, improvement by 1-bit correlator (Japanese) 2-47772
- pulmonary blood flow, redistrib. during expt. air embolism in dogs 2-42128
- pulmonary diffusing capacity, nonlinear increases during exercise by seated and supine subjects 2-52522
- red cell aggregation, appl. of stereological methods 2-37598
- red cell membrane proteins, multimol. films, surface rheology 2-37507
- renal bifurcation, glass model, wall shear stress meas. 2-9820
- rheencephalograms, structural approach to classification (Russian) 2-47731
- sap ascent in plants, review 2-14277
- sodium deoxycholate, conc. aq. soln., viscoelasticity, US meas. 2-37619
- sputum of bronchitis patients, viscoelasticity, protein content and ciliary transport rate 2-37610
- synovial joints, performance, poroelastic effects 2-47619
- turbulent flow, probe for analysing shear 2-37609
- vascular endothelial cells, dynamic response to fluid shear stress 2-42075
- venous air emboli in sheep: reversible increase in lung microvascular permeability 2-52523
- vesicle transport in arterial endothelium, mech. factors rel. to macromol. permeability 2-42078

**Biot-Savart law** see *electromagnetism***biothermics**

- animal study results overview (French) 2-52546
- baby, newborn, energy balance, use of manikin to estimate radiant and convective heat loss 2-52443
- bicine, thermodynamic parameters 2-2753
- blood circulation apparatus, extracorporeal thermoelec. temp. control devices 2-32354
- body temperature changes during the practice of g Tum-mo yoga 2-37501
- bone, heat capacity, 30-240K 2-32181
- brain temperatures in running quail 2-52441
- breast and drainage lymph node areas, cancer detect. capability of microwave radiometry thermal profiles 2-14316
- breast cancer screening by stress thermography, skin temp. meas. after peripheral vasoconstriction 2-47677
- brown adipose tissue, thermic response increase after a single meal 2-22703
- burn pathology development, rat tissue, proton mag. relax. 2-52437
- cancer therapy by hyperthermia, EM techniques appl. 2-32305
- carbohydrate-lipid interactions, thermodynamic anal. 2-18179
- cartilage, baby rat tail, radiation enhancement of lysosomal response following hyperthermia 2-27852
- chromatin, replicating, effect of hyperthermia 2-52460
- chromosome loss,  $\gamma$ -ray induced, in mutagen-sensitive *Drosophila melanogaster*, effect of hyperthermia 2-22702
- cooling stage of extracorporeal circulation, theoretical study of temperature regulations system (Japanese) 2-37504
- dipalmitoyl lecithin, lipid membranes, successive phase transitions 2-9783
- dipalmitoyl phosphatidylcholine liposomes, phase transition, US study 2-14210
- DNA, superhelical, effect of base-pair stability 2-37496
- DNA strand-breaks induced by ionising radiation, effects of hyperthermia on repair 2-27851
- emergence times distribution prediction model 2-9775
- entropy of solid phase biocompounds 2-42069
- epidermal growth factor, cultured rat cells, effects of hyperthermia 2-22708
- fibrosarcoma cells, hamster PARA-7, heat and microwave treatment, antibody-complement cytotoxicity enhancement 2-52547
- flow microcalorimeter system for meas. of dynamic energy variables of isolated perfused hearts 2-18347
- gastrocnemius muscle, cat, force-vel. relationship rel. to initial length, elec. activity and temp. 2-6231
- granulocyte-monocyte stem cells, thermal inactivation energy 2-27794
- haemoglobin, struct. changes at the haeme induced by freezing 2-18173
- head, human, complementary extremum principles for nonlinear model of heat conduction 2-2848
- heat-sink calorimeter of 5.8 m<sup>3</sup> for humans with online data acquisition, processing and control 2-47734
- history of heat and mass transfer in bioengineering 2-15003
- hyperthermia, influence of bloodflow in large vessels on temp. distrib. 2-37502
- hyperthermia, local, design of US transducers 2-37639
- hyperthermia as cancer therapy (German) 2-52664
- hyperthermia by EM heating of deep-seated tumours 2-37641
- hyperthermia in running sled dogs 2-42074
- hyperthermia of cultured cells; macromol. synthesis, membrane transport and lysosomal function 2-47585
- hyperthermia radiosensitising effects, importance of intratumour temperature uniformity 2-32182
- hyperthermic-induced seizures in rat pups, model for febrile convulsions in children 2-22713
- hypothalamic thermal sensitivity of rabbits, effect of heat acclimation 2-18178
- hypothermic mice, 5-hydroxytryptamine-induced, detect. of microwave heating 2-52548
- hypothermic response, endotoxin-induced, alteration by 2450 MHz microwave irradi., rat expts. 2-18250
- interstitial hyperthermia and interstitial <sup>192</sup>Ir implantation, technique and preliminary results 2-42204
- IR, determ. of absorption coeffs. of biological tissues, technique and theory 2-14365
- leukaemia cells, mouse, hyperthermic potentiation of X-ray effects on survival and DNA 2-32274
- lipid bilayer, semipermeable, with protein films, two-dimens. thermodynamic field theory 2-27784
- lipid bilayer membranes, photochem. reactions, phase transition effect 2-9782

**biothermics continued**

- lung, excised, rabbit, press.-vol. curves rel. to temp. and surface forces 2-52521
- lung cells, lack of correl. between hyperthermic killing, thermotolerance, and membrane lipid fluidity 2-27793
- membranes, lipid-protein interactions, lipid phase transition 2-27783
- microwave diathermy, anal. of minimally perturbing temp. probe and thermographic meas. 2-47766
- microwave diathermy applicators, evaluation using free space elec. field napping 2-18284
- microwave hyperthermia and irradi. in cancer therapy 2-42193
- microwave induced hyperthermia monitored by microwave thermography at 2.45 GHz 2-52596
- microwave measurement of temp. profile of patient's body 2-52601
- microwave-induced hyperthermia, expt. set-up for rat studies, temp. controller 2-52689
- microwave-induced hyperthermia in cancer treatment, use of thinned cylindrical antenna array 2-47679
- microwaves and radio waves thermal effects and exposure limits 2-32256
- neoplastic tissues, hyperthermia prod. by US, effects of some phys. factors 2-32254
- optic tectum, rattlesnake, IR and visual information integration 2-32204
- perfusion system, constant temp., for myocardial energetics study 2-18346
- potassium palmitate-water, lipid bilayer system, biaxial ordering of melted chains near gel phase transition, NMR st. udy 2-9781
- protein induced by hyperthermia in rat 2-32184
- protein thermal stability, anal. by temp. scanning pH-stat titration 2-27951
- proteins, denaturation, heat capacity, AC calorimetry technique 2-23639
- proteins, fibrillar, order-disorder transitions, stress-temp. dependence of collagen hydrothermal contract. 2-37492
- purple membranes of *Halobacterium halobium*, photoacoustic photocalorimetry and spectroscopy 2-52444
- radio and microwave frequency radiotherapy in cancerology (French) 2-52600
- radiothermograph, meas. of intrinsic microwave radiation from human body 2-37646
- red blood cells, effect of high power microwave pulses, transmembrane thermal gradients 2-47633
- remote temperature sensing in organic tissue by garnet sphere ferrimagnetic resonance freq. meas. 2-47680
- resonant thin-wire antenna, thermal response of human in near zone 2-47634
- RF hyperthermia for cancer therapy, absorbed power distrib. 2-27867
- RF hyperthermia for cancer therapy, non-perturbed and non-perturbing thermometer 2-47673
- RF induction heating for localised hyperthermia 2-37645
- Rhodospseudomonas sphaeroides, electron-transfer reaction, temp. dependence 2-37486
- rod outer segment membrane, Gekko gekko, fluidity and ordering, temp. effect 2-9786
- skin temperature, influence on central thermoregulatory control of leg blood flow 2-2850
- sleep stages, human, effects of high and low ambient temps. 2-2849
- somatosensory evoked potentials during whole body hyperthermia in humans 2-52440
- somatosensory evoked potentials in cats, effect of selective serve fibre group activation 2-18227
- somatosensory evoked potentials to peroneal nerve stimulation, cortical and subcortical 2-37591
- somatosensory evoked response to contralateral pudendal nerve stimulation 2-42117
- telethermometer, for remote meas. of human skin temp. 2-37503
- terrestrial large animals, heat flow between cold environment 2-6215
- thermal enhancement ratios for fast neutron and X-irrad. of normal rodent tissues 2-42159
- thermodynamics second law applicability, limitations rel. to macrostate-microstate transition 2-10756
- thermogenic mitochondria, book contrib. 2-37512
- thermometer arrays, thin, linear, for use in localised cancer hyperthermia 2-37704
- thermoregulation and metabolism during stages of sleep in humans exposed to heat and cold 2-52442
- thermoregulation diagnostics (German) 2-27925
- thermoregulation in cats exposed to high ambient temps., dehydration effect 2-42073
- thermoregulatory reactions to high ambient temp. in rabbits, effect of prolonged heat exposure 2-18177
- thermosensitive neurons in sunfish brains 2-32183
- thylakoid membrane phase transition temp., effect of spinach chloroplast ageing 2-27777
- triene, thermodynamic parameters 2-2753
- tumour thermal resistance, mouse expts. 2-32180
- UHF radiation exposure, evaluation of body thermal state 2-14207
- US irradiated tissue, transient cavitation during hyperthermia 2-47631
- yeast, diploid, rad mutants, comparison of sensitivity to heat and  $\gamma$ -radiation 2-32266

**biotite** see *mica***biotransport**

- see also *biodiffusion; biological fluid dynamics; biomembrane transport; cellular transport and dynamics; neurophysiology*
- alveolar epithelium, bullfrog, transport of water and solutes 2-52517
- blood acid-base balance and CO<sub>2</sub> transport at microcirculation level 2-42076
- buckwheat grown from irradi. seeds, changes in photosynthetic activity and assimilates transport (Russian) 2-42148
- charged particles, transport through spongy materials, lung appl., Monte Carlo calcs. 2-18247
- haemoglobin and myoglobin solns., transport of O<sub>2</sub> 2-9762
- history of heat and mass transfer in bioengineering 2-15003
- macromolecular transport, radioactive Au colloid as tracer 2-37713
- sputum of bronchitis patients, viscoelasticity, protein content and ciliary transport rate 2-37610
- washout curves, objective method to identify inhomogeneity 2-14181
- O<sub>2</sub> transport near tissue surface, effect of surface O<sub>2</sub> tension 2-32244

**bipolar integrated circuits**

- p<sup>+</sup>-n junctions under forward bias, leakage current degradation obs. 2-26487



**bipolar transistor circuits**

Used for general papers and papers where use of bipolar transistors is significant  
widespread preamplifier and signal processing filter for gas proportional detectors 2-43727

**bipolar transistors**

see also *bipolar integrated circuits*

alloy spike detection and charact. in power transistors using trans. acoustic microscopy 2-17852  
p-n-p switching, minority carrier lifetime meas. by laser scanning digital system (Rumanian) 2-41000  
planar transistor mag. induction transducers 2-28844  
Si device, minority carrier diffusion coeff. in heavily doped semicond. region 2-46023  
Si magnetic-field-sensitive multicollector n-p-n transistors 2-33582

bipoles see *network synthesis*

**birefringence**

see also *flow birefringence*; *Kerr electro-optical effect*; *light polarisation*; *magneto-optical effects*; *mechanical birefringence*; *optical constants*; *optical rotation*

4-alkoxyphenyl-4-alkylbenzoate nematic mixtures, anisotropic and dynamic scatt. props. 2-21002  
aliphatic esters, optical anisotropy, Molar Kerr constants, Rayleigh scatt. obs. 2-43923  
n-alkyl-p-(4-ethoxybenzylideneamino)- $\alpha$ -methyl cinnamates, orientational order from birefr. data 2-21009  
alkylammonium manganese chlorides, Brillouin scatt. and linear birefringence 2-31518  
biaxial crystal boundary, threshold peculiarities in waves reflected and refracted 2-44175  
biomedical meas., contactile events in cardiac and skeletal muscles, non-invasive meas. 2-18289  
bis(ethylammonium) tetrachloromanganate, layered perovskites, birefringence studies, phase transitions 2-45102  
bis(n-propylammonium) tetrachloromanganate, layered perovskites, birefringence studies, phase transitions 2-45102  
carbazole crystal, birefringence, temp. depend. mol. rot. and translation effects 2-51548  
cellulose triacetate mesomorphic solns. form. in halogenated org. acids and trifluoroacetic acid-dichloromethane mixtures 2-45022  
colloidal dispersion, Rayleigh-Gans-Debye approx., birefringence and conservative dichroism 2-34654  
critical fluid, diffraction and birefringence by acoustic waves 2-21979  
CsCaCl<sub>3</sub>, perovskite, structural phase transition, birefringence 2-1616  
4-cyano-4'-octyloxybiphenyl and 4-cyano-4'-hexyloxybiphenyl mixtures, birefringence 2-31448  
4-cyano-4'-pentyloxybiphenyl, nematic, optical-field-induced birefr. and Fredericksz transition 2-25730  
cylindrical garnet:Nd component, induced anisotropy and birefr. 2-11703  
p-(p-ethoxyphenylazo) phenyl alkanates, liq. cryst., internal field parameters 2-17034  
p(p-ethoxyphenylazo)phenyl alkanates, internal field parameters in nematic and cryst. phases 2-12467  
fibre, elliptical core, polarisation mode dispersion meas. by spatial technique 2-44469  
fibres, single-mode, anisotropic, multiply perturbed, polarisation behaviour 2-44470  
flexible polymers, solns., dynamic birefringence (Russian) 2-20222  
gas, collisionless nonequilibrium, birefringence 2-8265  
glasses of polarimeter cell, birefr. influence on polarisation plane rotation meas. accuracy 2-48748  
hydrocarbons, birefringence in mag. and electric field, quantum. chemical calcs. 2-20099  
III-V semiconductors, structural defects, birefringence study 2-40397  
ionic surfactants, micellar solns., elec. birefringence meas. 2-39701  
isobutyric acid-water critical mixtures, shear induced birefringence 2-2214  
KTAO<sub>3</sub>:Li electric dipole glass, birefringence 2-13446  
lens, birefringent, for HF enhancement 2-29789  
lens, -birefringent, for high freq. enhancement in image processing 2-49687  
light propagation in absorbing cholesterics and twisted nematics 2-7716  
liquid crystal display, transmission type, brightness-luminance ratio, psychological expt. 2-18211  
liquid crystalline mixtures, refr. indices, density, birefringence and order parameters 2-36588  
magneto-optical light diff. by banded domains 2-51562  
MBBA/tetrabutyltin (cyclohexane)(azobenzene), phase transition behaviour, mag. birefr. and refr. index meas. 2-16783  
measurement, polarised light technique 2-48471  
microscope, polarising, performance improvement by birefringence photoelectric meas. 2-217  
molecular films, structure and props. 2-5315  
molecular quadrupole moments, hyperpolarisability effects, theoretical study 2-29505  
nematic liquid crystal colour filters, transmission spectra 2-1009  
neuron activity investig. by optical methods (Russian) 2-47753  
nitrobenzene-n-hexane critical mixtures, shear induced birefringence 2-2214  
nucleosomes hydrodynamical props. 2-37485  
nylon 6, struct. development in melt spinning 2-16604  
nylon 6/LiCl mixtures, spun fibres, production and props. 2-46999  
optical fibre, birefringent single-mode, degree of polarisation 2-34910  
optical fibre, polarisation parameter measurement 2-34909  
optical fibre, single-mode, birefr. wavelength depend. 2-11820  
optical fibres, single-mode, birefr., forward-backward transmission, polarisation-sensitive meas. interpretation 2-25132  
optical fibres, single-mode, birefr. anal. and meas. using backscatt. method 2-25133  
optical filters, birefr. narrow bandpass large field of view, review 2-25105  
optical material birefringence meas. in IR region 2-23707  
4-n-pentyl-4'-cyanobiphenyl, order parameter determ. (Russian) 2-12475  
pentyloxybiphenyl, isotropic phase, US wave induced birefr. 2-36597  
pentyloxybiphenyl, isotropic phase, pulse acousto-optic modulator 2-17440  
4'-pentyloxyphenyl-4-alkyloxycyclohexanobenzoates, refr. index and dielec. const. 2-30390  
pheophytin A, solns., linear and circular birefringence and dichroism study 2-27773

**birefringence continued**

pheophytin solns., spectra props. and birefringence, Alentsev-Fok method calcs. 2-13473  
poly( $\gamma$ -benzyl-L-glutamate), liq. crystn. spherulites, light-scattering study of deform. 2-45023  
poly(benzylglutamates), lyotropic polymer liq. cryst., pretransitional effects in isotropic phase 2-40267  
poly(chlorotrifluoroethylene), oriented, dielec. anisotropy 2-9080  
poly- $\gamma$ -benzyl-L-glutamate, rodlike textures, orientation in electric field, light scatt., birefringence 2-35381  
poly- $\gamma$ -benzyl-L-glutamate lyotropic liq. cryst. solns., anisotropic refr. indices 2-21967  
polycarbonate film, plane stress deformation zone at crack tip 2-13777  
polyethylene, high density melt, flow through slit, entrance geometry effect on stress distrib. (Japanese) 2-30186  
polymers, stretched, optical birefringence, production of achromatic phase plates by copolymerisation (German) 2-9329  
polypropylene films, macromolecular orientation, NMR study 2-7686  
Poynting vector in dissipative media, temporal and spatial behaviour, refr. from vac. into medium 2-11633  
radial intensity filters using radial birefringent elements 2-11794  
rare earth garnet, sublattice contrib. to second-order magneto-optical effects 2-21993  
retinal rod outer segments, flash-bleached, birefr. and forward light-scatt. meas. 2-42090  
Reusch's piles with rectilinear birefringence, nonorthogonal eigen vibr. (French) 2-11638  
rod outer segment membrane, Gekko gekko, fluidity and ordering, temp. effect 2-9786  
S<sub>D</sub> and S<sub>4</sub> phases, hypothesis for mol. organisation 2-16575  
semiconductor compounds as quantum electronic materials, physical charact. (Russian) 2-20385  
semiconductors, cubic crystals, optical anisotropy 2-17438  
semiconductors, refractive index, birefringence and permittivity calcs. 2-26853  
single mode fibre production with negligible intrinsic birefringence and polarisation mode dispersion 2-25121  
single-mode optical fibres, polarisation parameters meas. 2-44449  
single-mode spun fibres, anisotropy 2-49920  
spun single-mode fibres, birefr. and polarisation mode-dispersion 2-1022  
theory of birefringence and dichroism for biological tissue or composites of aligned particles 2-11634  
thiourae, phase diagram in elec. field determ. from linear birefringence obs. (French) 2-8598  
tri(2-pyridinyl)-s-triazine, conformations, Kerr and Cotton-Mouton effect study 2-49471  
triphenyl-s-triazine, conformations, Kerr and Cotton-Mouton effect study 2-49471  
1,3,5-triphenylbenzene, conformations, Kerr and Cotton-Mouton effect study 2-49471  
X-ray polarisation conversion in single cryst. 2-16539  
AgGa(S<sub>1</sub>,Se<sub>2</sub>)<sub>2</sub> crystals, birefringence dispersion, optical activity 2-51546  
As-S. amorphous film, optical waveguide, laser beam electrooptic modulation 2-34885  
BN, hexagonal, interband transitions anisotropy, UV reflectivity spectra study (French) 2-22043  
BaNiF<sub>4</sub>, two-dimensional antiferromag., linear mag. birefringence and double-excitonic transitions 2-5661  
Ba<sub>0.5</sub>Sr<sub>0.5</sub>Nb<sub>2</sub>O<sub>6</sub>, ferroelec. thin film, electrooptical props. 2-31454  
Bi<sub>1-x</sub>SiO<sub>20</sub>, electrooptic crystal, anisotropic image recording 2-995  
Bi<sub>1-x</sub>SiO<sub>20</sub>, photorefractive electrooptic cryst. with vol. phase hologram, light diff. 2-11664  
BiVO<sub>4</sub>, temp. depend. of spontaneous birefringence 2-2216  
CdBr<sub>2</sub>, optical dispersion studies 2-9121  
CdCl<sub>2</sub>, optical dispersion studies 2-9121  
CdI<sub>2</sub>, optical dispersion studies 2-9121  
Cd<sub>3</sub>Nb<sub>2</sub>O<sub>7</sub>, quadratic electrooptic effect 2-17446  
CdS, deformed, absorpt. spectra and birefringent interference pattern 2-46539  
CdS, resonant Brillouin scatt. in opaque region, piezobirefringence theory 2-51616  
Cr complex, ( $\eta^6$ -benzene)tricarboxylchromium (Co), mono-substituted derivatives, configs., moments, electric birefringence 2-29639  
CsCrCl<sub>3</sub>, perovskite, structural phase transition, birefringence 2-1616  
Cs,HgBr<sub>3</sub>, pseudohexagonal, successive phase transitions 2-40529  
CsPbCl<sub>3</sub>, perovskite, structural phase transition, birefringence 2-1616  
Cu(II) complexes, mixed, induced distant Cotton effect 2-4355  
Fe<sub>2</sub>O<sub>3</sub>, haematite, magneto-optical props. (Russian) 2-26871  
He-Ne Zeeman lasers, mirror anisotropy effects, Jones matrix representation 2-39623  
He, solid, magnetically ordered, birefringence 2-35851  
InP, defects, birefringence study, comparison with electrochemical etching 2-40397  
K<sub>2</sub>SeO<sub>4</sub>, birefringence and lattice strain 2-26860  
K<sub>2</sub>SeO<sub>4</sub>, ferroelec., transitions and struct., birefringence study 2-30580  
KTAO<sub>3</sub>:Li, defect induced fluctuations, dielec. and optical props. meas. 2-26889  
LiNbO<sub>3</sub>:Fe, photorefractive electrooptic cryst. with vol. phase hologram, light diff. 2-11664  
Mn<sub>3</sub>B<sub>2</sub>O<sub>7</sub>Cl(Br)(I), orthorhombic ferroelec., phase transitions, expt. study 2-31409  
(NH<sub>4</sub>)<sub>2</sub>BeF<sub>4</sub>, ferroelec., optical activity and birefringence 2-31446  
NaK<sub>1-x</sub>(NH<sub>4</sub>)<sub>x</sub> tartrates, 0.18<x<0.92, dielec. props., piezoelec. props., birefringence 2-36596  
Ni<sub>3</sub>B<sub>2</sub>O<sub>7</sub>(Br), ferromag., ferroelec. and ferroelastic domains, birefringence and Faraday effect study 2-31430  
Ni<sub>3</sub>B<sub>2</sub>O<sub>7</sub>(I), ferroelec.-ferromag.-ferroelastic phase, elec. and optical meas. 2-31392  
NiI<sub>2</sub>, phase transitions, near IR d-d transitions and birefringence study 2-22022  
PLZT ceramic, linear electro-optical effect, domain struct. 2-46541  
PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, ferroelectric phase transitions 2-41308  
Pd complexes, Pd II thioether peptides, circular dichroism, MCD and HPLC obs. 2-39428  
RbAlF<sub>4</sub>, ferroelastic, phase transitions, birefringence study 2-50845  
RbAlF<sub>4</sub>, ferroelastic phase transition and struct., birefringence study 2-30584  
RbCdCl<sub>3</sub>, perovskite, structural phase transition, birefringence 2-1616  
RbMnCl<sub>3</sub>, ferroelastic domain struct. rel. to antiferromag., optical study 2-26869



# birefringence continued

- RbMnF<sub>3</sub>, critical exponent  $\beta$  meas. by means of optical birefringence 2-8972  
 TiMnCl<sub>3</sub>, perovskite, structural phase transition, birefringence 2-1616  
 YAP, orthorhombic crystals, lasing process, thermal effects (*Chinese*) 2-25013  
 YFeO<sub>3</sub>, surface with colloid deposit, Bitter patterns, magneto-optical props. 2-36606  
 Zn<sub>3</sub>P<sub>2</sub>, birefringence, dichroism, absorption edge, anisotropy 2-26862

# bismuth

- see also nuclei with .....*  
 adsorption on Si, sticking coeff., first adlayer struct. influence 2-45733  
 Alfvén waves dispersion, non-local calc. 2-21616  
 amorphous, elec. field gradients, TDPAC studies 2-31350  
 atom, electron impact excitation cross sections of spectral transitions 2-34579  
 atoms, bombarded with 9-155 MeV alpha particles, K-shell ionisation cross section and XES 2-777  
 Bridgman growth, orientation of (111) cleavage planes 2-46902  
 crystal growth by Bridgman method, (111) plane orientation, temp. gradient and growth rate effect 2-25776  
 crystallisation, influence of electric current on impurity distrib. 2-8455  
 deposition on C film, grain size meas. of nuclei shape 2-26241  
 determination in luke water using hydride at. absorpt., valence state effects 2-17931  
 diamagnetic susceptibility, impurities effect 2-26582  
 electron interactions, subband transitions study 2-26307  
 electron-hole liquid, ground-state energy in strong mag. field 2-12979  
 EM quantum excitations, microwave magnetoabsorpt. study 2-36737  
 epitaxial film, Shubnikov-de Haas effect obs. (*Russian*) 2-8819  
 Esaki effect, nonlinear equilibrium response 2-33462  
 evaporated films, early stages of growth, substrate effects (*French*) 2-5325  
 Fermi surface and band parameters, press. depend. magnetoref. studies 2-13457  
 film, 1/f noise, lack of spatial correlation 2-51251  
 film, amorphous, resist. transition, Ginzburg-Landau eqn., Kosterlitz-Thouless theory 2-17193  
 film, anomalous variation of resist., substrate temp. effect, narrow band gap semicond. behaviour 2-21702  
 film, elec. resist. oscill. behaviour with thickness 2-5478  
 film, evidence of size quantisation by tunnel spectroscopy 2-21699  
 film, optical absorption spectra of outermost 5d core-levels 2-17561  
 film, plasma vapour deposited, adhesion failure by repeated bending of substrate 2-2689  
 films, defect density, substrate temp. depend., elec. resist. study 2-51027  
 galvanomagnetic and thermomag. props., SQUID meas. 2-36064  
 galvanomagnetic instability, electroluminescence 2-46043  
 helicon waves, Vlasov eqn. 2-46047  
 high-purity, spectrochem. anal. 2-9583  
 interlayer in Josephson sandwiches (*Russian*) 2-17226  
 liquid, O activity, electrochem. meas. 2-8643  
 magnetoresistance, high temp. oscillations, review 2-36066  
 magnetoresistive thermometry for transient temp. meas. in liquid helium 2-23635  
 magnetoresistivity, high temp. oscils. (*Russian*) 2-40932  
 microwave quantum magnetoabsorpt. modulation 2-26275  
 molecule, A-X band, rot. anal., visible and IR obs. 2-39393  
 molecule, VUV absorpt. spectrum, obs. of new transitions to Rydberg states 2-29624  
 molten, dissoln. of solid Sb, static conditions 2-8625  
 NQR and quadrupole Hamiltonian 2-2160  
 nuclei, quadrupole and octupole moment calcs. 2-7663  
 plasma, expanding, recombination laser transitions 2-39627  
 polymorphic transformation, plastic deform. influence (*Russian*) 2-21292  
 radiative lifetimes of <sup>2</sup>P<sub>3/2</sub> and <sup>2</sup>P<sub>1/2</sub> states, fluorescence decay meas. 2-24646  
 radio wave spontaneous emission in mag. field in presence of temp. gradient (*Russian*) 2-26429  
 Shubnikov-de Haas oscillations, phase inversion, magnetoresist. and Hall effect study 2-36065  
 surface (111), etch pit occurrence 2-50643  
 target for laser interaction, plasma front motion (*Russian*) 2-1321  
 temperature depend. of Young's modulus in different crystallographic directions 2-5172  
 thermomagnetic wave damping (*Russian*) 2-46045  
 thin film, elec. resist. and magnetoresist. at low temp., electron localisation (*Russian*) 2-17172  
 thin film, electrical conduction, size and temp. depend. 2-36161  
 thin film, resistance and magnetoresistance, quantum corrections (*Russian*) 2-13204  
 thin film, struct. and electrical conduct. meas. 2-51354  
 thin film resistivity, air-exposure effect 2-41026  
 thin films, elec. resist., defect contrib. as function of deposition rate, annealing effect 2-46175  
 Ag halide containing Bi ions, direct positive emulsion behaviour 2-28916  
 BaS:Cu, Bi phosphors, elec. cond. 2-51166  
 Bi ions + He (Ne) (Kr) (H<sub>2</sub>), charge transfer cross sections involving electron capture processes 2-7631  
 Bi<sup>n+</sup>, electron impact excitation cross sections of spectral transitions 2-34579  
 Bi-(Ga<sub>2</sub>Se<sub>3</sub>-In<sub>2</sub>Se<sub>3</sub>), metal-semiconductor contact, elec. and photovoltaic props. 2-51298  
 CaO:Bi<sup>3+</sup> phosphor, mag. field effect on luminescence 2-17525  
 CaS:B, thermolum. phosphor, phys. parameters, operation importance 2-22101  
 CaS:Bi phosphor, luminescence study 2-22071  
 CaS:Bi<sup>3+</sup>, phosphor, mag. field effect on luminescence 2-17525  
 CaSO<sub>4</sub>:Dy, Bi, phosphors; X-ray induced fluorescence and phosphorescence 2-26956  
 CdP<sub>2</sub>:Bi, absorpt. spectra and energy levels in band gap 2-13490  
 CdP<sub>2</sub>:Bi, cathodoluminesc. spectrum 2-46784  
 Cl:Bi, ions backscattering yield enhancement near 180°, expt. study 2-46855  
 Cu grain boundaries, anisotropy of Bi segregation 2-40416  
 Cu, STEM/X-ray microanalytical study of Bi equilib. segregation 2-31699  
 GaP:Bi p-n struct., electrolum. and photoresponse spectra 2-36709  
 Gd<sub>2</sub>O<sub>3</sub>:Bi, luminescence props. 2-26961  
 Ge:Bi,  $\gamma$ -ray irradi., point defects, laser annealing 2-50696

# bismuth continued

- MgS:Bi<sup>3+</sup> phosphor, mag. field effect on luminescence 2-17525  
 Pb<sub>1-x</sub>Bi<sub>x</sub><sup>2+</sup> films, exciton-impurity interaction, Verdet const. and absorpt. spectra study 2-26305  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Bi; photo- and electroluminescence spectra 2-13549  
 Si:B implantation, lattice deformation, post-laser irradi., backscatt., channelling study 2-45213  
 Si:Bi, furnace and laser annealed, backscatt. and channelling anal., depth distrib. 2-45253  
 Si:Bi, implanted, solute trapping after laser annealing 2-45262  
 Si:Bi, ions backscattering yield enhancement near 180°, expt. study 2-46855  
 Si:Bi, SIMS profile distortions, Rutherford backscatt. study 2-51755  
 YAl<sub>3</sub>B<sub>2</sub>O<sub>7</sub>:Bi<sup>3+</sup>, energy transfer, luminesc. study 2-51649  
 YIG:Bi, Pb, for magneto-optical appls. LPE growth, Pr, Bi and Pb segregation 2-31644  
 (YbGd)IG:Bi,Pr,Al, for magneto-optical appls. LPE growth, Pr, Bi and Pb segregation 2-31644  
 YbIG:Bi,Pr,Ga, for magneto-optical appls. LPE growth, Pr, Bi and Pb segregation 2-31644

# bismuth alloys

- see also bismuth compounds*  
 solar thermoelectric generators, Bi<sub>2</sub>Te<sub>3</sub> alloys production for use as thermoelements 2-9666  
 Bi-Ni, liq., Ni influence on <sup>209</sup>Bi NMR linewidth and Knight shift 2-41218  
 Bi-Pb, molten, boundary with Cu, surface energy role in fracture kinetics 2-41742  
 Bi-Sb solid soln., comp. control of homogeneous single crystals during melt growth 2-5806  
 Bi-Sb solid solns., melting curve 2-1594  
 BiSb, relax. time and effective mass of charge carriers 2-8811  
 Bi<sub>1-x</sub>Sb<sub>x</sub> alloys, carrier dispersion relation 2-5347  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, chem. comp. determ. by polarography, electron probe, density and electron backscatt. meas. 2-27494  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, dil. alloys, magnetoacoustic attenuation, large dip and hump type quantum oscils. 2-16980  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, dil. alloys, magnetoacoustic attenuation, large dip and hump type quantum oscils. 2-16981  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, electron-hole liquid, ground-state energy in strong mag. field 2-12979  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, Fermi surface and band parameters, press. depend. magnetoref. studies 2-13457  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, semiconducting, impact ionisation rate, elec. field depend. 2-21594  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, semiconducting, hot carriers, interband recombination time 2-21605  
 Bi<sub>84</sub>Sb<sub>16</sub> amorphous film, sp. ht., 0.2 to 1.0K 2-30623  
 Cu-Bi alloys at 700 to 1100°C, thermodynamics and liquidus equilibrium 2-41582  
 Cu-Bi liq. alloys, viscosity (*German*) 2-1648  
 Cu-Bi-S, thermodynamics of metallic impurities in Cu saturated CuS, 1423 to 1573K 2-41583  
 Fe-Bi-S, amorphous, mag. props., surface inclusions effect 2-41159  
 (Gd<sub>0.26</sub>Fe<sub>0.74</sub>)<sub>0.96</sub>Bi<sub>0.04</sub>, metallic glass, film, laser annealed, mag. props. 2-21853  
 Ge-Bi, amorphous, elec. props. 2-17084  
 In-Bi, cryst. struct. and supercond. after high press. treatment 2-45118  
 In-Bi, mag. props. of higher than second order super cond. phase transition 2-17184  
 In-Bi liq. alloys, thermodynamic props. 2-5249  
 InBi, impact-induced fracture 2-27272  
 In<sub>2</sub>Bi, resistivity saturation, superconducting T<sub>c</sub> 2-35993  
 MgBi, bonding in liquid and amorphous binary semiconductor alloys 2-8436  
 MnBi thin films for erasably recording laser-beam irradiance distrib. 2-25058  
 MnBi-Bi eutectic, rate change transients in Bridgman-Stockbarger growth 2-51792  
 Pb-Bi, elec. resistance and mag. susceptibility (*Russian*) 2-1885  
 Pb-Bi, Josephson junction counter electrodes, microstruct., thermal cycling effects, 298 to 42K 2-51945  
 Pb-Bi, polycryst., flow stress variation during supercond. transition, conc. depend. (*Russian*) 2-5482  
 Pb-Bi alloys, dil., unidirectional solidification 2-2499  
 Pb-Bi film, Josephson junction electrodes, thermal stability 2-51944  
 Pb-Bi strong coupling superconductor, LF EM response 2-5499  
 Pb-Bi-Ga (In), supercond. transition temp., comp. depend. 2-36168  
 Pb-Bi-In, effect of impurities and press. on electron-phonon interaction 2-21718  
 PbBi clustered film, supercond. props. 2-30995  
 Sm<sub>2</sub>Bi<sub>3</sub>, valence transform. and ground state 2-30838  
 Sn-Bi, mag. props. of higher than second order super cond. phase transition 2-17184  
 Sn-Bi alloy ingots, macrosegregation formation mechanisms during solidification (*Japanese*) 2-27167  
 Zn-Bi-Cd liq. solns., Zn ternary interaction parameters 2-1639

# bismuth compounds

- see also bismuth alloys*  
 oxides, complex, with layered structs., crystallo-chem. props. (*Japanese*) 2-50562  
 oxides, layer struct., La modified, grain oriented ferroelectric ceramics, elec. props. 2-31380  
 space heating, heat mirror coatings for energy conserving windows 2-39723  
 AgBi(Cr<sub>2</sub>O<sub>7</sub>)<sub>2</sub> double dichromate, synthesis and crystallographic characteristics (*French*) 2-8485  
 Bi<sub>2</sub>GeO<sub>20</sub>, wide-gap semicond., free carrier exclusion in current-voltage characts. 2-36050  
 BaTiO<sub>3</sub> sintered with Bi<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub> glass, Curie temp. 2-46992  
 Bi-Sb films, semicond. behaviour, intercryst. barrier activation energy 2-2017  
 Bi<sub>1-x/4</sub>(As<sub>1/4</sub><sup>3+</sup>Bi<sub>3/4</sub><sup>3+</sup>)<sub>2</sub>O<sub>20</sub>, A<sup>3+</sup>=Li, Na; B<sup>3+</sup>=P, As, Bi, new phases with silicite structure (*French*) 2-16621  
 Bi<sup>3+</sup> (Bi<sub>1-x</sub>Bi<sub>x</sub>)<sub>2</sub>O<sub>4</sub>, ceramic prep. and characteris. 2-51530  
 Bi<sub>1-x</sub>Bi<sub>x</sub>As<sub>2</sub>(Bi<sub>1-x/2</sub>Bi<sub>x/2</sub>)<sub>2</sub>O<sub>4</sub>, cryst. chemistry anal. elec. props. 2-21383  
 Bi<sub>1-x</sub>Ca<sub>x</sub>Fe<sub>1-x/2</sub>V<sub>1-x/2</sub>O<sub>12</sub> crystal, ferromag. reson. linewidth anisotropy, theory (*Chinese*) 2-26752  
 Bi<sub>1-x</sub>Ca<sub>x</sub>(O<sub>1-x/2</sub>Bi<sub>x/2</sub>)<sub>2</sub>O<sub>4</sub>, cryst. chemistry anal. elec. props. 2-21383  
 Bi<sub>2-x/3</sub>Ca<sub>2x/3</sub>(Sr<sub>2x/3</sub>)(Ba<sub>2x/3</sub>)O<sub>3-x</sub>, solid soln., cryst. struct. 2-12571



## bismuth compounds continued

- Bi<sub>2</sub>(CrO<sub>4</sub>)Cr<sub>2</sub>O<sub>7</sub>, synthesis and crystallographic study (*French*) 2-40326  
 BiF<sub>4</sub>, A<sup>0+</sup>-X<sub>2</sub>O<sup>2+</sup> system, electronic spectrum 2-39373  
 BiF<sub>4</sub>, rot. intensity of A-X system, dipole moment calc. 2-43884  
 BiF<sub>3</sub>, double layer antireflection coatings on Ge, performance eval. 2-20395  
 BiF<sub>3</sub>-KF, fluoride phase, ionic cond., density and lattice const., composition depend. 2-16882  
 BiFeO<sub>3</sub>-BaTiO<sub>3</sub>(PbTiO<sub>3</sub>) solid solns., magnetoelec. effect, ferroelec. props. 2-36406  
 Bi<sub>12</sub>Ge<sub>20</sub>, crystals, ultrasonic attenuation at low temps. 2-34960  
 Bi<sub>12</sub>Ge<sub>20</sub>, defect states, elec. cond. and photoconductivity 2-1863  
 Bi<sub>12</sub>Ge<sub>20</sub>, optical phonon freq., linear wave-vector depend. 2-1574  
 Bi<sub>12</sub>Ge<sub>20</sub>, phase-conjugate wave-front reflectivity, electric-field depend. 2-39698  
 Bi<sub>12</sub>Ge<sub>20</sub>, phonon echo props. 2-45460  
 Bi<sub>12</sub>Ge<sub>20</sub>, single cryst., dielec. losses and permittivity 2-17398  
 Bi<sub>12</sub>Ge<sub>20</sub>, use in electron-beam spatial light modulator, props. 2-20404  
 Bi<sub>12</sub>Ge<sub>20</sub>, Fe<sup>3+</sup>, EPR study 2-31270  
 Bi<sub>12</sub>Ge<sub>20</sub>:Fe(Mn)(Cr), pure and doped, anomalous US attenuation, illum. effect 2-50772  
 Bi<sub>2</sub>Ge<sub>2</sub>O<sub>7</sub>:Eu<sup>3+</sup>, emission and excitation spectra, Stark levels and cryst. field parameters 2-13537  
 Bi<sub>2</sub>Ge<sub>2</sub>O<sub>12</sub> crystal scintillator, 35-175 MeV positron total absorpt. shower detection 2-24484  
 Bi<sub>2</sub>Ge<sub>2</sub>O<sub>12</sub>, quad detector, timing and positioning discriminators for positron computed tomography 2-49216  
 Bi<sub>2</sub>Ge<sub>2</sub>O<sub>12</sub> scintillator detectors for high-energy gamma radiation 2-596  
 Bi<sub>2</sub>Ge<sub>2</sub>O<sub>12</sub> scintillator timing props. 2-600  
 BiI, dissc. energy derived from pot. energy curves 2-44132  
 BiI, hyperfine struct. in ground state, rot. transition, quadrupole const. 2-24678  
 BiI<sub>3</sub>, indirect exciton secondary emission, resonant Raman and hot luminesc. studies 2-45842  
 Bi<sub>4</sub>La<sub>6</sub>WO<sub>6</sub>, emission and excitation spectra, luminesc. study 2-31534  
 BiO<sub>3</sub> film form. from laser plasma, operating mode investigation 2-46913  
 BiO<sub>3</sub> additive to Li-Ti-Zn ferrite, effect on props. (*Slovak*) 2-2105  
 BiO<sub>3</sub> film, elec. cond. mechanism (*Japanese*) 2-26527  
 BiO<sub>3</sub>, thin film optical transmission, refr. index, extinction coeff., visible and infrared range 2-51538  
 BiO<sub>3</sub>-R<sub>2</sub>O<sub>3</sub>, solid soln., fluorite type, R=Dy, Er, Gd, cond. and struct. 2-45619  
 BiO<sub>3</sub>-R<sub>2</sub>O<sub>3</sub> (R=La, Nd, Sm, Dy, Er, Yb), sintered, high oxide ion conductive phase form. 2-8667  
 BiO<sub>3</sub>-R<sub>2</sub>O<sub>3</sub> (R=rare earth) system, sintered, high O<sup>2-</sup> ion conduction 2-12837  
 BiO<sub>3</sub>-F<sub>2</sub>O<sub>3</sub>/Ca<sub>1-x</sub>Yb, solid-state batteries with alloy anodes 2-9635  
 γ-BiO<sub>3</sub>-SiO<sub>2</sub>, transparent polycrystn., fabrication by temp.-gradient furnace technique 2-27132  
 BiSiI, permittivity at microwave freq., 2-36503  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, electronic props. near semiconductor-semimetal transition, magnetoplasma resonance 2-2137  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, Auger recomb. and ionisation rates, Lax band struct. 2-8813  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, thermoelectric power of holes, anomalous temp. depend. 2-51221  
 Bi<sub>80</sub>Sb<sub>20</sub> alloy thin films, elec. props., vacuum-deposited at different substrate temps. 2-30979  
 Bi<sub>2</sub>Sb<sub>1-x</sub>SI solid-solution ferroelectric semiconds., free energy and singularity 2-5649  
 Bi<sub>2</sub>Se<sub>3</sub>, electromigration of Cu, effective ion charge, temp. and elec. cond. depend. 2-35749  
 BiSeI, permittivity at microwave freq., 2-36503  
 Bi<sub>12</sub>Si<sub>20</sub>, backward-wave phonon echoes at 17 GHz 2-45461  
 Bi<sub>12</sub>Si<sub>20</sub> based PROM controllable transparencies, energetic and spatial characts. (*Russian*) 2-4582  
 Bi<sub>12</sub>Si<sub>20</sub>, bulk photoconductive crystal for nematic liq. cryst. light valve 2-7856  
 Bi<sub>12</sub>Si<sub>20</sub>, crystals, two-wave mixing and energy transfer, image amplification and vibr. anal. apps. 2-34702  
 Bi<sub>12</sub>Si<sub>20</sub>, crystals phase conjugation, real-time nondestructive testing appl. (*French*) 2-44224  
 Bi<sub>12</sub>Si<sub>20</sub>, electrooptic crystal, anisotropic image recording 2-995  
 Bi<sub>12</sub>Si<sub>20</sub>, illumination-induced impurity photoconductivity 2-46075  
 Bi<sub>12</sub>Si<sub>20</sub> optical image converter, effect of electron-hole recomb. on performance 2-39732  
 Bi<sub>12</sub>Si<sub>20</sub>, photoelectret state 2-31372  
 Bi<sub>12</sub>Si<sub>20</sub>, photorefractive electrooptic cryst. with vol. phase hologram, light diff. 2-11664  
 Bi<sub>12</sub>Si<sub>20</sub>, photorefractive crystal, phase conjugation by real-time holography and degenerate four wavemixing 2-25078  
 Bi<sub>12</sub>Si<sub>20</sub>, photorefractive effect anisotropy 2-41323  
 Bi<sub>12</sub>Si<sub>20</sub> single cryst., dielec. losses and permittivity 2-17398  
 Bi<sub>12</sub>Si<sub>20</sub> Soviet PRIZ spatial light modulator 2-4583  
 Bi<sub>12</sub>Si<sub>20</sub> Soviet Prom and Priz spatial light modulators, test and evaluation 2-39731  
 Bi<sub>12</sub>Si<sub>20</sub>, use in electron-beam spatial light modulator, props. 2-20404  
 Bi<sub>12</sub>Si<sub>20</sub>, vacuum UV spectra using synchrotron radiation 2-2315  
 Bi<sub>12</sub>Si<sub>20</sub>, vacuum UV spectra using synchrotron radiation 2-9168  
 Bi<sub>12</sub>Si<sub>20</sub> cryst., holography and speckle techniques for deformation and vibr. anal. 2-12115  
 Bi<sub>1-x</sub>Sr<sub>x</sub>O<sub>3-x/2</sub>, cryst. chemistry anal. elec. props. 2-21383  
 Bi<sub>2</sub>Te<sub>3</sub>, band struct., magnetoresist. and Hall effect study 2-46042  
 Bi<sub>2</sub>Te<sub>3</sub>-Sb<sub>2</sub>Te<sub>3</sub>, electromigration of Cu, effective ion charge, temp. and elec. cond. depend. 2-35749  
 Bi<sub>2</sub>Te<sub>3</sub>-Sb<sub>2</sub>Te<sub>3</sub>, solid solutions, anisotropy coeffs. (*Russian*) 2-1927  
 Bi<sub>2</sub>Te<sub>3</sub>-Sb<sub>2</sub>Te<sub>3</sub>, extruded, elec. props. and struct. 2-40979  
 Bi<sub>2</sub>Te<sub>3</sub>-Sb<sub>2</sub>Te<sub>3</sub> solid soln., halide doping effect on elec. and thermoelec. props. 2-13110  
 Bi<sub>2</sub>Te<sub>3</sub>-Sb<sub>2</sub>Te<sub>3</sub>, thermoelectrical props; with x=0.12 and x=0.6 2-5427  
 Bi<sub>2</sub>Te<sub>3</sub>-Sb<sub>2</sub>Te<sub>3</sub>, effect of intrinsic cond. on thermoelectric props. 2-8830  
 BiTiO<sub>3</sub>, plasma X-ray emission spectra registration using crystals 2-1340  
 Bi<sub>2</sub>Ti<sub>2</sub>O<sub>7</sub> ceramics, grain oriented, fabrication and elec. props. 2-31662  
 Bi<sub>2</sub>Ti<sub>2</sub>O<sub>7</sub>, cationic valence and cond. bands for photoelectrolysis of water 2-6154  
 BiVO<sub>4</sub>, Brillouin and Raman scatt. study of phase transition, soft acoustic mode 2-17474  
 BiVO<sub>4</sub>, temp. depend. of spontaneous birefringence 2-2216  
 Bi<sub>2</sub>WO<sub>6</sub>, cationic valence and cond. bands for photoelectrolysis of water 2-6154

## bismuth compounds continued

- Bi<sub>2</sub>WO<sub>6</sub>, emission and excitation spectra, luminesc. study 2-31534  
 Ca/BiO<sub>3</sub>/F<sub>2</sub> solid-state galvanic cells 2-32051  
 Cd<sub>1-x</sub>R<sub>x</sub>/BiO<sub>3</sub>/F<sub>2</sub> (R=Yb, La), solid-state galvanic cells 2-32051  
 CdBiNbZrO<sub>7</sub>, mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
 CdBiTiNbO<sub>7</sub>, mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
 CsBi(MoO<sub>4</sub>)<sub>2</sub>, specific heat near two phase transitions 2-12775  
 Ge-Se-Bi glass, elec. transport props. 2-45971  
 Ge<sub>20</sub>Bi<sub>12</sub>Se<sub>80-2x</sub>, n-type semiconducting chalcogenide glasses, photoconductivity 2-51236  
 Ge<sub>20</sub>Bi<sub>12</sub>Se<sub>80-2x</sub>Te<sub>10</sub>, n-type semiconducting chalcogenide glasses, photoconductivity 2-51236  
 GeTe-AgBiTe<sub>2</sub> system, physicochem. investig. of phase diagram 2-5207  
 GeTe-Bi<sub>2</sub>Te<sub>3</sub>-Cu<sub>2</sub>Te quasiternary system, electrophys. props. of GeTe-based solid solns., double doping effect 2-13089  
 KBi(Cr<sub>2</sub>O<sub>7</sub>)<sub>2</sub> double dichromate, synthesis and crystallographic character. (*French*) 2-8485  
 KBiCrO<sub>4</sub>Cr<sub>2</sub>O<sub>7</sub>·1H<sub>2</sub>O, synthesis and crystallographic study (*French*) 2-40326  
 KBiF<sub>4</sub>, superionic cond., phonon response, IR reflectivity and Raman spectra study 2-16733  
 KBiF<sub>4</sub>, superionic conductor, phonon spectra 2-22031  
 K<sub>1-x</sub>Bi<sub>x</sub>F<sub>1+2x</sub>, solid solutions, F atom distrib. between normal and interstitial sites, neutron diff. obs. (*French*) 2-50632  
 K<sub>2</sub>Bi<sub>1-x</sub>F<sub>3-2x</sub>, superionic cond., struct. and ionic cond., expt. study 2-16883  
 MoO<sub>3</sub>/Bi<sub>2</sub>O<sub>3</sub> smoke coalescence, double oxide formation, study by TEM and X-ray microanal. 2-9297  
 NH<sub>4</sub>Bi(Cr<sub>2</sub>O<sub>7</sub>)<sub>2</sub> double dichromate, synthesis and crystallographic character. (*French*) 2-8485  
 NH<sub>4</sub>BiCrO<sub>4</sub>Cr<sub>2</sub>O<sub>7</sub>·1H<sub>2</sub>O, synthesis and crystallographic study (*French*) 2-40326  
 NaF-BiF<sub>3</sub> system, synthesis and anionic cond. of phases 2-16848  
 Pb<sub>1-x</sub>Bi<sub>x</sub>F<sub>2+x</sub>, symmetrical cells, interfacial phenomena 2-14064  
 PbO<sub>2</sub>·6Bi<sub>2</sub>O<sub>3</sub>, anion transport study by elec. cond. and SIMS 2-21384  
 PbS-Bi<sub>2</sub>S<sub>3</sub> system, struct., phase diagram, twinning 2-45135  
 Rb<sub>1-x</sub>Bi<sub>x</sub>F<sub>1+2x</sub>, solid solutions, F atom distrib. between normal and interstitial sites, neutron diff. obs. (*French*) 2-50632  
 Sb<sub>1.8</sub>Bi<sub>0.2</sub>Te<sub>3</sub>-Bi<sub>2</sub>Se<sub>3</sub>(Sb<sub>2</sub>Se<sub>3</sub>) cross sections, thermoelec. prop. s., conc. depend. 2-13109  
 SiO<sub>2</sub>·6Bi<sub>2</sub>O<sub>3</sub>, anion transport study by elec. cond. and SIMS 2-21384  
 Te<sub>30</sub>Ge<sub>20-x</sub>Bi<sub>x</sub>, glass transition and crystallisation effects, thermal anal. 2-12499  
 TlBi(Cr<sub>2</sub>O<sub>7</sub>)<sub>2</sub> double dichromate, synthesis and crystallographic character. (*French*) 2-8485  
 TlBiSe<sub>2</sub>-PbSe, phase diagram, electrophysical props. 2-9334  
 (Y,Bi)<sub>2</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub>, ferrite-garnet film, 360° dynamic domain wall (*Russian*) 2-46351  
 (Y, Yb, Bi, Gd)<sub>3</sub>(Fe, Al)<sub>2</sub>O<sub>12</sub> epitaxial garnet films, domain wall widening 2-13324  
 (YBi)<sub>2</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub> ferrite garnet epitaxial film, domain wall reson. obs. 2-36404  
 (YBi)<sub>2</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub> garnet LPE film, mag. props. 2-41168  
 (Y<sub>0.5</sub>Gd<sub>0.5</sub>Bi)<sub>2</sub>(Fe,Al)<sub>2</sub>O<sub>12</sub> epitaxial film, mag. domain wall displacement in weak field 2-46354  
 (YTmBi)<sub>2</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub> garnet film, (110)-oriented, controlled generation and conversion of wall coded mag. bubbles 2-26698  
 (YTmBi)<sub>2</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub> garnet LPE film, mag. props. 2-41168  
 ZnO-Bi<sub>2</sub>O<sub>3</sub> varistor, XPS obs. of surface layer effects on electronic props., intergranular layer form. 2-9253

Bitter patterns see magnetic domains

bitumen see materials

## BL Lacertae-type objects

- 1218+304 and 1727+50, underlying elliptical galaxies anal., visible/IR obs. 2-10509  
 1219+28, underlying elliptical galaxy redshift, visible/IR obs. 2-10509  
 A00+162, triple source, UHF obs. 2-33169  
 AO 0235+164, polarization burst, IR and optical obs. 2-38309  
 Compton losses and rockets 2-23216  
 galaxy components, visible obs. 2-53367  
 gamma-ray absorpt. mechanisms in nucleus of galaxy, and jet hypothesis 2-28567  
 BL Lacertae, obs. of millisecond second struct. during outburst 2-33153  
 AP Librae, props. from UV photoelectric photometry 2-48319  
 Markarian 421, IR and optical polarization 2-14933  
 Markarian 421, X-ray spectrum components, obs. 2-48335  
 MC2 1210+121 and 1620+103, spectroscopy of radio-quiet objects 2-38308  
 NGC 1052, nonthermal optical IR emission 2-53362  
 OJ 090.4, identification with suspected variable CSV 1180 rel. to b rightening in 1915 and (1927) 2-28562  
 OJ 287, photometric history (1890-1930) 2-42743  
 optical brightness variations (1901 to 1980) 2-33140  
 PKS 0521-36, appearance of broad emission lines in optical spectrum 2-28560  
 PKS 0735+178, Lyman continuum absorpt. detect., UV obs. 2-6661  
 radio spectra shape anal., SHF/UHF obs. 2-33168  
 UV photoelectric comparison sequences for four objects 2-33156

## black holes

see also gravitational collapse

- accreted matter spectra, granite red shift 2-10472  
 accretion discs, collimation of particle beams from thick discs 2-14765  
 accretion discs, struct. and variability of dynamo driven disc 2-48272  
 accretion discs, thermal and secular stability of innermost parts 2-33062  
 V1343 Aquilae (SS 433), possible additional relativistic effects 2-28473  
 bound states in quantum evaporation 2-42708  
 3C 273, struct. and variability of dynamo driven accretion disc 2-48272  
 coloured black holes, trace anomaly of gauge theory energy-momentum tensor 2-10474  
 cosmology (book) 2-23386  
 cosmology concepts, rel. to materials science concepts 2-23355  
 curved space-time, atom as probe 2-10658  
 Cygnus X-1, black hole models with/without accretion disc, UVB anal. (*Russian*) 2-14891  
 Cygnus X-1, linear polarisation vars. oblique accretion disc model 2-6643  
 Cygnus X-1, spectral anal. of 1975 May X-ray transition 2-14888  
 Cygnus X-1, struct. and variability of dynamo driven accretion disc 2-48272  
 Cygnus X-1, X-ray obs. made in 1980 during 'high state' 2-53328



**black holes continued**

- dust shells and deformed stars falling into black hole, grav. collapse and radiation 2-23514
- dynamics of test mini black holes 2-28340
- early Universe, first order phase transition, magnetised black hole and wormhole prod. 2-53399
- early Universe, first-order phase transition, wormhole and black hole fate 2-53397
- electrodynamics, absolute-space/universal time formulation 2-38231
- electrodynamics in curved spacetime, 3+1 formulation 2-38053
- equations of motion in quasistationary approx. 2-6633
- Ernst metric, null tetrad analysis 2-42917
- evaporation problems 2-33399
- families of black holes, rel. to grand unification scales hierarchy 2-33769
- formation in close binary stars 2-6645
- Friedmann Universe, black hole or radiation dominated 2-6694
- galactic nuclei black holes as energy sources for variable active galaxies 2-14926
- galaxies active nuclei, binary black holes form. through galaxy mergers 2-38302
- galaxies active nuclei, broad emission line profiles theory 2-6684
- galaxies active nuclei, X-ray emission theory 2-28555
- gravitational model for matter-free torsion ball 2-10692
- incomplete black-hole evaporation 2-42918
- internal space-time metric 2-14872
- Kerr geometry, rigid rotating disk model 2-42707
- Kerr metric in an expanding universe 2-28583
- Kerr-Newman black hole, grav. and EM waves perturbation eqns. 2-3446
- Kerr-Newman black holes, spin-3/2 perturbation anal. by linearising O(2) field eqns. 2-14873
- primordial black holes and super-massive stars [in galactic nuclei] 2-48273
- primordial black holes producing large amplitude initial fluctuations in Universe 2-33188
- primordial Universe matter-antimatter separation by rotating black holes 2-14953
- production from collapsing closed loops 2-14962
- quantum gravity, instabilities in path integral formalism, black hole nucleation 2-48587
- quasars, broad emission line profiles theory 2-6684
- quasars and active galaxies, luminosity evolution models 2-38328
- relativistic fluid stationary flow around a rot. black hole (*Russian*) 2-23513
- rotating, dissipative spin-thermodynamic systems 2-10473
- rotating, Hawking radiation, local thermodynamics and stress tensor 2-23320
- rotating star relativistic collapse 2-28493
- Schwarzschild metric, geodesic coordinates, special relativistic effects, black holes 2-10680
- in Seyfert galaxies, massive black holes rel. to comparative parameters of Seyfert 1 and Seyfert 2 galaxies 2-3308
- spherically symmetric collapse in quantum gravity 2-19000
- spherically symmetric spaces, scalar fields, iteration scheme 2-23509
- SS 433, supercritical accretion disk model 2-10431
- stationary spherical symmetric accretion onto massive black holes, rel. to radiation spectrum and luminosity 2-53311
- stimulated emission processes near black holes 2-53313
- supermassive rotating star, general relativistic collapse, black hole form. 2-53076
- thermal fluctuations in quantum gravity, semiclassical description 2-18997
- thermodynamics, 'information' approach (*Russian*) 2-48144
- vacuum Minkowski state, quantum detection by non-uniformly accelerated observers 2-3444
- wormholes, quantum theory, Einstein-Maxwell black hole solns. 2-23530

**blast waves** see *shock waves*

**bleaching, optical** see *optical saturable absorption*

**Bloch walls** see *magnetic domain walls*

**blood**

- see also *haemodynamics*
- acetylcholinesterase of human erythrocytes, determ. of mol. activity after  $\gamma$ -irrad. (*Russian*) 2-42151
- acid-base balance and CO<sub>2</sub> transport at microcirculation level 2-42076
- atelectatic lobe blood flow: open vs. closed chest, positive press. vs. spontaneous ventilation 2-2889
- capillary flow: history, experiments and theory 2-37595
- capillary networks, microhaemodynamics 2-37612
- capillary orifice, model studies of phase separation 2-37597
- cardiac blood pool imaging, radiopharmaceutical choosing 2-37654
- cells, 2-body collisions, model expts. 2-37606
- cells, human, binding of concanavalin A after in vitro X-irrad. 2-37628
- cells of X-irrad. mice, plasma membrane alterations, binding of concanavalin A 2-37627
- cellular diversity in the blood-forming system 2-27787
- Chromosome aberrations induced in patients treated with telecobalt therapy for mammary carcinoma 2-22801
- chromosome structural changes and SCE after exposure to fields from 380 kV systems 2-52534
- Copley-Scott Blair phenomenon and electric double layer 2-37596
- corpusele and plasma human blood samples, reflectance var. under mag. field at Ar<sup>+</sup> laser line 2-14310
- cytogenetic aspects of neutron appl. to radiotherapy (*Russian*) 2-52531
- electrocoagulation, transcatheter, evaluation of anode and cathode 2-27929
- emission tomograph for noninvasive meas. of brain blood perfusion 2-32327
- erythrocyte, human, deformability meas. by optical diffractometric method 2-22707
- erythrocyte cytoplasm, elec. conductivity obs. 2-14213
- erythrocyte ghost membranes, fluoresc. probe monitoring instrumentation, microwave irrad. expts. 2-42246
- erythrocyte membrane,  $\sigma$ -irrad. effect on spin-labelled compounds transport 2-52586
- erythrocyte membranes of rats, activity of ATPases after irrad. (*Russian*) 2-42150
- erythrocyte sedimentation, math. model 2-32235
- erythrocyte shape and rigidity rel. to viscosity 2-37607
- erythrocyte sickling, US absorpt. in deer blood 2-14283

**blood continued**

- erythrocyte surface protein amino groups, mechanism of shielding impairment upon irrad. (*Russian*) 2-52562
- erythrocytes, bovine, efflux of K<sup>+</sup> and haemoglobin at low doses and low dose-rates 2-42165
- erythrocytes, electrophoretic mobility changes after exposure to ionising radiations of various LET 2-42166
- erythrocytes, further evidence for Frohlich interaction 2-47584
- erythrocytes, human, Ca<sup>2+</sup> permeability enhancement by physiological shear stresses 2-37515
- erythrocytes, human, post-irrad. recovery obs. using double-dose method (*Russian*) 2-42146
- erythrocytes, indices of protein metabolism during radiation sickness (*Russian*) 2-42152
- erythrocytes, mechanism of K<sup>+</sup> transport disturbance on X-irrad. (*Russian*) 2-52563
- erythrocytes, water exchange, NMR, age depend. 2-2859
- extracorporeal blood circulation apparatus thermoelec. temp. control devices 2-32354
- extracorporeal irradiation in a rat model for human myelocytic leukemia 2-18260
- fibrin clots, rheological study of network struct. under various conditions 2-9821
- fibrinogen, conversion to fibrin, blood clotting 2-38383
- filtering capillary network, pressure and flow distrib. 2-32237
- flow through small diameter tubes, 2-fluid model 2-32234
- gases monitoring electrode, combined pO<sub>2</sub>-pCO<sub>2</sub> 2-52651
- haemodiafiltration, mass balance and kinetic modelling (*German*) 2-52513
- haemoglobin, oxy- and carbonmonoxy, low lying paramagnetic states 2-9819
- haemoglobin diffusion coeffs., artifacts in meas. by intensity fluctuation spectroscopy 2-6289
- haemoglobin structural dynamics as monitored by resonance Raman spectroscopy 2-9767
- haemopoiesis in mice, microwave irrad. effect on resistance to ionising radiation (*Russian*) 2-42134
- Hele-Shaw lamina flow of neutrally buoyant particles, blood appl. 2-35219
- immune functions of mammary carcinoma patients, long-term effect of postoperative irrad. 2-52549
- laser coagulation, medical laser devices, applications and status 2-14311
- leucocytes, method for labelling with <sup>99m</sup>Tc-colloid in whole blood 2-52624
- leukocyte DNA of rate peripheral blood, repair after total body  $\gamma$ -irrad. (*Russian*) 2-42141
- leukocytes, human, passive mech. props., rheological study 2-9785
- lymphocyte chromosome aberrations in partial-body fractionated radiation therapy 2-52575
- lymphocyte survival after X-irrad., dose-rate effects 2-47641
- lymphocytes, human, first two mitotic cycles after irrad. at different stages (*Russian*) 2-52557
- lymphocytes, in vitro irrad. by tritiated water, absorbed dose 2-18305
- lymphocytes, long-term changes in natural killer activity after external pelvic radiotherapy 2-27835
- lymphocytes, peripheral, sister chromatid exchanges after preoperative mammography 2-47651
- lymphocytes, rat thymus, fluorescein dye, time depend. fluorescence depolarisation meas. 2-52438
- lymphocytes, T and B, of guinea pigs and mice, effect of single microwave irrad. (*Russian*) 2-42135
- magnetic separation, high gradient, inviscid approx. trajectories, expt. study 2-52512
- malarial parasite concentration, bench top mag. separator 2-22807
- methaemoglobin, human foetal, quaternary struct. and spin state 2-9765
- microhaematocrite centrifuge, special-purpose medical device 2-37703
- microvascular blood flowmetry using intravital microscope-TV system, improvement by 1-bit correlator (*Japanese*) 2-47772
- microvascular dimensions, continuous recording with rotating mirror microscope 2-52687
- myelocytic leukaemia, acute, extracorporeal irrad. of blood, rat expts. 2-52581
- neutrophil count, dose evaluation and time course prognosis by haematological indices rel. to  $\gamma$ -irrad. (*Russian*) 2-32329
- optical microscopy automated reticulocyte counting system (*Japanese*) 2-47769
- oximeter, IL-182 CO, calculator/computer-assisted calibration and use 2-52595
- phantom materials for radiation dosimetry, liqs. and gels 2-47715
- plasma, human, bubble dissolution following recompression, holographic obs. 2-22785
- plasma, human, flow velocity profile meas. using differential laser microanemometer 2-20776
- plasma angiotensin II changes with noise exposure at three levels of ambient temperature 2-22791
- plasma apolipoproteins, rabbit, changes following whole-body electron irrad. 2-47647
- platelets, improved detail in study by soft X-ray microscopy 2-6294
- Poiseuille flow, study of couple stress fluid 2-32233
- proteins, adsorption kinetics, Fourier transform IR spectroscopy 2-52422
- pulmonary blood flow, redistrib. during expt. air embolism in dogs 2-42128
- rectified plasma, proton relaxation variation during coagulation (*French*) 2-18174
- red blood cell, human, crenation 2-27795
- red blood cell deformability meas., single pore membrane prod. for meas. device 2-22842
- red blood cells, effect of high power microwave pulses, transmembrane thermal gradients 2-47633
- red blood cells, US meas. of back-scatt. cross-section (*French*) 2-32251
- red cell aggregation, appl. of stereological methods 2-37598
- red cell membrane proteins, multimol. films, surface rheology 2-37507
- red cell membrane proteins, surface isotherms of monomol. films 2-37506
- red cells, sputtering yield, Ar<sup>+</sup> ion irradiation, 5 to 15 keV, ang. depend. (*Japanese*) 2-41476
- red cells, velocity meas. by LDV using freq. shifting by moving wedged glass 2-22862
- respiratory and blood gases anal. by twin ion source spectrometer, simultaneous meas. (*Japanese*) 2-19206
- rheological characteristics rel. to menstrual cycle 2-37604



**blood** continued

- rheological constitutive eqns. for whole human blood 2-32236
- rheological model for studying red cell-cell and red cell-protein interactions 2-37605
- rheological modelling of fresh blood from transient press. meas. 2-37603
- rheology, resonance-thrombography, theoretical and practical elements 2-37715
- rheology in transient flow, appl. to abnormal human bloods study 2-37601
- rheology of thrombotic processes, interaction of erythrocytes and thrombocytes 2-37600
- rouleau formation kinetics, mas action approach with geometric features 2-52451
- rouleaux, equilib. size distrib. 2-52452
- sera from patients with different pathological conditions, differences in dielec. constant 2-47593
- sickle cells, rot. in homogeneous mag. fields 2-18242
- US Doppler examination of the peripheral blood vessel system (*German*) 2-42180
- US scattering, theoretical study 2-47628
- vessel patterns in colour ocular fundus images, computerised extraction and labelling methods 2-22815
- viscoelastic behaviour, transient, effect of steady flow 2-37599
- viscoelasticity and thixotropy of human blood 2-37602
- viscosity, effect of flow instability and anti-instability props. 2-32232
- xeroderma pigmentosum and medulloblastoma, chromosomal damage to lymphocytes during radiotherapy 2-52583
- O<sub>2</sub> partial press. calc., computer algorithm 2-22845
- Pb and <sup>210</sup>Pb origins in residents of Toulouse 2-9883
- Si ICs, blood compatibility of components and materials 2-9890

**blood circulation** see *haemodynamics***blood dynamics** see *haemodynamics***blood flow** see *haemodynamics***blood platelets** see *blood***blue brittleness** see *brittleness***boilers**

- AGR, implications for condensate purification of operation at pH 9.6 2-4012
- AGR boiler design and construction in UK 2-4014
- AGR steam generator operation experience 2-4008
- austenitic steel steam generator superheater for PFR, stress corrosion cracking 2-15500
- boiler, denting corrosion, inhibition, model expts. 2-15495
- BWR nuclear power plant load following operation, reactor power regulator, microcomputer system 2-29365
- CANDU damaged boiler tubes, replacement in situ 2-15493
- CANDU nuclear steam generators, materials performance 2-4006
- cogeneration boiler design for bark and waste wood combustion 2-41976
- convective and radiative heat transfer in MHD radiant boilers 2-47503
- development of steam generator components for open-cycle MHD 2-32091
- enamel protective coatings, comparative tests 2-47267
- FBR, steam generator, materials development 2-15484
- FBR steam generator tubing, material development 2-15485
- fission reactor steam generator tubes, flow-induced vibr. and wear 2-15488
- flow section temp. and pressure meas. error calc. 2-50345
- hammer mill motor noise reduction method 2-49996
- heat transfer scaling laws for MHD channels and diffusers 2-47504
- heatpump-boiler combinations for space heating, enthalpy and exergy analyses 2-6158
- HTGR, steam generator materials performance 2-4007
- Incoloy 800 and Inconel 600, steam generator tube for PHWR, NaH<sub>2</sub>PO<sub>4</sub> evaluation as denting inhibitor 2-4016
- Inconel 600 tubing in nuclear power demonstration unit boiler, chem. cleaning 2-4019
- Inconel 690, stress-corrosion cracking, treatment, reactor boiler appls. 2-15497
- LMBR steam generator, forced-connection boiling upflow system, instabilities in parallel channel 2-7326
- LMFBR boiler, fretting and wear of steels 2-15499
- LMFBR boilers, maintenance and repair methods, demonstration test 2-11226
- LMFBR steam generator SNR 300, experience in materials 2-4020
- LMFBR steam generator US design 2-4111
- LMFBR steam generators fabrication technology 2-15481
- LMFBRs, boiler piping and heat exchangers, material development 2-15483
- Monel 400 steam generator tubes, low cycle fatigue 2-15503
- non-destructive testing, eddy current computer anal. code 2-41860
- nuclear power station U-tube boilers, dynamic thermal-hydraulic behaviour 2-24378
- nuclear steam generating systems, chem. thermohydraulics 2-4010
- nuclear steam generator materials, pitting corrosion studies 2-4018
- nuclear steam generator materials performance, conf., St. Petersburg, FL, USA (Oct. 1980) 2-3327
- nuclear steam generators, system chemistry consideration 2-4011
- online diagnostic instrum. in nuclear power plants, experiences 2-15585
- open cycle MHD, heat and seed recovery 2-18107
- OTEC, transient modelling 2-32100
- PWR model steam generators, corrosion resistance 2-49153
- PWR steam generator materials, Cu and Ni compounds effects on corrosion 2-4013
- PWR steam generator overfill transient, safety aspects 2-29397
- PWR steam generator tubing, material requirements 2-4009
- PWR steam generators materials performance 2-4005
- retrofit of a coal-fired open-cycle liquid-metal MHD to steam power plants 2-18106
- shredded municipal refuse combustion steam generators 2-41978
- steam generator test facility, critical heat flux 2-4695
- steam generator tube performance in water-cooled nuclear power reactors during 1979 2-29322
- steam generators, cracking problems, safety margins in nuclear design 2-49161
- steam generators, denting corrosion with water leaking in 2-15504
- steel, Cr-Mo (12, 1 wt.%), optimisation for SNR boilers 2-15482
- steel, stainless, weld overlay, H-induced cracking in heat-affected zone of steam generator forging 2-4015
- steels compatibility in FBR in high temp. Na (*Japanese*) 2-7160

**boilers** continued

- supercharged boilers, convective heat transfer to furnace waterwalls 2-20673
- supercritical boilers using ammonia-hydrazine water treatment, formation of magnetite in feedwater circuits 2-27355
- THTR steam generator development (*German*) 2-4115
- transient thermohydrodynamic processes following rupture of steam-generating channel in water cooled water moderated reactor, development mechanisms (*Russian*) 2-24392
- water-steam cycle regulation in a solar boiler 2-37207
- H<sub>2</sub>SO<sub>4</sub> vapour in combustion gases, continuous meas. by portable automatic monitor 2-42065

**boiling**see also *boiling point*

- boiling crises in horizontal channels with a screen on the inside surface 2-8230
- BWR, transient nonequilib. vapour generation model, adaptation to MAYU4a code 2-4098
- carbon tetrachloride, pool boiling heat transfer, surface roughness and subcooling effects 2-35035
- compact plate-fin heat exchanger, boiling heat transfer 2-30127
- cryogenic liquid in piston flow, phase slip and heat transfer in film boiling 2-25370
- curve obtained by static method, thermistor appl. 2-33518
- ebullition of a liquid in a large volume following rapid depressurization 2-8026
- fluids, boiling in elec. field, heat transfer (*Russian*) 2-30573
- Freon-113, boiling inception, heterogeneous nucleation theory 2-4709
- Freon-11, fully developed pool boiling, rel. to surface characterisation 2-35036
- fundamental entropy change in transitions from liquid state 2-40572
- heat transfer, pool boiling, surface roughness and subcooling effects 2-35035
- heated surface, in narrow space, boiling heat transfer, bubble influence 2-30123
- hexane-octane, mixture, boiling, vapour bubble study 2-30213
- hysteresis and transition effects during boiling on surfaces with porous coatings 2-16766
- impinging jet, forced convection boiling, burnout heat flux 2-35190
- inception in volume heated liquids, appl. to LMFBR accidents 2-4083
- incipience due to contact angle hysteresis on metal surface 2-35033
- internal pipe flow, critical boiling conditions determ. (*German*) 2-39982
- liquid in channels of evaporators, boiling and evaporation, heat transfer 2-25231
- low permeability porous material, boiling 2-44724
- low press. flow boiling in horizontal tube, heat flux effect on press. drop 2-4874
- methanol, nucleate boiling heat transfer, bubble flux density appl. 2-35039
- model of boiling crisis under conditions of free convection in a bundle of horizontal pipes flushed with air 2-4703
- non-Newtonian fluid, boiling heat transfer from rotating horizontal cylinder 2-16349
- nondimensional analysis of boiling dry a vertical channel with a uniform heat flux 2-50056
- nucleate boiling, bubble waiting time 2-50070
- plated thermocouples for boiling heat transfer studies 2-50069
- pool boiling at horizontal tubes, ang. distrib. of heat transfer coeff. (*German*) 2-39912
- R-113, critical heat flux in helically coiled tubes 2-50271
- refilling and rewetting of hot horizontal tube, two-fluid model appl. 2-50964
- shock boiling of a liquid around a pulsed source 2-39904
- superheated steam adiabatic equations 2-44815
- transition boiling heat transfer in fission reactor cores during reflooding after LOCA 2-49165
- vapour-liquid annular mist flow, critical heat transfer in transient boiling 2-16377
- water, boiling inception, heterogeneous nucleation theory 2-4709
- water, superheated, ebullition of large volume following rapid depressurization 2-8026
- CO<sub>2</sub>, boiling-like phenomena in free-convection heat transfer at supercritical pressures (*German*) 2-39913
- CO<sub>2</sub>, ebullition of large volume following rapid depressurization 2-8026
- H<sub>2</sub>O, boiling in pipes, model for heat transfer calc. 2-4702
- H<sub>2</sub>O-glycerol (isopropanol) mixtures, flow boiling, forced convection heat transfer 2-25365
- He I, flow boiling in vertical heated glass tube, press. drop. and flow struct. 2-35220
- He II, nucleate-film boiling transition influence on stability of composite supercond. under AC conditions 2-26570
- He II, saturated, film boiling heat transfer, correl. of time depend. recovery 2-26170
- He II, saturated, recovery heat flux from film boiling calc. 2-26169
- He, liq., transient heat transfer expts. 2-1114
- N<sub>2</sub>, liquid, superheated, fluctuation boiling and bubble form. 2-39800
- Pt wire submerged in water, density of boiling centres on surface studied by photomicrography method 2-16227

**boiling point**see also *boiling; heat of vapourisation*

- hydrocarbon+organic compound binary systems, vapour-liquid equilibrium, eqns. of state, activity coeffs. 2-21283

**bolometers**

- adiabatic demagnetization refrigerator for infrared bolometers 2-38659
- Bi microbolometer detectors for far IR imaging antenna array 2-38648
- cavity design for efficiency 2-23720
- far IR imaging antenna array 2-48698
- IR, He<sup>3</sup> cooled, low-noise pre-amp. 2-6902
- IR bolometer for use in high mag. fields 2-19184
- IR detectors, using bolometers, pyroelectric devices, photoconductivity devices 2-10868
- radiotelescope, bolometer receiver for NRAO 36-foot mm-wave telescope, cooling to 0.4K 2-42598
- superconducting bolometer and pulsed IR laser for mol. beam diagnostics 2-7683
- transducers, for SHF power and noise spectral power density standards comparison 2-6822
- Ge hot-electron bolometers for TFTR diagnostics,  $\gamma$ -ray and neutron effects 2-35329
- Hg<sub>0.8</sub>Cd<sub>0.2</sub>Te bolometer for mm wave radiation detection 2-19185



**Boltzmann equation**

- see also *transport processes*
- BCS pairing theory, quasiclassical Green's function 2-26546
- Bhatnager-Gross-Krook eqn., simulation method 2-6810
- charged particle differential collision terms in  $S_0$  appl. 2-34222
- charged spheres interaction in Poisson-Boltzmann equation 2-17180
- circularly polarised photons, Boltzmann-Langevin eqn., time-correl. functions 2-141
- classical, correspondence with quantum theory 2-3535
- collision equation, Lyapunov functionals class 2-33474
- collisionless Boltzmann eqns. and integrable moment eqns. 2-23554
- correlation functions asymptotics in generalised Boltzmann-Enskog model 2-48604
- D-T pellet heated by laser, thermal cond. study 2-4118
- dense fluids, dynamical model, Langevin equation approach 2-50506
- dense gases, kinetic theory 2-35255
- education, Boltzmann processes, gas kinetics, energy space model, computer simulation 2-48439
- extension of the Boltzmann H-theorem 2-48645
- finite collision time effects and bound state effects in binary collision approx. 2-8255
- finite element method for particle transport 2-49087
- gas, dense high temp. classical gas, renormalised kinetic eqns. (Russian) 2-44810
- gas lubricant flow including slipping of first and second order, Reynolds eqns. (Russian) 2-50324
- gas velocity correlation in model cell, direct simulation scheme 2-44805
- gases, monocomponent, direct simulation scheme derived from Boltzmann eqn. 2-23595
- gases, monocomponent, direct simulation scheme derived from Boltzmann eqn. 2-23596
- grand unified theories, statistical concepts 2-53394
- hard sphere gas, fluctuations about Boltzmann eqn. 2-38607
- heavy ion collisions, high energy, preequilib. and shadow effects 2-24269
- heavy-ion induced reactions, dynamical similarity 2-29282
- hot carrier cond., transient regime, Monte Carlo and Boltzmann eqn. iterative solns. 2-46003
- hot electron diffusion coefficient, determ. from dispersion of narrow packet 2-13087
- hot electrons, retarded transport, quantum physics 2-51184
- III-V semiconductors, carrier velocities, time depend., Boltzmann eqn., iterative soln. 2-45956
- inert gas mixtures, electrically excited, electron energy distrib. and transport coeffs., Boltzmann stability eqn. calc. (Chinese) 2-25665
- infinite uniform gas, nonlinear Boltzmann eqn. solns. 2-10748
- interpolation method, DT fusion system appl. 2-15428
- invariance and conservation laws for physical systems 2-38449
- ion stopping distrib. profile calc. in a planar target 2-16698
- kinetic theory of gases, recent developments, book contrib. 2-12265
- line shape predictions, kinetic corrections, approx. methods comparison 2-3533
- linearised Poisson-Boltzmann equation in cylindrical coordinates, analytical soln. 2-23594
- magnetoconductivity, quantum transport theory 2-5426
- magnetoresistance, classical to quantum regime transition 2-17042
- material interfaces, energy deposition, semi-empirical electron transport model 2-30503
- Maxwell gas, nonlinear Boltzmann eqn., powerlike decreasing solns. 2-40016
- metals, noble and polyvalent, electron-dislocation scatt. relax. time anisotropy 2-45943
- mixed conductor, transport equations for electrons and ions 2-21638
- molecular collision process, Boltzmann eqn. simulation scheme, vel. correl. 2-3483
- molecular crystals, US attenuation, relax. process, anisotropy effects 2-40490
- molecular high-energy translational motion, Boltzmann eqn. soln. 2-44807
- non-equilibrium fluctuations and the hierarchy, book contrib. 2-10768
- nonlinear, commuting operators 2-38609
- nonlinear, soln. asymptotic behaviour 2-146
- nonlinear, soln. by scatt. probability factorisation 2-10749
- nonlinear model-Boltzmann equations and exact solutions, review 2-19054
- one-dimensional compressible gas dynamics calculations using the Boltzmann equation 2-8253
- one-dimensional metal, elec. resist. arising from electron-electron scatt. 2-1896
- periodic medium, averaging of transport equation 2-42967
- Poincare theorem, the Boltzmann equation, and equations of the Korteweg-de Vries type 2-33275
- polaron Boltzmann equation, zero temp. soln., analytic expression 2-21507
- polarons, momentum distrib. function in ohmic regime, Boltzmann eqn. calc. 2-21508
- polarons linearised in elec. field, at weak electron-phonon coupling, distrib. function 2-1846
- quantum mechanical, correspondence with classical theory 2-3535
- rarefied gas, thermal stress slip flow induced between noncoaxial circular cylinder 2-16347
- rigid sphere molecules, relaxation rates of inverse-power 2-1282
- second sound attenuation in solids, Boltzmann-Peierls eqn. 2-45400
- semiconductor, carrier collision duration 2-51161
- semiconductor, polycryst., effective mobility, approx. soln. of Boltzmann eqn. w.r.t. crystallite polarisation 2-30883
- semiconductor compounds, ion implanted, stoichiometric disturbances, Boltzmann transport eqn. calc. 2-1501
- semiconductors, cyclotron resonance lineshape, quantum statistical theories, review 2-46385
- slowing down of energetic molecules in a spatially uniform gas 2-1283
- solution, approach to equilib. 2-28748
- solvable nonlinear Boltzmann equation 2-3536
- spatially uniform Maxwellian gas, nonlinear Boltzmann eqn. 2-19056
- spin polarised gas, transport props. 2-50350
- spinodal decomposition kinetics, memory function eqn. approach 2-50869
- superconductor, nonequilib., quasiparticle charge imbalance, relax., diffusion and oscillation 2-31033
- superconductors, dirty, nonequilib., quasi-particle distrib. function, kinetic eqns. 2-31032
- swarms, short-time development, hydrodynamic regime, charged articles in neutral gases 2-28801

**Boltzmann equation continued**

- temperature and unique energy level populations 2-14993
- theoretical developments (Dutch) 2-48650
- time-wise approximated Boltzmann equation 2-10746
- transport coefficients in high energy nuclear collisions 2-19526
- AlGaAs-GaAs-AlGaAs struct., phonon scatt. of electron gas 2-36131
- AlGaAs:Cr, ion implanted, stoichiometric disturbances and Cr redistrib. during annealing 2-21161
- $^3\text{He-B}$ , shear viscosity, s-p-d-wave approx. 2-30693
- $^3\text{He-B}$ , spin dependent transport and relaxation parameters 2-35811
- n-InAs<sub>0.65</sub>P<sub>0.35</sub>, transverse magnetoresist., Boltzmann equation calc. 2-21607
- N<sub>2</sub>, electron swarm props. at moderate electric field to gas density ratio 2-44806
- N<sub>2</sub>, post-discharge, electron energy distrib. function relax., superelastic vibr. collisions effect 2-20957
- (SN)<sub>x</sub>, interacting two-carrier system, elec. resistivity 2-30882
- (SNBr)<sub>x</sub>, interacting two-carrier system, elec. resistivity 2-30882
- Si, ion implantation, amorphisation, lattice displacement criterion 2-45221

**Boltzmann-Vlasov equation** see *Vlasov equation***bond angles**

- amorphous inorganic solids, short-range order parameters 2-1407
- annulenes, bridged, max. overlay study 2-19943
- anthracene, mol-struct., bond lengths and angles, gas phase 2-29714
- anthraquinone, mol-struct., bond lengths and angles, gas phase 2-29714
- bicyclo[3.2.1]octane, mol. struct., force field, electron diff. study 2-39491
- bis(dimethylphosphino)methane, mol. struct., gas phase electron diff. 2-29713
- 2-bromo-3-oxo-6,6-diphenyl-bicyclo [3.1.0] hexane-1-carbonitrile, cryst. and molec. struct. 2-1469
- chalcogenide glass film, defect struct. 2-45056
- circular orbit theory, bond angles for group V and VI hydrides and halides 2-34598
- conformational transitions, bond angle bending, force consts., kinetic calcs. 2-9541
- cyclobutane-1,2-dione, mol. struct., electron diff., bond lengths and angles determ. 2-20184
- cyclobutanes cycloreversion 2-24612
- cyclohexane, structural trends in C-H bond distances and C-C-H bond angles, ab initio calcs. 2-49275
- dihalomethanes, IR overtone spectra, symm. effects 2-20058
- cis-1,5-dimethyl-3,3,7,7-tetraphenylcyclotetrasiloxane-1,5-diol, cryst. struct. determ. 2-40367
- fluorocyclohexanes,  $^{19}\text{F}$ - $^{13}\text{C}$  coupling consts., conformational and substituent effects, INDO MO calc. 2-11405
- glycine, bond lengths and angles by  $^{13}\text{C}$  and  $^{14}\text{N}$  NMR 2-13361
- group V trihydrides, local valence forces, rel. to III-V semiconductor (110) surface reconstruction 2-12895
- ice Ih, bond angles, bond lengths, transition barrier, from neutron scatt. 2-21056
- imidazole, isotope effects, nucl. quadrupole coupling dipole moments, microwave obs. 2-39390
- molecular ions, Coulomb explosion technique for determining geometrical structures 2-44131
- molecules, complex, intramolecular forces energy derivative calcs., generalised coordinate method 2-20153
- moniodobenzene, in nematic liq. cryst.,  $\Gamma\alpha$  struct., PMR study 2-49462
- naphthalene, mol. struct., gas phase electron diff. 2-29715
- 2-phenylimino-2-methyl-3-phenyl-1,3,2-oxazaphospholane, cryst. and mol. struct. 2-40366
- phenylsulphenyl chloride, mol. struct., bond lengths and angles, electron diffraction study 2-39504
- poly-cis-1,4-butadiene, cryst. packing and conform., mol. interactions effects 2-45060
- quartz,  $\alpha$ - $\beta$  structural transition, Si-O-Si bond angle enlargement 2-45517
- AlF<sub>3</sub>, struct., bending vibr., bond angles, CNDO/2 calcs. 2-19971
- BF<sub>3</sub>, struct., bending vibr., bond angles, CNDO/2 calcs. 2-19971
- C, amorphous, dangling bonds defects, g-values of ESR signal 2-2134
- Cd phosphides, crystal structure, P-P bond lengths and angles, energy gap and melting point 2-25853
- Cr<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> soln., complex form. and SO<sub>4</sub><sup>2-</sup>-H<sub>2</sub>O interactions, X-ray diff. data 2-52181
- Ge, amorphous, dangling bonds defects, g-values of ESR signal 2-2134
- HABC mol. with 16 valence electrons, mol. configs., MO study 2-4202
- HSCN, geometric and electronic struct. studied by non-empirical and MNDO methods 2-43805
- K<sub>4</sub>Zr<sub>2</sub>Si<sub>6</sub>O<sub>18</sub>·2H<sub>2</sub>O, cryst. struct. 2-35458
- Na<sub>4</sub>Zr<sub>2</sub>Si<sub>6</sub>O<sub>18</sub>, crystal struct. and ionic conductivity 2-8498
- Ni complex, N,N'-ethylenebis(benzoylacetoniminato)-Ni(II), cryst. and mol. struct. 2-45124
- O<sub>3</sub>, matrix isolated, anharmonicity and bond angle 2-7671
- Pt complexes, cis-dichlorobis(cyclopropylamine)-Pt(II) 2-45122
- Si, amorphous, dangling bonds defects, g-values of ESR signal 2-2134
- Si, amorphous, HF plasma-ion sputtered, struct. parameters 2-40709
- Si, surface oxidation, O and O<sub>2</sub> chemisorpt. 2-27474
- SiF<sub>3</sub>, struct., bending vibr., bond angles, CNDO/2 calcs. 2-19971
- (SiX<sub>2</sub>YZ)<sup>+</sup> (X, Y, Z=H, F, Cl), mol. struct., Jahn-Teller effects, MNDO calc. 2-664
- Sn complex, SnBr<sub>2</sub>(1,3-diethylurea), cryst. struct. Mossbauer study 2-51510
- Sn complex, SnCl<sub>2</sub>(1,3-diethylthiourea), cryst. struct. Mossbauer study 2-51510
- WO, WO<sub>2</sub> and WO<sub>3</sub>, matrix isolated, IR spectra, vibr. const., bond angles 2-4280
- ZnF<sub>2</sub>, crystal structure, P-P bond lengths and angles, energy gap and melting point 2-25853

**bond lengths**

- acetaldehyde, matrix isolated in Ar,  $^{13}\text{C}$  dipolar spectra 2-7572
- acetylene, matrix isolated in Ar,  $^{13}\text{C}$  dipolar spectra 2-7572
- amorphous inorganic solids, short-range order parameters 2-1407
- cis-(10)annulene, mol. and electronic struct., MO calcs. 2-11397
- annulenes, bridged, max. overlay study 2-19943
- anthracene, mol-struct., bond lengths and angles, gas phase 2-29714
- anthraquinone, mol-struct., bond lengths and angles, gas phase 2-29714
- azulene, mol. and electronic struct., MO calcs. 2-11397
- bicyclo[3.2.1]octane, mol. struct., force field, electron diff. study 2-39491



## bond lengths continued

- bis(dimethylphosphino)methane, mol. struct., gas phase electron diff. 2-29713
- borate polyhedra, bond distances, X-ray spectra and electron density distributions, calcs. using ab initio methods 2-35436
- 2-bromo-3-oxo-6,6-diphenyl-bicyclo [3.1.0] hexane-1-carbonitrile, cryst. and molec. struct. 2-1469
- butadiene, bond index and length, CNDO approx. (French) 2-34301
- chalcogenide glass film, defect struct. 2-45056
- covalent substances, Debye temp., mass and bond length influence 2-1579
- cyclobutane-1,2-dione, mol. struct., electron diff., bond lengths and angles determ. 2-20184
- cyclohexane, structural trends in C-H bond distances and C-C-H bond angles, ab initio calcs. 2-49275
- cyclohexanone, CO stretching vibr., mol. props. MINDO/2 calcs. 2-7505
- cis-1,5-dimethyl-3,3,7,7-tetraphenylcyclotetrasiloxane-1,5-diol, cryst. struct. determ. 2-40367
- 1,3-diquinocyclobutanedione, mag. circular dichroism spectrum 2-43957
- ethylene, matrix isolated in Ar,  $^{13}\text{C}$  dipolar spectra 2-7572
- ethylenic compounds, bond index and length, CNDO approx. (French) 2-34301
- fluorocyclohexanes,  $^{19}\text{F}$ - $^{13}\text{C}$  coupling consts., conformational and substituent effects, INDO MO calc. 2-11405
- fluoromethane, matrix isolated in Ar,  $^{13}\text{C}$  dipolar spectra 2-7572
- furan, struct. and aromatic character, SCF ab initio calc. 2-4205
- glycine, bond lengths and angles by  $^{13}\text{C}$  and  $^{14}\text{N}$  NMR 2-13361
- group V trihydrides, local valence forces, rel. to III-V semiconductor (110) surface reconstruction 2-12895
- heavy water, liquid struct. factor, isochoric temp. derivative 2-30381
- hydroxy pyridines, vapour phase tautomeric equilib., ab initio calcs. 2-15709
- ice Ih, bond angles, bond lengths, transition barrier, from neutron scatt. 2-21056
- imidazole, isotope effects, nucl. quadrupole coupling dipole moments, microwave obs. 2-39390
- ionic substances, Debye temp., mass and bond length influence 2-1579
- melting relations of crystals with rocksalt struct. related to bonding 2-16755
- molecular ions, Coulomb explosion technique for determining geometrical structures 2-44131
- molecule, ground state electronic struct. calc., appl. of SC-RPA method 2-15694
- molecules, complex, intramolecular forces energy derivative calcs., generalised coordinate method 2-20153
- moniodobenzene, in nematic liq. cryst.,  $\Gamma\alpha$  struct., PMR study 2-49462
- naphthalene, mol. struct., gas phase electron diff. 2-29715
- organic compounds, ab initio geometries and their correl. to total energy group increments, 4-21G bond distances 2-49251
- parvalbumin, bond lengths and energy transfer by Tb(III) and En(III) luminesc. probes 2-14192
- 2-phenylimino-2-methyl-3-phenyl-1,3,2-oxazaphospholane, cryst. and mol. struct. 2-40366
- phenylsulphenyl chloride, mol. struct., bond lengths and angles, electron diffraction study 2-39504
- phosphabutadiene, microwave spectrum 2-39387
- polyacetylene, phase kink trapping, bond lengths 2-811
- polyenes, linear, Franck-Condon anal. of  $^1\text{A}_g \rightarrow ^1\text{B}_u$  absorpt. 2-7604
- polyenes, linear substituted, electronic band struct. and props. 2-5343
- polyenes, struct. isomerism, PPP investigation 2-49297
- positive molecular ions, octahedral and tetrahedral, scaling of equilib. bond lengths, chemical pot. and energy 2-39280
- pyrazine, pure rotation Raman spectra 2-4293
- pyrene complex, mol. and cryst. struct., X-ray diff. study 2-5106
- pyrrole, struct. and aromatic character, SCF ab initio calc. 2-4205
- relativistic bond length contractions, d-orbitals effect 2-19940
- silyl(methyl)acetylene, mol. struct., vibr., rot. consts., electron diff. obs. 2-29712
- spiro[2.4]hepta-4,6-diene, microwave spectra and electron distribution 2-7545
- surface EXAFS technique for surface struct. determ. 2-22113
- tetrakis(trimethylsiloxy)silane, X-ray cryst. struct. 2-8507
- thioformaldehyde, geometries of ground and first excited triplet states 2-43815
- thiophene, struct. and aromatic character, SCF ab initio calc. 2-4205
- vibrational depend. of bond lengths in nuclear spin dipole relax. 2-49463
- $\text{AlH}^+$  ground and excited states, pot. energy curves, dissoci., ab initio CI calcs. 2-24617
- $\text{Al}(111)$ , chemisorption of O, electronic band struct., and bond length 2-13154
- $\text{AuBr}$ , vibr. spectra and normal coord. anal. 2-31506
- $\text{AuCl}$ , vibr. spectra and normal coord. anal. 2-31506
- $\text{AuI}$ , vibr. spectra and normal coord. anal. 2-31506
- $\text{BCl}$ , IR spectrum of vibr. bands 2-49407
- $\text{BH}_3$  complex,  $\text{BH}_3$  (pyridine, 2,6 lutidine)  $\sigma$ - $\pi$  transmitted coupling, molecular orbitals calc. 2-49457
- $\text{BaMnFeF}_6$ , cryst. struct. 2-21086
- C, amorphous, dangling bonds defects, g-values of ESR signal 2-2134
- $\text{CsSe}_2$ , high resolution IR spectrum and struct. determ. 2-24696
- Cd phosphides, crystal structure, P-P bond lengths and angles, energy gap and melting point 2-25853
- $\text{CdAl}_2\text{O}_4$ , thermal expansion, meas. using dilatometry 2-50888
- $\text{Cr}(\text{H}_2\text{O})_6^{2+}$  complex, aq. soln.,  $\text{H}_2\text{O}$  exchange, EXAFS method appl. 2-27021
- $\text{CsH}_3(\text{SeO}_3)_2$ , hydrogen bond network, antiferroelectric phase transition  $^2\text{D}$  and  $^{133}\text{Cs}$  NMR study 2-51481
- $\text{Cu}(\text{H}_2\text{O})_6^{2+}$  complex, aq. soln.,  $\text{H}_2\text{O}$  exchange, EXAFS method appl. 2-27021
- DCN, pot. and dipole moment surfaces, force consts., HF SCF CI calcs. 2-29512
- $\alpha$ - $\text{DIO}_3$ , manifestation of H bond in NQR spectra (Russian) 2-41228
- $\text{FH.CN}^-$ , prod. from  $\text{HF.CN}^-$  reaction, electronic struct. and geometry, quantum chem. calc. 2-22433
- Ge, amorphous, dangling bonds defects, g-values of ESR signal 2-2134
- $\text{H}_2$ , mol. in rigid spheroidal box, electronic and vibr. props. at high press. 2-34285
- HCN, pot. and dipole moment surfaces, force consts., HF SCF CI calcs. 2-29512
- $\text{HCO}^+$ , mol. struct. by microwave substitution method 2-20205
- HCOF, centrifugal distortion consts., bond order and bond dipole moment 2-20025

## bond lengths continued

- $\alpha$ - $\text{HIO}_3$ , manifestation of H bond in NQR spectra (Russian) 2-41228
- $\text{HNCO}$ , centrifugal distortion consts., bond order and bond dipole moment 2-20025
- $\text{HNCS}$ , centrifugal distortion consts., bond order and bond dipole moment 2-20025
- HSCN, geometric and electronic struct. studied by non-empirical and MNDO methods 2-43805
- $\text{KD}_2\text{PO}_4$ , cryst. struct., temp. and press. depend. 2-50595
- $\text{KD}_2\text{PO}_4$ , cryst. struct. of tetragonal phase, temp. depend. 2-50596
- $\text{KH}_2\text{PO}_4$ , cryst. struct., temp. and press. depend. 2-50595
- $\text{KH}_2\text{PO}_4$ , cryst. struct. of tetragonal phase, temp. depend. 2-50596
- $\text{KH}_2\text{PO}_4$ , proton potential from spectroscopic and crystallographic data 2-36618
- $\text{K}_4\text{Zr}_2\text{Si}_6\text{O}_{18} \cdot 2\text{H}_2\text{O}$ , cryst. struct. 2-35458
- $\text{K}^+[\text{HOC}(\text{CH}_3)_2\text{C}(\text{CH}_3)_2\text{OPHO}_2]^- \cdot \text{H}_2\text{O}$ , cryst. struct., X-ray diff. study 2-5104
- $\text{Na}_3\text{AlH}_6$ , cryolite type, Al-H bond lengths determ. by NMR (French) 2-36466
- $\text{Na}_2\text{Zr}_2\text{Si}_2\text{O}_{12}$ , crystal struct. and ionic conductivity 2-8498
- Ni complex, N,N'-ethylenbis(benzoylacetoniminato)-Ni(II), cryst. and mol. struct. 2-45124
- NiCO, coupling between Ni-C and C-O stretch motion 2-43799
- $^{17}\text{O}_2$  and  $^{18}\text{O}_2$ , vibration-rotation Raman spectra 2-4293
- $^{17}\text{O}^{18}\text{O}$ , pure rotation and vibration-rotation Raman spectra 2-4293
- $\text{P}_4$ , vibration-rotation Raman spectra 2-4293
- Pt complexes, cis-dichlorobis(cyclopropylamine)-Pt(II) 2-45122
- $\text{SF}_6$ , mean amplitude of vibration, multiple scatt., struct., electron diff. obs. 2-24855
- Se, liq., expanded, mol. struct., 600-1400°C 2-50514
- Si, amorphous, dangling bonds defects, g-values of ESR signal 2-2134
- Si surface (001), surface atomic geometry 2-1715
- Si, surface oxidation, O and O<sub>2</sub> chemisorpt. 2-27474
- $\beta$ -Si-Al-O-N, thermal expansion, meas. using dilatometry 2-50888
- $\beta$ - $\text{Si}_3\text{N}_4$ , thermal expansion, meas. using dilatometry 2-50888
- $\text{SiO}_2$ , vitreous, struct. at high temps. 2-25751
- $(\text{SiX}_2\text{YZ})^+$ , (X, Y, Z=H, F, Cl), mol. struct., Jahn-Teller effects, MNDO calc. 2-664
- Sn complex,  $\text{SnBr}_2(1,3\text{-diethylurea})$ , cryst. struct. Mossbauer study 2-51510
- Sn complex,  $\text{SnCl}_4(2,1,3\text{-diethylthiourea})$ , cryst. struct. Mossbauer study 2-51510
- $\text{TiCl}_2$ , EXAFS struct. param. 2-41448
- $\alpha$ - $\text{TiCl}_3$ , EXAFS struct. param. 2-41448
- $\text{TiO}_2$ , rutile and anatase, EXAFS study 2-22118
- $\text{TiO}_2 \cdot \text{P}_2\text{O}_5$ , glass, neutron diffraction study 2-25750
- $\text{UO}_2$ , synthetic and natural, XPS obs. of phase comp., U ions content and bonds, uraninites analysis 2-37125
- $\text{YbZrF}_7$ , cubic, cryst. struct., X-ray and neutron diff. determ. 2-21085
- $\text{ZnP}_2$ , crystal structure, P-P bond lengths and angles, energy gap and melting point 2-25853
- bonds (adhesive) see adhesion**
- bonds (chemical)**  
 see also binding energy; bond angles; bond lengths; crystal binding; hydrogen bonds; intermolecular forces; lattice energy  
 acridine dyes binding to DNA investigated by triplet excited static probe technique and fluoresc. meas. 2-49257  
 alanine, dipeptide bond, conformational energy map ab initio MO calc. 2-4422  
 alcohol complexes, O-H bond vibr., pot. functions 2-15731  
 alcohols, liq., bond energies rel. to radiochem. H yield, correl. calcs. (French) 2-17905  
 alkali metal zirconosilicates, electronic struct., bonds, X-ray electron spectra, MO LCAO calcs. 2-39419  
 alkenes, additivity rules for bond and group optical anisotropies (French) 2-11486  
 trans-alkenes, cryst. state, double bond influence on Raman active acoustical mode 2-51569  
 alkenes, liq., bond energies rel. to radiochem. H yield, correl. calcs. (French) 2-17905  
 alkenylsilanes, additivity rules for bond and group optical anisotropies (French) 2-11486  
 alloxan- $\text{d}_0$ (- $\text{d}_2$ ), force consts., vibr. bonds, normal coord. anal., IR study 2-41363  
 amines, liq., bond energies rel. to radiochem. H yield, correl. calcs. (French) 2-17905  
 $\alpha$ -amino-isobutyric acid, struct. and bonding 2-49613  
 amorphous, molecular orbital selfconsistent field calc. 2-45814  
 amorphous semiconductors, pressure-induced effects and phase transitions 2-45044  
 amorphous semiconductors, tetrahedrally bonded, Hall effect sign anomaly, chem. bond orbital approach 2-13100  
 anharmonic atomic chain, destructive energy fluctuations 2-50581  
 antimonates, vibrational study, Raman spectra, force consts. (French) 2-13494  
 atoms embedded in electron gas, immersion energies 2-24576  
 azulene, bond orders and effective atomic charges, approx. eqns. method calcs. 2-15699  
 benzonitrile derivatives,  $\text{C}\equiv\text{N}$  stretching mode, IR intensities, substituent effects 2-39318  
 beryllosilicate minerals, BeOSi bond role in struct. 2-21075  
 binding of three molecules in the excited state 2-34599  
 biological systems, space-time symmetry of vibr. modes 2-9902  
 bis(trifluoromethyl) nitroxide + toluene, H abstraction, quantum tunneling, kinetic EPR study 2-9536  
 borides and boranes, struct. comparisons, review 2-40338  
 3-bromopyridine, quadrupole coupling consts. and centrifugal distortion consts. from microwave spectrum 2-7548  
 t-butyl, negative ion states, ETS study 2-49571  
 CCl Si:H, amorphous, struct. and electronic states, review 2-25744  
 chalcogenide glasses, charged dangling bonds model 2-13015  
 chalcogenides and pnictides, cond. band gap, chemical bond approach 2-35936  
 chemical bonding, applicability and accuracy of localised picture 2-43755  
 chromophores bound to bacterial reaction centres, resonance Raman spectra 2-18176  
 circular orbit theory, bond angles for group V and VI hydrides and halides 2-34598  
 CNDO/2 calculation of binding energy for  $\text{AH}_2$  systems 2-7672



**bonds (chemical) continued**

continuous random networks, structural ordering related to chemical bonds 2-45031

covalent crystals, lattice energy, electron-gas functional theory 2-1446

crystal covalent bonding, iteration-perturbation theory 2-21061

crystals, hardness-bond ionicity relationship 2-35583

diacetylene carbonic acids, lipid- and lysolipid-like, polymerisation in monolayers and liposomes, model membrane 2-32188

1,6-dicarbonyl, vibr. spectra and struct. 2-49434

2,5-dihydropyrrole, ring-puckering vibr., elect. vs. mech. anharmonicity in asymm. pot. wells 2-34418

dimethylsulphide, vibr., force consts., spectra (*French*) 2-698

dimethylsulphide, vibr., force consts., spectra (*French*) 2-698

dimethylsulphide, vibr., force consts., spectra (*French*) 2-698

dissociation energy calcs. 2-11558

early work in relation to solid state physics 2-1441

electronic structure theory, review 2-35919

elements, bulk electron conc. and average valence band strength correlation with elastic moduli 2-5074

elements, bulk electron conc. and average valence band strength correlation with elastic moduli 2-21060

energy calc. and elec. anal. 2-11374

ethylene glycol conformation, nontunnelling O-monodeuterated species from microwave rot. spectra 2-39388

ethylalicylate, US vel. dispersion meas. in 0.5 to 5.0 MHz range 2-8579

fluorescein dianion, dimeric and trimeric states, fluoresc. charact. effect 2-29652

fluorescein dianion, dimeric and trimeric states, mol. struct. 2-29620

formaldehyde, bonding nature of MIO through one-electron partitioning of electronic energy anal. 2-43756

furan, d-orbital bonding, CNDO/2 and ab initio calcs. 2-15701

galactose oxidase copper(II)-CN<sup>-</sup>(F<sup>-</sup>) binding, exogenous ligand sites, NMR study 2-14191

glass:Nd, nonradiative energy transfer processes 2-31555

graphite, lattice properties, bonding and thermal props. 2-50582

graphite intercalation compound, synthetic metal, band length change and cond., review 2-26270

hydrocarbon polymers, positron annihilation studies (*Russian*) 2-21185

hydrocarbons, saturated, charge distrib. and chem. effects, vibr. energies rel. to mol. stabilities 2-4209

II-V compounds, valence electron energy spectrum, d-s, p resonance, XPS obs. 2-27056

III-V semiconductors, native oxides, chem. bonding model 2-25805

inorganic cpds., NQR study 2-5601

interaction reaction dynamics, electronic and struct. changes 2-41871

Ising model, transverse, randomly diluted, second order phase transition 2-36371

IV-VI semiconductors, basic properties, evolving perspectives and unifying characts. 2-17066

liquids, charged dangling bonds model, appl. to self-ionisation and disproportionation 2-13015

main-group element molecules, chem. bonding (*French*) 2-4196

metallic glass, phys. props., research developments, correl. of technological parameters and mag. props. 2-8437

metals, covalent bond formation, charge centre interactions, kinetic energy changes 2-44133

metals and alloys, chemical bonding, valence model (*German*) 2-30433

methanol, O-H bond, dipole moment derivatives, H bonding effects 2-4215

methanol, X state existence near C-O stretch vibr. 2-7538

methyl arsines, deuterated and substituted, CH stretching freq., bonds, IR obs. 2-39409

methyl phenyl-sulphide-d<sub>0</sub>(-d<sub>3</sub>)(-d<sub>5</sub>) and rel.cps., vib. spectra, valence force field, normal modes (*French*) 2-34409

Möbius annulenes, expressions for p-electron energies and charge bond energies, HMO approx. appl. 2-19941

molecular bond orders and effective atomic charges, approx. eqns. method calcs. 2-15699

molecular configurations, topological theory 2-7669

naphthalene, bond orders and effective atomic charges, approx. eqns. method calcs. 2-15699

niobates, vibrational study, Raman spectra, force consts. (*French*) 2-13494

nonadiabatic binding of mol. states, rapid vibr. relax. (*Russian*) 2-49561

one dimensional system, breaking, effect of low freq. vibrs. 2-35586

one-dimensional crystal, loss of stability mechanisms 2-45508

organic compounds of phosphorus, electronic struct. and nature of chemical bond between P and O, X-ray fluorec. spectra 2-20077

organo-germanes, deuterated and substituted, CH stretching freq., bonds, IR obs. 2-39409

organotin(IV) derivatives, struct., bonding, IR and DMR obs. 2-39408

oxirane skeleton and C-C bond in its derivatives, electron-optical props., mol. polarisability, electric moment 2-11532

1-phosphabut-3-ene-1-yne, microwave spectrum 2-39386

phosphathene, microwave spectrum, struct., and dipole moment 2-39383

physico-mathematical procedures of analysis (*French*) 2-15689

plasma transferrin, human, anion binding, <sup>35</sup>Cl NQR obs. 2-11597

pollutant speciation, fluoresc. methods obs. 2-42057

polyacetylene, solitons, bond alternation and on-site Coulomb correlations effect 2-5359

polyatomic molecule, internal forces, algorithm and program for calcs. 2-15700

polybutadiene-glass adhesion strength, rel. to no. of chem. bonds. 2-37040

polyethylene, dissolution, thermofluctuation rupture of stressed bonds (*Russian*) 2-30608

polymer gel, crosslink density determ. by end group anal. after partial degradation 2-22496

polymers, cross-linked, determ. of amount of cross-linking agent by IR spectrosc. (*Russian*) 2-31983

polymers, radiation change in stress, theory 2-5156

proline dipeptide, struct. and bonding, ab initio calcs. 2-18171

propane-like mol., internal rot. coupling, INDO-SCF-MO theory 2-49292

protein central residues, C<sub>10</sub> H bonds and  $\beta$  bands, struct. and bonding calcs. 2-18172

pyridine-Br charge transfer complexes, bond props. investig. using Raman intensity 2-4297

quartz, amorphous fibres, IR spectra, resonances (*German*) 2-17458

quartz-silicate amorphous net, influence of bond breaking on optical stability (*Russian*) 2-2227

**bonds (chemical) continued**

random binary alloys, computer generated, ordered, random, and clustered distrib. 2-35435

rare earth complexes, acac complexes, Raman and IR spectra 2-13495

rare earth nitrides, heat of form. calc. based on bonding theory 2-9564

rare earth-amino acid complexes, bonding, luminesc. and absorpt. spectra 2-46726

resin sand mixture, cold-setting, bonding mechanism, fracture appearance 2-27257

semiconductor, microstructural information from opt. props. in near IR to near UV range 2-21972

semiconductor alloys, binary, liq. and amorphous, bonding 2-8436

semiconductor with one conduction and one valence band, model of exciton weakly bound to isoelectronic impurity (*German*) 2-12972

semiconductors, electronic struct., first principles calc. 2-30793

silathyne, isomerisation and hydrogenation, Si-C triple bond stability, SCF calc. 2-7675

spirohydrocarbons, small-ring, hybridisation, iterative, max. overlap approach 2-4227

trans-stilbene, Raman active low freq. torsions 2-24714

tantalates, vibrational study, Raman spectra, force consts. (*French*) 2-13494

tetracene-argon Van der Waals molecules, fluorec. obs., binding sites 2-34470

thiophene, d-orbital bonding, CNDO/2 and ab initio calcs. 2-15701

transition metal alloys, dil., bonding effects, Mossbauer isomer shift study 2-46440

transition metal hydrides, heat of form., bond anal., local density functional approx. 2-35433

transition metal ions in crystals, optical spectra, covalency effects 2-22050

transition metal oxide, erosion during electron beam treatment, depend. on bond characts. 2-40438

triethyleneglycoldimethacrylate, photopolymerising copying layers, IR study (*Russian*) 2-27460

trimethylenimine, ring-puckering vibr., elect. vs. mech. anharmonicity in asymm. pot. wells 2-34418

trimethylgallane-dimethylether(-d<sub>6</sub>), liquid and solid, vibr. studies, Raman and IR spectra study 2-29611

trimethylgermylazide, vibr. assignments and normal coord. calc. Raman and IR spectra obs. 2-29610

trimethylgermylisocyanate, vibr. states, normal coord. calc. 2-29610

trimethylgermylisothiocyanate, vibr. states, normal coord. calc. 2-29610

trimethylsilyl derivatives of ethylene and benzene, negative ion states, ETS study 2-49571

vancomycin, binding site for cell wall peptide analogue 2-52430

Ag, sputtering rate meas. for 10 keV O<sub>2</sub><sup>+</sup> ions with ion microanalyzer 2-41475

AgAs(Bi)(Sb)S<sub>2</sub> crystals and glasses, mag. susceptibility and chem. bond 2-5517

Al, sputtering rate meas. for 10 keV O<sub>2</sub><sup>+</sup> ions with ion microanalyzer 2-41475

Al:<sup>57</sup>Fe, interstitial <sup>57</sup>Fe sites, struct. and oscillational motion 2-51116

AlAs, crystal binding and density of states, pseudopot. calc. 2-45874

AlN, valence-electron density, X-ray determ. 2-40355

Al(III), chemisorption of O, self-consistent electronic struct. and bonding 2-13153

As, structure by bond-breaking processes from rock salt, struct. enumeration 2-25809

As-Se-Te glass, thermal cond. and hardness 2-45641

As<sub>2</sub>S<sub>3</sub>-GeS<sub>2</sub> glass, optical props. and chemical bonds (*Russian*) 2-22036

As<sub>2</sub>Se<sub>3</sub>, liquid covalently bonded alloys, bond equilibrium theory 2-45014

Au films, on Si (111), interaction after heating, surface phase form., LEED, EELS, AES, TEM, and photoelectron spectra 2-35747

Au/Ni/SnNi/n-GaAs interface, ohmic contact form. 2-41010

B electronic structure and bonding in crystalline forms 2-45107

B<sub>12</sub> icosahedral cluster, electronic struct. and binding energy 2-39523

B<sub>12</sub>C<sub>3</sub>, crystalline, electronic struct. and bonding 2-45107

B<sub>2</sub>H<sub>6</sub>, differential cross sections meas. by high energy electron scatt., chemical binding effect, ab initio-mol. calc. 2-7644

B<sub>6</sub>H<sub>6</sub><sup>2+</sup>, vibr. spectra and struct. 2-49434

B<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-CuO glasses, effect of melting temp., EPR and NMR studies 2-1411

BaAs<sub>3</sub>, cryst. struct., elec., optical, and mag. props. 2-8494

BarHO<sub>3</sub> polypeptide, prep. and cryst. struct. 2-1455

CH<sub>4</sub> series, dipole moment derivative calcs. 2-29513

CH<sub>2</sub>Fe(CO)<sub>5</sub>, methylene bridged complex, bonds, photoelectron spectra 2-7599

CO, bonding nature of MIO through one-electron partitioning of electronic energy anal. 2-43756

C<sub>2</sub>SiH<sub>4</sub> isomers, multiple bonds stability, ab initio SCF calc. 2-7674

C=C double bonds, stretching vibr., Raman scatt. intensities (*Japanese*) 2-11478

CaAs<sub>3</sub>, cryst. struct., elec., optical, and mag. props. 2-8494

CdGeP<sub>2</sub>, chalcopyrite semicond., bond charges, X-ray struct. amplitude study 2-40317

CoB, band structure and bonding 2-40779

Co<sub>2</sub>(CO)<sub>8</sub>, acetylene, inelastic neutron scatt. 2-29725

Co(III) complexes, [Co(salen)(L)]<sub>2</sub>O<sub>2</sub> (L=DMSO, Py, DMF, PyO), resonance Raman studies 2-4310

Cr<sub>2</sub>, multiple bonds nature, local density approx. 2-40314

Cr<sub>2</sub>, pot. energy curves, CI treatment, bonding 2-49312

CS<sub>2</sub>, nonadiabatic binding of mol. states, rapid vibr. relax. (*Russian*) 2-49561

CsAu, thermodynamic props., bond energies calc. 2-8257

Cu, sputtering rate meas. for 10 keV O<sub>2</sub><sup>+</sup> ions with ion microanalyzer 2-41475

CuCl<sub>2</sub><sup>2+</sup>, paramag. compound in D<sub>2d</sub> symm., covalence reduction factors 2-29517

Cu(II) complex, bi-chelate series, ligand mutual influence effect, struct., CNDO calcs. 2-34304

CuII-phosphine dioxide complexes, EPR spectra, ligand binding 2-43951

Cu<sub>2</sub>S and Cu<sub>1.938</sub>S, low chalcocite and djurite, Cu coord. behaviour 2-21074

EuAs<sub>3</sub>, cryst. struct., elec., optical, and mag. props. 2-8494

FeB, band structure and bonding 2-40779

Fe<sub>2</sub>B and FeB, bonding rel. to struct. and mag. props., photoemission meas. and ab initio calcs. 2-13628

Fe(II) complex, bi-chelate series, ligand mutual influence effect, struct., CNDO calcs. 2-34304



**bonds (chemical) continued**

- FeSn, Fe<sub>2</sub>Sn<sub>3</sub> and FeSn<sub>2</sub>, electron struct., invest. using X-ray and X-ray electron spectra (*Russian*) 2-35434  
GaAs (100)-Al, interface behaviour and crystallographic relationships 2-8715  
GaAs (110), bonding of column 3 and 5 atoms 2-30728  
GaAs (110), models of column III and V element overlayers, appl. to MBE 2-12935  
GaAs (110)-Al interface, initial stage of formation 2-8881  
GaAs, crystal binding and density of states, pseudopot. calc. 2-45874  
GaAs, expt. determ. of bonding of III and V elements 2-35871  
GaAs surface, (110), chemisorption of Cl (*Chinese*) 2-26205  
GaAs-Ga<sub>2</sub>/3Se solid solns., EXAFS study 2-41454  
GaAs<sub>1-x</sub>P<sub>x</sub> solid soln., static bond charge props., X-ray study 2-1442  
Ga<sub>1-x</sub>In<sub>x</sub>As solid soln., static bond charge props., X-ray study 2-1442  
Ga<sub>2</sub>In<sub>2</sub>Se, layer compound, lattice instability, ionicity and phase diag. 2-50800  
Ga<sub>2</sub>/3Se polymorphs, EXAFS study 2-41454  
Ge-GaAs abrupt (110) interface, geometry 2-12920  
Ge-Sb-Se glasses, optical props., dispersion energy and struct. (*Russian*) 2-26857  
Ge-Sb-Se system, beam-resistant films, prep. and struct., thermal stability, optical parameters 2-5317  
GeS(Se), amorphous, local struct. EXAFS, XPS studies 2-45032  
GeSe<sub>2</sub> glass, reversible reconstruction and crystn. under laser irradi., Raman scatt. study 2-30410  
H<sub>2</sub><sup>+</sup>, internal stresses and chemical binding 2-39279  
HCl<sub>2</sub><sup>+</sup>, vibr. struct. and equilb. geometry, ab initio MO-SCF calc. 2-4206  
HIF structure study 2-39503  
HN(SO<sub>3</sub>)<sub>2</sub><sup>-</sup> derivatives, S-N and S-O vibrs., Raman spectra study (*French*) 2-49427  
H<sub>2</sub>O, bonding nature of MIO through one-electron partitioning of electronic energy anal. 2-43756  
Hf<sub>2</sub>Sb, cryst. struct., coordination, and bonding 2-1456  
In-Ga complexes and salts, In-Ga bonds, Raman spectra 2-43918  
In-P-metal interfaces, atomic and electronic struct., XPS and elec. meas. 2-8880  
InSe film, amorphous, short-range order, elec. cond. and opt. absorpt. edge 2-40712  
KAl(SO<sub>4</sub>)<sub>2</sub>·12H<sub>2</sub>O, SO<sub>4</sub><sup>2-</sup> orientational dynamics, Raman scatt. study 2-31483  
K<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-Fe<sub>2</sub>O<sub>3</sub> glasses, Mossbauer spectroscopy study of nonbridging O atoms 2-9068  
La compounds, inner level and vacancy electronic spectra structure 2-1825  
La-Al-Ga metallic glasses, struct. determ. by X-ray diffr. 2-12492  
LaS<sub>x</sub> (x=1.33 to 1.5), optical props. and chem. bands 2-31443  
LiBO<sub>2</sub>, crystal struct. and charge density distrib. 2-40340  
LiCN, bonding nature of MIO through one-electron partitioning of electronic energy anal. 2-43756  
LiF surface, H adsorption, mol. parametrised CNDO and ab initio calcs. 2-16944  
LiGaSe<sub>2</sub>, dielectric const. and bond parameters 2-51513  
LiInSe<sub>2</sub>, dielectric const. and bond parameters 2-51513  
MgH<sub>2</sub> crystal, covalent bonding, iteration-perturbation theory 2-21062  
MnB, band structure and bonding 2-40779  
MnBr<sub>2</sub>, monomeric mol. struct., electron diffr. studies 2-7668  
Mn<sub>1-x</sub>□<sub>x</sub>V<sub>2-x</sub>Mo<sub>2-x</sub>O<sub>6</sub>, cryst. struct., Mo<sup>6+</sup> short range ordering and vacancies 2-21082  
Mo complex, tetraethylammonium tetra(phenylthiolato)oxomolybdate(V), EPR spectra 2-7579  
Mo<sub>2</sub>, multiple bonds nature, local density approx. 2-40314  
Mo<sub>2</sub>, pot. energy curves, CI treatment, bonding 2-49312  
Mo<sub>2</sub>Ge<sub>1-x</sub>, amorphous film, elec. transport and struct. 2-40913  
N<sub>3</sub>, gaseous, proton affinity and thermochem. props. 2-11587  
Na fluorophosphate glasses, struct., spectral luminesc. characteristics 2-26984  
Na<sub>2</sub>, nonadiabatic binding of mol. states, rapid vibr. relax. (*Russian*) 2-49561  
Na<sub>2</sub>Nb<sub>1-x</sub>Zr<sub>x</sub>(PO<sub>4</sub>)<sub>3</sub> solid soln., ionic cond., X-ray diffr., IR absorpt., Raman scatt. 2-16870  
Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub> system glasses, comp. and struct. effect on mech. characts. 2-41756  
Na<sub>2</sub>O-SiO<sub>2</sub> glass struct., Raman intensity calc. 2-5670  
NbO<sub>2</sub>, press. induced phase transition and elec. resist. meas. 2-26038  
Ni (100), adsorbed CO, inelastic electron scatt. by adsorbate vibrs. 2-22128  
Ni (100) surface, chemisorption of H, Cl, Na, O and S, bonding calcs. 2-12905  
Ni (111), adsorption of NO, electron stimulated desorption and LEED study 2-12912  
Ni, sputtering rate meas. for 10 keV O<sub>2</sub><sup>+</sup> ions with ion microanalyzer 2-41475  
NiCO, bonding and backbonding, electron correl., MCSCF study 2-34316  
NiCl<sub>2</sub> aq. soln., Ni-Cl bonding at high Cl<sup>-</sup>/Ni<sup>2+</sup> ratios, X-ray diffr. investig. 2-40248  
NiFe electronic states, ab initio HF-Cl calcs. 2-24623  
Ni(II) complex, bi-chelate series, ligand mutual influence effect, struct., CNDO calcs. 2-34304  
NiSi, electronic struct., chemical bond 2-35933  
NiSi<sub>2</sub>, electronic struct., chemical bond 2-35933  
NiSi<sub>3</sub>, electronic struct., chemical bond 2-35933  
NiSiF<sub>6</sub>·6H<sub>2</sub>O(6D<sub>2</sub>O), vibrational fine struct. in optical spectra 2-17463  
NiTiF<sub>6</sub>·6H<sub>2</sub>O(6D<sub>2</sub>O), vibrational fine struct. in optical spectra 2-17463  
O-H bond in alcohol complexes; vibr., pot. functions calcs. 2-15731  
OH<sup>-</sup> in crystal, local electric field and donor-acceptor bond effect on internal vibr. freq. 2-16739  
P, black structure by bond-breaking processes from rock salt, struct. enumeration 2-25809  
PN+Ni(Cu) interactions, ab initio MO calcs. 2-13946  
P<sub>2</sub>O<sub>5</sub>S<sub>6</sub>, cryst. synthesis and struct. 2-5086  
PdSi, electronic struct., chemical bond 2-35933  
Pd<sub>2</sub>Si, electronic struct., chemical bond 2-35933  
Pd<sub>2</sub>Si-Si interface, thermally induced Si accumulation, Si-Pd bonds, photoemission study 2-26505  
Pt complexes, H-bonding behaviour of 9-ethylguanine, Pt binding effects, <sup>1</sup>H NMR study 2-51478  
PtSi, electronic struct., chemical bond 2-35933  
Pt<sub>2</sub>Si, electronic struct., chemical bond 2-35933

**bonds (chemical) continued**

- Rb<sub>2</sub>, nonadiabatic binding of mol. states, rapid vibr. relax. (*Russian*) 2-49561  
RbAu, thermodynamic props., bond energies calc. 2-8257  
Se, effect of struct. transform. on viscosity 2-8655  
SeOF<sub>4</sub>, vibr., force field, bonds, configs., IR and Raman obs. (*German*) 2-11482  
Se<sub>80</sub>Te<sub>20-x</sub>S<sub>x</sub>, liquid, elec. cond. and bond conc. 2-30942  
Si, amorphous film, plasma CVD (*Japanese*) 2-13654  
Si, bond charge asphericity and temp. depend. 2-1443  
Si cluster growth sequence, up to amorphous phase 2-45036  
Si disordered surface, O<sub>2</sub> adsorpt. 2-26215  
Si, sputtering rate meas. for 10 keV O<sub>2</sub><sup>+</sup> ions with ion microanalyzer 2-41475  
Si surface (111), O chemisorpt. configurations 2-26214  
SiF, sputtered amorphous coating, struct. model, expt. study 2-16593  
SiH, amorphous, bonding struct. and H distrib. IR absorpt. and NMR meas. 2-40276  
SiH, amorphous, chem. bonding and H diffusion, <sup>1</sup>H NMR study, 20 to 530°C 2-41221  
SiH, amorphous, electron irradi., effect on photoconductivity 2-51233  
SiH, amorphous, electronic struct. of model defect 2-40820  
SiH, amorphous, H<sub>2</sub> exodiffusion, comparison with elec. cond. meas. 2-45623  
SiH, amorphous, luminescence props. 2-46730  
SiH, amorphous, sputtering conditions effect on H content and Si-H bonding 2-2444  
SiH, amorphous film, AC conductivity and optical props. 2-41040  
SiH, amorphous film, electronic struct. study 2-40768  
SiH, amorphous film, plasma deposited, microstruct., PMR study 2-13358  
SiH, amorphous film, struct. evolution during annealing 2-45035  
SiH, amorphous film, X-ray study of atomic struct. 2-45034  
SiH, amorphous ion beam deposited coating, prep. and props. 2-40723  
α-Si:H<sub>2</sub>O, RF sputtered, <sup>15</sup>N ion irradi., H effusion 2-5161  
SiH amorphous films, NMR study 2-41213  
SiH(F), amorphous, chem. bonding environment of Si and dopant 2-40275  
SiC (3C), ionicity and transverse charge, vol. and temp. depend. 2-50579  
Si<sub>3</sub>C<sub>2</sub>F<sub>6</sub> amorphous films, reactive RF sputtering prep., optical and comp. props. 2-51727  
Si<sub>3</sub>N<sub>4</sub> film, plasma CVD (*Japanese*) 2-13654  
Si<sub>3</sub>N<sub>4</sub> formation by N ion implantation of Si, AES and EELS studies 2-40422  
SiO<sub>x</sub>, amorphous, electronic and atomic struct. 2-40765  
SiO<sub>x</sub>, amorphous glow discharge film, band gap, photoluminesc. study 2-40766  
SiO<sub>x</sub>, electronic struct., self-consistent cluster-Bethe-lattice method 2-45828  
SiO, glow-discharge films, amorphous photoluminesc. study 2-46669  
Si(100) (2×1), dangling- and dimer-bond related surface electron bands, 2-21647  
Si(111)-Pd interface, synchrotron radiation photoemission results 2-9245  
SrAs<sub>3</sub>, cryst. struct., elec., optical, and mag. props. 2-8494  
h-Ta<sub>2</sub>Ge, cryst. struct., coordination, and bonding 2-1456  
TaSe<sub>3</sub>, supercond. transition temp. under uniaxial tension 2-36198  
Ti compounds, electron struct. and chemical binding 2-1438  
TiB, Z 2-40779  
TiCl<sub>4</sub>, bonding, SCF-Xalpha-SW calcs., He I photoemission and UV spectra 2-49288  
TiS<sub>2</sub>(Se)<sub>2</sub>(Te)<sub>2</sub>(SeTe), crystal struct. and chem. bond characts. (*French*) 2-5091  
V compounds, electron struct. and chemical binding 2-1438  
ZnB<sub>2</sub>O<sub>4</sub>-CdB<sub>2</sub>O<sub>4</sub>-PbF<sub>2</sub>, spectral luminesc. study 2-26985  
ZnO, intrinsic defects, ESR study (*German*) 2-25867  
ZnS:Mn(Co), Raman spectra, impurity induced, press. depend. 2-46645  
ZnSiP<sub>2</sub>, chalcopyrite semicond., bond charges, X-ray struct. amplitude study 2-40317  
ZrO<sub>2</sub>/SiO<sub>2</sub> catalyst, surface electronic struct., XPS and discrete variational Xα cluster study 2-26468

**bone**

- audiometry, bone-conduction receiver calibration using artificial mastoid instrument 2-32285  
auditory bone conduction vibrators, loudness balance calibration 2-52657  
autoclaved bone graft healing with direct current stimulation, dog expts. 2-22717  
cancers from Ra, dose-response anal. 2-32282  
cement-bone interface, analytical modelling and failure prediction 2-2886  
coherent/Compton scattering method using an X-ray tube for trabecular bone mineral content meas. 2-52690  
compact, permanent deform. monitored by acoustic emission 2-6241  
composite-bone interfacial strengths, anal. 2-14269  
cortical bone, human, uniaxial fatigue rel. to tissue phys. characts. 2-32241  
cortical bone simulator, conducting plastic, radiation appls. 2-37702  
DC stimulation of non-unions, 2-18332  
diaphysal surfaces, remodelling due to constant load 2-32242  
dose of X- and γ-rays absorbed in muscle at boundary of bone and metals (*Russian*) 2-42218  
electret-induced bone form. in rats 2-22716  
electromechanical response of wet bone, streaming pot. or piezoelectricity 2-22718  
endogenous electricity in bone 2-22715  
femoral bone, bovine, US meas. of orthotropic elastic constants 2-18237  
femoral bone densitometry, autonomous apparatus (*French*) 2-32318  
femoral head, mech. behaviour in Legg-Perthes disease, 3D finite element model 2-14268  
haemopoietic system of Papio hamadryas, chronic low-level exposure, morphological and cytogenetic changes (*Russian*) 2-52556  
hardness model, interconnected collagen molecules and mineral crystallites 2-27821  
healing, elec. enhancement, human skeleton inherent polarisation pattern 2-37526  
heat capacity, 30-240K 2-32181  
hip joint articular surface, stress in healthy adults and persons with idiopathic osteoarthritis 2-6235  
joints, human, lubrication, effects of cartilage roughness 2-27822  
joints, human, viscoelastic fluid film lubrication 2-27823  
marrow, active, dose distrib. determ. for paediatric pelvis and spine 2-37685



**bone continued**

- marrow, haemopoiesis in mice, microwave irradiation effect on resistance to ionising radiation (*Russian*) 2-42134  
 marrow, lymphoid tissue, cell number changes during chronic exposure to  $^3\text{H}$  and  $\gamma$ -rays (*Russian*) 2-52559  
 marrow-bone interface, Monte Carlo calc. of dose distrib. during diagnostic X-ray exam. 2-2948  
 mechano-electrical props. 2-42080  
 osteosarcomas induced by  $^{239}\text{Pu}$  in St. Bernards 2-52582  
 phantom materials for radiation dosimetry, liqs. and gels 2-47715  
 scoliosis evaluation utilising truncal cross-sections, laser scanning 2-47676  
 sella, high-resolution computerised tomography scanning, anal. of artifact 2-22820  
 skeleton, double stain technique for photographic appl. 2-27942  
 skeletons of young healthy persons, attenuation of shock waves 2-14275  
 sound, bone-conducted, in human head, propag. velocity 2-22790  
 spinal mineral anal., low-dose CT scanning 2-47704  
 spongy bone tissue at coxal human femur, material props. and strength behaviour (*German*) 2-32229  
 strain gauge system, techniques for in vivo implanting 2-32371  
 tibia, human, fracture and coxarthrosis, meas. using exponential US concentrators 2-37634  
 trabecular bone, post-mortem specimens, techniques for expt. deposition of radioisotopes 2-37722  
 X-ray induced tumours in guinea-pigs 2-52570

**Boolean algebra**

- see also *Boolean functions*  
 normal fuzzy set structure, and Boolean-valued models 2-23401  
 quantum logics, compatibility 2-48531  
 recursive Boolean algebras with recursive atoms 2-15006

**Boolean functions**

- analytical representation (*Czech*) 2-42839  
 recursive isomorphism 2-15005

**Boolean lattices** see *Boolean algebra***bootstrap models** see *bootstrapping***bootstrap theory** see *bootstrapping***bootstrapping**

- dual topological unitarisation theory, bilinear eqn. for cylinder, Pomeron residue 2-29091  
 quantum chromodynamics as dynamics of loops 2-6996  
 topological S-matrix bootstrap theory of hadrons 2-29090

**bootstraps** see *bootstrapping***borate glasses**see also *borosilicate glasses*

- IR spectra, rel. to nonradiative deactivation of rare earth ions 2-26921  
 optical glasses, glass-forming systems, optical consts., review 2-25090  
 structural parameters, anisotropy of short-range order 2-40286  
 $(\text{AgI})_x(\text{Ag}_2\text{O}-\text{B}_2\text{O}_3)_{1-x}$  superionic glasses, acoustic attenuation, 1-20K 2-35600  
 $\text{B}_2\text{O}_3$ -AgI-Ag $^+$ -O $^{2-}$   $\text{Cu}^+$ ,  $\text{Na}^+$  glass, superionic cond. and diffusion 2-16890  
 $\text{B}_2\text{O}_3$ -BaTiO $_3$ -Na $_2\text{O}$  glasses, Raman spectra, anomalous refr. index and density 2-13470  
 $\text{B}_2\text{O}_3$ -CaO-V $_2\text{O}_5$ -V $_2\text{O}_3$  based MIM struct., elec. props. 2-36151  
 $\text{B}_2\text{O}_3$ -CaO-V $_2\text{O}_5$ -V $_2\text{O}_3$  DC and AC elec. props. 2-36504  
 $\text{B}_2\text{O}_3$ -GeO $_2$  viscosity in glass transition range (*Japanese*) 2-22290  
 $\text{B}_2\text{O}_3$ -GeO $_2$  glass, retarded elasticity 2-41650  
 $\text{B}_2\text{O}_3$ -GeO $_2$  system, small-angle X-ray scatt. obs. of struct. 2-40287  
 $\text{B}_2\text{O}_3$ -K $_2\text{O}$ -In $^{3+}$  glass, photoluminescence (*Russian*) 2-26987  
 $\text{B}_2\text{O}_3$ -Li $_2\text{O}$  glasses, ionic cond., relation to alkali metal ion conc. (*French*) 2-50922  
 $\text{B}_2\text{O}_3$ -Li $_2\text{O}$ -Li $_2\text{SO}_4$ (Li $_2\text{PO}_4$ ) glasses, solid electrolyte, synthesis, struct., correl. and Raman spectra 2-16885  
 $\text{B}_2\text{O}_3$ -Li $_2\text{O}$ -Li $_2\text{MO}_4$  solid electrolytes, synthesis and characterisation (*French*) 2-16895  
 $\text{B}_2\text{O}_3$ -Li $_2\text{O}$ -LiCl, superionic glass, US props. 2-45399  
 $\text{B}_2\text{O}_3$ -Li $_2\text{O}$ -LiF(Li $_2\text{S}$ ) glass, superionic cond. and far IR spectra, expt. and computer simulation 2-16887  
 $\text{B}_2\text{O}_3$ -Li $_2\text{O}$ (LiCl) glass, diborate and metaborate, fast Li $^+$  cond. 2-16886  
 $\text{B}_2\text{O}_3$ -Na $_2\text{O}$  viscosity in glass transition range (*Japanese*) 2-22290  
 $\text{B}_2\text{O}_3$ -Na $_2\text{O}$ -CuO glasses, effect of melting temp., EPR and NMR studies 2-1411  
 $\text{B}_2\text{O}_3$ -PbO-Fe $_2\text{O}_3$  glasses, struct., elec., and mag. props. 2-45054  
 $\text{B}_2\text{O}_3$ -PbO-Al $_2\text{O}_3$  glass system, dynamical scaling, small angle X-ray scatt. study 2-12500  
 $\text{B}_2\text{O}_3$ -PbO-Al $_2\text{O}_3$  glass, cooling rate dependence of SAXS spectra 2-41599  
 $\text{B}_2\text{S}_3$ -Li $_2\text{S}$ , vitreous domains, ionic cond., synthesis and elec. props. (*French*) 2-50905  
 $\text{B}_2\text{S}_3$ -Na $_2\text{S}$ , vitreous domains, ionic cond., synthesis and elec. props. (*French*) 2-50905  
 $\text{BaO}$ -B $_2\text{O}_3$ , equilib. viscosity, temp. depend. 2-12805  
 $\text{BaO}$ -B $_2\text{O}_3$  glasses, low freq. IR refl. spectra and optical consts. 2-26922  
 $\text{Bi}_2\text{O}_3$ -B $_2\text{O}_3$  glass sintered with BaTiO $_3$ , Curie temp. 2-46992  
 $\text{CaO}$ -B $_2\text{O}_3$ -Al $_2\text{O}_3$ , autosolvation effect, elec. cond. 2-50908  
 $\text{CdO}$ -(PbO-CdO-BaO-B $_2\text{O}_3$  glasses) thick film resistors, X-ray and micro-scope investigations 2-8488  
 $\text{CoO}$ -B $_2\text{O}_3$ -PbO glass, mag. props. 2-13272  
 $x\text{Fe}_2\text{O}_3(1-x)(3\text{B}_2\text{O}_3-\text{PbO})$ , Fe valence states, matrix composition influence, Mossbauer effect study 2-46443  
 $20\text{Fe}_2\text{O}_3 \cdot 80(3\text{B}_2\text{O}_3-\text{GeO}_2(1-y)\text{PbO})$ , Fe valence states, matrix composition influence, Mossbauer effect study 2-46443  
 $\text{GeO}_2$ -B $_2\text{O}_3$ , internal press. from elastic constants 2-25969  
 $\text{H}_2\text{BO}_3$ -Na $_2\text{B}_4\text{O}_7$  glasses, thermal stability and film protective props. 2-40579  
 $x\text{K}_2\text{O} \cdot (100-x)\text{B}_2\text{O}_3 \cdot 7\text{Fe}_2\text{O}_3 \cdot 0.63 \text{KCl}$ ,  $x=10$  to 40 mol.%, Mossbauer and ESR studies 2-26792  
 $\text{K}_2\text{O}$ -Al $_2\text{O}_3$ -B $_2\text{O}_3$ -Fe $_2\text{O}_3$  system glasses, Fe $_2\text{O}_3$  additions influence on Faraday rot. 2-41336  
 $\text{La}_2\text{O}_3$ -B $_2\text{O}_3$  glasses, low freq. IR refl. spectra and optical consts. 2-26922  
 $\text{LiCl}$ -Li $_2\text{O}$ -B $_2\text{O}_3$ , superionic glass, low temp. US props. 2-35601  
 $\text{Li}_2\text{O}$ -Al $_2\text{O}_3$ -B $_2\text{O}_3$ (P $_2\text{O}_5$ (SiO $_2$ )) system glasses, acousto-optical effectiveness, conc.-depend. 2-41327  
 $\text{Na}_2\text{O}$ -B $_2\text{O}_3$  glass formation by quenching, role of viscosity (*Japanese*) 2-8444  
 $\text{Na}_2\text{O}$ -B $_2\text{O}_3$ , internal press. from elastic constants 2-25969  
 $\text{Na}_2\text{O}$ -B $_2\text{O}_3$  glassforming system, photoactive AgCl phase form. (*Russian*) 2-30607

**borate glasses continued**

- $\text{Na}_2\text{O}$ -B $_2\text{O}_3$  system glasses, comp. and struct. effect on mech. characts. 2-41756  
 $\text{Na}_2\text{O}$ -B $_2\text{O}_3$ :Pb $^{2+}$  glass, UV transparency, Pb $^{2+}$  ions effect 2-9171  
 $\text{Na}_2\text{O}$ -B $_2\text{O}_3$ -SiO $_2$  glass, containing 1 mol.% Mo oxide, oxidation state effect on phase separation 2-26063  
 $\text{Na}_2\text{O}$ -CeO $_2$ -SiO $_2$ -P $_2\text{O}_5$ -B $_2\text{O}_3$ -(Al $_2\text{O}_3$ ), bioglass, chem. comp., Vickers hardness, chemical durability (*Japanese*) 2-41774  
 $\text{Na}_2\text{O}$ -K $_2\text{O}$ -B $_2\text{O}_3$  glasses, mixed alkali effects, Tl $^+$  probe ion spectroscopy 2-9172  
 $\text{Na}_2\text{O}$ -SiO $_2$ -(Al $_2\text{O}_3$ )(B $_2\text{O}_3$ ), X-ray photoelectron spectra 2-51269  
 $\text{Na}_2\text{O}$ -Al $_2\text{O}_3$ -B $_2\text{O}_3$ :Ce, gamma-ray irradi., absorpt. bands, optical density variation 2-31527  
 $\text{Na}_4\text{P}_2\text{B}_3\text{O}_{11}$  ( $\text{Na}_8\text{P}_4\text{B}_2\text{O}_{17}$ ) glass, superionic cond., densification effect 2-16889  
 $\text{Nb}_2\text{O}_5$ -BaO-B $_2\text{O}_3$ , very pure glass, absorption curve, high index, colour (*Japanese*) 2-41380  
 $(\text{NiO})_x(2\text{B}_2\text{O}_3\text{PbO})_{1-x}$  glass, mag. props. 2-36332  
 $\text{PbO}$ -Al $_2\text{O}_3$ -B $_2\text{O}_3$  system glasses, acousto-optical effectiveness, conc.-depend. 2-41327  
 $\text{PbO}$ -Al $_2\text{O}_3$ -B $_2\text{O}_3$ (P $_2\text{O}_5$ (SiO $_2$ )) system glasses, acousto-optical effectiveness, conc.-depend. 2-41327  
 $\text{PbO}$ -B $_2\text{O}_3$ , equilib. viscosity, temp. depend. 2-12805  
 $\text{PbO}$ -B $_2\text{O}_3$  glasses, viscosity and thermal expansion in glass transition interval 2-26087  
 $\text{PbO}$ -ZnO-B $_2\text{O}_3$  glasses, elastic modulus and fracture toughness 2-51969  
 $\text{PbO}$ -B $_2\text{O}_3$ , vitreous, viscosity, impurity water conc. effect 2-12804  
 $\text{RuO}_2$ -(PbO-CdO-BaO-B $_2\text{O}_3$  glass) thick film resistors, X-ray and micro-scope investigations 2-8488  
 $\text{SiO}_2$ -B $_2\text{O}_3$ -BaO-Na $_2\text{O}$  glass system for high numerical-aperture optical fibres 2-49848  
 $\text{TeO}_2$ -B $_2\text{O}_3$  glasses, mol. struct.,  $^{11}\text{B}$  NMR study 2-36449  
 $\text{TeO}_2$ -B $_2\text{O}_3$ -GeO $_2$ (Fe $_2\text{O}_3$ )(MnO)(CoO)(NiO)(CdO), phase separation, electron microscope obs. 2-13707  
 $\text{TiO}_2$ -BaO-B $_2\text{O}_3$  glass, high-index, colour (*Japanese*) 2-51628  
 $\text{ZnB}_2\text{O}_5$ -CdB $_2\text{O}_5$ -PbF $_3$ , spectral luminesc. study 2-26985  
 $\text{ZnO}$ -B $_2\text{O}_3$ , equilib. viscosity, temp. depend. 2-12805  
 $\text{ZnO}$ -B $_2\text{O}_3$  and  $\text{ZnO}$ -La $_2\text{O}_3$ -B $_2\text{O}_3$  glasses, low freq. IR refl. spectra and optical consts. 2-26922

**Bordoni effect**

- internal friction and US attenuation in solids, conf., Lausanne, Switzerland (July 1981) 2-38360  
 metals, dislocation relax. processes 2-40400  
 Ag, electron irradi., dislocation-point defect complexes stability, Bordoni effect study 2-45186  
 Al, internal stresses and Bordoni relax. during plastic deformation or annealing 2-47074  
 Al, thermally activated double kink generation during cyclic deformation, US study 2-45185  
 Cu, electron bombard., Bordoni relax. processes, dislocation classes 2-41657  
 Cu, electron irradi., dislocation-point defect complexes stability, Bordoni effect study 2-45186  
 Cu, US attenuation temp. depend., plastic deformation effects 2-45409  
 Cu:N(Ne), ion implanted, fatigue and internal friction 2-47182  
 Ni:H, cold-worked, internal friction peaks 2-8568

**boron**see also *nuclei with .....*

- abundance in Hg-Mn stars, mag. peculiar stars and nu Capricorns 2-28464  
 atom, core exchange polarisation effects calc. using SCF Xalpha wave functions 2-43800  
 atom, expectation values in equalities, momentum density monotonicity, HF calcs. 2-39302  
 autodoping elimination through reduced pressure 2-30474  
 controlled two-stage diffusion model (*Russian*) 2-1650  
 coordination in glass, calc. using partially relaxed Abe rule model 2-40281  
 CVD at low temp. 2-13656  
 CVD coating, D $_2$  trapping meas. for tokamak fusion test reactor 2-12948  
 CVD on Be surface 2-13655  
 diamond:B, heavily doped, elec. cond. mechanisms, 2 to 700K 2-45986  
 diamond:B, semicond., excited states of shallow acceptor from photocond. 2-51118  
 diamond:B, synthetic, luminance wave obs. (*Russian*) 2-22095  
 distribution in borated carbon steel, track autoradiography study (*Russian*) 2-2653  
 distribution in tempered steel, neutron radiography study 2-1505  
 dopant profile control in Si by pulsed laser processing 2-50689  
 electronic structure and bonding in crystalline forms 2-45107  
 epithermal neutron activation analysis with a SLOWPOKE nuclear reactor 2-17937  
 fibre reinforced Al, damage accumulation during low-cycle deform. 2-36921  
 fibre reinforced Al, deform. characts. and fracture 2-36918  
 fibre reinforced composites, strength, interface effect 2-36919  
 fibre reinforced Mg-Al-Zn-Mn, corrosion resist. and electrochem. characts. 2-36995  
 fibre reinforced refractory oxides, composite strength 2-27269  
 fibre reinforced Ti, B solubility, matrix alloying effect 2-36867  
 filament surface layer struct., heat treatment effects, internal friction meas. 2-40655  
 fine grained, internal friction, temp. depend. 2-41649  
 galactic cosmic rays, isotopic comp. 2-23197  
 graphite, neutron irradiation damage, substitutional B effect 2-25938  
 growth and dissolution in nitric acid, impurity effects 2-40303  
 ion implantation in GaAs, compensation mechanisms responsible for carrier removal 2-50678  
 isoelectronic series oscillator strengths, polarised frozen-core approx. 2-43851  
 K-shell partial cross-section, for electron energy-loss spectrometry 2-29720  
 liquid metal field-emission ion sources 2-578  
 nuclear reaction anal. using nuclear track detectors 2-17935  
 nucleosynthesis review 2-3192  
 powder, dispersed, thermal anal. 2-41615  
 $\beta$ -rhombohedral, dielec. const., 9.5 GHz, microwave cavity meas. 2-41252  
 $\beta$ -rhombohedral, isothermal changes of entropy at high press. 2-40571  
 semiconductor, n-type, CVD prep. and elec. props. 2-40885



## boron continued

- Si-B, junction solar cell, emitter layer minority carrier lifetime photovoltaic obs. 2-52339  
vacuum deposited coating, mech. props., cracks and wrinkles 2-21476  
Al-B fibre composite, damping props. (*Russian*) 2-1562  
Al-B fibre composite, structural instability and damping props. (*Russian*) 2-2534  
B II, excited single k-vacancy terms, Auger rates and fluoresc. yields 2-19991  
 $\beta$ -B, rhombohedral, photocurrent instabilities, low freq., at low temp. 2-40957  
Gb-B, rhombohedral, transient photocond. Gb-B, rhombohedral, transient photocond. 2-40956  
 $\beta$ -B, rhombohedral single cryst., optical props. in fundamental absorpt. range 2-41321  
 $\alpha$ -B, rhombohedral, elec. cond., thermoelec. power and Hall coeff. 2-40889  
 $\alpha$ -B- $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, magnetochemical investig. 2-5539  
 $\beta$ -B-C, rhombohedral, C centres, photoinduced ESR investig. 2-40819  
B-B-G, rhombohedral single cryst. solid soln., X-ray diffr. study 2-40344  
B-H, amorphous plasma deposited film, PMR 2-46398  
B-O(H)(N) zone melting prep., mech. props., impurity effects 2-41723  
 $\beta$ -B-Si, rhombohedral, cryst. struct. 2-40346  
B-Pb glasses, types OF4 and OF5, chem. stability under high humidity and temp. conditions (*t*) 2-39707  
B+Ar, interatomic pots., non-adiabatic matrix, ArB form., ab initio CI calcs. 2-24825  
B+H<sub>2</sub>, exchange reactor, pot. surfaces, nonempirical calcs. 2-22435  
B+H<sub>2</sub>O interaction, chemiluminesc. 2-22453  
B+Ti interaction, high temp. gradients, TEM obs. 2-41887  
B+Ar, K- and L-shell excitation cross sections 2-24843  
B<sup>2+</sup>+H, ionisation; excitation and charge transfer cross section calcs. 2-44089  
B<sub>2</sub> icosahedral cluster, electronic struct. and binding energy 2-39523  
BF<sub>3</sub>, struct., bending vibr., bond angles, CNDO/2 calcs. 2-19971  
<sup>10</sup>B/<sup>11</sup>B isotope ratio determ. using FT IR spectrosc. 2-23744  
boron ion+H, charge exchange cross sections calc. by fully quantal perturbation stationary state method 2-49568  
C:H-B amorphous films, thermopower, elec. cond. 2-46178  
InP, liq. encapsulated Czochralski growth, B contamination and precipitation 2-5802  
Mg-B composite material, fibre solubility, matrix alloying influence 2-5234  
Ni alloy-B, fibre composites, temp. resistance, strength (*Russian*) 2-2481  
 $\beta$ -rhombohedral, hopping cond. in strong elec. field 2-40923  
Si (111)(1 $\times$ 1):B surface, highly doped, laser annealing prep., electronic props., photoemission study 2-8847  
Si:As, B wafer reactive-ion etch end-point detect. using spectrophotometer and photodetector 2-5969  
Si:B, acceptor ground state, thermal transport expts. 2-45646  
Si:B, amorphous, defect-dopant atom interaction 2-40274  
Si:B, amorphous, gas phase and ion implant doping, H content 2-45214  
Si:B, amorphous, plasma deposited and CVD coatings, ion implantation, elec. cond. and photoluminesc. 2-40905  
Si:B, amorphous, profile distortions and at. mixing in SIMS anal. 2-45236  
Si:B, amorphous DC sputtered coating, doping and elec. props. 2-40726  
Si:B, As, P, amorphous, ion implanted, epitaxial regrowth, compensating impurity effect 2-51014  
Si:B, B profiling using neutron induced reaction <sup>10</sup>B(n,  $\alpha$ )<sup>7</sup>Li 2-2751  
Si:B, diffusant influence on O<sub>2</sub> diffusion. 2-35528  
Si:B, doping profile, SIMS layer-by-layer anal., matrix effects 2-51762  
Si:B, electron-hole drops, luminescence 2-45845  
p-Si:B,  $\gamma$ -irrad., impurity-point radiation defects interactions 2-25928  
Si:B, H amorphous CVD film, hydrogenation effect, elec. cond. and ESR meas. 2-40906  
p-Si:B, heavily doped, defect profiles formed by light ion irrad., B distrib. effect 2-16691  
Si:B, heavily implanted layers, pulsed thermal annealing 2-50682  
Si:B, implanted, free-running ruby laser annealing 2-21171  
Si:B, impurity bound localised holes antiferromag. ordering, polarised luminesc. in mag. field 2-36701  
Si:B, impurity diffusion and distrib. in surface layer during sublimation 2-26142  
Si:B, impurity redistrib. under proton irrad. 2-1506  
Si:B, ion implanted, annealed, rod defects, TEM obs. 2-25883  
Si:B, ion implanted, Auger study 2-45224  
Si:B, ion implanted, defect formation during annealing 2-45179  
Si:B, ion implanted, elec. props., incident ion energy depend. 2-45227  
Si:B, ion implanted, electron microscopy of surface defects 2-40420  
Si:B, ion implanted, point defect generation during oxidation, loop annealing technique 2-25869  
Si:B, ionized impurity diffusion, influence of an internal electric field 2-21396  
Si:B, laser chemically doped, elec. props. 2-21579  
Si:B, luminescence study of excited states in impurity band 2-5367  
Si:B, neutron irrad., optical props. of defects 2-13521  
p-Si:B, nonlinear piezoresistance study 2-1916  
Si:B, P, ion implanted, doping profiles, implantation sequence effect 2-45228  
Si:B, particle track etch method for B anal. using <sup>10</sup>B(n,  $\alpha$ )<sup>7</sup>Li reaction 2-12630  
p-Si:B, positron capture by radiation defects 2-40853  
Si:B, pulsed laser annealing, melting phenomena 2-46837  
Si:B, pulsed-laser annealing, synchrotron X-ray diffr. study 2-51749  
Si:B, radiation-stimulated diffusion influence on sputtering 2-36785  
Si:B, recombination radiation of exciton-impurity band 2-2345  
Si:B, thermally evaporated, near-surface layer impurities, luminescence anal. 2-17526  
Si:B,As, ion implantation, alternate technique during MBE growth 2-50670  
Si:B (111)(1 $\times$ 1) surfaces, electronic props., photoemission study 2-17136  
Si:B IR charge-injection-device array performance, space-based astronomical obs. appl. 2-3193  
Si:B layers, secondary ion emission anomalies, depth profiling (*Ukrainian*) 2-27041  
Si:B p-n junction solar cells simplified ion implantation system 2-18093  
Si:B wafers, implantation dose accuracy and uniformity international survey 2-8528  
Si:B<sup>+</sup>, single crystal, TEM and AES study of ion bombardment 2-25913

## boron continued

- Si:B<sup>+</sup>, solar cells, prep. by ion implantation and pulsed laser annealing; optical and elec. characterisation 2-14080  
Si:H, amorphous, photoluminesc. spectrum, B doping and prep. conditions effect 2-36684  
p-Si:H, B amorphous film, high cond., prep. by Penning discharge 2-41530  
Si:H,B, amorphous, IR and far IR absorpt., annealing effect 2-36628  
Si:H,B, amorphous, temp. depend. of ESR spectra, elec. cond. 2-5575  
Si:H,B, Li-diffused, amorphous compensated, dark, and photocond. 2-46065  
a-Si:H,B, luminesc. spectrum, effect of dangling bond states 2-46670  
Si:H,B amorphous film, elec. props., optical props. 2-46176  
Si:H,B amorphous film, photoconductivity mag. field depend. 2-41033  
Si:H,B amorphous films, boron impurity conc. determ. 2-35527  
Si:C:B, impurity states 2-13013  
Si:C:B, ion implanted, defect luminescence spectra 2-36712  
 $\alpha$ -Si:C:B, photocapacitance effect, photon capture cross sections 2-17115  
Si:C:B (6H), bound excitons, electroabsorpt. spectra 2-9132  
SiO<sub>2</sub>:Si:B, ion implanted layers, equivalent circuit 2-46143  
TiO<sub>2</sub>:B antirefl. coating, spray deposition, Si solar cell appl. 2-37275  
YIG epilayers, SIMS anal. of Pb and B content 2-27497

## boron alloys

## see also boron compounds

- amorphous metallic powder, prep. 2-31656  
electrical elastoresistivity at 77.4K 2-5380  
Fe<sub>2</sub>Ni<sub>3</sub>Cr<sub>14</sub>P<sub>12</sub>B<sub>6</sub>, Metglas 2826 A, amorphous, He ion irradiated, blister formation 2-16687  
Fe-Al-B amorphous system, annealing effects on magnetic properties and crystallisation process (*Japanese*) 2-22242  
metglas 2826 MB, crystallisation charact. 2-21034  
rare earth alloys R-Co-B (R=Nd, Tb, Dy, Er, Kb), phase diagrams, X-ray and microscopic anal. 2-41586  
rare earth alloys R-Mo-B (R=Nd, Sm, Gd, Er), phase diagrams and cryst. struct. 2-41587  
rare earth alloys R-Ni-B (R=Nd, Sm, Gd, Dy, Er), phase diagrams, X-ray and microscopic anal. 2-41586  
rare earth alloys R-Re-B (R=Gd, Dy, Ho), phase diagrams and cryst. struct. 2-41587  
rare earth alloys R-W-B (R=Gd, Er), phase diagrams and cryst. struct. 2-41587  
Al-B fibre composite, elec. cond. depend. on fibre composition and struct. (*Russian*) 2-1886  
Al-C-B interstitial solid soln., mixing energy (*Russian*) 2-5228  
n-B-Si, semicond., CVD prep. and elec. props. 2-40885  
B-Si phase diagram, thermal anal. and vaporization studies 2-41594  
B<sub>1-x</sub>Co<sub>x</sub>, amorphous, mag. and magneto-optical props. 2-17450  
CePd<sub>3</sub>B<sub>8</sub>, valence change induced by B, lattice parameter and susceptibility meas. 2-40323  
Co-Fe-B amorphous films, induced anisotropy and permeability, annealing effects 2-46349  
Co-Fe-B-(Si), metallic glass, crystn., Lorentz microscopy study 2-21033  
Co-M-B (M=transition metal), amorphous alloys, mech. props., thermal stability 2-31787  
Co-Ni-P-B-Al, amorphous, ferromag. reson. 2-31292  
Co-Si-B alloys, amorphous, magnetoelastic effects 2-26706  
Co-Si-B ribbons, crit. thickness for amorphous state form. 2-36832  
Co<sub>72</sub>Si<sub>12</sub>B<sub>15</sub>, amorphous metallic powder, prep. 2-31656  
Co<sub>75</sub>Si<sub>15</sub>B<sub>10</sub>H<sub>2</sub>, H effect on coercive field 2-46348  
Co<sub>78</sub>Si<sub>10</sub>B<sub>12</sub>, amorphous, shear crack propag., plastic flow 2-31757  
CoTiB amorphous films, mag. props., effect of B and Ti 2-36399  
Co<sub>48</sub>Si<sub>8</sub>Fe<sub>2</sub>B<sub>2.5</sub> amorphous alloy, electron irrad. effects (*Ukrainian*) 2-25929  
Fe-B, amorphous, induced anisotropy and depend. on prep. parameters 2-8969  
Fe-B, amorphous, mag. behaviour under press., invar-like prop. 2-9016  
Fe-B, amorphous, magnetostriction props. and depend. on prep. parameters 2-9015  
Fe-B, amorphous, permivar effect, domain struct. stabilisation 2-8995  
Fe-B, amorphous, with transition metal substituents, mag. props. and crystn., cluster form. 2-8997  
Fe-B, amorphous-cryst. transform., coercive force and TEM obs. 2-8438  
Fe-B (17 at.%), amorphous, high press. crystn. and struct. transitions 2-30409  
Fe-B amorphous and crystallised alloys, phase diagram magnetisation, elec. resist. and thermal expansion meas. 2-17664  
Fe-B amorphous films, induced anisotropy and permeability, annealing effects 2-46349  
Fe-B amorphous Invar alloys, effect of cold rolling on thermal expansion and mag. props. 2-26595  
Fe-B amorphous metals, electron optical study 2-16598  
Fe-B metallic glass, quenching conditions influence on mag. aftereffect 2-9006  
Fe-B metallic glass, struct. relaxation, crystn., internal friction and elastic modulus 2-47085  
Fe-B-C-Si, amorphous low core loss materials, comp. and heat treatment 2-31242  
Fe-B-Si-C, amorphous, mag. props., surface inclusions effect 2-41159  
Fe-B-Si-C-Al, amorphous, crystn. temp., mag. props. 2-41160  
Fe-B-(Si-C), metallic glass, ribbon, mag. domains, SEM study 2-21816  
Fe-B-(Ni) based metallic glass, amorphous ribbons and toroids, pulse magnetisation losses 2-31239  
Fe-B (18 wt.%), amorphous and crystalline, NMR study 2-26771  
Fe-Co-B amorphous hyperfine field <sup>11</sup>B NMR 2-46407  
Fe-Cr-Si-B amorphous ribbons, mag. props. 2-36384  
Fe-M-B (M=transition metal), amorphous alloys, mech. props., thermal stability 2-31787  
Fe-Ni-B amorphous hyperfine field <sup>11</sup>B NMR 2-46407  
Fe-Ni-B based metallic glass, amorphous ribbons and toroids, pulse magnetisation losses 2-31239  
Fe-Ni-B-Si, amorphous, annealing effect on Barkhausen impulses 2-8999  
Fe-Ni-P-B-Al, amorphous, ferromag. reson. 2-31292  
Fe-Ni-P-B-(Si) metallic glass, ferromag., absolute thermoelec. power 2-51154  
Fe-P-B-Si-C ribbons, crit. thickness for amorphous state form. 2-36832  
Fe-Si-B ribbons, crit. thickness for amorphous state form. 2-36832  
Fe-Si-B substituted metallic glasses, electronic struct., saturation magnetisation 2-1817  
Fe-Zr-B, amorphous, form. range, mag. props. and thermal stability 2-31243



## boron alloys continued

- Fe<sub>100-x</sub>B<sub>x</sub>, amorphous, Mossbauer spectra asymmetry 2-31332  
 Fe<sub>100-x</sub>B<sub>x</sub> series, amorphous, elec. resist., 80 to 300K 2-45933  
 Fe<sub>2</sub>B and FeB, bonding rel. to struct. and mag. props., photoemission meas. and ab initio calcs. 2-13628  
 Fe<sub>3</sub>B<sub>27</sub>, metallic glass, microhardness and porosity investigation (*Russian*) 2-2577  
 Fe<sub>80</sub>B<sub>20</sub>, amorphous, annealing behaviour on continuous heating 2-17690  
 Fe<sub>80</sub>B<sub>20</sub>, amorphous, electron scatt. mechanisms, resist. temp. depend. meas. 2-13059  
 Fe<sub>80</sub>B<sub>20</sub>, amorphous, mag. aftereffect due to relax. of atoms (*Polish*) 2-36395  
 Fe<sub>80</sub>B<sub>20</sub>, amorphous, phase transitions, laser-induced 2-25748  
 Fe<sub>80</sub>B<sub>20</sub>, glassy metals, corrosion and dissoln. 2-31858  
 Fe<sub>80</sub>B<sub>20</sub>, metallic glass, thermomagnetic and transport props. 2-26362  
 Fe<sub>80</sub>B<sub>20</sub>, metallic glass, crystn. kinetics, TEM and DSC study 2-35399  
 Fe<sub>3</sub>B<sub>18-x</sub>Be<sub>x</sub> metallic glasses, <sup>57</sup>Fe Mossbauer spectra study 2-17375  
 Fe<sub>41.5</sub>B<sub>44.5</sub>S<sub>4</sub>, amorphous ribbon form., effect of casting vel. 2-27114  
 Fe<sub>1.5</sub>B<sub>1.42</sub>Si<sub>10.48</sub>, amorphous, mag. props. and crystn. 2-46441  
 Fe<sub>1.5</sub>B<sub>1.45</sub>Si<sub>4</sub>, metallic glass, ribbon, mag. permeability relax. quenching rate effect 2-21823  
 Fe<sub>3</sub>B<sub>13</sub>Si<sub>3.5</sub>C<sub>2</sub>, amorphous alloy, evidence for C mobility from mag. anisotropy meas. 2-41123  
 Fe<sub>3</sub>B<sub>11</sub>Si<sub>3.5</sub>C<sub>2</sub>, metallic glass, thermomagnetic and transport props. 2-26362  
 Fe<sub>81</sub>B<sub>13</sub>Si<sub>3.5</sub>C<sub>2</sub>, Metglas 2605, magnetomech. coupling and permeability 2-31258  
 (Fe<sub>0.85</sub>B<sub>0.18</sub>)<sub>0.9</sub>Tb<sub>0.05</sub>La<sub>0.05</sub>, amorphous and crystallised, mag. props. 2-21820  
 Fe<sub>1-x</sub>B<sub>x</sub> amorphous film, Hall effect meas. 2-51149  
 Fe<sub>74</sub>Co<sub>16</sub>B<sub>16</sub> metallic glass, ferromag., absolute thermoelec. power 2-51154  
 Fe<sub>74</sub>Co<sub>16</sub>B<sub>16</sub> metallic-glass fibre-optic phase modulators 2-34882  
 Fe<sub>60</sub>Co<sub>34</sub>B<sub>14</sub>Si<sub>1</sub>, Metglas 2605, magnetomech. coupling and permeability 2-31258  
 Fe<sub>3</sub>Co<sub>30</sub>Ni<sub>5</sub>Cr<sub>10</sub>Si<sub>3.5</sub>B<sub>7</sub>, metallic glass, microhardness and porosity investigation (*Russian*) 2-2577  
 Fe<sub>60</sub>Co<sub>30</sub>Si<sub>10</sub> amorphous mag. alloys, Fourier analysis of Mossbauer spectra 2-26803  
 (Fe<sub>1-x</sub>Co<sub>x</sub>)<sub>70</sub>Ni<sub>5</sub>B<sub>14</sub>, amorphous, mag. aftereffect, nonlinear and hysteretic changes of permeability (*Polish*) 2-26686  
 Fe<sub>82-x</sub>M<sub>x</sub>B<sub>18</sub> alloys, amorphous, effects of additions on crystn. temps. 2-1410  
 (Fe<sub>1-x</sub>Mn<sub>x</sub>)<sub>80</sub>B<sub>20</sub>, amorphous, mag. props., magnetisation and Mossbauer effect study 2-26666  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, amorphous, Lorentz electron microscopy study of domain struct. 2-5562  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, glassy metals, corrosion and dissoln. 2-31858  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, positron annihilation study 2-2365  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, crystn., X-ray invest. (*German*) 2-35403  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, atom probe FIM study of microstruct. after annealing 2-36874  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub> metallic glass, anelasticity and struct. relaxation 2-45357  
 (Fe,Ni<sub>1-x</sub>)<sub>80</sub>B<sub>20</sub>, metallic glass, mag. and Mossbauer study 2-21921  
 Fe<sub>40</sub>Ni<sub>18</sub>B<sub>18</sub>Mo<sub>4</sub>, Metglas 2826 MB, mech. props., effect of external mag. field 2-9428  
 (Fe,Ni<sub>100-x</sub>)<sub>80</sub>B<sub>10</sub>P<sub>10</sub>, amorphous alloys, magnetoresistance in magnetic fields up to 14.5 T 2-1894  
 FeNiBSi amorphous alloys, thermoelec. power singularities 2-21568  
 (Fe,Ni<sub>70</sub>)<sub>10</sub>Si<sub>1</sub>, amorphous, second order mag. phase transition 2-2077  
 Fe<sub>47</sub>Ni<sub>75</sub>B<sub>18</sub>Si<sub>10</sub>, amorphous alloys, effects of neutron irradiation on mag. props. 2-2104  
 Fe<sub>3</sub>Ni<sub>3</sub>Cr<sub>4</sub>P<sub>14</sub>B<sub>6</sub> metallic glass, crystallisation and mech. props. 2-8447  
 (Fe<sub>1-x</sub>Ni<sub>x</sub>)<sub>78-x</sub>Cr<sub>3</sub>Si<sub>10</sub>B<sub>12</sub> metallic glass, mag. and elec. props. 2-21834  
 Fe<sub>40</sub>Ni<sub>30</sub>Mo<sub>4</sub>B<sub>18</sub> amorphous alloy, He bubble form. under He<sup>+</sup> ion irradiation 2-50725  
 Fe<sub>3</sub>Ni<sub>3</sub>Mo<sub>4</sub>B<sub>18</sub> metallic glass, vitrification during sputtering 2-12501  
 (Fe<sub>1-x</sub>Ni<sub>x</sub>)<sub>80</sub>P<sub>14</sub>B<sub>6</sub> alloy, production by flame-spray quenching 2-2480  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub> amorphous alloy, He ion irradiation effects 2-1530  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, amorphous, creep, stress relax. and struct. charge 2-13769  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, amorphous ferromag., transverse magnetostriction due to shearing stress 2-21864  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub> amorphous ribbons, low field mag. props. 2-46346  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, amorphous ferromagnet, magnetisation study 2-46347  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, glassy, electrical elastoresistivity at 77.4K 2-5380  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, metallic glass, torsional elastic behaviour 2-31720  
 (Fe,Ni<sub>1-x</sub>)<sub>75</sub>P<sub>16</sub>B<sub>6</sub>Al<sub>3</sub>, amorphous, ferromag. transition, struct. relax. effect on scaling law anal. 2-5542  
 (Fe,Ni<sub>1-x</sub>)<sub>75</sub>P<sub>16</sub>B<sub>6</sub>Al<sub>3</sub>, amorphous, Mossbauer study 2-31356  
 (Fe<sub>1-x</sub>Ni<sub>x</sub>)<sub>77</sub>Si<sub>10</sub>B<sub>13</sub>, amorphous, breakdown of magnetism, susceptibility and Mossbauer meas. 2-8976  
 Fe<sub>30</sub>Ni<sub>30</sub>Si<sub>4</sub>B<sub>12</sub>, amorphous, temp. depend. of mag. permeability 2-26656  
 Fe<sub>47</sub>Ni<sub>75</sub>Si<sub>10</sub>B<sub>13</sub>, amorphous spin glass, Mossbauer study 2-31331  
 FeSiB alloys, amorphous, magnetostriction and magnetoelastic effects 2-21863  
 FeTiB amorphous films, mag. props., effect of B and Ti 2-36399  
 Fe<sub>60</sub>V<sub>10</sub>B<sub>10</sub>Si<sub>10</sub> amorphous mag. alloys, Fourier analysis of Mossbauer spectra 2-26803  
 Ge-B-Ga, amorphous, crystn. temp., mag. props. 2-41160  
 Hf-B eutectic system, crystn. at ultrahigh cooling rate 2-41600  
 (Ho<sub>1-x</sub>Er<sub>x</sub>)Rh<sub>4</sub>B<sub>4</sub>, mag. transitions 2-51406  
 HoRh<sub>4</sub>B<sub>4</sub>, mean-field ferromag., sp. ht., magnetisation, elec. resist., and thermal expansion meas. 2-51408  
 Ir-B phase diagram, DTA, metallographic and X-ray analyses 2-41585  
 Mo-B alloy, B segregation, nuclear reactions study (*Russian*) 2-13725  
 Mo-B system, thermodynamic modelling, liq. phase behaviour 2-13698  
 Mo-B-Si coating for Nb alloy, type VN-3 for heat resistance (*Russian*) 2-2613  
 Mo<sub>2</sub>B, standard free energy of form. by EMF meas. (*Japanese*) 2-27142  
 (Mo<sub>0.6</sub>Ru<sub>0.4</sub>)B<sub>14</sub> metallic glass, supercond. transition temp., press. depend. 2-36200  
 Nb-Ge-B, A-15 compound, supercond. props. 2-46215  
 Nd<sub>3</sub>Ni<sub>13</sub>B<sub>2</sub> crystal struct. and analogues (*Ukrainian*) 2-50584  
 Ni-B-Ge system, metallic glass form., struct. and mech. props. 2-12493  
 Ni-B-Si-Cr brazing alloy, rapidly solidified surface melts 2-16935  
 Ni-Fe-B-Si, amorphous, Barkhausen noise, power spectrum 2-8998  
 Ni-M-B (M=transition metal), amorphous alloys, mech. props., thermal stability 2-31787  
 Ni-Si-B ribbons, crit. thickness for amorphous state form. 2-36832

## boron alloys continued

- Ni<sub>80</sub>B<sub>20</sub>, amorphous sheets, electroless deposited, internal friction and dynamic modulus behavior 2-21230  
 Ni<sub>40</sub>Fe<sub>40</sub>Co<sub>20</sub>Cr<sub>12</sub>Mo<sub>6</sub>B<sub>16</sub> amorphous alloy, H<sup>+</sup> ion bombardment effects 2-50672  
 Ni<sub>45</sub>Fe<sub>5</sub>Co<sub>20</sub>Cr<sub>10</sub>Mo<sub>4</sub>B<sub>16</sub>, metallic glass, crystn., effect of electron irradiation 2-35402  
 Ni<sub>70</sub>Fe<sub>3</sub>Si<sub>10</sub>B<sub>12</sub>, amorphous, shear crack propag., plastic flow 2-31757  
 Ni<sub>75</sub>Si<sub>8</sub>B<sub>17</sub>, amorphous metallic powder, prep. 2-31656  
 Ni<sub>72</sub>Si<sub>10</sub>B<sub>12</sub> amorphous thin plates, deform. and fracture at crack tip (*Japanese*) 2-27231  
 Pd-B phase diagram, DTA, metallographic and X-ray analyses 2-41585  
 Ti-B eutectic system, crystn. at ultrahigh cooling rate 2-41600  
 V-B eutectic system, crystn. at ultrahigh cooling rate 2-41600  
 V-B system, thermodynamic modelling, phase diagram 2-40523  
 WC-Co-B (GB<sub>2</sub>) electric-spark alloying of C steel, microalloying effect on cathode weight gain 2-17780  
 WC-Co-B alloying electrodes, grain size effect on coating form. in elec.-spark alloying 2-13861  
 Y<sub>66</sub>(Fe<sub>1-x</sub>)<sub>34</sub>, metallic glass, struct. and elec. props. 2-21031  
 Zr-B eutectic system, crystn. at ultrahigh cooling rate 2-41600
- boron compounds**  
 see also boron alloys  
 boracites, phase transitions theory with multicomponent transition parameters 2-26016  
 borate polyhedra, bond distances, X-ray spectra and electron density distributions, calcs. using ab initio methods 2-35436  
 boride powders, magnetic, surface props. 2-41165  
 high symmetric compounds, core excited quantum yield spectra and X<sub>α</sub> calcs. 2-29566  
 polypyrrole-BF<sub>4</sub><sup>-</sup>, magnetic behaviour, Pauli spin susceptibility 2-13273  
 Al-B-Li(Ti)(V)(Cr)(Mn)(Fe)(Co)(Ni)(Cu) systems, B-rich phases grown from melts, X-ray diffr. study 2-46904  
 B-C, CVD deposited, comp. and struct. changes, temp. and supersaturation effects 2-40715  
 B-C compounds, thermoelectric props. 2-17103  
 B-C phase struct. and props., X-ray and density studies 2-40339  
 B-C phases, C rich, stoichiometric limits 2-41595  
 B-C powder, synthesis and physicochem. props. 2-41544  
 B-C system, phase analysis 2-41593  
 BC, free graphite determ. by X-ray diffr. 2-9590  
 B<sub>12</sub>C<sub>3</sub>, crystalline, electronic struct. and bonding 2-45107  
 B<sub>13</sub>C<sub>2</sub>, electronic struct. and semicond. behaviour 2-45826  
 B<sub>2</sub>C addition to kaolin refractories, effect on props. 2-41568  
 B<sub>2</sub>C, ion implantation, projected ranges and standard deviations (*Japanese*) 2-12653  
 B<sub>2</sub>C, metal-insulator transition, elec. cond., thermoelec. power and Hall effect meas. 2-40975  
 B<sub>2</sub>C near MM-wave Fourier transform refl. and transmission spectroscopy for plasma diagnostics 2-40183  
 B<sub>2</sub>C, neutron irradiated, volume swelling theory 2-25939  
 B<sub>2</sub>C, sintering, effect of C on microstruct. and mech. props. 2-41565  
 BCl<sub>3</sub>, IR spectrum of vibr. bands 2-49407  
 BCl<sub>3</sub> distillation, isotope separation coeffs., 278 to 438K 2-11207  
<sup>10</sup>BCl<sub>3</sub> laser isotope separation, IR absorpt. spectroscopy of irradiated products (*Chinese*) 2-15853  
 BCl<sub>3</sub>-COCl<sub>2</sub> mixture, separation by UV photolysis 2-31938  
 BF<sub>3</sub>, vibr. fine struct., ab initio coupling consts., photoelectron spectrum 2-34492  
 BFC<sub>1</sub> formation by CO<sub>2</sub> laser in B isotope separation by multiphoton absorpt. of BCl<sub>3</sub> (*Chinese*) 2-24876  
 BFC<sub>1</sub> formation by CO<sub>2</sub> laser in B isotope separation by multiphoton absorpt. of BCl<sub>3</sub> (*Chinese*) 2-24876  
 BF<sub>3</sub>(ν<sub>3</sub>), band model parameters, flame and flow tube, meas., IR absorpt. coeffs. 2-7561  
 BH, rot. const. vibr. const. and binding energies calc. using Born-Mayer interaction pot. model 2-15766  
 BH, vibr. struct., electronic transition, A-doubling, ab initio calcs. 2-4212  
 BH + He(Ar)(H<sub>2</sub>), rot. states, energy transfer, cross sections, lifetime meas. 2-44065  
 BH<sub>2</sub>, A<sup>2</sup>B<sub>1</sub>-X<sup>2</sup>A<sub>1</sub> electronic transition band struct., ab initio CI calcs. 2-4228  
 BH<sub>3</sub> complex, BH<sub>3</sub> (pyridine, 2,6-lutidine) σ-π transmitted coupling, molecular orbitals calc. 2-49457  
 BH<sub>3</sub>+NH<sub>3</sub>→BH<sub>3</sub>NH<sub>3</sub> binding energy ab initio calculations 2-15713  
 B<sub>2</sub>H<sub>4</sub>, geometrical struct. and vibr. freq. studied via ab initio mol. electronic struct. theory 2-49280  
 B<sub>2</sub>H<sub>6</sub> 2-19960  
 B<sub>2</sub>H<sub>6</sub>, differential cross sections meas. by high energy electron scatt., chemical binding effect, ab initio - mol. calc. 2-7644  
 B<sub>2</sub>H<sub>6</sub>, quadratic force fields, ab initio calcs. 2-15702  
 B<sub>4</sub>H<sub>10</sub>, optimised geometry, restricted HF level MO CI calcs. 2-19974  
 B<sub>4</sub>H<sub>6</sub><sup>2+</sup>, vibr. spectra and struct. 2-49434  
 BH<sub>3</sub>NH<sub>3</sub> binding energy, ab initio calculations 2-15713  
 B<sub>10</sub>H<sub>12</sub>(NH<sub>3</sub>)<sub>2</sub>, cryst. struct. at 123 and 298K 2-50608  
 B<sub>10</sub>H<sub>12</sub>(NH<sub>3</sub>)<sub>2</sub>N<sub>2</sub>H<sub>4</sub>, cryst. struct. and desolvation mechanism 2-50608  
 BN, <sup>11</sup>B nuclear-magnetic shielding 2-17354  
 BN addition to kaolin refractories, effect on props. 2-41568  
 BN, band and cryst. struct., LCAO SCF ab initio HF calc. 2-35935  
 BN, cubic, growth and characteristics of single crystal (*Japanese*) 2-36775  
 BN, cubic, new developments, optimisation of performance 2-46986  
 BN, cubic, synthesis, AlN additions and atmosphere effects 2-51855  
 BN, energy bands, smooth interpolation with gradient utilisation 2-45803  
 BN felt separator for Li-Al/metal sulphide battery 2-14060  
 BN film, CVD on to fused SiO<sub>2</sub> and sapphire 2-51806  
 BN film, plasma deposition, dielectric props. (*Russian*) 2-2457  
 BN graphite-like, energy of interaction between layers and relative stability of intermediate structs. 2-21059  
 BN, hexagonal, core excitons at B. K-edge, soft X-ray absorpt. meas. 2-13590  
 BN, hexagonal, interband transitions anisotropy, UV reflectivity spectra study (*French*) 2-22043  
 BN, ion implantation, projected ranges and standard deviations (*Japanese*) 2-12653  
 BN low temperature deposition using hydrogen injection process 2-51829  
 BN, phase transition mechanism at high temp. and press., Al catalytic action 2-41603  
 BN powders, fast luminesc. from C-related defects 2-46675



**boron compounds continued**

- BN, protective film prep. in silica tubes by thermal characterisation 2-41768  
 BN, pyrolytic, low temp. specific heat and thermal conductivity 2-40566  
 BN stability in molten salt cells with Li-Si electrodes 2-14059  
 BN, superhard polycryst., struct. and mech. props., annealing effect 2-31788  
 BN, wurtzite form,  $\gamma$ - $\beta$  transition during high press. creep, fine struct. study 2-35683  
 BN-SiO<sub>2</sub> ceramics, hot pressing, props. 2-31673  
 (BN)<sub>x</sub>C<sub>1-x</sub>, 0 < x < 1, struct. and props. 2-35453  
 B<sub>2</sub>NCl<sub>3</sub>, thermal decomp. to prepare BN protective coatings 2-41768  
 B<sub>2</sub>N<sub>2</sub>H<sub>4</sub>, borazafulvenes, struct. using MNDO calcs. (French) 2-34306  
 BO, excited states, CASSCF method appl., pot. curves 2-638  
 BO, multiconfigurational Hartree-Fock studies of avoided curve crossing using the Newton-Raphson technique 2-39451  
 BO radicals, B<sup>18</sup>O and B<sup>17</sup>O, ESR matrix isolated spectra, nuclear hyperfine struct. and ab initio calc. comparison 2-34451  
 BO<sub>2</sub> radical, vibronic interaction between  $\tilde{A}^2\Pi_g$  and  $\tilde{X}^2\Pi_g$  states, diode laser spectroscopy, Renner-Teller interactions 2-11479  
 B<sub>2</sub>O<sub>3</sub>, electronic states, geometry, spectra, source field, nonempirical calcs. 2-20202  
 B<sub>2</sub>O<sub>3</sub>, mol. struct. and computed vibr. spectrum 2-689  
 B<sub>2</sub>O<sub>3</sub>, total gamma-ray cross section meas. 2-43738  
 B<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>, literature review and exploratory data on ternary subsystems 2-47014  
 B<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O glasses, ionic cond., relation to alkali metal ion conc. (French) 2-50922  
 BP, <sup>11</sup>B nuclear-magnetic shielding 2-17354  
 BP, early CVD growth and props. 2-36795  
 BP, epitaxial growth on Si(100) substrates, REED 2-35907  
 BP, heat of formation and combustion, O<sub>2</sub> bomb calorimetric technique 2-9566  
 BPN high-temperature insulating ceramic for elemental vapour lasers, physicochem. and electrophys. props. 2-49845  
 BPO<sub>4</sub>, alkenes chemisorpt., IR spectra 2-26900  
 BS electronic spectra, perturbation anal. of  $\Lambda^2\Pi-X^2\Sigma^+$  system (French) 2-43929  
 BS electronic spectra, struct. of states in energy region 36000 to 46000 cm<sup>-1</sup> 2-43930  
 B<sub>2</sub>S<sub>3</sub>-Na<sub>2</sub>S glass, superionic cond. and prep. 2-17659  
<sup>10</sup>B<sub>2</sub>D<sub>6</sub>, high-resolution IR vibr. studies 2-39400  
<sup>10</sup>B<sub>2</sub>H<sub>6</sub>, high resolution IR rovibr. studies 2-24694  
 CaO-B<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>, autosolvation effect, elec. cond. 2-50908  
 n-FeB<sub>29.5</sub>, prep., electronic transport props., cryst. struct. 2-40886  
 GdB<sub>6</sub>, elec. props., hopping cond., thermoelec. power 2-40887  
 H<sub>2</sub>BO<sub>3</sub> in formate baths, for electrodeposition of black Cr-Co alloy 2-51834  
 (HBX)<sub>n</sub> (X=Be, BH, CH<sub>2</sub>, NH, O), band structure, ab initio STO calcs. 2-39309  
 xK<sub>2</sub>O-(100-x)B<sub>2</sub>O<sub>3</sub>-7Fe<sub>2</sub>O<sub>3</sub>-0.63 KCl, x=10 to 40 mol.%, Mossbauer and ESR studies 2-26792  
 MnO-SiO<sub>2</sub>-TiO<sub>2</sub>(B<sub>2</sub>O<sub>3</sub>), melts, thermodynamic activity of MnO 2-8645  
 MnO-TiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>, melts, thermodynamic activity of MnO 2-8645  
 Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> system, high-SiO<sub>2</sub> liquidus surface 2-36840  
 (NiO)<sub>2</sub>(B<sub>2</sub>O<sub>3</sub>, PbO)<sub>2</sub> glass, mag. props. 2-36332  
 PbO-xPbF<sub>2</sub>-yB<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>, variable comp.-system, dynamics of boundaries of crystallising phases 2-27159  
 Si:BF<sub>3</sub><sup>+</sup>, amorphous, elec. activation and impurity redistribution during pulsed laser annealing 2-45254  
 n-Si:BF<sub>3</sub><sup>+</sup>, ion implanted, plasma annealing 2-16664  
 Si<sub>3</sub>N<sub>4</sub>-BN composite, anisotropy effects in thermal diffusivity 2-17658  
 SmB<sub>6</sub>, elec. props., hopping cond., thermoelec. power 2-40887  
 VN, cubic, powders synthesis, MgB<sub>2</sub> catalyst appl. 2-13692  
 YbB<sub>6</sub>, elec. props., hopping cond., thermoelec. power 2-40887  
 ZnO-B<sub>2</sub>O<sub>3</sub> system, solid state reaction, thermolum. analysis (Spanish) 2-51723  
 ZnO-B<sub>2</sub>O<sub>3</sub>-H<sub>2</sub>O system, phase formation under hydrothermal conditions 2-50567  
 ZnO-B<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O(K<sub>2</sub>O)-H<sub>2</sub>O systems, phase formation under hydrothermal conditions 2-50567

**borosilicate glasses**

- boroaluminosilicate melt, formation of protective vitreocrystalline coatings 2-5051  
 chemical stability for radioactive waste fixation 2-13835  
 heat capacity for simulated radioactive waste glass by drop calorimetry 2-24318  
 lattice thermal cond. at low temp. 2-50946  
 leaching of radioactive waste 2-39145  
 medical glass, synthesis using mathematical expt. planning 2-22191  
 optical absorption, of glasses containing Se and Cd, temp. effects 2-46635  
 optical glasses, glass-forming systems, optical consts., review 2-25090  
 radioactive waste, in borosilicate glass, standard leach test 2-39149  
 sodium borosilicate glass, variable thickness layer, spectral and angular characts. 2-46527  
 B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glasses and fibres, Raman spectra study 2-2230  
 B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-Li<sub>2</sub>O glass, Raman spectroscopy and NMR (French) 2-9150  
 Ga<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> liq., liq. phase separation 2-26036  
 K<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> system, metastable liq.-liq. phase separation regions 2-40559  
 K<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> system, subliquidus miscibility gap 2-35696  
 K<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-Fe<sub>2</sub>O<sub>3</sub> glasses, Mossbauer spectroscopy study of nonbridging O atoms 2-9068  
 0.7K<sub>2</sub>O 0.3SiO<sub>2</sub> 0.4Al<sub>2</sub>O<sub>3</sub>B<sub>2</sub>O<sub>3</sub> 2SiO<sub>2</sub>, phase separation phenomenon (Japanese) 2-12503  
 Li<sub>2</sub>O-Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> ion exchanged glass, conc. depend. of refr. index gradient 2-41322  
 Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, double nucleation of TiO<sub>2</sub> (Czech) 2-30411  
 Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glasses, struct. model rel. to NMR results 2-1409  
 Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glasses, Na depletion on surface during Auger anal. 2-13596  
 Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, subcrit. crack growth, effect of corrosion 2-36944  
 Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>:Mn<sup>2+</sup> glasses, luminesc. decay times as probe of thermal phase separation 2-46681  
 Na<sub>2</sub>O-SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub> glasses, Raman spectroscopic study of struct. 2-5674  
 Rb<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> system, metastable liq.-liq. phase separation regions 2-40559

**borosilicate glasses continued**

- SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-MgO-K<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>:Fe<sup>3+</sup> glass-ceramic, CGW-9658, transport and reactivity of H<sub>2</sub> 2-22488  
 SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO-MgO-Na<sub>2</sub>O-Fe<sub>2</sub>O<sub>3</sub> glass, ESR spectra, 300 to 700K 2-31268  
 SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub> glass, Faraday rot., energy gap determ. 2-26868  
 SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-K<sub>2</sub>O:Cu<sup>2+</sup> glasses, diffusion layers prod. by ion exchange, EPR and optical study 2-13332

**Borrmann effect** see *X-ray crystallography; X-ray diffraction***Bose-Einstein statistics** see *quantum statistical mechanics***Bose gas** see *boson systems***boson fluids** see *boson systems***boson systems**

- see also *liquid helium-4; quantum statistical mechanics*  
 1/c expansion of the density matrix for the  $\delta$ -function Bose gas 2-38563  
 Bose-Einstein condensation for relativistic gas in d-dimens. 2-42939  
 coupled boson-fermion systems, field theories Monte Carlo calc. 2-18973  
 coupled cluster formalism for one-component Bose plasma 2-33423  
 critical behaviour of Bose model, self-consistent approach 2-6818  
 crystals, quantum field theory 2-50784  
 d-dimensional Landsberg gas 2-15104  
 degenerate Bose systems, Greens functions low-freq. asymptotic behaviour, kinetic characts. 2-19013  
 dynamic renormalisation group treatment of Bose gas model 2-28757  
 electron-phonon systems, kinetic equations, free boson fields 2-42941  
 Euclidean boson field theories, Legendre transforms and r-particle irreducibility 2-28977  
 fluids, static correlations, microscopic struct. 2-28772  
 free boson gas in weak external pot. 2-6789  
 free bosons in a scaled external potential, condensation 2-48607  
 Heisenberg ferromag., anisotropic, boson representation, energy gap calc. 2-17257  
 ideal Bose gas, KMS condition, regularity 2-42932  
 ideal relativistic Bose gas, thermodynamic props. 2-15105  
 impurity quasiparticle as a weak inhomogeneity 2-28765  
 infinite Bose system, time development, C\* algebraic description 2-42933  
 interacting boson props., excitation spectrum, struct. factor and sound vel. 2-21410  
 Josephson current in finite thickness junction 2-17233  
 magnetic superconductors, Josephson effect, formulation 2-17232  
 many-boson averages for model systems of the Dicke type 2-3480  
 nonideal Bose gas, zero temp. crit. behaviour 2-33419  
 number operator CC\* in statistics of bosons and fermions 2-38560  
 On para-Bose quantization with real order 2-23549  
 one-dimensional, condensation and excitation energy 2-33420  
 one-dimensional antiferromagnetic chain, boson Bogoliubov transform., magnon states 2-51428  
 one-dimensional Bose liq., effective harmonic fluid approach to low energy props. 2-30712  
 orbital angular momentum and orbital dynamics in limit of <sup>3</sup>He, superfluid, theory (Russian) 2-12875  
 para-Bose operators, pair representation, graded Lie algebra calcs. 2-28755  
 partition function of Bose statistics and principal characteristics of the symmetric group 2-6788  
 quadratic Hamiltonians, canonical forms 2-3476  
 quantum-statistical condensate, dynamics theory 2-42935  
 second-order differential eqns., bounds on Green's functions 2-33418  
 single nuclear j-shell with 4 nucleons, boson-fermion hybrid representation 2-11104  
 thermodynamically equivalent Hamiltonian method for boson pair Hamiltonians 2-33422  
 three-boson Amado model, binding energy, distorted wave bound-state approx. 2-3879  
 three-particle correlations in the ground state of a Bose fluid 2-42936  
 Cu<sub>2</sub>O, exciton luminescence 2-46709  
 D<sub>2</sub> molecules fusion, probability estimate through Bose degeneracy 2-10705  
 H, atomic, spin polarised Bose Gas, collective excitations (Russian) 2-12880  
 H, atomic, spin-polarised, ground state props., Ursell-Meyer method 2-35861

**bosons**

- see also *alpha particles; boson systems; deuterons; gravitons; intermediate bosons; meson resonances; mesons; photons*  
 arrow scheme model for leptons, quarks, bosons 2-23955  
 boson-fermion coupled system, Monte Carlo calc. 2-33365  
 calibration boson creation in conformally flat spaces (Russian) 2-32836  
 finite algebras, Bose realisation, rel. to B-para algebra 2-38812  
 highly negative ions, discrete spectrum absence 2-48524  
 interacting boson model, formulation appl., extension and interpretation 2-3860  
 localised clusters, Van der Waals forces 2-766  
 massless boson fields, covariant representations 2-3679

**boundaries** see *boundary layers; boundary value problems; grain boundaries; metal-insulator boundaries; semiconductor-insulator boundaries; semiconductor-metal boundaries***boundary-elements methods**

- book, progress in boundary element methods, plasticity and elasticity problems 2-48414  
 capacitance of quadrilateral, computational method 2-42841  
 elastoplastic analysis 2-25262  
 elastoplasticity, boundary element solution scheme 2-30037  
 heat conduction with nonlinear material and nonlinear boundary conditions, boundary value problems 2-42965  
 interfacing finite element and boundary element discretizations 2-23414  
 magnet design, automated optimisation using boundary integral method 2-48728  
 plasticity, boundary elements in 2D using quadratic shape functions 2-25261  
 plates, trapezoidal, three-ply freely supported, free vibrs. 2-39854  
 shafts, prismatic, inelastic torsion, boundary element and finite element method comparison 2-20554  
 sloshing problems, nonlinear, two-dimens., boundary element method anal. 2-25381  
 wave diffraction and radiation, two-dimens. problems, comparison of localised finite element methods 2-57



**boundary layer flow** *see* **boundary layers**

## boundary layer turbulence

*see also atmospheric boundary layer*  
 ablation wedges and boundary layer transition (*Chinese*) 2-25362  
 airfoil transonic shock boundary layer anal. 2-1219  
 axial jet, flow outside wall boundary layer (*French*) 2-35186  
 boundary layer, laminar to turbulence transition reversal, deep cooling effect 2-50293  
 buoyant wall jets, horizontal and vertical, extended k- $\epsilon$  model 2-12195  
 complex boundary conditions 2-4807  
 compressible boundary layer, temp.-velocity profile study 2-30110  
 confined turbulent flow, numerical anal., appl. to confined jet axisymmetric mixing 2-44705  
 cricket ball, swing in flight due to aerodynamic forces 2-20797  
 cylinder arrays, vibrations induced by internal and external axial flow, anal. 2-12069  
 cylinder arrays in axial and cross flow, fluidelastic vibration, state-of-the-art 2-12068  
 density interface topping 2-35128  
 displacement thickness effects in transonic shock wave boundary layer interactions 2-1228  
 distribution of disturbance field with character of transition regime 2-12130  
 drag reduction in laminar and turbulent boundary layers 2-4791  
 equilibrium boundary layers in moderate to strong adverse pressure gradients 2-35125  
 finite element algorithm accuracy and convergence for turbulent boundary layer flow 2-12131  
 flow around vertical circular cylinder, turbulent boundary layer, drag force meas. 2-20679  
 flow past a circular cylinder, comparisons and comments on recent calcs. 2-35127  
 flow pattern, transport process, periodic struct. model 2-16301  
 free shear layers, turbulent mixing layers coherent structure determ. 2-16299  
 free-surface flow, in lee of obstacle submerged in channel (*French*) 2-8158  
 fully rough turbulent boundary layer, accel., heat transfer 2-35163  
 gun barrel walls, heat transfer, boundary layer anal. 2-30128  
 heat transfer and fluid friction relationship 2-16292  
 heat transfer in turbulent asymptotic boundary layer with suction, Prandtl number determ. 2-35133  
 heat transfer in turbulent boundary layers of accelerated flows (*Russian*) 2-30125  
 heat transfer on porous plate at high free-stream turbulence 2-4815  
 heated layer, Reynolds number effect, flow meas. 2-4809  
 high Reynolds number, shock wave-boundary layer interactions 2-1186  
 hypersonic wind tunnel, boundary layer transition sensors evaluation 2-35246  
 ice-salt water boundary layers, convection and turbulent flows 2-18454  
 instability wave generation in boundary layer by external turbulence 2-30103  
 irregular roughness bed, flow resistance 2-8125  
 jet stream interacting normal to lamina, heat emission (*Russian*) 2-8199  
 jets, axisymmetric, in parallel flow, initial conditions effect 2-1242  
 laminar separation bubble with transition-attempt at prediction with local coupling (*French*) 2-1259  
 mixing-length parameter, low Reynolds number turbulent boundary layers 2-8122  
 noise, vortex sheet modelling 2-35126  
 noise on surface of body under turbulent boundary layer 2-35121  
 noniterative scheme for turbulent unsteady boundary layers 2-4810  
 normal shock wave interaction with turbulent boundary layers at transonic speed 2-1229  
 normal shock-turbulent boundary layer interaction at a curved wall 2-1230  
 oscillating, integral method calcs. 2-50248  
 packed-bed thermal storage unit, transient temp. response to general variation in rate of through flow 2-14127  
 pipe flow anisotropic turbulent-diffusion tensor diagonal components calc. method 2-44792  
 pressure driven, turbulent boundary layer along a circular cylinder 2-16297  
 radiation effects on wall zone and equilb. turbulence region 2-12137  
 Reynolds stress equations, in rotating coords., stabilisation, misalignment (*French*) 2-12133  
 rough permeable surface, turbulent boundary layer formation 2-1183  
 sensitivity analysis 2-39890  
 separating struct., high-order turbulence results 2-35123  
 separating struct., mean flow and Reynolds stresses 2-35122  
 separating struct., transverse vel. meas. 2-35124  
 separation, reattachment and viscous-inviscid interaction 2-39891  
 separation criterion based on turbulent fluctuation intensity 2-44714  
 shear flow, wall-bounded, turbulent struct., numerical simulation 2-16302  
 shear flow, instabilities, laminar to turbulent transition, boundary layers 2-25358  
 shear flows mass and heat transfer second moment turbulence appl. 2-1196  
 shear layer model, turbulent flow, lifting line theory, computer anal. 2-16300  
 shock-turbulent boundary layer interaction theory, in transonic flow 2-1231  
 shock-wave boundary layer interactions in wind tunnel obs., by laser anemometer 2-16408  
 singularities in three-dimensional turbulent boundary-layer calculations and separation phenomena 2-8124  
 Smith, A.M.O., boundary layer research 1945-75 2-42838  
 spanwise streaky structure and macroturbulence in open-channel flows 2-4891  
 spinning axisymmetric body, boundary-layer transition, smoke visualisation 2-50334  
 spinning tail body in axial flow, turbulent boundary layer at high speed ratio (*Japanese*) 2-8138  
 static pressure hole problem, separation of velocity gradient, wall curvature and boundary layer effects (*French*) 2-16291  
 structure of turbulent flow in channels and pipes 2-20757  
 supersonic axisymmetric flow, over sharp edge of bodies, boundary layers, viscosity influence 2-30171  
 supersonic flow, cylindrical protuberance interaction scaling 2-4854

## boundary layer turbulence continued

taylor-Görtler instability of turbulent wall jets along concave surface 2-4796  
 three-dimensional, inverse mode calc., finite difference method (*French*) 2-30114  
 trailing edge noise prediction from measured surface pressures 2-16307  
 trailing edge noise prediction using Amiet's method 2-20660  
 transonic airfoil flow, shock-boundary layer interaction 2-50289  
 turbulent coherent structure, conf., Madrid, Spain (1980) 2-14980  
 turbulent exchange in boundary layers, struct. model 2-30111  
 turbulent flow past circular cylinder, tunnel blockage effects 2-39895  
 turbulent pipe flow, thermal convection, double diffusion, boundary layer, variational principles 2-39897  
 turbulent scales, integral and differential injection effects 2-44712  
 turbulent shear flow, intermittency factor, closure model, appl. to plane jets and boundary layers 2-4808  
 turbulent wall jets 2-8202  
 two dimensional flows with finite length separated regions 2-1235  
 two-dimensional turbulent jet-boundary interaction, temp. distrib. 2-12149  
 vortex shedding from cylinders, wake flow, roughness influence, wind tunnel meas. 2-1204  
 wall jet, turbulent convection, heat transfer and skin friction 2-35199  
 wall shear stress, disturbed turbulence struct. effect on Preston tube meas. 2-50335  
 wave resistance of a submerged semi-elliptical body 2-4841

**boundary layer turbulent flow** *see* **boundary layer turbulence**

## boundary layers

*see also atmospheric boundary layer; boundary layer turbulence*  
 aerodynamic testing using water towing tank techniques 2-16405  
 air hypersonic flow, blunt body radiative-convective heat transfer, ablation product effect 2-4855  
 aircraft trailing, turbulent vortices, stratified fluids, numerical soln. 2-20676  
 airfoil, 2-dimens. steady inviscid supersonic flow 2-30175  
 airfoils, boundary layer, lift and drag Navier-Stokes eqns. 2-50247  
 airfoils, upper surface blown, incompressible and transonic flows 2-50288  
 airfoils, viscous flows including separation, coupling approach to calcs. (*French*) 2-1234  
 annular supersonic jet, shock wave effects, impinging on concave body, separation bubble 2-20705  
 aperiodic unsteady transonic flow around rotating bodies 2-50290  
 axisymmetric entrance diffuser, channel flow, oblique shock, flow separation 2-30226  
 backward boundary layers decaying algebraically along walls 2-50228  
 backward free-convective boundary layer, low heat resist. sheet cooling 2-20671  
 boundary layer, laminar to turbulence transition reversal, deep cooling effect 2-50293  
 boundary layer on moving surface, recirculation zone form. 2-39942  
 capillary free boundary problem governed by Navier-Stokes equation 2-30092  
 cavitation, artificial, in non-steady-state flow around thin obstruction (*Russian*) 2-8193  
 centrifugal convection, MHD flow in an angular channel 2-12146  
 cholesteric liquid cryst., radiation transmission through gradual interface 2-1400  
 compressible flow past cylinder, soln. of Imai's eqn. 2-25385  
 computation of flows including strong viscous interactions with coupling methods (*French*) 2-1215  
 conducting fluid, flow up plate, natural convection boundary layer, MHD 2-30138  
 conical body in hypersonic flow, boundary layer transition effect on static stability 2-8180  
 contact line motion, multiscale expansion approach 2-44710  
 convection with high Rayleigh number in shallow enclosures with different end temps. 2-1193  
 convective diffusion problems, boundary layer refinements 2-50259  
 convective heat transfer in convergent channel 2-20665  
 crack tip, rapidly propagating, plastic zone boundary layer phenomenon 2-20608  
 cricket ball, swing in flight due to aerodynamic forces 2-20797  
 diffuser behaviour, conical, inlet boundary layer blockage effects at different Reynolds and Mach numbers 2-8173  
 drag reduction in laminar and turbulent boundary layers 2-4791  
 Ekman-flow induced by a naturally permeable bed 2-39922  
 end-wall thermal boundary-layer behind reflected shock wave, numerical anal. 2-30181  
 ethanol-water, binary distillation, heat and mass transfer meas. 2-30122  
 expanding bodies, flow visualisation 2-12178  
 finite disc, rotating compressible flow over edge 2-12173  
 flow over rot. body, heat and mass transfer 2-35146  
 flow past two dims. obstacles 2-35112  
 flows, numerical method for solving nonlinear ordinary and partial differential eqns. 2-52  
 Fokker-Planck equation, kinetic boundary layer with absorbing boundary 2-23597  
 free boundary dynamics, fractional vol. of fluid method 2-1170  
 free boundary flows in thermally stratified medium, laminar buoyancy induced 2-35202  
 free convection in rectangular cavities with differentially heated end walls 2-4822  
 free shear layer, axisymm., turbulent spot azimuthal struct. and initiation mechanism 2-16295  
 free surface flow over semicircular obstruction, linearised theory 2-39894  
 Goldstein singularity removal at separation in flow past obstacles in wall layers 2-4786  
 heat transfer during shock-induced ignition of an explosive gas 2-35142  
 heat transfer to blunt bodies in hypersonic flight, vorticity effect 2-50255  
 heated surface, in narrow space, boiling heat transfer, bubble influence 2-30123  
 heavy liquid 'around' a cylinder, steady laminar flow, asymptotic theory 2-30094  
 heterogeneous flow around body, boundary layer with pressure 2-39977  
 horseshoe vortex flow, compressible Navier-Stokes eqn. 2-30152  
 hydrodynamic characteristics of boundary layer on continuous axisymmetric elastic surface 2-30096  
 hydrodynamic stick boundary condition, mol. model 2-1184  
 hydrodynamics, fluid boundary problems, discrete vortices method 2-1162



## boundary layers continued

- hypersonic flow, over blunt body, vorticity, boundary layer, heat transfer calcs. 2-35134
- incompressible boundary layers, interaction with strong viscous-inviscid interaction, calc. 2-1167
- incompressible boundary-layer interaction problems solving method 2-8112
- interference between boundary layer flow and wake flow 2-4787
- investigation of a two-phase boundary layer 2-44778
- ionised gases, nonequilibrium blunt body flows 2-39944
- jet flow, effect of blowing across blunt body surface, numerical simulation 2-35187
- jets, axisymmetric, in parallel flow, initial conditions effect 2-1242
- laminar, transformation and soln. method (Chinese) 2-25354
- laminar boundary layer, reverse transition influence of suction (Russian) 2-30098
- laminar boundary layer, transitional spot, Reynolds number and pressure gradient effect 2-16283
- laminar boundary layer flow, singularity at separation, forced convection 2-16281
- laminar boundary layer flow separation over moving walls, MRS criterion 2-20637
- laminar boundary layer formed on moving plate, heat transfer 2-20638
- laminar boundary layer on a wall nearly parallel to a magnetic field 2-44798
- laminar boundary layer on permeable surface in neighbourhood of symmetry plane of blunt bodies 2-39883
- laminar boundary layer separation in supersonic flow following shock wave 2-20639
- laminar boundary layer structure of disperse medium on a flat plate 2-1166
- laminar boundary layer with exponentially increasing press. gradient, development and separation 2-20640
- laminar boundary layers, flow on swept cylinders, similar solns. 2-20636
- laminar boundary layers on an oscill. wedge 2-4789
- laminar compressible boundary layer with stationary origin on continuous moving porous surface with large suction 2-35111
- laminar convection, combined forced and free, in entry region of vertical annulus with rot. inner cylinder 2-35138
- laminar flow, heat and mass transfer, coeff. change (German) 2-50237
- laminar flow, interrupted plate passag. heat transfer, plate thickness effect, appl. to heat exchanger 2-4790
- laminar flow heat transfer between 2-dimens. water jet and flat surface 2-44717
- laminar natural convection, double-diffusive counterbuoyant boundary layer 2-35144
- laminar separated flows, two-dimensional boundary-layers calc. 2-16280
- laminar separating flow, over backsteps, visualisation study 2-50234
- lifting-line theory of swept wings based on the full potential theory 2-44755
- liquid films, aerodynamic heating, ablation, laminar to turbulent transition, asymptotic props. 2-35132
- liquid under supercritical pressure, high-freq. oscillations regions determ. 2-16332
- local force loads from supersonic underexpanded stream on flat parallel to stream axis 2-12177
- logarithmic velocity profile, displacement height for rough-wall boundary layers 2-16294
- longitudinal streamlining of a semiinfinitely large plate by a viscoelastic fluid with heat transfer 2-35154
- methane, laminar diffusion flame, thermal radiation, boundary layer eqns. 2-31921
- methane oxidation near a cold wall in a shock tube 2-37076
- methanol-water, binary distillation, heat and mass transfer meas. 2-30122
- micropolar fluids, two-dimensional boundary layer eqns., numerical soln. 2-12183
- mixed convection flow adjacent to a vertical uniform-heat-flux surface, downstream transport 2-35141
- mixed convection flow on vertical surface (German) 2-50273
- mixed convection over horizontal flat plate, vortex mode instability 2-8165
- mixed convective flow on a heated surface with injection 2-12143
- mixture, stability of horizontal layers, convection 2-20663
- molecular beams, shock-heated, velocity anal. by time-of-flight method (Japanese) 2-38713
- multi-solid particle system transport phenomenon anal. at higher Reynolds numbers by Karman-Pohlhausen method 2-25347
- natural convection adjacent to vertical flat surface, thermal capacity effect 2-30139
- natural convection through horizontal porous layer, asymptotic anal. 2-20664
- Navier-Stokes eqns., vorticity of solns. near boundaries 2-4788
- nematic liquid cryst., shear flow, stabilizing effect of elec. field, flow alignment 2-50236
- non-Newtonian fluid boundary layer flow with short memory 2-20718
- nonreflecting far-field boundary conditions for unsteady transonic flow computation 2-44752
- nonsteady motion of a wing with subsonic velocity near a shield 2-20701
- nonsteady three-dimensional stagnation point flow with hard blowing 2-25409
- oscillating airfoil, vortical flow 2-16330
- oscillating airfoils, wake rollup, Kutta condition 2-50274
- oscillating boundary layers, interaction of wave disturbances 2-39929
- particle-fluid mixture, flow induced by oscill. flat plate, buoyancy effect 2-8209
- perturbations effect on flow struct. in detachment region 2-44702
- plane Benard problem, macroscopic selection rule of steady states 2-16318
- plane stationary irrot. flow past profile placed under free surface of heavy perfect fluid limited by wall (French) 2-1165
- point defect trapping, boundary layer phenomena 2-50623
- point defect trapping effect on sink strength 2-50624
- Poiseuille flow, free interaction of boundary layers with core 2-35226
- polygon transformations in fluid mechanics 2-30099
- poorly streamlined body, wake interaction with barrier 2-12158
- potential flow over cylinder, finite element method appl. 2-16282
- power-law fluids, solid sphere in swarm, drag coeffs. and void functions 2-35114
- ramp induced laminar boundary layer interaction, effect of suction 2-12121
- boundary layers continued
- rarefied gas flow, surface roughness depend. of local interaction parameters (Russian) 2-50301
- relaxation drag, of slender profile in steady plane flow (German) 2-4864
- rippled beds in oscill. flow, vel. meas. 2-30244
- rotating compressible flows, method of reducing truncation error in numerical scheme by incorporation of approximate soln. 2-4835
- rotating cones in quiescent air, flow and heat transfer expt. study (Japanese) 2-25374
- rotating fluid, mean flow induced by travelling wave 2-12163
- rotating Hele Shaw cells 2-16327
- rotating helical blade, 3-dimens. boundary layer 2-30144
- rotating MHD viscous flow, convection, initial value theory 2-8130
- separated boundary layer flows with high Reynolds numbers 2-4782
- separated flow past slender elliptic cone at incidence 2-1237
- shear flow, viscous, low Reynolds number, along circular hole in wall 2-16293
- shock tube expt., density profiles of boundary layers predicting by laser interferometry 2-20791
- shock wave-boundary layer interaction, calc. with flow separation (French) 2-1232
- single-phase medium flow in narrow channels with injection, hydrodynamical study 2-1265
- singularity analogue in inverse mode anal. (French) 2-1168
- slip flow past finite flat plate, velocity and temp. fields 2-50250
- slot injection, non-uniform, into laminar boundary layer 2-4856
- smectic A liquid crystals, permeative and hydroelastic flow 2-12123
- Smith, A.M.O., boundary layer research 1945-75 2-42838
- solar wind flow around Earth's magnetosphere, boundary-layer approx. 2-10252
- solid particle motion in turbulent flow, moving irregularities effects 2-35212
- spherical column packing, local aerodynamics and heat transfer characts. (Russian) 2-12215
- stability and separation of freely interacting boundary layers 2-1176
- stagnation-point boundary layer flow in saddle-point region with massive blowing 2-44701
- Stokes' flow past porous particles, fluid velocity calcs. 2-12212
- submerged laminar jet, impingement on plane, appl. to shear strength of vascular endothelium 2-39963
- supersonic flow, inverted cone with a spherical nose, pressure on side surface calcs. 2-30173
- supersonic flow, shape of ablating bodies 2-35177
- supersonic flow past body, combustion states, uniqueness and stability 2-12176
- supersonic interacting boundary layer flow past compression corner 2-1169
- supersonic stream, oscillating wedge, laminar boundary layer, influence of blowing 2-30097
- Taylor vortices, Benard convection, bifurcation and symmetry 2-16319
- thermal and dynamic boundary layers in porous medium with allowance for spontaneous convection (Russian) 2-50264
- thermophoretic deposition of small particle onto cold surfaces, Blasius series 2-35205
- transducer for flow meas. over helicopter rotor blades, wind tunnel tests 2-20788
- transient flow caused by a rotationally decelerated disk enclosed in a housing 2-44738
- transonic flow, viscous-inviscid interaction, over airfoils, separated laminar and turbulent flows, boundary layers 2-8174
- transonic flow around a convex corner with free streamline, boundary layer struct. 2-39941
- transonic laminar viscous-inviscid interaction flow field calc., boundary layers 2-4850
- triple-deck solns. for subsonic flow past humps, steps, corners, trailing edges 2-44751
- turbulence structure of a reattaching mixing layer 2-4801
- turbulent growth regions in laminar boundary layers 2-4800
- turbulent heat transfer, flow history effect 2-1191
- two dimensional flows with finite length separated regions 2-1235
- two layer viscous fluid, small scale front dynamics, time depend. model (Russian) 2-18444
- two-dimensional flow, perpendicular to flexible impervious membrane 2-16348
- two-dimensional flow past elliptic cylinder by discrete vortex approx. 2-4834
- two-phase boundary layer, wave struct. of interface, statistical anal. 2-8168
- unsteady, implicit noniterative scheme calcs. 2-44703
- unsteady compressible 3-dimens. stagnation point laminar boundary layers, self-similar soln. 2-8111
- unsteady compressible laminar boundary-layer flow within a moving expansion wave 2-50235
- unsteady MHD boundary layer flow, Hall effects, initial value problem soln. 2-8239
- unsteady subsonic flow past on oscillating cascade, numerical anal. 2-50286
- vibrations excited by a harmonic oscillator in Poiseuille flow 2-39991
- viscoelastic liquid, slow flow past circular cylinder 2-35239
- viscous flow induced in half space on wall 2-20627
- viscous flow prediction around fully submerged appended body 2-30104
- viscous fluid steady flow due to rot. sphere 2-20686
- viscous incompressible conducting fluid, hydromagnetic boundary layer flow past a flat plate 2-20759
- viscous incompressible fluid, marginal stability of Couette flow, spin decay 2-50278
- viscous-inviscid interaction model of jet entrainment 2-1246
- viscous-inviscid interactions, AGARD conf., Colorado Springs, CO, USA (Sept.-Oct. 1980) 2-11
- water, pure and saline, plume flows at density extremum 2-35113
- wind flow over rectangular bodies, heat transfer in natural environment 2-8147
- wind tunnel, hypervelocity, flowfield surveying techniques using traversing probe system 2-16409
- wind tunnel flow meas. using laser interferometer skin friction mete 2-20789
- CO<sub>2</sub>, hypersonic flow over blunt bodies, nonequilibrium ionisation, effect of addition of N<sub>2</sub> and Na 2-30174
- H<sub>2</sub>-He flow, over flat plate, laminar boundary layer, effect of C blowing heat transfer 2-35131



**boundary layers continued**

- H<sub>2</sub>O, channel-flow, infiltration into channel bed, kinematic wave model, boundary problem 2-4892  
 SiO<sub>2</sub>, in air flow, blunt body motion at supersonic velocity, particle shattering and thermal stresses 2-35203

**boundary-value problems**

- see also initial value problems*  
 air pollution, boundary condition on dispersal of contaminant 2-22683  
 Backlund transformations connecting different isospectral deformation eqns. 2-28699  
 beam, thin-walled pretwisted, displacement and strain fields for extension, bending, torsion and warping 2-1127  
 biharmonic Dirichlet problem, soln. by direct integral eqn. method 2-10585  
 block tri-diagonal matrix equation, recurrence soln. program 2-23417  
 bodies unbounded in several directions, elastostatics, periodic and slightly periodic boundary value problems 2-23443  
 boundary integral equations, theoretical aspects 2-42858  
 capacitance of quadrilateral, computational method 2-42841  
 classical scattering, boundary-value problems, functional anal. 2-15075  
 composite, effective elastic moduli determ. w.r.t. hollow spherical inclusions 2-41665  
 composite materials, mechanical behaviour, application of stress and strain polarization tensors (*French*) 2-44  
 conducting cylinder within alternating series of AC fed ring windings, centring force (*German*) 2-7700  
 crack edge contact in infinite elastic plane 2-50172  
 creep theory with finite deformations, correspondence principle 2-44662  
 crystal, longitudinal wave propag., continuous model, energetic criterion 2-3391  
 curved finite elements, boundary value problems 2-18902  
 cylinder, finite hollow, mixed boundary value problem of elasticity theory 2-25257  
 decay conditions and limiting behaviour at infinity, of solutions to a system of elasticity equations (*Russian*) 2-6744  
 deformational thermoplasticity, variable elasticity parameters method, convergence 2-6743  
 degenerate elliptic and parabolic eqns., localisation of solns. (*Russian*) 2-48482  
 dislocation linearised gauge theory, traction boundary value problem 2-50637  
 dissipative solids with internal defects and imperfections, stability phenomena 2-16250  
 Earth models, boundary conditions on surfaces of discontinuity of displacements in bodies of planetary dimensions 2-9983  
 eddy current problem, 3-D, boundary integral eqns. of minimum order 2-49624  
 elastic infinite space bounded internally by rigid inclusion, Betti's reciprocal relations for displacements 2-50095  
 elastic inhomogeneous body, crack-tip anal., boundary integral eqn. 2-25301  
 elastic ring reinforced by very rigid fibres, boundary value problems, asymptotic behaviour 2-30020  
 elastostatic boundary value problems, round-off errors comparison in integral eqn. formulation 2-33293  
 elastostatics, nonlinear, boundary value problems, dual formulation 2-23441  
 elastostatics, periodic boundary value problems 2-15026  
 electrodynamics of media with spatial dispersion, boundary value problem 2-44174  
 electrostatic boundary value problem, zero eigenvalue of integral operator removal 2-20226  
 electrostatics, boundary-value problems, variational method soln. 2-20228  
 EM energy refl. and transmission coeffs. at boundary between two absorbing materials 2-826  
 EM scatt. and propag. problems, approximate boundary conditions 2-820  
 EM signals limited in space and time, periodic screen scatt. (*Ukrainian*) 2-34628  
 EM wave propag., subharmonic Bragg effects in almost periodic media 2-29762  
 EM wave propag. in media with arbitrary mag. permeability mag. induction depend. 2-7705  
 half-plane, anisotropic, weakened by hole or cut, boundary value problems of elasticity 2-25250  
 half-space elasticity, solutions (*Chinese*) 2-18888  
 heat conduction, quasi-linear, mixed problem with piecewise discontinuous coeffs. (*Ukrainian*) 2-12002  
 heat conduction, steady-state, general soln. by iterative boundary integral method 2-4686  
 heat conduction with nonlinear material and nonlinear boundary conditions 2-42965  
 heat transfer across thick insulated wall, combined effects of cond., natural convection and radiation (*French*) 2-8017  
 ideal plasticity problem class with inhomogeneous kinematic boundary conditions 2-38435  
 inhomogeneous ageing body, boundary-value creep problem 2-25275  
 integral eqn. method, appl. to stress concentration problems 2-15027  
 integral eqn. method for soln. of anisotropic elasticity problems 2-15028  
 inverse heat conduction problems, review (*Polish*) 2-20668  
 isothermal nonlinear anisotropic filtration, boundary-value problems 2-20749  
 laminar fluid flow, steady, stream function method 2-8110  
 layered media, mech. problem solving 2-8034  
 low anisotropy medium boundary, EM refl. and refraction 2-49666  
 material failure, boundary value problems, variational formulations 2-12093  
 Maxwell's equations, initial boundary value problem, semi-discrete Galerkin approx. 2-63  
 micropolar fluid flow in channel with porous walls, numerical soln. 2-50316  
 microvoid-crack interaction, stress distrib. in ligament calc. 2-39857  
 mixed, for elliptic eqns. in domains with corners, Holder continuity of soln. derivatives 2-10581  
 mixed problem of heat cond. eqn. with nonlocal initial condition (*Russian*) 2-50049  
 Newtonian flow, plane creeping, contour integral formulation 2-50232  
 nonlinear partial differential equations, numerical method of integrating (*German*) 2-42  
 nuclear reactor flux distribution determ. using heterogeneous computing methods (*Rumanian*) 2-24291

**boundary-value problems continued**

- optical elements with arbitrary generatrix configs., elasticity theory, axisymm. linear boundary-value problems 2-16237  
 orthogonal and nearly orthogonal boundary fitted coord. system generation 2-38407  
 plasma flow, Maxwell's eqns., inverse soln. 2-20835  
 plastic deformation problem, uniqueness, stability and variational principle (*Chinese*) 2-4724  
 plastic flow, modularised program, for integrating constitutive eqns. using boundary conditions 2-30028  
 plasticity, boundary element method 2-8051  
 plate, elastic, bending, Reissner's model, boundary integral eqn. soln. 2-44652  
 plate, finite internally cracked, mixed boundary problem 2-4763  
 plate, thin, elastic, flexural motion, nonlinear boundary layer theory near edge 2-12077  
 plate, thin infinite elastic, external crack problem, transform method of soln. 2-12102  
 plates, orthotropic, generalised theory, boundary-value problem soln. 2-28659  
 plates, rectilinear, with mixed attachment condition along the contour, bending problems, homogeneous solns. 2-44664  
 poloidal divertor Tokamak scrape-off layer, asymmetric transport theory 2-40151  
 Pozzi-Friedman problems, boundary variation method 2-20748  
 prebuckled domes, nonlinear three-dimens. anal. 2-20563  
 rectangular domain mixed boundary-value problem, soln. completeness 2-6735  
 relativistic plasma half-space with an external magnetic field 2-20921  
 ribbed high permeable body in the field of massive cylindrical conductor running normal to the ribs, three-dimens. boundary-value problem (*German*) 2-7699  
 Riemann boundary value problem discontinuous matrix coeff., mechanics appl. 2-28662  
 Riemann monodromy problem, isomonodromy deformation equations and completely integrable systems 2-78  
 Schrodinger eqn. with one-turning point, soln. using lattice extrapolation 2-6760  
 shells of revolution, layered, orthotropic, low shear rigidity, nonaxisymm. nonlinear static problem soln. (*Ukrainian*) 2-50113  
 Signorini problem in elastostatics, interior penalty methods for finite element approx. finite element analysis boundary-value problems elasticity 2-18892  
 singularities at corners of three-dimensional stamps in contact problems 2-35095  
 slab, elastic, infinite, containing flat annular crack under torsion, mixed boundary value problem 2-20607  
 sloshing problems, nonlinear, two-dimens., boundary element method anal. 2-25381  
 stationary fresh-water lens, boundary variation method 2-44783  
 stress functions for discrete structures in space 2-20535  
 thermoelasticity with radiating condition, mixed boundary-value problem 2-50115  
 thin cylindrical shells, theoretical anal. of linear dynamic eqns. rel. to error in Donnell assumption and in-plane inertia neglect 2-8032  
 thin plates, eddy current induced by time-harmonic mag. field 2-4439  
 thin shell theory, Green's matrices in static problems 2-28661  
 trimensional plasticity problems appl. of boundary integral equation techniques 2-42859  
 tube, elastic, depressed, flattening study (*French*) 2-4775  
 vibration anal., transfer matrix method, improvement, of computation accuracy by using branching process 2-8076  
 viscoelasticity, linear theory, analytic problems 2-16248

**bowing see bending****brain**

- see also neurophysiology*  
 arterial pulse velocity rel. to intracranial press., US meas. 2-32294  
 auditory brainstem evoked response, review of expt. studies 2-18218  
 auditory brainstem responses, analogue and digital filtering 2-2971  
 auditory brainstem responses, conf., Stockholm, Sweden (Apr. 81) 2-14974  
 auditory brainstem responses in cats, latency rel. to stimulus polarity, intensity and acoustic waveform 2-18220  
 auditory brainstem-evoked response, physiological mechanisms 2-18217  
 auditory cortical neurons in cats, sound stimulus to evoke sustained response to complex sounds, 2-22773  
 auditory cortical neurons in cats, sustained response to tone stimuli 2-22772  
 auditory evoked cortical pots., attenuation by knowledge of stimulus timing 2-37584  
 auditory evoked response, wave I identification using an atraumatic ear canal electrode 2-18319  
 auditory stimuli, cross correlation analysis of averaged slow wave field potentials 2-47612  
 auditory system, innervation, review 2-18216  
 blood circulation restoration after ischemia 2-42130  
 blood flow, cephalic and cerebral, and cardiac output, age related changes in rats 2-6230  
 blood flow, regional, meas. by the <sup>133</sup>Xe inhalation technique (*French*) 2-32317  
 blood flow, regional, meas. using <sup>11</sup>C-methane, <sup>13</sup>N-N<sub>2</sub>O, and <sup>11</sup>C-acetylene 2-6260  
 blood flow and O<sub>2</sub> metabolism in man, quantitative meas., <sup>15</sup>O and positron emission tomography 2-2922  
 blue sensitive cone system responses, visual cortex and arterially perfused eye, cat and monkey expts. 2-22739  
 brainstem acoustic response, inferred patterns of surface pot. distrib. on cat skull 2-18224  
 brainstem acoustic response in diagnosis of acoustic neuroma 2-9843  
 brainstem auditory evoked elec. response in cochlear hearing loss 2-18221  
 brainstem auditory evoked potentials, importance of stimulus phase and reference recording electrode 2-18212  
 brainstem auditory evoked potentials recorded in sleep apneics 2-2876  
 brainstem auditory evoked potentials recorded in sleep apneics 2-6226  
 brainstem auditory evoked pots., acute effects of electroconvulsive therapy 2-52495  
 brainstem auditory evoked pots., Bessel filtering 2-2978  
 brainstem early responses to fast amplitude and freq. tone glides 2-18213  
 brainstem evoked potential, appl. of Wiener filtering 2-18314



**brain continued**

- brainstem evoked response audiometry, technical aspects of stimulation, recording and signal processing 2-18316
- brainstem response audiometry, ear-canal rel. to mastoid electrode placement 2-18317
- brainstem response audiometry, improved recording technique using a meatal electrode 2-18318
- brainstem response audiometry, normative clinical data 2-18322
- brainstem response audiometry, problems in analogue filtering 2-18321
- brainstem response audiometry, waveform variation anal., FFT and inverse FFT appl. 2-18320
- brainstem response audiometry and electronystagmography in auditory pathway lesion diagnosis, comparative study 2-9844
- brainstem response audiometry and gestational age in the newborn 2-9817
- brainstem response audiometry following severe head trauma 2-9814
- brainstem response audiometry in brainstem lesions 2-9813
- brainstem response audiometry in chronic alcoholism 2-9815
- brainstem response audiometry in operatively verified cerebello-pontine angle tumours 2-9812
- brainstem response audiometry in paediatrics 2-9845
- brainstem response in conductive hearing loss 2-18222
- brainstem response to clicks in normal hearing and steep high-freq. hearing loss 2-18223
- brainstem responses in multiple sclerosis, comparison of auditory and visual responses 2-9816
- brainstem responses to filtered sine-waves for freq. specific determ. of auditory sensitivity, animal expts. 2-18219
- cerebellar neurons, DNA struct. alterations after whole-brain irradi., rat expts. 2-18259
- cerebral blood flow and central haemodynamics in long-term period of chronic radiation disease (*Russian*) 2-27812
- cerebrospinal fluid, instrumentation for hydrodynamic studies in man 2-47738
- cerebrovascular disease, non-invasive diagnosis, review of techniques 2-32352
- circumscribed lesions diagnosis, use of EEG source derivations 2-52662
- click-evoked electric brainstem responses, use in audiological diagnosis 2-2972
- cortical unit activity during intermittent photic stimulation in *Papio papio* 2-37542
- cyclic nucleotides in brain, synthesis and degradation after a high dose of ionising radiation 2-18267
- dementia, degree of cerebral dysfunction rel. to oculomotor reaction time 2-37546
- Doppler sonography of extra-cranial arteries supplying the brain (*German*) 2-42179
- echolalic autistic individuals, central auditory nervous system dysfunction 2-52506
- electrical stimulation and heart rate control in monkeys 2-37531
- electroconvulsive shock, increase in tyrosine hydroxylase activity in rat brain and adrenal gland 2-47594
- electrophoregrams of brain struct., proteins, automatic processing (*Russian*) 2-47757
- emission tomograph for noninvasive meas. of brain blood perfusion 2-32327
- encephalovolumeter, noninvasive meas. of changes in brain volume of cerebral pulsation 2-37705
- epileptic discharge, cats, spread restriction by Bragg peak intracranial irradi. by Ne ions 2-52568
- epileptic unit activity, modelling variability of interspike intervals 2-14224
- evoked potential by elec. stimulation of human peripheral nerves 2-18226
- evoked potentials, averaged, a posteriori time varying filtering 2-14179
- evoked potentials, averaged, a posteriori time varying filtering 2-14180
- higher cortical activity, discrimination in EEG patterns, hierarchical non-parametric classification strategy 2-6279
- human neuron activity dynamics hardware-software complex (*Russian*) 2-47730
- hyperthermic-induced seizures in rat pups, model for febrile convulsions in children 2-22713
- hypothalamas, lateral, regulation of electrocortical activity, normal and split-brain cats 2-18187
- hypothalamic thermal sensitivity of rabbits, effect of heat acclimation 2-18178
- intracranial pressure, closed-loop control 2-27927
- intracranial pressure, microprocessor-based monitoring and trending system 2-9888
- lesions study, 3D computer reconstruction 2-47685
- magnetic auditory evoked fields, dipole orientation 2-52494
- modulation transfer functions of human visual system, mag. field meas. 2-42086
- molluscan brain, single neuron, quasi-electrostatic influence, freq. modulation 2-14218
- monograph on EEG-brain dynamics 2-13
- motor cortex, possible source of orthoses control signals 2-27933
- movements in rabbits, recording technique 2-18351
- neurophysiological tracing, temporal retina projection to contralateral visual cortex, cat 2-22747
- optic tectum, rattlesnake, IR and visual information integration 2-32204
- pattern processing and slow-wave activity in visual cortex of cat 2-52485
- pattern visual evoked pot., age-dependent changes in amplitude 2-18201
- phantom materials for radiation dosimetry, liqs. and gels 2-47715
- photon irradiation, tolerance of mature human central nervous system 2-2901
- potential shifts, slow, in humans during forewarned reaction, auditory and visual stimuli 2-18188
- potentials, investig. of local field non-uniformities (*Russian*) 2-47756
- pyramidal cells electrotonic coupling, rat hippocampus expts. 2-32200
- radiation therapy, tolerance to multiple courses 2-2900
- regional cerebral blood flow meas., NMR flowmeter focusing techniques 2-14318
- rheoencephalograms, structural approach to classification (*Russian*) 2-47731
- scanning, by single photon emission tomography, clinical appls. (*Dutch*) 2-9864
- single emission tomography research 2-6262
- somatosensory evoked potentials to peroneal nerve stimulation, cortical and subcortical 2-37591
- SQUID magnetometer, 7-channel, for brain research 2-32351
- striate cortex, cat, silent periodic cells 2-37556

**brain continued**

- temperatures in running quail 2-52441
- thermosensitive neurons in sunfish brains 2-32183
- tumours, human, <sup>1</sup>H NMR relax. times (*French*) 2-32309
- visual cortex, phase relationships between adjacent simple cells 2-6224
- visual cortex of cats, spatial computation performed by simple and complex cells 2-37553
- visual evoked cerebral pots. in humans by moving dynamic random dot stereograms 2-37543
- visual evoked cortical pot. responses to target flashes, photopic annulus luminance level effects 2-42093
- visual evoked potential, automatic detect., meas., and documentation: microprocessor appl. 2-52648
- visual evoked potential of strabismic amblyopes, binocular facilitation 2-52483
- visual evoked potentials, comparison of 2 types: pattern reversal and eye movement 2-37544
- visual evoked potentials, regional relationship in infants and school-aged children 2-37541
- visual evoked potentials, steady state, psychophysical correlates 2-52491
- visual pattern reversal evoked pots., effects of spatially structured stimulus fields 2-18200
- visual structures, neuronal organisation in rats, review 2-22748
- X-irradiation effects, rat, histology in 1st post-irrad. year 2-47636
- X-irradiation effects in C<sub>3</sub>H/He mice 2-22800

**brain models**

- see also learning systems; neural nets
- cognition, dynamic brain electrical patterns 2-14236
- deterministic neural net, relation between eigenvalues and memory retention 2-42085
- electrical source location in human brain, visually evoked scalp potential 2-14237
- electrocortical activity, math. model for lateral hypothalamic regulation 2-52468
- thalamocortical interactions model, attenuation ratio 2-18193
- visual cortex input layers, simplified model 2-18203

**braking**

- wayside energy storage for recuperation of potential energy from freight trains 2-22663

**brass**

- $\alpha$ -brass, intergranular creep cavities, growth mechanism 2-41685
- $\alpha$ -brass, stress corrosion cracking in ammoniacal soln., effect of crosshead speed and temp. 2-13844
- cold worked, low cycle fatigue strength in 2-phase 2-17723
- corrosion prevention in steam plant cooling ccts., chemical indices limit values (*Rumanian*) 2-17765
- $\beta$ -Cu-Zn(-Al), anelastic effects after quenching 2-47097
- ductile, significance of initiation, propagation and closure of microcracks in high cycle fatigue in  $\alpha$ -phase 2-52019
- electrohydroimpulse working, effect on struct. and props. 2-17777
- fracture, work hardened thin specimens, role of anisotropy coeff. R (*French*) 2-22317
- high-strength, GK-CuZn34Al2, EPMA study of inhomogeneities (*German, English*) 2-52262
- internal function in conc. alloys 2-45344
- liquid, free energy and other thermodynamic props., conc. depend. 2-12779
- local densities of states, recursion method 2-5360
- magnetoresistance, 77 to 300K 2-36017
- plastic anisotropy, estimation, effect of tension texture (*Polish*) 2-9365
- sheets, weakly textured, biaxial stretching, influence of sheet thickness and grain size 2-9378
- short-range ordering kinetics, vacancy parameters, quench and irradi. study 2-5111
- short-range ordering kinetics, vacancy parameters, quench and irradi. study 2-8512
- stress corrosion cracking monitoring, by acoustic emission 2-41861
- structure and props. changes of type L62, on heating and deform. (*Russian*) 2-5908
- substrate, corrosion of Cr finished electrodeposited Ni-Fe alloy 2-47261
- surface (110), adsorbed O, vibr. spectra, EELS study 2-51753
- surface temp. distrib. rel. to high-power US heating, thermographic investigation, sites of rapid localized heating 2-16177
- waveguides, rectangular, vibr. strength, improvement by metal treatment (*Russian*) 2-31773
- Al, stress corrosion cracking, influence of As and P 2-13842
- Al-brass, assessment of quality of surface film on cooling water side of condenser tubes 2-5993.

**Bravais lattice** see crystal atomic structure**brazing** see brazing**brazing****see also soldering**

- core flow test loop fuel rod simulators, joining techniques 2-39129
- Al-Si filler metal, influence of element additions for Al-brazing optimisation (*Chinese*) 2-22223
- Al-stainless steel bimetal, mech. strength and heat resist. 2-27251
- Au-Ni (18 wt%), brazing alloy spreading high temp. obs. by oxide penetration on stainless steel 2-5984
- n<sup>+</sup>-Si/Al solder, ohmic contact, invest. of form. (*Japanese*) 2-5462

**breakage** see fracture**breakdown (electric)** see electric breakdown**breakdown (mechanical)** see manufacturing processes**breakdown diodes** see avalanche diodes; Zener diodes**breeder reactors** see fission reactors**bremstrahlung**

- see also electron radiation; gamma-ray spectra; gamma-rays; X-ray emission spectra; X-rays
- analysis by photon activation with 30 MeV bremsstrahlung 2-22514
- atmosphere, depend. of X-ray bremsstrahlung bursts profile on precipitating particles pitch-angle distrib. 2-6494
- beta particles bremsstrahlung recording, tritium concentration in tritium targets determ. 2-19825
- channelling radiation, difference and connection 2-27012
- charged particle induced radiation in crystals, conf., North Caucasus, USSR (May 1980) 2-33229
- cross section close to high freq. limit for short range pot., resonance theory 2-15899
- electron energy loss, bremsstrahlung transport, simulation, 50 keV to 80 MeV (*French*) 2-51733



**bremstrahlung continued**

- electron trajectory simulation, by Monte Carlo method, conf., Toulouse, France (May 1981) (*French*) 2-48396  
 emission and scattering techniques, cong., Alghero, Italy (Sept. 1980) 2-42795  
 gas bremstrahlung from electron storage rings 2-49203  
 glow discharge, millimeter wave interaction, current-voltage variations, bremstrahlung emission 2-50471  
 glow discharge mm-wave interaction 2-50415  
 gravitons, cross section calcs. (*Russian*) 2-23536  
 isochromat spectroscopy, in solids 2-46835  
 photoproton spectra meas., with suppression of electron background 2-19913  
 spectra sampling for Monte Carlo simulations 2-52612  
 stimulated bremstrahlung radiation in inelastic electron+atom collisions (*Russian*) 2-39497  
 stimulated emission, electrons in mag. field, appl. to free electron laser 2-34775  
 supernovae, Type II, bremstrahlung emission from circumstellar shell 2-33052  
 Van de Graaff accelerator, bremstrahlung characts. and particle trajectories in inclined field tubes 2-11313  
 water, pair production probability and LPM bremstrahlung 2-24526  
 Ar, continuous optical discharge, theoretical model 2-25600  
 Ar, electron bombardment, bremstrahlung fluoresc. obs. 2-19996  
 Be+H<sup>+</sup>, quasifree electron bremstrahlung 2-19990  
 $\gamma$ -Ce, 4f levels, XPS and bremstrahlung isochromat spectroscopy studies 2-27052  
 CeAl<sub>3</sub>(Sn<sub>3</sub>)(Pd<sub>3</sub>), 4f levels, XPS and bremstrahlung isochromat spectroscopy studies 2-27052  
 Cu (001), k-resolved inverse photoemission, UV isochromat spectra 2-46811  
 Kr, electron bombardment, bremstrahlung fluoresc. obs. 2-19996  
 La, bremstrahlung isochromat spectroscopy model 2-41444  
 Ne, electron bombardment, bremstrahlung fluoresc. obs. 2-19996  
 Ni (001), k-resolved inverse photoemission, UV isochromat spectra 2-46811  
 Ni, inverse photoemission spectra calc. 2-2363  
 O, positron bremstrahlung spectra obs. 2-20194  
<sup>189</sup>Os, nuclear excitation by electron transition following K-shell ionisation by bremstrahlung 2-7081  
 Pb, pair production probability and LPM bremstrahlung 2-24526  
 Pd, inverse photoemission spectra calc. 2-2363  
 Pt, inverse photoemission spectra calc. 2-2363  
 Pt surfaces, direct optical interband transitions in bremstrahlung isochromat spectra 2-46810  
 Si, cryst., electron irradi., coherent bremstrahlung, planar channelling radiation, band struct. 2-13584  
 U, positron bremstrahlung spectra obs. 2-20194  
 Xe, electron bombardment, bremstrahlung fluoresc. obs. 2-19996

**brewing industry**

- heat pumps, gas engine fed, for malting drying kilns (*French*) 2-47514

**bridge circuits**

- see also bridge instruments  
 AC, automatic phase balance, theory (*Chinese*) 2-3573  
 control cct. for temp. regulation and other bridge applications 2-3576  
 multiplexed electric sensor pairs bridge cct. arrangement with differential amplifier 2-48685  
 self-balancing high-precision AC Wheatstone bridge for observing diffusion processes in electrolyte solutions 2-23673  
 transducer for meas. linear dimensions, errors evaluation 2-28847  
 US motional bridge circuits, response under resistive and reactive loads 2-44625  
 wheatstone full bridge configuration, strain gauge displacement transducer 2-179

**bridge instruments**

- see also bridge circuits  
 8-element strain gauge bridge 2-48693  
 AC magnetic props. meas., automatic microprocessor based technique (*Chinese*) 2-23677  
 capacitance loss bridges, unifying admittance calc. 2-6878  
 Poggendorf and Lindeck-Rothe zero-load signal measurements methods (*German*) 2-10824  
 Poggendorf zero load signal measurement method (*German*) 2-6874  
 pressure meas. using capacitive transducers, use of coaxial cable with double shielding 2-23623  
 thermometer for oceanographic research, Pt-wire based 2-6455  
 Wheatstone, pressure sensor appl. (*Dutch*) 2-19094  
 Wheatstone bridge with carbon-manganin gauge, nuclear underground test appl. 2-38640

**Bridgman method see crystal growth from melt****brightness**

- see also sky brightness  
 Algol binaries, totally eclipsing, cool subgiants brightness var. due to transfer events, obs. 2-24897  
 astronomical objects, population distribns. determ. via statistical anal. under incomplete knowledge of data 2-38063  
 massive black holes, stationary, spherical symmetric accretion rel. to radiation spectrum and luminosity 2-53311  
 Broca-Sulzer flash duration exponent as function of retinal eccentricity 2-47597  
 3C 273, flares on dynamo driven accretion disc as source optical variability 2-48272  
 cinematographic projection systems, light flux and illum. uniformity (*Czech*) 2-10894  
 comet nucleus, brightness temp. depend. on wavelength for different models, spacecraft obs. possibility 2-38128  
 comets, effect of dust zoning of rapidly rotating nuclei on light curves 2-32954  
 dwarf galaxies, catalogue and integrated magnitudes and mean colours in UVB system 2-10337  
 electroluminescent devices, high-field thin-film, physical concepts, review 2-51711  
 elliptical galaxies, dissipative processes rel. to corals. between luminosity, metallicity and vel. dispersion 2-14930  
 galactic UVB surface brightness, Helios 1 and 2 photometry 2-18797  
 galaxies, early-type, in clusters, colours rel. to supernovae and star form. 2-10462  
 galaxies, elliptical, intrinsic shape test, use of surface brightness-axis ratio relation 2-6540

**brightness continued**

- galaxies, luminosity-vel. dispersion relation for bulges of spiral and S0 galaxies 2-28542  
 galaxies active nuclei, effect of galaxy mergers on luminosity and total energy prod. 2-38302  
 galaxies of Virgo cluster, luminosity function 2-38303  
 IC 708, head-tail radio galaxy, brightness and polarisation distribns. rel. to orbital motion 2-28544  
 image intensity control produced by spatial freq. sampling 2-854  
 Innisfree meteorite, photographic anal. of fragmentation, dynamics and luminosity 2-14828  
 interstellar masers, influence of geometrical shape on luminosity 2-48307  
 Io post-eclipse brightening, search by Voyager spacecraft 2-3213  
 Juno, evidence for colour vars. on surface from photoelectric UVB obs. 2-38097  
 Jupiter, spectrophotometry of Great Red Spot at 0.6 to 1.1  $\mu$  2-6565  
 BL Lacertae objects, optical brightness variations (1901 to 1980) 2-33140  
 LED and optical fibre end, emitted luminous intensity, parametric representation using Legendre polynomials (*French*) 2-33611  
 light meas., physical characteristics of light units 2-19073  
 lighting, human eye adaptation effect on brightness measurement (*Japanese*) 2-6887  
 liquid crystal display, transmission type, brightness-luminance ratio, psychological expt. 2-18211  
 luminance contrast threshold, foveal adaptation level, background luminance (*Japanese*) 2-9799  
 luminescence investigations, vision research implications 2-52488  
 luminous-efficiency functions for point sources 2-47600  
 M15, X-ray globular cluster, centre struct. anal. and surface brightness distrib. UVBRH, obs. (*Russian*) 2-53340  
 Mars twilight sky brightness, dust effects 2-14796  
 meteors brightness curves, flares at end 2-23261  
 Moon distance from Earth, apogee and perigee var., brightness var. 2-10342  
 nebulae surrounding Wolf-Rayet stars, brightness in O III and H $\alpha$ +N II lines 2-53268  
 Neptune upper atmosphere rot., IR brightness obs. 2-32948  
 NGC 3862 (3C 264), head-tail radio galaxy, polarised intensity mapping at 0.6 to 5.0 GHz 2-28573  
 NGC 6814, Seyfert 1 galaxy, rapid X-ray variability obs. 2-28554  
 ocean, remotely sensed spectral radiances rel. to seawater diffuse attenuation coeff. 2-32541  
 ocean surface radiation temperature, response to internal waves (*Russian*) 2-10066  
 ocean surface skin, temperature difference from brightness temp. and temp. obs. 2-47895  
 OI 090.4 (=CSV 1180), BL Lacertae object, brightening in 1915 and (1927) 2-28562  
 XX Ophiuchi, shell star, 1979-80 brightness decrease, spectral and UVB obs. (*Russian*) 2-38219  
 Periodic Comet du Toit-Hartley (1982b, 1982c), changes in brightness and appearance (February 1982) 2-48185  
 periodic Comet du Toit-Hartley (1982b, 1982c), positions and visual magnitudes, (1982 February 18 to 22) 2-48184  
 Periodic Comet Encke, nucleus and brightness correl. with orbit position 2-10360  
 Periodic Comet Kearns-Kwee (1981h), total visual magnitudes and coma diameters (1981 November 27 to December 3) 2-28413  
 Periodic Comet Schwassmann-Wachmann 1, outburst obs. and visual magnitude estimates, (1982 January 16 to 25) 2-38136  
 Periodic Comet Schwassmann-Wachmann 1, total magnitude estimates, (1982 January 27 to February 2) 2-42654  
 Periodic Comet Swift-Gehrels (1981j), total visual magnitude estimates, (1981 October 17 to 21) 2-14806  
 Periodic Comet Swift-Gehrels (1981j), total visual magnitude estimates, (1981 December 4 to 1982 January 28) 2-48183  
 pyrometer, calibration, mounted in heliostat type solar furnace (*Japanese*) 2-33533  
 quasar reddening, implications for intergalactic dust and microwave background spectrum 2-28581  
 quasars, luminosity function rel. to near interpretation of V/V<sub>m</sub> test 2-28577  
 radio sources with synchrotron self-absorption, brightness temp. 2-42758  
 radiometric definitions and measurements (*French*) 2-10841  
 Sagittarius A West (galactic centre), 5 GHz flux density vars. from high resolution VLA obs. 2-28550  
 Saturn E-ring, brightness and optical thickness, obs. 2-32944  
 Seyfert galaxies, comparative bolometric luminosities of Seyfert 1 and Seyfert 2 galaxies 2-3308  
 solar corona maximum brightness curves comparison with interplanetary sector pattern 2-32953  
 solar photosphere, brightness fluctuations and supergranulation (*Russian*) 2-6579  
 standard lamp luminance nonuniformity rel. to photometer calibration error 2-208  
 Sun, corona, longitudinal and latitudinal distrib. interpretation 2-3237  
 Sun, coronal holes, brightness at 80 and 160 MHz, interpretation 2-3232  
 Sun, granule-intergranular lane contrast at 5200 Å and 6300 Å, obs. 2-53225  
 supernova remnants, nuclear gamma-ray line fluxes 2-10506  
 surface gloss meas., optical fibre sensor development (*Japanese*) 2-20424  
 threshold vision adjacent to luminance edge, spatiotemporal characts. 2-14243  
 visual acuity in traffic sign viewing, luminance changes effects 2-42107  
 X-ray sources in LMC, luminosity distrib., from soft X-ray study 2-6545  
 inner zodiacal light, brightness distrib. from Salyut-6 spacecraft pictures (*Russian*) 2-53167  
 BaSO<sub>4</sub> paint coatings, absolute luminance coeffs. 2-49843  
 InSn<sub>2</sub>O<sub>4</sub>-Ta<sub>2</sub>O<sub>5</sub>-ZnS:Mn-Ta<sub>2</sub>O<sub>5</sub>-Al, thin film struct., DC electrolum. 2-46764  
 Xe arc lamp, radiant flux stabilisation 2-25091  
 ZnS:Cu phosphor, relation between lattice parameter and particle size, brightness lifetime factors 2-22092  
 ZnS:Mn thin film electrolum. device, electrolum. characts. depend. on device parameters 2-31559  
 ZnS:Mn(TbF<sub>3</sub>) AC thin film device, electrolum. mechanism 2-46763



**Brillouin scattering** *see Brillouin spectra***Brillouin spectra***see also stimulated Brillouin scattering*

alkali halide solns., struct. relax. and Brillouin scatt. 2-51608  
 n-alkanedinitriles, Rayleigh-Brillouin light scatt. 2-51618  
 alkylammonium manganese chlorides, Brillouin scatt. and linear birefringence 2-31518  
 aniline hydrobromide, light scatt. study of ferroelastic transitions 2-35668  
 binary liquid mixtures, Rayleigh-Brillouin scatt. spectra 2-51611  
 butyloxy-benzilidene octylaniline, Brillouin scattering in  $S_A$  and  $S_B$  phases 2-2299  
 chloroform-ethanol mixtures bulk viscosity, relax. time of freq. depend. part, Brillouin scatt. study 2-8578  
 chloromethane, low temp. liqs., Brillouin scatt. and refractive index meas. 2-31514  
 cubic crystals, surface Brillouin scatt., anisotropy effects 2-5726  
 dibutyl phthalate, supercooled liq., depolarised Rayleigh-Brillouin scatt. from shear waves 2-46620  
 dichloromethane, low temp. liqs., Brillouin scatt. and refractive index meas. 2-31514  
 enhanced Brillouin scattering involving surface plasmon polaritons 2-36658  
 n-p-ethoxy-benzyliden-p-n-butylaniline, isotropic phase, Brillouin scatt. under high press. 2-51619  
 fluid-solid interfaces, transport processes, fluid layer equil. fluctuations 2-50999  
 Gaussian stationary field with Brillouin spectrum, photon counting statistics 2-24984  
 magnetic surface excitations, Brillouin scatt. study, review 2-51557  
 magnons, surface and interface mag. struct. near surface, review 2-21783  
 MBBA, isotropic phase, Brillouin scatt. under high press. 2-51619  
 methyl iodide, liquid, vibr. relaxation, US velocity, light scatt. study 2-16721  
 moderately dense gas mixtures, light scatt. in hydrodynamic regime 2-35268  
 nitroethane-isooctane, critical binary mixture, specific heat, Rayleigh-Brillouin scatt. 2-51620  
 plasma, EM beam-electrostatic wave interaction, Brillouin scatt. 2-35296  
 plasma, ion sound wave damping, Brillouin scatt. saturation 2-44836  
 poly(vinylidene fluoride) films, subject to stretching, Brillouin scattering studies 2-9435  
 polyacenes, crystals, sound vel., compressibility and thermal expansion, linear chain model 2-45401  
 polyethylene, low mol. wt., thermal behaviour studied by NMR and refined Brillouin scattering technique 2-51621  
 polyethylene terephthalate oriented films, elastic constants studies using Brillouin scatt. 2-45316  
 polyethylene-terephthalate films, obs. of orientation loss above glass transition temp., Brillouin scattering 2-25760  
 polymer gels, Brillouin light scatt. 2-22039  
 p-phenyls, crystals, sound vel., compressibility and thermal expansion, linear chain model 2-45401  
 p-polyphenyls, phase transitions, Brillouin scatt. study 2-51614  
 polypropylene, hydrostatically extruded, Raman and Brillouin scatt. spectra, chain orientation effects 2-46619  
 polystyrene, phonon damping at hypersonic freq. 2-45398  
 resonant Brillouin scattering intensities from multicomponent exciton-polaritons 2-2302  
 solids, light scatt. spectra, surface and size effects, book contrib. 2-51605  
 spectrometer, computer control, software and apparatus 2-3632  
 tetrachloro-p-benzoquinone, displacive transition, elastic and photoelastic anomalies 2-35677  
 n-tetracosane, thermal behaviour studied by NMR and refined Brillouin scattering technique 2-51621  
 TGS, Brillouin scatt. in pure and  $\gamma$ -irrad. crystals 2-36656  
 thin films, phonon modes, elastic consts., surface phonons 2-5767  
 time reversal symmetry and the Raman scattering by crystals 2-45464  
 trichloromethane, low temp. liqs., Brillouin scatt. and refractive index meas. 2-31514  
 trifluoromethane, low temp. liqs., Brillouin scatt. and refractive index meas. 2-31514  
 tris-saccosine calcium chloride, ferroelec., phase transition, Raman and Brillouin scatt. study 2-36617  
 $Ag_2AsS_3$ , proustite, Brillouin scatt. spectra 2-46629  
 $AgBr(Cl)$ , acoustic phonon anomaly, Brillouin scatt. study 2-46626  
 AgI, Rayleigh-Brillouin spectra in  $\alpha$ - and  $\beta$ -phase 2-46625  
 $\beta-Al_2O_3$ , polarized Brillouin scatt. 2-17500  
 Au film, surface Brillouin scatt., ripple and elastooptic coupling 2-5727  
 $Ba(NO_3)_2$ , US absorpt. and Brillouin scatt. 2-35603  
 $BaTiO_3$ , dielectric dispersion, Brillouin spectra study 2-46456  
 $BiVO_4$ , Brillouin and Raman scatt. study of phase transition, soft acoustic mode 2-17474  
 $Ca_3Ga_2Ge_2O_{12}$ , Raman and Mandel'shtam-Brillouin light scatt. 2-51601  
 CdS, acoustic domains, shock excitation and nonlinear process suppression, Brillouin scatt. meas. 2-1717  
 CdS, Brillouin scatt. via surface exciton polaritons, theory 2-46622  
 CdS,  $p_{44}$  photoelastic coeff. dispersion at 77K 2-36598  
 CdS, resonant Brillouin scatt. in opaque region, piezobirefringence theory 2-51616  
 CdS, surface Brillouin scatt., elasto-optic and ripple mechanisms 2-5725  
 $Ca_2O-Na_2O-SiO_2$  glasses, Brillouin spectra, US vels., and mech. props. 2-13501  
 Cu/Nb superlattices, SAW anomaly, Brillouin scatt. meas. 2-40663  
 CuBr, resonant Brillouin scatt. 2-2300  
 $Cu_2O$ , reson. Brillouin scatt., expt. 2-2298  
 $Cu_2O$ , reson. Brillouin scatt., theory 2-5723  
 D $_2$ , Rayleigh Brillouin spectra meas. 2-43926  
 $Gd_2(MoO_4)_3$ , ferroelec.-ferroelastic, phase transition, Raman and Brillouin scatt. study 2-36617  
 H $_2$ , Rayleigh Brillouin spectra meas. 2-43926  
 He-Xe ( $H_2$ ) ( $D_2$ ), Rayleigh Brillouin spectra meas. 2-43926  
 He-Xe( $H_2$ )( $D_2$ ), moderately dense gas mixtures, light scatt. in hydrodynamic regime 2-35268  
 In, Ga $_{1-x}$ P, Brillouin scatt. study, comp. depend. 2-5724  
 $KH_{1-x}D_xPO_4$ , polarisation relax., light scatt. study 2-41261  
 $H_2PO_4$ , quasielastic light scatt., nonequilib. thermodynamic approach 2-31515  
 K $NiF_6$ , nearly cubic antiferromag., Brillouin scatt. and US propag. 2-46355

**Brillouin spectra continued**

$K_2SeO_4$ , ferroelec., phase transitions, Brillouin spectra study 2-31516  
 $LaP_2O_{14}$ , Brillouin-Rayleigh scattering central peaks near ferroelastic transition 2-31517  
 $LaP_2O_{14}$ , coupled optic and acoustic modes, press. depend. near ferroelastic transitions 2-45511  
 $LaP_2O_{14}$ , ferroelastic transition, under high hydrostatic press., Raman and Brillouin scatt. study 2-30585  
 $LaSF_7$ , metallic glass, phonon damping at hypersonic freq. 2-45398  
 $Li_2SO_4$  rotator phase with fast ion cond., neutron, X-ray and Brillouin studies 2-21117  
 $(NH_4)_2 ZnCl_4$ , phase transitions, Raman and Brillouin scatt. study 2-31473  
 $NH_4Cl(Br)$ , light scatt. study of dynamic critical phenomena 2-41377  
 $NH_4LiSO_4$ , ferroelec. phase transition, Brillouin scatt. study 2-17421  
 $NaCN$ , cubic, absence of dispersion in elastic shear stiffness  $c_{44}$ , Brillouin scatt. 2-45319  
 $NaCl$ , phonon damping at hypersonic freq. 2-45398  
 $NaNO_2$ , incommensurate (antiferroelec.) phase transition, Brillouin scatt. study 2-46512  
 $NaNO_3-KNO_3$  binary melt, Brillouin scattering (*Japanese*) 2-46623  
 $PbI_2(2H)$ , reson. Brillouin scatt. of exciton polaritons 2-46621  
 $Pb(NO_3)_2$ , US absorpt. and Brillouin scatt. 2-35603  
 $RbCN$ , rotation-translation-coupling and lattice dynamics, elastic consts. determ. by Brillouin scatt. (*German*) 2-5198  
 $Si-Al(AlO_3)$  interface acoustic phonons, Brillouin scatt. study 2-51615  
 $SiO_2$ , vitreous, elastic props., US and Brillouin scatt. meas., 10 to 300K 2-12688  
 $SiO_2$ , vitreous, phonon damping at hypersonic freq. 2-45398  
 $Sr(NO_3)_2$ , US absorpt. and Brillouin scatt. 2-35603  
 $Tb_2(MoO_4)_3$ , ferroelec.-ferroelastic, phase transition, Raman and Brillouin scatt. study 2-36617  
 $V_2O_{3-x-1}$  ( $x=3.4,5$ ), optical props. and electron struct. (*Russian*) 2-5653  
 $Xe$ , Rayleigh Brillouin spectra meas. 2-43926

**Brillouin zones***see also band structure*

alkali graphite intercalation compounds, phonons 2-50787  
 alkali halides, crystal surface, semiempirical approach to electronic struct. 2-46092  
 CC, Si, far IR absorption due to two-phonon difference process 2-26898  
 cubic crystals, light induced spin polarised electrons at  $\Gamma$ -point 2-27050  
 energetic zone structure, of 5d transition metals (*Russian*) 2-8751  
 graphite intercalation cpds., electronic dispersion relations, energy bands 2-12956  
 II-VI compound semiconductors, transverse effective charge 2-16748  
 incommensurate system, lock-in wave vectors, symmetry determ. 2-41287  
 intra-band joint densities of states, Brillouin zone integration 2-45806  
 molecular crystal, coupled rot.-displacement motion, continuum description validity 2-21049  
 transition metal oxides, normal modes of vibrs. 2-26003  
 Al (111) film, surface reson. in two-dimens. Brillouin zone 2-17133  
 Ar, solid, transition to metallic state, band struct. 2-26300  
 $CsPbCl_3(Br_3)$ , electronic struct., optical and photoemission spectra 2-40783  
 $ErAl_3$ , thin film, occurrence of modulated phases 2-8734  
 $Er_{1-x}Gd_xAl_3$  thin film, occurrence of modulated phases 2-8734  
 n-GaAs, positron annihilation study of radiation defects due to proton irradi. 2-2366  
 GaAs:Nb, impurity luminesc., intracentre transitions 2-51703  
 GaP:Nb, impurity luminesc., intracentre transitions 2-51703  
 GaSe, polymorphic stability, band struct. and phonon spectra study 2-40786  
 Kr, solid, transition to metallic state, band struct. 2-26300  
 Ne, solid, transition to metallic state, band struct. 2-26300  
 $Si(100)$  ( $2\times 1$ ), dangling- and dimer-bond related surface electron bands, 2-21647  
 Xe, solid, transition to metallic state, band struct. 2-26300  
 $Zn_3As_2$ , band structure at Brillouin zone centre 2-45830  
 $ZnGa_2S_4$ , band struct. 2-5346  
 $ZnGa_2Se_4$ , band struct. 2-5346  
 $Zn_3P_2$ , band structure at Brillouin zone centre 2-45830  
 ZnS, surface (110) electronic band struct., intrinsic 2-40982  
 ZnSe single cryst., polished and etched, reflectivity and electroluminescence 2-36604  
 ZrS $_2$ , permittivity, matrix elements effect 2-31365

**bristles** *see fibres***brittle-ductile transitions** *see ductile-brittle transition***brittle fracture***see also ductile-brittle transition; notch brittleness*

ABS terpolymer, impact strength, effect of thermal ageing 2-31784  
 beam, local probability of failure, statistical theory 2-25300  
 bicrystals, steel, austenitic stainless, intergranular fracture 2-52004  
 ceramics, subcritical crack growth, brittle fracture (*Russian*) 2-5940  
 chevron V-notched bend bar fracture/toughness specimen, eval. 2-5994  
 controlled microcleaving process for crystalline materials 2-12673  
 creep rupture detection at welds by AE 2-41823  
 critical stress intensity factor, determ. at brittle crack arrest 2-13797  
 cutting tools of complex structure, brittle fracture mechanism (*Japanese*) 2-22308  
 disc in elastobrittle state, thermally loaded, kinetics and load-bearing capacity 2-39865  
 durability isotherm theory, and limiting characts. 2-21227  
 dynamic fracturing, of brittle bodies 2-5930  
 elastic brittle material, in mode III, speed of propag. of damaged zone (*French*) 2-35087  
 explosives, brittle behaviour during high acceleration 2-2572  
 flintworking, crack front configuration, geometrical effect 2-25313  
 fragmentation, dynamic, local inertial effects, energy balance calc. 2-50181  
 glass, subcritical crack growth, brittle fracture (*Russian*) 2-5940  
 glass, under combined action of thermal and mechanical loads 2-31790  
 glass plates, acoustic emission in fracture 2-31776  
 graphite, subcritical crack growth, brittle fracture (*Russian*) 2-5940  
 Hertzian contact stress, effect of thin compliant protective coating 2-47207  
 high temperature, crack growth by micropore coalescence 2-39858  
 loci under bi-axial stress state, probabilistic anal. 2-1142  
 macrocrack formation and acoustic emission in brittle fracture 2-12676  
 metal, FCC, cleavage fracture 2-5954  
 metals, low deformability, defects and long-term strength calc. 2-41727



**brittle fracture** continued

- models of inelastic deformation of materials, applic. 2-50748  
 multiaxial probability distrib. function relative coeff. 2-4755  
 photovoltaic solar modules, mechanical failure anal., fracture mechanics appl., cracking mechanisms for Si and cover materials 2-42022  
 plate, with periodic system of holes, cracks from contours 2-25320  
 plate with circular hole, failure resulting from array of surface cracks 2-50176  
 PMMA, glassy, brittle fracture, crazing, ductile-brittle transition 2-47165  
 polycrystalline hollow cylinder, thermal loading, energy conditions for brittle fracture (*Russian*) 2-13808  
 polyethylene-thermoplastic rubber blends, mech. props., depend. on shear and thermal history 2-13810  
 polymers, crystalline, tensile failure, brittle fracture, crazing, microcrack growth, free radical prod. 2-47164  
 polymers, high, fracture phenomena in cutting process, cutting conditions 2-47166  
 polystyrene, glassy, brittle fracture, crazing, ductile-brittle transition 2-47165  
 quasi-brittle dynamic fracture with damping due to crack edge failure zones 2-50178  
 rock deformation, parting in giant garnets as indicator of late brittle deform. 2-18424  
 stainless steel bicrystals; intergranular fracture 2-52004  
 steel, alloy, AE from cleavage microcracking 2-52037  
 steel, alloy, heat resisting, precip. hardening, fatigue props., low cycle, temp. and strain depend. (*Japanese*) 2-36950  
 steel, alloy, structural, criteria for working capacity determ. 2-5952  
 steel, C-Mn (0.015, 1.3 wt.%), influence of prestrain and strain ageing on cleavage fracture 2-2587  
 steel, cleavage controlled instability monitoring by AE 2-27362  
 steel, fracture at different stages of H embrittlement 2-41726  
 steel, high-strength reinforcing, resist. to H embrittlement, surface condition influence 2-27282  
 steel, low alloy, high strength, fatigue crack propag., effect of low temp. and grain size 2-47174  
 steel, low pearlite high strength plate, laminated fracture (*Ukrainian*) 2-13792  
 steel, low-C, resist. to brittle crack development, X-ray fractography appl. 2-37009  
 steel, Mn-Ni-Mo, A533 gr. B, upper nose temper embrittlement mechanism 2-5899  
 steel, Ni-Cr, fracture toughness effect of solute segregation 2-47175  
 steel, structural, brittle fracture tendency eval. 2-22327  
 Al alloy, stress corrosion cracking and corrosion fatigue, specimen thickness effects 2-41711  
 Al, use of Ga-induced brittle fracture, for grain struct. anal. (*German, English*) 2-52156  
 Al<sub>2</sub>O<sub>3</sub>, fracture in combined tension/torsion 2-36942  
 Al<sub>2</sub>O<sub>3</sub>, fracture in combined tension/torsion, Weibull theory 2-36943  
 BN, superhard polycryst., struct. and mech. props., annealing effect 2-31788  
 Co-base superalloy, cast, MM509, air embrittlement 2-36955  
 Cu, cyclic damage mechanism, interactions at elevated temps. 2-47176  
 Fe, fracture, intergranular, cathodic pot., effect of grain boundary chem. 2-9406  
 Fe-Si (2.6 wt.%) single crystal, quasibrittle fracture and cleavage initiation in different environments 2-5955  
 α-Fe-Sn, intergranular creep fracture at migrating and sliding grain boundaries 2-13813  
 GaAs, epitaxial film growth, CLEFT process 2-2463  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub>-SiO<sub>2</sub> and Li<sub>2</sub>O-K<sub>2</sub>O-(Ag<sup>+</sup>)-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass ceramics, deform. rate influence on bending strength and failure 2-52046  
 Mo alloys, cold-shortness temp. for intergranular and transcrystalline fracture (*Russian*) 2-5937  
 Mo, effective surface fracture energy, critical crack length (*Russian*) 2-2578  
 Mo, neutron irradi., deform. behaviour in tensile and hardness tests 2-31745  
 Mo, tensile properties under cathodic H<sub>2</sub> charging (*Japanese*) 2-13781  
 Mo-Ti-Zr alloy TZM, tensile properties under cathodic H<sub>2</sub> charging (*Japanese*) 2-13781  
 PCV, glassy, brittle fracture, crazing, ductile-brittle transition 2-47165  
 SiO<sub>2</sub>, vitreous in aqueous/non-aqueous environments, stress corrosion mol. interpretation 2-25082  
 W alloys, cold-shortness temp. for intergranular and transcrystalline fracture (*Russian*) 2-5937  
 W, powder metallurgical, failure features, 20-1600°C, in vac. 2-52043  
 ZnO, effects of impurity struct. on brittle fracture 2-45331  
 ZnS crystals, active surfaces produced by brittle fracture, AES study 2-41458  
 ZnS, effects of impurity struct. on brittle fracture 2-45331

**brittle materials** *see* **brittleness****brittleness**

- see also brittle fracture; embrittlement; hydrogen embrittlement; liquid metal embrittlement; notch brittleness*  
 alkali halides, anisotropic point defect interactions in radiation induced hardening 2-5152  
 Bond's work index relationship to mechanical props. 2-44686  
 chevron V-notched bend bar fracture toughness specimen, eval. 2-5994  
 composites, brittle, toughening by second-phase particles, crack paths 2-27270  
 critical stress intensity factors, evaluation by indentation method with low crack-to-indent ratios 2-50754  
 dynamic fracturing, of brittle bodies 2-5930  
 elastic brittle material, in mode III, speed of propag. of damaged zone (*French*) 2-35087  
 elastomeric polycation TCNQ salt, elec. cond. and mech. props. 2-17052  
 fatigue analysis of brittle materials, using indentation flaws 2-8562  
 fibres in multifibre composite, fracture, stress redistribution in composite 2-36964  
 fibres with brittle shape layers, prediction of tensile strength 2-35587  
 fracture surface energy determination, conditions selection 2-9477  
 glass fibre reinforced polystyrene, molecular orientation effect on mech. props. 2-13782  
 graphite, fracture surface energy determination, conditions selection 2-9477  
 hardness tester for brittle materials, compression of rods method appl. 2-2646

**brittleness** continued

- Hertzian contact stress, effect of thin compliant protective coating 2-47207  
 path-stability of a crack crossing a beam in bending 2-44688  
 perfect plasticity theory extended to brittle materials 2-39836  
 plate, very thin infinite brittle, fragment size distrib., microcrack reactions 2-12083  
 powder materials, brittle high temperature, failure resist. eval. methods, review 2-52132  
 solids, high velocity deformation, micromechanical study 2-21220  
 statistical fracture theory, multiaxial stress states using Weibull's function 2-12669  
 steel, Cr-Mo (1.25, 0.5 wt%), welded to 4Cr25Ni20 steel, brittle cracks along welded fusion zone (*Chinese*) 2-31780  
 steel, low C, brittle-ductile state diagram in impact bending 2-52044  
 steel, low-alloy, laminated pipes, impact strength and cold brittleness threshold, effect of number of layers 2-13796  
 steel, P-containing, low-temp. brittleness (*Chinese*) 2-22302  
 steels, alloy, internal friction, rel. to temper brittleness 2-47090  
 strength, statistical model 2-36939  
 strength, statistical model 2-36940  
 thermal fatigue behaviour, of brittle structural materials 2-2583  
 transformation toughening, contrib. to fracture toughness 2-51923  
 Fe-P alloys, low-temp. brittleness (*Chinese*) 2-22302  
 Mo alloys, cold-shortness temp. for intergranular and transcrystalline fracture (*Russian*) 2-5937  
 SiO<sub>2</sub>, irradiated with electrons and γ-rays, defect form. dose depend. 2-21176  
 V-Ga wires and tapes, quench cracking, low-temp. brittleness, transition temp. 2-13679  
 W alloys, cold-shortness temp. for intergranular and transcrystalline fracture (*Russian*) 2-5937  
 ZnS:Cu single crystals, solubility of Cu<sub>2</sub>S, struct. characts. and mech. prop. anisotropy 2-12674

**broadband amplifiers** *see* **wideband amplifiers****broadcasting**

- see also radio broadcasting*  
 digital 4-channel PCM recording opera perf. (*Italian*) 2-4657

**bromine**

- see also nuclei with .....*  
 atom, adsorption on Mo(100) and (111), binding energies 2-40695  
 atoms CNDO/INDO molecular orbital formalism appl. 2-4225  
 diffusion in NaCl single crystal, radiation enhanced 2-21392  
 graphite-Br<sub>2</sub> intercalation compound, enthalpy changes of phase transitions 2-16778  
 graphite-Br<sub>2</sub> intercalation compounds, X-ray diffr. obs. of intralayer ordering and phase transitions 2-16779  
 K-shell fluorescence and photoionisation in elements 28 ≤ Z ≤ 53 2-29549  
 liquid, structure factors from reference interaction site model theory (*Japanese*) 2-25709  
 molecule, E→B transition, UV-visible emission spectra 2-49447  
 molecule, extended X-ray absorpt. fine-struct. phase shift, screening charge transfer effect, 1s level excitation 2-11506  
 molecule, in Ar, emission spectrum 2-29623  
 molecule, resonance Raman spectra, exact calcs. 2-4304  
 molecule, thermal electron attachment, negative ion pot. energy curves 2-790  
 molecule photoproduction using platinized TiO<sub>2</sub> photocatalyst 2-6048  
 molecules, photodissoc., cage effect in presence of N<sub>2</sub> at high press., computer simulation 2-47363  
 vapour, anomalous Cherenkov radiation 2-19993  
 vapour, reson. fluoresc. and reson. Raman spectrosc. 2-716  
 Br-Cl mixtures, chem. equilb., Monte Carlo method 2-37095  
 Br to H, atom combination, CNDO and INDO formalism 2-4224  
 Br<sup>-</sup>, in developing solution adsorption on Ag electrodes (*Russian*) 2-27481  
 Br<sup>-</sup>, in various gases, ion mobility determ. 2-20813  
 Br+Br, radiative recombination, free-bound transitions 2-9543  
 Br+HAT, reactive scatt., H transfer, cross section meas., pot. hypersurfaces 2-47317  
 Br<sup>-</sup>+He, tests of interaction pots., ion mobility and diffusion coeff. calcs. 2-34539  
 Br<sub>2</sub> adsorbed on zeolite and alumina, resonance Raman spectra 2-2295  
 Br<sub>2</sub>, dismutation react. on nuclear surfaces, diffusion controlled theory 2-13935  
 Br<sub>2</sub>, continuum resonance Raman effect 2-15795  
 Br<sub>2</sub>+D, reactive scatt. of supersonic at beam 2-37066  
 Br<sub>2</sub>+F(I), transformation of spin-orbit excited states 2-52180  
 Br<sub>2</sub>+Hg<sub>2</sub>Cl<sub>2</sub> reaction in solid state, X-ray study 2-27430  
 Br<sub>2</sub>+Ni(II) glycine complexes, radiation chemical studies 2-13991  
 Br<sub>3</sub><sup>-</sup>, adsorbed on zeolite, Raman spectra 2-17465  
 BrI, inner shell transitions in extreme UV 2-4241  
 KCl:Br, doped and undoped, exciton decay into Frenkel pairs, optical absorption study 2-45846  
 KI:Br<sup>-</sup>, means square displacement of substitutional defect and nearest neighbours 2-45489  
 Pn<sub>2</sub>+ethylene, electrophilic addition, non-empirical SCF MO calc. 2-6022  
 Xe-Br<sub>2</sub> mixture, chloride, bromide formation in quasi-stationary discharge (*Russian*) 2-13944

**bromine compounds**

- Br-containing free radicals, high-freq. ENDOR meas. 2-24760  
 BrCl, fluoresc., reaction kinetics of mixtures with inert gases 2-49483  
 BrF, fluoresc., reaction kinetics of mixtures with inert gases 2-49483  
 Br<sub>0.25</sub>NbSe<sub>4</sub>, new pseudo-unidimens. cpd. (*French*) 2-5097  
 Br<sub>0.33</sub>NbSe<sub>4</sub>, new pseudo-unidimens. cpd. (*French*) 2-5097  
 BrO, A<sup>2</sup>II-X<sup>2</sup>II, absorpt. spectrum 2-43931  
 BrO in nitrogen gas, 3 mm wave transition collision-induced linewidth 2-7605  
 BrO<sub>3</sub>+malonic acid, Belousov-Zhabotinskii reaction, oscillations, catalysis by bis-bipyridine-Ag complexes 2-22423  
 BrO<sub>3</sub>+malonic acid, Belousov-Zhabotinskii system, oscillating reaction, Os and Cr bipyridine complexes catalysts 2-22424  
 BrO<sub>3</sub>+SO<sub>3</sub><sup>2-</sup>, kinetic study using time resolved Raman spectroscopy (*French*) 2-2756  
 BrSO<sub>2</sub>F, mol. struct., electron diffr. obs. 2-49572  
 Br<sub>0.25</sub>TaSe<sub>4</sub>, new pseudo-unidimens. cpd. (*French*) 2-5097  
 HCl/HBr electrolysis in solid polymer electrolyte cells for hydrogen production 2-32127  
 Mn(Br<sub>1-x</sub>Cl<sub>x</sub>)<sub>2</sub>·4H<sub>2</sub>O, press. depend. of Neel temp. 2-8977



**Brownian motion**see also *colloids*asymmetric top, rotational Brownian motion 2-23571  
asymptotic property of a certain Brownian motion expectation for large time 2-6799Brownian particle kinetic energy relax. 2-28776  
colloidal particles adsorption in presence of pot. barriers, different double-layer interaction modes effect 2-37107  
distorted Brownian motion, Dirichlet forms, stochastic calculus 2-23572  
domain wall with higher order phonon interactions 2-19024  
erythrocytes, further evidence for Frohlich interaction 2-47584  
fluctuation-dissipation theory, Brownian dynamics 2-48612  
Fokker-Planck equation solution, relax. to diffusive eqn. 2-10714  
fractional Brownian motion, Gaussian props., time rescaling 2-10719  
interacting Brownian particles, generalised Langevin eqn. derivation 2-38571  
irreversible processes models and stochastic calculus 2-19021  
Langevin coupled oscillators, Brownian motion 2-6796  
long time tail obs. 2-33426  
macromolecules, effective diffusion coeff., wavevector depend. 2-15110  
Maxwell-Langevin eqns. and Kubo formulae 2-23500  
mirror in cavity, alternative to Einstein model 2-3490  
molecular correlation function approaches, to dielec. relax., review 2-9083monodisperse rigid spheroidal particles, dil. suspension, rotary Brownian motion effects, memory impairment 2-10718  
multidimensional reflected Brownian motion, distrib. 2-48624  
nonrelativistic quantum mechanics, underlying Brownian motion 2-18941  
number fluctuation dynamics, Brownian particles, intensity autocorrelation 2-19025

one-dimensional Heisenberg model continuum limit, Brownian motion on sphere surface 2-33429

oscillator in external force, Fokker-Planck eqn. for Brownian motion, stationary soln. 2-48619

overdamped Brownian system, with hard core interaction, velocity autocorrelation function 2-33425

particle diffusion above potential barrier, external field effects 2-42974  
particle fall in gases, evidence for failure of Millikan's law 2-50356

particles in statistically homogeneous fields with finite correlation decay time, Brownian motion 2-19027

pendulum Brownian motion, Kamers eqn. eigenvalues and eigenfunctions appl. 2-48614

polymer networks, viscoelastic theoretical models and model theories of microBrownian motion 2-12516

quantum spin system, with friction, Brownian motion 2-48610  
random force from fluctuating stresses, Oseen's approx. 2-33436

rotational Brownian motion in a fluid with internal degrees of freedom 2-3489

selectively absorbing boundaries, kinetic boundary layer for Fokker-Planck eqn. 2-38570

spheres in viscous fluid, motion and Brownian motion 2-48615  
spheroidal Brownian particle, rotational diffusion 2-48616statistical mechanics, polaron problem, large deviations 2-23569  
statistical physics, configuration states lifetimes 2-42943steady absorption of Brownian particles by an infinite cylinder 2-38567  
stochastic diffusion in const. pot. fields, Brownian motion 2-42969

suspension, Brownian diffusion of small particle, excluded vel. effect 2-15111

symmetric top molecules, ang. vel.-orientation conditional probability density, reorientational correl. functions 2-25702

translational Brownian motion in a fluid with internal degrees of freedom/ 2-33438

turbid medium, root mean square particle velocity meas. technique (*Russian*) 2-38584two-dimensional, generalised Oseen theory 2-28779  
PCl<sub>3</sub>, liq., isotropic and anisotropic Raman band shape anal., vibr. line-width 2-22016**Brownian movement** see *Brownian motion***brush discharges** see *discharges (electric)***bubble chambers**glass-fabric-epoxide-resin composite piston for bubble chamber 2-13688  
KAMA II, computerised track and bubble density meas. system 2-19841microholography in bubble chambers (*French*) 2-43700  
narrow bubble track formation by laser beam 2-15667

H rapid cycling bubble chamber for visualising charmed particle decays 2-39264

**bubble nuclei** see *nuclear density***bubble point** see *boiling point***bubble points** see *bubbles***bubbles**see also *foams*air bubbles, cooling of heated H<sub>2</sub>O stream in open channel, enthalpy transfer coeffs. 2-25366air bubbles, growth in tissue by rectified diffusion, US irradi. 2-52540  
air ventilation effects on cavitation in venturi 2-30189binary microlayer, double diffusion problem 2-44773  
bubble media, chemical reaction and combustion waves 2-16389

BWR pressure suppression pools, air bubble radial oscillation freq. 2-39171

cavitation studied by laser beam technique 2-4867  
cholesteric liquid cryst., bubble domain, form. and erasure by applied field 2-8423

crystallisation front, open inclusions role of supercooled melt in gas bubbles formation 2-50569

crystallisation front of melt, impurities conc. at boundary 2-50568  
dimension and speed measurement of bubbles in liquid-gas flows (*German*) 2-12259dissolution and growth of rising single-gas bubble in glass melt 2-35206  
evaporating bubble spray, size and velocity meas., heat transfer, stroboscopic photography technique 2-12203fluid drift caused by a rising bubble 2-44774  
fluid droplet inside liquid drop, thermo-capillary flow 2-12198fluid-gas system under weightlessness, vibr. spectra of moving bubbles after capillary jumps (*Russian*) 2-16368fluidised bed, pressure fluctuations 2-1260  
fluidized granular bed, bubble mass transfer, mol. and convective diffusion 2-12213formation in flowing liquids released from no les 2-25421  
gas bubble dissolution and growth asymptotic expansion description 2-37106**bubbles continued**gas bubble motion beneath liquid surface (*Russian*) 2-8214  
gas bubbles in liq., collective oscils., singular perturbation theory 2-35208

gas fluidised beds, vertical internals, axial solids mixing, diffusion, bubble characts. 2-20741

gas in water, acoustic wave scatt., multipole resonances 2-16264  
gas vapour bubbles in liquids, radial oscillations 2-20727

gas-liquid flow, in horizontal pipes, bubble velocity in intermittent regimes, drift phenomenon 2-25420

gas-solid suspension, bubble distrib. (*Russian*) 2-1255  
growth during liquid decompression, diffusion eqn. solns. 2-4708

heated surface, in narrow space, boiling heat transfer, bubble influence 2-30123

hexane-octane, mixture, boiling, vapour bubble study 2-30213  
hind-limb, guinea-pig, US induced cavitation in vivo, stable bubble prod. 2-18249hot gas bubble in nonuniformity heated liq. layer, lift force calcs. (*Russian*) 2-8215impulsive noise generation by ascending bubbles in water (*Japanese*) 2-44520

incompressible fluid, eqn. for describing irrotational flow due to expansion and translational motion of bubbles 2-20733

incompressible liquid, bubble motion in an electric field 2-39976  
KNK reactor, Ar bubble transport in Na coolant (*German*) 2-492laminar separation bubble with transition-attempt at prediction with local coupling (*French*) 2-1259

lenticular bubble, ductile extension under high energy ion bombardment rel. to blistering and flaking 2-1528

limited cavitation on axisymmetric bodies obs. 2-25411  
liquid beds, glass particles in H<sub>2</sub>O, flow regimes and transitions, visualisation study 2-12211liquid bubble manometer for low differential heads 2-19076  
liquid flow characts. induced by air bubbles in column (*Japanese*) 2-25427liquid gas solutions, equilib. of cavitation nuclei 2-25412  
LMFBR, HCDA expanding multiphase bubbles, Na entrainment 2-34174

MBBA-cholesteryl formate-5CB, liquid cryst., DC-controllable bubble domains 2-8419

measurement of local gas content, using transducer-primary recorder system 2-25463

methane, H attack kinetics in steel 2-17734  
methanol, nucleate boiling heat transfer, bubble flux density appl. 2-35039

MHD generator, two-phase flow, electrical conduct. distrib. parameters anal. 2-12199

minimum capacity sets, Pade approximants, bubble problem 2-1258  
molten glass, gas bubble expulsion by surface-tension gradient method 2-5851nonlinear wave propag. in media with internal struct. 2-16337  
nucleate boiling, bubble waiting time 2-50070ocean waves producing aerosol, due to breaking of wave 2-18541  
oil flow in capillaries with hydrophilic and hydrophobic surfaces, trapped gas bubbles effect 2-30208optical recording using bubble forming media, new approach 2-991  
orifice flow, polymer additives behaviour effects on cavitation 2-30192

oxide crystals, grown by Czochralski method, fluid flow effect on gas bubbles formation 2-1421

n-paraffins, superheated binary liq. mixtures, high press. homogeneous bubble nucleation 2-8149

plasma, human, bubble dissolution following recompression, holographic obs. 2-22785

polymer solns., dil., cavitation bubbles obs. in flow through orifice 2-1253

pumice, pore size distrib. rel. to degassing processes during explosive volcanic eruptions 2-37821

PWR, bubble detection and level meas. in main coolant cts. using ultrasonic transducers (*German*) 2-11260

radial motion of cavitating spherical bubble in inviscid compressible liquid with variable sound speed 2-8208

radially pulsating in liq., heat transfer coeff., oscillations decay rates 2-20734

reactor fuel, transient fission gas swelling due to grain boundary bubble growth, cellular computer model 2-7174

sessile-drops and captive bubble meridians and props., capillary phenomena 2-50

sound generation in liquids by ionizing particle beams 2-45383  
sound radiation from a plate, influence of bubble layer 2-44549sound velocity, additional thermodynamic degrees of freedom 2-35592  
spark-discharge-produced, shock wave 2-8207spherical bubble, drag, coeff., effect of convection 2-30216  
spherical bubble behaviour in mercury 2-20738

spherical cavitation bubbles in a sound field, dynamics and acoustic emission 2-20658

spheroidal bubble collapse near solid wall 2-1251

stability and separation of freely interacting boundary layers 2-1176  
stationary flow around gas bubble, stability and minimum principle (*Russian*) 2-1257steel, C, cavitation erosion, vibratory and Venturi tests 2-9427  
superheated binary liq. mixtures, high press. homogeneous bubble nucleation 2-8149thermocapillary motion, normal to plane surface 2-25425  
thrust bearings, bubbly lubricated externally pressurised 2-25324

two phase bubble of hot water in cold water tank EXCOBULLE model anal. 2-34110

two-phase channel flow, bubbles, heat transfer study (*Russian*) 2-50258  
two-phase disperse flow, bubble coalescence, size effect, relevance to heat, mass and momentum transfer 2-12204two-phase media in electric field, diffusion and multivel. models 2-4894  
two-phase stream, electrical conductivity 2-16387vapour cavity growth and collapse near a free surface 2-16367  
vapour-gas bubbles, in fluid, heat and mass transfer dynamics 2-16363

vapour-liquid flows, bubble interaction on hydrodynamics, heat and mass transfer 2-4877

venturi, flowing down bubble effects on cavitation 2-30188  
water, boiling, nonacoustic reflection of weak press. waves 2-44764Au:He, spontaneous precipitation of He 2-13727  
CO<sub>2</sub> slug, in downflowing liquid, gas absorpt. meas. 2-20732Fe<sub>40</sub>Ni<sub>30</sub>Mo<sub>4</sub>B<sub>18</sub> amorphous alloy, He bubble form. under He<sup>+</sup> ion irradi. 2-50725



**bubbles continued**

- He, effect on microstruct. and strength of Nb 2-36914  
 He I, flow boiling in vertical heated glass tube; press. drop. and flow struct. 2-35220  
<sup>4</sup>He, liquid, multielectron bubbles, struct. and stability 2-30678  
 LiF, energy density of collapsing cavitation bubble 2-45147  
 N<sub>2</sub>, liquid, superheated, fluctuation boiling and bubble form. 2-39800  
 Pt wire submerged in water, density of boiling centres on surface studied by photomicrography method 2-16227  
 UO<sub>2</sub>, bubble diffusion model 2-43556

**buckling**

- arch, circular, elastic, clamped-hinged, buckling under gas pressure 2-12062  
 arches, circular and rings, buckling, nonlinear theory and press. representation significance (*French*) 2-4741  
 Argonaut reactor pebble-beds, water entry effects (*German*) 2-518  
 asymptotic postbuckling stresses determ. 2-50138  
 bar, nonlinear viscoelastic rectangular section, buckling (*Russian*) 2-12057  
 bar, thin walled, of open cross-section, second order strains and instability 2-25281  
 cantilever column in elastic medium, buckling, differential eqns. 2-20565  
 circular plates with variable profile and non-uniform boundary conditions, fundamental freq. and boundary conditions 2-16257  
 column, elastic, variable cross section, buckling, variational principles 2-8061  
 composite material shells, spherical orthotropic, nonaxisymm. buckling 2-35076  
 composite structures, finite element anal. (*French*) 2-30050  
 cylinders, axially loaded, buckling, explicit lower bounds 2-4739  
 cylinders, thin-walled, loaded in axial compression, buckling 2-4743  
 cylindrical covers, buckling study (*Russian*) 2-50139  
 elastic buckling strength meas. for glass microspheres, visual method 2-19098  
 elastic column, buckling, maximum deflection estimation 2-20561  
 elastic curve governed by non-convex energy, equilb. and post-buckling behaviour 2-15025  
 elastic materials with incompressibility, rigidity constraints, sinusoidal waves 2-20578  
 fibrous composite with elastic-plastic matrix, fracture mechanics under compression 2-35090  
 flexible shells, elasticity anal. 2-15032  
 heated circular plate, variable thickness, buckling 2-50140  
 I-beam, transversely loaded, one broad flange, combined flange and web buckling (*German*) 2-25283  
 I-beams transversely loaded, with slender flanges, total stability (*German*) 2-25282  
 jets, horizontal, viscous buckling 2-8201  
 jets, plane and axisymm., viscous fluid buckling 2-35191  
 load dropping rapidly with time, crit. parameters determ. 2-4744  
 mode superposition in buckling anal. 2-12055  
 panel, two-dimens. finite, exposed to incompressible flow, stability 2-50142  
 parabolic umbilic catastrophe, appl. to elastic stability theory 2-18900  
 pipes, metal, collapse caused by explosion 2-12054  
 plate, anisotropic elastic, finite torsion and flexure, one-dimens. theory 2-50103  
 plate, annular heated, elastic instability under lateral pressure 2-12061  
 plate, multiplicity of deformation modes under compression (*French*) 2-35070  
 plate, uniformly compressed annular, with axisymm. initial deflection, elastic instability 2-1130  
 plates, annular, polar-orthotropic, elastic buckling in shear 2-20566  
 plates, rectangular, temp.-depend. creep buckling 2-30042  
 plates, unilaterally-supported, postbuckling anal., nonlinear eigenvalue problems, variational inequalities 2-39842  
 post-buckling analysis of spatial structures by vector iteration methods 2-39837  
 prebuckled domes, nonlinear three-dimens. anal. 2-20563  
 rings, thin elastic, in-plane postbuckling under constant directional press. load 2-44668  
 rings and tubes with longitudinal cracks 2-30049  
 sandwich plate building by finite layer method 2-50137  
 shell, cylindrical, buckling behaviour changes resulting from system param. var. 2-16251  
 shell, cylindrical, dynamic buckling, energy approach and simplified models (*Japanese*) 2-4737  
 shell, elliptical cylindrical, buckling deform. meas. by moire topography (*Japanese*) 2-4738  
 shell of revolution, thin, shallow, precrit. equilb. and stability 2-4736  
 shells, shallow, under unilateral constraint, post-buckling soln. existence 2-18894  
 shells, spherical, buckling design 2-20570  
 shells of rotation, thin, elastic, influence of middle surface imperfections, Liapunoff-Schmidt method (*Russian*) 2-35078  
 steel linear design for nuclear reactor containment vessel 2-9410  
 stringer stiffened panels, in plane boundary conditions 2-39838  
 structural eigenvalues, elastic optimal design 2-16240  
 structures, thin, elastic postbuckling behaviour, asymptotic study, finite element method 2-30048  
 thin shells, buckling 2-20562  
 tube, thin-walled long, with slightly bent axis, elastic buckling (*Russian*) 2-1132  
 viscous buckling of thin fluid layers 2-1158  
 Al, liner, cylindrical shell, EM implosion in Z-pinch discharge 2-50429  
 C fibre reinforced plastics, deform. and strength props. under var. loading conditions 2-36927

**building**

- see also architecture; civil engineering; erection  
 acoustics analyzer type 4417 for noise level meas. 2-44617  
 acoustics analyzer type 823, microprocessor controlled 2-44618  
 as-built nuclear power plant buildings, dynamic testing, review 2-11246  
 ceiling tiles, metal, noise reduction props. 2-44574  
 construction site noise abatement, cost effectiveness, comparison of anal. and meas. 2-20475  
 dwelling, gamma-ray dose rates in Poland 2-11284  
 dwellings, radon, exhalation rate, conc., in Poland 2-11284  
 Poland, cancer deaths due to radiation from building materials 2-14293

**building continued**

- PWR, heat transfer coeffs. under LOCA conditions in containment buildings 2-4076  
 sound insulation, UK Building Regulations criteria 2-44573  
**bulk density** see density  
**bulk diffusion** see diffusion in solids  
**bundling** see packaging  
**burning** see combustion  
**burnout** see combustion  
**burst noise** see random noise  
**bushes** see bushings  
**bushings**  
 low temperature, for high AC voltage 2-6857  
**business** see commerce  
**BWT** see backward-wave tubes  
**C invariance**  
 baryogenesis without the out-of-equilibrium decay of superheavy bosons 2-53402  
 cosmology, nonsingular, spontaneous breakdown of C, P, CP, T, CPT and G symmetries 2-18803  
 dispersion relation for Gell-Mann-Low function, spectrality condition and invariant charge asymptotic behaviour 2-263  
 long-ray interaction between spins 2-3681  
 nonlocal electric charge conservation theories (*Russian*) 2-29016  
 U(1)XSU(3) model, physical constants and invariant charges (*Russian*) 2-23896  
 $e^+e^- \rightarrow \mu^+\mu^-$ , P- and C-symmetry violations near narrow r eson. (*Russian*) 2-48971  
 $n-p(p\bar{e}^+)X^0$ , charge nonconserving decays, geophysical obs. 2-23978  
 NN system, charge symm. violation in cloudy bag model 2-23872  
 $np \rightarrow X$ , 25-750 MeV, singlet-triplet transition, C invariance 2-29127  
**cable insulation**  
 see also insulating oils  
 ethylene-vinylacetate copolymer, C loaded, resist. and positive temp. coeff. of resist., correl. with C black parameters 2-46084  
 polyester fibres, modification of struct. by stretching and thermal treatment (*German*) 2-22287  
 polymers, light detection as prebreakdown phenomena 2-17402  
 MgO insulation in heat resistant cables, elec. cond. meas. 2-29341  
**cable jointing**  
 lightguide fusion splices, tensile strengths of >4 GPa obtained using Cl-OH torch for splicing 2-7898  
 monomode optical fibre system, 31.6 km fusion splicing 2-44456  
**cable laying**  
 optical cable pulling, long-spin installation machine 2-34942  
**cables (electric)**  
 see also coaxial cables; power cables; submarine cables; superconducting cables; telecommunication cables; underground cables  
 nuclear hardening to prevent nuclear electromagnetic pulses 2-24430  
**CAD**  
 see also architectural CAD; computer-aided analysis; interactive systems  
 apochromats, thin-component, glass choice on a BESM-6 computer (t) 2-39720  
 cable reinforced membranes 2-20527  
 CAES load regulation 2-17991  
 cemented double-lens objectives, CAD algorithm (*Russian*) 2-44427  
 composite matched filters 2-34696  
 education conf. Rapid City, South Dakota, October 19-21, 1981 2-33259  
 FASTBUS protocols, computer simulation 2-24544  
 heat pumps, air source, electrically driven, for domestic space heating with minimum energy consumption, computer 2-52380  
 IC capacitive press. transducer with high sensitivity 2-33506  
 LF fluidborne noise mufflers, computer-aided design and evaluation 2-14161  
 liquid optical filters made of transition metal ion aq. solns., computer design 2-1008  
 magnet design, automated optimisation using boundary integral method 2-48728  
 optical component blanks, input parameters for computer design 2-49959  
 optical glass dispersion approximation method by means of descriptive parameters 2-49849  
 solar energy system CAD (*Dutch*) 2-41983  
 stiffened plates, minimum weight design 2-39818  
 (Al,Ga)As DH injection laser with asymm. gain distrib., computer model 2-44291  
**cadmium**  
 see also nuclei with .....  
 adsorption, competitive, of Cd, Cu, Zn and Pb on amorphous Fe<sub>2</sub>O<sub>3</sub>.H<sub>2</sub>O 2-35887  
 anharmonicity, X-ray diffr. study 2-45500  
 atom, excited levels population in electron beam, electron stimulated desorp. effects 2-44104  
 atom, spin-polarisation, angular distrib., photoionisation cross sections 2-43871  
 atom and ions, binding energy, SCF calcs. 2-20200  
 atoms, metastable levels effects on line intensities of Ca(Mg) in hollow cathode discharge 2-52260  
 atoms and solid, binding energy, Auger and photoelectron spectra 2-34367  
 core-hole ground state energies, XPS determ. 2-17602  
 crystal, transversely isotropic half-space, epicentre and epicentral axis motion 2-16238  
 deposition on transparent substrates by laser induced dissociation of dimethylcadmium 2-51832  
 determination in sea water by anodic stripping voltammetry with thin film Hg electrode 2-18588  
 diffusion in InP at 680°C, p-n function formation 2-12850  
 discharge lamps, electrodeless, RF excited, as atomic fluorescent spectroscopy sources 2-9599  
 electrical cond. anisotropy, 1.2 to 8K 2-26359  
 electrode, photoacoustic, photoconductive and electrochem. detect. of surface species 2-47385  
 electron irradiated, diffuse X-ray scatt. 2-21179  
 emission reduction importance, electroplating industry system study report (*German*) 2-52217  
 epithermal neutron activation analysis with a SLOWPOKE nuclear reactor 2-17937  
 film, evaporated, elec. resist. meas. 2-26519



## cadmium continued

- HCP, lattice defects, PAC and distrib. methods study 2-30462  
 health hazards, public and occupational, of photovoltaic energy technologies 2-22542  
 ion bombard., at. excitations, photon emission study 2-13575  
 Lake Mariut, Egypt, heavy metal pollutants in water and fish 2-52399  
 laser, blue-green atomic, using CdI photodissociation, 508.6, 480.0 nm laser lines 2-7754  
 LMFBR cladding breach monitoring by solid state tagging of fuel element surface, appl. 2-24340  
 magnetic props. and energy spectrum, homovalent impurities and press. effects (*Russian*) 2-5523  
 Matthiessen rule deviation at low temp. due to surface scatt. 2-26378  
 metallic, many-electron interactions in  $M_{45}$ -NN Auger spectrum 2-41460  
 Newark Bay, New Jersey, USA, heavy metal pollution of marine sediments 2-23023  
 oxidation initial stages, low-energy EELS and AES study 2-13603  
 plasma, expanding, recombination laser transitions 2-39627  
 plates, surface impedance quantum oscills. (*Russian*) 2-46099  
 polycrystalline, photoelectron spectroscopy using gas-phase spectrometers 2-41490  
 production by CdO thermal decomposition at high temp. using 2 kW solar furnace 2-41874  
 resonance emission lines, far UV, meas. using inverse Zeeman scanning 2-43842  
 RF surface impedance, low-field anomaly 2-13162  
 seawater, simultaneous spectrochem. determ. method for Cd, Pb and Ag 2-48039  
 seawater composition in near-surface N Pacific and N Atlantic 2-18470  
 Severn Estuary, simulation of impact of technological change on dissolved Cd distrib. 2-2818  
 stress waves, laser induced 2-16716  
 substrate for Zn electrodeposition from zincate solns. 2-26245  
 substructure, and dislocations in single crystals, X-ray topographic study (*Japanese*) 2-8522  
 surface enhanced Raman scatt. from pyridine adsorbed on Cd 2-34420  
 thermal and plasma-conversion into  $\alpha$ -CdS 2-51839  
 AgCl, UV illuminated,  $\gamma$ -irrad.  $Cd^{2+}$  doped, load relax. studies 2-41647  
 AgCl:Cd, low temp. elec. cond. 2-1655  
 Cd I, Lande factors meas. of 5s5p, 5s5d config. levels (*French*) 2-49588  
 Cd I, metastable state alignment in gas discharge 2-44931  
 Cd I 5-10  $D_2$ ,  $D_3$  levels excited by electron impact, visible and UV spectra, Hanle effect, lifetime meas. 2-15900  
 Cd II+He metastable atoms, Penning excitation cross-sections determ. 2-34546  
 $Cd^{2+}$  ion interaction with polyelectrolyte,  $^{113}Cd$  NMR obs. 2-24747  
 Cd+alkane hydrocarbons, collisional intramultiplet relax. 2-44048  
 Cd+Hg, population transfer cross sections 2-29690  
 Cd+PbO, Pb+CdO, reduction equil., calorimetry and equil. meas., enthalpy of reaction and form. of CdO 2-17912  
 CdDyTiNbO<sub>7</sub>, mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
 Cd(II)+Ne, Penning excitation rates, cross section meas. 2-15887  
 Cd(P+(Cd(S<sub>2</sub>)<sub>3</sub>)<sub>2</sub>P<sub>1</sub>-P<sub>0</sub> transition, multichannel distorted-wave approx. 2-15874  
 $^{111}Cd$  dilute impurities in Se-rich Se-Te alloys, motional correl. time, TDPAC meas. 2-31348  
 GaAs:Cd<sup>2+</sup>, ion-doped films, elec. props. 2-21701  
 He-Cd II hollow cathode metal vapour lasers, oscill. spectra, 533.7 and 537.8 nm lines 2-44255  
 He-Cd laser, longevity problem investigation 2-25032  
 He-Cd laser operation in nonuniform mag. field (*Chinese*) 2-16011  
 He-Cd laser with RF pumping, quasi-CW operation 2-44257  
 InGaAsP/InP:Cd DH lasers, LPE growth 2-22178  
 p-In<sub>0.75</sub>Ga<sub>0.25</sub>As<sub>0.55</sub>P<sub>0.45</sub>:Cd LPE layer, doping characts. and elec. props. 2-41031  
 InP growth melts, Cd evaporation 2-8601  
 KCl:Cd<sup>2+</sup>, linear crystn. rate of KCl, Cd ions influence, adsorption role (*Russian*) 2-31615  
 Ni/Cd accumulators, plastic-bonded Cd electrodes O<sub>2</sub> recombination rate influenced by different metal screens 2-52321  
 Ni-Cd batteries, review 2-27592  
 Ni-Cd battery for multiple satellite apps. 2-27596  
 Ni-Cd cell cycle lifetime prediction eqn. for Low Earth orbit 2-27597  
 Ni-Cd cells, interchangeable linkage of photovoltaic solar generators (*German*) 2-27608  
 Ni-Cd cells, separators 2-27593  
 Ni-Cd cells, uses and abuses 2-32056  
 Ni-Cd spacecraft batteries, effects of cell reversals during reconditioning 2-27594  
 Ni-Cd Viking Lander battery performance, degradation, and reconditioning 2-27595  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Cd, carrier density, temp. depend. 2-17089  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Cd crystals and LPE layers, doping and elec. props. 2-45223

## cadmium alloys

- see also cadmium compounds  
 Ag<sub>1-x</sub>Cd<sub>x</sub>, optical props. and band struct., empirical band calc. 2-21971  
 Al-Cd, high power laser effects 2-50705  
 Al-Cd, internal friction and elastic modulus near martensitic transform. 2-47105  
 Au-Cd, martensitic transformation in  $\beta_1$ -phase, quenching effect 2-13719  
 Au-Cd, thermoelastic phase transition, acoustic emission study 2-5874  
 Au-Cd (47.5 wt.%), thermoelastic martensitic phase transform. AE meas. 2-51897  
 Cd-Ag (0.25 at.%), stress relax. in tensile deform. in temp. range from 77K to 200K 2-2255  
 Cd-Mg,  $^{111}Cd$  probe nuclei, electric field gradient, quadrupole coupling const., TDPAC meas. 2-17372  
 Cd<sub>3</sub>Hg<sub>35</sub>, electronic struct. near phase transition 2-40776  
 Cu-Cd, electrocrystallisation on Cu substrate, effect of electrolyte type 2-1797  
 Cu-Cd, heat resistance, elec. cond. and strength 2-27244  
 Ga-Cd melt, atomic distrib. pattern during demixing 2-12459  
 In-Cd(4-5.5 wt.%), solid solns., mechanism of phase transformation (*Japanese*) 2-9351  
 LiCd, self-consistent linear muffin-tin orbital calcs. 2-21496  
 Mg-Y-Zn-Cd-Zr, interaction of alloying elements and phase comp. 2-41589  
 Pb-Cd, fine-grained, creep, influence of pipe diffusion 2-25978  
 SnCd, lattice damage at recoil Sm impurity 2-25943  
 Zn-Bi-Cd liq. solns., Zn ternary interaction parameters 2-1639

## cadmium compounds

- see also cadmium alloys  
 Cd dimethyl, three body photodissoc. dynamics 2-7615  
 CdS/NaI.3.3NH<sub>3</sub> junction, photoelectrochem. behaviour, solar energy conversion utilisation 2-6155  
 CdSe crystals, thermal props. by photoacoustic spectroscopy 2-21241  
 composition dependence of energy gap of (CdTe)<sub>1-x</sub>(In<sub>2</sub>Te<sub>3</sub>)<sub>x</sub> with  $x < 0.02$  2-40780  
 decylammonium cadmium tetrachloride, smectic phases, local orientational ordering, mag. reson. study 2-12481  
 glasses, CdS(Se) doped, nonlinear optical absorpt. effects, laser pulse modulation (*Chinese*) 2-44007  
 oxalate trihydrate:  $Mg^{2+}(Zn^{2+})(Fe^{2+})(Ca^{2+})(Ni^{2+})(Zr^{4+})$  thermal decomp. kinetics, impurity effects 2-6029  
 solar cells, development review (*Croatian*) 2-47479  
 space heating, heat mirror coatings for energy conserving windows 2-39723  
 3,3'-thiodipropionic acid-Cd(II) complex, struct., mag. susceptibility, IR and electronic spectra 2-5664  
 $\beta'$ -Al<sub>2</sub>O<sub>3</sub>-CdO, divalent cation cond. 2-26130  
 $\beta'$ -Al<sub>2</sub>O<sub>3</sub>-CdO, ion exchange prep., ionic cond. props. 2-12835  
 CaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-H<sub>2</sub>O, selected phases, thermodynamic tabulations 2-33245  
 Cd aluminophosphate glass:  $Cu^{2+}$ , ESR study 2-31274  
 Cd chalcogenide spinels: Cr, mixed valence, ferromagnetic resonance 2-45914  
 Cd complex, bis(propylammonium)tetrachlorocadmate 2-31488  
 Cd complex, tetrachlorobis(n-propylammonium) cadmium II, heat capacity, 10 to 300K, struct. phase transitions 2-40564  
 Cd complexes, Cd(glycine),  $^{113}Cd$ - $^{15}N$  spin-spin coupling const., soln struct., NMR obs. 2-43943  
 Cd-As system, solid solution form., solubility boundaries, homogeneity range, physico-chemical investigations 2-26067  
 Cd-Si-As film, sputtered, compositional studies 2-8721  
 Cd<sub>4</sub>A<sub>2</sub>I<sub>3</sub>, A=As, P, struct. and solid solns., comparative studies (*French*) 2-1461  
 Cd<sub>1-x</sub>Ag<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, deviation from the Bloch law (*Russian*) 2-9003  
 CdAl<sub>2</sub>O<sub>4</sub>, thermal expansion, meas. using dilatometry 2-50888  
 CdAs, high pressure phase, thermodynamic props. 2-26083  
 CdAs<sub>2</sub>, crystal growth and vitreous state form. in Cd-As-I system 2-27066  
 Cd<sub>3</sub>As<sub>2</sub>, amorphous and cryst., thin films, prep., struct., elec. and optical props. 2-26262  
 Cd<sub>3</sub>As<sub>2</sub>, amorphous films, local atomic structure, radial distrib. function, electron diff. obs. 2-25745  
 Cd<sub>3</sub>As<sub>2</sub>, amorphous films, structural, electrical and thermoelectric props. 2-26399  
 Cd<sub>3</sub>As<sub>2</sub>, amorphous films, elec. transport props. 2-40911  
 Cd<sub>3</sub>As<sub>2</sub>, band gap, Fermi level, electron tunnelling study 2-26561  
 Cd<sub>3</sub>As<sub>2</sub>, band structure, UPS and EELS meas. 2-26294  
 Cd<sub>3</sub>As<sub>2</sub>, cryst. and amorphous thin films, Shubnikov de Haas oscills. in Hall volt. and magnetoresistance 2-26420  
 Cd<sub>3</sub>As<sub>2</sub>, crystal growth and morphology, Miller indices, X-ray and optical meas. 2-25789  
 n-Cd<sub>3</sub>As<sub>2</sub>, diffusivity-mobility ratio, carrier degeneracy effect 2-5401  
 Cd<sub>3</sub>As<sub>2</sub>, energy band struct., pseudopotential method 2-26293  
 Cd<sub>3</sub>As<sub>2</sub>, Fermi surface anisotropy, Shubnikov de Haas meas. 2-26277  
 Cd<sub>3</sub>As<sub>2</sub>, IR optical props., absorpt. coeff., reflectivity, plasmon-phonon coupling 2-26925  
 Cd<sub>3</sub>As<sub>2</sub>, Landau level structure, g-factors Luttinger parameters, effective Hamiltonian method 2-26312  
 Cd<sub>3</sub>As<sub>2</sub>, resistivity, Hall effect, effects of low temp. phase transition 2-26398  
 n-Cd<sub>3</sub>As<sub>2</sub>, ultrathin films, Einstein relation, size quantisation effect 2-41038  
 Cd<sub>3</sub>As<sub>2</sub>, valence band spin-orbit splitting, magnetophonon oscillations study 2-17100  
 Cd<sub>3</sub>As<sub>2</sub>:Ge(Cu)(Ag), transport props. study 2-40943  
 Cd<sub>4</sub>As<sub>2</sub>I<sub>3</sub>, cryst. struct., comparison with Cd<sub>4</sub>P<sub>4</sub>Cl<sub>6</sub> (*French*) 2-12564  
 CdAs<sub>2</sub>(P<sub>2</sub>), thermal dissoc. and evap. mechanism, single cryst. growth, diffusion role 2-41873  
 Cd(BF<sub>4</sub>)<sub>2</sub>.6H<sub>2</sub>O:Mn<sup>2+</sup>, structural phase transitions, ESR study 2-5577  
 Cd<sub>3</sub>B<sub>2</sub>O<sub>7</sub>S, cryst. struct. determ. 2-25821  
 CdBiNbZrO<sub>7</sub>, mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
 CdBiTiNbO<sub>7</sub>, mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
 CdBr photodissociation laser at 811 nm 2-44265  
 CdBr<sub>2</sub>, cryst. vibrs., linear chain dynamical model 2-5197  
 CdBr<sub>2</sub>, optical dispersion studies 2-9121  
 CdBr<sub>2</sub>:Co<sup>2+</sup> single cryst., spin exchange interaction optical spectra 2-46653  
 CdCl<sub>2</sub>, cryst. vibrs., linear chain dynamical model 2-5197  
 CdCl<sub>2</sub>, electrolyte soln. liq. struct., X-ray diff. study 2-45012  
 CdCl<sub>2</sub>, optical dispersion studies 2-9121  
 CdCl<sub>2</sub>:Co<sup>2+</sup> single cryst., spin exchange interaction optical spectra 2-46653  
 CdCl<sub>2</sub>:Ni<sup>2+</sup>, impurity ion absorpt., emission and excitation spectra 2-2321  
 CdCl<sub>2</sub>-KCl, molten, partial molar excess enthalpies, comp. depend., excess heat capacity 2-26081  
 CdCl<sub>2</sub>X<sub>2</sub> (X=Cl, Br or I), tetrapropylammonium salt, vibr., Raman study 2-13488  
 CdCoFeO, ferrite, specific heat, thermal diffusivity 2-26069  
 CdCr<sub>2</sub>In<sub>2-x</sub>S<sub>2</sub>, dilute spinel, spin glass behaviour, mag. susceptibility study 2-31200  
 CdCr<sub>2</sub>S<sub>4</sub>, ferromagnetic semicond., cathodolum. characts. of electron spectrum 2-46785  
 CdCr<sub>2</sub>Se<sub>4</sub>(S<sub>4</sub>), ferromagnetic resonance, mag. anisotropy 2-31291  
 CdCr<sub>2</sub>Se<sub>4</sub>, cathodolum., band struct., impurity states 2-31562  
 CdCr<sub>2</sub>Se<sub>4</sub>, ferromagnetic semiconductor, P<sub>Se2-A</sub>CdSe phase diagram (*Japanese*) 2-45531  
 CdCr<sub>2</sub>Se<sub>4</sub>, non-linear paramagnetic effect near Curie temp. 2-36306  
 CdCr<sub>2</sub>Se<sub>4</sub>, photoferromag. effect and photoinduced centres, relaxation 2-9021  
 CdCr<sub>2</sub>Se<sub>4</sub> single cryst., spin waves and uniform precession relaxation 2-13345  
 CdCr<sub>2</sub>Se<sub>4</sub>, spin wave self-relax. processes (*Russian*) 2-13282  
 CdCr<sub>2</sub>Se<sub>4</sub>:Ga, ferromagnetic semicond., susceptibility and photoinduced anisotropy disaccommodation 2-26606  
 CdCr<sub>2</sub>Se<sub>4</sub>:Ga, ferromagnetic semicond., complex mag. susceptibility, photo-induced anisotropy 2-36333



## cadmium compounds continued

- CdCr<sub>2</sub>Se<sub>4</sub>, Ga, mag. domain struct., photoinduced destabilisation in elec. field 2-13313  
 CdCr<sub>2</sub>Se<sub>4</sub>(S<sub>2</sub>), photoluminescence and elec. struct. 2-46687  
 CdEr<sub>2</sub>S<sub>4</sub>, magnetic and Mossbauer meas. 2-5519  
 CdF<sub>2</sub>, matrix isolated vibr. spectra 2-11490  
 CdF<sub>2</sub>:Eu<sup>3+</sup>, optical study of Eu<sup>3+</sup> centres 2-9185  
 CdF<sub>2</sub>:Ho<sup>3+</sup>, semiconductor, growth, IR spectra and elec. cond. 2-13638  
 CdF<sub>2</sub>:Mn, Y, metal-semicond. diode, high field electrolum., spatial distrib. of excited luminesc. centres 2-9202  
 CdF<sub>2</sub>:Mn metal-semiconductor junction, luminesc. impact excitation, spatial profiling 2-46761  
 CdF<sub>2</sub>:NaF, surface polarisation model, comparison with TSC and dielec. relax. data 2-9075  
 CdF<sub>2</sub>:Na(Y), thin films, ionic thermal current, conduct. mechanism 2-50907  
 CdFBr, matrix isolated vibr. spectra 2-11490  
 CdFCl, matrix isolated vibr. spectra 2-11490  
 Cd<sub>1-x</sub>Ga<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, cathodolum., band struct., impurity states 2-31562  
 CdGaInS<sub>4</sub>, layer cryst., sp. ht. 2-8634  
 CdGa<sub>2</sub>S<sub>4</sub>, crystal, optical activity, dispersion of gyration tensor 2-36593  
 CdGa<sub>2</sub>S<sub>4</sub>, growth, physicochem., electrophysical and optical characts. (Russian) 2-20386  
 CdGa<sub>2</sub>S<sub>4</sub>, linear susceptibility in transparency range, band calc. 2-9124  
 CdGa<sub>2</sub>S<sub>4</sub>, single crystal narrow-band tunable optical filter 2-34878  
 CdGa<sub>2</sub>Se<sub>4</sub>, energy band struct.,  $\lambda$ -modulated reflectivity 2-16989  
 CdGa<sub>2</sub>Se<sub>4</sub>, Raman study of optical phonons 2-5686  
 CdGeAs<sub>2</sub>, use in freq. conversion of CO<sub>2</sub> laser (Japanese) 2-20365  
 CdGeP<sub>2</sub>, chalcopyrite semicond., bond charges, X-ray struct. amplitude study 2-40317  
 CdHgTe, photodetector, Haynes-Shockley expt., contact effects 2-51202  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, anodic surface layer, surface and in-depth anal. 2-51063  
 Cd<sub>0.2</sub>Hg<sub>0.8</sub>Te, surface treatment effect on photosensitivity spectral distrib. (Russian) 2-21627  
 Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te, CESR (Russian) 2-26748  
 Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te, density of states calcs. 2-21486  
 p-Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te, elec. cond. in strong microwave elec. field, 77 to 300K 2-30921  
 Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te, elec. props. study 2-40942  
 Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te epitaxial films, optical props., absorption and reflection spectra study 2-13583  
 Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te epitaxial layers, deposited by cathodic sputtering, crystallographic props. 2-26249  
 n-Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te, impurity radiative recomb. 2-46752  
 Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te, magnetophonon reson. of nonequilib. carrier density 2-8825  
 Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te, molecular beam epitaxy on CdTe 2-2451  
 Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te p-n junction IR photovoltaic detectors, elec. props. 2-30958  
 Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te photodiodes, 8-14  $\mu$ m range, doping influence 2-19178  
 Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te, photosensitivity spectrum, influence of Gaussian diffuseness 2-5433  
 Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te, photothermomagnetic effect in mm and submm ranges 2-13132  
 Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te, resist. and Hall coeff., 4.2 to 30K 2-30897  
 Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te, semimetallic, magnetophonon reson. of hot carriers at 4.2K 2-40940  
 Cd<sub>0.1</sub>Hg<sub>0.9</sub>Te, surface recomb. vel. determ. from temp. depend. of minority carrier lifetime 2-51208  
 CdI photodissociation laser at 655 nm spectrum identification 2-44265  
 CdI-DMSO complexes in soln., struct., X-ray diff. 2-12453  
 CdI-H<sub>2</sub>O, complexes in soln., struct., X-ray diff. 2-12453  
 CdI<sub>2</sub>, optical dispersion studies 2-9121  
 CdI<sub>2</sub>, cryst., binding, struct., Raman and far IR spectra 2-46609  
 CdI<sub>2</sub>, photoluminescence, stimulated, and optical gain spectrum 2-46708  
 CdI<sub>2</sub>, polytypes, cubic and hexagonal layer packing studies 2-8502  
 CdI<sub>2</sub>, type crystals, binding, struct., Raman and far IR spectra 2-46609  
 CdI<sub>2</sub>:Fe<sup>3+</sup>, resonance enhanced electronic Raman scatt. 2-2283  
 CdI<sub>2</sub>:Ni<sup>2+</sup>, crystal field and spin-orbit coupling, near IR d-d transitions study 2-22022  
 Cd(II) complex, Cd<sub>10</sub>(SCH<sub>2</sub>(H<sub>3</sub>OH))<sub>16</sub><sup>4+</sup>, mol. struct. correl. with <sup>13</sup>Cd NMR spectra 2-26774  
 Cd<sub>1-x</sub>In<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, cathodolum., band struct., impurity states 2-31562  
 Cd<sub>1-x</sub>In<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, deviation from the Bloch law (Russian) 2-9003  
 Cd<sub>1-x</sub>In<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, single cryst., elec. cond. characts. 2-51176  
 CdInGa<sub>2</sub>S<sub>4</sub>, Raman light scatt. spectra 2-5687  
 CdIn<sub>2</sub>S<sub>4</sub>, interaction of free carriers with optical phonons (Russian) 2-13466  
 CdIn<sub>2</sub>Se<sub>4</sub>, free current carrier interaction with LO phonons, plasmon-phonon modes, IR spectra 2-36635  
 Cd<sub>1-x</sub>Mg<sub>x</sub>S, solid solns., formation mechanism 2-31623  
 (Cd<sub>1-x</sub>Mn<sub>x</sub>)<sub>3</sub>As<sub>2</sub>, semimagnetic semiconductor, Shubnikov-de Haas study 2-26419  
 Cd<sub>0.95</sub>Mn<sub>0.05</sub>Se, bound mag. polarons, effect of magnetisation fluctuations 2-51093  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te crystal, Raman spectrum 2-2257  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te, dil. frustrated lattice, spin glass transition 2-36359  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te, Heisenberg spin glass, high field Faraday rotation, mag. phases 2-46548  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te, light scatt. by magnons 2-13469  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te, mag. ordering study 2-36326  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te, mag. props. at low temps. 2-36358  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te, semimag. semicond., nonresonant energy transfer, time-resolved spectroscopy 2-46718  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te solid soln., electroreflection and photocond. spectra 2-26866  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te, temp. depend. of optical absorption edge meas. 2-2309  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te, transition from spin glass to single impurity behaviour 2-36360  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te, US velocity, 1.5 to 96K, magnetic transitions effect 2-50771  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te, valence band states, photoelectron spectra study 2-26289  
 Cd<sub>1-x</sub>Mn<sub>x</sub>(TeSe), elec. and mag. props. in mag. fields 2-30799  
 Cd<sub>2</sub>(ND<sub>4</sub>)<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>, ferroelec. phase transition, Raman spectra study 2-31477  
 Cd<sub>2</sub>(NH<sub>4</sub>)<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>, ferroelec. phase transition, Raman spectra study 2-31477  
 Cd(NO<sub>3</sub>)<sub>2</sub>, complexation kinetics in nonaqueous solvents, US obs. 2-40497  
 Cd(NO<sub>3</sub>)<sub>2</sub>, electrolyte soln. liq. struct., X-ray diff. study 2-45012  
 Cd<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, glasslike thermal and dielectric props. 2-40613  
 Cd<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, photolum., rel. to structural phase transitions 2-36672  
 Cd<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, quadratic electrooptic effect 2-17446  
 CdO, Debye temp. of oxides with NaCl struct. 2-16744

## cadmium compounds continued

- CdO, standard molar enthalpy of form. in Cd+PbO reaction 2-17912  
 CdO, thermochemical short cycle oxides decomposition in heliostat of arc image solar furnaces 2-37183  
 CdO transparent conducting coatings obtained by pulsed laser sputtering 2-49956  
 CdO-(PbO-CdO-BaO-B<sub>2</sub>O<sub>3</sub> glass) thick film resistors, X-ray and microscopic investigations 2-8488  
 CdO-ZnO-P<sub>2</sub>O<sub>5</sub> (5.60 mol.%) glass, band gap determ. 2-40763  
 Cd(OH)<sub>2</sub>, dissolution and crystn. mechanism from NaOH soln., ionic equilibria and cryst. phases 2-30426  
 CdP<sub>2</sub>, amorphous and cryst., thin films, prep., struct., elec. and optical props. 2-26262  
 CdP<sub>2</sub> and CdP<sub>2</sub>Bi, absorpt. spectra and energy levels in band gap 2-13490  
 CdP<sub>2</sub>, crystal structure, P-P bond lengths and angles, energy gap and melting point 2-25853  
 CdP<sub>2</sub>, photosensitivity anisotropy, 1.3 to 4 eV at 300K 2-46073  
 CdP<sub>2</sub>, solid vapour equilibrium, mass spectroscopic and static equalizing meas. 2-26034  
 CdP<sub>2</sub>, structured luminescence spectrum excited by electron beam 2-26998  
 CdP<sub>2</sub>, thermal expansion and phase transition, X-ray diff. obs. 2-26088  
 CdP<sub>2</sub>, two phonon Raman scatt. spectra, polarisation depend. 2-26927  
 CdP<sub>2</sub>:Zn(Bi)(Sb)(Ga), cathodoluminescence spectrum 2-46784  
 CdP<sub>2</sub>-metal diode structs., contact parameters, current transfer mechanisms 2-26475  
 CdP<sub>2</sub>-metal Schottky diodes, band struct., wavelength modulated photocond. and photoresponse meas. 2-30932  
 CdP<sub>4</sub>, crystal structure, P-P bond lengths and angles, energy gap and melting point 2-25853  
 Cd<sub>3</sub>P<sub>2</sub>, electron mobility, thermoelectric power, .Nernst-Ettingshausen effect 2-26400  
 Cd<sub>3</sub>P<sub>2</sub>, Fermi surface, Shubnikov-de Haas study 2-26278  
 Cd<sub>3</sub>P<sub>2</sub>, IR optical props., absorpt. coeff., reflectivity, plasmon-phonon coupling 2-26925  
 Cd<sub>3</sub>P<sub>2</sub>, resist., Hall coeff., thermoelec. power, band gap, pressure effects 2-26401  
 Cd<sub>3</sub>P<sub>2</sub>, spontaneous and stimulated emission 2-26938  
 Cd<sub>3</sub>P<sub>2</sub>, stimulated emission 2-17506  
 Cd<sub>3</sub>P<sub>2</sub>, prep. technology, cryst. struct. and semicond. props., optical absorption spectra meas. 2-25854  
 Cd<sub>3</sub>P<sub>2</sub>, crystal structure, P-P bond lengths and angles, energy gap and melting point 2-25853  
 Cd<sub>3</sub>P<sub>2</sub>, prep. technology, crystal struct. and semicond. props. optical absorption spectra meas. 2-25854  
 Cd<sub>3</sub>P<sub>2</sub>Cl<sub>6</sub>, cryst. struct., comparison with Cd<sub>3</sub>As<sub>2</sub>I<sub>3</sub> (French) 2-12564  
 Cd<sub>3</sub>Pb<sub>2</sub>-S (x=0.0625, 0.15625) superstructural thin film, props. 2-13205  
 CdRTh(VO<sub>4</sub>)<sub>3</sub>, (R=rare earth), synthesis and crystallographic data 2-40336  
 Cd<sub>2</sub>Rb<sub>2</sub>(SO<sub>4</sub>)<sub>4</sub>, ferroelec. phase transition, Raman spectra study 2-31477  
 CdS, acoustic domains, shock excitation and nonlinear process suppression, Brillouin scatt. meas. 2-17117  
 CdS, acoustoelectric currents, nonlinear, during .US carrier injection 2-36107  
 CdS, anisotropic cond. after plastic deform. and cond. along dislocations 2-45980  
 CdS, anisotropic heating of photoexcited electrons (Russian) 2-9251  
 CdS based photosensitive sandwich structs., series equivalent circuit parameters (Russian) 2-21700  
 CdS, biexciton states, real and virtual, Raman, fluoresc. and radiative recomb. spectroscopy 2-45841  
 CdS, Brillouin scatt. via surface exciton polaritons, theory 2-46622  
 CdS, collinear interaction of acoustic waves 2-35604  
 CdS, comparative optical studies of high density exciton gas 2-51625  
 CdS, conductivity near screw dislocation core 2-26396  
 CdS, contrib. of plasmon to optical gain spectra of high density electron-hole plasma 2-51683  
 CdS, cryst., acoustic shear waves elliptical polarisation 2-36540  
 CdS crystal, degenerate six-photon interaction, optical bistability and hysteresis 2-39690  
 n-CdS crystals, annealed in Cd or In, elec. cond. props. 2-45964  
 CdS crystals, emitted radiation spectral and time dependences 2-51719  
 CdS, defect formation mechanism under thermal neutron irradiation 2-8546  
 CdS, defect struct., high resolution TEM study 2-30473  
 CdS, deformed, absorpt. spectra and birefringent interference pattern 2-46539  
 CdS, dielectric function, renormalization with increasing excitation 2-45867  
 CdS, dislocation energy states, piezo-optical investigation, photoluminescence and absorption spectra obs. 2-51123  
 CdS, electro-acoustical noise 2-51266  
 n-CdS, electrodes, surface-trapped holes, photo- and electroluminesc. 2-41428  
 CdS epitaxial film on InP(111), excitonic luminesc. 2-26986  
 CdS epitaxial layers, exciton spectrum, purity influence 2-41441  
 CdS, evidence of quadrupole transitions to excited states of I<sub>2</sub>-bound exciton 2-2335  
 CdS, excitation mechanisms, excited states of I, bound exciton 2-26975  
 CdS, excitonic polariton dispersion, excitation induced renormalisation effects 2-1835  
 CdS film, chemically sprayed, struct. and electronic props., solar cell appl. 2-8732  
 CdS, film, elec. props. rel. to struct. and comp. 2-46163  
 CdS film, grain struct. 2-51051  
 CdS film, n-n junction system 2-8893  
 CdS film, reversible switching of residual cond. by a gas-vapour pulse 2-21641  
 CdS film exhibiting residual cond., lux-ampere characts., superlinearity 2-1957  
 CdS films, grown on faceted (111)InP substrates, small angle grain boundaries 2-5130  
 CdS, high press. quenched, semicond., pairing of holes rel. to complex mag. props. 2-31136  
 CdS, highly excited, light scatt. by density fluctuations 2-51612  
 CdS, ionic processes occurring under combined action of illum. and elec. field 2-30927  
 CdS laminar crystals, exciton luminesc., spectral and temporal props. 2-17543



## cadmium compounds continued

- CdS laser screen characts., dislocation influence 2-34768  
 CdS, local states US ionization, sonolum. and acoustoelastic current 2-41440  
 CdS, luminescence, time-resolved picosecond, at high excitation 2-46707  
 CdS, luminescence and absorpt. study of plasticity (*Russian*) 2-17545  
 CdS, luminescence study of free exciton lifetime and diffusion length 2-5756  
 CdS, magnetophotovoltaic effects 2-21631  
 CdS, mechanically treated, acceptor impurity diffusion, dislocation study (*Russian*) 2-1666  
 CdS, microstructural changes in high electric fields 2-26066  
 CdS, negative photoplatic effect, dislocation motion in basal and prismatic slip systems 2-45326  
 CdS, neutron irradi., electron-phonon interaction, luminescence study (*Russian*) 2-13559  
 CdS, noncollinear interaction between elastic vol. waves 2-25167  
 CdS,  $p_{44}$  photoelastic coeff. dispersion at 77K 2-36598  
 CdS, phonon echo props. 2-45460  
 CdS, phonon-electron spin interactions, Raman scatt. study 2-46583  
 CdS, photoconductivity and relaxation, barrier model anal., temp. and light intensity depend. 2-36096  
 CdS, photoelectrodes, in polysulphide electrolyte, surface crystallinity and morphology 2-8692  
 CdS piezocrystal, surface acoustic waves, nonlinear refl. 2-26201  
 n-CdS, piezoelectric, Brillouin instability 2-21243  
 n-CdS, piezoelectric semicond., acoustic wave propag., electron mass and collision freq. changes 2-46079  
 CdS, polariton spectroscopy, exciton study by thin prism refraction method 2-2209  
 $\alpha$ -CdS preparation by thermal and plasma-conversion of Cd 2-51839  
 CdS, pressed polycryst., photoelec. props. (*Bulgarian*) 2-21619  
 CdS, pressure quenched, supercond., 77K 2-30994  
 CdS, previously laser irradiated crystals, recomb. radiation spectra (*Russian*) 2-41427  
 CdS, RF elec. field excitation in volume elastic waves interaction 2-46082  
 CdS, resonant Brillouin scatt. in opaque region, piezobirefringence theory 2-51616  
 CdS semiconductor photoelectrodes, current doubling reaction study 2-9557  
 CdS single cryst., refractive index, optically induced changes 2-51543  
 CdS, single cryst., two-phase annealing, elec. resist. meas. 2-8792  
 CdS, single crystal growth from vapour 2-2425  
 CdS single crystals, growth by vapour-phase hydrogen transport 2-46891  
 CdS single crystals, semicond., line emission 2-51708  
 CdS single crystals, evaporation and formation of negative whiskers 2-35914  
 CdS single crystals, photoinduced processes, ageing and annealing effects 2-21620  
 CdS sintered ceramic ribbon solar cells, low cost, basic production processes development programme 2-18057  
 CdS, small particles deposited on transparent substrate luminesc. and Raman spectra, size effects 2-51691  
 CdS, small-angle light scatt. by dislocations, green luminescence 2-46628  
 CdS solar cell, polycrystalline thin film, liquid junction, performance eval. 2-9660  
 CdS solar cells, min. photovoltaic module cost projections, realistic comparison 2-37314  
 CdS, solid state plasma interacting with acoustic waves 2-21614  
 CdS, stress birefringence, EM wave coupling, transmission spectra study 2-21976  
 CdS, studies using megagauss fields 2-31290  
 CdS, superdiamagnetic nature 2-21766  
 CdS, surface, acoustoconcentration effect due to amplified US wave, elec. cond. obs. 2-51238  
 CdS, surface Brillouin scatt., elasto-optic and ripple mechanisms 2-5725  
 CdS tetrapod-like crystals, growth in smoke prepared by gas evaporation 2-51782  
 CdS thin film ultrasonic transducers 2-36538  
 CdS thin films, elec. props., effects of  $H_2$  adsorption 2-30986  
 CdS, US luminesc., fine struct. 2-17559  
 CdS, ultrasonic excitation of orange sonoluminescence 2-2350  
 CdS:Al<sub>2</sub>O<sub>3</sub>(SnO<sub>2</sub>) coating prep. by spray pyrolysis, solar cells appl. 2-51042  
 CdS:Cr<sup>2+</sup>, configuration mixing and cryst. field splitting 2-51136  
 CdS:Cu,Cl, activated phosphors, radiative and nonradiative recomb. centre struct. photoluminescence obs. 2-35966  
 CdS:Cu,Cl, elec. props. and imaging characts. in xerographic mode 2-23752  
 CdS:CuCl<sub>2</sub>, baked layers, effects on elec. and photoelectrical props. 2-30983  
 CdS:CuInSe<sub>2</sub>, vacuum deposition of CuInSe<sub>2</sub> on CdS, experimental methods 2-37237  
 CdS:In, anisotropic cond. after plastic deform., cond. along dislocations 2-45982  
 CdS:In layer and whisker, vapor reaction growth, luminesc. spectrum 2-46674  
 CdS:In layers, optical absorpt., spectral depend., dopant effects 2-51622  
 CdS:Li crystal, interstitial electromigration, exciton luminescence study 2-5279  
 CdS:Ni<sup>2+</sup>, optical spectra, fine struct. and isotope splitting, Jahn-Teller centre interpretation 2-51635  
 n-CdS:Te, semiconductor photoelectrodes, luminescence, photocurrent 2-14087  
 -CdS:Te luminesc. photoelectrochem. electrode, multiple emission and excited state communication 2-6153  
 CdS/Cu<sub>2</sub>S solar cells, characterisation by photocapacitance IR quenching 2-22619  
 CdS/p-g junction, admittance with deep impurity levels, space-charge anal. 2-13169  
 n-CdS/p-Si solar cells, heterojunction, characterisation 2-37239  
 CdS/Su<sub>2</sub>S sintered solar cells, controlled annealing of sintered CdS layer effects on photovoltaic performance 2-6172  
 CdS-aInSe heterostructures, photoelec. props. 2-51225  
 CdS-Ag<sub>2</sub>S, transport props. and cryst. struct. 2-30938  
 CdS-Al, electronic barrier characts., time-resolved charge injection 2-8878  
 CdS-Al contacts, carrier transport, effects of interfacial ambients, time resolved charge injection technique 2-51299

## cadmium compounds continued

- CdS-anthracene interface, exciton reflection and luminesc. spectra 2-51091  
 CdS-Au Schottky barrier solar cell, Ta<sub>2</sub>O<sub>5</sub> antireflection coating 2-27613  
 CdS-Cu<sub>2</sub>S photovoltaic cell crystallographic anal. using SEM and EBIC mode 2-27632  
 CdS-CdSe film n-n heterojunction, photovoltaic effect 2-51235  
 CdS-CdSe(CdTe) solid-phase substitutional heterostructs., photoresponse 2-13176  
 CdS-CdTe thin-film backwall illuminated heterojunction solar cells, spray pyrolysis prep. 2-37373  
 CdS-Cu<sub>2</sub>S solar cell prep. by organometallic CVD, preliminary stage 2-37368  
 CdS-Cu<sub>2</sub>S solar cells, window layer deposition 2-37235  
 CdS-Cu<sub>2</sub>S solar cells, junction-field and collection efficiency in current saturation range 2-37340  
 CdS-Cu<sub>2</sub>S solar cells, CdS film fabrication by chemical spray deposition-ion exchange process 2-37367  
 CdS-Cu<sub>2</sub>S thin film heterojunctions, photovoltaic properties 2-36135  
 CdS-CuInGa<sub>1-x-y</sub>Se<sub>2</sub>Te<sub>1-x-y</sub> heterojunction solar cells prep., RF sputtering technique, characts. 2-37371  
 CdS-CuInSe<sub>2</sub> thin-film high-efficiency solar cells, development 2-37364  
 CdS-electrolyte junction, flat band pot., electroreflectance study 2-17156  
 CdS-metal interface, reactive interdiffusion and electronic barriers, reactive interlayer control of Schottky barrier height, photoemission study 2-40608  
 CdS-S coevaporated thin film prep. and cryst. props. 2-41531  
 Cd(SCN)<sub>2</sub>, complexes, aq. solns. and solid, Raman spectra study 2-51579  
 CdSO<sub>4</sub> aq. solns., X-ray diff. study at 9 and 62°C 2-12455  
 CdSO<sub>4</sub>, electrolyte soln. liq. struct., X-ray diff. study 2-45012  
 CdS(Se), refractive index, birefringence and permittivity calcs. 2-26853  
 CdS<sub>1-x</sub>Se<sub>x</sub>, characts. of emitted recombination radiation 2-41425  
 CdS<sub>1-x</sub>Se<sub>x</sub>, localised exciton resonant secondary emission 2-46695  
 CdS<sub>1-x</sub>Se<sub>x</sub> solid solns., photoluminesc. spectra 2-31554  
 CdS<sub>1-x</sub>Se<sub>x</sub>, refractive index, birefringence and permittivity calcs. 2-26853  
 CdS<sub>1-x</sub>Te<sub>x</sub>, preparation and properties for graded band gap solar cells 2-5837  
 CdS<sub>1-x</sub>Te<sub>x</sub> solar cells, graded band gap, numerical model for photogenerated carriers distribution determ. 2-6144  
 CdS<sub>1-x</sub>Te<sub>x</sub> thin film solar cells graded band gap, preparation and props. 2-6145  
 (CdS)<sub>1-x</sub>(ZnS)<sub>x</sub>-Cu, Cl, sintered layers, photocond. and acceptor centre levels 2-13138  
 CdS:Li piezoelectric semicond. transducer, elec. energy conversion into sound, carrier injection effects 2-50047  
 p-CdSb, undoped, photoelec. props. 2-46074  
 CdSb<sub>2</sub>S<sub>3</sub>, crystal structure determ. 2-8503  
 CdSe, absorption coeff. in region of fundamental absorption edge, strong EM wave effect 2-51600  
 CdSe based photosensitive sandwich struct., series equivalent circuit parameters (*Russian*) 2-21700  
 CdSe, defect formation mechanism under thermal neutron irradiation 2-8546  
 CdSe, epitaxial film, surface state charging during NO<sub>2</sub> adsorption 2-36163  
 CdSe film, deposited from heteroorganic cpds., exciton absorpt. 2-5761  
 CdSe, film, elec. props. rel. to struct. and comp. 2-46163  
 CdSe, generation-recombination noise and defect levels 2-26455  
 CdSe, high density electron-hole plasma, picosecond luminesc. and relax. 2-51682  
 CdSe, hot electron-hole plasma, spatial expansion, time resolved photoluminesc. study 2-46051  
 CdSe, luminescence, time-resolved picosecond, at high excitation 2-46707  
 CdSe, negative photoplatic effect, dislocation motion in basal and prismatic slip systems 2-45326  
 CdSe, noncritically phase-matched, tunable coherent 16  $\mu$ m radiation by difference freq. mixing 2-11717  
 CdSe, photoanodes, photoelectrochemical cells, energy storage 2-14088  
 n-CdSe photoanodes, protection with photoelectrochemically generated polypyrrole films 2-47203  
 CdSe photoelectrochemical solar cell, high efficiencies and losses meas. 2-52370  
 CdSe, photoelectrodes, in polysulphide electrolyte, surface crystallinity and morphology 2-8692  
 CdSe, polycrystalline layers, effect of annealing on elec. props. 2-30984  
 CdSe single crystals, specific cond. meas. by capacityprobe (*Russian*) 2-43041  
 CdSe solution grown films, optical and photoconducting props. 2-46177  
 CdSe surface potential change as a result of O thermodesorption 2-16956  
 CdSe thin film, chemically deposited, for photoelectrochemical cells 2-36801  
 CdSe thin film, thermal desorption of chemisorbed O<sub>2</sub> and CO, elec. resist. var. obs. 2-35890  
 CdSe thin film anodes, photoelectrochem. characts. 2-8876  
 CdSe thin film electrodes for photoelectrochemical cells, props. 2-14092  
 CdSe thin film electrodes for backwall photoelectrochemical cells 2-14093  
 CdSe thin film MIS solar cell, characterization 2-37374  
 n-CdSe thin film photoelectrodes, Zn surface treatment effect, photoelectrochem. solar cell appl. 2-52373  
 CdSe:Ag, nonequilibrium sensitized, mid IR radiation detector, photocond. 2-8838  
 CdSe:Fe<sup>2+</sup>(Co<sup>2+</sup>)(Ni<sup>2+</sup>), zero-phonon lines in optical spectra 2-46650  
 CdSe:Ni<sup>2+</sup>, optical spectra, fine struct., Jahn-Teller centre interpretation 2-51636  
 CdSe:O films, reactive planar magnetron sputtering prep., expt. study 2-51026  
 n-CdSe/electrolyte interface, electrorefl. spectra, photoelectrochem. solar cell appl. 2-9207  
 CdSe/polysulphide solution Schottky barriers charact., surface treatment effect 2-2000  
 CdSe/S<sub>2</sub> photoelectrochemical cells, surface etching and morphology effect on stability 2-27711  
 CdSe-Al, electronic barrier characts., time-resolved charge injection 2-8878  
 CdSe-HgSe solid soln., fund. absorpt. and absorpt. by free carriers, lattice disorder influence 2-13465  
 CdSe-MIS solar cells, props. 2-37233



## cadmium compounds continued

- CdSe-metal interface, reactive interdiffusion and electronic barriers, reactive interlayer control of Schottky barrier height, photoemission study 2-40608  
 CdSe-ZnTe heterojunction, electronic-voltaic effect 2-30963  
 CdSeO<sub>4</sub>·H<sub>2</sub>O, cryst. struct. determ. 2-21071  
 CdSmTiNbO<sub>7</sub>, mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
 n-CdSnAs<sub>2</sub>, Shubnikov-de Haas effect, band struct., spin-orbit and cryst. field splitting 2-40934  
 CdSnAs<sub>2</sub>, single cryst. and layer growth from soln. in melt, solvents investigated. 2-41509  
 CdSnO<sub>4</sub> films, spray deposited, elec. and optical props., solar cells appl. 2-52386  
 CdTe, bound multiple exciton complex, in luminesc. spectra, Zeeman splitting 2-13553  
 CdTe, cold semicond., hot electrons, luminesc. expts. 2-51676  
 CdTe, compressibilities, Debye-Waller factors and melting criteria 2-1580  
 p-CdTe, covered with dielec. films, annealing effects, diffusion phenomena and carrier conc. (*Japanese*) 2-40609  
 CdTe crystals, wavefront inversion in degenerate four-wave interaction 2-39696  
 CdTe, crystals, vapour phase growth 2-27063  
 CdTe, defect formation mechanism under thermal neutron irradiation 2-8546  
 CdTe, defect struct., high resolution TEM study 2-30473  
 CdTe detector characteristics for  $\gamma$  dosimetry 2-43625  
 CdTe, dislocation electronic state calcs. 2-40821  
 CdTe doped with Fe group impurities, mag. susceptibility (*Russian*) 2-26580  
 n-CdTe electrodeposited solar cells evaluation 2-37234  
 CdTe, electronic band struct. calcs. 2-40782  
 CdTe, irradiation induced intrinsic excitonic luminesc. 2-2337  
 CdTe, mag. field induced LT mixing of multicomponent polaritons 2-26872  
 CdTe, molecular beam epitaxy on CdTe (100) and (100) 2-2450  
 CdTe p-n junctions, electrolytically prepared, emission props. 2-2347  
 CdTe, p-n junctions, LPE grown, injection electroluminescence 2-13569  
 CdTe p-n junctions quantum and energy conversion efficiency 2-36134  
 CdTe, photoelectron spectra under cooperative UV and visible excitation 2-9243  
 CdTe, plastic deform., photoplastic effect, dislocation obs. by TEM 2-8556  
 CdTe real surfaces, optical and elec. props. 2-51278  
 CdTe solar cell fabrication by hot wall vacuum evaporation 2-37372  
 CdTe solar cells, high efficiency electrodeposited, development 2-47474  
 CdTe, solubilities in liquid III metals 2-50863  
 CdTe sputtered thin films, photocond. and photovoltaic effects 2-46070  
 CdTe surface, (110), LEED intensities, dynamical anal. 2-12893  
 CdTe surface barrier diodes as detectors for energetic charged particles, evaluation 2-604  
 CdTe, surface polishing by diamond milling 2-41767  
 CdTe thin film apps. to solar cells (*Slovak*) 2-18054  
 CdTe thin films, optical props. 2-46805  
 CdTe, thin films, struct. and elec. props. stoichiometry and prep. condition depend. 2-51353  
 CdTe thin-film Schottky-barrier solar cells, elec. props., limitations 2-37392  
 CdTe, transient hot-carrier phenomena, method of moments for anal. 2-45998  
 CdTe undoped p-type annealed in vacuum, electrical and crystalline props. 2-5750  
 CdTe vacuum deposited films, optical band gap, thickness depend. 2-51731  
 p-CdTe:Ag, impurity acceptor photocond. centres, equilb. and nonequilb. 2-26444  
 n-CdTe:Al, DLTS study of deep levels 2-35962  
 n-CdTe:Al, deep centres, charact. 2-51115  
 CdTe:Al, Li, IR absorpt. of Al-Li defect pairs 2-9169  
 CdTe:Cl crystals, carrier scatt., Hall effect study 2-26383  
 CdTe:Co<sup>2+</sup>, cryst. field splitting, press. induced changes, IR spectra study 2-26944  
 CdTe:Cu high-resolution electron microscopy obs. of defects, coherent precip. and faulted loops 2-5120  
 CdTe:(P,Ga)(P,Al)(P,In), localised vibr. modes, Green's function calc. 2-50814  
 n-CdTe:Pb films, vapour deposited, elec. anal. optical props. 2-30985  
 CdTe-CdHgTe heterostruc., equilb. band profiles calc., IR apps. 2-51296  
 CdTe-HgTe ternary mixed alloys for tandem solar cell apps. 2-42021  
 CdTe-Langmuir film MIS solar cells photovoltaic props. 2-37211  
 CdTe-MnTe ternary mixed alloys for tandem solar cell apps. 2-42021  
 CdTe-TeO<sub>2</sub>, interface struct., high resolution TEM study 2-30473  
 CdTe-ZnSe heterojunction, photo-EMF anomalous mechanism under two-photon excitation 2-26491  
 Cd<sub>2</sub>Ti<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>, ferroelec. phase transition, Raman spectra study 2-31477  
 Cd<sub>3-x</sub>Zn<sub>x</sub>As<sub>2</sub>, conduction and valence band struct., Hall effect, resistivity and magnetoresistance meas. 2-26421  
 Cd<sub>1-x</sub>Zn<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>Ag, effect of impurity on mag. struct. 2-31141  
 (Cd,Zn)S/Cu<sub>2</sub>S solar cells, thin-film, polycrystalline 10% conversion efficiency 2-32080  
 CdZnS-Cu<sub>2</sub>S thin film solar cells, Cu<sub>2</sub>S and CdS lattice constants mismatch reduction for cell conversion efficiency optimisation 2-27635  
 CdZnS-Cu<sub>2</sub>S thin film solar cells, 10% conversion efficiency 2-37322  
 Cd<sub>1-x</sub>Zn<sub>x</sub>S film, grain struct. 2-51051  
 Cd<sub>1-x</sub>Zn<sub>x</sub>S/Cu<sub>2</sub>S photovoltaic cells heterojunction energy band lineups anal. 2-27637  
 CsCdCl<sub>3</sub>:Co<sup>2+</sup> optical absorpt. spectra 2-26946  
 Cs<sub>2</sub>CdCl<sub>4</sub>:Co<sup>2+</sup>, polarised absorpt. spectra, 300 and 77K 2-46641  
 Cu-CdS Schottky barriers, exciton refl., absorpt., and photoluminesc. spectra 2-36668  
 Cu<sub>2</sub>S-CdS backwall solar cells, sprayed ITO layers characts. determ. for cell efficiency optimisation 2-27633  
 Cu<sub>x</sub>-CdS polycrystalline heat-treated solar cells, atomic absorption anal. and auger depth profiles 2-37325  
 Cu<sub>2-x</sub>-CdS heterojunctions, photoeffect props. and manufacturing methods (*Russian*) 2-1997  
 CuInSe<sub>2</sub>-CdS thin film solar cells, development 2-37326  
 Cu<sub>2</sub>S/CdS solar cells, transient photovoltaic effect 2-52352  
 Cu<sub>2</sub>S/Zn<sub>1-x</sub>Cd<sub>x</sub>-S heterojunction solar cells formed on sprayed Zn<sub>1-x</sub>Cd<sub>x</sub>-S films, properties 2-27636

## cadmium compounds continued

- Cu<sub>2</sub>S-(Cd,Zn)S thin-film high-efficiency solar cells, development 2-37364  
 Cu<sub>2</sub>S-CdS dry process solar cells, CdS carrier concentration influence on cell props. 2-27634  
 Cu<sub>2</sub>S-CdS solar cells degradation, lateral diffusion effects 2-37324  
 Cu<sub>2</sub>S-CdS sprayed backwall solar cells for terrestrial appls., reliability 2-37321  
 Cu<sub>2</sub>S-CdS sprayed solar cells, losses 2-37320  
 Cu<sub>2</sub>S-ZnCdS thin film solar cells, cross diffusion of Cd and Zn 2-37323  
 Cu<sub>2-x</sub>S-CdS frontwall thin film solar cells, influence of performance of surface props. of Cu<sub>2-x</sub>S 2-27631  
 Cu<sub>2-x</sub>S-CdS thin film solar cells with dual impurity distrib. in base 2-37214  
 Cu<sub>2</sub>S/CdS photocells, characteristics 2-47476  
 Cu<sub>2</sub>S-CdS integrated thin film solar panels fabrication technology 2-27638  
 Cu<sub>2</sub>S-CdS thin-film heterostruc. solar cell, struct. and phase studies by X-ray diffr. 2-37366  
 Cu<sub>2</sub>S-CdS ungridded solar cell material, defect detect. by laser scanning 2-37365  
 (Hg,Cd)Te photoconductive detector in 3 to 5  $\mu$ m range, UV irradiat. effect 2-15226  
 Hg<sub>8</sub>Cd<sub>1-8x</sub>Te crystals, electrically and optically active defects 2-1479  
 Hg<sub>8</sub>Cd<sub>1-8x</sub>Cr<sub>2</sub>Se<sub>4</sub>, solid soln. thin films, isothermal epitaxial growth on CdCr<sub>2</sub>Se<sub>4</sub> single cryst. substrate (*Japanese*) 2-31637  
 HgCdTe, anodic oxide and ZnS passivant films, substrate interaction, XPS and ion sputtering meas. 2-17756  
 HgCdTe IR detector materials, conf., Washington, DC, USA (April 1981) 2-14973  
 HgCdTe IR detector arrays performance, 1 to 14  $\mu$ m wavelength apps. 2-48778  
 HgCdTe, large optical nonlinearities and CW degenerate four-wave mixing 2-16068  
 HgCdTe, luminescence 2-26957  
 HgCdTe photovoltaic detector arrays, backside-illuminated, MTF modelling 2-23722  
 HgCdTe, recombination processes in 3 to 5  $\mu$ m 2-21529  
 Hg<sub>80</sub>Cd<sub>20</sub>Te, defect struct., Hall effect study 2-46033  
 Hg<sub>80</sub>Cd<sub>20</sub>Te, photogenerated carrier lifetime meas. using contactless opt. technique 2-17112  
 Hg<sub>80</sub>Cd<sub>20</sub>Te-anodic oxide interface in MOS structure, charge trapping 2-17165  
 Hg<sub>80</sub>72Cd<sub>28</sub>Te narrow band gap semicond., free and bound magnetopolarons 2-40807  
 Hg<sub>80</sub>Cd<sub>20</sub>Te, anodic oxide film, surface anal. and capacitance-voltage characterization 2-51366  
 Hg<sub>80</sub>Cd<sub>20</sub>Te bolometer for mm wave radiation detection 2-19185  
 Hg<sub>80</sub>Cd<sub>20</sub>Te:Cu, pure and doped, defect struct., Hall effect study 2-46031  
 Hg<sub>80</sub>Cd<sub>20</sub>Te:In, defect struct., Hall effect study 2-46032  
 Hg<sub>80</sub>Cd<sub>20</sub>Te-oxide interface, anodic oxide composition and Hg depletion 2-26237  
 Hg<sub>80</sub>Cd<sub>20</sub>Te, electron freezeout and hopping cond., magnetoresist. and Hall effect meas. 2-5423  
 n-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, bandgap-reson. optical phase conjugation at 10.6  $\mu$ m 2-25075  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, deep levels, correlation with photodiode performance 2-1856  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, detector grade, LPE growth from Te rich solns. 2-17638  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, electron irradi. and annealed, carrier lifetime and recomb. props. 2-17090  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te epitaxial layers, slider LPE growth using Hg press. controlled growth solns. 2-31645  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te IR detectors, MIS diode and photoconductive devices, perform. rel. to grain boundary angles 2-48788  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te intrinsic photoconductive IR detectors, two-dimens. effects 2-43082  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, ion-implanted, CW CO<sub>2</sub> and ruby laser annealing, expt. study 2-41457  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, low-temp. thermal expansion 2-5250  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, narrow gap semicond., recomb. effects. temp. depend. photoresponse meas. 2-36055  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, nonequilb. carrier recomb., Auger recomb., carrier lifetime 2-51204  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, obs. of deep levels with optical modulation spectroscopy 2-51109  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, optical phase conjugation in forward and reflective modes 2-16069  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, photogenerated carrier lifetime, deep levels, optical modulation spectroscopy 2-51732  
 (Hg<sub>1-x</sub>Cd<sub>x</sub>)Te RF sputtered thin films, effect of annealing in Hg vapour on props. 2-8896  
 (Hg<sub>1-x</sub>Cd<sub>x</sub>)Te RF triode-sputtering film for IR detector arrays 2-17174  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, slider LPE growth on CdTe substrate 2-17639  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, two electron cond., Hall coeff., electron mobility and conc. 2-51216  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te-oxide interface, carrier transport props. 2-51337  
 Hg<sub>80</sub>Cd<sub>20</sub>Te, undoped and In and Ag doped, interdiffusion study 2-12859  
 HgCd\*, discharge studies 2-34488  
 HgTe-CdTe, pseudobinary phase diagram, DTA meas. 2-31687  
 HgTe-CdTe-Te system, thermodynamic anal. using regular associated soln. model 2-35717  
 In-CdS-In superconducting junction, lack of proximity effect coupling 2-31068  
 In<sub>2</sub>O<sub>3</sub>-CdSe-VO<sub>2</sub> heterojunctions, optical control of spectral characts. 2-36143  
 (InSb)<sub>1-x</sub>(CdTe)<sub>x</sub> solid soln., valence band spin-orbit splitting, electroreflectance study 2-17445  
 KCdF<sub>3</sub>, struct. phase transitions study by EPR probe of Gd<sup>3+</sup>-V<sub>Cd</sub> centre 2-45556  
 (K,Tl)<sub>1-x</sub>Cd<sub>x</sub>(SO<sub>4</sub>)<sub>3</sub>, phase transition and lattice parameters 2-12730  
 Li<sub>2</sub>CdBr<sub>4</sub>, ternary bromides, spinel structure, struct. and stability (*German*) 2-5095  
 Li<sub>2</sub>CdCl<sub>4</sub>, spinel struct., ionic cond. 2-5269  
 Mg<sub>2</sub>Cd<sub>1-x</sub>Se, Raman spectra, multiphonon resources (*Russian*) 2-46615  
 n-Mg<sub>1-x</sub>Cd<sub>x</sub>Te, degenerate, carrier conc. depend. of Auger lifetime 2-36059  
 MgO-CdO-Fe<sub>2</sub>O<sub>3</sub> system, phase comp., X-ray and mag. analysis 2-5864  
 (Ni<sub>10</sub>Cd<sub>90</sub>O)<sub>1-x</sub>(Fe<sub>2</sub>O<sub>3</sub>)<sub>1+x</sub>, mag. and elec. props. 2-46338



## cadmium compounds continued

- NiS-CdS/NiS-PbS selective coatings for solar thermal conversion 2-27730  
 p-Pb<sub>1-x</sub>Cd<sub>x</sub>Te epitaxial film, elec. transport props. 2-8894  
 PbS/CdS multilayer stacks as selective absorbers, designed and fabricated using solution growth techniques 2-9684  
 RbCdCl<sub>3</sub>, perovskite, structural phase transition, birefringence 2-1616  
 RbCdF<sub>3</sub>Gd<sup>3+</sup>, ESR study of phase transition 2-46507  
 Se-CdO photovoltaic cell fabrication by reactive sputtering 2-22623  
 SiO<sub>2</sub>-Na<sub>2</sub>CO<sub>3</sub>-ZnO-CdCO<sub>3</sub>-ZnS-Se-Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, selenium ruby glasses, SAXS anal. of nucleation 2-50828  
 SnO<sub>2</sub>/CdTe photovoltaic cells, prep. and characterisation 2-18056  
 TeO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-CdO, phase separation, electron microscope obs. 2-13707  
 TiCdF<sub>3</sub>Gd<sup>3+</sup>, ESR study of phase transition 2-46507  
 (Y,Sr,Ca)<sub>3</sub>(Ge,Fe)<sub>2</sub>O<sub>12</sub> film, domain wall motion, magnetisation and comp. depend. 2-26704  
 (Zn,Cd)S:Ag,Cl DC electrolum. powder cell, donor-acceptor recombination luminesc. 2-46768  
 γ-(Zn,Me)<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, (Me=Mg, Mn, Fe, Co, Cu, Ni, Cd), solid solns., crystal chem. 2-16626  
 ZnB<sub>2</sub>O<sub>3</sub>-CdB<sub>2</sub>O<sub>3</sub>-PbF<sub>2</sub>, spectral luminesc. study 2-26985  
 (Zn,Cd<sub>1-x</sub>)<sub>2</sub>P<sub>2</sub> solid soln. electron struct. XPS and X-ray spectral studies 2-27029  
 Zn,Cd<sub>1-x</sub>S-CdTe thin-film backwall illuminated heterojunction solar cells, spray pyrolysis prep. 2-37373  
 Zn,Cd<sub>1-x</sub>(S,Se), colour centres in silicate glasses 2-9173  
 Zn<sub>1-x</sub>Cd<sub>x</sub>(S,Se)(Te), solid solution, crystallochemical struct. and phase diagram 2-47016  
 Zn<sub>1-x</sub>Cd<sub>x</sub>Se, resonant Raman scatt. of light 2-36649  
 ZnS-CdS, synthesis and cocrystn. under hydrothermal conditions, phase form., analysis and struct. 2-41505  
 (ZnSe)<sub>1-x</sub>(CdTe)<sub>x</sub> luminesc. under one-photon laser pumping, exciton behaviour 2-36697

## caesium

see also nuclei with .....

- adsorbed on alkali metals, response to surface core excitations 2-40679  
 adsorbed on Mo, work function, thermal stability, LEED study 2-45732  
 atom, 6S<sub>1/2</sub>-5D<sub>3/2</sub> satellite line, rare gas perturbation study 2-24653  
 atom, core exchange polarisation effects calc. using SCF Xalpha wave functions 2-43800  
 atom, forbidden 6S-7S transition, meas. with and without elec. field 2-4403  
 atom, interaction with Au surface, van der Waal forces 2-44036  
 atom, multiphoton ionisation probabilities, calcs, perturbative treatment 2-4249  
 atom, obs. of quantum beats in superradiance on 5<sup>2</sup>D<sub>3/2</sub>-6<sup>2</sup>P<sub>1/2</sub> transition 2-20023  
 atom, optically pumped in Cs-Ne and Cs-H<sub>2</sub> systems, appl. of pulse study method 2-15750  
 atom, resonant multiphoton ionisation at 1.059 μm, laser temporal-coherence effects 2-15757  
 atom, second doublet oscillator strength ratio determ., band-shift method 2-16420  
 atom, Stark enhancement in resonant multiphoton ionisation in incoherent laser pulses 2-19997  
 atom, static electric dipole polarisabilities, SCF and CI calcs. 2-39329  
 atom, three-photon ionisation, probability rate, spin-orbit coupling, electron spin polarisation 2-686  
 atom and ions, binding energy, SCF calcs. 2-20200  
 atom electric field ionisation, spin-orbit effect 2-34330  
 atoms, ionisation rate const. in CO flames, RF reson. determ. 2-4239  
 atoms, multiphoton ionis. rel. to Cs<sub>2</sub> laser photodecomp. 2-20146  
 atoms, scalar polarisability determ. in 6S-7S transition 2-24879  
 atoms and solid, binding energy, Auger and photoelectron spectra 2-34367  
 crossed beams, Hanle signal shape 2-20013  
 electrical resist. at low temp., electron-electron Umklapp scatt. contrib. 2-26357  
 emissions in HTR coolant following water ingress (German) 2-533  
 frequency standard, squarewave frequency modulation servo system, freq. stability (Japanese) 2-166  
 gas, thermodynamic props. at high press. and temps. 2-35249  
 Hudson river sediment pollution by Pu, Cs, Co radionuclides 2-37468  
 ion sputter source for radioactive dating project 2-11342  
 liquid, thermophysical props. 2-35562  
 magnetometer spin generator, reson. freq. stabilisation with modulated optical pumping 2-43057  
 melting curve eqn. under high press., Simon's eqn. 2-45537  
 melting thermodynamics under high press., Simon eqn. 2-5208  
 metal-NH<sub>3</sub> solutions, ESR at -65°C 2-13330  
 metallic surface, caesiated, negative secondary ion emission (French) 2-5787  
 molecule, equilib. separation and electron affinity calc. using Xalpha discrete-variation method 2-29524  
 molecule, nonadiabatic binding of mol. states, rapid vibr. relax. (Russian) 2-49561  
 phonon frequencies, six force constant model 2-30545  
 radioactive, solutions, infiltration into water-bearing strata (German) 2-458  
 radioactive Cs levels in hot HTR core (German) 2-7318  
 Sanguenay fjord, sediments, C and <sup>137</sup>Cs spatial and temporal var. (French) 2-14451  
 solar MHD converter, high temp. operation 2-47502  
 spent fuel elements, implications of basalt as a nuclear waste repository 2-7163  
 sputtered negative ion source, sputter cathode enhanced axial erosion 2-11343  
 structural and thermodynamic props. using local transition metal pseudopot. 2-8472  
 submonolayers on Mg surface, outer core spectra 2-40678  
 vapour, photoacoustic-pulse generation and propag. 2-44818  
 vapour, pulsed-laser-induced breakdown, heat diffusion 2-44876  
 virtual bound states 2-5372  
 Al caesiated thin film, surface and volume photoeffect 2-2409  
 Cs I, semiclassical parameterisation of l≥3 energy levels 2-15691  
 Cs ions+He (Ne) (Kr) (H<sub>2</sub>), charge transfer cross sections involving electron capture processes 2-7631  
 Cs<sup>+</sup> and Cs, SCF wave functions 2-43793  
 Cs-Au amorphous mixture, metal-insulator transition 2-40795  
 Cs-Sb amorphous mixture, metal-insulator transition 2-40794

## caesium continued

- Cs-Xe mixture, metal-insulator transition 2-40793  
 Cs+CO(N<sub>2</sub>), cross sections for form. of electrons and negative ions, orientational effects 2-24812  
 Cs+H<sub>2</sub>, Cs second reson. doublet broadening 2-20002  
 Cs+H<sub>2</sub>, form. of H<sup>-</sup>, dissociative attachment 2-34528  
 Cs+H<sub>2</sub>(N<sub>2</sub>)(methane)(methane-d<sub>4</sub>), excitation transfer and quenching, temp. depend. of cross sections, fluoresc. 2-49553  
 Cs<sup>+</sup>+Cs<sup>+</sup> 2-44086  
 Cs<sub>2</sub>, laser photodecomp. rel. to multiphoton ionis. of atoms 2-20146  
<sup>133</sup>Cs, A=118-145 and isomers, hyperfine struct., D<sub>2</sub> isotope shift, nuclear moments, charge radii and deformation 2-29186  
<sup>133</sup>Cs, A=133, 134, 137, transfer rates in pasture, soil-type depend. 2-32135  
<sup>133</sup>Cs vapour, mag. reson. signal obs. with laser pumping 2-15754  
<sup>134</sup>Cs solution, activity meas. 2-43652  
<sup>134</sup>Cs/<sup>137</sup>Cs isotope correlations, for reprocessing input verification 2-4050  
<sup>137</sup>Cs, <sup>137</sup>Cs, reactor-released radionuclides, meas. in Susquehanna River sediments 2-32133  
<sup>137</sup>Cs, body burdens in selected adult male Japanese 2-52644  
<sup>137</sup>Cs concentrations in waters of Laurentian Great Lakes, comparison of 1973 and 1976 values 2-9698  
<sup>137</sup>Cs, concs. in different types of honey 2-9884  
<sup>137</sup>Cs, distrib. in Clyde sea area sediments 2-42058  
<sup>137</sup>Cs in environmental samples, studies of trace amounts (Japanese) 2-14175  
<sup>137</sup>Cs intracavitary tubes, dosimetric consequences of asymmetric positioning of active source 2-27905  
 Cs(7P)+H<sub>2</sub>, laser fluoresc., reaction rate coeff. 2-9540  
 K<sub>2</sub>Mg,Ti<sub>2</sub>O<sub>6</sub>, Cs, one-dimens. superionic cond., freq. depend., dielec. response 2-1663  
 N<sub>2</sub>-C, mixture in positive column, electron energy distrib. 2-8373  
 Si:Cs, ion implanted, dopant retention, backscatt. study 2-45217

## caesium alloys

- Cs-Au liquid alloy, metal-insulator transition 2-1828  
 Cs-K(Rb), solid solution, total binding energy electronic theory 2-26319  
 CsAu, bonding in liquid and amorphous binary semiconductor alloys 2-8436  
 CsAu(Sn), vapour phase reaction growth 2-22173  
 Na-Cs, liquid, elec. resist. and struct., electron-ion plasma model 2-26356

## caesium clocks see atomic clocks

## caesium compounds

see also caesium alloys

- caesium salt of thiosulfate complex of Fe(III), cryst. struct., Fe<sup>III</sup>S<sub>2</sub>O<sub>6</sub>N<sub>2</sub> coordination unit 2-25863  
 cryst. struct. and transition temp. 2-40329  
 CsCaCl<sub>3</sub>, perovskite, structural phase transition, birefringence 2-1616  
 CsNiF<sub>3</sub>, one-dimens. ferromag., soliton instability in high mag. fields 2-51417  
 graphite intercalation compound with Cs, staging and ordering 2-1618  
 halides, lattice static calc. of F-centre absorption energy 2-46642  
 C<sub>2</sub>Cs(H<sub>2</sub>), H rot. tunnelling spectra 2-35408  
 C<sub>6</sub>Cs, Auger line shape construction 2-27031  
 C<sub>6</sub>Cs, intercalation cpds., mech. of supercond. 2-46181  
 C<sub>6</sub>Cs, intercalation cpds., phonons 2-50787  
 Cs complex, Cs<sub>2</sub>(TCNQ)<sub>2</sub>, mol. vibr. and charge transfer states, polarised reflectance study 2-36637  
 CsAu, Z=2857  
 Cs<sub>2</sub>Bi<sub>2</sub>Br<sub>6</sub>, luminescence and photocond. 2-46676  
 CsBi(MoO<sub>4</sub>)<sub>2</sub>, specific heat near two phase transitions 2-12775  
 CsBr, additionally coloured, precip. and growth kinetics of Cs colloids 2-25874  
 CsBr, F centre luminesc. uniaxial stress induced polarisation, exptl. studies 2-17519  
 CsBr, tunnelling charge transfer to Frenkel defects, luminesc. obs. 2-45153  
 CsBr, vacancy and interstitial formation under optical exciton generation conditions 2-31572  
 CsBr:ReO<sub>4</sub><sup>-</sup>, IR and Raman spectra, ReO<sub>4</sub><sup>-</sup> ion orientation 2-13517  
 CsBr:S<sub>2</sub>(S<sub>2</sub><sup>-</sup>), molecular ion centres, optical and IR absorpt. studies 2-46556  
 CsCa(NH<sub>3</sub>)<sub>3</sub>, cryst. struct. and IR spectra (German) 2-8493  
 CsCa<sub>2</sub>Nb<sub>2</sub>O<sub>10</sub>, sheet perovskite (French) 2-35454  
 CsCdCl<sub>3</sub>:Co<sup>2+</sup>, optical absorpt. spectra 2-26946  
 Cs<sub>2</sub>CdCl<sub>4</sub>:Co<sup>2+</sup>, polarised absorpt. spectra, 300 and 77K 2-46641  
 CsCl, additionally coloured, precip. and growth kinetics of Cs colloids 2-25874  
 CsCl aqueous solutions, isopiestic molality obs. at elevated temps. 2-37091  
 CsCl colour symmetry, appl. of algebraic study of contemporary symmetry 2-38401  
 CsCl, cryst. slab of oscill. charges, elect. field K-depend. 2-5650  
 CsCl crystal, IR absorpt. spectra of impurity tetrahedral anions, vibr. bands 2-51638  
 CsCl, dil. aq. soln., cond. meas. at low temp. 2-50895  
 CsCl, ionic diffusion in water-dioxan mixtures (French) 2-12794  
 CsCl, simple ionic crystals structures, semi-quantitative theory 2-1459  
 CsCl:ReO<sub>4</sub><sup>-</sup>, IR and Raman spectra, ReO<sub>4</sub><sup>-</sup> ion orientation 2-13517  
 CsCl-CuCl<sub>2</sub>-H<sub>2</sub>O system, phase diagram 2-51788  
 CsCoCl<sub>3</sub>(Br<sub>3</sub>), magnon, spin dynamics, Raman study 2-13280  
 CsCoCl<sub>3</sub>, antiferromagnet, quasi-one-dimensional Ising-like, ESR study 2-41182  
 Cs<sub>2</sub>CoCl<sub>4</sub>, transverse susceptibility meas. 2-21779  
 CsCoCl<sub>3</sub>2H<sub>2</sub>O, antiferromag., one-dimens., <sup>133</sup>Cs nuclear spin-lattice relax., domain boundary propag. effect 2-26779  
 CsCrCl<sub>3</sub>, perovskite, structural phase transition, birefringence 2-1616  
 Cs<sub>2</sub>CrO<sub>4</sub>, matrix isolated, IR spectra 2-34397  
 Cs<sub>2</sub>CrO<sub>4</sub>, thermodynamic props. 2-2727  
 CsCuCl<sub>3</sub>, antiferromagnetic cryst., elastic const. temp. depend., US vel. study 2-25968  
 CsCuCl<sub>3</sub>, first order struct. transition at 423K 2-30576  
 CsCuCl<sub>3</sub>, Jahn-Teller phase transitions, <sup>133</sup>Cs quadrupole perturbed NMR study 2-21897  
 CsCuCl<sub>3</sub>, magnetic susceptibility study 2-41114  
 CsCuCl<sub>3</sub>, phase diagram, Neel temp. 2-26629  
 CsCuCl<sub>3</sub>, saturated solns. and single crystals, absorpt. spectra, 210-1400 nm 2-22047



## caesium compounds continued

- $\text{Cs}_3\text{Cu}_2\text{Cl}_2\cdot 2\text{H}_2\text{O}$ , saturated solns. and single crystals, absorpt. spectra, 210-1400 nm 2-22047  
 $\text{CsD}$ , lattice dynamics shell model 2-8585  
 $\text{CsEu}(\text{NH}_2)_3$ , cryst. struct. and IR spectra (*German*) 2-8493  
 $\text{CsF}$ , soln. in formic, acetic and propionic acids, heat of soln., H-bonds 2-2725  
 $\text{CsF}\cdot 2\text{ZrF}_4$ , mol. comp. of vapour, activities and dissociation energies, mass spectra of evap. products 2-27466  
 $\text{CsF} + \text{K}$ , ang. momentum conservation representation in energy space 2-39464  
 $\text{CsFeCl}_3$ , triangular X-Y antiferromag., spin ordering, susceptibility and sp. ht. study 2-36364  
 $\text{CsFeCl}_3\cdot 2\text{H}_2\text{O}$ , crystal field effects, Mossbauer study 2-26795  
 $\text{CsFeCl}_3\cdot 2\text{H}_2\text{O}$ , mag. ordering, Mossbauer study 2-26796  
 $\text{CsH}$ , lattice dynamics shell model 2-8585  
 $\text{CsH}$  spectroscopy, formation in elect. discharges 2-48792  
 $\text{CsH}$ , transition moment, electronic states, fluoresc. obs. 2-4343  
 $\text{CsH}_2\text{AsO}_4$  and  $\text{Cs}_2\text{D}_2\text{AsO}_4$ , dielectric response meas., polarisation fluctuations 2-41282  
 $\text{CsH}_2\text{AsO}_4$ , freq. conversion of Nd solid slab lasers for visible laser sources 2-25068  
 $\text{Cs}(\text{H}_{1-x}\text{D}_x)_2\text{PO}_4$ , RF complex dielectric const., sound velocity 2-41247  
 $\text{CsH}_2\text{PO}_4$ , H bonded ferroelec., neutron scatt. studies 2-31389  
 $\text{CsH}_2\text{PO}_4$ , spontaneous strain anomaly in ferroelec. phase, dilatometric meas. 2-1640  
 $\text{CsH}_2\text{PO}_4$ , X-ray and  $\gamma$ -ray irradiated, polarisation props. characts., domain struct. 2-51534  
 $\text{CsHSO}_4$ , cryst. struct. refinement, H bonded chains of  $\text{SO}_4$  groups 2-12548  
 $\text{CsHSO}_4$ , phase transition, dielec. const. and sp. ht. study 2-13388  
 $\text{CsHSO}_4$ , single crystal, plastic deform. by twinning 2-45320  
 $\text{CsHSeO}_4$ , ferroelasticity below 128°C transition 2-45554  
 $\text{CsHSeO}_4$ , phase transition at 128°C, dielec. permitt., DTA and dielec. permitt. thermal hysteresis meas. 2-35674  
 $\text{CsHSeO}_4$ , phase transition, dielec. and thermal studies 2-45557  
 $\text{CsH}_3(\text{SeO}_3)_2$ , hydrogen bond network, antiferroelectric phase transition  $^2\text{D}$  and  $^{13}\text{C}$  NMR study 2-51481  
 $\text{CsH}_3(\text{SeO}_3)_2$ , magnetic screening of  $^{77}\text{Se}$  nuclei, weak indirect interaction, anisotropy 2-46394  
 $\text{Cs}_2\text{H}_2\text{Br}_4$ , pseudohexagonal, successive phase transitions 2-40529  
 $\text{CsI}$ , additively coloured, precip. and growth kinetics of Cs colloids 2-25874  
 $\text{CsI}$ , charge state depend. of desorption induced by fast heavy ions 2-14298  
 $\text{CsI}$ , charge transport, yield point and microhardness, influence of crystal growth method and impurities 2-21208  
 $\text{CsI}$  crystals, asymmetry of X-ray diffuse scattering 2-25678  
 $\text{CsI}$  crystals, determ. of distrib. coeffs. from mean absorpt. coeffs. meas. of complex ions 2-45230  
 $\text{CsI}$ , deformation characts. under pulsed loading, dislocation dynamics 2-50745  
 $\text{CsI}$ , high press. effect on optical absorpt. spectra 2-36665  
 $\text{CsI}$ , highly transparent, bulk absorpt. coeff. at 10.6  $\mu\text{m}$ , laser calorimetry meas. 2-44418  
 $\text{CsI}$  monocryst., electron irradi., surface dissoci., and secondary emission invest. 2-21184  
 $\text{CsI SF}_6(\text{Kr})(\text{Xe})$  2-44046  
 $\text{CsI}$ , spin-phonon coupling for  $^{127}\text{I}$  nuclei pulsed nucl. acoustic reson. study 2-36453  
 $\text{CsI}:\text{Cu}^{2+}$ ,  $\text{CrO}_4^{2-}$  (*Russian*) 2-46614  
 $\text{CsI}:\text{Na}$ , ESR, magnetic circular dichroism study 2-51502  
 $\text{CsI}:\text{Na}$ , electron pulse irradiation, kinetics of luminesc. and relaxation (*Russian*) 2-5740  
 $\text{CsI}:\text{Na}$ , self-trapped exciton luminescence 2-41414  
 $\text{CsI}:\text{Na}$  crystals, thermal stability of activation centres 2-51722  
 $\text{CsI}:\text{Na}$  phosphor for X-ray position sensitive detector 2-49231  
 $\text{CsI}:\text{Na}(\text{Ti}^{4+})(\text{Eu}^{2+})(\text{Sr}^{2+})$ ,  $V_K$  centre migration, thermolum. and TSC meas. 2-8675  
 $\text{CsI}:\text{ReO}_4^-$ , IR and Raman spectra,  $\text{ReO}_4^-$  ion orientation 2-13517  
 $\text{CsI}:\text{Ti}$   $\gamma$  scintillation length and amplitude effects 2-43696  
 $\text{CsI}_2 + \text{SF}_6(\text{Kr})(\text{Xe})$  2-44046  
 $\text{CsI}_2\text{O}_3\text{-HIO}_3$ , phase equilibria, X-ray and thermal anal. (*Chinese*) 2-31684  
 $\text{CsKr}$ , selective photolysis at visible wavelength, photolytic spectroscopy 2-17907  
 $\text{Cs}_2\text{Kr}$ , selective photolysis at visible wavelength, photolytic spectroscopy 2-17907  
 $\text{Cs}_3\text{La}(\text{NH}_2)_6\text{NH}_3$  and  $\text{Cs}_4\text{La}(\text{NH}_2)_7\text{NH}_3$ , X-ray cryst. struct. determ. (*German*) 2-8492  
 $\text{Cs}_2\text{LiCo}(\text{CN})_6\cdot(\text{Fe}(\text{CN})_6)^{3-}$ , mol. vibr., solid state effects, resonance Raman scatt. 2-5671  
 $\text{CsLiMoO}_4$ , ferroelectric phase transitions, optical, dielec. and X-ray obs. 2-36568  
 $\text{CsLiMoO}_4$ , struct. and synthesis 2-21101  
 $\text{CsLiMoO}_4(\text{WO}_4)$ , ferroelectric transitions, dielec. and elastic study 2-31408  
 $\text{CsLiSO}_4$ , structural and physical props. 2-1613  
 $\text{CsMgCl}_3$ , thermal expansion, low temp. 2-30635  
 $\text{CsMg}_{1-x}\text{Co}_x\text{Cl}_3$ , disordered, Raman scatt. from phonons 2-46576  
 $\text{CsMnBr}_3$ , antiferromag., 1D mag. correlations 2-46245  
 $\text{CsMnCl}_3$ , excited electronic state gigantic splitting during exciton self-localisation, luminesc. study (*Russian*) 2-26954  
 $\text{CsMnCl}_3$ , parametric excitation and relax. of electron spin waves 2-31153  
 $\text{CsMnCl}_2\cdot 2\text{H}_2\text{O}$ , exciton-magnon light absorpt. 2-31523  
 $\text{CsMnCl}_3\cdot 2\text{H}_2\text{O}$ , antiferromagnetic resonance study 2-21889  
 $\text{CsMnCl}_3\cdot 2\text{H}_2\text{O}$ , energy gaps in magnon spectrum 2-31155  
 $\text{CsMn}_{1-x}\text{Co}_x\text{Cl}_3\cdot 2\text{H}_2\text{O}$ , random mixture, mag. ordering, neutron diff. study 2-36327  
 $\text{CsMnD}_3$ , giant oscils. of parallel pumping threshold (*Russian*) 2-26614  
 $\text{CsMnF}_3$ , absorpt. spectrum, uniaxial stress and high mag. field effects 2-51550  
 $\text{CsMnF}_3$ , easy plane antiferromag., parametric double reson. of nucl. mag-nons (*Russian*) 2-26790  
 $\text{CsMnF}_3$ , mag. prop. study (*Russian*) 2-46264  
 $\text{CsMnF}_3$ , weak ferrimagnetism, polarisation spectroscopic study (*Russian*) 2-26931  
 $\text{Cs}_2\text{MoO}_4$ , IR spectra 2-29582  
 $\text{Cs}_2\text{MoO}_4\text{-UO}_2\text{MoO}_4$  system, phase relations, complex cpds. form. 2-50834

## caesium compounds continued

- $\text{CsNO}_3$ , cryst. and melt,  $\text{NO}_3^-$  ion anharmonicity oscils. 2-31498  
 $\text{Cs}_2\text{Na}_2\text{A}:\text{Cu}^{2+}$ , location and movement of paramagnetic  $\text{Cu}^{2+}$  on dehydration studied by electron spin echo modulation anal. 2-2124  
 $\text{Cs}_2\text{NaCo}(\text{CN})_6\cdot(\text{Fe}(\text{CN})_6)^{3-}$ , mol. vibr., solid state effects, resonance Raman scatt. 2-5671  
 $\text{Cs}_2\text{NaDyF}_6$ , spin density transfer, struct., NMR study 2-21894  
 $\text{Cs}_2\text{NaEuCl}_6$ , adsorption mag. circular dichroism and emission spectra of  $\text{Eu}^{2+}$  2-36608  
 $\text{Cs}_2\text{NaSe}(\text{Y})(\text{In})\text{Cl}_6(\text{Br}_6):\text{MoCl}_6^{3-}(\text{Br}_6^{3-})$  crystals, IR and visible luminesc. spectra, vibronic struct., vibr. freq. 2-36687  
 $\beta\text{-CsNd}(\text{PO}_3)_4$  crystallites, cryst. struct. determ. 2-35466  
 $\text{CsNd}(\text{PO}_3)_4$ , spectral-luminesc. invest.,  $\text{Nd}^{3+}$  level obs., Stark structures 2-2325  
 $\text{CsNdP}_2\text{O}_{12}$ , cryst. struct. calcs. 2-35465  
 $\text{CsNiCl}_3$ , antiferromag. chain, elastic moduli, phase comparison meas. 2-45318  
 $\text{CsNiCl}_3$ , one-dimens. antiferromag., thermal expansion, low temp. 2-30635  
 $\text{CsNiF}_3$ , ferromagnetic chain, equil. dynamics, mol. dynamics study 2-42960  
 $\text{CsNiF}_3$ , magnetic sine-Gordon system, dynamic damping 2-5561  
 $\text{CsNiF}_3$ , multimagnon states, inelastic neutron scatt. study 2-5535  
 $\text{CsNiF}_3$ , one-dimensional magnet, sine-Gordon like magnetic chains, solitons and magnons 2-5537  
 $\text{CsNiF}_3$ , one-dimensional ferromagnet, existence of superparamagnetism 2-31247  
 $\text{CsNiF}_3$ , quantum effects in quasi-one-dimensional magnetic systems 2-8987  
 $\text{CsNiMF}_3$  ( $\text{M} = \text{Fe}, \text{Cr}$ ), flux growth, use of cryst. seal 2-5804  
 $\text{Cs}_2\text{O-Na}_2\text{O-SiO}_2$  glasses, Brillouin spectra, US vels., and mech. props. 2-13501  
 $\text{CsPF}_6$ , vibrational spectra and crystallographic props. 2-31490  
 $\text{CsPbCl}_3$ , perovskite, structural phase transition, birefringence 2-1616  
 $\text{CsPbCl}_3(\text{Br}_3)$ , electronic struct., optical and photoemission spectra 2-40783  
 $\text{CsPbCl}_3(\text{Br}_3)$ , ferroelec., exciton absorpt., luminesc. and reson. Raman scatt. 2-46638  
 $\text{CsRPr}_2\text{O}_{12}$  ( $\text{R} = \text{rare earth}$ ), growth, morphology and struct. 2-22156  
 $\text{Cs}_2\text{SO}_4$ , matrix isolation IR spectroscopic studies and dimerisation in N matrices 2-24688  
 $\text{Cs}_2\text{SO}_4$ , struct., pot. functions, isomers, vibr. IR obs. 2-39403  
 $\text{CsSb}$ , bonding in liquid and amorphous binary semiconductor alloys 2-8436  
 $\text{Cs}_2\text{SbCl}_6$ , 2-9140  
 $\text{Cs}_4\text{Sb}_4\text{O}_{23}$ , synthesis and struct. 2-12561  
 $\text{Cs}_2\text{Se}_3$ , thermoelectric props., semiconductor-metal transition 2-17102  
 $\text{Cs}_2\text{SiF}_6\cdot\text{Mn}^{2+}$ , interlevel nonradiative transitions of impurities 2-13550  
 $\text{Cs}_2(\text{Sn}^{1-2}\text{Sb}^{\text{III}})_2\text{Cl}_6$ , 2-9140  
 $\text{CsSrCl}_3\cdot\text{Gd}^{3+}$ , displacive phase transitions, ESR spectra obs. 2-36424  
 $\text{CsSr}(\text{NH}_2)_3$ , cryst. struct. and IR spectra (*German*) 2-8493  
 $\text{Cs}_2\text{TeCl}_6\cdot\text{TeCl}_6^{2-}$ , cubic cryst., IR and visible luminesc. 2-51667  
 $\beta\text{-Cs}_2\text{U}_2\text{O}_7$ , heat capacity and thermodynamic functions, standard enthalpy of form.,  $(\text{Cs} + \text{U} + \text{O})$  thermodynamics 2-37093  
 $\text{Cs}_2\text{UO}_2\text{Cl}_4$  crystal, struct. and nonlinear optics 2-40357  
 $\text{Cs}_2\text{UO}_2\text{F}_6$ , absorpt. and MCD spectra 2-36607  
 $\text{CsVF}_6$ , structural phase transitions, polarizing and electron microscope studies 2-40533  
 $\text{Cs}_2\text{WO}_4$ , IR spectra 2-29582  
 $\text{Cs}_2\text{WO}_4$ , matrix isolation IR spectroscopic studies and dimerisation in N matrices 2-24688  
 $\text{Cs}_2\text{ZnCl}_6\cdot\text{TeBr}_6^{2-}$ , cubic cryst., IR and visible luminesc. 2-51667  
 $\text{Cs}_2\text{ZnI}_4$ , phase transitions, dielec. study 2-26807  
 $\text{Cs}_2[\text{Pt}(\text{CN})_4](\text{N}_3)_{0.25}\cdot 0.5\text{H}_2\text{O}$ , quasi-one-dimensional cond., phys. props. rel. to chem. composition 2-13045  
 $(\text{Cu}, \text{Zn})\text{Cs}_2(\text{SO}_4)_2\cdot 6\text{H}_2\text{O}$  Tutton salt, diluted, pulsed ENDOR experiments 2-5604  
 $\text{PbTe-CsI}$  system, phase diagram construction, solid solns. form. 2-40521  
 $\text{Rb}_0.5\text{Cs}_0.5\text{CoF}_3$ , ferrimag. 6H hexagonal perovskite, neutron diff. obs. of mag. struct. (*French*) 2-36312  
 $\text{Rb}_2\text{Cs}_2\text{WO}_3$ , hexagonal tungsten bronze, elec. conc. and supercond. transition temp. 2-36045  
 $\text{V}_2\text{O}_5\text{-P}_2\text{O}_5\text{-Cs}_2\text{O}$ , amorphous, secondary electron emission props. meas. 2-13599  
 $\text{ZnCs}_2(\text{SO}_4)_2\cdot 6\text{H}_2\text{O}:\text{Cr}^{3+}$ , optical absorpt. spectrum, cryst. field parameters 2-26945

caesium generators see plasma diodes

caesium plasma diodes see plasma diodes

## calcium

see also nuclei with .....

- atom, collisional line broadening and shift, emission line 2-20003  
atom, electron and positron scatt., static exchange on a polarisation calcs. 2-15896  
atom, linear polarisation correl. in radiative cascade, Bell's theorem 2-73  
atom, oscillator strengths and collisional damping param. 2-34345  
atom, photoionisation, fluoresc., matrix isolation obs. 2-669  
atomic cascade, Bell's inequalities and the four-coincidence experiment 2-23486  
atomic fluorescence polarisation, due to coherence effect in photodissociation of  $\text{Ca}_2$  mols. 2-39354  
Ca XVIII and Ca XIX in solar flares used to determine ionisation equil. 2-38153  
cadmium oxalate trihydrate:  $\text{Ca}^{2+}$ , thermal decomp. kinetics, impurity effects 2-6029  
charge states, wavelengths and lifetimes of unidentified transitions 2-20022  
corrosion protective coatings on Fe substrate 2-22387  
interstellar Ca II, obs. of new interstellar line component in spectrum of HD 72127A 2-42732  
Leoville meteorite Ca-Al rich inclusion, Al correlated  $^{26}\text{Mg}$  excess 2-18742  
liquid, thermophysical props. 2-35562  
plasma, doubly excited levels near first ionisation limit, spectroscopic meas. 2-43819  
plasma, expanding, recombination laser transitions 2-39627  
pre-main-sequence stars, Mg II and Ca II reson. time fluxes for T Tauri stars 2-33003  
preparation of high purity samples by metallothermic reduction of oxides 2-9309



**calcium continued**

- skeletal muscle fibres, insect, Ca dependence of Ca currents inactivation 2-14231  
solar chromosphere, depend. of size and struct. of bright Ca<sup>+</sup>-network cells on heliographic position 2-48211  
solar non-resonance lines anal. 2-32968  
stellar non-resonance lines anal. 2-32968  
surface energy, work function, variational calc. 2-30741  
vapourisation, graphite furnace AAS 2-31974  
vapour, Nd laser freq. up-conversion to visible using four-photon parametric process 2-4562  
vapour, SHG reson. 2-34845  
Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O:Ca<sup>2+</sup>,  $\beta$  and  $\beta''$  phases, grain boundary and bulk cond., impurities effect 2-12834  
Ca II chromospheric emission vars. in stars, dynamo theory interpretation 2-33000  
Ca II emission from T Tauri stars, correl. with polarisation 2-33008  
Ca II H and K lines, contours in solar continuous emission streaks 2-42670  
Ca II H- and K-line emission in lower main-sequence stars, rotation 2-28448  
Ca II K-line var. throughout solar cycle 21, intensity and profile 2-10374  
Ca K line flux ratio, in solar spectra, rot. modulation, obs. 2-53228  
Ca<sup>+</sup> 8498 Å line in solar prominences, obs. and anal. 2-38151  
Ca<sup>+</sup> electron impact excitation cross sections at low energies 2-34572  
Ca<sup>+</sup> ionisation of Ca, matrix isolation Ar, fluoresc. obs. 2-669  
Ca<sup>+</sup> twilight airglow from thermosphere intermediate ionisation layers 2-28260  
Ca<sup>2+</sup>, s-hole states, CI calcs. 2-43809  
Ca<sup>2+</sup>, somatic membrane current during action pot., math. modelling 2-2860  
Ca<sup>2+</sup>, uptake and release by mitochondria 2-37517  
Ca<sup>4+</sup>, S isoelectronic sequence, optical oscillator strength calcs. 2-43858  
Ca/BiO<sub>1/2</sub>F<sub>2.8</sub> solid-state galvanic cells 2-32051  
Ca/LiClO<sub>4</sub>-LiNO<sub>3</sub> thermal battery cells, high rate discharge 2-32044  
Ca/SOCl<sub>2</sub> high-rate reserve cell 2-14057  
Ca+Ar(3p), Penning ionisation collision, light absorpt., chemiluminescence 2-39484  
Ca+He, Ca atomic spectra, principal series lines, collision broadening meas. 2-49335  
Ca+Kr, collision broadening of principal series line 2-43831  
Ca+Sr(S), energy transfer rate, laser induced fluoresc. 2-20158  
Ca<sup>+</sup>+Sr, laser induced charge transfer collisions 2-20179  
CaF<sub>2</sub>(YF<sub>3</sub>) single crystals, Ca<sup>45</sup>, Y<sup>88</sup> self-diffusion 2-30657  
Ca(P)+HCl, chemiluminesc. reaction, atomic reagent approach geom. effect on electronic branching 2-2707  
CsI:Cu<sup>2+</sup>, CrO<sub>4</sub><sup>2-</sup> (Russian) 2-46614  
KBr:Ca<sup>2+</sup>, CrO<sub>4</sub><sup>2-</sup>(SO<sub>4</sub><sup>2-</sup>), Raman spectra of guest ions (Russian) 2-46614  
KCl:Ca, Z<sub>1</sub>-centres, positron annihilation 2-22110  
KCl:Ca, Z<sub>4</sub> centre form., kinetics 2-50633  
KCl:Ca<sup>2+</sup>, SO<sub>4</sub><sup>2-</sup>, Raman spectra of guest ions (Russian) 2-46614  
KI:Ca<sup>2+</sup>, CrO<sub>4</sub><sup>2-</sup>, Raman spectra of guest ions (Russian) 2-46614  
LiCl:Ca<sup>2+</sup>, ionic cond. of pure and doped single crystals 2-26115  
LiF:Ca, X-ray irradi., ESR study 2-26743  
NaCl:Ca, influence of deform. on mechanical props., defect interactions 2-35532  
NaCl:Ca, Snoek rearrangement during strain ageing 2-22250  
NaCl:Ca crystal, defect struct. and dislocation obstacles, yield point at different strain rates 2-25896  
NaCl:Ca<sup>2+</sup>, impurity influence on mech. props. change during quenching 2-5895  
NiO:Ca, two-magnon Raman scatt. 2-26917  
PbF<sub>2</sub>:Ca, relation between band and free ion motion 2-21389  
YIG:Ca film, mag. linear dichroism, stability of Fe<sup>4+</sup> centre 2-21991  
ZnO:Mg<sup>2+</sup>(Ca<sup>2+</sup>)(Sr<sup>2+</sup>), crystalline state, effect of alkali-earth metal ions 2-16623

**calcium alloys**

see also calcium compounds

- Al-Ca, absorption of H<sub>2</sub>, thermodynamics, H<sub>2</sub> titration method 2-8706  
Al-Ca, irradi., interstitial-solute complexes, configs. and binding energies 2-30483  
Ca<sub>1-x</sub>La<sub>x</sub>/BiO<sub>1/2</sub>F<sub>2.8</sub> solid-state galvanic cells 2-32051  
Ca<sub>1-x</sub>Yb<sub>x</sub>/BiO<sub>1/2</sub>F<sub>2.8</sub> solid-state batteries with alloy anodes 2-9635  
Ca<sub>1-x</sub>Yb<sub>x</sub>/BiO<sub>1/2</sub>F<sub>2.8</sub> solid-state galvanic cells 2-32051  
Mg-Ca, disordered solid, heat of form., density functional-pseudopot. calc. 2-37097  
Mg-Zn-Ca and Mg-Li-Al-Ca, fatigue crack growth rate at 20 and -135°C 2-41747

**calcium compounds**

see also calcium alloys

- apatite, cryst., transversely isotropic half-space, epicentre and epicentral axis motion 2-16238  
apatite crystallites, new mode of growth 2-27112  
aragonite to calcite phase transition kinetics, dilatometric thermal anal. obs. 2-16616  
 $\alpha$ -calcium formate, X-irradi., displacement of HCO<sub>2</sub><sup>-</sup> groups in secondary radical form., ENDOR study 2-36477  
CaSO<sub>4</sub>+WO<sub>3</sub>-CaWO<sub>4</sub>SO<sub>3</sub> reaction kinetics, thermochemical H<sub>2</sub> prod. appl. 2-27734  
CsCaCl<sub>3</sub>, perovskite, structural phase transition, birefringence 2-1616  
dicalcium strontium propionate, paraelec. phase, struct. and optical activity 2-30454  
hexammines, anomalous mag. susceptibilities 2-36305  
oxalate monohydrate, whewellite, twin laws, struct. and growth approach 2-25905  
oxalate trihydrate, cryst. struct. 2-21124  
portlandite, role of struct. in formation of cement stone 2-35478  
stearate, microadditions effect on extrudability and rheological props. of polypropylene (Russian) 2-46993  
stearate, soap, plastic and viscoelastic props., meas. by hot hardness 2-47124  
vaterite-calcite transformation, ESR spectroscopy invest. using Mn<sup>2+</sup> ions as tracer 2-12733  
zeolites, review, synthesis, props. and characterisation 2-1366  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-CaO, cryst. struct., X-ray diff. study 2-25844  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-CaO, divalent cation cond. 2-26130  
Al<sub>2</sub>O<sub>3</sub>-CaO-SiO<sub>2</sub>-MgO glass, colour variation 2-2376

**calcium compounds continued**

- $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-CaO, fast ion cond., Ca segregation at grain boundaries 2-26129  
Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-CaO, zeolites, Al-Si ordering, magic angle <sup>29</sup>Si NMR 2-26766  
Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub>-MgO(CaO)(SrO)(BaO), based high-refractory cements, reaction kinetics 2-41571  
B<sub>2</sub>O<sub>3</sub>-CaO-V<sub>2</sub>O<sub>5</sub>-V<sub>2</sub>O<sub>3</sub> based MIM struct., elec. props. 2-36151  
B<sub>2</sub>O<sub>3</sub>-CaO-V<sub>2</sub>O<sub>5</sub>-V<sub>2</sub>O<sub>3</sub>, DC and AC elec. props. 2-36504  
(Ba, Sr, Ca)CO<sub>3</sub> powder, surface reaction with Ni-W-Zr alloy plate (Japanese) 2-13849  
(Ba,Sr,Ca)CO<sub>3</sub> powder, chemical cpds. formed at interface with (Ba,Sr,Ca)CO<sub>3</sub> powder (Japanese) 2-13850  
Ba<sub>0.8</sub>Ca<sub>0.2</sub>TiO<sub>3</sub>, single crystals, and ceramic, elec. cond. variation with dopant conc. 2-5404  
BaF<sub>2</sub>-CaF<sub>2</sub>-AlF<sub>3</sub>-BeF<sub>3</sub> glasses, Raman spectroscopic study 2-31484  
BaF<sub>2</sub>-CaF<sub>2</sub>-YF<sub>3</sub>-AlF<sub>3</sub> glass for IR optical fibres, material dispersion meas. 2-49846  
BeF<sub>2</sub>-CaF<sub>2</sub> glass, rare earth doped, struct., mol. dynamics simulation 2-8441  
Bi<sub>1-x</sub>Ca<sub>x</sub>Fe<sub>1-x/2</sub>V<sub>1/2</sub>O<sub>12</sub> crystal, ferromag. reson. linewidth anisotropy, theory (Chinese) 2-26752  
Bi<sub>1-x</sub>Ca<sub>x</sub>O<sub>1.5-0.5x/2</sub>, cryst. chemistry anal. elec. props. 2-21383  
Bi<sub>1-x</sub>Ca<sub>x</sub>O<sub>1.5-0.5x/2</sub> solid soln., cryst. struct. 2-12571  
(Ca,Ba)S:Cu,Nd phosphor, electrolum. behaviour 2-22093  
(Ca,Sr)S:Cu phosphors, luminescence centres and charge compensation 2-22084  
Ca-Cr-O system, phase equilibria 2-2495  
CaAl<sub>2</sub>Si<sub>2</sub>O<sub>8</sub>, anorthite, cryst. nucleation barrier, undercooling and glass crystn. expts. 2-1593  
Ca<sub>2</sub>Al<sub>2</sub>SiO<sub>7</sub>, gehlenite single cryst., Czochralski growth 2-5808  
CaAs<sub>3</sub>, cryst. struct., elec., optical, and mag. props. 2-8494  
CaB<sub>6</sub> single crystals, growth and props. 2-27075  
CaBr, A<sup>1</sup>-X<sup>2+</sup> and B<sup>2+</sup>-X<sup>2+</sup> systems, laser spectra 2-7564  
CaBr, excited B<sup>2+</sup> state, hyperfine struct., mol. beam, laser RF double resonance meas. 2-34465  
CaCO<sub>3</sub>, calcite, heterogeneous precipitation kinetics, rate const. and growth rate 2-45093  
CaCO<sub>3</sub>, calcite cleavages, thermal etch pit obs. 2-25879  
CaCO<sub>3</sub>, calcite crystals, soln. growth, etching of cleavage faces 2-16611  
CaCO<sub>3</sub>, calcite crystal, polariton Fermi reson. in hyper-Raman spectra 2-17481  
CaCO<sub>3</sub>, calcite single cryst., quenching and X-ray effects on absorpt. and luminesc. 2-51720  
CaCO<sub>3</sub>, cleavage surface, chem. and thermal etching 2-50644  
CaCO<sub>3</sub>, crack formation at twin boundaries 2-50667  
CaCO<sub>3</sub> crystals, twin boundaries 2-45200  
CaCO<sub>3</sub>, echinoid, asymmetrical Laue photographs, indexing using mini-computer 2-44965  
CaCO<sub>3</sub>, influence of elec. field on rhythmic crystn. in agar gel 2-46895  
CaCO<sub>3</sub> precipitation from sea ice brines, CO<sub>2</sub> prod., oceanic content 2-47924  
CaCO<sub>3</sub>, synthetic calcite crystal, cleavage face etch pits, low-angle grain boundaries 2-25902  
CaCO<sub>3</sub>, synthetic calcite crystal, inclined dislocation nature 2-35500  
CaCO<sub>3</sub>, vaterite, prep. of spherical powders, transition to calcite in water (Japanese) 2-36807  
CaCO<sub>3</sub>, vaterite-calcite transformation, ESR spectroscopy invest. using Mn<sup>2+</sup> ions as tracer 2-12733  
CaCO<sub>3</sub>-MgCO<sub>3</sub> solid solns. solubility, solid state chem. model 2-35694  
 $\beta$ -Ca(COO)<sub>2</sub>, produced by thermal dehydration of weddellite 2-47303  
Ca<sub>2</sub>O<sub>4</sub>H<sub>2</sub>O, morphologic, crystallographic charact. and surface props., grinding effect (French) 2-9299  
Ca<sub>2</sub>O<sub>4</sub>H<sub>2</sub>O, phase modification by grinding 2-13736  
CaCl<sub>2</sub> B<sup>2+</sup> state, unresolved hyperfine splittings studied using RF-pumped-laser double reson. spectroscopy 2-24762  
CaCl<sub>2</sub> jet, laser-induced fluoresc. obs. (German) 2-745  
CaCl<sub>2</sub>, accelerating admixture in Portland cement concrete 2-37089  
CaCl<sub>2</sub> aq. soln., heat capacities and volume, long range order transitions 2-50877  
CaCl<sub>2</sub> saturated soln. for solar heated dehumidification system in India for grain drying 2-9633  
Ca(ClO<sub>4</sub>)<sub>2</sub>·4H<sub>2</sub>O liq. and glassy states, OH stretching Raman spectra, H-bonds 2-22006  
CaCr<sub>2</sub>O<sub>4</sub>-Ca<sub>2</sub>Fe<sub>2</sub>O<sub>5</sub>, phase equilibria, X-ray and microscopical anal. 2-27160  
Ca<sub>2</sub>(CrO<sub>4</sub>)<sub>2</sub>, cryst. struct. refined 2-5100  
CaCuF<sub>6</sub>, Jahn-Teller cooperative effect, mag. props. influence (French) 2-2126  
CaErAl<sub>3</sub>O<sub>7</sub>, synthesis and characterisation 2-41515  
CaF<sub>2</sub>, anharmonicity effects, phonon lifetime, rigid ion model calcs. 2-45438  
CaF<sub>2</sub>, deform. pot., one-phonon Raman scatt. 2-51586  
CaF<sub>2</sub>, fast ion phase, quasielastic diffuse neutron scatt. 2-20975  
CaF<sub>2</sub> film, MBE grown dielectric 2-26820  
CaF<sub>2</sub>, Frenkel defect form. entropies in quasiharmonic approx. 2-45506  
CaF<sub>2</sub> glass, rare-earth doped, struct., mol. dynamics simulation 2-8441  
CaF<sub>2</sub>, ion bombarded, surface decomposition, electron beam induced, AES, EELS and XPS study 2-25931  
CaF<sub>2</sub>, nanosecond X-ray topography using laser produced plasma source 2-44971  
CaF<sub>2</sub>, natural, X-ray excited luminesc., temp. depend. rel. to thermoluminesc. 2-26966  
CaF<sub>2</sub> natural crystals, growth defects, optical micrograph and X-ray topograph obs. 2-12599  
CaF<sub>2</sub>, origin of superionicity 2-21388  
CaF<sub>2</sub>, precipitates, rare earth doped, O-compensated sites, defect processes 2-41399  
CaF<sub>2</sub>, proton stopping cross-sections, 0.05-5 MeV (Japanese) 2-45304  
CaF<sub>2</sub>, rare earth doped, R=rare earth, cluster relaxation meas. 2-9079  
CaF<sub>2</sub>, rare earth oxyfluoride impurity effect on elec., mech. and optical characts. 2-26880  
CaF<sub>2</sub>, recoil sputtering mechanism, excited sputtered particle source 2-17589  
CaF<sub>2</sub>, rotating transverse helical nuclear mag. ordering 2-41110  
CaF<sub>2</sub> solid electrolyte, galvanic cell investigations, 500-900°C 2-13976  
CaF<sub>2</sub> solid electrolyte, soft-core model, Monte Carlo simulation 2-16862  
CaF<sub>2</sub>, spin temp. oscils. in rot. frame, memory function approach 2-26783  
CaF<sub>2</sub>, spontaneous decay of high freq. acoustic phonons 2-26002  
CaF<sub>2</sub>, spontaneous decay of high-frequency acoustic phonons 2-26009



## calcium compounds continued

- CaF<sub>2</sub> superionic conductors, lattice phonon effects 2-45423  
 CaF<sub>2</sub>, surface (001), etchpit morphology 2-21431  
 CaF<sub>2</sub>, use in solid-state galvanic cells 2-32051  
 CaF<sub>2</sub>(YF<sub>3</sub>) single crystals, Ca<sup>45</sup>, Y<sup>88</sup> self-diffusion 2-30657  
 CaF<sub>2</sub>:Ce<sup>3+</sup>(Nd<sup>3+</sup>)(Dy<sup>3+</sup>) activated ionic cryst., thermally stimulated polarization current kinetics 2-46469  
 CaF<sub>2</sub>:Dy, nonlinearity in response characs. of thermolum. dosimeter, review 2-29440  
 CaF<sub>2</sub>:Dy<sup>2+</sup>, pot. as continuously tunable far-IR laser 2-44303  
 CaF<sub>2</sub>:Eu scintillator, appl. to assessment of escape peak formalism and fundamental parameter method 2-41962  
 CaF<sub>2</sub>:Eu single crystal, used for scintillation detector 2-49228  
 CaF<sub>2</sub>:Eu<sup>2+</sup>, acoustic phonon freq. depend. lifetimes 2-45437  
 CaF<sub>2</sub>:Mn, recombining centres, ODMR study, tunnelling recombination afterglow appl. 2-17368  
 CaF<sub>2</sub>:Na, thermal destruction mechanism of M<sub>A</sub> colour centres 2-50634  
 CaF<sub>2</sub>:Pr<sup>3+</sup>, dimers and clusters, laser selective excitation and time-resolved spectroscopy 2-31545  
 CaF<sub>2</sub>:Pr<sup>3+</sup>, optical hole burning by superhyperfine interactions 2-36691  
 CaF<sub>2</sub>:R (R=rare earth), dipole complex relax. 2-17393  
 CaF<sub>2</sub>:R (R=rare earth), dopant-interstitial binding energies, lattice simulation calc. 2-40428  
 CaF<sub>2</sub>:Sm<sup>2+</sup>, optical absorpt. and mag. circular dichroism spectra 2-13455  
 CaF<sub>2</sub>:Sm<sup>2+</sup>, Raman scatt. 2-2282  
 CaF<sub>2</sub>:Tb<sup>3+</sup>(Yb<sup>3+</sup>), defect clustering identification using three body energy transfers 2-22076  
 CaF<sub>2</sub>:U<sup>3+</sup>, orientational depend. of cross-relax. resonance, ESR 2-9024  
 CaF<sub>2</sub>/Ge<sub>2</sub>As<sub>1</sub>S<sub>64</sub> type antirefl. coatings for Ge-As(Sb)-S(Se) vitreous chalcogenides in visible and IR 2-16086  
 CaF<sub>2</sub>-CaO-SiO<sub>2</sub> glasses, struct. study by XPS, X-ray emission, IR spectra, and F ionic refr. 2-30403  
 CaF<sub>2</sub>-PTFE TLD, neutron sensitivity calc. 2-43619  
 CaF<sub>2</sub>-Si, heteroepitaxial struct., Si and CaF<sub>2</sub> vacuum deposition, channelling and backscatt. study 2-51814  
 CaFCl:Eu<sup>2+</sup>, EPR study of Eu<sup>2+</sup> ground state splitting 2-36420  
 CaF<sub>2</sub>·3Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>:Ce, Mn phosphors, luminesc. deprecation 2-46679  
 CaFe<sub>2</sub>+O<sub>4+n</sub> new ferrites, prep. and characterisation, existence in Fe-Cu-O phase diagram 2-16627  
 Ca<sub>2</sub>Ga<sub>2</sub>Ge<sub>2</sub>O<sub>12</sub>, Raman and Mandel'shtam-Brillouin light scatt. 2-51601  
 Ca<sub>2</sub>Ga<sub>2</sub>Ge<sub>2</sub>O<sub>12</sub>, struct. determ. 2-21098  
 CaGa<sub>2</sub>S<sub>4</sub>:Er<sup>3+</sup>, luminesc. props., energy transfer 2-46721  
 CaGeO<sub>3</sub>-MnGeO<sub>3</sub> system, phase diagram investig. and analysis 2-41592  
 CaH, UV absorpt. spectrum of C-X system, mol. vibr. levels 2-24725  
 $\alpha$ -Ca(HCOO)<sub>2</sub>, lattice energy calcs. 2-1435  
 CaHPO<sub>4</sub>·2H<sub>2</sub>O, brushite crystals grown rapidly in silica gel, morphology and surface struct. 2-45090  
 CaHoAl<sub>3</sub>O<sub>7</sub>, synthesis and characterisation 2-41515  
 CaI, AII-X<sup>2+</sup> and B<sup>2+</sup>-X<sup>2+</sup> systems, vibr.-rot. and deperturbation anal., fluoresc., Franck-Condon factors 2-4345  
 CaLaGa<sub>3</sub>S<sub>7</sub>:Er<sup>3+</sup>, luminesc. props., energy transfer 2-46721  
 Ca<sub>2</sub>Mn<sub>2</sub>Fe<sub>2</sub>-O<sub>8</sub>, nonstoichiometric, elec. and mag. props. 2-17745  
 CaMoO<sub>4</sub>, dipole centres, thermally stimulated depolarisation currents and optical absorpt. spectra 2-46466  
 CaMoO<sub>4</sub>, electronic struct. and optical spectra, struct. distortions effects 2-29619  
 CaMoO<sub>4</sub>, precipitation from aq. soln., cryst. growth kinetics 2-25772  
 CaMoO<sub>4</sub>(WO<sub>4</sub>), Raman spectra, high press. effects 2-2258  
 Ca(NO<sub>3</sub>)<sub>2</sub>, phase transition study (French) 2-46515  
 Ca<sub>2</sub>Na<sub>1-x</sub>[Al<sub>1+x</sub>Si<sub>3-x</sub>O<sub>8</sub>], 0.5≤x≤1, plagioclases, new types of satellite 2-5019  
 CaO, CO adsorpt., IR spectra study 2-707  
 CaO, creep and creep fracture, microstruct. depend. 2-51987  
 CaO, Debye temp. of oxides with NaCl struct. 2-16744  
 CaO, dipole polarisabilities, density functional theory 2-12535  
 CaO, electronic band struct. at lower mantle press. 2-52831  
 CaO, heat resistant materials for medium high temp. ranges, chem. and phys. props. (German) 2-472  
 CaO interdiffusion in ZrO<sub>2</sub> 2-50930  
 CaO, spin dephasing, optically detected 2-44409  
 CaO stabilized ZrO<sub>2</sub> solid electrolyte, O<sub>2</sub> release, electrochem. study 2-13970  
 CaO, supersharpening hardening from liq. phase (Ukrainian) 2-13740  
 CaO:Bi<sup>3+</sup> phosphor, mag. field effect on luminescence 2-17525  
 CaO:C, IR spectrum of OH-compensated defect 2-51634  
 CaO:Cu, Cu<sup>2+</sup> ion pairs, EPR study 2-46369  
 CaO:H<sup>+</sup>, vibr. due to H<sup>+</sup> ion, IR absorpt. spectra 2-46606  
 CaO:Mg, neutron irradi., ODMR study of electron transfer from excited F centres 2-46430  
 CaO:Pb<sup>2+</sup> phosphor, luminesc. spectra, mag. field effect (French) 2-41417  
 CaO-Al<sub>2</sub>O<sub>3</sub> glasses, crystn. characs., SEM study 2-50553  
 CaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, sintered ceramic, dielec. props. 2-9081  
 CaO-Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> based high-refractory cements, reaction kinetics 2-41571  
 CaO-B<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>, autosolvation effect, elec. cond. 2-50908  
 CaO-Cr<sub>2</sub>O<sub>3</sub>-CrO<sub>3</sub>, calc. of thermodynamic const. 2-6053  
 CaO-FeO-SiO<sub>2</sub>, crystn. of glasses and formation of siltals 2-8448  
 CaO-MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-H<sub>2</sub>O, quartz eclogite comp., phase relationships at 30 kbar, subduction zone magma implications 2-37849  
 CaO-MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> pyroxene glasses, catalysed crystn. using Cr<sub>2</sub>O<sub>3</sub>, nucleation rate, conc. and temp. depend. 2-40288  
 CaO-MgO-SiO<sub>2</sub> system, phase equilb. anal. 2-41597  
 CaO-Mn(Fe)(Co)(Ni), charge transfer transitions, energies of optical absorption and emission 2-22052  
 CaO-ZrO<sub>2</sub> system, struct. and phase comp. in ZrO<sub>2</sub>-rich region 2-5863  
 CaO+N<sub>2</sub>O, dipolar model for collisional energy transfer between dark and radiating excited electronic states 2-39479  
 CaO-SiO<sub>2</sub>-nH<sub>2</sub>O, X-ray diffr. and IR absorpt. obs. 2-36620  
 CaOH, thermochem. props. 2-22431  
 (CaO)<sub>2</sub>SiO<sub>2</sub> hydrates, morphological development, high resolu. SEM, STEM 2-31678  
 CaO-P<sub>2</sub>O<sub>5</sub>, vitreous, viscosity, impurity water conc. effect 2-12804  
 3CaO·P<sub>2</sub>O<sub>5</sub>-CaO·SiO<sub>2</sub>-CaO·MgO·2SiO<sub>2</sub> glass ceramics, fibre oriented, prep. (Japanese) 2-51867  
 CaO<sub>2</sub>·2Al<sub>2</sub>O<sub>3</sub>-H<sub>3</sub>PO<sub>4</sub> system, hardened body, props. and thermal changes 2-52001  
 Ca<sub>10</sub>(PO<sub>4</sub>)<sub>6</sub>(OH,F)<sub>2</sub>,  $\beta$ -type, acetate ions trapping, EPR detection 2-5584

## calcium compounds continued

- Ca(PO<sub>3</sub>)<sub>2</sub>:Eu<sup>3+</sup>, excitation energy transfer, temporal and temp. depend., reson. fluoresc. 2-51650  
 Ca<sub>10</sub>(PO<sub>4</sub>)<sub>6</sub>, CN<sub>2</sub>, prep. cryst. struct., and chem. reactivity rel. to bivalent ions in apatite channels 2-40348  
 Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>:Cu,  $\beta$ - and high-pressure phase, EPR study (French) 2-26734  
 Ca<sub>10-y+z</sub>(PO<sub>4</sub>)<sub>6-y-z</sub>(CO<sub>3</sub>)<sub>y-z</sub>(X<sub>2</sub>)<sub>z-y-z</sub> (X=F<sup>-</sup>, OH<sup>-</sup>), F<sup>+</sup> centre ESR spectra, charge compensation mechanisms 2-36428  
 Ca<sub>5</sub>(PO<sub>4</sub>)<sub>3</sub>Cl:Mn<sup>2+</sup>(Ce<sup>3+</sup>), X-irrad., thermoluminesc. 2-41439  
 Ca<sub>5</sub>(PO<sub>4</sub>)<sub>3</sub>OH, crystals, grown in aq. soln. at 37°C, morphology 2-9259  
 Ca<sub>2</sub>R<sub>1-x</sub>CrO<sub>3</sub> (R=Y, La, Nd, Sm, Eu, Gd, Ho, Yb) distorted perovskite struct. (French) 2-50590  
 Ca<sub>1-x</sub>R<sub>x</sub>F<sub>2+x</sub> (R=La, Gd, Er, Y), conc. solid solns., elec. cond. rel. to defect regions 2-26111  
 CaS doped phosphors, phosphoresc. using pulsed N<sub>2</sub> lasers 2-36677  
 CaS, single cryst. growth in floating zone arc image furnace, opt. props. and band struct. (Japanese) 2-9271  
 CaS single crystal, melt growth and props., X-ray diffr., optical absorpt. and ESR obs. 2-46903  
 CaS:Ag phosphors, luminesc. kinetics, phosphoresc. decay, thermoluminesc., and electrolum. meas. 2-13539  
 CaS:B, thermolum. phosphor, phys. parameters, operation importance 2-22101  
 CaS:Bi phosphor, luminescence study 2-22071  
 CaS:Bi<sup>3+</sup> phosphor, mag. field effect on luminescence 2-17525  
 CaS:Cu<sup>2+</sup>(Mn<sup>2+</sup>)(Bi<sup>3+</sup>)(Ce<sup>3+</sup>) phosphors, luminescence centres and charge compensation 2-22084  
 CaS:Eu, single crystals, luminesc. and excitation spectra (Japanese) 2-9271  
 CaS:Hd, Cu, electroluminesc., temp. depend. 2-31558  
 CaS:Pb<sup>2+</sup> phosphor, luminesc. spectra, mag. field effect (French) 2-41417  
 CaS:R (R=rare earth), DC electrolum. 2-46767  
 CaS-rare earth sulphide systems, phase relationships 2-17666  
 CaS-TiS<sub>2</sub> solid electrolyte for S determ. in liq. Fe 2-12842  
 CaSO<sub>4</sub>, crystal intergrowth, effect of addition of electrolytes on crystallisation contacts formation 2-5063  
 CaSO<sub>4</sub>, supersaturated solns., formation of crystallisation contacts 2-1419  
 CaSO<sub>4</sub>:Dy, Bi, phosphors; X-ray induced fluorescence and phosphorescence 2-26956  
 CaSO<sub>4</sub>:Dy, nonlinearity in response characs. of thermolum. dosimeter, review 2-29440  
 CaSO<sub>4</sub>:Dy, phosphorescence and thermoluminescence study 2-46746  
 CaSO<sub>4</sub>:Dy phosphor with high Dy conc., high level  $\gamma$ -dosimetry 2-29438  
 CaSO<sub>4</sub>:Dy ribbon, TLD-900, kinetics and thermolum. parameters at low dose levels 2-22100  
 CaSO<sub>4</sub>:Dy ribbon, TLD-900, dosimetric props. in low dose region 2-22830  
 CaSO<sub>4</sub>:Dy thermoluminescent dosimeters, effects of different climatic conditions on performance 2-29439  
 CaSO<sub>4</sub>:Mn TLD, beta dose-rate determ. in ceramics for dating 2-52936  
 CaSO<sub>4</sub>:Sm, phosphor, photoinduced change in mag. susceptibility 2-46235  
 CaSO<sub>4</sub>:Tm, TLDs, sensitivity to LET irradi. (Japanese) 2-5757  
 CaSO<sub>4</sub>-H<sub>2</sub>O, solid phases, dehydration and hydration of hemihydrates and soluble anhydrides 2-2496  
 CaSO<sub>4</sub>-H<sub>2</sub>O, solid phases, IR spectra of hemihydrates and soluble anhydrides 2-2497  
 CaSO<sub>4</sub>-polyethylene TLD, neutron sensitivity calc. 2-43619  
 CaSO<sub>4</sub>·2H<sub>2</sub>O, cryst. growth in NH<sub>3</sub> soln. 2-2431  
 CaSO<sub>4</sub>·xH<sub>2</sub>O (x=0.5, 0.67), struct. determ. 2-21099  
 Ca<sub>2</sub>Sb<sub>2</sub>S<sub>6</sub>, new comp. with Sb<sub>2</sub>S<sub>4</sub> four-membered rings (German) 2-12568  
 CaSe, single cryst. growth in floating zone arc image furnace, opt. props. and band struct. (Japanese) 2-9271  
 CaSe:Ph<sup>2+</sup> phosphor, luminesc. spectra, mag. field effect (French) 2-41417  
 $\beta$ -CaSiO<sub>3</sub> prisms, crystn. by saturated soln. slow cooling in metal chloride melt 2-35418  
 CaSiO<sub>3</sub>, vitreocrystalline protective coatings, formation of crystalline phase in electrostatic field 2-5051  
 Ca<sub>2</sub>SiO<sub>4</sub>, thermal barrier coatings for thermal insulation and corrosion resistance in industrial gas turbine engines 2-31818  
 Y-Ca<sub>2</sub>(Si<sub>2</sub>O<sub>7</sub>)(SiO<sub>4</sub>)(OH)<sub>2</sub>, crystal struct. refinement 2-35461  
 CaSr<sup>+</sup> quasimolecule, pot. curve prod. from Ca<sup>+</sup>+Sr 2-20179  
 Ca<sub>10</sub>-Sr(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>2</sub>, cryst. struct. and OH torsional motion 2-25823  
 CaTbAl<sub>3</sub>O<sub>7</sub>, synthesis and characterisation 2-41515  
 CaTiO<sub>3</sub>, absorption edge 2-2314  
 CaTiO<sub>3</sub>, electronic struct. calc. by PBX, method 2-51086  
 CaTiO<sub>3</sub>, O 2p- valence band, electronic struct., DV-X $\alpha$  calcs., XPS 2-21498  
 CaTiO<sub>3</sub>, thermal barrier coatings for thermal insulation and corrosion resistance in industrial gas turbine engines 2-31818  
 Ca<sub>0.68</sub>U<sub>0.02</sub>Co<sub>0.3</sub>F<sub>2.34</sub>, use in solid-state galvanic cells 2-32051  
 Ca<sub>2</sub>(VO<sub>4</sub>)<sub>2</sub>, electrophys. props., struct. transitions influence 2-41250  
 CaWO<sub>4</sub>, phonon dispersion, external mode formalism 2-45465  
 CaWO<sub>4</sub>, quadrupole interactions, <sup>182</sup>W Mossbauer spectra (French) 2-5612  
 CaWO<sub>4</sub>:Sm<sup>3+</sup> cryst., energy transfer investig. by dye laser spectroscopy 2-41397  
 (CaWO<sub>4</sub>)<sub>1-x</sub>(LaNbO<sub>4</sub>)<sub>x</sub> solid solns., fergusonite-scheelite phase transition and Raman spectra 2-26044  
 Ca<sub>4</sub>Fe<sub>2</sub>O<sub>13</sub>, cryst. struct. anal., 1 MeV high resolu. electron microscopy and convergent-beam electron diffr. 2-1449  
 CdBi<sub>2</sub>:Ni<sup>2+</sup>, impurity ion absorpt., emission and excitation spectra 2-2321  
 CeO<sub>2</sub>-ZrO<sub>2</sub>:CaO solid solns., temp. depend. of elec. cond. 2-5964  
 CsCa(NH<sub>2</sub>)<sub>3</sub>, cryst. struct. and IR spectra (German) 2-8493  
 (Eu, Tm, Y, Ca)<sub>3</sub> (Fe, Ge)<sub>2</sub>O<sub>12</sub> film, mag. bubble domain lattice pulsations 2-2112  
 Fe-Fe<sub>2</sub>O<sub>4</sub>-CaO, phase diagram, homogeneity and maximal solubility of CaO 2-5862  
 GaAs<sub>3</sub>, IR study of phonons and free carriers 2-36627  
 Gd<sub>2</sub>O<sub>3</sub>-CaO:Li<sub>2</sub>O, reversible polymorphic transitions 2-50842  
 La<sub>1-x</sub>Ca<sub>x</sub>FeO<sub>3-y</sub> (0≤x≤0.5), mixed valency ferrites with perovskite struct. 2-5609  
 LaF<sub>3</sub>(CaF<sub>2</sub>), ion transport at low temps. 2-16849  
 La<sub>2</sub>O<sub>3</sub>-Cr<sub>2</sub>O<sub>3</sub>-CaO system, effects of O<sub>2</sub> pressure on phase rels. at high temp. 2-5859  
 La<sub>2</sub>O<sub>3</sub>-Cr<sub>2</sub>O<sub>3</sub>-CrO, MHD-related materials, O reactivity 2-27153



**calcium compounds continued**

- MgO-Cr<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO-SiO<sub>2</sub> constitution changes due to O<sub>2</sub> press. at high temp. 2-31822  
 (Na<sub>2</sub>, K<sub>2</sub>, Ca)Al<sub>2</sub>Si<sub>10</sub>O<sub>24</sub>·7H<sub>2</sub>O, cryst. dipole-dipole interaction, NMR study of OH groups 2-41210  
 Na<sub>2</sub>Ca(Mn,Fe)<sub>2</sub><sup>2+</sup>(P<sub>4</sub>)<sub>6</sub>, fawcittite, cryst. struct. 2-21076  
 Na<sub>2</sub>CaP<sub>2</sub>O<sub>7</sub> derivatives, Na<sup>+</sup> ion conductivities 2-16872  
 Na<sub>2</sub>Ca<sub>2</sub>[HSiO<sub>4</sub>]<sub>2</sub>PO<sub>4</sub>, optimal form. conditions and character. 2-51838  
 NaCl-CaCl<sub>2</sub>, molten, US wave velocity, thermodynamic props. (*Japanese*) 2-45380  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub>-H<sub>2</sub>O gels, swelling props., rel. to expansion of concrete 2-37109  
 Na<sub>2</sub>O-CaO glass track detectors, etch pit cone angle, energy and Z-depend. 2-24483  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glass, sliding fracture in liquid environment 2-27313  
 Na<sub>2</sub>O-CaO-Al<sub>2</sub>O<sub>3</sub>-P<sub>2</sub>O<sub>5</sub> glasses, elec. cond., mixed alkali effect 2-12825  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glass, median crack initiation and propag. beneath a disc glass cutter 2-27268  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glass, subcrit. crack growth, effect of corrosion 2-36944  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glass, nuclear track detectors, pre-irradiation annealing effect on bulk etch rate 2-29478  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>-Al<sub>2</sub>O<sub>3</sub>(B<sub>2</sub>O<sub>3</sub>)(B<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>), bioglass, chem. comp., Vickers hardness, chemical durability (*Japanese*) 2-41774  
 SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO-MgO-Na<sub>2</sub>O-ZnO glasses, impact resist. and Young's modulus, effect of ZnO 2-36946  
 SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO-MgO-Na<sub>2</sub>O-Fe<sub>2</sub>O<sub>3</sub> glass, ESR spectra, 300 to 700K 2-31268  
 SiO<sub>2</sub>-Na<sub>2</sub>CO<sub>3</sub>-ZnO-CdCO<sub>3</sub>-ZnS-Se-Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, selenium ruby glasses, SAXS anal. of nucleation 2-50828  
 SiO<sub>2</sub>-Na<sub>2</sub>O-CaO-Al<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>-MgO-SO<sub>3</sub> glass, chem. stability, electrochem. treatment effect 2-22349  
 SiO<sub>2</sub>-Na<sub>2</sub>O-CaO-MgO-Al<sub>2</sub>O<sub>3</sub>, soda lime glass, Faraday rot., energy gap determ. 2-26868  
 SiO<sub>2</sub>-Na<sub>2</sub>O-CaO-MgO-Al<sub>2</sub>O<sub>3</sub> glass, strength props., for large dimension designs 2-31762  
 SiO<sub>2</sub>-Na<sub>2</sub>O-CaO-SnO<sub>2</sub>-Au, gold ruby glasses, SAXS anal. of nucleation 2-50829  
 (Sm,Lu,Ca)<sub>3</sub>(Si,Lu,Fe)<sub>2</sub>O<sub>12</sub> film, domain wall motion, magnetisation and comp. depend. 2-26704  
 Sm<sub>1-x</sub>Ca<sub>x</sub>B<sub>6</sub>, solid solutions, valence state of Sm ions, cryst. struct. 2-30841  
 (Y,Eu,Tm,Sm,Ca)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub> magnetic epitaxial film, bubble domain lattice high freq. vibrs. 2-46353  
 (Y,Eu,Tm,Sm,Ca)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub>, epitaxial ferrite garnet film, domain wall mobility 2-9014  
 (Y,Sm,Lu,Ca)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub>, ferrite-garnet film, 360° dynamic domain wall (*Russian*) 2-46351  
 (YCa)<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub> thin film, magnetostatic modes, temp. depend., FMR study 2-21887  
 (Y,GdCa)<sub>3</sub>(FeVM)<sub>2</sub>O<sub>12</sub> (M=In, Zr), magnetostatic losses and saturation magnetisation temp. depend. 2-21828  
 Y<sub>2.5</sub>Pr<sub>0.5-1</sub>Ca<sub>1</sub>Fe<sub>2</sub>O<sub>12</sub>, induced uniaxial anisotropy caused by Pr<sup>4+</sup> 2-26623  
 (YSmLuCa)<sub>3</sub>(FeGe)<sub>2</sub>O<sub>12</sub>, LPE grown, mag. bubble props., melt composition depend. 2-31250  
 (YSmLuCa)<sub>3</sub>(FeGe)<sub>2</sub>O<sub>12</sub> bubble epitaxial layers, neutron and γ-irrad., mag. props. 2-31252  
 (YSmLuCa)<sub>3-x</sub>Gd<sub>x</sub>(FeGe)<sub>2</sub>O<sub>12</sub> garnet film, bubble collapse field, zero temp. coeff. 2-36403  
 Zr(CaO)<sub>2-x</sub>, superionic conductor, disordered, X-ray diffr. study 2-16632  
 ZrO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO, phase equilibria, development of SiO<sub>2</sub> O<sub>2</sub> sensor 2-47013  
 ZrO<sub>2</sub>-CaO solid electrolyte, O transfer kinetics at interfaces with Mo and MoO<sub>2</sub> electrodes 2-41994

**calculating see calculation****calculating apparatus**

No entries

**calculating machines see calculating apparatus****calculation**

see also graphs; nomograms

No entries

**calculators see calculating apparatus****calculus**

see also differentiation; integration; variational techniques

- heavy gas dispersion, spreading, gravity, density excess, calculus anal. treatment 2-30217  
 on the axiomatics of hyperreal number (*Chinese*) 2-10578  
 perturbed ladder operator method, eigenvalues and eigenfunctions from finite difference considerations 2-10638  
 Regge calculus and obs., formalism and appl. to radial motion and circular orbits 2-10660

**calibration**

see also measurement standards; standardisation

- accelerometer, absolute calibration at high frequency 2-23617  
 accelerometer, back-to-back, vibration standard appl. 2-33491  
 acoustic instruments, traceability of calibration to NBS 2-11976  
 acoustic noise meas. instruments, calibration by OSHA Cincinnati Lab. 2-11975  
 acoustical laboratory accreditation schemes 2-11978  
 acoustical testing laboratory, calibration and certification activities 2-11977  
 actinide nuclide, decay scheme studies and anal., γ-ray spectrometry-appl. 2-11347  
 Alcator A Tokamak, electron cyclotron emission, submillimeter heterodyne receiver calibration 2-44904  
 audiometers, bone-conduction, calibration survey 2-27920  
 auditory bone conduction vibrators, loudness balance calibration 2-52657  
 balloon calibrated solar cells with narrow band-pass filters, simulator spectral characterisation 2-27689  
 biomedical thermometry, hydrated salts transition temps. as fixed points 2-6852  
 bone-conduction receiver calibration over extended freq. range using artificial mastoid instrument 2-32285  
 brightness pyrometer, mounted in heliostat type solar furnace (*Japanese*) 2-33533  
 C-space dynamic error theory 2-38627  
 camera shutter parameter testing, precise time interval generator for digital test instrument calibration 2-48819  
 chromatograph, microcomputer controlled, calibration cost cutting using relative response factors 2-31985

**calibration continued**

- clock synchronisation technique, for tracking and controlling deep space probes 2-18679  
 conductivity probe, dynamic response meas., salt-stratified tank design 2-6454  
 cosmic gamma-ray scintillation detector, calibration procedure 2-10327  
 cosmic ray scintillation detector for low energy electrons 2-10326  
 cryogenic flowmeter, using piston installation 2-30250  
 cryogenic liquids, portable calibration densimeter 2-19087  
 cryogenics and vacuum engineering, T-p relationship (*Japanese*) 2-43034  
 data evaluation, transducers and measuring instruments (*Hungarian*) 2-10778  
 defibrillator analyser, microprocessor-based, precision calibrator and tester appl. 2-18340  
 dimension meas., linear, below 0.1 mm, metrological provisions 2-28836  
 dose calibration at high event-densities, overlapping counts correction 2-43627  
 dosimeters, α-particle irradiation chamber 2-43630  
 electricity meters calibration range validity extension using random-test-method, experience from user point of view (*German*) 2-3555  
 electricity meters calibration validity range extension using the random test method (*German*) 2-3554  
 electroacoustic transducers, development, operational use and parameter meas., calibration, review (*German*) 2-4678  
 electron energy loss spectra, absolute calibration and scanning, technique 2-23787  
 EM flowmeter, calibration and testing without liquid 2-30254  
 EM flowmeters reference installation 2-30252  
 error location and standards 2-33487  
 ESA VHF ranging system, SIRIO-2 laser ranging experiment 2-42572  
 European reference solar cell calibrations, comparison 2-27688  
 fast ion diagnostic experiment detector, design and calibration 2-35319  
 ferrioxalate actinometer, quantum yield determ. using electrically calibrated radionometers 2-33610  
 film dosimeters, filtered X-ray set for calibration (*Bulgarian*) 2-7374  
 flow and density meas. of fuel, reference installations 2-30251  
 flow calibration facility, using drag disc/turbine transducer, mass flow calc. 2-34169  
 flow meas. in open channel, level-flow method 2-25471  
 flow meas. of corrosive and toxic liquids, pipe-and-piston installations prospects 2-30249  
 flow meas. probe, seven-hole 2-40011  
 flow measurement and calibration facility, 8×10<sup>-7</sup> to 2.6×10<sup>2</sup> kg/sec air flow rates 2-35244  
 flow-rate meas. facilities in USSR, for pressurised and open flows 2-30248  
 flowmeter, standardisation and results processing automation 2-25465  
 flowmeter precision improvement by using probing methods 2-25474  
 force sensor-machine interaction identification and quantification 2-38642  
 force transducers, three-dimens., calibration equipment design (*Chinese*) 2-28828  
 gamma-ray telescope, passively anti-collimated, design, calibration and sensitivity 2-18703  
 gas analysers, multicomponent gas mixtures automatic analysis 2-9757  
 GEOS 3 altimeter, calibration validation 2-23205  
 glass homogeneity, quantitative meas., calibration curve, Shelyubskii's method (*Japanese*) 2-20389  
 hydrophone, at low frequency, under hydrostatic pressures 2-25204  
 interferometer, automatic, calibration characts. linearity, compensator initial adjustment angle selection 2-48761  
 ion gauges, calibration by standard laboratories, comparison 2-48716  
 ionisation chambers for fast neutron dosimetry, characts., book contrib. 2-19879  
 ionisation gauges, triode and Bayard-Alpert types, long term behaviour 2-19125  
 IR linewidth and line position meas. using diode lasers with internal calibration 2-28899  
 IR radiance model validation by sensor flight measurements 2-38041  
 isotropic electric field monitor at National Bureau of Standards, USA, design and calibration 2-28863  
 lightning impulse voltages recording by wave memories (*German*) 2-42489  
 low ionisation current meas., dosimetric problem 2-19890  
 luminance and illuminance photometry reference light source 2-205  
 measurement system, synthesis and verification model 2-38626  
 measurement system, theory 2-38625  
 methanol lines for Stark cell calibration 2-11533  
 microphone calibration, secondary method for meas. of response curve, free and semireverberant fields 2-7999  
 microphones, using laser-Doppler technique 2-29980  
 microwave nondestructive moisture meas. apparatus (*Chinese*) 2-48710  
 millimetric receptor system for T<sub>e</sub> diagnosis of Tokamak plasma, design and calibration (*Spanish*) 2-12401  
 minicomputer for voltmeters, ohmmeters, and ammeters, standards 2-33571  
 mixed-field dosimetry using ionisation chambers, uncertainty anal. 2-19787  
 mm-wavelength spectral line data, astronomical recommendations 2-28349  
 multidetector particle analyzers, calibration of spectrometer channels 2-15675  
 multidetector particle analyzers, calibration of spectrometer channels 2-19862  
 MWPC with cathodic read-out, acquisition and calibration electronics 2-43723  
 National Bureau of Standards, USA, measurement programs and services 2-19074  
 nephelometers, integrating, calibration and intercomparison for atmospheric turbidity meas. 2-9751  
 NMR pulsed gradient diffusion meas., residual gradient and lineshape distortions 2-23695  
 noise and vibration meas. instrumentation 2-11979  
 noise and vibration meas. instruments 2-11973  
 non-hydrogenous ionisation chambers, relative neutron sensitivity 2-19788  
 orthogonal polynomials appl. 2-23605  
 oximeter, iL-182 CO, calculator/computer-assisted calibration and use 2-52595  
 particle counters calibration and operating standards 2-38734  
 pH electrode design for overcoming calibration problems 2-17897



**calibration continued**

- phase angle calibration standard, NBS, with auto-zero feedback compensation 2-19075  
photoelectron spectrometer, computer-controlled 2-33684  
photometer calibration error due to luminance nonuniformity of standard lamp 2-208  
plasma diagnostic instrumentation radiometric calibration using storage rings 2-30328  
pneumotachograph calibration for inspiratory and expiratory flows during  $\text{HeO}_2$  breathing 2-52652  
postaccelerating system, parameters for first analysing magnet (*Rumanian*) 2-19828  
proportional shower counter, mapping using microprocessor-controlled X-Y moving stage 2-24511  
proton recoil proportional counters for neutron spectrometry 2-43686  
pulsed US field intensity meas. using miniature hydrophone calibrated by simplified technique 2-20499  
pyrometer, using standard radiator with automatic temp. controller 2-23644  
quarter wave plate, calibration method (*Chinese*) 2-11791  
radioactive sources,  $\gamma$ -ray energies meas. using Ge semicon. detectors 2-15378  
Raman spectroscopy, cosecant drive monochromator calibration method 2-3636  
reference angle gauge block calibration by null-balance method (*French*) 2-3561  
reflectometer for absolute reflectance factors,  $45^\circ$ /normal geometry 2-33615  
RF voltage standards, use for calibration of precision voltage meas. devices 2-28826  
S-band waveguide technique for the calibration of miniature implantable electric-field probes for use in microwave-bioeffects studies 2-42240  
satellite scanner data, Landsat/NOAA intercalibration 2-23118  
scintillation counter hodoscope, laser based time and amplitude calibration system 2-39265  
SEM magnification standard, grating or conjugated struct. 2-10922  
semiconductor resistance thermometer, 0.02 to 300K 2-19107  
single fibre light scatt. matrix, expt. determ., calibration source for polarisation nephelometers 2-24933  
solar radiation measurement, pyranometer operation and routine calibration 2-10202  
sonar array transducer and hydrophone design and construction 2-44531  
specular reflectance, calibration of standards for meas. with microscope photometer 2-28827  
stellar spectrophotometry, atmospheric extinction effects 2-3204  
TE ion chamber meas. for neutron dosimetry, interpretation and corrections and book contrib. 2-19885  
TE ion chambers model IC-17 for dose meas., calibration constancy 2-19886  
teletherapy machines,  $^{60}\text{Co}$  and high-energy, use of FBX dosimeter for calibration 2-52639  
test equipment for liquid quantities meas., precision improvement 2-28830  
thermally-lowered fission-track age correction 2-19915  
thermoluminescence dosimetry system calibration for personnel and environmental monitoring 2-7389  
tunable pulse generator for calibration of superconducting solenoids by NMR method 2-28875  
ultrasoft X-ray source for channeltron calibration 2-576  
underwater explosive source spectrum scaling 2-48054  
US pulse echo instrument, compact US delay line for calibration 2-11985  
vacuum gauge calibration system based on piston manometer 2-191  
vacuum meters, electrical-discharge, in  $10^{-4}$  to  $4.10^4$  Pa range 2-23657  
vacuum metrology, standards, performance of gauges 2-6863  
visible IR spin-scan radiometer atmospheric sounder 2-23117  
weather forecasting, probability calibration for fixed width credible interval temp. forecasts 2-10111  
X-ray detectors for X-ray energies below 5 keV, calibration 2-43145  
X-ray diagnostics, calibration sources at the Lawrence Livermore National Laboratory 2-28958  
X-ray sources below 4 keV, standardisation for calibration of Si(Li) detectors 2-43144  
Ag halides, photocond. meas. using microwave cavity 2-10825  
Fe-CuNi sheathed thermocouple, reference standard for calibrating industrial thermocouples (*German*) 2-15166  
Ge:Ga, far IR and sub-MM detector, spectral response from blackbody meas. 2-19180  
Ge(Li) detector, efficiency calibration at short source-to-detector distance 2-24490  
Ge(Li) detector calibration for neutron activation anal. (*Rumanian*) 2-24504  
 $^3\text{He}$  spectrometer calibration and neutron spectrum meas. from Am/Li source 2-15662  
Mg-Ar ion chamber sensitivity to high energy neutrons 2-19790  
Pt resistance thermometer calibration between 13.81K and 273.15K, interpolation methods 2-15137  
 $^{227}\text{Rn}$  assaying systems, absolute calibration method 2-27909  
Si:In, IR absorpt. calibration using neutron transmutation 2-26939

**californium**

- see also nuclei with .....  
surface ionisation, ionisation pots. studied by mass spectra 2-17591  
 $^{252}\text{Cf}$  contamination accident at Univ. of Tokyo, radiation management (*Japanese*) 2-4072  
 $^{252}\text{Cf}$  spontaneous fission source for gas-jet coupled ISOL facility 2-19694  
 $^{244}\text{Cm}$  isotope correlations, for reprocessing input verification 2-4050

**californium compounds**

No entries

**calorimeters**

- see also calorimetry  
design for low temperature radiative transfer between metallic surfaces as spacing function 2-4699  
differential flow-type, for high-temp. heat capacity calorimetry of aqueous solns. 2-37092  
flow microcalorimeter system for meas. of dynamic energy variables of isolated perfused hearts 2-18347  
flow-type, for direct determ. of excess enthalpies of gases 2-16415  
hadron calorimeter, props. relevant to storage rings 2-34239  
hadron calorimeter prototype, performance 2-34240

**calorimeters continued**

- heat capacity measurements of high precision from 1.4 to 100K, adiabatic calorimeter, appl. to  $\text{Co}(\text{NH}_3)_6\text{Cl}_2$  2-26070  
heat sink, wire spun Al sphere, laser energy meas. 2-15172  
human heat-sink calorimeter,  $5.8 \text{ m}^2$ , with online data acquisition, processing and control 2-47734  
isothermal calorimeter for the direct measurement of enthalpy of vaporization at high pressure and high temperature 2-43020  
laser calorimeter, bulk-absorpt., for ps pulsed laser light energy meas. (*Chinese*) 2-23638  
laser calorimeter, bulk-absorpt., using semicond. thermopiles, for laser pulse energy meas. (*Chinese*) 2-23637  
microcalorimeter, UNIPAN 600 thermodynamic and kinetic parameter determ. in various processes 2-33530  
multifunctional thermophysical property meas. adiabatic plate calorimeter (*Chinese*) 2-48703  
photomultipliers gain regulation system using LED and optical fibres 2-24488  
Picker mixing flow microcalorimeter for heat capacity meas. of liqs. 2-45590  
segmented calorimeter for high  $P_1$  jet expts. 2-593  
titration microcalorimeter using nanomolar quantities of reactants 2-23641

**calorimetry**

- see also calorimeters; specific heat; thermal analysis  
absorption coefficients in crystalline materials, meas. techniques comparison 2-3629  
aqueous solution, high temp. heat capacity calorimetry using differential flow calorimeter 2-37092  
bis-propyl ammonium tetrachloro zincate, ferro-paraelectric phase transitions 2-41292  
ceramics, durability assessment by differential microcalorimetry 2-21428  
conduction microcalorimetry, automatic signal correction apparatus (*French*) 2-10808  
di(methylammonium)hexachlorostannate, crit. phase transition, calorimetric and IR study 2-1608  
differential heat flow calorimetry, appl. to thermodynamics of  $\text{LaNi}_5\text{-H}_2$  system 2-8704  
differential scanning calorimetry, mathematical treatment of heat flow 2-48704  
electrolyte dilute solutions props. from calorimetric meas. 2-9567  
Elinvar,  $\gamma$ -phase form. mech., kinetics and singularities (*Russian*) 2-22212  
heating rate, estimation using calorimetric probe 2-23642  
low-temperature small sample, SOS thermometer appl. 2-33525  
mono-methyl pyridines, cryst. methyl group rotation 2-35411  
phase transitions, heat capacity, AC calorimetry technique 2-23639  
polymers, amorphous state, Fourier transform IR spectra and calorimetry 2-5059  
polystyrene, isotactic, extended-chain struct., X-ray diffr. and calorimetric data 2-22495  
propylene-ethylene block copolymers, cryst., stress whitening, X-ray, SEM and calorimetry obs. 2-47134  
PVC, pressure-induced freezing of conformational states 2-26052  
results reduction to isothermal calorimetric process and standard-state process in soln.-reaction calorimetry 2-23640  
silicate glass, high-temp. sp. ht., average and true values, temp. depend. 2-40568  
single-maximum colour-matching transforms. with minimal overlap 2-33608  
smectic A phase diagrams exhibiting enhancement, calorimetry 2-12744  
smectic-A phases, phase diagrams of dipolar molcs., calorimetric and X-ray investig. 2-8611  
solar flat-plate collectors, pipe and fin type, calorimetric determ. of bond conductances 2-37436  
specific heat meas. system, automated 2-33529  
steel, maraging, Co-Mo-Ti-Ni, calorimetry anal. for ageing (*Japanese*) 2-13742  
steel, stainless, ferritic and martensitic, calorimetric anal. of ageing reaction (*Japanese*) 2-27194  
superconducting magnet, AC loss measurement, calorimetric method (*Chinese*) 2-19130  
AgCl-LiCl-KCl liq. mixture, calorimetry and thermal anal. (*French*) 2-21329  
Al-Ge-Si, heat of form. determ. by high temp. calorimetry 2-9563  
Al-Si, heat of form. determ. by high temp. calorimetry 2-9563  
Al-Zn-Mg (4.5, x wt.%), influence of Mg content on formation and reversion of GP zones 2-2538  
 $\text{Al}_2\text{O}_3$ , anodized film, on line colour meas. during electrolytic colouring 2-43065  
AIP, heat of formation and combustion,  $\text{O}_2$  bomb calorimetric technique 2-9566  
 $\text{Al}_2\text{S}_3$ , thermodynamic props. 2-30629  
BP, heat of formation and combustion,  $\text{O}_2$  bomb calorimetric technique 2-9566  
 $\text{CO}$ , quasi-ideal chemisorpt. in oxides, entropy microcalorimetric determ. 2-40681  
CsI, highly transparent, bulk absorpt. coeff. at  $10.6 \mu\text{m}$ , laser calorimetry meas. 2-44418  
 $\beta$ -Cu-Zn-Al alloy, calorimetric study of ordering 2-2541  
Ge, adsorpt. of  $\text{O}_2$ , on atomically clean surface, calorimetric heat of adsorpt. determ. 2-12907  
 $^4\text{He}$  and  $^3\text{He}$ - $^4\text{He}$  mixtures, heat capacities and press. coeffs., simultaneous meas. apparatus 2-21409  
 $\text{PbTe}$ :Ti, volume supercond. 2-17192  
 $\text{Pd}_3\text{Mn-H}_2(\text{D}_2)$  solns., thermodynamic props. 2-21328  
Si, adsorpt. of  $\text{O}_2$ , on atomically clean surface, calorimetric heat of adsorpt. determ. 2-12907  
 $\text{TiCl}_3\text{-TiBr}$ , KRS-b, highly transparent, bulk absorpt. coeff. at  $10.6 \mu\text{m}$ , laser calorimetry meas. 2-44418  
 $\text{Zn}_3\text{P}_2$ , heat of formation and combustion,  $\text{O}_2$  bomb calorimetric technique 2-9566

**calorimeters see calorimeters****CAMAC**

- booster, CAB, minicomputer for high-rate CAMAC data acquisition, presentation 2-24535  
booster, CAB, minicomputer for high-rate CAMAC data acquisition 2-24536  
CERN SPS experiments, data acquisition using VAX computer, CAMAC driver 2-11368



## CAMAC continued

- CNEA 200D tandem accelerator, microcomputer based communication system 2-11318  
 crate controller, type U, with auxiliary controller bus interface, for SLAC 2-7467  
 cyclotron facility, data acquisition system 2-7459  
 data acquisition for particle and nuclear physics, conf., Oak Ridge, TN, USA (May 1981) 2-10544  
 data acquisition interface, microprogrammed CAMAC branch driver 2-7466  
 data acquisition systems using Perkin-Elmer 32-bit computers 2-19918  
 dilepton triggers, fast ECL-CAMAC processor 2-19904  
 education, microcomputer to multichannel analyzer interface 2-48457  
 electrophoregrams of brain struct., proteins, automatic processing (*Russian*) 2-47757  
 emulator 168/E, online experience at SLAC, software development and appl. 2-24554  
 front end event selection with microprogrammed branch driver, using Q data acquisition 2-7468  
 gamma-ray spectrometer, data acquisition system 2-11363  
 high speed CAMAC data acquisition system using a bank-switchable bulk memory 2-7474  
 high-energy experiment NA3, acquisition system, CAMAC auxiliary controller 2-19930  
 high-energy physics, microprocessor event analysis in parallel with CAMAC data acquisition 2-19920  
 I/O software system 2-11365  
 interface to Apple minicomputer, CAMAPPLE 2-24540  
 LAMPF, data acquisition system for nuclear chemistry 2-7450  
 logic state analyser 2-24560  
 microcomputer, CAVIAR, address space expansion by memory mapping 2-24559  
 microprocessor MC 68000 appls. in high-energy physics 2-24545  
 microprocessor-based CAMAC module for testing and monitoring 2-24558  
 multichannel data streams, autonomous processing, REMUS based crate controller 2-19929  
 multiple-user data acquisition and analysis system for high flux beam reactor 2-11364  
 neuron membranes computerised investig. of volt-amp and inactivation characts. of ionic channels (*Russian*) 2-47590  
 nuclear laboratory, data acquisition system, CAMAC-based, using VAX 11/780 and MBD branch driver 2-7465  
 parallel/serial CAMAC driver for nuclear data acquisition 2-7482  
 photogrammetry appl., with coordinate errors correction (*Russian*) 2-3638  
 recoil missing mass trigger, ECL-CAMAC processor system 2-19903  
 shower calorimeter, ADC correction and readout, CAMAC processor 2-24521  
 SIMS, SMI-300 ion microscope, data acquisition and processing system 2-3661  
 standard CAMAC subroutines for on-line computers at CERN 2-7469  
 tandem accelerator, data acquisition and anal. system, real-time programming 2-7454  
 Triangle Universities nuclear lab., data acquisition system 2-7451  
 university of Washington nuclear physics. Data acquisition system, CAMAC crate 2-7452  
 W.K. Kellogg laboratory, nuclear data acquisition system 2-7456  
 zero power reactors, data acquisition system 2-11362

camera lenses *see* photographic lensescamera tubes, television *see* television camera tubes

## cameras

- see also coronagraphs; television cameras*  
 Anger camera, flood field uniformity anal. using order statistics 2-47696  
 annular-aperture wide-field camera astron. spectroscopic appls. 2-28346  
 autofocus system for lens shutter cameras, using NMOS technology 2-33674  
 biomedical gamma camera motion corrector, evaluation of characts. (*Japanese*) 2-14325  
 biomedical scintillation camera performance phantoms (*Japanese*) 2-14326  
 Canon AE-1 Program, review 2-38706  
 central camera shutter, triggering diagram, light opening area variation effect 2-48820  
 comet camera lens design, wideband 2-53091  
 electronic camera equipment; using ICs (*Spanish*) 2-28920  
 electronic-shutter reflex, camera, liq.-cryst. exposure display (*it*) 2-33660  
 exposure-measurement problem in photography, review (*it*) 2-33661  
 Faint Object Camera on Space Telescope 2-18707  
 faint object spectrograph 2-53090  
 feed mechanisms vel. of high speed motion picture cameras, optimum stability (*Russian*) 2-28924  
 Field laboratory camera, appl. to TEM rapid microscopy 2-23754  
 gamma camera data anal. systems, evaluation of count rate losses due to dead time 2-32315  
 gamma camera interfacing to DEC Gamma-11 data processing system for emission tomography 2-52620  
 gamma-ray image intensifier camera, performance study 2-27878  
 Gammacamera, Toshiba mobile model GCA-50A, diagnostic appls., operation 2-32326  
 gas scintillation camera for X-ray astronomy 2-48150  
 Guinier X-ray diffractometer, and camera, automated, low-temp. 2-43148  
 high-speed camera development trends in USSR and PRC 2-6913  
 holocamera, miniature, using multiple-pulse Q-switched ruby laser, aerosol anal. 2-49707  
 holocameras, types 35 and 9X12, easy-to-handle 2-34693  
 holography, Dennis Gabor memorial symposium, Haifa, Israel (Mar. 1980) 2-33216  
 image formats and their impact on photofinishing 2-6910  
 MAVICA all-electronic general-purpose camera with re-usable mag. disc for image storage (*French*) 2-28921  
 Mavica reflex camera using magnetic disc storage (*German*) 2-38707  
 medical, rotating laminar emission, with Ge-detector, anal. 2-37662  
 medical, rotating laminar emission, with Ge-detector, expt. results 2-37661  
 microfilming camera employing a dry-processing system and reading apparatus for phase images (*it*) 2-38708  
 Minolta spotmeter-M, exposure calculation meter (*German*) 2-239  
 mirror system design for high-speed cameras (*Russian*) 2-25098

## cameras continued

- Mitchell camera, machine and its makers 2-48824  
 motion picture cameras, complex evaluation according to resolution (*Russian*) 2-33666  
 movie cameras, noise level reduction technique (*Russian*) 2-19200  
 Moviecam 3N Mark 2, description 2-48810  
 non-metric cameras calibration problem 2-37739  
 nuclear medicine imaging with semiconductor gamma cameras 2-47705  
 oscillation data collection system, for high resolu. protein crystallography 2-2976  
 pancreatic telescope with camera, instrum. description 2-15208  
 performance under aircraft internal-compartment turbulence effects 2-48814  
 photomicrographic camera system, MC 63 Zeiss 2-10901  
 picosecond optical streak camera design, stable S-1 photocathode development 2-48829  
 picosecond streak camera system, real-time measurement (*Japanese*) 2-15250  
 picosecond streak camera system characteristics (*Japanese*) 2-28914  
 pinpeak camera, quantum noise, simple object limit 2-48811  
 Polaroid SX-70 land camera, unusual optics 2-48806  
 Popov-Bowen camera, aberration correction and F-ratios 2-42604  
 radioisotope cameras, view distortion introduced by multiframed imagers 2-2944  
 rotating-mirror cameras, adaptive digital control 2-48830  
 safeguards surveillance, camera system based on Super 8 2-7209  
 scintillation camera, recommendation for quality control (*Japanese*) 2-14327  
 scintillation camera collimators, accuracy of PSF and MTF computation by Fourier anal. 2-52614  
 scintillation cameras, standardisation of performance meas. 2-52608  
 shake evaluation by hand-held speckle photography 2-33656  
 shock wave transition recording by curved-slit streak camera 2-50336  
 shutter parameter testing, precise time interval generator for digital test instrument calibration 2-48819  
 soft X-ray streak cameras for plasma diagnostics 2-30334  
 Stereosat, cartographic potential of spacecraft line-array camera system 2-18357  
 ultra-high speed multi-spark camera of a pulse-control type 2-19198  
 X-ray topographic cameras for substructural analysis 2-35350

candoluminescence *see* luminescence

## canted spin arrangements

- see also weak ferromagnetism*  
 alkyl diammonium iron chloride, layered cpds, mag. studies 2-26605  
 rare earth garnets,  $R_2Fe_2O_{12}$ , ferrimag., exchange constants 2-51402  
 rare earth-transition metal alloys, uniaxial ferrimag., review 2-26621  
 uniaxial ferrimag., Greens function for single ion anisotropy, canted spin phase 2-46227  
 $BaFe_{12}M_{12}O_{19}$  ( $M=In, Sc$ ), hexagonal ferrites, mag. struct., Mossbauer study 2-21768  
 $BaMnF_4$ , magnetoelectric, Landau theory predictions 2-41170  
 $CoF_3$ , canted struct. induced by longitudinal mag. field, magneto-optical study 2-36321  
 GdIG, spin reorientation transition induced by mag. field, dislocations influence 2-46285  
 Li-Zn-Co ferrites, mag. anisotropy anomaly due to Co, permeability meas. 2-26622  
 $NiF_2$ , weak ferromagnetism, neutron diffr. study 2-31143

## capacitance

- see also photocapacitance*  
 dipalmitoyl phosphatidyl ethanolamine, charge transport in thin biological films grown by the Langmuir-Blodgett technique 2-9763  
 glow discharge film, density of states, MOS struct. capacitance determ. 2-51076  
 liquid crystal guest-host displays, dielec., electro-optical, and phase change props. 2-5043  
 metal/ $\beta-Al_2O_3$ - $Na_2O$  interface, evolution in humid atm. (*French*) 2-8877  
 MOS system, surface states and minority carrier generation meas. by DLTS (*Japanese*) 2-21678  
 nematic liquid crystals, elastic constants, determ. from C-V curve 2-40460  
 polycrystalline electrodes, capacitance characts. anal. 2-31435  
 polycrystalline solid electrolytes, impedance 2-50900  
 polystyrene: Cu phthalocyanine films, dielec. props. 2-21939  
 solar cell, open circuit voltage decay transients 2-14085  
 solid-state electrochem. cells, electrode and interface reactions, review 2-13973  
 superconducting loop closed with point contact, quantum tunnelling, dissipation influence 2-36271  
 thin oblate body of revolution, electrostatic pot. field 2-11614  
 thin-layer interdigital transducers, static capacitance, charge and potential distrib. (*French*) 2-50046  
 traveling mirror compressor delay line with nonconstant capacitance 2-20907  
 $Ag_2IWO_4$ , ionic cond., AC cond. and dielec. response 2-26112  
 $\beta-Al_2O_3Na^+$ , mech. and elec. relaxation meas. 2-16718  
 As-Se-Te, metal-semicond.-metal struct., elec. props. 2-46155  
 n-GaAs, photoelectrochemical corrosion, effect of Au monolayer 2-13181  
 n-GaAs-oxide layer, interface defect states effect on electronic props. 2-26509  
 $GaAs_{0.6}P_{0.4}Fe(Ni)$ , impurity centre characts., thermal and optical capacitance transients study 2-5362  
 $Ge_3N_2$ -GaAs MIS devices, elec. characts. and memory behaviour 2-46147  
 $Hg_{0.8}Cd_{0.2}Te$ , anodic oxide film, surface anal. and capacitance-voltage characterization 2-51366  
 InSb MOS structure, capacitance, I-V characts. 2-51324  
 $MoO_3$  films, capacitance, dielec. loss, and destructive breakdown study 2-51528  
 Nb-NbO<sub>x</sub>-PbIn Josephson edge junction, specific capacitance 2-36264  
 Si, self-implanted amorphous layers, CV and capacitance transient anal. 2-50713  
 Si:Fe, deep levels, capacitance transient spectroscopy 2-17018  
 n-Si:Fe, solid soln. precip., capacitance study 2-16804  
 a-Si:H, gap states study, appl. of isothermal capacitance transient spectroscopy 2-45901  
 a-Si:H, photoresponse time and density of localised states in mobility gap 2-46064  
 n-Si:Pt, impurity levels, capture cross section, capacitance, hole lifetime and resistivity obs. 2-51125



**capacitance continued**

- Si-Al<sub>2</sub>O<sub>3</sub>, SOS films, transport props. investig. by gate controlled galvanomagnetic effects 2-51336  
 Si-SiO<sub>2</sub> MOS struct., electron capture at Na<sup>+</sup> sites, 77 to 296K 2-46134  
 SiO<sub>2</sub>-GaAs, MIS diode, props. of spin-on interfaces 2-2013  
 SiO<sub>2</sub>-Si, avalanche electron injection, interface states generation 2-17162  
**capacitance measurement**  
 DFCM 500 8-digit freq. and capacitance meter, mains or Ni-Cad battery operation 2-33564  
 diodes, computer-assisted system using phase sensitive technique 2-38666  
 electrocalorimetric apparatus for loss meas. in supercond. 2-23662  
 review of basic theory and practice 2-15182  
 semiconductor dopant and trap conc. profiles meas. method junction capacitance techniques 2-50688  
 semiconductor junction capacitance-voltage meas. techniques 2-46120  
 water purity measurement by electric resistance and capacitance measurements for pollution control (German) 2-37480

**capacitance meters** *see capacitance measurement***capacitor storage**

- HV impulse devices with aqueous insulation, insulator shape optimisation 2-44923

**capacitor stores** *see capacitor storage***capacitors**

- see also electrolytic capacitors; thin film capacitors; varactors*  
 capacitive transducers, multi-terminal, survey of theoretical background 2-33511  
 cylindrical, paradox of Newton's Third Law being apparently disobeyed, speculations 2-9082  
 elliptical capacitors, thin, conducting, electric pot. distrib. calc. 2-20227  
 precision capacitors calibration, cryst. structural props. under dielec. load 2-5621  
 Au-doped MOS capacitor, truncated load method for modelling (Romanian) 2-5464  
 KH<sub>2</sub>PO<sub>4</sub>, dielectric props., conduct., multilayer capacitor, electrooptic study 2-13394  
 Si MOS, use of CW laser recrystallised 2-51056  
 SiO<sub>2</sub>, electron traps, processing parameters influence 2-21598  
 SrTiO<sub>3</sub>, boundary layer capacitor material, microstruct. 2-50874

**capillarity**

- see also bubbles; contact angle; drops; foams; liquid films; surface tension*  
 bile salts, ionic self-diffusion meas., capillary method 2-12795  
 bubble, thermocapillary motion, normal to plane surface 2-25425  
 capillary porous body, struct., mathematical description 2-37039  
 cavitating flow past a flat plate, capillarity influence 2-50303  
 crystal-melt system, capillary props. during growth and melting of crystals. 2-1414  
 disperse particle structures, capillary tensile strength 2-17720  
 droplet of nonwetting fluid, press. drop. induced flow through capillary tube with constriction, inertial and viscosity forces effects (French) 2-8191  
 elastic liquid, extrusion flow jet from a capillary, swelling effect 2-12192  
 liquid droplet inside liquid drop, thermo-capillary flow 2-12198  
 jet flow of supercritical aqueous solns. of electrolytes with Joule heating in thin capillary tubes 2-35194  
 oil flow in capillaries with hydrophilic and hydrophobic surfaces, trapped gas bubbles effect 2-30208  
 organic liquids, interfacial tension determ., differential capillary rise 2-16931  
 polyamide 6, reinforced, influence of water uptake on fatigue limit (German) 2-9411  
 polymer soln., semi-dilute, mech. degradation in laminar flow 2-30225  
 polypropylene-polyethylene blends, die swell behaviour and morphology after capillary flow 2-30382  
 polystyrene and HIPS melts, determ. of capillary entrance press. losses and first normal stress difference 2-25343  
 rubber, capillary viscoelastic and vulcanisate properties. treated C black influence 2-47116  
 sessile-drops and captive bubble meridians and props., capillary phenomena 2-50  
 ultrasonic capillary effect depend. on viscosity, vapour press., surface tension and gas content of liq. 2-25445  
 viscous flow sintering kinetics, dynamic computer simulation 2-8057  
 water, evaporation from capillaries, effect of inhomogeneous elec. field 2-1707  
 water film, nonfreezing, thermocrystn. flow on capillary surface 2-35224  
 wetting, tensiometric studies, contact angle and surface press., relax. 2-26182  
 CuCl, molten, tracer diffusion coeffs. meas., 450 to 750°C 2-26093  
<sup>4</sup>He, liq.-solid interface, capillary effects on phonon transmission 2-40616  
<sup>4</sup>He, superfluid, capillary flow, steady inhomogeneous flow states 2-35788  
<sup>4</sup>He, superfluid, vortex cooler, thermal effect 2-35782

**capillary phenomena** *see capillarity***capillary waves**

- acoustic phase conjugation and self-focusing by nonlinear interaction with liquid surface 2-44513  
 capillary-gravity wave packet nonlinear evolution eqn. at two superposed fluid interface 2-44745  
 finite amplitude, forced gravity-capillary waves in perfect fluid (French) 2-35174  
 liquid-vapour interface, capillary waves and inherent density profile 2-40651  
 ocean capillary-gravity wave generation by steep gravity waves (Russian) 2-10047  
 two-dimensional Ising model, interface profile, agreement with capillary wave theory 2-50961  
 water steep waves, surface tension effects 2-4843

**capture cross-sections, nuclear** *see nuclear reactions and scattering***Carathéodory's principle** *see thermodynamics***carbon**

- see also nuclei with .....*  
*see also carbon fibres; charcoal; diamond; graphite*  
 abundance in F- and G-type stars 2-28447  
 activated, absolute adsorption from dil. aqueous solns., Dubinin-Radushkevich equation applic. 2-35888  
 activated, high temp. adsorption of water 2-5308  
 activated, inert gas adsorption, review and evaluation 2-30744  
 activated C, adsorption kinetics rel. to struct. 2-1731

**carbon continued**

- adsorbed on W, effect on surface diffusion of Pb adatoms 2-16955  
 adsorption during Ag adsorption of pyridine, Raman scatt. 2-5705  
 adsorption on Ni with O<sub>2</sub>, residual gases electron beam bombard. effects 2-40670  
 adsorption props. in electrolyte soln., cryst. struct. effects 2-30755  
 aerosol deposits, total C content, gas-phase photoacoustic determ. 2-47386  
 amorphous, dangling bonds defects, g-values of ESR signal 2-2134  
 amorphous, electronic density of states calc., liq. metal model approx., results (Russian) 2-8749  
 amorphous, low-energy electron transport, Monte Carlo simulation (French) 2-50727  
 amorphous, thick specimen, contrast and resolution in electron spectroscopy 0.1 to 3 MeV (French) 2-12436  
 amorphous, X-ray diffr. studies 2-16596  
 amorphous and graphitised foils, differences in stripper qualities 2-11336  
 atmosphere <sup>14</sup>C and <sup>13</sup>C from nucl. weapons, dispersion, C cycle model appl. 2-14596  
 atom, core exchange polarisation effects calc. using SCF Xalpha wave functions 2-43800  
 atom, expectation values in equalities, momentum density monotonicity, HF calcs. 2-39302  
 atom, photoionisation cross sections, close coupling calcs., autoionizing reson. 2-43872  
 atom, VUV spectrum by, flash-pyrolysis technique 2-29545  
 atom+H<sup>+</sup>, K-shell electron capture calcs. 2-24847  
 atoms, ab initio effective spin-orbit operators for struct. calc. 2-43782  
 atoms, partial photoionisation cross sections, subshell branching ratios 2-7529  
 black, treated, influence on capillary viscoelastic and vulcanisate props. of rubber 2-47116  
 black filled vulcanisates, rolling resist. 2-47196  
 black loaded ethylene-vinylacetate copolymer, resist. and positive temp. coeff. of re.sist., correl. with C black parameters 2-46084  
 C III 1909 Å semiferroin line correl. with redshift for quasars 2-6683  
 collooidally deposited high-temp. solar selective surfaces 2-27100  
 condensed phase-gas phase transform. near graphite-liquid-vapour triple point 2-45546  
 contamination detection using <sup>12</sup>C(p,γ)<sup>13</sup>N reson. reaction 2-47395  
 CVD, laser-induced 2-22169  
 deposition during decomp. of methylchlorosilanes 2-13634  
 desorption from W, Ar ion bombardment expt. Auger spectra 2-26207  
 determination, using <sup>12</sup>C(n,n',γ), γ-ray line Doppler broadening 2-9591  
 diffusion in α-Fe, coeffs. calc. from single meas., activation enthalpy 2-16902  
 diffusion in Nb (Russian) 2-5275  
 electrode, activated vitreous C, comparison with Pt-Ir for pacemaker stimulating electrodes 2-32364  
 energy straggling of H<sup>+</sup>, He<sup>+</sup> ions, 70 to 1200 keV 2-40454  
 exchange between steel and FeCr, autoradiography study (Russian) 2-2711  
 film, amorphous, spatial and temporal coherence of electron beam from astigmatic image 2-39552  
 film, C<sub>60</sub>, electron diffr. study of crystn. phase struct. 2-50583  
 film, deposition kinetics in 1-butene pyrolysis, flow rate effect, integral relationship for reaction parameters 2-46931  
 film, on glass substrate, internal stress, Young's modulus and adhesion energy 2-8740  
 film, self-supporting C glass, as photoacoustic spectroscopy standard sample 2-43097  
 films, prod. combining pyrolysis and discharge technique 2-27080  
 foil, P<sup>+</sup> collisions, Auger electron spectra 2-49355  
 foil, p, d and α-particles energy-loss straggling in energy range 0.2-2.4 MeV 2-49239  
 foils, electron beam evaporation and glow discharge prep., optical absorpt. meas. 2-51728  
 foils, protons and deuterons energy loss at 50-150 keV per nucleon 2-615  
 fuel cells, H<sub>3</sub>PO<sub>4</sub>, supports for Pt electrocatalysts, alternative materials and evaluation methods 2-37205  
 galactic cosmic rays, isotopic comp. 2-23197  
 giant stars of globular clusters M3 and M13, C and N abundances 2-33015  
 glassy, γ-ray Compton profile 2-9063  
 graphitised carbon black, adsorpt. of hydrocarbons, chromatographic step-and-pulse method obs. 2-12906  
 graphitising, thermal stress role in initiation of struct. transform. 2-47067  
 graphitized, adsorption of benzene, cyclohexane, n-heptane, enthalpy and entropy effects 2-45715  
 influence on O<sub>2</sub> precipitation in SiO<sub>2</sub> 2-12763  
 interstellar C abundance toward δ Scorpii, determ. from obs. of interstellar C II line 2-42733  
 interstellar clouds, C<sup>+</sup>, C and CO network 2-33103  
 ion+He, one-electron ions ionisation and capture 2-7636  
 ion abundances in planetary nebulae, emission-line spectra 2-3299  
 ion implantation, projected ranges and standard deviations (Japanese) 2-12653  
 ions, electron impact ionisation in plane-wave Born approx. 2-44109  
 ions, four- and five-electron, Doppler tuned X-ray spectra 2-49321  
 isotropic, nucl. grade, irreversible expansion and shrinkage during graphitisation 2-41560  
 K-shell partial cross-section, for electron energy-loss spectrometry 2-29720  
 materials, charact. temps., computer calc. from enthalpy data 2-5245  
 metal-metal carbide melts in contact with solid C, C vaporisation 2-21286  
 microporous adsorbents, water vapour adsorption, isotherm eqn. 2-40672  
 molecule, chemiluminesc. spectra of d<sup>1</sup>Π<sub>g</sub>-a<sup>1</sup>Π<sub>g</sub> states 2-31924  
 molecule, multiphoton dissoc., electronically excited products 2-24801  
 molecule, Swan and Fox-Herzberg band intensities, electronic transition moments, CI calc. 2-20035  
 monolayers on W(100) and (110), surface phase study 2-26191  
 monolayers on W(110), segregation 2-26190  
 N2 and N5 planetary nebulae in SMC, chem. comp. and C abundance, obs. 2-53363  
 neutron total cross-sections from 0.5 to 60 MeV 2-4123  
 non-graphitising, graphitisation and densification under high press. (Japanese) 2-22411  
 P40 planetary nebula in LMC, UV spectral obs. C abundance and chem. comp. 2-53363



## carbon continued

- particles, highly divided carbonaceous, form. mechanism 2-41872  
 particulate, in small pool fire flames, laser transmission meas. 2-13957  
 particulate organic C in marine atmosphere, origin from stable C isotopic comp. 2-28129  
 phase diagram near solid-liquid gas triple point using laser heating system 2-8599  
 pionic, pion captive, molecular effects in complex media, X-ray emission spectra 2-49605  
 pitch-bonded green carbon bodies, linear dims. changes during baking 2-51852  
 planetary nebulae abundance from 4267 Å CII line 2-10496  
 plasma, laser produced, visible spectrum 2-1343  
 powder with LaB<sub>6</sub>, hot-pressing 2-51845  
 powders, black, IR optical consts. determ. from refl. meas. 2-24945  
 profiling by <sup>12</sup>C(<sup>3</sup>He,α)<sup>12</sup>C reaction 2-47390  
 pyrolytic, Si-containing, struct. props. and graphitisation 2-41633  
 pyrolytic, electron emission props. 2-22125  
 pyrolytic powders, temp.- and atmosphere depend. of elec. resist. 2-51177  
 radiocarbon dating techniques, appl. to air pollution studies 2-47546  
 Sanguenay fjord, sediments, C and <sup>137</sup>Cs spatial and temporal var. (French) 2-14451  
 scientific and industrial advances, conf., Baden-Baden, Germany (July 80) 2-38357  
 in seawater, estimation of alkalinity and total inorganic C from titration data 2-6398  
 solid high-resistivity form, form. from ion bombardment of graphite film 2-16692  
 soot, form. from hydrocarbon flame, decomposition by combustion 2-22449  
 soot, visible absorption in atmosphere 2-23105  
 spherules, form. from carbonisation of polyethylene under press., yield and morphology 2-41561  
 stripper foil behaviour in <sup>127</sup>I beam 2-11338  
 stripper foils, radiation lifetimes and failure mechanisms 2-11335  
 stripper foils comparative performance in Argonne FN tandem 2-11337  
 stripper foils made by DC glow discharge process, physical props. and structure 2-11334  
 substrate with pyrocarbon coating, for polysilicon film growth, interface props. 2-51835  
 supernova remnants in northern hemisphere, C abundances from near IR spectroscopy 2-28535  
 surface (111) 1×1, atomic relaxation, tight binding Green's function approach 2-16936  
 surface erosion and re-emission behaviour of various types under He ion bombardment 2-50722  
 surfaces, active, adsorption mechanism of aliphatic alcohols and amines, Polanyi-Dubin theory 2-40671  
 thin films, amorphous and cryst., RF plasma decomposition and ion beam deposition growth, structure, TEM and electron diff. obs. 2-12931  
 unipolar arc erosion rates measured using an ion beam activation technique 2-30522  
 vacuum deposited coating, mech. props., cracks and wrinkles 2-21476  
 vitreous anode oxidation of deposited Ti film 2-9464  
 X-ray Cherenkov radiation, permittivity calcs. near photo-absorpt. edge (Russian) 2-24929  
 X-ray photoelectric cross-sections 2-30926  
 amorphous, electronic density of states calc., liq. metal model approx., theory (Russian) 2-1816  
 Ar<sup>12+</sup>+C foil, K X-ray prod, foil thickness effect 2-33696  
 β-BiC, rhombohedral, C centres, photoinduced ESR investig. 2-40819  
 C films, hydrogenated, produced by reactive magnetron sputtering, props. 2-39704  
 C foil+highly stripped ions, equilibrium charge-state distrib. 2-20165  
 C I, energies and oscillator strengths, polarised frozen core approx. 2-43852  
 C I absorption lines in quasars, use as radiometer for background radiation at Z≥2 2-28582  
 C I in interstellar molecular clouds, abundance, obs. at 609 microns 2-38259  
 C I in Orion Nebula, near IR high resolution spectrophotometry of 872.7 nm forbidden line 2-3289  
 C I to Ca XV isoelectronic series, oscillator strengths 2-15741  
 C II, obs. of 1335 Å dielectronic recomb. lines in planetary nebula (IC 418) 2-6657  
 C II forbidden line halos round H II regions, IR obs. 2-23333  
 C III, electron impact excitation, fine struct., collision strength, data table 2-38368  
 C III, intershell transitions, theoretical study 2-39363  
 C III expanding envelope round Wolf Rayet star HD 152270 2-42688  
 C IV, diffusion and mass flow effects on lines formed in solar atmosphere 2-28423  
 C IV in solar transition zone, transient plasma anal., obs. 2-10368  
 C IV resonance lines in O-B2 stars, use as temp./luminosity indicator 2-32987  
 C ion+H, charge exchange cross sections calc. by fully quantal perturbation stationary state method 2-49568  
 C<sup>+</sup> in interstellar clouds 2-33103  
 C<sup>+</sup>, prod. rate in Venus and Mars ionospheres from photoionisation of CO and CO<sub>2</sub> 2-32832  
 C<sup>3+</sup>, electron-impact excitation, pseudostate expansion, cross section and rate calcs. 2-24870  
 C<sup>6+</sup>, electron capture cross-sections from He-atoms and H<sub>2</sub> molecules (Russian) 2-7639  
 C<sup>n+</sup>, gas excited ions, prompt and time delayed electron decay-in-flight spectra 2-4353  
 C:H, amorphous, elec. and optical props. 2-40912  
 C:H, amorphous plasma deposited film, PMR 2-46398  
 C:H,B(P), amorphous films, thermopower, elec. cond. 2-46178  
 e-amorphous In<sub>0.25</sub>Te<sub>0.75</sub>-C struct. nanosecond switching parameters 2-13143  
 C-C composites, oxidation behaviour 2-41765  
 C-graphite materials AG1500B83 and AG1500BS30, antifriction props. in end face rubbing 2-17649  
 C-H spin-spin coupling consts., review 2-736  
 C-PVC composites, fluctuation modulation of tunnel junctions by applied AC stress 2-40998  
 C+H<sub>2</sub>, exchange reaction, pot. surfaces, nonempirical calcs. 2-22435  
 C+SO<sub>2</sub>→SO(A<sup>2</sup>Π)+CO, chemiluminesc. reaction, mol. beam study 2-2714  
 C<sup>+</sup>+Ar, K- and L-shell excitation cross sections 2-24843

## carbon continued

- C<sup>+</sup>+CO<sub>2</sub>, reaction rate consts. for energies 0.04-2.5 eV, appl. to Venus ionosphere 2-38089  
 C<sup>+</sup>+H<sub>2</sub>+H<sub>2</sub>, rate coeff. calc. from statistical theories compared with expt. data 2-17882  
 C<sup>+</sup>+H<sub>2</sub>(D<sub>2</sub>), chemiluminescence spectra, product state distrib. 2-47327  
 C<sup>+</sup>+H<sub>2</sub>-CH<sup>+</sup>+H, pot. energy surfaces, chemiluminescence, ab initio MCSCF-POLCI calcs. 2-27427  
 C<sup>+</sup>+He, integral elastic scatt. cross sections meas. 2-34524  
 C<sup>+</sup>+O<sub>2</sub>, chemiluminesc. reaction, CO<sup>+</sup>(A<sup>2</sup>Π) vibr. distrib. 2-49360  
 C<sup>6+</sup>+H, charge transfer and ionisation cross sections, quantal study, finite-elemental 2-39485  
 C<sup>6+</sup>+H, electron capture, cross sections, eikonal calcs. 2-34560  
 C<sup>6+</sup>+H, ionisation, excitation and charge transfer cross section calcs. 2-44089  
 C<sup>8+</sup>+H<sub>2</sub>, X-ray emission during electron capture (Russian) 2-11430  
 C<sub>2</sub> in comets, triplet-singlet, Phillips, Balick-Ramsay and Mulliken vibr. bands prediction 2-38112  
 C<sub>2</sub>, π<sup>+</sup> config., singlet-triplet energy splitting, CEPA-PNO calcs. 2-34320  
 C<sub>2</sub> time resolved Swan emission, C<sub>2</sub> formation from UV fragmentation of CO 2-7568  
 C<sub>2</sub> 0-0 vibrational band of Σ-Σ electronic transition in H-poor C star 2-48246  
 C<sub>3</sub>, mol. consts. evaluation 2-4254  
 C<sub>3</sub> pseudopotential, non opacity source for Bond-Neff depression in Ba II star (HR 774) 2-53270  
 C<sup>2</sup>(D), dynamic polarisability 2-7661  
 A<sub>C</sub>=12,13, pionic and muonic X-rays, strong interaction effects 2-49606  
<sup>13</sup>C-guanidine, prod. by proton irradi. of liq. NH<sub>3</sub>-N<sub>2</sub>O system, medical appl. 2-6264  
<sup>13</sup>C-methane and -acetylene, use as regional cerebral blood flow agents 2-6260  
<sup>13</sup>C/<sup>13</sup>C ratio of C stars, criteria by line profiles of <sup>13</sup>CN 2-38220  
<sup>13</sup>C/<sup>13</sup>C isotope exchange in ion-neutral reactions, laboratory studies and interstellar implications 2-53350  
<sup>13</sup>C+H<sup>+</sup>, K-shell ionisation theory 2-49565  
<sup>13</sup>C NMR, appls. to metabolic studies, review, book contrib. 2-27961  
<sup>13</sup>C NMR spectra, adjustable param. sine bell apodisation appl. 2-15810  
<sup>13</sup>C spin-spin coupling, NMR assignment using double quantum coherence 2-4331  
<sup>13</sup>C/<sup>13</sup>C in galactic cosmic rays, isotopic ratio at source 2-53030  
<sup>14</sup>C activity in atmosphere, long term vars. and relation to geophysical and astrophysical phenomena 2-47948  
<sup>14</sup>C activity meas. in tree leaves, near Swiss nuclear power stations 2-39239  
<sup>14</sup>C and <sup>125</sup>I, simultaneous determ. of activities using liq. scintillation counting 2-49244  
<sup>14</sup>C as CaCO<sub>3</sub>, method for counting in liq. scintillator with improved precision 2-43744  
<sup>14</sup>C beam accel. in electrostatic accelerators 2-11323  
<sup>14</sup>C, cosmogenic, in terrestrial atmosphere, secular non-random vars. 2-37922  
<sup>14</sup>C, cosmogenic, short-term vars., 1909-1952, rel. to 11-year cosmic ray vars. 2-48120  
<sup>14</sup>C dating of groundwater rel. to T and <sup>85</sup>Kr (German) 2-6458  
<sup>14</sup>C, formation, props., emission from nuclear power stations (German) 2-559  
<sup>14</sup>C formation rate in atmosphere during Maunder minimum (1645-1715) review 2-48201  
<sup>14</sup>C in tree rings, natural vars. on prolonged time scale rel. to solar activity 2-47827  
<sup>14</sup>C incorporated in germ cells of male mice, genetic effect (Russian) 2-52565  
<sup>14</sup>C, radiation hazard 2-18270  
<sup>14</sup>C/<sup>12</sup>C ratio meas. using MP tandem accelerator dating facility 2-14636  
 C<sub>2</sub>\*+Na, C<sub>2</sub>\*-d <sup>3</sup>Π, state deactivation 2-31924  
 CaO:C, IR spectrum of OH-compensated defect 2-51634  
 Ci:Bi, ions backscattering yield enhancement near 180°, expt. study 2-46855  
 Cn clusters, n=2 to 6, struct. and props., HF calc. 2-49617  
 Fe-C, solute peak associated with grain boundaries 2-45150  
 Fe-C solidifying melt, liq. solid region formation of two-phase zone, convection effect 2-22208  
 Fe-Cr-Co-C, permanent mag. props., C content effect, expt. study 2-52062  
 Fe-Ni:C, Invar alloys, Mossbauer spectroscopy study 2-9064  
 GaAs:C, crystal microstruct., impurities effect, TEM study 2-40419  
 GaAs:C, implanted, IR localised mode vibr. spectroscopy, annealing temp. depend. 2-17509  
 GaAs:C, ion implanted, photolum. study 2-17512  
 H<sup>+</sup>+C-foil collisions, K-Auger emission meas. 2-44078  
 MgO:C, depth profiling, temp. and time-dependent behaviour 2-35524  
 MgO:C, IR spectra, effect of C surface layer (German) 2-26942  
 MgO:C, IR spectrum of OH-compensated defect 2-51634  
 Mo:C, Snoek peak study 2-45366  
 Nb-Zr-C, electronic struct., dispersion hardening, interatomic bonds 2-45822  
 δ-NbN<sub>0.85</sub>:C, supercond. obs. after ion implantation 2-2027  
 Ni alloy-C, fibre composites, temp. resistance, strength (Russian) 2-2481  
 Ni:He:C, ion irradiated, void formation and denudation 2-45298  
 Pt-C film, reactively sputtered, XPS study 2-5791  
 Si:C, implanted, photoluminescence study 2-41419  
 Si:C, ion implantation to from SiC thin layers, struct. and annealing props. 2-8733  
 Si:C, O, role of C in precipitation of O, IR and DLTS studies 2-21315  
 Si:C surface, (111), impurity electron states, tight binding calcs. 2-46094  
 Si:C<sup>+</sup>, formation of SiC by laser annealing 2-50675  
 Si:C, C, luminescence, thermally-induced defects 2-46748  
 Si:O:C, Czochralski grown, heat treated, O precipitation, C-O nucleation centres, IR spectra study 2-50861  
 Si:C:C, ion implanted, defect luminescence spectra 2-36712  
 Si<sub>3</sub>N<sub>4</sub>-C amorphous CVD composites, struct. and thermal props. 2-30773  
 SiO<sub>2</sub>-C colloidal produced solar selective coatings, solar selectivity 2-52390  
 Ti-C, interstitial solns. with FCC and BCC lattices, interatomic interaction 2-21058  
 U refining, change of C-contamination (Chinese) 2-22152  
 V-C-Pb supercond. junctions, tunnelling spectroscopy 2-46211



**carbon continued**

- W/C, decarbonisation reactions, electron stimulated and flash desorption study 2-47374  
 Zn-C chemical gas-phase deposited, Hall effect 2-5419  
 Zr-C, interstitial solns. with FCC and BCC lattices, interatomic interaction 2-21058

**carbon compounds**

see also *organic compounds*

- activated C, sorption of CO<sub>2</sub>, effect of heat of sorption during kinetic meas. 2-1730  
 atmospheric level, Raman scatt. computerised meas. 2-10194  
 carbides, rocksalt struct., melting relations, rel. to bonding 2-16755  
 carbonaceous materials, X-ray diffraction patterns 2-35351  
 carbonate system in Atlantic Ocean, distrib. and variability 2-10083  
 CC, photoionisation cross section rel. to C<sup>+</sup> prod. rate in Venus and Mars ionospheres 2-32832  
 CO, interstellar, in M16 (NGC 6611), investigation rel. to neutral and ionised gas 2-6648  
 CO in interstellar clouds 2-33103  
 OCS photolysis and 200-300 nm region absorpt., CO prod., appl. to stratosphere 2-31939  
 pulsed jet form, behind supersonic nozzle when gas can relax at entrance to nozzle 2-20723  
 Ag in solutions, Raman spectra, CO<sub>2</sub> conversion to hydrocarbons 2-6066  
 C-Si-N-O system, heterogeneous phase equil. calc., computer program 2-13704  
 C<sub>6</sub>CS, Auger line shape construction 2-27031  
 C<sub>6</sub>CS(H<sub>2</sub>), H rot. tunnelling spectra 2-35408  
 CF<sub>2</sub> target-laser pulse interaction in mag. field 2-1322  
 CF<sub>4</sub> laser, combination band excitation, hot band lasing 2-15988  
 CH<sub>4</sub> planar target 0.35 μm laser radiation absorpt., meas. and interpretation 2-50423  
 C<sub>2</sub>K intercalation compounds, absorbed H, CESR compounds 2-46383  
 C<sub>2</sub>K intercalation compounds, absorbed H, CESR compounds 2-46383  
 C<sub>2</sub>Li, Auger line shape construction 2-27031  
 CN (2,0) band in late type giant stars, visible obs. 2-38183  
 CN, emission features obs. in Comet Bowell (1982 January 31) 2-53170  
 CN orientational disorder in NaCN.2H<sub>2</sub>O, IR spectra 2-5666  
 CN rot. distrib. from 266 nm photodissoc. of ICN 2-29559  
 CN, rot. struct., emission from N flames, visible obs. 2-7565  
 CN rovibronic state distrib. from trifluoromethyl cyanide unimol. reaction 2-41880  
 CN, X<sup>2Σ</sup> free radicals, characterisation and temp. controlled prod. in free jet expansion 2-15837  
 CN<sup>-</sup>, electronic struct., X-ray emission and XPS 2-29626  
 CN<sup>-</sup> form. from dissociative electron attachment to C<sub>2</sub>N<sub>2</sub> molecule, differential cross sections 2-47306  
 C<sub>2</sub>N<sub>2</sub>, mol. shape and cryst. struct. calcs. 2-15919  
 CN(B<sup>2Σ<sup>+</sup></sup>) state, vibr. relax. 2-779  
 CO, 5σ photoionis., vibr. branching ratios and photoelectron ang. distrib. 2-20143  
 CO, absolute intensity of 2-0 band, line broadening, IR absorpt. 2-34391  
 CO, absorption and reaction with O<sub>2</sub> on Pd-Au alloy wire 2-26230  
 CO, adsorbed in zeolites, <sup>13</sup>C NMR investig. 2-17344  
 CO, adsorbed on Ag, inelastic electron scatt. 2-2389  
 CO adsorbed on Ag surface, enhanced Raman spectra 2-2294  
 CO, adsorbed on Cu, refl. absorpt. IR spectroscopy study, book contrib. 2-41370  
 CO, adsorbed on Cu (100), surface vibr. modes, EELS study 2-17581  
 CO, adsorbed on Fe, tunnelling spectra, top metal electrode effect 2-35892  
 CO, adsorbed on metal surface, mol. vibr. interaction, dipole-dipole interaction 2-45709  
 CO, adsorbed on Mo, mol. dissociation, pulsed laser atom-probe study 2-26226  
 CO adsorbed on Ni (111), electron-stimulating desorption 2-51000  
 CO adsorbed on Ni (111), polarisation of Raman modes 2-2251  
 CO adsorbed on Ni(100), EELS 2-22130  
 CO, adsorbed on Pt, synchrotron radiation photoemission study 2-2413  
 CO, adsorbed on Pt(111), interactions with NO 2-26227  
 CO, adsorption and dissoc. on Al<sub>2</sub>O<sub>3</sub>-supported Rh 2-14006  
 CO, adsorption and dissoc. on Se films 2-17924  
 CO adsorption on alkali metal covered Ni(100) 2-40696  
 CO adsorption on CaO(SrO), IR spectra study 2-707  
 CO adsorption on clean Ti surface elec. resistance ionisation (*Japanese*) 2-5304  
 CO, adsorption on Cu (001), off-specular coherent and incoherent elastic scatt. of He 2-2396  
 CO adsorption on Cu(111), surface state energy shifts 2-36122  
 CO, adsorption on methanol catalysts, FT-IR spectrosc. obs. 2-27487  
 CO adsorption on Ni(111) surface, struct. exam. 2-40673  
 CO, adsorption on Pt, visible optical reflectance study 2-40669  
 CO, adsorption on Si, mechanisms studied by AES 2-40693  
 CO, adsorption on W(100), AES and work function meas. 2-22139  
 CO, adsorption/desorption on Pd, surface struct. effects 2-16948  
 CO, adsorption-desorption on W/C 2-47374  
 CO and CS, mm line intensities for interstellar gas clouds 2-28538  
 CO, associative molecular ionisation on adiabatic expansion in supersonic flow (*Russian*) 2-15890  
 CO, atmosphere midlatitude vertical profile (obs. made in 1977, 8, 9) 2-10131  
 CO, bonding nature of MIO through one-electron partitioning of electronic energy anal. 2-43756  
 CO bridge bonded on Pt, IR integrated absorpt. intensities and extinction coeff. 2-34396  
 CO CW laser, long wavelength operation up to 8.18 μm 2-16013  
 CO c(2x2) layer adsorbed in Ni (001), image pot. and ion trajectories in SIMS 2-41481  
 CO chemical laser from supersonic CS-S-O<sub>2</sub> mixture in shock tunnel 2-20297  
 CO chemical laser operating by oxidation of CS<sub>2</sub>, power level raised by using S flame 2-39640  
 CO, chemisorbed on Ni, vibr. bands, Raman spectra study 2-29606  
 CO, chemisorbed on Ni (100), geom., vibr. freqs., ionisation pot., and photoelectron spectrum 2-1743  
 CO chemisorbed on Ni (100), photon stimulated desorption due to multi-electron emission 2-12908  
 CO chemisorbed on Ni(001), energy and angle resolved SIMS 2-41473  
 CO chemisorbed on pt, UV photoemission, valence band studies 2-41496

**carbon compounds continued**

- CO, chemisorbed on Pt and Cu surfaces, Auger spectra 2-51003  
 CO, chemisorpt. on transition metals, trends in chemisorption energies with atomic number 2-37099  
 CO, chemisorption on CdTe film, resist. variation during thermal desorption 2-35890  
 CO, chemisorption on Pt {001} and {111}, coupling induced vibr. freq. shifts and island size determ., book contrib. 2-41372  
 CO, coadsorption with the H<sub>2</sub> on small Ni particles, Raman scatt. enhancement 2-5712  
 CO, combustion diagnostics by multichannel CARS 2-13959  
 CO concentration in upper stratosphere, meas. from solar IR spectra 2-28132  
 CO content over a city, atm. transmission function technique (*Russian*) 2-9754  
 CO dimer, AVE-ZDO and CNDO/SM calcs. 2-15728  
 CO, dynamic polarisabilities and Raman intensities calc. 2-43916  
 CO electric-discharge continuous-flow laser using H<sub>2</sub>-containing mixture 2-25002  
 CO electrically excited gasdynamic laser, electron-beam preionised, expt. research (*Chinese*) 2-24995  
 CO, electron impact dissoci., C<sup>-</sup> form., resonant states, predissociation 2-796  
 CO electron-beam-controlled discharge laser, kinetics and energy characts. 2-34730  
 CO emission from interstellar molecular clouds rel. to galactic structure 2-10516  
 CO, energy-loss cross sections, adiabatic-nuclei approx. 2-44124  
 CO flames, alkali metals ionisation, RF reson. study and RF system design 2-4238  
 CO flames, Cs(K)(Na)(Li) ionisation rate consts., RF reson. determ. 2-4239  
 CO, free and coordinated, core ionisation, XPS study of intensity borrowing 2-15848  
 CO gas, elect. and mag. props. 2-50362  
 CO, gas, IR absorpt. band shapes 2-49414  
 CO gasdynamic laser, active medium energy and spectral characts. 2-49741  
 CO, gasdynamic laser, adiabatic expansion through supersonic nozzle, mol. vibr. relax. calc. 2-50308  
 CO gasdynamic laser utilising active medium containing H<sub>2</sub> 2-34733  
 CO, H<sub>2</sub>O line broadening absorpt. profile of vibr. rot. transition 2-7607  
 CO, high velocity, near Herbig-Haro objects HH 7-11, radio obs. 2-28530  
 CO, IR nondispersive gas analysis, background broadening effects obs. 2-31988  
 CO, in Ar cryst. matrix, IR and microwave spectra model 2-49384  
 CO in bright-rimmed mol. cloud Barnard 35, 2.7 mm obs. rel. to gas temp. and cloud heat source 2-33115  
 CO in face-on galaxies, distrib. from J=1-0 emission at 2.6 mm 2-38295  
 CO in high velocity gas in Orion BN/KL region, (2-1) line obs. 2-28523  
 CO in Mars atmosphere, spectroscopy of Cameron bands in airlow 2-6557  
 CO in Mars atmosphere, EHF obs. 2-32893  
 CO in molecular clouds, high vel. wings and self reversal 2-14899  
 CO in molecular clouds, 870 μm obs. of J=3<sub>2</sub>-2 emission 2-14914  
 CO in Venus atmosphere dayglow, fourth positive bands synthetic spectra 2-32889  
 CO indices for C-stars in Magellanic Clouds and Galaxy 2-14920  
 CO, inelastic scatt. from LiF(001), rot., laser-induced fluoresc. 2-29693  
 CO, interstellar, in H I clouds, 2.6 mm line obs. and correls. with H I and OH 2-3290  
 CO, interstellar, UV lines obs. in direction of HD 102567 (4U 1145-61) by IUE 2-33032  
 CO, ion induced desorption from stainless steel, influence of O<sub>2</sub> and water vapour 2-8710  
 CO, ion structures and proton affinities calc. using FOGO method 2-43784  
 CO laser, intensity modulation, freq. stabilisation and tuning by extracavity Stark cell 2-34818  
 CO laser, single line operation, transition struct. anal. 2-49736  
 CO laser, vibrational exchange cycles 2-7533  
 CO laser discharge, UV sustained 2-4492  
 CO, laser excitation study, fluoresc., lifetime meas., vibr., rot. depend. perturbation 2-24788  
 CO low lying valence states, excited state props., MC time depend. HF and MC RPA calcs. 2-39297  
 CO MOS gas detectors using transition metal-gate 2-33508  
 CO map of mol. cloud assoc. with NGC 7538 H II region 2-23335  
 CO mapping of H II regions towards Carina Nebula, EHF obs. 2-18787  
 CO, mol. multipole polarisabilities calc. by variational method using atom centred extended trial functions 2-4415  
 CO, molecular cryst., thermal expansion 2-30637  
 CO monitoring system, using nondispersive IR analyser 2-32159  
 CO on Ni (100), inelastic electron scatt. by adsorbate vibrs. 2-22128  
 CO on Ru(001), island size and disordering 2-40675  
 CO, one electron props. calc. using CI techniques 2-24618  
 CO, oscillator strengths, excited states absorpt. and fluoresc. 2-4344  
 CO, oxidation on Pd supported catalyst, thermal oscillations and chaotic behaviour (*German*) 2-2738  
 CO, oxidation on Pd surface, IR reflection-absorpt. spectra study 2-41921  
 CO, oxidation on Pt studied using ZrO<sub>2</sub> galvanic cell O<sub>2</sub> sensor, non-ideal EMF behaviour 2-10795  
 CO, oxidation on Pt surface, vibr. excited surface reaction products, IR chemilum. technique appl. 2-41924  
 CO oxidation reaction on Pt-C sputtered films, catalytic effect 2-8725  
 CO pollutants in troposphere over India, Saudi Arabia and Arabian Sea 2-32144  
 CO pollution at Chicago urban intersection, correl. with traffic and wind 2-9710  
 CO pulsed high-pressure laser, electron-beam-controlled 2-34794  
 CO pulsed laser, electron-beam-controlled, active medium heating influence 2-44264  
 CO pulsed laser having selective and nonselective resonators, spectral characts. 2-44358  
 CO, quadratically convergent HF (QC-SCF) method appl. 2-15711  
 CO, quasi-ideal chemisorpt. in oxides, entropy microcalorimetric determ. 2-40681  
 CO reduction in circumplanetary nebulae, implications for satellite comp. 2-10343



## carbon compounds continued

- CO reduction kinetics of Pt surface 2-47258  
 CO, single orbital relax. energy, ab initio LCAO MO SCF calcs. 2-19967  
 CO, spectral, band integral emission absorpt. characteristics 2-15779  
 CO trimer, AVE-ZDO and CNDO/SM calcs. 2-15728  
 CO, tropospheric hemispheric distrib. during 1974 July-August period 2-18523  
 CO UV fragmentation, C<sub>2</sub> formation and time resolved Swan emission 2-7568  
 CO, vib.-rot. line broadening by combustion gases UV obs. 2-7571  
 CO, vibr.-vibr. energy transfer rates for high lying states 2-24832  
 CO, vibrationally nonequilibrium mol. gas flow, associative ionisation 2-35179  
 CO<sup>+</sup> 235-470 GHz elec. dipole allowed transitions 2-23337  
 CO<sup>+</sup>, A<sup>2</sup>Π(v=0) state, laser induced fluoresc. 2-20112  
 CO<sup>+</sup> branching ratio through autoionisation from X<sup>2</sup>Σ<sup>+</sup> to B<sup>2</sup>Σ<sup>+</sup> state 2-24799  
 CO<sup>+</sup> electron collisions var. functional, Schwinger var. principle extension 2-34585  
 CO<sup>+</sup> electron impact, branching ratios for electronic transitions 2-34589  
 CO<sup>+</sup> radiative lifetime of A<sup>2</sup>Π state 2-42587  
 CO<sup>+</sup>, trapped in ICR cell, excited states, laser induced fluoresc. 2-49484  
 C<sup>18</sup>O, interstellar, obs. in Taurus cloudlets 2-33112  
 CO/Rh/Al<sub>2</sub>O<sub>3</sub> system, IR spectra 2-37100  
 CO-Ar binary gas mixtures, thermal cond. 2-50357  
 CO-D<sub>2</sub>, rot. excitation, differential cross sections and time of flight distrib. meas., energy loss spectra 2-44090  
 CO-HCl, H-bonded complex, ab initio SCF-MO calcs. 2-29496  
 CO-HF, H-bonded complex, ab initio SCF-MO calcs. 2-29496  
 CO-He, gas, IR absorpt. band shapes 2-49414  
 CO-He binary gas mixtures, thermal cond. 2-50357  
 CO-He-Xe CW laser discharge, O<sub>2</sub> addition effect on plasma kinetics 2-11716  
 CO-N<sub>2</sub> mixed cryst., IR time-resolved saturation spectroscopy, vibr. dephasing and spectral diffusion 2-46571  
 CO<sup>+</sup>He<sup>+</sup>He, vibr. relax., semiclassical calcs., deactivation rate const. determ. 2-49544  
 CO+Ar, He metastable states; chemi-ionisation velocity depend. 2-44069  
 CO+Ar relaxation of rotational energy over temp. range 300 to 1040K 2-4370  
 CO+Cl<sup>-</sup>(F<sup>-</sup>)(H<sup>-</sup>), electron detachment, direct coupling, charge exchange, shape resonances 2-44070  
 CO+Cs, cross sections for form. of electrons and negative ions, orientational effects 2-24812  
 CO+H<sub>2</sub>, interaction on Ni monocryst. surfaces (*French*) 2-41927  
 CO+HCN, vibr. relax., time resolved IR fluoresc. study 2-11566  
 CO+HF, collisional relax., rate consts. 2-37049  
 CO+He, V-T collisional relax., ab initio pots. calcs. 2-39478  
 CO+N<sub>2</sub>, unsteady flow behind shock fronts, physicochem. processes 2-50300  
 CO+N<sub>2</sub>O, steady state nonequib. reaction, asymmetric mode excitation of CO<sub>2</sub> 2-2712  
 CO+N<sup>+</sup> collisions, CO<sup>+</sup> comet-tail emission and chemilum. 2-15885  
 CO<sub>2</sub> 16-μm bending-mode laser system 2-890  
 CO<sub>2</sub> 1.5 kW laser with excitation in a transverse RF-discharge (*German*) 2-7794  
 CO<sub>2</sub> 3ν<sub>3</sub> vibr.-rot. band, line edges 2-34384  
 CO<sub>2</sub> absorption spectra monitor diving appl. 2-41967  
 CO<sub>2</sub>, adsorbed in zeolites, <sup>13</sup>C NMR investig. 2-17344  
 CO<sub>2</sub> adsorption on clean Ti surface, elec. resistance ionisation (*Japanese*) 2-5304  
 CO<sub>2</sub> advanced laser rangefinders, direct-and heterodyne-detect. type comparison 2-11739  
 CO<sub>2</sub> amplifiers, electron-beam-controlled, inversion recovery following saturated extraction 2-892  
 CO<sub>2</sub> analyser, open path, using eddy correlation technique 2-32671  
 CO<sub>2</sub>, anharmonic force field determ. by matrix diagonalisation, rot. and centrifugal distortion consts. 2-49595  
 CO<sub>2</sub>, anthropogenic increase in oceans 2-47925  
 CO<sub>2</sub>, atmosphere concentration during past 40000 yr from ice sample meas. 2-37958  
 CO<sub>2</sub>, atmosphere remote probing using CO<sub>2</sub> DIAL system 2-2828  
 CO<sub>2</sub>, atmospheric conc. in tropical E.African biomes (Kenya) 2-14546  
 CO<sub>2</sub>, atmospheric content history C cycle model 2-14596  
 CO<sub>2</sub>, boiling-like phenomena in free-convection heat transfer at supercritical pressures (*German*) 2-39913  
 CO<sub>2</sub> CW and RSP laser appl. for bladder tumour control and eradication 2-18287  
 CO<sub>2</sub> CW fast flow laser coupled to toroidal resonator cavity, expt. 2-20331  
 CO<sub>2</sub> CW laser, freq. and amplitude stabilisation using servo control system 2-4522  
 CO<sub>2</sub>, CW laser, sealed-off with tuning over lines of first two sequential bands 2-20328  
 CO<sub>2</sub> climate problem, role of ocean-atmos. energy transfer and interactions 2-28191  
 CO<sub>2</sub> cloud seeding experiments, comparison of AgI and CO<sub>2</sub> effectiveness 2-14566  
 CO<sub>2</sub> coherent TEA laser rangefinder, transmitter/local oscillator design 2-956  
 CO<sub>2</sub>, cold, rapid mixing with hot N<sub>2</sub> gases in gas throat, optical gain 2-4477  
 CO<sub>2</sub>, collision induced absorption at 0.091 cm<sup>-1</sup> 2-701  
 CO<sub>2</sub>, collision induced microwave absorpt., dielec. loss and quadrupole moment (*French*) 2-7543  
 CO<sub>2</sub>, condensing jet, cluster form., meas. of effective size 2-15937  
 CO<sub>2</sub> content and alkalinity of seawater, potentiometric titration in GEOSECS 2-14612  
 CO<sub>2</sub>, critical points, effect of water 2-8600  
 CO<sub>2</sub>, depolarised Rayleigh spectral linewidths 2-24708  
 CO<sub>2</sub>, dimers and clusters, photoionisation study 2-15852  
 CO<sub>2</sub>, dissoci. by plasma-chemical process in nonequib. microwave discharge 2-41896  
 CO<sub>2</sub> dissociation in nonequib. plasma microwave discharge, discharge propag. mechanism 2-35346  
 CO<sub>2</sub>, ebullition of large volume following rapid depressurisation 2-8026  
 CO<sub>2</sub> effect on climate; feedbacks and synergisms 2-47996  
 CO<sub>2</sub>, electron impact excitation, asymmetric stretch, cross section calcs. 2-15907

## carbon compounds continued

- CO<sub>2</sub>, electron scatt. spectrum, Feshbach reson. 2-43998  
 CO<sub>2</sub>, electron scattering, exchange interactions, linear algebraic approach 2-24862  
 CO<sub>2</sub>, electron-beam controlled pulsed, discharge and flow characteristics 2-11675  
 CO<sub>2</sub>, electron-beam-controlled discharge lasers, review 2-34719  
 CO<sub>2</sub>, electron-beam-controlled discharge laser, kinetics and energy char-acts. 2-34730  
 CO<sub>2</sub>, electron-ion recombination coeff. 2-44118  
 CO<sub>2</sub>, equation of state of pure fluid in one-phase region development from expt. data 2-40509  
 CO<sub>2</sub>, fast-axial-flow longit.-discharge lasers, kinetic modelling 2-39616  
 CO<sub>2</sub>, fast-flow pulsed closed-cycle laser with CO<sub>2</sub> regeneration unit 2-34725  
 CO<sub>2</sub>, fission fragments effective charge on stopping 2-15891  
 CO<sub>2</sub>, free jet expansion, dimer depletion mass spectrometric meas. 2-27496  
 CO<sub>2</sub>, frost, reflectance spectra, astron. appl. 2-38122  
 CO<sub>2</sub>, gas, thermal cond. at high temps., calcs. 2-40023  
 CO<sub>2</sub>, gas phase electron diff. intensities, vibr. anharmonicity effects, var. calcs. 2-15894  
 CO<sub>2</sub>, gasdynamic laser, gain and vibr. temps. meas. and calc. 2-44245  
 CO<sub>2</sub>, gasdynamic laser, three-freq. periodic pulse, energy capabilities 2-39617  
 CO<sub>2</sub>, gasdynamic laser media consisting of low N<sub>2</sub> fuel combustion products 2-49730  
 CO<sub>2</sub>, gasdynamic laser with electric-arc heating, stimulated emission at 18.4 μm 2-39672  
 CO<sub>2</sub>, global atmospheric meas., using computer-based meas. systems 2-14635  
 CO<sub>2</sub>, heterodyne laser rangefinder using pulse compression 2-11740  
 CO<sub>2</sub>, high freq. capacitative discharge 10.6 μm gain 2-44242  
 CO<sub>2</sub>, high-power CW TE laser with graphite electrodes 2-891  
 CO<sub>2</sub>, high-power military waveguide laser 2-11725  
 CO<sub>2</sub>, high-pressure, lasers with selective optical pumping, output parameters 2-44243  
 CO<sub>2</sub>, high-pressure, electron mobility, density and temp. depend. 2-1288  
 CO<sub>2</sub>, high-speed flow electrodischarge laser with active medium transverse pumping, amplification parameter calc. (*Russian*) 2-4480  
 CO<sub>2</sub>, high-temp. Raman spectra for combustion diagnostics 2-24706  
 CO<sub>2</sub>, hybrid TEA laser, freq. sweeping, origin 2-34807  
 CO<sub>2</sub>, hypersonic flow over blunt bodies, nonequilibrium ionisation, effect of addition of N<sub>2</sub> and Na 2-30174  
 CO<sub>2</sub>, IR nondispersive gas analysis, background broadening effects obs. 2-31988  
 CO<sub>2</sub> in atmos. affecting sea ice extent in Antarctic 2-47912  
 CO<sub>2</sub> in atmosphere, climate models with doubled CO<sub>2</sub> conc. 2-42464  
 CO<sub>2</sub> in atmosphere, combined effects on stratospheric O<sub>3</sub>, air temp. and surface temp. 2-32142  
 CO<sub>2</sub> in atmosphere, Earth surface temp. sensitivity to increased abundance 2-18562  
 CO<sub>2</sub> in atmosphere, effect on climate 2-14597  
 CO<sub>2</sub> in atmosphere, northern hemisphere, annual var. due to biomass 2-32591  
 CO<sub>2</sub> in atmosphere, partial press. buffered over geological time by negative feedback mechanism 2-37950  
 CO<sub>2</sub> in atmosphere due to fossil fuel burning, climate changes 2-23102  
 CO<sub>2</sub> in ocean, production by CaCO<sub>3</sub> precipitation from sea ice brines 2-47924  
 CO<sub>2</sub> in various solvents, Gibbs free energies of solute solvent interactions 2-41920  
 CO<sub>2</sub>, ion induced desorption from stainless steel, influence of O<sub>2</sub> and water vapour 2-8710  
 CO<sub>2</sub>, laser, discharge current modulation of output 2-887  
 CO<sub>2</sub>, laser, electron beam controlled, small signal gain and uniformity meas. 2-4523  
 CO<sub>2</sub>, laser, electron beam ionisation, efficiency reflected electrons effect 2-44343  
 CO<sub>2</sub>, laser, electron-beam ionisation, electron beam economy, pump pulse shape effect 2-15981  
 CO<sub>2</sub>, laser, freq. conversion using chalcopyrite crystals. (*Japanese*) 2-20365  
 CO<sub>2</sub>, laser, high press. CW, output power, self-absorption effects 2-884  
 CO<sub>2</sub>, laser, high pressure sealed-off condition, power characteristics (*Japanese*) 2-4521  
 CO<sub>2</sub>, laser, optogalvanic stabilisation using electrodynamic tuning element 2-49728  
 CO<sub>2</sub>, laser, properties of some diffusers, speckle pattern effects 2-7818  
 CO<sub>2</sub>, laser, pulsed, metallised film mirror with variable curvature 2-16036  
 CO<sub>2</sub>, laser, RF excited, high repetition rate at 10 atm operation 2-49768  
 CO<sub>2</sub>, laser, reactive electrooptic Q-switching 2-25044  
 CO<sub>2</sub>, laser, sealed-off single-mode type, characts. and performance (*Rumanian*) 2-16027  
 CO<sub>2</sub>, laser, third harmonic of 10.2 μm R(30) transition, rel. to methane-stabilised He-Ne laser, freq. difference (*Japanese*) 2-4486  
 CO<sub>2</sub>, laser, UV preionisation pulsing by capillary discharges, laser optimisation 2-11678  
 CO<sub>2</sub>, laser, wave instability regions in glow discharge, pressure-current meas. 2-4478  
 CO<sub>2</sub>, laser amplifiers, electron-beam controlled, gain meas. 2-49800  
 CO<sub>2</sub>, laser discharge vibr. population distrib. meas. with tunable diode laser 2-49727  
 CO<sub>2</sub>, laser excited in matched regime, 3 kJ output energy 2-44244  
 CO<sub>2</sub>, laser exhibiting passive Q-switching, bistability obs. 2-49813  
 CO<sub>2</sub>, laser gas mixture, magnetically stabilised coaxial laser discharge 2-11710  
 CO<sub>2</sub>, laser induced fluoresc. in SF<sub>6</sub>-H<sub>2</sub> mixtures 2-20119  
 CO<sub>2</sub>, laser optical material characts. 2-29856  
 CO<sub>2</sub>, laser plasma flare, target atoms electronic struct. effect 2-16468  
 CO<sub>2</sub>, laser pulse-solid target interaction in mag. field 2-1322  
 CO<sub>2</sub>, laser radiation freq. conversion to 0.5 μm range in nonlinear crystals. 2-44393  
 CO<sub>2</sub>, laser surgery of head and neck tumors 2-18286  
 CO<sub>2</sub>, laser system, amplifying props. of CO<sub>2</sub>-N<sub>2</sub>-He medium with different microwave preionisation systems 2-34723  
 CO<sub>2</sub>, laser with annular resonator, performance with polariser in annular leg 2-25037  
 CO<sub>2</sub>, laser with intracavity diff. selector, emission spectrum 2-34722  
 CO<sub>2</sub>, laser-produced plasmas, inner shell satellite lines 2-20881  
 CO<sub>2</sub>, laser-target interaction, absorpt. and backscattering 2-16458



## carbon compounds continued

- CO<sub>2</sub> lasers, high-power nanosec. pulse generation, new approach 2-29807  
 CO<sub>2</sub> lasers with 16 micron wavelength for IR dissociation of mols., development 2-44237  
 CO<sub>2</sub>, liq., depolarised Rayleigh scatt., molecular orientation in wide density range 2-22040  
 CO<sub>2</sub>, liquid, mol. distrib. functions, stat. mech. theory 2-40245  
 CO<sub>2</sub>, liquid, thermodynamic props., stat. mech. theory 2-40246  
 CO<sub>2</sub>, moist vapour, sound speed dispersion 2-35263  
 CO<sub>2</sub>, mol. electrostatic pots., net atomic charge model 2-19960  
 CO<sub>2</sub>, molecular cryst., thermal expansion 2-30637  
 CO<sub>2</sub> molecule in waveguide gas-discharge struct., 00<sup>1</sup> vibr. level relax. rate 2-44060  
 CO<sub>2</sub> molecules in heterogeneous gas-cluster system, vibr. relax. 2-43887  
 CO<sub>2</sub> multiline TEA laser, laser amplification efficiency 2-34718  
 CO<sub>2</sub>, multipole polarisabilities, coupled and finite perturbation theory using SCF MO LCAO CNDO density matrix appl. (*Russian*) 2-15721  
 CO<sub>2</sub> nuclear pumped laser system using He-N<sub>2</sub>-CO<sub>2</sub>-UF<sub>6</sub> mixture 2-11676  
 CO<sub>2</sub>,  $\nu_3$  absorpt. coeff. numerical estimates 2-7539  
 CO<sub>2</sub>, ocean-atmos. gas exchange in Arctic Ocean 2-47926  
 CO<sub>2</sub> over Pacific at OWS P, sea surface temp. effect 2-28082  
 CO<sub>2</sub>, photoionisation cross section rel. to C<sup>+</sup> prod. rate in Venus and Mars ionospheres 2-32832  
 CO<sub>2</sub> photoionisation laser with high pulse repetition freq. 2-44239  
 CO<sub>2</sub> photoionisation shape reson. features comparative studies 2-34506  
 CO<sub>2</sub>, plasma, emission capacities, absorpt. coeffs. 2-8360  
 CO<sub>2</sub>, pulse-periodic waveguide laser pumped by longit. capacitor discharge 2-34798  
 CO<sub>2</sub> pulsed amplifier, thermal defocusing, numerical anal. 2-44365  
 CO<sub>2</sub> pulsed electric discharge laser amplifier, freq. chirp meas. 2-7743  
 CO<sub>2</sub> pulsed laser, electron-beam-controlled, operating regime optimisation 2-34720  
 CO<sub>2</sub> pulsed laser oscillators, electron-beam-controlled, theory and expt. comparison, four-temp. model 2-39615  
 CO<sub>2</sub> pulsed RF waveguide laser, gain-switched output 2-4524  
 CO<sub>2</sub>, Raman active vibr. selective excitation, energy transfer between vibr. states, CARS and PARS obs. 2-49439  
 CO<sub>2</sub>, Raman scatt., rot.-vibr. transitions 2-24710  
 CO<sub>2</sub> repetitively pulsed sealed TE laser using O<sub>2</sub> tolerant discharge scheme 2-11711  
 CO<sub>2</sub>, rock sample chem. anal. method, for gases released during heating 2-52942  
 CO<sub>2</sub>, rot.-vibr. spectrum, IR opto-acoustic cell sensitivity as laser spectroscopic detectors 2-28910  
 CO<sub>2</sub> sealed TE laser discharge, gas chromatographic analysis of products 2-883  
 CO<sub>2</sub> sealed waveguide laser, long-term operation 2-11721  
 CO<sub>2</sub> sealed-off laser, gas constitution and electrode material effects on lifetime (*Chinese*) 2-25025  
 CO<sub>2</sub>, sensor for noninvasive monitoring 2-2966  
 CO<sub>2</sub> sequence band TEA laser, multi-joule pulses 2-946  
 CO<sub>2</sub> short-pulse line-tunable laser for photochemical studies 2-20316  
 CO<sub>2</sub> slug, in downflowing liquid, gas absorpt. meas. 2-20732  
 CO<sub>2</sub>, small-angle electron scatt. and electron density 2-49584  
 CO<sub>2</sub>, sorption on H<sub>2</sub>O surface, effect of agitation by vortex rings 2-25378  
 CO<sub>2</sub>, sorption on hydrated Fe<sub>2</sub>O<sub>3</sub>, thermal treatment effects 2-16942  
 CO<sub>2</sub>, spectral, band integral emission absorpt. characteristics 2-15779  
 CO<sub>2</sub>, speed of sound at high press. 2-44819  
 CO<sub>2</sub>, stable single-line mode-locked oscillator development 2-49779  
 CO<sub>2</sub>, standard emissivity, grey gas approx. 2-12269  
 CO<sub>2</sub>, static CW waveguide laser with high-freq. excitation 2-34724  
 CO<sub>2</sub>, stratospheric continuous absorpt. meas. near 2400 cm<sup>-1</sup> 2-37966  
 CO<sub>2</sub>, supersonic beams, absolute intensities and perpendicular temps. 2-29732  
 CO<sub>2</sub>, supersonic molecular beams, vel. anal. 2-16345  
 CO<sub>2</sub> TE continuously tunable laser using three mirror resonator, single mode operation 2-886  
 CO<sub>2</sub> TEA 4.3  $\mu$  laser action 2-11677  
 CO<sub>2</sub> TEA laser, electron beam controlled, small gain meas. 2-888  
 CO<sub>2</sub> TEA laser, emission lines in 10.4 and 9.4  $\mu$ m bands 2-889  
 CO<sub>2</sub> TEA laser, injection-locked tunable, for sub-MM laser pumping for Tokamak plasma ion temp. meas. 2-39618  
 CO<sub>2</sub> TEA laser, photo-ionised, small signal gain (*German*) 2-4479  
 CO<sub>2</sub> TEA laser, tunable single longit. mode output 2-11720  
 CO<sub>2</sub> TEA laser emitting lines in 00<sup>2</sup>-(10<sup>1</sup>, 02<sup>1</sup>)<sub>1,1</sub> bands, output parameter investigation 2-4482  
 CO<sub>2</sub> TEA laser mode-locking, gas lenslike effect influence (*Chinese*) 2-44240  
 CO<sub>2</sub> TEA laser with air as gas source (*Chinese*) 2-7782  
 CO<sub>2</sub> technological laser with closed gasdynamic channel, numerical investigation 2-49729  
 CO<sub>2</sub> tunable laser, spectral tuning using intracavity spatial filtering 2-7799  
 CO<sub>2</sub> tunable pulsed laser 2-7795  
 CO<sub>2</sub> tunable TEA laser with intracavity NaCl prisms as dispersive elements (*Chinese*) 2-24987  
 CO<sub>2</sub> tunable waveguide laser with high transverse mode and line discrimination 2-44241  
 CO<sub>2</sub>, vibr.-rot. absorpt. bands, integral intensities, temp. effects 2-49412  
 CO<sub>2</sub>, viscosity meas. by transient flow method 2-40020  
 CO<sub>2</sub> waveguide laser, 00<sup>1</sup> vibr.-level lifetime meas. 2-34816  
 CO<sub>2</sub> waveguide laser, development of sealed-off long life device 2-16025  
 CO<sub>2</sub> waveguide laser, effect of resonator-mirror curvature on output power 2-20337  
 CO<sub>2</sub> waveguide laser, feedback controlled current stabilised power supply (*Chinese*) 2-7783  
 CO<sub>2</sub> waveguide laser, optogalvanic stabilisation and offset tuning 2-44360  
 CO<sub>2</sub> waveguide laser, parameters of active medium by luminesc. study 2-34721  
 CO<sub>2</sub> waveguide laser, saturation parameter determ. in waveguide tube consisting of metal and highly reflecti-ng coating 2-4483  
 CO<sub>2</sub> waveguide laser discharge tubes, signal amplification in 10.6  $\mu$ m band 2-39682  
 CO<sub>2</sub> waveguide lasers containing diff. grating, coupling losses 2-39619  
 CO<sub>2</sub><sup>+</sup>, Renner effect studied using adiabatic approach, vibronic levels calc. 2-20029  
<sup>13</sup>CO<sub>2</sub> laser hot band transitions, heterodyne freq. meas. 2-16045  
<sup>13</sup>C<sup>16</sup>O<sub>2</sub> isotopic laser pump for <sup>15</sup>NH<sub>3</sub> far IR laser system 2-16021

## carbon compounds continued

- CO<sub>2</sub>/CO dominated Comet, ionosphere interaction with solar wind 2-23201  
 CO<sub>2</sub>/H<sub>2</sub>O Mars atmosphere, energy balance climate model 2-6556  
 CO<sub>2</sub>-C<sup>18</sup>O<sup>18</sup>O laser, optically pumped in 4.3  $\mu$  band, lasing investigation in 24- and 38- $\mu$ m region 2-44238  
 CO<sub>2</sub>-CO gas mixture, monochromatic absorptivity calc. (*French*) 2-15782  
 CO<sub>2</sub>-HF complex, energy hypersurface, stationary points, form. thermodynamics 2-15862  
 CO<sub>2</sub>-He, excess and interaction second virial coeff. 2-30263  
 CO<sub>2</sub>-He, mixing temp. meas. and excess enthalpy 2-35259  
 CO<sub>2</sub>-He(N<sub>2</sub>) high freq. capacitive discharge 10.6  $\mu$ m gain 2-44242  
 CO<sub>2</sub>-N<sub>2</sub>, mixing laser, performance using rapid mixing technique 2-885  
 CO<sub>2</sub>-N<sub>2</sub> mixture, reson. self-focusing 2-11771  
 CO<sub>2</sub>-N<sub>2</sub>-He, oscillatory population inversion behind nonstationary shock waves 2-25393  
 CO<sub>2</sub>-N<sub>2</sub>-He laser mixture, supersonic flow, dynamic parameters calc. 2-4481  
 CO<sub>2</sub>-N<sub>2</sub>-He mixture, transverse discharge, laser radiation amplification (*French*) 2-24988  
 CO<sub>2</sub>-N<sub>2</sub>-He-CO high-power electronic discharge convection laser, ionic and thermal instability 2-15980  
 CO<sub>2</sub>-N<sub>2</sub>-He-O<sub>2</sub> electron beam sustained discharge, elect. field distrib. 2-44942  
 CO<sub>2</sub>-N<sub>2</sub>-O<sub>2</sub>-H<sub>2</sub>O mixture, vibr. nonequib. flow in wedge no le 2-12247  
 CO<sub>2</sub>-N<sub>2</sub>-methane, tissue-equivalent gas mixture, W<sub>a</sub> values computation 2-19783  
 CO<sub>2</sub>-N<sub>2</sub>-(He) 2-12266  
 CO<sub>2</sub>-Ne(Kr)(Xe) binary systems, diffusion coeff. temp. depend. 2-35256  
 CO<sub>2</sub>+Ar, laser excitation study, fluoresc., lifetime meas., vibr., rot. depend. perturbation 2-24788  
 CO<sub>2</sub>+C<sup>+</sup> reaction rate consts. for energies 0.04-2.5 eV, appl. to Venus ionosphere 2-38089  
 CO<sub>2</sub>+H, laser photolysis of hot H, vibr. excitation collisions, IR obs. 2-24830  
 CO<sub>2</sub>+H<sub>2</sub>, interaction on supported Rh surface, IR obs. 2-41931  
 CO<sub>2</sub>+H<sup>+</sup> (D<sup>+</sup>), vibr. excitation, mode selectivity and time effects 2-44051  
 CO<sub>2</sub>+HF, collisional relax., rate consts. 2-37049  
 CO<sub>2</sub>+He, vibr. modes decoupling, vibr. close coupling infinite order sudden calc. 2-20161  
 CO<sub>2</sub>+Li<sup>+</sup>, energy transfer, vibr. and rot. excitation cross sections calcs. 2-20163  
 CO<sub>2</sub>+N<sub>2</sub>, unsteady flow behind shock fronts, physicochem. processes 2-50300  
 CO<sub>2</sub>+O<sub>2</sub>, electronic to vibr. energy transfer obs. 2-49557  
 CO<sub>2</sub>+O<sub>2</sub> (H<sub>2</sub>O)<sub>n</sub>, reaction rate consts. meas. with variable temp. flowing afterglow apparatus 2-47325  
 CO<sub>2</sub>+O<sub>2</sub><sup>+</sup>→O<sub>2</sub><sup>+</sup>(CO<sub>2</sub>)<sub>2</sub>, ion cluster formation and reactions 2-7692  
 CO<sub>2</sub>+O<sub>2</sub><sup>+</sup>→O<sub>2</sub><sup>+</sup>.CO<sub>2</sub>, ion cluster formation and reactions 2-7692  
 (CO<sub>2</sub>)<sub>n</sub><sup>+</sup>, ion cluster, unimolecular decomposition, average kinetic energy meas. 2-29741  
 CO<sub>2</sub> 80  $\mu$ m hollow-core slab waveguide laser, 10.6  $\mu$ m optical gain meas. 2-15979  
 C<sub>2</sub>O, fluoresc. decay and bimolecular electronic quenching behaviour 2-15842  
 C<sub>2</sub>O, laser induced excitation and fluoresc. spectra 2-15841  
 C<sub>2</sub>O+Ar(N<sub>2</sub>)(O<sub>2</sub>), fluoresc. decay and bimolecular electronic quenching behaviour 2-15842  
 CO(A<sup>2</sup>Π), laser induced fluoresc., appl. in CO(A-X) electronic laser 2-4341  
 CO<sup>+</sup>(A<sup>2</sup>Π) vibr. distrib. from C<sup>+</sup>+O<sub>2</sub> chemiluminesc. reaction 2-49360  
 COS, angle-resolved photoelectron spectra meas. with synchrotron radiation, valence orbitals ang. symmetry 2-756  
 COS, UV absorption spectra (*French*) 2-23147  
 COS<sup>+</sup>(A<sup>2</sup>Π), vibr. level lifetimes, predissociation rates, fluorescence quantum yield 2-20111  
 CO<sub>2</sub><sup>2+</sup>, mol. electrostatic pots., net atomic charge model 2-19960  
 CO(v) chemiluminescence in CS<sub>2</sub>/O<sub>2</sub> and CS<sub>2</sub>/O<sub>2</sub>/N<sub>2</sub>O flames, elec. collision quenching 2-2715  
 C<sub>2</sub>Rb(H<sub>2</sub>), H rot. tunnelling spectra 2-35408  
 CS in atmosphere form. from CS<sub>2</sub> oxidation and source for OCS 2-23059  
 CS, outer and inner valence levels, CI calcs. 2-49301  
 CS<sub>2</sub>, adsorption cross sections in UV, appl. to Venus and Io 2-23243  
 CS<sub>2</sub>, amplification coefficients of conjugate, non-conjugate waves in stimulated scatt. 2-25072  
 CS<sub>2</sub>, angle-resolved photoelectron spectra meas. with synchrotron radiation, valence orbitals ang. symmetry 2-756  
 CS<sub>2</sub>, chemical CO laser, power level raised by using S flame 2-39640  
 CS<sub>2</sub>, cooled in supersonic free jet, <sup>1</sup>B<sub>2</sub> state, single vibronic level fluoresc. spectra 2-24779  
 CS<sub>2</sub>, electron impact excitation, fluoresc. emission cross sections, visible and cracks 2-7658  
 CS<sub>2</sub> in atmosphere, oxidation to CS 2-23059  
 CS<sub>2</sub>, liq., linewidth meas. in stimulated Raman scatt. under picosecond pumping (*French*) 2-967  
 CS<sub>2</sub>, liq., struct., correlation functions, orientational model 2-5038  
 CS<sub>2</sub>, liq., vibr. spectrosc., assignments, teaching expt. 2-10573  
 CS<sub>2</sub>, liquid, high order stimulated Raman scatt. 2-11757  
 CS<sub>2</sub>, liquid, vibrational relaxation over 10 to 30°C and 3 MHz to 5 GHz 2-40496  
 CS<sub>2</sub>, liquids, interaction-induced spectra, lineshapes 2-22019  
 CS<sub>2</sub>, mol. cryst., lattice dynamics 2-50801  
 CS<sub>2</sub>, orientational correl. param. calc. 2-35363  
 CS<sub>2</sub>, phase conjugation of KrF laser radiation using degenerate four-wave mixing 2-25074  
 CS<sub>2</sub>, photooxidation in troposphere, role in S chemistry 2-32563  
 CS<sub>2</sub> R<sup>0</sup>B<sub>2</sub> state, laser induced fluoresc. 2-39432  
 CS<sub>2</sub>, UV absorption spectra (*French*) 2-23147  
 CS<sub>2</sub> vapour, laser snow effect induced by Kr laser 2-17906  
 CS<sub>2</sub> vapour, mol. emission spectra in low press. discharges 2-39438  
 CS<sub>2</sub>, vibrational relaxation by isotropic Raman scattering in conjunction with a hydrodynamic theory (*French*) 2-15800  
 CS<sub>2</sub>/O<sub>2</sub> and CS<sub>2</sub>/O<sub>2</sub>/N<sub>2</sub>O flames, CO(v) luminescence, elec. collision quenching 2-2715  
 C<sub>2</sub>S<sub>2</sub>, laser excited phosphorescence spectrum in Ar matrix 2-24786  
 (C<sub>2</sub>S) surface compounds, prep. and characterisation 2-2471  
 CSe<sub>2</sub>, high resolution IR spectrum and struct. determ. 2-24696  
<sup>12</sup>C<sup>16</sup>O<sub>2</sub>, rovibr. transitions, emission Fourier spectra anal. in 4.5  $\mu$ m region 2-24693



**carbon compounds continued**

- <sup>13</sup>C in molecular cloud ensembles used to find props., EHF obs. 2-14898  
<sup>14</sup>C <sup>16</sup>O molecule, anal. of E' $\Pi$ -A' $\Pi$  transition 2-49441  
<sup>14</sup>CO in troposphere, seasonal and latitudinal variations 2-10130  
 CO adsorption on Pt, electron stimulated and thermal desorption spectra study 2-26223  
 Co, binding energy of valence levels, photoemission spectroscopy (*German*) 2-17598  
 Co IR bandshapes and overtone absorpt. bands, dipole correl. functions 2-44006  
 Co isotopic mixture overlayers on Cu (111) and (001), collective vibr. modes 2-12903  
<sup>13</sup>CO, interstellar, obs. in Taurus cloudlets 2-33112  
 D<sub>2</sub>F<sub>2</sub>-CO<sub>2</sub> chemical amplifier of nanosec. pulses, numerical optimisation 2-34740  
 DF-CO<sub>2</sub> optically pumped transfer laser 2-928  
 EuS-H<sub>2</sub>S-H<sub>2</sub>-CO<sub>2</sub> chem. equilib. study 2-41919  
 F<sub>2</sub>-D<sub>2</sub>-CO<sub>2</sub> mixtures, detonation investig. 2-22451  
 FCO radical, IR diode laser spectroscopy of  $\nu_1$  and  $\nu_2$  bands 2-24697  
 Ge<sub>2</sub>C<sub>1-x</sub> CVD coating, struct. and optical props. 2-45773  
 HCN, stratospheric, absorption near 14  $\mu$ m 2-23104  
 HF+CN $\rightarrow$ FNH $\rightarrow$  reaction, quantum chem. study 2-22433  
 He-CO<sub>2</sub> mixture, thermal diffusion factor, pressure and conc. depend. 2-30267  
 HgCdTe, large optical nonlinearities and CW degenerate four-wave mixing 2-16068  
 N<sub>2</sub>-CO<sub>2</sub> mixture, speed of sound at high press. 2-44819  
 NO-CO adsorbed on Pd surface, IR spectra, thermal desorpt. and XPS study 2-50997  
 OC+N<sub>2</sub>, mol. collisions, stochastic theory in the perturbed stationary state formulation 2-39466  
 OCO...HF, 3-21G intermol. interaction energies appl. 2-764  
 OCS, heterodyne freq. meas. near 1050 cm<sup>-1</sup> 2-39399  
 OCS in atmosphere, form. from CS 2-23059  
 OCS in pure and seeded beams, rot. transitions, microwave Stark spectra 2-20039  
 OCS in troposphere, effect of ocean hydrolysis on lifetime 2-18501  
 OCS, inert gas mixt., II- $\Sigma$  and  $\Sigma$ - $\Sigma$  vibr. rot. bands correl. function 2-39370  
 OCS, isotope species effect, mol. const., heterodyne freq. meas. 2-20045  
 OCS, mol. photodissociation and upper atmosphere chemistry 2-10218  
 OCS,  $\nu_2$  band, IR spectrum, intensity and dipole moment autocorrelation functions 2-20050  
 OCS, power-broadened relax. parameters, line shapes, microwave transitions 2-34496  
 OCS, pure rot. far IR spectrum 2-20054  
 OCS UV absorpt. cross sections, temp. depend., appl. to troposphere photolysis 2-28134  
 OCS, vibr. and Rydberg series anal., electronic states, energy loss spectra 2-24852  
 OCS, vibrational relaxation by isotropic Raman scattering in conjunction with a hydrodynamic theory (*French*) 2-15800  
 OCSe, broadband Xe<sub>2</sub>\* fluoresc. dissoc. 2-11555  
 Se<sub>2</sub>-CO, photoabsorption cross-section, UV laser photolysis 2-33603

**carbon fibre reinforced composites**

- epoxy matrix, selective reinforcement of Al alloy by adhesive bonding 2-27221  
 epoxy resin-graphite fibre composites, water-soaked, broadline NMR spectra, temp. depen d. 2-17347  
 epoxyanilinephenol formaldehyde, loading rate effect on type of failure 2-36962  
 graphite epoxy prepreg, effect of ageing and moisture on reactivity 2-13753  
 graphite fibre reinforced advanced epoxy matrix composites, sub-T<sub>g</sub> annealing studies 2-17693  
 graphite fibre reinforced Al, US charact. of elastic const. and moduli 2-17829  
 graphite fibre reinforced C, sp. ht. capacity and elec. resist., 1500 to 3000K, pulse heating method 2-12771  
 graphite fibre reinforced epoxy laminate, fatigue damage monitoring by US mapping 2-9500  
 graphite fibre reinforced epoxy laminate, US methods for characterising response 2-17822  
 graphite reinforced laminated composite plate subject to low velocity impact, structural integrity 2-13812  
 graphite/epoxy composite, type T300/S208, moisture and temp. coupling effects, transient hygrothermal stresses 2-30510  
 nondestructive testing and fatigue behaviour 2-17796  
 phthalocyanide, C-10, development for composite matrix appl. 2-13694  
 plastic laminates, thermal expansion, influence of fibre weave in fabric reinforcement 2-1641  
 plastic matrix, fractography 2-27263  
 plastic matrix, orthotropic plate, stresses around rectangular hole 2-20539  
 plastic matrix, thermal expansion, effect of distribution between fibre orientations 2-26084  
 plastic matrix, unidirectional compressive strength, comparison of test techniques 2-27367  
 plastics, conical shells, longit. compressed, supporting power 2-35075  
 plastics, deform. and strength props. under var. loading conditions 2-36927  
 plastics, laminar, with 3 reinforcement angles, mech. breakdown, layer ratio influence 2-36965  
 polyester matrix, compression strength, effect of kinked, misaligned and poorly adhering fibres 2-9367  
 polymer matrix material for precision sliding base components of optomech. instrums. (I) 2-36972  
 refractory oxide matrix, composite strength 2-27269  
 reinforcement properties realisation 2-36925  
 review of C fibre props. (*Polish*) 2-31611  
 silicone rubber, review of short fibre reinforced composites 2-47006  
 Al matrix, component reactions, matrix comp. effect 2-36920  
 Al matrix, corrosion and mech. props., carbide phase content effect 2-41556  
 Al matrix, damage accumulation during low-cycle deform. 2-36921  
 Al matrix, effect of coating C fibres with TiC 2-36811  
 Al matrix, effect of SiC coating on C fibres 2-36994  
 C matrix, fibre infiltration from propylene by CVD 2-41575

**carbon fibre reinforced composites continued**

- C matrix, fibre infiltration from propane by DVD, microstruct. and fracture behaviour 2-41716  
 C matrix, porous struct. effect on props. 2-22194  
 C-fibre composite/Al-alloy, thermally-induced shear stress meas. 2-52169
- carbon fibres**  
 see also carbon fibre reinforced composites  
 composite materials appl., review (*Polish*) 2-31611  
 graphitising, magnetoresistance effect rel. to heat treatment temp. 2-46035  
 micropoint emitter, electrolum. effects associated with electron field emission 2-27057  
 surface analysis, appl. of X-ray photoelectron spectroscopy 2-22505
- carbon microphones** see microphones
- carbon steel**  
 absorption of H in acid pickling, inhibitors influence 2-27349  
 AGR boiler materials 2-4014  
 austenite recrystallisation, retardation by solutes 2-41625  
 borated layers, track autoradiography study (*Russian*) 2-2653  
 calorized, wear charact. during dry rubbing (*German*) 2-27289  
 cavitation erosion, vibratory and Venturi tests 2-9427  
 cementite phase, X-ray diffr. and metallography after cold hydraulic moulding (*Russian*) 2-51920  
 coating by electric spark alloying with WC-Co-B (CrB<sub>2</sub>), alloying effects 2-17780  
 coating with TiC-Fe, wear resist. 2-13860  
 contact area determ. during sliding contact of steel St45 pair 2-27298  
 contact fatigue life, effect of elemental S addition in lubricant 2-27288  
 corrosion and chemistry study under steam blanketing 2-19650  
 corrosion products, IR and Raman spectroscopy 2-52110  
 crack propagation resistance, nonmonotonic variation during low temp. tempering (*Russian*) 2-5938  
 crack toughness of mild, side grooved specimens 2-17728  
 cyclic creep behaviour, max. stress and stress ratio effects 2-5926  
 developments w.r.t. improved formability and strength 2-22241  
 diffusion coatings of Cr-Ti 2-27347  
 diffusional interaction of CrB<sub>2</sub> under flow-discharge conditions 2-31848  
 dimensional changes offer phase recrystallisation, bulk cold plastic deform. effect 2-22239  
 discs, pitting process, optical microscopy and SEM obs. 2-27300  
 dual-phase, DP80, study of unlubricated friction and wear break-in behaviour 2-47192  
 dual-phase steels, review 2-51847  
 ductile fracture, of 0.16%C type containing coarse second phase 2-2574  
 ductile fracture strain, deformation mode and deformation history effects 2-5927  
 ductility operating life determination 2-37011  
 eroded surface under salt water, SEM study 2-5980  
 erosion-corrosion in nuclear steam generators 2-19645  
 eutectoid, pearlite spheroidisation kinetics during static annealing and hot deform. 2-36908  
 eutectoid, spheroidization of cementite by concurrent warm torsional deform. 2-47062  
 fatigue failure prediction using US surface waves, corner reflector method 2-9512  
 fatigue life, of type S10C and S45C, under rot. bending and reversed torsion, understress effect 2-5923  
 ferritic, tough, R curve determ., appl. of AC pot. drop technique 2-13873  
 ferromagnetic particles contained in type I supercond., effect on elec. resist. behaviour 2-21735  
 friction testing, of hardened dry steel pairs 2-52164  
 high C, struct., alloying principles 2-2586  
 high strength wire, stress corrosion cracking 2-13840  
 high-C steels, effect of second-phase vol. fraction on grain size stability and flow stress during superplastic flow 2-22268  
 hydrogen absorption, and evolution kinetics, of C-Mn steel exposed to NaCl acidified solns. 2-31826  
 hydrogen embrittlement, high temp. 2-13799  
 impact loading, initial microstruct. effect (*Czech*) 2-31781  
 induction hardening, props. prediction by computer modelling 2-22251  
 laminated, fatigue fracture 2-5924  
 laminated inhomogeneous, stress-strain curve, effect of initial residual stress (*Japanese*) 2-5909  
 low C, brittle-ductile state diagram in impact bending 2-52044  
 low C, C1045, wear resistance improvement by cryogenic treatment 2-22344  
 low C, duplex chromiumised for S container in Na-S cells, charact. and corrosion behaviour 2-22564  
 low C, dynamic tensile testing by rot. hammer (*Polish*) 2-9503  
 low C, fatigue cracks, early stage, optical and SEM study (*Japanese*) 2-22310  
 low C, fatigue life distrib., effect of cyclic strain ageing (*Japanese*) 2-5947  
 low C, fracture toughness charact., load cyclicality effect 2-41745  
 low C, H conc. in samples exposed to geothermal fluids 2-17766  
 low C, high quality, modern technique (*German*) 2-46977  
 low C, low cycle fatigue, grain size effects 2-47152  
 low C, near threshold fatigue crack propag., stress ratio and grain size effects 2-52015  
 low C, P-bearing, mag. ageing charact. 2-13826  
 low C, plate, fatigue strength with a sharp notch and precrack under plane bending 2-5925  
 low C, radiating power, effect of coatings 2-4696  
 low C, sheet forming using impact loading through water columns 2-27185  
 low C, sheets, weakly textured, biaxial stretching, influence of sheet thickness and grain size 2-9378  
 low C, sheets, well-developed preferred orientation, biaxial stretching, effect of grain anisotropy 2-9379  
 low C, strain-rate hardening, constitutive eqns. 2-31707  
 low C, study of mag. ageing kinetics 2-26659  
 low C, sulphide cracking resist., thermomech. working conditions influence 2-41805  
 low C, tufridged, fatigue strength under axial load (*Japanese*) 2-5948  
 low C, US attenuation and microstruct. 2-31876  
 low-C, marine, heat treatment influence on low freq. fatigue crack growth rates 2-41717  
 low-C, mech. props. and strain hardening, temp. effect 2-2528



**carbon steel continued**

- low-C, resist. to brittle crack development, X-ray fractography appl. 2-37009  
 low-C, strain hardening, mech. ageing effect 2-2527  
 low-C, sulphide cracking resist., multiple alloying influence 2-17778  
 low-C, water vapour effect on fatigue crack tip stress and strain distrib., crack propag. energy 2-2581  
 machine structural use, low- and high-cycle fatigue props. 2-27267  
 magnetic method of quality inspection of high temp. tempering 2-27382  
 magnetic props. for soft magnetic appl., heat treatment 2-21831  
 martensite decomposition, formed from polycryst. austenite, X-ray diffr. study 2-22195  
 martensite structure after  $\chi' \rightarrow \alpha$  transition (*Russian*) 2-51892  
 medium C, press-fitted specimens, fatigue strength, influence of varying stress amplitude (*Japanese*) 2-9401  
 medium C, residual stress form. anal. during hardening by surface deform. 2-41630  
 medium C, wear surfaces investigation by electrode potential method 2-41761  
 medium-C, 40 Kh, nitriding influence in electrolytic plasma on frictional characts. (*Russian*) 2-31796  
 medium-C, fatigue and corrosion fatigue, Ni-Al and Ni-Ti plasma coatings influence 2-17776  
 mild, 1015, acoustic emission mechanisms, during high cycle fatigue 2-5935  
 mild, AE associated with fracture processes 2-31868  
 mild, circular plate, residual stress distrib. due to axial symm. temp. distrib., effect of heat input (*Japanese*) 2-21204  
 mild, corrosion in cultures of ferric Fe reducing bacterium isolated from crude oil, polarisation characts. 2-27325  
 mild, crack initiation, slow crack growth, unstable propag. of ductile fracture 2-9403  
 mild, crack tip plastic flow, expt. study 2-13794  
 mild, ductile, significance of initiation, propagation and closure of microcracks in high cycle fatigue 2-52019  
 mild, fatigue growth threshold of small cracks 2-8560  
 mild, H diffusion, effect of sulphide inclusions 2-41730  
 mild, high velocity deformation, micromechanical study 2-21220  
 mild, high-Si, corrosion mechanism in high press. CO<sub>2</sub> 2-41796  
 mild, hot rolled sheet, MnS inclusion effect on mech. props. 2-51959  
 mild, in aerated NaNO<sub>2</sub>, passivity, linear polarisation resistance study 2-9457  
 mild, internal stress meas. using neutron diffr. 2-2658  
 mild, low-Si, corrosion mechanism in high press. CO<sub>2</sub> 2-41795  
 mild, mech. stress meas. by magnetic field strength rotation 2-2659  
 mild, neutron scattering study of texture 2-2660  
 mild, oxidation in CO<sub>2</sub> based atmos., appl. of thermodynamics 2-47251  
 mild, reinforced with steel fibre, reinforcement effect on struct. and mech. props. 2-41557  
 mild, response to water chemistry changes, hysteresis effects 2-19647  
 mild, scale and corrosion parameters at a geothermal loop experimental facility 2-13856  
 mild, SCC S<sup>2-</sup> ion effects 2-22372  
 mild, strain rate history and temperature-effects on torsional-shear behaviour 2-27223  
 mild, stress corrosion behaviour, effect of Al additions and grain size (*Korean*) 2-41791  
 mild, stress corrosion in NaOH soln., film rupture model 2-27320  
 mild, thin rings and short tubes subjected to centrally opposed concentrated loads 2-4727  
 mild, viscoplasticity constitutive eqns. following neutron irradi. 2-22265  
 mild steel, fatigue testing, US method 2-47272  
 mild steel components in reactors and steam generators, operation experience 2-4008  
 multilayer material, impact strength and damping props. 2-17706  
 notch depth determ., technique using pulse-echo Rayleigh waves 2-41837  
 oxidation in LiOH at 250°C, XPS study 2-27321  
 oxidation in reversing rubbing 2-5986  
 plain-C, 1075 and 1020, solid particle erosion behaviour as function of microstructs. 2-2593  
 plain-C, US prediction of grain size and mech. props. 2-37026  
 quenching with water-air mixture 2-36887  
 RBMK coolant circuit, oxalic acid decontamination soln. 2-7390  
 rimming, inclusions and O behaviour after refining with base oxygen furnace 2-13738  
 rolling wear, predictions of life to pitting failure under multiple stress conditions 2-36979  
 scuffing under boundary lubricated conditions 2-52055  
 St.3, spalling fracture, crit. conditions, temp. effects 2-13802  
 strain hardening at low temperatures 2-31705  
 strain-temperature correlations obtained an application of axisymm. compressive stresses 2-47138  
 strengthening at crack tip by current pulse (*Russian*) 2-2575  
 stress corrosion cracking, electrochem. study 2-27324  
 structural, cyclic fracture toughness determ., cylindrical sample with circular crack 2-27379  
 surface coating, thermal treatment in presence of ZrB<sub>2</sub> and KBF<sub>4</sub> 2-41788  
 surface hardening, by CO<sub>2</sub> plasma beam 2-5003  
 surface modification, ion implantation parameter influence 2-1499  
 surface modification by electron beam glazing 2-47265  
 surface morphology changes during ion bombardment (*Russian*) 2-5296  
 tubular, C-Mn, hot-rolled, low ductility tensile failures (*German, English*) 2-41690  
 ultrahigh C, preparation, props. and potential 2-36892  
 universal joints, bulk-surface hardening 2-22380  
 US prediction of grain size, strength and toughness 2-17825  
 US thickness gauge for low-carbon steel element meas. 2-33498  
 wear resistance and fatigue strength, low-temp. carbonitriding effect 2-52052  
 weathering, corrosion products, IR and Raman spectroscopy 2-52110  
 yield stress, apparent, effect of H on delayed plasticity 2-52011  
 C exchange between steel and FeCr, autoradiography study (*Russian*) 2-2711  
 C-Mn, C-Cr-Ni, hot-ductility in temp. range 1339-1561K 2-31742  
 Fe, cast-steel St45 pair, contact area determ. during sliding contact 2-27298  
 H attack, kinetics 2-17734  
 H attack, Nelson curves, model calc. 2-50751  
 H attack cavity growth mode 2-47177  
 P bearing, carbide precipitation, TEM obs. 2-51915

**carbon tetrachloride, CCl<sub>4</sub> see organic compounds****carcinotrons**

- 1 mm source for 1 mm wavelength electron density interferometer 2-40180

**cardiology**

see also blood; electrocardiography; haemodynamics

- acoustic emission, freq. shift rel. to heart function 2-32293  
 action potential propagation meas., laser scanning system 2-37723  
 ambulatory patients, assessment of circadian rhythm of blood press. and heart rate 2-37695  
 aortic valve tissue, viscoelastic props. 2-22783  
 apex region human cardiac activity, detect. by laser speckle 2-2917  
 arrhythmias, AV conduction block mathematical anal. 2-52477  
 atrio-ventricular valves, dynamic response anal. using membrane model 2-37614  
 aviation medicine course 2-18307  
 biomechanical model as integral musculoskeletal organ, preconditions 2-22784  
 biosignal visualization devices for equipment of cardiology units, CRT oscilloscope development 2-32349  
 blood flow, cephalic and cerebral, and cardiac output, age related changes in rats 2-6230  
 blood flow rel. to cardiac output, meas. using multiplexed ultrasound Doppler-microcomputer combination 2-47666  
 blood pool imaging, radiopharmaceutical choosing 2-37654  
 blood pump motor controller for artificial heart 2-52667  
 blood-pool tomography, biplanar 2-42209  
 brain electrical stimulation and heart rate control in monkeys 2-37531  
 cardiac muscle, stress/strain relation determ. from ventricular press./time relationships 2-9827  
 cardiac output, automatic determ., impedance plethysmography method (*Japanese*) 2-52655  
 cardiopulmonary data-acquisition system, computerised control of stress rates 2-2969  
 cardiovascular signal recorder, dual microprocessor data handling system 2-52604  
 cell clusters, spherical, linear elec. props. of passive and active currents, chick embryo expt. 2-9789  
 cells, cultured, inward current channels activated by intracellular Ca 2-37516  
 computerised tomography of moving objects, time domain interpolation effectiveness 2-14331  
 disease detection using non-invasive low cost high fidelity ECG 2-22851  
 displacement cardiograph including a device sensitive to torso resistivity variations, phys. principles 2-2918  
 echocardiographic meas. in children, normal values calc., pocket calculator program 2-14301  
 echocardiography in aeronautical medicine, review (*French*) 2-6268  
 electric acupuncture, regulation of cAMP/cGMP level in normal and arrhythmic cardiac muscles of rats (*Chinese*) 2-22864  
 fibre optic sensors for medical appls., intravascular cardiological exam. 2-7878  
 flow microcalorimeter system for meas. of dynamic energy variables of isolated perfused hearts 2-18347  
 foetal heart rate monitoring in cattle and sheep using repeater telemetry methods 2-47786  
 haemodynamic control by optimisation of the cardiac pump (*French*) 2-37616  
 heart rate data acquisition, cardiachometer using KIM-1 single board computer 2-27864  
 helical excitation waves, refractoriness of heart tissue and mechanism of loss of sources 2-2861  
 impedance plethysmography for cardiac output meas. 2-14354  
 instrumentation for resuscitation and intensive care departments in cardiological service 2-22852  
 left ventricle, effects of inertia and viscoelasticity in late rapid filling 2-6244  
 left ventricle, human, 3D time-varying reconstruction from cardiac catheterisation and 2D US techniques 2-22806  
 left ventricle myocardium, contraction and relax., role of internal stresses (*Ukrainian*) 2-14270  
 left ventricular assist device, magnetically actuated implantable 2-14360  
 left ventricular assist devices and total artificial hearts, effects on blood vessel mech. props. 2-6237  
 left ventricular assist system, implantable, long-term, elec.-actuated 2-18339  
 left ventricular identification in dog, cardiac contractility evaluation through maximal isovolumic elastance 2-32228  
 left ventricular midwall dynamics, right anterior oblique projection, human expts. 2-14273  
 left ventricular perfusion distrib. performance evaluation, computer assisted planimetry of press. waveforms 2-32384  
 left ventricular press. of conscious dogs, telemetry system 2-37717  
 left ventricular time activity curve, equilibrium gated radionuclide scan, point by point exam. 2-27875  
 left ventricular wall motion analysis by a novel vector analysis method 2-6246  
 left ventriculometry, global, segmental and temporal analysis, review 2-32316  
 lung, postinspiratory mixing rel. to cardiogenic oscils. 2-52525  
 magnetocardiographic lead fields, effects of torso geometry 2-14308  
 microcomputer-based measurement of beat-to-beat intervals and analysis of heart rate variability 2-32346  
 microwave irradiation effects on embryonic quail hearts 2-18251  
 mitochondria, rat, inhibition and stimulation of respiration-linked Mg<sup>2+</sup> efflux 2-47587  
 mitral valve, closure dynamics, collapsible tube model 2-42129  
 mitral valve, natural, fluid mechs. 2-6232  
 muscle, intracellular K<sup>+</sup> and inward-going rectification 2-9792  
 muscle, intrinsic birefringence signal preceding the onset of contraction 2-18191  
 muscle cells, in vitro microwave irradi. effects 2-27827  
 myocardial cells in culture morphology and physiology obs. using Zeiss Axiomat microscope 2-14374  
 myocardial imaging with <sup>201</sup>Tl, photon absorpt. effect 2-27874  
 myocardial infarction, dynamic scintigraphy with <sup>125</sup>I-labelled free fatty acids 2-42198  
 myocardial infarction estimation from unipolar epicardial QRS pots. 2-22846



**cardiology continued**

- myocardial metabolic imaging using  $^{123}\text{I}$ -labelled heptadecanoic acid, angina pectoris patients 2-42199  
 myocardial pacemaker cells, entrainment model based on phase response curve 2-52465  
 myocardial perfusion, tomographic studies, single-composite image display of information 2-42212  
 myocardial stimulation with ultrashort duration stimuli, dog expts. 2-18331  
 myocardium, excised canine, passive biaxial stress-strain props. 2-14280  
 myocardium, plane  $^{201}\text{Tl}$  images, spatial and temporal quantitation 2-27883  
 myocardium mechanical state assessment using action potential 2-22719  
 nuclear cardiovascular studies, resulting radiation exposure 2-52636  
 nuclear imaging, carotid and ECG pulses as indices 2-42200  
 nuclear medicine, methods 2-9860  
 oesophageal accelerometer, indication of cardiovascular function 2-42232  
 pacing threshold estimation for heart-electrode combination, graphical method 2-22855  
 perfusion system, constant temp., for myocardial energetics study 2-18346  
 phonocardiography, first and second heart sound freq. spectra temporal variation 2-27858  
 post-cardiac surgery, transcutaneous  $\text{PO}_2$ , peripheral perfusion status 2-14357  
 prosthetic valves, occluder type, haemolytic and thrombogenic pot. 2-18336  
 pyrophosphate scintigraphy, improved detect. of acute myocardial infarction 2-27877  
 radioisotope angiocardiology, left-to-right shunts appl., homomorphic deconvolution 2-42202  
 radioventriculography, equilib., fully automated data acquisition, processing and display 2-37652  
 rate fluctuation, power spectrum anal., beat-to-beat cardiovascular control 2-14278  
 rate telemetry, short-distance, capacitive, sports and health care appl. 2-18282  
 scintigrams, time-gated, of cardiac boundaries, processing using digital boundary detect. techniques 2-9865  
 single emission tomography research 2-6262  
 SQUID, flat DC thin film, appl. and technique for biomag. meas. 2-22865  
 SQUID magnetometer detection of magnetocardiogram, clinical magnetocardiography approach (*Japanese*) 2-22809  
 stimulator, for investigating atrial and ventricular vulnerability (*German*) 2-18310  
 stroke volume assessment, beat-by-beat, by pulsed Doppler US in exercise 2-52589  
 thermography in coronary surgery 2-6255  
 US CW Doppler FHR signals, meas., extraction and processing (*Chinese*) 2-9842  
 US diagnostic instrument types for use in different medical fields 2-22805  
 US multichannel pulsed Doppler blood flowmeter, minicomputer-based 2-18280  
 US waves and tissue interaction, overview rel. to cardiology 2-6247  
 vagal cardiac neurons, modification of discharge during learned heart rate change 2-37532  
 ventricular contraction patterns in man, second harmonic analysis in radionuclide image assessment 2-14332  
 ventricular fibres, porcine, response to electric stimuli after long periods of cold storage (*Chinese*) 2-27799  
 vertebrate ventricle, twitch tension frequency as mechanical autoregulation performance 2-2884  
 volume changes, mag. meas. 2-37640  
 wall activity, human, tomographic mapping 2-37675

**carrier avalanches** see impact ionisation**carrier density**

- see also current density; electron density; electron density (metals)  
 $\gamma$ -ray irradi., point defects, laser annealing 2-50696  
 dichrometer for studying free-carrier density in semiconductors (*t*) 2-38676  
 diode laser introduction, injected carrier conc. rel. to optical gain 2-4508  
 graphite- $\text{AlCl}_3$  intercalate, Shubnikov-de Haas effect (*Russian*) 2-8820  
 graphite- $\text{ICl}$  intercalate, Shubnikov-de Haas effect (*Russian*) 2-8820  
 insulator, trap filling by ionising radiation, kinetic eqns. 2-30824  
 inversion layers, inhomogeneous, elec. cond., Hall effect, 2D resistor network computer simulation 2-51322  
 IV-VI semiconductors, basic properties, evolving perspectives and unifying characts. 2-17066  
 metal-semiconductor interface, minority carrier extraction and accumulation 2-21674  
 metals, quasi-Alfvén waves, self-excitation and spontaneous emission (*Russian*) 2-30919  
 $n^+n$  junction, carrier exclusion for low impurity carrier conc. 2-46117  
 p-n junction, abrupt, forward biased, model for terminal characts. and inject efficiency 2-46121  
 p-n junction solar cells, photo voltage decay method for minority carrier lifetime meas. 2-14076  
 $\text{pb}_{1-x}\text{Sn}_x$  heterostructure for injection lasers 2-41522  
 semiconductor, diffusion of high density electrons and holes, and many-body effects 2-45866  
 semiconductor, homostructures, electrostatic pot., space charge region 2-51294  
 semiconductor, photoelasticity, nonlinear 2-2217  
 semiconductor characterisation by Raman scatt. 2-17476  
 semiconductor characterisation uses of modulation spectroscopy, review 2-15243  
 semiconductor laser injection locking, refractive index depend. on active layer carrier density 2-49749  
 semiconductor surface, potential, elec. field, charge density, mobile carrier conc., equilib. soln. 2-40995  
 semiconductor thin films, drift mobility and density 2-13397  
 semiconductor-multilayer dielec. coating struct., field effect cond. at enriching voltages (*Russian*) 2-46150  
 semiconductors, compensated, localised charge carriers, particle statistics and transport 2-17085  
 semiconductors, degenerate narrow-gap, Fermi-Dirac integrals and Fermi energy 2-45979

**carrier density continued**

- semiconductors, photoelectric effect in semiinfinite surface-barrier struct. luminescence 2-17114  
 semiconductors containing defects with negative electronic correlation energy, charge carrier statistics 2-51160  
 submicron devices, current equations for velocity overshoot 2-51180  
 trap-limited dispersive transport, recomb. effects, Monte Carlo simulation 2-26409  
 $\text{Ag}_2\text{AsS}_3$ , acoustic and elec. props., US meas. 2-45405  
 $\text{AgCl}(\text{Hg})$ , point defects behaviour at 20-400°C 2-50626  
 $\text{AlGa}_{1-x}\text{As-GaAs}$  heterojunction FET, magnetoconductance, g-factor gate voltage 2-41003  
 $\text{Al}_{0.48}\text{In}_{0.52}\text{As}$ , MBE layers, elec. props. 2-30978  
 Au-mica-p-Te-Cu film MIS struct., field effect studies 2-41017  
 $\text{Ba}(\text{PO}_3)_2\text{-MgF}_2$ , glass, effect of  $\text{MgF}_2$  additions on physicochemical props 2-26391  
 $\text{BaTiO}_3\text{-Sb}$ , PTC effect as function of 3d element doping, elec. resist grain sizes, carrier density 2-30887  
 Bi epitaxial film, Shubnikov-de Haas effect obs. (*Russian*) 2-8819  
 $\text{Bi}_{1-x}\text{Sb}_x$ , electronic props. near semiconductor-semimetal transition, magnetoplasma resonance 2-2137  
 $\text{Bi}_{1-x}\text{Sb}_x$ , thermoelectric power of holes, anomalous temp. depend 2-51221  
 $\text{Bi}_2\text{Te}_3\text{-Sb}_2\text{Te}_3$ , solid solutions, anisotropy coeffs. (*Russian*) 2-1927  
 n- $\text{Cd}_3\text{As}_2$ , ultrathin films, Einstein relation, size quantisation effect 2-41038  
 $\text{Cd}_3\text{As}_2\text{-Ge}(\text{Cu})(\text{Ag})$ , transport props. study 2-40943  
 $\text{Cd,Hg}_{1-x}\text{Te}$ , photothermagnetic effect in mm and submm range 2-13132  
 $\text{Cd,Hg}_{1-x}\text{Te}$ , resist. and Hall coeff., 4.2 to 30K 2-30897  
 $\text{CdInSe}_4$ , free current carrier interaction with LO phonons, plasmon phonon modes, IR spectra 2-36635  
 CdS film, chemically sprayed, struct. and electronic props., solar cell app 2-8732  
 CdS, film, elec. props. rel. to struct. and comp. 2-46163  
 CdS, surface, acoustoconcentration effect due to amplified US wave, elec. cond. obs. 2-51238  
 $\text{CdS-CuCl}_2$ , baked layers, effects on elec. and photoelectrical props 2-30983  
 CdSe, absorption coeff. in region of fundamental absorption edge, stron. EM wave effect 2-51600  
 CdSe, film, elec. props. rel. to struct. and comp. 2-46163  
 p-CdTe, covered with dielec. films, annealing effects, diffusion phenomenon and carrier conc. (*Japanese*) 2-40609  
 CdTe undoped p-type annealed in vacuum, electrical and crystalline props 2-5750  
 $\text{CuInSe}_2$ , hole effective masses, optical study 2-40762  
 $\text{CuInSe}_2$ , single crystal, carrier heating by microwave elec. field 2-8834  
 $\text{CuInTe}$ , single crystals, as-grown elec. props. 2-46011  
 $\text{Cu}_x\text{Rb}_{1-x}\text{Cl}_{20-(7+x)}$  solid electrolyte, polarization study 2-21380  
 $\text{Cu}_2\text{S-CdS}$  dry process solar cells, CdS carrier concentration influence on cell props. 2-27634  
 $\text{Cu}_2\text{-S-CdS}$  thin film solar cells with dual impurity distrib. in bas 2-37214  
 Ga-Sb-Te system, GaSb-based solid soln. region investig. comp. depend. on carrier conc. 2-12720  
 $\text{Ga}_{1-x}\text{Al}_x\text{As}$ , MO-CVD growth, quantum well transport structs. 2-9282  
 $\text{Ga}_{1-x}\text{Al}_x\text{As:Se}$ , donor energy levels, elec. cond. and electron conc. stud 2-51106  
 GaAs:Cr,  $\pi$ -type, semi-insulating, Cr concentration determ. on basis of temp. dependencies of electron mobility and carrier concentration  $\rho$  (*Slovak*) 2-51200  
 GaAs, Czochralski grown, liq. encapsulated technique, elec. compensator melt stoichiometry effect 2-51164  
 GaAs doping superlattices, photoexcited carrier conc. and mobility, Ha effect meas. 2-51226  
 n-GaAs, epilayers, phonon generation and electron-phonon scattering 2-21257  
 p-GaAs epitaxial films, Hall effect of hot electrons 2-36162  
 GaAs, epitaxial layer thickness, dependence of electrophysical parameter (*Russian*) 2-13200  
 GaAs epitaxial layers, by low pressure MOVPE, using triethylgallium a Ga source 2-5817  
 n-GaAs, epitaxially grown, p-type buffer layer, evaluation using Ha meas. 2-17095  
 GaAs ion implanted layers, mobility and carrier conc. profiles determ. a 299 and 105K 2-51167  
 GaAs, laser annealing induced defects 2-40433  
 n-GaAs, lightly doped, nonequilibrium carrier transport transient processes: reemission effect 2-36061  
 GaAs, MO-CVD, p-type, diffusion lengths 2-8808  
 GaAs MOS structures, charge trapping in anodic native oxide under pulsed laser illum. 2-41016  
 GaAs multilayer struct., carrier conc/ and mobility, rapid determ. metho 2-8815  
 n-GaAs, Raman scatt. from ion implanted carriers 2-46607  
 GaAs, selective carrier removal using O implantation 2-21162  
 GaAs substrates, Cr, Si, Mn, and Fe distrib. after annealing with and without  $\text{SiO}_2$  encapsulation 2-30478  
 GaAs substrates, monolayer-Sn technique for solving substrate film interface high resist. problem in MBE 2-26243  
 GaAs, VPE growth in low press. halogen transport system 2-17632  
 n-GaAs wafer, proton implanted, IR reflectivity characteris. 2-17478  
 p-GaAs, Z 2-17114  
 GaAs:Cr, metal-organic VPE, elec. and optical props. of deep level 2-8768  
 GaAs:Cr, intrinsic density, band gap and effective mass parameters, C acceptor capture coeff. 2-51203  
 GaAs:Ge MBE layers, elec. behaviour obs., autocompensation mechanism 2-51361  
 GaAs:Si, MBE layers, electrochem. doped, elec. props. 2-45222  
 GaAs:Si, heavily doped, annealing-induced changes, Si defect conc depend. 2-30889  
 GaAs:Si, ion implanted and annealed, carrier conc. profiles, C-V meas techniques 2-12623  
 GaAs:Te,Zn, heavily doped material with p-n junction, SEM local cathodolum. obs. 2-46776  
 GaAs:Zn, polycrystalline, optoelectronic props. rel. to grain boundary features, cathodoluminesc. anal. 2-36713  
 p-GaAs/P-Ga $_{1-x}\text{Al}_x\text{As}$  isotype heterojunction in DH laser material 2-46111



## carrier density continued

- GaAs-(AlGa)As heterojunction interfaces, modulation doped, electron mobility depend. on electron density and Al conc. 2-21662
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As superlattice, energy levels and cond. in appl. mag. field 2-8866
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As submicron heterostructs., IR optical characterisation 2-17565
- GaAs-AlGaAs DH injection laser, active layer radiative processes in strong mag. field 2-49751
- GaAs-MgAs heterojunction interface, backside-gated modulation-doped 2-8862
- GaAs-GaAlAs, DH laser grown by metalorganic CVD process 2-937
- GaAs-GaAlAs diode laser, multiple segment stripe contact, effect of non-uniform current 2-935
- GaAs<sub>1-x</sub>P<sub>x</sub>, direct-gap, electron-hole plasma expansion, photoluminesc. study 2-21617
- (GaAs)<sub>1-x</sub>(ZnSe)<sub>x</sub>, solid solns., electrophys. props. 2-40927
- Ga<sub>0.47</sub>In<sub>0.53</sub>As, LPE growth, baking temp. effect on purity, photoluminesc. and elec. props. 2-27106
- Ga<sub>0.47</sub>In<sub>0.53</sub>As:Sn, MBE layers, elec. props. 2-30978
- Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, IR refl. spectra, free carrier parameters and lattice vibrs. 2-5678
- GaP, lanthanide doping influence on elec. and photolum. props., LED material 2-41391
- GaP:Ag(Au), influence of heat treatment on distrib. of diffused impurities 2-26141
- GaP-Au surface barrier struct., elec. breakdown mechanisms 2-17159
- GaSb:Te, Czochralski grown, impurity distrib., cathodoluminesc. study 2-51715
- GaSb:Te and GaSb:Te,Zn, charge transport characts., 80 to 700K 2-30895
- Ga<sub>2</sub>Te<sub>3</sub> thin films, prep. and elec. props. 2-5475
- n-gas methodic error in carrier conc. meas. by far IR absorpt. 2-5414
- GdBi<sub>6</sub>, elec. props., hopping cond., thermolec. power 2-40887
- Gc containing Hg<sup>0</sup>, Zn<sup>0</sup> and Cd<sup>0</sup> centres, impurity photoconductivity spectra, photoimpact ionization mechanism and oscills. 2-1953
- Ge, point defects and disordered regions due to irradi., magnetoresist. meas. 2-8826
- Ge, thermal gradient-drift domains in electron-hole plasma 2-17106
- n-Ge, weak-field magnetoresistance coeffs., magnetoresistance skewness 2-51217
- Ge:Au, gamma irradi., radiation defects interaction with impurity 2-12633
- Ge:Li,  $\gamma$ -irrad., radiation defect interaction with impurity atoms 2-25918
- Ge:Pd, Sb,  $\gamma$ - and electron-irrad., complex formation, primary defects charge state effect 2-40436
- Ge:Zn, second impurity level, activation energy, random field effects 2-51124
- Ge-Si alloys, n-type, heavily-doped, short term heat treatment effects on thermoelectric props. 2-36071
- GeTe amorphous thin films, elec. cond. mechanisms 2-13083
- GeTe-Bi<sub>2</sub>Te<sub>3</sub>-Cu<sub>2</sub>Te quaternary system, electrophys. props. of GeTe-based solid solns., double doping effect 2-13089
- HgCdTe, recombination processes in 3 to 5  $\mu$ m 2-21529
- Hg<sub>0.6</sub>Cd<sub>0.4</sub>Te, defect struct., Hall effect study 2-46033
- Hg<sub>0.8</sub>Cd<sub>0.2</sub>Te:Cu, pure and doped, defect struct., Hall effect study 2-46031
- Hg<sub>0.8</sub>Cd<sub>0.2</sub>Te:In, defect struct., Hall effect study 2-46032
- Hg<sub>0.8</sub>Cd<sub>0.2</sub>Te, electron freezeout and hopping cond., magnetoresist. and Hall effect meas. 2-5423
- Hg<sub>1-x</sub>Cd<sub>x</sub>Te epitaxial layers, slider LPE growth using Hg press. controlled growth solns. 2-31645
- (Hg<sub>1-x</sub>Cd<sub>x</sub>)Te RF sputtered thin films, effect of annealing in Hg vapour on props. 2-8896
- (Hg<sub>1-x</sub>Cd<sub>x</sub>)Te RF triode-sputtering film for IR detector arrays 2-17174
- Hg<sub>1-x</sub>Cd<sub>x</sub>Te, two electron cond., Hall coeff., electron mobility and conc. 2-51216
- Hg<sub>1-x</sub>Mn<sub>x</sub>Te, zero gap, conduction-valance band overlap in mag. field Hall coeff. and cond. meas. 2-45827
- n-InAs accumulation layers, far IR cyclotron reson. and Shubnikov-de Haas oscills. 2-41020
- In<sub>2</sub>O<sub>3</sub> films, evaporation from In<sub>2</sub>O<sub>3</sub>/In source, chemical and elec. props. 2-12933
- n-InP,  $\gamma$ -irradiated, homogeneously compensated, electron mobility at low electron density 2-26390
- InP, LPE-grown, effect of substrate orientation on electrical properties 2-26522
- InP, polycrystalline, low temp. growth, elec. props. meas. 2-22155
- InP:Co, single cryst. growth and elec. props. 2-9264
- n-InP:Cu, homogeneously compensated, electron mobility at low electron density 2-26390
- InP:Fe, Mg(Zn), ion implanted, struct. and elec. props. 2-21163
- InP:O, horizontal Bridgman growth, O doping effect, Hall effect meas. 2-16667
- InSb, deep acceptors, M<sub>1</sub> defect accumulation kinetics after electron irradi. 2-40831
- p-InSb, extrinsic semicond., magnetoconc. effect 2-8823
- p-InSb film, hydrogenated, elec. transport props. 2-8895
- n-InSb, Landau levels nonthermal broadening, transverse magnetoresist. and photomag. effect 2-8822
- p-InSb, light and heavy hole mobility and conc., effect of dislocations (Russian) 2-26395
- InSb, magnetophonon oscill. of thermolec. power, anomaly in p-type to intrinsic transition region 2-30914
- InSb:Ge, effect of nonmetal-metal transition due to doping in lattice thermal cond. 2-50939
- In<sub>2-x</sub>Sn<sub>x</sub>O<sub>3-y</sub> films, sputter deposited, elec. and optical props., heat treatment effects 2-26523
- n-Mg<sub>1-x</sub>Cd<sub>x</sub>Te, degenerate, carrier conc. depend. of Auger lifetime 2-36059
- $\beta$ -MnO<sub>2</sub>, pyrolusite, carrier mobility and conc. meas. 2-46029
- Ni<sub>2</sub>(Fe<sub>1-x</sub>Nb<sub>x</sub>), Hall effect rel. to temp. (Russian) 2-13041
- Pb salt epitaxial film, photovoltaic diode IR detector, modified hot wall technique prep. 2-15222
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te, hole mobility and band struct. at 77K 2-1923
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Cd, carrier density, temp. depend. 2-17089
- PbTe (111) epitaxial thin films, elec. transport props., thermal-cycling induced changes 2-13201
- n-PbTe epitaxial layers, interface electron states, IR radioelectric effect study 2-51352

## carrier density continued

- PbTe:Cl, self-compensation of donor effect by vacancy-impurity complexes, Hall carrier density meas. 2-36067
- PbTe:Ti, hole scattering and mobility, impurity effects 2-13107
- Pb(Zr<sub>1-x</sub>Ti<sub>x</sub>)<sub>2</sub>O<sub>3</sub>, elec. props. study 2-45960
- Si, amorphous, trap-controlled dispersive transport and exponential band tails 2-40964
- Si, amorphous solar cell, computer simulation 2-52342
- Si, amorphous thin-layers production and appls. (German) 2-46943
- Si CVD films, polycryst., elec. props., depend. on grain size and impurity doping conc. 2-30981
- Si, carrier density, deformation potential constants, Hall effect anal. 2-21609
- n-Si, cond. in strong alternating elec. fields 2-30903
- Si, electric carriers and heat at high electronic temp. 2-8809
- n-Si, electron pulse irradi., transient process kinetics 2-36060
- Si, intrinsic carrier conc., temp. depend. energy gap, Fermi level 2-16986
- p<sup>+</sup>-Si, ion implanted, isothermally annealed, carrier mobility and conc. profiles 2-51170
- Si, ion implanted, pulsed electron beam apparatus and annealing 2-12625
- Si, laser annealing, computer model of lattice temp., carrier conc. and temp. 2-45259
- Si, MOS inversion layers, Anderson localisation, Hall mobility study 2-51316
- Si, MOSFET inversion layers, electron mobility, temp. and carrier const. effects 2-51319
- Si p-n structure, homogeneously heated, injection effects 2-13177
- Si, photoelectric effects, lux depends. under surface and bulk Auger recomb. conditions 2-13133
- Si, point defects and disordered regions due to irradi., magnetoresist. meas. 2-8826
- Si, spontaneous oscills. under impurity centre breakdown conditions 2-51223
- Si:As, atom and carrier depth distrib. for channelled 300 keV As ions, SIMS study 2-5163
- Si:As, ion implanted, doping profiles and elec. activation, Rutherford backscatt. study 2-25916
- Si:As, ion implanted, polycryst. film, laser irradi., elec. props. grain size, annealing effect 2-17173
- Si:As, ion implanted, pulsed electron beam annealing 2-50710
- Si:Au, intrinsic carrier conc., temp. depend. energy gap, Fermi level 2-16986
- p-Si:B,  $\gamma$ -irrad., impurity-point radiation defects interactions 2-25928
- Si:B, recombination radiation of exciton-impurity band 2-2345
- Si:Cr, energy levels and degeneracy ratios determ. from Hall coeffs. 2-30825
- Si:Ga, high dose implanted, thermal annealing and elec. activation 2-5147
- Si:H.P. amorphous, photogenerated carrier recombination 2-46018
- Si:In(Ga), trap population and free hole conc. with IR photoexcitation 2-51211
- Si:P CVD layers, refr. index, absorption coeff., free carrier model 2-31577
- Si:P film, microstructure and sheet resistance 2-30480
- Si:P films, elec. cond., Hall effect 2-46166
- Si-Al<sub>2</sub>O<sub>3</sub>, charge carrier props. in p-type layers of SOS 2-8812
- Si-Al<sub>2</sub>O<sub>3</sub>, SOS films, transport props. investig. by gate controlled galvanomagnetic effects 2-51336
- Si-GaP heterojunction, elec. and photoelec. props. 2-46123
- Si-Ge:P, thermal cond. change by precip. of dopant 2-45967
- Si-MOS n-inversion layers, Anderson localisation and negative magnetoresistance (Japanese) 2-26513
- Si-SiO<sub>2</sub> MOS system, As implants through SiO<sub>2</sub> layer, TEM, Rutherford backscatt. and device characts. study 2-40450
- SiH<sub>4</sub> amorphous Schottky barrier solar cell, carrier collection efficiency, recombination effects 2-9652
- SmB<sub>6</sub>, elec. props., hopping cond., thermolec. power 2-40887
- SmS, influence of dislocations on carrier density 2-51207
- SmS single cryst., carrier density, elastic deform. influence 2-51206
- Sn<sub>0.13</sub>Eu<sub>0.08</sub>Mo<sub>0.8</sub>, Hall coeff. and resistivity, low temp. and high press. 2-30910
- SnOx, amorphous spray coating, elec. and optical props. 2-40908
- (SnTe)<sub>1-x</sub>(PbSe)<sub>x</sub> epitaxial layers, band struct. parameters (Russian) 2-21499
- Ti<sub>1-x</sub>S<sub>x</sub>, transport and optical props. 2-1932
- Ti<sub>1-x</sub>S<sub>x</sub>, transport props. and Raman scatt., stoichiometry depend. 2-13043
- Tl, helicon resonance, carrier conc., magnetoresistivity, Fermi surface model 2-8748
- TlBiSe<sub>2</sub>-PbSe, phase diagram, electrophysical props. 2-9334
- TlInTe<sub>2</sub> single cryst., elec. cond. in strong elec. field, 77 to 300K 2-40921
- UO<sub>2+x</sub>:Y<sub>2</sub>O<sub>3</sub>, pure and doped, elec. cond., hole conc. and mobility, 800 to 1400°C 2-36039
- YbB<sub>6</sub>, elec. props., hopping cond., thermolec. power 2-40887
- ZnO film, absorption edge shift at high carrier densities 2-13582
- ZnO film prep. by metalorganic CVD from diethyl zinc 2-41525
- ZnP, high resist. layers, localised states, carrier conc., field effect 2-26412
- ZnS:Cr<sup>2+</sup>, local centre charging, Hall effect 2-17024
- ZnSe:Cr<sup>2+</sup>, local centre charging, Hall effect 2-17024
- ZnSe:In, epitaxial thin films, doped and undoped, electron mobility and carrier conc., temp. depend 2-51357

## carrier diffusion length see carrier lifetime

## carrier lifetime

- chalcogenide glasses, review of studies at Ioffe Physical-Technical Institute, USSR 2-45050
- degenerate multiband semiconductors, generalised Einstein relation for diffusivity-mobility ratio 2-36058
- interdigitated back contact solar cell with high-current collection 2-37405
- many-layered heterostruct., hot electron vel. correl. and diffusion 2-46118
- minority carrier diffusion coeff. in heavily doped semicond. region of Si device 2-46023
- MIS solar cells, computer-aided anal. of short circuit current, spectral response meas. appls. 2-42013
- MIS structures, minority carrier lifetime and doping profile determ. by photoinjection 2-17161



## carrier lifetime continued

- molecular crystal, exciton or charge carrier diffusion coeff., band and hopping limits 2-40798  
 MOS capacitor, B doped, generation lifetime, C-t characteristics meas. 2-26506  
 MOS capacitor, generation lifetime determ. from I-V and I-t meas. 2-46146  
 MOS structure, low-doped, pulsed photoinjection, characteris. of doping level and minority carrier lifetime 2-17164  
 MOS structure, trichloroethylene oxidation effect on generation characteristics (*Chinese*) 2-13186  
 one-dimensional disordered system, excited states lifetime 2-21600  
 p-n junction, hot carrier thermo-EMF under strong forward bias conditions 2-5454  
 p-n junction, minority carrier lifetime meas. by laser scanning digital system (*Rumanian*) 2-41000  
 p-n junction solar cells, photo voltage decay method for minority carrier lifetime meas. 2-14076  
 photoelectrolysis cell, current-voltage characteristics 2-22632  
 photovoltaic detector arrays, backside-illuminated, MTF modelling 2-23722  
 quartz, cryst. and glassy, hot carrier ambipolar diffusion length, ultrasoft X-ray range 2-9198  
 semiconductor, carrier mobility under controlled trap-filling conditions, transit time method 2-21591  
 semiconductor, degenerate, generalised Einstein relation thermal noise calc. 2-36056  
 semiconductor laser, modulation response, lateral carrier diffusion effect 2-914  
 semiconductor material/device characteris. using two-wavelength laser scanner 2-16057  
 semiconductor materials, SEM-EBIC minority-carrier diffusion-length measurement technique 2-51201  
 semiconductor thin film, minority carrier bulk diffusion length determ. by SEM-EBIC 2-30980  
 semiconductor ultrathin film, non-parabolic, Einstein relation, size quantisation effect 2-13198  
 semiconductors, degenerate narrow-gap, Fermi-Dirac integrals and Fermi energy 2-45979  
 semiconductors, direct gap, minority carrier lifetime, electron beam induced current study 2-46014  
 semiconductors, photoelectric effect in semiinfinite surface-barrier struct., luminescence 2-17114  
 semiconductors, quasiintrinsic lifetime and relax. regimes, high injection levels 2-46026  
 Shockley-Haynes expt., theory, contact effects 2-51202  
 Si  $n^+n^-p^-$  rectifier junction, induced short circuit currents 2-21666  
 solar cell, band gap narrowing evaluation methodology based on measurements of emitter and base lifetimes and relaxation time 2-42012  
 solar cells, carrier redistribution anal. within junction using kinetic method 2-42014  
 solar cells, effect of  $O_2$  impurities 2-42024  
 solar cells, p-n junction, generalised approach to minority carrier lifetime meas. 2-2794  
 solar cells, Si-on-ceramic, evaluation for low-cost fabrication 2-18072  
 TCNQ, photocurrent, photogenerated carrier lifetime 2-40961  
 (Al,Ga)As epilayers, and DH lasers, minority carrier lifetime and luminescence 2-8807  
 AlGaAs-GaAs solar cells, proton irradi., radiation-induced deep-level defects, annealing, DLTS, SEM 2-32084  
 Al<sub>0.7</sub>Ga<sub>0.3</sub>As, photoluminescence, carrier mobility and lifetime determ. 2-41424  
 Bi<sub>2</sub>GeO<sub>20</sub>, wide-gap semicond., free carrier exclusion in current-voltage characts. 2-36050  
 n-Cd<sub>3</sub>As<sub>2</sub>, diffusivity-mobility ratio, carrier degeneracy effect 2-5401  
 n-Cd<sub>3</sub>As<sub>2</sub>, ultrathin films, Einstein relation, size quantisation effect 2-41038  
 Cd,Hg<sub>1-x</sub>Te, surface recomb. vel. determ. from temp. depend. of minority carrier lifetime 2-51208  
 Cu<sub>2</sub>O Schottky-barrier solar cells, minority carrier diffusion length meas. for Cu-Cu<sub>2</sub>O functions 2-37389  
 p-GaAs, degenerate, low temp. luminesc., doping effect 2-36695  
 n-GaAs, lightly doped, nonequib. carrier transport transient processes, reemission effect 2-36061  
 GaAs, MO-CVD, p-type, diffusion lengths 2-8808  
 GaAs, minority carrier lifetime, electron beam induced current study 2-46014  
 GaAs  $p^+n^-n^+$  structs., nonequib. minority carriers, effective lifetime in lightly doped n-type region 2-17155  
 p-GaAs, reemission effect on carrier transport 2-8814  
 p-GaAs, Z 2-17114  
 GaAs:Cr S-type diodes, impedance under double injection conditions, switching mechanism 2-30962  
 GaAs:Zn, polycrystalline, optoelectronic props. rel. to grain boundary features, cathodoluminesc. anal. 2-36713  
 GaAs-GaAlAs, DH laser grown by metalorganic CVD process 2-937  
 GaAs-GaAlAs DH lasers, nonradiative lifetime and leakage losses 2-7763  
 GaP:N, Al<sup>2+</sup> postimplantation gettering effects in p-n junctions 2-12627  
 p-GaSb, degenerate, low temp. luminesc., doping effect 2-36695  
 n-GaSb:S, minority carrier diffusion length, photoconductivity study 2-21604  
 Ge, surface recombination and bulk lifetime contactless PME investig. 2-17116  
 Ge, thermal gradient drift domain rel. to sample shape change 2-36051  
 Ge-Se evaporated film, amorphous, non-dispersive and dispersive transport 2-46019  
 Hg<sub>0.7</sub>Cd<sub>0.3</sub>Te, photogenerated carrier lifetime meas. using contactless opt. technique 2-17112  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, deep levels, correlation with photodiode performance 2-1856  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, electron irradi. and annealed, carrier lifetime and recomb. props. 2-17090  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, narrow gap semicond., recomb. effects. temp. depend. photoresponse meas. 2-36055  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, nonequib. carrier recomb., Auger recomb., carrier lifetime 2-51204  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, photogenerated carrier lifetime, deep levels, optical modulation spectroscopy 2-51732  
 In-phthalocyanine, metal free x-phase, solar cell, low freq. photocapacitance 2-27612

## carrier lifetime continued

- InGaAsP heterostructures, nonequib. carrier lifetime and edge luminesc. reemission 2-13554  
 p-In<sub>0.7</sub>Ga<sub>0.25</sub>As<sub>0.55</sub>P<sub>0.45</sub>Cd LPE layer, doping characts. and elec. props. 2-41031  
 n-InP single cryst., electron mobility and minority carrier lifetime 2-13093  
 InSb, conductivity fluctuations in crossed elec. and mag. fields 2-5445  
 n-InSb, hot electrons, noise and diffusivity 2-51182  
 n-InSb, non-parabolic, ultrathin films, Einstein relation, size quantisation effect 2-13198  
 InSb, photoexcited hot carrier lifetime, magnetophonon oscillations 2-46068  
 InSb, photoexcited hot carriers, far IR cyclotron reson. and emission 2-46384  
 n-Mg<sub>1-x</sub>Cd<sub>x</sub>Te, degenerate, carrier conc. depend. of Auger lifetime 2-36059  
 PbO film, photoconductivity in space charge and recombination regime 2-21622  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Se photovoltaic detectors, minority carrier lifetimes, resist-area product 2-26433  
 Se, liquid, photoconductivity 2-40960  
 Si, amorphous, solar cells, materials, assessment, internal field, hole transport and lifetime 2-42010  
 Si amorphous p-n junction, drift type photovoltaic effect 2-46107  
 Si, amorphous solar cell, computer simulation 2-52342  
 Si, Auger recombination at low temp. 2-40931  
 Si, carrier lifetime profile induced by ion implantation, determ. using MOS struct. 2-51210  
 Si, defect creation and recomb. lifetime due to high energy and  $\gamma$  irradiation 2-50715  
 Si, electron diffusion coeff. 2-21599  
 Si, electron irradi., minority carrier lifetime meas. 2-46024  
 Si, gamma-ray irradi., uniaxial deform. influence on nonequilibrium carrier recombination 2-26410  
 Si, laser damage gettering and lifetime improvement appl. 2-12637  
 p-Si, low resist., minority carrier diffusion length, heat treatment effect 2-46022  
 p-Si, minority carrier diffusion length meas., evaluation of surface photo voltage method 2-30906  
 Si, neutron irradi. dislocation-free crystals, annealing influence on elec. and struct. props. 2-40440  
 Si on metallurgical grade Si, heat treatment effects 2-27548  
 Si p-n junction, alpha particle irradi., radiation defects 2-12647  
 Si polycrystalline, n and p-type, photocurrents and diffusion length near grain boundaries, interfacial recomb. vel. 2-51209  
 Si, polycrystalline, RAD polysilicon sheets characterisation using SEM in EBIC mode 2-17091  
 Si, polycrystalline, solar cells, grain size dependence of photovoltaic props 2-22622  
 Si, polycrystalline films, diffusion length meas. method based on photovoltaic conversion 2-5476  
 p-Si, SCL current flow, hot holes and noise 2-51183  
 Si sheet, ion implanted thin film solar cells 2-37297  
 Si, solar cell, single cryst. and polycryst., minority carrier diffusion length 2-27611  
 Si solar cell fabrication, carrier lifetime rel. to doping density, importance of low-temp. processing 2-27674  
 Si solar cells, fabricated by planar technology, characts. 2-6138  
 Si solar cells, high efficiency, lifetime and effective surface recomb. velocity meas. 2-52367  
 Si solar cells, minority carrier lifetime, laser-transient photovoltaic effect study 2-47482  
 Si solar cells, polycrystalline,  $p^+n^-n^+$  structure, low cost development 2-18079  
 Si solar cells columnar, diffusion parameters optimisation using two-step diffusion of phosphorus 2-18081  
 Si solar cells crystalline, non-single, grain boundaries electrical props 2-18088  
 Si substrates, numerical anal. of minority carrier lifetime, contactless meas. technique (*Japanese*) 2-13094  
 Si, surface recombination and bulk lifetime contactless PME investig. 2-17116  
 Si wafer processing, temp. gradient zone melting appl. 2-22161  
 Si:Au(Pt), deep levels, effect on device performance (*Japanese*) 2-30818  
 Si:B(Al), junction solar cell, emitter layer minority carrier lifetime photovoltaic obs. 2-52339  
 Si:B<sup>+</sup>(P<sup>+</sup>)(As<sup>+</sup>), solar cells, prep. by ion implantation and pulsed laser annealing, optical and elec. characterisation 2-14080  
 n-Si:Gd,  $\gamma$  and electron-irradi., defect formation; elec. and optical stud. 2-21175  
 Si:H, amorphous, solar cells, electronic props., review 2-45970  
 Si:H, amorphous Schottky barrier solar cells, prep. by plasma decompos. and sputtering, carrier generation efficiency 2-14079  
 Si:H, intrinsic, amorphous, dual light beam modulation of photocarrier lifetime 2-46063  
 Si:H, P, amorphous, dispersive transport and electronic struct. 2-26408  
 a-Si:H, photoresponse time and density of localised states in mobility gap 2-46064  
 Si:H Schottky barrier diodes, amorphous, electrical characterisation 2-37225  
 n-Si:Pt, impurity levels, capture cross section, capacitance, hole lifetime and resistivity obs. 2-51125  
 Si-SiO<sub>2</sub>-Ta sputtered coating, interface stresses and elec. props. 2-21475  
 n-SiC (6H), minority carrier diffusion length, annealing effect, photocurrent obs. 2-51205  
 SiH, amorphous Schottky barrier solar cell, carrier collection efficiency recombination effects 2-9652  
 Zn<sub>3</sub>P<sub>2</sub>-Mg, p-n junction form., carrier diffusion lengths, collection efficiency spectral response, EBIC meas. 2-26494

## carrier mean free path

- see also *electron mean free path (metals)*  
 semiconductor, carrier collision duration 2-51161  
 thin metal films, energy depend. of thermoelectric power, graphically determ. 2-51153  
 GaAs, surface electron scatt., diffusivity and mean free path (*Russian*, 2-13127  
 Si, photoelectrons, mean free path, kinetic energy depend. 2-36759



# carrier mean free path continued

SiO<sub>2</sub>, energy-loss function model, mean free paths and stopping power calcs. 2-21192  
 SiO<sub>x</sub> (0 ≤ x ≤ 2), photoelectrons, mean free path, kinetic energy and O conc. depend. 2-36759

# carrier mobility

see also carrier mean free path; carrier relaxation time; current density; electron-hole recombination; electron mobility (metals)  
 1/f noise, mobility fluctuations 2-30940  
 1/f noise, role of mobility 2-51258  
 amorphous semicond., Hall effect due to hopping cond. in localised states 2-40935  
 amorphous semiconductors, photoinduced absorpt., subpicosecond relax. 2-44410  
 amorphous semiconductor, hopping and AC cond., Hall mobility, master eqn. 2-40878  
 anthracene, doping influence on charge carrier transport 2-30885  
 bovine serum albumin, hydrated, elec. charge mobility 2-52476  
 degenerate multiband semiconductors, generalised Einstein relation for diffusivity-mobility ratio 2-36058  
 dibenzothiophene, anisotropy of hole drift mobility meas. by photocond. technique, temp. depend. 2-30904  
 dielectric liquid, plane layer, overstable electrothermal instabilities 2-13432  
 1,3-diphenyl-5-(p-chlorophenyl)-2-pyrazoline, van der Waals solid, carrier transport studies 2-46005  
 elemental semiconductors, mobility fluctuation 1/f noise, elec. field depend. 2-1973  
 ferroelectric, carrier mobility temp. depend., interaction of carriers with soft ferroelec. mode 2-17071  
 ferroelectrics, carrier mobility anomaly, near phase transition, soft TO phonon and defect scatt. 2-45958  
 funnelling, alpha-particle-induced field and enhanced collection of carriers 2-50720  
 glassy semiconductors, mobility distrib. in drift of carriers 2-17070  
 Hall mobility of carriers hopping in impurity band, r-percolation model 2-21551  
 holes, diffusion-mobility relation, Einstein's contrib. 2-15131  
 Holstein 3-site hopping process, Hall mobility, r-percolation case 2-40936  
 hot electron diffusion coefficient, determ. from dispersion of narrow packet 2-13087  
 II-V compounds, amorphous and cryst., thin films, prep., struct., elec. and optical props. 2-26262  
 III-V semiconductors, carrier velocities, time depend., Boltzmann eqn., iterative soln. 2-45956  
 III-V semiconductors, vacuum metalorganic CVD epitaxial layers, carrier mobility 2-27092  
 iodoform cryst., hole drift mobility, anisotropy and temp. depend. 2-51199  
 IV-VI semiconductors, basic properties, evolving perspectives and unifying characts. 2-17066  
 macroscopic effects of carrier transport in ordered and disordered solids 2-45929  
 many-valley semiconductor, intervalley diffusion of hot-electrons 2-45999  
 MNOS structure, degradation props. 2-13187  
 mobility edge in noncrystalline materials, electron props. and minimum metallic cond. 2-45832  
 molecular crystals, interaction between excitons and free charge carriers, hot and complex charge carriers generation 2-8806  
 MOS structure, Monte Carlo simulation of conduction electrons in n-type inversion layer 2-51331  
 naphthalene, electron mobilities, density of states phonon scatt. 2-13067  
 organic molecular crystals, coherent and incoherent transfer of excitons and charge carriers (Russian) 2-36042  
 organic quasi-one dimensional conductors, nonlinear conductivity 2-51155  
 organic semiconductor, model of photogeneration of carriers 2-30930  
 p-n junction, abrupt, forward biased, model for terminal characts. and inject efficiency 2-46121  
 perfect dielectric crystal, low-mobility transport, review 2-8801  
 polar crystal, photogalvanic effect, mag. field influence, and carrier mass determ. 2-51234  
 poly-N-vinyl carbazole, model of photogeneration of carriers 2-30930  
 polycrystalline semiconductor, effective mobility, approx. soln. of Boltzmann eqn. w.r.t. crystallite polarisation 2-30883  
 polydiacetylene, cryst., electron injection, electron mobility and energy level spectrum 2-17061  
 polyethylene terephthalate films, 'slow' electronic carrier motion 2-8904  
 polyvinylidene fluoride, drift mobility determ., surface charge decay method, dopant effects 2-45983  
 scattering of carriers from neutral point defects near displacive phase transition 2-36034  
 semiconductor, carrier mobility under controlled trap-filling conditions, transit time method 2-21591  
 semiconductor, degenerate, generalised Einstein relation thermal noise calc. 2-36056  
 semiconductor, diffusion of high density electrons and holes, and many-body effects 2-45866  
 semiconductor, electron-phonon coupling determ. from warm carrier coeff. 2-40879  
 semiconductor, frequency and wavevector dependent diffusion coefficient of electrons from Monte Carlo calculations 2-46000  
 semiconductor, non-equilib. hot-carrier diffusion phenomenon, theoretical non-Markovian approach 2-45996  
 semiconductor, nondegenerate, galvanomagnetic props., size effect 2-51215  
 semiconductor, polycrystalline, carrier mobility, grain boundary barrier model 2-21580  
 semiconductor characterisation by Raman scatt. 2-17476  
 semiconductor film, carrier mobility and resistivity, spreading magnetoresist. determ. 2-41041  
 semiconductor heterolayer, two-dimensional electron transport, screening 2-13172  
 semiconductor layer structures, high-freq. characts. 2-17149  
 semiconductor polar heterolayers, electron transport, 2-D scatt. process 2-51163  
 semiconductor superlattice, electron drag by solitons 2-8868  
 semiconductor thin films, drift mobility and density 2-13397  
 semiconductor ultrathin film, non-parabolic, Einstein relation, size quantisation effect 2-13198  
 semiconductors, amorphous, cond., drift and diffusion 2-5410

# carrier mobility continued

semiconductors, compensated, localised charge carriers, particle statistics and transport 2-17085  
 semiconductors, controlled trap occupation, effective mobility, time-of-flight techniques 2-26327  
 semiconductors, degenerate narrow-gap, Fermi-Dirac integrals and Fermi energy 2-45979  
 semiconductors, dispersive electronic transport, multiple trapping, computer simulation 2-51198  
 semiconductors, doped, diffusion of electrons and holes at high lattice and electronic temps. 2-46067  
 semiconductors, non-equilib., hot-carrier diffusion phenomenon, Monte Carlo approach 2-45997  
 Shokley-Haynes expt., theory, contact effects 2-51202  
 a-Si:H photovoltaic cells conversion efficiency limiting parameters anal. 2-27639  
 solar cell spectral response, effect of minority carrier mobility variations 2-37341  
 solar cells, MIS, p-type, electron capture by surface states, adverse and beneficial effects 2-37228  
 spatially and energetically disordered systems, hopping Hall mobility, temp. depend. percolation theory 2-40895  
 TCNQ salt, K-TCNQ, microwave conductivity 2-51157  
 wide gap semiconductors, density of localised states determ. from field effect 2-35918  
 AgBr(Cl):I layer, dye sensitised photolum. 2-46728  
 (Al,Ga)As-GaAs heterostruct., electron mobility, background doping effect 2-26483  
 Al-SiO<sub>2</sub>-Si structure, hole mobility and density of states at Si-SiO<sub>2</sub> interface 2-5469  
 Al<sub>1-x</sub>Ga<sub>x</sub>As, photoluminescence, carrier mobility and lifetime determ. 2-41424  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs heterostructure, modulation doped, MBE grown, electron mobility study 2-8865  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs heterostructures, carrier mobility enhancement 2-36130  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs heterojunction, selectively doped, cyclotron reson. linewidth 2-51467  
 Al<sub>0.48</sub>In<sub>0.52</sub>As, MBE layers, elec. props. 2-30978  
 As-Se, glassy, hole drift mobility, composition and struct. depend. 2-46021  
 As<sub>2</sub>S<sub>3</sub>-Sb<sub>2</sub>S<sub>3</sub> and As<sub>2</sub>S<sub>3</sub>-Sn, glassy, hole drift mobility, composition and struct. depend. 2-46021  
 As<sub>2</sub>Se<sub>3</sub>, amorphous film, transport props. 2-41035  
 As<sub>2</sub>Se<sub>3</sub>, glass, pure and doped, transient hole transport meas. 2-26389  
 As<sub>2</sub>Se<sub>3</sub>Te<sub>4</sub>Ge<sub>10</sub>Si<sub>12</sub>, amorphous, transient switching process, simple analytical explanation 2-8840  
 Au-mica-p-Te:Cu film MIS struct., field effect studies 2-41017  
 α-Bi rhombohedral, elec. cond., thermoelec. power and Hall coeff. 2-40889  
 Bi film, elec. resist. oscill. behaviour with thickness 2-5478  
 Bi<sub>2</sub>Te<sub>2.89</sub>Se<sub>0.12</sub> solid soln., halide doping effect on elec. and thermoelec. props. 2-13110  
 Cd<sub>3</sub>As<sub>2</sub>, amorphous films, elec. transport props. 2-40911  
 n-Cd<sub>3</sub>As<sub>2</sub>, diffusivity-mobility ratio, carrier degeneracy effect 2-5401  
 n-Cd<sub>3</sub>As<sub>2</sub> ultrathin films, Einstein relation, size quantisation effect 2-41038  
 Cd<sub>3</sub>P<sub>2</sub>, electron mobility, thermoelectric power, Nernst-Ettingshausen effect 2-26400  
 n-CdS crystals, annealed in Cd or In, elec. cond. props. 2-45964  
 n-CdS, piezoelectric semicond., acoustic wave propag., electron mass and collision freq. changes 2-46079  
 CdS:CuCl<sub>2</sub>, baked layers, effects on elec. and photoelectrical props. 2-30983  
 CdTe, transient hot-carrier phenomena, method of moments for anal. 2-45998  
 n-CdTe:Pb films, vapour deposited, elec. anal. optical props. 2-30985  
 CsI:Na, electron pulse irradiation, kinetics of luminesc. and relaxation (Russian) 2-5740  
 CuInSe<sub>2</sub>, single crystal, carrier heating by microwave elec. field 2-8834  
 CuInTe<sub>2</sub>, single crystals., as-grown elec. props. 2-46011  
 Cu<sub>2</sub>Mo<sub>2</sub>S<sub>6</sub>, single cryst., supercond., Hall coeff. and resist. meas. 2-17099  
 FeFe<sub>0.95</sub>In<sub>0.05</sub>Se<sub>4</sub>, elec. props. 100 to 600K (Russian) 2-1967  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, conduction band structure from Hall mobility measurements at high pressures 2-46030  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layers, Hall to drift mobility ratio 2-8821  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layers, electron mobility 2-13076  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layer, intervalley scatt., Hall mobility study 2-17062  
 GaAs:Cr, π-type, semi-insulating, Cr concentration determ. on basis of temp. dependencies of electron mobility and carrier concentration ratio (Slovak) 2-51200  
 n-GaAs, D<sup>+</sup> irradiated, carrier removal 2-1533  
 GaAs doping superlattices, photoexcited carrier conc. and mobility, Hall effect meas. 2-51226  
 GaAs electron mobility, space-charge and central-cell scatt. contrib. reassessment 2-13092  
 GaAs, electron mobility and compensation ratio at 77K, variational calc. 2-51169  
 p-GaAs epitaxial films, Hall effect of hot electrons 2-36162  
 n-GaAs, epitaxially grown, p-type buffer layer, evaluation using Hall meas. 2-17095  
 GaAs, impact ionisation, band struct. depend. 2-45994  
 GaAs, ion implanted, defects produced by laser annealing 2-1523  
 GaAs ion implanted layers, mobility and carrier conc. profiles determ. at 299 and 105K 2-51167  
 GaAs large diameter bulk crystals for microwave device technology 2-17619  
 GaAs, laser annealing induced defects 2-40433  
 GaAs, low-temperature electron mobility calcs. 2-46028  
 GaAs multilayer struct., carrier conc. and mobility, rapid determ. method 2-8815  
 n-GaAs near-ballistic electron transport device, AC impedance 2-51181  
 GaAs superlattice, simultaneous modulation of electron and hole conductivity 2-51297  
 n-GaAs, transient transport phenomena 2-17092  
 GaAs, VPE growth in low press. halogen transport system 2-17632  
 GaAs, VPE layers, implanted and annealed, elec. and optical props. 2-46164  
 GaAs:Cd<sup>2+</sup>, ion-doped films, elec. props. 2-21701



## carrier mobility continued

- GaAs:Ge MBE layers, elec. behaviour obs., autocompensation mechanism 2-51361  
 GaAs:S, MBE layers, electrochem. doped, elec. props. 2-45222  
 GaAs:Si, implanted, multiply scanned electron beam annealing 2-45211  
 GaAs/n-AlGaAs heterostructures, selectivity doped, high mobility electrons, high-speed devices appl. 2-36790  
 GaAs-(AlGa)As heterostructs., light scatt. spectroscopy of electrons, rel. to transport props. 2-13500  
 GaAs-(AlGa)As heterojunction interfaces, modulation doped, electron mobility depend. on electron density and Al conc. 2-21662  
 GaAs-Al<sub>0.47</sub>Ga<sub>0.53</sub>As heterostructure, modulation doped surface and interface proximity effect on quantum melt electron mobilities 2-13170  
 GaAs-Al<sub>0.47</sub>Ga<sub>0.53</sub>As submicron heterostructs., IR optical characterisation 2-17565  
 GaAs-AlGaAs heterojunction interface, backside-gated modulation-doped 2-8862  
 GaAs-GaAlAs modulation doped multilayer struct., optimum cond. and effective mobility conditions, LPE grown -struct. 2-5456  
 GaAs-n-AlGaAs heterostructure, MBE gram. effect of annealing on elec. props. 2-26485  
 Ga<sub>0.47</sub>In<sub>0.53</sub>As LPE, CVD and VPE layers, electron and hole mobilities of n- and p-type films 2-5480  
 Ga<sub>0.47</sub>In<sub>0.53</sub>As, LPE growth, baking temp. effect on purity, photoluminesc. and elec. props. 2-27106  
 Ga<sub>0.47</sub>In<sub>0.53</sub>As:Sn, MBE layers, elec. props. 2-30978  
 Ga<sub>0.47</sub>In<sub>0.53</sub>As-Al<sub>0.48</sub>In<sub>0.52</sub>As heterojunction, MBE, modulation doped, electron mobility 2-46108  
 Ga<sub>1-x</sub>In<sub>x</sub>As uniform epitaxial layers, organometallic VPE growth, elec. characts. 2-31638  
 Ga<sub>1-x</sub>In<sub>x</sub>As, electron drift, electric field depend., Monte Carlo calc. 2-51196  
 Ga<sub>1-x</sub>In<sub>x</sub>As, P<sub>1-y</sub> electron Hall mobility calc. with two longitudinal optic phonon model 2-17094  
 Ga<sub>1-x</sub>In<sub>x</sub>As, P<sub>1-y</sub>, IR refl. spectra, free carrier parameters and lattice vibrs. 2-5678  
 GaP, lanthanide doping influence on elec. and photolum. props., LED material 2-41391  
 GaSb:S MBE film, S doping with H<sub>2</sub>S gas 2-40718  
 GaSb:Te and GaSb:Te<sub>2</sub>Zn, charge transport characts., 80 to 700K 2-30895  
 (GaSb)<sub>1-x</sub>Ge<sub>x</sub> films, single cryst. metastable, growth, thermal stability and characteristics 2-27089  
 Ga<sub>2</sub>Te<sub>3</sub> thin films, prep. and elec. props. 2-5475  
 Ge epitaxial layers on Si, CVD and vacuum deposited, phys. and elec. props. 2-51024  
 p-Ge, hot carrier population inversion, Hall effect study 2-46037  
 n-Ge, impurity band cond. study 2-40919  
 Ge, transient hot-carrier phenomena, method of moments for anal. 2-45998  
 n-Ge, weak-field magnetoresistance coeffs., magnetoresistance skewness 2-51217  
 Ge:Au, gamma irradi., radiation defects interaction with impurity 2-12633  
 Ge:Cu, gamma-ray induced defect formation 2-40437  
 Ge:Li, γ-irrad., radiation defect interaction with impurity atoms 2-25918  
 H<sub>2</sub>, solid surface, two-dimensional layer, localized electron mobility (*Russian*) 2-21426  
 Hg<sub>0.8</sub>Cd<sub>0.2</sub>Te:Cu, pure and doped, defect struct., Hall effect study 2-46031  
 Hg<sub>0.8</sub>Cd<sub>0.2</sub>Te, electron freezeout and hopping cond., magnetoresist. and Hall effect meas. 2-5423  
 (Hg<sub>1-x</sub>Cd<sub>x</sub>)Te RF sputtered thin films, effect of annealing in Hg vapour on props. 2-8896  
 (Hg<sub>1-x</sub>Cd<sub>x</sub>)Te RF triode-sputtering film for IR detector arrays 2-17174  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, two electron cond., Hall coeff., electron mobility and conc. 2-51216  
 Hg<sub>1-x</sub>In<sub>x</sub>Te<sub>6</sub>, electrophysical props. and optical absorpt., influence of heat treatment 2-8791  
 n-In<sub>0.53</sub>Ga<sub>0.47</sub>As, electron drift velocity meas. at 300K using microwave time-of-flight technique 2-30916  
 In<sub>0.53</sub>Ga<sub>0.47</sub>As on InP substrate, Mn as p-type dopant, distrib. coeff., room temp. mobility and diffusion coeff. 2-25914  
 p-In<sub>0.53</sub>Ga<sub>0.47</sub>As, photoexcited minority electrons, velocity field characts. 2-5432  
 In<sub>0.53</sub>Ga<sub>0.47</sub>As epitaxial layers, physical characts. (*Czech*) 2-8897  
 InGaAsP, high purity grown by liq. phase epitaxy 2-36802  
 InGaAsP n-channel inversion mode MISFET with low interface state density 2-13188  
 In<sub>1-x</sub>Ga<sub>x</sub>As, P<sub>1-y</sub>, lattice matched to InP, comp. depend. of mobility, peak vel. and threshold field 2-5479  
 n-InP, γ-irradiated, homogeneously compensated, electron mobility at low electron density 2-26390  
 InP, high purity grown by liq. phase epitaxy 2-36802  
 InP inversion-mode MISFET, pyrolytic Al<sub>2</sub>O<sub>3</sub> deposition temp. effect 2-13189  
 InP, LPE film growth for MESFET appl. 2-9293  
 InP, polycrystalline, low temp. growth, elec. props. meas. 2-22155  
 InP, props., prep. and device appls., review 2-51087  
 n-InP single cryst., electron mobility and minority carrier lifetime 2-13093  
 n-InP:Cu, homogeneously compensated, electron mobility at low electron density 2-26390  
 InP:Fe, Mg(Zn), ion implanted, struct. and elec. props. 2-21163  
 InP:S VPE layers, effect of doping on mobility, Hall effect and magnetoresistance meas. 2-46044  
 InP-thermal nitride, interface in MIS diodes and MISFETs, interface props. annealing effects, device prop. 2-51308  
 n-InSb, electron drift vel. under impact ionisation conditions at 77K 2-8802  
 p-InSb, extrinsic semicond., magnetoeffect 2-8823  
 p-InSb film, hydrogenated, elec. transport props. 2-8895  
 n-InSb, high elec. field Hall effect meas. 2-51214  
 n-InSb, light and heavy hole mobility and conc., effect of dislocations (*Russian*) 2-26395  
 InSb, microwave breakdown, nonlinear effects 2-41269  
 n-InSb, non-parabolic, ultrathin films, Einstein relation, size quantisation effect 2-13198  
 InSe, cryst. growth 2-2492  
 KI:Tl, thermally activated hole motion, kinetics 2-5417  
 β-MnO<sub>2</sub>, pyrolusite, carrier mobility and conc. meas. 2-46029

## carrier mobility continued

- NaI:Tl, thermally activated motion of charge carriers, kinetics (*Russian*) 2-8810  
 Ne, solid, electron drift vel. meas. 2-51178  
 Ni-n-Si, Schottky barrier diodes, temp. anomalies 2-13185  
 Pb salt epitaxial film, photovoltaic diode IR detector, modified hot wall technique prep. 2-15222  
 p-Pb<sub>1-x</sub>Cd<sub>x</sub>Te epitaxial film, elec. transport props. 2-8894  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te, epitaxial layer, elec. cond. and Hall effect (*Russian*) 2-46179  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te, hole mobility and band struct. at 77K 2-1923  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te solid solns., mobility and hole scatt. anisotropy, magnetoresist. meas. 2-40938  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Cd crystals and LPE layers, doping and elec. props. 2-45223  
 PbTe (111) epitaxial thin films, elec. transport props., thermal-cycling induced changes 2-13201  
 PbTe films, magnetoresistance, Hall mobility 2-51360  
 p-PbTe:Ag epitaxial layers, elec. cond. and Hall coeff. 2-41039  
 PbTe:Tl, hole scattering and mobility, impurity effects 2-13107  
 Se, glassy, transient hole transport meas. 2-26389  
 Se<sub>0.35</sub>As<sub>0.65</sub>, amorphous film, carrier mobility, thermal annealing and light irradi. effects 2-13199  
 Se<sub>0.43</sub>Ge<sub>0.57</sub>, amorphous film, carrier mobility, thermal annealing and light irradi. effects 2-13199  
 Si (100) inversion layer, metallic cond., temp. depend., above mobility edge 2-13190  
 Si (100) inversion layer, thermally activated cond. by electrons excited above mobility edge 2-13191  
 Si CVD films, polycryst., elec. props., depend. on grain size and impurity doping conc. 2-30981  
 Si, electric carriers and heat at high electronic temp. 2-8809  
 Si, electron and hole mobilities as function of dopant conc. and temp. 2-51168  
 Si, electron irradiated, drift mobility, temp. depend. 2-8798  
 n-Si, electron mobility, 5 to 80K, phase shift calc. 2-1914  
 Si, extrinsic, elec. parameter calc. using FORTRAN program, Hall effect, dopant states and carrier mobility 2-1903  
 n-Si, heavily doped, elec. resist., partial wave theory 2-13077  
 Si, heavily doped, nondegenerate minority-carrier concentration and recombination current 2-8805  
 Si, hole mobility and Hall coeff. factor, temp. depend. 2-46034  
 Si, impact ionisation, band struct. depend. 2-45994  
 Si, intervalley diffusion of hot-electrons 2-45999  
 Si inversion layer in strong mag. field, temp. depend. Hall cond., mobility edge model 2-40933  
 Si inversion layers, electron transport in high mag. fields 2-21685  
 Si inversion layers, remote polar phonon scatt. for hot electrons 2-30972  
 Si, ion implanted, annealing in plasma of pulsed gas discharge 2-40918  
 p<sup>+</sup>-Si, ion implanted, isothermally annealed, carrier mobility and conc. profiles 2-51170  
 Si, ion implanted, pulsed electron beam apparatus and annealing 2-12625  
 Si low resistivity solar cells, anomalous electron mobility behaviour limits open-circuit voltages 2-18098  
 Si, MBE, background and dopant impurities in film and film-substrate transition region, elec. transport 2-5145  
 Si, MOS inversion layers, Anderson localisation, Hall mobility study 2-51316  
 Si, MOS structures, oxidation in Cl-containing media, effect on electron/hole mobilities in inversion channels 2-51326  
 Si, MOSFET inversion layers, electron mobility, temp. and carrier const. effects 2-51319  
 n-Si MOSFET inversion layer, electron mobility, oxide charge, phonon and surface scatt. 2-51320  
 Si, neutron irradiated, carrier scatt. by defect clusters 2-21587  
 Si, plastically deformed, dislocation-point defect interaction, rel. to elec. props. 2-45178  
 Si polycryst. film, on SiO<sub>2</sub> coated substrates, zone melting recrystallised, stress enhanced carrier mobility 2-46161  
 Si, pulsed laser annealing, ambipolar excess carrier diffusion effects 2-5418  
 Si solar cells, fabricated by planar technology, characts. 2-6138  
 Si solar cells, p-n and n-p junction, effect of back surface field on open-circuit voltages 2-37218  
 Si, transient hot-carrier phenomena, method of moments for anal. 2-45998  
 Si:As, ion implanted, polycrystn. film, laser irradi., elec. props. grain size, annealing effect 2-17173  
 Si:As(P), polycrystalline, heavily doped, comparison of thermal and CW laser annealing effect on resist. 2-51179  
 Si:H, amorphous, AC field and freq. depend. of elec. cond. 2-40901  
 Si:H, amorphous, dispersive electronic transport, multiple trapping, computer simulation 2-51198  
 Si:H, amorphous, non-dispersive and dispersive transport 2-46019  
 Si:H, amorphous, solar cells, electronic props., review 2-45970  
 Si:H, amorphous, transport props., CPA calc. 2-40907  
 Si:H, amorphous film, electron drift mobility meas. 2-41036  
 Si:H, amorphous film, large area plasma deposition and elec. props. 2-40728  
 Si:H, amorphous Schottky barrier solar cells, prep. by plasma decomp. and sputtering, carrier generation efficiency 2-14079  
 Si:H,P amorphous, transport props. 2-45984  
 Si:H amorphous film, electron drift mobility study 2-41034  
 Si:H Schottky barrier diodes, amorphous, electrical characterisation 2-37225  
 Si-Al<sub>2</sub>O<sub>3</sub>, charge carrier props. in p-type layers of SOS 2-8812  
 Si-Al<sub>2</sub>O<sub>3</sub>, SOS films, transport props. investig. by gate controlled galvanomagnetic effects 2-51336  
 Si-GaP heterojunction, elec. and photoelec. props. 2-46123  
 Si-SiO<sub>2</sub> MOS system, As implants through SiO<sub>2</sub> layer, TEM, Rutherford backscatt. and device characts. study 2-40450  
 Si+H, amorphous, transient photocond. and Schottky barrier profile determ. 2-46060  
 a-Si<sub>1-x</sub>Ge<sub>x</sub> films for high performance solar cells 2-37227  
 Si<sub>1-x</sub>Ge<sub>x</sub> solid soln., hole Hall mobility 2-45988  
 Si(100) inversion layer, hot electrons at low lattice temps. 2-46137  
 α-Sn heteroepitaxial films, metastable, growth by metal beam epitaxy 2-8724  
 SnOx, amorphous spray coating, elec. and optical props. 2-40908  
 (SnTe)<sub>1-x</sub>(PbSe)<sub>x</sub> epitaxial layers, band struct. parameters (*Russian*) 2-21499



**carrier mobility continued**

- Te single crystal, electron transfer effect 2-51191  
 $\text{UO}_{2-x}\text{Y}_2\text{O}_3$ , pure and doped, elec. cond., hole conc. and mobility, 800 to 1400°C 2-36039  
 ZnO film prep. by metalorganic CVD from diethyl zinc 2-41525  
 $\text{ZnS:Cr}^{+}$ , local centre charging, Hall effect 2-17024  
 n-ZnSe organometallic CVD layer, cond. mechanism 2-51355  
 $\text{ZnSe:Cr}^{+}$ , local centre charging, Hall effect 2-17024  
 $\text{ZnSe:In}$ , epitaxial thin films, doped and undoped, electron mobility and carrier conc., temp. depend 2-51357

**carrier relaxation time**

- see also electron relaxation time (metals)*  
 ferromagnetic semiconductors, I-V characts. in phase transition region (*Russian*) 2-21606  
 hot electron diffusion coefficient, determ. from dispersion of narrow packet 2-13087  
 Hubbard model, quasi one-dimens., nucl. spin relax. 2-46416  
 magnetoconductivity, quantum transport theory 2-5426  
 molecular crystal, exciton or charge carrier diffusion coeff., band and hopping limits 2-40798  
 semiconductor, carrier collision duration 2-51161  
 semiconductor, electron energy relax. in quantising mag. field 2-30907  
 semiconductor, high freq. photoresponse with modulated carrier diffusion coeff. 2-26442  
 semiconductor, hot electron noise props. in nonzero collision duration regime 2-51248  
 semiconductor, transit reson., subharmonic 2-21593  
 semiconductors, hot carrier relax., picosecond laser pulse studies, review 2-46528  
 semiconductors, inhomogeneous, elec. cond. and permittivity near percolation threshold 2-8795  
 semiconductors, laser cyclotron resonance, Zeeman absorpt. 2-41205  
 semiconductors, polar, magnetoresist. 2-17098  
 solar cell, band gap narrowing evaluation methodology based on measurements of emitter and base lifetimes and relaxation time 2-42012  
 submicron devices, current equations for velocity overshoot 2-51180  
 surface characterisation by plasma reflectivity spectra, surface damage effects 2-22013  
 three dimensional disordered systems, relax. time and cond., logarithmic temp. depend. 2-1875  
 Ag chalcogenides, conductivity, relax. time and struct. factors 2-21642  
 Ag halconides, response functions, electronic relax. time, and cond., continuum model 2-40978  
 $\text{As}_2\text{S}_3$ , amorphous, hot carrier relax., optical picosecond study 2-46529  
 BiSb, relax. time and effective mass of charge carriers 2-8811  
 n-CdS, piezoelectric semicond., acoustic wave propag., electron mass and collision freq. changes 2-46079  
 GaAs crystals and solid solns., hot electron luminescence 2-46712  
 p-GaAs, heavily doped, hot carrier relax., picosecond luminesc. study 2-46742  
 GaAs, hot carrier relax., picosecond laser pulse studies, review 2-46528  
 p-GaSe-n-CuInSe, heterojunction, photoelec. and elec. props. 2-17152  
 Ge, photoexcited hot carriers, picosecond interband saturation and intraband relax. 2-46004  
 InSb, hot electron energy relaxation, screening by shallow donor impurities 2-40950  
 $\text{LaS}_x$  ( $x=1.33$  to 1.5), optical props. and chem. bands 2-31443  
 Ni-n-Si, Schottky barrier diodes, temp. anomalies 2-13185  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}$ , disorder scatt. 2-17059  
 Se, single crystal, freq. depend. of cond., noise and photoresponse 2-13080  
 Si, A-centres, field depend. of thermal activation energy, electron captive cross sections and relax. time, using capacitance transient spectroscopy 2-45887  
 Si, amorphous, hot carrier relax., optical picosecond study 2-46529  
 n-Si crystals, electron scatt. by clusters, Hall effect and magnetoresist. study 2-26415  
 Si inversion layers, remote polar phonon scatt. for hot electrons 2-30972  
 Si, periodic struct., elec. props. 2-17153  
 Si surface, nonequilib. depletion relax. acceleration in strong elec. fields 2-30952  
 Si surface inversion layer, uniaxially stressed, electron cyclotron reson. 2-13155  
 p-Si, transient regimes of hot carriers 2-51197  
 Si:H, amorphous, hot carrier relax., optical picosecond study 2-46529  
 p-ZnSb, carrier kinetics in mixed scatt. region, cond., thermoelec. power, and Hall effect tensors 2-21602

**carrier scattering at surfaces** *see surface scattering***carrier scattering by dislocations** *see dislocation scattering***carrier scattering by impurities** *see impurity scattering***carrier scattering by point defects** *see point defect scattering***carrier traps** *see electron traps; hole traps***CARS** *see coherent antiStokes Raman scattering***cartography**

- ATLAS programme for Spacelab, photographic topographic mapping 2-2986  
 boundary lines, computer-aided determ. (*German*) 2-42256  
 Canada, 1980 magnetic declination mapping, SHE appl. (*French English*) 2-37758  
 computer assisted mapping, digitizing and automatic output errors 2-37740  
 digital mapping using entity-to-entity correspondence for control 2-47789  
 Earth induced polarisation, contour map presentation of dipole-dipole data 2-9923  
 geologic and tectonic maps produced by the Commission for Geological Map of the World 2-32648  
 graphic interactive computer systems for geodetic data and mapping 2-52710  
 N.Greenland, geoid prediction using collocation and digital terrain models 2-6296  
 Indonesian Arc seismicity maps 2-18385  
 Mars, topographic maps, photogrammetric application of Viking orbital photography 2-42634  
 National Land Survey of Sweden, geodetic and cartographic data handling 2-52714  
 New Zealand, geomorphic mapping from Landsat-3 Return Beam Vidicon (RBV) imagery 2-18428  
 Ordnance Survey of Great Britain (OSGB) scientific network, satellite and terrestrial data combination 2-6297

**cartography continued**

- photographic maps production from satellite multispectral scanner (MSS) data, geometric distortions correction method 2-18581  
 plane surveying applied to production of planimetric maps, area limits 2-18355  
 Stereosat, cartographic potential of spacecraft line-array camera system 2-18357  
 Sweden, seismic energy mapping 2-47824

**cascade showers** *see cosmic ray showers and bursts***Cassegrain antennas** *see reflector antennas***cast iron** *see iron alloys***casting**

- chamotte lightweight refractories, casting 2-41567  
 filamentary Al<sub>5</sub> superconductors, developments in the UK, review 2-8935  
 fluoride glass low-loss fibre fabrication, build-in casting method 2-44494  
 ingot solidification, continuous casting, intensive heat transfer (*Russian*) 2-9344  
 ingot solidification in continuous casting, intensive heat transfer in liq. and crystallising metal case (*Russian*) 2-17674  
 materials freezing at cryogenic temps., casting and tensile testing 2-2665  
 metal cylinder, thermal stresses calc. 2-20533  
 slurry investment casting, alternate hardening scheme (*Chinese*) 2-9343  
 sputtered protective coatings for die-casting dies 2-31856  
 steel, continuous, effect of mech. parameters on development of thermo-strained state (*Russian*) 2-36845  
 steel, continuous cast production, effect of mech. parameters on development of thermo-strained state (*Russian*) 2-36845  
 steel, ductility at high temps. 2-41688  
 steel wire reinforced Al, continuous casting, prod. and props. 2-46985  
 surface morphology recording, casting technique 2-15143  
 thermoplastic slip, sliding friction in ceramics casting process 2-41757  
 Al alloy slabs, optimum satisfaction regime for continuous casting in electromagnetic mould (*Russian*) 2-27168  
 Al-Mg<sub>2</sub>Si, precipitation, influence of initial struct. 2-31702  
 Al-Si, crystn. process and as-cast struct., Sb effect, Si dissolution in Al-Si melt 2-36844  
 Al-Si eutectic alloy, cast and heat treated, microstruct. and mech. props. (*German*) 2-47068  
 Al<sub>2</sub>O<sub>3</sub>-MgO, transparent spinel, fusion casting 2-51849  
 Fe-Cr-V-Mn-C, cast, microstruct. characts. and elements distrib. 2-51888  
 Fe<sub>81</sub>B<sub>14</sub>S<sub>4</sub>, amorphous ribbon form., effect of casting vel. 2-27114  
 Nb<sub>3</sub>Sn-Cu filamentary superconducting wire, in situ prep. and props. 2-8942  
 Si, polycrystalline solar grade, directional solidification technique 2-36849  
 Si solar cell production, casting replaces conventional pulling process 2-52364

**castings**

- steel, containing shrinkage, tests to determ. fatigue strength 2-9490  
 Al alloy, plate quality, X-ray eval., comparative tests (*French*) 2-47269  
 Al-Mg-Ti-Cu, castings, struct. and mech. props., Na impurity effect 2-27241  
 Fe-Ni-Al alloy YuND4 magnets, cooling rate rel. to mag. props. 2-26674  
 TiNi, cast, synthesis by combustion processes, mech. and shape memory props. 2-41547

**cataclysmic binary stars***see also novae*

- 2A 0526-328, cataclysmic X-ray binary, triple periods, spectral obs. 2-10428  
 2A 0526-33, cataclysmic X-ray binary, UV spectra anal. 2-14878  
 accretion discs, radiation spectra and disc models 2-42685  
 accretion discs, transition from convective to radiative struct. as cause of outbursts 2-38198  
 AE Aquarii, rapidly varying star, spectroscopic and photometric obs. 2-33030  
 UU Aquilae, U Geminorum type star, outbursts characts. from AAVSO data 2-33041  
 V794 Aquilae, X-ray and optical characts. 2-10435  
 V603 Aquilae (Nova 1918), periodic light vars. obs. and light elements 2-18766  
 V603 Aquilae (Nova 1918), photometric period and orbital inclination from high-speed photometric study 2-3258  
 V603 Aquilae (Nova Aquilae 1918), eclipsing binary, photometric obs. rel. to orbital period 2-48254  
 AS 296, high vel. symbiotic or disk star, visible spectral obs. 2-38217  
 Z Camelopardalis, dwarf nova, Ho-obs. at standstill 2-28469  
 AC Cancri, possible ex-nova, UVB photometry 2-42702  
 WX Ceti, WZ Sagittae star, visible spectral obs. 2-38212  
 T Coronae Borealis, recurrent nova, evidence for periodic eruptions related to orbital phase 2-38208  
 EM Cygni, dwarf nova, accretion disk spectra anal. and component masses, spectral obs. 2-10418  
 SS Cygni, dwarf nova, models of rapid oscills., V obs. 2-48263  
 CI Cygni, eclipsing symbiotic star, photoelectric obs. during egress from eclipse 2-38204  
 CH Cygni, high-dispersion obs. 2-33044  
 CI Cygni, symbiotic eclipsing binary, viable spectral obs. (*French*) 2-33035  
 CH Cygni, symbiotic star, new outburst report and UVB photometry 2-38202  
 CI Cygni, symbiotic star 's-process episode' as eclipse ingress 2-48249  
 distances of cataclysmic variable stars, determ. from K-band photometry 2-14862  
 1E 0643.0-1648, cataclysmic X-ray binary, visible obs. 2-53292  
 1E 0643.0-1648, newly discovered X-ray emitting dwarf nova, photographic obs. 2-6636  
 1E 0643.0-1648, X-ray cataclysmic variable, visible/IR obs. 2-10459  
 1E 0643.0-1648, X-ray dwarf nova, photographic obs. (1960 February 2) 2-48353  
 eruptive variable star in LMC, discovery, precise position and photographic magnitudes 2-53284  
 evolution from binaries in planetary nebulae 2-14901  
 U Geminorum, white+red dwarf, accretion disk spectra, component masses, visible obs. 2-10417  
 H2252-035, obs. and models 2-6640  
 H 0139-68, variable soft X-ray source, AM Her-like cataclysmic binary 2-28511



**cataclysmic binary stars continued**

- AM Herculis, spectra, model, white dwarf albedo and mass, X-ray obs. 2-28498  
 AM Herculis, visual magnitude estimates, (1981 September 2 to October 27) 2-10485  
 AM Herculis (3U 1809+50), spectrophotometric study at max. light 2-48293  
 HO139-68 optical counterpart, polarisation obs. rel. to identification as AM Herculis star 2-38247  
 EX Hydrae, eclipsing cataclysmic variable, variable X-ray emission model, ob. 2-48264  
 IUE spectroscopy 2-38194  
 Lanning 10, X-ray, UV and visible fluxes, obs. 2-38192  
 MV Lyrae, minimum light caused by mass transfer to white dwarf stopping, obs. 2-38191  
 MV Lyrae, nova-like star, brightness and polarisation, B obs. 2-42723  
 magnetic accretion columns, polarization props. 2-38249  
 TU Mensae, first SU Ursae Majoris star with orbital period beyond 2-hour gap, spectroscopic obs. 2-28480  
 SY Muscae, symbiotic star, UV emission lines increase and apparent magnitude obs., 1981 June to December 2-38209  
 Nova Cygni 1975 (V1500 Cygni), 1977 to 1979, B-obs. 2-42687  
 BD Pavonis (Nova 1934), periodic light vars. detect. 2-23303  
 RU Pegasi, dwarf nova, orbit and white dwarf accretion disc emission 2-10427  
 AG Pegasi, symbiotic star, orbital period from UV photometry 2-6603  
 S 10830 Trianguli, outburst spectroscopic obs. (German) 2-48251  
 WZ Sagittae, dwarf nova, photometric study during outburst 2-10419  
 WZ Sagittae, external ring generation during 1978 outburst rel. to emission-line spectrum 2-33024  
 HM Sagittae, symbiotic star, visible spectra and photometry obs. (Russian) 2-6606  
 V1223 Sagittarii/4U 1849-31 identification and optical pulsations 2-10434  
 U Scorpii, recurrent nova, UV spectroscopy during 1979 outburst? 2-33025  
 U Scorpio, recurrent nova, spectrum obs. during 1979 outburst 2-10451  
 UZ Serpentis, dwarf nova, UV and optical spectra in outburst 2-14865  
 short period binary, period, mass, mass transfer and evolution 2-28470  
 symbiotic stars, soft X-ray obs. of 19 objects 2-14866  
 symbiotic stars, spectroscopic obs. in July and September (1981) 2-28479  
 symbiotic stars (Japanese) 2-53271  
 symbiotic stars as old disk population, radial vel. anal. 2-38218  
 UX Ursae Majoris, nova-like variable, UV spectrum variability obs. 2-42715  
 BE Ursae Majoris (PG 1155+492), unique cataclysmic variable-like object, photometry and spectrum 2-38188  
 PU Vulpeculae (Honda-Kuwano object 1979), binary symbiotic star model 2-38205  
 white dwarfs, accreting, steady nuclear burning theory 2-38186  
 X-ray properties and obs. 2-38193  
 H2254-033, double period optical pulsar, simultaneous five colour photometry 2-10479

**catalysis**

see also *catalysts; reaction kinetics*

- alkane cleavage by Ni atomic clusters 2-7693  
 aromatic compounds, heterogeneous photocatalytic oxidation on TiO<sub>2</sub> 2-9572  
 biomass, photocatalytic prod. of H<sub>2</sub> 2-6192  
 catalyser trap, for oil sealed roughing pumps 2-23654  
 cyclohexene, hydrogenation on a PtAl<sub>2</sub>O<sub>3</sub> catalyst, intraparticle diffusion effects 2-27472  
 halogen photoproduction using platinumized TiO<sub>2</sub> photocatalyst 2-6048  
 heterogeneous catalysis research, Mossbauer spectroscopy appls. 2-7582  
 hydrocarbon electrocatalytic oxidation using stabilised zirconia electrolyte employing Au or Pt electrodes 2-22459  
 1-hydroxyl-1-methylethyl radical, photochemically produced, on colloidal metal, H<sub>2</sub> formation catalyst 2-13983  
 IR/gas chromatographic reaction system for in situ catalytic studies 2-52258  
 kinetic model, interaction of gases with solid surface (French) 2-26260  
 metal oxide surfaces in aq. solns., acid-base prop. meas. 2-27475  
 nonequilibrium plasma chemical reactors, catalytic processes (French) 2-52249  
 $\alpha$ -olefins polymerisation, MgCl<sub>2</sub>-ethyl benzoate active catalysts 2-13950  
 oscillatory chem. engines, control and dissipation 2-52376  
 quantum chem. approaches, review (French) 2-6061  
 radiotracer technique for adsorption and catalysis studies 2-8707  
 stereochemistry of disproportionation, conservation principle of points 2-9545  
 stratosphere O<sub>3</sub>, destruction, role of catalytic mechanisms involving ClX 2-32593  
 surface reactions, mol. beam surface scattering apparatus, for vel. and ang. distrib. meas. 2-9235  
 transition metals and oxides, 3d, catalytic props. in mag. transition temp. region 2-31948  
 Ag (111), Rb dosed, chemisorption of O<sub>2</sub>, surface species identification, isotope scrambling, reaction studies 2-26208  
 Ag clusters, form., stability and catalytic activity, role in photographic process 2-28913  
 Ag in solutions, Raman spectra, CO<sub>2</sub> conversion to hydrocarbons 2-6066  
 Al-BN fused contact, Al catalytic action on  $\alpha$ - $\beta$  phase transition of BN 2-41603  
 $\gamma$  and  $\eta$ -Al<sub>2</sub>O<sub>3</sub>, adsorpt. of halogens, effect on catalytic activity, IR study 2-5682  
 BrO<sub>2</sub> + malonic acid, Belousov-Zhabotinskii reaction, oscillations, catalysis by bis-bipyridine-Ag complexes 2-22423  
 BrO<sub>2</sub> + malonic acid, Belousov-Zhabotinskii system, oscillating reaction, Os and Cr bipyridine complexes catalysts 2-22424  
 CO<sub>2</sub> oxidation on Pd surface, IR reflection-absorpt. spectra study 2-41921  
 CaO-MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> pyroxene glasses, catalysed crystn. using Cr<sub>2</sub>O<sub>3</sub>, nucleation rate, conc. and temp. depend. 2-40288  
 Co  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> and CoMo  $\gamma$ -Al<sub>2</sub>O<sub>3</sub>, hydrodesulphurisation catalysts, XPS and ESR obs. of Co species after catalytic operation 2-27507  
 H isotope exchange reaction in hydrophobic catalyst bed, appl. to heavy water enrichment 2-39126  
 H<sub>2</sub>, catalytic combustion, role in future H<sub>2</sub> energy systems 2-32129  
 H<sub>2</sub> production optimisation from tris(2,2'-bipyridyl)Ru(II) photosensitised reduction of methyl viologen 2-47533

**catalysis continued**

- H<sub>2</sub>O, splitting process, electron injection study on catalytic semiconductor surface 2-22487  
 La<sub>2</sub>Co<sub>2</sub>O<sub>10</sub> oxidation catalyst, struct. evolution and catalytic activity (French) 2-8483  
 N<sub>2</sub>+3H<sub>2</sub>  $\rightarrow$  2NH<sub>3</sub>, catalysis on Fe surface, AES and thermal desorpt. study 2-41922  
 NH<sub>3</sub>, adsorbate form. on Pt(III), catalytic oxidation, IR obs. 2-2734  
 NiO+ $\alpha$ -Al<sub>2</sub>O<sub>3</sub>-NiAl<sub>2</sub>O<sub>4</sub> interfacial reaction, Rutherford backscatt. obs., depth profiles, volatilisation effects 2-27479  
 Pu(III), oxidation by HNO<sub>3</sub> in tri-n-butyl phosphate soln., kinetics, Pu loss effects 2-49142  
 Se<sub>2</sub>O<sub>3</sub> stabilized ZrO<sub>2</sub> electrocatalytic role in hydrocarbon fuel cell anodic current-overpotential behaviour 2-14071  
 ThO<sub>2</sub>:Eu<sup>3+</sup>, luminescence by photonic and chem. excitations 2-41407  
 UF<sub>4</sub>, catalytic fluorination by NiF<sub>2</sub> and CuF<sub>2</sub> 2-9573  
 UO<sub>2</sub>F<sub>2</sub>, catalytic fluorination by NiF<sub>2</sub> and CuF<sub>2</sub> 2-9573  
 VN, cubic, powders synthesis, MgB<sub>2</sub> catalyst appl. 2-13692
- catalysts**  
 see also *catalysis*  
 activity determ. by chemisorption and particle size analysers 2-31949  
 aluminosilicates, nature of F modified oxide surfaces, NMR study 2-31303  
 automobile, heavy elements, energy and wavelength dispersive X-ray fluoresc. anal., using radioactive, secondary fluoresc., and X-ray tube sources 2-47422  
 biomass gasification of wood using catalysts, technical and economic feasibility 2-6105  
 Diazo compounds, dark catalytic decomposition (Russian) 2-27437  
 ESR characterisation 2-31287  
 fuel cells, H<sub>3</sub>PO<sub>4</sub>, supports for Pt electrocatalysts, alternative materials and evaluation methods 2-37205  
 heterogeneous, parameter anal., research techniques, overview 2-15233  
 heterogeneous redox catalysts for photochem. H<sub>2</sub> prod. 2-6193  
 hydrodesulphurisation catalysis, catalyst charact. by ESR 2-31287  
 laboratory EXAFS spectrometer for catalyst studies 2-43153  
 metal-metal carbide melts in contact with solid C, C vaporisation 2-21286  
 methanol catalysts, adsorpt. of CO, FT-IR spectrosc. obs. 2-27487  
 molybdate compounds, struct. modifications, Raman scatt. study 2-5719  
 particles, in filamentous C, crystallographic orientations, case of simple conical particles 2-31703  
 pellets with nonuniform activity distrib., effectiveness factors, asymptotic region of diffusion effect 2-27471  
 porous solids, periodic capillary models of diffusion 2-8657  
 on powdered solid, preferentially exposed plane determ. by differential neutron diffr. (French) 2-5087  
 racemisation catalysts, of aminoacids, prep. using formaldehyde resins and poly-n-(oxy)styrene (Russian) 2-36833  
 supported metal catalysts, surface area determ. by small angle X-ray scattering 2-14003  
 transition metals and oxides, 3d, catalytic props. in mag. transition temp. region 2-31948  
 Ag<sub>2</sub> complex, (Ag(bipyridine))<sup>+</sup>/Ag(bipyridine)<sub>2</sub><sup>2+</sup>, catalyst in Belousov-Zhabotinskii systems, oscillations 2-22423  
 Ag powder, SO<sub>3</sub><sup>2-</sup> and SO<sub>4</sub><sup>2-</sup>, catalytic form. obs. by surface enhanced Raman scatt. 2-41925  
 $\alpha$ -Al<sub>2</sub>O<sub>3</sub> catalyst carriers, prod. for NH<sub>3</sub> disoc. 2-41569  
 Al<sub>2</sub>O<sub>3</sub>:F, nature of F modified oxide surfaces, NMR study 2-31303  
 $\gamma$ -Al<sub>2</sub>O<sub>3</sub>-MoO<sub>3</sub>-(CoO)(NiO) catalyst, prep. and characterisation by Raman spectroscopy 2-31972  
 Au monolayers, on Si (111), catalytic effect on oxidation 2-13836  
 Co/Rh/Al<sub>2</sub>O<sub>3</sub> system, IR spectra 2-37100  
 Co  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> and CoMo  $\gamma$ -Al<sub>2</sub>O<sub>3</sub>, hydrodesulphurisation catalysts, XPS and ESR obs. of Co species after catalytic operation 2-27507  
 Cr (100) surfaces, mag. structure study using electron capture spectroscopy 2-46244  
 Cr complex, Cr-bipyridine, catalysts for Belousov-Zhabotinskii oscillating reaction 2-22424  
 Fe polycrystalline surface, interactions with K, O<sub>2</sub> and N<sub>2</sub>, AES, work function and thermal desorption meas. 2-16939  
 H in coked catalyst pellets, microbeam anal. 2-47396  
 IrO<sub>2</sub>, sputtered films, phase transitions, DTA, evolved gas anal., and SEM studies 2-40742  
 Ir<sub>2</sub>O<sub>3</sub> catalytic anodic coating for H<sub>2</sub>O vapour electrolysis, improved cell 2-9553  
 La<sub>2</sub>Co<sub>2</sub>O<sub>10</sub> oxidation catalyst, struct. evolution and catalytic activity (French) 2-8483  
 MgB<sub>2</sub> powder catalyst in cubic BN synthesis 2-13692  
 NH<sub>3</sub>-O<sub>2</sub> catalyst system, pre-ignition/pre-extinction phenomena detection by modified DTA 2-6079  
 Ni (100) surfaces, mag. structure study using electron capture spectroscopy 2-46244  
 Ni, SiO<sub>2</sub> supported, superparamag. effects in ferromag. reson. 2-36439  
 Ni small particle, coadsorption of CO+H<sub>2</sub>, Raman scatt. enhancement 2-5712  
 NiO, finely divided catalyst, doping effect on sintering 2-17655  
 NiO-MoO<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>, oxide state characts. by Raman spectroscopy 2-5718  
 NiO-SiO<sub>2</sub>, impregnated and ion-exchanged, XPS use for dispersion variations detection 2-9602  
 NiO+ $\alpha$ -Al<sub>2</sub>O<sub>3</sub>-NiAl<sub>2</sub>O<sub>4</sub> interfacial reaction, Rutherford backscatt. obs., depth profiles, volatilisation effects 2-27479  
 O<sub>2</sub> reduction in fuel cells with H<sub>3</sub>PO<sub>4</sub> electrolyte, Pt catalyst performance optimisation 2-52332  
 OS complex, (OS(bipyridine))<sub>2</sub>SO<sub>4</sub>, catalyst for Belousov-Zhabotinskii oscillations, reaction 2-22424  
 Os-Cu clusters in SiO<sub>2</sub> supported catalysts, EXAFS obs., cluster struct. 2-27023  
 Pt catalysed decomposition of water, OH radical prod., energetics and mechanism, fluoresc. obs. 2-17872  
 Pt-based catalysts, improved EXAFS function calc. procedure 2-44962  
 Pt-C sputtered films, struct. and elec. props., catalysis of CO oxidation reaction 2-8725  
 Pt-group metals for catalytic combustion of H<sub>2</sub>, role in future H<sub>2</sub> energy systems 2-32129  
 Ru supported catalysts, STEM study, X-ray spectra, EELS, and micro-diffr. patterns 2-37102  
 SiO<sub>2</sub> catalyst surface, electronic struct., X $\alpha$  calcs. 2-40985  
 SiO<sub>2</sub>:F, nature of F modified oxide surfaces, NMR study 2-31303



**catalysts continued**

- TiCl<sub>4</sub>-diethyl aluminium chloride catalyst, polymerisation of ethylene, polyethylene props. (*Russian*) 2-25271  
 TiO<sub>2</sub>, diffusion doped, elec. and optical props. 2-5369  
 ZrO<sub>2</sub>/SiO<sub>2</sub> catalyst, surface electronic struct., XPS and discrete variational  $\chi$  cluster study 2-26468

**cataphoresis** *see electrophoresis***catastrophe theory**

- bound integrable systems, phase-space tori, geometry 2-38413  
 cubic crystals, ballistic phonons and acoustic ray surface shape 2-12701  
 nonlinear dynamic systems, qualitative catastrophe theory (*Dutch*) 2-48500  
 parabolic umbilic catastrophe, appl. to elastic stability theory 2-18900  
 steam-water system, thermodynamics, interpretation using catastrophe theory 2-38617  
 TGSE, ferroelectric transition, tetracritical point, topological aspect 2-36563  
 triatomic molecules, determ. of parameter  $w$ , catastrophe theory and mol. charge densities 2-44129  
 Zeeman's equations for nerve impulses 2-2863

**cathode-ray oscilloscopes**

- see also oscillographs*  
 biomedical oscilloscope, digital variable persistence,  $\gamma$ -camera appl. 2-18296  
 biosignal visualization devices for equipment of cardiology units 2-32349  
 intensification system, multichannel  $\gamma$ -modulation, for improving the contrast of photographed neurophysiological signals 2-14368  
 multi-functional CROs, small size, technology, characts. 2-6844  
 phase anal. of short pulses rel. to time meas. accuracy, minicomputer appl. 2-15162  
 sampling oscilloscopes, appln. in dielectric frequency domain spectroscopy system, computer-controlled 2-33590  
 semiautomatic search for particularly directed particles in nuclear emulsions 2-43690  
 Trio CS-2100 CRO, 100 MHz, 4-channel, 8-trace, characts. 2-6845

**cathode-ray tube displays**

- see also cathode-ray oscilloscopes*  
 colour-coded video monitor for electron microscope 2-43137  
 CRT assembly noise reduction 2-16179  
 CRT display variables and formats study for BWR power plant start-up operation 2-34156  
 thermograph, camera and monitor assemblies, for technical and research appl. 2-33520

**cathode-ray tube screens** *see cathode-ray tubes; fluorescent screens***cathode-ray tubes**

- see also image converters; image intensifiers; image storage tubes; television camera tubes*  
 design, using linear transformations for Gaussian trajectory parameters (*Chinese*) 2-34646  
 electron beam circular scanning in dissector, parameters meas. 2-23771  
 holographic intensity correlator using a laser cathode-ray tube 2-44219

**cathode rays**

No entries

**cathodes**

- see also electron emission; oxide coated cathodes; photocathodes; thermionic cathodes*  
 arcs, temperature fields on point cathode in homogeneous gas stream 2-50465  
 cathode systems, geometric aberration coeff., expansion parameters 2-39557  
 discharge behaviour of electrodeposited PbO<sub>2</sub> and Pb electrodes 2-37204  
 field emission, cathodic needle growth from Mo(CO)<sub>6</sub> vapours at high elec. fields 2-51066  
 graphite surface, pyrolytic, sputter-textured, electron reflection and secondary electron emission 2-22126  
 medical electrocoagulation, transcatheter, evaluation of anode and cathode 2-27929  
 polyacetylene, use as cathode active material in lightweight rechargeable storage batteries 2-9642  
 proportional counters, background rejection using guard cathodes 2-19848  
 RF sputtering, targets, insulator to metal bonding 2-51803  
 SNICS, surface ionisation sputter-type ion sources, sputter cathode enhanced axial erosion 2-11343  
 status of rechargeable positive electrodes for ambient temperature lithium batteries 2-37201  
 superconducting, energy distrib. of field emission electron beams (*Japanese*) 2-5800  
 vacuum-gap electrodes, electrical breakdown, thermal instability of cathode microprotuberances 2-12416  
 Cu vacuum arc, cathode-fall region 2-8379  
 Cu-Mo bimetallic electrode under ultrahigh vacuum, dynamics of cathode processes 2-6040  
 FePS<sub>3</sub> cathode in Li battery, synthesis, struct. and phys. props. (*French*) 2-32057  
 GaAs photocathode with neg. electron affinity, photoelectron spectra 2-13630  
 Ga<sub>0.9</sub>In<sub>0.1</sub>As photocathode with neg. electron affinity, photoelectron spectra 2-13630  
 He<sup>+</sup> 468.6 nm emission from hollow cathode discharge by restricting inner cathode wall 2-5013  
 Li batteries, TiS<sub>2</sub> cathode characts. 2-41996  
 Li primary cells, BrCl cathode component 2-32045  
 Li/SO<sub>2</sub> cells, porous carbon black cathode dependence 2-41998  
 Li<sub>2</sub>FeS<sub>3</sub> cathode material for Li secondary battery 2-22562  
 V<sub>6</sub>O<sub>13</sub> cathode material, X-ray diffr. thermal anal. and mag. susceptibility 2-22183  
 Na-AlCl<sub>3</sub> cells using solid electrolytes with molten Na anodes and cathodes composed of S compounds and AlCl<sub>3</sub> 2-22597  
 Na-S battery, hollow fibre, recent developments and progress 2-22592  
 Na<sub>2</sub>Cr<sub>2</sub>S<sub>7</sub> for cathodes in secondary Li cells 2-9637  
 NbS<sub>2</sub>Cl<sub>2</sub> rechargeable cathode in molten NaAlCl<sub>4</sub> electrolyte, moderate temp. NaCl 2-47471  
 Ni, oriented recrystn. during current flow 2-17621  
 NiPS<sub>3</sub> cathode in Li battery, synthesis, struct. and phys. props. (*French*) 2-32057  
 TiO<sub>2</sub> anatase as cathode material in Li-organic electrolyte rechargeable batteries 2-14062

**cathodes continued**

- V<sub>6</sub>O<sub>13</sub> cathode material, X-ray diffr. thermal anal. and mag. susceptibility 2-22183  
 VS<sub>2</sub> rechargeable cathode in molten NaAlCl<sub>4</sub> electrolyte, moderate temp. NaCl 2-47471  
 W cathodes, with alkali metal additives, field emission props. 2-46882  
 W, oriented recrystn. during current flow 2-17621

**cathodes, electrochemical** *see electrochemical electrodes***cathodochromism**

No entries

**cathodoluminescence**

- alkali halide crystal, fundamental luminesc. following dense electron-beam nanosecond irradiation 2-5755  
 alkali metal halides, self-trapped exciton,  $^1\Sigma_u^+$  state lifetime, temp. depend. 2-17554  
 colour SEM, imaging technique and stroboscopy 2-28939  
 diamond, crystal growth-sector boundary luminesc. 2-41434  
 diamond, natural, dislocation-rich, cathodoluminescence study 2-31565  
 diamond, resonant excitation of GR 1, luminescence and cathodoluminescence study 2-46685  
 ferroelectrics, ABO<sub>3</sub> type, luminesc. props. 2-31539  
 Ga<sub>0.9</sub>In<sub>0.1</sub>-P-GaAs heterostructures, luminesc., effect of mismatch between lattice const. and thermal expansion coeffs. 2-9195  
 luminescent materials with long relax. times, exam. in colour SEM 2-38715  
 scanning cathodoluminescence microprobe system 2-28943  
 scanning cathodoluminescence system, appl. to semicond. surfaces and structs. 2-31563  
 SEM, ellipsoidal and parabolic light collectors, angular distrib. of cathodoluminescence intensity 2-28938  
 SEM detection systems for cathodoluminesc. and cond. modes 2-28941  
 SEM-based cathodoluminescence meas. system, instrumentation and capabilities 2-28942  
 semiconductor-oxide interface, cathodolum. characteris. 2-17556  
 semiconductors, SEM appls. in EBIC and cathodoluminesc. modes 2-30371  
 superstatistical emission noise 2-28780  
 thiogallates, Er<sup>3+</sup> doped, luminesc. props., energy transfer 2-46721  
 Ag film, photon emission under slow electron irradi., spectral characs., temp. depend. 2-46782  
 Ag, polycrystalline, surface optical emission polarization under electron bombardment 2-46787  
 Al<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>Tb<sup>3+</sup>, cathodoluminescence saturation effects 2-51717  
 Au, electron irradiated, cathodoluminescence study 2-46786  
 (Ca,Sr)S:Cu phosphor, luminescence centres and charge compensation 2-22084  
 CaS phosphors, doped, luminescence centres and charge compensation 2-22084  
 CdCr<sub>2</sub>S<sub>4</sub>, ferromagnetic semicond., cathodolum. characts. of electron spectrum 2-46785  
 CdCr<sub>2</sub>Se<sub>4</sub>, cathodolum., band struct., impurity states 2-31562  
 Cd<sub>1-x</sub>Ga<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, cathodolum., band struct., impurity states 2-31562  
 Cd<sub>1-x</sub>In<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, cathodolum., band struct., impurity states 2-31562  
 CdP<sub>2</sub>, structured luminescence spectrum excited by electron beam 2-26998  
 CdP<sub>2</sub>:Zn(Bi)(Sb)(Ga), cathodoluminescence spectrum 2-46784  
 CdS crystals, emitted radiation spectral and time dependences 2-51719  
 CdS epitaxial layers, exciton spectrum, purity influence 2-41441  
 CdS, luminescence study of free exciton lifetime and diffusion length 2-5756  
 CdS:In layer and whisker, vapor reaction growth, luminesc. spectrum 2-46674  
 Cu, electron irradiated, cathodoluminescence study 2-46786  
 Cu wire, rupture by MHD instability, luminesc. 2-26999  
 Dy<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec.-ferroelastic, phase transition, cathodo- and photolum. study 2-36550  
 GaAlAs DH laser, strain related degradation phenomena, SEM cathodoluminescence and induced current study 2-39652  
 Ga<sub>0.68</sub>Al<sub>0.32</sub>As:Te(Zn) laser pumped by electron beam, cathodolum. and threshold current density, doping influence 2-7766  
 Ga<sub>1-x</sub>Al<sub>x</sub>As MBE layers, alloy clustering 2-40740  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>P epitaxial films, cathodoluminesc. spectra 2-22097  
 GaAs (100) surface, cathodoluminesc. lifetime pattern meas. 2-31563  
 GaAs, cathodoluminescence lifetime patterns of surface near dislocations 2-46780  
 GaAs, cold semicond., hot electrons, luminesc. expts. 2-51676  
 GaAs, proton implanted, damage profile, cathodoluminescence, SIMS, chemical staining and C-V meas. 2-40449  
 GaAs, proton implanted, cathodolum., Rutherford backscatt. and SIMS studies 2-46778  
 GaAs:Si (Te), cathodoluminescence and dislocation struct. 2-31566  
 GaAs:Te,Zn, heavily doped material with p-n junction, SEM local cathodolum. obs. 2-46776  
 GaAs:Zn, polycrystalline, optoelectronic props. rel. to grain boundary features, cathodoluminesc. anal. 2-36713  
 GaAs-Ga<sub>x</sub>Al<sub>1-x</sub>As DH and multiple quantum well superlattices, luminesc. props. and struct. 2-46779  
 GaAs<sub>1-x</sub>P<sub>x</sub>:N, cathodoluminescence spectra 2-2348  
 GaN epitaxial film on sapphire, SEM, electron diffr. and cathodolum. obs. 2-45753  
 GaP, recombination-enhanced defect reactions, cathodoluminesc. and photoluminesc. study 2-46783  
 GaSb:Te, Czochralski grown, impurity distrib., cathodoluminesc. study 2-51715  
 Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec.-ferroelastic transition, cathodo- and photolum. study 2-36550  
 HgCr<sub>2</sub>Se<sub>4</sub>, ferromagnetic semicond., cathodolum. characts. of electron spectrum 2-46785  
 InGaAsP-InP DH laser, degradation obs. by electron probe microanal. 2-44282  
 InP, ion implanted, damage profile, cathodoluminescence, SIMS, chemical staining and C-V meas. 2-40449  
 InP, proton implanted, cathodolum., Rutherford backscatt. and SIMS studies 2-46778  
 InP:Sn(Ge)(S), etched and unetched, dislocation obs. and Huber etching assessment 2-40396  
 La<sub>2</sub>S<sub>3</sub>:Ce(Nd), luminesc. and energy transfer 2-51685  
 Mg<sub>3</sub>N<sub>2</sub>, forbidden band width, refl., luminesc. and excitation spectra, thermochromic transitions 2-8754



**cathodoluminescence continued**

- MgO crystals, deformed region on (111) plane, cathodolum. obs. 2-36710  
 MgO, edge cathodoluminescence and reflectivity in edge vacuum 2-2349  
 MgO, excitons and edge luminescence 2-46781  
 MgO:Al, edge cathodoluminescence and reflectivity in edge vacuum 2-2349  
 MgO:Al, excitons and edge luminescence 2-46781  
 Si, cathodoluminescence imaging 2-31564  
 Si, deep level luminesc. spectra and decay lifetime meas., scanning cathodoluminesc. microprobe system 2-28943  
 SiC:Al<sup>+</sup> implanted epitaxial diodes, cathodoluminescence characts. 2-17557  
 n-SiC(6H), electron bombarded, subthreshold defect form., cathodoluminescence obs. 2-51718  
 SrS:Cu phosphors, luminescence centres and charge compensation 2-22084  
 TbP<sub>2</sub>O<sub>4</sub>, Tb<sup>3+</sup> cathodoluminescence saturation effects 2-51717  
 W:ThO<sub>2</sub>, anal. by SIMS and electron probe microanalyser, cathodoluminesc. 2-41953  
 YAG, plastic deform. of subsurface layers rel. to point defect motion, microcathodolum. obs. 2-46775  
 YAG:Tb<sup>3+</sup>, cathodoluminescence saturation effects 2-51717  
 Y<sub>2</sub>O<sub>3</sub>-WO<sub>3</sub> system, cathodoluminesc., effect of phase relationships 2-17555  
 Y<sub>2</sub>O<sub>3</sub>:S:Eu phosphors, excitation mode into charge transfer band 2-36711  
 Y<sub>2</sub>O<sub>3</sub>:S:R<sup>3+</sup>, Tb<sup>3+</sup> phosphor, photoluminesc. and cathodoluminesc., Tb<sup>3+</sup> enhancement mechanism 2-51666  
 ZnO-polyethylphenylsiloxane, heterogeneous mixt., cathodoluminesc. quenching by low temp. plasmas 2-31561  
 ZnS, cathodoluminescence in TEM 2-41435  
 ZnS:Cu,Nd,Cl film, laser phenomena in direct current electrolum. and cathodolum. 2-13572  
 ZnSe, electrically active grain boundaries, SEM cathodoluminescence and induced current obs. 2-40417  
 ZnSe, resonant exciton photoluminescence and cathodoluminescence 2-2341  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-ThF<sub>4</sub>:TbF<sub>3</sub> glasses, luminesc. props. 2-26962
- cathodophosphorescence** *see* cathodoluminescence  
**cathodothermoluminescence** *see* cathodoluminescence  
**catholytes** *see* electrolytes  
**CATV** *see* community antenna television  
**causality** *see* physics fundamentals  
**causticity** *see* pH  
**cavitation**  
*see also* bubbles; vortices  
 acoustic cavitation noise spectra, dynamics 2-35012  
 air ventilation effects on cavitation in venturi 2-30189  
 artificial, in non-steady-state flow around thin obstruction (*Russian*) 2-8193  
 bubble collapse, effects of solid wall on bubble motion and shock waves 2-8207  
 2-D cavity flow, heat transfer, numerical anal. using finite-analytic method 2-1199  
 detection and classification of cavitation nuclei 2-44767  
 explosive shock waves inducing cavitation, laboratory investigation, improved technique 2-20772  
 flexible supercavitating hydrofoils, hydroelastic characts., 2-dimens. theory 2-39873  
 flexible supercavitating hydrofoils, hydroelastic instabilities, 2-dimens. theory 2-39874  
 flow induced by a jet in a cavity measurements and 3D numerical simulation 2-30106  
 flow through orifice with enormous press. fluctuations, Johnsson effects 2-30190  
 gas content in liquids determ. by ultrasonic method 2-44613  
 gaseous cavitation in liquids, influence ofinsonification time on threshold pressure 2-25160  
 hind-limb, guinea-pig, US induced cavitation in vivo, stable bubble prod. 2-18249  
 ideal incompressible fluid, solns. describing steady irrot. flow over bodies 2-39956  
 limited cavitation on axisymmetric bodies obs. 2-25411  
 liquid flow, subsonic, compressibility effects on cavitation 2-16352  
 liquid flows, transonic cavitation 2-16353  
 liquid gas solutions, equilib. of cavitation nuclei 2-25412  
 liquid natural gas carrier underwater noise study in Baffin Bay 2-34984  
 liquid-film lubrication problems, cavitation algorithm 2-25328  
 liquids cavity dynamics, optical breakdown initiation, shadowgraphic study 2-16354  
 local behaviour of cavitation studied by laser beam technique 2-4867  
 models of cavitating liquid in nonsteady hydroelastic plasticity 2-30194  
 nonlinear acoustics, subharmonic route to chaos 2-11874  
 nonlinear low-frequency cavity-oscillations behind a circular cylinder 2-1239  
 nuclei, influence of conc. and distribution on inception and noise of bubble cavitation 2-29910  
 nuclei, relationship between strength and size 2-8194  
 nuclei measurements by Coulter-counter system without adding any salt in water 2-1241  
 orifice flow, polymer additives behaviour effects on cavitation 2-30192  
 permanent cavities in liquids 2-12189  
 plane and axisymmetric cavitation flows, variational calc. method 2-39957  
 polymer solns., dil., cavitation bubbles obs. in flow through orifice 2-1253  
 potato tuber tissues, determ. of cavitation threshold from luminesc. appearing on US exposure 2-9834  
 pumps, cavitation noise meas. techniques 2-20505  
 radial motion of cavitating spherical bubble in inviscid compressible liquid with variable sound speed 2-8208  
 scale effects on various types of limited cavitation 2-25410  
 self-induced pulsating liquid flow in hydraulic system 2-30223  
 shape of slender axisymm. nonstationary cavity 2-1238  
 spherical cavitation bubbles in a sound field, dynamics and acoustic emission 2-20658  
 steel, C, cavitation erosion, vibratory and Venturi tests 2-9427  
 steel, stainless, crept. angular frequency of cavitated boundaries on sectioning plane 2-50664

**cavitation continued**

- steel, stainless, electrochemical corrosion, surface plastic deform. influence in cavitation-erosion failure 2-17774  
 stressed dielectric liquids, cavitation dynamics 2-12188  
 supercavitating hydrofoil with short cavity, performance anal. 2-30193  
 two dimensional/unbounded flow, unsteady characteristics of cavitation behind circular cylinder 2-1240  
 US biophysical effects, cavitation during low-power exposure, detect. of resonant bubbles by second-harmonic emission 2-18350  
 US irradiated tissue, transient cavitation during hyperthermia 2-47631  
 vapour cavity growth and collapse near a free surface 2-16367  
 venturi, flowing down bubble effects on cavitation 2-30188  
 water flow through orifice, polymer additive effect on cavitation development, static press. effects 2-30191  
 Cu, creep and cavity growth at low stresses 2-51975  
 Cu-Al-Fe, C62500 Al bronze, laser quenched, cavitation erosion, surface layer transform. 2-9458  
 Fe, oxidation FeO grain size and cavities effects 2-41779  
 LiF, energy density of collapsing cavitation bubble 2-45147
- cavities (solid)** *see* voids (solid)  
**cavity resonators**  
*see also* acoustic resonators; laser cavity resonators  
 bidirectional ring cavity, optical bistability 2-20356  
 cyclotron maser instability as resonant limit of space charge wave 2-39604  
 dielectric constants, meas. by MW dielectric resonator 2-6876  
 dielectric measurement of polymers, in ionising radiation field, at 10 Hz freq., -100 to 200°C 2-36498  
 Fabry-Perot and open resonators at microwave and millimetre wave frequencies, 2-300 GHz, review 2-33620  
 Fabry-Perot folded resonators, stability 2-20357  
 Fabry-Perot interferometer, resonator eqn. relating Fresnel number, finesse and number of beam transits 2-19165  
 ferrites EM parameters meas. at UHF, by comparison method 2-23618  
 Helmholtz resonator, extended, in low-temp. photoacoustic spectroscopy 2-43096  
 Josephson tunnel junction, rectangular cavity modes obs. 2-46206  
 maser, mol. beam, operated with disc resonator, bistability of elliptically polarised oscill. 2-34711  
 microwave complex permittivity meas. of lossy materials using cylindrical TM<sub>010</sub> cavity perturbation techniques, precise calcs. and meas. 2-3588  
 MM-wave spectroscopy, untuned cavities, appls., dielec. meas. 2-33570  
 open coaxial-line resonator appl. to local dielec. const. meas. for thin slab-like materials at microwave freqs. 2-43052  
 open resonator, evacuable, operating at 337  $\mu$ m, dry N<sub>2</sub> refr. index meas. 2-3611  
 open resonators, linear and nonlinear electron cyclotron interaction 2-49721  
 optical cavity modes, relativistic electron acceleration 2-561  
 optically bistable devices, use of bidirectional ring cavity 2-7828  
 passive ring resonator method for sensitive inertial rot. meas. in geophysics and relativity 2-23702  
 ponderomotive force, anomalous 2-44168  
 rectangular waveguide resonator calc., used as absorption cell in radio spectroscopy 2-201  
 relativistic electron beams, EM waves steady-state parametric excitation 2-829  
 ring cavity, optical bistability and universality, path to turbulence 2-25063  
 self-imaging fields 2-34684  
 spherical cavities for determ. of microwave props. of semiconductors 2-3589  
 superconducting cavities, stabilisation of tunnel diode oscillators 2-33411  
 Nb, elliptically shaped RF cavities, expt. and theoretical results 2-15648
- c.c.d. circuits** *see* charge-coupled device circuits  
**CCTV** *see* closed circuit television  
**celestial mechanics**  
*see also* Earth orbit; N-body problems; stellar motion  
 1980 S 1 and 3, dynamics 2-3221  
 1980 S 1 and 3, obs. of positions and orbits 2-53160  
 1980 S 1 and 3, tadpole and horseshoe orbits of coorbital satellites 2-53158  
 1980 S 20 and 21, satellite orbits and positions 2-53160  
 1980 S 6 (Dione B), orbit, visible obs. 2-14801  
 1981 S 1 and 2, orbit visible obs. 2-14801  
 1981 S 7, 8, possible new Dione Trojan(s), evidence for horseshoe orbit rel. to Dione 2-28407  
 1981 UA, identification as probable Phocaea-type asteroid 2-10351  
 ANS inclination var. giving upper atmosphere rot. vel. 2-28253  
 Ariel 1, orbital elements during final thousand days and geophysical inferences 2-10299  
 artificial satellite drag perturbations in spherically symm. atm. 2-14751  
 artificial satellite orbit, secular effects, use of satellite photographs of planetary surface 2-6525  
 artificial satellite orbit, third order perturbation theory (*Chinese*) 2-18676  
 artificial satellite orbit determ., use of micro-accelerometers for space geodetic expts. 2-6437  
 artificial satellite orbit parameters estimation method 2-28356  
 artificial satellites, appl. of orbital perturbations to oceanic tide studies 2-6369  
 artificial satellites, close, orbit perturbation due to Earth (*Chinese*) 2-18677  
 artificial satellites, dual spin, subject to gravit. torques, stabilisation due to gyroscopic coupling 2-42568  
 artificial satellites, orbital perturbation, third order soln. 2-18685  
 artificial satellites orbital motion, effect of terrestrial IR radiation press. 2-18678  
 artificial satellites orbits near critical inclination, inclusion of lunisolar perturbations 2-18694  
 artificial satellites Sun-synchronous orbits near critical inclination 2-18695  
 asteroid belt, restricted three-body problem in resisting medium rel. to origin (*Italian*) 2-10338  
 asteroid belt formation, computer simulation 2-23232  
 binary stars, relativistic celestial mechanics in postNewtonian approx. 2-10483  
 Brouwer geopotential theory for satellite motion, improved efficiency 2-3187  
 canonical systems of differential eqns., stationary solns. 2-32823  
 collisionless systems of gravitating masses, evolution rel. to form. of galaxies and galaxy clusters 2-28569



## celestial mechanics continued

- comet 2-42658  
 comet barycentric orbits and planet perturbations 2-42649  
 comet capture by Jupiter 2-18741  
 Comet Howard-Koomen-Michels (1979 XI), Sun-grazing comet, orbital elements rel. to collision with Sun 2-18739  
 comet swarm dynamical evolution in proto outer planetary region 2-38072  
 comets, orbital evolution rel. to excess of retrograde orbits among 2-10359  
 critical inclination in satellite theory, reconsiderations 2-32818  
 Dione, coorbital satellite orbits and mass of Dione 2-53158  
 Dione B, libration motion of coorbital satellite 2-53159  
 dissipative Kepler's problem, conservation laws 2-6528  
 dynamical systems stability, Henon-Heiles' model and KAM theorem (Polish) 2-42586  
 Earth-Moon system, spacecraft reson. rot. motion at triangular libration point 2-10301  
 equatorial orbit about oblate body, elliptic elements, Lie series 2-32817  
 extended Hamiltonian system contact transformation groups, appl. to extended N-body soln. 2-23208  
 four-body problem, planar circular case 2-32819  
 four-body problem, satellite restricted case, perturbing function 2-18690  
 galaxies, barred, effect of resonances near corotation 2-18794  
 galaxy halos mass profile form., secondary infall N-body simulation 2-33130  
 Galilean satellites orbital reson. and tidal interactions 2-6560  
 geodetic satellites, orbit determ. from laser range obs. 2-42573  
 geosynchronous satellites, calc. of Earth station Sun outage times 2-32806  
 gravitational forces and moments computation from external fields 2-42589  
 gravitational interaction of two planetesimals, rel. to orbital evolution 2-53069  
 gravitational interaction retardation effect 2-14759  
 Gylden-Mescerskii problem 2-3189  
 Hansen coefficients, computation of tables 2-23213  
 horseshoe orbit solns. of elliptical restricted three-body problem 2-53066  
 IAU (1976, 1979) System of Fundamental Astronomical Constants, numerical values 2-42582  
 Intercosmos 11 at 15th order orbital reson., geopotential determ. 2-9908  
 Janus, obs. of orbit and positions 2-53160  
 Jovian planets, third order theory (French) 2-32813  
 Jupiter, motion in Le Verrier and Gaillois's theories (German) 2-28405  
 Jupiter satellites (outer), intercollision probability 2-53149  
 lunar orbiter missions having low inclination, trajectory optimisation 2-18699  
 lunar theory, Earth-figure perturbations computation 2-42621  
 many fixed centres problem, appls. to geophysics 2-42584  
 mapping Kolmogorov entropy, depend. on coord. system (Chinese) 2-18689  
 Mars, UHF radar obs. giving orbit, refl. props. and profiles 2-23240  
 Mars satellites, pole and prime meridian expressions 2-32891  
 mean-Earth satellites, analytical singularity-free orbit predictor 2-48138  
 Mercury, translational rotational motion, periodic perturbations 2-38078  
 Mercury, UHF radar obs. giving orbit, refl. props. and profiles 2-23240  
 meteor streams orbit and origin from Comet nuclei 2-23262  
 meteoroid orbit, perihelion motion due to thermally induced expansion 2-23263  
 meteoroid swarm orbits, secular perturbations, effect on meteor showers 2-42662  
 meteoroid velocity distribution in near Earth orbit, sliding window method 2-32861  
 Moon, semi-analytic libration theory 2-23237  
 Moon, translational rotational motion, periodic perturbations 2-38078  
 Moon distance from Earth, apogee and perigee var., brightness var. 2-10342  
 Moon elongation, second derivative jump 2-23236  
 Moon orbit, effect of Earth orbit eccentricity secular changes 2-28361  
 Moon orbital acceleration, rel. to tidal friction and Earth rotation over last 2000 years 2-52699  
 Moon orbital motion soln. ELP-2000 comparison with JPL model (LE-51) (French) 2-32872  
 motion in rotationally symmetric potential field, props. of near circular motion 2-28325  
 motion of body with changing dynamic structure, theory (Russian) 2-53068  
 multiple stars orbit configurations, possible hierarchies 2-23330  
 N-body problems, error estimation in numerical integration (Russian) 2-38042  
 near-Earth satellite orbit determ., 1981-status and future trends 2-48137  
 Nereid, orbital elements including solar perturbations 2-32947  
 neutron stars, asteroid impact, gravit. scatt. as  $\gamma$ -ray burst source 2-10527  
 orbit calcs. near equilib. points, discrete mechanics method 2-3188  
 orbit determination method 2-14785  
 orbital elements, secular perturbations calc. by Halphen Goryachev method 2-32824  
 orbital interactions, geometrical formalism 2-53095  
 outer planets, construction of theory using iterative method (French) 2-6522  
 Period Comet Gehrels 3, orbit variations, temporary satellite captures by Jupiter 2-18738  
 Periodic Comet Encke, nucleus and brightness correl. with orbit position 2-10360  
 Periodic Comet Halley, long-term motion (1404 BC to AD 1910) 2-14807  
 Periodic Comet Tempel Tuttle, orbit over 1366-1966 period 2-38133  
 periodic lunar flybys 2-18691  
 perturbation coupling, secular term elimination 2-32822  
 Phobos and Deimos, dynamical environment, three dimens. numerical model anal. 2-32895  
 Phobos and Deimos, effects of tidal friction on orbital evolution (French) 2-6550  
 planet motion, rotational and translational, secular effects caused by non-spherical nature 2-32882  
 planet potential from body movement close to surface 2-6529  
 planetary distances, Basano-Hughes law rel. to nebula accretion (French) 2-53067  
 planetary orbital and rotational motion, general relativistic coupling 2-38043

## celestial mechanics continued

- planetary satellites, orbit orbit reson. about a massive planet 2-23209  
 planetary satellites orbital evolution, effects of tidal friction (French) 2-6550  
 planetary systems, orbital stability constraints on nature of systems 2-32812  
 planetary triple conjunctions 2-48162  
 Pluto-Charon system, effects of tides on orbital evolution (French) 2-6550  
 Pluto-Charon system as Neptune binary satellite, constraints 2-38110  
 protoplanetary nebula evolution, accumulation process model and orbit interactions 2-32871  
 quasi-equilibrium in collisional systems 2-53130  
 relativistic planetary perturbations (French) 2-42579  
 resonant systems with three degrees of freedom, isolating integrals number 2-23212  
 restricted three-body problem, new regularising transform and appl. 2-42585  
 rigid body oscillations evolution rel. to mass centre near a libration point (Russian) 2-6527  
 rotating triaxial gravitating ellipsoid, libration point stability 2-53065  
 Saari's conjecture, proof using variational method 2-23210  
 satellite 1974-70 A, vars. of thermal accommodation coeff. from anal. of atmospheric lift effects 2-14753  
 satellite motion, homogeneous atmosphere height change effect 2-53046  
 satellite orbits, combined effect of solar radiation pressure and atmos. drag 2-32821  
 satellites of outer planets, numerical integration 2-32815  
 Saturn, 1980 apparition discovered satellites, classification into orbital groups 2-32943  
 Saturn, F-ring braids, mag. anomaly origin 2-23252  
 Saturn, motion in Le Verrier and Gaillois's theories (German) 2-28405  
 Saturn ring system, collisionless rings theory 2-14803  
 Saturnian satellites, discovery and possible orbit of 1980 S 34 and (1981 S 6) 2-48180  
 solar nebula dispersal and planetary system stability, scanning secular reson. theory 2-32869  
 solar system bodies, relativistic effects in radar, optical and radio-interferometric meas. 2-10335  
 solar system invariable plane, inclination and ascending node (DE 102) 2-48160  
 solid satellite in circular orbit, rotation, first order perturbations 2-14758  
 spherical functions, addition theorem 2-5323  
 Stackel systems Lagrangian theory 2-18697  
 stars diffusion in harmonic pot. 2-33090  
 stellar dynamics, folds in direction field and transformations in type of orbits 2-42726  
 Szebehely's equation general soln. and appl. 2-23211  
 tadpole orbit solns. of elliptical restricted three-body problem 2-53066  
 Tethys Lagrangian satellites, orbits and libration motion 2-53162  
 three body problem, restricted case, new family of periodic orbits 2-18698  
 three-body problem, 3-dimens. restricted case, stochasticity, Lyapunov chars. 2-32820  
 three-body problem, elliptical restricted case, tadpole and horseshoe orbits 2-53066  
 three-body problem, elliptical restricted case, Trojan asteroids, orbital element perturbations 2-6558  
 three-body problem, general case, bifurcations of planar to three dimens. orbits 2-23207  
 three-body problem, moment of inertia props. 2-3186  
 three-body problem, non-planar stellar case, asymptotic soln. 2-18693  
 three-body problem, plane circular restricted case, periodic lunar flybys 2-18691  
 three-body problem, restricted case, horseshoe periodic orbits for Sun-Jupiter mass ratio 2-32814  
 three-body problem, restricted case, Poincare's conjecture 2-6526  
 three-body problem, restricted circular case, orbital evolution 2-53063  
 three-body problem, restricted circular case, reson. rot. motion of rigid body at triangular libration point 2-10301  
 three-body problem, restricted elliptical case, satellite motion w.r.t. centre of mass 2-53064  
 three-body problem, stability study, analogy with triple collisions (French) 2-18696  
 three-body problem, twice averaged restricted circular case, orbit evolution 2-28324  
 three-body problems, conditions for escape of smallest mass body 2-10302  
 three-body problems, scattering, new treatment techniques 2-32816  
 three-dimensional periodic motion, of three finite masses around collinear equilib. configurations 2-42583  
 time elements in rectangular coordinates 2-18692  
 Tiros 7 rocket at 15th order orbital reson., geopotential determ. 2-9908  
 trajectories to Saturn 2-53047  
 Trojan asteroids, orbital element perturbations 2-6558  
 two-body problem, classical non-stationary Gylden-Mescerskii problem 2-3189  
 two-body problem, short periodic perturbations elimination 2-28323  
 two-body problems, orbits in Sun-Jupiter asteroid system 2-23214  
 Uranus comet family, orbital elements rel. to eruptive evolution of planetary satellites 2-53180  
 Venus, resonance rotation problem anal. 2-6555  
 Venus, UHF radar obs. giving orbit, refl. props. and profiles 2-23240  
 viscoelastic sphere, motion in central Newtonian force field 2-6731  
 X-ray binary, supernova effect on orbital plane (Russian) 2-38253  
 $\beta$ -meteoroids, orbits, interplanetary dust grains collisional processes as possible origin 2-32958

## cell model (liquids) see liquid theory

## cell motility

- bacteria, aquatic, mag. navigation 2-42118  
 bacteria, flagella motor rot. mechanism, theoretical model 2-52457  
 bull spermatozoa, photokinetic investigation 2-32367  
 E coli, migrating chemotactic bands, quasilelastic light scatt. obs. 2-9784  
 light beating spectroscopy developments, obs. of motile microorganisms 2-230  
 Nitella, behaviour of cytoplasmic streaming, during centrifugation 2-37510  
 sperm cells, bull, motility evaluation by computer controlled video techniques 2-14217



**cell motility continued**

- sperm motility study apparatus, microprocessor anal. of scatt. laser light 2-47779  
 stomatal cells of *Allium*, vacuole motility and development, epifluoresc. and video anal. 2-37511  
 topotaxis, math. theories 2-9788

**cells (electric)**

- see also fuel cells; photoelectric cells; photoelectrochemical cells; primary cells; secondary cells  
 battery plate cycling, electrode kinetics methods appls. 2-47346  
 battery plate formation charging methods to keep pace with industrial demand, state-of-the-art 2-52311  
 electrochemical cell 2-2782  
 electrochemical cell noise meas., expt. techniques, problems 2-47461  
 electrochemical cells with solid electrolytes, impedance, freq. depend. 2-31931  
 electrochemical cycling of pasted antimonial lead electrodes (positives) 2-32043  
 energy storage, batteries, and the BEST facility 2-47460  
 fluidised-bed electrolytic cells, diaphragmless, for metal deposition 2-37081  
 galvanic, with solid sulphide electrolytes, S chem. pot. determ. 2-47459  
 gas evolving, ohmic interelectrode resistance, hydrodynamic model 2-27441  
 graphite intercalation cpds., positive electrodes in galvanic cells 2-6039  
 metal/electrolyte interface, noise source isolation 2-32041  
 modified asymptote superposition for electrochemical cell electrode polarization 2-32042  
 salinity power production, concentration cell, economic potential 2-6187  
 sintered nickel hydroxide, electrodes blistering effects 2-41993  
 solid state electrochemical cell used for meas. of kinetics of metal oxidation 2-9525  
 solid state ionics and galvanic cells, conf., Tokyo, Japan (Sept., 1980) 2-14975  
 solid-sulphide electrolyte galvanic cell measurements 2-13975  
 undercooled melts and glasses, electrochem. behaviour, thermodynamic props., galvanic cells 2-13967  
 Ag/ $\beta$ -AgI/2Li<sub>2</sub>Py cell, AgI solid electrolyte cryst. microstruct. 2-16806  
 Ag/ $\beta$ -AgI/2Li<sub>2</sub>Py cell, AgI film conductivity 2-16878  
 CaF<sub>2</sub> solid electrolyte, galvanic cell investigs., 500-900°C 2-13976  
 Li/LiC<sub>2</sub>O<sub>4</sub>-F<sub>3</sub>-polyethylene oxide/Li<sub>2</sub>Na<sub>2</sub>TiS<sub>2</sub> ( $y=0, 0.16$ ) electrochem. cell investig. 2-21369  
 LiAl composite electrodes in solid state battery 2-27583  
 MoO<sub>3</sub>/ZrO<sub>2</sub>-CaO/Mo system, O transfer kinetics at solid electrolyte-electrode interfaces 2-41994  
 V<sub>2</sub>O<sub>5</sub>, composite electrodes in solid state battery 2-27583  
 ZrO<sub>2</sub> galvanic cell O<sub>2</sub> sensor, non-ideal EMF behaviour 2-10795  
 ZrO<sub>2</sub>, stabilised, cell, electrode processes studied by complex impedance method 2-13974  
 ZrO<sub>2</sub>, stabilised cell for O<sub>2</sub> partial press. control and meas. 2-10800

**cellular biophysics**

- see also biomembrane transport; biomembranes; cellular effects of radiation; cellular transport and dynamics; lipid bilayers  
 adhesion, specific, of cells to surfaces or other cells, theoretical models 2-9787  
 amacrine cells, importance in processing pattern-induced flicker colours 2-22744  
 amacrine cells of the cat retina 2-22742  
 antibacterial effects of Ag electrodes 2-22871  
 ATP synthesis and  $\Delta\mu_{H^+}$  formation, role of elec. field, book contrib. 2-37514  
 auditory neurons, comparison of spectro-temporal sensitivity to tonal and natural stimuli 2-52493  
 auditory neurons, functional characteristic, spectro-temporal receptive field 2-52492  
 auditory system, 8th nerve regeneration, reformation of organised connections 2-14261  
*Bacillus megaterium* cell investigation by Raman scatt. technique 2-52455  
 bacteria detection automation 2-2981  
 bacterial culture, growing, impedance meas. of soln., 2- and 4-electrode methods (Japanese) 2-47771  
 bacterial photosynthetic reaction centres, X-ray absorpt. study of Fe site 2-52453  
 blood deer, sickle cell absorption of ultrasound 2-14283  
 blood platelets, improved detail in study by soft X-ray microscopy 2-6294  
 burn pathology development, rat tissue, proton mag. relax. 2-52437  
 cancer cell, detection system based on multi-spectral images 2-22814  
*Chlamydomonas reinhardtii* cells with P700 enrichment, hole-burning in low-temp. absorpt. spectra 2-2856  
*Chlorella*, chlorophyll fluorescence, picosecond spectroscopy 2-47579  
*Chlorella* algae, delayed fluorescence, time resolved spectroscopy 2-47581  
 chlorophyll, in vivo, in chloroplasts and algae, fluorescence lifetimes 2-47580  
 chloroplast active immobilised membranes, photoacoustic spectroscopy 2-47574  
 chromatin, replicating, effect of hyperthermia 2-52460  
 chromosome bands, use of high resolution microscope photometry in discrimination 2-52686  
 chromosomes, 3D reconstruction by electron microscopy, instrumentation 2-27958  
 cortical unit activity during intermittent photic stimulation in *Papio papio* 2-37542  
 cryofixed specimens, cooling chain for STEM and X-ray microanal. 2-9900  
 cultured cells, whole mount obs. by ultrahigh resolution TEM 2-27946  
 cytoplasm flow in living cells, laser Doppler velocimetry obs. 2-35242  
*E. coli* K-12( $\lambda$ ) bacterial cells, mm wave reson. absorpt. 2-52538  
 electron microscopy, simple method for whole-cell prep. 2-52688  
 epidermal growth factor, cultured rat cells, effects of hyperthermia 2-22708  
 ERG waves, origins in terms of retinal cell function 2-22753  
 erythrocyte, human, deformability meas. by optical diffractometric method 2-22707  
 erythrocyte cytoplasm, elec. conductivity obs. 2-14213  
 ganglion cell thresholds and discharge patterns, determ. by latencies, frog retina expts. 2-22750  
 ganglion cells in cat's retina, difference between X- and Y-type responses 2-22749

**cellular biophysics continued**

- ganglion cells of frog retina, disinhibitory action of strychnine 2-22746  
 genic section model, noise-induced transitions 2-6212  
 granulocyte-monocyte stem cells, thermal inactivation energy 2-27794  
 hindlimb electrical stimulation rel. to increased neuronal cell death in chick embryos 2-37529  
 hyperthermia of cultured cells; macromol. synthesis, membrane transport and lysosomal function 2-47585  
 L-type horizontal cell response in retina, spatial decay props. 2-37549  
 laser micromanipulation and prep. of biological tissue sections and cells in vitro 2-32366  
 laser scanner microscope, ultrafast, for digital image anal., cytology appl. 2-42188  
 leucocytes, method for labelling with <sup>99m</sup>Tc-colloid in whole blood 2-52624  
 leukocytes, human, passive mech. props., rheological study 2-9785  
 LEYAS, use in analytical and quantitative cytology 2-42189  
 liver cell image processing, variable-threshold digitiser for photodiode arrays 2-27944  
 liver cells, adhesion to glass surfaces, reflection-contrast microscopy 2-52694  
 lung cells, lack of correl. between hyperthermic killing, thermotolerance, and membrane lipid fluidity 2-27793  
 lymphocyte activation, fluoresc. probe obs. 2-47764  
 lymphocytes, fluorescein fluorescence, picosecond spectroscopy 2-47579  
 lymphocytes, rat thymus, fluorescein dye, time depend. fluorescence depolarisation meas. 2-52438  
 macrophages, rat lung <sup>14</sup>C autoradiogram meas. by densitometry or photometry 2-6293  
 macrophages, vols. and surface areas, by SEM photogrammetry 2-52685  
 macrophages from mouse spleen cultures, voltage clamp studies 2-37533  
 malarial parasite concentration, bench top mag. separator 2-22807  
 mammalian retina, functional architecture of cone bipolar cells 2-22730  
 mechano-electric transduction in insects and vertebrates 2-47613  
 membrane integrating functions and protonic pot. role, book contrib. 2-37509  
 Merkel cell-neurite complexes, struct. and transducer function 2-32227  
 metabolically active cells, laser-Raman spectrum of Davydov soliton 2-22706  
 mitochondria, dimens. during ion flow, electron microscopic obs. 2-33690  
 mitochondria and microsomes, book 2-33242  
 molluscan brain, single neuron, quasi-electrostatic influence, freq. modulation 2-14218  
 morphological analysis of cells, using wide-angle laser scatt. intensity distrib. 2-841  
 muscle cell membrane obs. using biological HVEM 2-27953  
 myocardial cells in culture morphology and physiology obs. using Zeiss Axiomat microscope 2-14374  
 myocardial pacemaker cells, entrainment model based on phase response curve 2-52465  
 nerve cell studies using stereo micrographic techniques 2-22867  
 neuron, pond snail, driven by maintained currents, repetitive activity, supercritical bifurcation 2-52464  
 neuron activity investig. by optical methods (Russian) 2-47753  
 neuronal lipofuscin, accumulation in human brain, autofluorescence intensity meas. 2-32189  
 neurons, single, new morphological methods for representation using optical microscopy 2-52695  
 neurophysiology expts., computer-controlled meas. system using FM tape (German) 2-9896  
 neuroscience device to aid penetration of small nerve fibres with microelectrodes 2-42248  
*Nitella mucronata*, state of water studied by NMR 2-14212  
 NMR, <sup>1</sup>H, study of variations in relax. times T<sub>1</sub> and T<sub>2</sub> (French) 2-9833  
 nuclear components, identification and selective microprep. using Zeiss IM 35 inverted microscope 2-52693  
 oral epithelial cells, effects of mechanical loading on cell membrane 2-22786  
 photopigments and carp ganglion cell action spectra 2-22761  
 photoreceptor biophysics, review 2-47598  
 photoreceptor cell static and dynamic props., light scatt. as sensitive probe 2-52675  
 photoreceptor cells, fluoresc., in vivo fly eye obs. 2-18204  
 photosynthetic organisms excited by intense light, fluoresc. study 2-52537  
 phycocyanin, energy transfer, photochemical hole burning obs. 2-47582  
 phycoerythrin, energy transfer, photochemical hole burning obs. 2-47582  
 Porphyrin, in situ, spectroscopic obs. 2-52454  
 primate retinal ganglion cells, blue sensitive cone mechanism characts. 2-22738  
 purple bacteria, solar energy appls. 2-22705  
 purple membrane of *Halobacterium halobium*, photochem. transients, low temp. photoacoustic spectra 2-47575  
 purple membranes of *Halobacterium halobium*, photoacoustic photocalorimetry and spectroscopy 2-52444  
 Raman spectroscopy of micro-organisms, expt. aspects 2-52678  
 red blood cell, human, crenation 2-27795  
 red blood cell deformability meas., single pore membrane prod. for meas. device 2-22842  
 red blood cells, sputtering yield, Ar<sup>+</sup> ion irradiation, ang. depend. (Japanese) 2-41476  
 red blood cells, US meas. of back-scatt. cross-section (French) 2-32251  
 retina, cat, neural circuitry, cone pathways to ganglion cells 2-22726  
 retina, catfish, direct elec. connections between transient amacrine cells 2-37547  
 retina, dace, characts. of 2nd order neurons 2-22728  
 retina, small field L-horizontal cells, peripheral antagonism, turtle expts. 2-22733  
 retinal bipolar cells with double colour-opponent receptive fields 2-9800  
 retinal cells made syncytial after electrode penetration, morphological obs. 2-42094  
 retinal ganglion cell classes in Old World monkeys, morphology and central projections 2-22724  
 retinal ganglion cells, dynamic aspects of centre and surround mechanisms, white noise anal. 2-22751  
 retinal ganglion cells, freq. response to moving monochromatic spots under photopic conditions 2-22740  
 retinal ganglion cells, goldfish, growth-related changes in receptive field props. 2-2867  
 retinal ganglion cells, goldfish, growth-related changes in size of receptive field centres 2-2868



**cellular biophysics continued**

- retinal ganglion cells, monkey, luminance and response range to white light 2-42097  
 retinal ganglion cells, mudpuppy, light-evoked sustained inhibition 2-42096  
 retinal ganglion cells, rabbit, effect of synaptic transmitter drugs 2-22745  
 retinal horizontal cells, cat, freq. transfer props. 2-22731  
 retinal horizontal cells in visual streak, anatomy and physiology, turtle expts. 2-22735  
 RF electric oscill., natural 2-47583  
 Rhodospseudomonas sphaeroides, electron-transfer reaction, temp. dependence 2-37486  
 Rhodospseudomonas sphaeroides, reaction centres, electronic struct. of  $\text{Fe}^{2+}$ , EXAFS obs. 2-52428  
 rod outer segment membrane, Gekko gekko, fluidity and ordering, temp. effect 2-9786  
 scanning conditions for cell images using microscope-TV system (*German*) 2-27956  
 SEM autoradiography, of critical point dried biological samples 2-32383  
 striate cortex, cat, silent periodic cells 2-37556  
 submitochondrial particles and energy transduction, book contrib. 2-37513  
 Tetrahymena pyriformis membrane, chemoreception, fluoresc. probe study 2-47615  
 thermogenic mitochondria, book contrib. 2-37512  
 thermosensitive neurons in sunfish brains 2-32183  
 thylakoid membrane phase transition temp., effect of spinach chloroplast ageing 2-27777  
 thylakoid membranes, of chloroplasts, proton spin-lattice relax., proton dilution studies 2-32187  
 ultrastructure, elemental imaging, soft X-ray contact microscopy 2-32379  
 vascular endothelial morphology rel. to blood flow pattern 2-42132  
 vision, opponent-colour cells rel. to detect. of small, brief lights 2-37566  
 visual cortex, phase relationships between adjacent simple cells 2-6224  
 visual cortex of cats, spatial computation performed by simple and complex cells 2-37553  
 yeast intracellular metabolites,  $^1\text{H}$  NMR obs. using  $^{13}\text{C}$  decoupling 2-24748

**cellular effects of radiation**

- see also biological effects of .... (type of radiation)  
 see also photosynthesis  
 acetylcholinesterase of human erythrocytes, determ. of mol. activity after  $\gamma$ -irrad. (*Russian*) 2-42151  
 adenocarcinoma of rat small bowel, antibody-dependent cell-mediated cytotoxicity 2-47649  
 ascites tumour cells, mouse, in vivo and in vitro radiosensitivities 2-18266  
 Bacillus stearothermophilus, permeable cells, effects of  $\gamma$ - and UV-radiation on DNA synthesis (*Russian*) 2-52552  
 Balb/c-3T3 cells, differential mutagenic response of G1 phase variants to UV irradiation 2-22797  
 blood, extracorporeal irradiation in a rat model for human myelocytic leukemia 2-18260  
 blood cells, human, binding of concanavalin A after in vitro X-irrad. 2-37628  
 blood cells of X-irrad. mice, plasma membrane alterations, binding of concanavalin A 2-37627  
 cardiac, muscle cells, in vitro microwave irrad. effects 2-27827  
 cerebellar neurons, DNA struct. alterations after whole-brain irrad., rat expts. 2-18259  
 chromosomal nonhistone protein-DNA complexes, cell specific, in HeLa chromatin,  $\gamma$ -rad induced crosslinking 2-22798  
 chromosome aberrations and sister chromatid exchanges induced in mouse  $10\text{T}^{1/2}$  cells 2-47643  
 Chromosome aberrations induced in patients treated with telecobalt therapy for mammary carcinoma 2-22801  
 chromosome loss,  $\gamma$ -rad induced, in mutagen-sensitive Drosophila melanogaster, effect of hyperthermia 2-22702  
 chromosome structural changes and SCE after exposure to fields from 380 kV systems 2-52534  
 clonogenicity in situ assays, hypothetical mechanisms and limitations for normal tissues 2-32280  
 Clostridium butyricum, reversible effect of light on  $\text{H}_2$  release 2-14287  
 CNA repair studies, MWPC with cathode coupled delay line read-out 2-42237  
 conference, Hannover, Germany (Oct. 81) 2-48398  
 Crepis capillaris, seeds and seedlings, absence of additivity in combined effect of  $\gamma$ -rays and neutrons (*Russian*) 2-42157  
 cytogenetic aspects of neutron appl. to radiotherapy (*Russian*) 2-52531  
 diploid fibroblasts, human, reduction in proliferative life span after thermal neutron irrad. 2-32248  
 DNA, newly synthesised, transient post-irrad. defect 2-52572  
 DNA strand breaks, normal rejoining in ataxia telangiectasia fibroblast lines after low X-ray exposure 2-27848  
 DNA strand-breaks induced by ionising radiation, effects of hyperthermia on repair 2-27851  
 DNA-protein, cross-links, UV-induced, and the possibility of elimination thereof (*Russian*) 2-42149  
 Don cells, Chinese hamster, inactivation by  $^3\text{H}$  decays, comparison with X-rays 2-32273  
 dose-response model for estimating lifetime tumour risks when cell killing occurs 2-14290  
 dye-sensitised photodynamic inactivation of cells 2-6250  
 E coli, cell surface charge and cell division after X-irrad. 2-47650  
 E. coli, repair of  $\gamma$ -induced single- and double-strand DNA breaks (*Russian*) 2-52553  
 E. coli K1060, membrane fluidity and radiosensitivity 2-37630  
 E coli photoreactivable lethal damage after X- or  $\gamma$ -irrad. rel. to Cherenkov UV radiation 2-42164  
 Ehrlich's ascites tumour cells, X-ray induced cytoproteins increase rel. to UV-fluoresc. (*Russian*) 2-42153  
 epidermal cells of Saintpaulia, repair of sublethal and pot. lethal damage 2-42163  
 epidermis, rat, induction and repair of DNA breaks by electron irrad. 2-32275  
 epithelioma cells, murine, survival after pion irrad. by TRIUMF cyclotron 2-32277  
 erythrocyte ghost membranes, fluoresc. probe monitoring instrumentation, microwave irrad. expts. 2-42246  
 erythrocyte membrane,  $\sigma$ -irrad. effect on spin-labelled compounds transport 2-52586

**cellular effects of radiation continued**

- erythrocyte membranes of rats, activity of ATPases after irrad. (*Russian*) 2-42150  
 erythrocyte surface protein amino groups, mechanism of shielding impairment upon irrad. (*Russian*) 2-52562  
 erythrocytes, bovine, efflux of  $\text{K}^+$  and haemoglobin at low doses and low dose-rates 2-42165  
 erythrocytes, electrophoretic mobility changes after exposure to ionising radiations of various LET 2-42166  
 erythrocytes, human, post-irrad. recovery obs. using double-dose method (*Russian*) 2-42146  
 erythrocytes, indices of protein metabolism during radiation sickness (*Russian*) 2-42152  
 erythrocytes, mechanism of  $\text{K}^+$  transport disturbance on X-irrad. (*Russian*) 2-52563  
 erythrocytes, nucleated and anucleated, radioprotection by oxide-reduction coenzymes 2-18268  
 eucaryotic cells, DNA double-strand breaks induction, dose rate effect 2-47652  
 fibroblasts, human, deficient in glutathione, induction and repair of single-strand DNA breaks 2-42161  
 fibrosarcoma cells, hamster PARA-7, heat and microwave treatment, antibody-complement cytotoxicity enhancement 2-52547  
 genetic consequences of diagnostic radiology in Great Britain 2-2926  
 genetic effects of ionising radiation 2-6251  
 germ cell population dynamics in the adult male Indian gerbil exposed to internal  $\beta$ -irrad 2-27839  
 germ cells of CBA male mice, dominant lethal mutations induced by  $\gamma$ -rays (*Russian*) 2-42144  
 germ cells of embryos and fry of fish, Oryzias latipes, response to continuous  $\gamma$ -irrad. 2-52571  
 germ cells of male mice, genetic effect of  $^{14}\text{C}$  (*Russian*) 2-52565  
 haemopoiesis in mice, microwave irrad. effect on resistance to ionising radiation (*Russian*) 2-42134  
 haemopoietic stem cells from control and preirrad. infant mice, in vitro radiosensitivity 2-32281  
 haemopoietic system of Papio hamadryas, chronic low-level exposure, morphological and cytogenetic changes (*Russian*) 2-52556  
 heavy ions, accelerated, effects of single doses in normal tissue, tumours and cells in vivo 2-27844  
 heavy ions, accelerated, fractionated irrad. of intestinal crypt cells 2-27845  
 HeLa cells, Q-banding anal. of long acrocentric chromosomes after X-irrad. 2-2906  
 HeLa S3 cells, DNA polymerase  $\alpha$  and  $\beta$  activity after  $\gamma$ -irrad. 2-37629  
 hepatocytes, giant, form. in  $\gamma$ -irrad. Swiss albino mice 2-37624  
 immune functions of mammary carcinoma patients, long-term effect of postoperative irrad. 2-52549  
 intestinal epithelium of developing Swiss albino mice, effect of T 2-52574  
 laser microsurgery in cell and developmental biology 2-27957  
 leukaemia cells, mouse, hyperthermic potentiation of X-ray effects on survival and DNA 2-32274  
 leukocyte DNA of rat peripheral blood, repair after total body  $\gamma$ -irrad. (*Russian*) 2-42141  
 liver erythroid cells, foetal mouse, in vitro X-irrad. effects 2-52578  
 liver regenerative processes, X-ray abolition of tumour inhibitory effect (*Russian*) 2-32261  
 lung, mouse, cell proliferation, effects of neutron and X-irrad. 2-18262  
 lung cells, repair of sublethal and potentially lethal damage after irrad. 2-27831  
 lymphocyte chromosome aberrations in partial-body fractionated radiation therapy 2-52575  
 lymphocyte survival after X-irrad., dose-rate effects 2-47641  
 lymphocytes, human, first two mitotic cycles after irrad. at different stages (*Russian*) 2-52557  
 lymphocytes, in vitro irrad. by tritiated water, absorbed dose 2-18305  
 lymphocytes, long-term changes in natural killer activity after external pelvic radiotherapy 2-27835  
 lymphocytes, peripheral, sister chromatid exchanges after preoperative mammography 2-47651  
 lymphocytes, T and B, of guinea pigs and mice, effect of single microwave irrad. (*Russian*) 2-42135  
 lymphoid tissue, cell number changes during chronic exposure to  $^3\text{H}$  and  $\gamma$ -rays (*Russian*) 2-52559  
 lymphoma cells, murine, response to X-rays under oxic and hypoxic conditions 2-47646  
 lysis, US induced, press.-mediated reduction 2-52541  
 mammalian cell survival rel. to radiation quality 2-18257  
 mammalian cells, biological importance of selective absorpt. of ultrasoft X-rays 2-18258  
 mammalian cells, chromosome aberrations and cell survival 2-18264  
 mammalian cells, dose-survival curves shape and pot. lethal damage repair 2-47648  
 mammalian cells, sequential exposures to low- and high-LET radiations 2-32272  
 mammalian cells, single-hit pot. lethal damage repair, X-ray or fission neutron irrad. 2-47645  
 mammary adenocarcinoma tumour cell subpopulations, differential RBE values, neutron and X-irrad. 2-52532  
 man, radiation effects 2-9839  
 mast cells and basophils, rat, acute in vivo exposure to 2450 MHz microwave radiation 2-27829  
 melanomas, human, transplanted into nude mice, hypoxic fraction and repair of pot. lethal damage 2-52577  
 Micrococcus radiodurans, release of membrane-bound polysaccharide and exonuclease 2-27853  
 Micrococcus radiodurans cells, formation and repair of  $\gamma$ -irrad.-induced DNA breaks (*Russian*) 2-42140  
 microwaves and radio waves thermal effects and exposure limits 2-32256  
 mouse ovary, X-irrad., effect on DNA synthetic activity 2-32265  
 multicellular spheroids, radiobiological studies using a sequential trypsinisation technique 2-27842  
 mutagenicity of filleted fish exposed to  $\gamma$ -radiation and fed to rats (*Russian*) 2-42154  
 myelocytic leukaemia, acute, extracorporeal irrad. of blood, rat expts. 2-52581  
 neutron irradiation, OER and RBE for mono-energetic 2.5 and 14.3 MeV neutrons 2-32247  
 neutrophil count, dose evaluation and time course prognosis by haematological indices rel. to  $\gamma$ -irrad. (*Russian*) 2-32329



**cellular effects of radiation continued**

- oncogenic transformation *in vitro*, the how and why 2-27849  
 oocytes, statistical dosimetry of radiation from DNA-bound  $^3\text{H}$  2-47718  
 Oryzias eggs, effects of ionising radiation on early development, chromosome aberrations 2-27837  
 partition coefficient, X-ray induced changes in polymer aqueous phases 2-14297  
 phagocytosis, depression by US, mouse expts. 2-2896  
 photoelectron microscopy, contrast effects, UV dose-depend. quantum yields of biological surface components 2-9837  
 Physarum polycephalum, effects of 163 nm vacuum UV irradiation on mitosis initiation 2-52579  
 plasma membrane, sensitive target in radiation-induced cell injury and death, ultrastruct. study 2-32268  
 plasmid of Physarum polycephalum, preferential synthesis of low-mol. wt. RNA after UV irradiation. 2-52576  
 proliferation and chromosomal damage after irradiation. 2-47638  
 protoplasts from wild Nicotiana species,  $\gamma$ -ray and fast neutron irradiation. 2-52569  
 radiosensitivity, inherent, basis concept for human tumour radiotherapy 2-18286  
 red blood cells, effect of high power microwave pulses, transmembrane thermal gradients 2-47633  
 respiratory tract, transformations due to inhaled radioactivity, method for determ. 2-37626  
 retina, frog, alternating mag. field effects, special ref. to ganglion cell activity 2-14282  
 rhabdomyosarcoma, rat, cell population kinetics after X-irradiation. 2-47637  
 Rhodospirillum rubrum spheroid chromatophores, light-induced pH gradient,  $^{31}\text{P}$  NMR obs. 2-52542  
 ruby laser microbeam irradiation, in cell biology (Chinese) 2-47632  
 sarcoplasmic reticulum vesicles, isolated from skeletal muscle, X-irradiation. 2-18261  
 secondary particle tracks produced by energy absorpt. in biological microvols., spatial correl. (Russian) 2-42155  
 sickle cells, rot. in homogeneous mag. fields 2-18242  
 skin, animal, reaction to local irradiation, depend. on dose and fractionation pattern (Russian) 2-32262  
 skin, cell kinetic mechanism for radiation-induced cellular depletion 2-37631  
 small intestinal villi, multinucleate, giant enterocyte form after X- or neutron irradiation, SEM, TEM, optical microscopy 2-27840  
 spermatogonial killing, RBE of high-Z, high-LET charged particles compared to  $^{60}\text{Co}$   $\gamma$ -rays 2-52580  
 spermatogonial survival in mice, effects of negative pions 2-42158  
 spinal cord, human, iso-effect table for radiation tolerance 2-42168  
 spinal cord, proliferative cells turnover after X-irradiation. and rel. to time-dependent damage repair 2-32263  
 spleen cells, complement receptor-positive, mechanisms controlling susceptibility to microwave-induced increases 2-18253  
 stellate cataracts in lenses of rats, latent period determ. rel. to irradiation. conditions (Russian) 2-42139  
 stem spermatogonia, survival and renewal following  $^{60}\text{Co}$   $\gamma$ -irradiation. 2-22796  
 testes of house sparrow, effect of external  $^{60}\text{Co}$  irradiation. 2-47640  
 testis, mouse, 2.45 GHz continuous-wave microwave irradiation, cytological studies 2-32257  
 thymocytes, rat, *in vivo* X-irradiation, chromatin internucleosomal breakage obs. 2-18263  
 thymus, mouse, absence of late effects of radiation on cellularity 2-37632  
 thymus cells, rat, effect of X-irradiation. and cortisol on RNA synthesis in isolated nuclei (Russian) 2-52561  
 tumour cell HeLa, RNA synthesis rate, Cu laser visible light effect 2-2898  
 tumour cell proliferation kinetics for fractional irradiation. (Russian) 2-27830  
 tumour cell responses to US, influences of growth conditions and cell-cell contact 2-32253  
 tumour cells, human, cultured, inactivation by cyclotron neutrons and protons 2-27838  
 tumour multicellular spheroids, response to multiple fractions of negative pions and X-rays 2-42167  
 vibrios, antibiotic-resistant mutation induction by  $\gamma$ -irradiation. (Russian) 2-42143  
 water radiolysis, high-LET tracks, O prod. radiobiological implications 2-22795  
 wing discs, imaginal, of Drosophila melanogaster, cell death and mitotic inhibition 2-47644  
 wound-enhanced survival and myelocytogenesis in mice after whole-body irradiation. 2-6253  
 xeroderma pigmentosum and medulloblastoma, chromosomal damage to lymphocytes during radiotherapy 2-52583  
 yeast,  $\beta$ -ray-induced gene conversion 2-32271  
 yeast, cell size rel. to UV-induced cell cycle variation in lethality and mitotic recombination 2-32269  
 yeast, diploid, rad mutants, comparison of sensitivity to heat and  $\gamma$ -radiation 2-32266  
 $^{14}\text{C}$ , radiation hazard 2-18270  
 $^{125}\text{I}$  cytotoxicity, therapy implications and radiation risk estimation 2-27832

**cellular method**

- two-phase materials, cellular effective medium approx. for cond. 2-45927  
 LiF, surface electron states, INDO and quasimol. large unit cell model calcs. (Russian) 2-17130

**cellular transport and dynamics**

- see also cell motility*  
 axonal transport, fast, dependence on organelle local conc. 2-18185  
 bacteriorhodopsin liposomes, mosaic equilibrium thermodynamics, ion movement and energy transduction 2-32191  
 blood, erythrocyte shape and rigidity rel. to viscosity 2-37607  
 blood, high gradient mag. separation, inviscid approx. trajectories, expt. study 2-52512  
 blood, rheological model for studying red cell-red cell and red cell-protein interactions 2-37605  
 blood, rheology of thrombotic processes, interaction of erythrocytes and thrombocytes 2-37600  
 blood cells, 2-body collisions, model expts. 2-37606  
 blood velocity in microcirculation, LDV meas. using freq. shifting by moving wedged glass 2-22862  
 capillary networks, microhaemodynamics 2-37612

**cellular transport and dynamics continued**

- cardiac cells, cultured, inward current channels activated by intracellular Ca 2-37516  
 cardiac mitochondria, rat, inhibition and stimulation of respiration-linked  $\text{Mg}^{2+}$  efflux 2-47587  
 cytofluorometer, 2-station multidimensional slit-flow system 2-42243  
 E. coli, character of lactate secretion, ion flows study 2-2858  
 E coli outer membranes, clusters of channels in a native environment, matrix protein 2-2853  
 embryonic muscle cell membrane, rapid lateral diffusion of functional ACh receptors 2-47588  
 epithelial cell plasma membrane, tight junction as diffusion barrier 2-37508  
 erythrocyte membrane,  $\sigma$ -irradiation. effect on spin-labelled compounds transport 2-52586  
 erythrocyte sedimentation, math. model 2-32235  
 erythrocytes, bovine, efflux of  $\text{K}^+$  and haemoglobin at low doses and low dose-rates 2-42165  
 erythrocytes, electrophoretic mobility changes after exposure to ionising radiations of various LET 2-42166  
 erythrocytes, further evidence for Fröhlich interaction 2-47584  
 erythrocytes, human,  $\text{Ca}^{2+}$  permeability enhancement by physiological shear stresses 2-37515  
 erythrocytes, mechanism of  $\text{K}^+$  transport disturbance on X-irradiation. (Russian) 2-52563  
 erythrocytes, water exchange, NMR, age depend. 2-2859  
 flagella, direct meas. of microtubule sliding force 2-14215  
 flow cytometry, slit-scan, restoration of profiles 2-42242  
 fluidity of cell membranes and its regulation 2-32193  
 heart cell clusters, spherical, linear elec. props. of passive and active currents, chick embryo expt. 2-9789  
 heart muscle, intracellular  $\text{K}^+$  and inward-going rectification 2-9792  
 hexose transport in hybrids between malignant and normal cells 2-32190  
 horizontal cell membrane, ionic mechanisms underlying nonlinearity 2-22732  
 intracellular perfusion, review of method for neuron current recording 2-42247  
 liver mitochondria from normal and diabetic rats, comparative study of pyruvate transport 2-47586  
 liver mitochondria, stoichiometry of  $\text{H}^+$  ejection coupled to mitochondrial electron flow 2-37518  
 macromolecule diffusion across arterial wall in presence of multiple endothelial injuries 2-42079  
 membrane components, *in situ* electrophoresis, review, book contrib. 2-27798  
 membrane patches, isolated, nerve and muscle cells, high-resolution current meas. 2-47762  
 muscle, embryonic cells, multiple conductance states of single acetylcholine receptor channels 2-22709  
 muscle cell culture, rat, single, channel recordings of  $\text{Ca}^{2+}$ -activated  $\text{K}^+$  currents 2-9790  
 myocyte cultures, rat, single  $\text{K}^+$  channel currents of anomalous rectification 2-42077  
 nerve cell membrane proton receptor, rats 2-52447  
 neuron membrane, mollusk, Ca channel energy profile 2-52466  
 neurons, pond-snail, cholinergic receptor desensitisation mechanisms 2-52467  
 Phormidium uncinatum, energy transport by transmission of elec. pot. along the trichome 2-52461  
 phospholipid vesicles,  $\text{H}^+$  and  $\text{OH}^-$  permeability 2-27797  
 plant cell wall permeability to macromolecules of various sizes 2-32194  
 plant cell walls, compression method for meas. of stress-relax. props. 2-37714  
 protein diffusion, in biological membranes, matrix control 2-32192  
 protoplasmic streaming velocities, speckle pattern photographic meas. 2-18342  
 pyramidal cells electrotonic coupling, rat hippocampus expts. 2-32200  
 red cell aggregation, appl. of stereological methods 2-37598  
 retinal ganglion cells, axonal transport of proteins 2-32205  
 retinal neurons, non-spike signals propagation, carp expts. 2-22736  
 retinal signal pathways, carp, physiological and morphological studies 2-22725  
 rhabdomyosarcoma, rat, cell population kinetics after X-irradiation. 2-47637  
 RNAs, microinjected, intracellular transport in Xenopus oocytes 2-52462  
 rouleau formation kinetics, mas action approach with geometric features 2-52451  
 rouleaux, equilib. size distrib. 2-52452  
 sorting, classical molecular approach to computer simulation 2-52458  
 spectrometer for laser-light scatt. meas. of macromol. and subcellular particle motions 2-47774  
 stop-flow apparatus, improved, to meas. permeability of human red cells and ghosts 2-22868  
 subcommisural organ, secretory activity, densitometric meas. of cellular parameters 2-27955  
 thermodynamics second law applicability, limitations rel. to macrostate-microstate transition 2-10756  
 tunicate egg cell, anomalous rectifier, single channel  $\text{K}^+$  currents 2-27796  
 vascular endothelial cells, dynamic response to fluid shear stress 2-42075  
 vesicle transport in arterial endothelium, mech. factors rel. to macromol. permeability 2-42078  
 $\text{Ca}^{2+}$ , uptake and release by mitochondria 2-37517  
 $\text{K}^+$  conductance, voltage-sensitive, lack of in myelinated central vertebrate axon 2-6222

**cement industry**

- fusion thermal energy apps. 2-4114  
 plaster blocks drying installation using heat pumps (French) 2-2799

**cements (building materials)**

- used only for those materials which bind together particulate matter so as to form a coherent mass of considerable strength. For cements that cause two or more separate masses to adhere see adhesion*  
 hardened cement paste porosity and pore size assessment 2-13735  
 hardened paste, relationship between permeability and pore struct. 2-27126  
 hydration, meas. by US wave refl. 2-5990  
 loading history effect on tensile props. 2-27234  
 Portland cement, strength-developing capacity, extended model 2-27233  
 portland cement clinker, unusual form of belite 2-16624



**cements (building materials) continued**

- pozzolana cement concretes, steel reinforcements, corrosion, exposure testing 2-31841
- pozzolana cement concretes, steel reinforcements, corrosion behaviour 2-31840

**centrifuges**

- gas centrifuge, rotating, numerical method for solving fluid mechanics problems 2-4837
- ionised plasma centrifuge with plasma gun discharge in crossed E- and H-fields, separation of elements 2-1364
- microhaematocrite centrifuge, special-purpose medical device 2-37703
- plasma, separative power 2-5002
- polymer diffusion in dilute solution 2-8650
- refrigerated, laboratory, with sample temperature control, review 2-177

**ceramals** *see cermets***ceramics**

*see also refractories*

- aluminosilicate ceramic fibres, review of props. and appl. 2-41558
- aluminous cement/perlite composite, low density, mech. props. 2-51963
- beta dose-rate determ. for thermolum. dating 2-52936
- bimodal concurrent flaw distrib. eval. 2-52133
- biomedical US transducers, design using new piezoelec. ceramic materials 2-2912
- ceramics, durability assessment by differential microcalorimetry 2-21428
- ceramics, transient creep in bending tests 2-47119
- chemical resistance, conc.  $H_2PO_4$  soln. 2-5965
- Chinese bauxites, sintering charact. 2-27122
- clay based ceramics, separation of sintering mechanisms 2-31670
- clay-quartz-feldspar ceramic, mechanical strength, in dehydroxylation temp. region (Czech) 2-27179
- coatings as positive current collectors for Li-Al/FeS<sub>2</sub> batteries 2-47469
- compaction mechanism, fine batches, effect of intermediate layers 2-22186
- complex thermal analysis apparatus use in field of ceramics (Czech) 2-28855
- counterpoled, polarisation and elastic vibr. distrib. laser probe meas. 2-36505
- creep and creep fracture, microstruct. depend. 2-51987
- crystallites, orientations characterisation by EPR 2-31264
- defect location, appl. of photothermal imaging 2-3623
- dental ceramics, thermal expansion, and thermal stresses as rel. to thermal history (German English) 2-21334
- elastic properties and internal friction, acoustic reson. method (Polish) 2-35098
- elastic/plastic indentation damage, median/radial crack system 2-52029
- electrode for photoelectrolytic decomposition of water 2-27707
- eutectic solidification, review 2-51890
- expanded ring flexure tests, Weibull statistics 2-13780
- fatigue, static and dynamic expts., statistical reproducibility 2-31766
- ferrite and ferroelectric materials synthesis, oxide ionic struct. characts. rel. to initial mixture density and vol. changes 2-41564
- ferroelectric, domain struct., crack growth conditions 2-50759
- ferroelectric, research in China 2-46490
- ferroelectric, transparent, semicond. props., electron-hole processes, hologram forming 2-46013
- fibres, insulating, at high temps., thermal conductivity 2-50947
- glass, segregated in grain boundaries, crystn. of small quantities 2-12490
- glass ceramic synthesis, optimisation of technological parameters 2-5852
- glass ceramics, fracture toughness meas., SEM secondary electron and backscattered electron image appls. 2-17809
- glass enamels, corrosion 2-36986
- glass-ceramic, machining damage effect on strength 2-17752
- glass-ceramic coatings with quartz, X-ray investigation of microstresses 2-37036
- hot pressing, of ceramics 2-9324
- hot-pressing techniques development, at Springfield's nuclear labs. 2-9305
- hydroxyapatite ceramics, biocompatible, mech. behaviour 2-9415
- inhomogeneous structures capacitance-voltage characts. (Russian) 2-21554
- insulating, for prototype large breeder reactor headers, thermodynamic calc. 2-49131
- ion-beam thinning characts. 2-50724
- laser enhanced etching in KOH 2-52068
- magnetic ceramics, in 1980, adaptation of hard ferrites to evolution of market requirements (French) 2-31609
- manufacture, heat transfer calc. 2-22188
- manufacture by hot isostatic pressing, development and appl. 2-2474
- materials for HTR appls., thermomech. props. (German) 2-473
- mechanical strength meas. using US method 2-47793
- mercury porosimetry, for ceramic characterisation 2-27401
- microstructure orientation by hot-forming methods 2-46988
- Mikrolite ceramic, plane-parallel insulator, electron irradiation result at atm. press. 2-5158
- mullite porcelain, mineralisers influence on sintering, struct. and props. 2-17651
- NASICON, ceramic solid electrolyte (Polish) 2-30652
- $(NH_4)_2FeF_6$ , low temp. phase, remanent polarisation (French) 2-31371
- nuclear industry appl., fission and fusion reactors (French) 2-34129
- optical ceramic, KO-1, refr. index meas., wavelength and temp. depend. 2-49842
- oxides, for coating of metals via colloidal intermediates 2-9473
- piezoceramic bodies, electromech. coupling, effective coeffs. 2-8016
- piezoceramic props. at high electrical power and hydrostatic pressure, expt. 2-50040
- piezoceramic rods, longitudinal vibr., variable mechanical quality factor 2-26825
- piezoceramic shell, free, eqns. of electroelasticity 2-26823
- piezoceramic discs, with axisymmetrical electrodes, calc. of radial modes 2-26824
- piezoelectric, fracture toughness determ. using double torsion and impression methods 2-52159
- piezoelectric, recent developments in Japan 2-46480
- piezoelectric ceramic discs, heat release assoc. with electroelastic modes 2-7962
- plasma processing, HF and DC 2-46991
- polar glass ceramics, pyroelec., piezoelec., dielec. and electromechanical props. 2-31381
- polycrystals, creep rupture, effects of inhomogeneity 2-13791

**ceramics continued**

- polymer-ceramic composites for hydrophones, fabrication and interphase connectivity 2-36834
- porcelain, thermostimulated surface currents, 78 to 285K 2-26471
- porcelain materials, microstruct. data and mech. props., correl. 2-22224
- protective coatings for high temp. reactors (German) 2-474
- pyroceraic interaction with K-400 cement, MFTIR IR spectra obs. 2-49840
- quartz, sintering and crystn., influence of mould material and moulding process 2-5848
- quartz ceramics, low-temp. firing 2-22248
- refractory ceramic fibres, fire resist. props. prod. (Czech) 2-2484
- sapphire, strength and transmittance, surface treatment effects 2-17711
- saturated mixture, transfer of water, diffusion couple method 2-26143
- Sialon, effect of additives on sintering and mech. props. 2-17657
- $\beta$ -sialon system, densification behaviour during reaction hot-pressing 2-9320
- sialons, densification, role of  $Sc_2O_3$  2-9319
- SiC, polycryst., frictional deform. and fracture 2-27294
- silicate melts, viscosity 2-30645
- sintering furnace, low cost, high temp. induction system 2-41559
- slags and metal oxides, vaporisation in reactive atmos., MHD and coal gasifier systems 2-26029
- solar central receivers, for German solar tower power plant 2-2803
- sound-absorbing materials, appls. in industrial noise control 2-4647
- spodumene ceramics, with apatite additions 2-22225
- strain measurement, by holographic interferometry (Japanese) 2-47292
- structural, correlation of static strengths and speeds of rotational failure 2-31767
- subcritical crack growth, brittle fracture (Russian) 2-5940
- substrates for catalytic converters, acoustic emission study 2-9475
- surfaces, colorimetry for quality assurance (German English) 2-19150
- thermal conductivity, contactless method 2-1685
- thermal fatigue, ring test (Japanese) 2-9495
- thermoplastic slip, sliding friction in ceramics casting process 2-41757
- time to failure, neutron and gamma irradi. effects 2-5961
- transition metal oxide, erosion during electron beam treatment, depend. on bond characts. 2-40438
- vitroecrystalline protective coatings, formation of crystalline phase in electrostatic field 2-5051
- 2-31964
- $3Al_2O_3 \cdot 2SiO_2$ , mullite containing powders, sintering, composition effects 2-51857
- $3Al_2O_3 \cdot 2SiO_2$ , mullite containing powders, agglomeration effects 2-51858
- $AgNbO_3$ , hot pressing prep., elec. and photoelec. props. 2-13689
- $AgNbO_3$ - $LiNbO_3$  system, phase equil. and transforms., ferroelec. props. 2-50833
- $AgTaO_3$ , hot pressing prep., elec. and photoelec. props. 2-13689
- AlN ceramic with added  $Y_2O_3$  or Ni, structural characteristics 2-46989
- $Al_2O_3$ ,  $^{59}Fe$  tracer diffusion 2-50926
- $Al_2O_3$ , acetabulum, cement hardening action on artificial hip joint components 2-22859
- $Al_2O_3$  ceramics, consideration between burning out of polyvinyl butylar binder and sintering 2-27131
- $Al_2O_3$  ceramics, neutron irradiated, elastic props. 2-22258
- $Al_2O_3$ , debased, stress corrosion 2-9449
- $\alpha$ - $Al_2O_3$ , deformed single crystal, X-ray extinction contrast 2-35506
- $Al_2O_3$ , dense, aged in water and physiological media, Ca migration 2-50686
- $\beta$ - $Al_2O_3$ , form. by electrophoresis (Polish) 2-27127
- $Al_2O_3$ , fracture in combined tension/torsion 2-36942
- $Al_2O_3$ , fracture in combined tension/torsion, Weibull theory 2-36943
- $\beta$ - $Al_2O_3$  in Na-S batteries, interface resistance study 2-27589
- $\beta''$ - $Al_2O_3$ , Li-stabilised, prep. and characts. 2-2482
- $\beta''$ - $Al_2O_3$ , moisture effect on ionic cond. 2-26116
- $\gamma$ - $Al_2O_3$ , plasma arc spraying, optimisation of conditions and coating props. 2-27306
- $Al_2O_3$ , plasma sprayed, applied to metallic substrates, delayed failure 2-52077
- $Al_2O_3$ , plasma-sprayed coatings, elastic moduli variations during structural phase transitions (French) 2-36901
- $\beta''$ - $Al_2O_3$ , polycryst., asymmetric resistance, time depend. 2-26113
- $\beta$ - $Al_2O_3$ , polycryst., electro-mech. degradation 2-52071
- $Al_2O_3$  powders, densification in liq. phase presence 2-31665
- $Al_2O_3$ , prismatic slip of single crystals below 1000°C in compression under hydrostatic press. 2-16654
- $Al_2O_3$ , ultradisperse particles, phase comp. 2-50831
- $Al_2O_3$ ,  $Fe^{3+}$ , particle orientations characterisation by EPR 2-31264
- $Al_2O_3$ -AlN spinel, prep. by carbothermal nitridation of  $Al_2O_3$  2-31664
- $\beta$ - $Al_2O_3$ - $Li_2O$ - $Na_2O$ , ceramic solid electrolyte, DC resistivity 2-50917
- $Al_2O_3$ -MgO, transparent spinel, fusion casting 2-51849
- $\beta$ - $Al_2O_3$ - $Na_2O$  ceramics, resist. aging in Na-S cells 2-27587
- $Al_2O_3$ - $Na_2O$ - $K^+ (Ca^{2+})$ ,  $\beta$  and  $\beta''$  phases, grain boundary and bulk cond., impurities effect 2-12834
- $\beta$ - $Al_2O_3$ - $Na_2O$ -AlN ceramics, form. and ionic cond. 2-12836
- $Al_2O_3$ - $SiO_2$ , alumina-mullite ceramic, susceptibility to delayed failure after dynamic testing 2-5920
- $Al_2O_3$ - $SiO_2$ , mullite, fused, texture anisotropy and mech. props. 2-41622
- $Al_2O_3$ - $TiO_2$ , strength and thermal expansion obs. (Japanese) 2-31729
- $(Al_2O_3)_{1-x}(MgO)_x$ , deformed single crystal, X-ray extinction contrast 2-35506
- $Al_2TiO_5$ - $Fe_2TiO_5$ , strength and thermal expansion obs. (Japanese) 2-31729
- $Al_2TiO_5$ - $MgTi_2O_5$ , strength and thermal expansion obs. (Japanese) 2-31729
- BN- $SiO_2$  ceramics, hot pressing, props. 2-31673
- BPN for use in elemental vapour lasers, physicochem. and electrophys. props. 2-49845
- $(Ba,Sr)TiO_3$  complex ferroelectric thin films, growth by plasma-ion sputtering 2-27099
- $Ba_2Ge_2TiO_8$ , glass-ceramic and single crystals, piezoelec. props. 2-51529
- $BaO$ - $SrO$ - $Na_2O$ - $Nb_2O_5$ , solid solution, phase equilb. study, Curie point and lattice consts. 2-17667
- $BaO$ - $Al_2O_3$ - $SiO_2$  celsian ceramic, DC cond., dielec. loss 2-5890
- $Ba_2Sr_2TiO_7$ , multifunctional ceramic temp.-humidity sensors 2-33557
- $BaTiO_3$  ceramic joined to ferrite by diffusion bonding process 2-31895
- $BaTiO_3$ , Curie temp., external mag. field effect, thermographic study 2-9101
- $BaTiO_3$ , photovoltaic, pyroelec., and piezoelec. outputs under pulsed laser illum. 2-36084
- $BaTiO_3$ , porous ceramic, stoichiometry effect on positive TCR 2-51172



## ceramics continued

- BaTiO<sub>3</sub>, thick films, dielec. const., grain size depend. 2-17383  
 BaTiO<sub>3</sub>, undoped, nonstoichiometry 2-17064  
 BaTiO<sub>3</sub>(Cr to Ni), reversible wt. change after annealing, 700 to 1300°C 2-31712  
 BaTiO<sub>3</sub>:Cr(Sn), contact voltammetry investig., acceptor defects form., dielec. nonlinearity rel. to synthesis conditions 2-41283  
 BaTiO<sub>3</sub>:Fe<sup>3+</sup>, effect of Fe content on resistivity anomaly (Czech) 2-30898  
 BaTiO<sub>3</sub>:Sb, PTC effect as function of 3d element doping, elec. resist., grain sizes, carrier density 2-30887  
 BaTiO<sub>3</sub>:Sb<sub>2</sub>O<sub>3</sub>, semiconducting, positive temp. coeff. of resist., microstruct. effect 2-36040  
 BeO-CeO<sub>2</sub>-ZrO<sub>2</sub>, phase rels. reinvestigated via metallorganic precursors, 1200°-1400°C 2-5867  
 Bi layer structure oxides, La modified, grain oriented ferroelectric ceramics, elec. props. 2-31380  
 Bi<sup>3+</sup>(B<sub>1-x</sub>B<sub>2-x</sub>)<sub>2</sub>O<sub>4</sub>, ceramic prep. and characteris. 2-51530  
 Bi<sub>2</sub>O<sub>3</sub>-R<sub>2</sub>O<sub>3</sub> (R=La, Nd, Sm, Dy, Er, Yb), sintered, high oxide ion conductive phase form. 2-8667  
 Bi<sub>2</sub>O<sub>3</sub>-R<sub>2</sub>O<sub>3</sub> (R=rare earth) system, sintered, high O<sup>2-</sup> ion conduction 2-12837  
 γ-Bi<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, transparent polycryst., fabrication by temp.-gradient furnace technique 2-27132  
 Bi<sub>4</sub>Ti<sub>3</sub>O<sub>12</sub> ceramics, grain oriented, fabrication and elec. props. 2-31662  
 C-Si-N-O system, heterogeneous phase equil. calc., computer program 2-13704  
 CaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, sintered ceramic, dielec. props. 2-9081  
 CaO-ZrO<sub>2</sub> system, struct. and phase comp. in ZrO<sub>2</sub>-rich region 2-5863  
 3CaO·P<sub>2</sub>O<sub>5</sub>-CaO·SiO<sub>2</sub>-CaO·MgO·2SiO<sub>2</sub> glass ceramics, fibre oriented, prep. (Japanese) 2-51867  
 CaO-2 Al<sub>2</sub>O<sub>3</sub>-H<sub>3</sub>PO<sub>4</sub> system, hardened body, props. and thermal changes 2-52001  
 cc Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> composites, transform. toughening, fabrication and fracture toughness 2-51925  
 CdAl<sub>2</sub>O<sub>4</sub>, thermal expansion, meas. using dilatometry 2-50888  
 Cd<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, glasslike thermal and dielectric props. 2-40613  
 Co<sub>1-x</sub>O, thermoelec. study of point defect struct. 2-30915  
 Cr-Si-B-N system, compatibility phase relations (Japanese) 2-51886  
 CrO<sub>3</sub>-AP<sub>3</sub>O<sub>3</sub>-Mo system, thermionic emitter material 2-2487  
 Cr<sub>2</sub>O<sub>3</sub>-ZrSiO<sub>4</sub>, ceramics, densification (Japanese) 2-22190  
 EuB<sub>6</sub>, prep. by hot pressing 2-5844  
 Fe-Fe<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub>, phase relations and oxidation at 700 to 1100°C 2-41591  
 Fe(Fe<sub>1.5</sub>Al<sub>0.9</sub>)<sub>4</sub>O<sub>4</sub> spinels, thermal segregation of cations 2-31697  
 Fe<sub>1-x</sub>O, wustite, elec. props. 2-51220  
 Fe<sub>2</sub>O<sub>3</sub>, stoichiometric, cation distrib., thermopower meas. 2-17101  
 Fe<sub>2</sub>O<sub>3</sub>-FeV<sub>2</sub>O<sub>4</sub>(FeCr<sub>2</sub>O<sub>4</sub>), spinel solid soln., thermodynamic props. 2-51883  
 Gd<sub>2</sub>O<sub>3</sub>, monoclinic, microcracking behaviour 2-49113  
 HfO<sub>2</sub>, thermal expansion, axial and linear 2-5251  
 HfO<sub>2</sub>-TiO<sub>2</sub> system, phase diagram and characterisation 2-5860  
 In<sub>2</sub>O<sub>3</sub> vapour deposited films, O<sub>2</sub> diffusion 2-50927  
 K(M,W<sub>1-x</sub>)<sub>2</sub>O<sub>6</sub> (M=Li, Al, Ti or Nb) cryst. chem., polymorphism and dielec. props. 2-5237  
 La<sub>2</sub>Ti<sub>2</sub>O<sub>7</sub>, synthesis, cryst. struct. and electrophys. props. 2-41562  
 Li-Ti-Zn ferrite, effect of MnO<sub>2</sub> and Bi<sub>2</sub>O<sub>3</sub> additives on props. (Slovak) 2-2105  
 LiAl-FeS batteries, high temperature, ceramic separators 2-22583  
 LiNbO<sub>3</sub>, bicrystal, thermal bonding, influence of planar diffusion bonded boundaries on props. 2-26840  
 LiNbO<sub>3</sub>, photovoltaic, pyroelec., and piezoelec. outputs under pulsed laser illum. 2-36084  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-P<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub> system pyroceramics, props. 2-9436  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-TiO<sub>2</sub>(ZrO<sub>2</sub>), crystn., laser Raman spectroscopy 2-12491  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub>-SiO<sub>2</sub> and Li<sub>2</sub>O-K<sub>2</sub>O(Ag<sup>+</sup>)<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass ceramics, deform. rate influence on bending strength and failure 2-52046  
 Li<sub>2</sub>O-Fe<sub>2</sub>O<sub>3</sub>(Cr<sub>2</sub>O<sub>3</sub>)(SnO<sub>2</sub>)(ZrO<sub>2</sub>)(ThO<sub>2</sub>)(V<sub>2</sub>O<sub>5</sub>)-WO<sub>3</sub> phase relations 2-17668  
 Li<sub>2</sub>O-ZrO<sub>2</sub>-SiO<sub>2</sub> system, phase diagram 2-2498  
 Li<sub>2</sub>Si<sub>2</sub>O<sub>7</sub>, glass-ceramics, pyroelec. 2-2198  
 MgAl<sub>2</sub>O<sub>4</sub>, elec. cond. 2-30649  
 MgAl<sub>2</sub>O<sub>4</sub> spinel synthesis by reaction of Al(OH)<sub>3</sub>+MgCO<sub>3</sub>+MgCl<sub>2</sub> eutectic mixture 2-41504  
 MgCr<sub>2</sub>O<sub>4</sub>-TiO<sub>2</sub> multifunctional ceramic humidity-gas sensor 2-33557  
 MgF<sub>2</sub>, intergranular slow crack growth 2-17731  
 MgF<sub>2</sub>-LiF, solid solns., sintering kinetics 2-2483  
 MgMn-ferrite/BaTiO<sub>3</sub>, ferroelectric ferromagnetics 2-51863  
 MgO, activation by cyclic temp. change, adsorption capacity, activated material behaviour during sintering 2-6026  
 MgO, high-density, production 2-36816  
 MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, cordierite bodies with improved refractoriness 2-5847  
 MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> comps., subsolidus phase equilibria and melting temps. 2-51880  
 MgO-Cr<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO-SiO<sub>2</sub> constitution changes due to O<sub>2</sub> press. at high temp. 2-31822  
 MgO·2TiO<sub>2</sub> and MgO·TiO<sub>2</sub>, alkoxy-derived, formation kinetics 2-27123  
 (Mn,Zn) ferrite, disaccommodation after temp. cycling 2-31713  
 (NH<sub>4</sub>)<sub>2</sub>AlF<sub>6</sub>, low temp. phase, remanent polarisation (French) 2-31371  
 Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> molten system, IR emission spectra (Japanese) 2-9148  
 Na<sub>2</sub>O-BaO-Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> glasses, alkaline durability 2-52085  
 Na<sub>2</sub>O-Fe<sub>2</sub>O<sub>3</sub>(Cr<sub>2</sub>O<sub>3</sub>)(SnO<sub>2</sub>)(ZrO<sub>2</sub>)(ThO<sub>2</sub>)(V<sub>2</sub>O<sub>5</sub>)-WO<sub>3</sub> phase relations 2-17668  
 Na<sub>2</sub>O-Y<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, cpds, phase equilib., X-ray obs. 2-27149  
 Na<sub>2</sub>O·MgO·5Al<sub>2</sub>O<sub>3</sub> ceramics, preparation and elec. cond. 2-27128  
 Na<sub>1-x</sub>-Si<sub>2</sub>Zr<sub>2</sub>P<sub>3-x</sub>O<sub>12</sub>, NASICON, chemical stability in liq. Na, fracture and cracking 2-52251  
 Na<sub>2</sub>YSiO<sub>4</sub>, ionic conductivity and conduction path struct. 2-16869  
 Na<sub>1+y</sub>Y<sub>1-x</sub>Zr<sub>1-x</sub>(PO<sub>4</sub>)<sub>3</sub>, sintered ionic conductive material, conduction paths 2-21356  
 Na<sub>2</sub>Zr<sub>2</sub>Si<sub>2</sub>PO<sub>12</sub> membrane, cond. in Pyrex cell 2-27590  
 Na<sub>2</sub>Zr<sub>2</sub>Si<sub>2</sub>PO<sub>12</sub> Nasicon electrolyte, fabrication and characterisation 2-17656  
 Ni(Al,Fe)<sub>2</sub>O<sub>4</sub> ceramic, gaseous reduction 2-2688  
 NiO, finely divided catalyst, doping effect on sintering 2-17655  
 PLZT ceramic, dielectric eqn. of state in Curie range 2-46494  
 PLZT ceramic, electrostriction and strain-optic phenomena 2-46486  
 PLZT ceramic, linear electro-optical effect, domain struct. 2-46541  
 PLZT ceramic, shape memory effect study 2-40468  
 PLZT ceramics, photoferroelec. props., ion implantation effects 2-36086  
 PLZT X/65/35, transparent ferroelec. ceramics, phase transitions 2-9102  
 PZT, TEM obs. of grain boundary phase, sintering effects 2-17652

## ceramics continued

- Pb (Zr<sub>0.5</sub>Ti<sub>0.5</sub>)O<sub>3</sub> ceramics, influence of mixing medium on sintering and coupling coeff. 2-51841  
 Pb<sub>1-x</sub>La<sub>x</sub>Zr<sub>1-x</sub>Ti<sub>1-x</sub>O<sub>3</sub> ceramic, dielectric props. 2-46455  
 Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>, electrostrictive ceramic, low Q electromechanical resonator 2-17413  
 (Pb<sub>1-(3x/2)+(7/2)Nd<sub>x</sub></sub>)(Ti<sub>1-y-z</sub>Mn<sub>y</sub>In<sub>z</sub>)O<sub>3</sub> piezoelectric ceramics SAW vel., strain effects 2-12899  
 PbO-Nb<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> system, precipitation of ferroelec. PbNb<sub>2</sub>O<sub>6</sub> and dielec. props. of crystallised glasses (Japanese) 2-51917  
 PbO-TiO<sub>2</sub>-ZrO<sub>2</sub> solid state reactions during calcining 2-51949  
 PbSe<sub>1/2</sub>Nb<sub>1/2</sub>O<sub>3</sub> transparent ferroelec. ceramics, phase transitions 2-9102  
 Pb(Ti, Zr)O<sub>3</sub>, modified solid solns., phase composition, struct., electro-physical characts. 2-5082  
 Pb(Ti, Zr)O<sub>3</sub>, tetragonal-rhombohedral transition, changes in dielectric constant 2-5616  
 PbTiO<sub>3</sub>-La(Mg<sub>2/3</sub>O<sub>3</sub>), piezoelectric ceramic, piezoelectric props. 2-41271  
 PbTiO<sub>3</sub>-La(Zn<sub>2/3</sub>Nb<sub>1/3</sub>)O<sub>3</sub>, piezoelectric ceramic, piezoelectric props. 2-41271  
 PbTiO<sub>3</sub>-PbZrO<sub>3</sub>-Pb(W<sub>0.5</sub>Cd<sub>0.5</sub>)O<sub>3</sub> pyroceramic electret with vitreous phase, prep. and characteris. 2-51866  
 (PbTiO<sub>3</sub>)<sub>1-x</sub>(PbCeO<sub>3</sub>)<sub>x</sub>-(PbNb<sub>2</sub>O<sub>6</sub>)<sub>1-x</sub>(MnO<sub>2</sub>)<sub>x</sub> system, piezoelectric, dielectric props. 2-41273  
 Pb(Ti, Zr-x)<sub>2</sub>O<sub>3</sub> type ceramics, acoustic emission and piezoelectricity 2-46485  
 Pb(Zr,Sn,Ti)O<sub>3</sub> ceramic, microstructure effect on electrocaloric props. 2-41278  
 Pb(Zr,Ti)O<sub>3</sub>, 4 and 8 type ceramics, high field props. 2-41249  
 Pb(Zr,Ti)O<sub>3</sub> ceramics, piezoelectric props. 2-41272  
 Pb(Zr,Ti)O<sub>3</sub> ceramic, piezoelectric props., transducer appl. 2-41274  
 Pb(Zr,Ti)O<sub>3</sub> ceramic, domain space distrib. meas. 2-41311  
 Pb(Zr,Ti)O<sub>3</sub>, densification and sintering 2-41540  
 Pb(Zr,Ti)O<sub>3</sub>, elec. resist., effect of voids 2-17063  
 Pb(Zr,Ti)O<sub>3</sub>, high press. dielectric props. 2-41262  
 Pb(Zr,Ti)O<sub>3</sub>, piezoelectric, electrophys. props. in tetragonal-rhombohedral transition region 2-41275  
 Pb(Zr,Ti)O<sub>3</sub>, resonant freq. temp. depend., permittivity 2-41248  
 Pb(Zr,Ti)O<sub>3</sub>, solid solutions, pyroelectric and dielectric props. 2-13424  
 Pb(Zr,Ti)O<sub>3</sub>-type piezoceramics theory 2-46504  
 PbZrO<sub>3</sub>, Curie temp., external mag. field effect, thermographic study 2-9101  
 PbZrO<sub>3</sub>, single cryst. and ceramic, pyroelec. effect 2-2192  
 PbZrO<sub>3</sub>-PbTiO<sub>3</sub>-Pb<sub>2</sub>FeNbO<sub>7</sub> system, pyroelec. ceramics 2-46489  
 Pb<sub>1-x</sub>Zr<sub>x</sub>O<sub>3-x</sub>, Gibbs energy of formation 2-30630  
 Pb(Zr<sub>0.5</sub>Ti<sub>0.48</sub>)O<sub>3</sub>, influence of microcracking and slow crack growth on planar coupling coeff. 2-31777  
 Pb(Zr<sub>0.5</sub>Ti<sub>0.47</sub>)O<sub>3</sub> solid soln., synthesis by cryoprecip., prep. and dielec. characts. 2-41563  
 Pb(Zr,Ti-x)<sub>2</sub>O<sub>3</sub>, ferroelec., nature of morphotropic transition region 2-31426  
 Pb(Zr,Ti-x)<sub>2</sub>O<sub>3</sub>:Nb<sup>5+</sup>(Sb<sup>3+</sup>) ceramics, wet or dry method prep., struct. and piezoelec. props., effect of initial Pb content 2-9091  
 Pb<sub>1-x</sub>(Zr<sub>0.5</sub>Ti<sub>0.5</sub>)O<sub>3-x</sub> ceramics, microstruct. and props., effect of processing and excess PbO 2-5845  
 Pu<sub>2</sub>C<sub>3</sub>, synthesis by dioxide reduction with graphite 2-43572  
 SbSi<sub>3</sub>, textured ceramic, processing and characterisation techniques 2-9318  
 Si-Al-O-N based glasses, prep. and props. 2-9325  
 Si-Al-Zr-N-O, phase diagram determ. by expt. and thermodynamic calc. 2-27155  
 Si-based ceramics, review (French) 2-51850  
 Si-O-N based glasses, prep. and props. 2-9325  
 Si-on-ceramic solar cells, grooved substrate to give back contacts 2-2792  
 SiC, fracture toughness as function of indentation crack parameters 2-36947  
 SiC, inclusions of grain boundaries, EELS (TEM study) 2-35511  
 SiC, self-bonded, mech. props., crystallite size effect 2-41744  
 SiC, strength distrib. after oxidation and oxidation under load 2-52076  
 SiC-AlN, hot-pressed, fabrication and charact. 2-36817  
 SiN ceramics, kinetics of densification and phase transformations 2-9349  
 Si<sub>3</sub>N<sub>4</sub> ceramic materials, comp., fabrication, and props. 2-51862  
 Si<sub>3</sub>N<sub>4</sub> ceramics, indentation plasticity and fracture 2-31774  
 Si<sub>3</sub>N<sub>4</sub> ceramics, sintering techniques, material props. and appls. 2-5841  
 Si<sub>3</sub>N<sub>4</sub>, energy-absorbing reaction-sintered surface layers on hot-pressed substrates 2-52007  
 Si<sub>3</sub>N<sub>4</sub>, fracture toughness as function of indentation crack parameters 2-36947  
 Si<sub>3</sub>N<sub>4</sub>, high density, prep. by gas press. sintering 2-51854  
 Si<sub>3</sub>N<sub>4</sub>, hot-pressed, activation energies from densification, creep, grain-boundary sliding 2-31666  
 Si<sub>3</sub>N<sub>4</sub>, polycryst., frictional deform. and fracture 2-27294  
 Si<sub>3</sub>N<sub>4</sub>, reaction sintered, pore struct. determ. 2-36821  
 Si<sub>3</sub>N<sub>4</sub>, thermal cond. and microhardness, effect of additives 2-52006  
 Si<sub>3</sub>N<sub>4</sub>-BN composite, anisotropy effects in thermal diffusivity 2-17658  
 Si<sub>3</sub>N<sub>4</sub>-based materials, study of protective powders role in sintering 2-9322  
 Si<sub>3</sub>N<sub>4</sub>-BeO ceramic used for Si shaping dies, solar cell prod. 2-51795  
 Si<sub>3</sub>N<sub>4</sub>-SiC composite, strength, statistical investigation 2-41697  
 Si<sub>3</sub>N<sub>4</sub>-Y<sub>2</sub>O<sub>3</sub>/Al<sub>2</sub>O<sub>3</sub>, densification by dual N<sub>2</sub> press. process 2-36820  
 Si<sub>3</sub>N<sub>4</sub>-O<sub>2</sub> thermodynamic props. 2-16820  
 SiO<sub>2</sub> film deposition by RF sputtering of sintered P<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub>, P conc., etching rate, ionic charge getting effect (Japanese) 2-21266  
 SiO<sub>2</sub>, fused, D<sub>2</sub> treated, IR transmission spectra 2-51571  
 SiO<sub>2</sub> powders, densification in liq. phase presence 2-31665  
 SiO<sub>2</sub>, vitreous in aqueous/non-aqueous environments, stress corrosion mol. interpretation 2-52082  
 SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-MgO-K<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>:Fe<sup>3+</sup> glass-ceramic, CGW-9658, transport and reactivity of H<sub>2</sub> 2-22488  
 SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> ceramics, dense, corrosion resist. in H<sub>2</sub>SO<sub>4</sub> solns. 2-22350  
 (Sn<sub>0.5</sub>Se<sub>0.5</sub>)(As<sub>0.5</sub>Ge<sub>0.5</sub>Se<sub>0.5</sub>)<sub>100-x</sub> glasses and glass-ceramics, Mossbauer study 2-21923  
 (Sr,Ba)Nb<sub>2</sub>O<sub>6</sub> ceramics, hot-pressed, props. 2-26806  
 Sr<sub>0.5</sub>Ba<sub>0.5</sub>Nb<sub>2</sub>O<sub>6</sub> ferroelec. ceramics, Cu doped, spectral photovoltaic response 2-26431  
 Sr<sub>0.5</sub>Ba<sub>0.5</sub>Nb<sub>2</sub>O<sub>6</sub>Cu ceramics, ageing study through photovoltaic effect 2-26432  
 SrCeO<sub>3</sub>-BaCeO<sub>3</sub> solid soln., crystallographic characts. 2-50591  
 SrTiO<sub>3</sub>, boundary layer capacitor material, microstruct. 2-50874  
 SrZrO<sub>3</sub>-based, mixed perovskite ceramics, elec. resist. and high temp. stability 2-26384



## ceramics continued

- $\text{Th}_{0.85}\text{V}_{0.15}\text{O}_{1.925}$ , electron transport parameter, 800 to 1140K 2-12817  
 Ti-Li-O superconductor, hot pressed, aging effects, elec. resistivity 2-2540  
 Ti-Si-O-N system, multiphase materials, invest. from 1200 to 1600°C 2-47011  
 $\text{TiO}_2$ , thermally stimulated surface currents, 78 to 285K 2-26471  
 $\text{TiO}_2$ -BaO- $\text{B}_2\text{O}_3$  glass, high-index, colour (*Japanese*) 2-51628  
 $\text{TiO}_2$ - $\text{Tb}_2\text{O}_3$  system, phase diagram at 1100-1750°C, phase comp. and struct. 2-5865  
 $\text{TiO}_2$ -xPt ceramic, preparation, elec. props. 2-46987  
 $\text{UO}_{2+x}\text{Y}_2\text{O}_3$ , pure and doped, elec. cond., hole conc. and mobility, 800 to 1400°C 2-36039  
 $\text{UO}_{2+x}\text{CeO}_2$ - $\text{ZrO}_2$ - $\text{ThO}_2$  crystalline ceramic nuclear waste, phase relations 2-15473  
 $\text{Y}_3\text{Al}_2\text{O}_{12}$ , elec. cond. 2-30649  
 $\text{Y}_{1-x}\text{Mg}_x\text{CrO}_3$ , cryst. struct. and electrophysical props. 2-13065  
 $\text{Y}_2\text{O}_3$  ceramics, effect of  $\gamma$ -radiation on optical props. 2-22347  
 $\text{ZnO}$ , densification, optimisation during sintering 2-36822  
 $\text{ZnO}$ , initial sintering, pore size distrib., surface areas, densities, porosities 2-36819  
 $\text{ZnO}$ , non-ohmic, microstruct. TEM, SEM, and X-ray diffr. study 2-50875  
 $\text{ZnO-Bi}_2\text{O}_3$  varistor, XPS obs. of surface layer effects on electronic props., intergranular layer form. 2-9253  
 Zr binary alloys, new ceramics with high thermomech. performance (*French*) 2-27139  
 $\text{ZrO}_2$ , CaO stabilised coatings, thermal diffusivity meas. 2-5284  
 $\text{ZrO}_2$ , CaO stabilised solid electrolyte,  $\text{O}_2$  release, electrochem. study 2-13970  
 $\text{ZrO}_2$ , commercial, partially stabilised, grain boundaries, fracture and heat treatment 2-52028  
 $\text{ZrO}_2$  fibres, from extrusion of solns., cryst. struct. form. 2-41574  
 $\text{ZrO}_2$ , partially stabilised by CaO, crack branching and propagation 2-17730  
 $\text{ZrO}_2$ , substoichiometric, congruently vapourising comps. and thermodynamic props. 2-26033  
 $\text{ZrO}_2$ , thermal expansion, axial and linear 2-5251  
 $\text{ZrO}_2$ , ultradisperse particles, phase comp. 2-50831  
 $\text{ZrO}_2$ , ultrafine monoclinic powder, hydrothermal prep. 2-51856  
 $\text{ZrO}_2$ ,  $\text{Y}_2\text{O}_3$  stabilised, plasma sprayed ceramic turbine seals, sputtered primer for improved thermal shock resist. 2-31852  
 $\text{ZrO}_2$ ,  $\text{Y}_2\text{O}_3$  stabilised, elec. cond. behaviour 2-12840  
 $\text{ZrO}_2$ - $\text{Er}_2\text{O}_3$ , phase equilibria and ordering 2-13708  
 $\text{ZrO}_2$ - $\text{Y}_2\text{O}_3$  ceramic composites, polystyrene filled, mech. props. 2-22278  
 $\text{ZrO}_2$ - $\text{Y}_2\text{O}_3$  composites, transform. toughening, expt. obs. 2-51924  
 $\text{ZrO}_2$ - $\text{Y}_2\text{O}_3$  solid electrolyte, phase change and mech. props. after ageing 2-13715  
 $\text{Zr}$ ,  $\text{Ti}$ ,  $\text{Sn}$ ,  $\text{O}_3$  ceramics ( $x+y+z=2$ ), existence range, structural and dielec. props. 2-36842

Cerenkov counters see Cerenkov counters

Cerenkov radiation see Cerenkov radiation

## cerium

- see also nuclei with .....  
 Anderson model, periodic, with Falicov-Kimball type interaction, valence transition 2-51131  
 EELS, dynamic effects, localised states 2-27036  
 electronic aspects of electron-phonon interaction 2-30808  
 isobar nuclides separation using surface ionisation 2-43570  
 K-shell ionisation,  $\text{H}^+$  and deuteron induced, nuclear Coulomb, energy loss and relativistic effects 2-44081  
 liquid, compressibility and sound vel. 2-35593  
 localised 4f levels, XPS and bremsstrahlung isochromat spectroscopy studies 2-27052  
 muon spin rotation study of  $\gamma$ - $\alpha$  transition 2-9350  
 polymorphic transformation, plastic deform. influence (*Russian*) 2-21292  
 polymorphism under hydrostatic press. up to 8 GPa 2-41590  
 virtual bound states 2-5372  
 X-ray 5p emission band 2-46831  
 X-ray absorpt. spectrum, near-edge struct. 2-41455  
 zone refining, evaluation as purification technique 2-27079  
 $\text{CaF}_2$ : $\text{Ce}^{3+}$  activated ionic cryst., thermally stimulated polarization current kinetics 2-46469  
 $\text{CaF}_2$ - $3\text{Ca}_3(\text{PO}_4)_2$ :Ce, Mn phosphors, luminesc. depreciation 2-46679  
 $\text{Ca}_3(\text{PO}_4)_2$ : $\text{Ce}^{3+}$ , X-irrad., thermoluminesc. 2-41439  
 Ce I to XVI, plasma, ground state configs., 4d-4f emission obs. 2-43835  
 $\text{Ce}^{3+}$  in ethylenediamine tetra-acetate aqueous solns., gamma-radiolysis 2-13990  
 $\text{La}_2\text{Mg}_3(\text{NO}_3)_{12}\cdot 24\text{H}_2\text{O}$ : $\text{Co}^{2+}$ ,  $\text{Ce}^{3+}$ , maser effect on  $\text{Co}^{2+}$  spin sub-levels (*Russian*) 2-7734  
 $\text{La}_2\text{S}_3$ :Ce, luminesc. and energy transfer 2-51685  
 $\text{La}_2\text{O}_3$ : $\text{Sb}^{3+}$ , red luminesc., large Stokes shifts 2-51669  
 $\text{Na}_2\text{O}:\text{Al}_2\text{O}_3\cdot\text{B}_2\text{O}_3$ :Ce, gamma-ray irrad., absorpt. bands, optical density variation 2-31527  
 Pr I to XVI, plasma, ground state configs., 4d-4f emission obs. 2-43835  
 $(\text{Sr}, \text{Ba})_{1-x}\text{Y}_x(\text{Nb}_2\text{O}_6)_y$ :Ce, holographic sensitivity depend. on Ce conc. 2-4469  
 $\text{YAl}_3\text{B}_2\text{O}_{12}$ : $\text{Ce}^{3+}$ , energy transfer, luminesc. study 2-51649  
 $\text{Y}_2\text{O}_3$ : $\text{Sb}^{3+}$ , red luminesc., large Stokes shifts 2-51669  
 $\text{ZnS}:\text{Ag}$ , Ce phosphors, photoelectroluminesc. 2-13564  
 $\text{ZnS}:\text{Cu}$ , Cu(Ag), phosphorescence decay and thermolum. study 2-22099  
 $\text{ZnS}:\text{Cu}$ , Ce phosphors, photoelectroluminesc. 2-13564

## cerium alloys

- Al-Mg-Ce, mech. props., Ce effect 2-27242  
 (Ce, La) $\text{Al}_2$ , high-field magnetisation, single ion Kondo effect and ferro-mag. short range order 2-36310  
 (Ce,M) $\text{Al}_2$  (M=La, Y, Sc), spin dynamics, neutron scatt. study 2-26584  
 Ce-Al alloys, quenched, metastable phases, resistivity and struct. during heating 2-13040  
 Ce-Au, amorphous, mag. susceptibility and sp. ht. 2-31201  
 Ce-Cu, amorphous, mag. susceptibility and sp. ht. 2-31201  
 Ce-Mn-Co system phase equilibria (*Ukrainian*) 2-51873  
 $\text{CeAl}_3$ , high-field magnetisation, single ion Kondo effect and ferromag. short range order 2-36310  
 $\text{CeAl}_3$ , spin dynamics, neutron scatt. study 2-26584  
 $\text{CeAl}_3$ , 4f levels, XPS and bremsstrahlung isochromat spectroscopy studies 2-27052  
 $\text{CeAl}_3$ , low temp. magnetoresist., cryst. field and Kondo effects 2-5390  
 $\text{CeAl}_3$ , with unstable 4f shells, Gruneisen parameter 2-16743  
 $\text{Ce}_{1-x}\text{Al}_x\text{Co}_3$ , constitution, struct. and mag. props. 2-47199

## cerium alloys continued

- CeCo<sub>5</sub>, valence state of Ce, lattice const., mag. props. and X-ray absorpt. meas. 2-40320  
 CeCo<sub>5</sub>-PrCo<sub>5</sub>, cryst. struct. and mag. props. 2-1447  
 CeCu<sub>5</sub>, valence state of Ce, lattice const., mag. props. and X-ray absorpt. meas. 2-40320  
 CeCu<sub>2</sub>Si<sub>2</sub>, near-edge struct. in X-ray absorpt. spectrum 2-41455  
 CeCu<sub>2</sub>Si<sub>2</sub>, superconductivity, absence 2-46188  
 CeFe<sub>2</sub>, electric and mag. resist., 1.5 to 300K 2-5385  
 CeFe<sub>2</sub>, electric and mag. resist., 1.5 to 300K 2-8786  
 Ce<sub>1-x</sub>Gd<sub>x</sub>Pd<sub>3</sub>, dil. alloy, elec. and thermal cond. 2-21559  
 CeGe<sub>2</sub>(Si<sub>2</sub>), cryst. struct., thermal and mag. props. 2-45117  
 Ce<sub>0.9-x</sub>La<sub>0.1</sub>Th<sub>0.1</sub>, mixed valence alloy, mag. excitations, mag. susceptibility and neutron diffr. study 2-45913  
 CeNi<sub>5</sub>, valence state of Ce, lattice const., mag. props. and X-ray absorpt. meas. 2-40320  
 CeNi<sub>5</sub>Al<sub>5</sub>, lattice constants (*Ukrainian*) 2-25813  
 Ce(Ni<sub>1-x</sub>Cu<sub>x</sub>)<sub>5</sub>, valence state of Ce, lattice const., mag. props. and X-ray absorpt. meas. 2-40320  
 CeNi<sub>5</sub>Sn<sub>2</sub>, cryst. struct., elec. and mag. props. (*Russian*) 2-50585  
 CeNi<sub>5</sub>Sn, cryst. struct. 2-50589  
 CePd<sub>3</sub>, 4f levels, XPS and bremsstrahlung isochromat spectroscopy studies 2-27052  
 CePd<sub>3</sub>, intermediate valence cpds., elec. and thermal cond. 2-21559  
 CePd<sub>3</sub>, intermediate valence and near-edge struct. in X-ray absorpt. spectrum 2-41455  
 CePd<sub>3</sub>, valence fluctuation cpds., optical struct. near 20 meV 2-9152  
 CePd<sub>3</sub>, with unstable 4f shells, Gruneisen parameter 2-16743  
 CePd<sub>3</sub>-Gd(Er), impurity magnetization study 2-31241  
 CePd<sub>3</sub>B<sub>6</sub>, valence change induced by B, lattice parameter and susceptibility meas. 2-40323  
 CePd<sub>3-x</sub>Pt<sub>x</sub>, cryst. struct. and valence state 2-40322  
 CeSn<sub>3</sub>, 4f levels, XPS and bremsstrahlung isochromat spectroscopy studies 2-27052  
 CeSn<sub>3</sub>, Mossbauer study of finite temp. lattice softening 2-46446  
 Ce<sub>0.74</sub>Th<sub>0.26</sub>, elastic const., ultrasonic meas. 2-35569  
 Ce<sub>0.74</sub>Th<sub>0.26</sub>, muon spin rotation study of  $\gamma$ - $\alpha$  transition 2-9350  
 Ce<sub>1-x</sub>Y<sub>x</sub>Pd<sub>3</sub>, elec. and thermal cond. 2-21559  
 (LaCe) $\text{Al}_2$ , re-entrant supercond. phase boundaries, press. depend. 2-31020  
 La<sub>0.8</sub>Th<sub>0.2</sub>Ce, re-entrant supercond. phase boundaries, press. depend. 2-31020  
 Mg-Mn-Ce, interaction of alloying elements and phase comp. 2-41589  
 $\alpha$ -Pd-Ce, short range order and evidence for Pd<sub>2</sub>Ce, electron microscopy 2-16620  
 Th-Ce, extremely dilute, intermediate valence, TDPAD study 2-2169  
 V-Ga-Ce (16, 1 wt.%) irrad. conditions on mechanical props. 2-13757

## cerium compounds

see also cerium alloys

- alkali silicate glasses containing Ag and Ce, light-sensitive, Ag reduction mechanism 2-41911  
 Anderson model, periodic, with Falicov-Kimball type interaction, valence transition 2-51131  
 ethylsulphate, spin lattice interactions, mag. susceptibility study 2-46236  
 monochalcogenides, antiferromag. transition 2-35643  
 pnictides, anomalous anisotropies, behaviour under high mag. field 2-26338  
 valence fluctuating states, review 2-30845  
 BeO-CeO<sub>2</sub>-ZrO<sub>2</sub>, phase rels. reinvestigated via metallorganic precursors, 1200°-1400°C 2-5867  
 CMN powder-liquid <sup>3</sup>He interface, thermal resist., mixed powder decimeter effect 2-30736  
 CMN-liquid <sup>3</sup>He (<sup>3</sup>He-<sup>3</sup>He) interface, thermal resist. below 100 mK 2-35880  
 Ce-La-O system, statistical assessment of uncertainties in derived thermodynamic data 2-8258  
 Ce-La-Y-O system, statistical assessment of uncertainties in derived thermodynamic data 2-8258  
 Ce-O system, statistical assessment of uncertainties in derived thermodynamic data 2-8258  
 Ce-O system, X-ray diffr. obs. at high temp. in controlled atm. (*French*) 2-51881  
 CeAs, 4f photoemission satellites 2-17600  
 CeB<sub>6</sub>, spin dynamics, neutron scatt. study 2-26584  
 CeB<sub>6</sub>C<sub>2</sub>, mag. props., 3-300K 2-41116  
 CeBi, 4f photoemission satellites 2-17600  
 CeBi, anomalous mag. props., anisotropic p-f mixing mechanism 2-8952  
 CeCl<sub>3</sub>, electrical resistivities 2-31181  
 CeCl<sub>3</sub>, valence shell electronic struct., He I/II PES 2-755  
 CeCoSi<sub>2</sub>, effect of 3d element on Ce electronic state (*Russian*) 2-30798  
 CeCu<sub>2</sub>Si<sub>2</sub>, spin dynamics, neutron scatt. study 2-26584  
 CeCu<sub>2</sub>Si<sub>2</sub>, thermal expansion study 2-30638  
 CeF<sub>3</sub>, paramagnet, optic phonons, reststrahlen spectra mag. field depend. study 2-46550  
 CeF<sub>3</sub>:Gd<sup>3+</sup>, spin Hamiltonian parameters of Gd<sup>3+</sup>, superposition model anal. 2-17035  
 CeFe<sub>2</sub>Si<sub>2</sub>, effect of 3d element on Ce electronic state (*Russian*) 2-30798  
 Ce(HPO<sub>4</sub>)<sub>2</sub>, cryst. struct., thermoanalysis, X-ray diffr. 2-5096  
 CeLa<sub>1-x</sub>Cu<sub>x</sub>, mag. and elec. props., mag. resist., cryst. field effect 2-8973  
 (Ce<sub>1-x</sub>La<sub>x</sub>)<sub>2</sub>Mg<sub>3</sub>(NO<sub>3</sub>)<sub>12</sub>·24H<sub>2</sub>O, adiabatic demagnetisation 2-36349  
 CeMgAl<sub>11</sub>O<sub>9</sub>, single cryst. growth (*German*) 2-8461  
 CeN, 4f surface chemical shift, mixed valence 2-46876  
 CeNi<sub>5</sub>Si<sub>2</sub>, effect of 3d element on Ce electronic state (*Russian*) 2-30798  
 CeO, optical optical double resonance spectra, fluoresc. 2-11526  
 CeO<sub>2</sub>, hexagonal phase, from oxidation product of Si<sub>3</sub>N<sub>4</sub>:CeO<sub>2</sub>+SiO<sub>2</sub> 2-47204  
 CeO<sub>2</sub>, thin film, polarised IR absorpt. spectrum 2-2356  
 CeO<sub>2</sub>, with La<sup>3+</sup>(Gd<sup>3+</sup>)(V<sup>3+</sup>)(Sc<sup>3+</sup>) dopant, ionic cond. meas. 2-21387  
 CeO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub> dil. solid solns., network of charged defects, dielec. relax. 2-21944  
 CeO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub>, relax. peaks due to defect complexes 2-45369  
 CeO<sub>2</sub>-ZrO<sub>2</sub> solid solns., doping by CaO, Y<sub>2</sub>O<sub>3</sub>, Sm<sub>2</sub>O<sub>3</sub>, Ta<sub>2</sub>O<sub>5</sub> and Nb<sub>2</sub>O<sub>5</sub>, elec. cond. 2-5964  
 Ce<sub>2</sub>O<sub>3</sub>, neutron diffr. and mag. susceptibility meas. 2-51412  
 (CeO<sub>2</sub>)<sub>0.82</sub>(GdO<sub>3</sub>)<sub>0.18</sub>, sintered, density and ionic cond. 2-5261  
 (CeO<sub>2</sub>)<sub>0.9</sub>(Gd<sub>2</sub>O<sub>3</sub>)<sub>0.1</sub> solid electrolyte, Pt paste electrodes, diffusion-limited charge transport 2-13972  
 (CeO<sub>2</sub>)<sub>0.7</sub>(ZrO<sub>2</sub>)<sub>0.3</sub> solid solns., thermodynamics, electronic conductivity 2-1906  
 CeP, 4f photoemission satellites 2-17600



## cerium compounds continued

- CeP, resonant photoemission, 4f level and valence band emission features 2-13624  
 CePO<sub>4</sub> powder preparation and compaction, rad. waste disposal appl. 2-36806  
 CePt, ferromagnetic, specific heat, 1.5 to 16K 2-46303  
 CeS, resonant photoemission, 4f level and valence band emission features 2-13624  
 Ce<sub>3-x</sub>S<sub>x</sub>, fermi glass, cond. activation energy and Seebeck coeff. in nearest-neighbour hopping regime, effective medium theory 2-8829  
 Ce<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>·8(H<sub>2</sub>O), prep. and characterisation study 2-5801  
 CeSb, anomalous mag. props., anisotropic p-f mixing mechanism 2-8952  
 CeSb, antiferromagnetic, critical neutron scatt. 2-17263  
 CeSn<sub>3</sub>, with unstable 4f shells, Grueneisen parameter 2-16743  
 Ce<sub>3</sub>V<sub>2</sub>S<sub>6</sub>O<sub>7</sub>, mixed oxysulphides, crystallographic characters. (French) 2-8484  
 Ce<sub>2</sub>(WO<sub>4</sub>)<sub>3</sub>, ferrimagnetic, mag. props. 2-46278  
 Ce<sub>2</sub>Zr<sub>2</sub>O<sub>10</sub>, non-conformation in CeO<sub>2</sub>-ZrO<sub>2</sub> system, X-ray powder diffr. obs. 2-35456  
 CoO-CeO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>, glass form. regions and phys. props. 2-8442  
 Er<sub>2</sub>Ce<sub>1-x</sub>Na(SO<sub>4</sub>)<sub>2</sub>H<sub>2</sub>O, excitation and emission spectra, decay kinetics, and energy transfer 2-26963  
 Ho<sub>2</sub>Ce<sub>1-x</sub>Na(SO<sub>4</sub>)<sub>2</sub>H<sub>2</sub>O, excitation and emission spectra, decay kinetics, and energy transfer 2-26963  
 LaCeB<sub>6</sub>, surface composition, temp. depend. Auger spectra obs. 2-30723  
 La<sub>1-x</sub>Ce<sub>x</sub>Mo<sub>6</sub>S<sub>8</sub>, superconducting and mag. props. 2-31019  
 LiPO<sub>3</sub>-CeP<sub>2</sub>O<sub>6</sub>, phase equilib. relations 2-22202  
 MnO-CeO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>, glass form. regions and phys. props. 2-8442  
 NaPO<sub>3</sub>-CeP<sub>2</sub>O<sub>6</sub>, phase equilib. relations 2-22202  
 Nd<sub>2</sub>Ce<sub>1-x</sub>Na(SO<sub>4</sub>)<sub>2</sub>H<sub>2</sub>O, excitation and emission spectra, decay kinetics, and energy transfer 2-26963  
 NiO-CeO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>, glass form. regions and phys. props. 2-8442  
 SeO<sub>2</sub>-CeO<sub>2</sub>-Co<sub>2</sub>O<sub>4</sub> activator effect on ferrite form. Li<sub>0.5</sub>Fe<sub>2.5</sub>O<sub>4</sub> matrix 2-22441  
 SiN, hot-pressed, with CeO<sub>2</sub> additions, oxidation 2-9448  
 Si<sub>3</sub>N<sub>4</sub>(CeO<sub>2</sub>+SiO<sub>2</sub>), hot-pressed, oxidation 2-52070  
 Si<sub>3</sub>N<sub>4</sub>-CeO<sub>2</sub>, hot-pressed, oxidation 2-31811  
 (U,Ce)O<sub>2+x</sub>, O diffusion under chemical potential gradient (French) 2-49111  
 UO<sub>2</sub>-ZrO<sub>2</sub>-Ce<sub>2</sub>O<sub>3</sub>, solid soln. and phase equil., 1270 to 1670K 2-43553  
 UO<sub>2+x</sub>-CeO<sub>2</sub>-ZrO<sub>2</sub>-ThO<sub>2</sub> crystalline ceramic nuclear waste, phase relations 2-15473  
 ZrO<sub>2</sub>-CeO<sub>2</sub>, phase equilibria below 1400°C 2-13711  
 ZrO<sub>2</sub>-(Al<sub>2</sub>O<sub>3</sub>)-Y<sub>2</sub>O<sub>3</sub>-CeO<sub>2</sub> composites, transform. toughening and fracture toughness, effect of alloying additions and temp. 2-51926

## cermets

- dental ceramics, thermal expansion, and thermal stresses as rel. to thermal history (German English) 2-21334  
 film, changes in struct. and composition during heat treatment, oxidation (Russian) 2-5894  
 nondestructive testing, scanning γ-ray method 2-47278  
 Al-Al<sub>2</sub>O<sub>3</sub> powder composites, wear-resistant, produced by cold extrusion 2-36813  
 Co-Al<sub>2</sub>O<sub>3</sub> cermet selective films, photothermal conversion, effective dielectric function bounds 2-9683  
 Fe-TiC, microstruct. refinement by laser and electron beam surface melting 2-41794  
 Ge,C<sub>1-x</sub> CVD coating, struct. and optical props. 2-45773  
 In-SiO<sub>2</sub> cermet films for optical recording in metal film ablation memory 2-25087  
 Mo/Al<sub>2</sub>O<sub>3</sub> cermets, thermal diffusivities 2-30667  
 Mo-Al<sub>2</sub>O<sub>3</sub>, thin film, coevaporation technique (German) 2-31640  
 Mo-MoO<sub>2</sub> black Mo thin film, CVD growth and H<sub>2</sub> reduction 2-21464  
 Nb/Al<sub>2</sub>O<sub>3</sub> cermet films, current cond. mechanism, energy depend. 2-46157  
 Ni-TiC powder mixtures, struct. and DTA, effect of Mo, Ta or Co additions 2-31671  
 Pt-Al<sub>2</sub>O<sub>3</sub> selective absorber coatings, sputter-deposited 2-22654  
 Pt-Y<sub>2</sub>O<sub>3</sub> cermet contact for a-Si:H solar cells, material optimisation studies 2-37310  
 TiC-Fe wear resistant powder metallurgical coatings, on C steel 2-13860  
 UO<sub>2</sub> fuel particles for HTGR, prod. by microwave hardening of aqueous droplets (German) 2-24343  
 W-Al<sub>2</sub>O<sub>3</sub>, thin film coevaporation (German) 2-31640  
 W-Mg<sub>2</sub>O<sub>3</sub>, thin film, coevaporation technique (German) 2-31640  
 WC-Co, TiC coated, atom probe microanal. 2-13859  
 ZrN-Al<sub>2</sub>O<sub>3</sub>-Mo(W) cermets, sintered, strength 2-13693

## CESR

- alkali metal-NH<sub>3</sub> solns., conc., CESR obs. 2-26745  
 Bloch eqns. for ESR incorporating Kondo effect 2-26746  
 electron spin-ultrasound wave interaction in nonhomogeneous mag. field (Bulgarian) 2-5583  
 metal with surface paramag. impurities, conduction electrons magnetisation eqns. of motion 2-2116  
 metals, local moments, indirect g-shift bottlenecking 2-51463  
 polyacrylonitrile fibre, oxidatively stabilized, elec. cond. and ESR at high temp. 2-21584  
 superconductivity mechanism rel. to CESR disappearance 2-26548  
 type II superconductor, zero gap, CESR line shape 2-26549  
 Ag foil, CESR at 42.5 MHz 2-26747  
 Ag, spin-orbit interaction pseudopot. parameters 2-1873  
 Al foil, CESR at 42.5 MHz, evidence for electron-electron spin scatt. process 2-26747  
 Al, low-temp. CESR and electron-electron interactions 2-36432  
 C<sub>2</sub>K intercalation compounds, absorbed H, CESR compounds 2-46383  
 C<sub>3</sub>K intercalation compounds, absorbed H, CESR compounds 2-46383  
 Cd,Hg<sub>1-x</sub>Te, CESR (Russian) 2-26748  
 Cu, conduction electron spin flip scatt. by impurities 2-51462  
 Cu, spin-orbit interaction pseudopot. parameters 2-1873  
 InMo<sub>6</sub>S<sub>8</sub>, superconductor, exchange interactions, CESR and spin waves study 2-36211  
 InSb, CESR of free and bound electrons, photoconductivity, impurity conc. depend. 2-21879  
 K small particles, CESR obs. 2-51461  
 KBr:Ag crystal, ESR of electron and hole centres, tunnel recomb. afterglow 2-9035  
 KCl:Ag crystal, ESR of electron and hole centres, tunnel recomb. afterglow 2-9035  
 Li films, skin depth meas. at X-band use of CESR (French) 2-36431  
 Li-3d metal double layers, cond. electron spin resonance 2-31288

## CESR continued

- Na small particles, CESR obs. 2-51461  
 Rb small particles, CESR obs. 2-51461  
 V<sub>3</sub>Si, superconductor, exchange interactions, CESR and spin waves study 2-36211

## chalcogenide glasses

- amorphous semiconductors, book 2-42804  
 amorphous semiconductors, pressure-induced effects and phase transitions 2-45044  
 arsenate glasses, binary and ternary, stability regions with glass formers 2-51882  
 a-As<sub>2</sub>S<sub>3</sub>, luminesc. and optically detected ESR 2-46756  
 charged dangling bonds model 2-13015  
 conference, Grenoble, France, (July 1981) 2-38359  
 defect and impurity effects 2-45906  
 defects, dispersive transport, field effect, valence-alternation model, review 2-40837  
 fabrication techniques 2-46929  
 film, defect struct. 2-45056  
 film, electronic transport, review 2-8906  
 film, origin of photocontraction effect 2-35910  
 high-speed transient effects in chalcogenide glasses 2-45991  
 IR optical fibres, prediction of loss minima 2-4595  
 mobility distrib. in drift of carriers 2-17070  
 Mossbauer spectroscopy, characterisation of solids 2-51509  
 optical mass memories and IC elements, appl. of chalcogenide amorphous films 2-44492  
 photo-induced phenomena 2-45057  
 photoconductivity, slow relax. 2-21632  
 photoconductivity and negatively correlated defect effects 2-40962  
 photoelastic response 2-31449  
 photoprocessing and lithographic appl. 2-43123  
 photostructural changes, configurational model 2-12496  
 quasimolecular defects, rel. to elec. and optical props. 2-13016  
 review of studies at Ioffe Physical-Technical Institute, USSR 2-45050  
 semiconductors, vitreous, photostructural transformations, configurational approach 2-46533  
 small polaronic solid, photoluminescence decay rates, excitation energy and temp. depend. 2-46733  
 structural model of two-level states 2-21039  
 switching, low-resistivity state, electron-thermal nature 2-8841  
 switching transient state characts. anal. based on space charge overlapping model 2-17124  
 thin amorphous chalcogenide films, electrothermal model for breakdown, switching and memory effects 2-13206  
 thin films, amorphous, high field short pulse behaviour, band model 2-13084  
 thin films, domain microscopy 2-40273  
 time resolved optical spectroscopy, review 2-46732  
 5, glassy, photo-induced ESR 2-46377  
 AgAs(Bi)(Sb)S<sub>2</sub> crystals and glasses, mag. susceptibility and chem. bond 2-5517  
 Al-Se<sub>2</sub>Te<sub>3</sub>As<sub>2</sub>Ge<sub>32</sub>-Au structure, elec. characts. of amorphous semicond. layer 2-26525  
 Al<sub>0.5</sub>As<sub>0.5</sub>Te<sub>0.4</sub> amorphous alloy, model for short range structure (Spanish) 2-21029  
 As-Ge-Se, glasses and melts, thermal and elec. cond. 2-8683  
 As-Ge-Se system, elec. cond. in glassy and liq., states across GeSe<sub>2</sub>-As<sub>2</sub>Se<sub>3</sub> and GeSe<sub>2</sub>-AsSe sections and with excess Se conc. 2-26393  
 As-Ge-Se system with excess Se, vitrification temp. calc. method 2-40279  
 As-Ge-Te glasses, pure and doped, elec. and dielec. props. 2-17075  
 As-S, amorphous film, optical waveguide, laser beam electrooptic modulation 2-34885  
 As-S glasses, retarded elasticity in glass transition range, creep meas. 2-13761  
 As-S-H, amorphous plasma deposited coating, optical props. and EPR 2-40734  
 As-S-Fe glass, dielec. const. and loss angle (Russian) 2-26816  
 As-Se, glassy, absorption spectra 2-26425  
 As-Se, glassy, hole drift mobility, composition and struct. depend. 2-46021  
 As-Se, glassy, optical absorpt. spectra 2-17120  
 As-Se, vibrational spectra 2-5668  
 As-Se films, photostructural changes, photodarkening and thermal bleaching 2-12497  
 As-Se glass,inelastic props. at very low freq. 2-45360  
 As-Se glasses, dielectric consts., loss tangents, depend. on composition 2-17386  
 As-Se glasses, IR absorpt. spectra 2-26905  
 As-Se-H, amorphous plasma deposited coating, optical props. and EPR 2-40734  
 As-Se-Ag, amorphous, AC cond. 2-45972  
 As-Se-Ge, film, anal. of relief-type gratings (Japanese) 2-39589  
 As-Se-Te, amorphous, photoconductor for electrographic printing 2-44421  
 As-Se-Te, metal-semicond.-metal struct., elec. props. 2-46155  
 As-Se-Te glass, thermal cond. and hardness 2-45641  
 As-Te, glass-forming tendency, comp. depend. 2-26058  
 As<sub>2</sub>S<sub>3</sub>, amorphous, acoustic dispersion meas. 2-20498  
 As<sub>2</sub>S<sub>3</sub>, amorphous, glass transition rel. to reversible photostruct. changes 2-26056  
 As<sub>2</sub>S<sub>3</sub>, amorphous, intimate valence alternation pairs, exciton and pair recombination, ODMR study 2-46432  
 As<sub>2</sub>S<sub>3</sub>, amorphous, isothermal dielec. relax currents 2-46473  
 As<sub>2</sub>S<sub>3</sub>, amorphous, radiative recomb. of localised excitons 2-36685  
 As<sub>2</sub>S<sub>3</sub>, amorphous, struct. model 2-12498  
 As<sub>2</sub>S<sub>3</sub> amorphous film, local struct. model using electronic struct. of As<sub>2</sub>S<sub>3</sub> 2-24611  
 As<sub>2</sub>S<sub>3</sub> amorphous film, photoinduced elastic changes 2-40747  
 As<sub>2</sub>S<sub>3</sub>, amorphous film, photostruct. change, temp. cycling studies 2-46800  
 As<sub>2</sub>S<sub>3</sub> chalcogenide, photodarkening process 2-21960  
 As<sub>2</sub>S<sub>3</sub> film, amorphous, elec. breakdown 2-9089  
 As<sub>2</sub>S<sub>3</sub> film waveguide, electron-beam directly written microgratings for integrated optical circuits 2-4618  
 As<sub>2</sub>S<sub>3</sub> film waveguide with optical grating devices 2-49901  
 As<sub>2</sub>S<sub>3</sub>, glass, electron beam induced defects, elec. and optical props. 2-45280  
 As<sub>2</sub>S<sub>3</sub>, glass, polymer struct., US study 2-45053



## chalcogenide glasses continued

- As<sub>2</sub>S<sub>3</sub> glasses, elect. props. 2-21612  
 As<sub>2</sub>S<sub>3</sub>, hot carrier relax., optical picosecond study 2-46529  
 As<sub>2</sub>S<sub>3</sub>, vitreous, electroabsorpt., polarised light anisotropy 2-46544  
 As<sub>2</sub>S<sub>3</sub>-Ag glass, structure, Raman spectra study 2-46575  
 As<sub>2</sub>S<sub>3</sub>-Sb<sub>2</sub>S<sub>3</sub>, negative transient conductivity effects 2-45963  
 As<sub>2</sub>S<sub>3</sub>-Ag based photographic system, use of vacuum evaporated inorganic sublayers 2-28917  
 As<sub>2</sub>S<sub>3</sub>-Ag light-sensitive system, behaviour during laser beam irradi. (*Russian*) 2-16679  
 As<sub>2</sub>S<sub>3</sub>-GeS<sub>2</sub> glass, optical props. and chemical bonds (*Russian*) 2-22036  
 As<sub>2</sub>S<sub>3</sub>-Sb<sub>2</sub>S<sub>3</sub> and As<sub>2</sub>S<sub>3</sub>-Sn, glassy, hole drift mobility, composition and struct. depend. 2-46021  
 As<sub>40</sub>-S<sub>60</sub>, glass, Raman spectra and struct. 2-46608  
 As<sub>2</sub>S<sub>3</sub>(Se<sub>3</sub>), chalcogenides, electron stimulated ESR 2-5582  
 As<sub>2</sub>S<sub>3</sub> (AsSe), vitreous, electroabsorpt., polarised light anisotropy 2-46544  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, density of state in gap, dispersive photocurrent meas. 2-46059  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, Faraday rot. 2-46549  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, geminate and non-geminate recomb. 2-13097  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, isothermal dielec. relax currents 2-46473  
 As<sub>2</sub>Se<sub>3</sub> amorphous film, spectral memory of electron work function 2-17143  
 As<sub>2</sub>Se<sub>3</sub>, amorphous film, transport props. 2-41035  
 As<sub>2</sub>Se<sub>3</sub> film, amorphous, localised states, optical DLTS meas. 2-45899  
 As<sub>2</sub>Se<sub>3</sub> glass, AC transport and struct. relax. 2-40904  
 As<sub>2</sub>Se<sub>3</sub> glass, electron beam induced defects, elec. and optical props. 2-45280  
 As<sub>2</sub>Se<sub>3</sub> glass, polymer struct., US study 2-45053  
 As<sub>2</sub>Se<sub>3</sub> glass, temp. depend. of struct. factor up to glass transition 2-30404  
 As<sub>2</sub>Se<sub>3</sub> glassy, dielec. losses and permittivity, temp. depend. 2-2182  
 As<sub>2</sub>Se<sub>3</sub>, photothermoplastic recording material, image contrast, inhomogeneity effects 2-48818  
 As<sub>2</sub>Se<sub>3</sub>, pure and doped, transient hole transport meas. 2-26389  
 As<sub>2</sub>Se<sub>3</sub>-Ag amorphous film, XPS study, core electron binding energy 2-46872  
 As<sub>2</sub>Se<sub>3</sub>-As<sub>2</sub>S<sub>3</sub>, photothermoplastic recording material, image contrast, inhomogeneity effects 2-48818  
 As<sub>2</sub>Se<sub>3</sub>-As<sub>2</sub>Te<sub>3</sub>, glassy semicond. elec. cond. in high elec. fields 2-51195  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, dielec. const. and loss meas. 2-17390  
 As<sub>2</sub>Se<sub>3</sub> amorphous film, reversible photodarkening, photopolymerisation model 2-46799  
 (As<sub>2</sub>Se<sub>3</sub>)<sub>1-x</sub>(Sb<sub>2</sub>Se<sub>3</sub>)<sub>x</sub>, oscillator strength, far IR spectra and Kramers-Kronig analysis 2-26899  
 As<sub>2</sub>Te<sub>3</sub> glassy semicond., memories, neutron radiation effects 2-51244  
 As<sub>2</sub>Te<sub>3</sub>(Se<sub>3</sub>), single polaron hopping contrib. to AC cond. 2-40903  
 As<sub>2</sub>X<sub>3</sub>, X=S, Se or Te, crystallisation, semiempirical calc. of Tamman curves 2-8449  
 c-amorphous In<sub>0.25</sub>Te<sub>0.75</sub>-C struct. nanosecond switching parameters 2-13143  
 Cu<sub>25</sub>As<sub>75</sub>Te<sub>70</sub>, amorphous, elec. resist. at high press., time depend. 2-30888  
 GaSe<sub>2</sub>Te, glasses, broken chalcogen chemical order 2-40272  
 Ge chalcogenides, amorphous, photostructural changes revealed through UPS 2-45059  
 Ge-Ag-(Sb) glasses, X-ray diffr. radial distrib. functions 2-45052  
 Ge-(As)(Sb)-S(Se) vitreous chalcogenides CaF<sub>2</sub>/Ge<sub>24</sub>As<sub>7</sub>S<sub>64</sub> type antirefl. coatings, visible and IR 2-16086  
 Ge-S, chalcogenide semiconductor, defect and impurity effects 2-45906  
 Ge-S glasses, crystn., positron annihilation and Doppler broadening study 2-22108  
 Ge-Sa-As(Sb)(Bi) influence of bond metallisation on elec. cond. 2-5402  
 Ge-Sb-S, defect centres, ESR study 2-2135  
 Ge-Sb-S glasses, optical gap temp. depend., exponential absorpt. edge 2-13438  
 Ge-Sb-Se glasses, optical props., dispersion energy and struct. (*Russian*) 2-26857  
 Ge-Sb-Se system, beam-resistant films, prep. and struct., thermal stability, optical parameters 2-5317  
 Ge-Se, glass, doped, elec. transport props. 2-45971  
 Ge-Se evaporated film, amorphous, non-dispersive and dispersive transport 2-46019  
 Ge-Se system, elec. cond. in glassy and liq. states 2-26392  
 Ge-Se-Ag films, photo and electrochem. doping, AES and XPS study 2-45051  
 Ge-Se-Ga thin film, amorphous, trap distrib., SCLC obs. 2-30908  
 Ge-Se-Te system glasses, elec. cond. over wide temp. range, struct. component 2-5403  
 Ge-Te, glass, doped, elec. transport props. 2-45971  
 Ge<sub>20</sub>Bi<sub>80-x</sub>, n-type semiconducting chalcogenide glasses, photoconductivity 2-51236  
 Ge<sub>20</sub>Bi<sub>80-x</sub>Te<sub>10</sub>, n-type semiconducting chalcogenide glasses, photoconductivity 2-51236  
 GeS<sub>2</sub> glass, high-pressure, optical studies 2-46574  
 GeS<sub>2</sub>-Te, glasses, broken chalcogen chemical order 2-40272  
 GeS<sub>2</sub>-Li<sub>2</sub>S(Na<sub>2</sub>S)(Ag<sub>2</sub>S), glass form. and ionic cond. 2-12824  
 GeS<sub>2</sub>, vitreous, electroabsorpt., polarised light anisotropy 2-46544  
 Ge<sub>2</sub>S<sub>8</sub> glass, paramag. defects, thermal quenching and generation, ESR study 2-5581  
 Ge<sub>2</sub>S<sub>3</sub>(Se<sub>3</sub>), chalcogenides, electron stimulated ESR 2-5582  
 GeSe, amorphous, small angle X-ray scatt., density-density correl. 2-12494  
 GeSe, amorphous thin films, laser-induced phase transition 2-5762  
 a-GeSe<sub>2</sub> films, laser induced oscillatory phenomena, absorption coeff., photocurrent 2-36721  
 GeSe<sub>2</sub> glass, photoluminescence spectra after thermal annealing 2-46750  
 GeSe<sub>2</sub> glass, reversible reconstruction and crystn. under laser irradi., Raman scatt. study 2-30410  
 GeSe<sub>2</sub> glassy films, self diffusion and kinetics of annealing, optical absorption edge meas. 2-21357  
 Ge<sub>10</sub>Se<sub>90</sub> and Ge<sub>10</sub>Se<sub>70</sub>, amorphous, chem. shifts of K-absorpt. discontinuities of Ge and Se 2-31585  
 Ge<sub>2</sub>Se<sub>1-x</sub> glass film, evaporated and sputtered, Raman study 2-5662  
 Ge<sub>2</sub>Se<sub>1-x</sub> glasses, heat capacities below 1K 2-40567  
 Ge<sub>2</sub>Se<sub>1-x</sub>·In(Cu)(Fe) glasses, photocond. and elec. cond., dopant effects 2-36089  
 Ge<sub>10</sub>Se<sub>90</sub>Te<sub>10</sub> and Ge<sub>33</sub>Se<sub>40</sub>Te<sub>26</sub>·<sub>7</sub>, amorphous, chem. shifts of K-absorpt. discontinuities of Ge and Se 2-31585  
 Ge<sub>2</sub>Se<sub>5</sub>Te films, charged defects, Poole-Frenkel effects study 2-45992

## chalcogenide glasses continued

- GeTe amorphous thin films, elec. cond. mechanisms 2-13083  
 GeTe<sub>2</sub>-Ag, amorphous films, Ag diffusion kinetics, Rutherford backscatt. study 2-45625  
 Ge<sub>0.3</sub>Te<sub>0.7</sub>, amorphous, <sup>125m</sup>Te ion implanted, Mossbauer study of disorder 2-41238  
 Ge<sub>1</sub>Te<sub>81</sub>Sb<sub>2</sub> amorphous films, elec. props. (*Chinese*) 2-5408  
 In<sub>20</sub>Te<sub>80</sub>, amorphous, elec. resist. at high press., time depend. 2-30888  
 P-Se glasses, thermal capacity, 300 to 600K 2-26074  
 P-Se-Te, glasses, elastic props., microhardness and US vel. meas. 2-9363  
 P<sub>2</sub>Se<sub>3</sub>, glassy chalcogenide semiconductors, localised states, photoluminesc. meas. 2-17523  
 S-Ge, vitreous, order parameter in glass transition, Raman spectra study 2-36629  
 Sb-Ge-Se system, elec. cond. glassy and liq. states 2-26394  
 Sb-Ge-Se system with excess Se, vitrification temp. calc. method 2-40279  
 Sb<sub>2</sub>S<sub>3</sub>-As<sub>2</sub>S<sub>3</sub>, negative transient conductivity effects 2-45963  
 Se glass, inelastic props. at very low freq. 2-45360  
 Se, transient hole transport meas. 2-26389  
 Se-As-Te, chalcogenide photocond. in near IR region 2-43114  
 a-Se-Ge alloys, Raman spectra and average band gap meas. 2-45058  
 Se-Ge-As glasses, fracture toughness, microhardness, and Young's modulus 2-36945  
 Se-P, amorphous, longitudinal and transverse US vel. meas. 2-35595  
 Se-S, vitreous, influence of S admixture on crystallisation kinetics (*German*) 2-5052  
 Se-Te, vitreous, influence of Te admixture on crystallisation kinetics (*German*) 2-5052  
 Se-Te system, equilib. phase diagram 2-22200  
 Se<sub>0.3</sub>As<sub>0.5</sub>, amorphous film, carrier mobility, thermal annealing and light irradi. effects 2-13199  
 Se<sub>1-x</sub>Ge<sub>x</sub>-Ag film, amorphous, bilayer system for high resolution optical imaging 2-39709  
 Se<sub>0.4</sub>Ge<sub>0.7</sub>, amorphous film, carrier mobility, thermal annealing and light irradi. effects 2-13199  
 Se<sub>0.1-x</sub>Ge<sub>0.9-x</sub> amorphous alloys, x=0.9, 0.85, US vel. behaviour near glass transition 2-1564  
 Se<sub>100-x</sub>S<sub>x</sub>, amorphous, thermal cond. 2-50934  
 Se<sub>80</sub>Te<sub>20</sub> and Se<sub>60</sub>Te<sub>40</sub>, amorphous, US vels. and thermal expansion coeffs. 2-50770  
 Se<sub>2</sub>Te<sub>1-x</sub>, amorphous system, kinematical transform. and struct. ageing, glass transition, enthalpy, thermal anal. 2-50551  
 Si-As-Sr<sub>2</sub>Cu, p-n heterojunction, current-voltage characts. 2-46114  
 Si-Ge-As-Te-(Mn), glassy semicond. elec. cond. in high elec. fields 2-51195  
 Si-Te, struct. investigated by Mossbauer effect 2-9062  
 Si<sub>18</sub>Te<sub>45</sub>As<sub>37</sub>Ge<sub>20</sub>, amorphous chalcogenide IR emitting diode, optical props. 2-36705  
 (Sn<sub>0.5</sub>Se<sub>0.5</sub>)<sub>x</sub>(As<sub>0.1</sub>Ge<sub>0.3</sub>Se<sub>0.6</sub>)<sub>100-x</sub> glasses and glass-ceramics, Mossbauer study 2-21923  
 Te<sub>40</sub>As<sub>35</sub>Ge<sub>7</sub>Si<sub>8</sub>, amorphous, threshold switching 2-51246  
 Te<sub>48</sub>As<sub>30</sub>Si<sub>12</sub>Ge<sub>10</sub>, chalcogenide glass threshold switching devices, thermal cond., temp. meas. using liquid crystals 2-36108  
 Te<sub>39</sub>As<sub>36</sub>Si<sub>17</sub>Ge<sub>7</sub>P, glass, field effect meas. 2-40916  
 Te<sub>85</sub>Ge<sub>15</sub>, semicond. glass, photocond. meas. 2-1955  
 Te<sub>80</sub>Ge<sub>20-x</sub>As<sub>x</sub> (A=Sb, Bi), glass transition and crystn. effects, thermal anal. 2-12499  
 Te<sub>85</sub>Ge<sub>10</sub>Sb<sub>5</sub>, semicond. glass, photocond. meas. 2-1955  
 Te<sub>81</sub>Ge<sub>14</sub>Sb<sub>5</sub>, amorphous, memory switching 2-51246  
 TeO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-GeO<sub>2</sub>(Fe<sub>2</sub>O<sub>3</sub>)(MnO)(CoO)(NiO)(CdO), phase separation, electron microscope obs. 2-13707  
 TeO<sub>2</sub>SiO<sub>2-x</sub>Pb<sub>x</sub> glass, thermal and elec. props. 2-21588  
 TlAsX<sub>2</sub>, X=S, Se or Te, crystallisation, semiempirical calc. of Tamman curves 2-8449  
 Tl<sub>2</sub>SnSe<sub>8.6</sub>, glassy, dielec. losses and permittivity, temp. depend. 2-2182

change of state see phase transformations

## channel flow

- see also pipe flow  
 active attenuation of duct noise 2-11883  
 annular ducts, turbulence models, heat transfer 2-35162  
 arterial heat pipes with capillary channels, method for calc. hydrodynamic heat transfer boundary 2-35155  
 asymmetric turbulent channel flows, mixing lengths and eddy viscosities meas. 2-44789  
 axisymmetric entrance diffuser, channel flow, oblique shock, flow separation 2-30226  
 bifurcated channel flow 2-dimens. and axisymmetric, body-fitted coord. calcs. 2-39981  
 boiling crises in horizontal channels with a screen on the inside surface 2-8230  
 boundary layer convective heat transfer in convergent channel 2-20665  
 Boussinesq fluid, stratified shear channel flow, nonlinear wave evolution 2-12118  
 calibration and certification systems in USSR, for pressurised and open flows 2-30248  
 centrifugal convection, MHD flow in an angular channel 2-12146  
 channel with porous layer, heat transfer during liq. filtration 2-30135  
 circular duct, broadband noise propag. due to flow through coaxial obstruction, meas. 2-8001  
 conduit flow of fluid through its solid phase, intraglacial channel flow apps. 2-30227  
 confined counter current flow tilting, stretching, pairing of collapse vortex struct. 2-25448  
 cooling channels, formulas for calc. optimum equivalent diameter 2-30134  
 corrugated wall channels, with two bends, fluid flow and heat transfer 2-39985  
 countercurrent flow, air and water in vertical duct, wall roughness effect on heat transfer 2-35135  
 cylinder in parallel plate duct, fluid flow and forced convection 2-44788  
 deformation of a thermal marker in a liquid moving in flat or cylindrical channels 2-8231  
 developing flow stability in two-dimens. channel, symmetric vs. antisymmetric disturbances 2-12219  
 diagonal MHD generator, planar subsonic flow in channel 2-16386  
 dielectric fluid flowing along annular channel, influence of electric field of heat transfer 2-44791



**channel flow continued**

- ducts, annular, concentric, laminar flow determ., implicit finite difference scheme 2-12220  
 dusty fluid in symmetric duct of varying gap, pulsatile flow 2-25449  
 electrically conducting fluid, motion in plane linear induction machine duct, current load 2-39990  
 Faraday MHD channels, effect of electrode geometry on nonuniform flow 2-40000  
 finite amplitude convection in layer heated from below, influence of side walls 2-44727  
 finite element computer model of the hole pressure problem 2-30260  
 flow in channel or tube, accelerating surface vel., Navier-Stokes eqns. with reverse flow 2-30228  
 flow of continuous medium in channel filled with dispersed material, two-phase heat transfer 2-25373  
 flow through bottom racks 2-16378  
 flume for rotating laminar flow with linearly varying temp. distribution 2-16401  
 free and forced convection flow through channel, wall porosity and Hall effects interactions 2-8222  
 free and forced convective hydromagnetic flow through channel, Hall current effect 2-8187  
 free surface role in onset of flow in open channel heated unevenly from above 2-16384  
 free-forced laminar flow convective heat transfer from square cavity in var. inclination channel 2-4816  
 free-surface flow, in lee of obstacle submerged in channel (*French*) 2-8158  
 gas, channel flow with supersonic nozzle, nonstationary perturbation 2-35222  
 gas, free mol. motion in channel of finite length with sufficiently general boundary conditions 2-25396  
 2-D gas flow in axisymmetric channel of variable cross sections, 3-D acoustic perturbations propag. 2-20450  
 gas liquid flow in vertical tubes, film model for prediction of flooding and flow reversal 2-25444  
 heat transfer in plane channel with single system of jets in a cross flow (*Russian*) 2-8134  
 heat-carrier flow, through porous mat. in channel, heat transfer (*Russian*) 2-50256  
 Hele-Shaw lamina flow of neutrally buoyant particles, blood appl. 2-35219  
 high voltage discharge in liquid, optical meas. of channel and shock wave expansion speeds 2-30351  
 horizontal duct connecting fluid reservoirs, free convection flow stratification 2-4893  
 incompressible fluid flow in channel 2-20635  
 incompressible laminar flow in square section curved duct, numerical calcs. (*Japanese*) 2-8234  
 incompressible liquid in channel, turbulent flow, numerical simulation (*Russian*) 2-8236  
 incompressible Newtonian fluid, steady laminar flow in rectangular ducts 2-20632  
 induction pump, nonuniform channel flow construction charact. 2-39999  
 induction pump channel uniform turbulent flow, hydrodynamic stability 2-39887  
 isothermal fibre form., fluid flow rate, finite element anal. 2-50311  
 jet, issuing from channel, extrudate swell study 2-35196  
 jets, diffusion combustion turbulent mixing in a channel 2-4868  
 laminar boundary layer, reverse transition influence of suction (*Russian*) 2-30098  
 laminar boundary layer on a wall nearly parallel to a magnetic field 2-44798  
 laminar duct flow, heat transfer contrib. (*German*) 2-50325  
 laminar forced convective heat transfer in trapezoidal channels 2-8108  
 liquid in channels of evaporators, boiling and evaporation, heat transfer 2-25231  
 liquid metal, hot, flow through cylindrical pipe, nozzle blockage by freezing, mathematical model 2-44706  
 liquid under supercritical pressure, high-freq. oscillations regions determ. 2-16332  
 liquid-liquid channel flow, mass transfer, surfactant effects (*German*) 2-30224  
 LMBR steam generator, forced-connection boiling upflow system, instabilities in parallel channel 2-7326  
 magnetisable surfactants, plane modes of flow 2-39975  
 mass and heat transfer entry length for power law fluids in cylindrical geometry 2-20667  
 measurement by level-flow method 2-25471  
 MHD flow, nonisothermal liq., temp. depend. electrical conduct. 2-12232  
 MHD flow between vertical conducting walls 2-35231  
 MHD generator channel flow, transverse asymmetries, zero net Hall current 2-8242  
 MHD system 2-40001  
 micropolar flow, fluid injection in an infinite channel, flow picture 2-12218  
 micropolar fluid flow in channel with porous walls, numerical soln. 2-50316  
 micropolar fluid in plane channel, convective heat transfer, WKB method appl. 2-12142  
 natural convection mass transfer in horizontal annuli 2-50263  
 Newtonian fluid in horizontal rectangular duct, laminar heat transfer, friction factor 2-35136  
 nitrine, dissociating coolant, thermohydraulic characts. in rough annular channel (*Russian*) 2-4061  
 nondimensional analysis of boiling dry a vertical channel with a uniform heat flux 2-50056  
 nonNewtonian fluid, channel flow, dispersion of soluble matter 2-25404  
 nonNewtonian fluid through channel of volute type disk pump, isothermal flow 2-35110  
 nonstationary heat exchange of laminar flow of viscous incompressible fluids in channels 2-44732  
 nonstationary one-dimensional gas flows in channels in the presence of periodic perturbations of the boundary conditions 2-39988  
 occlusion description, nonlinear flow field calc., conformal mapping 2-39989  
 open-channel flow between two basins, rot. hydraulics 2-30229  
 perfect fluid, vortex flow, shallow water approximation calcs. 2-30146  
 perfect gas, three-dimens. flows in narrow ducts 2-50315  
 planar channel flow, numerical simulation of transition and turbulence 2-1268

**channel flow continued**

- plane channel, hydrodynamic entrance region anal. using various turbulence model 2-4799  
 plasma rings, current-carrying, conveyance in conducting liquid flow stability 2-20918  
 plates, parallel, fluctuating flow of viscoelastic liq. with time-varying suction 2-35228  
 polyethylene, high density melt, flow through slit, entrance geometry effect on stress distrib. (*Japanese*) 2-30186  
 polyethylene oxide solns. in square duct and capillary flow, along reduction, solvent effects 2-20755  
 between prolate spheroids, unstable flow and rot. in narrow gap, arbitr. axis ratio 2-50320  
 pulsatile visco-elastic channel flow, heat transfer, approx. soln. by perturbation theory 2-12135  
 rectangular channel, free convection onset 2-4823  
 regime boundaries for an interior subchannel of a horizontal 37-element bundle 2-4890  
 reversible multistage pump-turbine bladed diffuser conveyor flow behavior anal. (*Italian*) 2-35227  
 sea drift struct. and compensating currents near bank slope 2-32533  
 shear to sideways diffusion instability transition in vertical slot 2-30101  
 shock wave propagation from circular channel (*Russian*) 2-35180  
 single-phase medium flow in narrow channels with injection, hydrodynamic study 2-1265  
 slot injection, non-uniform, into laminar boundary layer 2-4856  
 solid-liquid interface, channel flow, vorticity, wave motion, thermoelectric MHD 2-8246  
 spanwise streaky structure and macroturbulence in open-channel flows 2-4891  
 spatially varying mean flow in high frequency sound refraction effects 2-7917  
 stability of developing flow in a channel, nonparallel effects 2-1175  
 stationary fresh-water lens, boundary variation method 2-44783  
 steady shallow flow over a spillway 2-16381  
 steady-state MHD convection in vertical planar channel, mag. field effects 2-39997  
 steam turbine channel turbulence model 2-44708  
 straight duct, supersonic flow, numerical simulation 2-39986  
 stratified flow over a bounded obstacle in a channel of finite heights 2-4872  
 structure of turbulent flow in channels and pipes 2-20757  
 swirling flow in circular channel with sudden expansion 2-39917  
 thermocanemometer measuring transducers of fluid mass flow rates, metrological characts. 2-25467  
 turbine blade, discrete-hole cooling, turbulence 2-35161  
 turbulence in plane channel flows 2-16380  
 two way water wave propag. in a channel, solitary wave solns. 2-12168  
 two-layer liquid, interface dynamics investig. 2-12223  
 two-phase flow, bubbles, heat transfer study (*Russian*) 2-50258  
 viscous fluid, laminar gravitational open flow in cylindrical channel (*French*) 2-39882  
 viscous gas flow, jet from cylinder into vacuum, Navier-Stokes eqns. calcs. 2-35189  
 viscous gas in channels, nonstationary subsonic flows, numerical investigation (*Russian*) 2-30233  
 viscous incompressible conducting fluid containing suspension of particles, unsteady flow problems 2-8213  
 viscous incompressible fluid flow through channel 2-20634  
 viscous incompressible fluid in planar channel, hydrodynamic and heat exchange calc., Navier-Stokes eqn. 2-4814  
 vortical flow of gas in annular channel (*Russian*) 2-8229  
 wall shear stress, disturbed turbulence struct. effect on Preston tube meas. 2-50335  
 water, laminar gravit. heat convection in dead-end channels 2-4820  
 water vapour, condensing, nonstationary flows, wave dynamics 2-20754  
 weakly-conducting fluid, flow and heat transfer in channel with plane walls, effect of electric field (*Russian*) 2-8227  
 H<sub>2</sub>O, channel-flow, infiltration into channel bed, kinematic wave model, boundary problem 2-4892  
 H<sub>2</sub>O, flow in heated stream open channel, bubble cooling, enthalpy transfer coeff. 2-25366  
 He I, flow boiling in vertical heated glass tube, press. drop. and flow struct. 2-35220  
<sup>3</sup>He, superfluid, flow dissipation and crit. vel., phenomenological theory 2-12871  
<sup>3</sup>He-A, orbital dissipation, history depend., torsion pendulum expt. 2-35801  
<sup>3</sup>He-B, AC critical velocity effects 2-35800  
<sup>3</sup>He-B, flow, mag. distortion 2-35802  
<sup>3</sup>He-B, vibrating wire expts. to 0.6 mK 2-35799  
<sup>4</sup>He, superfluid, counterflowing, vortex line density meas. 2-35787  
<sup>4</sup>He, superfluid, critical counterflow in narrow channels 2-35786  
<sup>4</sup>He, superfluid, Josephson transport through weak link 2-35792  
<sup>4</sup>He superfluid laminar flow through capillary tubes and narrow channels, two-fluid theory 2-16918

**channeling radiation** *see* **channelling radiation****channelling**

- see also energy loss of particles*  
 axial, transverse plane trajectory focusing, expts. interpretation using close encounter nucl. processes 2-45305  
 axial channelling, transverse plane trajectory focusing, theory, rel. to computer simulations 2-35559  
 axially-channelled relativistic electrons, Fokker-Planck eqn. soln. 2-25960  
 backscattering expts., alternative method for dechannelling-correction 2-16697  
 bent crystal, planar channelling of relativistic protons 2-16694  
 bent crystal, ultrarelativistic particle channelling, quantum theory 2-21201  
 charged particle induced radiation in crystals, conf., North Caucasus, USSR (May 1980) 2-33229  
 charged particles, induced coherent X-ray radiation 2-5769  
 Compton scattering by channelled relativistic electrons 2-38885  
 conference on ion beam anal., Sydney, Australia (Feb. 1981) 2-42775  
 crystal septum, efficiency of ultrarelativistic particle beam deflection, channelling mode 2-15652  
 crystals, electron motion, channelling in axially symmetric field 2-12654  
 crystals, radiation emitted by ultrarelativistic positrons (*Russian*) 2-51735  
 dechannelling, planar, influence of dislocations, computer simulation model 2-45301



## channelling continued

- diamond,  $C^+$  ion implantation, crystal growth, proton channelling 2-45212  
 diamond, ion beam analyses 2-45231  
 diamond, natural, ion channelling, minimum yields 2-16696  
 diamond, planar channelling trajectories 2-25951  
 diamond, radiation emitted by ultrarelativistic positrons (*Russian*) 2-51735  
 diamond crystal, channelled electrons  $\gamma$ -radiation expt. investigation (*Russian*) 2-40455  
 electron beams, fast, bending and transport by means of macrochannelling 2-39558  
 energy loss spectra in planar channelling 2-21198  
 instrument for light impurity atoms lattice location studies by  $(n,\alpha)$  reaction 2-601  
 interatomic potential, incident particle energy effect 2-45308  
 layered structures, channelling of neutral particles 2-5165  
 light nuclei depth profiling in single crystals using nuclear reaction and RBS technique 2-47394  
 metal surfaces, channelling contrast after ion beam etching, SEM specimen prep. appl. 2-17810  
 metals, laser pulse melting, epitaxy and allotropy, expt. study 2-50702  
 microprocessor based control system for channelling expts. (*Chinese*) 2-35554  
 MIS devices stress measurement using SEM electron channelling patterns 2-50978  
 nonmagnetic crystals, magnetic channelling of neutrons (*Russian*) 2-50731  
 planar channelling and dechannelling probability, dislocation effects, harmonic oscillator approx. 2-35556  
 planar channelling process at small depths 2-25950  
 polarisation oscillation of fast channelled particle due to quadrupole moment 2-16699  
 reconstructed surface, H-induced ordering 2-50965  
 relativistic channelled particles, passage and radiation 2-25961  
 relativistic nuclei, electrodisintegration by cryst. periodic field upon channelling 2-35560  
 Rutherford backscattering spectrometry, automatic beam alignment for channelling meas. 2-19815  
 semiclassical approach to channelling and dechannelling 2-35557  
 semiconductors, SEM appls. in EBIC and cathodoluminesc. modes 2-30371  
 SOS film, cryst. quality improvement by O implantation and thermal annealing 2-51023  
 spontaneous emission of relativistic channelled particles in X-ray range (*Russian*) 2-25963  
 sputtering yields of single crystalline targets, book contrib. 2-46865  
 thermal dechannelling from axial channels, theory 2-21195  
 thermalization of energetic charged particle beams channelled through crystal 2-35555  
 Al, laser pulse irradiated, slip deform. and melt threshold 2-1485  
 Al, surface and bulk plasmon losses, relative intensity variation due to cryst. orientations, low energy EELS study 2-17582  
 Al-alloys, high-strength, 2024-T4, 6061-T6, 7075-T6, fatigue crack tip plastic strain 2-5941  
 Au, lattice steering of relativistic positrons from implanted positive muons 2-21194  
 Au/Ag(111) epitaxy, first stage, backscatt./channelling anal. 2-50965  
 Cu, polycryst., influence of channelling on sputtering yield 2-17590  
 $Cu^{111}$  In, channelling and gamma-ray spectra 2-50730  
 Fe:Dy(Ar)(Sb), ion implanted single crystal, Rutherford backscattering and channelling anal. 2-45220  
 Ga, channellographic projection patterns at 295.77 and 4K, lattice struct. (*French*) 2-5075  
 GaAs, ion implantation and low temp. epitaxial regrowth 2-8532  
 GaAs surface, ion bombarded channelling-backscatt. study, dechannelling correction 2-16697  
 GaAs-oxide interface, ion beam channelling characterisation 2-26236  
 GaP:Sb, In, impurity location by asymmetry of channelling dips 2-16693  
 Ge crystal, distorted, planar dechannelling of GeV particles 2-21191  
 Ge, dechannelling of H and He ions 2-45307  
 He channelled microbeam for semicond. anal. 2-45299  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, ion-implanted, CW CO<sub>2</sub> and ruby laser annealing, expt. study 2-41457  
 InAlAs/InGaAs MBE layer structs., ion beam anal. 2-35906  
 InAlAs/InGaAs interface, MBE, channelling anal. 2-12922  
 InP:Fe, Mg(Zn), ion implanted, struct., channelling study 2-21163  
 InP:Se, backscattering spectrum, channelling meas. using automatic beam alignment 2-19815  
 LiF in liquid <sup>3</sup>He, plastic flow stress temp. depend., phonon channelling mechanism 2-5179  
 $\alpha$ -LuD<sub>0.01</sub>, ion implanted and thermally diffused, D lattice location, channelling study 2-35517  
 Mo, dechannelling of H and He ions 2-45307  
 Ni, Hf ion implanted, laser pulse melting, TDPAC, Rutherford backscatt. and channelling meas. 2-31351  
 Ni surface, (100), oxidation, Rutherford backscatt. and channelling study 2-47257  
 PbS/PbSe bicrystals, misfit dislocations distrib. determ. by energetic He ion channelling 2-40398  
 Pb<sub>0.9</sub>Sn<sub>0.1</sub>Te:Sb, surface oxide modification due to <sup>4</sup>He ion bombardment 2-16688  
 Si (111)/Au interface, AES, EELS, LEED and depth profiling study, UHV conditions 2-21446  
 Si, amorphous film, laser annealing,  $\alpha$ -particle channelling study (*French*) 2-1799  
 Si avalanche photodetectors, crystal defects, electron channelling imaging with SEM 2-12605  
 Si, channelling of As ions, roles of electronic and nuclear stopping 2-8549  
 Si, channelling of electrons, ang. distrib., quantum states preferential population effect 2-21196  
 Si, cryst., electron irradiat., coherent bremsstrahlung, planar channelling radiation, band struct. 2-13584  
 Si crystal, channelling length of high energy positrons 2-35558  
 Si crystal, distorted, planar dechannelling of GeV particles 2-21191  
 Si crystal, electron backscattering, anisotropy formation depth 2-35545  
 Si crystal, positron transmission anomaly, model 2-12643  
 Si, dechannelling from secondary defects, TEM and MeV He<sup>+</sup> channelling study 2-16695  
 Si, dechannelling of H and He ions 2-45307

## channelling continued

- Si, electron irradiated, TEM and channelling anal. of defects 2-25937  
 Si, electrons in planar channel, band struct. and level populations 2-25962  
 Si, electrons undergoing channelling, band struct. 2-21199  
 Si, implanted, macroscopic electron channelling pattern for laser induced recrystallisation monitoring 2-5164  
 Si interfaces, backscattering and ion channelling studies 2-45742  
 Si, laser-annealed polysilicon, on insulating layers, electron channelling characterisation 2-50699  
 Si, planar channelling trajectories 2-25951  
 Si, radiation damage simulation 2-30499  
 Si reordered surfaces, struct., backscatt./channelling anal. 2-50965  
 Si:As, atom and carrier depth distrib. for channelled 300 keV As ions, SIMS study 2-5163  
 Si:As, channelling Rutherford backscattering (*Chinese*) 2-35553  
 Si:As<sup>+</sup>(P<sup>+</sup>), extended defect depth profiling, channelling, Rutherford backscattering meas. 2-12628  
 Si:B implantation, lattice deformation, post-laser irradiat., backscatt., channelling study 2-45213  
 Si:Bi, furnace and laser annealed, backscatt. and channelling anal., depth distrib. 2-45253  
 Si:In,Sb (100), ion implanted, solid phase epitaxy, solid solubility, channelling study 2-50862  
 Si:In (Sb) implanted amorphous layers, defect and solubility limit study 2-30477  
 Si:P, implanted, MeV He<sup>+</sup> dechannelling from secondary defects 2-30505  
 Si:Pb, ion implanted, dopant range, damage depth, backscatt. and channelling anal. 2-45216  
 Si:Sb(In), Rutherford backscatt., ion channelling, dopant diffusion 2-45252  
 Si-CaF<sub>2</sub>, heteroepitaxial struct., Si and CaF<sub>2</sub> vacuum deposition, channelling and backscatt. study 2-51814  
 Si-CoSi<sub>2</sub>-Si (111), laser annealing, epitaxial growth of amorphous Si film 2-51009  
 Si-SiO<sub>2</sub>-Si implanted epitaxial struct., interfacial struct., channelling study 2-30758  
 V-Si, laser induced defects, material interactions 2-50704  
 V<sub>3</sub>Ge(Si), ion irradiat. damage, effect on supercond. transition temp., channelling meas. 2-5162  
 V<sub>3</sub>Si, defect structures determ. by ion channelling and X-ray diffraction 2-45295  
 W., axially-channelled relativistic electrons, Fokker-Planck eqn. soln. 2-25960  
 W, dechannelling of axially channelled electrons, single string approx. 2-25959  
 W, dechannelling of H and He ions 2-45307  
 W, electrons in planar channel, band struct. and level populations 2-25962  
 W, electrons undergoing channelling, band struct. 2-21199
- channelling radiation**  
 axially channelled electrons, radiation, computer simulation 2-12652  
 axially channelled electron radiation, computer simulation 2-25953  
 bremsstrahlung, coherent, difference and connection 2-27012  
 charged particle induced radiation in crystals, conf., North Caucasus, USSR (May 1980) 2-33229  
 crystals, electron motion, channelling in axially symmetric field 2-12654  
 crystals, radiation emitted by ultrarelativistic positrons (*Russian*) 2-51735  
 diamond, electron channelling, planar,  $\gamma$ -emission spectrum 2-46450  
 diamond, radiation emitted by ultrarelativistic positrons (*Russian*) 2-51735  
 diamond crystal, channelled electrons  $\gamma$ -radiation expt. investigation (*Russian*) 2-40455  
 electron channelling radiation spectra, energy depend. 2-27016  
 electron channelling radiation with a realistic pot. 2-40451  
 induced radiation in channelling, possibility of X-ray laser action 2-17566  
 Kumakhov radiation ang. distrib., fine structs. 2-27014  
 Kumakhov radiation total intensity for high energy channelled positrons and electrons 2-25956  
 Kumakhov X-ray radiation from relativistic electron 2-22120  
 multiple scattering of electrons at axial channelling 2-25957  
 planar emission from fast electrons 2-40453  
 positron channelling in bent crystals, dynamics, radiation, and spin separation 2-25958  
 positron channelling radiation in pot. of cryst. planes 2-27015  
 relativistic channelled particles, passage and radiation 2-25961  
 relativistic electron. planar channelling, spectral and pol. ang. props. 2-35561  
 spontaneous emission of relativistic channelled particles in X-ray range (*Russian*) 2-25963  
 Ge, channelled electrons and channeling radiation, energy levels 2-25955  
 Si, axially channelled MeV electrons, transitions between bound states 2-25954  
 Si, channelled electrons and channeling radiation, energy levels 2-25955  
 Si, electrons in planar channel, band struct. and level populations 2-25962  
 W, electrons in planar channel, band struct. and level populations 2-25962
- characteristic temperature** see Debye temperature
- characteristics measurement**  
 see also headings for specific characteristics, e.g. gain measurement; viscosity measurement  
 piezoelectric transducers, thickness-mode, transient induced voltage characteristic analysis (*Chinese*) 2-50038  
 solar cell characteristics plotter with sample hold 2-9653
- charcoal**  
 see also carbon  
 activated, in ADL-Collins He liquefier 2-10813  
 activated, oxine impregnated, Co ion removal from radioactive liquid waste (*Japanese*) 2-7162  
 adsorption isotherms and heats of adsorption of Ne and H<sub>2</sub> 2-35889
- charge (electric)** see electric charge
- charge compensation**  
 see also crystallography  
 II-VI semiconductors, self-compensation, review 2-16672  
 semiconductor, compensated, screening of minority ions 2-17060  
 semiconductors, compensated, localised charge carriers, particle statistics and transport 2-17085



**charge compensation continued**

- $\beta$ -Al<sub>2</sub>O<sub>3</sub>-M<sub>2</sub>O, (M=Ag<sup>+</sup>, Na<sup>+</sup>, K<sup>+</sup>, NH<sub>4</sub><sup>+</sup>, H<sup>+</sup>/H<sub>2</sub>O), non-stoichiometry 2-21320
- $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O and  $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, superionic conductors, pot. energy calc. 2-21362
- Ca<sub>10-y+z</sub>(PO<sub>4</sub>)<sub>6-y</sub>(CO<sub>3</sub>)<sub>y-z</sub>(CO<sub>3</sub>)<sub>2</sub>X<sub>2-y-z</sub> (X=F<sup>-</sup>, OH<sup>-</sup>), F<sup>+</sup> centre ESR spectra, charge compensation mechanisms 2-36428
- CoO:Sn(Fe), charge compensation mechanism, absorpt. Mossbauer spectra 2-36489
- p-Ga<sub>1-x</sub>Al<sub>x</sub>As:Ge, LPE grown, charge compensation, photoluminescence spectrum 2-17517
- n-GaAs wafer, proton implanted, IR reflectivity characteris. 2-17478
- (GaAs)<sub>1-x</sub>(ZnSe)<sub>x</sub> solid solns., electrophys. props. 2-40927
- Ga<sub>2</sub>O<sub>3</sub>-K<sub>2</sub>O-ZnO, superionic cond.,  $\beta$ -Al<sub>2</sub>O<sub>3</sub> isomorph, ionic cond. and Raman spectra 2-26125
- $\beta$ -Ga<sub>2</sub>O<sub>3</sub>-K<sub>2</sub>O(Na<sub>2</sub>O) and  $\beta''$ -Ga<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, defect struct., X-ray diffr. study 2-25871
- NaCl:Yb<sup>3+</sup>, IR luminesc. and absorpt. spectra of 4f<sup>14</sup>-4f<sup>13</sup>5d transition 2-51668
- Na<sub>1.9-2x</sub>Cu<sub>x</sub>V<sub>10</sub>O<sub>30</sub>, prep., struct. and ESR characts. 2-41512
- p-PbTe epitaxial film, elec. props., H<sub>2</sub> effect 2-8900
- PbTe:Cl, self-compensation of donor effect by vacancy-impurity complexes, Hall carrier density meas. 2-36067
- a-Si:H,B(P), luminesc. spectrum, effect of dangling bond states 2-46670
- Si<sub>3</sub>N<sub>4</sub>:Mn, residual cond., degree of compensation and impurity conc. effects 2-8797
- SrTiO<sub>3</sub>:La, self-compensation 2-25909
- ZnS:Tm<sup>3+</sup>, fluorescence from nonequivalent Tm<sup>3+</sup> centres 2-51665

**charge-coupled device arrays** *see charge-coupled device circuits***charge-coupled device circuits**

- detector operation as optically addressed correlator, time-integrating image processing 2-44200
- image sensor, use for domain pattern obs. 2-36379
- imagers, fabricated from float zone p-Si, deep levels study 2-12996
- IR Si:B charge-injection-device array performance, space-based astronomical obs. appl. 2-3193
- liquid crystal C-CD driven spatial light modulators 2-11809
- pacemaker analysis, improved instrument based on charge-coupled device 2-42236
- phased array microphone by charge transfer device 2-11965
- spectral analyser, integrated acoustooptic, prototype 2-1046

**charge-coupled devices**

- see also charge-coupled device circuits*
- gamma-induced noise anal. and meas. 2-29435
- MIS structure, charge-transfer, electrode gap role 2-46148
- SiO<sub>2</sub>-Si interface states generation at low temp. with ionising radiation 2-30944

**charge density waves**

- alkali superoxides, CDW and displacive collective Jahn-Teller effect 2-21514
- amorphous semiconductor film, laser annealing and theory of photostimulated structures 2-25922
- Bertaut series employing charge density functions and Tournarie's product function, convergence, Madelung const. 2-30809
- CCTaSe<sub>2</sub> (2H), incommensurate splitting in CDW state 2-30594
- cholesteric to nematic phase transition in mag. field 2-21305
- electron gas, two-dimensional, CDW patterns in high mag. field, HF approx. 2-45858
- electron interactions, spin-density wave state selection 2-41144
- electron liquids, strongly coupled, metallic density, CDW instability 2-12981
- electron-phonon coupling, strong coupling approx. 2-21512
- graphite intercalation compounds, order-disorder transition and charge density waves 2-16780
- infinite order critical points 2-21513
- 2H layer compound, 3x3 CDW state, band struct., density of states and total band struct. energy 2-8764
- metal-insulator transition, spin and charge density wave formation in matter with localised mag. moments (*Russian*) 2-5348
- NbSe<sub>3</sub>, Frolich mode conductor, nonlinear transport 2-13053
- one-dimensional, pinned by impurities, Q-vector metastability 2-30810
- one-dimensional CDW at weak impurity pinning, cond., and localisation in presence of interactions 2-36027
- one-dimensional conductor, org., irr. induced disorder and effects on transport props. 2-30870
- one-dimensional conductors with interchain interaction, structural energy and phonon dynamics 2-25999
- one-dimensional metal, competition between supercond. and insulating phases 2-21574
- one-dimensional organic metal, X-ray diffuse scatt. obs. of 4k<sub>F</sub> anomaly 2-26296
- organic quasi-one dimensional conductors, nonlinear conductivity 2-51155
- Peierls one-dimensional conductor, Frolich conductivity, commensurate charge density waves (*Russian*) 2-45948
- Peierls-Frolich problem and pot. with finite number of gaps 2-3529
- plasmons, simple molten salts, charge density excitations, spectral linewidth 2-21522
- polyacetylene, broken symmetry ground states, soliton excitations 2-13048
- quasi one-dimensional Frolich model, Peierls transition, fluctuation effects, RPA calc. 2-16991
- quasi-one-dimens. conduction, CDW and supercond. transition temp., review 2-36171
- quasi-one-dimensional CDW distorted solid, charge density fluctuations 2-30812
- quasi-one-dimensional conductors, mag. reson. studies, review 2-31302
- quasi-one-dimensional system, struct. ordering 2-13050
- semiconductors, magnetic, magnetic and structural phase transitions, HP mag. props. (*Russian*) 2-46290
- superconductor-nonmetal system props. 2-31069
- surface generalized susceptibilities and electronically driven surface phase transitions 2-1721
- TCNQ salt, TSeF-TCNQ, commensurate-incommensurate cond., umklapp scatt. mechanism 2-13046
- (TMTSF)<sub>2</sub>X (X=PF<sub>6</sub>, AsF<sub>6</sub>, ClO<sub>4</sub>, NO<sub>3</sub>), supercond., X-ray diffuse scatt. study 2-36192
- transition temperature into CDW state, influence of electron-phonon coupling 2-5357
- transition to anharmonic CDW of two-dimensional electron gas 2-1847

**charge density waves continued**

- TTF-TCNQ, commensurate-incommensurate cond., umklapp scatt. mechanism 2-13046
- TTF-TCNQ, electron-intramolecular vibr. coupling, IR spectra study 2-26904
- TTF-TCNQ quasi-one-dimensional conductor, electronic instabilities 2-13052
- two-dimensional charge density wave state in a strong magnetic field 2-21515
- Wigner transition temperature of a two-dimensional electron gas in a strong magnetic field 2-17002
- X-Y spin system, one-dimens., in random anisotropy field (*Russian*) 2-41152
- Cu surface, adsorbed Co, reconstruction, CDW, surface mag. and O<sub>2</sub> adsorption 2-12911
- FeNb<sub>3</sub>Se<sub>10</sub>, cryst. struct. rel. to CDW 2-16629
- Fe<sub>2</sub>Zr(Ti)(Nb)Se<sub>2</sub>, layered intercalation compound, elec. and optical characts. 2-17072
- K<sub>2</sub>Pt(CN)<sub>4</sub>Cl<sub>0.3</sub>2H<sub>2</sub>O, non-exponential nucl. mag. relax. by solitary waves 2-17360
- NbSe<sub>2</sub>(Se<sub>2</sub>) (2H), magnetic breakdown, magnetoresist. and Hall effect meas. 2-21567
- NbSe<sub>2</sub>, quasi-one-dimens. cond., freq. and field depend. transport 2-30872
- NbSe<sub>3</sub>, AC-induced DC cond. in CDW state 2-17053
- NbSe<sub>3</sub>, Fermi surfaces, rel. to CDW transitions and Hall const. behaviour 2-45805
- NbSe<sub>3</sub>, fraction of condensed electrons and CDW correlation length from sp. ht. data 2-35956
- NbSe<sub>3</sub>, microwave harmonic mixing by pinned CDW 2-40877
- NbSe<sub>3</sub>, quasi-one-dimens. cond., calorimetric obs. of phase transitions 2-30611
- NbSe<sub>3</sub>, quasi-one-dimens. cond., impurity effects, radiation damage, CDWs and supercond. 2-30871
- NbSe<sub>3</sub>, transient non-linear phenomena and metastable states of CDWs 2-1897
- NbSe<sub>3</sub>, transient nonlinear cond. 2-36028
- NbSe<sub>2</sub>(2H), elec. transport props. 2-45944
- NbSe<sub>2</sub>(2H), galvanomagnetic effects in CDW state 2-45945
- Nb<sub>1-x</sub>Ta<sub>x</sub>Se<sub>3</sub>, superconductivity and charge density waves 2-2042
- Nb<sub>1-x</sub>Ti<sub>x</sub>Se<sub>3</sub>, superconductivity and charge density waves 2-2042
- Pt atom chain compounds, anion-deficient, chem. and phys. interrelationship, one-dimens. metal 2-30439
- Si (111)-7x7 surface, atomic and electronic struct. 2-13157
- Si inversion layers, two-dimens. electron system, mag. field induced Wigner glass 2-40988
- Si surface, (111), lattice dynamics and reconstruction, microscopic theory 2-50989
- (TMTTF)<sub>2</sub>X (X=PF<sub>6</sub>, AsF<sub>6</sub>, ClO<sub>4</sub>, NO<sub>3</sub>), supercond., X-ray diffuse scatt. study 2-36192
- TaSe<sub>2</sub> (2H), lattice dynamics study by Raman scatt. 2-36645
- TaSe<sub>2</sub>, charge density wave metal-insulator transition study 2-51088
- TaSe<sub>3</sub>, CDW semiconductor, high freq. cond. 2-5429
- TaSe<sub>3</sub>, nonlinear CDW cond. 2-17081
- TaSe<sub>2</sub>(Se<sub>2</sub>) (2H), magnetic breakdown, magnetoresist. and Hall effect meas. 2-21567
- TaSe<sub>2</sub>(2H), elec. transport props. 2-45944
- TaSe<sub>2</sub>, 2H, incommensurate-commensurate lock-in transition 2-12731
- TaSe<sub>2</sub>, 2H polypoly, commensurate CDW phases, transition temps. 2-45571
- TaSe<sub>2</sub> (2H), CDW, one- and two-phonon Raman scatt. 2-45860
- TaSe<sub>2</sub> (2H), one-dimensionally incommensurate CDW struct. 2-1898
- TaSe<sub>2</sub>-2H, discommensurate microstructure, charge density waves 2-35703
- TaSe<sub>2</sub>(2H), galvanomagnetic effects in CDW state 2-45945
- TaSe<sub>2</sub>(2H), striped-to-hexagonal CDW transition, press. depend. 2-26041
- TiNi, elec. cond., mag. susceptibility, CDW formation 2-45935
- TiSe<sub>2</sub>, resist. anomaly suppression at microwave freq. 2-1939
- VSe<sub>2</sub> (1T), CDW investig. by Raman scatt. 2-45861
- VSe<sub>2</sub>(N<sub>2</sub>H<sub>4</sub>)<sub>0.6</sub> intercalation cpd., resistivity, temp. depend. 2-30873

**charge exchange**

- for charge exchange in particle and nuclear physics see elementary particle interactions and nuclear reactions and scattering.*
- see also charge transfer states; ionisation*
- $\omega$ -phenyl- $\alpha$ -(N,N-dimethylamino)alkanes, intramol. charge transfer in polar solns., kinetics 2-39488
- alcohol clusters in  $\gamma$ -irr. glass mixt., electron trapping study 2-44083
- amino acids, secondary ion formation by H<sup>+</sup> and cation transfer 2-9533
- anthracene-pyromellitic anhydride, dimers and charge transfer complexes, electronic excitation, intermol. vibr. freq. 2-1567
- anthracenes, phenylated, soln., amine fluoresc. quenching 2-43979
- aqueous solutions, electron transfer reactions in PES 2-2408
- atom ion collisions; three electron exchange in slow collisions by atoms and ions 2-29707
- atom-ion collisions, charge transfer, electron capture, cross sections impact parameter method 2-4381
- atom-ion collisions, electron transfer, double K-shell to K-shell cross sections 2-24850
- atomic collisions, laser-assisted symmetric charge transfer 2-20174
- benzophenone anion in alcohol glasses, spectral relax. and solvent reorientation 2-11552
- Born approximation, single and double electron scatt. 2-24849
- Brinkman-Kromers approximations, quasiclassical and quantum mech. amplitudes 2-17890
- cation exchange membrane, bionic cell with SrCl<sub>2</sub> and KCl, mass and charge transfer, hydrostatic pressure gradient 2-17919
- charge transfer coupling elements, second order asymptotic electronic wavefunction 2-34556
- chlorophyll, photooxidation, ion-mol. electron exchange, CIDNP study 2-7575
- continuous range contact charge exchange spectrometer 2-19131
- cross section scaling laws for charge exchange, ionisation and electron loss atom-highly charged ion collisions 2-7638
- 2,4-dinitrophenol+alcohols (tetrahydrofuran) (dioxan), electron donor-acceptor interactions, UV electronic absorpt. obs. 2-39489
- DNA, H-bonded and complimentary base pair systems, pot. energy curves 2-635
- double charged mol. ions+neutral mols., charge transfer reactions 2-31909



**charge exchange continued**

electron capture by slow multiply charged Mg, Al, Cs, Pb and Bi ions from He, Ne, Kr and H<sub>2</sub> 2-7631  
 energy decay of excited donor due to interactions with moving acceptors 2-781  
 exchange interaction between an atom and a multiply charged ion 2-29708  
 fast ion diagnostic experiment detector, design and calibration 2-35319  
 fermion systems, one-dimensional, lock-in transitions and charge transfer 2-45946  
 fission fragments effective charge on stopping in CO<sub>2</sub>, CF<sub>2</sub>Cl<sub>2</sub>, CF<sub>4</sub> and SF<sub>6</sub> 2-15891  
 fluctuating polarisation medium, charge transfer theory 2-2713  
 heavy ions, multicharged, charge-changing collision in gaseous media (*Japanese*) 2-49569  
 hexafluorobenzene, liquid, fast migrating negative species study using pulse radiolysis 2-1645  
 8-hydroxy-1,3,6-pyrenetrisulphonate in water-alcohol solns., picosecond proton transfer studies, fluoresc., decay obs. 2-37051  
 ionospheric trapped ions distrib. near synchronous orbit, charge exchange effect 2-14724  
 Jupiter's magnetosphere, charge exchange loss of energetic charged particles 2-48177  
 magnetically confined fusion plasma,  $\alpha$ -particle distrib. meas. technique 2-11265  
 metal-dielectric liquid interfaces, charge transfer 2-13415  
 3-methylpentane-1-propanol glass mixtures, electron transfer and solvation, gamma ray irradiat. at 77 and 4K 2-13523  
 molecular ion beams from tandem accelerators 2-11324  
 molecules, ground-state charge transfer and electronegativity equalization 2-43790  
 2-naphthol-6-sulphonate in water-alcohol solns., picosecond proton transfer studies, fluoresc., decay obs. 2-37051  
 nonpolar liquids, positive charge transfer studied by pulse radiolysis 2-1646  
 photo-induced, meas. of small charge transfer optical absorption bands by modulation spectroscopy 2-6907  
 polyacetylene:Li, charge transfer and bond alternation calcs. 2-808  
 porphyrin, short-range and long-range intermol. interaction energies calc. using perturbation theory 2-769  
 quadricyclene charge transfer complexes, ionic photodissoc., wavelength depend. 2-47357  
 quinone, triplet quenching by organometal donors, CIDEP and ESR study 2-15824  
 radiation belt heavy ions, loss, transport and charge exchange 2-48113  
 Rydberg atoms, charge-transfer collisions 2-7637  
 Schiff bases, heterocyclic, electronic spectra, ring, p-substitution and solvent effects 2-15803  
 semiconductors, photoeffect, spectral sensitisation, by dyes (*Russian*) 2-36093  
 STO charge distribution, two-centre, Fourier transform calc. program 2-4200  
 tetracyanobenzene-anthracene-d<sub>0</sub>(d<sub>10</sub>), charge transfer complexes, disordered phase, IR and Raman study 2-13484  
 trans-thioindigo, excited state electron acceptor props. 2-34326  
 time-depend. Hamiltonian method 2-15067  
 Tokamak plasma, large, spectroscopic diagnostics, review (*Japanese*) 2-35318  
 unitarised capture cross sections in the impact parameter representation 2-52187  
 Al targets, partially stripped ions energy loss straggling, charge exchange role 2-43733  
 Ar<sup>+</sup>+H<sub>2</sub>O, H<sub>2</sub>O<sup>+</sup> and ArH<sup>+</sup> formation, crossed beam study at low energies 2-4378  
 Ar<sup>+</sup>+O<sub>2</sub>, charge transfer, O<sub>2</sub><sup>+</sup>(<sup>4</sup>I<sub>u</sub>) product state, rate coeffs. 2-34555  
 Ar<sup>+</sup>+He(Ne)(Ar) 2-11569  
 Ar<sup>+</sup>+Ar(Kr)(Xe), low energy charge transfer reactions, time of flight study 2-15888  
 Ca<sup>+</sup>+Sr, laser induced charge transfer collisions 2-20179  
 Cl<sup>+</sup>+CO(D<sub>2</sub>)(N<sub>2</sub>), electron detachment, direct coupling, charge exchange, shape resonances 2-44070  
 CoAl, electron momentum distrib. and charge transfer, Compton scatt. study 2-26281  
 Cs<sup>+</sup>+Cs<sup>+</sup> 2-44086  
 Cu(II), imidazole complexes, electronic spectra in soln. 2-24717  
 Cu(II) pyrazole complexes, electronic spectra in soln. 2-24717  
 D<sup>+</sup> beam, high current, production by charge exchange in Na 2-43656  
 D<sub>2</sub><sup>+</sup>+H<sub>2</sub>O, proton transfer, unimolecular decay and isotope scrambling, crossed mol. beam studies 2-13936  
 F<sup>+</sup>+CO(D<sub>2</sub>)(N<sub>2</sub>), electron detachment, direct coupling, charge exchange, shape resonances 2-44070  
 F<sup>+</sup>+HX→HF+X<sup>+</sup>, X=Cl, Br and I, HF vibr. state distrib., IR chemiluminesc. 2-17883  
 FeAl, electron momentum distrib. and charge transfer, Compton scatt. study 2-26281  
 H, dynamics in atmosphere, total mixing ratio rel. to global escape flux (*Rumanian*) 2-23152  
 H in exosphere, vel. and temp. distrib., effect of charge exchange source 2-23150  
 H<sup>-</sup> ion source, charge exchange, conversion coeff. and scatt. angle 2-4382  
 H-like atom+bare charge, electron capture to continuum states, distrib. anisotropies 2-786  
 H+atoms, collisions, charge transfer and ionisation, review 2-24851  
 H+Be(B)(C) ions, charge exchange cross sections calc. by fully quantal perturbation stationary state method 2-49568  
 H+H<sup>+</sup>, classical trajectory calcs. using Wigner function 2-20160  
 H+H<sup>+</sup>, differential charge transfer cross sections calc. using classical trajectory Monte Carlo method 2-34557  
 H+H<sup>+</sup>, total charge transfer cross-section calc. 2-788  
 H+H<sup>+</sup>(C<sup>6+</sup>), charge transfer and ionisation cross sections, quantal study, finite-elemental 2-39485  
 H+H<sup>+</sup>(Li<sup>3+</sup>)(B<sup>3+</sup>)(C<sup>6+</sup>)(Si<sup>14+</sup>), ionisation, excitation and charge transfer cross section calcs. 2-44089  
 H+He<sup>2+</sup>(H<sup>+</sup>), laser-induced charge transfer, photon-induced cross section 2-4379  
 H+Li<sup>3+</sup>, charge transfer and excitation cross-section calcs. 2-44085  
 H+CO(D<sub>2</sub>)(N<sub>2</sub>), electron detachment, direct coupling, charge exchange, shape resonances 2-44070  
 H<sup>+</sup>+Ar, H(2p) charge exchange excitation, alignment tensor components 2-49570

**charge exchange continued**

H<sup>+</sup>+H scatt. at low energies, phase shifts and differential cross sections 2-34551  
 H<sup>+</sup>+H<sup>-</sup> collisions, one-electron treatment 2-11570  
 H<sup>+</sup>+H(1s), collisions at 1 to 7 keV, direct and charge exchange excitation processes 2-20181  
 H<sup>+</sup>+He<sup>+</sup>, charge exchange excitation cross sections, mol. state study 2-34563  
 H<sup>+</sup>+X<sup>(2-1)+</sup>→H<sup>+</sup>+X<sup>2+</sup>, modified Coulomb-Born approx. and charge transfer 2-34554  
 H<sub>2</sub>-H<sub>2</sub><sup>+</sup>(H<sub>2</sub>-H<sub>2</sub><sup>+</sup>)(O<sub>2</sub><sup>2-</sup>-H<sub>2</sub><sup>+</sup>)(S<sub>2</sub><sup>2-</sup>-H<sub>2</sub><sup>+</sup>), electron transfer, quantum chemical approach 2-39490  
 H<sub>2</sub><sup>+</sup>+H<sub>2</sub>O(D<sub>2</sub>O), proton transfer, unimolecular decay and isotope scrambling, crossed mol. beam studies 2-13936  
 H<sub>2</sub>O, splitting process, electron injection study on catalytic semiconductor surface 2-22487  
 He<sup>+</sup> neutralisation in low energy scatt. from Ni 2-51759  
 He-Te positive column laser transitions, excitation mechanism 2-7744  
 He<sup>+</sup>+H<sup>+</sup>, electron transfer collisions, cross sections, Sturmian basis 2-44088  
 He<sup>+</sup>+He reson. charge transfer collision, diabatic mol. representation 2-34553  
 He<sup>2+</sup>+H, charge exchange excitation cross sections, mol. state study 2-34563  
 He<sup>2+</sup>+H, electron transfer collisions, cross sections, Sturmian basis 2-44088  
 He<sup>2+</sup>+H, translation factors for approx. mol. wavefunctions, charge exchange cross section calc. 2-34558  
 H<sub>2</sub><sup>+</sup>(v)+Ar→ArH<sup>+</sup>+H, Ar<sup>+</sup>+H<sub>2</sub>, reactions, CT cross sections near reson., TESICO study 2-17886  
 K<sup>+</sup>+difluorobenzene, momentum transfer collision freq. meas. by ICR spectrometer 2-9534  
 K<sup>+</sup>+K<sup>+</sup>, inelastic collision cross section meas., charge exchange 2-4380  
 Li<sup>3+</sup>+H collisions, CT cross sections 2-34564  
<sup>7</sup>Li<sup>3+</sup>+<sup>7</sup>Li<sup>3+</sup>, form. of <sup>7</sup>Li<sup>2+</sup>, cross sections, scaling laws 2-783  
 N<sub>2</sub><sup>+</sup>+Ar, charge exchange, N<sub>2</sub><sup>+</sup>(X→A) Meinel bands, visible spectra 2-34552  
 N<sub>2</sub><sup>+</sup>+SO<sub>2</sub>, depend on internal energy, charge transfer 2-2705  
 N<sub>3</sub><sup>+</sup>, gaseous, proton affinity and thermochem. props. 2-11587  
 NH<sub>3</sub>+Ar<sup>+</sup>(Kr<sup>+</sup>)(Xe<sup>+</sup>), energy disposal in thermal energy CT reactions 2-44084  
 NH<sub>3</sub>+NH<sub>3</sub>, charge transfer, H transfer, cross sections photoelectron obs. 2-9542  
 (N<sub>2</sub>H<sub>7</sub>)<sup>+</sup>, H-bonded system, H<sup>+</sup> transfer and electronic redistrib., ab initio MO calcs. 2-24848  
 Na<sup>+</sup>+Na<sup>+</sup>, inelastic collision cross section meas., charge exchange 2-4380  
 Ne+Ar<sup>+</sup>, low energy collisions, charge transfer, ionisation, cross section meas. 2-34562  
 NiAl, electron momentum distrib. and charge transfer, Compton scatt. study 2-26281  
 O<sup>8+</sup>, in ISX-B Tokamak, charge exchange excitation and recomb. 2-20819  
 O<sup>8+</sup>+O<sub>2</sub>, charge transfer reactions 2-22437  
 (O<sub>2</sub>H<sub>2</sub>)<sup>+</sup>, H-bonded system, H<sup>+</sup> transfer and electronic redistrib., ab initio MO calcs. 2-24848  
 O<sub>2</sub><sup>+</sup>(H<sub>2</sub>O)<sub>n</sub>+O<sub>3</sub>(NO)(SO<sub>2</sub>)(CO<sub>2</sub>), reaction rate consts. meas. with variable temp. flowing afterglow apparatus 2-47325  
 O<sup>+</sup>(P)+H<sub>2</sub>, high energy classical trajectory study, cross sections and rate const., exchange and dissociation processes 2-37048  
 Rb<sup>+</sup>+Rb<sup>+</sup>, inelastic collision cross section meas., charge exchange 2-4380  
 S<sup>2+</sup>+H, charge transfer, pot. energy curves, ab initio MO calcs. 2-20177  
 SF<sub>6</sub>+HS<sup>-</sup>(s<sup>-</sup>)(OH<sup>-</sup>)(O<sup>-</sup>), reactions charge exchange, electron affinity 2-31913  
 SF<sub>6</sub>+Cl<sub>2</sub>(NO<sub>2</sub>), reactions charge exchange, electron affinity 2-31913  
 WO<sub>4</sub><sup>2-</sup>, charge transfer spectra 2-49380  
 WS<sub>4</sub><sup>2-</sup>, charge transfer spectra 2-49380  
 WSe<sub>4</sub><sup>2-</sup>, charge transfer spectra 2-49380

**charge measurement**  
*see also electrometers*  
 charge centroid determination in field-effect experiments 2-43048  
 continuous range contact charge exchange spectrometer 2-19131  
 dielectrics, charge distrib. meas., high resolution laser pulse method 2-43050  
 semiconductor junctions, homogeneous, charge meas. of interface 2-46110

**charge-ordered states**  
 electronic cond. temp. depend. in charge-ordered crystals 2-17065  
 Hubbard model, extended, charge ordering, Caron-Pratt cluster approx. 2-45862  
 GeSe, amorphous thin films, laser-induced phase transition 2-5762

**charge storage diodes**  
 No entries

**charge transfer** *see charge exchange*

**charge transfer states**  
 n-alkane:copper porphyrin, Zeeman pattern, vibronic coupling 2-35978  
 anthracene, charge transfer excitons, optical absorpt. and thermal dissociation 2-35943  
 anthracene, charge transfer transitions characterisation 2-35976  
 anthracene-PMDA charge transfer complex, electroabsorption spectra, vibronic coupling in excited CT states 2-35975  
 anthracene-pyromellitic anhydride, isotopically mixed, charge-transfer exciton bandwidth, refl. and luminesc. spectra 2-17537  
 anthracene-tetracyanobenzene charge transfer crystals, optical nuclear polarisation via hyperfine relax. 2-51500  
 electron-donor-acceptor complex, excited charge-transfer state, feedback (A<sup>-</sup>D<sup>+</sup>)\*→A<sup>+</sup>+D dissociation 2-52195  
 exciplex dipole moments, external elec. field influence on fluorescence 2-49502  
 exciton dynamics in deformable lattice 2-45836  
 graphite intercalation compound, synthetic metal, band length change and cond., review 2-26270  
 intercalation reaction dynamics, electronic and struct. changes 2-41871  
 intervalence mixtures and charge transfer adducts, site-transfer electronic cond., dielectric relax., hopping mechanism 2-13073  
 metal surface spectra, CT and totally symm. mode activity 2-22017  
 naphthalene-tetracyanobenzene, triplet states, ESR and ENDOR spectra 2-46357



**charge transfer states continued**

- nematic liquid crystals mixtures, induced smectic phases, amino substituent effect 2-12750  
 organic molecular crystals, charge carrier photogeneration mechanisms (*Russian*) 2-36092  
 pentacene, cryst., optical charge carrier generation, charge transfer excitation 2-46632  
 pentacene, solid, CT transition studied by electroabsorpt. 2-30837  
 phenothiazine derivatives, perchlorate and bromide salts, mag. susceptibility and optical spectra 2-41105  
 phenothiazine derivatives, solid, radical cations, substituents influence, exptl. study 2-51466  
 polyacetylene, doped, cis-trans isomerisation mechanism 2-31907  
 polyacetylene, doped, elec. field depend. conc., disorder role in insulator-metal transition 2-30868  
 polyacetylene, doped, quasi-one-dimens. cond., freq. and field depend. transport 2-30872  
 porphyrin-quinone model systems, photoinduced charge separation, picosecond time resolved obs. 2-27449  
 proteases, serine and cysteine, proton-transfer energetics, theoretical model 2-9761  
 rare earth complex with tetraparatolulporphine, 2nd excited  $\pi$ -electron state fluoresc. 2-34482  
 rare-earth ion to ligand spin-density transfer, theory 2-51132  
 semiconductors, biexciton excitation profile for intermediately bound exciton 2-35945  
 TCNQ charge transfer complexes with perylene, pyrene and  $\text{NH}_4$ , resonant Raman spectra 2-2264  
 TCNQ salt,  $\text{NMP} \cdot \text{Phen}_1 \cdot \text{TCNQ}$ , quasi-one dimensional charge transfer system, Raman scatt. anal. 2-2263  
 TCNQ salt,  $\text{NMP} \cdot \text{Phen}_1 \cdot \text{TCNQ}$ , quasi-one-dimens. cond., vibr. spectra and charge transfer 2-22011  
 TCNQ salt,  $\text{Qn}(\text{TCNQ})_2$ , quasi-one-dimens. cond., freq. and field depend. transport 2-30872  
 TCNQ salt,  $\text{TMITTF} \cdot \text{TCNQ}$ , valence fluctuation time and charge transfer, XPS and Raman spectra 2-46871  
 TCNQ salt,  $\text{TTF} \cdot 2,5\text{-difluoro TCNQ}$ , cryst. struct. Madelung energy 2-50618  
 TCNQ salts, quasi-one-dimens. cond., neutron irradi., IR spectra and defects influence 2-31467  
 TCNQ salts with doped dialkylated phenazines, quasi-one-dimens. cond., charact. 2-26370  
 TCNQ-Cu charge transfer salt, semicond. film, vibr. and XPS spectra, Auger obs. 2-31600  
 tetracene, solid, CT transition studied by electroabsorpt. 2-30837  
 $(\text{TMTSF})_2\text{PF}_6$ , quasi-one-dimens. cond., freq. and field depend. transport 2-30872  
 TTF, halogen doped, quasi-one dimensional charge transfer system, Raman scatt. anal. 2-2263  
 vibronic coupling in excited charge transfer state of solid state charge transfer complexes 2-35975  
 $\text{Au/Si}_3\text{N}_4/\text{p-Si}$  structure, charge transfer, temp. depend. 2-17163  
 $\text{Ba}(\text{Pt}(\text{CN})_4)_2 \cdot 4\text{H}_2\text{O}$  quasi-one-dimens. cond., emission quenching by  $(\text{Ni}(\text{CN})_4)^{2-}$  dopants and interpret. 2-31535  
 $\text{CdSe:Co}^{2+}$ , zero-phonon lines in optical spectra 2-46650  
 Cs complex,  $\text{Cs}_2(\text{TCNQ})_2$ , mol. vibr. and charge transfer states, polarised reflectance study 2-36637  
 $\text{Cs}_2\text{SbCl}_6$  2-9140  
 $\text{Cs}_2(\text{Sn}^{1-2}\text{Sb}^{\text{V}}\text{Sb}^{\text{III}})_2\text{Cl}_6$  2-9140  
 Cu (001), charge state of adsorbed I, XPS study 2-41494  
 CuCl, band struct. at high press., disproportionation effects 2-35938  
 Cu(II) complexes, L-amino acid salts, chirality origin charge transfer bands 2-729  
 Fe-V alloy, local mag. moments and atomic ordering, continued fraction technique calcs. 2-31147  
 GaP:Fe, hole localization and charge transfer excitation by time depend. photolum. meas. 2-51702  
 I charge transfer complexes, conductometric meas. 2-5371  
 $\text{I}_2$ -aromatic hydrocarbon charge transfer cpds., ionic cond. and ESR study 2-16893  
 $\text{Li}_2\text{TiS}_5$ , elec. resist. and Hall coeff. at low temp. 2-35984  
 $\text{Li}_2\text{ZrSe}_6$ , elec. resist. and Hall coeff. at low temp., supercond. props. 2-35984  
 $\text{MgAl}_2\text{O}_4$  crystals exposed to  $\gamma$ -rays, optical spectra 2-51631  
 $\text{MgCl}_2 \cdot \text{Ti}^{2+}$ , Ti-Ti interactions, temp. effects 2-31520  
 $\text{NbN}_2$  film, electronic struct., XPS study 2-35934  
 $\text{NbSe}_2$ , quasi-one-dimens. cond., impurity effects, radiation damage, CDWs and supercond. 2-30871  
 $\text{NbSe}_2$ , quasi-one-dimens. cond., freq. and field depend. transport 2-30872  
 Ni (100) surface, adsorbed CO, EELS 2-22130  
 n-NiTiO<sub>3</sub>, photoelectric and photochem. response 2-51224  
 Ru complex, tris(2,2'-bipyridine)Ru(II), surfactant enhanced singlet energy transfer from charge transfer state 2-41868  
 $\text{SrTiO}_3\text{:Fe}$ , electronic struct. and charge transfer bands 2-17016  
 $\text{ThO}_2\text{:Eu}^{3+}$ , luminescence by photonic and chem. excitations 2-41407  
 $\text{TiO}_2$ , diffusion doped, elec. and optical props. 2-5369  
 $\text{VSe}_2(\text{N}_2\text{H}_4)_{0.6}$  intercalation cpd., resistivity, temp. depend. 2-30873

**charge transfer transitions** see **charge transfer states****charged dislocations** see **dislocation dipoles****charm particles**see also **D mesons; psi mesons**

- baryon decuplet, interrelations between Regge trajectory parameters and mass formulas (*Russian*) 2-38870  
 baryon semileptonic decays in quark model 2-33835  
 Cabibbo allowed non-leptonic charm decays, diagrams and group theory 2-19370  
 charmonium splitting, SVZ moment procedure within QCD 2-19339  
 decay rates 2-43331  
 deep inelastic neutrino scatt., charmed quark transverse momentum, QCD predictions 2-19363  
 hadrons, mass in quark model 2-23949  
 hyperfine splittings from  $\psi$ - $\eta$ , mass difference 2-33839  
 meson nonleptonic decays, W-exchange dominance hypothesis 2-33824  
 particle substructure, positronium and charmonium spectroscopy 2-43266  
 perturbative QCD, charm prod., central and diffractive components 2-43299  
 properties, review 2-3763  
 quark models 2-29086  
 quarkonium, QCD radiative corrections to hyperfine splitting 2-23994

**charm particles continued**

- spin forces in mesons made up of quarks of different mass 2-29085  
 unified nonrelativistic qq pot. for mesons and baryons 2-23944  
 $\chi(3554) \rightarrow \psi\pi^+\pi^-\pi^0$ , upper limit on branching fraction 2-33830  
 $\chi$  charmonium states, hadronic width lower bounds, scalar gluon exchange 2-29106  
 $\chi \rightarrow \gamma\gamma(\gamma\psi)$ , charmonium studies with Crystal Ball detector in  $e^+e^-$  annihilation 2-15342  
 $e^+e^-$ , annihilation, charmed meson production 2-24009  
 $e^+e^-$ ,  $\tau$ ,  $T$  and charm physics,  $\gamma\gamma$  interactions, quarks and gluons 2-43369  
 $\eta_c$  at 2980 MeV/c<sup>2</sup> mass, evidence for existence in  $e^+e^-$  annihilation 2-19382  
 $\eta_c'$  candidate state at 3592 MeV, from  $\psi(3684)$  decay 2-38877  
 $\eta_c \rightarrow \gamma(J/\psi)$ , charmonium M1 transitions and charm quark anomalous mag. moment 2-33844  
 $F$ , charmed meson, semileptonic decays, soft-gluon effects 2-315  
 $F \rightarrow$  leptons, direct yield, QCD calc. (*Russian*) 2-11046  
 $F^+$ , inclusive and two-body hadronic decay study 2-43338  
 $F^+$  charmed hadrons lifetime meas. review 2-15336  
 $F^+$  mesons, photon and gluon radiative weak decays and inclusive decays 2-48981  
 $F^+ \rightarrow \pi^+\eta$ , W-exchange dominance hypothesis 2-33824  
 $F^+ \rightarrow \phi X$ , decay modes, from photoprod. expt. 2-3777  
 $\gamma N$ ,  $\Lambda_c^+$  inclusive photoproduction cross section 2-29116  
 $\gamma N \rightarrow FX$ , 75-200 GeV, inclusive prod. cross-section 2-326  
 $\Lambda_c^+$ , two mass levels as cu and cd diquark structs. 2-7011  
 $\Lambda_c^+$  baryons lifetimes 2-33834  
 $\Lambda_c^+$  charmed hadrons lifetime meas. review 2-15336  
 $\Lambda_c^+ \rightarrow \Sigma^+\pi^+$ , decay mode in neutrino-induced events 2-48984  
 pp, 70 GeV/c, direct single electron prod. search 2-24032  
 pp  $\rightarrow \Lambda_c^+ M_1^- X$  ( $\Lambda_c^+ \bar{D}X$ ), charm and beauty prod. cross section comparison 2-24036  
 pp  $\rightarrow \Lambda_c^+ X$ , diffractive production of charm, parton distrib., QCD evolution role 2-29073  
 $\pi^- N \rightarrow \mu^+ \mu^-$ , 140-190 GeV, charm prod. 2-351  
 $\pi^- N \rightarrow \psi X$ , 140-190 GeV, charm prod., rel. to quark fusion model 2-351

**charring** see **combustion****chelates** see **coordination complexes****chemical analysis**

- see also **chemical analysis by nuclear reactions and scattering; chromatography; electrochemical analysis; electron probe analysis; ion microanalysis; mass spectroscopic chemical analysis; polarimetry; pollution detection and control; radioactive chemical analysis; spectrochemical analysis; thermal analysis; X-ray chemical analysis**  
 air-sensitive specimen analysis, transfer tool design 2-31967  
 chrysotile asbestos fiber, short fiber separation, anal. and physico-chem. charact. 2-6067  
 cold trapping efficiencies for collection of tritiated water entrained in a gaseous stream 2-47408  
 combustible gas detection instruments, performance standards effects 2-31993  
 dimethylmercury, determ. in liq. biological samples 2-37127  
 diphenylmercury, determ. in liq. biological samples 2-37127  
 EELS quantitation for microanal., computer program 2-37122  
 electrolytic gas mixtures, O<sub>2</sub> estimation 2-27500  
 electrostatic precipitators, gas analysis measuring equipment, developing and testing (*German*) 2-31976  
 emergency post-accident sampling at San Onofre nuclear generating station 2-7393  
 enthalpimetry, instrumented design and appls. 2-47387  
 exhaust gas analysis system, with self-contained data processing and automatic calibration 2-41968  
 gas sampling probe for flame structure analysis (*Polish*) 2-9548  
 glasses, silicate anions anal. using trimethylsilylation method (*Japanese*) 2-8443  
 graphite tube furnace, longitudinal atom density distrib. using coherent forward scatt. 2-15173  
 instrumentation conf., St. Louis, MO, USA (March 1981) 2-32156  
 laboratory automation system, experiences with Hewlett-Packard HP 3350 minicomputer 2-3569  
 low energy ion scattering, comp. and struct. analysis of solid surfaces, review 2-27047  
 low temp. ashing technique 2-6082  
 metalohalides flame emission, use for halogen anal. 2-22516  
 meteorites, L3 chondrites, chemical distinction from LL3 chondrites 2-14823  
 meteorites, L6 chondrites, major element var. 2-14824  
 methane, trace gas monitoring using PbSnTe tunable diode laser 2-27754  
 methane gas production by anaerobic digestion of industrial wastes 2-17982  
 microprocessor-based signal processing module 2-174  
 multicomponent gas mixtures automatic analysis, data interpretation 2-9757  
 municipal solid waste anaerobically digested gas characterisation and anal. 2-17980  
 on-line chemical analysis for cost effective process control 2-31987  
 optimisation strategies 2-27491  
 polyacetylene film, AsF<sub>3</sub> doped, As-F species anal. 2-31962  
 positronium, chem. reactions and anal. appls., review 2-9547  
 rare earth thiohafates, self-propagating high-temp. synthesis 2-41543  
 rock sample chem. anal. method, for gases released during heating 2-52942  
 seawater chemical analysis, estimation of alkalinity and total inorganic C from titration data 2-6398  
 SEM, at. number and comp. meas. using backscattered detectors 2-37123  
 SEM backscattered image anal. using multichannel pulse height analyser 2-33688  
 semiconductors, microscopic exam. by transmission EELS technique 2-31596  
 steel, Al killed, low C, acid soluble Al content estimation using O probe 2-14041  
 steel, martensitic, softening resistance during tempering 2-2542  
 steel, nonisothermal probe for continuous O meas. 2-10799  
 steel, pearlitic, softening resistance during tempering 2-2542  
 steel, stainless, Ti enriched, complex oxide scales, phase chem. anal. 2-41784  
 trace amount determ. using capacitively coupled microwave plasma 2-17948



**chemical analysis continued**

- uranium oxide (di)formamide hydrate, IR spectra, microanal. and X-ray diff. 2-2710
- Al-B-Li(Ti)(V)(Cr)(Mn)(Fe)(Co)(Ni)(Cu) systems, B-rich phases grown from melts, X-ray diff. study 2-46904
- Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> refractories, chem. phase anal. 2-41957
- Ba, high purity, prep. by metallothermic reduction of oxides 2-9309
- CO<sub>2</sub> analyser, open path, using eddy correlation technique 2-32671
- Ca, high purity, prep. by metallothermic reduction of oxides 2-9309
- Co passivating film form. in neutral soln., two-layer struct. 2-47231
- Cr<sup>3+</sup>, differential conc. meas. in natural polluted waters (Portuguese) 2-32136
- CuII complex, imipramine hydrochloride, isolation and struct. obs. 2-29575
- Fe, liquid, S content determ. using CaS-TiS<sub>2</sub> solid electrolyte 2-12842
- Fe-Cr-V-Mn-C, cast, microstruct. characts. and elements distrib. 2-51888
- H<sub>2</sub>S metal oxide sensor history and performance, repeatability improvement 2-31984
- H<sub>2</sub>SO<sub>4</sub> vapour in combustion gases, continuous meas. by portable automatic monitor 2-42065
- Hg, determ. in air by Hg/hydride system 2-17932
- IrO<sub>2</sub> sputtered films, phase transitions, DTA, evolved gas anal., and SEM studies 2-40742
- Li-Si/FeS<sub>2</sub> primary cell, reactive interface materials characterisation 2-14056
- Np reference solutions for chem. anal., sealed ampoule preparation (French) 2-7195
- Pu, determ. in large amount of Am (Chinese) 2-47402
- Pu reference solutions for chem. anal., sealed ampoule preparation (French) 2-7195
- Ra and Ba particulate forms in water, determination by selective dissolution method 2-32689
- SiC single crystal polytypes, deviations from stoichiometry 2-5236
- Sr, high purity, prep. by metallothermic reduction of oxides 2-9309
- SrTiO<sub>3</sub> boundary layer capacitor material, microstruct. 2-50874
- TiO<sub>2</sub>, anatase, superficial constitutive water, <sup>1</sup>H NMR study 2-41209
- U reference solutions, sealed ampoule preparation (French) 2-7195
- WC-Co hard alloys, thermomag. method for Co determ. 2-36348

**chemical analysis by mass spectrometry see mass spectroscopic chemical analysis****chemical analysis by nuclear reactions and scattering**

- see also chemical effects of nuclear reactions and scattering; neutron activation analysis; radioactive chemical analysis
- amorphous thin films, study by ion beam nuclear analysis (French) 2-1799
- analysis by photon activation with 30 MeV bremsstrahlung 2-22514
- depth profiling with nuclear microanalysis, deconvolution technique 2-41952
- DITE Tokamak, deuterium microbeam anal. in C probes exposed to plasma 2-44911
- gamma-ray spectra analysis program, SAMPO80, with nuclide identification 2-17939
- glass, leached, evidence for interdiffusion of hydronium and alkali ions 2-12844
- light nuclei depth profiling in single crystals using nuclear reaction and RBS technique 2-47394
- liquid chromatography, beta-induced fluoresc. detection 2-31970
- liquid chromatography, beta-induced fluoresc. quenching detection 2-31971
- modification by ion implantation, ion beam anal. 2-45215
- NDT, neutron capture gamma-ray spectrometer 2-13894
- pollutant tracing, activation and fluorescence methods appls. 2-47548
- proton-activation analysis using short-lived radionuclides 2-14040
- resonance neutron radiography for nondestructive evaluation and assay applications 2-2757
- secondary ion mass spectrometry, comparison with high-energy ion beams anal. techniques 2-47389
- semiconductor thin films, H profiling, <sup>1</sup>H(p,p) appl. 2-45232
- steels, surface modification, ion implantation parameter influence 2-1499
- very light element particulate anal. method using alpha particles 2-2758
- Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-LiO-MgO,  $\beta$  and  $\beta'$  phases, growth, struct., comp. and ionic cond. 2-26122
- B, in matrices, nucl. track detect. 2-17935
- C contamination detection using <sup>12</sup>C(p,p $\gamma$ )<sup>13</sup>N reson. reaction 2-47395
- C profiling by <sup>12</sup>C(<sup>3</sup>He, $\alpha$ )<sup>13</sup>C reaction 2-47390
- CdSe(n, $\gamma$ ),  $\gamma$ -ray line Doppler broadening, C content determ. 2-9591
- CdSeO films, reactive planar magnetron sputtering prep., expt. study 2-51026
- F contamination detection using <sup>19</sup>F(p,p $\gamma$ )<sup>19</sup>F reaction 2-47391
- F microanalysis by <sup>19</sup>F(d,X) reactions 2-47393
- Ga<sub>1-x</sub>Al<sub>x</sub>As-GaAs interfaces, nondestructive charact. using nucl. profiling 2-12921
- Ge detector, on-line neutron capture gamma anal. 2-603
- H in coked catalyst pellets, microbeam anal. 2-47396
- IrO<sub>2</sub> film, electrochromic amorphous, cation insertion reactions 2-27435
- Li in matrices, nuclear track detect. 2-17935
- Mo-B alloy, B segregation, nuclear reactions study (Russian) 2-13725
- N, proton activation analysis in Ta and Nb (Chinese) 2-37114
- <sup>14</sup>N abundances from (p,p $\gamma$ ) resonance scatt., stopping power corrections 2-14035
- Nb single crystals, implanted Ne atoms anal. using nuclear reson. reactions 2-45219
- NiSi formation, effects of implanted O using <sup>4</sup>He<sup>+</sup> backscattering spectroscopy study 2-1502
- O depth profiling using glancing angle techniques 2-47392
- $\beta$ -PbF<sub>2</sub> thin films, superionic cond., O<sub>2</sub> adsorp., ESCA and nuclear anal. 2-16881
- Pt-C sputtered films, struct. and elec. props., catalysis of CO oxidation reaction 2-8725
- Si:B, B profiling using neutron induced reaction <sup>10</sup>B(n, $\alpha$ )<sup>7</sup>Li 2-2751
- Si:B, particle track etch method for B anal. using <sup>10</sup>B(n, $\alpha$ )<sup>7</sup>Li reaction 2-12630
- a-Si:H, Ar sputtered films, interaction between Ar and dopants 2-40738
- Si:H, sputtered coatings, nuclear microanalysis and Rutherford backscattering (French) 2-5331
- Si:H amorphous films, gas phase dosed or ion implanted 2-40735
- a-Si:H multilayer structs., comp. profiles, nucl. scatt. and Rutherford backscatt. meas. 2-40737
- Si:P, doping profile from <sup>31</sup>P(p, $\alpha$ )<sup>28</sup>Si yield (Chinese) 2-37113
- Si-Ni interface, formation of Si oxides at Ni/Ni<sub>2</sub>Si interface 2-30968

**chemical analysis by nuclear reactions and scattering continued**

- Ti, H diffusion coeffs., determ. by nuclear physics method 2-12845
- Ti-Al-V, H diffusion coeffs., determ. by nuclear physics method 2-12845
- Ti-Ni, H diffusion coeffs., determ. by nuclear physics method 2-12845
- chemical association see association
- chemical batteries see cells (electric)
- chemical bonding see bonds (chemical)
- chemical bonds see bonds (chemical)
- chemical composition see chemical analysis
- chemical diffusion see diffusion
- chemical effects of nuclear reactions and scattering  
see also chemical analysis by nuclear reactions and scattering; radiation chemistry  
No entries
- chemical effects of radiation see radiation chemistry
- chemical elements see elements (chemical)
- chemical energy conversion  
ammonia thermochemical energy transport/ in a distributed collector solar thermal power plant 2-37422
- charging a water energy store from a flat explosive magneto-generator (Russian) 2-22670
- ethanol from hardwood by continuous acid hydrolysis and fermentation, review 2-27719
- heat pipes, chemical, EVA and ADAM processes 2-37421
- high temp. heat production by solar energy use to investigate energy storage in reversible thermochemical cycles, development and testing of experimental facility (German) 2-18136
- oscillatory chem. engines, control and dissipation 2-52376
- photochemical reaction engine utilising NO<sub>2</sub>, optical decomposition under UV radiation 2-22641
- review of electrochemical energy conversion and storage for ocean thermal and wind energy systems 2-27720
- solar driven chemical heat pump system, sensitivity anal. 2-32093
- Solchem process for conversion of solar energy into chemical energy, tests 2-14050
- thermochemical, with Pu working fluid, for generating electrical energy 2-9657
- SO<sub>2</sub> dissociation as mechanism for converting and transporting solar energy 2-9678
- chemical engineering see chemical technology
- chemical engineering computing  
see also computerised control; computerised instrumentation
- flow meas., optimal-precision constricting devices computing 2-30256
- horizontal-line two-phase pressure drop computation program 2-20730
- chemical equilibrium  
see also chemical reactions; reaction kinetics
- acetic acid, gas phase in chem. equilb., comp. Raman spectra study 2-29609
- air-H<sub>2</sub>S equilibria under Claus furnace conditions 2-31943
- Belousov-Zhabotinsky reaction, cascade of bifurcations leading to turbulence (French) 2-41886
- Belousov-Zhabotinsky reaction, forced, expt. on chaotic responses 2-47300
- Belousov-Zhabotinsky reaction system, period doubling bifurcations, abnormality 2-52199
- butanols in cyclohexane, solns., association equilb., thermodynamic props. 2-47329
- complex equilibria, Mossbauer spectrosc. obs. 2-29636
- 1-dimethylamino-4-cyanonaphthalene, dil. soln., dual fluoresc., excited state equilb., temp. and viscosity effects 2-15835
- 1,4-dioxane-methanol mixtures, excess Gibbs free energy, heat of mixing and form., equilb. const. (German) 2-27469
- disperse systems, chemical equilibrium shifts, role of size factors 2-47384
- electrolyte solutions, high dilution, equilb. and transport excess props., ion pairs limit 2-9546
- 4-hydroxypyridine, hydration shell construction based on electrostatic pots. 2-13933
- ion-molecule equilb. meas. by high press. mass spectrometry, recent advances 2-27465
- maleic anhydride-2-phenylvinyl alkyl ethers and thioethers, charge transfer complex monomers, NMR obs. 2-47370
- mechano-chemical stability of a fluid-fluid interface undergoing mono- and bi-molecular reactions (French) 2-41885
- methyl mercury cation affinities in gas phase, high press. mass spectrometry 2-27412
- methylmercury complexation formation const., PMR study of soln. chem. 2-15806
- molten salt solns. chem. equilb. 2-9568
- non-aqueous solutions 2-6705
- nonlinear kinetics, Schlogl model, pattern form. 2-6020
- oscillatory chem. engines, control and dissipation 2-52376
- pattern formation in systems with nonlocal interactions 2-47299
- physical nonlinear systems, noise in chemical reactions and in fluid flow 2-50252
- polymerisation, equilibrium, equivalence to O(n) field theory 2-52207
- positive molecular ions, octahedral and tetrahedral, scaling of equilb. bond lengths, chemical pot. and energy 2-39280
- Runge-Kutta method to solve stiff differential equations 2-22419
- BaOH, thermochem. props. 2-22431
- Bi-Cl mixtures, chem. equilb., Monte Carlo method 2-37095
- CO+N<sub>2</sub>O, steady state nonequilb. reaction, asymmetric mode excitation of CO<sub>2</sub> 2-2712
- CaOH, thermochem. props. 2-22431
- Cd+PbO→Pb+CdO reduction equilb., calorimetry and equil. meas., enthalpy of reaction and form. of CdO 2-17912
- EuS-H<sub>2</sub>S-H<sub>2</sub>-CO<sub>2</sub>, chem. equilb. study 2-41919
- FeF<sub>3</sub>, chem. equilb., heats of form. and dissoc., mass spectra 2-37086
- FeF<sub>4</sub>, chem. equilb., heats of form. and dissoc., mass spectra 2-37086
- HNC-HCN equilb. system, high temp., high resolution IR spectral meas. 2-20056
- HTO+H<sub>2</sub>S, exchange reaction equilibrium const. for tritiated water enrichment 2-47336
- <sup>3</sup>H exchange equilibrium between H gas and Ti<sub>0.4</sub>Mn<sub>0.6</sub>H<sub>n</sub>, tracer expts. 2-34593
- He, impure O and C pot., thermodynamic anal. 2-6055
- I in aqueous NaOH-H<sub>2</sub>BO<sub>3</sub> mixtures, partition equilibrium 2-6054
- LaF<sub>4</sub>, above lanthanum trifluoride, ion-molecular equilibria, enthalpy of form. 2-41913
- LaH<sub>2</sub>, (LaD<sub>2</sub>), (LaT<sub>2</sub>), isotope effects on equilb. pressures 2-1623



**chemical equilibrium continued**

- Li<sub>2</sub>O-GeO<sub>2</sub> glasses, ion exchange interaction with molten alkali nitrates and refr. index gradient 2-26147  
 NiAl<sub>2</sub>O<sub>4</sub>-NiO-Ni system, thermodynamics, 900 to 1400K 2-17911  
 NiAl<sub>2</sub>O<sub>4</sub>-Ni-Al<sub>2</sub>O<sub>3</sub> system, thermodynamics, 900 to 1400K 2-17911  
 Pb<sup>2+</sup> ion selective electrode membrane, effect of bivalent metal ions, ESCA 2-37103  
 Pu<sup>4+</sup>+Cl<sup>-</sup>⇌Pu<sup>3+</sup>+1/2Cl<sub>2</sub>, in molten NaCl/2CsCl, IR spectra study 2-17888  
 SnCl<sub>4</sub><sup>2-</sup>, complex equilibria, Mossbauer spectrosc. obs. 2-29636  
 SrOH, thermochem. props. 2-22431  
 ThO<sub>2</sub>-ThC-C equilb., 1328-1976K 2-2709  
 TiO<sub>2</sub>, dissociative evaporation in vacuum and oxidising atmosphere, thermodynamic anal. 2-6052  
 UO<sub>2</sub>(NO<sub>3</sub>)<sub>2</sub>, tributyl phosphate extraction system, density, viscosity and surface tension meas. (*Chinese*) 2-19683  
 W, heterogeneous reactions and chemical transport, in incandescent lamps 2-2728

**chemical exchanges**

- see also ion exchange; isotope exchanges  
 aqueous solutions, electron transfer reactions in PES 2-2408  
 bimolecular exchange reactions, matrix method for calc. rate consts. 2-47320  
 chemical exchange networks, appl. of 2-D <sup>13</sup>C NMR spectroscopy 2-22429  
 coupled nuclear spins, two dimens. chem. exchanges and cross relax. spectroscopy 2-15812  
 di-t-butyl peroxide, photolysis, radical decay rate constants, abstraction reaction, thermal lensing study 2-22473  
 ion-molecule equilb. meas. by high press. mass spectrometry, recent advances 2-27465  
 liquids, charged dangling bonds model, appl. to self-ionisation and disproportionation 2-13015  
 macrofiche polyethers, complexation of <sup>24</sup>Na<sup>+</sup> and <sup>22</sup>Na<sup>+</sup>, isotope effects 2-52190  
 molecule+molecule clustered on ions reactions, rate const. meas. 2-41876  
 polyurethane film, permeability to water vapour, IR spectra obs. using deuterioexchange reaction 2-30745  
 ST-EPR appl. to systems with intramol. chem. exchange, sensitivity 2-28878  
 ArKr+Ar, atom exchange, dissoci., quasiclassical trajectory and statistical study 2-47315  
 BaF<sub>2</sub>, single crystals, selective etching and solution in salts and acids 2-13828  
 C exchange between steel and FeCr, autoradiography study (*Russian*) 2-2711  
 Co complex, hexakis (pyridine N-oxide) cobalt (II) salts, reaction with alkali halide, used in IR spectroscopy 2-41895  
 Cr(H<sub>2</sub>O)<sub>6</sub><sup>2+</sup> complex, aq. soln., H<sub>2</sub>O exchange, EXAFS method appl. 2-27021  
 Cu(H<sub>2</sub>O)<sub>6</sub><sup>2+</sup> complex, aq. soln., H<sub>2</sub>O exchange, EXAFS method appl. 2-27021  
 CuSO<sub>4</sub>+PbO, exchange reaction, thermoanalytical and mass spectroscopic study 2-41891  
 D+HF(HCl), exchange reactions barrier heights, generalized reson. VB calc. 2-2708  
 D+O<sub>2</sub>→OD+O, kinetic isotope effects, thermal rate coeffs., quasiclassical trajectory calcs. 2-27424  
 H<sub>2</sub>+A, (A=Li-F), exchange reactions, pot. surfaces, nonempirical calcs. 2-22435  
 HAt+Br, reactive scatt., H transfer, cross section meas., pot. hypersurfaces 2-47317  
 HTO+H<sub>2</sub>S, exchange reaction equilibrium const. for tritiated water enrichment 2-47336  
 NH<sub>3</sub><sup>+</sup>+methanol, reaction mechanism and rate coeffs., kinetic study, mass spectra 2-37053  
 NH<sub>3</sub><sup>+</sup>+NH<sub>3</sub>, charge transfer, H transfer, cross sections photoelectron obs. 2-9542  
 Ne<sub>2</sub>+Ar, atom exchange, dissoci., quasiclassical trajectory and statistical study 2-47315  
 Ni complex, hexakis (pyridine N-oxide) nickel in salts, reaction with alkali halides used in IR spectroscopy 2-41895  
<sup>99</sup>Tc(IV)-citrate polynuclear complex isolation from ligand exchange reaction 2-22440  
 Zn complex, hexakis (pyridine N-oxide) zinc (II) salts, reaction with alkali halides used in IR spectroscopy 2-41895

**chemical industry**

- conceptual designs for commercial OTEC-ammonia product plantships 2-9669  
 high-temperature nuclear reactor appl. 2-27582  
 on-line chemical analysis for cost effective process control 2-31987  
 petrochemical, manufacture, fusion thermal energy appls. 2-4114

**chemical kinetics see reaction kinetics****chemical lasers**

- atomic photodissociation lasers, UV-visible laser development review 2-904  
 book, lasers and chemical change 2-16  
 chain-reaction laser, energetics anal. allowing for rot. nonequilb. 2-34741  
 flow chemical lasers, inhomogeneous and collisional broadening, models (*Chinese*) 2-39638  
 high energy laser device technology for military appls., overview 2-7780  
 laser optics, conf., Leningrad, USSR (Jan. 1980) 2-28594  
 near millimetre wave sources, gas phase approach 2-7735  
 photodissociation laser with active medium circulation 2-923  
 photodissociation lasers, small-scale inhomogeneity growth 2-4546  
 pulsed and continuous, new results and ideas from Lebedev Institute, review 2-29828  
 pulsed HCl chemical laser, analysis 2-7753  
 research and applications, review (*French*) 2-29827  
 CO chemical laser from supersonic CS-SO<sub>2</sub> mixture in shock tunnel 2-20297  
 CO chemical laser operating by oxidation of CS<sub>2</sub>, power level raised by using S flame 2-39640  
 Cd, blue-green atomic laser using CdI<sub>2</sub> photodissociation, 508.6, 480.0 nm laser lines 2-7754  
 CdBr photodissociation laser at 811 nm 2-44265  
 CdI photodissociation laser at 655 nm spectrum identification 2-44265  
 D<sub>2</sub>-F<sub>2</sub>-CO<sub>2</sub> amplifier of nanosec. pulses, numerical optimisation 2-34740

**chemical lasers continued**

- DF pulsed flashlamp-pumped laser with diff.-limited beam divergence 2-44268  
 DF, R-branch line laser operation 2-49743  
 DF-CO<sub>2</sub> optically pumped transfer laser 2-928  
 F+H<sub>2</sub>→FH+H, reaction path calcs. 2-9544  
 HBr, electric discharge laser, kinetic model 2-29810  
 HF amplified multi-line laser beam coherent recomb., phase control 2-16052  
 HF chain-reaction laser, energetics anal. allowing for rot. nonequilb. 2-34741  
 HF chemical laser driver for inertial confinement fusion, conceptual design 2-4518  
 HF electric-discharge laser operating at high pulse repetition freq. 2-34799  
 HF high-gain 1.7 kJ laser amplifier, pulse compression using angular multiplexing 2-947  
 HF small scale CW laser, freq. stability 2-44333  
 HF/DF pulsed chemical laser, UV prescribed, H<sub>2</sub>/D<sub>2</sub> donor and driving circuit parameter effects 2-44335  
 HF-DF chemical laser, pulsed, magnetically confined electron beam initiation 2-49770  
 HF-HCl CW chain-excited self-contained chem. laser utilising an F-H<sub>2</sub>-ClF-He mixture 2-34738  
 Hg blue-green atomic laser using HgI<sub>2</sub> photodissociation, 546.1, 435.8 nm laser lines 2-7754  
 HgBr dissociation laser, high-power blue-green lasers for Naval systems 2-7792  
 HgBr<sub>2</sub>/HgBr dissociation laser, elec. beam preionised 2-7755  
 HgBr<sub>2</sub>/HgBr dissociation lasers, performance status and underwater communication system appl. 2-25003  
 I amplifier, high-energy, beam-quality-determining processes 2-907  
 I chemically pumped laser as fusion driver, modeling 2-4498  
 I laser, chemically pumped, candidate laser fusion driver 2-908  
 I laser, chemically pumped, reactor size, total system efficiency 2-932  
 I laser, chemically pumped, O<sub>2</sub>(Δ) generation 2-2700  
 I laser, chemically pumped, energy storage kinetic anal. 2-11688  
 I laser, photolytic, nuclear pumped, photon transport computer code simulation 2-44338  
 I laser advanced concepts, energy storage and extraction, pulsedwidth variability and freq. conversion 2-905  
 I laser transition at high press., saturation energy density and line profile 2-906  
 I photodissociation laser, CW operation 2-34739  
 I photodissociation laser, absorpt. cell construction feasibility, tuned to 1315 nm 2-39673  
 I photodissociation laser using C<sub>2</sub>H<sub>2</sub>I<sub>2</sub>, resonator design and output characts. (*Korean*) 2-11718  
 I photodissociation laser free-oscill. pulses, delayed amplification characts., pulse duration control 2-34742  
 I photodissociation lasers for controlled thermonuclear fusion, review 2-39639  
 I photodissociation lasers, spectroscopy and primary processes in photolysis of iodides 2-44269  
 I smooth nanosec. laser pulse generation by excimer laser pumping 2-15995  
 I, solar simulator-pumped gas laser for the direct conversion of solar energy using C<sub>2</sub>F<sub>4</sub> 2-22659  
 PO chemiluminescence flame, UV light amplification 2-44266  
 Se (<sup>3</sup>S→<sup>3</sup>P) laser initiation by OCS<sub>2</sub> photodissociation, large-system design implications 2-11555  
 Se\*(<sup>3</sup>S) wavelength depend. photoionisation cross section in VUV, OCS<sub>2</sub> photodissociation 2-15758  
 TI laser excited by TII photodissociation, efficient operation at 535.0 nm 2-15994  
 Ti-Hg photodissociatively pumped excimer system 2-4499  
 Zn, blue-green atomic laser using ZnI<sub>2</sub> photodissociation, 481.1, 472.2 nm laser lines 2-7754  
 ZnI photodissociation laser, quenching kinetics, and small signal gain spectrum 2-44267

**chemical reactions**

- see also association; atom-atom collisions; atom-ion collisions; atom-molecule reactions; atomic inelastic collisions; catalysis; charge exchange; chemical exchanges; chemically reactive flow; chemiluminescence; chemisorption; CIDEPI; CIDNP; corrosion; dissociation; electrolysis; free radical reactions; heat of reaction; ion-molecule reactions; isomerisation; molecule-molecule reactions; oxidation; photochemistry; polymerisation; pyrolysis; radiolysis; reaction kinetics; reduction (chemical); solvation  
 aliphatic-aromatic copolyesters: synthesis and crystallization studies 2-40296  
 alkali halide solids, ion form. by high power pulsed laser irradi. 2-52204  
 alkyl dissociation reaction H-C-C→H+C, ang. momenta, energy partitioning, rel. to non-RRKM dynamics 2-9522  
 anionites, Si containing anion exchangers, synthesis and props., complex form. (*Russian*) 2-47337  
 aromatic compounds, heterogeneous photocatalytic oxidation on TiO<sub>2</sub> 2-9572  
 aromatic hydrocarbons, polycyclic, carcinogenic reactivity, MO explanation for bay-region 2-13955  
 aromatic molecules, nitration, frontier orbital theory, ab initio version, appl. 2-49250  
 aromatic polyethers, with norbornane type fragments, prep. and props. (*Russian*) 2-31916  
 atomic ions, heavy, positive, in weak ionisation limit, chemical pot. and total energy 2-47301  
 bacteriorhodopsin, picosecond kinetic absorpt. studies using streak camera 2-24677  
 Belousov-Zhabotinsky reaction, cascade of bifurcations leading to turbulence (*French*) 2-41886  
 Belousov-Zhabotinsky reaction, forced, expt. on chaotic responses 2-47300  
 Belousov-Zhabotinsky reaction system, period doubling bifurcations, abnormality 2-52199  
 bicyclic β-lactams, struct., reactivity, biological activity 2-24882  
 bifurcation and coexistence of several limit cycles in models of open two-variable quadratic mass-action systems 2-37042  
 bursting phenomena in a simplified Oregonator flow system model 2-47323  
 carbon tetrafluoride, nuclear recoil F-for-F substitution reactions 2-52184



## chemical reactions continued

catecholamine interaction with anionic sites in biophase 2-42068  
 cellulose nitrate-poly(vinyl pyrrolidone) blend membranes, ultrafiltration and dialysis charact. 2-14005  
 charge exchange in Brinkman-Kramers approximation, quasiclassical and quantum mech. amplitudes 2-17890  
 chemical chaos, discrepancy between expt. and computation evidence 2-47322  
 chemical instabilities and broken symmetry, hard mode case 2-6032  
 chemical reactions, energy hypersurfaces, critical level topology 2-41867  
 chemically reactive fluid mixtures, thermodynamic stability, dynamic critical phenomena 2-50332  
 collinear reactions, canonical unified statistical model, classical mechanical theory 2-47298  
 comet comae models with abundances for various heliocentric distance 2-38126  
 computer assisted modelling of reactions and reactivity 2-9526  
 corundum, thermochem. soln. 2-52244  
 cyclohexene, hydrogenation on a  $\text{PtAl}_2\text{O}_3$  catalyst, intraparticle diffusion effects 2-27472  
 decamethylmetallocene dicarbonyls, synthesis, spectra, mol. struct. 2-799  
 deuterioethylene, unimolecular cis-trans isomerisation, vibration nonadiabatic model calcs. 2-7531  
 dielectric coating optical breakdown, laser induced, chem. reactions 2-45251  
 differential cross sections, weight function calc., Monte Carlo methods 2-41870  
 diffusion, chemical reaction rate, time resolved laser pump-probe technique 2-27408  
 diffusion coeff. conc. depend. and chem. reactions, integral transforms 2-31899  
 diffusion controlled reactions, interacting pots., boundary conditions, sink term methods 2-9527  
 diffusion mediated bimolecular reactions, rate coeff., ultimate reaction probability, random walk method 2-13931  
 difluorovinylidene, rearrangements to acetylenes, ab initio 4-31G SCF calcs. 2-9529  
 dimethyl vinylidenes, rearrangements to acetylenes, ab initio SCF calcs. 2-29503  
 1,4-dimethyl-6-methoxytetralin, obtained via Friedel-Crafts reaction, struct. 2-4406  
 diphenylphosphinodiselenic anhydroselenide, prep. 2-49372  
 DNA, chem. modification, NMR spectrosc. investig. 2-4426  
 double charged mol. ions+neutral molcs., charge transfer reactions 2-31909  
 electron scavenging reactions in nonpolar mol. liqs., solvent effects, depend. on electron energy 2-52192  
 electron transfer, effective penetration of barrier in quasi classical theory 2-31904  
 electron transfer reactions, tunnelling probability, radial and ang. depend., reaction kinetics 2-17873  
 emission:  $\rightarrow$  spectra  $\rightarrow$  from transition state  $\text{ABC}^\ddagger$  : in  $\text{A}+\text{BC} \rightarrow \text{ABC}^\ddagger \rightarrow \text{AB}+\text{C}^*$  2-37055  
 enzyme-substrate fast reaction system, conc. distrib., semianalysis for computing 2-22450  
 fluorovinylidenes, rearrangements to acetylenes, ab initio 4-31G SCF calcs. 2-9529  
 Fokker-Planck equation, kinetic boundary layer with absorbing boundary 2-23597  
 formaldehyde, fragmentation and isomerisation, intrinsic reaction coordinate, ab initio MO calc. 2-31903  
 formation of and dispersal of toxic components, chemical kinetics, jet flows in atmosphere 2-35188  
 Fourier transform method for collision dynamics 2-29686  
 gas desorption from liquids due to chemical reaction 2-9570  
 glass, chemical stability for radioactive waste fixation 2-13835  
 graphitic sulphide-rich schists from Maine, petrology, desulphidation during prograde regional metamorphism 2-37857  
 heat pipes, chemical, EVA and ADAM processes 2-37421  
 8-hydroxy-1,3,6-pyrenesulphonate in water-alcohol solns., picosecond proton transfer studies, fluoresc., decay obs. 2-37051  
 hypercycles, chemical reaction networks, non-equilibrium thermodynamics 2-17871  
 III-V semiconductors, native oxide reactions 2-52205  
 immobilised enzymes, isothermal deactivation, slow intraparticle diffusion effect 2-27413  
 imperfect bifurcations and spatial structures in dissipative systems 2-52173  
 3-(3'-indolyl) bornene 2-amines, N-substituted, synthesis, pKa and fluoresc. 2-49505  
 inert gas+halogen compound reactions, fluoresc., reaction kinetics 2-49483  
 insertion compounds, struct. and electrochem. reactions 2-22466  
 intercalation reaction dynamics, electronic and struct. changes 2-41871  
 internal energy randomisation in weak-collision unimolecular reaction systems 2-22421  
 interrupted coarse-grained theory of quasi-continuum photoexcitation 2-52222  
 interstellar clouds of low and medium density, chemistry 2-14910  
 interstellar medium, chemical processes in shocked gas 2-53348  
 interstellar medium, chemical processes rel. to nature of carrier of diffuse bands 2-53347  
 interstellar oxide grains surface chemistry 2-33118  
 interstellar reaction scheme, extension to D chemistry and mol. isomers 2-53349  
 IR photochemistry, unified approach for single channel reactions, approx. soln. of master eqn. 2-52221  
 iron porphyrin, picosecond kinetic absorpt. studies using streak camera 2-24677  
 isoquinolines electronic effects during Schmidt and Beckmann rearrangements 2-4407  
 isothianchromanone, electronic effects during Schmidt and Beckmann rearrangements 2-4407  
 light ion induced reactions, recoil effects in atomic inner shell ionization 2-43876  
 linear stochastic evolution equation models 2-6019  
 mechano-chemical stability of a fluid-fluid interface undergoing mono- and bi-molecular reactions (French) 2-41885  
 metal, thermochemical processes, laser control and optimal laser heating in oxidising medium 2-22485  
 methyl ions, substituted, unimol. reactions, kinetic energy release 2-2697

## chemical reactions continued

methyl vinylidenes, rearrangements to acetylenes, ab initio SCF calcs. 2-29503  
 methylthiosilanes, IR and Raman vibr. spectra and synthesis 2-34392  
 micellar ions, reaction kinetics, ionic strength effect 2-41865  
 multidimensional stochastic chemical reaction model, asymptotics of transition probability (Russian) 2-27407  
 2-naphthol-6-sulphonate in water-alcohol solns., picosecond proton transfer studies, fluoresc., decay obs. 2-37051  
 nonequilibrium systems, fluctuation theory 2-6031  
 nonlinear, instabilities, fluctuation dynamics 2-6033  
 one dimensional double well and anharmonic potentials, Fourier transform method appl. 2-29687  
 pattern formation in systems with nonlocal interactions 2-47299  
 pellets with nonuniform activity distrib., effectiveness factors, asymptotic region of diffusion effect 2-27471  
 periclase, reaction with killed steel 2-41772  
 periodic orbits, adiabaticity and stability 2-17869  
 physical nonlinear systems, noise in chemical reactions and in fluid flow 2-50252  
 poly(vinylpyrrolidone)-binding site probes interaction, spectra and thermodynamic studies 2-44147  
 poly-p-phenylene sulphide hexafluoroarsenate, cond. polymer characteris. 2-30869  
 polymeric molecules, localised states, appl. to chem. and biological processes 2-39517  
 polymers, thermal decomp. processes, thermogravimetric anal. 2-37060  
 porphyrin-quinone model systems, photoinduced charge separation, picosecond time resolved obs. 2-27449  
 positronium, chem. reactions and anal. appls. review 2-9547  
 potentiostatic corrosion monitoring, water detection during aromatic hydrocarbon chlorination 2-31986  
 propane-air flame, laser-induced Na fluoresc. saturation characts., chem. reaction role 2-47343  
 pseudoisocyanine chloride, dimerisation, spectral data anal., monomeric transition moments 2-20036  
 pyrene+CTAB, reaction kinetics, ionic strength effect 2-41865  
 o-pyroxene, Fe-rich, geochrometry, reaction reversal expts. and geological implications 2-37858  
 quinones+organtin compounds, photochemical reactions, electron transfer processes, EPR spectra, triplet radical ion pair obs. 2-37082  
 quinoxaline triplet in aq. solns., reaction dynamics obs. by transient spontaneous Raman spectra 2-17885  
 (rare-earth) $_2\text{O}_3$ , reactive atmosphere processing 2-37061  
 reaction probabilities, collinear quantal computations, pot. energy surface, adiabatic barriers, tunnelling 2-9523  
 reactivity anisotropy averaging, reagent translational motion, diffusion controlled reaction 2-22413  
 recombination reactions, Langevin dynamics with space dependent friction coeff. 2-37043  
 representations of series solutions for transport problems 2-15122  
 retro mass spectral synthesis, mass spectrometry appl. (Japanese) 2-15264  
 reversible and irreversible processes studied using variational principle (German) 2-38402  
 Runge-Kutta method to solve stiff differential equations 2-22419  
 semiconducting electrodes, stabilising by means of redox systems 2-21671  
 short-lived reaction intermediates, time-resolved Raman spectroscopy 2-10875  
 solid explosives, compressive wave-induced reactions, microscopic theory 2-41879  
 solid solution, two-component, grain boundary diffusion mechanism (Russian) 2-45638  
 sound attenuation in critically slowed-down chemically reactive mixtures 2-40488  
 steel, killed, reaction with periclase and  $\alpha\text{-Al}_2\text{O}_3$  refractories 2-41772  
 stereochemistry of disproportionation, conservation principle of points 2-9545  
 stochastic chem. process without detailed balance, stationary distrib. 2-41866  
 stoichiometric dynamical system steady states rate consts. 2-17870  
 strict Lindemann behaviour because of an activation bottleneck 2-37050  
 structure-reactivity correlations in state-to-state chemistry 2-47321  
 surface dispersed layers in far from thermodynamic equil. state, prep. by surface reactions 2-2739  
 TCNQ salts, OPh(TCNQ) $_2$  and BIPA(TCNQ) $_2$ , quasi-one-dimens. cond., synthesis, intramol. H bond stabilising role 2-25803  
 TCNQ-1,2-dithiole derivatives charge transfer salts, quasi-one-dimens. cond., prep. and characts. 2-26367  
 thermal desorption of particles experiencing disoc. reaction in adsorbed layer, transient processes of surface ionisation 2-22489  
 thermal explosion confined by const. temp. boundary, rapid transient phase 2-52210  
 thermal print papers, survey of compositions 2-33635  
 third body effects on reactions in liquids, solvent, homogeneous catalysis and ionic strengths effects 2-37054  
 trajectory study, differential cross sections, Fourier series 2-13932  
 trapped ion cell, unquenched mode in ion, cyclotron resonance spectrometry, appl. to chemical kinetics 2-33679  
 travelling wave fronts in reaction diffusion system, evolution of large scale fluctuations 2-17910  
 unimolecular chemical reaction, double well model pot., tunnelling 2-37062  
 unimolecular reactions, reactant energy distrib. function determ. 2-22422  
 unrestricted Hartree-Fock theory and its applications to molecules and chemical reactions 2-24582  
 uranyl formate+ $\text{NH}_3$  gas reaction 2-2710  
 urethane elastomers, synthesis, crosslinking and macroscopic props. (Polish) 2-36929  
 $\text{Ag}_2^+$ , dismutation react. on nuclear surfaces, diffusion controlled theory 2-13935  
 $\alpha\text{-Al}_2\text{O}_3$ , reaction with killed steel 2-41772  
 Ar, free jet expansion, dimer depletion mass spectrometric meas. 2-27496  
 $\text{Ar}+\text{H}_2^+$ , vibr. effects in proton and charge transfer 2-2695  
 Au-InP system, binary cpd. form., 320 to 360°C 2-1680  
 B+Ti interaction, high temp. gradients, TEM obs. 2-41887  
 Br+Br, radiative recombination, free-bound transitions 2-9543  
 $\text{Br}_2^+$ , dismutation react. on nuclear surfaces, diffusion controlled theory 2-13935  
 $\text{Br}_2^+$ +Ni(II) glycine complexes, radiation chemical studies 2-13991  
 C fibre reinforced Al, component reactions, matrix comp. effect 2-36920



**chemical reactions continued**

- CHF<sub>4</sub>-ethylene, addition reaction, isomerisation, vibr. energy of CHF  
2-22425  
CO UV fragmentation, C<sub>2</sub> formation and time resolved Swan emission  
2-27568  
CO<sub>2</sub>, free jet expansion, dimer depletion mass spectrometric meas.  
2-27496  
Ca<sub>10</sub>(PO<sub>4</sub>)<sub>6</sub>, CN<sub>2</sub>□, prep., cryst. struct., and chem. reactivity rel. to  
bivalent ions in apatite channels 2-40348  
α-CdS preparation by thermal and plasma-conversion of Cd 2-51839  
Ce+NH<sub>3</sub>, reaction in NH<sub>3</sub> and NH<sub>3</sub>/Xe matrices, <sup>57</sup>Fe Mossbauer study  
2-19984  
Co II complexes, phthalocyaninatocobalt (II) adducts, synthesis, props.  
2-51627  
Cr<sub>2</sub>O<sub>3</sub>, reaction between Cr<sub>2</sub>C<sub>3</sub> in vac. (*Japanese*) 2-52172  
CrO<sub>5</sub>·H<sub>2</sub>O, short-lived reaction intermediate, reson. Raman study 2-722  
Cr<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> soln., complex form. and SO<sub>4</sub><sup>2-</sup>-H<sub>2</sub>O interactions, X-ray diff.  
data 2-52181  
Cs+Sr+basalt hydrothermal interactions, implications of basalt as a  
nuclear waste repository 2-7163  
Cu<sub>2-x</sub>Se, form. in solid state, phase transformations, reaction kinetics  
2-16771  
Cu<sub>2</sub>VS<sub>4</sub>, Li<sup>+</sup> insertion studies 2-22442  
FeS<sub>2</sub>, pyrite and marcasite conversion in different atm., thermomagnetic  
studies 2-26598  
HF in nozzles beam, vibr. excitation by CW HF laser in antiparallel  
coaxial arrangement, mass spectra 2-6038  
He+H<sub>2</sub><sup>+</sup>, quasiclassical trajectory study using HF and CI pot. energy  
surfaces 2-24815  
HgCl<sub>2</sub>+HgBr<sub>2</sub>, reaction in solid state, X-ray study 2-27430  
HgCl<sub>2</sub>+Br<sub>2</sub>, reaction in solid state, X-ray study 2-27430  
IrO<sub>3</sub> film, electrochromic amorphous, cation insertion reactions 2-27435  
K<sup>+</sup> (H<sub>2</sub>O) in N<sub>2</sub> at room temp., ion mobility meas. 2-20225  
Li<sub>2</sub>FeV<sub>2</sub>O<sub>8</sub>, topotactic lithium reactions with ReO<sub>3</sub> related shear structures  
2-27433  
Li<sub>0.5</sub>(Mo<sub>0.25</sub>V<sub>0.75</sub>)<sub>2</sub>O<sub>8</sub>, structure, transport and equilibrium props. 2-26136  
Li<sub>2</sub>ReO<sub>3</sub>, topotactic lithium reactions with ReO<sub>3</sub> related shear structures  
2-27433  
Li<sub>2</sub>V<sub>2</sub>O<sub>8</sub>, structure, transport and equilibrium props. 2-26136  
Li<sub>2</sub>WO<sub>3</sub>, structure, transport and equilibrium props. 2-26136  
Mg ions, gas phase chemistry, flowing afterflow studies 2-2704  
MgO, activation by cyclic temp. change, adsorption capacity, activated  
material behaviour during sintering. 2-6026  
λ-MnO<sub>2</sub>, preparation of new cryst. form from LiMn<sub>2</sub>O<sub>4</sub>+acid 2-9300  
MoS<sub>2</sub> surfaces, reactivity to NO studied by XPS 2-41930  
Na+Na, energy pooling collisions, form. of Na<sub>2</sub>S and Na<sub>4</sub>d, rate const.,  
associative ionisation 2-44058  
Na+Na, Na<sub>2</sub><sup>+</sup> and Na<sup>+</sup> prod., associative and Penning ionisation  
2-15889  
Na<sub>1-x</sub>Si<sub>x</sub>Cr<sub>2</sub>P<sub>3-x</sub>O<sub>12</sub>, NASICON, chemical stability in liq. Na, fracture  
and cracking 2-52251  
Ni<sup>2+</sup> hydration in perchlorate and chloride solutions 2-2696  
OH radical prod. from Pt-catalysed decomposition of water, energetics  
and mechanism, fluoresc. 2-17872  
OH+Ni(II)-glycine complexes, radiation chemical studies 2-13991  
OH<sup>-</sup> production from N<sub>2</sub>O and H<sub>2</sub>/hydrocarbon mixture, dissociative elec-  
tron capture 2-17874  
P<sub>4</sub>O<sub>5</sub>S<sub>6</sub>, cryst. synthesis and struct. 2-5086  
Ru complex, tris(2,2'-bipyridine)Ru(II), surfactant enhanced singlet  
energy transfer from charge transfer state 2-41868  
Si, direct thermal nitridation for Si<sub>3</sub>N<sub>4</sub> film prep. (*Japanese*) 2-22357  
Sr+basalt hydrothermal interactions implications of basalt as a nuclear  
waste repository 2-7163  
SrSO<sub>4</sub> and BaCO<sub>3</sub>, cation exchange reaction (*Japanese*) 2-52202  
TiO<sub>2</sub>+Si<sub>3</sub>N<sub>4</sub>, reaction mechanism, thermodynamic anal. 2-37059  
VN, cubic, powders synthesis, MgB<sub>2</sub> catalyst appl. 2-13692  
ZnS phosphors, luminesc. props., influence of formation temp. 2-46729  
ZrO<sub>2</sub>+Si<sub>3</sub>N<sub>4</sub>, reaction mechanism, thermodynamic anal. 2-37059

**chemical reactivity** *see chemical reactions***chemical relaxation**

- ultrasonic absorption due to rotational isomerism 2-8580  
MgCO<sub>3</sub>, accounting for undersea sound absorption anomaly 2-47915

**chemical shift***see also isomer shift*

- tert-butyl-naphthalene, mono- and di-substituted isomers, <sup>13</sup>C NMR, PMR  
2-738  
acetophenones, <sup>13</sup>C NMR shifts and C-H coupling const. 2-24728  
acetylene, mol. quadrupole elect. reaction field and solvent chem. shift  
2-29632  
alkali methoxides, methanolic soln., IR and NMR spectrosc. characts.  
(*French*) 2-39396  
n-alkanes, mol. packing effects on solid-state chem. shifts 2-13363  
aluminosilicate solns., <sup>27</sup>Al NMR, second coord. sphere effects on shield-  
ing of Al 2-20080  
amorphous, chem. shifts of K-absorpt. discontinuities of Ge and Se  
2-31585  
aromatic amines, substituent effect of Ni(acac)<sub>3</sub>-induced, PMR and C  
NMR contact shifts, INDO calc., EPR 2-13362  
azobenzene, <sup>13</sup>C-<sup>15</sup>N spin-spin coupling const., relative signs and  
INDO-MO calcs. 2-29631  
benzene, mol. quadrupole elect. reaction field and solvent chem. shift  
2-29632  
benzenoid hydrocarbons, small var. in chem. shifts for atoms in similar  
environments 2-15809  
benzo(b)selenophenes, monosubstituted, <sup>1</sup>H and <sup>13</sup>C chemical shifts  
2-39421  
benzo(c) cinnoline, <sup>13</sup>C-<sup>15</sup>N spin-spin coupling const., relative signs and  
INDO-MO calcs. 2-29631  
beryllaboranes, <sup>9</sup>Be NMR obs. 2-11513  
bile acid methyl esters, vapour press. osmometry and NMR investig.  
2-2150  
chemisorption and surfaces studied by nuclear magnetic resonance spectro-  
scopy, review 2-51474  
cholesterol, <sup>13</sup>C NMR spectral simplification and assignment with spin-  
echo Fourier transform technique 2-34445  
cubic A<sub>2</sub>B<sub>2</sub>N semiconductors, least bound core electron excitations, bind-  
ing energies, chemical shifts 2-26286  
cyclohexenes, conformational anal., graphical method calcs. using Karplus  
type eqn. 2-15918  
**chemical shift continued**  
cyclopropane, chem. shift tensor orientation, <sup>13</sup>C NMR dipolar spectrosc.  
2-733  
cytidine-5'-phosphate, heteronuclear two dimens. spectroscopy with strong  
H<sup>+</sup> coupling 2-34443  
trans-decahydroquinolines, methyl-substituted, <sup>15</sup>N chemical shifts  
2-49458  
deoxybenzoins, <sup>13</sup>C NMR shifts and C-H coupling const. 2-24728  
3,5-dichloro-2-hydroxythiophenol in soln., conformational study 2-43938  
dicyanohemim in aqs. soln., chemical shifts, line widths and spin-lattice  
relax. rates 2-20082  
4, dihydropyridine derivatives, conformation, solid-state <sup>13</sup>C NMR, model  
system for NADH 2-34436  
3,3-dimethylcyclohexyl derivatives, <sup>13</sup>C mag. reson. chem. shifts, H  
involvement in γ-anti substituent effects 2-34434  
1,7-dioxaspiro[5.5]undecanes, <sup>13</sup>C chemical shift 2-4321  
fluoranol, <sup>19</sup>F chemical shift tensor from mag. reson. lineshape moments  
2-34447  
5-fluorouracil, <sup>19</sup>F chemical shift tensor from mag. reson. lineshape  
moments 2-34447  
free ions, X-ray characteristic lines, chem. shifts, theory rel. to electronic  
relax. 2-15805  
glycine, bond lengths and angles by <sup>13</sup>C and <sup>14</sup>N NMR 2-13361  
heteroaryl cpds., PMR, Ag-Pd shift reagents 2-43947  
heteronuclear two dimens. spectroscopy, double reson. 2-15203  
hydroxyproline, PMR spectrum, multiplet shape and chem. shift 2-4334  
indirect 2-dimens. J-spectroscopy, <sup>1</sup>H<sup>+</sup> multiplet struct. meas. 2-23687  
ionic diffusion in solids, NMR techniques, review 2-31314  
maleic anhydride-2-phenylvinyl alkyl ethers and thioethers, charge transfer  
complex monomers, NMR obs. 2-47370  
metal, core electron binding energy shift due to chem. combination, rel. to  
X-ray absorpt. chem. shift 2-41451  
metals, X-ray K-absorption edge shifts due to chem. combination 2-2369  
metals, XPS core level binding energies, surface chemical shift 2-22145  
methyl cyanide, J=1→2, K=1 and K=0 transitions, beam maser spectro-  
scopy 2-34439  
N<sub>2</sub>-methyl-N<sub>2</sub>-acetylphlegmarines config. anal., <sup>13</sup>C NMR chem. shift  
2-43937  
monofluorobenzene, partially oriented in thermotropic liq. crystals, NMR  
obs. 2-2151  
monosubstituted, <sup>1</sup>H and <sup>13</sup>C chemical shifts 2-39421  
multiple quantum NMR, analogy with isotopic spin labelling 2-3597  
naphthaldehydes, substituted, use of <sup>13</sup>C chemical shift to identify confor-  
mational preferences 2-34440  
nuclear magnetic relaxation, anisotropic rot. diffusion rel. to internal  
motion 2-27476  
nucleotide conformational anal. by <sup>31</sup>P NMR spectroscopy, review, book  
contrib. 2-27963  
permethylocyclosilanes, synthesis and spectra 2-7574  
phosphane oxides, sulphides and selenides, <sup>31</sup>P solid state NMR, chemical  
shift tensors 2-13365  
phosphoserine, heteronuclear two dimens. spectroscopy with strong H<sup>+</sup>  
coupling 2-34443  
polyacetylene:AsF<sub>5</sub>, <sup>13</sup>C NMR study 2-51489  
polypropylenes, inverted, C<sup>13</sup>-NMR spectra, configurational and confor-  
mational influences 2-2153  
polyurethane elastomers charact. by <sup>13</sup>C NMR spectra 2-21902  
porphyrin π-electron ring currents, mag. props., MO LCAO SCF calcs.  
2-11401  
potassium butoxybenzoate, D<sub>2</sub>O soln., micellisation effect on configs.,  
NMR and Raman study 2-39423  
potassium propoxybenzoate, D<sub>2</sub>O soln., micellisation effect on configs.,  
NMR and Raman study 2-39423  
proline, PMR spectrum, multiplet shape and chem. shift 2-4334  
6S-prostaglandin I<sub>1</sub>, nuclear overhauser effect and two dimens. J PMR  
study 2-15828  
pyridazine-N-oxide, (<sup>15</sup>N), PMR, NMR and INDOR investig. 2-4327  
pyridinium cations, in organic solvents, H-bonded ion-pairs, chemical shift,  
<sup>13</sup>C NMR 2-11523  
randomly oriented sample, broad band NMR spectra simulation 2-26765  
solids and liquids, chemical shift scaling in NMR 2-36458  
spin-echo NMR, 2-dimens., rotational, in solids, isotropic and anisotropic  
chem. shifts 2-4330  
terphenyl phenyl sulphides and selenides, photochemical reaction study  
2-27452  
tetra-n-butylammonium silicate, aq. soln., chemical shifts, <sup>29</sup>Si NMR  
study 2-51487  
tetra-n-propylammonium silicate, aq. soln., chemical shifts, <sup>29</sup>Si NMR  
study 2-51487  
tetraethylammonium silicate, aq. soln., chemical shifts, <sup>29</sup>Si NMR study  
2-51487  
tetramethylammonium silicate, aq. soln., chemical shifts, <sup>29</sup>Si NMR study  
2-51487  
trimethyllead-glutathione-complexation in aq. soln. and intact human  
erythrocytes, NMR study 2-13934  
triquinacenes, substitution and deuterium isotope effects, chirality, IR  
absorpt. and circular dichroism obs. 2-34460  
two-dimensional rot. spin echo NMR, chem. shift and dipolar interactions  
correl. 2-13374  
X-ray characteristic lines, chem. shifts, theory rel. to electronic relax.  
2-15804  
X-ray characteristic lines, chem. shifts, theory rel. to electronic relax.  
2-15805  
As<sub>2</sub>Se<sub>3</sub>:Ag amorphous film, XPS study, core electron binding energy  
2-46872  
BH<sub>3</sub> complex, BH<sub>3</sub> (pyridine, 2-6 lutidine) σ-π transmitted coupling,  
molecular orbitals calc. 2-49457  
BN, <sup>11</sup>B nuclear-magnetic shielding 2-17354  
BP, <sup>11</sup>B nuclear-magnetic shielding 2-17354  
Be cpds., <sup>9</sup>Be NMR obs. 2-11513  
C-fibre, appl. of X-ray photoelectron spectroscopy to surface anal.  
2-22505  
<sup>13</sup>C connectivity patterns in organic molecules from natural abundance  
<sup>13</sup>C data 2-33594  
<sup>13</sup>C dipolar spectra of organic mol. matrix isolated in Ar 2-7572  
Ca<sup>2+</sup>-EDTA, <sup>43</sup>Ca high resolution NMR 2-46399  
CaF<sub>2</sub>-CaO-SiO<sub>2</sub> glasses, struct. study by XPS, X-ray emission, IR spectra,  
and F ionic ref. 2-30403  
Cd(II) complex, Cd<sub>6</sub>(SCH<sub>2</sub>(H<sub>2</sub>OH))<sub>16</sub><sup>4+</sup>, mol. struct. correl. with <sup>13</sup>Cd  
NMR spectra 2-26774  
CeN, 4f surface chemical shift, mixed valence 2-46876



**chemical shift continued**

- Co complexes in quaternary ammonium cations,  $^{59}\text{Co}$  chemical shift, hydrophobic effects 2-36457  
 Co III complexes, NMR, chem. shift investig. 2-13360  
 $\text{Co}(\text{H}_2\text{O})_6^{3+}$ , thermally populated high spin excited state, chemical shift and spin-lattice relax. time meas. 2-49461  
 $\text{Cr}_{11}\text{Fe}_{10}\text{Al}_2\text{Mg}_3\text{O}_{44}$ , mixed valence spinel, specific site valence, EELS determ. 2-46844  
 Cu-Ga alloys, Fermi level shift study by X-ray absorpt. spectroscopy 2-1812  
 Cu-Ge alloys, Fermi level shift study by X-ray absorpt. spectroscopy 2-1812  
 $\text{Cu}_2\text{Pd}_{1-x}$ , chemical-shift effects and valence-electron spectra 2-2411  
 Eu-Au, surface core level binding energy, chem. shift, surface segregation 2-51272  
 Fe complex, dimethylsulphoxide iron(III), variable temp. PMR and  $^{13}\text{C}$  NMR spectra 2-51488  
 Ga compounds, nucl. mag. shielding investig. and theory 2-4231  
 $\text{Ge}_{10}\text{Se}_{30}$  and  $\text{Ge}_{30}\text{Se}_{70}$ , amorphous, chem. shifts of K-absorpt. discontinuities of Ge and Se 2-31585  
 $\text{HCN}$ ,  $^1\text{H}$ ,  $^{13}\text{C}$ , and  $^{15}\text{N}$  nuclear mag. shielding, intermol. effects 2-34321  
 $\text{H}_2\text{O}$  in Na  $\beta'$  alumina, orientation and motion, proton NMR meas. 2-36459  
 $(\text{H}_2\text{O})_2$ ,  $\text{H}^+$  chemical shift in neutral and ionic O-H...O hydrogen bonds 2-51486  
 $(\text{H}_2\text{O})_2^+$ ,  $\text{H}^+$  chemical shift in neutral and ionic O-H...O hydrogen bonds 2-51486  
 $(\text{H}_2\text{O})_2^+$ ,  $\text{H}^+$  chemical shift in neutral and ionic O-H...O hydrogen bonds 2-51486  
 $\text{Mg}^{2+}$ -EDTA,  $^{25}\text{Mg}$  high resolution NMR 2-46399  
 $\text{Na}_2\text{V}_2\text{O}_8$ , soln., struct., chemical shift  $^{17}\text{O}$  NMR study 2-20086  
 O, photoemission spectroscopy (*German*) 2-17598  
 OH ions, aq., ionic association studies by PMR 2-13364  
 $\text{PO}_4$  glasses, containing di-, tri-, tetra-, and penta-valent cations, photoelectron spectra 2-51771  
 $\text{Rb CdF}_3$ , nuclear magnetic shielding, chemical shift, NMR study 2-21544  
 $\text{RbCaF}_3$ , nuclear magnetic shielding, chemical shift, NMR study 2-21544  
 $\text{RbPbF}_3$ , nuclear magnetic shielding, chemical shift, NMR study 2-21544  
 Si, oxidation of (111) surface, high resolution AES,  $\text{SiO}_2$  spectrum shape 2-5973  
 Si surface (111), O chemisorpt. configurations 2-26214  
 $\text{Si:F}$ , amorphous, core level and valence band UPS and XPS spectra 2-2414  
 $\text{Si:H}$ , amorphous,  $^{29}\text{Si}$  NMR 2-46402  
 $\text{Si:H(F)}$ , amorphous, chem. bonding environment of Si and dopant 2-40275  
 $\text{Si/(NiPd)}$  systems, local chemical struct., XPS study 2-9246  
 $\text{TiCaF}_3$ , nuclear magnetic shielding, chemical shift, NMR study 2-21544  
 $\text{TiCdF}_3$ , nuclear magnetic shielding, chemical shift, NMR study 2-21544  
 $\text{TiPbF}_3$ , nuclear magnetic shielding, chemical shift, NMR study 2-21544  
 $\text{U}(\text{Ni}_{1-x}\text{Cu}_x)_2$ , chemical shift of  $L_{\alpha 1}$  line, lattice parameter, composition depend. 2-46833  
 V-O systems, X-ray and X-ray photoelectron spectra 2-12966  
 Yb-Au, surface core level binding energy, chem. shift, surface segregation 2-51272

**chemical structure**

- see also bonds (chemical); crystal atomic structure; crystal chemistry; molecular configurations  
 compounds isoelectronic with diamond, creation of hard and superhard materials 2-21088  
 fractionally charged atoms, electronegativity, ionic crystal radius 2-39511  
 graphite- $\text{H}_2\text{SO}_4$  intercalation cpd., electronic and chem. struct., XPS study 2-27051  
 liquid crystal series, reentrant nematic and smectic A phases, chem. struct. considerations 2-16589  
 liquid crystals, chemical struct. and reentrant behaviour 2-35389  
 polymers, cross-linked, determ. of amount of cross-linking agent by IR spectrosc. (*Russian*) 2-31983  
 polystyrene-based films, plasma-deposited, struct. and oxidation, mass spectrometry study 2-1796  
 seven-membered rings, identification of conformational type 2-24884  
 urethane elastomers, synthesis, crosslinking and macroscopic props. (*Polish*) 2-36929  
 $\text{AgSi}$ , gaseous molecule, dissociation energy, mass-spectrometric determ. (*German*) 2-28929  
 $\text{CuSi}$ , gaseous molecule, dissociation energy, mass-spectrometric determ. (*German*) 2-28929  
 $\text{Li}_2\text{O-Al}_2\text{O}_3\text{-SiO}_2$  glass, struct. state change of  $\text{Cu}^{\text{II}}$  and  $\text{Mn}^{\text{V}}$  during crystallization, ESR obs. 2-41190  
 Pt atom chain compounds, anion-deficient, chem. and phys. interrelationship, one-dimens. metal 2-30439  
 $\text{SiO}_2$  film deposition by RF sputtering of sintered  $\text{P}_2\text{O}_5\text{-SiO}_2$ , P conc., etching rate, ionic charge getting effect (*Japanese*) 2-22166

**chemical technology**

- see also chemical industry; chemical variables control; chemical variables measurement; oil refining  
 $\alpha$ -waste and other used extraction agents, pilot plant for pyrohydrolysis (*German*) 2-11192  
 aromatic hydrocarbon chlorination, on-line corrosion monitoring 2-31986  
 binary heterogeneous azeotropes, separation using interlinked columns 2-37137  
 dispersions, gas-liquid, close-packed, coalescence effects (*German*) 2-31951  
 dispersions, liquid-liquid, close-packed, coalescence effects (*German*) 2-31951  
 ethylene oxide sterilisers monitoring, pneumatic gas chromatograph appl. 2-31989  
 gas sampling probe for flame structure analysis (*Polish*) 2-9548  
 hydrocarbon flow, Pt filament thermionic emission at low press. 2-9238  
 methanol from bituminous coal, technical and economic evaluation 2-52277  
 on-line chemical analysis for cost effective process control 2-31987  
 pulsed molecular beam apparatus for the study of molecular photofragmentation processes (*Japanese*) 2-19211  
 styrene, bulk polymerisation expts., factorial design appls. 2-6034  
 $\text{UF}_6$  chemical processing with lasers 2-15913

**chemical vapour deposited coatings** see CVD coatings**chemical vapour deposition**

- see also vapour phase epitaxial growth  
 conference, vapour growth and epitaxy, San Diego, CA, USA (July 1981) 2-42778  
 crystal growth, by chemical vapour transport in closed tubes 2-46890  
 electronic devices, microstruct. fabrication, review 2-51828  
 p-GaAs, non-alloyed ohmic contacts, using MO-CVD contact layers 2-46938  
 growth processes and impurity capture 2-45777  
 III-V compounds, deposition by MO-CVD in halogen transport systems 2-5819  
 III-V semiconductors, chem. mechanisms for cryst. growth using coordination compounds in MOCVD process 2-5830  
 laser CVD, selective area deposition technique 2-22171  
 laser CVD 2-9559  
 low pressure, computer simulation 2-9277  
 MO-CVD, recollections and reflections 2-9280  
 modified, thermophoretic efficiency 2-51825  
 optical fibre fabrication by vapour-phase axial deposition, refractive-index profile control techniques 2-20438  
 optical fibre MOCVD preforms, OH reduction by isotope exchange 2-7899  
 optical fibres, Ge doped, made by MCVD, loss mechanism, design parameter and fabrication condition in-terplay on performance 2-4597  
 optical fibres, loss reduction, fibre fabrication processes (*Japanese*) 2-49925  
 optical fibres single-mode, low dispersion, fabrication over wide spectral range 2-7863  
 plasma CVD technology, and appl. (*Japanese*) 2-13654  
 refractory metal thin film structures, direct writing by laser photodeposition 2-13652  
 RF plasma-enhanced modified CVD, preparation of single-mode light-guides 2-20418  
 poly-Si, nucleation and growth, in-situ obs. 2-45765  
 single mode fibre with high relative refractive index difference values, prep. by VAD 2-25122  
 solid electrolyte coatings for electrochemical devices 2-22554  
 space heating, heat mirror coatings for energy conserving windows 2-39723  
 transition metals, CVD by pyrolysis, reduction and dismutation (*French*) 2-26260  
 V-MOS transistors thin gates fabrication in V-groove (*Slovak*) 2-46162  
 AlGaAs-GaAs lasers, MO-CVD grown, review 2-7765  
 $\text{Al}_2\text{O}_3$ , pyrolytic, deposition temp. effect on InP inversion-mode MISFET 2-13189  
 B, CVD at low temp. 2-13656  
 B CVD on Be surface 2-13655  
 BN film, CVD on to fused  $\text{SiO}_2$  and sapphire 2-51806  
 BN low temperature deposition using hydrogen injection process 2-51829  
 BP, early CVD growth and props. 2-36795  
 C fibre reinforced C composite, fibre infiltration from propylene by CVD 2-41575  
 C fibre reinforced C composite, fibre infiltration from propane by CVD, microstruct. and fracture behaviour 2-41716  
 C film, deposition kinetics in 1-butene pyrolysis, flow rate effect, integral relationship for reaction parameters 2-46931  
 C, highly divided carbonaceous particles form. mechanism 2-41872  
 C, laser induced CVD 2-22169  
 $\text{CsAu(Sn)}$ , vapour phase reaction growth 2-22173  
 $\text{CuInS}_2$ , growth on GaP substrate, by chem. vapour deposition 2-5828  
 $\text{Cu}_2\text{S/CdS}$  solar cells prepared by organometallic chemical vapor deposition: preliminary stage 2-37368  
 Ga-InAs, MOCVD 2-5829  
 GaAlAs, growth by low-pressure MO-CVD, gettering of  $\text{O}_2$  2-5821  
 GaAlAs/GaAs double heterostructures, for opto-electronic devices, MOCVD growth 2-9283  
 $\text{Ga}_{1-x}\text{Al}_x\text{As}$ , MO-CVD growth, quantum well transport structs. 2-9282  
 GaAlP, MO-CVD growth 2-5824  
 GaAs epilayers, growth by MOCVD, appl. to microwave MESFETs 2-5834  
 GaAs epitaxial thin film solar cell fabrication using organometallic CVD, single-crystal Si substrates 2-37369  
 GaAs, growth rate anisotropy analysis in CVD system 2-35901  
 GaAs, high purity prepared from trimethylgallium and arsine 2-5816  
 GaAs, metallorganic CVD in a molecular beam system 2-5818  
 p-GaAs, non-alloyed ohmic contacts, using MO-CVD contact layers 2-46938  
 GaAs shallow-homojunction solar cells on epitaxial Ge grown on Si substrates, CVD technique 2-37370  
 GaAs thin film solar cells by OM-CVD growth, high efficiency 2-27652  
 GaAs/GaAlAs lasers, MO-CVD grown, props. as function of stripewidth 2-34790  
 GaAs-GaAlAs, DH laser grown by metallorganic CVD process 2-937  
 GaAs-GaAlAs, selective MOCVD epitaxy for optoelectronic devices 2-5833  
 GaAs-GaAlAs integrated optical devices fabricated by MBE and metallorganic CVD 2-49947  
 GaAs-GaAlAs:Zn CVD layers, cryst. defect incorporation during growth 2-31635  
 GaInAs, grown by MOCVD, for microwave and optoelectronic appls. 2-5822  
 GaInAsP, grown by MOCVD, for microwave and optoelectronic appls. 2-5822  
 GaP, MO-CVD growth 2-5824  
 GaP, prep. by MO-CVD 2-46939  
 Ge, chem. vapour deposition on Si from  $\text{GeH}_4\text{-He}$  gas mixtures 2-2454  
 Ge chemical transport, with  $\text{H}_2\text{O}$  (*German*) 2-30428  
 Ge film, polycryst., low temp. growth by UV laser photodissociation of  $\text{GeH}_4$  2-51823  
 Ge-P epitaxial films, P doping during gas phase chem. precip. 2-12612  
 $\text{InAs}_{1-x}\text{Sb}_x$  alloys, epitaxial growth by MOCVD 2-5825  
 $\text{In}_2\text{O}_3$  optical thin films obtained by plasma-induced chemical vapor deposition 2-51807  
 InP, MOCVD 2-5829  
 InP, props., prep. and device appls., review 2-51087  
 Mo, CVD by pyrolysis, reduction and dismutation (*French*) 2-26260  
 Nb, CVD by pyrolysis, reduction and dismutation (*French*) 2-26260  
 Nb $_3$  superconductor, chem. vapour deposition, expt. and thermodynamic studies 2-36794  
 Ni, CVD by pyrolysis, reduction and dismutation (*French*) 2-26260



**chemical vapour deposition continued**

- Si, amorphous film, plasma CVD (*Japanese*) 2-13654  
 Si amorphous film, prep. by CVD, elec. props. 2-2446  
 Si amorphous films deposited on substrates, using non-equilibrium plasma jet 2-51826  
 Si, amorphous thin-layers production and appls. (*German*) 2-46943  
 Si, CVD, solar cell appl. 2-22177  
 Si, CVD under reduced pressure in hot-wall reactor, equilib. and kinetics 2-46942  
 Si chunks continuous production process, combined fluidized bed apparatus 2-2692  
 Si epitaxial film deposition in CVD reactor, transients 2-22172  
 Si epitaxial growth, by CVD in hot-wall furnace 2-17630  
 Si film, polycryst., low temp. growth by UV laser photodissociation of  $\text{SiH}_4$  2-51823  
 Si film deposition by pyrolytic decomposition of  $\text{SiF}_4$  gas 2-41524  
 Si film prep. by plasma and low press. CVD in horizontal reactor 2-22175  
 Si films, polycrystn., continuous growth by CVD 2-46933  
 Si from  $\text{SiH}_4$  through plasma deposition 2-36796  
 Si, growth from  $\text{SiH}_4$  in cold wall CVD systems 2-9288  
 Si, layer growth by CVD on liquid Sn coated graphite substrate 2-13657  
 Si polycrystalline CVD layers, characterisation by X-ray diffr. 2-30772  
 Si, recrystallisation of amorphous and small grained polycrystalline material 2-13756  
 Si rheotaxial film development by CVD on low cost substrate, solar cell appl. 2-2455  
 Si, semi-insulating polycryst., deposition in low pressure CVD reactor, growth kinetics 2-31632  
 Si, semi-insulating polycryst., deposition in low pressure CVD reactor, O content 2-31633  
 Si sheet, ion implanted thin film solar cells 2-37297  
 Si, vapour phase epitaxy 2-46932  
 Si:H, amorphous, homogenous CVD 2-41526  
 $\alpha$ -Si:H preparation by CVD 2-22170  
 Si:P film, microstructure and sheet resistance 2-30480  
 $\text{SiCl}_4$ - $\text{H}_2$ - $\text{N}_2$  system, rate-determ. reactions and surface species of CVD Si 2-51824  
 $\text{SiH}_4$  pyrolysis in free-space reactor, Si production for low cost solar cell arrays 2-36805  
 $\text{Si}_3\text{N}_4$ , film, plasma CVD (*Japanese*) 2-13654  
 $\text{Si}_3\text{N}_4$  film, prep. by direct thermal nitridation of Si (*Japanese*) 2-22357  
 $\text{Si}_3\text{N}_4$  film prep. by plasma and low press. CVD in horizontal reactor 2-22175  
 $\text{Si}_3\text{N}_4$ , plasma enhanced CVD on InP 2-41527  
 $\text{Si}_3\text{N}_4$ , plasma-enhanced CVD, using  $\text{SiH}_4$ - $\text{N}_2$  mixture, mech. 2-31631  
 $\text{Si}_3\text{N}_4$ -C, amorphous, density and deposition 2-9286  
 $\text{SiO}_2$  film, glassy, deposition kinetics from  $\text{SiH}_4$ ,  $\text{O}_2$  and  $\text{N}_2$  2-21457  
 $\text{SiO}_2$  film prep. by plasma and low press. CVD in horizontal reactor 2-22175  
 $\text{SiO}_2$  low temp. Photo-CVD oxide processing for semicond. device fabrication 2-51831  
 $\text{SiO}_2$  optical thin films obtained by plasma-induced chemical vapor deposition 2-51807  
 $\text{SiO}_2$ , plasma enhanced CVD onto InP 2-41527  
 $\text{SiO}_2$ , plasma-deposited, charact. 2-9278  
 Ta, CVD by pyrolysis, reduction and dismutation (*French*) 2-26260  
 TiC, CVD coatings on cemented WC tool bits, morphology 2-30731  
 TiC CVD coatings on cemented carbide, nucleation and growth, phenomenological study 2-51052  
 TiC, CVD onto cemented carbides, formation and growth of  $\eta$  layer 2-51053  
 TiC coating on WC-Co, atom probe microanal. 2-13859  
 TiC<sub>x</sub>, nonstoichiometric, CVD at high temps., conditions 2-35905  
 TiN particles, CVD formation process, direct obs. 2-22176  
 $\text{TiO}_2$  film CVD from ethyl titanate vapour pyrolysis, photoelectrochem. behaviour 2-9287  
 $\text{TiO}_2$  optical thin films obtained by plasma-induced chemical vapor deposition 2-51807  
 $\text{Ti}_2\text{O}_3$  crystal growth by chemical vapour transport 2-46894  
 $\text{W}_5\text{Si}_3$ , formation by plasma CVD 2-2453  
 ZnO film prep. by metalorganic CVD from diethyl zinc 2-41525  
 ZnO, highly oriented films, by CVD 2-27095  
 ZnO optical waveguide material, VPE CVD technique 2-51827  
 ZnS(Se) transmissive IR materials made by CVD process 2-5836  
 ZnSAs<sub>2</sub>, MO-CVD growth and characterisation 2-27093  
 $\text{ZrC}_x\text{N}_y$  films, synthesis by CVD 2-9285

**chemical variables control**

- see also pollution detection and control  
 froth flotation, continuous analysis controlled automation by 14 MeV neutron activation (*Italian*) 2-6076  
 steel, ferritic stainless, melt, deoxidation control using solid electrolyte  $\text{O}_2$  conc. cells 2-13943  
 Si-Cr sputtered films, comp. control to control temp. coeff. of resist. 2-51801

**chemical variables measurement**

- see also chemical analysis; moisture measurement; pollution detection and control  
 ion-controlled diodes for down-borehole operation, temp. depend. of gate-controlled portion 2-37986  
 MOS gas detectors using transition metal-gate 2-33508  
 multifunctional ceramic sensors: humidity-gas sensor and temperature-humidity sensor 2-33557  
 NHKG power station, experimental operation of  $\text{O}_2$  probe (*Czech*) 2-31963  
 POLAROX electrochemical analyser for bleaching 2-37136  
 total oxygen demand anal., automatic technique 2-32151  
 water detection during aromatic hydrocarbon chlorination, by on-line corrosion monitoring 2-31986  
 CO monitoring system, using nondispersive IR analyser 2-32159  
 Fe supersaturate vapour, homogeneous condensation kinetics investig. in shock tube 2-35655  
 $\text{H}_2\text{SO}_4$  vapour in combustion gases, continuous meas. by portable automatic monitor 2-42065  
 $\text{NH}_3$  determination as waste water and control using automatic anal. apparatus (*German*) 2-32149  
 O sensor, using non-metallic electrodes (*Chinese*) 2-37112  
 $\text{O}_2$  sensor, oscillatory mode 2-33509  
 S, chem. pot. determ. using galvanic cells with solid sulphide electrolytes 2-47459

**chemically reactive flow**

- alkali-metal vapour, gas-dynamic jet, use of vacuum props. 2-1245  
 base drag reduction by base or external burning 2-20767  
 bubble media, chemical reaction and combustion waves 2-16389  
 bursting phenomena in a simplified Oregonator flow system model 2-47323  
 compact differencing schemes for advective problems 2-3386  
 dynamic combustion, shock-wave interactions, qualitative model 2-12249  
 far wake, approximate method for calc. air parameters and radiation intensity 2-20675  
 fire plume rising from burning heat source 2-8192  
 fluid mixtures, thermodynamic stability, dynamic critical phenomena 2-50332  
 fluids, diffusion, reactions fluid-mechanical mixing, material surface concept 2-40004  
 Fokker-Planck equation, kinetic boundary layer with absorbing boundary 2-23597  
 gas reactions, valence-shell photoelectron spectroscopy 2-44002  
 hyperbolic diffusion equation, relaxation and dispersed medium, chemical reaction, thermodynamics 2-12246  
 internal combustion engines, numerical simulation of reactive flow 2-30239  
 Kirchhoff Langevin equation derivation for fluid with chemical reaction 2-1161  
 laminar flame front, linear stability 2-12245  
 mass flow measurement, contact methods (*Russian*) 2-85240  
 model for flow system having multiple inlet and outlet streams 2-20768  
 multidimensional combustor flow, anal. algorithm 2-8247  
 nitride, dissociating coolant, thermohydraulic characts. in rough annular channel (*Russian*) 2-4061  
 nuclear steam generating systems, chem. thermohydraulics 2-4010  
 numerical methods in fluid dynamics, conf., Stanford, CA, USA 2-28608  
 orifice flow, polymer additives behaviour effects on cavitation 2-30192  
 polyethylene oxide solns. in square duct and capillary flow, along reduction, solvent effects 2-20755  
 polymerising fluid, circular Couette flow 2-12224  
 reactant conversion degree in a chem. reactive flow, longitudinal mixing effect 2-50330  
 reactive diffusion problems with stiff integrators and adaptive grids 2-4902  
 steel, erosion by high temp. flows, water vapour contrib. 2-12678  
 supersonic flow past body, combustion states, uniqueness and stability 2-12176  
 thermal explosion in reactive viscous flows, crit. conditions 2-1273  
 turbulent diffusion, chemical reactions, Lewis number effects 2-16392  
 turbulent mean reaction rates in large activation energy limit 2-4901  
 turbulent rotating chemical waves 2-35169  
 unstable layer close to perfectly catalytic wall, asymptotic theory 2-4900  
 water flow through orifice, polymer additive effect on cavitation development, static press. effects 2-30191  
 $\text{CO}_2$ - $\text{N}_2$ - $\text{O}_2$ - $\text{H}_2\text{O}$  mixture, vibr. nonequilib. flow in wedge no le 2-12247  
 $\text{H}_2\text{PO}_2$ +inert gas mixtures laminar burning velocities 2-27738  
 $\text{N}_2\text{O}_4$  turbulent dissociating coolant flow, transient props. (*Russian*) 2-16391

**chemiluminescence**

- bioluminescence and stimulated coherent radiation (*German*) 2-47573  
 ethylene, chemiluminesc. in inert matrix 2-22452  
 ethynyl radical+ $\text{O}_2$ ( $\text{H}_2$ )(methane), time resolved chemiluminesc., rate coeff. 2-31923  
 inert gas oxides, excimers in matrices 2-49482  
 liquid phase electrochemiluminesc., diffusion kinetics 2-51710  
 Penning ionisation collision, light absorpt., chemiluminescence 2-39484  
 plasma etching stripping process, chemiluminescence end-point detect. 2-36996  
 $\text{SrCl}$  (A-X, B-X) bands chemiluminesc. 2-41903  
 trans-stilbene derivatives, electrogenerated chemilum. 2-22104  
 ultraweak, photomultiplier selection 2-48779  
 upper atmosphere chemiluminescent emission on release of Al and compounds 2-32694  
 B+ $\text{H}_2\text{O}$  interaction, chemiluminesc. 2-22453  
 Ba+ $\text{O}_2$  low press. flames, chemiluminesc., rule of  $\text{BaO}_2$  2-31919  
 C+ $\text{SO}_2$ -( $\text{SO}(\text{A}^1\Pi)$ )+CO chemiluminesc. reaction, mol. beam study 2-2714  
 $\text{C}^+$ + $\text{H}_2$ ( $\text{D}_2$ ), chemiluminescence spectra, product state distrib. 2-47327  
 $\text{C}^+$ + $\text{H}_2$ - $\text{CH}^+$ +H, pot. energy surfaces, chemiluminescence, ab initio MCSCF-POLCI calcs. 2-27427  
 $\text{C}^+$ + $\text{O}_2$  chemiluminesc. reaction,  $\text{CO}^+$ ( $\text{A}^2\Pi$ ) vibr. distrib. 2-49360  
 CO, oxidation on Pt surface, vibr. excited surface reaction products, IR chemilum. technique appl. 2-41924  
 CO(v) chemiluminescence in  $\text{CS}_2/\text{O}_2$  and  $\text{CS}_2/\text{O}_2/\text{N}_2/\text{O}$ -flames, elec. collision quenching 2-2715  
 $\text{C}_2^*$ , chemiluminesc. spectra of  $d^3\Pi_u$ - $a^3\Pi_u$  states 2-31924  
 $\text{Ca}(\text{P}_1)$ +HCl, chemiluminesc. reaction, atomic reagent approach geom. effect on electronic branching 2-2707  
 $\text{Cl}_2$ +HBr( $\text{H}_2$ )(methyl mercaptan) gas phase chem. chain reactions pulse laser photolysis, IR chemiluminescence 2-31914  
 $\text{CrO}_2\text{Cl}_2$ +inert gas atoms, IR multiphoton excitation, visible chemiluminesc. 2-47345  
 F+HBr(HI), time resolved vibr. chemiluminesc., reaction rate const. 2-37049  
 F+HNF, IR chemiluminesc. obs., heat of form., ab initio and statistical calcs. 2-37077  
 F+isocyanic acid, IR chemiluminesc. obs. 2-37077  
 F+HX- $\text{HF}+\text{X}^+$ , X=Cl, Br and I, HF vibr. state distrib., IR chemiluminesc. 2-17883  
 LiF, annealing of radiation defects, chemiluminesc. and thermostimulated luminesc. (*Russian*) 2-9205  
 $\text{N}^+$ +CO collisions,  $\text{CO}^+$  comet-tail emission and chemilum. 2-15885  
 $\text{N}_2$ , total bound determ. by pyrochemiluminesc. 2-27492  
 $\text{NO}_x$  generation in ozonizers, meas. by chemiluminescence method 2-8262  
 O+ $\text{D}_2$ ,Se( $\text{D}_2$ Te), chemiluminescence,  $\text{b}_0^+$  to  $\text{X}_2^+$ g emissions of Se<sub>2</sub> and Te<sub>2</sub> 2-52211  
 PO chemiluminescence flame, UV light amplification 2-44266  
 SnS, low-lying excited states, chemiluminesc., perturbed bands, rot. anal. 2-4346  
 $\text{ThO}_2$ :Eu<sup>3+</sup>, luminescence by photonic and chem. excitations 2-41407



**chemioception**

- E coli, migrating chemotactic bands, quasielastic light scatt. obs. 2-9784  
Tetrahymena pyriformis membrane, chemoreception, fluoresc. probe study 2-47615

**chemisorption**

- atom chain, indirect interaction, Green's operator method. (*German*) 2-45734  
catalyst activity determ. 2-31949  
cyclopropane, chemisorption and reaction on Ir (110) surface 2-40674  
diamond powders, H chemisorption, effect of preceding heat treatment 2-5298  
electronic surface states of crystals. 2-51277  
epoxy oligomers, effect on electrodeposition of finely divided Co 2-13664  
FCC crystal, surface (001), electronic struct., atom absorption, SCF calcs. 2-40986  
graphite surface, basal plane, oxidation, chemisorption, rate consts. diffusion, kinetics and mechanism 2-9571  
 $\alpha$ -Hf, reaction kinetics of O<sub>2</sub> and N<sub>2</sub> absorption at high temp. (*German*) 2-45738  
intercalation reaction dynamics, electronic and struct. changes 2-41871  
kinetic laws deduction from exptl. data 2-6062  
metal, adsorbed molecules, surface-enhanced Raman scatt. 2-2237  
molecular monolayer on nonmagnetic substrate, magnetic phase transition model (*Russian*) 2-5545  
molecules chemisorbed on Ni (III) surface, optical props. 2-43932  
p-nitrobenzoic acid, mol. monolayer chemisorbed on oxide-coated Cu, FT IR spectrum 2-17455  
NMR studies, review 2-51474  
nonequilibrium plasma chemical reactors, catalytic processes (*French*) 2-52249  
nonimpact printing, photochemical and photomechanical effects 2-37105  
oxide phases investigation using inversion voltammetry with C paste electrode 2-52256  
partitioning technique (*German*) 2-45735  
Raman scattering cross sections from, molecules on surface, roughness, chemisorption 2-2293  
semiconductive material formation on sliding surface, Al-Zn rubbing (*Japanese*) 2-52054  
solid surfaces, mol. events, photoelectron spectrosc. obs. 2-45722  
stepped surface, chemisorption theory, adatom binding energies, LEED intensity expression 2-1770  
surface, chemisorpt. of H<sub>2</sub>, embedding theory and small cluster calc. 2-45729  
transition metal alloys, chemisorbed layers, order-disorder transformations, review 2-50967  
transition metals, of atoms, trends in chemisorption energies with atomic number 2-37099  
transition metals, of H, embedded cluster model 2-12915  
transition metals, of N<sub>2</sub>, O<sub>2</sub>, NO and CO, trends in chemisorption energies with atomic number 2-37099  
underlayer, Ti<sub>6</sub> and Ti<sub>6</sub>N cluster electronic structure 2-36117  
Ag (001), of Cl, comparative LCAO and linear APW calcs. 2-40690  
Ag (111), Rb dosed, chemisorption of O<sub>2</sub>, surface species identification, isotope scrambling, reaction studies 2-26208  
Ag, of O<sub>2</sub>, MS Xalpha SCF calc. 2-41923  
Al<sub>2</sub>O<sub>3</sub>, of organic monolayer, surface enhanced Raman scatt. 2-51568  
Al(111), of O, electronic band struct., and bond length 2-13154  
Al(111), of O, self-consistent electronic struct. and bonding 2-13153  
Al(111) surfaces, oxidation initial stages, LEED and AES study 2-45724  
As(111), of InAs, phase transitions 2-45730  
Au/Ti thin films, segregation of Ti, chemisorpt.-induced 2-51907  
BPO<sub>4</sub>, alkenes chemisorpt., IR spectra 2-26900  
C, activated, high temp. adsorption of water 2-5308  
CO, chemisorbed on Pt and Cu surfaces, Auger spectra 2-51003  
CO, quasi-ideal chemisorpt. in oxides, entropy microcalorimetric determ. 2-40681  
CdSe epitaxial film, of NO<sub>2</sub>, effect on surface state charging 2-36163  
CdSe thin film, thermal desorption of chemisorbed O<sub>2</sub> and CO, elec. resist. var. obs. 2-35890  
Co (II), adsorpt. on MnO<sub>2</sub> from aq. solns. 2-47373  
Co, S chemisorption thermodynamics 2-40676  
Cu and Ag clusters, of halogen, He I photoemission spectra obs. 2-35886  
Cu-Ni alloy, surface modification through chemisorption of hydrocarbons 2-51004  
Fe polycrystalline surface, interactions with K, O<sub>2</sub> and N<sub>2</sub>, AES, work function and thermal desorption meas. 2-16939  
Fe, S chemisorption thermodynamics 2-40676  
GaAs surface, (110), chemisorption of Cl (*Chinese*) 2-26205  
GaAs(110), of Cl, cluster model and EHT method study 2-8708  
Ge(111), of Cl, cluster model and EHT method study 2-8708  
H chemisorption on diamond face (100), ab initio SCF model calcs. 2-21440  
Ir (110), chemisorption and decomp. of NO, thermal desorption, XPS, UPS, AES, LEED, and contact pot. meas. 2-12913  
Ir (110), chemisorption of N<sub>2</sub> and coadsorption of H<sub>2</sub>, thermal desorption, XPS, UPS, AES, and LEED meas. 2-12914  
Ir, of O<sub>2</sub>, on (110) face, surface struct., LEED and thermal desorpt. obs. 2-21445  
KCl: Cd<sup>2+</sup>, linear crystn. rate of KCl, Cd ions influence, adsorption role (*Russian*) 2-31615  
LaNi<sub>5</sub>, absorption-desorption of H<sub>2</sub>, thermodynamics for single-phase regions, differential heat flow calorimetry 2-8705  
Li surface+H<sub>2</sub> interaction, diatomics in-molecules calcs., Li cluster simulation 2-45713  
Mo (001) surface, adsorpt. of H<sub>2</sub>, substrate rearrangement and 2D ordering 2-1755  
Nb, chemisorbed O layers, vel. depend. of ionisation probability of sputtered O<sup>-</sup> 2-13607  
Nb surface, (110), H<sub>2</sub> adsorpt.-desorpt. kinetics 2-35893  
Ni (001), chemisorbed CO, energy and angle resolved SIMS 2-41473  
Ni (100), chemisorbed CO, photon stimulated desorption due to multielectron excitations 2-12908  
Ni (100), of c(2x2) S, struct. determ. using polarisation depend. surface EXAFS 2-30751  
Ni (100) surface, of H, Cl, Na, O and S, bonding calcs. 2-12905  
Ni (111)-C and Ni (111) surfaces of methyl cyanide (isocyanide), vibr. study, EELS spectra 2-46842  
Ni, of H, on (100) surface, transfer matrix calcs. 2-26222

**chemisorption continued**

- Ni particles, chemisorbed CO, H<sub>2</sub> and ethylene, vibr. bands, Raman spectra study 2-29606  
Ni surface, (110), O<sub>2</sub> chemisorption and NiO growth, LEED and AES study 2-26229  
NiO, of O, Hartree-Fock calcs. 2-35894  
O, chemisorption on Al(111) surface, direct force calc. by LCAO Xalpha method 2-654  
Pd (001) surface, Cl chemisorption, electronic struct., LCAO calc. 2-1987  
Pd (331) stepped surface, struct. stability and chemisorption props. of O<sub>2</sub>, and NO 2-1746  
Pd, adsorption/desorption of CO, surface struct. effects 2-16948  
Pd-Au alloy wire, adsorption and reaction of CO and O<sub>2</sub> 2-26230  
Pt (111), chemisorbed ethylene and acetylene, vibr. spectra, Co complex analogue 2-4282  
Pt [001] and [111], chemisorption of CO, coupling induced vibr. freq. shifts and island size determ., book contrib. 2-41372  
Pt, adsorption of gases at atm. press., visible optical reflectance study 2-40669  
pt, chemisorbed CO and H<sub>2</sub>O, photoemission, valence band studies 2-41496  
Pt, of CO and water, synchrotron radiation photoemission study 2-2413  
Pt, Raney, of benzene, neutron inelastic scatt. study 2-16938  
Pt surface, (111), <sup>13</sup>C-benzene chemisorption and rehydrogenation, radio tracer study 2-8707  
Pt-Al<sub>2</sub>O<sub>3</sub>, adsorption of cyclohexane and benzene, Fourier transform IR spectroscopy, evidence for  $\pi$ - and  $\sigma$ -bonded chemisorbed species 2-40694  
Re, polycrystalline, chemisorbed <sup>15</sup>NO, thermal desorpt. mass spectroscopy 2-1736  
Rh/Ag surface, (100), chemisorpt. of O<sub>2</sub>, N<sub>2</sub>O 2-26225  
Ru (001), of water, cluster MO study, EHT calc. 2-31945  
Ru(001), adsorption of CO island size and disordering 2-40675  
Si (100) surface, of O and O<sub>2</sub>, energy band structure, density of states, tight binding anal. 2-21646  
Si (100) surface of O and O<sub>2</sub>, Auger LVV line shape 2-22124  
Si (111), oxidation, catalytic action of Au, AES, EELS, and ion depth profiling 2-13836  
Si surface, (111), thermally cleaned, electron states and H chemisorpt., defect model 2-1986  
Si surface, quenched clean (111), disordered  $\sqrt{(19)} \times \sqrt{(19)}$  struct. obs. by LEED and UPS 2-1723  
Si surface (111), O chemisorpt. configurations 2-26214  
Si, surface oxidation, O and O<sub>2</sub> chemisorpt. 2-27474  
Si(111), of Cl, cluster model and EHT method study 2-8708  
Si(111)7x7, chemisorption of H<sub>2</sub>O and H<sub>2</sub>S, electron orbital e nergies, photoemission spectra 2-30946  
Ti, chemisorption theory, surface localised orbitals for (0001) clusters 2-40688  
TiC(001) and (111) surfaces, atomic struct., electronic struct., chemisorption 2-40654  
TiC(001) surface, chemisorption props. (*Japanese*) 2-1738  
Ti(0001) of O<sub>2</sub>, surface states study 2-26221  
V, chemisorbed O layers, vel. depend. of ionisation probability of sputtered O<sup>-</sup> 2-13607  
W (001) surface, adsorpt. of H<sub>2</sub>, substrate rearrangement and 2D ordering 2-1755  
W (110), of O, island growth dynamics and phase separation 2-30746  
W [110], of H, angle-resolved photoemission study 2-2417  
W stepped (110) surface with adsorbed O, chemisorption theory and adatom binding energies 2-1770  
W, surface (100), chemisorption of H, localised electronic interactions, density matrix treatment 2-7499  
W(001) surface, carburized, chemisorption props. (*Japanese*) 2-1738  
W(100) of H, IR study by surface EM wave spectroscopy 2-26220  
ZnO, adsorbed O influence on luminesc. temp. depend. 2-31542  
ZnO films prep. by oxidation of diethyl zinc 2-21460  
ZnO, of H<sub>2</sub> and O<sub>2</sub>, electronic struct., DV-X $\alpha$  cluster calc. 2-8843
- chemistry**  
see also atmospheric chemistry  
polyacetylene, advances in chem. and physics 2-36116  
superheavy elementary particles, chemical signatures 2-15306
- chemistry, physical** see physical chemistry
- chemistry computing**  
see also computerised instrumentation; spectroscopy computing  
ab initio calcs., integral program for related molecules 2-39307  
atom molecule reactions, computational approach to reduced multichannel Green function 2-47318  
biosynthesis of neutral solvents 2-6100  
computer assisted modelling of reactions and reactivity 2-9526  
EELS quantitation for microanal., computer program 2-37122  
energy gradients, MC SCF LCAO wavefunction, basis set considerations 2-634  
flexible molecules, steric comparison, least squares fit 2-15920  
FORTRAN IV general computer program for ab initio calcs. in quantum chemistry using SCF-LCAD-MO method (*Chinese*) 2-43771  
gamma-ray spectra analysis program, SAMPO80, with nuclide identification 2-17939  
methanol-d<sub>3</sub>, burnable laser start difference spectra, hindered rot. 2-7585  
methanol-water solution, mol. calculations 2-24605  
molecular biology, rigid-body least squares program with angular and translation scan facilities 2-40217  
organic compounds computer-aided structural anal. by AI system 2-20201  
quantum chemistry calcs. using parallel processing on microcomputers 2-649  
reactions and molecular collisions, computer studies, state-of-the-art survey 2-47304  
solvent extraction chemistry, personal reference database, TOOL-IR-PDP system appl. (*Japanese*) 2-27516  
symmetry adaptation in molecular ab initio calculation 2-15697  
symmetry adapted molecular orbitals, computer generation 2-11387  
Co(III)-amine complexes at Hg electrodes, computer-aided meas. of kinetic parameters of reactions 2-22501
- Cherenkov counters**  
electron energy meas. in presence of hadron background, with Cherenkov gamma spectrometer 2-24502  
electron shower 500 MeV in water, expt. results on Cherenkov light 2-24485



**Cherenkov counters continued**

- lead-glass total absorption counters in hodoscope gamma spectrometer 2-15659
- neutron activation anal., Cherenkov counting appl. 2-14038
- ring imaging device, appl. of CAMAC interface to Apple minicomputer, CAMAPLE 2-24540
- silica aerogel Cherenkov detector testing for European hybrid spectrometer 2-43676
- single gas vol. Cherenkov counter and drift chamber detector 2-43675

**Cherenkov detectors** *see Cherenkov counters***Cherenkov radiation**

- see also Cherenkov counters; electron radiation*
- air, anomalous Cherenkov radiation 2-19993
- Alfvén waves, Cherenkov absorpt. in low press. plasma (*Russian*) 2-40078
- beam instability and longitudinal waves in relativistic anisotropic plasma (*Russian*) 2-40081
- charged particle in sphere, Cherenkov and transition radiation 2-49644
- cosmic ray air shower, Cherenkov/particle front time delays 2-18669
- cosmic ray extensive air shower, Cherenkov light pulse shape 2-18668
- counting, contrib. of counting vol. to variable quench 2-43747
- E coli photoreactivable lethal damage after X- or  $\gamma$ -irrad. rel. to Cherenkov UV radiation 2-42164
- electron beam momentum modulation by laser fields, coherent optical radiation obs. 2-16055
- free electron Cherenkov laser model, S-matrix theory 2-29825
- laser using stimulated Cherenkov effect, theory 2-49761
- magnetic domain wall motion, shock wave excitation 2-21868
- magneto-acoustic waves, Cherenkov absorpt. in low press. plasma (*Russian*) 2-40078
- permittivity calcs. near photo-absorpt. edge (*Russian*) 2-24929
- photomultiplier quantum sensitivity meas. and calc. 2-19869
- plasma, Cherenkov heating and parametric turbulence in spatially inhomogeneous plasma (*Russian*) 2-40115
- plasma frequency radiation from relativistic runaway electrons in Tokamaks 2-4922
- plasma heating by low freq. axial nonsymm. EM field, quasilinear theory (*Russian*) 2-44875
- plasma source of coherent microwave radiation, theory 2-50391
- Raman free electron lasers, theoretical and expt. performance 2-39665
- relativistic Cherenkov self generator 2-38456
- relativistic electron beam, optically bunched, coherent Cherenkov radiation at 0.532  $\mu$ m 2-44179
- relativistic electron beam in corrugated waveguide, Cherenkov radiation 2-828
- relativistic plasma, approximately relativistic particle interactions, time symm., radiation 2-38455
- solute molecules, excited singlet state form. in several sat. hydrocarbons and ethanol solvents 2-49510
- stimulated Cherenkov radiation, quantum theory 2-48550
- synchrotron-Cherenkov radiation near atomic absorpt. edge 2-19989
- Br vapour, anomalous Cherenkov radiation 2-19993
- C, X-ray Cherenkov radiation; permittivity calcs. near photo-absorpt. edge (*Russian*) 2-24929
- 2,5-diphenyloxazole in saturated hydrocarbon solvents, excited singlet state, radiolysis study 2-49510
- Na vapour, anomalous Cherenkov radiation 2-19993

**chilling** *see cooling***chiral symmetries***see also SU<sub>N</sub> theory*

- $\sigma$  model, chiral symmetric SU(2)×SU(2), phase transitions (*Chinese*) 2-10932
- $\sigma$  model, with quarks and gluons, strong CP violation 2-48866
- axions and second class currents, common basis in chiral U1 symmetry 2-38819
- baryon masses in broken chiral quark bag model 2-43320
- chiral field eqn. Backlund transform. 2-43197
- composite leptons and quarks, spin 1/2 preons, family struct. 2-19352
- confinement and chiral symmetry breakdown 2-43289
- confining gauge theories, unbroken flavour symmetries 2-29069
- CP(n) and  $\sigma$  models, Lund-Regge method appl., gauge theory relations 2-19280
- electroweak gauge theory, chiral symm. breaking, fermion mass generation 2-15302
- Euclidean lattice gauge theories without fermions, phase structure, chiral symmetry breaking 2-19244
- fermion mass relations, chiral symm., naturalness, t mass 2-29094
- gauge theories, massive neutrinos and proton decay, Orbis Scientiae, Coral Gables, FL, USA (Jan. 1981) 2-42794
- generating function for hidden symmetries, chiral models 2-43192
- Gross-Neveu model, SU(2), chiral invariant, nonzero density states 2-38768
- ground unification and proton stability in chiral SU(8) theory 2-43247
- hadron masses and the sigma commutator in light of chiral perturbation theory 2-15330
- hidden symmetry, explicit approach to group structure 2-43225
- Julia-Zee dyon, anomalous fermion prod., chirality violation, axial anomaly 2-23838
- Kac-Moody Lie algebra, hidden symm. of chiral models 2-23870
- lattice chiral fermion regularisation, no-go theorem 2-6972
- lattice gauge and chiral models, large N phase transition, 4d lattice QCD 2-38763
- lattice Gross-Neveu model, phase transition for chiral symmetry breaking 2-48886
- light composite fermions, broken chiral symmetries, strongly interacting gauge theory 2-11031
- Noether anal. for hidden symmetry responsible for infinite set of nonlocal currents 2-19259
- nuclear structure role 2-38807
- Poincaré supergravity N=1 formulation, minimal off-shell version 2-19002
- pseudoscalar mesons, chiral-symmetry breakdown and spectrum in QCD 2-7000
- QCD, chiral symmetry breaking, scales and phase transitions 2-19329
- QCD, dynamical masses for quarks (*Russian*) 2-23933
- QCD, fractional topological charge and chirality selection rules 2-43290
- QCD, quark propagator and confinement in axial gauge, chiral symmetry breaking 2-19328
- QCD, spontaneous chiral symmetry breaking 2-48939
- QCD chiral currents, vacuum polarisation, massive quarks effect 2-29013

**chiral symmetries continued**

- quark confinement in non-Abelian gauge field theory 2-33796
- quark masses from phenomenological qq pot. 2-23947
- quark models, naive preon chiral dynamics 2-3762
- radiative quark mass generation and a fourth quark family in model with chiral gauge interaction 2-23996
- reduction chiral models, geometric Lund-Regge model, gauge transform. 2-10946
- $s^2$  chiral field Lagrangians, symmetry group 2-3728
- SO(10) model with harmless axion, baryon nonconservation 2-48923
- spinor electrodynamics, anomalous commutators 2-38836
- spontaneous breaking in lattice QCD, hadron mass spectrum calc. 2-29095
- spontaneous breaking in SU(2) lattice gauge theory 2-28999
- strong and neutral PCAC, chiral-symmetry breaking schemes 2-23874
- strongly coupled lattice QCD, effective Lagrangian and dynamical symmetry breaking 2-23921
- SU(11) model, invisible axion and neutrino oscill. 2-33774
- SU(2)×SU(2) chiral bag model,  $\pi$ -baryon interaction and baryon char. acts. (*Russian*) 2-11023
- SU(3)×SU(3) chiral symmetry breaking, sigma term (*Spanish*) 2-277
- SU(6) grand unified theory without fundamental Higgs scalars 2-43248
- SU(7)×U(1) anomaly-free gauge unification theory 2-43244
- SU(N) chiral models in three dimens., mean field and Monte Carlo studies 2-38773
- SU(N) matrix model with fermions, dynamical chiral symmetry breaking, massless boson 2-48912
- SU(N) QCD in two dimensions, zero mass states 2-43282
- superprojectors, construction algorithm in terms of chiral superfields 2-3722
- Thirring and pre-Schwinger models, charge restoration, Lorentz-transform prop. 2-43200
- two-dimensional chiral gauge theories, tumbling, most attractive channel condensation 2-15285
- two-dimensional Euclidean chiral models, instanton-like solns. 2-38803
- two-dimensional massless QED, ground state structure 2-15313
- two-dimensional vector models, implications of anomalies 2-29072
- U(2) chiral model, Monte Carlo study 2-15283
- U(N) lattice gauge theory, spontaneous chiral symmetry breaking 2-19240
- unified field theory, chirality anomalies 2-23901
- vacuum structure and chiral charge quantization in the large N limit 2-43277
- Yang-Mills theory, quarks and lepton interactions in anisotropic space-time 2-48937
- ed-cpn, chiral invariance role 2-38807
- $\eta$ ,  $\eta'$  gluonic matrix element, strong anomaly, chiral symmetry breaking 2-6971
- $K^+ \rightarrow \pi^+ a$ ,  $a$ =axion, lower bound for branching ratio and Peccei-Quinn axion non-existence 2-48978
- KN sigma term, chiral symmetry breaking 2-19354
- $P^+$  pseudo-Goldstone boson mass, chiral dynamics in technicolour 2-3747
- $\pi K$  system scatt. lengths calc. in chiral models with quark and baryonic loops (*Russian*) 2-33857
- $\pi N \rightarrow \pi N$ , near threshold,  $\pi\pi$  interaction, broken chiral symm. test (*Russian*) 2-38897
- $\sigma$ -meson mass in QCD and dynamical symmetry breaking 2-48943

**chlorine***see also nuclei with .....*

- adsorbed on Ni surface during passivation by burning discharge in Cl<sub>2</sub>-O<sub>2</sub> mixture (*Russian*) 2-2611
- atom, adsorption on Mo(100) and (111), binding energies 2-40695
- atom, core exchange polarisation effects calc. using SCF X $\alpha$  wave functions 2-43800
- chemisorbed on Pd (001), electronic struct., LCAO calc. 2-1987
- chemisorption on Ag (001), comparative LCAO and linear APW calcs. 2-40690
- chemisorption on GaAs (110) surface (*Chinese*) 2-26205
- chemisorption on Ge(111), Si(111) and GaAs(110), cluster model and EHT method study 2-8708
- chemisorption on Ni (100) surface, bonding calcs. 2-12905
- coadsorption with K and O on Ag (100), LEED, AES, work function, and thermal desorption meas. 2-1745
- electrochemical H-Cl energy storage system operating parameter optimisation for minimum capital investment 2-22461
- Hamiltonian consistent effective pot. calc. rel. to mol. shape 2-11395
- ions, 2s-2p transitions, wavelength meas. 2-11423
- molecule, collision with smooth surfaces, vibr.-rot.-translational energy exchange 2-39474
- molecule, dynamic polarisabilities and Raman intensities calc. 2-43916
- molecule, fluoresc., reaction kinetics of mixtures with inert gases 2-49483
- molecule, thermal electron attachment, negative ion pot. energy curves 2-790
- molecule photoproduction using platinized TiO<sub>2</sub> photocatalyst 2-6048
- sparking pot. and secondary ionisation coeff. 2-1356
- supersonic flow, adiabatically expanding, spectral and kinetic props. 2-44757
- Bl-Cl mixtures, chem. equilb., Monte Carlo method 2-37095
- CdS:Cu,Cl, activated phosphors, radiative and nonradiative recomb. centre struct. photoluminescence obs. 2-35966
- CdS:Cu,Cl, elec. props. and imaging characts. in xerographic mode 2-23752
- CdTe:Cl crystals, carrier scatt., Hall effect study 2-26383
- Cl ion+Pb, K shell ionisation, role of relativistic and binding energy effects 2-34548
- Cl<sup>+</sup> in various gases, ion mobility determ. 2-20813
- Cl<sup>1+</sup>, S isoelectronic sequence, optical oscillator strength calcs. 2-43858
- Cl<sup>16+</sup>, hydrogenic, Lamb shift meas. 2-49340
- Cl<sup>2+</sup>, electron impact Stark widths, semiclassical calcs. 2-43845
- Cl<sup>3+</sup>, optical oscillator strengths, Born approx. and LS coupling calc. 2-29551
- Cl+H<sub>2</sub>, rate constants., fluoresc.-flash photolysis, kinetics study 2-27423
- Cl+HOCl, product channels, reaction rate consts. 2-9537
- Cl+Pb, K-shell ionisation process, trajectory, binding and relativistic effects 2-44041
- Cl<sup>+</sup>+Ar, tests of interaction pots., ion mobility and diffusion coeff. calcs. 2-34539
- Cl<sup>+</sup>+CO(D<sub>2</sub>)(N<sub>2</sub>), electron detachment, direct coupling, charge exchange, shape resonances 2-44070



**chlorine continued**

- Cl<sup>+</sup>-pyridine, adsorbed on Ag electrode, surface enhanced Raman scatt., overtones and combination modes 2-5708  
 Cl<sub>2</sub>-Ar, glow discharge, positive column, electrical characteristics, electrical energy distrib. functions 2-8375  
 Cl<sub>2</sub>+Cl<sub>2</sub>, vibr. energy transfer, master eqn. calcs. 2-39477  
 Cl<sub>2</sub>+H, evaluation of classical phase for reactive molecular collisions in semiclassical collision theory 2-13939  
 Cl<sub>2</sub>+H<sub>2</sub>O<sub>2</sub>-NaOH solution, O<sub>2</sub>(<sup>1</sup>Δ) generation for I, laser pumping 2-2700  
 Cl<sub>2</sub>+HBr(H<sub>2</sub>)(methyl mercaptan) gas phase chem. chain reactions pulse laser photolysis, IR chemiluminescence 2-31914  
 Cl<sub>2</sub>+He, pseudochannels, converging coupled-channel scatt. calcs. 2-44066  
 Cl<sub>2</sub>+SF<sub>6</sub>, reactions charge exchange, electron affinity 2-31913  
 Cl<sub>2</sub>+Sr\*, SrCl (A-X, B-X) bands chemiluminesc. 2-41903  
 Cl<sub>2</sub>+Xe, chemically relative collisions, fluoresc. bands obs. 2-20157  
 Cl<sub>2</sub>+Xe, radiative lifetimes and quenching rate const. 2-746  
 Cl<sub>2</sub>+Xe, state-to-state relax. processes, emission spectra 2-15878  
<sup>36</sup>Cl, environmental, appl. to hydrology, liq. scintillation counting 2-6208  
 He/Cl<sub>2</sub> laser, electron beam pumped, 258 nm 2-44254  
 KI-Cl<sup>-</sup>, means square displacement of substitutional defect and nearest neighbours 2-45489  
 Na/Cl ratios, solute source tracing in semiarid zone 2-10098  
 PbTe:Cl, self-compensation of donor effect by vacancy-impurity complexes, Hall carrier density meas. 2-36067  
 Si:H, Cl amorphous films, IR vibr. spectra 2-36630  
 Si:H, Cl glow discharge films, amorphous, optical characts. and photoluminesc. 2-31546  
 Si:H, Cl amorphous film, photolum. studies 2-46738  
 SiO<sub>2</sub>/Si interface, H and Cl depth profiles 2-45233  
 (Zn,Cd)S:Ag, Cl DC electrolum. powder cell, donor-acceptor recombination luminesc. 2-46768  
 ZnS:Ag, Cu, Cl phosphor powders, prep. and blue electroluminesc. 2-26992  
 ZnS:Cu, Cl crystal phosphor, localised surface state spectroscopy 2-17131  
 ZnS:Cu,Nd,Cl film, laser phenomena in direct current electrolum. and cathodolum. 2-13572  
 ZnSe:Cu,Cl, luminesc. centres, activation energy of form. 2-41392

**chlorine compounds**

- chloride concentration in aerosols from maritime air around Asian continent 2-14592  
 chloride ion, polarisability computed using HF method and many body perturbation theory 2-39505  
 ClF+D, reaction products, influence of isotope effect on energy distrib. 2-17889  
 species in stratosphere, catalytic mechanisms for O<sub>3</sub> destruction 2-32593  
 ClF, cone and valence binding energies, SCF and MCSCF/CI calc. 2-19977  
 Cl<sub>2</sub>CS, A-X laser excited fluoresc. spectrum, press. effects 2-43966  
 ClF, fluoresc., reaction kinetics of mixtures with inert gases 2-49483  
 ClF+HF, association reaction, thermodynamics, isomerism, energy hypersurfaces 2-27418  
 ClF+SF<sub>6</sub>, laser isotopic photochemistry, Raman anal. 2-47360  
 ClHPNH<sub>2</sub>, mol. struct. pseudopot. calcs. (French) 2-15708  
 ClO in nitrogen gas, 3 mm wave transition collision-induced linewidth 2-7605  
 ClO in stratosphere, review of in situ obs. 2-18525  
 ClO, matrix isolated in CO<sub>2</sub>, EPR spectra (German) 2-39425  
 ClO radical, stratospheric composition 2-32618  
 ClO+N<sub>2</sub>, press. broadening, microwave spectrosc. obs. 2-15778  
 ClO<sub>2</sub> radical, IR microwave double reson. spectroscopy 2-24764  
 Cl<sub>2</sub>P, <sup>31</sup>P NMR shielding tensor anisotropy, CNDO/2 interpretation (German) 2-19981  
 ClSO<sub>2</sub>F, mol. struct., electron diff. obs. 2-49572  
 CISS, electronic struct. and props., ab initio SCF-MO study 2-4207  
<sup>36</sup>ClO<sub>2</sub>, rapid method for prep. from <sup>36</sup>Cl<sup>-</sup> by electrolysis 2-47348  
 Cl (acetonitrile), clusters, struct. and stability calcs. 2-29740  
 HCl/HBr electrolysis in solid polymer electrolyte cells for hydrogen production 2-32127

**cholesteric liquid crystals**

- p-alkoxybenzoates of cholesterol, translational ordering 2-50545  
 p-amy-1'-cyanodiphenyl-cholesteryl nonanoate, liq. cryst., Eu cpd. activation, phase transition 2-26051  
 azoxy polyesters, nematic and cholesteric thermotropic, with moderately low transition temps., synthesis and props. 2-35390  
 biaxial ordering, self diffusion, helix distortion, NMR study 2-51483  
 blue phase, BCC orientational order, Landau theory 2-16592  
 blue phase, exptl. results and problems 2-16590  
 blue phase, PMR study 2-50519  
 Bragg diffraction, coupled wave theory 2-1401  
 bubble domain, form. and erasure by applied field 2-8423  
 cellulose triacetate mesomorphic solns. form. in halogenated org. acids and trifluoroacetic acid-dichloromethane mixtures 2-45022  
 chiral biphenyl mixtures, blue phases, lattice parameter behaviour 2-35396  
 chiral liquid cryst., texture, optical study 2-16580  
 cholesteric blue phase single crystals, polarisation microscopy 2-12476  
 cholesteric to nematic phase transition in mag. field 2-21305  
 cholesteric-nematic mixtures, bubble domains and striped domains, mol. alignment models 2-21005  
 cholesteric benzoates, translational ordering 2-50545  
 cholesteryl butyrate, X-ray study of structural changes during solid-cryst. to liq.-cryst. transition 2-50837  
 cholesteryl dodecyl carbonate, oriented liq. cryst., refr. index meas. and order parameter estimation 2-46530  
 cholesteryl ester mixtures, effect of rhodamine 6G on phase transition 2-5225  
 cholesteryl halopropionate, mesomorphism, phase transition study and dielec. relax. meas. 2-12743  
 cholesteryl laurate, liq. cryst. phase transformation, thermoelectric electret 2-46468  
 cholesteryl myristate-cholesteryl propionate liq. cryst. mixtures, US vel. meas. 2-5042  
 cholesteryl oleate, phase transitions and mesophases, X-ray diff. study 2-21308  
 cholesteryl oleyl carbonate, thermal nonlinear optical rotation 2-50546  
 cholesteryl propionate (nonanoate)(decanoate)(myristate), order parameter, S, in cholesteric phase 2-21003

**cholesteric liquid crystals continued**

- cholesteryl trans-cinnamate, photoreaction in solid, mesomorphic, and isotropic liq. states 2-9558  
 coloring properties of cholesteric liquid crystals with large pitch 2-40262  
 convective instabilities when heated from below 2-16320  
 deformation mechanism under electric and mag. fields, light scatt. 2-35382  
 dielectric, EM wave propag., high vel. amplitude struct. formation 2-35398  
 dynamic light scattering by cholesteric liq. crystals 2-39703  
 elastic consts. and tensor fields 2-40458  
 elastic energies 2-16701  
 elastooptical behaviour 2-13447  
 electro-optical and thermo-optical appls. 2-16591  
 film, mag. field induced phase transitions 2-40541  
 Fredericksz transition in absence of external field (Russian) 2-12473  
 guest-host displays, dielec., electro-optical, and phase change props. 2-5043  
 induced cholesteric mesophases, EPR determ. of helix pitch and relative handedness 2-45021  
 induced cholesteric system, helical pitch, temp. and conc. depend. 2-16571  
 IR image conversion using cholesteric liq. crystals, polarisation method (t) 2-39762  
 laser pulse compression in cholesteric liquid cryst. 2-966  
 layer between glass plates, light transmission, amplitude and polarisation characts. 2-36664  
 light propag. perpendicular to characteristic axis, fringes appearance 2-16558  
 light propagation and reflection by absorbing cholesteric layers 2-17433  
 light propagation in absorbing cholesterics and twisted nematics 2-7716  
 MBBA, twist impeded self-diffusion, NMR study 2-26096  
 MBBA-cholesteryl formate-5CB, liquid cryst., DC-controllable bubble domains 2-8419  
 MBBA-cholesteryl nonanoate mixture, cholesteric, electrooptical effects and EHD instabilities 2-1392  
 MBBA-cholesteryl nonanoate mixture, cholesteric, rotatory dispersion under AC elec. field, appl. to colour display device 2-31457  
 MBBA-cholesteryl oleate mixture, cholesteric, US field effects 2-30532  
 mesomorphic state, for Fabry-Perot interferometer 2-43079  
 mesophase, orientation effect of light wave (Russian) 2-50547  
 multicolour fluorescent display by scatt. states 2-8417  
 nematic-cholesteric mixtures, submicrostruct. 2-50541  
 optical props. under DC elec. field 2-31456  
 orientation by amphiphilic monolayers, phase transition effect 2-25738  
 orientational order param. meas. by NMR 2-40259  
 phase change devices, cholesteric texture study by laser light diff. 2-8427  
 phase IV-based induced cholesteric solns., chiral solute orientation, IR rot. dispersion spectra 2-30392  
 pitch-induced phase biaxiality, role in equilib. struct. 2-30391  
 poly(L-glutamic acid), in conc. solns. and in solid films, texture (Japanese) 2-1391  
 poly(L-glutamic acid) liquid crystal in pyridine-water mixture, mech. relaxation (Japanese) 2-31522  
 poly-γ-benzyl-L-glutamate-d<sub>2</sub> soln., liq. cryst., D-labelled benzyl group orientation, D NMR study 2-9051  
 polyester forming a thermotropic cholesteric phase, texture study 2-45024  
 proteins with cholesteric liq. cryst. struct. 2-37495  
 radiation transmission through gradual interface 2-1400  
 self diffusion coefficient, pitch depend. 2-35726  
 smectic-cholesteric mixed liq. cryst., light transmission characts. in optic effects 2-17442  
 successive transitions in AC elec. field 2-40539  
 superimposed layers, refl. transmittance, and colour gamut 2-9123  
 thermal nonlinear optical rotation 2-50546  
 thermotropic liquid-crystalline polymers, cholesteric and nematic, phase diagrams 2-35688  
 triple point, cholesteric-isotropic-blue phase 2-40543  
 twisted, flexoelectric effect (Russian) 2-21027  
 vibrational spectra in solid phase 2-46597

**chondrites see meteorites****choppers (circuits)**

- photovoltaic array load energy transfer optimisation using electronic series/parallel adaptors 2-32073  
 thermopiles, output chopping at very low frequencies, comparison with DC mode (Japanese) 2-6901

**chopping see cutting****chromatic aberration see aberrations****chromatography**

- automatic head-space analysis, using multi-detector system 2-14021  
 biological matrices compounds characterisation, by HPLC 2-14362  
 computer-controlled, environmental analyses appl. 2-32162  
 computerised, advanced integration system design and characts. 2-175  
 computerised, high performance capillary chromatography in a multi-GC network 2-14028  
 computerised, productivity increase through laboratory apparatus automation 2-173  
 computing, dedicated vs. general minicomputer appl. 2-6839  
 conf., St. Louis, MO, USA (March 1981) 2-32156  
 data enhancement and analysis, through mathematical deconvolution of signals 2-15154  
 dense gas, coupled with mass spectrometer using supersonic molecular beam interface 2-9594  
 diffusion coefficient meas., chromatographic method 2-12791  
 dihexyloxyazoxybenzene, order parameter of nematic solns. of decane, tetrachloromethane, and benzene, GLC meas. 2-21004  
 diheptyloxyazoxybenzene, order parameter of nematic solns. of decane, tetrachloromethane, and benzene, GLC meas. 2-21004  
 DNA, reversed-phase ion-pair chromatography 2-42067  
 dual flame photometric detector for gas and liquid chromatography 2-22511  
 electrooptical ion detector for gas chromatography/mass spectrometry 2-15258  
 environmental, microprocessor controlled analyser 2-32157  
 environmental, portable, multi-component air impurity analyser, based on photoionisation detector 2-32158  
 esters, correl. between thermodynamic values and mol. struct. studied using gas-liquid chromatography 2-26075



**chromatography** continued

- gas, appl. of He ionisation detector in its saturation region 2-2755  
 gas, single injection system 2-2747  
 gas chromatography, He microwave induced plasma appl. as element sensitive detector 2-17945  
 gas chromatography auto-injection systems, automatic controller 2-14033  
 gas chromatography/emission spectroscopy, cavities for microwave induced plasma generation 2-9598  
 GC sample concentrator appl., microprocessor-controlled 2-14024  
 gel permeation column model (Italian) 2-37111  
 GPC, data analysis using computing integrator 2-176  
 graphitised carbon black, adsorpt. of hydrocarbons, chromatographic step-and-pulse method obs. 2-12906  
 p-n-heptyl-p'-cyanobiphenyl, thermodynamics of solns. of nonmesomorphic solutes in nematic and isotropic phases 2-9565  
 HPLC, efficient octadecylsilane columns packing 2-2748  
 HPLC, integrated microprocessor-based design 2-14022  
 HPLC, polarographic detector design and performance 2-14019  
 HPLC, proteins separation appl. 2-9898  
 HPLC, sample injection and column switching 2-2749  
 HPLC, using UV filter detector 2-27493  
 HPLC columns packing 2-14017  
 HPLC system, microprocessor-based, gradient formation 2-14027  
 ICR spectrometer as a gas chromatographic detector 2-9534  
 IR/gas chromatographic reaction system for in situ catalytic studies 2-52258  
 isoalkanes, retention indices, thermodynamic method calcs. 2-37130  
 liquid, computer controlled system, absorpt., fluoresc. and CARS detection 2-31960  
 liquid, preparative, low-pressure, with normal silica and reversed-phase packings 2-14026  
 liquid chromatography, beta-induced fluoresc. detection 2-31970  
 liquid chromatography, beta-induced fluoresc. quenching detection 2-31971  
 liquid chromatography, reversed phase, streaming current detector 2-17938  
 liquid chromatography for complex samples anal. (Dutch) 2-52255  
 metal chelates, ICP-AES multielement detection, separation by HPLC 2-31959  
 metal specification, using model specific detectors 2-14018  
 methylantimony cpds., determ. in natural waters by chromatography-AAS 2-31955  
 microprocessor-based instrument for correlation chromatography and data processing 2-22500  
 microprocessors-controlled gas chromatograph 2-14025  
 modular chromatograph for anions separation, with electronic suppression 2-14020  
 molecular configurations, chromatographic anal. 2-11589  
 multicomponent diffusion in liquid mixtures by chromatographic and NMR techniques 2-30640  
 oligo-diethyleneglycol adipate dimethacrylate, mol. distrib. and weight determ. (Russian) 2-20204  
 overlapping chromatographic peaks numerical resolution, multichannel detection 2-2743  
 pneumatic gas chromatograph, ethylene oxide sterilisers monitoring appl. 2-31989  
 polymer-polymer solvent compatibility, comparison of gel permeation chromatographic and turbidimetric titration technique 2-9592  
 polymers, struct. characterisation by pyrolysis-gas chromatography 2-41951  
 polypropylene decomposition behaviour, pyrolysis gas chromatography (Japanese) 2-52174  
 polystyrenes, monodisperse, ternary system with cyclohexane, phase equil., comp., separation factor 2-45009  
 preparative liquid chromatography, relationship to thin layer chromatography 2-2746  
 process analysis, computer-based evaluation system 2-31991  
 process gas chromatograph, microcomputer controlled, calibration cost cutting using relative response factors 2-31985  
 process gas chromatographs, constant temperature thermal conductivity detector using thermistor bridge apps. 2-15167  
 radio-chromatographic TLC tests, linear analyser and Beta camera developments 2-6078  
 radiochromatogram scanner, performance and data prod. (Chinese) 2-37115  
 radiochromatogram scanning equipment for T labelled compounds (Chinese) 2-37116  
 tetrachlorodibenzodioxins, detect. in air filter samples 2-32140  
 tetrachloroethane, RF low pressure discharge, decomposition, gas chromatography, time resolved spectra (German) 2-16521  
 transducer appl., amperometric, thin-layer 2-6077  
 vapour concentration measurement, transpiration-gas chromatograph apparatus 2-6864  
 CO<sub>2</sub> sealed TE laser discharge, gas chromatographic analysis of products 2-883  
 In<sub>2</sub>O<sub>3</sub>, cleanliness of substrate surface, liq. crystal orientation (Japanese) 2-23620  
 Pd complexes, Pd II thioether peptides, circular dichroism, MCD and HPLC obs. 2-39428  
 S compounds, traces, separation and analysis, using flame photometric detector 2-32161  
 Sb III determ. in natural waters by chromatography-AAS 2-31955  
 SbV determ. in natural waters by chromatography-AAS 2-31955  
 Si polycrystalline ribbon, high press. plasma deposition 2-41529

**chromium**

- see also nuclei with .....  
 antiferromagnetic (100) thin films, electron band struct., local density of states, and spin polarisation 2-13148  
 aspherical charge distrib. 2-45110  
 atom, electron impact excitation cross-sections, Cr II spectral lines 2-34577  
 atom level structure calcs. 2-29516  
 black, Cr surface, solar collector surfaces, thermal degradation 2-22657  
 coated mild steel, behaviour in Na polysulphide environment 2-22565  
 corrosion in ortho-phosphoric acid 2-17788  
 corundum:Cr, influence of impurity on defect struct. (Russian) 2-17029  
 disappearance potential spectroscopy, rel. to AES (Japanese) 2-51746  
 electrodeposit, low contractile, cryst. struct. and internal stresses 2-21470  
 electrodeposited, low contraction, parameter optimization 2-12947

**chromium** continued

- electronic structure, meas. and calc. of charge, spin and momentum density 2-40774  
 electroplated coating, on Zn, outdoor performance 2-2628  
 electrospray alloying, cracking, invest. using acoustic emission and metallography (Russian) 2-9391  
 emission reduction importance, electroplating industry system study report (German) 2-52217  
 engineering tools and components, ion implantation techniques for non-semiconductor appl. 2-5134  
 film, 1/f noise, lack of spatial correlation 2-51251  
 film, evaporated on Cu foil, atm. O<sub>2</sub> effect, SIMS study 2-1786  
 film, laser-activated oxidation 2-9459  
 film, on Al, laser treatment at high power densities 2-51750  
 film on glass substrate, optical consts. in visible spectral range, ellipsometric meas. 2-27007  
 films, line monitor of oxide content 2-51347  
 glass:Cr<sup>3+</sup> based materials, fluorescent, for luminescent solar collector 2-52387  
 glass:Cr(III), luminesc. conc. quenching, EPR study 2-31265  
 guanidinium aluminum sulphate hexahydrate: Cr<sup>3+</sup>, anomalous absorpt. of Cr<sup>3+</sup> EPR line intensities, dielec. const. 2-2122  
 K-shell X-ray emission spectra, double plasmon satellites decay 2-46828  
 layer, optical consts. meas. in visible spectral range, substrate temp. influence 2-36722  
 molecule, pot. energy curves, CI treatment, bonding 2-49312  
 molecule, thermodynamic functions and dissociation energy 2-7673  
 Neel transition, first-order, effect of uniaxial stress 2-46280  
 Nichrome, oxidation resistant coating on Mo, electrophoretically deposited 2-41817  
 nitriding in N<sub>2</sub> gas, high temps. 2-2624  
 ore deposits correl. with type of ophiolite 2-47857  
 potential-pH diagrams, in water at temps. from 25 to 300°C 2-27326  
 powder simulant, use in mag. separation trials for radioactive liquor clarification 2-19687  
 protective oxide layer form. on air exposure, STEM and EELS study 2-2626  
 ruby:Cr, heavily doped, stationary radioluminesc., temp. depend. 2-36703  
 ruby, gamma-bombarded, Cr<sup>3+</sup> valence change, X-ray emission study 2-12639  
 self-diffusion, 1073 to 1446K 2-12815  
 solar absorber converters, Cr selectively absorbing films angle vapour deposition in vacuum, optical props. 2-9679  
 solid, multiple bonds nature, local density approx. 2-40314  
 solubility in liquid Li, absorpt. X-ray spectral analysis 2-1629  
 spin density wave, Q-vector metastability 2-30810  
 spin density wave, third harmonics 2-2065  
 spin waves and thermodynamic props. (Russian) 2-21784  
 structural materials in fast reactors, Doppler effect 2-7158  
 substrate for YbO<sub>3</sub> film, refractive index thickness depend., reflection ellipsometry study 2-46807  
 structurally strengthened states, stability under thermal shock conditions (Russian) 2-36884  
 surface, electron spin polarisation determ. with electron capture spectroscopy 2-2114  
 surface magnetic ordering and mag. props. 2-8986  
 surface phonons calc. 2-50990  
 TGS:Cr,  $\alpha$ -alanine, spontaneous polarisation and internal field 2-51521  
 thin film structures, refractory metal, direct writing by laser photodeposition 2-13652  
 thin films, 1/f noise lack of spatial cross correl. 2-51253  
 thin films, crystallographic structure and anal. 2-1789  
 work function reduction on hydrogenation, appl. as contacts to a-Si:H 2-51300  
 X-ray K-absorption edge shifts due to chem. combination 2-2369  
 Al<sub>0.5</sub>Ga<sub>0.5</sub>As:Cr variable gap semicond. solid solns., deep impurity centres and impurity photoluminescence 2-17025  
 Al(NO<sub>3</sub>)<sub>3</sub>:Cr<sup>3+</sup>, Fe<sup>3+</sup>, EPR spectra and crystal struct. 2-13333  
 Al<sub>2</sub>O<sub>3</sub>:Cr<sup>3+</sup>, interlevel nonradiative transitions of impurities 2-13550  
 Al<sub>2</sub>O<sub>3</sub>:Cr<sup>3+</sup>, ion distrib. coeff. and localisation by EPR studies (Russian) 2-1507  
 Al<sub>2</sub>O<sub>3</sub>:Cr<sup>3+</sup>, spin-spin reservoir relax. theory (Russian) 2-46362  
 Al<sub>2</sub>O<sub>3</sub>:Cr<sup>3+</sup> precipitated struct., SIMS and EPR spectra line broadening, spin matrix param. 2-9031  
 $\alpha$ -Al<sub>2</sub>O<sub>3</sub>:Cr<sup>3+</sup>(Ti<sup>3+</sup>)(Ti<sup>4+</sup>)(Mg<sup>2+</sup>), deformed by basal slip, dislocation substruct. 2-35499  
 BaO-V<sub>2</sub>O<sub>5</sub>:Cr glass, elec. cond. and EPR spectra 2-46365  
 BaTiO<sub>3</sub>:Cr, contact voltammetry investig., acceptor defects form., dielec. nonlinearity rel. to synthesis conditions 2-41283  
 BeAl<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, spectroscopic and lasing props. 2-17538  
 Bi<sub>2</sub>GeO<sub>9</sub>:Cr, anomalous US attenuation, illum. effect 2-50772  
 Cd chalcogenide spinels: Cr, mixed valence, ferromagnetic resonance 2-45914  
 CdS:Cr<sup>2+</sup>, configuration mixing and cryst. field splitting 2-51136  
 Cr (100) surfaces, mag. structure study using electron capture spectroscopy 2-46244  
 Cr I, 3d and 4s spectra, spectator electrons approx. 2-4244  
 Cr I, lifetime meas. by laser excitation from metastable states 2-24647  
 Cr II, spectral lines, prod. by electron impact, excitation cross-sections 2-34577  
 Cr, X-ray appearance pot. spectra and electronic struct., conduction bands, density of states distrib. function 2-41456  
 Cr<sup>3+</sup>:BeAl<sub>2</sub>O<sub>4</sub>, alexandrite, ground-state and excited-state absorpt. meas. in lasing region 2-7776  
 Cr<sup>3+</sup>:BeAl<sub>2</sub>O<sub>4</sub>, alexandrite laser characts. 2-7778  
 Cr-graphite composite coatings, electrodeposited, effect of plating variables 2-9291  
 Cr-SiO light-absorbing layers, props. 2-49844  
 Cr+Cr<sub>2</sub>O<sub>3</sub> system, thermodynamic props. determ. by EMF method using solid electrolyte electrochem. sensors 2-22066  
 Cr+H<sup>+</sup>, K-shell ionisation, total and differential cross sections meas. 2-44039  
<sup>52</sup>Cr<sup>3+</sup>, high current metal ion beam prod. for ion implantation appl. 2-4159  
 Cu/Cr thin films, shear stress and adhesion to substrates 2-5334  
 EuGaG:Cr<sup>3+</sup>, site selective fluoresc. spectrum 2-22066  
 GaAs:Cr,  $\pi$ -type, semi-insulating, Cr concentration determ. on basis of temp. dependencies of electron mobility and carrier concentration ratio (Slovak) 2-51200  
 GaAs substrate, semi-insulating, effect of Cr-doping on device quality 2-45767



**chromium continued**

- GaAs, undoped, background Cr determ. using SIMS 2-1509  
 GaAs:Cr, compensated, nonequilibrium carrier recomb., Cr impurity centre role, photoelec. props. and luminesc. 2-30928  
 GaAs:Cr, defects in III-V semiconds., EPR studies, review 2-31285  
 GaAs:Cr, diffused, photoluminescence study 2-36694  
 GaAs:Cr, dislocation density variation 2-30468  
 GaAs:Cr, heat treated substrate, photoluminescence props. studies 2-13531  
 GaAs:Cr, intrinsic density, band gap and effective mass parameters, Cr acceptor capture coeff. 2-51203  
 GaAs:Cr, ion implanted, stoichiometric disturbances and Cr redistrib. during annealing 2-21161  
 GaAs:Cr, ion-implanted, depth distrib., range-energy data and shape factors 2-1500  
 GaAs:Cr, luminescence, no phonon at 0.84 eV, Zeeman and axial stress splitting calc. 2-51659  
 GaAs:Cr, no-phononluminescence, ground set of states 2-41402  
 GaAs:Cr, phonon scatt. by impurities, thermal cond. meas. 2-8584  
 GaAs:Cr, phonon scatt. by Cr ions, uniaxial stress effect, thermal cond. meas., 50 mK to 100K 2-45648  
 GaAs:Cr, phonon spectra, supercond. tunnel junction meas. 2-50798  
 GaAs:Cr, photoluminescence anisotropy, high mag. field Zeeman splitting 2-22090  
 GaAs:Cr, subMM EPR obs. of impurity centres 2-2131  
 GaAs:Cr, symmetric struct., impurity carrier traps, electroluminescence study 2-26995  
 GaAs:Cr amorphous film, hopping conduction 2-41032  
 GaAs:Cr in metal-semicond.-metal structures I-V characts. (*Slovak*) 2-40920  
 GaAs:Cr  $n^+ - n^-$  diode struct., magnetosensitivity, effect of strong carrier accumulation 2-46119  
 GaAs:Cr S-type diode, photoelec. props., neg. resistance under reverse bias 2-1959  
 GaAs:Cr S-type diodes, impedance under double injection conditions, switching mechanism 2-30962  
 GaAs:Te(Si),  $Cr^{2+}$ , surface (110) photovoltage spectroscopy of  $Cr^{2+}$  2-26462  
 GaP:Cr, solubility and distrib. ratio of impurities in melt-cryst. system 2-5146  
 GaP:Cr $^{2+}$ , EPR signals of multiples of classical reson. mag. field 2-31269  
 GaP:Ge, Cr epitaxial films, behaviour of Ge, elec. props. and photoluminesc. 2-13008  
 In-Ga:Cr-In struct. with S-type I-V characts., field distrib., switching mechanism 2-36153  
 InP:Cr, deep level states, press. depend. and k-space localisation 2-35967  
 n-InP:Cr, piezoelectric attenuation under hydrostatic press. 2-40491  
 InP:Cr, semi-insulating, Cr redistrib. 2-8537  
 InP:Cr, thermal and optical studies of deep levels, DLTS and DLOS techniques 2-51127  
 KH<sub>2</sub>PO<sub>4</sub>:Cr, laser damage threshold, Cr impurities effect 2-25051  
 LaAlO<sub>3</sub>:Cr $^{3+}$ , energy transfer, fluoresc. responses, time resolved laser spectroscopy 2-26964  
 Li-La phosphate glass:Cr $^{3+}$ , Nd $^{3+}$ , energy transfer between Cr and Nd ions 2-44313  
 LiAl<sub>2</sub>O<sub>3</sub>:Cr $^{3+}$ , energy levels and wave functions calcs. 2-17033  
 LiGa<sub>2</sub>O<sub>3</sub>:Cr $^{3+}$ , energy levels and wave functions calcs. 2-17033  
 LiGa<sub>2</sub>O<sub>3</sub>:Cr $^{3+}$ , luminesc. of exchange coupled Cr $^{3+}$  pairs 2-51660  
 MgAl<sub>2</sub>O<sub>4</sub>:Cr $^{3+}$ , luminescence spectrum, N-lines, identification 2-41404  
 MgAl<sub>2</sub>O<sub>4</sub>:Cr $^{3+}$ , luminesc. spectrum, N-lines, origin 2-41405  
 MgAl<sub>2</sub>O<sub>4</sub>:Cr $^{3+}$ , luminescence spectrum, N-lines, partial spectrum 2-41406  
 MgO:Cr $^{3+}$ , EPR spectrum, of impurity in cubic symmetry sites, S<sup>3</sup> term effects 2-26732  
 MgO:Cr $^{3+}$ , interlevel nonradiative transitions of impurities 2-13550  
 $\alpha$ -MnS:Cr, electrical and mag. props., cryst. struct. 2-9032  
 NH<sub>4</sub>AlF<sub>6</sub>:Cr $^{3+}$ , order-disorder transition, ESR investig. 2-40528  
 Ni-Cr, subband resist. and spontaneous resist. anisotropy, two-current model 2-1888  
 RbH<sub>2</sub>(SeO<sub>3</sub>)<sub>2</sub>:Cr $^{3+}$ , incommensurate phase, ESR line shape study 2-41179  
 Si-Cr, energy levels and degeneracy ratios determ. from Hall coeffs. 2-30825  
 Si-Cr, energy levels and solubility, EPR and Hall effect study 2-40817  
 Si-Cr, ion-implanted, depth distrib., range-energy data and shape factors 2-1500  
 Si-Cr, Jahn-Teller centre, ER spectrum, isotopic vibronic struct. 2-36419  
 Si-Cr interface, evidence of room temp. intermixing, photoemission study 2-9247  
 Si-Cr point contacts, I-V characts., effects of Cr hydrogenation 2-51300  
 SrO:Cr $^{3+}$ , off-centre effects and lattice energy calc. 2-45237  
 TiO<sub>2</sub>:Cr, diffusion doped, elec. and optical props. 2-5369  
 TiO<sub>2</sub>:Cr anatase powders, Cr ions determ. by ESR spectroscopy 2-9026  
 TlAl(SO<sub>4</sub>)<sub>2</sub>.12H<sub>2</sub>O:Cr, single crystals, Cr $^{3+}$  doped, EPR study 2-2123  
 YAG:Cr, antiferromag., fine struct. of R absorption lines of Cr $^{3+}$  2-26940  
 Y<sub>1-x</sub>Bi<sub>x</sub>Al<sub>2</sub>B<sub>2</sub>O<sub>12</sub>:Cr $^{3+}$ , energy transfer, luminesc. study 2-51649  
 ZnAl<sub>2</sub>O<sub>4</sub>:Cr $^{3+}$ , luminescence spectrum, N-lines, identification 2-41404  
 ZnAl<sub>2</sub>O<sub>4</sub>:Cr $^{3+}$ , luminesc. spectrum, N-lines, origin 2-41405  
 ZnAl<sub>2</sub>O<sub>4</sub>:Cr $^{3+}$ , luminescence spectrum, N-lines, partial spectrum 2-41406  
 ZnCs<sub>2</sub>(SO<sub>4</sub>)<sub>2</sub>.6H<sub>2</sub>O:Cr $^{3+}$ , optical absorpt. spectrum, cryst. field parameters 2-26945  
 ZnGa<sub>2</sub>O<sub>4</sub>:Cr $^{3+}$ , luminescence spectrum, N-lines, identification 2-41404  
 ZnGa<sub>2</sub>O<sub>4</sub>:Cr $^{3+}$ , luminesc. spectrum, N-lines, origin 2-41405  
 ZnGa<sub>2</sub>O<sub>4</sub>:Cr $^{3+}$ , luminescence spectrum, N-lines, partial spectrum 2-41406  
 ZnMnFe<sub>2</sub>O<sub>4</sub>:Cr, dielec. props., elec. cond., mag. props., lattice constants, dopant effects 2-51524  
 ZnS:Cr, Raman scatt., local force variations, press effects 2-41358

**chromium alloys**

see also chromium compounds

- advanced high temp. reactor materials (*German*) 2-468  
 Chromel thermocouple, uniformity improvement of thermoelectric props. 2-23634  
 commensurate antiferromagnetic, influence of electron-phonon coupling on transition temp. into SDW state 2-5357  
 electrical elastoresistivity at 77.4K 2-5380  
 Fe<sub>3</sub>Ni<sub>3</sub>Cr<sub>14</sub>P<sub>12</sub>B<sub>6</sub>, Metglas 2826 A, amorphous, He ion irradiated, blister formation 2-16687

**chromium alloys continued**

- Hastelloy, Ni-Mo-Cr alloys, long-term ageing characts. 2-9361  
 Hastelloy, surface oxidised HTR heat exchanger materials, tritium and H permeation reduction (*German*) 2-471  
 Hastelloy X welded joint, creep behaviour 2-15501  
 IN-738, Ni-base superalloy, extending creep life, intermediate regenerative heat treatments 2-22274  
 Incoloy, HTR metal under process gas atm., temp. cycling influence on tritium permeability (*German*) 2-470  
 Incoloy, surface oxidised HTR heat exchanger materials, tritium and H permeation reduction (*German*) 2-471  
 Incoloy 800, dislocation struct. influence on internal friction after short-time creep (*Polish*) 2-27210  
 Incoloy 800, materials requirements for PWR steam generator tubing 2-4009  
 Incoloy 800, nuclear steam generator materials, pitting corrosion studies 2-4018  
 Incoloy 800, performance in PWR steam generators 2-4005  
 Incoloy 800 and Inconel 600, steam generator tube for PHWR, NaH<sub>2</sub>PO<sub>3</sub> evaluation as denting inhibitor 2-4016  
 Inconel 600, corrosion in LWR coolant by cationic resin beads 2-4017  
 Inconel 600, materials requirements for PWR steam generator tubing 2-4009  
 Inconel 600, nuclear steam generator materials, pitting corrosion studies 2-4018  
 Inconel 600, performance in PWR steam generators 2-4005  
 Inconel 600, PWR steam generator materials, Cu and Ni compounds effects on corrosion 2-4013  
 Inconel 600 boiler tubing, stress corrosion cracking 2-15494  
 Inconel 600 steam generator, stress relief heat treatment, stress corrosion cracking 2-15496  
 Inconel 600 tubing in nuclear power demonstration unit boiler, chem. cleaning 2-4019  
 Inconel 617, high-temp. alloy, carburisation effects conductivity 2-31738  
 Inconel 617, Ni-base superalloy, creep rupture props. at 1000°C, vacuum environment effect 2-47151  
 Inconel 617, SIMS study of carburisation and decarburisation 2-31961  
 Inconel 617 structural materials for HTGR, corrosion behaviour in impure He gas 2-6055  
 Inconel 625, cone form. by ion bombardment in Ar DC glow discharge, SEM obs. 2-25948  
 Inconel 625, superalloy, thermal stability 2-47060  
 Inconel 690, stress-corrosion cracking, treatment, reactor boiler appls. 2-15497  
 Inconel 706 Base material and gas W arc weldments, cryogenic mech. props. meas. 2-22330  
 Inconel 718, fretting wear at elevated temps. 2-36980  
 Inconel 800, creep-deformed, small-angle neutron scattering study of voids 2-2562  
 itinerant antiferromagnets, elementary excitations 2-31122  
 Nimonic 105, effects of room-temp. prestrain on creep-fracture 2-2588  
 Nimonic 115, fatigue crack growth at elevated temps. in carburising environments 2-36956  
 Nimonic 80A bolts, for elec. generating plant, grain boundary particle anal. by scanning Auger microscopy 2-16657  
 Nimonic 86, high-temp. alloy, carburisation effects conductivity 2-31738  
 rare earth alloys, RCr<sub>2</sub>Al<sub>6</sub>, magnetism, spin relax. and hyperfine interactions 2-36484  
 steel, austenitic stainless, Cr-Ni (25, 20 wt.%), internal friction during steady state creep 2-47082  
 steel, Cr-C, martensite structure after  $\chi' \rightarrow \alpha$  transition (*Russian*) 2-51892  
 steel, Cr-Mn, austenitic, surface  $\gamma\text{-}\alpha$  phase transition during oxidation (*Russian*) 2-50966  
 steel, Cr-Mo (1.25, 0.5 wt.%), welded to 4Cr25Ni20 steel, brittle cracks along welded fusion zone (*Chinese*) 2-31780  
 steel, Cr-Mo (12, 1 wt.%), optimisation for SNR boilers 2-15482  
 steel, Cr-Mo (2 $\frac{1}{4}$ , 1 wt.%), FBR steam generator tubing, material development 2-15485  
 steel, Cr-Mo (9, 1%), deposition and corrosion studies in high press. boiler loop 2-19651  
 steel, martensitic transformation, pulsed mag. field influence (*Russian*) 2-51901  
 steel Cr-Mo ferritic steel stress corrosion cracking in caustic environment 2-15498  
 steels, 12Kh18N10T, and 09Kh16N15M3B, oxidation in N<sub>2</sub>O<sub>4</sub>, ESCA study 2-9471  
 superalloy, thermal stability 2-47060  
 tube, Alloy 600, nuclear steam generators, system chemistry consideration 2-4011  
 Waspalloy, fatigue life, low cycle, high temp., effect of time-depend. processes 2-31768  
 Zircaloy-2, I stress corrosion cracking susceptibility, texture and surface condition effects 2-31843  
 Zircaloy-2 tubings, I-induced stress corrosion cracking, surface condition influence on crack initiation 2-31844  
 Zircaloy-2-clad U alloy target, design and evaluation for pulsed neutron source 2-29472  
 Al-Cr, C fibre reinforced, component reactions, matrix comp. effect 2-36920  
 Al-Cr, low-field Hall effect, impurity effects 2-36011  
 Al-Cr, rapidly solidified, coarsening of intermetallic particles 2-41611  
 Al-Cr-M, (M=Co, Ni, Fe), plasma deposited coatings formed from mechanically alloyed powders 2-17622  
 Au-Cr, dil., Hall effect 2-17048  
 C exchange between steel and FeCr, autoradiography study (*Russian*) 2-2711  
 Co-Cr coating, ion plated, highly oriented, tribological props. 2-30777  
 Co-Cr films for perpendicular recording, RF sputtering deposition 2-26691  
 Co-Cr films for perpendicular mag. recording, opposing targets sputtering deposition 2-27082  
 Co-Cr films with perpendicular magnetic anisotropy, RF sputtering prep., coercivity and X-ray orientation 2-26689  
 Co-Cr perpendicular recording medium by vacuum deposition, mag. and struct. props. 2-26690  
 Co-Cr sputtered films, mag. props., effects of Cr 2-26688  
 Co-Cr sputtered layered media, optimisation for areal density 2-21836  
 Co-Cr-Al coating containing active element additions, erosion resistance 2-31821  
 Co-Cr-Al coatings containing active element additions, oxidation behaviour vel. to struct. 2-31851



## chromium alloys continued

- Co-Cr-Al-Y coating, low press. plasma applied, mech. props. 2-45794  
 Co-Cr-Al-Y laser treated coatings, struct. 2-30769  
 Co-Cr-Al-Y plasma sprayed coatings for aircraft gas turbine appl. 2-47262  
 Co-Cr-Fe system, phase equilibria, critical eval. and constitution 2-47009  
 Co-Fe-Cr films, mag. props. variation during electron bombard., surface comp. (Russian) 2-21844  
 Co-Fe-Cr sputtered films, mag. props., effects of Cr 2-26688  
 Co-Ni-Cr-Mo, cold-rolled and recovered, internal friction meas. 2-41664  
 Cr-Al, Neel temp., random distrib. of antiferromag. clusters model 2-31184  
 Cr-Al-Si diffusion coatings on Nb alloys, heat resist. 2-41802  
 Cr-Co black alloy, electrodeposition from trivalent chromium baths 2-51834  
 Cr-Cre alloy, spin density waves, neutron diffr. study 2-26585  
 Cr-Fe, matrix effects in quantitative AES 2-37128  
 Cr-Fe-Ni ternary system, X-ray intensities, matrix correction methods appls. 2-38733  
 Cr-Mn, frozen magnon theory 2-26612  
 Cr-Mn, spin density waves, amplitude and period, neutron diffr. study 2-26586  
 Cr-Mo steel, AGR boiler materials 2-4014  
 Cr-Ni (80.4 at%), elastic moduli, 300 to 600K, US pulse-echo overlap meas. 2-5170  
 Cr-Ni (80.4 at%), elastic moduli, 300 to 600K, US pulse-echo overlap meas. 2-8554  
 Cr-Ni thin films, micromechanisms of crystn. 2-45041  
 Cr-OS, antiferromagnetic, positron annihilation (Russian) 2-17571  
 Cr-TaC(NbC)-MgO-Ti, rubbing surfaces rupture characts., 20-1000°C 2-17742  
 Cr-Ti diffusion coatings on C steel 2-27347  
 Cr-V, spin density waves, amplitude and period, neutron diffr. study 2-26586  
 Cr<sub>100-x</sub>Al<sub>x</sub>, struct. and microstruct. study 2-21065  
 Cr<sub>100-x</sub>Al<sub>x</sub>, struct. and microstructure study 2-21066  
 Cr<sub>3</sub>C<sub>2</sub>-Ni(15 wt.%), hot pressing conditions effect on densification and struct. 2-41553  
 Cr<sub>1-x</sub>Fe<sub>x</sub>, 3d-like electron localisation, anal. of positron annihilation and Mossbauer data 2-40816  
 CrMn, spin density wave, third harmonics 2-2065  
 CrV, spin density wave, third harmonics 2-2065  
 Cu-Cr and Cu-Cr-Zr(Mg), heat resistance, elec. cond. and strength 2-27244  
 Cu-Sn-Cr, ultrasonic waves damping factors, rel. to microstruct. 2-13880  
 CuCr film, superconducting Kondo effect study using DC Josephson current 2-31091  
 Fe-C-Si (Ni, Mn, Cr), grain boundary ferrite allotriomorphs, growth kinetics 2-16659  
 Fe-C-Si (Ni, Mn, Cr), proeutectoid ferrite growth kinetics, influence of carbide precip. 2-17682  
 Fe-Cr, corrosion in ortho-phosphoric acid 2-17788  
 Fe-Cr, elastic meas., volume effects 2-2546  
 Fe-Cr, mag. moments for different local at. configs. 2-46255  
 α-Fe-Cr, nitrogenation kinetics in NH<sub>3</sub>-H<sub>2</sub> mixtures, influence of alloying elements 2-41793  
 Fe-Cr, spin waves, neutron diffr. study 2-46266  
 Fe-Cr, σ-phase, electron microsc. obs. 2-45113  
 Fe-Cr (18%) alloy, volumic diffusion of S, 850 to 1200°C (French) 2-16898  
 Fe-Cr (20 wt.%), scaling in H<sub>2</sub>-H<sub>2</sub>O-H<sub>2</sub>S mixtures 2-47254  
 Fe-Cr (20 wt.%) alloys, effect of Y<sub>2</sub>O<sub>3</sub> dispersion on high temp. oxidation 2-2632  
 Fe-Cr nitridation, two-phase zone growth kinetics (Russian) 2-1622  
 Fe-Cr sputtered films, mag. props., effects of Cr 2-26688  
 Fe-Cr-Al, high temp. props. improvement by rare earth additions, internal friction study 2-45355  
 Fe-Cr-Al (0-17.7, 2.6-9.3 wt.%), Al<sub>2</sub>O<sub>3</sub>-forming, oxidation morphology 2-27341  
 Fe-Cr-Al alloy, effects of rare earth on preferred orientation in oxide scales (Chinese) 2-22232  
 Fe-Cr-C, hypo-eutectic alloys, solidification, partition of solute elements 2-47033  
 Fe-Cr-C-P, equilibrium segregation of P at grain boundaries 2-5881  
 Fe-Cr-Co, mag. hard, high-temp. transform 2-41604  
 Fe-Cr-Co, permanent magnet, heat treated in miscibility gap, mag. props. 2-36983  
 Fe-Cr-Co-C, permanent mag. props., C content effect, expt. study 2-52062  
 Fe-Cr-Co-Si (27, 17.5, 1 wt.%), mag. and struct. transitions, mag. props. 2-26630  
 Fe-Cr-Cr<sub>2</sub>O<sub>3</sub>, oxidation resist., high temp., effect of dispersed oxides 2-47244  
 Fe-Cr-Mn, unstable austenitic, deform. induced γ-ε-α transition and mech. props. (Russian) 2-51900  
 Fe-Cr-Mn-C, cast, austenite transform., Mn conc. influence 2-51902  
 Fe-Cr-Mo, single crystals, shear band form., fatigue-induced 2-41710  
 Fe-Cr-Mo base amorphous alloys, spontaneous corrosion passivation in 6 N HCl 2-31846  
 Fe-Cr-N, influence of N content on internal friction 2-45374  
 Fe-Cr-Ni (7, 2 wt.%), decomp. of austenite, kinetic and microstruct. study 2-9347  
 Fe-Cr-Ni alloys, low temp. change of mag. struct. and plastic props. 2-22294  
 Fe-Cr-Ni commercial alloys, irradi. induced swelling 2-50716  
 Fe-Cr-P, equilibrium segregation of P at grain boundaries 2-5881  
 Fe-Cr-Si, deform., embrittling σ-phase precipitate effects 2-47046  
 Fe-Cr-Si alloys, oxidation, scale growth morphology 2-27340  
 Fe-Cr-Si-B amorphous ribbons, mag. props. 2-36384  
 Fe-Cr-V-Mn-C, cast, microstruct. characts. and elements distrib. 2-51888  
 Fe-Mn-Cr base amorphous alloys, corrosion behaviour, Mn content effects 2-31845  
 Fe-Ni-Cr, Alloy 800, corrosion, high-temp. in carburising, oxidising and sulphidising environments 2-27337  
 Fe-Ni-Cr, alloy 800H, low-cycle fatigue, high temp., effect of ageing and cold working 2-36951  
 Fe-Ni-Cr, scale-resist., alloying fundamentals 2-2619  
 Fe-Ni-Cr alloy 800 H, high-temp. alloy, carburisation effects conductivity 2-31738  
 Fe-Ni-Cr sputtered films, mag. props., effects of Cr 2-26688

## chromium alloys continued

- Fe-Ni-Cr system, self-diffusion of components in FCC phase of binary solid solns. 2-1653  
 Fe-Ni-Cr-Mo (14.5, 14.5, 2.5 at%), elastic moduli, 300 to 600K, US pulse-echo overlap meas. 2-5170  
 Fe-Ni-Cr-Mo (14.5, 14.5, 2.5 at%), elastic moduli, 300 to 600K, US pulse-echo overlap meas. 2-8554  
 Fe-Ni-Cu-Si-Mn-Cr-C, cast austenitic, struct. and mech. props., heat treatment effect 2-51953  
 Fe-Si-Nb(Cr)(V), anodic processes, galvanostatic conditions 2-47224  
 Fe<sub>35</sub>Co<sub>10</sub>Ni<sub>5</sub>Cr<sub>10</sub>Si<sub>3</sub>B<sub>7</sub>, metallic glass, microhardness and porosity investigation (Russian) 2-2577  
 FeCr<sub>20</sub>Ni<sub>2</sub>Al<sub>2</sub> wire, mass spectrometric anal. of precipitates formed under heat treatment (French) 2-51960  
 Fe<sub>70</sub>Cr<sub>10</sub>P<sub>13</sub>C<sub>7</sub> (Russian) 2-25777  
 γ-Fe<sub>87-x</sub>Ni<sub>x</sub>Cr<sub>13</sub>, spin glass state study (Russian) 2-51410  
 Fe<sub>32</sub>Ni<sub>36</sub>Cr<sub>14</sub>P<sub>12</sub>B<sub>6</sub> metallic glass, crystallisation and mech. props. 2-8447  
 (Fe<sub>1-x</sub>Ni<sub>x</sub>)<sub>78-x</sub>Cr<sub>2</sub>Si<sub>10</sub>B<sub>12</sub> metallic glass, mag. and elec. props. 2-21834  
 Mn-Cr base amorphous alloys, corrosion behaviour, Mn content effects 2-31845  
 Ni-(Mo)-Cr, corrosion resist. 2-2620  
 Ni-B-Si-Cr brazing alloy, rapidly solidified surface melts 2-16935  
 Ni-base alloys, Nimonic PE 16 and 105, γ-precipitating, new aspects of particle hardening mechanisms, TEM study 2-36870  
 Ni-base superalloy, fatigue crack growth behaviour, effect of product form 2-31793  
 Ni-base superalloys, Inconel 718 and Waspaloy, high temp. deform., recrystn. and ageing effects 2-9381  
 Ni-Co-Cr-Al-Y laser treated coatings, struct. 2-30769  
 Ni-Co-Cr-Al-Y plasma sprayed coatings for aircraft gas turbine appl. 2-47262  
 Ni-Cr, Alloy 800, susceptibility to intergranular corrosion 2-52092  
 Ni-Cr, heat-resist., dispersion strengthening with ZrO<sub>2</sub> 2-51927  
 Ni-Cr, magnetic domain wall pinning by lattice defects 2-26653  
 Ni-Cr, plasma deposited, props. anal. using dimensionless complex parameters 2-41552  
 Ni-Cr (20 wt.%), high-porosity, props. 2-17646  
 Ni-Cr (40 wt.%), intergranular oxidation and internal void formation 2-36999  
 Ni-Cr (75, 16 wt.%) Alloy 600, stress corrosion cracking susceptibility, heat treatment effect 2-17768  
 Ni-Cr alloy ultra thin film metallic semiconductors, limitations on usefulness for phonon detection 2-50781  
 Ni-Cr films, segregation, AES, electron diffr. and elec. cond. study 2-45786  
 Ni-Cr sputtered films, mag. props., effects of Cr 2-26688  
 Ni-Cr-Al (15.1, 1.1 wt.%), internal and intergranular oxides development at high temp. 2-37000  
 Ni-Cr-Al (28.8, 1.0 wt.%), internal and intergranular oxides development at high temp. 2-37000  
 Ni-Cr-Al-Co, anisotropic fatigue hardening of single cryst. at elevated temps. 2-13814  
 Ni-Cr-Al-Ti, Alloy 800, γ'-particle coarsening and yield, TEM study 2-31701  
 Ni-Cr-Al-Ti-Mo, tensile behaviour, elevated temp., influence of coherency strain 2-9380  
 Ni-Cr-Al-Y laser treated coatings, struct. 2-30769  
 Ni-Cr-Al-Y/ZrO<sub>2</sub>-8Y<sub>2</sub>O<sub>3</sub> thermal barrier coated rods, assessment of variations in thermal cycle life data 2-31819  
 Ni-Cr-Co-Mo, Rene 95 superalloy powder, precip., STEM and TEM study 2-47032  
 Ni-Cr-Co-Mo-Al-W-Ti-C, heat-resist., cryst. and dislocation struct., var. during cutting 2-51989  
 Ni-Cr-Fe, heat treatment effect on stress and corrosion in BWR, PWR environment 2-29345  
 Ni-Cr-Fe alloy 600, stress corrosion cracking in PWR steam generator 2-49137  
 Ni-Cr-Nb, discontinuous precipitation, alloying addition influence (Russian) 2-51908  
 Ni-Cr-Nb, dispersion-hardening alloys, discontinuous precip. process development, cold plastic deformation influence 2-5885  
 Ni-Cr-Ti, Ti effect on oxidation resistance 2-13864  
 Ni-Cr-W-Mo-Al-Ti (16.9, 4.1, 4.1 wt.%), γ' phase discontinuous precipitation and recrystn. (Russian) 2-51909  
 Ni-Cr-(Mo) fibres, corrosion and oxidation resist., prod. and strength props. 2-41550  
 Ni-Fe-Cr alloys, anal. by X-ray fluoresc. and fundamental parameter approach 2-41960  
 Ni-P-Cr coatings heated in air, struct. and props. (Russian) 2-13858  
 NiCr film heater is pyroelectric anemometer, preparation and flow velocity meas. 2-16393  
 NiCr, substructure after laser irradiation (French) 2-12606  
 NiFe-Cr double layer mag. films, planar Hall effect 2-21565  
 NiFe<sub>2</sub>-Ni-Cr system, struct. transform., conc. depend. (Russian) 2-22196  
 Ni<sub>40</sub>Fe<sub>20</sub>Co<sub>20</sub>Cr<sub>12</sub>Mo<sub>6</sub>B<sub>16</sub> amorphous alloy, H<sup>+</sup> ion bombardment effects 2-50672  
 Ni<sub>45</sub>Fe<sub>20</sub>Co<sub>20</sub>Cr<sub>10</sub>Mo<sub>6</sub>B<sub>16</sub>, metallic glass, crystn., effect of electron irradi. 2-35402  
 Pd<sub>1-x</sub>Cr<sub>x</sub>H, superconducting, Kondo effect and spin-glass freezing due to impurities 2-31140  
 Si-Cr sputtered films, comp. control to control temp. coeff. of resist. 2-51801  
 ThCr, superconducting, sp. ht. meas. 2-31052  
 Ti-Al-Cr-Mo alloy VTZ-1, fatigue testing and strength, statistical regularities 2-37010  
 Ti-Cr, ordering in incommensurate displacement structures 2-16776  
 V-Cr-H, internal friction study 2-45363  
 V<sub>90</sub>Cr<sub>10</sub>, superconducting transition temp., elec. cond., density of states 2-36178  
 W-Co-GB<sub>2</sub>, electric-spark alloying of C steel, microalloying effect on cathode weight gain 2-17780  
 Y-Al-Cr-metal, vacuum plasma sprayed coatings 2-17623  
 Zr-Cr alloys, self-diffusion studies 2-5267  
 ZrCr<sub>2</sub>, H<sub>2</sub> absorbing cpd., XPS and SAM studies 2-22146

## chromium compounds

- see also chromium alloys  
 dichromate solutions, routine kGy dosimetry 2-49189  
 dichromated gelatin film, hologram formation mechanism 2-11665  
 electrolytic oxidation chromic sulphate to chromic acid, Pb anode preparation effects 2-22460



**chromium compounds continued**

- perilase-chromite fused materials, prod. in elec.-arc furnace 2-41566  
 poly(chromium phosphinate) one-dimensional Heisenberg antiferromag., static and dynamic susceptibility 2-13279  
 AgCrS<sub>2</sub>, two-dimens. superionic cond., phonons and ionic cond. 2-45443  
 Al-Cr-B system, B-rich phases grown from melts, X-ray diff. study 2-46904  
 Cd<sub>1-x</sub>Ag<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, deviation from the Bloch law (*Russian*) 2-9003  
 CdBr<sub>2</sub>, layered, two-phonon progressions associated with vibronic excitons, cryst. field spectrum 2-50807  
 CdCr<sub>2</sub>Se<sub>4</sub> (S<sub>4</sub>), ferromagnetic resonance, mag. anisotropy 2-31291  
 CdCr<sub>2</sub>Se<sub>4</sub>, non-linear paramagnetic effect near Curie temp. 2-36306  
 CdCr<sub>2</sub>Se<sub>4</sub>, spin wave self-relax. processes (*Russian*) 2-13282  
 CdCr<sub>2</sub>Se<sub>4</sub>:Ga, ferromagnetic semicond., susceptibility and photoinduced anisotropy disaccommodation 2-26606  
 CdCr<sub>2</sub>Se<sub>4</sub>:Ga, ferromagnetic semicond., complex mag. susceptibility, photo-induced anisotropy 2-36333  
 CdCr<sub>2</sub>Se<sub>4</sub>:Ga, mag. domain struct., photoinduced destabilisation in elec. field 2-13313  
 CdCr<sub>2</sub>Se<sub>4</sub>(S<sub>4</sub>), photoluminescence and elec. struct. 2-46687  
 Cd<sub>1-x</sub>In<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, deviation from the Bloch law (*Russian*) 2-9003  
 Cd<sub>1-x</sub>Zn<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>:Ag, effect of impurity on mag. struct. 2-31141  
 Co<sub>2</sub>Cr<sub>1-x</sub>S<sub>x</sub>, high temp. metal-semicond. transition, elec. cond., DTA and X-ray diff. study 2-36111  
 Cr complex, (η<sup>5</sup>-benzene)tricarbonylchromium (Co), mono-substituted derivatives, configs., moments, electric birefringence 2-29639  
 Cr complex, chromium tetracarbonyl diimine, resonance Raman spectrum and photochem. reactivity 2-4309  
 Cr complex, Cr-bipyridine, catalysts for Belousov-Zhabotinskii oscillating reaction 2-22424  
 Cr complex, tris(acetylacetonato) Cr(III), paramag. relax. reagent for <sup>14</sup>N nucl. screening 2-4329  
 Cr complex tri(acetylacetonato)chromium(III), paramag. relax. reagent for struct. probing 2-24743  
 Cr<sup>3+</sup> ions in crystals, optical spectra, covalency effects 2-22050  
 Cr-Si-B-N system, compatibility phase relations (*Japanese*) 2-51886  
 Cr-Si-N system, phase relations and reactions at 1600°C under 1 atm. N<sub>2</sub> (*Japanese*) 2-22205  
 Cr-V-N solid soln., X-ray emission and absorpt. spectra (*Russian*) 2-27028  
 Cr+Cr<sub>2</sub>O<sub>3</sub> system, thermodynamic props. determ. by EMF method using solid electrolyte electrochem. sensors 2-12776  
 CrB<sub>2</sub>, diffusional interaction with C steel, cast and Armco Fe under glow-discharge conditions 2-31848  
 Cr<sub>2</sub>B<sub>3</sub>O<sub>7</sub>Cl<sub>3</sub>, improper ferroelec. transition, disorder-order parameters, Raman scatt. study 2-31411  
 CrBr<sub>3</sub> bladed crystals, lattice parameters, pycnometric density, stability in air, melting pt., surface struct. 2-40331  
 CrBr<sub>3</sub>, ferromag. and paramag., thermoreflectance spectra, magneto-optical effects 2-31459  
 Cr<sub>2</sub>C<sub>2</sub>, plasma- and vacuum-plasma sprayed composite coatings, props. 2-17761  
 Cr(CO)<sub>6</sub>Fe(CO)<sub>5</sub>, single cryst., EPR spectrum 2-36413  
 CrCl<sub>3</sub> in formate baths, for electrodeposition of black Cr-Co alloy 2-51834  
 Cr<sub>11</sub>Fe<sub>0.7</sub>Al<sub>0.7</sub>Mg<sub>0.5</sub>O<sub>4</sub>, mixed valence spinel, specific site valence, EELS determ. 2-46844  
 CrH<sub>2</sub>, gaseous, max. dissociation energies 2-29726  
 Cr(H<sub>2</sub>O)<sub>6</sub><sup>2+</sup> complex, aq. soln., H<sub>2</sub>O exchange, EXAFS method appl. 2-27021  
 Cr<sub>1-x</sub>Ir<sub>x</sub>O<sub>3</sub> solid soln., mag. props. (*French*) 2-26599  
 Cr-N-MnN solid solns., thermal cond. coeff. determ. in temp. interval 100-1000K 2-40612  
 Cr<sub>2</sub>N, subnitride, diffusivity of N, thermogravimetric technique 2-1659  
 Cr(NCS)<sub>6</sub><sup>3-</sup> in frozen alcohol solvents, phosphoresc. lifetimes 2-2346  
 Cr(NO<sub>3</sub>)<sub>3</sub>, aq. solns., EPR line width 2-43950  
 CrO<sub>2</sub>, electronic struct. and XPS, discrete-variation Xα cluster method 2-30796  
 CrO<sub>2</sub> particles, coercivity, vol. packing fraction depend. 2-21841  
 CrO<sub>2</sub> particles, mag. props., mag. tape appl. 2-21840  
 CrO<sub>2</sub>-AP<sub>2</sub>O<sub>3</sub>-Mo system, thermionic emitter material 2-2487  
 Cr<sub>2</sub>O<sub>3</sub> addition in pyroxyne glasses, catalysed cryst. obs. 2-40288  
 Cr<sub>2</sub>O<sub>3</sub> conversion coatings on Zn plating 2-22376  
 Cr<sub>2</sub>O<sub>3</sub>, internal strain effects, ion-lattice interaction parameters 2-17032  
 Cr<sub>2</sub>O<sub>3</sub>, reaction between Cr<sub>2</sub>C<sub>3</sub> in vac. (*Japanese*) 2-52172  
 Cr<sub>2</sub>O<sub>3</sub>, XPS and UPS 2-36756  
 Cr<sub>2</sub>O<sub>3</sub>:<sup>19</sup>Sn<sup>2+</sup>, Mossbauer study of mag. hyperfine interactions (*Russian*) 2-13382  
 Cr<sub>2</sub>O<sub>3</sub>:Ga<sub>2</sub>O<sub>3</sub>(Al<sub>2</sub>O<sub>3</sub>), EPR line width, nonmag. dopant effects (*German*) 2-21875  
 Cr<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>, solid solutions, inter- and intra-crystalline ion exchange equilib. 2-52201  
 Cr<sub>2</sub>O<sub>3</sub>-Cr composite selective absorbers produced by the ebonizing process, props. 2-42040  
 Cr<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> system, electron microscopic obs. for high-index crystallographic shear phase 2-25699  
 Cr<sub>2</sub>O<sub>3</sub>-ZrSiO<sub>4</sub>, ceramics, densification (*Japanese*) 2-22190  
 CrOBr, crystalline parameters thermal dilatation coeffs. (*French*) 2-1451  
 CrOCl, crystalline parameters thermal dilatation coeffs. (*French*) 2-1451  
 Cr<sub>2</sub>O<sub>3</sub>Cl<sub>2</sub>, IR multiple-photon excitation and electronic emission 2-7557  
 Cr<sub>2</sub>O<sub>3</sub>Cl<sub>2</sub>+inert gas atoms, IR multiphoton excitation, visible chemiluminesc. 2-47345  
 Cr(OH)<sub>3</sub>, dissolution and crystn. mechanism from NaOH soln., ionic equilibria and cryst. phases 2-30426  
 CrO<sub>2</sub>·H<sub>2</sub>O, short-lived reaction intermediate, reson. Raman study 2-722  
 CrP, band struct. and mag. props. 2-30797  
 Cr<sub>2</sub>S<sub>4</sub>, cryst. struct. and domain struct. 2-8490  
 Cr<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub> soln., complex form. and SO<sub>4</sub><sup>2-</sup>-H<sub>2</sub>O interactions, X-ray diff. data 2-52181  
 CrSbO<sub>4</sub>, double oxide, crystal data 2-12555  
 CrSi, K-edge of absorpt. of Si, fine struct. (*Russian*) 2-36734  
 Cr<sub>2</sub>Si, phonon dispersion 2-16731  
 Cr<sub>2</sub>Si<sub>3</sub>, whiskers and hollow crystals, chem. vapour growth 2-30779  
 CrTe, adiabatic magnetisation cooling, rel. to mag. refrigeration efficiency 2-33553  
 Cr<sub>2</sub>Te<sub>3</sub>, mag. props., thermal expansion effect 2-13301  
 Cr<sub>2</sub>Te<sub>3</sub>, magnetisation, temp. depend. 2-13320  
 Cr<sub>0.5</sub>V<sub>0.5</sub>S<sub>2</sub>, cathodic behaviour in Na cell, Na intercalation du ring discharge 2-47470  
 Cr<sub>2</sub>WO<sub>6</sub>, quadrupole interactions, <sup>182</sup>W Mossbauer spectra (*French*) 2-5612

**chromium compounds continued**

- CsI:Cu<sup>2+</sup>, CrO<sub>4</sub><sup>2-</sup> (*Russian*) 2-46614  
 CuCr<sub>2</sub>S<sub>4</sub>, deviation from the Bloch law (*Russian*) 2-9003  
 (CuCr<sub>2</sub>S<sub>4</sub>)(Cu<sub>0.5</sub>In<sub>0.5</sub>Cr<sub>2</sub>S<sub>4</sub>)<sub>1-x</sub>, mag. elec. and thermoelectric props. 2-9005  
 Cu<sub>0.88</sub>Cr<sub>2</sub>Se<sub>3.44</sub>Br<sub>0.64</sub>, magnetic anisotropy, determ. using FMR 2-26626  
 Cu<sub>2</sub>Cr<sub>2</sub>Se<sub>4</sub>·Br<sub>2</sub>, elec. props., anion substitution effect, cond. max. near Curie temp. 2-36044  
 FeCr<sub>2</sub>·In<sub>2</sub>S<sub>4</sub>, electrical props. 100 to 650K (*Russian*) 2-13098  
 Fe<sub>1-x</sub>Cr<sub>x</sub>NbO<sub>4</sub>, prep., cryst. struct., mag. and electronic props. 2-26440  
 FeCr<sub>2</sub>Se<sub>4</sub>, heat treatment effects on props. 2-13276  
 Fe<sub>1-x</sub>Eu<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, synthesis and physicochem. props., semicond. behaviour 2-9256  
 GTe<sub>4</sub>, magnetocaloric effects near room temp., exptl. and theoret. values comparison 2-33536  
 (Ga,Al)As-GaAs heteroepitaxial layers, stacking faults and substructure 2-35515  
 Gd(Cr,Al<sub>1-x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688  
 Gd(Cr,Ga<sub>1-x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688  
 HgCr<sub>2</sub>Se<sub>4</sub>, band struct., self consistent discrete variational Xα calc. 2-12970  
 KBr:Ca<sup>2+</sup>, CrO<sub>4</sub><sup>2-</sup>(SO<sub>4</sub><sup>2-</sup>), Raman spectra of guest ions (*Russian*) 2-46614  
 KCr(SO<sub>4</sub>)<sub>2</sub>·12H<sub>2</sub>O, partial lattice participation in spin-lattice relax. 2-36303  
 KCr(SO<sub>4</sub>)<sub>2</sub>·12H<sub>2</sub>O-KAl(SO<sub>4</sub>)<sub>2</sub>·12H<sub>2</sub>O mixed cryst., Cr ion crystal field spectra, absorpt. spectra 2-41385  
 KH<sub>2</sub>PO<sub>4</sub>:CrO<sub>4</sub><sup>2-</sup>, radiation damage, optical absorpt. spectra and EPR spectra 2-1525  
 KI:Ca<sup>2+</sup>, CrO<sub>4</sub><sup>2-</sup>, Raman spectra of guest ions (*Russian*) 2-46614  
 La<sub>2</sub>Cr<sub>2</sub>N<sub>2</sub>, prep., cryst. struct., and supercond. props. (*French*) 2-9298  
 La<sub>2</sub>O<sub>3</sub>-Cr<sub>2</sub>O<sub>3</sub> system, effects of O<sub>2</sub> pressure on phase rels. at high temp. 2-5859  
 La<sub>2</sub>O<sub>3</sub>-Cr<sub>2</sub>O<sub>3</sub>-CaO system, effects of O<sub>2</sub> pressure on phase rels. at high temp. 2-5859  
 La<sub>2</sub>O<sub>3</sub>-Cr<sub>2</sub>O<sub>3</sub>-CrO<sub>3</sub>, MHD-related materials, O reactivity 2-27153  
 Li<sub>2</sub>Cr<sub>2</sub>PO<sub>4</sub>·3H<sub>2</sub>O, cryst. struct. determ. 2-35469  
 Li<sub>2</sub>O-Cr<sub>2</sub>O<sub>3</sub>-WO<sub>3</sub>, phase relations 2-17668  
 Lu(Cr,Al<sub>1-x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688  
 Lu(Cr,Ga<sub>1-x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688  
 MgO-Cr<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO-SiO<sub>2</sub> constitution changes due to O<sub>2</sub> press. at high temp. 2-31822  
 MgO-FeO(Fe<sub>2</sub>O<sub>3</sub>)-Al<sub>2</sub>O<sub>3</sub>-Cr<sub>2</sub>O<sub>3</sub> system, spinels form. kinetics 2-41598  
 Mn<sub>0.7</sub>Zn<sub>0.3</sub>Cr<sub>2</sub>Fe<sub>2</sub>O<sub>4</sub>, ferrite, Mossbauer study of Cr conc. effect (*French*) 2-13381  
 NaCrS<sub>2</sub>, photoemission and mag. effects 2-36755  
 Na<sub>2</sub>Cr<sub>2</sub>Ti<sub>1-x</sub>S<sub>2</sub> system, cryst. struct., elec., mag., and NMR study 2-40360  
 Na<sub>2</sub>Cr<sub>2</sub>V<sub>0.5</sub>S<sub>2</sub>, form. during Cr<sub>0.5</sub>V<sub>0.5</sub>S<sub>2</sub> discharge in Na cell, struct. study 2-47470  
 Na<sub>2</sub>O-Cr<sub>2</sub>O<sub>3</sub>-WO<sub>3</sub>, phase relations 2-17668  
 Rb<sub>2</sub>CrCl<sub>4</sub>, spin wave temp. depend. 2-26609  
 Rb<sub>2</sub>Cr<sub>2</sub>Mn<sub>1-x</sub> mixed crystals, mag. excitations study by mag. resonance 2-36446  
 Rb<sub>2</sub>Mn<sub>1-x</sub>Cr<sub>2</sub>Cl<sub>4</sub>, spin glass behaviour 2-51414  
 Sn<sub>1-x</sub>Cr<sub>x</sub>Te, mag. props., effect of isothermal annealing 2-41161  
 Ti-Cr-Si(Se)(Te) system cpds., mag. props. and struct. 2-51398  
 (V<sub>1-x</sub>Cr<sub>x</sub>)<sub>2</sub>O<sub>3</sub>, metal-insulator transition mechanism inter pret., review (*Japanese*) 2-16994  
 Zn<sub>1-x</sub>Eu<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, synthesis and physicochem. props., semicond. behaviour 2-9256  
 ZrO<sub>2</sub>-Cr<sub>2</sub>O<sub>3</sub> system, phase equilib. DTA and X-ray diff. study (*French*) 2-27158

**chromosphere**

- Al I meas. of oscillator strengths and autoionisation widths of 3s<sup>2</sup> 3p<sup>2</sup> 3s3p<sup>2</sup> 2P multiplet 2-10308  
 Alfvén waves in solar atmosphere, nonlinear propag. on open mag. flux tubes 2-48208  
 chromosphere-corona transition region, intensities of lines from low-lying levels of B-like ions and Si II 2-48216  
 'cold' chromospheric plasma in solar wind, evidence from obs. of He<sup>+</sup> ions (*German*) 2-3176  
 flare emission in corona transition region in Hα 2-38161  
 flare epithermal electrons, role in form. of anomalous comp. of solar cosmic rays 2-48198  
 flare matter ejections into chromosphere and corona due to mag. field var. (*Russian*) 2-38160  
 flares, chromospheric boundary conditions rel. to stability and uniqueness of coronal loops 2-53237  
 hydrodynamic response to elementary flare burst, effect of heating by accelerated electrons 2-6582  
 models, review and prospects 2-32981  
 network structure near developed sunspot groups, Hα line obs. 2-42672  
 optically thick lines, plage obs. in UV 2-28429  
 plages as explanation for var. in Sun viewed as star 2-10374  
 propagation of adiabatic and linear internal gravity waves 2-10370  
 quiescent filament chromospheric oscils. detect., visible obs. 2-14833  
 quiet Sun, chromospheric network correl. with struct. of 6 cm radio sources 2-53232  
 spectral lines above sunspot umbrae, spatial/ temporal var., visible obs. 2-18745  
 spicules, effect on limb brightening intensity profile in 300-400 μm continuum 2-10363  
 spicules, numerical hydrodynamics of jet phenomena in solar atmosphere 2-48214  
 structural features identified with plasma props. and energy input props. 2-28424  
 surge prominence, hydrodynamic simulation 2-32974  
 transition region, GRIST high-resolution obs. 2-32980  
 transition region, steady flows obs. with Solar Maximum Mission 2-32972  
 transition region models with mag. field and fluid flow 2-10369  
 transition zone transient plasma anal., UV obs. 2-10368  
 Ca<sup>2+</sup> network cells, depend. of size and struct. on heliographic position 2-48211

**chronographs see chronometers****chronometers**

- digital wrist-watches performance improvement by using 4.2 MHz quartz oscillator 2-48677  
 IC clock module appl. (*Italian*) 2-10792



**chronometers continued**

- local chronometric system in Soviet Union 2-28843
- portable, precise time transfer with submicrosec accuracy 2-165

**CIDEP**

- quinone, triplet quenching by organometal donors, CIDEP and ESR study 2-15824

**CIDNP**

- N-acetyltryptophan + 3-N-carboxymethylumiflavin photochemical reaction, time dependence of CIDNP spectra 2-27448
- 1,4-biradical,  $^{13}\text{C}$  CIDNP 2-29628
- chlorophyll, photooxidation, ion-mol. electron exchange, CIDNP study 2-7575
- mutual effect of nuclei upon CIDNP in high fields, violation of Kaptein rules 2-43940

**cinematography see cinematography****cinematography**

- see also cameras; telefilming*
- animated cartoons, computerized drawing device for line changing (*Russian*) 2-33663
- automatic control systems, trends (*Russian*) 2-33662
- automatic exposure control, contact printing of cine films 2-3647
- comtrak - combination photographic soundtrack 2-10899
- copying apparatus for 35 mm films with damaged perforation 2-43122
- CP200, cinema theatre audio processor 2-11993
- development, shooting techniques, sound recording and reproduction film materials and picture distribution (*Russian*) 2-242
- Du Art frame count cueing system 2-19199
- duplex film unit for correction of rerecording audio-control console (*Russian*) 2-15254
- Eastman Color motion picture films, evolution 2-10900
- electronic cinematography camera, design considerations 2-43121
- feed mechanisms vel. of high speed motion picture cameras, optimum stability (*Russian*) 2-28924
- film editing system 2-48828
- frame count cueing system, computer-controlled, for film printing 2-33653
- holographic cinematography of time-varying reflecting and phase objects using Nd:YAG laser 2-49709
- kinematic characts. of cine escapement mechanism calc., numerical solution (*Chinese*) 2-23750
- laser target interaction obs., high-speed cinematography and interferometry developments 2-20354
- make-up tone development, colorimetric characts. of human face (*Russian*) 2-19201
- Mitchell camera, machine and its makers 2-48824
- motion picture cameras, complex evaluation according to resolution (*Russian*) 2-33666
- motion picture printing and grading practice 2-10887
- movie cameras, noise level reduction technique (*Russian*) 2-19200
- Moviecam 3N Mark 2, description 2-48810
- optical sound tracks, distortion-balance test procedure 2-10888
- persulphate bleach and motion-picture film processes 2-48825
- printer control by means of calculated trimmer corrections 2-48826
- processing motion picture films, kinetics of thiosulphate extraction (*Russian*) 2-28922
- projection systems, light flux and illum. uniformity (*Czech*) 2-10894
- rapid processing, testing colour reversal motion picture films for TV (*Russian*) 2-28923
- renovation of motion picture photographic documents using automatic system (*Russian*) 2-33664
- sound motion picture film conversion in another projection freq. (*Russian*) 2-29864
- sound recording studio reconstruction, acoustic features 2-1091
- sound track reproduction, non-silver technique using photodiodes (*Russian*) 2-1106
- space-time image transformation in cinematography, camera pan speed appl. (*Russian*) 2-15252
- Tucson 35-mm fisheye projection lens 2-48827
- zoom lenses, development 2-10898

**circuit analysis computing**

- combined photovoltaic/thermal solar array DC electrical model 2-47481

**circuit breakers**

- vacuum, DC, parallel operation full-scale test and anal. for Tokamak, JT-60 device 2-49176

**circuit design see network synthesis****circuit diagrams**

- photon counting systems, one-electron pulse selector circuit 2-19900
- radio pulse generator, for lasers with high freq. transverse discharge 2-20322
- spectrophotometer, automatic, with punched tape output 2-19152
- synchroniser, for spectra discrete recording 2-19194

**circuit oscillations**

- see also circuit resonance*
- gas-filled spark gap triggered RLC ccts. 2-25669

**circuit reliability**

- see also quality control*
- photomultiplier output amplitude to code logarithmic convertor 2-49233

**circuit resonance**

- see also circuit oscillations*
- No entries

**circuit synthesis see network synthesis****circuit theory**

- see also distributed parameter networks; filters; network synthesis*
- continuous model for simulation of thermal phenomena 2-23600
- randomly diluted network, percolation and conduction 2-120
- soliton-impurity interaction in nonlinear lattice, expt. using LC circuit 2-16738

**circular polarisation see polarisation****circular waveguides**

- No entries

**circumstellar shells**

- see also stellar atmospheres; stellar winds*
- A 0538-66, LMC X-ray binary, compact object accretion from shell 2-14875
- accretion discs, thermal and secular stability of innermost parts 2-33062
- accretion discs in cataclysmic variables, transition from convective to radiative struct. as cause of outbursts 2-38198

**circumstellar shells continued**

- AFGL 618, planetary nebula precursor, near-IR spectrum of circumstellar dust ring 2-3288
- o Andromedae, Be star, Balmer lines vars. since October 1980 rel. to current shell episode 2-38210
- AF Andromedae, S Doradus star in M31 model and spectral obs. 2-10420
- o Andromedae, shell star, UVB photometry and spectrum rel. to new shell episode 2-53278
- A-1 Andromedae in M31, S Doradus star, model and spectral obs. 2-10420
- V1343 Aquilae, eclipsing binary, model involving neutron star and precessing disc, photometry anal. (*Russian*) 2-14889
- V923 Aquilae, spectrographic obs. of Be-star 2-33047
- V603 Aquilae (Nova 1918), evidence for transient features in accretion disc from photometric study 2-3258
- V 1343 Aquilae (SS 433), spectral anal., orbital motion and accretion disk, spectral obs. 2-38190
- RW Aurigae, T Tauri star, circumstellar envelope rel. to YY Orionis line profiles 2-48235
- § Aurigae, UV spectrum during 1979-80 eclipse rel. to circumstellar envelope struct. 2-3269
- Be stars, electron collisions in circumstellar envelopes rel. to Paschen emission lines intensities 2-28475
- black hole accretion disc electrodynamics, absolute-space/universal time formulation 2-38231
- black holes, struct. and variability of dynamo driven accretion discs 2-48272
- Z Camelopardalis, dwarf nova, accretion disc vel. struct. at standstill 2-28469
- VY Canis Majoris, interferometric meas. of flattened circumstellar envelope 2-53255
- VY Canis Majoris, SiO 8  $\mu\text{m}$  line profile interpretation 2-53273
- UW Canis Majoris eclipsing binary, circumstellar lines obs. in UV spectrum 2-3274
- GG Carinae, system struct. involving shell expansion, visible spectra obs. 2-53331
- cataclysmic binaries accretion discs, radiation spectra and disc models 2-42685
- $\mu$  Cephei, late-type variable star, evidence for linear polarisation prod. in photosphere or circumstellar material 2-38206
- FK Corae Berenices, excretion disc model for regular vars. in H $\alpha$  profile 2-33033
- EM Cygni, dwarf nova, accretion disk spectra anal. and component masses, spectral obs. 2-10418
- V1489=NML Cygni, interferometric meas. of flattened circumstellar envelope 2-53255
- V1341 Cygni, X-ray binary, accretion disc UV obs. 2-48289
- Cygnus X-1, black hole models with/without accretion disc, UVB anal. (*Russian*) 2-14891
- Cygnus X-3, cocoon model rel. to X-ray light curve and orbital parameters 2-33063
- Cygnus X-3, scattering gas shell model for X-ray modulation 2-6635
- detection using Mg II 2800 Å line 2-14782
- early-type emission-line stars, radio obs. rel. to circumstellar envelopes and stellar winds 2-38215
- equilibrium of rotating gaseous disc of finite thickness, anal. 2-28339
- excretion disk outer region, gas streamlines in close binary, periodic orbit anal. 2-28500
- flattened circumstellar envelopes, interferometric meas. 2-53255
- gas-dust envelope evolution around massive young stars 2-3247
- U Geminorum, cataclysmic variable, white+red dwarf, accretion disk spectra, component masses, obs. 2-10417
- H2252-035, model of X-rays reprocessing in accretion use rel. to optical obs. 2-6640
- H $\alpha$  line anal. during 1976-8 eclipse, shell emission 2-10488
- HD 152270, Wolf Rayet star, expanding C III envelope model 2-42688
- HD 200775, Herbig Be star, evidence for compact envelope from spectrum obs. 2-48248
- HD 34454, semi-regular variable, brightness var. assoc. with refl. nebula, UVB obs. 2-42697
- HDE 245770 (A0335+26), Be star, spectrum and photometry rel. to shell ejection 2-23305
- HR 2947, giant, possible variability due to thin gas shell form., obs. 2-14854
- TT Hydrae, Algol type close binary, evidence for circumstellar matter 2-48277
- ionization structure in disklike circumstellar envelopes 2-38165
- IR stars, ang. dias. and shapes meas. via spatial interferometry in IR 2-53105
- IRC+10216 (CW Leonis), circumstellar shell props. from IR spectroscopy 2-53381
- late-type stars, circumstellar dust shells obs. using heterodyne spatial interferometry at 11  $\mu\text{m}$  2-53254
- CW Leonis (IRC +10216), interferometric meas. of flattened circumstellar envelope 2-53255
- long period variables, SiO maser radiative pumping model 2-14762
- LSI+61°303, degenerate binary, fast rot. primary with stable shell 2-42724
- RU Lupi, southern T Tauri star, H $_2$ O maser detect. 2-33013
- $\beta$  Lyrae type discs, equilib. figures 2-33064
- magnetic accretion disc, MHD instabilities 2-6628
- mass loss and envelope ionisation 2-38170
- Mira type variables, SiO masers, ground vibr. state prod. 2-14858
- Nova Aquilae 1982, JHKL mags., blackbody temp. and dust shell 2-53286
- novae envelopes, radiatively accel. luminosity depend. 2-23300
- novae IR development, effect of surrounding small graphite grains 2-38211
- OH 0739-14, OH maser IR source, H $_2$ O ice existence, spectral obs. 2-28440
- OH 26.5+0.6, OH/IR star, circumstellar shell/envelope OH maser emission, UHF obs. 2-23299
- RZ Ophiuchi, eclipsing binary, masses, spectral types, accretion disk characts., spectra anal. 2-28501
- RZ Ophiuchi, long-period Algol-type binary, photometric obs. of disc eclipse 2-48280
- 66 Ophiuchi Be star, shells and mass loss at polar latitudes, spectral anal. 2-53274
- $\omega$  Orionis, Be star, shells and mass loss at polar latitudes, spectral anal. 2-53274



**circumstellar shells continued**

- $\alpha$  Orionis, dust shell size, IR speckle interferometry obs. 2-23338
- U Orionis, Mira variable, OH maser emission evolution, UHF obs. 2-6597
- $\alpha$  Orionis, model for circumstellar gas 2-28450
- $\alpha$  Orionis, model for circumstellar gas 2-28454
- RU Pegasi, dwarf nova, orbit and white dwarf accretion disc emission 2-10427
- $\beta$  Pegasi, M-giant shell velocity fields 2-38173
- X Persei, X-ray binary, Be component pulsating shell obs. 2-42722
- photochemistry of C-rich envelopes 2-38166
- protostars, gas dynamics of protostellar nebulae from near IR spectroscopy 2-53264
- protostellar model envelope evolution 2-10403
- pulsars disk system comparison with X-ray pulsars disks 2-38222
- R 71 in LMC, minimum state obs. of S Doradus-type star, expanding envelope 2-28477
- R-association stars shell detect. and IR excesses 2-53339
- RCW 104, ring nebula around WN6 star HD 147419, possible anomalous far UV extinction 2-6605
- 2S 0921-630, X-ray binary optical counterpart, model and flux, UVB obs. 2-48288
- S-type stars in IRC and AFGL catalogues, possibility of circumstellar shells 2-10409
- WZ Sagittae, dwarf nova, mass-transfer bright spot rel. to photometric study in outburst 2-10419
- WZ Sagittae, external ring generation during 1978 outburst rel. to emission-line spectrum 2-33024
- scattering accretion discs in binary systems, linear polarisation and radiation intensity 2-6643
- U Scorpii, recurrent nova, ejecta comp. and mass from UV spectroscopy during outburst 2-33025
- SMC X-1/Sanduleak 160, accretion disc model for light-curve anal. 2-38250
- SS 433, supercritical accretion disk model 2-10431
- supernovae, Type II, interaction of radiation with circumstellar shell 2-33052
- HL Tauri, T Tauri star evidence for circumstellar shell 2-33100
- UX Ursae Majoris, nova-like variable, hot spot features in UV light curve 2-42715
- variable stars of long-period, pulsations, grain condensation and mass loss 2-28461
- vBH 65b, southern T Tauri star, H<sub>2</sub>O maser detect. 2-33013
- white dwarfs, accreting C-O, long term evaluation in binary systems (French) 2-42681
- Wolf-Rayet stars, new search for circumstellar ring nebulae 2-53268
- X-ray binary, compact star, accretion structure orientation, effect of supernova (Russian) 2-38253
- X-ray pulsars disks comparison with radio pulsars 2-38222
- C stars IR spectra comparison with SiC submillimeter grain spectra 2-10408

**civil engineering**

- see also architecture; building; dams*
- earthquake protection building codes 2-37767
- Ontario highway noise barrier R&D programme 2-14150
- outdoor noise barrier performance calc. allowing for near-ground plane propagation 2-14152
- road bridge dynamic response and infrasonic pressure level due to loaded vehicle 2-14141
- seismic strong ground motion, correl. of horiz. components for building design application 2-28008

**civil engineering computing**

- see also architectural CAD; town and country planning*
- cable reinforced membranes, CAD 2-20527
- cable structure analysis, curved element 2-20524
- cantilever beams, large deflections 2-39815
- concrete structures, differential creep stress analysis 2-20548
- elastic frame structures, optimal support reaction 2-18890
- elastic plates, numerical analysis by segmentation method 2-20576
- multistorey building stress direct P-delta anal. 2-10611
- prebuckled domes, nonlinear three-dimens. anal. 2-20563
- recessed shells of revolution, DSISR program appl. 2-39816
- skeletal frames, large displacement analysis 2-20521
- transient acoustic response of submerged shells, DAA2 and IDCA models 2-20575
- unified numerical approach for thermal stress waves 2-50087
- waffle slab analysis, macroelement 2-50107

**cladding techniques**

No entries

**claddings**

- BWR LOCA, bundle partial blockage effects on heat transfer, cladding temp. and quenching 2-39195
- composite metal technology, joining processes and appls. 2-36814
- eccentrically clad fibre, anal. of symmetrical modes 2-49921
- explosive cladding materials, prep. 2-2472
- FFTF, multiduct test assembly, fuel pin life 2-11188
- fission reactor fuel claddings, ferrite content meas. eddy current method 2-24328
- FTF, partial carbide core, transient overpower accident, cladding failure, molten fuel ejection, consequences 2-4097
- KWU LWR plants, pellet clad interaction protection 2-4002
- LMFBR, variable flow allocation scheme optimisation 2-29363
- LMFBR cladding breach monitoring by solid state tagging of fuel element surface 2-24340
- LMFBR transient overpower cladding failure, simulation, computerised test system 2-7276
- metal coating for electrical contacts, tribology 2-31800
- mixed-oxide fast reactor fuel pins, direct obs. of fuel-cladding mech. interaction 2-47128
- nuclear fuel pin cladding, creep relaxation, bending and ovaling stresses 2-39158
- nuclear materials, corrosion and cladding expts., 1942-45 2-18855
- optical fibre waveguides, losses induced by ionising radiation 2-29880
- optical fibres as temperature sensors using cladding and jacket loss effects 2-25117
- optical waveguide, hollow core, oxide-glass-cladding, loss calc. 2-44445
- pellet-clad interaction predictions, in-pile irradiations for verifications 2-29324
- pellet-cladding interaction of LMFBR fuel elements 2-39159

**claddings continued**

- reactor fuel performance testing with respect to pellet clad interaction 2-7167
- steels compatibility in FBR in high temp. Na (Japanese) 2-7160
- structural materials in fast reactors, Doppler effect 2-7158
- tube ballooning problem with account of displacement and bending components 2-39112
- Zircaloy, I<sub>2</sub> SCC, lab. data, phenomenological model, in-reactor behaviour prediction 2-31835
- Zircaloy, mechanics of fluting process 2-27318
- Zircaloy, pellet-cladding interaction failure, occurrence on power ramping 2-29323
- Zircaloy clad fuel rods, ZrO<sub>2</sub> corrosion films, eddy current meas. 2-24333
- zircaloy cladding, irradiated, stress corrosion cracking 2-31823
- Zircaloy cladding, irradiated, stress corrosion cracking relevance to pellet-cladding interaction failure 2-31824
- Zircaloy-2 fuel cladding tubes, external pressure creep (Japanese) 2-11179
- Zircaloy-2 tubings, I-induced stress corrosion cracking, surface condition influence on crack initiation 2-31844
- Zircaloy-4, creep and irradiation growth models development and correl. 2-39110
- Zircaloy-4 cladding, chemical interaction with simulated fission products at elev. temp. 2-49112
- Zircaloy-clad UO<sub>2</sub> elements, cladding strain; fuel density and relocation effects 2-39137
- InGaAsP low threshold DH lasers double clad with InGaAsP confining layers 2-29815
- U alloy target, Zircaloy-2-clad, design and evaluation for pulsed neutron source 2-29472
- UO<sub>2</sub>-PuO<sub>2</sub> mixed oxide fuels pellets, PuO<sub>2</sub> microheterogeneities limiting sizes specification 2-4004
- UO<sub>2</sub>-Zircaloy-2 interactions, defects location through fission product release 2-29325

**classical algebra *see algebra*****classical field theory**

- see also classical mechanics; electromagnetic field theory; gravitation; special relativity*
- approximately relativistic particle interactions, time symm., radiation 2-38455
- automorphic systems of scalar fields 2-28678
- book 2-3339
- charged nonlinear Dirac field in Coulomb pot., bound states 2-28677
- configurations of field problem grids, optimisation using network models 2-6753
- Dirac delta function, products and compositions 2-33310
- generalised field theory, linearised field equations. 2-28732
- helicity operator for integral spin fields 2-28676
- interacting gravitational and matter fields, Hamiltonian structure 2-18932
- physical fields, averaging 2-3400
- vector and tensor eqns. of motion of spin in orthogonal fields 2-18933

**classical mechanics**

- see also classical mechanics of continuous media; classical mechanics of discrete systems; classical theories of fluid structure*
- collision of a solid body when boundary conditions apply (French) 2-28643
- constrained systems, symm. transformations (Chinese) 2-38414
- constrained systems, transformation props. (Chinese) 2-38432
- damped harmonic oscillator, classical and quantum mechanics 2-33364
- dynamic response by means of functions of matrices 2-18887
- Galilean space-time rules 2-18875
- motion of a sphere on a tilted turntable 2-10571
- Newtonian mechanics, new formulation of fundamental law of motion 2-18873
- Noether's theorem generalisation 2-23429

**classical mechanics of continuous media**

- see also elasticity; fluid mechanics; mechanical contact; plasticity*
- beam, rigid plastic, deflection by rigid circular indenter 2-8055
- beam transverse shear and rotary inertia Gaussian model 2-18910
- beams and plates, fixed, lateral loading behaviour 2-8056
- boundary element methods, plasticity and elasticity problems, book 2-48414
- Burgers equation, analytic linearisation, Hamiltonian formalism and infinite sequences of const. of motion 2-10600
- cable models, finite segment, fluid force representation Lagrange equations 2-20522
- cable structure analysis, curved element 2-20524
- cantilever beam vibration, rigid clamping by use of welded joints, crack depth in joint, comments and reply 2-8074
- cantilever plates, rotating, pre-twisted and tapered, low aspect ratio, vibration anal., finite element method 2-12067
- cantilever variable cross section optimal design, dynamic programming 2-20530
- cantilevered articulated pipe conveying fluid, stability, attached mass and damping effects 2-38433
- circular plates of variable thickness, vibration anal. for elastic edge restraint and boundary clamping 2-20589
- circular plates with simple support, natural vibration freqs., comments and reply 2-1136
- Clausius-Duhem inequality, continuum mechanics, second law of thermodynamics 2-3378
- complete spherical shells, axisymmetric branching behaviour, bifurcation theory 2-20526
- complex structure vibration, modal constraint method of anal., eigenvalues/eigenfunctions of structs. 2-8075
- composite, effective elastic moduli determ. w.r.t. hollow spherical inclusions 2-41665
- composite material dynamic response modelling, mixtures theories 2-30006
- composite material transition layer phenomenological model, component chem. interaction (Ukrainian) 2-35050
- composite materials, mechanical behaviour, application of stress and strain polarization tensors (French) 2-44
- composite materials overall props., theoretical determ. 2-15046
- composites, fibre-reinforced, elastic-viscoplastic, continuum theory 2-50077
- cylinder, micropolar, elastic, normally loaded, couple stresses 2-48506



**classical mechanics of continuous media continued**

- cylindrical shell imperfectly bonded to surrounding continuum of infinite extent, dynamic response 2-35054  
 cylindrical shell support, design (*Russian*) 2-8054  
 deformable media, with couple stresses, nonlinear models 2-30010  
 EHD stream, bipolarly charged disperse, propag. of perturbations 2-4898  
 elastic anisotropic materials, stress anal., effects of change of reference coords. 2-25241  
 elastic isotropic medium, voids of min. stress conc. 2-18895  
 elastic material mixture, plane wave energy phase group and motion vels. (*Ukrainian*) 2-33294  
 elastic sheet, infinite, with infinite row of colinear straight cuts, stress and strain anal. (*Russian*) 2-47  
 elasticity dilation theory 2-15030  
 elasticity variational principles derived from the matrix structural analysis equations 2-48507  
 engineering structures, effective finite element anal. in nonlinear range 2-16230  
 fluid saturated porous solid, Biot eqns. of motion, comparison to Derski's 2-15019  
 fluid with microstructure, entropy flux formulation (*French*) 2-6816  
 frame, two-dimens., geom. nonlinear analysis, mixed-hybrid finite element model (*German*) 2-50079  
 gases with integrable pair interactions, high temp. expansion, Borel summability 2-23446  
 half space, nonhomogeneous, transversely isotropic, torsion 2-48505  
 homogeneous media, isotropic props. (*French*) 2-42857  
 inelastic underwater umbilical, hydrodynamic and gravity loading, static loading 2-28652  
 inhomogeneous continua, modulation instabilities in coupled mode system 2-42874  
 layered Earth, shear moduli and density profiles, from torsion-vibr. data 2-28036  
 layered media, analytic method for strong motion studies 2-1133  
 layered media, mech. problem solving 2-8034  
 local vibration response for system subject to harmonic forced excitation 2-20588  
 materials with continuous transition between two states 2-28658  
 membrane stretched by inextensible strings at opposite edges, free vibration, natural freqs. and mode shapes 2-12070  
 Mindlin plates, transient and pseudo-transient anal. developments 2-39802  
 mixed problems in arbitrary domains 2-15043  
 Mooney-Rivlin materials, finite incompressible elasticity problems, asymmetric simplicial finite element method solns. 2-10614  
 multibody systems dynamics 2-15033  
 multiple-parameter systems instability 2-15022  
 non-standard analysis and material systems 2-20518  
 non-standard analysis and material systems 2-20519  
 nonholonomic nonconservative systems, anal. 2-15020  
 nonlinear hydrodynamic fluctuations around equilibrium 2-48509  
 nonlinear thermoviscoelasticity, semi-inverse method in quasistatic problems 2-16246  
 normal vibration modes for two degree of freedom system subject to random excitation 2-20591  
 on smooth materially uniform simple bodies 2-18886  
 orthotropic body, plane problem soln. by R-function method (*Ukrainian*) 2-48504  
 plastic continuum, collapse state computation, limit anal., mixed finite element approx. 2-18897  
 plate, isotropic, dislocation config. stress fields 2-50076  
 plate, thin infinite elastic, external crack problem, transform method of soln. 2-12102  
 plate finite elements based on Mindlin theory, four-node bilinear isoparametric element 2-50085  
 plate submitted to rupture criterion, optimal design 2-23440  
 plates, elastic, axisymmetric, optimal design, regularised formulation 2-25242  
 plates, limit solns., minimisation approach 2-28654  
 plates, orthotropic, generalised theory, boundary-value problem soln. 2-28659  
 point defects as sources of micropolar effects in elastic continua 2-28668  
 random media, bounds for non-local effective props. 2-6740  
 rectangular plate with offset mass, rocking freq. 2-20590  
 rigid perfectly-plastic body undergoing finite deforms., dynamics, dual extremum principles 2-6741  
 rigid solid subject to constraints, shock effects (*French*) 2-50082  
 rigid-perfectly plastic continua, limit anal., mixed formulation and mixed finite elements 2-50081  
 rod stability during simultaneous torsion and axial compression 2-35051  
 rotating disc, high speed, reinforced by laminating and hoop winding method 2-4712  
 rotating rotor, axis motion stability 2-25244  
 semi-free liquid sphere, axial and tangential vibr. modes (*French*) 2-33298  
 semiconductors, intrinsic deform., tricontinuum theory 2-50083  
 shell, conical, const. thickness, thermal stress 2-39803  
 shell, cylindrical, stability under nonuniform asymmetric loading 2-6742  
 shell, cylindrical orthotropic, subjected to moving periodic load, nonlinear stability 2-35077  
 shell, spherical, compliance coeff. 2-30013  
 shell of arbitrary shape, refined appl. theory construction 2-48502  
 shell theory, boundary-value problem, numerical method of integrating nonlinear difference eqns. (*German*) 2-42  
 shells, circular cylindrical, symmetrically loaded, limit anal. by linear programming (*French*) 2-1124  
 shells, composite, method for constructing Green's type matrices (*Ukrainian*) 2-25240  
 shells, cylindrical, strength increasing by local material weakening 2-30012  
 shells, cylindrical, with elastic frames, stability, expt. investigation 2-8059  
 shells, finite element analysis, numerical integration effects 2-25239  
 shells, shallow, under unilateral constraint, post-buckling soln. existence 2-18894  
 shells, thin, geometrically nonlinear behaviour, mixed finite elements based on Marguerre theory 2-30004  
 shells and bars, cylindrical, short, thin-walled, displacements and normal stresses taking account of shear 2-8033  
 shells of revolution, anisotropic, conc. boundary load effects, Fourier series 2-25243

**classical mechanics of continuous media continued**

- shells of revolution, nonlinear, finite element models 2-44648  
 skeletal frames, large displacement analysis 2-20521  
 solid mechanics, bound energy definitions (*French*) 2-28656  
 solids, deform. and fracture, power-type constitutive eqns. 2-30005  
 solids, diatomic, viscoelasticity 2-30007  
 structural continua, minimum weight design, finite element method 2-20520  
 structural defects, metric and non-metric spaces 2-48499  
 structural mechanics, determinantal eqns. 2-23444  
 symmetrically loaded spherical shell, forces, moments, displacements 2-30011  
 thermomechanical materials, generalised theory 2-28657  
 thermomechanics, invariable eqns. space time coordinate transforms 2-15018  
 thin cylindrical shells, theoretical anal. of linear dynamic eqns. rel. to error in Donnell assumption and in-plane inertia neglect 2-8032  
 thin shells theory, asymptotic method of anal. 2-15021  
 thin-walled struct. in centrifugal force field, dynamical props. 2-44649  
 three-layer circular plates, vibration anal., effect of in-plane inertia forces, computer studies 2-12072  
 Timoshenko beams, vibration anal., second freq. spectrum 2-12071  
 Timoshenko shear-flexible beam element reduced integration 2-50080  
 trussed type structures, explicit optimum design 2-20525

**classical mechanics of discrete systems**

- see also *N-body problems*  
 apparent acceleration simulation 2-18881  
 asymmetric solid acted upon by const. and dissipative perturbing moments, evolution of rotation 2-23422  
 body in circular orbit under Lorentz forces, plane oscills. (*Russian*) 2-35  
 bound integrable systems, phase-space tori, geometry 2-38413  
 bounded systems, post-Newtonian spin and ang. momentum 2-38424  
 cables, slack, with discrete masses, vibrations 2-44646  
 calculus of variations, inverse problems 2-18876  
 charged particle dynamical motions, equilib. conditions 2-29768  
 circular billiard table, deformed, classical mechanics, regularity and chaos 2-10588  
 classical and quantal, relativistic and nonrelativistic elementary particles, state spaces 2-33759  
 classical and quantal systems of imprimitivity 2-33336  
 collective variables, classical analogy to quantum theory 2-38477  
 columnar objects, collision between 2, repulsion coeff. and impact force 2-35048  
 computational complexity of a rigidity problem 2-48483  
 conservative Hamiltonian system, correlation function method for stochastic transition detection 2-23577  
 conservative system, period doubling bifurcations and universality 2-23427  
 conservative system of point particles, time meas. inexactness implications 2-48485  
 constrained dynamical system, with external forces, consistency 2-38416  
 coupled oscillator system study by modulated amplitude method (*French*) 2-32  
 deterministic system, random processes, symbolic dynamics 2-3491  
 device with a disc spring, elasto-frictional characs. (*Russian*) 2-30002  
 disc, rolling, stability based on dynamic conditions (*Russian*) 2-50074  
 disordered system, effective medium theory 2-48488  
 dissipative bifurcation ratio in area-nonpreserving Henon map 2-31  
 dissipative dynamical system, turbulence, review 2-113  
 dissipative dynamical systems, universality for area-preserving maps of plane 2-23425  
 double strange attractors in rigid body motion with linear feedback control 2-18878  
 Duffing equation system, chaotic motion, periodic stationarity 2-48489  
 dynamic systems, equivalent descriptions, differential geometry 2-38418  
 dynamic systems, qualitative catastrophe theory (*Dutch*) 2-48500  
 dynamical system, chaos in ordinary differential eqns. numerical anal. 2-23576  
 dynamical system, kinetic theory foundations 2-19005  
 dynamical system, stochastic reson. mechanism 2-10716  
 dynamical system, universal behaviour in families of area-preserving maps 2-18879  
 dynamical system chaotic motions and strange attractors, review 2-3492  
 dynamical system with infinite-dimensional phase space, uniqueness of Kubo-Martin-Schwinger states 2-6737  
 dynamical systems, local symmetry vector, first integral, inverse problem 2-38417  
 dynamical systems small random perturbation and attractor definition 2-23419  
 dynamically controlled system with variable masses, motion control 2-6732  
 ellipsoidal leptoformous systems, energy shape depend. 2-10591  
 equivalent potentials in classical mechanics 2-28648  
 Euler-Lagrange eqns. differential geometry and Lagrangian dynamics inverse problem 2-3372  
 fluctuations transient growth when sweeping system through bifurcation 2-19022  
 gyroscope motion, power series soln. (*Russian*) 2-50075  
 gyroscope with elastic main-axis ball bearings, translational vibr. effect on errors 2-25238  
 gyroscope with noncontact suspension on two-component vibr. of base, resonant motion 2-25237  
 gyroscopes, two, drift during ang. base oscills. (*Ukrainian*) 2-50073  
 hamiltonian system, noncanonical symm., isospectral representation 2-38419  
 Hamiltonian systems, symmetries and conservation laws 2-28646  
 Hamiltonian systems exhibiting chaotic motion, nonlinear diffusion 2-38582  
 Hamiltonian systems with two degrees of freedom, horseshoes in perturbations 2-48484  
 Hamiltonians, quadratic multidimens., exact propagators, initial value soln. 2-6757  
 heavy solid motion with ang. vel. of const. modulus 2-44647  
 Henon-Heiles oscillator, power of chaos, numerical expts. 2-23574  
 high-velocity solid and liquid bodies collision dynamics 2-15011  
 impulse flight trajectory in central gravitational field, conjugate variables variation computation (*Russian*) 2-48491  
 integrable problems of classical mech. (*Russian*) 2-15014  
 islets of stability beyond period doubling 2-38420  
 Lagrangian mechanics, inverse problem, symm., first integrals 2-38415



**classical mechanics of discrete systems continued**

- lagrangian systems, first integrals 2-42850  
 Lax representation for the systems of S. Kowalevskaya type 2-3371  
 logistic system behaviour, external noise influence 2-38574  
 Lorenz system, global bifurcation structure interpretation 2-19023  
 Maltese-cross mechanisms, pin-slot clamp appl. (*Russian*) 2-30003  
 mechanical oscillatory systems, identification (*Russian*) 2-30001  
 mechanisms of stochasticity in classical dynamical systems, book contrib. 2-10725  
 multiple-parameter systems instability 2-15022  
 non-symmetric nonlinear system subject to random excitation, non-stationary responses 2-8072  
 nonlinear reaction-diffusion eqns. symmetries and solns. 2-23428  
 nonlinear systems, approx. anal. by Laplace transform, comments on use of operational calculus 2-6734  
 non-Noether symmetries, associated conserved quantities 2-48487  
 nonstationary vibration during acceleration through two critical speeds (without damping) 2-30  
 one-dimensional classical system, Yang-Lee edge behaviour 2-19066  
 open systems, Lagrangian mechanics 2-10589  
 oscillator in external force, Fokker-Planck eqn. for Brownian motion, stationary soln. 2-48619  
 particles with spins, classical dynamics 2-48492  
 pedagogic potential of a biased sphere 2-38391  
 pendulum, composite, periodic oscills. 2-3369  
 perturbed Hamiltonian systems, integrability 2-33280  
 phase-space classical map for periodically kicked particle 2-23497  
 power-law pot. and bound state 2-48532  
 quantum theory, extended particle theory interpretation 2-28690  
 random behaviour of deterministic systems 2-19030  
 rectangular bar and rectangular beam, collision, impact force and kinematics 2-35049  
 rectangular domain mixed boundary-value problem, soln. completeness 2-6735  
 regular first order system, differential eqns., genotopic transformations and Lagrangians 2-48486  
 retarded van der Waals interaction, between plates and spheres, approx. expressions 2-27484  
 rheonomic system, Carnot theorem 2-48490  
 rigid body inertia tensor, elastic deform. effect 2-23424  
 rigid body planar motion around a fixed point, stability in Newtonian force field (*Russian*) 2-15013  
 rigid body subjected to gyrostatic force, motion about fixed point (*Italian*) 2-3368  
 rigid body uniform rots. around principal axis, stability 2-3370  
 rigid body with fixed point, eqns. of motion in Cayley-Klein coords. (*Russian*) 2-15012  
 rigid mass connected to elastic half-space by elastic rod, transient torsional vibrs. 2-25236  
 rigid-plastic discrete structure subjected to dynamic forces, work-hardening adaptation 2-8031  
 satellite in circular orbit, optimal reorientation 2-23423  
 satellite motion about its centre of mass, gravit. and Lorentz force moment effects (*Russian*) 2-33282  
 satellite motion relative to centre of mass, Lorentz force effect (*Russian*) 2-36  
 saws, disc cutting, motional stability (*Russian*) 2-8030  
 solid body rotation, optimal control 2-42849  
 spinning particle, canonical theory of multipliers 2-33288  
 string dynamics, elliptical operators (*French*) 2-33278  
 three particles on a ring 2-28649  
 time-dependent nonlinear Hamiltonian systems, exact invariants 2-33281  
 time-dependent nonlinear systems, dynamical Noether invariants 2-18877  
 transient states, threshold and shaping actions, nonlinear analysis 2-3373  
 transverse freq. vibr. ratio for loaded and unloaded rubber strings 2-48438  
 two interacting particles classical system, approx. relativistic centre-of-mass variables 2-3374  
 vertical pendulum, Hamiltonian maps in complex plane 2-23426  
 vibrating systems, discrete, damped, eigenvalue computation, reduction and iteration (*German*) 2-28645  
 vibration absorbing device, optimisation (*Russian*) 2-8029  
 viscoelastic sphere, motion in central Newtonian force field 2-6731

**classical theories of fluid structure**

- see also kinetic theory; liquid theory*  
 charged hard spheres, correl. functions, first order corr. 2-50499  
 fluids, Percus-Yevick eqn. for triangular well pot. for  $n=2$ , perturbation soln. 2-1378  
 fused-salt binary mixtures, hard-sphere theory applic. to isothermal compressibilities 2-16703  
 hidden structure in liquids 2-50507  
 ionic systems, binary distrib. function calc. (*Russian*) 2-25708  
 two dimensional fluids, statistical mechanics via complementary var. principles 2-25704  
 two dimensional fluids, statistical mechanics via complementary var. principles 2-44997

**classification**

- see also indexing*  
 galaxies active nuclei, empirical results on emission lines intensities and widths 2-28543  
 galaxy images automatic classification, appl. of Fourier structural anal. 2-33144  
 noise phenomena classification 2-46087  
 remote sensing, statistical scale-up estimators for surveys where detect. and classification errors exist 2-18603  
 seismic wave propagation, systematic classification of layer-induced transverse isotropy 2-9949  
 sdfp systematic classification, of chem. compounds, minerals, oxides 2-50573  
 steel, low-alloy, sintered, density effect on tensile strength, fracture toughness and fatigue crack propagation 2-41734

**classification, pattern *see* pattern recognition****clathrates *see* molecules; organic compounds****clay**

- based ceramics, separation of sintering mechanisms 2-31670  
 clay-quartz-feldspar ceramic, mechanical strength, in dehydroxylation temp. region (*Czech*) 2-27179  
 filler for rubber 2-47004

**clay continued**

- 1:1 layer minerals, mag. props. and struct. 2-26589  
 San Andreas fault gouge, permeability and strength under high press. conditions 2-28072

**cleaning *see* surface treatment****cleanliness *see* hygiene****cleavage fracture *see* brittle fracture****Clebsch-Gordan coefficients**

- see also elementary particle theory*  
 group  $SO_5$ , complete systems of Clebsch-Gordan coeffs. 2-28714  
 hexagonal crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50572  
 monoclinic crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50571  
 $O(n)$  generator matrix elements and semisimple Lie group, Wigner coeffs. 2-33758  
 orthorhombic crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50571  
 $pd^N$  electron system in cubic field, p-electron spin-orbit interaction 2-24567  
 $SU(2)$  group, Clebsch-Gordan coeffs. and Han polynomials (*Russian*) 2-48553  
 tetragonal crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50571  
 triclinic crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50571  
 trigonal crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50572

**climatology**

- see also atmospheric humidity; atmospheric precipitation; sunlight; wind*  
 N.Africa in Late Quaternary, from Atlantic aeolo-marine dust deposits anal. 2-10171  
 SW Amazon basin, Holocene climate and forest cover (*French*) 2-3081  
 American, climatic stability before 1900 AD 2-14594  
 Antarctic sea ice decrease due to atmos.  $CO_2$  increase 2-47912  
 Arabian Sea 150 kyr  $^{18}O$ -pollen record 2-52922  
 N Asia, Pliocene and Early Pleistocene climatic changes 2-52924  
 atmosphere  $CO_2$  content rel. to climate, implications of ice core sample 2-37958  
 Australasia, coastal regimes tropical cyclone activity and sedimentation, erosion and flooding 2-14526  
 Bolivian Andes, variation in type and annual distrib. of precipitations (*French*) 2-14511  
 Changbaishan northern slope, vertical climatic zone features (*Chinese*) 2-2633  
 S.Chile, temp. and precipitation extended to 43000 yr BP 2-18563  
 cloud feedback in 1-D radiative-convective model 2-18561  
 conference on energy and climate, Munster, Germany (March 1980) 2-48402  
 Cretaceous/Tertiary boundary 2-37869  
 Earth radiation budget effects 2-37947  
 Egyptian, adobe bricks as record of past 3000 yr mag. field, climate link 2-2992  
 central England, cold winter occurrence during 1861 to 1980 period 2-23103  
 ensemble framework for describing GCM climates 2-28190  
 forecasting methods (*German*) 2-28196  
 general circulation model of climate, effect of geographic cloud distrib. 2-42462  
 glaciation time scale model, with mantle and ice sheet flow 2-10157  
 global climatic model, incorporation of thermal energy advection (*Spanish*) 2-10156  
 global surface temperature, 1600-1950, rel. to atmospheric  $^{14}C$  activity and solar activity 2-47948  
 global temperature, semi-empirical Budyko-Sellers class model 2-14599  
 global warming, man-made, possible consequences 2-6424  
 S. Greenland, ice core record of summer weather, since 200 BC 2-3082  
 Holocene climate deduced from Amazonian forest cover records (*French*) 2-3081  
 Early Holocene monsoon climate, model involving Earth's orbit parameters 2-32634  
 Holocene palaeoclimate of SE Ghana, wind speed and rain 2-28194  
 hydrodynamic models of climate change (*Russian*) 2-47998  
 ice age climate and wind strength, E.Antarctic ice core study 2-3083  
 ice age climate model, annual snow-ice boundary cycle 2-42463  
 N Indian Ocean, glacial to interglacial contrasts 2-52920  
 interannual vars., model (*Russian*) 2-47995  
 Iowa, dendroclimatic reconstruction of annual precip. amounts since 1680 2-23100  
 Lake Manitoba, Canada, climatic vars. rel. to Late Quaternary history 2-14508  
 marine palaeoclimatic record, rel. to age of Ipswichian fauna of Victoria Cave, N.England 2-37806  
 Mauna Loa Observatory, Hawaii, back trajectories five year climatology 2-10106  
 methane increases leading to global warming due to modified stratosphere 2-2820  
 models of climate, prediction, review 2-23101  
 monsoon rainfall during Holocene times 2-28193  
 Northern Hemisphere, model study of relation between glaciation and precip. rates 2-18560  
 Northern Hemisphere climate, effects of Arctic sea ice changes due to Soviet river diversions 2-6376  
 northern hemisphere ground level air temp., climatic changes (1881-1978) 2-14598  
 Phanerozoic land-sea and albedo variations as climate controls 2-52921  
 Pleistocene glacial periods, effects of Arctic Ocean ice sheets on  $O$  isotope and sea level records 2-37876  
 pole shift and climatic var. due to asteroid impact 2-22874  
 prediction, long range, quantitative approach 2-32590  
 Qinghai-Xizang (Tibet) plateau, climate change during last 2000 years (*Chinese*) 2-18559  
 quasi-geostrophic dynamical model of atmos. using max. entropy production states concept 2-6417  
 Quaternary palaeoclimate, conf., Toronto (May 1979) 2-33240  
 remote sounding of atmosphere and ocean, for climate research 2-3102  
 seasonal temp. var. monitoring using branching reef coral growth 2-10158  
 solar activity effects, mechanism 2-6425  
 solar constant perturbation model with albedo feedback 2-47997



**climatology continued**

- solar constant variations effect on climate, via surface evaporation changes 2-28192
- solar cycle UV variations influence on tropospheric climate 2-18564
- solar luminosity changes, effect on climate and palaeoclimate 2-18565
- solar UV radiation variability influence on climate 2-52923
- solar variability and stochastic effects, energy balance model 2-18566
- Southern Ocean bottom current fluctuations, effect of palaeoclimate 2-32536
- stochastic perturbations to energy balance model 2-3085
- structure and evolution (book) 2-23388
- sulphate content of polar ice cores, determ. by static elec. cond. obs. 2-28223
- surface temperature, effects of atmospheric CO<sub>2</sub> and chlorofluoromethanes 2-32142
- surface temperature, sensitivity to increased atmospheric CO<sub>2</sub> 2-18562
- temperature distribution, climatic theory based on energy balance 2-48166
- thermodynamic dissipation and the global climate system 2-3084
- Tigris-Euphrates streamflow estimation, climate and precipitation 2-14503
- tropical climate anomalies, time series anal. 2-28195
- United States (Midwest), weather influenced by aircraft contrails 2-14567
- Vancouver Is., Late Pleistocene palaeoclimate 2-52753
- weather records and extremes in recent years 2-14595
- CO<sub>2</sub> climate problem, role of ocean-atmos. energy transfer and interactions 2-28191
- CO<sub>2</sub> content from two dimens. C cycle model 2-14596
- CO<sub>2</sub> doubling in climate model, feedbacks and synergisms 2-47996
- CO<sub>2</sub> effect on climate, review of greenhouse problem 2-10166
- CO<sub>2</sub> effect with atm. circulation model and climatological ocean 2-14597
- CO<sub>2</sub> increase due to fuel combustion, radiative-convective model 2-42464
- CO<sub>2</sub> increase due to man, past and projected climate changes 2-23102

**climb, dislocation** *see dislocation climb***clock paradox** *see special relativity***clocks**

- see also atomic clocks; chronometers; time measurement*
- batteries development, Li miniature batteries characts. comparison 2-52312
- cardboard clock, educational project 2-38397

**closed circuit television**

- Magnox nuclear power station, monitoring using stereoscopic TV system 2-15583
- poolside fuel examination in Westinghouse PWRs 2-24364
- security system CCTV, video disc recording appl. 2-43544

**closed loop control systems** *see closed loop systems***closed loop systems**

- see also feedback*
- Abnormal Transient Operating Guidelines programme for nuclear power station operators 2-29412
- automatic temperature control, principles 2-42997
- gyroscope, fibre-optic, closed-loop, low-noise 2-4602
- helical MHD plasma oscillations stability, effect of vacuum chamber and control shell 2-50407
- Xc arc lamp, radiant flux stabilisation 2-25091

**cloud chambers**

- ethanol, thermal diffusion, cloud chamber meas. nucleation rate variation with supersaturation 2-8596
- expansion cloud chamber for homogeneous nucleation studies 2-23802
- flows with nucleation and condensation 2-8204

**cloud physics** *see clouds***clouds**

- see also atmospheric precipitation; sky*
- Arabian Sea monsoon, vertical current, cloud layer and wind anal. 2-32621
- boundary layer interaction with clouds, parameterisation in large-scale meteorological models 2-10110
- cirrus, albedo to solar radiation and influence on atmos. heat budget 2-3091
- cirrus, optical props. and gross struct., lidar and IR obs. 2-28144
- cloud cluster (GATE) low-level vertical fluxes 2-47965
- cloudiness, effect on urban O<sub>3</sub> plume 2-28120
- condensation nuclei, S. Florida summertime meas. 2-28153
- condensation nuclei observed at Valladolid Spain (weather modification site) (French) 2-42433
- convective cloud simulation model with wave-permeable lateral boundary conditions 2-18518
- convective raincells in Illinois 2-32585
- cumulonimbus at midlatitude, model with ice phase parametrization 2-6416
- cumulus, vertical struct. of H<sub>2</sub>O and temp. 2-23094
- cumulus (small), tethered balloon obs. of turbulence and droplets 2-23078
- cumulus cloud development, assessment of stage by probabilistic method 2-28182
- cumulus convective pulsating tower, microphys. development 2-3076
- daily mean cloudiness appl. to evaluation of monthly sunshine duration 2-14556
- dispersal by linear heat source, calc. of clearing zone 2-28184
- diurnal asymmetry in bright sunshine hours in New Zealand, cloud cover effects 2-37959
- droplet growth by condensation, two-stream Maxwellian kinetic theory 2-28142
- droplet impingement onto a cylinder, finite element calc. 2-28228
- droplet shape classification using statistical pattern recognition 2-14569
- electric charge separation in convective clouds 2-42430
- ensemble model construction involving moist convection and radiative cooling (Russian) 2-18507
- estimation of cloud cover, comparison of satellite and all-sky camera methods 2-14570
- global surface temp. models with variations in cloud cover 2-28187
- gravity wave cloud formations at California coastal site 2-23098
- hailstone embryo types, classification 2-28166
- height meas. using eyesafe laser rangefinder 2-3110
- ice nucleation process, expansion cloud chamber expt. 2-18515
- Indian Ocean large scale cloud patterns aligned with wind fields 2-6412
- IR radiative transfer in cloudy atm., used to find thermodynamic props. 2-3090

**clouds continued**

- laser beam propagation meas. of 2-32643
- laser beam propagation through hazes, fogs and clouds, significance of higher-order multiple scatt. 2-48002
- laser propagation (10.6  $\mu$ m) through ice clouds, microphys. effects 2-28205
- latent heat release during glaciation of deep convective clouds 2-23082
- light fields in depth regime including polarisation (Russian) 2-10049
- light propagation, laboratory meas. of propag. in turbid media 2-29786
- light propagation, results from Downlink Laser Cloud Propagation Experiment 2-32646
- light propagation in turbulence and particulate media, multiple scatt. effects 2-32640
- light pulse broadening through thick clouds 2-42469
- light scattering from hexagonal ice crystals 2-18571
- light single scatt. albedo determ. by airborne method 2-48029
- mass flux models (Arakawa-Schubert) 2-47966
- mesoscale cloud band patterns 2-18514
- microstructure and rain formation droplet turbulent mixing (Russian) 2-47954
- microwave weather modification 2-47983
- microwaves absorption by cloud and rain, computation method 2-3058
- mixing of boundary layer by trade-wind cumuli 2-28141
- MM-wave airborne radiometer for 94/183 GHz high altitude atmospheric meas. 2-42492
- modification of cloud microstructure by input of artificial condensation nuclei 2-28174
- modification of mesoscale convective systems, numerical model 2-32609
- mountain cap clouds, ice origin by nucleation 2-18516
- multichannel scanning radiometer for remote sensing cloud physical parameters 2-18604
- multilayer clouds, automatic tracking technique appl. to GOES and METEOSAT obs. 2-14615
- multiple backscattering, time-dependent transfer models 2-28203
- noctilucent clouds, nucleation and growth of ice in mesosphere 2-14575
- noctilucent clouds, optical studies from manned Soviet spacecraft, (1961-1981) 2-52976
- optical transfer function of stratus clouds (Russian) 2-37969
- orographic frontal rain over medium hills, struct. mechanism 2-6420
- parameterisation schemes, appl. of detailed planetary boundary layer model 2-14538
- pileus cloud, microphysics and dynamics (French) 2-42431
- polar low with spiral cloud structure 2-32584
- prefrontal surge and cold-frontal clouds, vertical air motions and microstructure 2-32583
- radar apparent reflectivity at attenuation wavelength, distrib. calc. 2-32629
- radiative convective model with interactive water vapour transport and cloud level. 2-14605
- radiative cooling in low fog or cloudiness conditions via 8-13 micron window (Russian) 2-37968
- reentry environmental conditions forecasting, cloud particle effects determ., real-time processing 2-38003
- Saurashtra cyclone (1978), cloud top temp. structural changes during storm life-cycle 2-3056
- seeding, effect of precipitation, radar detect. 2-18548
- seeding and weather modification 2-42803
- seeding experiments using AgI or CO<sub>2</sub>, comparison of effectiveness 2-14566
- shape classification of cloud droplets and ice particles 2-14568
- SHF cloud-produced amplitude scintillation 2-14586
- sky, cover measuring instrument having two sets of solar cells 2-3103
- solar diffuse radiation rel. to cloud elec. discharge activity (for India) 2-3088
- solar radiation absorption, influence of cloud comp. and cloud geometry 2-18568
- solar radiation absorption by water vapour, efficient computation method 2-14601
- solar radiation diffuse fluxes on oriented sloping surfaces, improved approximation 2-18495
- low stratiform cloud model, sensitivity to radiation 2-28143
- stratocumulus droplet sizes, implications for weather modification projects (French) 2-42432
- structure as earthquake precursor 2-22921
- subgrid scale turbulence in 3-D cloud convection model (French) 2-52889
- sulphate production and cloud water chemistry 2-10108
- thundercloud charge generation, riming electrification mechanism 2-47974
- thundercloud electrification process, laboratory test of inductive theory 2-23083
- thunderstorm of air mass type, two-scale model 2-47968
- tropical cloud clusters, precipitation system structure 2-14580
- tropical convective ensembles, vertical flux computations 2-32582
- turbulent jet theory appl. to local precipitation increase (Russian) 2-18508
- United States (Midwest), weather influenced by aircraft contrails 2-14567
- unsaturated downdrafts, similarity theory 2-32570
- upper troposphere large-scale transient wave disturbances assoc. with clouds 2-28137
- warm rainshower, shallow 3-D cloud model 2-47967
- worldwide cloud-cover, new models 2-14548
- zonal distribution of clouds over land and oceans 2-28173

**Clusius-Dickel columns** *see isotope separation***cluster analysis** *see pattern recognition***cluster approximation**

- alkali halides, F-centres, surface, quantum chem. models (German) 2-46654
- alloys, random, with short-range order, electronic props., 'self-consistent theory' 2-1810
- amorphous, molecular orbital selfconsistent field calc. 2-45814
- band models with Coulomb interaction, cluster approx. and perturbation theory 2-40753
- binary alloys, surface segregation, simple theoretical model 2-45693
- binary BCC alloys, three-particle interactions on order-disorder equilibrium diagrams 2-5224
- bond-disordered resistor network, multi-bond expansions for effective cond. 2-17041
- Bose plasma, one-component, coupled cluster formalism 2-33423



**cluster approximation continued**

- cluster-size distrib. and condensation bimodality in finite Lennard-Jones system 2-23601  
 deep levels due to nonsubstitution impurity cluster, MTO calc. 2-30820  
 electron gas, metallic densities, coupled cluster formalism 2-35958  
 interacting Ising spin chains, phase transitions 2-139  
 interacting Ising spin chains, phase transitions 2-3525  
 intercalation, lattice gas models, comparison of Monte Carlo, cluster variation method and renormalisation group calcs. 2-33469  
 Ising models, exact solns., critical phenomena 2-31223  
 massless lattice field,  $\lambda(\Delta\phi^4)$  perturbation, cluster expansion 2-3508  
 massless lattice field,  $\lambda(\Delta\phi^4)$  perturbation, cluster expansion convergence 2-3509  
 metal-insulator transition, Falicov-Ramirez-Kimball model, localised state spatial correlation 2-40792  
 plasma etching, quantum chem. calcs. (*German*) 2-47220  
 point defects electronic struct., cyclic cluster models with quantum-chemical hamiltonians 2-51102  
 random animals, percolation clusters and compact clusters, diffusivity and radius 2-10731  
 random-bond Ising models, frustration effect and spin glass transition temp. 2-2088  
 semiconductor alloys, local order dependent impurity levels 2-26335  
 semiconductors, impurity band metal-insulator transition and off-diagonal disorder 2-40796  
 spatially disordered systems, electron localisation calcs. 2-40848  
 spin glasses, two-spin cluster dynamics, remanent magnetisation 2-41143  
 squaric acid, antiferroelectric phase transition, thermodynamic props., statistical model calc. 2-17424  
 transition metal b.c.c. dilute alloys, electronic theory of screw dislocation motion 2-1476  
 transition metal ion in tetragonally or trigonally distorted cubic cryst. field, spectroscopic splitting factors (*Chinese*) 2-21541  
 transition metal ions in crystals, optical spectra, covalency effects 2-22050  
 tris-sarcosine calcium chloride, ferroelectric transition, soft modes 2-36557  
 Xalpha SW method appl. to periodic models of solids (*Russian*) 2-16978  
 Ag<sub>2</sub>Si, superionic phases, variational lattice liq. cluster model 2-12557  
 BaTiO<sub>3</sub>, phase transition calcs. 2-46499  
 BeAl<sub>2</sub>O<sub>4</sub>, chrysoberyl, electronic struct. and spectra 2-46634  
 Be<sub>3</sub>Al<sub>2</sub>Si<sub>6</sub>O<sub>18</sub>, beryl, electronic struct. and spectra 2-46634  
 Cu-H, electronic struct. of interstitial H 2-21526  
 Fe cluster, magnetism and electronic struct. 2-41102  
 GaAs (110) surface core excitations, ab initio calc. 2-8850  
 GaAs, collective coordinates of tetrahedral cluster, inner displacement effect 2-13028  
 GaAs(110), Cl chemisorption config. study, cluster model and EHT method 2-8708  
 GaP, vacancy electronic struct. 2-45882  
 Ge, amorphous, electronic struct., CPA study 2-12959  
 Ge(111), Cl chemisorption config. study, cluster model and EHT method 2-8708  
 H chemisorption on diamond face (100), ab initio SCF model calcs. 2-21440  
 KH<sub>2</sub>PO<sub>4</sub>, ferroelectric dynamics 2-41281  
 Li surface+H<sub>2</sub> interaction, diatomics in-molecules calcs., Li cluster simulation 2-45713  
 Si, amorphous, electronic struct., CPA study 2-12959  
 Si cluster growth sequence, up to amorphous phase 2-45036  
 Si, dislocation core struct. calcs. 2-26330  
 Si, Jahn-Teller distortion of A- and E-centres 2-1872  
 Si:F, H, amorphous, vibr. excitations 2-45495  
 Si:H, amorphous, vibr. excitations 2-45495  
 SiO<sub>2</sub>, amorphous, electronic struct. calcs. 2-40767  
 Si<sub>2</sub>O<sub>3</sub>, quantum chem. calc. (*German*) 2-43808  
 Si(111), Cl chemisorption config. study, cluster model and EHT method 2-8708  
 Ti, chemisorption theory, surface localised orbitals for (0001) clusters 2-40688  
 Ti compounds, electron struct. and chemical binding 2-1438  
 TiC, X-ray emission spectra, cluster calcs. 2-36735  
 V compounds, electron struct. and chemical binding 2-1438  
 V<sub>2</sub>Si, electronic struct. and quadrupole interactions, cluster model 2-26349  
 ZnO polar surface, electronic struct. DV-X $\alpha$  cluster calc. 2-8843  
 ZnS:Sc(Ti)(V)(Mn)(Fe)(Co)(Ni), impurity electronic struct., Green's function method 2-40823

**cluster model (nuclear)** *see nuclear cluster model*

**clustering, impurity** *see segregation*

**clustering, solute** *see segregation*

**clusters, atomic** *see atomic clusters*

**clusters, globular (stellar)** *see globular star clusters*

**clusters, metal** *see metal clusters*

**clusters, molecular** *see molecular clusters*

**clusters, stellar** *see stellar clusters and associations*

**clusters of galaxies**

*see also galaxies; intergalactic matter*

- 0016+16, distant cluster of galaxies, obs. of decrement in microwave background radiation 2-33187  
 0016+16, galaxy cluster at  $z=0.54$ , X-ray struct. and implication for cluster evolution and cosmology 2-33164  
 0016+16, red galaxies cluster at  $z=0.54$ , multicolour photometry 2-33165  
 2006-56 region, rich irregular cluster, radio emission mapping 2-38324  
 Abell 119, X-ray cluster, red shift and vel. dispersion, obs. 2-33163  
 Abell 1314, orbital motion of head-tail radio galaxy (1C 708) 2-28544  
 Abell 1367, obs. of head-tail radio galaxy NGC 3826 (3C 264) at 0.6 to 5.0 GHz 2-28573  
 Abell 1775 compact galaxies, photometry, statistics and selection 2-48340  
 Abell 2022, 2256, 2462 radio sources, nature, 5 GHz obs. 2-14940  
 Abell clusters, 430 MHz obs. rel. to Einstein X-ray obs. 2-53373  
 Abell clusters, radio and optical obs. of nine nearby groups 2-48339  
 Abell clusters in D $\geq 4$ , morphological classification 2-53372  
 binary galaxies in rich clusters, separation as distance indicator 2-38315  
 brightest galaxy magnitude rel. to redshift, determ. of deceleration parameter 2-14954

**clusters of galaxies continued**

- brightest member rel. to cluster richness, dynamics of luminous galaxies 2-38284  
 3C 176, head-tail source, identification with galaxy in different cluster 2-14941  
 3C 295 cluster, luminosity function 2-38316  
 Cancer cluster, CCD photometry of edge-on spiral galaxies 2-10510  
 cD galaxy at kinematic centres, theory test 2-53371  
 collapsing gaseous protoclusters of galaxies, initial fragmentation 2-33196  
 Coma and Virgo clusters comparison for Universe expansion purposes 2-38351  
 Coma Berenices cluster, dynamic anal. (*French*) 2-53374  
 Coma Berenices cluster, dynamical anal. model (*French*) 2-48341  
 cosmological density parameter, statistical measure 2-38281  
 cosmological models, empirical evidence 2-14968  
 diffuse magnetic fields 2-33190  
 dominant radio galaxies, asso. optical emission line gas 2-23346  
 formation, dynamical evolution of collisionless systems of gravitating masses 2-28569  
 formation, Mach-Poincare gravodynamics rel. to condensation phenomena in expanding universe 2-10536  
 formation, origin of struct. in Universe from thermal fluctuations 2-42764  
 formation, stability of contracting gaseous protoclusters (pancakes) 2-14928  
 formation, thermal evolution of gas with primordial chemical comp. in gravit. contraction 2-3309  
 formation in Friedmann Universe 2-33189  
 formation in neutrino-dominated Universe 2-53366  
 Fornax cluster, UVB star sequence for NGC 1399 field 2-38254  
 gravitational potential fluctuations causing fluctuations in microwave cosmic background 2-23354  
 Hercules region, obs. of supercluster bridge between groups of galaxy clusters 2-10520  
 Hercules supercluster, red shift depend. on morphological type of galaxies (*French*) 2-38318  
 hot gas core evolution,  $n(\theta)$  counts rel. to cosmic microwave background 2-3310  
 intergalactic gas contents of clusters of galaxies, meas. by background radiation obs. 10.6 GHz 2-14932  
 intracluster gas, problems with dynamical evolution 2-6668  
 isolated triple galaxies, list of 84 triplets 2-28359  
 kinematics of interacting galaxies, motions in nests and chains 2-42753  
 large-scale structures of Universe, book 2-33252  
 in Lick astrophysical survey; selection of galaxies rel. to clustering 2-14927  
 Local Group, evidence against intergalactic population of very high vel. H I clouds 2-10501  
 Local Group, proper motion of Magellanic Clouds and halo mass of Galaxy 2-48332  
 Local Group, stellar spheroids dust cloud anal., BI<sub>1</sub> obs. 2-3300  
 Local Group of galaxies, dynamical age and mass 2-3311  
 Local Supercluster, galaxies distrib. rel. to anal. of isolated-galaxy criterion 2-6675  
 Local Supercluster, galaxy orientations 2-48342  
 low frequency extended radio sources, mag. field strength, classification 2-38327  
 merging instability and dynamical evolution 2-14939  
 multiple clusters redshift (*Russian*) 2-6677  
 multiple galaxies, quasars discoveries near companion galaxies 2-28576  
 N-body clustering models rel. to actual galaxy distrib. 2-42750  
 NGC 7212, Seyfert galaxy with asymmetric forbidden-line profiles in interacting system 2-33155  
 non-Abell clusters radiogalaxies, X-ray emission as link between environment and nonthermal radioemission 2-33162  
 Ophiuchus cluster of nearby galaxies, discovery and struct., visible obs. 2-10521  
 QSO pairs, possible members (*Russian*) 2-33184  
 quasar-generating superclusters, as explanation for clumpy quasar sky explanation for clumpy quasar sky 2-48348  
 redshifts of galaxy clusters, test for richness-dependent component 2-42751  
 review 2-42752  
 SC 0316-444 and 2008-569, X-ray clusters, red shift/vel. dispersion, obs. 2-33163  
 Sculptor Group, UVB sequences for South Polar Cap galaxies 2-38254  
 Ser 40/6, X-ray cluster, red shift and vel. dispersion, obs. 2-33163  
 Stephan's Quintet, distances consistent with red shifts 2-33166  
 Stephan's Quintet, radio continuum emission, VLA obs. 2-48338  
 supernovae in clusters of galaxies, implications for star form. 2-10462  
 Ursa Major cluster, CCD photometry of edge-on spiral galaxies 2-10510  
 Ursa Major cluster, multidimensional statistical analysis of normal galaxies 2-33142  
 Virgo, galaxy spins 2-38317  
 Virgo Cluster, distance determ. from obs. of novae 2-33149  
 Virgo cluster, galaxies luminosity function 2-38303  
 Virgo cluster, multidimensional statistical analysis of normal galaxies 2-33142  
 Virgo cluster, rel. dispersions in bulges of spiral and S0 galaxies 2-28542  
 Virgo cluster galaxies, H I obs. 2-38304  
 virialization in cluster cores rel. to velocity dispersion among galaxies 2-38282  
 X-ray emission and Einstein Observatory obs. 2-48355  
 Zwicky clusters with extended radio sources, non Abell, X-ray obs. 2-6676

**c.m.o.s. integrated circuits** *see field effect integrated circuits*

**c.m.o.s.i.c.** *see field effect integrated circuits*

**CNDO calculations**

- acrolein, vibr. freq., force field, CNDO/2 calcs., IR and Raman obs. 2-29590  
 alkylthio-2 imidazoles, UV spectra, CNDO/S calcs. (*French*) 2-34307  
 alcohol complexes, O-H bond vibr., pot. functions 2-15731  
 alkali phosphate glasses, electron struct., MO LCAO method 2-26280  
 p-aminobenzoate, sulphur drug, electronic struct.-activity relationship, CNDO study 2-4219  
 2-aminopyridine, close lying inversion states by protonation, CNDO study 2-22432  
 benzene,  ${}^1B_{2u} \rightarrow {}^1A_{1g}$  transition, second order vibronic coupling, CNDO calc. 2-24608



## CNDO calculations continued

- benzene, ground and excited state polarisabilities, CNDO/S-CI calcs. 2-34313
- benzene, Raman intensity calc. by CNDO method 2-4296
- benzonitrile derivatives, C≡N stretching mode, IR intensities, substituent effects 2-39318
- benzoxazoles, spectral and luminesc. props. to assess lasing capacity, theoretical determ. 2-49511
- bicyclopropyl, liq. and solid, vibr., force consts. CNDO calcs., IR and Raman study 2-31485
- binding energies of AH<sub>2</sub> type systems, CNDO/2 calc. 2-7672
- butadiene, bond index and length, CNDO approx. (French) 2-34301
- crotonaldehyde, IR and Raman spectra, vibr. anal., CNDO/2 calc. 2-34399
- 12-crown-4, geometrical and electronic struct., CNDO/2 and X $\alpha$  SW calcs. 2-34295
- delocalisation corrections to strictly localised MO, SCF approx. 2-34292
- diamond, vacancy electronic struct., cyclic cluster models with quantum-chemical hamiltonians 2-51102
- dimethyldithiocarbamate, ionisation energies, LCAO CNDO/2 calcs. 2-34298
- dipole moment of AH<sub>2</sub> systems, CNDO/2 calc. 2-7677
- DNA adenine-thymine base pair, electronic struct., semiempirical calcs. 2-37487
- enzyme reactions, self-consistent reaction field theory of core effects, quantum scheme 2-2693
- ethylenic compounds, bond index and length, CNDO approx. (French) 2-34301
- formaldehyde, ground and excited state polarisabilities, CNDO/S-CI calcs. 2-34313
- furan, d-orbital bonding, CNDO/2 and ab initio calcs. 2-15701
- furan, Dewar and valence, structs., ab initio and CNDO/2 MO calcs. 2-15705
- furan, electron affinity, ionisation pot. and photoionisation cross sections calc. using CNDO approx. 2-43804
- glyoxal, vibr. freq., force field, CNDO/2 calcs., IR and Raman obs. 2-29590
- heterocyclic molecules, electronic state orbital character, quantum mech. study 2-7504
- 1,3,5-trans-hexatriene, ground and excited state polarisabilities, CNDO/S-CI calcs. 2-34313
- imidazole, shake-up transitions, XPS, CNDO/S CI calcs. 2-39447
- $\Delta$ -4-imidazolinethiones, UV spectra, CNDO/S calcs. (French) 2-34307
- isoxazole, shake-up transitions, XPS, CNDO/S CI calcs. 2-39447
- thiazole, shake-up transitions, XPS, CNDO/S CI calcs. 2-39447
- linear molecules, multipole polarisabilities, coupled and finite perturbation theory using SCF MO LCAO CNDO density matrix appl. (Russian) 2-15721
- localised mol. orbitals, CNDO/2 calc. 2-656
- magnesium dimalonate, lowest energy config., STO-3G and CNDO calcs. 2-15725
- methacrolein, IR and Raman spectra, vibr. anal., CNDO/2 calc. 2-34399
- methanol, CH<sub>3</sub> and OH fragment orbital study, LCAO, CNDO and MINDO calcs. 2-19970
- m-methoxybenzaldehyde, internal rot., H-bond, pot. function, CNDO/2 calcs. 2-39319
- methyl acetate, electronic struct., external elec. field effects 2-663
- methyl formate, conformational stability, NDO calcs. 2-34299
- methyl thioformate, conformational stability, NDO calcs. 2-34299
- (+)-(3R)-methylcyclohexanone, vibr. circular dichroism, CNDO calcs. 2-11407
- 2-methylthioimidazole excited singlet states, direct energy minimisation 2-24627
- methylvinylketone, IR and Raman spectra, vibr. anal., CNDO/2 calc. 2-34399
- molecules, localised orbital construction from density matrix, LCAO and CNDO/2 calcs. 2-39291
- naphthalene, ground and excited state polarisabilities, CNDO/S-CI calcs. 2-34313
- naphthalene, hemi-Dewar and valence struct., CNDO/2 MO calcs. 2-34303
- 1,5-naphthyridine-d<sub>6</sub>-(d<sub>8</sub>), electronic spectra, vibr. struct., fluoresc., CNDO/S calcs. 2-4223
- neopentyl-1-d-chloride, vibr. circular dichroism CNDO calcs. 2-11406
- organo-sulphur cpds., electronic struct. and conformational stabilities, STO and CNDO calcs. 2-629
- oxamide, cryst., Raman intensities of lattice vibrs., CNDO calc. 2-50786
- phenolic hydroxyl groups in phenol and catechol, torsional barrier, partition of energy methods and MO calc., H-bonds 2-7497
- phosphoryl compounds, <sup>31</sup>P NMR shielding tensor anisotropy, CNDO/2 interpretation (German) 2-19981
- polythiomethylene, mol. and electronic structs. 2-20218
- pyrazole, shake-up transitions, XPS, CNDO/S CI calcs. 2-39447
- pyridine derivatives, zero-field splittings, CNDO/2 and CI calcs. 2-655
- pyrimidine, in hexane soln., fluoresc. excitation, CNDO and INDO calcs. 2-34473
- pyrrole, Dewar and valence, structs., ab initio and CNDO/2 MO calcs. 2-15705
- selenophene, electron affinity, ionisation pot. and photoionisation cross sections calc. using CNDO approx. 2-43804
- spin-spin coupling consts., UHF instabilities in semiempirical CNDO/S and INDO/S calcs. 2-24753
- sulphanilamides, sulphur drug, electronic struct.-activity relationship, CNDO study 2-4219
- TCNQ salt, tetramer, Hubbard parameter, CNDO/S-CI calcs. 2-39316
- TCNQ salt, TTF-2,5-difluoro, TCNQ, cryst. struct. Madelung energy 2-50618
- tellurophene, electron affinity, ionisation pot. and photoionisation cross sections calc. using CNDO approx. 2-43804
- tetraphenylporphyrin, conformation-coupled H<sup>+</sup> migration, adiabatic pot., CNDO calcs. 2-24881
- thiazole, shake-up transitions, XPS, CNDO/S CI calcs. 2-39447
- thiazole Z 2-24627
- thiophene, d-orbital bonding, CNDO/2 and ab initio calcs. 2-15701
- thiophene, electron affinity, ionisation pot. and photoionisation cross sections calc. using CNDO approx. 2-43804
- trimethylphosphine, <sup>31</sup>P NMR shielding tensor anisotropy, CNDO/2 interpretation (German) 2-19981
- vanillin, internal rot., H-bond, pot. function, CNDO/2 calcs. 2-39319

## CNDO calculations continued

- vibrational circular dichroism and absorpt. intensities, MO calcs. 2-29500
- AlF<sub>3</sub>, struct., bending vibr., bond angles, CNDO/2 calcs. 2-19971
- BF<sub>3</sub>, struct., bending vibr., bond angles, CNDO/2 calcs. 2-19971
- BeAl<sub>2</sub>O<sub>4</sub>, chrysoberyl, electronic struct. and spectra 2-46634
- Be<sub>3</sub>Al<sub>2</sub>Si<sub>6</sub>O<sub>18</sub>, beryl, electronic struct. and spectra 2-46634
- CO dimer, AVE-ZDO and CNDO/SM calcs. 2-15728
- CO, free and coordinated, core ionisation, XPS study of intensity borrowing 2-15848
- CO trimer, AVE-ZDO and CNDO/SM calcs. 2-15728
- CaMoO<sub>4</sub>, electronic struct. and optical spectra, struct. distortions effects 2-29619
- Cl<sub>2</sub>P, <sup>31</sup>P NMR shielding tensor anisotropy, CNDO/2 interpretation (German) 2-19981
- CoCl<sub>2</sub>, MO calc. using CNDO method, electronic energy and dipole moments determ. 2-43806
- Cu zeolites, physical characteristics, CNDO/2 calc. 2-29526
- Cu(II) (difluorodithiophosphate)<sub>2</sub>, ionisation energies, LCAO CNDO/2 calcs. 2-34298
- Cu(II) (dithiophosphate)<sub>2</sub>, ionisation energies, LCAO CNDO/2 calcs. 2-34298
- Cu(II) complex, bi-chelate series, ligand mutual influence effect, struct., CNDO calcs. 2-34304
- F<sub>2</sub>P, <sup>31</sup>P NMR shielding tensor anisotropy, CNDO/2 interpretation (German) 2-19981
- Fe(CO)<sub>5</sub>, CNDO-CI calcs., UV spectra, photochemical activity 2-49294
- Fe(II) complex, bi-chelate series, ligand mutual influence effect, struct., CNDO calcs. 2-34304
- H to Br, CNDO/INDO molecular orbital formalism appl. 2-4225
- H to Br atom combination, CNDO and INDO formalism 2-4224
- ((HCN)<sub>3</sub>) polymers, electronic and mol. struct. 2-7687
- Li clusters, binding energy, ionisation pot., CNDO/BW study 2-815
- LiF, electronic structure, hole centres (Russian) 2-21527
- LiF surface, H adsorption, mol. parametrised CNDO and ab initio calcs. 2-16944
- MoO<sub>3</sub>, electronic struct. and optical spectra, struct. distortions effects 2-29619
- Na<sup>+</sup> complex with 18-crown-6 polyether, conformational props., CNDO calc. 2-4220
- Ni complex, (dithiocyanate tetraamine)nickel(II), geometry, struct., pot. surface, CNDO-UHF, MO-LCAO-SCF calcs. 2-34297
- Ni-Cu, electronic struct., CNDO/2 tight-binding method calcs. 2-40980
- Ni(CO)<sub>4</sub>, CNDO-CI calcs., UV spectra, photochemical activity 2-49294
- Ni(II) (dithiophosphate)<sub>2</sub>, ionisation energies, LCAO CNDO/2 calcs. 2-34298
- Ni(II) complex, bi-chelate series, ligand mutual influence effect, struct., CNDO calcs. 2-34304
- Pd-Ag, electronic struct., CNDO/2 tight-binding method calcs. 2-40980
- Si, amorphous, molecular orbital selfconsistent field calc. 2-45814
- SiF<sub>3</sub>, struct., bending vibr., bond angles, CNDO/2 calcs. 2-19971
- Sn complexes, electronic struct., SCF MO LCAO method, CNDO approx. 2-43807
- SrMoO<sub>4</sub>, electronic struct. and optical spectra, struct. distortions effects 2-29619

## coagulation

- aerosol coagulation, deposition and leakage during nuclear reactor accident 2-7263
- heterocoagulation in shear flow 2-27483
- mixed colloidal systems, heterocoagulation, adhesion and microflotation 2-47380
- reaction kinetics singularities 2-37045
- rectified plasma, proton relaxation variation during coagulation (French) 2-18174

## coal

- see also mining
- 100 MW integrated coal gasification combined cycle power plant, USA 2-2774
- acetylene manufacture from coal, fusion thermal energy appls. 2-4114
- alternative energy sources, conf. Kuwait, Feb. 1980 2-52270
- ash content anal. using annihilation radiation 2-2752
- bituminous coal fired power stations support by Federal German Government for environmental protection (German) 2-27740
- Brazilian coal and oil shale development processes using nuclear energy (German) 2-19762
- chemical composition determ. by <sup>13</sup>C NMR 2-27498
- coal gasification process by Sumitomo Metals 2-9611
- coal-oil mixtures and coal-water slurries as alternatives to oil fuel 2-17961
- consumption forecast, for 1980-2000 2-52278
- conversion technologies, environmental legislation and regulatory programmed in USA, review 2-27743
- devolatilization data for reactor modelling, assessment and research recommendations 2-27525
- eastern bituminous coal gasification field trial, USA 2-32013
- enrichment and utilisation, future trends (German) 2-37143
- environmental problems associated with coal use including desulphurisation and fly ash use (Dutch) 2-42052
- environmental standard reference material NBS SRM-1632a, trace element anal. 2-22529
- fossil energy carriers comparison with fissionable material energy content (German) 2-39114
- gas turbines, coal-burning, research advances in erosion prediction and reduction 2-16271
- gasification, development work (German) 2-9608
- gasification, review 2-17966
- gasification using high-temp. reactor process heat 2-27581
- gasification using nuclear heat, tubular cracking oven conceptual design (German) 2-39207
- gasification/liquefaction unit process ready for commercial application 2-22533
- high temp. reactors, gasification appls. 2-6132
- high-temperature gas-cooled reactor applications to fossil conversion processes 2-9634
- liquid fuels derived from coal, combustion and emission charact. 2-27524
- liquid-metal MHD cycle operation for solar collectors and fossil-fuel combustors 2-37419
- methanol from bituminous coal, technical and economic evaluation 2-52277



- coal continued**  
 Mexican, energy conservation and its effects on energy costs (*Spanish*) 2-41972  
 mHD coal combustor development status 2-9661  
 nuclear gasification, complex multi-material processes energetic anal. (*German*) 2-41974  
 accidental controlled flash pyrolysis process and its application to power generation 2-9612  
 past, present and future utilisation trends (*German*) 2-9607  
 peat char gasification—laboratory and PDU-scale studies 2-47428  
 Pittsburgh seam, thermophys. props. 2-5253  
 pollution, coal fired power stations and the environment in West Germany (*German*) 2-18151  
 pore structure, mercury porosimetry 2-27402  
 power station stack emission control, evaluation of Australian coal 2-52416  
 preparation plants, noise exposure levels of workers, cost effective assessment methods 2-11932  
 production of synthetic crude oil from coal using the TOSCOAL pyrolysis process 2-22536  
 pyrite crystals, in coal, electron microscopy 2-1373  
 pyrolysis to produce substitute petroleum and power plant fuel 2-47432  
 resource areas, land use characterisation 2-47433  
 risk analysis of nuclear vs. fossil-fuel economics 2-32039  
 slag, temp. depend. of  $\text{Fe}^{2+}$  cone in air rel. to elec. cond. 2-36113  
 South African reserves, feedstock use 2-17962  
 synfuel production, using lignite and HTR process heat 2-52275  
 synthetic-fuel production processes, coal-based overview of technical and engineering status 2-52285  
 treatment plant for coal conversion, electrical equipment protection from explosions 2-52274  
 unloading facilities for barges, ships and trains, noise assessment 2-11925  
 utilisation, report of study group to APS 2-17967  
 utilisation/ and conversion/ of coal/ (*Dutch*) 2-37144  
 utilisation and recommendations for electric power generation (*French*) 2-52308  
 westinghouse fluidized bed coal gasification process for phosphoric acid fuel cell power plant 2-9649  
 world energy resources (*Dutch*) 2-31995  
 world resources exploitation through international co-operation (*Hungarian*) 2-52272  
 $\text{CH}_4$  content anal. 2-9613
- coating processes** *see* **coating techniques**
- coating techniques**  
*see also* anodisation; cladding techniques; coatings; electrodeposition; electrophoretic coating techniques; encapsulation; epitaxial growth; metallisation; spray coating techniques; vapour deposition  
 alkali borosilicate gradient-index AR film deposited by sol-gel process 2-49951  
 commercial applications, review 2-47215  
 electroless plating, meas. of instantaneous rate by electrochem. method 2-6041  
 fluid interfaces and films in technology (*German*) 2-30714  
 inertial confinement fusion targets, coatings 2-11271  
 jacketing process, theory (*Russian*) 2-9442  
 optical fibre coating technique, high speed, with UV curable materials, rates  $>5$  m/sec 2-25149  
 optical fibres, new primary coating method using thermoplastic tube 2-7896  
 optical thin-film coating processes 2-49953  
 plasma polarisation, coloured polymeric coatings fabrication 2-17631  
 slot coating flow, finite element method 2-8252  
 substrate holder shape for uniform coating thickness for IC manufacture 2-41517  
 vacuum-arc plasma, electron magnetisation effect, appl. to coating deposition 2-20940  
 Be coatings on zircalloy sheets, physical vapour deposition techniques, appls. 2-9276  
 Ni, dispersion hardened coating, autocatalytic deposition 2-17782  
 Ni plating of stainless steel, by electroless technique, specimen preparation for crack detection 2-27332  
 Si-on-ceramic substrate fabrication using Si-coating-by-inverted meniscus process, solar cell appl. 2-37349
- coatings**  
*see also* anodised layers; antireflection coatings; claddings; decorative coatings; electrodeposits; electrophoretic coatings; epitaxial layers; insulating coatings; protective coatings; spray coatings; sputtered coatings; vapour deposited coatings; varnish  
 accelerated heating of optical coatings using gradient electric furnace 2-48705  
 adhesion, review 2-47213  
 dielectric coating on inner surface of pipe, DK-1 composite quality inspection unit 2-6006  
 dielectric coating optical breakdown, laser induced, chem. reactions 2-45251  
 drill, high speed steel, coated, tool life improvement using activated reactive evaporation 2-31857  
 E-glass fibres, surface coatings, IR spectroscopic characterisation 2-16934  
 epoxy powder coatings, fracture props. 2-47181  
 Formvar coated Nb-Ti/Cu composite supercond., recovery from post-quench conditions 2-8911  
 fosterite and stress coatings on grain oriented Fe-Si (3 wt.%), effect on domain struct. 2-26652  
 glass-ceramic coatings with quartz, X-ray investigation of microstresses 2-37036  
 glow discharge spectroscopy use for surface analysis 2-12898  
 high temperature battery systems, use of coatings 2-22563  
 metallic coatings, meas. techniques (*German*) 2-38631  
 multilayer, residual stresses 2-39812  
 nonconductive on metal substrate, holiday detection appl. to NDT 2-9502  
 nonuniform, inspection with integral thickness gauge 2-10782  
 optical coatings, nonoptical characterisation 2-20394  
 optical waveguide, glass thin-film, low loss, using surface coating and laser annealing 2-7859  
 polymers, cross-linked, UV cured, mech. props., effect of comp. and polymerisation 2-13766  
 pyrocarbon coatings for HTR fuel, composition temp. depend. (*German*) 2-7184
- coatings continued**  
 radiation scattering in optical glasses, conf., Huntsville, AL, USA (Oct. 1980) 2-10546  
 reflectometer, nonspecular, far IR operation, optically black coatings 2-10850  
 Sureket metal hollow O-ring, coating materials (*Japanese*) 2-19118  
 thickness gauging method using X-ray fluorescence 2-13896  
 thin current conducting method of monitoring 2-9508  
 thin film, laser damage thresholds at 532, 355 and 248 nm 2-952  
 two-component coating, composition and thickness meas. using TPRU-1 thickness gauge 2-162  
 vibration-absorbing, single-layer, edge effect calc. method 2-8081  
 AgCl coating on guanidine aluminium sulphate hexahydrate, coating influence on ferroelec. domains, SEM study 2-36579  
 Au coating on TGS, coating influence on ferroelec. domains, SEM study 2-36579  
 Nb-Mo(Ti)(Zr), nitrided, struct., phase comp., and hardness 2-52106  
 Ni-B-Si-Cr brazing alloy, rapidly solidified surface melts 2-16935  
 Ti enamel and coatings, corrosion and leaching in citric acid solns. 2-5982  
 TiC coating on stainless steel, unipolar arc damage 2-12636  
 TiC coating on WC-Co, atom probe microanal. 2-13859  
 TiN coatings, gas phase deposition, optimum conditions determ. 2-17759  
 $\text{WO}_3$  coating on TGS, coating influence on ferroelec. domains, SEM study 2-36579
- coatings, protective** *see* **protective coatings**
- coaxial cables**  
 optical coaxial dielectric directional coupler 2-44441  
 RF permittivity meas. of biological tissues with open-ended coaxial lines 2-42238  
 RF permittivity meas. of biological tissues with open-ended coaxial lines 2-42239
- coaxial lines** *see* **coaxial cables**
- cobalt**  
*see also* nuclei with .....  
 adsorbed on  $\gamma\text{-Fe}_2\text{O}_3$  particles, coercivity, vol. packing fraction depend. 2-21841  
 adsorbed on Cu surface, reconstruction, CDW, surface mag. and  $\text{O}_2$  adsorption 2-12911  
 adsorption of CO on Co films, interaction investigated by means of thermal desorpt. mass spectrometry 2-9569  
 atom level structure calcs. 2-29516  
 atoms, transition probabilities and oscillator strengths, data compilations 2-7523  
 Auger effect, XVV spectra model, comparison with photoemission data 2-9228  
 coating, ion plated, highly oriented, tribological props. 2-30777  
 diamond-Co system, sintering behaviour at high temp. and press. 2-51864  
 disorder, in single crystals, elastic neutron scattering 2-25688  
 electroless plating, meas. of instantaneous rate by electrochem. method 2-6041  
 electron microscope images, diffr. contrast, column approx. breakdown 2-45206  
 electronic structure, meas. and calc. of charge, spin and momentum density 2-40774  
 evaporated film, texture meas. 2-8735  
 ferromagnetic, domain dragging by elec. current at 4K 2-17047  
 ferromagnetic effect of Coulomb correlations on energy bands 2-51079  
 ferromagnetic host metal, for rare earth impurities, nucl. orientation 2-46397  
 film, oblique incidence deposition, mag. props. 2-21850  
 film, optical absorpt. and props. elec. cond.,  $\alpha$ - $\beta$  transition 2-5763  
 film, vapour deposited, mag. props. (*Japanese*) 2-26693  
 fine particle system, time depend. magnetisation 2-26679  
 finely divided, electrodeposition in presence of epoxy oligomers 2-13664  
 HCP and FCC, sputtering yield meas. 2-5789  
 Hudson river sediment pollution by Pu, Cs, Co radionuclides 2-37468  
 initial fracture stages during cold rolling (*Russian*) 2-5939  
 ion removal from radioactive liquid waste by oxine impregnated activated charcoal (*Japanese*) 2-7162  
 liquid, electrical resist., mean free path and multiple scatt. corrections 2-5379  
 ordered layers on Cu (111), mag. exchange splitting, photoemission spectra study 2-51403  
 oxidation in air, room temp. to  $467^\circ\text{C}$  2-52108  
 passivating film form. in neutral soln., two-layer struct. 2-47231  
 polycrystals, FCC and HCP, thermal emission spectra, circular polarisation 2-13506  
 single crystal,  $\text{Ar}^+$  bombardment, sputtering yield 2-46915  
 sintering, model of variation of specific surface area 2-46965  
 surface, S chemisorption thermodynamics 2-40676  
 viscous creep, low stress, transient stage in  $\beta$ -phase 2-5915  
 X-ray K-absorption edge shifts due to chem. combination 2-2369  
 $\text{BaO-V}_2\text{O}_5\text{-Co}$  glass, elec. cond. and EPR spectra 2-46365  
 $\text{BaTiO}_3\text{-Co}$ , diffuse phase transition, dielec. meas. 2-9104  
 $\text{BaTiO}_3\text{-Co}$ , optical absorpt., elec. cond., electronic struct. 2-46640  
 $\text{CaO-Co}$ , charge transfer transitions, energies of optical absorption and emission 2-22052  
 $\text{CdBr}_2\text{-Co}^{2+}$  single cryst., spin exchange interaction optical spectra 2-46653  
 $\text{CdCl}_2\text{-Co}^{2+}$  single cryst., spin exchange interaction optical spectra 2-46653  
 $\text{CdSe-Co}^{2+}$ , zero-phonon lines in optical spectra 2-46650  
 $\text{CdTe-Co}^{2+}$ , cryst. field splitting, press. induced changes, IR spectra study 2-26944  
 Co (II), adsorpt. on  $\text{MnO}_2$  from aq. solns. 2-47373  
 Co  $\gamma\text{-Al}_2\text{O}_3$ , hydrosulphurisation catalysts, XPS and ESR obs. of Co species after catalytic operation 2-27507  
 $\text{Co}^{2+}$ , s-hole states, CI calcs. 2-43809  
 $\text{Co:MgF}_2$ , optically pumped transition-metal lasers, scaling up 2-25021  
 $\text{Co-Al}_2\text{O}_3$  cermet selective films, photothermal conversion, effective dielectric function bounds 2-9683  
 Co-like ions, relativistic Auger and X-ray deexcitation rates 2-11446  
 Co-Ni-O-Ni, ferromag. films, spin pol. electron tunnelling obs. 2-51342  
 $\text{Co+CoO}$  system, thermodynamic props. determ. by EMF method using solid electrolyte electrochem. sensors 2-12776  
 $\text{Co+H}^+$ , K-shell ionisation, total and differential cross sections meas. 2-44039  
 $\text{Co}_{1-x}$ , deform., dependence on stoichiometry 2-51974



## cobalt continued

- <sup>57</sup>Co impurities in Cu, interstitial-atom trapping and D localisation, Mossbauer study 2-30484  
<sup>58</sup>Co, fallout in eastern Canada from nuclear weapons testing 2-9699  
<sup>59</sup>Co release during PWR plant shutdown 2-4102  
<sup>60</sup>Co, <sup>58</sup>Co, reactor-released radionuclides, meas. in Susquehanna River sediments 2-2133  
<sup>60</sup>Co dosimetry, postal intercomparison using TLDs by secondary standard dosimetry labs. 2-47723  
<sup>60</sup>Co, fallout in eastern Canada from nuclear weapons testing 2-9699  
<sup>60</sup>Co unit for large field irradi. 2-42203  
<sup>60</sup>Co, variable energy photon source, Monte Carlo simulation 2-574  
CsCdCl<sub>3</sub>:Co<sup>2+</sup>, optical absorpt. spectra 2-26946  
Cs<sub>2</sub>CdCl<sub>4</sub>:Co<sup>2+</sup>, polarised absorpt. spectra, 300 and 77K 2-46641  
 $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>:Co, sputtered double-layer disk, mag. props., recording characts. 2-21851  
 $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>:Co particles, coercivity, vol. packing fraction depend. 2-21841  
GaP:Co<sup>2+</sup>, IR luminesc., temp. depend. 2-31654  
InP:Co, EPR study 2-2125  
InP:Co, single cryst. growth and elec. props. 2-9264  
InP:Co<sup>2+</sup>, impurity levels, photoluminesc. study 2-51655  
La<sub>2</sub>Mg<sub>2</sub>(NO<sub>3</sub>)<sub>12</sub>·24H<sub>2</sub>O:Co<sup>2+</sup>, Ce<sup>3+</sup>, laser effect on Co<sup>2+</sup> spin sub-levels (Russian) 2-7734  
Li-Co, double layers, cond. electron spin resonance 2-31288  
MgO:Co, charge transfer transitions, energies of optical absorption and emission 2-22052  
Si:Co, implanted, laser and thermal annealing studied by Mossbauer spectroscopy 2-31346  
SrF<sub>2</sub>:Co, optical absorpt. spectrum, X-ray excited emission 2-13520  
SrF<sub>2</sub>:Co, thermoluminescence, X-ray excited, charge change processes 2-41437  
TiO<sub>2</sub>:Co, diffusion doped, elec. and optical props. 2-5369  
WC-Co, TiC coated, atom probe microanal. 2-13859  
YAG:Co<sup>2+</sup>, ESR, Co<sup>2+</sup> spin sites 2-41183  
YIG:Co films, (100) and (111), Co substitution influence on domain struct., anisotropy influence, ferromag. reson. obs. 2-9011  
YIG:Co films, (111), ferromag. reson. parameters, anisotropy fields and domain struct. 2-9037  
ZnS:Co, impurity electronic struct., Green's function method 2-40823  
ZnS:Co, Raman scatt., local force variations, press effects 2-41358  
ZnS:Co, Raman spectra, impurity induced, press. depend. 2-46645  
ZnS:Co<sup>2+</sup>, spin-lattice relax. and phonon bottleneck 2-2130

## cobalt alloys

see also cobalt compounds

- Alnico 5 with Nb additions, columnar, permanent mag., mag. props. 2-17316  
amorphous, recent studies, review (Japanese) 2-26354  
Hastelloy X welded joint, creep behaviour 2-15501  
IN-738, Ni-base superalloy, extending creep life, intermediate regenerative heat treatments 2-22274  
Inconel 617, high-temp. alloy, carburisation effects conductivity 2-31738  
Kovar/glass bonding, new technique for surface prep. of metal 2-22370  
magnetic state of the intermetallic compound HoCo<sub>5</sub>, over a wide range of temperatures 2-51397  
mischmetal-Co-Cu-Fe-Mg alloys, mag. props. for permanent magnet application 2-41164  
Nimonic 105, effects of room-temp. prestrain on creep-fracture 2-2588  
Nimonic 115, fatigue crack growth at elevated temps. in carburising environments 2-36956  
rare earth alloys R-Co-B (R=Nd, Tb, Dy, Er, K), phase diagrams, X-ray and microscopic anal. 2-41586  
rare earth-Co permanent magnets, materials and appl. (German) 2-33580  
Recalloy, props. (Japanese) 2-51400  
Stellite 6 alloy, liq. phase sintering 2-46973  
superalloy, corrosion prevention due to chemical and electrolytic surface treatment 2-47221  
superalloy substrates, oxide structure on aluminide coatings 2-30732  
superalloys, manufacture in vacuum arc furnace with permanent electrode (German) 2-46980  
Waspalloy, fatigue life, low cycle, high temp., effect of time-depend. processes 2-31768  
WC-Co hard alloy, Ti-C-N coated, TiB<sub>2</sub> interaction 2-40607  
Al-Co, dil., low field Hall coeff., virtual bound state effect 2-13044  
Al-Co dilute alloy for moderate-strength, high cond. appls. 2-5489  
Al-Co-Fe alloys, magnetomech. coupling, annealing effect 2-26713  
Al-Cr-Co, plasma deposited coatings formed from mechanically alloyed powders 2-17622  
Au-Co solid soln., elec. resist. and mag. susceptibility 2-30861  
Au-Co solid soln. thin films, elec. resist., annealing treatment depend. 2-21693  
B<sub>1-x</sub>Co<sub>x</sub>, amorphous, mag. and magneto-optical props. 2-17450  
Co-Mn-Co system phase equilibria (Ukrainian) 2-51873  
Ce<sub>1-x</sub>Al<sub>x</sub>Co, constitution, struct. and mag. props. 2-47199  
CeCo<sub>5</sub>, valence state of Ce, lattice const., mag. props. and X-ray absorption meas. 2-40320  
CeCo<sub>5</sub>-PrCo<sub>5</sub>, cryst. struct. and mag. props. 2-1447  
Co based oxide containing detonation gun coatings, high-temp. impact sliding wear and oxidation resist. 2-31853  
Co-Al, valence band density of states, XPS study 2-22147  
Co-base amorphous alloys, density, conc. depend. 2-30506  
Co-base amorphous alloys, mag. props., comp. depend. 2-31244  
Co-base superalloy, cast, MM509, air embrittlement 2-36955  
Co-Cr coating, ion plated, highly oriented, tribological props. 2-30777  
Co-Cr films for perpendicular recording, RF sputtering deposition 2-26691  
Co-Cr films for perpendicular mag. recording, opposing targets sputtering deposition 2-27082  
Co-Cr films with perpendicular magnetic anisotropy, RF sputtering prep., coercivity and X-ray orientation 2-26689  
Co-Cr perpendicular recording medium by vacuum deposition, mag. and struct. props. 2-26690  
Co-Cr sputtered films, mag. props., effects of Cr 2-26688  
Co-Cr sputtered layered media, optimisation for areal density 2-21836  
Co-Cr-Al coating containing active element additions, erosion resistance 2-31821  
Co-Cr-Al coatings containing active element additions, oxidation behaviour vel. to struct. 2-31851  
Co-Cr-Al-Y coating, low press. plasma applied, mech. props. 2-45794  
Co-Cr-Al-Y laser treated coatings, struct. 2-30769  
Co-Cr-Al-Y plasma sprayed coatings for aircraft gas turbine appl. 2-47262  
Co-Cr-Fe system, phase equilibria, critical eval. and constitution 2-47009  
Co-Cu, grain size distribution during coarsening in liquid matrix (Korean) 2-41579  
Co-Fe-B amorphous films, induced anisotropy and permeability, annealing effects 2-46349  
Co-Fe-B(-Si), metallic glass, crystn., Lorentz microscopy study 2-21033  
Co-Fe-Cr films, mag. props. variation during electron bombard., surface comp. (Russian) 2-21844  
Co-Fe-Cr sputtered films, mag. props., effects of Cr 2-26688  
Co-Fe-Gc, crystal and mag. struct. 2-45115  
Co-Fe-Ni system, phase equilibria, critical eval. and constitution 2-47009  
Co-Fe-V, influence of thickness on mag. props. 2-5564  
Co-Ga,  $\beta$ -phase, slow cooled, mag. phase diag., AC susceptibility study 2-41137  
 $\beta$ -Co-Ga, ordered, enthalpy of form. anal. defect struct. 2-51877  
Co-Gc, molten, elec. resist., temp. and conc. depends. (Russian) 2-21555  
Co-M-B (M=transition metal), amorphous alloys, mech. props., thermal stability 2-31787  
Co-metal amorphous alloys, thermal stability, magnetic props. (Dutch) 2-9002  
Co-Mn-Gc, crystal and mag. struct. 2-45115  
Co-Mo (W) wear resistant coatings, brush-plated 2-52119  
Co-Ni, fatigue crack tip, metallographic method for determ. of plastic strains 2-22395  
Co-Ni-Cr-Mo, cold-rolled and recovered, internal friction meas. 2-41664  
Co-Ni-P-B-Al, amorphous, ferromag. reson. 2-31292  
Co-Ni-W sputtered film, recording performance and mag. props. 2-21849  
Co-P, amorphous multilayered, mag. domains 2-36380  
Co-P (9 at.%) amorphous ferromag., NMR spectrum, discontinuous variation during heating (Russian) 2-5590  
Co-P amorphous multilayered films, prep., struct. and mag. props. 2-36800  
Co-P binary alloys, amorphous state formation, thermal stability, melt quenching 2-30408  
Co-P chemically deposited film, mag. props., effects of activation and acceleration 2-9009  
Co-P magnetic electroless thin films, effective life 2-41166  
Co-P(-Ni) layers, cylindrical amorphous, domain struct. and strain anisotropy effects 2-9010  
Co-Re sputtered film, effect of orientation and microstructure on mag. props. 2-21848  
Co-Ru film, perpendicular mag. state, RF sputtering 2-16965  
Co-Si-B alloys, amorphous, magnetoelastic effects 2-26706  
Co-Si-B ribbons, crit. thickness for amorphous state form. 2-36832  
Co-Sm, magnetic domain and cryst. microstruct., Lorentz electron microscopy study 2-21817  
Co-W, eutectic, directionally solidified, oxidation study 2-2625  
Co-W-C, equilib. diagram in Co rich corner, thermodynamic study, 1000 to 1200°C (Czech) 2-31681  
CoAl, electron momentum distrib. and charge transfer, Compton scatt. study 2-26281  
CoFe, NMR on oriented nuclei, spin-lattice relax. parameters 2-9049  
CoGa, aspects of diffusion in intermetallic phase (German) 2-1681  
CoGa<sub>1-x</sub>, mag. props. and spin glass-ferromag. transition 2-41132  
CoGa<sub>100-x</sub>, electronic band struct. and localised states, rel. to elec. props. 2-40813  
Co<sub>2</sub>MnAl, order-disorder transition, X-ray diff. study 2-1610  
Co<sub>2</sub>MnSn, Sn hyperfine field distrib. meas. 2-31327  
CoMo<sub>2</sub>Al<sub>2</sub>O<sub>3</sub>, hydrosulphurisation catalysts, XPS and ESR obs. of Co species after catalytic operation 2-27507  
Co<sub>68</sub>Ni<sub>32</sub>, US attenuation and vel. changes during FCC-HCP martensitic transform. 2-47026  
Co<sub>2</sub>Ni<sub>1-x</sub>MnGe, mag. struct. and props. 2-36324  
Co<sub>1-x</sub>P<sub>x</sub> films, amorphous to cryst. kinetic transitions, nucl. spin echo study 2-26789  
CoPt, disordered, diminution of high internal friction level due to magnetoelastic hysteresis (Polish) 2-27206  
CoPt, disordered, mag. permeability disaccommodation, 450 to 760K (Polish) 2-26684  
CoPt, internal friction curve, effect of thin surface layers of mineral 2-47108  
CoPt, low temp. internal friction, surface mineral oil layer influence (Polish) 2-27209  
Co<sub>2</sub>Si<sub>1-x</sub> sputtered film, transport props. and magneto-optic Kerr effect 2-21556  
Co<sub>72</sub>Si<sub>12</sub>B<sub>15</sub>, amorphous metallic powder, prep. 2-31656  
Co<sub>72</sub>Si<sub>15</sub>B<sub>10</sub>H, H effect on coercive field 2-46348  
Co<sub>72</sub>Si<sub>10</sub>B<sub>12</sub>, amorphous, shear crack propag., plastic flow 2-31757  
CoTaC eutectics, X-ray diff. determ. of thermal interphase stresses 2-13877  
CoTi, mixing enthalpy, expt. and theoretical, CsCl type phases 2-12765  
Co<sub>100-x</sub>Ti<sub>x</sub>, amorphous ferromagnetic thin films, mag. props. FMR and magnetisation meas. 2-36398  
CoTiB amorphous films, mag. props., effect of B and Ti 2-36399  
Co<sub>2</sub>YAl, Heusler alloys, mag. and magneto-optical props. 2-26671  
Co<sub>2</sub>YGa, Heusler alloys, mag. and magneto-optical props. 2-26671  
<sup>58</sup>CoFe and <sup>60</sup>CoFe, nuclear spin lattice relax. 2-26777  
Co<sub>84</sub>Si<sub>8</sub>Fe<sub>2</sub>B<sub>2.5</sub> amorphous alloy, electron irradi. effects (Ukrainian) 2-25929  
Cr-Co, black alloy, electrodeposition from trivalent chromium baths 2-51834  
Cu-Al-Si-Co (2.8, 1.8, 0.4 wt.%), superplastic, doubt over existence of Region I 2-31730  
Cu-Be-Co (2 wt.%, 0.3 wt.%), phys. props. 2-17684  
Cu-Co, liquid alloys, thermodynamic study (Japanese) 2-27144  
Cu-Co (1 at.%), plastic behaviour of polycryst. wire deformed by simultaneous torsion and extension at 78K 2-47120  
Cu-Co (2at.%), age-hardened single crystals, creep behavior 2-31734  
Cu-Co (3.36 wt.%), single phase, scaling behaviour, 700-1000°C 2-27339  
Cu-Co solid soln., elec. resist. and mag. susceptibility 2-30861  
Cu-Co solid solns., elec. resist. at low temp., annealing effect 2-45934  
Cu-Ni-Co (50, 21, 29 wt.%), mech. and mag. hardening 2-17686  
(Cu<sub>1-x</sub>Co<sub>x</sub>)<sub>2</sub>MnSn Heusler alloy, mag. props. 2-46283  
DyCo<sub>2</sub>, cryst. struct. distortion and magnetostriction 2-45119  
DyCo<sub>2</sub>-DyAl<sub>2</sub>, soft X-ray emission spectrum 2-46830  
ErCo<sub>2</sub>, cryst. struct. distortion and magnetostriction 2-45119  
ErCo<sub>2</sub>-ErAl<sub>2</sub>, cryst. struct. and mag. props. 2-8476



## cobalt alloys continued

- Er<sub>2</sub>-Pr<sub>1</sub>Co<sub>17</sub>, mag. props., Mossbauer effect 2-36385  
 (Fe,Co)<sub>100-x</sub>(Ta,W)<sub>x</sub>, RF sputtered amorphous films, mag. and thermal props. 2-36397  
 Fe-Al-Co, piezomag., annealed, internal damping depend. on mag. polarisation (*Polish*) 2-36903  
 Fe-Co, dilute solid soln., softening at low-temp. (*French*) 2-36873  
 Fe-Co, FCC particles in Cu matrix, ferromag.-antiferromag. transition 2-13294  
 Fe-Co, metal pigment, coercivity and unit particle size 2-26680  
 Fe-Co, neutron irradiated, accelerated diffusion (*French*) 2-35546  
 Fe-Co, order-disorder transitions, specific heat 2-21794  
 Fe-Co, solid and liq., thermodynamic activities and heat of mixing meas. by Knudsen-Cell mass spectrometry 2-16817  
 Fe-Co alloys, free thin film production, technique 2-46925  
 Fe-Co film, NMR, conduction electron spin reorientation 2-5593  
 Fe-Co film, oblique incidence deposition, mag. props. 2-21850  
 Fe-Co-B amorphous hyperfine fine <sup>11</sup>B NMR 2-46407  
 Fe-Co-M(V)(Ti) alloys, neutron irradiated, accelerated diffusion (*French*) 2-35546  
 Fe-Co-Mn (46-51, 3-10 at.%), mag. moment, Hall const., outer electron band filling 2-51080  
 Fe-Co-Ni (38-48, 3-11 at.%), mag. moment, Hall const., outer electron band filling 2-51080  
 Fe-Co-V, Vicalloy, cellular decomposition (*Russian*) 2-13726  
 Fe-Co-V-Ni, Vicalloy, cellular decomposition (*Russian*) 2-13726  
 Fe-Cr-Co, mag. hard, high-temp. transform 2-41604  
 Fe-Cr-Co, permanent magnet, heat treated in miscibility gap, mag. props. 2-36983  
 Fe-Cr-Co-C, permanent mag. props., C content effect, expt. study 2-52062  
 Fe-Cr-Co-Si (27, 17.5, 1 wt.%), mag. and struct. transitions, mag. props. 2-26630  
 Fe-Mn-Co alloys, hardening of martensite (*Russian*) 2-36872  
 Fe-Nb-Co-W system, Recalloy, props. (*Japanese*) 2-51400  
 Fe-Ni-Co, oxidation mechanism 2-47249  
 Fe-Ni-Co, solid soln., mutual diffusion coeffs., calc. method (*Russian*) 2-50903  
 Fe-Ni-Co-Cu, reverse martensite transform. stabilization of austenite (*Chinese*) 2-2508  
 Fe-Ni-Cr-Co, scale resist., Co addition effect 2-2619  
 FeCo, adsorpt. of CO, interaction investigated by means of thermal desorpt. mass spectrometry 2-9569  
 FeCo alloy, change in electron bands in order-disorder transition (*Russian*) 2-8752  
 FeCo film, order-disorder effects in magneto-optical props. 2-21995  
 FeCo, order-disorder transition, Mossbauer study 2-45570  
 FeCo, ordering, electron diff. study 2-45047  
 Fe<sub>74</sub>Co<sub>10</sub>B<sub>16</sub>, metallic glass, ferromag., absolute thermoelec. power 2-51154  
 Fe<sub>74</sub>Co<sub>10</sub>B<sub>16</sub>, metallic-glass fibre-optic phase modulators 2-34882  
 Fe<sub>67</sub>Co<sub>18</sub>B<sub>15</sub>Si<sub>1</sub>, Metglas 2605, magnetomech. coupling and permeability 2-31258  
 Fe<sub>35</sub>Co<sub>10</sub>Ni<sub>5</sub>Cr<sub>10</sub>Si<sub>15</sub>B<sub>7</sub>, metallic glass, microhardness and porosity investigation (*Russian*) 2-2577  
 Fe<sub>68</sub>Co<sub>10</sub>Si<sub>10</sub> amorphous mag. alloys, Fourier analysis of Mossbauer spectra 2-26803  
 Fe<sub>2</sub>Co<sub>1-x</sub>Si<sub>x</sub>, helimagnetic struct., magnetisation and small-angle neutron scatt. meas. 2-2056  
 (Fe<sub>1-x</sub>Co<sub>x</sub>)<sub>78</sub>Si<sub>14</sub>B<sub>4</sub>, amorphous, mag. aftereffect, nonlinear and hysteretic changes of permeability (*Polish*) 2-26686  
 Gd-Co, amorphous film, effect of annealing on compensation temp. 2-26627  
 Gd-Co, amorphous film, low temp. resistivity and Hall effect 2-35986  
 Gd-Co amorphous film, XPS study 2-17597  
 Gd-Co amorphous films, domain structure and mag. props., comp. depend. 2-17323  
 Gd-Co amorphous films, mag. orientation transitions 2-46284  
 Gd-Co amorphous films, transport props. 2-21690  
 Gd-Co film, amorphous, galvanomag. props., Hall effect curves (*Bulgarian*) 2-21689  
 Gd-Co RF sputtered amorphous film, magneto-optical Kerr effect meas. technique appl. 2-41334  
 GdCo<sub>2</sub>, Laves phase, <sup>59</sup>Co NMR study 2-17349  
 Gd<sub>1-x</sub>Co<sub>x</sub>, amorphous sputtered films, extraordinary Hall effect, electrical resist. 2-36009  
 Gd<sub>40</sub>Co<sub>60</sub> amorphous film, spin wave resonance (*Russian*) 2-21886  
 GdCoAu, amorphous bubble film, domain drag propag. vel., bias field depend. 2-13323  
 Gd<sub>2</sub>Y<sub>1-x</sub>Co<sub>3</sub>, magnetic behaviour and exchange interactions 2-46262  
 Ho-Co sputtered thin films, bubble and stripe domains, wall structures, electron microscopy obs. 2-26701  
 Ho-Co film, amorphous, annealing effect on elec. resist. temp. depend., mag. compensation pt. and Hall parameters 2-9008  
 HoCo<sub>2</sub>, cryst. struct. distortion and magnetostriction 2-45119  
 HoCo<sub>2</sub>, Laves phase, <sup>59</sup>Co NMR study 2-17349  
 HoCo<sub>2</sub>, mag. excitations, neutron scatt. study 2-51396  
 HoCo<sub>2-x</sub>Ni<sub>x</sub>(Cu<sub>x</sub>), magnetisation reorientation and anisotropy 2-26670  
 LaCo<sub>5</sub>, absorption of H<sub>2</sub>, thermodynamic and kinetic characts., diffusion coeff. determ. 2-41926  
 Mo-Cu-Co, pseudoalloys, phase boundary reactions 2-17665  
 NdCo<sub>2</sub>, Laves phase, <sup>59</sup>Co NMR study 2-17349  
 NdCo<sub>2</sub>, magnetostrictive strain in spin orientation temp. region 2-26716  
 Nd<sub>2</sub>(Co,Fe<sub>1-x</sub>)<sub>17</sub>, neutron diff., preferential site occupation and mag. struct. 2-50586  
 Ni base superalloy, cast, CoO inoculant for surface grain refinement (*Chinese*) 2-17692  
 Ni-Co, fatigued FCC material, eigenstresses determ. from X-ray diff. profiles 2-27258  
 Ni-Co, subband resist. and spontaneous resist. anisotropy, two-current model 2-1888  
 Ni-Co (0 to 70 wt.%), relation between damping capacity and magneto-mechanical props. (*Japanese*) 2-26715  
 Ni-Co film, oblique incidence deposition, mag. props. 2-21850  
 Ni-Co film and Ni-Co/Cu struct., AES, digital data processing 2-22517  
 Ni-Co-Cr-Al, superalloy, oxidation, effect of Ti and Ta additions 2-2621  
 Ni-Co-Cr-Al-Y laser treated coatings, struct. 2-30769  
 Ni-Co-Cr-Al-Y plasma sprayed coatings for aircraft gas turbine appl. 2-47262  
 Ni-Cr-Al-Co, anisotropic fatigue hardening of single cryst. at elevated temps. 2-13814

## cobalt alloys continued

- Ni-Cr-Co-Mo, Rene 95 superalloy powder, precip., STEM and TEM study 2-47032  
 Ni-Cr-Co-Mo-Al-W-Ti-C, heat-resist., cryst. and dislocation struct., var. during cutting 2-51989  
 Ni<sub>40</sub>Fe<sub>20</sub>Co<sub>20</sub>Cr<sub>12</sub>Mo<sub>6</sub>B<sub>16</sub> amorphous alloy, H<sup>+</sup> ion bombardment effects 2-50672  
 Ni<sub>45</sub>Fe<sub>20</sub>Co<sub>20</sub>Cr<sub>10</sub>Mo<sub>4</sub>B<sub>16</sub>, metallic glass, crystn., effect of electron irradi. 2-35402  
 NpCo<sub>2</sub>Si<sub>2</sub>, antiferromagnet, high press. Mossbauer study 2-46442  
 Pd-Co, dil., forced vol. magnetostriction, conc. and temp. depend. 2-46356  
 Pr<sub>1-x</sub>Al<sub>x</sub>Co<sub>5</sub>, constitution, struct. and mag. props. 2-47199  
 PrCo<sub>2</sub>, magnetisation and susceptibility 2-46257  
 Pr<sub>2</sub>(Co<sub>1-x</sub>Fe<sub>x</sub>)<sub>17</sub>, elec. resist. singularities and spin reorientation transistors 2-41133  
 Pt-Co, dil., forced vol. magnetostriction, conc. and temp. depend. 2-46356  
 Pt-Co, L<sub>10</sub> struct., defects atomic struct., FIM study (*Russian*) 2-12583  
 Pt-Co, multishell cryogenic laser fusion targets use of supercond. levitation 2-7330  
 Si<sub>1-x</sub>Co<sub>x</sub>, amorphous, mag. and magneto-optical props. 2-17450  
 Sm-Co, amorphous mag. films, struct. changes during crystn. (*Chinese*) 2-1406  
 Sm-Co alloy film, amorphous, mag. behaviour 2-51440  
 Sm-Co amorphous films, magnetisation reversal, domain wall motion 2-36401  
 Sm-Co amorphous uniaxial films, mag. torque behaviour, rotational hysteresis, spontaneous magnetisation 2-51441  
 Sm-Co permanent magnets, hexapolar mag. configurations (*French*) 2-196  
 SmCo<sub>5</sub>, anisotropic permanent magnets, force anal. 2-21829  
 SmCo<sub>5</sub> magnet, for portable NMR spectrometer, props. 2-23683  
 SmCo<sub>5</sub>, magnetic hysteresis curve, symmetrical in high mag. field 2-21825  
 SmCo<sub>5</sub> permanent magnets, deform. sintered, struct. and mag. props. 2-31245  
 SmCo<sub>5</sub> sintered mag. alloys, domain wall pinning and nucl. thermal activation and coercive field 2-21818  
 SmCo<sub>5</sub> sintered mag. alloys, domain wall pinning and nucl., mag. viscosity obs. 2-21819  
 Sm(CoCu)<sub>5</sub>, structural transform. rel. to coercivity (*Czech*) 2-46343  
 SmCo<sub>5-x</sub>Fe<sub>x</sub>Sn<sub>y</sub>, permanent magnets, Mossbauer effect 2-9066  
 TbCo<sub>2</sub>, Laves phase, <sup>59</sup>Co NMR study 2-17349  
 TbCo<sub>5</sub>, hydrides, H desorption isotherms, isopolaths in press. plateaus 2-26060  
 TbCo<sub>5</sub>, magnetic ordering processes (*Russian*) 2-5528  
 Ti-Co-Fe, absorption-desorption characts. of H<sub>2</sub> 2-8703  
 Ti-Ni-Co system, phase relations and diffusion paths at 900°C 2-9332  
 U-Co alloys, mag. props. temp. and field depend., 4.2 to 300K 2-8961  
 UCo<sub>5</sub>, mag. props. effect of 5f electron localisation 2-31236  
 UCo<sub>5</sub>, system, microwave reson. effect, stoichiometry depend. 2-9039  
 UFe<sub>2</sub>-UCO<sub>2</sub> system, elec. and mag. props., model of strong scatt., temp. and field depend. 2-8784  
 V-Co, self-diffusion and impurity diffusion mechanism 2-5268  
 W-Cu-Co, pseudoalloys, phase boundary reactions 2-17665  
 WC-Co, crack resist., loading rate and temp. effects 2-31789  
 WC-Co, hard electrodes, strengthened layer formation by B electrospray alloying (*Russian*) 2-31827  
 WC-Co, sintered, strength, scale factor effect 2-41704  
 WC-Co cold-upsetting tool, surface layer struct. 2-17743  
 WC-Co gas detonation deposits on stainless steel, quality, specimen travel rate effect 2-41808  
 WC-Co hard alloys, hot-pressed, thermophys. props. 2-30671  
 WC-Co hard alloys, thermomag. method for Co determ. 2-36348  
 WC-Co-B (GB<sub>2</sub>) electric-spark alloying of C steel, microalloying effect on cathode weight gain 2-17780  
 WC-Co-B alloying electrodes, grain size effect on coating form. in elec.-spark alloying 2-13861  
 WC-Co-N, vacuum sintered, β-free layer formed near surface 2-17650  
 WC-TiC-Co, prep. and props. of WCoB diffusion layer, X-ray diff. obs. 2-41787  
 YCo<sub>5</sub>, itinerant electron metamagnetism 2-41100  
 YCo<sub>5</sub>, lattice parameters, temp. depend. 2-45119  
 YCo<sub>5</sub> hydrides, H desorption isotherms, isopolaths in press. plateaus 2-26060  
 Y<sub>4</sub>Co<sub>3</sub>, elec., mag. and supercond. props. 2-46182  
 Y<sub>4</sub>Co<sub>3</sub>, low field magnetisation, onset of mag. order and supercond. transition 2-17207  
 Y<sub>4</sub>Co<sub>3</sub>, superconducting transition and onset of mag., field depend. 2-36201  
 Y<sub>1-x</sub>Nd<sub>x</sub>Co<sub>5</sub>, exchange interactions and mag. anisotropy 2-31169  
 Zn-Co, electrodeposition mechanism 2-22179  
 Zn-Co alloys, electrodeposited, Mossbauer study of chemical state of Co 2-31330  
 Zr<sub>70</sub>Co<sub>30</sub> glasses, supercond. transition temp. and upper crit. field 2-36197  
 Zr(Fe<sub>1-x</sub>Co<sub>x</sub>)<sub>2</sub>, Laves phase, mag. hyperfine interactions, <sup>57</sup>Fe Mossbauer study 2-46438  
 Zr(Fe<sub>1-x</sub>Co<sub>x</sub>)<sub>2</sub>, magnetic order range, magnetisation and Mossbauer study 2-46341

## cobalt compounds

see also cobalt alloys

- dihalides, photoelectron spectra and electronic struct. 2-4351  
 formate dihydrate, NMR spin echo in dilution refrigerator 2-31323  
 magnetic properties of (Co<sub>1-x</sub>Mn<sub>x</sub>)<sub>2</sub>P compounds 2-41113  
 Al-Co-B system, B-rich phases grown from melts, X-ray diff. study 2-46904  
 BaCoFe<sub>2</sub>O<sub>7</sub>, hexagonal ferrite, magneto-optical spectra 2-31458  
 CdCoFeO, ferrite, specific heat, thermal diffusivity 2-26069  
 CeCo<sub>2</sub>Si<sub>2</sub>, effect of 3d element on Ce electronic state (*Russian*) 2-30798  
 Co, complex, 8-(p-toluenesulphonylamino)-quinoline Co(II), electronic absorpt. spectrum, rel. to fluorene, quenching 2-29621  
 Co complex, (meso-tetraphenylporphyrinato) cobalt (II), electronic struct., X-ray diff. study 2-35449  
 Co complex, Co(γ-methylpyridine N-oxide) perchlorate, crystal struct., and superexchange pathways 2-25858  
 Co complex, Co(γ-methylpyridine N-oxide) perchlorate, mag. ordering, susceptibility and sp. ht. obs. 2-26604



## cobalt compounds continued

- Co complex, cobalt pyridine chloride, ground state, local excitations 2-21750  
 Co complex, EDTA-CoCl<sub>2</sub> chelate, US vel., temp. depend. 2-35596  
 Co complex, ethyldiene trisobal nonacarbonyl, vibr. spectra, chemisorbed ethylene analogue 2-4282  
 Co complex, hexakis (pyridine N-oxide) cobalt (II) salts, reaction with alkali halide, used in IR spectroscopy 2-41895  
 Co complex, methyl substituted bipyridine-Co(II), PMR isotropic shift 2-24727  
 Co complex, triazene-1-oxide-Co(II), forbidden hyperfine lines in EPR spectra 2-36415  
 Co complex, trisethylene-diamine Co(III) nitrate, oscillation annealing during neutron irradi. 2-21188  
 Co complex 1-phenyl-3-methyl-4-acetyl-pyrazolone-5, struct., IR and NMR spectra, cond. meas. 2-31503  
 Co complex of 1-phenyl-3-methyl-4-trifluoroacetyl-pyrazolone-5, synthesis, struct., IR and NMR spectra, cond. meas. 2-26909  
 Co complex with 3-nitroaniline, IR and electronic spectra, mag. and cond. meas. 2-26911  
 Co complex with crown ether 15-crown-5, dynamic behaviour, <sup>1</sup>H NMR spectra 2-9042  
 Co complexes, (2M-1,2,4-triazole-3-thiol) cobalt, K-absorption edge, X-ray spectra 2-27022  
 Co complexes, cis-(Co(X)<sub>2</sub>(en)<sub>2</sub>)<sup>+</sup> (X=CN<sup>-</sup>, NO<sub>2</sub><sup>-</sup>, NCS<sup>-</sup>, N<sub>3</sub><sup>-</sup>, Cl<sup>-</sup>), directional ion assoc., cond. meas. 2-44033  
 Co complexes, pyridine based, X-ray K-absorpt. studies (German) 2-27025  
 Co complexes in quaternary ammonium cations, <sup>59</sup>Co chemical shift, hydrophobic effects 2-36457  
 Co II complexes, phthalocyaninatocobalt (II) adducts, synthesis, props. 2-51627  
 Co III complexes, cis-bis(ethylenediamine)-Co(III) soln., PMR 2-43944  
 Co III complexes, Co III (tris-tropolonate and tris-4-isopropyltropolonate), <sup>57</sup>Co-labelled, Mossbauer study 2-46445  
 Co III complexes, NMR, chem. shift investig. 2-13360  
 Co<sup>2+</sup> ions in crystals, optical spectra, covalency effects 2-22050  
 Co-S system close to Co<sub>9</sub>S<sub>8</sub>, prep. and magnetic props. 2-21093  
 Co+CoO system, thermodynamic props. determ. by EMF method using solid electrolyte electrochem. sensors 2-12776  
 CoAs<sub>2</sub>-Sb<sub>2</sub>, far IR lattice vibr. spectra 2-31491  
 CoB, band structure and bonding 2-40779  
 Co<sub>3</sub>B<sub>2</sub>O<sub>7</sub>, cryst. struct. determ. 2-25820  
 Co<sub>3</sub>B<sub>2</sub>O<sub>7</sub>, magnetic and magnetoelec. props. 2-13327  
 CoBr<sub>2</sub>, cryst. binding, struct., Raman and far IR spectra 2-46609  
 Co(CN)<sub>2</sub>OH<sup>+</sup>, electronic struct. and related photochem. props., MS Xα calc. 2-29523  
 Co(CO)<sub>4</sub>, protonation, mol. electrostatic pots. calcs. 2-29679  
 Co(CO)<sub>4</sub>NO, electronic struct., ionisation pot., photoelectron spectra, Xα-SW-Cl calcs. 2-34293  
 Co(CO)<sub>4</sub>NO, gas and soln. phase photochem., linear to bent geom. changes 2-13980  
 CoCl<sub>2</sub>, cryst. vibr., linear chain dynamical model 2-5197  
 CoCl<sub>2</sub>, electrolyte soln. liq. struct., X-ray diff. study 2-45012  
 CoCl<sub>2</sub>, X-ray Cl L<sub>2,3</sub> spectra and electronic struct. 2-27027  
 CoCl<sub>2</sub> in formate baths, for electrodeposition of black Cr-Co alloy 2-51834  
 CoCl<sub>2</sub><sup>2-</sup>, MO calc. using CNDO method, electronic energy and dipole moments determ. 2-43806  
 CoCl<sub>2</sub>·6H<sub>2</sub>O, K X-ray absorpt. spectra 2-17572  
 CoCr<sub>2</sub>O<sub>4</sub>, spinel phase, unusual twinning 2-1494  
 Co<sub>2</sub>Cr<sub>1-x</sub>S<sub>x</sub>, high temp. metal-semicond. transition, elec. cond., DTA and X-ray diff. study 2-36111  
 CoF<sub>2</sub>, canted struct. induced by longitudinal mag. field, magneto-optical study 2-36321  
 CoF<sub>2</sub>, specific heat capacity near Neel temp. 2-8980  
 CoFe<sub>2</sub>O<sub>4</sub>, epitaxial growth on acicular γ-Fe<sub>2</sub>O<sub>3</sub> particles, coercivity, temp. depend. 2-36388  
 CoGe<sub>1.5</sub>S<sub>1.5</sub>(Se<sub>1.5</sub>), far IR lattice vibr. spectra 2-31491  
 CoH, mass spectrometric determ. of dissociation energies 2-29726  
 Co(H<sub>2</sub>O)<sub>6</sub><sup>3+</sup>, thermally populated high spin excited state, chemical shift and spin-lattice relax. time meas. 2-49461  
 CoHgCl<sub>4</sub>·4H<sub>2</sub>O, proton mag. resonance study 2-36448  
 CoI<sub>2</sub>, crystal field and spin-orbit coupling, near IR d-d transitions study 2-22022  
 CoI<sub>2</sub>, lattice vibr., polarised far IR reflection spectra study 2-17473  
 CoI<sub>2</sub>, mag. and struct. investigations 2-26588  
 Co(II) mixed complexes in mixed solvents, PMR investig. 2-15820  
 Co(III) complexes, [Co(salen)(L)]<sub>2</sub> (L=DMSO, Py, DMF, PyO), resonance Raman studies 2-4310  
 Co<sub>3</sub>-M<sub>2</sub>B<sub>4</sub> borides, mag. moments, M=Zr, Nb, Mo, In, Sn or Sb 2-31152  
 Co<sub>2</sub>Mg<sub>1-x</sub>O, single cryst., mag. susceptibility (Russian) 2-2059  
 Co<sub>2</sub>-Mn<sub>2</sub>F<sub>2</sub>, spin excitation spectrum in external field, effect of mag. impurities (Russian) 2-26754  
 Co(NH<sub>3</sub>)<sub>6</sub>Cl<sub>3</sub>, heat capacity from 2.1 to 309K 2-26070  
 Co(NO<sub>3</sub>)<sub>2</sub>, electrolyte soln. liq. struct., X-ray diff. study 2-45012  
 CoNO(CO)<sub>2</sub>, photolysis, excited levels 2-22471  
 CoNb<sub>2</sub>O<sub>6</sub>, cationic valence and cond. bands for photoelectrolysis of water 2-6154  
 Co(NO<sub>3</sub>)<sub>3</sub>, first coord. sphere in mixed solvents, PMR investig. 2-15826  
 CoO, Debye temp. of oxides with NaCl struct. 2-16744  
 CoO, normal modes of vibr. 2-26003  
 CoO, semicond. antiferromag., Raman scatt. associated with magnons 2-26895  
 CoO, surface clusters, adsorption, quantum chem. calc. (German) 2-45736  
 CoO:Sn(Fe), charge compensation mechanism, absorpt. Mossbauer spectra 2-36489  
 CoO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, AC susceptibility meas. 2-46300  
 CoO-B<sub>2</sub>O<sub>3</sub>-PbO glass, mag. props. 2-13272  
 CoO-CeO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub> glass form. regions and phys. props. 2-8442  
 CoO-MoO<sub>3</sub>/γ-Al<sub>2</sub>O<sub>3</sub> catalyst, prep. and characterisation by Raman spectroscopy 2-31972  
 CoO-ZnO free energy of mixing 2-21304  
 Co<sub>1-x</sub>Fe<sub>x</sub>O, thermoelec. study of point defect struct. 2-30915  
 Co<sub>2</sub>O<sub>3</sub>, polycrystalline, dispersity, struct. and mag. props. 2-21872  
 Co<sub>2</sub>O<sub>3</sub>, sputtered electrodes, photoelectrochemistry 2-22465  
 Co<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O, pure and doped, elec. cond. and thermoelec. power meas. 2-36041  
 Co<sub>2</sub>O<sub>3</sub>+H<sub>2</sub>, reduction, external mag. field effects 2-9539

## cobalt compounds continued

- CoP<sub>3</sub>-As<sub>4</sub>, far IR lattice vibr. spectra 2-31491  
 Co(S<sub>2</sub>Se<sub>2</sub>)<sub>2</sub>, itinerant electron metamagnetism 2-41100  
 Co<sub>2</sub>S<sub>4</sub>, linnaeite, electronic struct., mol. orbital calcs. 2-40751  
 CoSO<sub>4</sub>, electrolyte soln. liq. struct., X-ray diff. study 2-45012  
 CoSe, cryst. struct. determ. (Russian) 2-16635  
 CoSi-Si epitaxial layers on Si(111) substrate, TEM and Rutherford backscatt. anal. 2-40703  
 CoSiF<sub>6</sub>·6H<sub>2</sub>O:Cu<sup>2+</sup>, phase transitions, EPR study 2-46367  
 CoTe, cryst. struct. determ. (Russian) 2-16635  
 CoWO<sub>4</sub>, quadrupole interactions, <sup>182</sup>W Mossbauer spectra (French) 2-5612  
 Co<sub>0.3</sub>Zn<sub>0.7</sub>F<sub>2</sub>, three-dimens. Ising antiferromag., random-field effects, neutron scatt. study 2-51423  
 CsCoCl<sub>2</sub> (Br<sub>3</sub>), magnon, spin dynamics, Raman study 2-13280  
 CsCoCl<sub>2</sub> antiferromagnet, quasi-one-dimensional Ising-like, ESR study 2-41182  
 Cs<sub>2</sub>CoCl<sub>4</sub>, transverse susceptibility meas. 2-21779  
 CsCoCl<sub>2</sub>·2H<sub>2</sub>O, antiferromag., one-dimens., <sup>133</sup>Cs nuclear spin-lattice relax., domain boundary propag. effect 2-26779  
 CsMg<sub>1-x</sub>Co<sub>x</sub>Cl<sub>3</sub>, disordered, Raman scatt. from phonons 2-46576  
 CsMn<sub>1-x</sub>Co<sub>x</sub>Cl<sub>3</sub>·2H<sub>2</sub>O, random mixture, mag. ordering, neutron diff. study 2-36327  
 Cu<sub>2</sub>Co<sub>1-x</sub>Cr<sub>x</sub>S<sub>4</sub> chalcogen spinel system, elect. and mag. props., temp. depend. 2-31135  
 Fe<sub>1-x</sub>Co<sub>x</sub>S, magnetic transitions, mag. susceptibility study 2-41136  
 KCoF<sub>3</sub>, relationship between mag. and crystallographic struct. 2-36329  
 K<sub>2</sub>CoF<sub>4</sub>·Fe, antiferromagnet, localised magnon gap modes 2-26611  
 KMnF<sub>3</sub>-KCoF<sub>3</sub>, mixed crystals, hydrothermal growth 2-51787  
 KZn<sub>1-x</sub>Co<sub>x</sub>F<sub>3</sub>, electronic Raman scatt. from Co<sup>2+</sup> clusters 2-2284  
 La<sub>2</sub>Co<sub>2</sub>O<sub>10</sub> oxidation catalyst, struct. evolution and catalytic activity (French) 2-8483  
 (La<sub>1-x</sub>Sr<sub>x</sub>)CoO<sub>3</sub>, cubic perovskite struct., mag. props. meas. 2-26618  
 Li-Zn-Co ferrites, mag. anisotropy anomaly due to Co, permeability meas. 2-26622  
 Li<sub>2</sub>Co<sub>1-x</sub>Fe<sub>x</sub>O<sub>4</sub>, spinels, cation distrib. and elec. props. 2-26423  
 Li<sub>2</sub>CoO<sub>2</sub>, cathode material for batteries of high energy density 2-18043  
 Li<sub>1-x</sub>V<sub>1-y</sub>Co<sub>y</sub>S<sub>2</sub>, layered compounds, mag. props. 2-21765  
 Li<sub>2</sub>Zn<sub>1-x</sub>Co<sub>x</sub>O<sub>4</sub>, spinels, cation distrib. and elec. props. 2-26423  
 MgO-CoO, surface clusters, adsorption, quantum chem. calc. (German) 2-45736  
 Na<sub>2</sub>CoO<sub>2</sub> bronzes, electrochem. intercalation of Na 2-18042  
 Nd<sub>2</sub>Co<sub>2</sub>(NO<sub>3</sub>)<sub>12</sub>·24H<sub>2</sub>O:Mn<sup>2+</sup>, Gd<sup>3+</sup>, host spin-lattice relax. narrowing, EPR study 2-2120  
 PrCo<sub>2</sub>H<sub>4</sub>, magnetisation and susceptibility 2-46257  
 Rb<sub>2</sub>CoF<sub>4</sub>·Fe, antiferromagnet, localised magnon gap modes 2-26611  
 Rb<sub>2</sub>Co<sub>2</sub>Mg<sub>0.5</sub>F<sub>4</sub>, two-dimens. Ising antiferromag., random-field effects, neutron scatt. study 2-51423  
 Rb<sub>2</sub>Co<sub>2</sub>Mg<sub>1-x</sub>F<sub>4</sub>, dilute antiferromag., two-dimens., sharp phase transition 2-13303  
 Rb<sub>0.5</sub>Co<sub>0.5</sub>CoF<sub>3</sub>, ferrimag. 6H hexagonal perovskite, neutron diff. obs. of mag. struct. (French) 2-36312  
 Se<sub>2</sub>O<sub>3</sub>-CeO<sub>2</sub>-Co<sub>2</sub>O<sub>3</sub> activator effect on ferrite form. Li<sub>0.5</sub>Fe<sub>2.5</sub>O<sub>4</sub> matrix 2-22441  
 Si-CoSi-Si (111), laser annealing, epitaxial growth of amorphous Si film 2-51009  
 Sr(Co<sub>1-x</sub>Mn<sub>x</sub>)O<sub>3</sub>, cubic perovskite struct., mag. props. meas. 2-26618  
 TeO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-CoO, phase separation, electron microscope obs. 2-13707  
 TiCoSi<sub>2</sub>, protective coating on Mo, cyclic oxidation testing 2-27372  
 WCoB diffusion layer on hard WC-TiC-Co alloys, prep. and props. X-ray diff. obs. 2-41787  
 WCoB, thermal expansion coeff., linear, X-ray diff. meas., 300-973K 2-16825  
 γ-(Zn,Me)<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, (Me=Mg, Mn, Fe, Co, Cu, Ni, Cd), solid solns., crystal chem. 2-16626

## cochlea see ear

## code converters

- see also codes; information theory  
 logarithmic pulse amplitude to code converter 2-49234  
 photomultiplier output amplitude to code logarithmic converter 2-49233

## codes

- see also encoding; error correction codes  
 three-level balanced code for optical communications systems 2-34943

## coding see encoding

## coefficient of thermal expansion see thermal expansion

## coercive force

## see also magnetic hysteresis

- acicular particles, coercivity and packing density 2-26677  
 Alnico 5 with Nb additions, columnar, permanent mag., mag. props. 2-17316  
 disperse system, struct. and mag. charact. relationship 2-31248  
 γ-Fe<sub>2</sub>O<sub>3</sub> audio tape recording props. rel. to particle size 2-36389  
 Fe-Al-B amorphous system, annealing effects on magnetic properties and crystallisation process (Japanese) 2-22242  
 ferrite powder particles, packing density depend. on coercive field strength (German) 2-51435  
 ferromagnetic amorphous alloys, theory of coercive field 2-21832  
 ferrous, oxalate dihydrate, thermal decomp. study using DC elec. cond. meas. 2-13938  
 field strength, meas. procedure for ring specimens in audio freq. range 2-15201  
 measurements in particulate systems, kinetic effects 2-26681  
 metal dusts and fumes, mag. props. meas. technique 2-48730  
 meter, automatic ferromag. probe with cyclic mag. reversal 2-198  
 mischmetal-Co-Cu-Fe-Mg alloys, mag. props. for permanent magnet application 2-41164  
 permanent magnetic developments, review 2-9020  
 prussian blue, and several kinds of additives, thermal decomp. products (Japanese) 2-2754  
 quartz, ferrous, changes in mag. props. under blast action (Russian) 2-21822  
 Recalloy, props. (Japanese) 2-51400  
 rock remanent magnetisation press. effects 2-22972  
 soft magnetic materials development, mag. anisotropy and magnetstriction meas. 2-31171  
 soft non-iron based alloys, properties and applications (Czech) 2-46339  
 steel, high-speed, struct. and props. after cold treatment 2-27196  
 steel, low C, magnetic props. for soft magnetic appl., heat treatment 2-21831  
 steel, low C, P-bearing, mag. ageing characts. 2-13826



**coercive force continued**

- steel, low C, study of mag. ageing kinetics 2-26659  
 steel, stainless, structural stability, rel. to physicomach. props. 2-17719  
 transition metal-base amorphous alloys, mag. props., comp. depend. 2-31244  
 3d transition metal-Cr sputtered films, mag. props., effects of Cr 2-26688  
 Ba ferrite films with perpendicular mag. anisotropy, DC sputtering prep. 2-27083  
 BaFe<sub>12</sub>O<sub>19</sub>/SiO<sub>2</sub> coprecipitated, uniaxially hot pressed, coercivity and texture 2-21838  
 Co film, oblique incidence deposition, mag. props. 2-21850  
 Co film, vapour deposited, mag. props. (Japanese) 2-26693  
 Co, fine particle system, time depend. magnetisation 2-26679  
 Co-Cr films for perpendicular recording, RF sputtering deposition 2-26691  
 Co-Cr films for perpendicular mag. recording, opposing targets sputtering deposition 2-27082  
 Co-Cr films with perpendicular magnetic anisotropy, RF sputtering prep., coercivity and X-ray orientation 2-26689  
 Co-Cr perpendicular recording medium by vacuum deposition, mag. and struct. props. 2-26690  
 Co-Cr sputtered layered media, optimisation for areal density 2-21836  
 Co-Fe-Cr films, mag. props. variation during electron bombard., surface comp. (Russian) 2-21844  
 Co-Ni-W sputtered film, recording performance and mag. props. 2-21849  
 Co-P chemically deposited film, mag. props., effects of activation and acceleration 2-9009  
 Co-P magnetic electroless thin films, effective life 2-41166  
 Co-rare earth permanent magnets, materials and appl. (German) 2-33580  
 Co-Re sputtered film, effect of orientation and microstructure on mag. props. 2-21848  
 Co-Sm, magnetic domain and cryst. microstruct., Lorentz electron microscopy study 2-21817  
 CoFe<sub>2</sub>O<sub>4</sub>, epitaxial growth on acicular  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> particles, coercivity, temp. depend. 2-36388  
 Co<sub>75</sub>Si<sub>15</sub>B<sub>10</sub>H, H effect on coercive field 2-46348  
 CoTiB amorphous films, mag. props., effect of B and Ti 2-36399  
 CrO<sub>2</sub> particles, coercivity, vol. packing fraction depend. 2-21841  
 CrO<sub>2</sub> particles, mag. props., mag. tape appl. 2-21840  
 Cu-Mn-Al (20.6, 34.7 at.%), displaced hysteresis loop upon mag. annealing 2-26687  
 Cu-Ni-Co (50, 21, 29 wt.%), mech. and mag. hardening 2-17686  
 Cu-Ni-Fe decomposed solid solns., plastic deform. effect on mag. props. (Russian) 2-21862  
 (Fe,Co)<sub>100-x</sub>(Ta,W)<sub>x</sub>, RF sputtered amorphous films, mag. and thermal props. 2-36397  
 Fe foil, electrodeposited, mag. props. 2-26664  
 Fe, magnetic and magnetomechanical props., influence of dislocation structs. 2-26712  
 Fe, magnetic props. for soft magnetic appl., heat treatment 2-21831  
 Fe particles, mag. props., mag. tape appl. 2-21840  
 Fe-B, amorphous, with transition metal substituents, mag. props. and crystn., cluster form. 2-8997  
 Fe-B, amorphous-cryst. transform., coercive force and TEM obs. 2-8438  
 Fe-B-C-Si, amorphous low core loss materials, comp. and heat treatment 2-31242  
 Fe-B-Si-C-Al, amorphous, crystn. temp., mag. props. 2-41160  
 Fe-Co, metal pigment, coercivity and unit particle size 2-26680  
 Fe-Co film, oblique incidence deposition, mag. props. 2-21850  
 Fe-Cr-Co, permanent magnet, heat treated in miscibility gap, mag. props. 2-36983  
 Fe-Cr-Co-Si (27, 17.5, 1 wt.%), mag. and struct. transitions, mag. props. 2-26630  
 Fe-Cr-Si-B amorphous ribbons, mag. props. 2-36384  
 Fe-Mo system, Gentalloy, damping characts. 2-1556  
 Fe-Nb-Co-W system, Recalloy, props. (Japanese) 2-51400  
 Fe-Ni (36 and 50 wt.%), mag. props. after deform. and annealing 2-26673  
 Fe-Ni-Al alloy YuND4 magnets, cooling rate rel. to mag. props. 2-26674  
 Fe-P alloys, sintered, mag. props. 2-22346  
 Fe-Pd (18 to 52.5 at.%) alloy, mag. props., by mag. meas. and X-ray diff. 2-21833  
 Fe-Pd-Ag, Ag effect on magnetic props. (Japanese) 2-27301  
 Fe-Si (6.5 wt.%) ribbons, mag. props. and grain struct. after annealing 2-26665  
 Fe-Si alloys, high Si content, mech. and mag. props., recent studies 2-26648  
 Fe-Si alloys, rapidly quenched, mag. props. 2-17315  
 Fe-Si based metallic glasses, mag. props., surface inclusion effects 2-41159  
 Fe-Si-Al single crystns., mag. props. near Sendust comp. 2-26624  
 Fe-Si-P alloys, sintered, mag. props. 2-22346  
 Fe-Zr-B, amorphous, form. range, mag. props. and thermal stability 2-31243  
 (Fe<sub>0.82</sub>B<sub>0.18</sub>)<sub>0.9</sub>Tb<sub>0.05</sub>La<sub>0.05</sub>, amorphous and crystallised, mag. props. 2-21820  
 Fe<sub>3</sub>N<sub>4</sub> pigment, coercivity and unit particle size 2-26680  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, amorphous, Lorentz electron microscopy study of domain struct. 2-5562  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>10</sub>B<sub>6</sub> amorphous ribbons, low field mag. props. 2-46346  
 Fe<sub>19</sub>Ni<sub>39</sub>Si<sub>42</sub>B<sub>12</sub>, amorphous, temp. depend. of mag. permeability 2-26656  
 $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>, acicular, prep. with antisintering agents, mag. and rheological props. 2-26682  
 $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, ferrimagnetic phase form. during milling 2-27193  
 $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> particles, coercivity, vol. packing fraction depend. 2-21841  
 $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>:Co particles, doped and adsorbed, coercivity, vol. packing fraction depend. 2-21841  
 $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>:Ti(Co), sputtered double-layer disk, mag. props., recording characts. 2-21851  
 $\gamma$ -Fe<sub>2</sub>O<sub>4</sub> particles, mag. props., mag. tape appl. 2-21840  
 FeTiB amorphous films, mag. props., effect of B and Ti 2-36399  
 Gd-Fe amorphous film, RF magnetron sputtering and mag. props. 2-36782  
 Ge-B-Ga, amorphous, crystn. temp., mag. props. 2-41160  
 Li-Ti-Zn ferrite, effect of MnO<sub>2</sub> and Bi<sub>2</sub>O<sub>3</sub> additives on props. (Slovak) 2-2105  
 Nd<sub>1-x</sub>Fe<sub>x</sub> amorphous alloys, melt-spun, crystallisation and mag. props. 2-17314

**coercive force continued**

- Ni, Z 2-26653  
 Ni-Co film, oblique incidence deposition, mag. props. 2-21850  
 Ni-Cr(Cu) alloys, magnetic domain wall pinning by lattice defects 2-26653  
 Ni-Fe-Nb-Al, struct. effect on physical props. (Chinese) 2-2533  
 Sm-Co alloy film, amorphous, mag. behaviour 2-51440  
 SmCo<sub>5</sub> sintered mag. alloys, domain wall pinning and nucl., thermal activation and coercive field 2-21818  
 SmCo<sub>5</sub> sintered mag. alloys, domain wall pinning and nucl., mag. viscosity obs. 2-21819  
 Sm(CoCu)<sub>5</sub>, structural transform. rel. to coercivity (Czech) 2-46343  
 SmCo<sub>5-x</sub>Fe<sub>x</sub>Sn<sub>y</sub>, permanent magnets, Mossbauer effect 2-9066  
 Sn<sub>1-x</sub>Cr<sub>x</sub>Te, mag. props., effect of isothermal annealing 2-41161  
 Tb-Fe amorphous film, RF magnetron sputtering and mag. props. 2-36782  
 TiC-Ni-Mo, hot pressing, conditions effect on coercive force and grain size 2-17647  
 U-Co alloys, mag. props. temp. and field depend., 4.2 to 300K 2-8961  
 YIG films, domain wall vel. anomaly due to coercivity 2-46352

**coercivity see coercive force****coexistent superconductors see magnetic superconductors****coherence****see also light coherence**

- electron microscopy, image contrast, quantitative approach (French) 2-1374  
 EM, wave reflection from discrete scatterers in turbulent atmosphere, saturation effect in coherence function 2-39544  
 EM beam mutual-coherence function in turbulence, two-position, two-freq. 2-42467  
 Gaussian stochastic processes, coherent frequency modulation 2-23557  
 interferometry, very-long-baseline geodetic appl., coherence limits 2-28227  
 ocean acoustic wave propag., stochastic waveguide model 2-44519  
 rough surfaces, coherent scatt. 2-15078  
 superrandom fields, entropy props. 2-49717

**coherence distance see coherence length****coherence length**

- Josephson junctions, weakly coupled, thermal fluctuations and phase locking 2-17223  
 superconductor-insulator mixture, scaling theory 2-5512  
<sup>3</sup>He-<sup>4</sup>He mixtures, superfluidity proximity effect 2-21422  
 Nb superconducting bridge, short variable-thickness, vortex flow regime 2-8921

**coherent accelerators see collective accelerators****coherent antiStokes Raman scattering**

- acetylene, pulsed supersonic mol. beam, high-resolution CARS 2-11488  
 anthracene single cryst., two-photon resonance in CARS and coherent Stokes Raman spectra 2-11763  
 benzene, second order CARS (Chinese) 2-20362  
 benzene, vibr. relax., excitons, CARS study 2-26881  
 chromatograph, liquid, computer controlled system, absorpt., fluoresc. and CARS detection 2-31960  
 combustion diagnostics by multichannel CARS 2-13959  
 combustion processes, CARS probing 2-13958  
 condensed media, review 2-13498  
 ethene, supersonic free jet, rot. relax. CARS spectra 2-43919  
 ferricytochrome-c excited state spectra obtained using CARS, vibr. transitions 2-24709  
 ferrocyclochrome-c, excited state spectra obtained using CARS, vibr. transitions 2-24709  
 four wave mixing, rotational CARS and stimulated Raman scatt., 3D phase matching 2-11764  
 gas, CARS, interference effects and resonance 2-16064  
 gas, resonant CARS, review 2-16063  
 hexatriene single cryst., two-photon resonance in CARS and coherent Stokes Raman spectra 2-11763  
 methane diffusion flame, crossed-beam, background-free CARS 2-13960  
 naphthalene molecular crystal, vibr. and librational dynamics, picosecond CARS 2-46570  
 nonlinear laser spectroscopy of gases, gas flows and low temp. plasma 2-48797  
 one-photon resonance, CARS, coherent Stokes and spontaneous Raman spectra 2-11758  
 pentacene in benzoic acid, thermally induced excited state coherent Raman spectra 2-2225  
 pentacene-benzoic acid molecular cryst., multiresonant four wave mixing 2-44403  
 spectrometer and measurements 2-10882  
 spectroscopy, monograph 2-33646  
 spectroscopy, review, principles and characts. (Chinese) 2-23734  
 supersonic jet flow vel. meas. using CARS technique 2-35235  
 surface plasmons 2-10881  
 wavenumber determination, high resolution CARS method 2-23730  
 CO<sub>2</sub>, Raman active vibr. selective excitation, energy transfer between vibr. states, CARS and PARS obs. 2-49439  
 D<sub>2</sub>, supersonic free jet, rot. relax. CARS spectra 2-43919  
 H<sub>2</sub>, supersonic free jet, rot. relax. CARS spectra 2-43919  
 I<sub>2</sub>, high resolution CARS spectra obs. 2-49417  
 N<sub>2</sub>, CARS, high press., collisional narrowing 2-11499  
 NO, Q-branch CARS 2-20070  
 Na excited state, resonant CARS and coherent Stokes Raman scatt. 2-11425  
 Nz, supersonic free jet, rot. relax. CARS spectra 2-43919  
 O atoms in flames, coherent anti-Stokes Raman spectra 2-10879  
 O<sub>2</sub>, photofragment of O<sub>3</sub>, collision free CARS 2-7562  
 O<sub>2</sub>, supersonic free jet, rot. relax. CARS spectra 2-43919

**coherent optical transients see optical coherent transients****coherent potential approximation see CPA calculations****cohesive energy see binding energy****coils****see also inductors; solenoids; windings**

- inductance, liquid conductance at high frequencies meas., using non-contact system 2-15192  
 long life coil of field 50 T for plasma research 2-11176  
 loss-angle measurement, series and parallel cct. (German) 2-15183  
 magnetometer, fluxgate, sensitivity calc. w.r.t. meas. coils dimensions (Chinese) 2-33579  
 RF coil for NMR head imaging 2-52599



**coils continued**

- superconducting coil design for multipole alternate fusion fuel burner 2-24411
- superconducting devices, conf., Chicago, USA (Nov. 1980) 2-14984
- superconducting magnet coils of Mirror Fusion Test Facility, mechanical behaviour 2-15633
- Al anodised strip excitation coils for LEP magnets 2-7423

**coincidence circuits**

- see also counters
- cosmic ray research at Florence (1928-32) 2-18856
- liquid scintillation coincidence counters 2-43709
- multiple channel  $4\pi\beta\gamma$  anti-coincidence counting 2-24528
- multiple-user data acquisition and analysis system for high flux beam reactor 2-11364
- multiplicity logic unit, for gamma-ray detection 2-19894
- neutron coincidence counting method, CARMEN 2-4194
- <sup>198</sup>Au absolute intensity meas., efficiency extrapolation method (Chinese) 2-34250
- Ge(Li)  $\gamma\gamma$  coincidence counter, Compton suppression spectrometer, NaI(Tl) veto shields 2-19909
- <sup>131</sup>I absolute intensity meas., efficiency extrapolation method (Chinese) 2-34250
- Pu passive assay, with shift register neutron coincidence counter 2-4137
- PuO<sub>2</sub>, large samples, neutron coincidence counting, systematic errors 2-19636

**cold-cathode tubes**

- see also counting tubes; photomultipliers; phototubes
- No entries

**cold rolling**

- Cu-Al (9 wt.%) alloy, microcalorimetric eval. of disordering under different mech. solicitations 2-41602
- metal, BCC, single cryst. ribbon prod. by cold rolling and high temp. annealing (Japanese) 2-17645
- rigid fibre reinforced composites, ductile fracture criterion 2-27184
- rotating roll with surface heat flux and convective cooling, steady-state temp. distrib. 2-4693
- steel, cold rolled sheets, possibilities of increasing strength, metallurgical aspects (German) 2-31708
- steels, influence of temper rolling on transient stage of cyclic deform. 2-41628
- superconducting amorphous alloys, supercond. props., review 2-31023
- tandem, mathematical model for dynamic digital simulation and differential eqn. of tension (Chinese) 2-2524
- Ag, recrystn. temp., effect of trace elements (Japanese) 2-9360
- Al, 99.99<sup>+</sup> and 1100, fatigue crack propagation 2-36954
- Co, initial fracture stages during cold rolling (Russian) 2-5939
- Co-Ni-Cr-Mo, cold-rolled and recovered, internal friction meas. 2-41664
- Cu, rolled single crystals, shear bands 2-27254
- Cu sheet, cold-rolled texture development, three dimensional representation (Russian) 2-5892
- Cu-Zn (47.3 wt.%), martensite burst temp., effect of plastic deform. 2-51898
- CuZn 30 sheets, struct. and texture study on cold rolling (German) 2-2530
- Dy, texture and mag. props. after rolling and annealing (Russian) 2-22236
- Fe-B amorphous Invar alloys, effect of cold rolling on thermal expansion and mag. props. 2-26595
- Ni, texture orientation transition due to rolling temp. lowering (Russian) 2-13744
- Pd, annealed and cold rolled, diffusivity and solubility of H<sub>2</sub> (Japanese) 2-12853
- Tb, texture and mag. props. after rolling and annealing (Russian) 2-22236

**cold shortness** see brittleness**cold working**

- see also bending; cold rolling; plastic deformation; slip; work hardening
- Armo, dimensional changes offer phase recrystallisation, bulk cold plastic deform. effect 2-22239
- blank production by breaking, loading parameters effect on metal fracture process 2-51940
- $\alpha$ -brass, cold worked, low cycle fatigue strength 2-17723
- brass waveguides, rectangular, vibr. strength, improvement by metal treatment (Russian) 2-31773
- Elinvar,  $\gamma$ -phase form. mech., kinetics and singularities (Russian) 2-22212
- Inconel 625, superalloy, thermal stability 2-47060
- metals, hardening during plastic treatment (Russian) 2-9358
- Nimonic 86, superalloy, thermal stability 2-47060
- polymer fibre reinforced metals, powder technology, mech. props. (German) 2-36815
- porous materials, sintered, cold extrusion forging 2-13670
- restoration mechanisms 2-41641
- steel, alloy, dimensional changes offer phase recrystallisation, bulk cold plastic deform. effect 2-22239
- steel, anisotropy in cold worked layer, US obs. 2-31879
- steel, ASE 4340, external stress effect on H blistering 2-2585
- steel, austenitic, cold worked, internal friction peaks 2-47077
- steel, austenitic stainless, H solubility, effect of thermomech. treatment and surface condition 2-35700
- steel, austenitic stainless Cr-Mn, mech. props. and phase transforms. at +20 and -196°C 2-27240
- steel, C, dimensional changes offer phase recrystallisation, bulk cold plastic deform. effect 2-22239
- steel, C, high strength wire, stress corrosion cracking 2-13840
- steel, Cr-Ni, deform. history effect on creep (Czech) 2-47137
- steel, high Mn, wrought, phase comp. and props., effect of C, Mn, Ni and N concs. 2-51938
- steel, Ni maraging, low temp. ageing and repeated strain ageing 2-41620
- steel, Si-Cr valve, cold-drawn, fracture-mechanics anal. (Chinese) 2-22299
- steel, stainless, Cr-Ni 18/10 type, partial substitution of Cr and effects on struct. (French) 2-36875
- steel, stainless, ferritic, oxide dispersion strengthened, prep. and mech. props. 2-41548
- steel, Ti, low C, nitridable, cold forming processes 2-36871
- steel, tool, ductility after heat treatment in salt soln. (German) 2-22288
- steel, tool, secondary hardening and ductility investig. (German) 2-22289
- steel developments, carbon and alloy types 2-22241
- steel fibre reinforced Ag, low-cycle fatigue 2-52026

**cold working continued**

- steel fibre reinforced steel composite, reinforcement effect on struct. and mech. props. 2-41557
- thin plate, metallurgical characterization by ultrasonics 2-17828
- Zircaloy 4, creep and stress relaxation, data representation in terms of Hart's phenomenological theory or hyperbolic sine eqn. 2-31746
- Zircaloy-2, in-reactor deform. of tubes at 330K 2-47125
- Zircaloy-2, proton irradi. creep 2-47127
- Zircaloy-2 and -4, neutron irradi., dislocation struct. 2-50649
- Ag, cold worked, internal friction and modulus defect, temp. depend. (Polish) 2-36907
- Ag, electrical resistivity, low temp., cold work effect 2-36001
- Al alloys, dilute, cold worked, low freq. internal friction peaks, strain amplitude 2-47079
- Al and alloys, ductile, erosion mechanisms 2-27293
- Al-Cr, rapidly solidified, coarsening of intermetallic particles 2-41611
- Al-Fe, rapidly solidified, coarsening of intermetallic particles 2-41611
- Al-Ga (0.5 wt.%), cold work internal friction peak at low temp. 2-45342
- Al-Mg (2 wt.%), dissolution of beta-phase, effect of cold work, fracture stress 2-5891
- Al-Mg (5.5 at.%), cold worked, recovery, role of Mg atoms 2-47051
- Al-Mg-Si, precipitation, influence of initial struct. 2-31702
- Al-Ni, rapidly solidified, coarsening of intermetallic particles 2-41611
- Al-polyethylene, sandwich laminates, cold press workability 2-13745
- Al-Zn-Mg-Cu, alloy 7075-T651, effects of warm working 2-47064
- Cu, Bauschinger effect, pure and dispersion hardened specimens 2-2548
- Cu, cold worked, low cycle fatigue strength 2-17723
- Fe, cold worked, internal friction spectrum 2-41654
- Fe, high-purity, defect investigs. using mag. aftereffect and internal friction (Polish) 2-27205
- Fe, sintered, strain hardening during cold plastic deform. 2-22238
- Fe-Al, cold worked, Mossbauer study of atomic reordering 2-17377
- Fe-Ni-C, internal friction behaviour, 77 to 300K, effect of thermal transformation and cold working 2-47106
- Fe-Ni-Cr, alloy 800H, low-cycle fatigue, high temp., effect of ageing and cold working 2-36951
- Fe-Pd (18 to 52.5 at.%) alloy, cold drawn, mag. props., by mag. meas. and X-ray diffr. 2-21833
- Fe-Si alloys, high Si content, mech. and mag. props., recent studies 2-26648
- KCl(Br)(I), polymorphic press. induced phase transition hysteresis, cold working, plastic deform., and impurities effect 2-50853
- Mg, grain-boundary struct. influence on props. 2-45203
- Mo, cold worked and H-charged, internal friction  $\alpha$  and  $\beta$  peaks, 90 to 400K 2-41652
- Nb, cold worked, internal friction study of  $\gamma$ -peak 2-41653
- Ni-H, cold-worked, internal friction peaks 2-8568
- Pd<sub>2</sub>MnSn ferromag. Heusler alloy, magnetisation reduction by cold working 2-9001
- RbCl, polymorphic press. induced phase transition hysteresis, cold working, plastic deform., and impurities effect 2-50853
- Zn single cryst., internal friction under impact loading 2-45347
- $\alpha$ -Zr, fatigue, cold work effect at elev. temp. 2-31772
- Zr-Nb (2.5 wt.%), in-reactor deform. of tubes at 330K 2-47125

**collections of physical data**

- A=116, nuclear data sheets 2-3337
- A=125, nuclear data sheets 2-28613
- A=139, nuclear data sheets, levels, J<sup>π</sup>, transitions 2-6714
- A=16,17, energy levels compilation 2-49034
- A=193 nuclear data sheets 2-28614
- A=246-262, even A, nuclear data sheets, levels, J<sup>π</sup>, transitions 2-6715
- A=75, nuclear data sheets 2-3336
- A=91-150, gamma-ray transition strengths up to February 1981 2-38371
- alkali metal nitrides, activity and osmotic coeffs.; data correlation 2-33247
- atomic and atomic ion spectra, wavelengths and transition probabilities, data table 2-4237
- atomic sensitivity factors for ESCA, empirical set 2-27508
- $\alpha$  Carinae (Canopus), spectrum obs. and absorpt. lines equivalent widths 2-38187
- Chinese meteorites, catalogue 2-14791
- data guide for reactor neutron metrology, activation and fission reactions 2-14988
- earthquakes, catalogue of shallow events in central Japan (1904-25) (Japanese) 2-32418
- earthquakes of Izu Peninsula, Japan, 1901 to 1980, catalogue to fore shocks characts. 2-32415
- electrolytes, aq. solns., activity and osmotic coeffs., data tables 2-33246
- electron-positron pair internal creation, total and differential conversion coeff. 2-24174
- heavy ion-nucleus reaction parameters 2-14985
- hetero compounds containing first row elements, photoelectron spectra 2-38372
- IAU (1976, 1979) System of Fundamental Astronomical Constants, numerical values 2-42582
- Jupiter satellites, surface feature coords., rot. axis and diameter 2-32933
- limiting gravity waves in water of finite depth 2-6397
- mineral crystals, largest data compilation 2-37856
- nuclear data, recent references, January through April 1981 2-10556
- optical glasses entering into GOST 3514-76, relative abrasion hardness 2-49851
- proteins, molar absorptivity and A<sup>1%</sup><sub>1cm</sub> values at selected wavelengths of UV and visible regions 2-33243
- proteins and its derivatives, molar absorptivity and A<sup>1%</sup><sub>1cm</sub> values at selected wavelengths of UV and visible regions 2-33244
- pulsars, observed and derived parameters for 330 objects 2-48267
- radioisotope decay characts., data table (French) 2-29177
- scatt. at low energies, phase shifts and differential cross sections 2-34551
- sunspot diatomic molecular lines, table in 7600 to 8100 range 2-42667
- supernova database, proposed creation 2-53114
- third-row elements, (3d+4s)<sup>4p</sup> at. configs., energy levels, first spectra 2-10555
- transition metals, optical props., 0.1-500 eV, data compilation 2-36586
- water, pair production probability and LPM bremsstrahlung 2-24526
- Z<sub>2</sub>≤60 nuclei, internal conversion coeffs., ratios, data table 2-29178
- Ar, photoionisation, cross sections, spin-polarisation, data compilation 2-38370
- Be-like ions, electron impact, collision strengths, data compilation 2-38368



**collections of physical data continued**

- CaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-H<sub>2</sub>O, selected phases, thermodynamic tabulations 2-33245  
 Co, transition probabilities and oscillator strengths, data compilations 2-7523  
 Fe II, semiempirical calc. of gf values 2-7516  
 Fe, transition probabilities and oscillator strengths, data compilations 2-7523  
 H-like ions, Z=6 to 33, dielectronic satellite spectra for (2l'3l'-1s2l, 2l'3l'-1s3l) transitions 2-34344  
 He-like ions, Z=6 to 33, dielectronic satellite spectra for (1s2l'3l'-1s<sup>2</sup>2l, 1s2l'3l'-1s<sup>2</sup>3l) 2-34344  
 Kr, photoionisation, cross sections, spin-polarisation, data compilation 2-38370  
<sup>6,7</sup>Li, elastic scatt. cross section, optical model parameters, data compilation 1968 to 1981 2-38369  
 Mn XVII to XXIII, atomic data and level populations calc. 2-42797  
 Ni, transition probabilities and oscillator strengths, data compilations 2-7523  
 Pb, pair production probability and LPM bremsstrahlung 2-24526  
 Te emission line wavelengths, 300-700 nm atlas 2-24639  
 Xe, photoionisation, cross sections, spin-polarisation, data compilation 2-38370

**collective accelerators**

- closed electron drift, ion flow struct., mag. field effects 2-40188  
 electrostatic superaccelerator for high energy particles 2-43638  
 2-D flow in pulsed plasma accelerators, numerical simulation (*Russian*) 2-25507  
 heavy-ion accelerator, magnetometric apparatus for pulsed magnetic field meas. in accelerating system 2-15198  
 heavy-ion accelerator, magnetometric apparatus for pulsed magnetic field meas. in accelerating system 2-19142  
 high beam-current accelerators, research program in US, review 2-563  
 pulsed plasma accelerator, flow studied using optical interferometer (*Russian*) 2-25508  
 relativistic beam, high-current, waveguide buncher optimisation 2-19830  
 slow cyclotron waves in tubular electron beams 2-29464  
 Tonus-Vera electron accelerator for ions collective accel. study 2-4151  
 vacuum erosion-type generators and plasma accelerators working on alternating current 2-5001

**collective states, nuclear** *see nuclear collective states and giant resonances***collimators (optical)** *see optical collimators***collision processes**

- see also atom-surface impact; atomic inelastic collisions; charge exchange; chemical reactions; elastic scattering of atoms and molecules; elastic scattering of electrons by atoms and molecules; electron attachment; electron impact; elementary particle interactions; intermolecular mechanics; ion-surface impact; molecular inelastic collisions; molecule-surface impact; negative ions; Penning ionisation; plasma collision processes; potential energy surfaces for collision processes; quantum field theory; quasimolecules; radiation quenching*  
 asteroids, effect of size-depend. collisional history on spin rate distrib. 2-32896  
 asteroids, impact origin for rapidly rotating asteroid 201 Penelope rel. to UVB photometry 2-38096  
 charged particle interacting with many-particle target, self-energy near surface 2-31588  
 Comet Howard-Koomen-Michels (1979 XI), Sun-grazing comet, orbital elements rel. to collision with Sun 2-18739  
 elastic collisions, central or peripheral? 2-23502  
 galaxies, N-body simulations of tidal interactions and merging of disc-halo systems 2-14929  
 gases, optical cooling, collisions effect 2-44816  
 high-velocity solid and liquid bodies collisional dynamics 2-15011  
 inelastic scattering, quantum mechanical scatt. eqns. 2-18836  
 interstellar dust, sputtering and collisions in three-phase medium rel. to Ca-Al rich inclusions in meteorites 2-32959  
 ion-acoustic solitons, resonance, collision processes in multidimensional space 2-28675  
 ionosphere, collision freq. profile rel. to Joule heating of equatorial electrojet E-region 2-32732  
 meteorites, space erosion rates rel. to secular var. of cosmic rays over 10<sup>9</sup> years 2-14831  
 potential scattering, analytic scatt. length 2-33362  
 unified treatment, collision complex eigenfunctions, Jost matrix 2-24806

**collision sequences, focused** *see sputtering***colloid chemistry** *see colloids***colloids**

- see also Brownian motion; coagulation; electrophoresis; electroviscous effect; emulsions; gels; magnetic fluids; thixotropy*  
 adsorbed molecules, spectroscopic study, role of EM interactions 2-2377  
 alkali halides, irradiated, colloidal centres growth (*Russian*) 2-2740  
 alkyl resin fractions, dielectric relax. and elec. cond. 2-46470  
 amphiphilic electrolyte props. in nonpolar solvents 2-9576  
 applications in coating of metals with ceramic oxides 2-9473  
 birefringence and conservative dichroism, Rayleigh-Gans-Debye approx. 2-34654  
 Brownian particles adsorption in presence of pot. barriers, different double-layer interaction modes effect 2-37107  
 charged micelles, ion migration rates, fluoresc. quenching, electrostatic effects 2-39431  
 conference, Jerusalem, Israel (5-10 July 1981) 2-42783  
 dilute suspensions of colloids, dielect. response and conductivity 2-46458  
 electronic method of determining the strength of suspensions in colloidal sols 2-27486  
 glass-forming systems, colloidal and polymer gels, monolithic transformation 2-41944  
 heterocoagulation in shear flow 2-27483  
 hexadecyltrimethylammonium bromide, C-H Raman stretching modes in water and chloroform solns. 2-4292  
 ionic reaction kinetics, ionic strength effect 2-41865  
 ionic surfactants, micellar solns., elec. birefringence meas. 2-39701  
 luminescent probes in micellar systems, quenching kinetics 2-43972  
 metals, photochem. electron storage, H<sub>2</sub> formation by free radicals 2-13983  
 micellar diffusivity at low NaCl conc., light scatt. meas. 2-40580  
 micellar media, dynamics of photoinduced charge separation using amphiphilic redox delays 2-2720  
 micelles, investig. with pyridinium N-phenolbetaine E<sub>T</sub>(30) polarity probes for aq. interfaces 2-22493

**colloids continued**

- micelles, muonium reactions, rate consts., spin rot. technique 2-11591  
 micelles, organic counterion binding determ., Fourier transform NMR self-diffusion meas. 2-21915  
 micelles, press. effects, review 2-2742  
 microflora analysis, by laser turbidity meas. (*Russian*) 2-14361  
 minerals, mag. flocculation and treatment, theoretical model 2-52253  
 mixed colloidal systems, heterocoagulation, adhesion and microfloitation 2-47380  
 noble metal microspheres, surface local fields, rel. to enhancement of Raman scatt. and fluoresc. emission 2-13480  
 plasma, graded density, with colloidal net, second harmonic generation 2-1309  
 polyacene molecules in micellar systems or homogeneous soln., photoionisation, ionisation pot. meas. 2-49599  
 polymer chains at interfaces 2-4431  
 polymer coatings, plasma deposited, colored, metal codeposition technique 2-44419  
 polymer colloids, phase equilibria and transport 2-5221  
 potassium butoxybenzoate, D<sub>2</sub>O soln., micellisation effect on configs., NMR and Raman study 2-39423  
 potassium propoxybenzoate, D<sub>2</sub>O soln., micellisation effect on configs., NMR and Raman study 2-39423  
 pyrene, in aq. dodecyltrimethylammonium chloride, fluoresc. quenching by I<sup>-</sup> 2-24776  
 pyrene+CTAB, reaction kinetics, ionic strength effect 2-41865  
 quasilelastic light scattering from macromolecules and Micelles 2-46631  
 rhodamines, micellar water solns., fluoresc., conc. quenching 2-24775  
 sodium dodecyl sulphate, conc. micellar soln., neutron scatt. investig. 2-31953  
 sodium dodecyl sulphate micelles, microviscosity, aggregation number, excimer fluoresc., effects of additives 2-7587  
 sodium perfluorooctanoate, micelle form. in aq. soln., high pressure study 2-12793  
 spherical microstructures, struct. and stress 2-21429  
 spheroidal particle polarisability, electro-optical investigation of elec. props. 2-26864  
 surface enhanced Raman spectrosc. investig. 2-47379  
 surface-active substances, colloidal, solns., dynamic and static surface tension determ. 2-45680  
 surfactants, aq. micellar solns., electron microsc. investig. (*German*) 2-31952  
 thionine-detergent system, optical parameters, effects of dodecyl alcohol 2-13511  
 Ag colloid, ethylene and acetylene adsorbed, surface-enhanced Raman spectra 2-34413  
 Ag, colloid and electrodes, pyridine adsorbed on surface, surface-enhanced Raman effect pot. depend. comparison 2-34414  
 Ag, embedded in NaCl(Br), first-order Raman scatt. 2-5715  
 Ag-AgCl film, spectral dips in Ag colloidal band, Weigert and Herschel effects 2-2358  
 Au, radioactive, as tracer of macromol. transport 2-37713  
 C colloiddally deposited high-temp. solar selective surfaces 2-27100  
 α-Fe<sub>2</sub>O<sub>3</sub>, haematite, particle adhesion and removal, kinetics of detachment from steel 2-27485  
 H<sub>2</sub>O-NaTS-NaClO<sub>4</sub>, relaxation expt., reaction mechanism 2-14009  
 LiF, radiolysis processes, temp. depend. (*Russian*) 2-6047  
 Na, embedded in NaCl(Br), first-order Raman scatt. 2-5715  
 SiO<sub>2</sub>, colloiddally deposited high-temp. solar selective surfaces 2-27100  
 ZrO<sub>2</sub>, polishing suspension, foaming and foam suppression characts. 2-49963

**colorimeters***see also colorimetry*

- chromaticity coordinate meas. accuracy, effect of nonlinearity of comprehensive charact. 'light-signal' (*Russian*) 2-19153  
 tristimulus colorimeters, D25P-9 and D24P-9 (*Hungarian*) 2-43064

**colorimetry***see also colorimeters; spectrochemical analysis; spectrophotometry*

- ceramic surfaces, colorimetry for quality assurance (*German English*) 2-19150  
 CIE 1976 colour spaces, comparison of CIELUV and CIELAB 2-10840  
 cinematography, make-up tone development, colorimetric characts. of human face (*Russian*) 2-19201  
 colour measurement and its related tolerances (*Italian*) 2-38673  
 hue difference terms derivation from CIELAB coordinates 2-10837  
 image addition and subtraction for white light by colorimetric meas. (*Chinese*) 2-39576  
 Natural Colour System, Swedish standard for colour notation 2-33606  
 nematic liquid cryst. display 90° twisted, optical props., colorimetry 2-16566  
 nematic liquid crystal display under ambient illum., colour gamut 2-33605  
 notation, formation and appls. of Colour Image Scale 2-10839  
 photographic characteristic curve, math. models 2-3646  
 propylthiourcil, colorimetric determ., effects of pH, time and conc. of reactants 2-19151  
 red-yellow-blue principle of colour printing and mixture as discovered by J.C. Le Blon 2-10575  
 standard source, D<sub>55</sub>, based on quartz-halogen lamp and glass filters (*Spanish*) 2-48744  
 telecine, test materials for alignment 2-43067  
 tristimulus calculations, spectrophotometer slit influence 2-10838  
 MoO<sub>3</sub> thin amorphous coatings, electro-colour response optimisation (*French*) 2-27009  
 WO<sub>3</sub> thin amorphous coatings, electro-colour response optimisation (*French*) 2-27009

**colour***see also colour vision*

- Caribbean Sea, attenuation index and colour index rel. to water dynamics (*Russian*) 2-10073  
 cholesteric liquid crystals with large pitch, colouring props. 2-40262  
 cholesteric liquid cysts., superimposed layers, refl. transmittance, and colour gamut 2-9123  
 electroluminescent devices, high-field thin-film, physical concepts, review 2-51711  
 Juno, evidence for colour vars. on surface from photoelectric UVB obs. 2-38097  
 luminescence investigations, vision research implications 2-52488  
 MBBA-cholesterly nanonano mixture, cholesteric, rotatory dispersion under AC elec. field, appl. to colour display device 2-31457



## colour continued

- notation, formation and appls. of Colour Image Scale 2-10839  
 red-yellow-blue principle of colour printing and mixture as discovered by J.C. Le Blon 2-10575  
 SEM, imaging technique and stroboscopy 2-28939  
 $\text{Al}_2\text{O}_3\text{-CaO-SiO}_2\text{-MgO}$  glass, colour variation 2-2376  
 $\text{KCl(Br)}$  (I) crystals, colouring arising from damage due to laser irradiation 2-13514  
 $\text{MoO}_3$  thin amorphous coatings, electro-colour response optimisation (French) 2-27009  
 $\text{Nb}_2\text{O}_5\text{-BaO-B}_2\text{O}_3$ , very pure glass, absorption curve, high index, colour (Japanese) 2-41380  
 $\text{Ni}^{2+}$  compounds, optical absorpt. spectra, origin of yellow colour 2-22042  
 $\text{SiO}_2\text{-Na}_2\text{CO}_3\text{-ZnO-CdCO}_3\text{-ZnS-Se-Ca}_3(\text{PO}_4)_2$ , selenium ruby glasses, SAXS anal. of nucleation 2-50828  
 $\text{SiO}_2\text{-Na}_2\text{O-CaO-SnO}_2\text{-Au}$ , gold ruby glasses, SAXS anal. of nucleation 2-50829  
 $\text{TiO}_2\text{-BaO-B}_2\text{O}_3$  glass, high-index, colour (Japanese) 2-51628  
 $\text{WO}_3$  thin amorphous coatings, electro-colour response optimisation (French) 2-27009

## colour blindness see colour vision

## colour cameras, television see colour television cameras

## colour centres

- see also F-centres;  $\text{OH}^-$ -centres; paramagnetic resonance of colour centres; U-centres; V-centres  
 $\alpha\text{-Al}_2\text{O}_3$ , electron irradiation, thermolum. curves, influence of impurities and heat treatment atm., trap parameters 2-41436  
 alkali halides, activated, recombination photostimulated luminesc. kinetics (Russian) 2-5741  
 alkali halides, hologram formation, Gaussian type complex refractive index props. 2-2212  
 laser crystal, solar-radiation-pumped, feasibility study 2-4514  
 lasers, tunable, review 2-39653  
 ruby, crystal, radioluminesc. and colour centre conc., temp. effects 2-13568  
 ruby laser in  $\gamma$ -radiation field, colour centres, laser generating props. (Russian) 2-29823  
 silicate glass: Cu, high  $\text{SiO}_2$  content, nature of colour centres of Cu-ruby type 2-9199  
 silicate glasses, containin S, Se, and Cd compound additions 2-9173  
 $\text{Ag}_2\text{RBi}_3$ , I diffusion coeffs. and conc. profiles 2-30653  
 $\text{Be}_3\text{Al}_2\text{Si}_6\text{O}_{18}\text{:Mn}$ , Morganite, colour centres, EPR 2-46364  
 $\text{CuFeS}_2$ , natural chalcopyrite, colour-centre decay, thermolum. meas. 2-5758  
 $\text{KBr}$ , X-ray irradiation, defect formation, temp. depend. and activation energy 2-1524  
 $\text{KBr:Sr}$ , electron irradiation, interstitial trapping by divalent impurities (French) 2-16646  
 $\text{KCl}$ , holograms recorded through F-X conversion, diffr. efficiency, X-centre anisotropy effect 2-39596  
 $\text{KCl:Ba}$ , thermoluminescence and D<sub>1</sub> and F-centre stability 2-9204  
 $\text{KCl:In}$  crystal, colour centre form. under intense UV laser radiation 2-45156  
 $\text{KCl(Br)}$  (I) crystals, colouring arising from damage due to laser irradiation 2-13514  
 $\text{KI}$  quartz glass, colorimetric  $\gamma$ -ray dosimeter 2-19776  
 $\text{LiF}$ , spectra and lasing props. of colour centres (Chinese) 2-9174  
 $\text{LiF:Mg}$ , colour centres, photoluminesc. polarisation 2-22083  
 $\text{NaBr}$  crystal, additively coloured, positron capture centres 2-13586  
 $\text{NaCl}$  crystals, glide band decoration from proton irradiation 2-25941  
 $\text{NaCl}$ , natural Galite, proton irradiation, dislocation decoration 2-45287  
 $\text{NaCl:In}$  crystal, colour centre form. under intense UV laser radiation 2-45156  
 $\text{Na}_2\text{O-Al}_2\text{O}_3\text{-B}_2\text{O}_3\text{:Ce}$ , gamma-ray irradiation, absorpt. bands, optical density variation 2-31527  
 $\text{Nd}^{3+}$ :YAG radiation coloured crystals, colour centre influence on energy characts. 2-34772  
 $\text{Si}$ , X-centres (C-acceptor pair centres) 2-1475  
 $\text{Si:In}$  X-centre, trapping parameters, DLTS studies 2-5361  
 $\text{SiO}_2$ , vitreous, accumulation kinetics of radiation defects, for fibre light guides appl. 2-8541  
 $\text{WO}_3$ , amorphous film, charact. by optical absorpt. spectra (Japanese) 2-41442  
 $\text{WO}_3$  polycryst. films, photochromism, optical centre form. 2-5764  
 $\text{YAG:Nd}$ , disintegration of transient colour centres, luminesc. 2-22067

## colour filters see optical filters

## colour model

- $\Delta B=2$  effective interactions in unified gauge theories  $n\bar{n}$  transitions 2-3732  
 $\sigma$ -model thermodynamics, IR behaviour, high temp. QCD 2-6954  
 additive pot. model of coloured quarks 2-19325  
 algebraic confinement of coloured states 2-3745  
 analyticity and renormalization group 2-28955  
 anisotropic chromodynamics, strong interactions structure 2-33793  
 anisotropic Yang-Mills interactions for quarks and leptons 2-43178  
 antisymmetric spin-orbit interaction between quarks 2-19336  
 asymptotic form factors at large  $q^2$ , parton model 2-7036  
 asymptotic freedom as a spin effect 2-28629  
 baryon mag. moments, spin depend. quark-quark interaction 2-48991  
 baryon spectroscopy in potential model 2-19319  
 baryon-baryon interaction, short range part in nonrelativistic quark model 2-48950  
 baryon-baryon interactions, short range part in nonrelativistic quark model 2-48951  
 baryons, containing colour-bearing scalar quanta, dynamic effects 2-23929  
 beyond perturbation expansion 2-15321  
 bifurcation symmetries 2-38814  
 Born-Infeld non-polynomial Lagrangian generalisation to non-abelian  $\text{SU}(2)$  gauge theory 2-15280  
 charge correlations as definitive tests of QCD 2-3756  
 charmed baryon lifetimes 2-33834  
 chiral invariant lattice QCD, absence of neutrinos, intuitive topological proof 2-43270  
 colour degree of freedom and multi-quark states 2-7005  
 colour flux tube model, Yang-Mills struct. and triality confinement 2-48940  
 composite model for leptons and quarks 2-48959

## colour model continued

- conference on high energy physics, Akaslompola, Finland (July-Aug. 1980) 2-42782  
 confinement and chiral symmetry breakdown 2-43289  
 confining gauge theories, unbroken flavour symmetries 2-29069  
 confining QCD vacuum, confinement and random fluxes 2-43272  
 constant self-dual euclidean  $\text{SU}(2)$  background field, quarks and vacuum pol. 2-38851  
 Copenhagen vacuum and confinement 2-23941  
 covariant 3-dimens. eqns. for quark bound states, hadron struct. functions 2-33841  
 critical phenomena in strong interactions, statistical approach 2-23956  
 D meson weak hadronic decay, QCD effects 2-23976  
 deep inelastic neutrino scatt., charmed quark transverse momentum, QCD predictions 2-19363  
 deep inelastic scatt., fourth-order QCD corrections to longit. structure functions 2-43353  
 deep inelastic scatt. and inclusive annihilation, higher order QCD effects 2-29113  
 deep inelastic scatt. and lepton pair prod., QCD Drell-Yan corrections 2-23928  
 deep inelastic singlet structure function at small x, gluon ladder unitarisation 2-7035  
 deep inelastic structure function moments, QCD power corrections 2-6998  
 deep inelastic structure functions, QED and QCD renormalisation group functions 2-6999  
 deep inelastic sum rules at fixed hadron energy 2-43350  
 Delbourgo representation and the gluon propagator in the light-like ( $n^2=0$ ) gauge 2-19335  
 dibaryon colour isomers 2-23940  
 diffractive  $\psi$  and  $\text{D}\bar{\text{D}}$  muon prod., azimuthal depend., gluon spin, parity and  $k_{\perp}$  test 2-24003  
 dilepton prod. polarisation asymmetry in perturbative QCD 2-24055  
 Drell-Yan mechanism, perturbative QCD and lepton charge asymmetry at  $Z^0$  energies 2-43297  
 Drell-Yan process, large  $P_T$ , 2nd order gluon radiative corrections to parton processes 2-3755  
 early Universe, thermodynamics of quark-hadron matter phase transition, QCD confinement 2-23356  
 effective coupling constant in QCD 2-29068  
 effective dielectric theory from QCD, electric flux tube soln. 2-43276  
 effective gluon mass, Monte Carlo evaluation 2-43283  
 electromagnetic vacuum fields in a spherical cavity 2-23923  
 electron structure functions from electron-photon scatt. in  $e^+e^-$  collisions 2-48992  
 electroproduction as a test of confinement 2-23917  
 elementary particle interactions, prospect for gauge theories 2-33748  
 Euclidean and Hamiltonian lattice QCD, scales and string tension 2-43271  
 Euclidean lattice and continuum QCD,  $q\bar{q}$   $\Lambda$  parameter relationship 2-11020  
 euclidean lattice QCD, Susskind fermions,  $\text{U}(1)$  axial current 2-23922  
 exact axially symmetric multimomopole solns. construction 2-10970  
 exclusive QCD processes, helicity selection rules and gluon spin tests 2-43298  
 extended technicolour interactions, pseudo-Goldstone boson masses from broken gauge interactions 2-43279  
 Fermi string model, equivalence to QCD 2-6997  
 field theory, development in past 50 yrs 2-48868  
 four quark mesonic-states, orbital excitations, colour config. mixing, potential model 2-33819  
 fractional charge states, astrophysical prod. in broken QCD 2-23939  
 fractionally charged colour singlet fermions in  $\text{SU}(7)$  grand unified theory 2-11005  
 fundamental interactions theory developments, Winter School, Karpeaz, Poland (Feb.-March, 1980) 2-48384  
 fundamental physics, conf., Bogota, Columbia (July-Aug., 1979) 2-10554  
 gauge theories, massive neutrinos and proton decay, Orbis Scientiae, Coral Gables, FL, USA (Jan. 1981) 2-42794  
 gauge theories in particle physics, book 2-42802  
 gauge theories of strong, weak and EM interactions 2-29022  
 gauge theory integral formulation, strings, bags phenomenology 2-48909  
 $\text{GL}(2, \mathbb{C}) \times \text{GL}(2, \mathbb{C})$  gauge-theoretical foundation of color geometrodynamics 2-43213  
 glueball structure in MIT bag model, review 2-43287  
 glueballs, hermaphrodites and QCD problems for baryon spectroscopy 2-11024  
 glueballs status review 2-43286  
 gluon hadronisation in quark and gluon jets, QCD colour content 2-23927  
 gluon propagator, IR asymptotic form in four-dimens. QCD 2-43278  
 gluon spin-parity, rel. to S-wave quarkonium width ratio, QCD calcs. (Russian) 2-15320  
 gluonia, effective masses, QCD approach 2-38863  
 gluons, existence, QCD theory (Czech) 2-29066  
 grand unification with strong gauge coupling of weak interactions and composite Higgs fields 2-3734  
 grand unified theories 2-33776  
 ground and low-lying excited baryon states, quark model with hyperfine interactions 2-48953  
 ground state hadrons, wave functions,  $\text{SU}(3)$  colour gauge theory,  $\text{SU}(6)$  flavour model 2-291  
 ground unification and proton stability in chiral  $\text{SU}(8)$  theory 2-43247  
 hadron gas model, phase transition 2-19345  
 hadron masses and the sigma commutator in light of chiral perturbation theory 2-15330  
 hadron spectra and quarks 2-10570  
 hadron structure theory 2-15326  
 hadron-hadron interactions and leading particle effect in dual-parton model 2-3821  
 hadronic inelastic scatt. initiated by gluons coherent interaction in quark sea 2-49014  
 hadronic strings in theory with integer-charge quarks and gluons (Russian) 2-23897  
 hadronic weak interaction processes; QCD effects 2-48947  
 hard jet charge measurement, IR singularities 2-19321  
 hard jets, correlations of quarks and gluons, quantum chromodynamics 2-11028  
 heavy particle weak decays, mass and QCD corrections 2-43334  
 heavy quark system and hadron mass spectra 2-33821



## colour model continued

- heavy quark systems, hyperfine splittings 2-33839  
 heavy quark two body mesic decays, gluon radiative effect, QCD, B appl. 2-23919  
 heavy quarks, semileptonic decay, quark fragmentation 2-3780  
 high-energy physics techniques, NATO Advanced Study, St. Croix, US Virgin Islands (July, 1980) 2-28591  
 hyperon nonleptonic decays, in weak interaction theories 2-48983  
 intermediate boson masses, order  $\alpha_s$  corrections 2-48944  
 is fractional electric charge problematic for QCD? 2-29054  
 jet fragmentation, average transverse momentum, QCD anal. 2-48942  
 jet phenomena in perturbative QCD, review 2-29123  
 Kobayashi-Maskawa quark model, leading QCD corrections to total weak nonleptonic c Hamiltonian (*Russian*) 2-48955  
 $L = 1$  light quark mesons in QCD 2-7009  
 large momentum transfer processes, gauge field theory approach, QCD and parton model 2-265  
 lattice gauge and chiral models, large N phase transition, 4d lattice QCD 2-38763  
 lattice QCD, 1/N topological expansion 2-43280  
 lattice QCD,  $A_{\text{lattice}}$  fermionic contrib. 2-29014  
 lattice QCD, hadron mass spectrum calc. 2-29095  
 lattice QCD, SU(3) and U(3) invariant group integrals 2-23918  
 lattice QCD vacuum in large-N limit 2-43273  
 left-right symmetric electroweak model without broken gauge interactions, quark-lepton composite model 2-6984  
 lepton, composite models, lepton QCD interaction 2-38867  
 lepton+hadron processes beyond leading order in QCD 2-29080  
 lepton-hadron deep inelastic scatt., soft gluon radiation and parton model 2-11027  
 lepton-nucleon deep inelastic scatt. 2-29117  
 leptoproduction, QCD analysis, twist-4 corrections, appl. to transverse structure functions 2-3751  
 light quark vacuum condensate, QCD sum rules, PCAC, spontaneous masses 2-11021  
 low  $P_T$  fragmentation in QCD 2-295  
 many-particle exclusive and exclusive semi-inclusive processes, QCD calc. 2-7007  
 mass and IR regularisation in nonlighthlike axial gauge 2-19260  
 massive quark QCD, confinement mechanism 2-29075  
 massless ghost pole in QCD, U<sub>1</sub>-problem soln. (*Russian*) 2-15329  
 massless QCD, lattice and continuum  $\Lambda$  scale parameters, comparison 2-11015  
 massless quarks, vacuum polarisation, QCD massive quark contrib. 2-23934  
 meson wave functions with two-gluon states 2-29076  
 mesons, QCD model, hadron classification 2-15324  
 metacolor gauge theory, solutions, massless spectrum 2-48920  
 modern field theories, symp. Stockholm, Sweden (Sept, 80) 2-33227  
 narrow-resonance models with nonlinear Regge trajectories 2-43317  
 neutron elec. moment in QCD (*Russian*) 2-33843  
 non-Abelian gauge theories, vector pot. orbit space study 2-33733  
 non-singlet structural function, moments, parametrisation (*Russian*) 2-19271  
 nonAbelian Bloch-Nordsieck conjecture, counter example diagrammatical display 2-19326  
 noncompact lattice QCD, Monte Carlo simulation 2-33794  
 nuclear axion decay 2-38992  
 O(N) three-dimensional theory at large distances 2-10969  
 P wave quarkonium hadronic and photonic decays, QCD corrections 2-23972  
 particle physics and field theory, book 2-6718  
 perturbative and lattice QCD, critical phenomena in strong interaction physics 2-48941  
 perturbative QCD, charm prod., central and diffractive components 2-43299  
 perturbative QCD, gluon and quark world scales 2-19331  
 perturbative QCD, heavy mesons weak decays, momentum flow 2-33831  
 perturbative QCD, isospin violations in large  $P_T$  pion inclusive processes 2-33800  
 perturbative QCD, optimised theory for Gross-Neveu model 2-6958  
 perturbative QCD, quark-quark and quark-antiquark pot. 2-19333  
 perturbative QCD, threshold IR behaviour 2-43291  
 perturbative QCD modification, confining pot. for heavy static quarks 2-23915  
 perturbative QCD study of hadronic jets produced in hard processes 2-33801  
 photon structure function, from  $l^+l^- \rightarrow l^+l^-X$ , QCD test 2-29110  
 photon structure functions and azimuthal asymmetries in two-photon processes, QCD calc. 2-3785  
 photon structure functions at large Bjorken x 2-11051  
 photon third structure function, higher order QCD corrections 2-11049  
 photons, quark bremsstrahlung, QCD corrections 2-296  
 preon model, prepspinors 2-48958  
 pseudoscalar mesons, chiral-symmetry breakdown and spectrum in QCD 2-7000  
 QCD<sub>2</sub>, local meson operator construction from path-ordered operator 2-7001  
 QCD<sub>2</sub> and classical correspondence in large-N limit 2-7002  
 QCD, Bloch-Nordsieck counter example 2-292  
 QCD, broken in SU(3), fractional electric charge existence in diquark states 2-294  
 QCD, charmonium splitting, SVZ moment procedure 2-19339  
 QCD, currents, symm. breaking, mass spectra 2-23938  
 QCD, dynamical masses for quarks (*Russian*) 2-23933  
 QCD, fermion mass dynamical origin (*Russian*) 2-23932  
 QCD, finite temp., phase transition, struct. 2-6942  
 QCD, fractional topological charge and chirality selection rules 2-43290  
 QCD, gauge independent renormalisation group function with flavour thresholds 2-3692  
 QCD, gauge invariances and renormalisation schemes 2-38856  
 QCD, gluon propagator in axial gauge 2-43275  
 QCD, high-energy phenomena and short-range nuclear structure 2-15325  
 QCD, higher twist contribs., physical basis 2-3753  
 QCD, instanton effects on physical processes 2-48945  
 QCD, introducing review 2-11025  
 QCD, large N as a thermodynamic limit 2-23925  
 QCD, light quarks masses 2-38857  
 QCD, Monte Carlo methods appl. 2-23935  
 QCD, nonperturbative confinement, Mandelstam approximate eqn. study 2-29067

## colour model continued

- QCD, parton distrib. and decay functions 2-43293  
 QCD, perturbative, Drell-Yan and deep-inelastic processes, virtual corrections regularisation scheme depend. 2-29079  
 QCD, perturbative, IR sensitive quantities 2-7006  
 QCD, phase transition in quark-gluon plasma (*Russian*) 2-33798  
 QCD, photon struct. function,  $\gamma\gamma$  short-distance processes 2-29174  
 QCD, quark and gluon jets, asymptotic features and comparisons 2-43285  
 QCD, quark propagator and confinement in axial gauge, chiral symmetry breaking 2-19328  
 QCD, quark-gluon symmetry for Wilson operators of deep inelastic scatt. 2-19323  
 QCD, renormalisation, structure functions and mass scales, 2nd order effects 2-43284  
 QCD, spontaneous chiral symmetry breaking 2-48939  
 QCD, Stoke's theorems for non-Abelian fields 2-19334  
 QCD, string operator renormalisation 2-43274  
 QCD, theory of hadrons, review 2-33797  
 QCD,  $U_A(1)$  breaking evidence from lattice calcs. 2-29071  
 QCD, unitarity relations and number of flavours 2-43281  
 QCD, vacuum polarisation anal. function, special props. 2-6995  
 QCD, vertex functions, double logarithmic asymptotic behaviour 2-7003  
 QCD, vertex functions, double logarithmic asymptotic behaviour, perturbation theory eighth order 2-7004  
 QCD and electroweak gauge model, gauge bosons, spin asymmetries in large- $p_T$  prod. 2-29144  
 QCD and hard scatt. processes 2-48946  
 QCD as macroscopic theory of superfluidity 2-11022  
 QCD asymptotic dynamics, coherent states and quark form factor 2-29074  
 QCD chiral currents, vacuum polarisation, massive quarks effect 2-29013  
 QCD confining field theories, approx. method for bound states 2-38852  
 QCD effective Lagrangian, canonical quantisation 2-38854  
 QCD external field problem in SU(N) lattice gauge theories 2-23924  
 QCD in 1+1 space time, gauge invariant approach 2-19318  
 QCD in minimal subtraction scheme, renormalisation group invariants 2-3746  
 QCD jets, colour singlet clusters, quantitative props. 2-38858  
 QCD jets, hadron and gluon multiplicities, three loop Yang-Mills calc. 2-6992  
 QCD jets as branching processes with y-dependent elementary probabilities 2-23920  
 QCD processes, soft gluon effects 2-297  
 QCD props., hadron prod. and jet phenomena in  $dd e^+e^-$  annihilation 2-6991  
 QCD running coupl. constant and measuring gluon density 2-43288  
 QCD scale param. meas. at CHEER 2-23916  
 QCD simulation random paths and random surfaces on digital computer 2-19250  
 QCD strings 2-23936  
 QCD sum rules for V-A spectral functions 2-19330  
 QCD vacuum, instanton paramag. medium, quark confinement 2-23937  
 QCD with massive quarks, consistent massive anomalous dimensions 2-19324  
 quantum chromodynamics, IR divergence cancellation and initial degenerate state, soft gluons 2-11017  
 quantum chromodynamics, testing problem, three-gluon coupling rule (*Polish*) 2-15319  
 quantum chromodynamics as dynamics of loops 2-6996  
 quantum field theory future developments in particle physics 2-33740  
 quark, composite models, lepton QCD interaction 2-38867  
 quark (antiquark) behaviour in pp, and  $e^+e^-$  interactions 2-19337  
 quark confinement, colour SU(3) group, gauge theory, QCD 2-23931  
 quark confinement and hadron separation 2-48957  
 quark EM form factors in QCD, asymptotic behaviour, renormalisation 2-320  
 quark gas, screening of instantons 2-23926  
 quark matter, abnormal, colour instabilities 2-43437  
 quark matter, colour superconducting phase transition, order parameter, latent heat 2-33795  
 quark models 2-29086  
 quark pair interaction energy in gluonic long-wave vacuum fluctuation field (*Russian*) 2-33799  
 quark-antiquark potentials incorporating asymptotic freedom, confinement and decoupling of heavy pairs 2-3757  
 quarkochemistry in relativistic heavy ion collisions 2-15419  
 quarkonium, QCD radiative corrections to hyperfine splitting 2-23994  
 quarkonium decays: testing the 3-gluon vertex, QCD signal 2-43269  
 quarks and leptons long-lying excited states in composite models 2-43313  
 Regge limit in QCD, IR props., 3 gluon exchange eqns. 2-290  
 rishon model, fermion mass generations 2-7013  
 scales and phase transitions in chiral symmetry breaking QCD 2-19329  
 semi inclusive-inclusive neutrino and antineutrino scattering, treegluon-gluon coupling 2-3754  
 semi-inclusive reactions, produced hadrons polarisation as measure of triple gluon coupling 2-29078  
 $SO_3 \otimes SO_3$ , weak, EM and strong interaction unified model 2-48921  
 $SO(10)_V \times SO(10)_H$ , flavour-colour-hypercolour unification 2-43255  
 soft gluon corrections to large- $p_T$  direct photon and dilepton production 2-3749  
 spectroscopy with QCD sum rules 2-29081  
 Stevenson optimised perturbation theory appl. to factorisation and mass scheme depend. 2-43294  
 strong and neutral PCAC, chiral-symmetry breaking schemes 2-23874  
 strongly coupled lattice QCD, effective Lagrangian and dynamical symmetry breaking 2-23921  
 structure functions, perturbative QCD calc. in leading twist approx. 2-322  
 SU(2)  $\times$  U(1) theory status 2-15307  
 SU(2) colour gauge theory, short-distance structure of instantons 2-3688  
 SU(2) lattice gauge theory, finite size Wilson loops 2-10953  
 SU(3)  $\times$  SU(2)  $\times$  U(1), unified theories for quarks and leptons based on Clifford algebras 2-48928  
 $SU(3)_{HC} \times SU(N)_S \times U(1)_{EM}$  gauge, technicolour and the three-fermion composite model 2-7016  
 $SU(3)_V \times SU(3)_R \times SU(3)_C$  gauge model, for electroweak and strong interaction 2-48917  
 SU(5) and SO(10) grand unified theories 2-48919  
 SU(5) axion model, grand unified theories 2-19290



## colour model continued

- SU(5) GUT with SU(3)<sub>c</sub> colour subgroup, scaling and asymptotic freedom breakdown 2-29051  
 SU(6) grand unified theory without fundamental Higgs scalars 2-43248  
 SU(7) flavour unification scheme, strong CP and flavour problems simultaneous solns. 2-48926  
 SU(N- $\alpha$ ) gauge theories, third order phase transition studies 2-28978  
 SU(N) QCD in two dimensions, zero mass states 2-43282  
 subcomponent models for quarks and leptons, baryonic number nonconservation 2-43314  
 subconstituent models satisfying t'Hooft anomaly conditions and approx. proton stability 2-43304  
 Sudakov form factor, asymptotic behaviour in QCD 2-38853  
 supercolour, supersymmetric theory with elementary scalars 2-29070  
 supersymmetric  $\sigma$ -models and composite Yang-Mills theory 2-48906  
 supersymmetric technicolour model of particle physics 2-11016  
 symmetrised chromomagnetic field vacuum, quark confinement critical energy 2-19327  
 t-quark mass from up-down symmetry breaking in technicolour 2-293  
 top meson and quarkonium pot. 2-23930  
 top quark mesons and their photoproduction 2-38855  
 transverse gluonium pot. model with Breit-Fermi hyperfine effects 2-3752  
 two-dimensional vector models, implications of anomalies 2-29072  
 two-hadron fragmentation functions, Q<sup>2</sup>-evolution phenomenological predictions 2-43301  
 two-photon collisions and QCD 2-24071  
 U(1) axial anomaly, effective Lagrangian formulation, rel. to QCD 2-38820  
 vacuum structure and chiral charge quantization in the large N limit 2-43277  
 vector SU(N<sub>c</sub>) gauge theories, anomaly eqns. and persistent mass condition 2-48938  
 weak interaction theories with dynamical symmetry breaking theories of technicolour, review 2-288  
 WZH<sup>±</sup> coupling in hypercolour and SU<sub>L</sub>(2)⊗U(1) extended gauge theories 2-23892  
 Yang-Mills fields in planar gauge, renormalisation (*Russian*) 2-23851  
 Yang-Mills theory, long distance dielectric props. 2-48871  
 Yang-Mills theory, quarks and leptons interactions in anisotropic spacetime 2-48937  
 Yang-Mills-Higgs system in 2+1 dimens., quantum gauge fields topology and duality 2-29000  
 B<sup>0</sup>-B<sup>0</sup> mixing, strong interaction corrections to CP violation in six-quark model and QCD 2-43292  
 bb system hadronic transition in QCD multipole expansion framework 2-43337  
 D-leptons, direct yield, QCD calc. (*Russian*) 2-11046  
 D<sup>0</sup>(D<sup>+</sup>), inclusive and two-body hadronic decay study 2-43338  
 D<sup>+</sup> nonleptonic weak decays, QCD nonleading corrections, dimensional reduction 2-316  
 D<sub>s</sub><sup>0</sup>D<sub>s</sub><sup>+</sup> mass difference and CP violation in SU(2)×U(1) gauge model 2-19376  
 D<sup>+</sup>K<sup>0</sup>e<sup>+</sup> $\nu_e$ , form factors, QCD short distance behaviour 2-11045  
 $\Delta$ , mass calc. in QCD from quark currents 2-19338  
 $\Delta$ -N<sub>7</sub>, quadrupole transition in quark model (*Russian*) 2-33845  
 (e,e), parton model high momentum transfer scatt., scaling laws 2-3880  
 E $\rightarrow\eta\pi\pi$ , pseudoscalar glueball QCD sum rules 2-15338  
 e<sup>+</sup>e<sup>-</sup>, hadron production, MARK J results, QCD predictions 2-24012  
 e<sup>+</sup>e<sup>-</sup>→ABX, back-to-back jets in QCD 2-38889  
 e<sup>+</sup>e<sup>-</sup> annihilation, 3 jet cross section, higher order perturbative QCD calc. 2-29122  
 e<sup>+</sup>e<sup>-</sup> annihilation, charged hyperion prod., hypercolour scenario 2-19387  
 e<sup>+</sup>e<sup>-</sup> annihilation, QCD jets, hadron distrib., transverse momentum moments 2-19320  
 e<sup>+</sup>e<sup>-</sup> annihilation, three-jet ang. distrib., QCD test 2-19389  
 e<sup>+</sup>e<sup>-</sup> annihilation, thrust distrib., perturbative QCD calcs. 2-24006  
 e<sup>+</sup>e<sup>-</sup> annihilation three-jet production, gluon and Higgs scalar contrib. in QCD 2-3799  
 e<sup>+</sup>e<sup>-</sup> annihilations, inclusive J/ψ prod. cross section calc. in perturbative QCD 2-29121  
 e<sup>+</sup>e<sup>-</sup> collisions, Sterman-Weinberg jet cross sections, gluon cut vertices QCD coupling calcs. 2-29120  
 e<sup>+</sup>e<sup>-</sup>→γhX, QCD prediction for direct photon prod. 2-7008  
 e<sup>+</sup>e<sup>-</sup>→h, parton showers, hadron prod. in QCD 2-339  
 e<sup>+</sup>e<sup>-</sup>→hX, 30 GeV, three-jet events, gluon bremsstrahlung 2-3801  
 e<sup>+</sup>e<sup>-</sup>→hadrons, 33-36.7 GeV, three-jet events, rel. to QCD model 2-38891  
 e<sup>+</sup>e<sup>-</sup>→hadrons, jet prod., hard gluon bremsstrahlung in QCD 2-24011  
 e<sup>+</sup>e<sup>-</sup>→hadrons, jet structure, QCD tests 2-7040  
 e<sup>+</sup>e<sup>-</sup>→hadrons, O(α<sub>s</sub><sup>2</sup>) QCD radiative corrections for shape variable distributions 2-49003  
 e<sup>+</sup>e<sup>-</sup>→hadrons, QCD event simulation, Monte Carlo program 2-15345  
 e<sup>+</sup>e<sup>-</sup>→jets, transverse momentum distrib., perturbative QCD tests 2-11058  
 e<sup>+</sup>e<sup>-</sup>→qqq, three-jet processes, chromomagnetic quark moment (*Russian*) 2-338  
 e<sup>+</sup>e<sup>-</sup>→three jets, transversely polarised, lowest order calcs. in broken colour gauge theory 2-49000  
 e<sup>+</sup>e<sup>-</sup>→X, perturbative QCD tests, problems 2-3802  
 e<sup>+</sup>e<sup>-</sup>→X, QCD tests 2-24010  
 e<sup>+</sup>e<sup>-</sup> annihilation, hard process jets similarity to low p<sub>T</sub> hadron jets 2-29119  
 e<sup>+</sup>e<sup>-</sup> annihilations, fast baryon prod., combinatorial rules 2-49001  
 e<sup>+</sup>e<sup>-</sup> annihilations, inclusive J/ψ prod. cross section, perturbative QCD calc. 2-33850  
 eN→X, inelastic scattering, QCD test 2-24002  
 F, charmed meson, semileptonic decays, soft-gluon effects 2-315  
 F-leptons, direct yield, QCD calc. (*Russian*) 2-11046  
 F<sup>+</sup>, inclusive and two-body hadronic decay study 2-43338  
 γ-γ<sub>CC</sub>, heavy vector mesons radiative decays into paraquarkonia 2-23989  
 γ\*γ\*→meson, exclusive two-photon process, higher order QCD corrections 2-38917  
 γγ, QCD tests in LEP experiments, predictions 2-29175  
 γγ→MM, M=meson, large angle exclusive channels in QCD, Regge singularity 2-24057  
 γγ→MM, M=mesons, scaling, ang., helicity depend., QCD calc. 2-29169  
 γγ→μ<sup>+</sup>μ<sup>-</sup>h, Drell-Yan process, dimuon prod., QCD calc. 2-24058

## colour model continued

- γγ→X, QCD tests in hadron dynamics 2-29163  
 γN, charmed mesons and baryons inclusive photoproduction cross section 2-29116  
 γp→h<sup>+</sup>X, perturbative QCD test 2-7037  
 γp→HX, Higgs-boson photoproduction at very high energy 2-43359  
 γp→π<sup>+</sup>hX, pol.γ, jet polarisation, gluon spin, in QCD 2-327  
 h(h)p, h=π,k,p, high p<sub>T</sub> jet prod., antiparticle-particle total cross section differences 2-24042  
 hh→l<sup>+</sup>l<sup>-</sup>X, Drell-Yan process, QCD factorisation, initial state interactions 2-29147  
 hh→l<sup>+</sup>l<sup>-</sup>X, review 2-3818  
 hh→πX, large p<sub>T</sub> scatt., naive QCD parton model, gluon distrib. 2-7050  
 hp→hp, QCD Born approx. anal. (*Russian*) 2-11075  
 K→πν, form factors, QCD short distance behaviour 2-11045  
 K→ππγ, Δ=1-1/2 rule, Weinberg+QCD model 2-23990  
 K<sup>+</sup>→π<sup>+</sup>a, a=axion, lower bound for branching ratio and Peccei-Quinn axion non-existence 2-48978  
 K, mesons regeneration on nuclei in coloured quark model (*Russian*) 2-49049  
 ld→X, inelastic scattering, QCD test 2-24002  
 lh→X, deep inelastic scatt., scaling violations, QCD massive quark model 2-325  
 μN, in Fe, 120-280 GeV, nucleon structure function, scale breaking, leading order QCD fit 2-15340  
 μN, quarkonium muoproduction review 2-15344  
 μN→μCCX, charm muoproduction, intrinsic charm and photon-gluon fusion contrib. 2-19386  
 μN, deep inelastic scatt., QCD and hadronic energy flow ang. distrib. 2-38886  
 μp, 120, 280 GeV, proton structure function, scaling violation, leading order QCD fits 2-15339  
 μp, azimuthal depend. in semi-inclusive leptonproduction, QCD prediction 2-43296  
 N, mass calc. in QCD from quark currents 2-19338  
 NN, 15 to 50 MeV, QCD corrections to weak interaction Hamiltonian and parity violation (*Russian*) 2-7043  
 np→dy, QCD effects in ΔS=ΔC=0 nonleptonic interactions, P violation 2-43295  
 ν( $\bar{\nu}$ )N, structure functions, rel. to QCD calcs. 2-309  
 ν<sub>μ</sub>( $\bar{\nu}$ )N→μX, 30-200 GeV, charged-current interactions, differential cross section expt. study 2-48974  
 νN→μ<sup>+</sup>h<sup>+</sup>X, quark fragmentation function study 2-314  
 ν<sub>μ</sub>N→μ<sup>+</sup>μ<sup>-</sup>X, J/ψ meson diffractive prod. via neutral currents 2-48973  
 νp→μ<sup>+</sup>X, hadron transverse momentum distrib., rel. to QCD calc. 2-3771  
 P<sup>+</sup> pseudo-Goldstone boson mass, chiral dynamics in technicolour 2-3747  
 pN, transverse momentum distributions for Drell-Yan pairs in QCD 2-24017  
 pN (pN), 20 to 150 GeV/c, particle prod. from nuclei 2-29137  
 pp, 540-2000 GeV, cross sections and jet mean charge in QCD frame, scaling violation 2-29155  
 pp, colour triplet states, technicolour pseudo-Goldstone boson couplings to gluon fields 2-19322  
 pp, s<sup>1/2</sup>=63 GeV, accompanied vs. unaccompanied prompt photons, QCD anal. 2-43391  
 pp→dijet, high p<sub>T</sub>, parton transverse momentum meas. 2-3814  
 PP→γX, direct photon prod. in SU(2)<sub>L</sub>×U(1)×SU(3)<sub>c</sub> gauge theory 2-19408  
 pp→llX, tt state prod. cross section lower limit calc. 2-49020  
 pp→Λ<sub>c</sub><sup>+</sup>X, diffractive production of charm, parton distrib., QCD evolution role 2-29073  
 pp→μ<sup>+</sup>μ<sup>-</sup>X, √S=44, 62 GeV, dimuon scaling comparison 2-49019  
 pp(p)→μ<sup>+</sup>μ<sup>-</sup>X, dilepton prod. with polarised beam and target, asymmetry parameter QCD calc. 2-3816  
 pp(pp), high-mass dileptons ang. distrib. 2-43395  
 pp(pp), p<sub>T</sub> distrib. fourth moment in QCD, triple gluon coupling 2-43387  
 pp(pp), QCD-electroweak interference and weak vector-boson prod. 2-49021  
 φ→η<sup>0</sup>γ, vector decay branching ratio calc. in QCD 2-48980  
 π<sup>+</sup>→π<sup>0</sup>ν<sub>1</sub>, form factors, QCD short distance behaviour 2-11045  
 ΠN, 20 to 150 GeV/c, particle prod. from nuclei 2-29137  
 πN, transverse momentum distributions for Drell-Yan pairs in QCD 2-24017  
 πN σ-term, QCD and extrapolated values 2-33855  
 πN→X, large p<sub>T</sub> jets, direct pion coupling, QCD sub-processes 2-24043  
 π N, 150 GeV/c, dimuon hadronic prod., ang. distrib. 2-29157  
 π N→μ<sup>+</sup>μ<sup>-</sup>X, 150-280 GeV, O(α<sub>s</sub>) QCD calc., perturbative Drell-Yan model 2-24044  
 π N→μ<sup>+</sup>μ<sup>-</sup>X, ang. distrib., Drell-Yan and lowest order QCD comparison 2-7052  
 πp, D meson formation, parton model (*Russian*) 2-24046  
 Ψ→E(1440)γ, pseudoscalar glueball QCD sum rules 2-15338  
 ψ→γγ(γγ), heavy vector mesons radiative decays into paraquarkonia 2-23989  
 ψ→γ(0γ), branching ratio study 2-48996  
 ψ radiative decays inclusive and exclusive meas. in e<sup>+</sup>e<sup>-</sup> annihilation 2-19382  
 ψ→η(η)γ, vector decay branching ratio calc. in QCD 2-48980  
 QQ-systems, Schrödinger vs. Dirac bound state spectra, effective power-law pot. Lorentz structure 2-38865  
 q<sup>0</sup> baryons, phase consistency and dissociated wave functions 2-48954  
 σ-meson mass in QCD and dynamical symmetry breaking 2-48943  
 T, gluonic width QCD corrections, leptonic branching ratio 2-11019  
 T(9.46) decays and quark jets, baryons inclusive prod. 2-19350  
 T→γγ, vector decay branching ratio calc. in QCD 2-48980  
 Y→ggg from e<sup>+</sup>e<sup>-</sup>, QCD calc., strong coupling const. 2-3781  
 eN deep inelastic scatt., leptonproduction jet cross section, parton transverse momentum corrections 2-43358  
 μp→μ<sup>+</sup>h<sup>+</sup>X, 280 GeV, fragmentation function, (p<sub>T</sub>)<sup>2</sup>, rel. to QCD calc. 2-334

## colour perception see colour vision

## colour photography

- chromaticity analysis of lake photographs, water quality studies 2-10182  
 colour separation, hand-colour lithographs to laser-scanned transparencies 2-19197  
 digitised colour pictures, colour and tone corrections 2-3643  
 central colour system, sensitometric parameters improved QCD using central composite expt. designs 2-6912  
 motion picture printing and grading practice 2-10887



**colour photography continued**

- Nuberg-Noigebauer eqn., densitometric representation (*Russian*) 2-23763  
 reflection prints, colour stability (*Spanish*) 2-48813  
 selectivity increase, for band-pass filtered false-coloured photos (*Hungarian*) 2-10893  
 subtractive colour photography, colour matching, simplified algorithm 2-48817  
 subtractive colour photography, spectral sensitivities calc. 2-10896

**colour television**

- telescope colorimetry, test materials for alignment 2-43067

**colour television cameras**

- Jupiter spaceprobe (Voyager), performance of cameras 2-32842  
 lenses, variable focal length 2-4573  
 variable focus lenses, methods for increased multiplicity (*Russian*) 2-33665

**colour tv see colour television****colour vision**

see also eye

- aberration correcting lenses 2-37706  
 adaptation, chromatic, nonlinear model formulation 2-37563  
 adaptation, chromatic, reasons and techniques for study 2-37561  
 adaptation and heterochromatic matching 2-42105  
 adaptation and persistence for colour matches, near-threshold and large colour differences 2-37562  
 adaptation and the Ives effect 2-42104  
 adaptation to polarised orange-red light in humans 2-42106  
 amacrine cells, importance in processing pattern-induced flicker colours 2-22744  
 blue sensitive cone mechanism charact., primate retinal ganglion cells 2-22738  
 blue sensitive cone system responses, visual cortex and arterially perfused eye, cat and monkey expts. 2-22739  
 blue-blindness in central fovea, psychological testing brightness of colour figures (*Japanese*) 2-14250  
 cichlid fish retina, chromatic organisation 2-14248  
 defective or anomalous colour vision response inclusion in theory, progress in nineteenth century (*Italian*) 2-15000  
 deuteranopic eye, deuteranomalous colour matching 2-14247  
 ERG, chicken, colour coding expts. 2-22741  
 hue difference terms derivation from CIELAB coordinates 2-10837  
 human, processes and problems 2-47602  
 latencies for chromatic and achromatic mechanisms 2-2866  
 LED dark adaptor, microprocessor-controlled 2-47775  
 luminescence investigations, vision research implications 2-52488  
 luminous-efficiency functions for point sources 2-47600  
 mechanism, spectroscopic aspects 2-18205  
 metallic surfaces, colour relationship, teaching (*Spanish*) 2-3351  
 Natural Colour System, Swedish standard for colour notation 2-33606  
 neural mechanisms, post-receptor, revelation by flickering vs. fused adaptation 2-37565  
 notation, formation and appls. of Colour Image Scale 2-10839  
 opponent-colour cells rel. to detect. of small, brief lights 2-37566  
 opponent-colours approach to colour rendering 2-47601  
 perceived colour differences, comparison of CIELUV and CIELAB colour spaces 2-10840  
 perceived colours, stimuli, colour space and vector field (*German*) 2-52489  
 perception under chromatic adaptation, equilib. yellow and long-wavelength adaptation 2-42110  
 photopigments and carp ganglion cell action spectra 2-22761  
 pigment, local elec. field as spectroscopic and photochem. determinants 2-14246  
 primate retina, colour coding 2-22737  
 retinal bipolar cells with double colour-opponent receptive fields 2-9800  
 retinal ganglion cells, freq. response to moving monochromatic spots under photopic conditions 2-22740  
 retinitis pigmentosa patients, long wavelength sensitivity losses 2-37567  
 rivalry between eyes, min. light intensity required 2-2873  
 single-maximum colour-matching transforms. with minimal overlap 2-33608  
 spatial adaptation of short-wavelength pathways in humans 2-37564  
 theory of invariance of colour under condition of varying illumination 2-9804  
 tritan defect, autosomal dominant, colour matching 2-18207  
 vertebrate cone retina, cybernetic model 2-22727

**columbium see niobium****coma see aberrations****combination scattering spectra see Raman spectra****combustion**

see also explosions; flames; heat of combustion; reaction kinetics

- acetylene combustion product gasdynamic laser 2-44259  
 aerosuspension in fuel containing oxidant, convective combustion 2-39935  
 air-H<sub>2</sub>S equilibria under Claus furnace conditions 2-31943  
 analysis instrumentation, conf., St. Louis, MO, USA (March 1981) 2-32156  
 bubble media, chemical reaction and combustion waves 2-16389  
 CARS probing 2-13958  
 catalytic combustion of H<sub>2</sub>, role in future H<sub>2</sub> energy systems 2-32129  
 coal gasification process by Sumitomo Metals 2-9611  
 combustion chambers of heat and power installations, determ. of effective temp. 2-29999  
 contamination measurements with quadrupole mass spectrometer 2-37131  
 cylindrical chamber, effect of combustion on freq. of acoustical vibr. 2-7967  
 diagnostics by multichannel CARS 2-13959  
 diesel engine, air swirl effect on combustion, exhaust smoke study 2-22448  
 diffusion combustion in a liquid, theory 2-13954  
 dynamic combustion, shock-wave interactions, qualitative model 2-12249  
 fire smokes, spectral transmission, 0.4 to 4.5  $\mu$ m 2-4917  
 flame propagation hydrodynamics and principles in a planar slit in condensed matter 2-52209  
 flash bulbs, radiative transfer processes in combustion atmosphere 2-35041  
 fluidised bed combustion, status and advantages (*French*) 2-17965  
 fluidised-bed combustion systems in electric power generation industry 2-31922  
 fuel, steady-state burning stability in semiclosed vol. (*Russian*) 2-31920

**combustion continued**

- gasdynamic laser, explosion-type, utilising acetylene combustion products, charact. 2-34735  
 jets, diffusion combustion turbulent mixing in a channel 2-4868  
 laser diagnostic techniques, review 2-17952  
 liquid fuels derived from coal, combustion and emission charact. 2-27524  
 methanation of CO and CO<sub>2</sub> for heat production 2-7223  
 methane oxidation near a cold wall in a shock tube 2-37076  
 methane-H<sub>2</sub>-air, combustion, quenching distance determ. 2-22447  
 microprocessor-based combustion analysis instrumentation for fuel cost control 2-31990  
 multidimensional combustling flow, anal. algorithm 2-8247  
 multifrontal detonation wave struct. formation, numerical simulation 2-44765  
 accidental controlled flash pyrolysis process and its application to power generation 2-9612  
 polymers, combustion in oxidising atmosphere, limiting conditions 2-47344  
 propane-O<sub>2</sub> mixture, highly divided carbonaceous particles form. mechanism 2-41872  
 Raman spectroscopy in combustling media, using 5 J 1.8  $\mu$ sec pulse 10 pps dye laser 2-25034  
 Raman spectroscopy of combustion processes, using freq. doubled Nd:YAG/glass laser 2-7800  
 shredded municipal refuse combustion steam generators 2-41978  
 solid waste fuel and coal combinations, combustion processes and effects 2-41979  
 soot, form. from hydrocarbon flame, decomposition by combustion 2-22449  
 supersonic flow past body, combustion states, uniqueness and stability 2-12176  
 turbulent flame, combustion, coherent structure interaction 2-17896  
 waves, in solid, spinning propag. 2-17894  
 wood, energy resource potential and effects of increased combustion on air quality 2-17983  
 C combustion to CO<sub>2</sub>, gas-phase photoacoustic determ. of aerosol total C content 2-47386  
 CO<sub>2</sub> gasdynamic laser media consisting of low N<sub>2</sub> fuel combustion products 2-49730  
 CO<sub>2</sub>, high-temp. Raman spectra for combustion diagnostics 2-24706  
 CO<sub>2</sub>-N<sub>2</sub>-O<sub>2</sub>-H<sub>2</sub>O mixture, vibr. nonequib. flow in wedge no le 2-12247  
 H<sub>2</sub>+air ignition, time-resolved anal. by multichannel Raman spectroscopy 2-6037  
 H<sub>2</sub>O, high-temp. Raman spectra for combustion diagnostics 2-24706  
 H<sub>2</sub>SO<sub>4</sub> vapour in combustion gases, continuous meas. by portable automatic monitor 2-42065  
 NH<sub>4</sub>ClO<sub>4</sub>-KClO<sub>4</sub> solid soln., mechanoformation, thermal behaviour and combustion 2-9301  
 Na combustion in LMFBRs (*German*) 2-537  
 O+H<sub>2</sub>→OH+H, reaction path calcs. 2-9544  
 O<sub>2</sub> estimation in electrolytic gas mixtures 2-27500  
 TiNi, cast, synthesis by combustion processes, mech. and shape memory props. 2-41547

**comets**

- Amor Apollo asteroids, replenishment rate anomaly, cometary origin model implausity 2-38100  
 barycentric orbits and planet perturbations 2-42649  
 Bowell (1980b), CN emission obs. (1982 January 31) 2-53170  
 Bowell (1980b), dust emission at 7 AU heliocentric distance 2-53176  
 Bowell (1980b), improved orbital elements and ephemeris (1982 February 20 to July 30) 2-53172  
 Bowell (1980b), JHK obs. and anal. 2-38123  
 Bowell (1980b), tail and coma 2-53168  
 Bradfield (1979 X), gassiest comet, narrowband filter photometry 2-10357  
 Bradfield (1979 X), HCN and other molecules, EHF obs. 2-38127  
 Bradfield (1979 X), O I forbidden lines, IUE obs. 2-28409  
 Bradfield (1979 X), water prod. models 2-38113  
 Bradfield (1979), search for X-ray emission 2-32957  
 capture by Jupiter 2-18741  
 charged conducting spheroids, electrostatic disruption 2-6568  
 collisions with interplanetary particles, evolutionary role 2-53178  
 coma and nucleus kinematics from OH radical UHF obs. 2-38131  
 comae, icy grains detect. by IR astronomy 2-38120  
 comae H<sub>2</sub>O and other species from stellar occultations, Space Telescope UV obs. possibility 2-38129  
 comae models with abundances for various heliocentric distance 2-38126  
 conference IAU Colloquium 61, contributed papers, Tucson, Arizona (March 1981) 2-33217  
 P/du Toit-Hartley (1982b, 1982c), ephemeris, (1982 April 11 to June 20) 2-53175  
 P/du Toit-Hartley (1982b, 1982c), positions and visual magnitudes, (1982 February 18 to 22) 2-48184  
 P/du Toit-Hartley (1982b, 1982c), precise positions (1982 February 16 to 19) 2-48185  
 P/du Toit-Hartley (1982b,c), mag. changes and spectroscopic obs. 2-53174  
 dusty comets, nuclei, effect of single scatt. on visibility 2-38119  
 Earth collision prob., influx size and mass distrib. 2-37871  
 Earth orbit approaching comets and assoc. meteor radiant 2-38134  
 P/Encke, nucleus and brightness correl. with orbit position 2-10360  
 faint comets, UV spectra obs. and comparison 2-38130  
 P/Gehrels 3, orbit variations, temporary satellite captures by Jupiter 2-18738  
 P/Halley, long-term motion (1404 BC to AD 1910) 2-14807  
 P/Halley, magnetic field in tail, evaluation method 2-53179  
 P/Halley, magnetic tail and electrodynamic forces, solar wind effects 2-38115  
 P/Halley, spacecraft obs., comet camera lens design, wideband 2-53091  
 P/Halley flyby by Giotto, conf. (Noordwijkerhout, Netherlands, April 1981) 2-3333  
 P/Halley mission, midcourse navigation and propellant estimation computing 2-42577  
 Hartley (1982b, 1982c), orbital elements and ephemeris for 1982c rel. to origin 2-42657  
 Hartley (1982b), discovery, precise positions, 1982 February 5 and 6, and relation to Comet 1982c 2-42652  
 Hartley (1982b), precise positions, orbital elements and ephemeris 2-42655



## comets continued

- Hartley (1982c), discovery, precise positions, 1982 February 5 and 6, and relation to Comet 1982b 2-42653  
 Hartley (1982c), precise position, (1982 February 7) 2-42656  
 Howard-Koomen-Michels (1979 XI), Sun-grazing comet, orbital elements rel. to collision with Sun 2-18739  
 Humason (1962 VIII), solar wind interaction with CO<sub>2</sub>/CO dominated Comet 2-23201  
 interstellar planetesimals, implications of primordial comet cloud dissipation by tidal encounters with massive nebulae 2-48188  
 introduction to comets, book 2-38377  
 JHK photometry, ice mantles on reddish refractory cores 2-10358  
 P/Kearns-Kwee (1981h), ephemeris (1981 December 22 to 1982 July 10) 2-48186  
 P/Kearns-Kwee (1981h), total visual magnitudes and coma diameters (1981 November 27 to December 3) 2-28413  
 Kohoutek (1973 XII), spectrophotometric scans 2-53177  
 Kohoutek (1973 XII), tail plasma dynamics, solar wind interaction 2-38125  
 long-period comets, excess of retrograde orbits 2-10359  
 magnitudes, coma dia. and tail, details for 22 objects (1968 July to 1981 June) 2-23257  
 mass distrib., temporal vars. 2-48187  
 microwave emission, flux density prediction 2-10355  
 nuclei, heat balance, effect of water ice phase transition 2-38118  
 nuclei, rapidly rotating, latitudinal dust zoning 2-32954  
 nuclei, volatile ice sublimation model including thermal effects 2-38116  
 nuclei evolution and heat content 2-38117  
 nuclei mass ejection to form meteor streams 2-23262  
 nuclei volatiles, frosts reflectance spectra in laboratory 2-38122  
 nucleus, brightness temp. depend. on wavelength for different models, spacecraft obs. possibility 2-38128  
 nucleus electrostatic charging, solar wind interactions 2-10356  
 nucleus impact probe 2-42659  
 observing techniques of inner coma, visual 2-23222  
 occurrence anomaly of comets with 200-500 yr periods 2-28410  
 Oort cloud comets infall and formation 2-32955  
 orbit migration from parabolic to elliptical 2-42658  
 orbital elements, secular perturbations calc. by Halphen Goryachev method 2-32824  
 P/du Toit-Hartley (1945 II=1982b, 1982c), precise positions, orbital elements and ephemerides 2-53171  
 P/Grigg-Skjellerup (1982a), recovery and precise positions, (1982 January 15 and 16) 2-42651  
 Panther 1980u, mol. bands spectra, visible obs. (French) 2-38114  
 Periodic Comet Swift Tuttle, dust activity models 2-32956  
 plasma tails, role of high frequency interplanetary turbulence 2-42650  
 plasma tails comparison with Jupiter's distant mag. tail 2-28377  
 precise posns. on Minor Planet Circulars 6221-6344 for 36 objects 2-3210  
 precise posns. on Minor Planet Circulars 6425-6480 for 43 objects 2-53147  
 primordial cloud of comets, dissipation by tidal encounters with massive nebulae 2-48188  
 probable comet on ESO/SRC Southern Sky Survey, discovery and precise positions (1978 March 5) 2-53169  
 probable object on ESO/SRC Southern Sky Survey plate, discovery and approximate position (1975 May 11) 2-38135  
 satellites possibility 2-38132  
 P/Schwassmann-Wachmann 1, outburst obs. and visual magnitude estimates, (1982 January 16 to 25) 2-38136  
 P/Schwassmann-Wachmann 1, total magnitude estimates, (1982 January 27 to February 2) 2-42654  
 P/Schwassmann-Wachmann 1 (1974 II), ephemeris (1981 June 25 to 1982 May 31) 2-23258  
 P/Schwassmann-Wachmann 1 (1974 II) outburst, VB obs. 2-23256  
 search and discovery techniques of W.A. Bradfield 2-23221  
 searching with blink technique 2-38061  
 Shcherbanovskij, no confirmation of possible comet 2-28412  
 Shcherbanovskij, possible comet, discovery and approximate positions, (1981 December 19 and 22) 2-23259  
 solar wind plasma interaction, crit. ionisation vel. effect 2-14767  
 Stattmayer, no confirmation of possible comet 2-14805  
 P/Stephan-Oterma (1980g), thermal emission from dust, JHK obs. 2-38123  
 swarm dynamical evolution in proto outer planetary region 2-38072  
 P/Swift-Gehrels (1981j), 1981 Nov. visual mag. estimates 2-28411  
 P/Swift-Gehrels (1981j), total visual magnitude estimates, (1981 October 17 to 21) 2-14806  
 P/Swift-Gehrels (1981j), total visual magnitude estimates, (1981 December 4 to 1982 January 28) 2-48183  
 P/Swift-Tuttle (1862 III), recovery prospects 2-23255  
 tail properties from estimation of grain substances 2-38121  
 tail rays folding phenomenon, elec. and mag. fields anal. 2-38137  
 P/Tempel 2 (1982d), recovery posns., elements and ephemeris 2-53173  
 P/Tempel Z, comet nucleus impact probe 2-42659  
 P/Tempel-Tuttle dust distrib. from Leonid shower anal. 2-38133  
 Tunguska meteor fall in 1908, atmosphere O<sub>2</sub> depletion 2-32617  
 Uranus system of comets, example of eruptive evolution of planetary satellites 2-53180  
 P/Vaisala 1 (1981i), recovery and positions, (1981 December 7 to 18) 2-18740  
 West (1976 VI), composition from optical polarimetry obs. 2-38124  
 C<sub>2</sub>, triplet-singlet, Phillips, Ballik-Ramsay and Mulliken vibr. bands prediction 2-38112  
 CO<sup>+</sup> comet-tail emission and chemilum. in N<sup>+</sup>+CO collisions 2-15885  
 CO<sub>2</sub>/CO dominated Comet, ionosphere interaction with solar wind 2-23201  
 Fe-Al<sub>2</sub>O<sub>3</sub> compact, infiltration of liquid Cu (Japanese) 2-27117  
 O I forbidden lines 2-28409

## commensurate-incommensurate transformations

- adsorbed films, commensurate-incommensurate transitions 2-5335  
 adsorbed layers, incommensurate phase, soliton crossing 2-45723  
 adsorbed monolayers, superstructures, powder diff. patterns near commensurate-incommensurate transition 2-1758  
 adsorbed system, commensurate order, multicrit. points and finite sizes 2-1751  
 alkali superoxides, CDW and displacive collective Jahn-Teller effect 2-21514

## commensurate-incommensurate transformations continued

- benzene monolayers on grafoil, thermal neutron diff. obs. two-dimens. crit. phenomena and structures 2-1767  
 biphenyl, incommensurate phase transitions, phonons role 2-45563  
 biphenyl, solid, lattice dynamics of high temp. phase 2-45457  
 CCTaSe<sub>2</sub> (2H), discommensuration splitting in CDW state 2-30594  
 coupled condensate-lattice systems, phase solitons near commensurate-incommensurate transition 2-8597  
 crystal in nonpolar incommensurate phase, spontaneous polarisation 2-36512  
 disordered transitions with 2×2 structure in mean-field approx. 2-21813  
 displacive structures hexagonal NiAs to orthorhombic MnP type transition appl., macroscopic method of anal. (French) 2-35664  
 ferroelectric and ferroelastic crystals, incommensurate phase transition, Landau theory 2-31400  
 ferroelectrics, dielectric properties in incommensurate phase region 2-41286  
 ferroelectrics, incommensurate superstruct. form. in presence of Lifshitz invariants 2-46516  
 fluctuations and commensurate-incommensurate transition in two and three dimensions 2-40513  
 graphite intercalation compounds, discommensurations, X-ray diffuse scatt. study 2-25829  
 ground state determ. in incommensurate phase transitions 2-45526  
 helical magnetic structures, commensurate-incommensurate transition 2-46279  
 2,4-hexadiyne-1,6 diol bis-(p-toluene sulphonate), incommensurate phase struct. as function of polymer conversion 2-35482  
 incommensurate one-dimensional system, cond. study, impurity effects (Russian) 2-45949  
 incommensurate phase formation at finite temps. in one-dimension, method of anal. 2-21271  
 incommensurate phases, dielectric and light scattering spectroscopy, review 2-46627  
 incommensurate phases (French) 2-27172  
 incommensurate superstructure transition theory (Russian) 2-12740  
 insulators, incommensurate phase transitions, phonons role 2-45563  
 Invar, martensitic transformation, role of incommensurate atomic struct. in mechanism 2-13720  
 Ising model, commensurate-incommensurate 2×2 transition, Monte Carlo simulation 2-46326  
 Ising model, layered triangular lattice, commensurate and incommensurate phases 2-46327  
 Ising model, two-dimens. axial nearest neighbour, finite lattice calc. 2-46325  
 Ising model, two-dimens. axial nearest neighbour, spatially modulated phases, crit. behaviour 2-46324  
 light scattering and dispersion of susceptibilities in an incommensurate phase (Russian) 2-46630  
 methane adsorbed on graphite, neutron scatt. obs. of triple pt. and phase transitions 2-1763  
 model with intermediate incommensurate phase 2-41288  
 molecular crystals, microcommensurate phase formation 2-35410  
 one-dimensional and two-dimensional systems, substrate effects on long range order and neutron scatt. characs. 2-1764  
 perovskites ferroelectric, incommensurate superstructure transition theory (Russian) 2-12740  
 phase transitions near Lifshitz point, phase diagram with incommensurate phase 2-40519  
 physisorbed films, commensurate-incommensurate transitions on anisotropic substrates 2-26212  
 polyacetylene, doped, attracting solitons and phase separation, lock-in transition in spin-Peierls system 2-26298  
 p-polyphenyls, phase transitions, Brillouin scatt. study 2-51614  
 pseudo-harmonic model, commensurate-incommensurate phase transition 2-35646  
 quasi-one-dimens. electron-phonon system, commensurate-incommensurate phase transition 2-35645  
 superconducting thin film, critical currents and elec. fields 2-21745  
 surface commensurate-incommensurate transitions 2-1722  
 symmetry aspects, review 2-30430  
 symmetry aspects in ferroelectric, antiferroelectric, improper and incommensurate phase transitions 2-41291  
 TCNQ salt, TSeF-TCNQ, commensurate-incommensurate cond., umklapp scatt. mechanism 2-13046  
 tetramethylammonium tetrachlorocuprate, ferroelastic-incommensurate, phase transitions 2-30581  
 tetramethylammonium tetrachlorocuprate, ferroelastic-incommensurate transition, acoustic softening 2-30582  
 tetramethylammonium zinc chloride, incommensurate-commensurate transition, ESR study of Mn<sup>2+</sup> 2-26731  
 thiourea, phase diagram in elec. field determ. from linear birefringence obs. (French) 2-8598  
 thiourea-d<sub>4</sub>, field-induced commensurate phase 2-51531  
 toluene monolayers on grafoil, thermal neutron diff. obs. two-dimens. crit. phenomena and structures 2-1767  
 TTF-TCNQ, commensurate-incommensurate cond., umklapp scatt. mechanism 2-13046  
 TTF-TCNQ, low temp. phases, frustration and commensurate pinning 2-35675  
 TTT<sub>1,2,3</sub>, quasi-one-dimens. cond., nonstoichiometry and press. influence on metal-insulator transition 2-21500  
 two dimensional commensurate-incommensurate transitions and dislocations 2-50850  
 two-component order parameter transforming under two-dimens. irreducible representation, Dzyaloshinskii soln. 2-35647  
 two-dimensional classical sine-Gordon system, commensurate-incommensurate transitions 2-42977  
 vortex systems and their images, commensurate-incommensurate phase transition 2-46224  
 BaMnF<sub>4</sub>, incommensurate, Raman spectrum, soft mode behaviour 2-22029  
 Ba<sub>2</sub>NbNb<sub>2</sub>O<sub>15</sub>, commensurate-incommensurate transition, ferroelastic transition 2-45567  
 Ba<sub>2</sub>NbNb<sub>2</sub>O<sub>15</sub>, soft phonon valley near tetragonal-incommensurate phase transition 2-45514  
 CdP<sub>2</sub>, thermal expansion and phase transition, X-ray diff. obs. 2-26088  
 Cs<sub>2</sub>HgBr<sub>4</sub>, pseudohexagonal, successive phase transitions 2-40529  
 β-Cu-Zn-Al, precipitates, commensurate-incommensurate transition 2-45568



**commensurate-incommensurate transformations continued**

- H<sub>2</sub>, chemisorbed on W (001) and Mo (001) surfaces, substrate rearrangement and 2D ordering 2-1755
- Ho, helical magnetic structures, commensurate-incommensurate transition 2-46279
- K<sub>2</sub>SeO<sub>4</sub>, calc. props. of incommensurate phase 2-2205
- K<sub>2</sub>SeO<sub>4</sub>, commensurate-incommensurate transition, X-ray scatt. study 2-21295
- K<sub>2</sub>SeO<sub>4</sub>, dielectric critical slowing-down near incommensurate-ferroelec. transition point 2-41296
- K<sub>2</sub>SeO<sub>4</sub>, ferroelectric transitions and quantum effects, high press. effect 2-41293
- K<sub>2</sub>SeO<sub>4</sub>, nonlinear lattice dynamics; phonon-periodon modes 2-45467
- K<sub>2</sub>SeO<sub>4</sub>, softmode-periodon coupling in ferroelec. phase transitions 2-41285
- K<sub>2</sub>ZnCl<sub>4</sub>, incommensurate-commensurate transition, impurity effects 2-41295
- K<sub>2</sub>ZnCl<sub>4</sub>, normal-incommensurate-commensurate transition, US attenuation 2-40495
- LaF<sub>3</sub>:Eu<sup>3+</sup>, hypersensitive 4f-4f transitions, rel. to pseudo-multipolar field (Portuguese) 2-26344
- $\beta$ -LiAlSiO<sub>4</sub>, commensurate-incommensurate transition 2-45565
- $\beta$ -LiAlSiO<sub>4</sub>, paramagnetic-incommensurate-commensurate transitions, Ising model 2-46326
- Mo surface, (100), phonon spectra and incommensurate reconstruction, lattice dynamics calc. 2-50969
- N<sub>2</sub>, physisorbed on graphite, LEED obs. of vapour press. isotherms, phase coexistence and transforms. 2-1762
- (NH<sub>4</sub>)<sub>2</sub>, ferroelec., commensurate-incommensurate transition, X-ray study 2-30431
- (NH<sub>4</sub>)<sub>2</sub>BeF<sub>6</sub>, ferroelectric phase transitions, X-ray dilatometric study 2-21954
- NaNO<sub>2</sub>, commensurate and incommensurate phases, <sup>23</sup>Na NMR study 2-36452
- NaNO<sub>2</sub>, incommensurate phase transition, lattice instability 2-9114
- NaNO<sub>2</sub>, incommensurate phase transition, statics and dynamics 2-41289
- NaNO<sub>2</sub>, incommensurate (antiferroelec.) phase transition, Brillouin scatt. study 2-46512
- NaNO<sub>2</sub>, nonequilibrium state, dynamical struct. anal. 2-31397
- NaNO<sub>2</sub>, ultrasonic study of phase transitions 2-45576
- Pt complex, bis(oxalato)platinate salts, cation-deficient, neutron scatt. and thermopower meas., cation polarisation effects 2-30578
- Rb<sub>2</sub>ZnBr<sub>4</sub>, ferroelec., phase transitions, <sup>81</sup>Br NQR study 2-31322
- Rb<sub>2</sub>ZnCl<sub>4</sub>, dielectric critical slowing-down near incommensurate-ferroelec. transition point 2-41296
- Rb<sub>2</sub>ZnCl<sub>4</sub>, ferroelec., transitions and struct. 2-30580
- Rb<sub>2</sub>ZnCl<sub>4</sub>, incommensurate ferroelectric, <sup>87</sup>Rb spin-lattice relax. via phases 2-31305
- Rb<sub>2</sub>ZnCl<sub>4</sub>, normal-incommensurate-commensurate transition, US attenuation 2-40495
- Rb<sub>2</sub>ZnCl<sub>4</sub>, phase transitions, optical, dielec. and elastic study 2-30583
- Rb<sub>2</sub>ZnCl<sub>4</sub>, spin-lattice relaxation via phases in a multisoliton lattice 2-31309
- Rb<sub>2</sub>ZnCl<sub>4</sub>:Mn<sup>2+</sup>, commensurate-incommensurate transitions, EPR study 2-31266
- Rb<sub>2</sub>ZnCl<sub>4</sub>(Br<sub>4</sub>), incommensurate-commensurate transition, impurity effects 2-41295
- Sr<sub>2</sub>KNb<sub>2</sub>O<sub>7</sub>, commensurate-incommensurate transition, ferroelastic transition 2-45567
- TaSe<sub>2</sub>, 2H, incommensurate-commensurate lock-in transition 2-12731
- TaSe<sub>2</sub>(2H), striped-to-hexagonal CDW transition, press. depend. 2-26041
- ThBr<sub>4</sub>, incommensurate phase transitions, phonons role 2-45563
- Ti-Cr, ordering in incommensurate displacement structures 2-16776
- $\alpha$ -U, phenomenological approach to displacive transitions (French) 2-21289
- VS<sub>2</sub>, (1T), CDW investig. by Raman scatt. 2-45861
- W (001) surface, adsorbed H effect 2-1771
- Xe monolayer on graphite, struct. and phase transitions 2-1754

**commerce**

- see also marketing*
- Federal Germany's energy imports and balance of payments (German) 2-32007
- first-generation fuel cell demonstration and commercialisation programme in USA 2-37206
- OPEC oil price increases, world wide economic effects (German) 2-37146

**commissioning**

- see also installation*
- decontamination during nuclear facilities decommissioning (German) 2-7372
- nuclear power plants decommissioning, legal problems and licensing procedure (German) 2-7147
- PWRs commissioning programme for Belgian electrical power generation industry (German) 2-43595

**communication systems *see telecommunication systems*****communication theory *see information theory*****communications applications of computing *see communications computing*****communications computing**

- automatic speaker recognition, measuring of contours of intensity and fundamental period of speech (German) 2-7996
- Du Art frame count cueing system 2-19199
- satellite Earth stations, Sun outage time calcs., hand-held calculator program 2-32806
- satellite link rain attenuation in range 10-100 GHz; Microsoft BASIC program Apple II-Plus computer 2-32615
- transform theory of propagation, diffraction in deterministic environments, computer solutions 2-44178

**community antenna television**

- reception centre cost anal., TV transposer powered by solar and wind generators 2-37251

**community planning *see town and country planning*****commutators**

- high-power electron beam commutator, using centrifugal electrostatic beam-shaping, design 2-4445
- CO<sub>2</sub> photoionisation laser with high pulse repetition freq. 2-44239

**compacting *see densification*****compasses*****see also navigation***

- Hamiltonian systems, large scale stochasticity, cascade of period doubling from compass movements (French) 2-15195
- motions, cascade of period doubling bifurcations and large stochasticity 2-38578

**compensation*****see also error compensation***

- coherent optics, conditions for effective phase adaption (Russian) 2-847
- crystal growth, microprocessor-controlled system, design and implementation 2-27061
- phase angle calibration standard, NBS, with auto-zero feedback compensation 2-19075
- radioisotopic instruments, servo-compensation method (Chinese) 2-33693
- SAW IDT filters design, errors due to diffraction compensation 2-8011
- temperature-compensating pH meter 2-14023
- thick film 2-33504
- GaAs, compensation mechanisms related to deep B implantation 2-50678

**compensation, charge *see charge compensation*****compilers (program) *see program compilers*****compiling programs *see program compilers*****complementarity**

- axiomatic quantum mechanics, uncertainty principle and complementarity 2-3425

**complementary metal-oxide-semiconductor integrated circuits *see field effect integrated circuits*****complete computer programs*****see also subroutines***

- alkali fieldspars, Al distrib. in tetrahedral sites and lattice parameters calc., AFEL program in FORTRAN 2-40207
- concrete structures, differential creep stress analysis in BASIC 2-20548
- echocardiographic meas. in children, normal values calc., pocket calculator program 2-14301
- energy dispersive X-ray spectrometry, spectral interference resolution using sequential simplex 2-43158
- FORTRAN IV general computer program for ab initio calcs. in quantum chemistry using SCF-LCAD-MO method (Chinese) 2-43771
- FORTRAN program to determine diffusion constants 2-12264
- geological data segmentation using Kolmogorov-Smirnov test, in FORTRAN 2-42354
- geological net projections generation, 2D, Cartesian coordinate construction, in FORTRAN 2-42353
- geomagnetic field synthesizing algorithm, in FORTRAN 2-42257
- head-related acoustic transfer function, calculator program 2-52502
- hydrocarbon fluid mixtures, viscosity, density and thermal cond. prediction, computer program in FORTRAN 2-8656
- liquefied natural gas densities, model programs in FORTRAN IV 2-1541
- logarithmic mean temperature difference for shell-and-tube heat exchangers, Hewlett-Packard and Texas Instruments Calculator programs 2-20517
- Markov-Orgeil underground storage simulation and evaluation for solar heat long-term storage 2-18146
- orbital image sensor geometry simulation, in FORTRAN 2-18580
- periods searching in large series of observational data, in Fortran (German) 2-10332
- room acoustic modes, calc. in BASIC 2-44576

**complex angular momentum plane**

- see also angular momentum theory; Pomeranchuk poles and trajectories; Regge poles and trajectories*
- No entries

**compliance constants *see elastic constants*****composite insulating materials**

- ethylene-vinylacetate copolymer, C loaded, resist. and positive temp. coeff. of resist., correl. with C black parameters 2-46084
- mica flake integrated sheet/epoxy laminates, mech. and elec. props. 2-27222
- quartz filled bisphenol epoxy HV DC insulation, effects of quartz fillers 2-8671

**composite materials**

- see also cermets; composite insulating materials; composite superconductors; concrete; eutectic alloys; fibre reinforced composites; fibres; filled polymers; laminates*

- agglomerate, metallisation, agglomeration parameter effects (Polish) 2-27304

- aluminous cement/perlite composite, low density, mech. props. 2-51963
- anisotropic composites, heat conduction, numerical anal. (German) 2-50050

- beam composite, with initial stress from moving load, stability 2-12060
- binary composite materials, thermoelec. props. 2-26364

- buckling of composite structures, finite element anal. (French) 2-30050
- complex structure, mech. characts. calcs. (French) 2-30023

- corrosion, materials selection for corrosion environment 2-9440
- cryogenic struct. materials, mech. and phys. props. requirements (Japanese) 2-43026

- diamond-metallic binder tools, EM inspection method 2-27378
- discs, stress conc. around circular aperture during flexure 2-35066

- dynamic response modelling, mixture theories 2-30006
- effective elastic modulus, calc. 2-35057

- elastic moduli, effective, determ. w.r.t. hollow spherical inclusions 2-41665
- elastic moduli determ., simultaneous Young's and shear 2-9497

- epoxy-rubber, particulate composite, low temp. behaviour 2-17726
- fatigue test method for mild loading conditions 2-13881

- ferrite powder-water system, rheological and technological props., effect of finely divided additions 2-41573
- flywheel energy storage system, creep characts. determ. 2-22662

- foam-ceramic composite for interelectrode inclusion, thermal cond. and mechanical props. (Russian) 2-1683
- fracture, emission of electrons and positive ions 2-9398

- fracture strength, correl. 2-50757
- glass cloth/epoxy laminates, G-10 CR and G-11 CR, mech. elec. and thermal charact., cryogenic appl. 2-22296

- glass-ceramic coatings with quartz, X-ray investigation of microstresses 2-37036
- glass-crystalline composite, deform. calcs., X-ray microstress meas. 2-1550

- granular composite films, microstruct. and dielec. props. 2-52063



## composite materials continued

- heat conductivity, semiempirical description 2-35030  
inhomogeneous media, bounds and exact theories for transport props. 2-19051  
interface phenomena 2-45746  
laminated composite finite bodies, thermal cond. when there is imperfect thermal contact between layers 2-30668  
laminated elastic composites, harmonic acoustic wave propag. 2-49971  
laminated shell structures, finite element analysis 2-20564  
lifetime prediction under const. load 2-17732  
mechanical behaviour, application of stress and strain polarization tensors (French) 2-44  
metal based composite technology, joining processes and appls. 2-36814  
metal catalytic particles, in filamentous C, crystallographic orientations, case of simple conical particles 2-31703  
metal-glass fibre material composite cylinders, supporting power taking into account edge effect 2-35065  
mica reinforced Al alloy, damping capacity, resistivity, thermal expansion and machinability 2-12785  
moisture profile under fluctuating ambient conditions, rapidly convergent scheme 2-22227  
molten metal matrix composites, dispersed particles behaviour, Spacelab I experiment 2-27119  
multicomponent, bounds on transport and mechanical props. 2-13147  
multicomponent, generalised cond. (Russian) 2-30666  
multilayered plate, round, bending and stress/strain state 2-50128  
nonlinear anisotropic elastic materials, parameters determ. 2-35056  
nonlocal fracture criterion, expt. verification 2-5932  
organic plastics, fatigue limit and breakdown 2-36963  
particulate, cracking due to thermomech. stress 2-8559  
phlogopite mica-glass composites, thermal conductivity and linear expansions 2-35759  
photoelasticity for anisotropic composite materials, fund. concepts 2-20536  
physical coating methods for production of composites, struct. and props. 2-36812  
plastic composite structures, strain hardened, rupture under striker impact 2-35089  
plate, cylindrically orthotropic, with circular hole, stress concs, closed-form solns. 2-50101  
plate with polar orthotropy, stress conc. near circular aperture during stretching 2-20558  
polymer coatings, plasma deposited, colored, metal codeposition technique 2-44419  
polymer matrices, highly cross-linked, fracture viscosity improvement 2-36959  
polymer-C composites, elec. props. effect of glass transition temp. (Japanese) 2-36984  
polymer-ceramic composites for hydrophones, fabrication and interphase connectivity 2-36834  
polymer-ceramics, mech. props. 2-22278  
polymer-containing composite material under ablative failure, math. model (Ukrainian) 2-36938  
polymer/concrete composites, review of physical props. 2-13783  
polymeric, multilaminated polymer films as models 2-36924  
polymeric materials, mechanical characteristics determination, at elevated temps. 2-37018  
polystyrene filled  $ZrO_2$ - $Y_2O_3$  ceramic composites, mech. props. 2-22278  
polystyrene-polyethylene, high density, dispersed composite blend, mech. props. (Japanese) 2-31755  
reinforced, solid particle erosion 2-36977  
reinforced shells, polymeric, optimisation 2-35063  
rod, in steady state and under vibr., optimum three-dimens. reinforcement, finite elements of Timoshenko beam 2-20601  
rubber, conf., Harrogate, England (June 1981) 2-42790  
shear rigidity determination, taking account of layer struct. geometry 2-37033  
shells, stringer-reinforced, stability in nonuniform stress-strain state 2-25278  
shells, thermoelastic, design based on failure conditions 2-25248  
shells, three-layered transversely-isotropic, free vibrs. 2-20600  
shells, viscoelastic, stability at elevated temps. 2-20568  
sintering of complex systems, compact growth prevention 2-41546  
sonar transducers, new materials and types of device 2-44532  
steel wire reinforced Al, continuous casting, prod. and props. 2-46985  
strength probability distribns., convergent sequence of tight bounds 2-27228  
supercomposite, strengthening by thermal cycling to develop reliable struct. 2-27111  
TGS powder-silicone rubber composite, ferroelectricity 2-36549  
thermographic detection, of adhesive-bond and interlaminar flaws 2-31862  
thick films, elec. props. and cond. mechanism 2-13192  
thin-walled rotational shells, residual stresses determ. by annular element removal method 2-20617  
tri-laminated, wave propag. normal to layers, mixture model calcs. 2-39844  
two-component, transport and optical props., bounds 2-9120  
two-layer composites, disruptive solns. based on combined thermoelasticity model 2-35055  
two-layered composite rod, low frequency propag. of zeroth torsional mode 2-2674  
two-level bounds, probability distributions for strength 2-1146  
two-phase, elastic props. 2-50739  
two-phase material, particle size depend. of thermoelastic stress intensity factor 2-21203  
unidirectional composites, elastic-plastic deform., plane stress formulation 2-30040  
US methods for characterising response 2-17822  
US vel. meas., continuous wave transmission technique 2-35017  
vibration and noise control, materials 2-25178  
viscoelastic materials, nonpolynomial descriptions of phys. nonlinearity 2-35062  
vulcanisates containing C black, rolling resist. 2-47196  
wound articles, initial thermal stresses elimination by winding angle var. 2-36837  
Al/GaAs, plasma anodisation, composite oxide film formation, AES study 2-52075  
Al- $Al_2O_3$  particle composites, US vel. and elastic constns., influence of microstruct. parameters 2-36902

## composite materials continued

- Al-glass, brittle composite, toughening by second-phase particles, crack paths 2-27270  
Al-graphite particle composites, dry wear 2-2595  
 $Al_2O_3$ -talc compositions, hot-pressing 2-46971  
BN- $SiO_2$  ceramics, hot pressing, props. 2-31673  
BaTiO<sub>3</sub> sintered with Bi<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub> glass, Curie temp. 2-46992  
Be-Al composite diaphragm for dome-type loudspeaker, vacuum deposition production method (Japanese) 2-25219  
C-C composites, oxidation behaviour 2-41765  
C-PVC composites, fluctuation modulation of tunnel junctions by applied AC stress 2-40998  
cc  $Al_2O_3$ - $ZrO_2$  composites, transform. toughening, fabrication and fracture toughness 2-51925  
Cr-graphite composite coatings, electrodeposited, effect of plating variables 2-9291  
Cr<sub>2</sub>C<sub>3</sub>, plasma- and vacuum-plasma sprayed composite coatings, props. 2-17761  
Cr<sub>2</sub>O<sub>3</sub>-Cr composite selective absorbers produced by the ebonizing process, props. 2-42040  
Cu/Ni foil composites, electrodeposits, 2-phase metal layer, H-diffusion (Japanese) 2-8672  
Cu- $Al_2O_3$  composite coatings, factors affecting entrapment of  $Al_2O_3$  particles 2-2608  
Cu- $Al_2O_3$  dispersion strengthened, strengthening and mech. props. study 2-22309  
Cu-Fe multifilamentary composites, in situ formed, mag. hysteresis loops 2-13315  
Cu-Mo layer composite form. by sputter deposition 2-12943  
Cu-Nb ultrathin multifilamentary composites, Young's modulus enhancement 2-17698  
Fe-Cu multilayer condensate, high temp. creep study 2-13785  
 $H_2BO_3$ -ZnO bonding material, composite form. under hot pressing and heat treatment 2-36826  
In-granular glass composite, structural magnetoresist. and Hall coeff. 2-5388  
In-granular glass composite, structural magnetoresist. and Hall coeff. 2-8787  
LaNi<sub>5</sub> metal hydrides, mechanically stable, designed for rapid cycling, preparation and characts. 2-32130  
LiCl, dispersed second phase particles, enhanced ionic cond., <sup>7</sup>Li NMR study (Chinese) 2-41206  
LiF-MgF<sub>2</sub> precipitated composites, fracture toughness meas. 2-36941  
Mg/Mn-ferrite/BaTiO<sub>3</sub>, ferroelectric ferromagnetics 2-51863  
Mo- $Al_2O_3$  composite film, surface roughness, photothermal absorber appls. 2-45688  
Ni-Cu multilayer condensate, high temp. creep study 2-13785  
Ni-glass, brittle composite, toughening by second-phase particles, crack paths 2-27270  
Pb(Ti,Zr)O<sub>3</sub>-polymer composites, pyroelec. props. 2-2197  
Pd/Ni foil composites, electrodeposits, 2-phase metal layer, H-diffusion (Japanese) 2-8672  
SiC reinforced Al, composite fabrication 2-41555  
 $Si_3N_4$ -BN composite, anisotropy effects in thermal diffusivity 2-17658  
 $Si_3N_4$ -C amorphous CVD composites, struct. and thermal props. 2-30773  
 $Si_3N_4$ -SiC composite, strength, statistical investigation 2-41697  
Ti/Au thin films, interdiffusion and phase formation, expt. study 2-45749  
TiC<sub>0.5</sub>N<sub>0.5</sub>-tool steel materials, sintering and props. 2-31660  
Y<sub>2</sub>O<sub>3</sub> stabilised  $ZrO_2$  composite, thermal barrier coatings for thermal insulation and corrosion resistance in industrial gas turbine engines 2-31818  
Zn-C chemical gas-phase deposited, Hall effect 2-5419  
 $ZrO_2$ - $Y_2O_3$  composites, transform. toughening, expt. obs. 2-51924
- composite models of elementary particles**  
see also composite models of hadrons  
arrow scheme model for leptons, quarks, bosons 2-23955  
bosons in rishon model 2-299  
calibration hierarchies in quark and lepton calibration models (Russian) 2-11036  
composite leptons and quarks, spin 1/2 preons, family struct. 2-19352  
composite quarks and leptons, Cabibbo angle, SU(3) generation symmetry 2-11032  
electron composite structure, static pot. for qq interactions,  $\pi^0$  calcs. 2-19353  
fermions, effective pot. in Veltman-Derman dynamical model 2-48961  
fermions mag. moments 2-43315  
gluons, review 2-11033  
grand unification and beyond, conf., Baltimore, MD, USA (May 1981) 2-28605  
lepton, composite models, lepton QCD interaction 2-38867  
lepton composite model, anomalous mag. moment (Chinese) 2-33816  
lepton-spectrum inducing pot. and family problem 2-43308  
leptons, composite struct., naive model 2-3761  
leptons and quarks, composite model 2-48959  
light composite fermions, broken chiral symmetries, strongly interacting gauge theory 2-11031  
magnetic preon confinement, radiation effects in monopole pair creation 2-29065  
maximal conserved flavour symmetry in models with complementarity 2-19351  
neutrino, photon and monopole field, composite particle structure theory 2-7014  
possible model search for composite quarks and leptons 2-29088  
preon model, prepsins 2-48958  
quark, composite models, lepton QCD interaction 2-38867  
quarks and leptons as composite Goldstone fermions 2-43310  
quarks and leptons low-lying excited states in composite models 2-43313  
quarks/leptons radial excitation model 2-48960  
relativistic composite particle systems, unified models 2-38804  
relativistic pot. models of electrons, muons and pions 2-43309  
rishon model, 't Hooft's anomaly constraint and flavour independ. 2-29087  
rishon model, fermion mass generations 2-7013  
spontaneous dimensional reduction in generalized Kaluza's high-dimensional theory 2-43238  
strongly coupled lattice gauge theories, composite massless fermions 2-23831  
SU(2)<sub>c</sub> × U(1) × SU(3)<sub>c</sub> model, spontaneous breaking of global baryon number symmetry 2-23873



**composite models of elementary particles continued**

- SU(3)×SU(6)×SU(6) metacolor theory for light composite fermions, anomaly matching 2-43312
- SU(7) unified model, fractionally charged colour singlet particles 2-19293
- SU(N) QCD in two dimensions, zero mass states 2-43282
- sub lepton-quark models, quark and lepton axial charge in O(N) group 2-43311
- subcomponent models for quarks and leptons, baryonic number nonconservation 2-43314
- subquark structure 2-23954
- valence preon model for composite quarks and leptons, algebraic search 2-33815
- $e^+e^-$ -heavy quarks, string model calc. 2-23953

**composite models of hadrons**

- see also parton model; quark models*
- Bogolyubov transformation in massive particle capture by quantum field 2-10982
- composite neutron model,  $p-e^-$  bound state, binding energy, mag. moment 2-33803
- Geometroelectrodynamics string model aspects 2-38860
- non-associative algebras and exceptional gauge groups 2-43307
- nucleon form factors in geometrodynamical model 2-11052
- relativistic pot. models of electrons, muons and pions 2-43309
- relativistic string model generalisation in geometrical approach 2-11030
- structure of matter, recent developments (*German*) 2-29033
- $\Sigma^+$ -py, decay amplitude, baryon reson. contrib. calc. in bag model framework (*Russian*) 2-23979

**composite particles**

- see also alpha-particles; deuterons; nuclei with mass number 1 to 5; tritons*
- causal Green's function formalism in statistical mechanics of composite particles 2-23544
- generalized Dirac equation with four orthogonal families of spin 1/2 solutions 2-3743
- relativistic composite particle systems, unified models 2-38804
- relativistic equal-time eqn. for composite particles, derivation from Bethe-Salpeter eqn. 2-3715
- technicolour and the three-fermion composite model 2-7016

**composite superconductors**

- braided superconductor, microslip induced degradation 2-21749
- calculating the characteristics of composite superconducting materials with high contact resistances 2-46208
- filamentary A15 superconductors, conf., Upton, NY, USA (May 1980) 2-6706
- filamentary A15 superconductors, developments in Japan, review 2-8933
- filamentary A15 superconductors, developments in the UK, review 2-8935
- filamentary A15 superconductors, strain depend. props., review 2-8916
- filamentary superconductor, current distrib. near end 2-36278
- filamentary superconductors, in situ, supercond. props. and coupling mech., review 2-8910
- hot powder metallurgical prep. 2-8943
- matrix jumple deformation during low temp. creep 2-22292
- multi-filamentary, nonequilibrium superconductivity, characterised by electric charge 2-31079
- multifilamentary, crit. current strain depend., use of MAXIMSUPER computer program 2-13266
- multifilamentary, hysteresis losses in superimposed DC and AC mag. fields 2-21736
- multifilamentary A15 superconductors, development at Aircro (USA) 2-17255
- multifilamentary A15 superconductors, developments at IGC (USA), review 2-8936
- multifilamentary A15 superconductors, developments in Germany, review 2-8934
- multifilamentary A15 superconductors, prep. by infiltration process 2-8945
- multifilamentary composite, transverse conductivity asymptotic study 2-41063
- multifilamentary compound superconductors, development, review 2-8939
- multifilamentary superconductors, in situ and powder metallurgy, review 2-8941
- multistrand superconductor, magnetisation rel. to volt-ampere charact. 2-5493
- Nb<sub>3</sub>Sn diffusion layers, bronze route, AES study 2-8909
- Nb<sub>3</sub>Sn multifilamentary superconductor, high-current, mech. props. 2-8940
- nonstationary heat exchange in normal-zone propagation 2-17214
- pair potential, proximity induced, mag. field depend. 2-31089
- plastic strain and flux jumps 2-31115
- properties alteration by nonhydrostatic elastic strain 2-21710
- stability under AC conditions, influence of nucleate-film boiling transition in liq. He 2-26570
- thermal characteristics with alternating current 2-46225
- wire, in situ formed, twisted, AC losses 2-8944
- Al/Nb-Ti composite, boundary resist. 2-13167
- Al/Nb-Ti composite supercond., strengthened, fabrication, energy storage appl. 2-13687
- Al/NbTi-Cu composite conductor, nonlinear stresses and relative displacements, finite element model 2-13789
- Al/NbTi-Cu composite supercond. for tokamak toroidal field coils 2-11273
- Cu-(Nb<sub>1-x</sub>Ta<sub>x</sub>)<sub>3</sub> Sn supercond. in situ multifilamentary wire, crit. currents 2-8931
- Cu-Nb dendritic A15 superconducting composite, large-scale casting and wire fabrication 2-13678
- Cu-Nb<sub>3</sub>Sn untwisted composite, AC losses, critical current density 2-13256
- Cu-Nb-Sn, cold powder-metallurgy processed multifilamentary composite, fabrication, current density 2-13681
- Cu-Nb-Sn multifilamentary in situ wires, high-temp.-gradient casting 2-13682
- Cu-V<sub>3</sub>Ga composites, in situ prep., supercond. and mech. props. 2-13263
- CuSnIn bronze/Nb single core A15 diffusion layers, influence of In on supercond. props. (*German*) 2-13219
- Hg, in filaments in dielectric matrix, heat capacity peak splitting 2-1212
- (Nb,Ta)<sub>3</sub>Sn multifilamentary wires, bronze process fabrication, supercond. props. 2-13259

**composite superconductors continued**

- Nb-Cu composite superconductor, anisotropic critical fields 2-31111
- Nb-Hf/Cu-Sn-Ga, multifilamentary supercond., crit. current, strain effects 2-17251
- Nb-Ti composite high-field supercond., current-carrying, stability, elec. charge effect 2-51385
- Nb-Ti multifilamentary composites, microstruct. rel. to crit. current density, TEM study 2-13734
- Nb-Ti multifilamentary wires, neutron irradi. effects on crit. current density 2-13261
- Nb-Ti/Cu composite superconductor, formvar coated, supercond. recovery from postquench conditions 2-8911
- Nb<sub>3</sub>Sn-Nb-bronze composites, supercond. props., stress effects 2-13265
- Nb<sub>3</sub>Al, multifilamentary, precip. from supersaturated BCC phases, supercond. props. 2-26532
- Nb<sub>3</sub>Ge composite tape conductors, total AC losses 2-36277
- Nb<sub>3</sub>Sn composite superconductor, effect of prestress on supercond. props. 2-8928
- Nb<sub>3</sub>Sn composite-processed, alloying addition effect on comp., growth rate and supercond. props. 2-21743
- Nb<sub>3</sub>Sn composites, crit. currents strain response, alloying effects 2-13264
- Nb<sub>3</sub>Sn, composites preparation, props. and improvements in current-carrying capacities in high mag. fields 2-13685
- Nb<sub>3</sub>Sn, cooled by normal and superfluid He, stability 2-26564
- Nb<sub>3</sub>Sn, filamentary, supercond. props., stress effects, mag. fusion energy program appl. 2-21747
- Nb<sub>3</sub>Sn filamentary superconductor, bronze processed, microstruct. effects under strain 2-8918
- Nb<sub>3</sub>Sn filamentary superconductor manufactured by solid-liq. diffusion process 2-8937
- Nb<sub>3</sub>Sn, internal friction and Young's modulus, 6 to 300K 2-47107
- Nb<sub>3</sub>Sn, multifilamentary, prestrain and upper crit. field 2-13249
- Nb<sub>3</sub>Sn, multifilamentary, internal bronze fabrication, supercond. props. 2-13260
- Nb<sub>3</sub>Sn, multifilamentary, crit. current strain depend., use of MAXIMSUPER computer program 2-13266
- Nb<sub>3</sub>Sn, multifilamentary, strained, self-healing effect 2-21744
- Nb<sub>3</sub>Sn multifilamentary conductors, Al, Cu stabilised, heat pulses effects 2-8925
- Nb<sub>3</sub>Sn multifilamentary superconductor, mag. props. 2-8913
- Nb<sub>3</sub>Sn multifilamentary superconductor, strain-scaling law, uniaxial and bending strains 2-8929
- Nb<sub>3</sub>Sn multifilamentary superconductor, manufacture by external diffusion method 2-8938
- Nb<sub>3</sub>Sn multifilamentary supercond. for high field test facility at Lawrence Livermore Lab. 2-29431
- Nb<sub>3</sub>Sn multifilamentary wires, low temp. phase transform. and strain depend. of critical current density 2-5509
- Nb<sub>3</sub>Sn multifilamentary wire, crit. current in high mag. field 2-5510
- Nb<sub>3</sub>Sn multifilamentary wires, crit. current and pinning behaviour, 4.2K to crit. temp. 2-13258
- Nb<sub>3</sub>Sn multifilamentary wires, in situ prep., high field crit. current density, mech. stresses effect 2-13262
- Nb<sub>3</sub>Sn, ultrafine multifilament composite wires, processing limits 2-13684
- Nb<sub>3</sub>Sn, W-Cu reinforced, composite superconductor, stress effects 2-8930
- Nb<sub>3</sub>Sn wire, bronze-processed, flux pinning 2-8922
- Nb<sub>3</sub>Sn/Nb-Ti composite-processed superconductor, high field props. 2-17241
- Nb<sub>3</sub>Sn-Cu, superconductor wire, prep. by in situ process, optimisation of props. 2-2043
- Nb<sub>3</sub>Sn-Cu composite, powder preparation, critical current density 2-13680
- Nb<sub>3</sub>Sn-Cu filamentary superconducting wire, in situ prep. and props. 2-8942
- Nb<sub>3</sub>Sn-Cu supercond. wire, fabrication by external diffusion 2-51848
- NbTi multifilamentary supercond. wires, flux creep phenomenon 2-36286
- NbTi-Cu multifilament supercond., explosive bonding (*Chinese*) 2-41096
- (SN)<sub>x</sub>, superconducting, mag. props., composite supercond. model 2-46199
- V-Ga/Cu-Ga-Al composite system, metallurgical processing, superconducting props. of V<sub>3</sub>Ga wires 2-13686
- V-Ga-Ce (16, 1 wt.%), irradi. conditions on mechanical props. 2-13757
- V<sub>3</sub>Ga, multifilamentary, precip. from supersaturated BCC phases, supercond. props. 2-26532
- V<sub>3</sub>Ga tapes, supercond., microstruct. and crit. current density, prep. by composite process 2-13255
- V<sub>3</sub>Ga wire, superconducting props., formation temp. effects 2-8927
- V<sub>3</sub>Ga-Cu in situ multifilamentary composite, preparation and superconducting props. 2-13683
- V<sub>3</sub>Ga<sub>2</sub>, composites preparation, props. and improvements in current-carrying capacities in high mag. fields 2-13685
- Va<sub>3</sub>Ga tapes, supercond. props., prep. by composite process 2-13254

**composition measurement** *see chemical analysis***compressibility**

- see also compressibility of gases; compressibility of liquids; compressive strength*
- acrylic cube, strain anal. by laser speckle interferometry (*Korean*) 2-12113
- alkali hydride, thermal expansion coeff., isothermal compressibility and Grüneisen const. determ. 2-50819
- alkali metal halides, compressibility, Broat sum rule, Debye-Waller factor, melting 2-12698
- antiferromagnetic cryst., elastic const. temp. depend., US vel. study 2-25968
- bars, thick, curved, subject to bending, tension and shear, complete yield at collapse (*Polish*) 2-20555
- bubble, spheroidal, collapse near solid wall 2-1251
- charge-ordered cryst., elec. cond. temp. depend. 2-17065
- cylinder, tall hollow, with high interfacial friction, static axial compression 2-16242
- 2,2dimethyl propanoic acid, sub-grain-boundary self-diffusion (*French*) 2-1662
- elemental solids, entropy-compressibility correl. 2-1638
- ferrites, soft, press. effect on magnetisation mechanisms 2-26714
- fibre bundles subjected to deforming compression, geometrical parameters 2-49929
- forsterite (Mg<sub>2</sub>SiO<sub>4</sub>), single-crystal, shock compression meas. in 15-93 GPa range 2-22974
- glass-liquid transition, nature of internal changes, review 2-8616



**compressibility continued**

- high pressure generation, hexagonal anvil apparatus, effects of pressure medium (*Japanese*) 2-43040  
 isotropic solids, irreversible thermodynamics of overdriven shocks 2-40486  
 layered acoustic medium, density and compressibility profiles from precritical incidence data 2-23452  
 majorite ((Mg,Fe)SiO<sub>3</sub>), vibrational and compressional props. of mineral high-press. phase 2-22973  
 membranes, lipid-protein interactions, lipid phase transition 2-27783  
 naphthalene, alpha- and beta-halogen derivatives, melting, volume changes and latent heat of melting 2-16754  
 PET, solid and molten, PVT props. 2-25761  
 plate, multiplicity of deformation modes under compression (*French*) 2-35070  
 PMMA, static compression to 100 GPa 2-8571  
 poly p-phenylene terephthalamide fibres, compressional behaviour, electron microsc. obs. 2-16711  
 polyacenes, crystals, sound vel., compressibility and thermal expansion, linear chain model 2-45401  
 polymer dispersion mech. props., US absorption study, relation of particles to film props. (*German*) 2-22281  
 polymer powders, non-porous, meas. of compressibility coeff. by mercury porosimetry 2-30077  
 p-polyphenyls, crystals, sound vel., compressibility and thermal expansion, linear chain model 2-45401  
 polyurethane annular disc, strain analysis, by laser speckle interferometry (*Korean*) 2-12113  
 porous media models, compressible, theory of mixtures formalism 2-50078  
 rectangular parallelepiped, compression, theory of small elasto-plastic deformations (*Russian*) 2-12041  
 rod stability during simultaneous torsion and axial compression 2-35051  
 semiconductors, II-VI and III-V, compressibilities, Debye-Waller factors and melting criteria 2-1580  
 shaped charge jet and long rod penetration, finite compressibility, shock effects 2-1557  
 shock loaded materials, compressibility in mixed phase region 2-30526  
 sputtering, nonlinear yield, hydrodynamical anal. 2-51761  
 transition metal boride powder, synthesis and physicochem. props. 2-41544  
 Al alloy, trapezoidal sheet, load-carrying capacity in post-buckling area due to static compression 2-30516  
 Al, shock compressed, cryst. struct. determ. (*Russian*) 2-5076  
 Ar, crystalline, struct. and compression at high press. and room temp. 2-21063  
 B-C powder, synthesis and physicochem. props. 2-41544  
 CsCuCl<sub>3</sub>, antiferromagnetic cryst., elastic const. temp. depend., US vel. study 2-25968  
 Cs<sub>3</sub>O-Na<sub>2</sub>O-SiO<sub>2</sub> glasses, Brillouin spectra, US vels., and mech. props. 2-13501  
 CuCl, volume compression study up to 7 GPa 2-40485  
 Fe powder, atomised, pressing characts., particles porous struct. effect on compressibility 2-41551  
 Fe<sub>2</sub>P, lattice compression, anisotropic, X-ray diffr. study 2-25971  
 LaSn<sub>3</sub>, thermodynamic and mag. props. 2-1643  
 Li, plastic behaviour study 2-21216  
 LiF, dislocation struct., influence of deform., hardening curves 2-45198  
 Nb<sub>3</sub>Sn composite superconductor, effect of prestress on supercond. props. 2-8928  
 Ne, crystalline, struct. and compression at high press. and room temp. 2-21063  
 Ni<sub>2</sub>P, lattice compression, anisotropic, X-ray diffr. study 2-25971  
 Si, plastic deformation, 300-600°C 2-40472  
 UO<sub>2</sub>, thermophysical props., review 2-50880  
 Xe, crystalline, lattice parameters, thermal expansion, thermal vacancies and eqn. of state 2-25831

**compressibility of gases**

- see also high pressure phenomena and effects*  
 axisymmetric perturbations during compression of gas-filled hollow by ideal liquid (*Russian*) 2-8266  
 D<sub>2</sub>O, liq. and vap., speed of sound on sat. line, appl. of law of corresponding states 2-16720  
 H, atomic, spin-polarised, ground state props., Ursell-Meyer method 2-35861  
 N<sub>2</sub>, compressibility and viscosity equations 2-20799

**compressibility of liquids**

- 4-trans-4-alkyl-cyclohexylbenzonitriles, pVT data and Tait eqn. in nematic and isotropic phases 2-35638  
 acetone-tri-n-propanol (i-propanol) (n-butanol)(i-butanol)(cyclohexanol), excess volume, isentropic compressibilities at 303.15K 2-1537  
 alcohols, surface tension, Eotvos const., compressibility, press. coeff., expansivity and Gruneisen parameter 2-30718  
 alkali halides, freezing, classical statistical mech. theory 2-26021  
 alloys, binary, freezing, classical statistical mech. theory 2-26021  
 cholesteryl myristate-cholesteryl propionate liq. cryst. mixtures, US vel. meas. 2-5042  
 cylindrical solid penetration into compressible liquid 2-50735  
 dimethyl sulphoxide-alcohol binary mixtures, US rel. and isentropic compressibility determ. 2-12683  
 N,N-dimethylaniline+chloroform mixture, isentropic compressibility calc. from US velocity and density meas. 2-30527  
 N,N-dimethylaniline+methylene chloride mixture, isentropic compressibility calc. from US velocity and density meas. 2-30527  
 effective hard sphere diameters evaluation 2-20984  
 elastic wedge penetration into incompressible liquid 2-4779  
 electrolytes, aq. solns., compressibility, structural aspects, electrostriction 2-40459  
 electrolytes in acetonitrile at 25°C, isentropic compressibilities, sound vel. meas. 2-12655  
 p-(p-ethoxy phenyl azo) phenyl propionate, liq. cryst., US velocity and specific vol. 2-45382  
 n-p-ethoxy-benzyliden-p-n-butylaniline, isotropic phase, Brillouin scatt. under high press. 2-51619  
 fused-salt binary mixtures, hard-sphere theory applic. to isothermal compressibilities 2-16703  
 heavy water surface tension, Eotvos const., compressibility, press. coeff., expansivity and Gruneisen parameter 2-30718  
 hydraulic servomechanism, step response, oil compressibility effects 2-40456

**compressibility of liquids continued**

- hydraulic servomechanism, step response without inertia loading, oil compressibility effects 2-40457  
 inert gases, liquefied, dielectric const. determ. (*Russian*) 2-13395  
 liquid crystal, scaled particle theory of a system of hard right circular cylinders 2-16570  
 liquid noble metals, effective pair potential and thermodynamic props. 2-45015  
 MBBA, isotropic phase, Brillouin scatt. under high press. 2-51619  
 metal, thermodynamic properties using one-component plasma reference system 2-45013  
 metals, isothermal compressibility rel. to surface tension 2-45310  
 mixed electrolyte solns., compressibility, temp. depend. (*Russian*) 2-12658  
 nematic liquid cryst., orientation, stability in sound field in absence of squeeze-flow 2-5048  
 oil, in hydraulic servomechanism, compressibility effects on step response 2-40456  
 oil, in hydraulic servomechanism, compressibility effects on step response without inertia loading 2-40457  
 organic binary liquid mixtures, molecular interaction determinations using US methods 2-21235  
 organic solvents, isothermal compressibility meas. using laser light dispersion analysis (*French*) 2-12657  
 phospholipid bilayer, correl. length and lateral compressibility in presence of thermodynamic density fluctuations 2-16705  
 propane, liq., sound vel. meas., rel. to compressibility, specific heat 2-8574  
 rare earths, liq., compressibility and sound vel. 2-35593  
 trans-1,2-dichloroethylene, novel liq. places at high press., spin-lattice relax. time and sp. vol. 2-9050  
 water, surface tension, Eotvos const., compressibility, press. coeff., expansivity and Gruneisen parameter 2-30718  
 water, viscosity and thermal cond. in critical region, isothermal compressibility calc. 2-40611  
 water-carbon tetrachloride mixture, compressibility, phase transitions (*Chinese*) 2-8553  
 Ag, liq., US vel., meas. using pulse echo method 2-40489  
 Al, liq., US vel., meas. using pulse echo method 2-40489  
 Bi, liq., US vel., meas. using pulse echo method 2-40489  
 Cu, liq., US vel., meas. using pulse echo method 2-40489  
 D<sub>2</sub>O, eqn. of state determ. from sound speeds 2-1584  
 D<sub>2</sub>O, liq. and vap., speed of sound on sat. line, appl. of law of corresponding states 2-16720  
<sup>3</sup>He-B, superfluid compressibility 2-35813  
 Hg-In metallic solns., thermodynamic and elec. props. near crit. points 2-1883  
 Ne-Ar solutions, volume thermodynamic props., ultrasonic velocity (*Russian*) 2-12686  
 Se-Te liquid mixtures, sound vel. meas. under high press. 2-35594

**compressible flow**

- see also compressibility*  
 air injection in stagnation region, shock layer, axisymmetric eqns. 2-30182  
 airfoils, subsonic and transonic flow, numerical method calcs. 2-44750  
 axial-flow compressor design with tandem blades 2-8171  
 boundary layer flow over rot. body, heat and mass transfer 2-35146  
 buried wire separation detector simulation in compressible flow 2-12128  
 compressible flow hydrodynamics, eqns. of motion, Hamiltonian frame, of reference 2-12162  
 computation of flows including strong viscous interactions with coupling methods (*French*) 2-1215  
 conservation equation solution, two-step implicit schemes (*French*) 2-12172  
 cylindrical body movement through compressible liq. surface (*Ukrainian*) 2-35175  
 cylindrical shock problem, second order iterative scheme solutions 2-4860  
 density gradient meas., by noise deflectometry 2-16343  
 disturbances in 2-dimens. compressible flow, transformation of eqn. 2-39889  
 finite disc, rotating compressible flow over edge 2-12173  
 flow simulation using Hamilton's eqn. and Clebsch-type vortex parameters 2-30163  
 fluid-solid interaction and fluid acoustical effects, piping system dynamics 2-11244  
 friction compressor, compressible laminar subsonic flow, difference eqn. soln. (*German*) 2-20699  
 high resolution difference schemes for compressible gas dynamics 2-8172  
 high Reynolds number, shock wave-boundary layer interactions 2-1186  
 hydroacoustic wave, plane, diffr. on open end of plane semi-infinite waveguide with thin elastic walls 2-4846  
 hydroelasticity, elastic solid interacting with compressible viscous liquid 2-25387  
 Imai's equation soln. for compressible flow past a cylinder 2-25385  
 incompressible limit of compressible fluid motions in a bounded domain 2-38443  
 inhomogeneous media, gasdynamic flow calcs. using conc. method 2-33302  
 inviscid flows, unsteady, numerical soln. of partial differential eqns. 2-1216  
 liquid flow, subsonic, compressibility effects on cavitation 2-16352  
 liquid flows, transonic cavitation 2-16353  
 measurement and calibration facility,  $8 \times 10^{-7}$  to  $2.6 \times 10^2$  kg/sec 2-35244  
 multidimensional combustor flow, anal. algorithm 2-8247  
 nonsteady motion of a wing with subsonic velocity near a shield 2-20701  
 numerical methods in fluid dynamics, conf., Stanford, CA, USA 2-28608  
 oblique jet interaction with subsonic flow, laser velocimetric obs. (*French*) 2-50343  
 one-dimensional compressible gas dynamics calculations using the Boltzmann equation 2-8253  
 oscillatory laminar boundary layers, flow past yawed cylinders 2-12122  
 patterns, streamline coordinates use in numerical soln. 2-20700  
 pipe orifice, high speed steady compressible flow characts. 2-39984  
 pipe sizing for isothermal flow, using TI-58 or TI-59 program 2-8226  
 plane compressor cascade, Reynolds and Mach number effects at extreme incidence 2-30164  
 PWR, compressibility and added masses in blowdown anal. (*German*) 2-11236  
 sharp-edged orifices, two-phase mixtures 2-16366



**compressible flow continued**

- shear flow, thermal instability 2-25386  
 steady two-dimensional flow past a flat plate, Ocean flow 2-20698  
 supercooled water droplets in air flow, dynamics in undisturbed state and after compressed shock 2-44777  
 surface vorticity modelling of separated flows from two-dimensional bluff bodies of arbitrary shape 2-16344  
 turbulent boundary layers, temp.-velocity profile study 2-30110  
 unsteady, flowfields computation by time-depend. technique 2-12174  
 unsteady compressible 3-dimens. stagnation point laminar boundary layers, self-similar soln. 2-8111  
 unsteady compressible laminar boundary-layer flow within a moving expansion wave 2-50235  
 viscous compressible fluid in tube with elastic walls, nonstationary motion 2-20753  
 viscous flow, unsteady, alternating direction implicit finite element method 2-4847  
 viscous-inviscid interaction model of jet entrainment 2-1246  
 viscous-inviscid interactions, AGARD conf., Colorado Springs, CO, USA (Sept.-Oct. 1980) 2-11  
 vortex shedding in compressible flow, base bleed and press. effect 2-1206  
<sup>3</sup>He-B, vibrating wire expts. to 0.6 mK 2-35799

**compressive strength**

- see also compressibility  
 alloys, biphasic isotropic, elastoplastic props., comparison with constituent props. (French) 2-30507  
 brittle bodies, nature of 'dynamic' strength 2-5930  
 electrocorundum refractories, props., effect of SiO<sub>2</sub> and MgO-containing additives 2-36932  
 epoxy putty, A & B, thermal and mech. props., low temp. meas. 2-22297  
 fibre reinforced composite laminates, strength, design with reliability concept (Japanese) 2-36865  
 fibre reinforced composites, aligned fibres, compressive props., new theory 2-8557  
 fibre reinforced composites, compression strength, effect of kinked, misaligned and poorly adhering fibres 2-9367  
 filamentary-reinforced composite, cryogenic props., review 2-2550  
 glass cloth/epoxy laminates, G-10 CR and G-11 CR, mech. elec. and thermal charact., cryogenic appl. 2-22296  
 glass fibre reinforced polyester composite, mech. testing 2-22406  
 graphite, HTGR struct. components, material characts. and eval. 2-41831  
 graphite, nuclear, thermal expansion under compressive stress at high temp. 2-43558  
 ice, columnar grained, rate sensitivity of compressive strength 2-13875  
 infiltration of liquid Cu (Japanese) 2-27117  
 kaolin refractories, props., effect of additions of Si<sub>3</sub>N<sub>4</sub>, B<sub>4</sub>C and BN 2-41568  
 keramzite refractory, prod. for light porous granular fillers 2-36823  
 Oshima granite, influence of strain rate on dilatancy and strength under uniaxial compression 2-32507  
 phenolic laminate, thermal and mech. props., low temp. meas. 2-22297  
 polyester fibreglass, pultruded, thermal and mech. props., low temp. meas. 2-22297  
 polyethylene solidified wastes density increase by copper slag 2-4000  
 polymer/concrete composites, review of physical props. 2-13783  
 polystyrene filled ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub> ceramic composites, mech. props. 2-22278  
 polystyrene-polyethylene, high density, dispersed composite blend, mech. props. (Japanese) 2-31755  
 Portland cement, strength-developing capacity, extended model 2-27233  
 quartz sand aqueous suspensions based refractories, props. 2-36933  
 rock, creep behaviour, appl. of generalised rheological model (Japanese) 2-35579  
 sand, moulding and core, universal apparatus for strength meas. 2-37034  
 steel, stainless 304 and 21-6-9, unflawed, AE under biaxial stresses 2-31874  
 thermoplastic foams, shock mitigating props., predicted from stress-strain data 2-31782  
 Al and Al alloys 7075 and 7050, AE during tensile and compressive deform., microstruct., effect 2-31883  
 Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, mullite, fused, texture anisotropy and mech. props. 2-41622  
 BN-SiO<sub>2</sub> ceramics, hot pressing, props. 2-31673  
 C fibre reinforced plastic, unidirectional compressive strength, comparison of test techniques 2-27367  
 CaO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-H<sub>3</sub>PO<sub>4</sub> system, hardened body, props. and thermal changes 2-52001  
 Cu, dynamic recrystn. during hot compression (Russian) 2-36878  
 Fe, high-porosity, props. 2-17646  
 Fe-Al<sub>2</sub>O<sub>3</sub> compact, infiltration of liquid Cu (Japanese) 2-27117  
 MgO, sintering in presence of heteroorg. cpd. additives, effect on mech. props. 2-51853  
 Ni, high-porosity, props. 2-17646  
 Ni-Cr, plasma deposited, props. anal. using dimensionless complex parameters 2-41552  
 Ni-Cr (20 wt.%), high-porosity, props. 2-17646  
 SiC, self-bonded, mech. props., crystallite size effect 2-41744  
 SiO<sub>2</sub>-Na<sub>2</sub>O-CaO-MgO-Al<sub>2</sub>O<sub>3</sub> glass, strength props., for large dimension designs 2-31762  
 Ti-Al-Sn-Zn-Mo-Si alloy 6242, compressive plastic instability 2-27219  
 TiC, polycrystalline, mech. props. 2-51984

**compressors**

- axial-flow compressor design with tandem blades 2-8171  
 diffuser performance prediction, set of correlations 2-30258  
 noise control to comply with current legislation 2-44572  
 refrigeration cycle He temp., max. practical efficiency 2-33534  
 silencer performance effects of steady flow rate and acoustic intensity 2-14162  
 water-ring, circular casing type, exp. study 2-42996

**Compton effect**

- $\gamma$ - $\gamma$ , 0-400 MeV, Compton effect, finite energy sum rules (Russian) 2-11053  
 astronomical anisotropic synchrotron sources, inverse Compton scatt. 2-10311  
 astrophysical luminous objects, Compton losses and rockets 2-23216  
 channelled relativistic electrons, Compton scattering 2-38885  
 coherent/Compton scattering method using an X-ray tube for trabecular bone mineral content meas. 2-52690  
 energy dispersive X-ray spectrometry, in SEM, artifacts 2-28973

**Compton effect continued**

- free electron laser, axial DC elec. field, high power visible radiation generation 2-44318  
 galaxies active nuclei, Compton effect rel. to X-ray emission 2-28555  
 hadron Compton effect, radiative scatt. by nuclei 2-15409  
 historical review 2-33264  
 hydrogenic ions, 1s ground state, Compton defect theory appl. (French) 2-11553  
 impulse approx. calcs., Compton defect, rel. to electronic struct. (French) 2-5157  
 information theoretic synthesis and anal. of Compton profiles 2-7526  
 nonlinear Compton scatt., relativistic treatment 2-38822  
 nuclear Compton amplitude and exchange effects, dispersive approach 2-11126  
 plasma with only Compton scatt., radiative transfer 2-10318  
 plasmon clouds, multiple Compton scatt. study 2-44834  
 radiation transfer, nonstationary, calcs. (Russian) 2-8024  
 radio sources, extragalactic, inverse Compton model for assoc. large-scale X-ray and radio structs. 2-42754  
 X-ray binary stars, effects of Comptonisation on radiative transfer is strongly magnetised plasma 2-32828  
 X-ray scattering at Bragg position 2-13587  
 X-ray sources, compact, Compton scatt. of relativistic electrons 2-10529  
 X-ray sources spectra, numerical soln. of time-depend. Compton scatt. problems via integral eqn. 2-14952  
 $\gamma$ -ray absorpt. coeffs., semiempirical formulae 2-46809  
 $\gamma$ p- $\gamma$ p, 700-1000 MeV photon laboratory energies, proton Compton scatt. differential cross-sections 2-324  
 BN, band struct. and Compton profiles, LCAO SCF ab initio HF calc. 2-35935  
 CO<sub>2</sub> laser-plasma interaction expts. 2-12326  
 CoAl, electron momentum distrib. and charge transfer, Compton scatt. study 2-26281  
 FeAl, electron momentum distrib. and charge transfer, Compton scatt. study 2-26281  
 H, Compton profiles for ejected electrons, momentum densities determ. 2-24864  
 He, Compton profiles for ejected electrons, momentum densities determ. 2-24864  
 He, Compton scattering, incoherent factors, density matrix approach 2-43863  
 He, ejected-electron scattering cross sections, Compton diffusion (French) 2-39492  
 LiF, surface defect influence on Compton scatt. 2-35873  
 Mo, Compton scatt., 145 KeV  $\gamma$ -rays, from bound electrons 2-20011  
 NiAl, electron momentum distrib. and charge transfer, Compton scatt. study 2-26281  
 Si, directional Compton profiles in impulse approx., exact exchange Hartree-Fock calcs. 2-2364  
 Sn, Compton scatt., 145 KeV  $\gamma$ -rays, from bound electrons 2-20011

**Compton profile** see *Compton effect***Compton scattering** see *Compton effect***computation** see *calculation***computational complexity**

- liquid-film lubrication problems, cavitation algorithm 2-25328

**computer-aided analysis**

- see also analogue simulation; CAD; circuit analysis computing; digital simulation; electric machine analysis computing; hybrid simulation; power system analysis computing  
 alternating magnetic field distribution calc. method, computer program TDEDDY appl. (Korean) 2-49626  
 biosynthesis of neutral solvents, appl. 2-6100  
 fast Fourier processing, and anal. of atomic resoln. microscopic images, on-line system construction 2-50492  
 flat plate photovoltaic modules encapsulation systems, thermal and optical performance 2-37319  
 FORTRAN program for crystallographic data eval. 2-16538  
 hinged wave energy converter with two platforms 2-6115  
 industrial plants, computer-aided noise modelling 2-16186  
 intestinal pressure recordings, automated computer anal. 2-14344  
 laser beam propagation optimisation in nonlinear media, nonlinear distortion suppression problems 2-29840  
 LMFBR cladding breach monitoring by solid state tagging of fuel element surface, analysis program 2-24340  
 MARKAL, linear programming model for energy systems analysis, BNL version technical features 2-52269  
 MIS solar cells, short circuit current 2-42013  
 nuclear reactor accident consequence analyses, computer codes 2-4101  
 online microcomputer anal. of auditory neuron response characteristics 2-6295  
 organic compounds computer-aided structural anal. by AI system 2-20201  
 PIC system, digital image processing of electron micrographs 2-50495  
 powder qualitative analysis software package, for use with computer controlled powder diffractometer 2-25684  
 pressurisation transients in BWR, RAMONA computer code simulations 2-15599  
 pulmonary sounds, diagnostic value, preliminary study 2-14299  
 SAMPO80 program 2-17939  
 scattered and diffracted energy calcs. using APART/PADE version 7 deterministic computer program 2-11782  
 solar air heater performance anal. and optimisation 2-14117  
 solar panels load losses, analogical study (Italian) 2-37222  
 solar space heating system design, role 2-37177  
 spacecraft HF structural vibrs., prediction using statistical energy anal. 2-1067  
 steam turbine, mass and volumetric flowrate calc. 2-44803  
 Stirling engine inner loop parameters calc. method 2-44638  
 tobacco mosaic virus, STEM images, computer image processing 2-52692  
 WAMCOM computer code for common cause methodologies using large fault trees 2-15600  
 X-ray powder-diffraction phase identification, minicomputer search/matching, pros and cons 2-25685  
 Ga<sup>+</sup> liquid-metal ion source extraction region, trajectory calcs. 2-51775  
 Hg discharge lamps, break-down voltage calc. method (Russian) 2-50472



computer-aided circuit analysis *see circuit analysis computing*

computer-aided design *see CAD*

computer-aided instruction

*see also education*

education conf. Rapid City, South Dakota, October 19-21, 1981 2-33259  
ESSOR system, stimulated scientific experimentation, pedagogic potentialities (French) 2-14992  
introductory physics lab., microcomputer data management 2-48451  
microprocessors in schools, appls. 2-22  
nuclear safety computer-aided instruction 2-7275  
physics, computer-aided instruction, review 2-18848  
speech training for deaf children, computer-based aid, vocal-tract cross-section display 2-18849

computer architecture

multiprocessor architecture for rapid EEG frequency analysis 2-37701

computer facilities

noise prediction models for design specification development 2-16184

computer-generated holography

acoustic holograms reconstruction, spatial replication in back-propagated acoustic holograms 2-44602  
aspheric surfaces, testing by computer-generated holograms 2-7904  
aspherical surfaces, testing by in-line computer-generated holograms 2-7905  
blurred-edge object recognition method 2-859  
double phase holograms, image deblurring appl. 2-44223  
fabrication process and expt. results (Chinese) 2-44213  
focusing light into specified volume by computer-synthesized holograms 2-49715  
Lagrangian interpolated binary Fourier holograms, Lohmann hologram phase error modification (Chinese) 2-15968  
laser scanner for computer-generated holograms 2-11673  
multiplexed coherent optical processor for calculating generalized moments 2-39585  
multiplexed holograms, digital generation and optical retrieval 2-49699  
pattern recognition and classification using hybrid optical processor, generalised set of pattern functions 2-49679  
polarizational complex kinoform 2-4470

computer graphic equipment

*see also interactive terminals; plotters*

raster-scanned terminal to emulate Tektronics 4010 2-7484

computer graphics

*see also curve fitting; interactive systems*

cable reinforced membranes, CAD 2-20527  
crystal structure stereoscopic images, production by computer 2-25676  
EEG anal., graphics-based computer system 2-37690  
graphic interactive computer systems for geodetic data and mapping 2-52710  
high-resolution for solar system simulation 2-18700  
intra thoracic anatomy reconstruction and display 2-6285  
meteorological data 3-D display techniques 2-23120  
National Weather Service (USA) river forecasting computer graphics appl. 2-23043  
Space Telescope, image processing hardware, graphics systems 2-18707

computer installation

*see also distributed processing*

sound level modelling 2-16185

computer interfaces

*see also CAMAC; data communication equipment; program processors*  
BDC 500 branch driver controller for nuclear data acquisition 2-24547  
chromatograph to desktop computer, productivity increase, through automation 2-173  
education, microcomputer to multichannel analyzer interface 2-48457  
fast, time-sliced, multiple data bus structure for overlapping I/O and CPU operations, nuclear appl. 2-7475  
fast Amsterdam multiprocessor, system hardware, interfacing 2-19926  
FASTBUS, description, status, review 2-24543  
FASTBUS, status for multiprocessing system design 2-7462  
FASTBUS protocols, computer simulation 2-24544  
FASTBUS slaves, logic and timing requirements 2-7461  
FASTBUS standard, current status 2-11367  
gamma camera interfacing to DEC Gamma-11 data processing system for emission tomography 2-52620  
GPIB and PC8000 microcomputer in computer controlled data acquisition systems for exptl. physics (Japanese) 2-15153  
IEEE-488 for computerised microwave meas. 2-33572  
microstructure image analyser signal input direct to Minsk-32 computer 2-48686  
nuclear power plant man-machine interface design features and developments 2-29378  
PDP11, memory expansion hardware for nuclear data 2-7481  
three-port interface, microprocessor controlled, to 168/E processor 2-24565  
Varian E-line series EPR spectrometer, microcomputer interfacing 2-43059

computer internal arrangement *see computer architecture*

computer languages *see programming languages*

computer networks

*see also distributed processing*

digitising devices, control, microcomputer network 2-24561  
multi-microcomputer system for Monte Carlo calculations 2-23413  
remote monitoring and communication of telemetry data 2-18166

computer operator training *see training*

computer printers *see printers*

computer programming *see programming*

computer programs, complete *see complete computer programs*

computer programs (listings) *see complete computer programs*

computer science education

electronics curriculum in secondary education 2-3348  
microprocessors in schools, appls. 2-22

computer software

*not used for applications software for which see specific applications*

*see also programming*

No entries

computer storage devices *see digital storage*

computer subroutines *see subroutines*

computerised control

*see also chemical engineering computing; electrical engineering computing;*

*mechanical engineering computing; nuclear engineering computing;*

*power system computer control*

blood pressure automated control using self-tuning regulator, dog expt. 2-22872

blood pump motor controller for artificial heart 2-52667

cardiopulmonary data-acquisition system, computerised control of stress rates 2-2969

differential spectrometer, high precision, for quantitative exam. of surfaces 2-19189

electron spectrometry, data acquisition and control system 2-49214

fission reactors, modular approach to improved operator aids in the control room 2-34161

in-service inspection using data acquisition and processing system (Japanese) 2-24385

linear accelerator, microprocessor control and data acquisition system 2-7480

LMFBR, sodium purification loop, computerised control system 2-19706

microcomputer-based data acquisition, display, and control system for vestibulo-spinal Hoffmann reflex experiments 2-18352

microprocessor based control system for channelling expts. (Chinese) 2-35554

microwave-induced hyperthermia, expt. set-up for rat studies, temp. controller 2-52689

Minolta spotmeter-M, exposure calculation meter (German) 2-239

photovoltaic cells, optimal power generation, microprocessor control (French) 2-1941

POWERPLEX—in-core monitoring method: concept and results 2-15561

radioheliograph at Nancy (French) 2-6537

radiopharmaceuticals, automatic dispenser and preparation units 2-47708

rotating-mirror cameras, adaptive digital control 2-48830

solar collector optimum position computerised control in domestic water heating systems (German) 2-41985

solar flat plate collector system for computer controlled baseboard hot water system 2-2780

stepping motor driven microscope with microprocessor control 2-6900

thermonuclear fusion research, computer control and instrumentation 2-29430

US plethysmograph, microprocessor-controlled, limb cross-section area meas. 2-2910

computerised instrumentation

*see also astronomy computing; astrophysics computing; automatic test*

*equipment; biology computing; chemical engineering computing; chemistry*

*computing; computerised monitoring; computerised spectroscopy;*

*computerised tomography; electrical engineering computing; electronic*

*engineering computing; geophysics computing; nuclear engineering computing;*

*physics computing*

120 channel HV regulator, DATEP, for gamma detector photomultipliers 2-24525

6522-based potentiometer digitiser characts. 2-15140

AC magnetic props. meas., by bridge technique (Chinese) 2-23677

accelerator CESR, microprocessor-based methods 2-19936

Achilles tendon reflex meas., microprocessor-based instrument 2-14313

acoustic assessment of fish stock, using microprocessors as target classifiers 2-44524

acoustic research facility, coupled reverberation chambers, IEEE-488 computer interface for control/meas. 2-7994

aerospace industry test methods advances, conf., Indianapolis, IN, USA (April 1981) 2-38367

AI-4096 multichannel analyzer, circuit for generating and displaying tags 2-19899

AI-4096 multichannel analyzer, preliminary processing of experimental data 2-19898

airborne geophysical instruments, I/O structure, microinterrupts appl. 2-28252

aircraft component fatigue crack growth rates, electron fractography 2-52129

analysis instrumentation, conf., St. Louis, MO, USA (March 1981) 2-32156

analytical, microprocessor-based signal processing module 2-174

animated cartoons, computerized drawing device for line changing (Russian) 2-33663

Anoscan Large Precision Measuring Machine 2-33499

arrhythmia monitoring system, computerised dynamic 3D joint interval histogram display 2-47736

automated system for nuclear data measurements and optimization 2-4195

automatic apparatus for metal internal friction and elastic modulus temp. characts. determ. 2-9488

automobile industry, computer-based length meas. system (German) 2-10787

bacteria detection automation 2-2981

balance, electronic, Delta Range series, laboratory automation 2-3565

betatron electron energy control and stabilisation system 2-43641

biomedical microcomputer system for data acquisition and analysis of synaptic relationships 2-47745

bubble chamber images, computerised track and bubble density meas. system 2-19841

building acoustics analyzer type 823, microprocessor controlled 2-44618

CAMAC, logic state analyser 2-24560

car noise evaluation, digital equipment for real time sound intensity meas. 2-44620

cardiac electrophysiology instrumentation, microcomputer based data acquisition systems 2-18324

cardiac stimulator, for investigating atrial and ventricular vulnerability (German) 2-18310

cavitation nuclei classification system 2-44767

Chalk River dating facility using MP tandem accelerator 2-14636

chromatograph, calibration cost cutting using relative response factors 2-31985

chromatograph, liquid, computer controlled system, absorpt., fluoresc. and CARS detection 2-31960

chromatograph high performance capillary chromatography in a multi-GC network 2-14028

chromatographic sample concentrator appl., microprocessor-controlled 2-14024

chromatography, advanced integration system design and characts. 2-175



## computerised instrumentation continued

chromatography, environmental, microprocessor controlled analyser based on photoionisation detector 2-32157  
 chromatography, environmental analyses appl. 2-32162  
 chromatography, gel permeation, data analysis using computing integrator 2-176  
 chromatography, gradient formation in a microprocessor-based HPLC system 2-14027  
 CNEA 20UD tandem accelerator, microcomputer based communication system 2-11318  
 colorimetry, microcomputer-controlled, thin amorphous oxide coatings (*French*) 2-27009  
 combustion analysis instrumentation for fuel cost control, microprocessor-based 2-31990  
 communication aids for the severely physically disabled, design considerations 2-14355  
 computer controlled data acquisition systems for exptl. physics (*Japanese*) 2-15153  
 computer-based vibrating string weighcells (*German*) 2-10791  
 crystal growth, microprocessor-controlled system, design and implementation 2-27061  
 curve digitizer, microcomputer-controlled 2-15152  
 data receiver-processor, high-speed ESR spectroscopy appl. 2-19148  
 DC ocular rheography, microprocessor-controlled differentiator for signal processing 2-14346  
 defibrillator analyser, microprocessor-based, precision calibrator and tester appl. 2-18340  
 dielectric frequency domain spectroscopy system, computer-controlled, using sampling oscilloscope 2-33590  
 dielectric layer optical thickness monitoring using microprocessor controlled turning-point method 2-49954  
 digital temp. control and meas. system with temp. resolution of 1 mK 2-23636  
 digital two-beam interferometers, computer controlled, automatic interferogram anal., three-interferogram method (*German*) 2-33626  
 digitising devices, control, microcomputer network 2-24561  
 diode conductance and capacitance meas., computer-assisted system using phase sensitive technique 2-38666  
 drift chamber, multi-hit time-to-digital converter system 2-24487  
 drift chambers, microprocessor-controlled readout system 2-24546  
 drift chambers, multiple time digitizers and trigger system 2-606  
 electrochemical analysis appl. of microprocessors 2-172  
 electric permittivity meas., in frequency range 0.1 to 300 MHz 2-33567  
 electrochemical anal. 2-37133  
 electrochemical experiments, digitally driven system 2-47411  
 electron optics, uses of computers 2-29776  
 electronic control devices for particle detectors 2-29485  
 electrophoregrams of brain tissue, proteins, automatic processing (*Russian*) 2-47757  
 electrophysiology, exptl., automated data processing (*Russian*) 2-47758  
 electrostatic accelerator control systems developments 2-11317  
 EMG-reward system for biofeedback training of children, automated 2-27930  
 energy conservation test facility, data acquisition system 2-37434  
 excited membranes, exptl. meas. of ionic permeability, electronic and computing subsystems (*Russian*) 2-47754  
 exhaust gas analysis system, with self-contained data processing and automatic calibration 2-41968  
 Fabry-Perot wavemeter, computer controlled 2-19171  
 fast fluorescence waveform averager, microprocessor-controlled 2-19091  
 fault detection system, computer-controlled, for rotating and reciprocating machine 2-29964  
 femoral bone densitometry, autonomous apparatus (*French*) 2-32318  
 fibre optic iterative optical processor, microprocessor-based 2-39740  
 fishing gear computerised instrumentation, using hydrophones 2-44526  
 flow visualisation data quantitative interpretation, by coupling video techniques and microcomputer 2-20785  
 foetal ECG analysis, microprocessor-based signal averager 2-47741  
 frame count cueing system, computer-controlled, for film printing 2-33653  
 gas chromatograph, microprocessor-controlled 2-14025  
 goniophotometer, automatic, high speed, principles and construction for luminaires, photometric performance measurement (*Japanese*) 2-48743  
 heart rate variability and beat-to-beat intervals, microcomputer-based meas. system 2-32346  
 heat-sink calorimeter of 5.8 m<sup>3</sup> for humans with online data acquisition, processing and control 2-47734  
 heavy nuclei fission expts. automation with TPA-i1001 minicomputer 2-7445  
 heavy-ion identification, real-time digital preanalysis, hardware algorithms 2-19917  
 high energy physics experiment, FAMP multiprocessor system appl. 2-24551  
 high-energy collider experiment UA1, online microprocessor appls. 2-19924  
 high-energy physics experiments at SLAC, microprocessor systems 2-19935  
 high-energy physics instrumentation, calibration with microprocessor connected to time-sharing system 2-19932  
 high-energy physics techniques, NATO Advanced Study, St. Croix, US Virgin Islands (July, 1980) 2-28591  
 high-resolution weather satellite pictures, image display, testing and alignment 2-42490  
 HPLC, integrated microprocessor-based design 2-14022  
 human brain, neuron activity dynamics hardware-software complex (*Russian*) 2-47730  
 HV pulse monitor system for flash-chamber neutrino detector 2-43721  
 image processing system, coordinate measuring table, microcomputer control (*German*) 2-15680  
 image processing with acoustic microscope with IEEE 488 bus (*French*) 2-25184  
 intense pulsed neutron source, scattering instruments, data acquisition system 2-7449  
 interpolating time interval meter based on Elektronika B3-21 calculator 2-48680  
 intracranial pressure, microprocessor-based monitoring and trending system 2-9888  
 intracranial pressure recording, microprocessor based analyser 2-42234  
 isotropic-pattern antennas, synthesized, for EM field meas. 2-33586  
 laboratory apparatus automation, productivity increase 2-173

## computerised instrumentation continued

laboratory automation system, experiences with Hewlett-Packard HP 3350 minicomputer 2-3569  
 laser interferometric measurement and computerized evaluation of ultrasonic displacements 2-19162  
 laser scanning system, microprocessor-controlled, for semiconductor annealing 2-49810  
 laser transit anemometer with 5 ns correlator processor, for wind tunnel meas. 2-16404  
 laser velocimeter with microprocessor controlled positioning, subsonic wind tunnel appl. 2-40010  
 laser-Doppler speed measuring system with microcomputer (*Dutch*) 2-8250  
 LED dark adaptometer, microprocessor-controlled 2-47775  
 LEYAS, use in analytical and quantitative cytology 2-42189  
 light measuring equipment, using microcomputer (*Japanese*) 2-6888  
 limb movement monitoring, US microprocessor-based system 2-32287  
 LMFBR transient overpower cladding failure, simulation, computerised test system 2-7276  
 measurement, control and evaluation of cryothermal test with a large IBM computer 2-33556  
 measurement error freq. response 2-38623  
 medical digital vascular imaging system 2-6259  
 medical system for determ. of reaction time, movement time and movement accuracy 2-2964  
 microcomputer-coupled measurement systems, thermal variable example (*German*) 2-19102  
 microcomputer based clinical evoked response system 2-6281  
 microcomputer for HV equipment dielectric loss meas. 2-33573  
 microcomputer system, real time data acquisition and analysis of neuromuscular bioelec. events 2-22847  
 microcomputer system for data processing and acquisition (*Japanese*) 2-35021  
 microcomputer-based data acquisition, display, and control system for vestibulo-spinal Hoffmann reflex experiments 2-18352  
 microcomputers for data acquisition and preprocessing 2-52708  
 microdensitometers, computer controlled, coordinate error investig. (*Russian*) 2-204  
 microdensitometry, processor-controlled 2-23703  
 microprocessor applications at DESY accelerator 2-19919  
 microprocessor based system for background EEG activity analysis 2-22848  
 microprocessor based visual evoked cortical potential recording and analysis system 2-22841  
 microprocessor driven ultrafast multichannel event counter 2-24517  
 microprocessor systems for 'SMARTIE' 2-6476  
 microprocessor-based beam sweep control unit 2-7415  
 microprocessor-based crossed array acoustic imaging system 2-6472  
 microprocessor-based Doppler sonar current profiler 2-6473  
 microprocessor-based instrument for correlation chromatography and data processing 2-22500  
 microprocessor-based oceanographic system 2-6478  
 microprocessor-based pick-ups transfer characts. (*German*) 2-10801  
 microprocessor-based remote subsea equipment 2-6477  
 microprocessor-based thermometers for cryogenic temp. meas. (*Russian*) 2-19106  
 microprocessor-based transducer characts. (*German*) 2-10807  
 microprocessor-based weighing system 2-10789  
 microprocessor-controlled integrating read-out systems for photomultiplier tubes 2-6916  
 microprocessor-controlled photo-thermoplastic device for holographic filter recording and positioning 2-20276  
 microprocessors for presentation of sidescan sonar data 2-6479  
 microprocessors on data buoys 2-6475  
 microscope, solid-state automated system 2-38686  
 microscopes, capabilities extension electron and optical, micro computers appl. 2-3659  
 microwave, minicomputer-based system characts. 2-33572  
 mirror system for intensity meas. in LEED, computer-controlled 2-48745  
 mono-chip timing generator for use with pressed NMR spectrometers 2-43061  
 multi channel event-counter/timer 2-4179  
 multi-scalar system 2-29484  
 Munich MP-tandem accelerator improvements 2-11304  
 MWPC with cathodic read-out, acquisition and calibration electronics 2-43723  
 NDA measuring procedure and data treatment, Ispra approach to standardisation 2-7228  
 neuromuscular stimulation unit, functional 2-52668  
 neuron membranes computerised investig. of volt-amp and inactivation characts. of ionic channels (*Russian*) 2-47590  
 neurophysiology expts., computer-controlled meas. system using FM tape (*German*) 2-9896  
 neutrino detection, microprocessor applications 2-24531  
 NMR magnet regulator cct., search and lock regulation circuitry for accelerator bending magnets 2-11355  
 NMR spin-warp imaging, microprocessor-controlled instrumentation 2-33589  
 nuclear safeguards NDA instruments, microprocessor automation 2-7189  
 ocean technology electronics, conf., Birmingham, England (Sept. 1981) 2-38366  
 oceanographic conductivity-temperature-depth telemeter, microcomputer controlled 2-39772  
 oceanographic data buoy system, using CMOS microprocessors 2-42500  
 oceanographic microprocessor-based data logger 2-6474  
 Omega automated laser control and data acquisition 2-920  
 on-line chemical analysis for cost effective process control 2-31987  
 on-line system for track chamber film anal. 2-43739  
 optical fibre transfer function meas., frequency-domain, using microcomputer controlled system 2-20439  
 optical microscopy automated reticulocyte counting system (*Japanese*) 2-47769  
 optical waveguide switch, NXM planar, for computer communications 2-11849  
 parameter identification from impedance measurements on electrochemical reactions 2-37134  
 particle detector 'crystal box', intelligent trigger processor 2-19906  
 particle physics experiments, online data filtering, dead-time reduction 2-19937  
 particle size distribution measurement, computer controlled (*Dutch*) 2-43164



**computerised instrumentation continued**

phase anal. of short pulses rel. to time meas. accuracy, minicomputer appl. 2-15162  
 photogrammetric complex with CRT scanner, coordinate errors correction (*Russian*) 2-3638  
 photomultipliers gain regulation system using LED and optical fibres 2-24488  
 physics, exptl., computer controlled data acquisition systems (*Japanese*) 2-15153  
 picosecond streak camera system, real-time measurement (*Japanese*) 2-15250  
 piezoelectric vibration/press. transducers, programmable signal conditioner, data acquisition system appls., interface with lab. computer 2-19095  
 polymer spherulite size determ. scanner 2-19085  
 portable tool for room acoustic meas. 2-25197  
 process analysis, computer-based evaluation system 2-31991  
 programmable integrator, digital instrument coulomb meas. in electrochemical anal. 2-22507  
 prompt gamma neutron activation anal. facility 2-17934  
 proportional shower counter, mapping using microprocessor-controlled X-Y moving stage 2-24511  
 psychophysiological investigation automation set of instruments based on programmed keyboard computer 2-32350  
 radar system, microprocessor-based, appl. to radio meteor radiant distrib. imaging 2-48157  
 radiation monitoring, computer control, process computer appl. 2-49187  
 radio-chromatographic TLC tests, linear analyser and Beta camera developments 2-6078  
 radiopharmaceuticals, automatic dispenser and preparation units 2-47708  
 Raman scattering, O<sub>2</sub>/CO<sub>2</sub> ratio in air, computerised apparatus 2-10194  
 reentry environmental conditions forecasting, cloud particle effects determ., real-time processing 2-38003  
 refractive index meas. for bulk materials at UV, visible and IR wavelengths, computerised system 2-43072  
 respiratory deadspace, apparatus for automatic assessment 2-47735  
 saccadic eye movement disorders, quantitative evaluation 2-42235  
 scanning tables, BESSY, automation 2-24562  
 scattering instrument, microprocessor-controlled, for BRDF measurements from visible to far IR 2-10851  
 second- and third-order nonlinear optical susceptibility meas. system 2-44379  
 self-balancing high-precision AC Wheatstone bridge for observing diffusion processes in electrolyte solutions 2-23673  
 SEM and minicomputer system use in quantitative analysis of microstructures 2-47271  
 SEM-based cathodoluminescence meas. system, instrumentation and capabilities 2-28942  
 shear modulus and internal friction meas. at very low freqs., programmable system 2-43006  
 shock meas. using CORTEX system, nuclear explosions meas. appl. 2-38680  
 shower calorimeter, ADC correction and readout, CAMAC processor 2-24521  
 simultaneous deposition and ion implantation technique 2-8529  
 skin sensitivity to spatiotemporal patterns, computer-controlled tactile matrix using piezoceramic transducers 2-52670  
 solar cells, optical characterisation, computer-controlled instrumentation, spectral photoresponse, reflectivity, transmissivity, GaAs and stacked cells 2-37388  
 solar observatory, data acquisition systems using Perkin-Elmer 32-bit computers 2-19918  
 Space Telescope, image processing hardware, graphics systems 2-18707  
 spatial evaluation of cylindricity 2-33500  
 specific heat meas. system, automated 2-33529  
 spent fuel detector, portable, intelligent, for material safeguards 2-4135  
 sperm motility study apparatus, microprocessor anal. of scatt. laser light 2-47779  
 stabilometer, instrumented, for dynamic balance studies 2-47733  
 STEM coupled to minicomputer, for mass meas. of biological specimens 2-27967  
 strain gauge, data acquisition system improvement (*German*) 2-3572  
 tachometer, instrument with microprocessor-controlled computer 2-52964  
 Tandem project, 20 MV electrostatic accelerator development 2-11302  
 techniques, conf. at Dusseldorf, Germany 1980 2-12262  
 theory and trends 2-38621  
 thermonuclear fusion research, computer control and instrumentation 2-29430  
 time-domain reflectometry automated, using stroboscopic convertor, accuracy increase 2-3567  
 titration microcalorimeter using nanomolar quantities of reactants 2-23641  
 titrator with a digital display 2-27501  
 titrimetry, on-line, with solid state and double junction electrodes 2-31992  
 torque magnetometer, microcomputer-controlled for on-line data analysis 2-33583  
 touch terminal, for high-energy physics expt. control 2-24563  
 transient events recording control, using time delay computer 2-35237  
 two-axis diffractometer for synchrotron X-rays at DORIS 2-38726  
 two-coordinate microscopy data analysis by microprocessor 2-48767  
 two-phase flow meas., microprocessor-based instruments 2-20782  
 ultrasonic absorption in resonator, automatic meas. (*French*) 2-20494  
 ultrasound multiplexed Doppler microcomputer combination as noninvasive blood flowmeter 2-47666  
 US multichannel pulsed Doppler blood flowmeter, minicomputer-based 2-18280  
 US plethysmograph, microprocessor-controlled, limb cross-section area meas. 2-2910  
 vibration testing using random-process digital simulator 2-23625  
 visual grating displays, computer-controlled function generator 2-52669  
 voltmeters, ohmmeters and ammeters, minicomputer calibration 2-33571  
 Y-t recorder, microprocessor-controlled, for acoustic meas. 2-29965  
 CO<sub>2</sub> global atmospheric meas., using computer-based meas. systems 2-14635  
 Pu solns. in Pu purification process, automated in-line meas. 2-29339  
 Pu waste monitor, microprocessor-based, internal matrix attenuation correction 2-19793

**computerised instrumentation continued**

SO<sub>2</sub> concentration meas. by lidar and computer 2-37475  
 Si, pressure sensor chips, improved accuracy by use of intelligent pressure transducer 2-15161

**computerised manufacturing control** *see manufacturing computer control*

**computerised monitoring**  
 ambient temperature monitoring using microcomputer and thermistor transducers 2-23650  
 arrhythmia monitoring system, computerised dynamic 3D joint interval histogram display 2-47736  
 cardiopulmonary data-acquisition system, computerised control of stress rates 2-2969  
 cardiachometer, microprocessor-based, heart rate meas. in rest or exercise stress testing 2-2970  
 cardiovascular signal recorder, dual microprocessor data handling system 2-52604  
 combustion analysis instrumentation for fuel cost control, microprocessor-based 2-31990  
 dielectric partial discharge monitoring, electrical and acoustic detect. computer-controlled data acquisition 2-13420  
 electrocalorimetric apparatus for loss meas. in supercond. 2-23662  
 high speed QRS width detection, microprocessor system 2-6286  
 intracranial pressure, microprocessor-based monitoring and trending system 2-9888  
 level control of liquids in crystallisation, microprocessor applns. (*German*) 2-9266  
 microwave interactions with physiological activities, microprocessor-based instrumentation 2-18344  
 neurosurgical intensive care unit, microprocessor based monitoring system 2-52665  
 Nuclear reactor safety, protective logic system (*French*) 2-7260  
 online hazard detection, anticipator system approach 2-15601  
 patient monitoring, research orientated microcomputer based system 2-18311  
 radiation monitoring, computer control, process computer appl. 2-49187  
 relative humidity monitoring using microcomputer and thermistor transducers 2-23650  
 remote monitoring and communication of telemetry data 2-18166  
 telemetric neurological analyser, stimulation and monitoring of patients 2-52603  
 CO monitoring system, using nondispersive IR analyser 2-32159

**computerised numerical control**  
 diamond turning machine, computer numerical and interferometer controlled, aspherical lens, fabrication 2-7901

**computerised pattern recognition**  
 blood vessel patterns in colour ocular fundus images, computerised extraction and labelling methods 2-22815  
 earthquakes and nuclear detonations, seismic signature discrimination 2-37996  
 ECG, P-wave recognition program, performance evaluation using adaptive correlating filter (*Japanese*) 2-52654  
 EEGs, clinical, automatic adaptive segmentation 2-2963  
 fusion reactor materials inspection 2-15627  
 hierarchical nonparametric classification strategy for discriminating EEG patterns of higher cortical functions (HCF) 2-6279  
 hybrid optical processor for pattern recognition and classification using generalised set of pattern functions 2-49679  
 hybrid optical-digital image processing with optically generated filters 2-11655  
 image processing, hybrid optical-digital, using pattern recognition methods for correl. signal evaluation 2-861  
 medical computerised tomography, streaking artifact removal, pattern recognition method 2-42211  
 microprocessor based single board computer for high-energy physics pattern recognition 2-24550  
 microstructure image analyser signal input direct to Minsk-32 computer 2-48686  
 nuclear fuel reprocessing facilities, online computer system for continuous criticality 2-7214  
 nucleon decay detector, data acquisition and triggering system, pattern recognition 2-24549  
 particle track pattern recognition, microprocessor 168/E appl. 2-24509  
 pipeline distributed processing system for real time pattern recognition applications 2-17847  
 plastic track detectors, pattern recognition computing 2-24510  
 radionuclide tomograms, anal. of spatial patterns using distance based method 2-37674  
 spray droplet sizing system using television camera and minicomputer, pattern recognition procedures 2-33494  
 tissue signature identification anal. of nuclear medicine images, texture anal. of uniform fields 2-22825  
 two-phase flow, machine recognition of void fraction 2-16365

**computerised picture processing**  
*see also computer-generated holography*  
 acoustic image processing by two-dimensional digital filtering 2-44600  
 acoustic imaging techniques for nondestructive testing 2-17839  
 aerodynamic testing appl. 2-40012  
 aspherical surface testing with interferometer using digital information processing 2-1048  
 astronomical images, information treatment (*French*) 2-3205  
 bioimage digital processing techniques (*Italian*) 2-22802  
 biological macromolecules, multivariate statistics use in electron micrograph image anal. 2-9771  
 biopsied tissue sections, machine vision system for study of multidimensional multicolour images 2-42190  
 cardiac gated scintigram analysis using digital boundary detect. techniques 2-9865  
 cartography computer assisted mapping, digitizing and automatic output errors 2-37740  
 colour pictures, digitised, colour and tone corrections 2-3643  
 COSMOS used for image processing 2-38064  
 digital counting of objects in unit area of image, automatic detection of phases and textures (*Polish*) 2-27357  
 digital fluoroscopy for injecting contrast material into arterial system 2-47710  
 digital image analysis, small-computer 2-49693  
 digital images, bilinear interpolation 2-7729  
 distributed cosmic objects, application of technical diagnostics in remote sensing 2-37999



**computerised picture processing continued**

- ECG gated radioisotope images, amplitude anal. using macro programming 2-37666  
 electron micrograph computer image processing using flat-bed scanning microdensitometer 2-249  
 electron micrograph linear image processing, and anomalous scattering 2-7728  
 electron microprobe elemental distributions, image processing 2-27515  
 flow visualisation data quantitative interpretation, by coupling video techniques and microcomputer 2-20785  
 GOES imagery, interactive techniques for precipitation estimation 2-23145  
 high-precision optoelectronic picture scanning by means of a precision mechanical instrument (*Hungarian*) 2-11663  
 hydrologic modelling, real time information system and interface 2-23042  
 image perspective transformations, urban scenes 2-49692  
 image processing, hybrid optical-digital, using pattern recognition methods for correl. signal evaluation 2-861  
 image processing with acoustic microscope with IEEE 488 bus (*French*) 2-25184  
 interferometric fringe interactive analysis, software system for image processing 2-213  
 ion microprobe elemental distributions, image processing 2-27515  
 LANDSAT MSS data, geometric correction, land cover classification and change detection 2-48042  
 Landsat remote sensing data image processing system implementation of general-purpose computer, software development 2-3095  
 line scan imagery, two dimens. resampling by one dimens. processing, for remote sensing 2-37997  
 live length meas. with Quantimet image analysing computer 2-48671  
 liver scintigrams, evaluation of digital enhancement techniques 2-37671  
 lung, radioisotope images, processing to highlight pulmonary embolism 2-27876  
 medical computerised tomography, streaking artifact removal, pattern recognition method 2-42211  
 medical digital vascular imaging system 2-6259  
 medical topography technique for spinal diseases meas. 2-42185  
 metal, synthetic aperture US imaging 2-17840  
 meteorological satellite image processing, interactive system 2-10175  
 microphotographic reproduction error reduction by optimal corrections of original masks 2-240  
 microscope image, surface and circumference of objects, television methods of measurement (*Polish*) 2-27358  
 microscopes, capabilities extension electron and optical, micro computers appl. 2-3659  
 microstructure design for materials, information system 2-52123  
 microstructure image analyser signal input direct to Minsk-32 computer 2-48686  
 myocardial perfusion, tomographic studies, single-composite image display of information 2-42212  
 myocardium, plane <sup>201</sup>Tl images, spatial and temporal quantitation 2-27883  
 nuclear medicine, planar images, resolution and contrast recovery at depth 2-52613  
 object internal spatial struct. reconstruction from integral projections 2-24966  
 ocular fundus images, coloured, method of detecting and analysing peculiar regions 2-37647  
 printing, quantisation problem in digital image processing 2-34686  
 radiography, mask technique, extension through digital picture processing (*German*) 2-9872  
 radioheliograph at Nancay (*French*) 2-6537  
 radionuclide tomograms, anal. of spatial patterns using distance based method 2-37674  
 radioventriculography, equilib., fully automated data acquisition, processing and display 2-37652  
 reconstruction program, CLEAN, X-ray crystallography appl. 2-30363  
 scoliosis assessment using 3D radiographic meas. 2-47684  
 SEM, stereogrammatic anal., minicomputer-based system 2-33689  
 Space Telescope, image processing hardware, graphics systems 2-18707  
 STEM images of tobacco mosaic virus 2-52692  
 superresolving image restoration using linear programming 2-44201  
 synthetic aperture radar image quality, conf., Frascati, Italy (Dec. 1980) 2-6711  
 TEXAC, digital radiography 2-6261  
 UCL interactive processing system 2-23230  
 video techniques, computer controlled, for bull sperm cell motility evaluation 2-14217

**computerised power station control** see power station computer control

**computerised power system control** see power system computer control

**computerised process control** see process computer control

**computerised signal processing**

- see also biology computing; computerised pattern recognition; computerised picture processing; medical diagnostic computing  
 analytical instrumentation, microprocessor-based signal processing module 2-174  
 bio-signals, basis of digital processing (*Japanese*) 2-52656  
 biological signals, parallel systems for processing rat's long-term locomotor activity, EEG, EOG, and EMG (*Japanese*) 2-52682  
 blood pressure, continuous recordings in essential hypertension 2-37694  
 blood pressure waveforms, planimetry for left ventricular perfusion distrib. performance evaluation 2-32384  
 brainstem evoked potential, appl. of Wiener filtering 2-18314  
 car noise evaluation, digital equipment for real time sound intensity meas. 2-44620  
 cerebral activity temporally defined code preceding speech, computer extraction 2-22776  
 Doppler US signals, waveform anal. in blood vel. meas. 2-42173  
 ECG, data-reduction algorithm for real-time anal. 2-37700  
 ECG, heart rate variability signal, comparison of methods for obtaining 2-2968  
 ECG serial comparison using statistical signal analysis 2-6280  
 ECG simultaneous noise filtering and data compression, computer algorithm 2-47746  
 EEG, rapid freq. anal., multiprocessor architecture 2-37701  
 EEG data reduction by autoregressive representation and discriminant anal. procedures 2-18313  
 EEGs, clinical, automatic adaptive segmentation 2-2963  
 EMG of small intestine, analogue automated anal. 2-47777

**computerised signal processing continued**

- foetal ECG analysis, microprocessor-based signal averager 2-47741  
 grating signal quality estimation by harmonic analysis (*Chinese*) 2-49885  
 high speed QRS width detection, microprocessor system 2-6286  
 medicine conf. Houston, TX, USA (Sept. 1981) 2-3334  
 microcomputer-coupled measurement systems, thermal variable example (*German*) 2-19102  
 microprocessor-based crossed array acoustic imaging system 2-6472  
 multiunit neural signals, real-time classification using reduced feature sets 2-27943  
 myoelectric signal, procedure for decomposition into constituent action pots. 2-42230  
 myoelectric signal, procedure for decomposition into constituent action pots. 2-42231  
 neurophysiology real-time measurements 2-9899  
 pulse height analyser, microcomputer-based 2-49238  
 radioastronomical data with unknown noise, use of /automatic search algorithm 2-28354  
 radioastronomical observations, automatic optimal Gauss anal. algorithm 2-28355  
 speech synthesis system using adaptive data modulation 2-35008

**computerised spectroscopy**

- see also spectroscopy computing  
 automated inductively-coupled plasma optical emission spectrometry based on a sequential reading monochromator 2-19186  
 colour centre laser conversion into high resolution laser spectrometer, computer control 2-48790  
 differential spectrometer, high precision, for quantitative exam. of surfaces 2-19189  
 DLTS, exponential and nonexponential transients, computer anal. 2-19089  
 DLTS automatic measurement, digital equipment (*Japanese*) 2-51111  
 environmental analyses appl. of chromatography and mass spectroscopy 2-32162  
 EPR, computer applications 2-26726  
 EPR, single crystal studies with computer assisted two circle goniometer 2-10833  
 ESR, computer-controlled high-speed data receiver-processor 2-19148  
 field emission thermal desorption spectrometer, microcomputer-controlled 2-48848  
 Fourier transform dielectric spectroscopy utilizing real-time operating system, permittivity meas. appl. 2-13396  
 Fourier transform NMR spectra, accumulation, signal-to-noise ratio 2-6880  
 front end event selection with microprogrammed branch driver, using Q data acquisition 2-7468  
 gamma-ray spectrometer, data acquisition system 2-11363  
 high resolution, double focusing mass spectrometer for organic analysis, design and performance (*Chinese*) 2-33675  
 IR, for multicomponent quantitative analysis 2-234  
 IR spectra of polymers, digitalisation 2-9579  
 mass spectrometer, automatic acquisition and processing of data using AIM-65 microcomputer 2-19202  
 microcomputer on-line coupling with quadrupole mass spectrometer 2-43129  
 microprocessor-based fast fluorescence waveform system 2-33649  
 microspectrophotometer, IR, computerised, for meas. of multiple film thicknesses, dopant conc. and impurity levels 2-19195  
 monitoring and control systems at European Hybrid Spectrometer, distributed processing appls. 2-24538  
 Mossbauer spectrometer, fully programmable microprocessor-controlled 2-3668  
 NMR spectrometer memory expansion using Dataram add-on system 2-23692  
 one-photon resonance, CARS, coherent Stokes and spontaneous Raman spectra 2-11758  
 optical diagnostic system for UV and visible supersonic flow pulsed lasers 2-10876  
 parallel access UV-spectrophotometer 2-23741  
 peak-fitting program for analysis of Ge(Li) spectra and its application to non-destructive gamma-spectrometric determination of uranium in UO<sub>2</sub> sources 2-33601  
 plasma emission, inductively coupled 2-224  
 plasma emission spectroscopy, computer-controlled 2-48796  
 polymers, state of order studies using computer-supported Raman spectroscopy 2-5690  
 Raman and Brillouin spectrometers, computer control, software and apparatus 2-3632  
 rapid scanning reflectance spectrophotometer 2-28896  
 Rutherford backscattering spectrometry, automatic beam alignment for channelling meas. 2-19815  
 SIMS, SMI-300 ion microscope, data acquisition and processing system 2-3661  
 solid state NMR spectroscopy, analog transient recorder-computer interface 2-33591  
 Spin Spectrometer, fast parallel preprocessor design 2-7483  
 sub-mm heterodyne spectrometer, 300-500 GHz, development, radioastronomical appls. 2-42597  
 total reflection time domain spectroscopy, on-line computer-based system 2-28901  
 twin ion source mass spectrometer for simultaneous meas. of respiratory and blood gases (*Japanese*) 2-19206  
 Varian E-line series EPR spectrometer, microcomputer interfacing 2-43059  
 wavelength dispersive X-ray fluorescence spectrometers, microcomputer based control and data acquisition 2-41963  
 Ne<sub>2</sub>, ab initio polarisability invariants, spectroscopic exam. 2-4411
- computerised test equipment** see automatic test equipment
- computerised tomography**  
 acoustical tomography reconstruction using transducer arrays, female breast pathology appl. 2-9841  
 algorithms for digital tomographic reconstruction 2-14334  
 bioimage digital processing techniques (*Italian*) 2-22802  
 brain lesions study, 3D computer reconstruction 2-47685  
 breast cancer diagnosis, use of CT, historical sketch 2-47686  
 cardiac blood-pool tomography, biplanar 2-42209  
 carotid artery flow, computerised Doppler tomography and spectrum anal. 2-47668  
 cerebral blood flow and O<sub>2</sub> metabolism in man, quantitative meas., <sup>15</sup>O and positron emission tomography 2-2922



**computerised tomography continued**

- conf. Houston, TX, USA (Sept. 1981) 2-3334  
 data digitisation instrument, radiotherapy simulator appl. 2-2934  
 diffraction tomographic reconstruction techniques for microwave and US diagnostics 2-14320  
 display, effect of window width and viewing distance 2-37651  
 divergent beams, modified convolution reconstruction technique 2-52618  
 dose minimisation in CT overscanning 2-2955  
 dosimetry survey of systems from 10 manufacturers 2-37676  
 emission, performance characts. of 7-pinhole system 2-47690  
 emission, transaxial single photon, using a rotating  $\gamma$ -camera 2-27890  
 emission computerised tomography (*Dutch*) 2-9861  
 emission system, single-photon, using 10 scanning detectors, characts. evaluation 2-27886  
 environmental density artifact, beam-hardening effect 2-42210  
 eosinophilic granuloma diagnosis appl. 2-2923  
 functional images from serial computer tomograms 2-32319  
 future of CT, review 2-2935  
 gamma camera interfacing to DEC Gamma-11 data processing system for emission tomography 2-52620  
 gamma camera tomography 2-10577  
 gamma-ray transmission CT, pleural edge determ. 2-42208  
 heart wall activity, human, tomographic mapping 2-37675  
 hepatocellular carcinoma, CT and angiography 2-9857  
 intra thoracic anatomy reconstruction and display 2-6285  
 intravenous arteriography using scanned projection radiography 2-52623  
 kidney, polycystic disease, vol. estimation from CT 2-47688  
 limited angle CT, fast min. variance estimator for image reconstruction 2-2943  
 longitudinal tomographic positron imaging system, performance parameters 2-52606  
 medical imaging methods, review 2-27870  
 metal clip artifacts in reconstructions, algorithm for reduction 2-37657  
 microprogrammable processor, MICE for CT apps. 2-27900  
 microwave, transmission and refl. techniques, medical diagnostic apps. 2-47678  
 microwave, transmission and reflection for medical investigations (*Swedish*) 2-47671  
 missing cone problem, experimental results 2-47711  
 motion artefacts, simulation study 2-37670  
 moving object CT, time domain interpolation effectiveness 2-14331  
 multisectioned ion chamber for CT scanner dosimetry 2-6266  
 NMR tomography and its clinical apps. 2-52594  
 nuclear scattering radiography 2-2924  
 object internal spatial struct. reconstruction from integral projections 2-24966  
 pheochromocytoma, localization, computer tomography versus angiography 2-9858  
 photon-beam dose calcs., evaluation of density correction algorithms in CT treatment planning 2-42224  
 37 pin fuel assembly phantom, filtered neutron beam computed tomography 2-37027  
 plasma, JIPP T-II Tokamak,  $m=2$  mag. island struct., soft X-ray tomography study 2-25632  
 positron computed tomography, quad BGO detector, timing and positioning discriminators 2-49216  
 positron CT, boundary method for attenuation correction 2-27884  
 positron emission CT, quantitation, sampling effect 2-2925  
 positron emission tomograph, spherical, 3D reconstruction algorithm 2-37669  
 positron emission tomography, detectors, shielding, sampling, electronics 2-47707  
 positron emission tomography, photon time-of-flight assisted, image reconstruction and noise evaluation 2-37653  
 positron emission tomography, physiology appl. (*Dutch*) 2-9862  
 positron emission tomography, physiology appl. (*Dutch*) 2-9863  
 positron emission tomography 2-14333  
 proton computed tomography of human specimens 2-37668  
 proton energy loss CT 2-18294  
 pulmonary tumour visualisation by computed subtraction scintigraphy with  $^{67}\text{Ga}$  citrate and  $^{113}\text{In}$  chloride (*Russian*) 2-27871  
 quantitative imaging in US time-of-flight tomography 2-52137  
 radiation therapy treatment planning, use of CT, review 2-47687  
 radionuclide tomograms, anal. of spatial patterns using distance based method 2-37674  
 radiotherapy planning, patient beam positioning system using CT images 2-52615  
 reconstruction algorithms, 3D 2-47683  
 reconstruction estimation, least-squares technique 2-14322  
 reconstruction using direct Fourier inversion 2-18300  
 residual stress mapping by US tomography 2-17833  
 review of cancer treatment and detect. 2-38353  
 review of improvements 2-14335  
 review of medical apps. of radiation 2-9859  
 review of redington, R.W. Berninger, R.W. (General Electric Corporate Res. & Dev. Center, Schenectady, NY, USA) 2-6283  
 review of the past and present, perspective of the future 2-27888  
 sampling the 2-D Radon transform 2-3364  
 scanner principles, reconstruction technique and detectors (*Japanese*) 2-18298  
 scattered radiation distributions around CT scanners and hazard to personnel 2-37677  
 sella, high-resolution CT scanning, anal. of artifact 2-22820  
 serial US tomograms, hollow object vol. meas. appl. 2-14300  
 single emission tomography research 2-6262  
 single photon emission tomography, clinical apps. (*Dutch*) 2-9864  
 spinal mineral anal., low-dose CT scanning 2-47704  
 spleen, vol. and mass determ. from CT scans 2-47689  
 streaking artifact removal, pattern recognition method 2-42211  
 synthetic tomography, computer evaluation, ultrasound imaging using multi-element transducers 2-44601  
 systems from 10 manufacturers, evaluation 2-32312  
 theory of the conventional tomographic imaging process 2-18295  
 therapy planning from CT data, review 2-27889  
 thyroid scintigraphy, comparison with standard pinhole imaging 2-27885  
 ultrasonic techniques (*Japanese*) 2-27924  
 US, 3-dimens. image reconstruction 2-18271  
 US, for medical investigations (*Swedish*) 2-47654  
 US tomography of human head, experimental results 2-47662  
 US velocity tomography, imaging method cardiac appl. 2-2980

**computerised tomography continued**

- whole-body CT scanner, Toshiba TCT-60A=20 series, image quality improvement 2-32325  
 X-ray review of computed tomography, imaging, image reconstruction and equipment (*Japanese*) 2-18293  
**computing applications to accounting** *see accounts data processing*  
**computing applications to aerospace engineering** *see aerospace computing*  
**computing applications to architectural design** *see architectural CAD*  
**computing applications to art** *see art*  
**computing applications to astronomy** *see astronomy computing*  
**computing applications to astrophysics** *see astrophysics computing*  
**computing applications to billing** *see accounts data processing*  
**computing applications to biology** *see biology computing*  
**computing applications to biomedical engineering** *see medical computing*  
**computing applications to business** *see administrative data processing*  
**computing applications to chemical engineering** *see chemical engineering computing*  
**computing applications to chemistry** *see chemistry computing*  
**computing applications to circuit analysis** *see circuit analysis computing*  
**computing applications to civil engineering** *see civil engineering computing*  
**computing applications to communications engineering** *see communications computing*  
**computing applications to education** *see educational computing*  
**computing applications to electric machine analysis** *see electric machine analysis computing*  
**computing applications to electrical engineering** *see electrical engineering computing*  
**computing applications to electronic engineering** *see electronic engineering computing*  
**computing applications to engineering** *see engineering computing*  
**computing applications to geophysics** *see geophysics computing*  
**computing applications to history** *see history*  
**computing applications to legal research** *see social and behavioural sciences computing*  
**computing applications to linguistics** *see linguistics*  
**computing applications to mathematics** *see numerical analysis*  
**computing applications to mechanical engineering** *see mechanical engineering computing*  
**computing applications to medical administration** *see medical administrative data processing*  
**computing applications to medical diagnostics** *see medical diagnostic computing*  
**computing applications to medicine** *see medical computing*  
**computing applications to music** *see music*  
**computing applications to natural sciences** *see natural sciences computing*  
**computing applications to nuclear engineering** *see nuclear engineering computing*  
**computing applications to physics** *see physics computing*  
**computing applications to power system analysis** *see power system analysis computing*  
**computing applications to psychology** *see psychology*  
**computing applications to social and behavioural sciences** *see social and behavioural sciences computing*  
**computing applications to town and country planning** *see town and country planning*  
**concepts (index language)** *see vocabulary*  
**concrete**  
   *see also cement industry*  
   boundary condition effect on behaviour conc. of load 2-27235  
   containment vessel, viscoelastic and thermal behaviour of structure 2-4730  
   exposure and dose rate characts. for 6.2 MeV source photons through Pb, Fe, concrete shields 2-7371  
   high loaded structure in nuclear power plants, steel bar reinforcement 2-15480  
   internal crack progress detection by embedded graphite rods 2-27275  
   loading history effect on tensile props. 2-27234  
   microconcrete hyperbolic-paraboloid shell subject to uniformly distributed load 2-13774  
   NDT, in situ 2-17801  
   nuclear power station concrete press. vessel., 20 MN breaking load tension member development (*German*) 2-4031  
   oxidised concrete, viscosity in hypothetical core meltdown (*German*) 2-460  
   polymer/concrete composites, review of physical props. 2-13783  
   Portland cement concrete, accelerating action of  $\text{CaCl}_2$  2-37089  
   pozzolana cement concretes, steel reinforcements, corrosion behaviour 2-31840  
   prestressed, steel reinforcement types and props. (*German*) 2-46979  
   refractory concrete, unshaped specimens, lab. and simulative pilot-scale tests 2-47293  
   reinforced by steel, compact bending stress (*German*) 2-47117  
   reinforced concrete members, stiffeners calc. (*Chinese*) 2-41648  
   reinforced concrete press. vessel construction for high temp. reactors (*German*) 2-4030  
   testing using high temp. triaxial-torsional testing machine 2-31863  
   thermal stress analysis in fission reactors 2-514  
   US testing 2-17813  
   B analysis, for neutron shielding, quality control method (*German*) 2-39121  
    $\text{Na}_2\text{O}-\text{CaO}-\text{SiO}_2-\text{H}_2\text{O}$  gels, swelling props., rel. to expansion of concrete 2-37109  
**concurrency (computers)** *see multiprocessing systems*  
**condensation**  
   *see also clouds; drops; fog*  
   aerosols, chemically modified,  $\text{N}_2$  adsorpt. energy distrib. functions, condensation approx. 2-41942  
   air, condensation nuclei creation by negative corona discharge 2-30346  
   aliphatic-aromatic copolyesters: synthesis and crystallization studies 2-40296  
   amorphous thin films, formation mechanism, struct. and phys. props. 2-51044  
   binary nucleation, cooling rate effect 2-12021  
   cloud condensation nuclei, S. Florida summertime meas. 2-28153  
   condensing surface design optimisation, rate calc. (*German*) 2-50072



**condensation continued**

- countercurrent steam condensation on subcooled liq. film, rel. to LOCA 2-8151  
 cyclohexane vapour, homogeneous nucleation, double-diaphragm shock tube study 2-35656  
 direct contact condensation studied by steam injection at subsonic injection rates 2-25230  
 flows with nucleation and condensation 2-8204  
 freeze-fractured model membranes, ice crystals specifically decorate hydrophilic sites 2-27959  
 gas/film flow, heat transfer, surface evaporation and film condensation (German) 2-8154  
 heat exchange during condensation of water vapor on vertical water-repellent pipes 2-44731  
 heat transfer rate calc. method for condensation of finned tubes 2-16221  
 kinetic theory of evaporation and condensation rates of spherical particles 2-4701  
 laminar film condensation on a porous vertical wall with non-uniform normal velocity 2-50231  
 liquid films, linear stability with interfacial phase change 2-35115  
 metal vapour phase high temperature co-condensation process (Japanese) 2-27118  
 multicomponent condensation, rate estimation by film model 2-45542  
 organic molecular crystals, sublimation kinetics 2-8459  
 polyelectrolyte solutions, limiting laws and counterion condensation, electrophoretic mobility and conductance 2-13966  
 PWR primary circulation leak, transient refilling, steam condensation (German) 2-495  
 rectangular fins, convecting, optimum shape, rel. to condensation 2-8155  
 rotary regenerators with non-sorbing matrices, heat and mass transfer 2-8140  
 thermal print papers, survey of compositions 2-33635  
 thin film growth, intermediate stage, Monte Carlo simulation 2-51049  
 thin films, surface chemical phenomena and growth 2-51048  
 tube-in-tube condenser thermal design, condensation heat transfer coefficient effects (Japanese) 2-12147  
 two-phase pipe flow, in-line static mixers, condensation, pressure drop, stochastic modelling 2-4879  
 vapour condensation inside horizontal tube, local heat transfer coeff., transition from annular to stratified flow 2-8132  
 vapour flow, cooling porous plate, condensation 2-1252  
 vapour vortex in plane twisted flow, condensation numerical solution 2-44741  
 vapour-gas mixture condensation, influence of boundary kinetic effects 2-45545  
 volume condensation in heterogeneous reactions (Russian) 2-2724  
 water, dropwise condensation, surface charact. and material thermal props. 2-5294  
 water vapour, condensing, nonstationary flows, wave dynamics 2-20754  
 water vapour, spontaneous condensation charact., effect of heterogeneous centres 2-16763  
 wavy laminar filmwise condensation 2-8604  
 AgBr, evaporated layers, struct. rel. to evaporation-substrate arrangement (Russian) 2-21455  
 Ar, supersaturated vapour, nucleation and condensation kinetics, appl. of curvature-depend. surface tension 2-45543  
 Au surfaces, steam condensation, use of electroplating bath and vacuum vapour deposition 2-50071  
 Cu vapour obtained using pulsed light source evaporation and condensation mechanism 2-16228  
 Fe supersaturated vapour, homogeneous condensation kinetics investig. in shock tube 2-35655  
 GaAs heteroepitaxial layer deposited by laser pulse, condensation mechanism 2-35904  
 He vapour, positive ion droplet size comparison with Thomson eqn. 2-35657  
<sup>4</sup>He, superfluid flow in narrow pumping tube, spontaneous temp. inversion effects 2-35777  
 Hg, condensation coefficient, interphase matter transfer 2-27081  
 K<sub>2</sub>CO<sub>3</sub>, condensation of liq. force surface, droplet mass transfer effect 2-26183  
 Nb-Al(Si), vapour phase high temperature co-condensation process (Japanese) 2-27118  
 SO<sub>2</sub> on Jupiter's satellite Io rel. to post-eclipse brightening 2-32902  
 Te, thin films, condensation, vacuum deposition, magnetic and electric field effects 2-12940  
 UO<sub>2</sub> condensation, following expansion in Ar, particle size distrib. 2-4088

**condensers (electric)** *see capacitors*

**condensers (steam plant)**

- brass tube corrosion damage anal. 2-52118  
 corrosion prevention, chemical indices limit values for coding ccts. (Rumanian) 2-17765  
 tube-in-tube condenser thermal design, condensation heat transfer coefficient effects (Japanese) 2-12147  
 Cu-Ni alloy resistance to NH<sub>3</sub> corrosion in simulated steam condenser conditions 2-37007

**condensing** *see condensation*

**conductance, electric** *see electric admittance*

**conductance, electric, measurement** *see electric admittance measurement*

**conductance measurement, electric** *see electrical conductivity measurement*

**conducting materials**

*see also bimetals; electrolytes; metals; semiconductor materials; superconducting materials*  
 No entries

**conduction, heat** *see heat conduction*

**conduction bands**

- see also Fermi level; semiconductor materials*  
 abrupt heterojunctions in equilibrium, anal. 2-30960  
 Anderson model, asymmetric ground state 2-21480  
 antiferromagnetic semiconductor, multivalley, energy spectrum and kinetic characts. of band electrons (Russian) 2-26291  
 chalcogenides and pnictides, conduction band gap, magnetic bond approach 2-35936  
 cubic semiconductors, indirect exciton ground state Stark shift and splitting 2-21505  
 exchange interaction, indirect, Bloembergen-Rowland approx., third order corrections and finite conduction band effects 2-40859

**conduction bands continued**

- narrow-gap semiconductor film, intraband magneto-optical transitions 2-9134  
 photoelectrolysis cell, current-voltage characteristics 2-22632  
 propane, dense fluid, conduction band energy 2-1964  
 semiconductor, antiferromagnetic, carrier self-localisation at surface ferromag. microregion 2-13160  
 semiconductor single crystals, conduction electron-exciton complexes 2-40802  
 semiconductor-insulator nonlattice matched interface, U-shaped background density of interface states 2-26508  
 semiconductors, fluctuation levels, cyclotron resonance in random potential (Russian) 2-13343  
 semiconductors with diamond-type struct., tunnelling, band struct. 2-40999  
 SmB<sub>6</sub>, intermediate-valent, nuclei spin relax., hybridisation, and 4f spin fluctuations 2-26784  
 studies of empty states in conduction bands of solids (Polish) 2-46824  
 B<sub>13</sub>C<sub>2</sub>, electronic structure and semiconducting behaviour 2-45826  
 Cd<sub>3</sub>As<sub>2</sub>, band structure, UPS and EELS meas. 2-26294  
 Cd<sub>3</sub>As<sub>2</sub>, Fermi surface anisotropy, Shubnikov-de Haas meas. 2-26277  
 Cd<sub>3</sub>As<sub>2</sub>, Landau level structure, g-factors Luttinger parameters, effective Hamiltonian method 2-26312  
 CdCr<sub>2</sub>S<sub>4</sub>, ferromagnetic semiconductor, cathodolum. characts. of electron spectrum 2-46785  
 CdTe thin films, optical props. 2-46805  
 Cd<sub>3</sub>As<sub>2</sub>, conduction and valence band structure, Hall effect, resistivity and magnetoresistance meas. 2-26421  
 Cr, X-ray appearance pot. spectra and electronic structure, conduction bands, density of states distrib. function 2-41456  
 CsPbCl<sub>2</sub>(Br<sub>3</sub>), electronic structure, optical and photoemission spectra 2-40783  
 Cu, electronic band structure, angle-resolved photoemission study 2-27054  
 CuBr, resonant Brillouin scattering 2-2300  
 Fe<sub>2</sub>O<sub>3</sub>, photoelectrochemical behaviour in presence of redox reagents 2-22475  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, conduction band structure from Hall mobility measurements at high pressures 2-46030  
 GaAs, hot electron non-Maxwellian distrib. function in magnetic field, cyclotron emission study 2-46038  
 GaAs:Cr, intrinsic density, band gap and effective mass parameters, Cr acceptor capture coeff. 2-51203  
 GaAs:Te(Si), Cr<sup>2+</sup>, surface (110) photovoltage spectroscopy of Cr<sup>2+</sup> 2-26462  
 GaAs-AlGaAs DH injection laser, active layer radiative processes in strong magnetic field 2-49751  
 GaAsSb<sub>1-x</sub>, electron effective mass values 2-5345  
 GaSb, electron transport and conduction band structure 2-46012  
 Ge, indirect exciton ground state Stark shift and splitting 2-21505  
 GeS (001), density of empty states meas. in conduction band 2-8746  
 GeSe (001), density of empty states meas. in conduction band 2-8746  
 (HBX)<sub>3</sub> (X=Be, BH, CH<sub>2</sub>, NH, O), band structure, ab initio STO calcs. 2-39309  
 Hg<sub>1-x</sub>Mn<sub>x</sub>Te, zero gap, conduction-valence band overlap in magnetic field Hall coeff. and conduction meas. 2-45827  
 InGaAsP n-channel inversion mode MISFET with low interface state density 2-13188  
 n-InP, photoluminescence press. depend. 2-46686  
 InP:Cr, deep level states, press. depend. and k-space localisation 2-35967  
 InP:Fe, deep-level photocond., energy scheme 2-30924  
 Mo, X-ray appearance pot. spectra and electronic structure, conduction bands, density of states distrib. function 2-41456  
 Na<sub>2</sub>WO<sub>3</sub> (0.26<x<0.76), Fermi edge, density of states, magnetic susceptibility, UPS 2-31599  
 Ni, resonant photoemission model 2-51770  
 PtSb<sub>2</sub>Te, impurity conduction 2-1915  
 Se, band edges, press. depend., relativistic ab initio calc. 2-45824  
 Se, relativistic ab initio valence band and conduction band levels 2-35930  
 Si, amorphous, dangling bond site dehybridisation, light-induced metastable states 2-21497  
 Si, density of states near band edge, donor impurities effect 2-17008  
 Si, impurity levels, impurity pair effects, 2-D finite element analysis 2-51114  
 Si indirect exciton ground state Stark shift and splitting 2-21505  
 Si:H,P(B), amorphous, temp. depend. of ESR spectra, elec. cond. 2-5575  
 a-Si:H film, photocond. anal. luminesc. meas. of conduction band tail 2-46062  
 Si-SiO<sub>2</sub> interface in MOS struct., surface state density distrib. 2-36118  
 SmS, semiconducting, conduction band deformation pot. and semiconductor-metal transition 2-1824  
 Te, band edges, press. depend., relativistic ab initio calc. 2-45824  
 Te, relativistic ab initio valence band and conduction band levels 2-35930  
 Te single crystal, electron transfer effect 2-51191  
 V<sub>2</sub>O<sub>5</sub>, origin of split-off conduction bands 2-16988  
 W, X-ray appearance pot. spectra and electronic structure, conduction bands, density of states distrib. function 2-41456  
 (Zn<sub>1-x</sub>Cd<sub>x</sub>)<sub>3</sub>P<sub>2</sub> solid soln. electron structure. XPS and X-ray spectral studies 2-27029  
 ZnO, coadsorbed p- and n-dyes, spectral sensitivity 2-1945  
 ZnO microcryst., IR spectrum, electronic and vibrational effect under different temp. and environmental conditions 2-46573

**conduction electron spin resonance** *see CESR*

**conduction in solids, ionic** *see ionic conduction in solids*

**conductivity, electrical** *see electrical conductivity*

**conductivity, thermal** *see thermal conductivity*

**conductors (electric)**

- see also bimetals; wires (electric)*  
 1/f noise, role of mobility 2-51258  
 straight-cylindrical conductor carrying rectangular periodic current, skin effect 2-36077  
 strip conductor in stratified dielectrics, complete orthogonal functions 2-39530  
 Be wire, high-strength, mech. props. and elec. cond. 2-2567  
 Fe effects on toroidal conductor, magnetostatic field calcs. 2-29747



confinement, plasma *see plasma confinement*

connecting *see joining processes*

connectors (electric) *see electric connectors*

conservation laws

*see also C invariance; CP invariance; CPT invariance; elementary particle symmetry; P invariance; T invariance*

approximate Riemann solvers, parameter vectors, and difference schemes 2-38437

baryogenesis without the initial presence of superheavy bosons 2-38834

baryon conservation, nucleon lifetime limit testing 2-29039

baryon number, violation above  $M_w$  2-23901

celestial mechanics, conservation law for dissipative Kepler's problem 2-6528

classical constrained systems, symm. transformations (*Chinese*) 2-38414

classical constrained systems, transformation props. (*Chinese*) 2-38432

double beta-decay and Majorana neutrinos 2-43459

field equations for gravitation, electromagnetism and scalar field, conservation laws (*German*) 2-3730

general relativity, areas conservation rel. to ang. momentum conservation in dissipative Kepler's problem 2-6528

gravitation, nonlocal energy-mass, field source 2-10690

Hamiltonian systems, symmetries and conservation laws 2-28646

Landau-Lifshits eqn. for ferromag. nonlinear dynamics, linear pseudo-potentials 2-46313

lepton number, violation above  $M_w$  2-23901

nonlinear  $\sigma$ -model on symmetric spaces, higher local conservation laws 2-23812

nonlinear Dirac eqns. and conserved currents, similarity solns. 2-33719

quantum field theory, mag. monopoles and other topological objects 2-33734

quantum unified field theory from enlarged coord. transform. group 2-3456

sine-Gordon equations, conservation laws and symmetries 2-3394

SU(2)<sub>c</sub> × U(1) × SU(3)<sub>c</sub> model, spontaneous breaking of global baryon number symmetry 2-23873

SU(2)<sub>c</sub> × U(1) model, deviations of neutral currents and  $n_B + n_L$  conservation 2-19288

subcomponent models for quarks and leptons, baryonic number nonconservation 2-43314

weak conservation laws, Lie-Monad formalism 2-3718

weak nonleptonic processes, factorisation appl. 2-23913

$K \rightarrow \pi\pi$ ,  $\Delta I = 1/2$  rule, Weinberg+QCD model 2-23990

Majorana  $\nu$  masses, baryon- and lepton-number non-conserving processes and intermediate mass scales 2-11003

n- $\bar{n}$  oscillations, baryon- and lepton-number non-conserving processes and intermediate mass scales 2-11003

p decay, baryon- and lepton-number non-conserving processes and intermediate mass scales 2-11003

$^{40}\text{Ca}(\mu, e^+)^{40}\text{Ar}$ , branching ratios, lepton conversion in gauge model 2-39018

constant current modulation *see amplitude modulation*

constant current sources

thermistor resistance conversion to voltage, using stable current generator 2-23632

constant voltage diodes *see avalanche diodes; Zener diodes*

constants

*see also elastic constants; gravitational constant; lattice constants; optical constants*

Eddington's cosmological number, rel. to Einstein's number criterion and Rydberg's rational system of dimensions (*German*) 2-10535

fine structure constant determ. methods, solid state quantum effect, review 2-23608

gamma constant and the gamma equivalent in dosimetry 2-6825

IAU (1976, 1979) System of Fundamental Astronomical Constants, numerical values 2-42582

physical, relationship to mechanical and electrical quantities 2-159

Planck's const. meas. using visible photoelectric effect 2-38387

solar system invariable plane, inclination and ascending node (DE 102) 2-48160

constitution diagrams *see phase diagrams*

construction *see building*

construction industry

*see also civil engineering*

microwave nondestructive moisture meas. apparatus (*Chinese*) 2-48710

constructional engineering *see civil engineering*

contact (mechanical) *see mechanical contact*

contact angle

*see also capillarity; surface tension; wetting*

aliphatic amines and aldehydes adsorbed on SiO<sub>2</sub> gel and aerogel, contact angle 2-16943

boiling incipience due to contact angle hysteresis on metal surface 2-35033

coal pore structure, mercury porosimetry 2-27402

hydrogel surface, contact angles of water droplet, hysteresis effect, polymer mol. mobility and orientation effect 2-45684

line tension, curvature effect 2-35863

low energy surfaces, characterisation by standard surface method 2-5295

mercury intrusion porosimetry, contact angle 2-26185

microscopic and macroscopic contact angles 2-50960

oil flow in capillaries with hydrophilic and hydrophobic surfaces, trapped gas bubbles effect 2-30208

organic liquids, interfacial tension determ., differential capillary rise 2-16931

polymer coatings, plasma-polymerised, prep. and characts. 2-47212

polymer surface, contact angle of water droplet, hysteresis effect, polymer mol. mobility and orientation effect 2-45684

porosimetry, hysteresis 2-26186

quartz fibres, netting, tensiometric study 2-12884

quartz surface, controlled wettability 2-50959

solid/solid interface, adhesive performance prediction, surface energy characterisation 2-35899

solution, binary regular, two-liquids region, interfacial tensions and wetting 2-35865

water on SiO<sub>2</sub> esterified with alcohols, surface energy determ. 2-1728

wetting, tensiometric studies, contact angle and surface press. relax. 2-26182

wetting, tensiometric studies, surface roughness effect 2-16925

wetting, tensiometric studies, surface roughness effect 2-16926

contact angle continued

wetting kinetics in tubes under conditions of simulated microgravity (*German*) 2-8237

Hg porosimetry, hysteresis, entrapment and wetting angle 2-25460

NaCl, aq. solution, contact with primary black film, linear tension at wetting perimeter 2-26179

Pt fibres, netting, tensiometric study 2-12884

contact e.m.f. *see contact potential*

contact lenses

extended wear contact lenses for aphakia correction 2-22856

hydrogel contact lens convex surface curvature meas., clinical use of Kontr-Mess system 2-32298

hydrogel contact lenses, technique for centre thickness meas. using radiuscope 2-32357

hydrogel lens wet cells, optical power calc., ray-tracing procedures 2-32299

hydrophilic lens, electronic gauge for sagittal height and thickness meas. 2-32358

hydrophilic lens inspection with phase contrast microscopy 2-32297

myopia control, research endeavours, clinical obs. and theory 2-37708

polymer films, O<sub>2</sub> permeability coeffs. appl. to contact lenses 2-18335

soft, extended wear, osmotic component of cornea swelling 2-22721

soft lens analyser, clinical appls. 2-32355

soft lens measurement, clinical use of Medicon B.C. Tronic unit 2-32356

symposium, cornea and contact lens instrumentation, Anaheim, CA, USA (Dec. 1979) 2-33207

contact potential

*see also contact resistance*

continuous range contact charge exchange spectrometer 2-19131

cyclopropane, chemisorption and reaction on Ir (110) surface 2-40674

molecular films, structure and props. 2-5315

semiconductor-electrolyte junction, flat band pot., electroreflectance study 2-17156

X-ray edge problem, dispersion relation approach with contact pot. model 2-48625

As<sub>2</sub>Se<sub>3</sub> amorphous film, spectral memory of electron work function 2-17143

Ir (110), chemisorption and decomp. of NO, thermal desorption, XPS, UPS, AES, LEED, and contact pot. meas. 2-12913

LiNbO<sub>3</sub>, work function, polarisation effect, temp. depend., contact pot. difference method 2-17144

Mo (112), adsorption of Ba, work function, thermal stability, LEED and contact pot. meas. 2-45731

Re (1010), adsorption of Ba, work function, thermal stability, LEED and contact pot. meas. 2-45731

Se amorphous film, spectral memory of electron work function 2-17143

Si-SiO<sub>2</sub> interface in MOS structs., memory effects caused by irradi. (*Russian*) 2-21681

Sn, superconducting and normal, thermoelectrostatic effects, AC meas. 2-31040

ZnSe (110) oxidation model based on anal. by 21 eV photoemission spectroscopy, contact-potential difference and AES 2-41766

ZnTe (110) oxidation model based on anal. by 21 eV photoemission spectroscopy, contact-potential difference and AES 2-41766

contact resistance

*see also contact potential*

calculating the characteristics of composite superconducting materials with high contact resistances 2-46208

III-V semiconductor multilayer struct. profiling method, contact resistance meas. along angle lapped surface (*German*) 2-46106

metal-oxide interface, thermal resistance 2-5460

thermal gap resist., and contact resist. meas. by modulated heating method 2-6848

Ag chips, with and without Ag<sub>2</sub>S tarnish layer, subject to friction load, contact resist., adhesion and wear 2-36973

Al/Cu bimetallic thin film couple, interfacial reaction, contact resist. meas. 2-50931

Al-Al thermal and elec. contact resist. rel. to Al-stabilised superconductor develop. 2-13167

Au/Ni/SnNi/n-GaAs interface, ohmic contact form. 2-41010

Au-Ag thin film couples, interfacial reactions, Auger depth profiling, TEM, and contact resist. meas. 2-8678

Au-Ge laser-annealed ohmic contacts on GaAs, microstruct. and resistivity 2-21675

AuGe-GaAs ohmic contact, low temp., sintered 2-51301

GaAs solar cells with distributed parameters, I-V characts. effect of ohmic losses 2-18055

GaAs/Au-Ge ohmic contacts, laser annealed, resistivity and SIMS profile 2-26497

GaAs-AuGe/Pt pulsed electron beam, alloyed ohmic contacts, reliability 2-5458

Ga<sub>1-x</sub>In<sub>x</sub>As graded band gap layers, ohmic contacts to n-GaAs grown by MBE 2-13174

p-GaP/Au-Zn contact system, out-diffusion process, barrier metals effect 2-46128

InGaAsP, ohmic contacts, low specific contact resistance, metallisation 2-2005

InP, ohmic contacts, low specific contact resistance, metallisation 2-2005

InP surface, n- and p-type, lightly doped, ohmic contacts 2-13173

n-InP-Sn-Au alloyed ohmic contact formation, contact resistance depend. on annealing temp. 2-5463

Mo-Si contacts, P ion implantation effects 2-8531

Pb/Cu bimetallic thin film couple, interfacial reaction, contact resist. meas. 2-50931

Si, solar cell type, contact resistivities of transition metal nitride metallisations 2-36126

n-Si-TiN contact, elec. characts. 2-26504

contacts, electrical *see electrical contacts*

continuous creation hypothesis *see cosmology*

continuum hypothesis *see set theory*

continuum mechanics *see classical mechanics of continuous media*

contours, surface *see surface contours*

contrast transfer function *see optical transfer function*

control facilities

nuclear power plant, off-normal system operations 2-7227

nuclear power plant safety parameter display systems evaluation 2-49170



control gear, electric *see* electric control equipment

control rooms, radio *see* radio studios

# control system synthesis

*see also correlation methods; describing functions; frequency response; perturbation techniques; piecewise-linear techniques; poles and zeros; root loci; sensitivity analysis; stability; state-space methods; transfer functions*

crystal growth, microprocessor-controlled system, design and implementation 2-27061

fission reactors, seismic response, active control appl. 2-24438

PWR power station self-tuning load-following control 2-546

# controllers

*see also cryostats; instruments; servomechanisms; thermostats*

automatic temperature control, principles 2-42997

blood pressure automated control using self-tuning regulator, dog expt. 2-22872

blood pump motor controller for artificial heart 2-52667

boiler hammer mill motor noise reduction method 2-49996

low and infralow temperatures, stabiliser 2-43024

NMR magnet regulator cct., search and lock regulation circuitry for accelerator bending magnets 2-11355

photovoltaic system with storage overloading protection using bistable relay regulator 2-37212

rotating-mirror cameras, adaptive digital control 2-48830

# convection

*see also convection in liquids*

AC current arc, break, convective air flow effect on admixture atoms behaviour 2-16532

accretion discs in cataclysmic variables, transition from convective to radiative struct. as cause of outbursts 2-38198

aerosuspension in fuel containing oxidant, convective combustion 2-39935

air, perpendicular jet flow through perforated wall for small Reynold numbers, convective heat exchange 2-25371

air hypersonic flow, blunt body radiative-convective heat transfer, ablation product effect 2-4855

amplitude equation near convective threshold, appl. to time depend. heating 2-4821

arbitrary shaped body, transient convective heat transfer 2-4829

atmosphere, dry thermal dynamics, initiated by active admixture (*Russian*) 2-47951

atmosphere, use of detailed planetary boundary layer model for convection parameterisation 2-14538

atmosphere boundary layer, comparison of struct. parameter scaling expressions with turbulence closure model predictions 2-14536

atmosphere boundary layer, echosonde study of thermal plumes 2-23065

auroral arc, drifting, ion convection vel. rel. to tangential elec. fields 2-28262

Benard convection, Taylor vortices, bifurcation and symmetry 2-16319

Bernard problem between rotating spheres, bifurcation and stability of rotating waves (*French*) 2-44737

binary gas mixtures, approx. system of eqns. for describing natural convection 2-39900

boiling, crisis phenomena under conditions of free convection in bundle of pipes, flushed with air 2-4703

bottom convection flow, two and three-core struct. generation and degeneration 2-32534

boundary layer convective heat transfer in convergent channel 2-20665

Boussinesq and Darcy-Boussinesq equations, invariant quantities (*French*) 2-35130

Boussinesq approx. accuracy for incompressible fluid 2-50254

bubble mass transfer, mol. and convective diffusion 2-12213

building ventilation using thermal means to cause air flow 2-12157

buoyancy driven viscous flow, in rectangular cavity flow and heat transfer calcs. 2-8156

combined free and forced convection flow past a vertical porous plate 2-35148

conducting fluid, flow up plate, natural convection boundary layer, MHD 2-30138

convection to turbulence transition thermal fluctuation effect 2-30136

convective and radiative heat transfer in MHD radiant boilers 2-47503

convective flame front propag. in semi-confined tubes partly filled with propellant (*Russian*) 2-25376

cryogenic liquid containers, open, heat transfer in floating insulations 2-33535

cylinder in parallel plate duct, fluid flow and forced convection 2-44788

cylindrical tubes, free convection, heat transfer to cubical enclosure 2-4830

Czochralski crystal growth, hydrodynamic, heat and mass transfer 2-35419

developing laminar free convection in a heated vertical open-ended concentric annulus 2-35147

diffusion problems, boundary layer refinements 2-50259

double diffusive convection, subcritical instability, asymptotic anal. 2-44730

double-diffusive cellular convection due to uniform lateral heat flux 2-35151

Earth crust, convective upward migration of igneous intrusion 2-14429

Earth liquid core, inviscid, frozen-flux vel. components from surface mag. field obs. 2-18399

Earth mantle convection, implications of fine-scale isotopic heterogeneity in sub-Atlantic mantle 2-37808

Earth mantle convection rel. to ocean floor bathymetry and heat flow, effects of lithosphere rigidity 2-18418

Eulerian hydrodynamic eqns., convective terms, nonlinear filtering soln. method 2-39906

finite amplitude convection in layer heated from below, influence of side walls 2-44727

finite Benard system crit. fluctuations, unavoidable pretransitional macroscopic fluid motion 2-50265

flat-plate collector, transverse slatted, convection losses reduction performance in domestic heating systems 2-47519

flow in horizontal mixing chamber, effect of unsteady natural convection on flow struct. 2-16315

flow in porous media, thermal eqn. 2-50314

flow through horizontal plate bounded by permeable bed, free convection effects 2-35216

fluid layers, impulsively heated or cooled, onset of convection 2-44636

fluid layers, rapidly heated, onset of convection, mean-field approx. 2-39796

forced and free, in horizontal tube, interferometric obs. 2-8146

# convection continued

forced convection turbulent heat transfer, Rayleigh-Ritz method 2-8152

forced convective heat transfer from cylinders in unsteady flow 2-4812

forced convective heat transfer from hot film sensor to liq. Hg 2-30130

free and forced convection flow through channel, wall porosity and Hall effects interactions 2-8222

free and forced convective hydromagnetic flow through channel, Hall current effect 2-8187

free convection above a point source of heat in a stratified fluid 2-50051

free convection and mass transfer flow through a porous medium bounded by an infinite vertical limiting surface with constant suction 2-20746

free convection in a grainy layer along a vertical wall 2-30132

free convection in rectangular cavities with differentially heated end walls 2-4822

free convection problems, Kochin-Loitsyanskii method appl. 2-12011

free convection problems near vertical nonisothermal plate, two-parameter solution 2-39795

free convective mass transfer in porous media 2-1194

free-convection mixed layer, temp. spectra, frozen turbulence hypothesis investigates 2-44711

free-forced laminar flow convective heat transfer from square cavity in var. inclination channel 2-4816

freezing, natural convection heat transfer coeff. meas. 2-35034

freezing, transition from convection-controlled to conduction-controlled growth 2-4705

freezing and melting with convection, numerical anal. 2-29989

frost layer growth and densification under forced convection and densification 2-4704

gas, convective motion due to propag. of temp. discontinuity along boundary of closed region 2-39901

gas, laser induced convection instability 2-35158

gas-particulate tube flow, anisotropically scatt., emitting and absorbing, combined radiation and convection 2-1266

gravity waves, internal interaction with shearing motion 2-35173

greenhouse-type solar stills, numerical calc. of heat and mass transfer 2-47455

Grimsvotn geothermal area, Iceland, penetration of water into hot rock boundaries of magma 2-52781

groundwater, high Rayleigh number convection in East Mesa geothermal field, California 2-42308

gun barrel walls, heat transfer, boundary layer anal. 2-30128

heat and mass transfer coeff. calc. for rivers, influence of net radiation flux (*German*) 2-39914

heat exchanger storage tank for heat storage in solar brooding system 2-14126

heat transfer problems of irregular geometries, generalised finite-difference method 2-29986

heat transfer scaling laws for MHD channels and diffusers 2-47504

heat transfer through single and double vertical walls in natural convection 2-4817

heat transfer to wires and cylinders in high-temperature surroundings 2-4688

high Rayleigh number convection in shallow enclosures with different end temps. 2-1193

ice, vertical wall, melting into fresh water by free convection, finite difference calc. 2-4706

ice-salt water boundary layers, convection and turbulent flows 2-18454

inclined annular insulation layer, 3-dimens. natural convection in porous medium (*Japanese*) 2-4819

incompressible forced convective flow between parallel plates, turbulence, two-eqn. model appl. (*Japanese*) 2-16288

interfacial convection 2-30715

interferometer, triangular path reversing, appl. to heat transfer studies in natural convection 2-19172

Io, magma heat transport as mechanism allowing thick lithosphere 2-28371

ionosphere, electric field convection meas. by long-line technique 2-6500

laminar boundary layer flow, singularity at separation, forced convection 2-16281

laminar convection, combined forced and free, in entry region of vertical annulus with rot. inner cylinder 2-35138

laminar flow in tubes, convective heat transfer, heat conduction influence (*German*) 2-39881

laminar forced convective heat transfer in trapezoidal channels 2-8108

laminar free-convection round isothermal sphere, numerical anal. 2-1198

laminar natural convection, double-diffusive counterbuoyant boundary layer 2-35144

laminar natural convection in shallow cavities, numerical calcs. 2-8109

large-particle fluidised beds, gas convection dominant heat transfer 2-12216

laser radiation in absorbing gas, thermal self-action in presence of induced convection, numerical modelling 2-29854

lateral intrusion of natural convection into a horizontal porous structure 2-8144

layered porous medium heated from below 2-16313

linear hodograph solutions of natural convection equations in a porous medium 2-44722

LMBR steam generator, forced-convection boiling upflow system, instabilities in parallel channel 2-7326

LOCA, small-break, natural circulation two-phase flow expts. 2-49166

magnetisable surfactants, plane modes of flow 2-39975

magnetosphere convection, effects on winds in auroral atmosphere 2-6507

magnetosphere convection, rel. to newly emerging model of substorms 2-14728

magnetosphere plasma flow, results of anal. of JIKIKEN  $f_{0n}$  reson. expt. (*Japanese*) 2-3144

mantle, two layer model, lower mantle radioactive elements depletion 2-28042

melting around horizontal circular cylinder, heat transport mechanisms anal. 2-44726

MHD flow between vertical conducting walls 2-35231

MHD free convection flow of viscous incompressible fluid over hot plate with variable suction 2-12228

MHD oscillatory flow past infinite porous vertical plate, suction and free convection currents effect (*Croatian*) 2-16388

micropolar fluid in plane channel, convective heat transfer, WKB method appl. 2-12142

mixed convection flow adjacent to a vertical uniform-heat-flux surface, downstream transport 2-35141

mixed convection flow on vertical surface (*German*) 2-50273



## convection continued

- mixed convection over horizontal flat plate, vortex mode instability 2-8165
- mixed convective flow on a heated surface with injection 2-12143
- monolayer, insoluble, surface self-diffusion, density instability in bulk role 2-35867
- natural, flow visualization techniques review 2-20784
- natural convection adjacent to vertical flat surface, thermal capacity effect 2-30139
- natural convection fin with nonmonotonically varying heat transfer coeff., anal. 2-8142
- natural convection flows, press. stress work and viscous dissipation effect 2-8135
- natural convection for pair of horizontal cylinders, effect of vertical separation distance, and temp. imbalance 2-50055
- natural convection from vertical surfaces, influences of variable props. 2-50266
- natural convection heat transfer coefficients for a short horizontal cylinder attached to a vertical plate 2-50054
- natural convection heat transfer from inclined cylinders 2-44721
- natural convection in a vertical stack of inclined parallelogrammic cavities 2-35143
- natural convection in breeder reactor, temp. rise, flow rate, laminar flow and turbulence 2-4092
- natural convection in undivided and partially divided rectangular enclosures 2-50269
- natural convection mass transfer in horizontal annuli 2-50263
- natural convection through horizontal porous layer, asymptotic anal. 2-20664
- natural convective heat transfer through vertical porous layer, transient behaviours 2-30116
- non-stationary regimes, Poincare diagrams (*French*) 2-39898
- nonlinear convective motions in rotating horizontal layers 2-35160
- nonlinear viscoplastic fluid, Couette flow, radiative and convective heat transfer 2-25372
- nucleate boiling, bubble waiting time 2-50070
- ocean double diffusive convection, with nonlinear eqn. of state 2-3028
- oceanic crust, topographic forcing of supercritical thermal convection in porous layer 2-14454
- one-dimensional convection-diffusion problems, finite element singular perturbation method 2-12154
- optically thick boundary layer on isothermal plate, radiation-convection heat transfer 2-12136
- optically thick layer, radiative and free convection thermal conductivity 2-8023
- optimal Petrov-Galerkin methods through approximate symmetrization 2-48646
- oscillatory and steady convection in a magnetic field 2-35150
- packed-bed thermal storage unit, transient temp. response to general variation in rate of through flow 2-14127
- penetrative convection at low Peclet number 2-35149
- plane Benard problem, macroscopic selection rule of steady states 2-16318
- plane vertical electrode, transient natural convection, momentum and mass transfer 2-44720
- Population II massive stars, evolution with semi-convection 2-3254
- porous horizontal layer, three dimens. thermoconvective struts. (*French*) 2-1261
- porous media, thermal propagation, energy equation (*French*) 2-12208
- Rayleigh-Benard, finite amplitude convection, stability, evolution, sidewall effect 2-4826
- Rayleigh-Benard cells, convection patterns anal. 2-50052
- Rayleigh-Benard convection, transition to turbulence, hydrodynamic instability 2-25377
- Rayleigh-Benard convection in a slightly tilted porous cavity (*French*) 2-44728
- rectangular cavity, geometry determ. from surface temp. scanning, heat flux calc. 2-4694
- rectangular channel, free convection onset 2-4823
- rectangular fins, convecting, optimum shape, rel. to condensation 2-8155
- rotating cryogenic Benard cell 2-25476
- rotating MHD viscous flow, convection, initial value theory 2-8130
- rotating rectangular boxes, thermal cellular convection, flow pattern visualisation 2-39907
- rotating roll with surface heat flux and convective cooling, steady-state temp. distrib. 2-4693
- salt-finger convection in surface discharge of heated saline jets, expts. 2-16310
- Saurashtra cyclone (1978), cloud top temp. structure rel. to deep convection cells movement 2-3056
- sheet, low heat resist., cooling, backward free-convective boundary layer 2-20671
- solar absorber converters, flat plate type, sinusoidal glass honeycomb, design cost optimisation 2-37452
- solar and stellar convection zones, mixing length theory (*Chinese*) 2-23269
- solar collectors, flat-plate, effect of angle of inclination to horizontal on the heat losses 2-9677
- solar flat plate collectors, heat loss, insulation effect 2-37453
- solar photosphere, wave and convective motions rel. to centre-to-limb profiles of weak Fraunhofer lines 2-53242
- solar photosphere granulation, time-dependent interaction with mag. flux tubes 2-48194
- solar pond with three zones, thermal analysis 2-52394
- solid around hot horizontal cylinder, melting, subcooling, thermal diffusivity, natural convection study 2-29990
- solidification, thermal and fluid flow effects in a rectangular enclosure 2-35139
- solidification heat transfer with volume change, similarity rule 2-35047
- spherical bubble, drag, coeff., effect of convection 2-30216
- spherical clouds, self-gravitating, convective instability 2-32826
- stationary disc electrode, in rotated fluid, convective diffusion study 2-8162
- steady-state MHD convection in vertical planar channel, mag. field effects 2-39997
- stellar convection theory, dynamical coupling of two convection zones in A-type stars 2-10404
- Sun, convective efficiency rel. to solar luminosity vars. 2-53194
- Sun porch solar heating, design and performance 2-14115
- supercharged boilers, convective heat transfer to furnace waterwalls 2-20673

## convection continued

- supercritical convective motions in a short horizontal cylinder 2-1190
  - supercritical laminar free convection on vertical flat plate, reference temp. method 2-50267
  - supplementary electric heating, for high productivity furnaces 2-19110
  - symmetry breaking far from equilibrium 2-4827
  - temperature field of the active element of a solid-state laser with a liquid cooling system 2-25223
  - thermal convection from conc. heat sources in porous media 2-8143
  - thermal convection in upper mantle 2-22937
  - thermal convection onset in slowly rotating fluid shells, theory 2-16311
  - thermal fatigue behaviour, of brittle structural materials 2-2583
  - thermal finite amplitude convection planform selection between poorly conducting slabs 2-35152
  - thermally stratified fluid, nonsimilar laminar convection 2-4871
  - thermocline-type cylindrical enclosure for heat storage in solar power plants, effects of walls on axisymmetric natural convection flows 2-47526
  - thermocline-type cylindrical enclosure for heat storage in solar power plants, numerical model of effects of walls on axisymmetric natural convection flows 2-47527
  - thermosyphon, open, heat cond. regime at small Rayleigh nos., natural convection eqns. soln. (*French*) 2-8131
  - thermosyphon, vertical, effects of inlet conditions on free convection (*French*) 2-16308
  - time-dependent free convection in vertical slots 2-35159
  - transient 3-dimens. natural convection in porous media 2-8145
  - transient conjugated forced convection, improved quasi-steady approach 2-1195
  - transient convective heat transfer to turbulent flow from flat plate 2-39899
  - transient heat conduction at low Biot numbers, Heisler's charts 2-20510
  - transient thermal convection, during orbital spaceflight 2-1197
  - trapezoidal groove solar collectors, natural convection and sidewall losses 2-6180
  - turbulent convection, laser Doppler imaging 2-1181
  - turbulent droplet flow in circular tubes, convective heat transfer 2-50272
  - two-component Benard problem, convection onset 2-4824
  - two-dimensional convection-diffusion problems, finite-element singular perturbation method 2-12155
  - used reactor fuel elements, convective heat transfer, scale expts. (*German*) 2-467
  - vacillation in thermally driven rotating flow in annulus, effects of boundary conditions and fluid props. 2-16331
  - wall, thick insulated vertical, combined effects of cond., natural convection and radiation on heat transfer (*French*) 2-8017
  - wall jet, turbulent convection, heat transfer and skin friction 2-35199
  - CO<sub>2</sub>, boiling-like phenomena in free-convection heat transfer at supercritical pressures (*German*) 2-39913
  - Fe-C solidifying melt, liq. solid region formation of two-phase zone, convection effect 2-22208
  - H<sub>2</sub>-He flow, over flat plate, laminar boundary layer, effect of C blowing, heat transfer 2-35131
  - N<sub>2</sub>, heat transfer from vertical surfaces, influences of variable props. 2-50266
- convection in liquids**
- anomalous fluctuations near nonequilib. soft transitions, Rayleigh-Benard instability in nematics 2-3546
  - Benard-Rayleigh problem, two-dimensional perturbation wave number choice 2-39911
  - binary melts, solidifying, thermal conc. convective motion, alloy component distrib. (*Russian*) 2-8133
  - centrifugal convection, MHD flow in an angular channel 2-12146
  - cholesteric liquid crystals, convective instabilities when heated from below 2-16320
  - computational models for convective motions induced at fluid interfaces 2-4831
  - conductive and convective heat transfer below evaporating liquid surfaces 2-30118
  - crystal growth from melt, convective effects 2-30429
  - crystallisation, weak body forces, heat and mass transfer, numerical investigation 2-30121
  - disperse two-phase mixture, low velocity rotating Couette flow, microconvection, heat transfer enhancement 2-4828
  - double diffusive convection model, bifurcations 2-4825
  - electric natural convection heat transfer phenomena in a heat exchanging system 2-20766
  - electrically conducting viscous liquid, convective flow, stability 2-20672
  - electrically stressed liquid dielectrics, bulk electroconvection 2-12242
  - eutectic growth, effect of forced convection 2-1423
  - forced convection, heat transfer coeff. meas., electrolytic method 2-30117
  - free convection around horizontal cylinder in stratified liquid, investig. 2-1249
  - glass, molten, flow modelling methods 2-12148
  - groundwater, dissolved salts, convective diffusion during filtration into drainage (*Russian*) 2-32138
  - horizontal duct connecting fluid reservoirs, free convection flow stratification 2-4893
  - impinging jet, forced convection boiling, burnout heat flux 2-35190
  - ingots, axis-symmetric, macrosegregation, effect of fluid flow 2-9353
  - large cells in nonlinear Rayleigh-Benard convection 2-44729
  - laser formed melt, surface tension driven convection 2-45263
  - metals and alloys, crystallisation kinetics, mag. field and thermoelectromotive forces effects, convective flow 2-12530
  - mixture, stability of horizontal layers, convection 2-20663
  - molten glass, convective currents, role of deform. of free surface 2-30141
  - molten salt electrolysis with liquid electrodes, spontaneous surface convection 2-2718
  - nematic liquid crystal, electroconvective flow and domain instabilities 2-16561
  - nematic liquid crystal, thermoconvective instability theory 2-45029
  - small break accident, heat removal, natural convection tests 2-49154
  - smectic A liquid crystals, convective instabilities when heated from below 2-16320
  - solute dispersion in laminar flow through tubes by simultaneous diffusion and convection 2-12120
  - steel, melt solidification under layer of heat insulation (*Russian*) 2-31690
  - thermal and dynamic boundary layers in porous medium with allowance for spontaneous convection (*Russian*) 2-50264



**convection in liquids continued**

- turbulent pipe flow, thermal convection, double diffusion, boundary layer, variational principles 2-39897  
 water, laminar gravit. heat convection in dead-end channels 2-4820  
 $\text{H}_2\text{O}$ , unsteady convective instabilities, oscillations 2-30129  
 $\text{H}_2\text{O}$ -glycerol (isopropanol) mixtures, flow boiling, forced convection heat transfer 2-25365  
 $^3\text{He}$ - $^4\text{He}$  mixture, superfluid, oscill. convective instability 2-21423  
 $^3\text{He}$ - $^4\text{He}$  superfluid, Rayleigh-Benard instability, convective heat transfer 2-35827  
 $^3\text{He}$ - $^4\text{He}$  superfluid mixtures, dil., onset of convection 2-26166  
 $^3\text{He}$ - $^4\text{He}$  superfluid mixture, convective instability 2-26167  
 $^3\text{He}$ - $^4\text{He}$  superfluid solutions, dilute, time depend. thermal convection 2-21421  
 Hg, convective instabilities, effect of horizontal mag. field 2-8137  
 Sb, solid, dissoln. in molten Bi, static conditions 2-8625

**convergence**

- see also *convergence of numerical methods*  
 boundary layer flow, turbulent, finite element algorithm accuracy and convergence 2-12131  
 deformational thermoplasticity, variable elasticity parameters method, convergence 2-6743  
 heat conductivity, stationary, linear theory, variational principles (Russian) 2-29984  
 massless lattice field,  $\lambda(\Delta\phi^4)$  perturbation, cluster expansion convergence 2-3509  
 semi-Markov systems with inhomogeneous failure probabilities, asymptotic anal. (Ukrainian) 2-10712  
 solidification problems, series solns. appl. 2-30569  
 stochastic Heisenberg model, convergence to equilb. 2-2048  
 superconducting transition temp., math. (Chinese) 2-26530  
 superconducting transition temp., math. series soln., convergence, high freq. phonons effect (Chinese) 2-26529

**convergence of numerical methods**

- active remote sensing, inverse scatt. problems, iterative soln., convergence 2-15091  
 Cauchy problem, degenerating equations through method of finite differences (Russian) 2-10586  
 degenerate elliptic and parabolic eqns., localisation of solns. (Russian) 2-48482  
 elastic plate models, comparison between two- and three-dimensional (French) 2-42862  
 elastic-plastic problems solution, existence and uniqueness, convergence of approx. solutions (Chinese) 2-28653  
 EM wave scatt. by open cylinder, electric field integral equation, numerical solution 2-49642  
 general stochastic difference equations, weak convergence to a diffusion 2-15113  
 heat transfer, homogenisation of the stationary diffusion equations in flattened cylindrical dominance (French) 2-42971  
 Heisenberg model, anisotropic, bond disordered, magnon density, CPA calc. 2-31162  
 post-buckling analysis of spatial structures by vector iteration methods 2-39837  
 successive-pass method for difference scheme of one-dimensional system 2-44794  
 variable moment of inertia models, initial values for nonlinear fit, computer program 2-24137  
 viscous flow computations, convergence accel. 2-15037

**conversion electron spectra**

- Mossbauer spectra, expt. study of mag. films and surfaces 2-51506  
 Mossbauer spectroscopy using channel electron multipliers at low temp. 2-24479  
 $^{109}\text{Ag}$ , E3 transition conversion lines relative intensities determ. 2-24175  
 $^{140}\text{Ce}$ , A=110-112, levels characts. study 2-24149  
 $^{153}\text{Dy}$ ,  $\gamma$ -ray, internal conversion electron and  $e\gamma$ -coincidence spectra study 2-24153  
 $^{152}\text{Dy}$ , decay diagram investigation 2-19479  
 $^{\text{Er}}$ , A=161, 163, 165, rotational states lifetimes and  $\gamma$ -transition reduced probabilities study 2-24172  
 $^{157}\text{Er}$ ,  $^{157}\text{Ho}$ ,  $\beta$ -decay and  $^{157}\text{Ho}$  excited levels 2-19480  
 $^{149}\text{Eu}$  conversion electron spectra, internal conversion coeffs.,  $^{149}\text{Sm}$  levels (Russian) 2-43442  
 $\alpha$ -Fe, thin surface layer study using depth selective conversion electron Mossbauer spectroscopy 2-51504  
 $\text{Na}_2\text{Fe}(\text{CN})_6 \cdot 10\text{H}_2\text{O}$  Mossbauer multisectional proportional resonance counter 2-43694  
 $^{182}\text{Os}$ , band crossings study 2-38931  
 $^{141}\text{Pr}$  high spin levels,  $J^\pi$ ,  $T_{1/2}$ , ICC, gamma transitions from ( $\alpha, \text{Zn}\gamma$ ), ( $d, n\gamma$ ) 2-19419  
 $^{183}\text{Re}$ , internal conversion electron spectrum study 2-33953  
 $^{144}\text{Sm}$  ( $^{\text{He}}, 2n$ )  $^{145}\text{Gd}$ , medium-spin levels and 20.4 ms  $13/2^+$  isomer character in  $^{145}\text{Gd}$  2-38951  
 $^{100}\text{Sr}$ , strongly deformed nucleus,  $\gamma$  ray and conversion electron spectra 2-24168  
 $^{153}\text{Tb}$  excited states,  $\gamma$ -ray, internal conversion electron and  $e\gamma$ -coincidence spectra study 2-24157  
 $^{153}\text{Tb}$ - $^{155}\text{Gd}$ ,  $\gamma$ -ray, internal conversion electron and  $e\gamma$ -coincidence spectra study 2-24154  
 $^{\text{Tm}} \rightarrow ^{\text{Er}}$ , A=161, 162, 165, internal conversion and  $\gamma$ -ray spectra study 2-24158  
 $^{125}\text{Xe}$  decay,  $\gamma$ -ray and  $e\gamma$ -coincidence spectra study 2-24159  
 $^{\text{Zr}}$ , A=88, 92, 94,  $0_2^+$  states decay and E0 systematics 2-24173

**convertors**

- see also *analogue-digital conversion; code convertors; digital-analogue conversion; direct energy conversion; frequency convertors; image convertors; magnetohydrodynamic convertors; power convertors; solar absorber-convertors*  
 analog converter for capacitive transducers 2-15159  
 avalanche optoelectronic downconverter 2-43087  
 thermistor resistance conversion to voltage, using stable current generator 2-23632  
 time-to-digital converter, multiple hit system for drift chamber appl. 2-24487  
 voltage-frequency converter, high resolution, for direct recording of secondary electron spectra 2-33685

**cooling**

- see also *Joule-Thomson effect; low-temperature production; magnetic cooling; quenching (thermal); refrigeration; supercooling*  
 Abec enstatite chondrite, thermal history from thermal meas. and heat flow calcs. 2-14826  
 active solar cooling system 2-18130  
 active solar cooling system in northern Italy, design, modelling and performance 2-52392  
 active solar heating and cooling systems, performance and cost 2-18121  
 active solar heating and cooling using heat pump systems 2-18120  
 channels, formulas for calc. optimum equivalent diameter 2-30134  
 chemical heat pumps and competitive systems, cost effectiveness and energy consumption evaluation 2-22673  
 combustion chamber film cooling by air jet injection (German) 2-8153  
 cryogenic object, cooling time calc. 2-16316  
 cryogenic vessel, lightweight design with thin cooling jacket and walls aerospace appl. 2-189  
 crystal, cooled to about 90K, system for optical pumping 2-23646  
 cylindrical cooling element under steady state thermal conditions, galvanothermomag. effect 2-29998  
 cylindrical tube with one-sided heating, porous cooling, efficiency 2-25232  
 dilution refrigerator for cooling polarised proton target 2-43023  
 domestic cooling using passive techniques in Saudia Arabia 2-14055  
 electric machines cooling by heat dissipation through heat pipes (German) 2-50059  
 electrical conductor wire, natural convective cooling 2-44635  
 ethylene gas, selectivity emitting, radiative cooling 2-1286  
 ferrocene, multiphoton dissoc. and ionis., cooling and mol. beams 2-39458  
 ferroelectrics, nonvarying and decreasing of  $P_s$  with cooling from  $T_c$  2-17420  
 French experience in the usage of photovoltaic batteries in developing countries (French) 2-37255  
 fusion reactors, inertial confinement, forced-convection Li test loop for developing and designing cooling and blanket systems (Japanese) 2-24416  
 gas atom laser cooling by optical freq. shift (Chinese) 2-7524  
 gas cooling by reson. EM field under saturation conditions 2-20808  
 gases, optical cooling, collisions effect 2-44816  
 glass forming melts, mol.-kinetic model for critical cooling rates 2-8445  
 graphite, synthetic, tempering, modulus of elasticity 2-5901  
 heat transfer in plane channel with single system of jets in a cross flow (Russian) 2-8134  
 heavy ion beams, laser cooling 2-7427  
 HV, cooling by heat-dissipation using heat pipes 2-50062  
 ice single crystals, stacking fault formation by cooling 2-16661  
 ion storage ring, electron cooling 2-24467  
 lake stratification during cooling, long term simulation 2-28106  
 laser cooling of atomic ions, atomic clocks and frequency standards precision improvement 2-15135  
 metal surfaces, high temp., no le spray water cooling, heat exchange 2-12140  
 metals, mechanical testing, specimen cooling with freon-22 2-37013  
 molten glass, cooling-solidification process, radiative transfer 2-35137  
 neutron stars cooling, neutrino and photon emission from dense high temp. atmosphere 2-33059  
 new system of storing and primary cooling of fish in villages of isolated fishers and based on solar energy (French) 2-37257  
 nickelocene, multiphoton dissoc. and ionis., cooling and mol. beams 2-39458  
 nitrine, dissociating coolant, thermohydraulic characts. in rough annular channel (Russian) 2-4061  
 optical elements, high power, cooling using porous materials 2-49868  
 passive heat pipe photovoltaic receiver, heat exchanger 2-27682  
 passive solar systems for domestic heating and cooling in Turkey, performance and results 2-14114  
 pipes flooded with liquid  $\text{N}_2$ , cooling down expt. on models 2-185  
 point-focus photovoltaic concentrator passively-cooled module, design and performance 2-27575  
 power plant cooling, once-through potential of Mississippi River 2-22658  
 power saving in solar absorption cooling systems 2-27553  
 progress and results of the Dutch National Research Program on solar energy (Dutch) 2-37172  
 protogalactic gas, contrib. of  $\text{H}_2$  and heavy elements to gas cooling during gravit. contraction 2-3309  
 residential air-conditioning system for heating and cooling, alternative power sources 2-32106  
 rocks, thermophys. props. significance to thermomech. stability of underground installations 2-1684  
 rocks cooling rates, determ. from solute partitioning under continuous cooling conditions 2-32874  
 rubber band, cooling 2-20512  
 sheet, low heat resist., cooling, backward free-convective boundary layer 2-20671  
 sliding contacts, heat distrib. parameters, compilation 2-20615  
 solar air heater performance anal. and optimisation 2-14117  
 solar concentrator cells, passive cooling using Cu heat pipe with water/acetone working fluid 2-27667  
 solar cooling simulation programs for electric utilities, assessment and evaluation project, five major activities 2-18135  
 solar cooling simulation programs for electric utilities 2-18134  
 solar heated and cooled house, stochastic response characterisation using Monte Carlo simulation methods 2-6179  
 Solar Heating and Cooling Demonstration Programme, in USA, two case studies 2-32107  
 solar heating and cooling industry, supply problems 2-18011  
 space He refrigerator, at 4.4K, for Salyut-6 2-19111  
 steel, high-speed, struct. and props. after cold treatment 2-27196  
 steel, high-speed, transforms. during cold treatment 2-27195  
 steel, high-temperature thermomechanical treatment, sprayer cooling effect on struct. and props. 2-51955  
 structure and resistance for a two-phase evaporating flow in a porous material 2-39908  
 superconducting magnet current leads, effect of coolant loss 2-19141  
 thermoelements, anisotropic, temp. independent transport coeffs., maximum cooling condition 2-36075  
 thermoelements, anisotropic, temp. independent transport coeffs., efficiency and performance in absence of mag. field 2-46046  
 thin biological samples, ultrarapid freezing 2-32382  
 transient heat conduction at low Biot numbers, Heisler's charts 2-20510



**cooling continued**

- turbine blade, discrete-hole cooling, turbulence 2-35161  
 turbomolecular pumps, air-cooled, to be mounted in any position (*German*) 2-10817  
 unbounded plate steady-state heating 2-39909  
 vapour-mist dielectrics, cooling and insulating media for vapour-cooled power transformers 2-16419  
 wafers, gas cooling during ion implantation 2-5139  
 water moderated water cooled reactor/turbine system coolant discharge studies 2-50322  
 Westerbork Synthesis Radio Telescope, multifrequency cryogenically cooled front end receiver 2-48147  
 Al-Si-Cu-Zn-Mg-Ti, cryst. and struct., effect of cooling rate and Zn, Mg and Ti additions 2-1549  
 AlGaAs/GaAs solar cells high conc. photovoltaic module, development and testing with jet-impingement cell cooling 2-27574  
 B<sub>2</sub>O<sub>3</sub>-PbO-Al<sub>2</sub>O<sub>3</sub> glass, cooling rate dependence of SAXS spectra 2-41599  
 Cu-Sn-Al-Fe-Ni-Mn, fracture and mech. props., effect of comp. and crystn. conditions 2-41729  
 Fe-Ni-Al alloy YuND4 magnets, cooling rate rel. to mag. props. 2-26674  
 H<sub>2</sub>O, flow in heated stream open channel, bubble cooling, enthalpy transfer coeff. 2-25366  
 H<sub>2</sub>SO<sub>4</sub> chemical heat pumps for industry 2-22674  
<sup>4</sup>He, superfluid, vortex cooler, thermal effect 2-35782  
 HF-B eutectic system, crystn. at ultrahigh cooling rate 2-41600  
 LiF:Mg<sup>2+</sup>, rapid cooling effect on dispersion of impurity-vacancy pairs 2-21166  
 Ni-Ni<sub>3</sub>Sb<sub>2</sub> eutectic system alloys, undercooling-structure relationship obs. (*Japanese*) 2-31689  
 Ni<sub>3</sub>Sn-Ni<sub>3</sub>Sn<sub>2</sub> eutectic system alloys, undercooling-structure relationship obs. (*Japanese*) 2-31688  
 Ti, creep behaviour, effect of cooling from  $\alpha$  range (*French*) 2-51980  
 Ti-B eutectic system, crystn. at ultrahigh cooling rate 2-41600  
 V-B eutectic system, crystn. at ultrahigh cooling rate 2-41600  
 Zr-B eutectic system, crystn. at ultrahigh cooling rate 2-41600

**cooling, splat** *see splat cooling***cooling towers**

- see also water supply*  
 crossflow, plastics corrugated sheet arrangement for use as heat transfer packing 2-29988  
 natural-draught cooling tower emissions, atmospheric impact assessment 2-37476

**Cooper Hewitt lamps** *see mercury vapour lamps***Cooper pairing** *see Cooper pairs***Cooper pairs**

- see also BCS theory; Josephson effect*  
 antiferromagnetic superconductor, one-dimensional, electron pairing in homogeneous mag. field 2-51369  
 BCS pairing theory, quasiclassical Green's function 2-26546  
 fermions, quartic self-interaction in four dimens., Cooper pair formation 2-6960  
 microbridges, long and short, Cooper pairs, chem. pot. 2-31085  
 nonequilibrium supercond., depairing influence on charge imbalance 2-36246  
 normal-superconductor system, order parameter, spatial depend. 2-13244  
 one-dimensional metal, competition between supercond. and insulating phases 2-21574  
 proximity sandwich, Cooper pair current tunnelling 2-51376  
 scattering in superconducting state, theory 2-46196  
 superconductors with impurities, Cooper electron pairing (*Russian*) 2-51370  
 thermoelectric effects in superconductors, review 2-26551  
 transition metals, magnetic and nonmagnetic, p-wave superconductivity 2-31002  
 Al filament, crit. pair-breaking current far below T<sub>c</sub> 2-36292  
<sup>3</sup>He, superfluid B-phase, zero sound propag., soliton solns. 2-1692  
<sup>3</sup>He-<sup>4</sup>He mixtures, superfluidity proximity effect 2-21422

**coordination complexes**

- inorganic complexes are indexed under the appropriate metal compound headings*  
 molecular states, relativistic core calcs., X $\alpha$  scattered wave method 2-15723  
 rare-earth ion to ligand spin-density transfer, theory 2-51132  
 SIMS extension 2-14032

**copolymerisation** *see polymerisation***copper***see also nuclei with .....*

- [110] surface, high temp. dislocation internal friction (*Russian*) 2-1486  
 acoustic pulse generation, influence of temp. dependence of light absorption coeff. on pulse shape 2-5189  
 adsorbed CO, S, and methanol on (100), surface vibr. modes, EELS study 2-17581  
 adsorbed CO isotopic mixture overlayers on (111) and (001) surfaces, collective vibr. modes 2-12903  
 adsorbed Xe ordered layer, He atom scatt. with energy anal. 2-41482  
 adsorption, competitive, of Cd, Cu, Zn and Pb on amorphous Fe<sub>2</sub>O<sub>3</sub>.H<sub>2</sub>O 2-35887  
 adsorption of benzotriazole, isotherm 2-45711  
 adsorption of CO, refl. absorpt. IR spectroscopy study, book contrib. 2-41370  
 adsorption of ethylene and acetylene, AES study 2-51002  
 adsorption of I on (001) surface, charge state, XPS study 2-41494  
 L-alanine:Cu(II), nuclear quadrupole coupling tensor and hyperfine coupling tensor, ENDOR spectra 2-36476  
 alkali halides with Ag, Cu additives, A<sub>F</sub>-centres, luminesc. linear polarisation obs. 2-36689  
 anode, vacuum gap thermal processes, electric breakdown 2-12417  
 anodic dissolution and cathodic deposition, Fe (II) ions effect 2-13659  
 arc in air, NO<sup>+</sup> behaviour study (*Japanese*) 2-25671  
 atmospheric corrosion, chronological prediction (*Czech*) 2-9456  
 atom, collisional line broadening and shift, emission line 2-20003  
 atom, laser-active level excitation efficiency in electric discharges 2-49742  
 atom level structure calcs. 2-29516  
 atom near 3p threshold, photoabsorpt. and photoemission, CI and inelastic scatt. effect 2-11442

**copper continued**

- atomic, photoabsorpt. and photoemission with reson. two electron excitation 2-34583  
 atomic absorption, optogalvanic reson. detect. 2-2744  
 atomic clusters, struct. ab initio SCF calcs. 2-4435  
 atomic clusters, struct. ab initio SCF calcs. 2-7694  
 atomic vapour, two-electron satellites 2-11441  
 atoms, excited state radiation lifetimes investig. 2-49338  
 atoms, L<sub>2,3</sub>M<sub>4,5</sub>M<sub>4,5</sub> principal and satellite Auger spectra 2-49356  
 atoms and clusters, matrix isolated, UV photoemission study 2-24661  
 atoms and solid, binding energy, Auger and photoelectron spectra 2-34367  
 atoms isolated in various matrices, UV-visible spectra 2-49319  
 Auger effect, XUV spectra model, comparison with photoemission data 2-9228  
 band struct., angle-resolved photoemission study 2-31605  
 band structure calc., pseudopotential method, interpolation scheme 2-16984  
 Bauschinger effect, pure and dispersion hardened specimens 2-2548  
 bicrystals, deformed, grain boundary effects 2-51973  
 bicrystals, mech. behaviour in plastic deform. 2-2558  
 cathodes, thermal instability, electrical breakdown 2-12416  
 chemisorbed CO, Auger spectra 2-51003  
 chemisorption of halogen on Cu and Ag clusters, He I photoemission spectra obs. 2-35886  
 clusters, electronic struct., HF and LCAO X $\alpha$  calcs. 2-49287  
 coated steel wire, composite metal technology, joining processes and appls. 2-36814  
 coating materials of metal hollow O-ring 'Sureket' (*Japanese*) 2-19118  
 cold worked, low cycle fatigue strength 2-17723  
 compact, sintering, effect of compacting pressure and temp. (*German*) 2-13676  
 conduction electron spin flip scatt. by impurities 2-51462  
 corrosion in SO<sub>2</sub>, pure and pre-oxidised specimens, 500-950°C 2-27336  
 creep and cavity growth at low stresses 2-51975  
 crystal, bent, elec. resistivity, annealing effect electrical resistivity of bent crystals, pulsed annealing study 2-13827  
 cyclic damage mechanism, interactions at elevated temps. 2-47176  
 cyclic hardening behaviour, endochronic description 2-31706  
 cytosine H<sub>2</sub>O:Cu<sup>2+</sup>, high resolution <sup>13</sup>C NMR spectra 2-37498  
 Czochralski single cryst. growth, dislocation-free, thermal conditions 2-2433  
 defect prod. by neutrons at 4.7K 2-29330  
 determination in sea water by anodic stripping voltammetry with thin film Hg electrode 2-18588  
 diffusion, radiation-stimulated, in amorphous SiO<sub>2</sub> 2-40600  
 diffusion of Al along dislocations 2-8674  
 diffusion of Sb, coeffs. calc. from single meas., activation enthalpy 2-16902  
 disco, miniature Chladni pattern obs. in electron-acoustic microscopy 2-19224  
 dislocation behaviour in fatigue, strain localisation in persistent slip bands 2-5126  
 dislocation damping, dynamic 2-45191  
 dislocation induced elec. resistivity during bending 2-5386  
 dislocation pinning effects, US attenuation and vel. meas. 2-45194  
 dislocation resonance damping, temp. depend. 2-45192  
 dislocation struct. of [321] crystals grown by Bridgman method, Al addition effects (*Japanese*) 2-12603  
 dislocations, group velocity 2-12595  
 dissolution in NHO<sub>3</sub> solution, effect of local mag. field 2-41815  
 dynamic recrystallisation during hot compression (*Russian*) 2-36878  
 elastic constants, 4 to 295K 2-1546  
 electrical resist., 40 mK to 1.5K 2-26358  
 electrochemical properties, freshly formed surfaces in electrolyte solns. 2-41904  
 electrocrystallisation in presence of levelling and brightening additives, electrochem. dissolution of single crystals 2-31833  
 electrodeposition in electrochemical system containing nematogenic cpd. 2-17898  
 electrodes, metal-halide vibrs., surface enhanced Raman spectrosc. 2-36625  
 electrodes, Ni coatings, for wear and corrosion resistance 2-22373  
 electroless plating, meas. of instantaneous rate by electrochem. method 2-6041  
 electromigration in Bi<sub>2</sub>Se<sub>3</sub>, effective ion charge, temp. and elec. cond. depend. 2-35749  
 electromigration in Bi<sub>2</sub>Te<sub>3</sub>-Sb<sub>2</sub>Te<sub>3</sub>, effective ion charge, temp. and elec. cond. depend. 2-35749  
 electron backscattering by polycryst., 0.3 to 1.2 MeV calcs. (*French*) 2-5781  
 electron bombard., Bordoni relax. processes, dislocation classes 2-41657  
 electron irradi., dislocation-point defect complexes stability, Bordoni effect study 2-45186  
 electron irradiated, atom displacement threshold energy, nucleation and growth of dislocation loops, electron microscopy obs. 2-25933  
 electron irradiated, cathodoluminescence study 2-46786  
 electron irradiated, internal friction, oxidising and reducing anneals effect 2-47078  
 electron-dislocation scatt. relax. time anisotropy 2-45943  
 electron-electron interaction and single-particle props. 2-40775  
 electronic band struct., angle-resolved photoemission study 2-27054  
 electronic struct. of non-mag. impurities 2-35963  
 electroplated coating on PrNi<sub>5</sub>, effect on thermal cond. 2-35996  
 electroplating, for electronics 2-2719  
 electrorefining and electrowinning using Cu (I) solns., energy considerations 2-22469  
 electrowinning circuits, current efficiency, Cu<sup>+</sup> conc. profile effect 2-13660  
 electrowinning circuits Cu<sup>+</sup> conc., time and position depend. 2-13965  
 energy dispersion. relations, photoemission spectroscopy (*German*, 2-17598  
 energy-loss straggling of protons, deuterons and  $\alpha$ -particles 2-43736  
 EXAFS, automatic background removal 2-2368  
 EXAFS, calc. by regularisation and Fourier transformation method 2-22116  
 EXAFS, many-body effects 2-17573  
 extended ELS fine structures above M<sub>2,3</sub> edges 2-27038  
 fatigue, high temp., form. of boundary serrations and cavities 2-41733  
 fatigue at low amplitudes, anelastic study 2-47169



## copper continued

- fatigue hardening, mechanisms in single crystals, effect of strain amplitude and orientation 2-27186  
 fatigue hardening and nucleation of persistent slip bands 2-51933  
 fatigue life, high cycle, single crystals, tested under plastic-strain controlled conditions 2-27277  
 fatigue testing, HF reson. freq. changes due to plastic deform. and crack initiation 2-41821  
 fatigued single crystal, void formation, positron annihilation meas. 2-35485  
 Fermi level shift study by X-ray absorpt. spectroscopy 2-1812  
 film, adsorbed pyridine, surface enhanced Raman scatt. 2-36614  
 film, epitaxial growth on PbS(111), RHEED study 2-5326  
 film, evaporated, mech. props. (Japanese) 2-26263  
 film, magnetron sputtered, electron beam ionisation effects 2-51804  
 film, negative magnetoresistance 2-30977  
 film, on C, growth in TEM, statistical anal. of successive stages 2-40704  
 flow stresses in prestrained annealed samples 2-31763  
 foil, sputtering by heavy-current pulse arc in coaxial vaporiser (Russian) 2-9234  
 foils and plated wires, electron emission study using flash X-ray spectrum 2-31602  
 fracture kinetics, role of surface energy at boundary with liq. Bi-Pb 2-41742  
 friction and wear, using high-vacuum machine (Japanese) 2-5963  
 galvanokinetic behaviour, in  $\text{Na}_2\text{PO}_4\text{-NaCl}$  aq. soln. 2-47227  
 glide system selection, activated at low stresses 2-5129  
 grain boundaries, anisotropy of Bi segregation 2-40416  
 halide laser pumped by vac.-tube and thyatron oscillators 2-4496  
 hardness indentations, refl. X-ray topography in single crystals 2-41851  
 heat resistance, elec. cond. and strength 2-27244  
 high press. eqn. of state 2-50824  
 imidazole: $\text{Cu}^{2+}$ , high resolution  $^{13}\text{C}$  NMR spectra 2-37498  
 intergranular crack nucleation and fracture 2-27261  
 internal friction, high temp., and dislocation motion 2-45352  
 internal friction background and peaking effect in electron irradi. cryst. 2-45339  
 internal friction peaking effect, lattice dynamics model 2-45346  
 interstitial atom trapping and D localisation at  $^{57}\text{Co}$  impurities in Cu 2-30484  
 intraocular foreign Cu bodies, extraction using pulsed mag. fields 2-2914  
 ion bombarded, secondary ion emission, incident ion energy depend. 2-27044  
 ion implanted, diffusion of Al 2-12847  
 ion laser, hollow cathode, UV and IR operating characs. 2-15985  
 ion-induced secondary-electron yield, ang. depend. 2-17588  
 IR absorption coeff., pseudopot. calc. (Russian) 2-22012  
 isoelectronic series spectra,  $\text{Ba}^{2+}$  to  $\text{W}^{45+}$ , wavelengths, energy levels and ionisation energies 2-24634  
 jumplike deformation during low temp. creep, rel. to supercond. 2-22292  
 K-shell fluorescence and photoionisation in elements  $28 \leq Z \leq 53$  2-29549  
 K-shell ionisation by protons 2-43875  
 Lake Mariut, Egypt, heavy metal pollutants in water and fish 2-52399  
 lattice defect-impurity configuration, geometrical struct. determ. by TDPAC 2-31354  
 lattice dynamics, phonon dispersion rel. 2-35614  
 liquid, deoxidation, electrocond. increase by Mg and Ar injection, inclusion obs. (Rumanian) 2-47197  
 liquid, effective pair potential and thermodynamic props. 2-45015  
 liquid, electrical resist., mean free path and multiple scatt. corrections 2-5379  
 liquid, infiltration into sintered Fe and Fe- $\text{Al}_2\text{O}_3$  compacts (Japanese) 2-27117  
 liquid, surface tension, effect of O 2-8691  
 loaded Rayleigh waves on lightly loaded interfaces, damping, appl. to Kapitza conductance 2-12900  
 low field Hall effect, size effects 2-36012  
 matrix for Fe-Co FCC particles, ferromag.-antiferromag. transition 2-13294  
 Matthiessen's rule deviations in high purity Cu 2-17045  
 microspheres, surface local fields, rel. to enhancement of Raman scatt. and fluoresc. emission 2-13480  
 mirror, laser irradi., surface damage, brightness reflectivity and SEM study 2-49801  
 mirror, laser-induced pitting at 10.6  $\mu\text{m}$ , surface prep. method effect 2-7816  
 mirrors, optical effects of energetic Cu-ion irradi. 2-25942  
 neutron irradiated, slip band form., yield and stage I deform. 2-41709  
 NMR, radioactive detected, on brute force oriented  $^{111}\text{In}$  in Cu 2-36451  
 nonstationary vaporisation regime on electron beam irradi. (Russian) 2-1605  
 nuclear magnetic susceptibility below 1  $\mu\text{K}$ , orientation depend. 2-36331  
 nuclei, transition temp. to mag. ordered state 2-36345  
 nuclei, transition temp. to ordered state 2-36352  
 on the ion bombardment induced cone/pyramid apex angle 2-13606  
 optical props., empirical band calc. 2-21970  
 ordered layers of Co on (111) surface, mag. exchange splitting, photoemission spectra study 2-51403  
 oxidation in reversing rubbing 2-5986  
 PC electroless Cu bath, continuous regeneration by electromembrane cell 2-52220  
 persistent slip bands, form near regions of surface damage 2-35510  
 phonon dispersion relations, phenomenological models 2-45435  
 phonon frequencies in off-symmetry directions 2-50804  
 photoeffect cross sections at K-edges 2-7525  
 photoelectron emission spectroscopy, ang. resolved, appl. to bulk and surface props. of metals 2-41500  
 photoemission, angle-resolved, KKR-CPA treatment of disorder 2-9248  
 photoemission intensity calcs. for (111) surface 2-22148  
 pipes flooded with liquid  $\text{N}_2$ , cooling down expt. on models 2-185  
 plasma, expanding, recombination laser transitions 2-39627  
 plastically deformed, dislocation struct., US investig. 2-45190  
 plastically deformed, temp. depend. of US velocity to evaluate internal stresses 2-17835  
 plastically deformed, unsuitability of Wiedemann-Franz law 2-36003  
 point defect-impurity interactions 2-21165  
 polycrystalline, dynamic tensile testing by rot. hammer (Polish) 2-9503  
 polycrystals, cyclic stress-strain curve 2-35570  
 polycrystals of cubic symm. ultrasonic wave propag. with allowance for multiple scatt. 2-5188  
 positron lifetimes meas. in isochronal annealing of fatigued Cu 2-51738

## copper continued

- powder, anal. of mass-transport mechanism in initial stage of sintering 2-46974  
 powder, X-ray diffr. profile shape approx. using ternary convolution 2-12427  
 powder compacts, deform. induced changes in density 2-13672  
 pressure-volume relations and elastic consts. under press. 2-1545  
 projectile, cylindrical, normal impact against massive steel anvil at low velocity 2-27225  
 prolonged extension, creep contrib. (Polish) 2-27215  
 protection against oxidation of first Cu layer prior to second evaporation 2-52098  
 pseudopotential study of energy gaps and resistivities 2-26282  
 radiation induced displacement cascades, spatial characs. 2-16674  
 rapidly cooled crystals, etch peak form. on (111) surface, optical and electron obs. (Japanese) 2-12604  
 recrystallisation, solute effect, comparison of single crystals and polycrystals. 2-22244  
 recrystallisation temperature (Japanese) 2-51936  
 resonant photoemission study 2-46869  
 ribbon substrate for Sn-Pb sputtered coating, struct., phase composition (Russian) 2-5812  
 Rochelle salt: Cu single crystals, optical props. 2-46652  
 rods, impact on target, plastic deformation and microstruct. 2-51982  
 s-p bands, angle-resolved photoemission study 2-17604  
 Saguenay fjord sediment, Hg, Cu, Pb, Zn spatial and temporal var. 2-14452  
 seawater composition in near-surface N Pacific and N Atlantic 2-18470  
 shear bands in rolled single crystals 2-27254  
 sheet, cold-rolled texture development, three dimensional representation (Russian) 2-5892  
 sheets, well-developed preferred orientation, biaxial stretching, effect of grain anisotropy 2-9379  
 silicate glass: Cu, high  $\text{SiO}_2$  content, nature of colour centres of Cu-ruby type 2-9199  
 single crystal, Young's modulus low temp. peak 2-47080  
 single crystal, substruct. stabilisation by particles of a second phase (Russian) 2-51910  
 sintered, low freq. phonons, Young's modulus and sound vel. meas., rel. to Kapitza resist. with liq.  $^4\text{He}$  2-45520  
 sintered, porous, grain growth mechanism (Japanese) 2-2476  
 slip and fatigue, single crystals, in air and in vacuum 2-9396  
 solar absorbing films, in-line sputter coating plant fabricated, props. 2-2807  
 solar selective absorber, sputter etched, for high temp. thermal collectors 2-22653  
 spalling fracture, crit. stress depend. on loading time 2-13803  
 specific heat press. depend. 2-1634  
 specific volume, influence of Ni additions 2-35445  
 spin-orbit interaction pseudopot. parameters 2-1873  
 sputtered atoms energy distrib. calc. under low-energy-Ar bombardment 2-13605  
 sputtered film, effects of Ar pressure on struct. 2-8729  
 sputtered-film, struct. and props., Ar press. and substrate temp. depend. 2-1787  
 sputtering, Ar ion bombardment induced hypersonic shock waves, computer simulation 2-2394  
 sputtering rate meas. for 10 keV  $\text{O}_2^+$  ions with ion microanalyzer 2-41475  
 sputtering yield of polycrystalline Cu, effect of channelling 2-17590  
 stacking fault energy, temp. depend. from X-ray peak shift meas. 2-1496  
 stress corrosion cracking, in  $\text{NH}_4\text{OH}$  solns. 2-9453  
 stress waves, laser induced, damping 2-16716  
 substrate for Cr evaporated film, atm.  $\text{O}_2$  effect, SIMS study 2-1786  
 substrate for Ni electrodeposit, surface conditions effect on microstruct. 2-26258  
 substrate for Ni overlayer, surface magnetism 2-2115  
 substrate for Zn electrodeposition from zincate solns. 2-26245  
 sulphidation inhibition by B implantation 2-27322  
 surface, (100), adsorbed ethene vibr. excitation and struct. 2-49362  
 surface, (100), adsorbed  $\text{H}_2$ ,  $\text{D}_2$ , HD, rot. transitions, EELS study 2-46843  
 surface, (117), diffr. of Ne atoms 2-9236  
 surface, (117), diffraction of thermal beam of Ne atoms (French) 2-36752  
 surface, (311), LEED crystallographic anal., comparison of Zanazzi-Jona and Pendry reliability indices 2-45692  
 surface, adsorbed Co, reconstruction, CDW, surface mag. and  $\text{O}_2$  adsorption 2-12911  
 surface, adsorbed species, EELS study 2-22127  
 surface, amorphous and crystalline, Pt adsorption, mol. dynamics study 2-8709  
 surface, CO adsorption, surface state energy shifts 2-36122  
 surface, LiF and  $\text{MgO}$  covered, time of flight studies of positron interactions 2-9220  
 surface, magnetron co-sputter etching, solar selective absorbing appl. 2-2617  
 surface, non-normal incidence ion bombarded, development of tailed-cones 2-16685  
 surface, precision diamond-machined, pulsed laser-induced melting at IR wavelengths 2-9226  
 surface (001), clean and with adsorbed CO and Xe, off-specular coherent and incoherent elastic scatt. of He 2-2396  
 surface (001), k-resolved inverse photoemission, UV isochromat spectra 2-46811  
 surface (100), adsorbed methoxide, vibr. damping, IR spectra study 2-45707  
 surface electron states 2-1979  
 surface plasmon, dispersion curves, optical props., ATR spectra 2-17132  
 surface structure, mechanically polished, TEM study 2-41844  
 surface temp. distrib. rel. to high-power US heating, thermographic investigation, sites of rapid localized heating 2-16177  
 tensile stresses under dynamic tension 2-50763  
 TGS: $\text{Cu}^{2+}$ , ferroelec. transition, US velocity and absorption, doping effects 2-16727  
 TGS:Cu,  $\alpha$ -alanine, spontaneous polarisation and internal field 2-51521  
 thermal expansion coefficients meas. using interferometric dilatometer (Japanese) 2-19081  
 thin film, electrical and mechanical properties of thin metal films: Size effects, review 2-51348  
 thin film, magnetoresistance study 2-46160



## copper continued

- thin overlayer on Ni (111), thermal stability study 2-1791  
 thymine:Cu<sup>2+</sup>, high resolution <sup>13</sup>C NMR spectra 2-37498  
 torsion test specimen, dynamic anal., incl. heat conduction and plastic flow 2-30513  
 ultrasonic waves damping factors, rel. to microstruct. 2-13880  
 unipolar arc erosion rates measured using an ion beam activation technique 2-30522  
 uracil:Cu<sup>2+</sup>, high resolution <sup>13</sup>C NMR spectra 2-37498  
 US attenuation temp., depend., plastic deformation effects 2-45409  
 vacancy effects from enthalpy and heat capacity data 2-35487  
 vacuum arc, cathode-fall region 2-8379  
 vapour, dense, discharge and lasing characteristics 2-29809  
 vapour laser, 1.5 litre active volume, mean output power and emission pulse energy 2-16029  
 vapour laser, electron beam controlled discharge 2-44342  
 vapour laser, limiting mean power output 2-4489  
 vapour laser, multiparameter optimisation 2-34731  
 vapour laser, reson. wavefront reversal in active medium containing Cu vapour 2-44405  
 vapour laser, stimulated emission radial characts. 2-898  
 vapour laser, transverse-discharge 2-49739  
 vapour laser (*Chinese*) 2-20290  
 vapour laser operation, transverse and longitud. discharge modes 2-25036  
 vapour laser pumping of LiF laser 2-16004  
 vapour lasers radiation influence on dyes lasing 2-4504  
 vapour obtained using pulsed light source evaporation and condensation mechanism 2-16228  
 wear, mechanicochem., surface layers struct. and comp. 2-17741  
 wear of single crystal under 90° impact 2-22341  
 wear surfaces investigation by electrode potential method 2-41761  
 whiskers, stress-strain curves rel. to lattice distortions, X-ray topography obs. 2-35913  
 wire, fine, electroplastic drawing, reduction in breaking tendency (*Russian*) 2-9393  
 wire, nondestructive monitoring by eddy-current method 2-2640  
 wire, rupture by MHD instability, luminesc. 2-26999  
 X-ray absorption spectrum using synchrotron radiation 2-23799  
 X-ray induced electron emission meas. 2-31601  
 X-ray K-absorption edge shifts due to chem. combination 2-2369  
 XANES obs. 2-22115  
 Z 2-9378  
 zinc thiocacetate:Cu<sup>2+</sup>, EPR spectrum, g-tensor and hyperfine parameters 2-51455  
 Ag halide:Cu photochromic glasses, effects of electron-hole separation on recomb. probability 2-5415  
 Al, cryst. plates, numerical calc. of isotherms during growth by Bridgman method 2-25787  
 Al:Cu, ion implanted, pulsed laser irradiation, Cu redistrib., thermal diffusion role 2-45250  
 Al:Cu thin films diffusion coeff., influence of noise driving force 2-1652  
 Al/Cu bimetallic thin film couple, interfacial reaction, contact resist. meas. 2-50931  
 Al/Cu conductor stripes with polyamide passivation, electromigration 2-26149  
 Al/NbTi-Cu composite conductor, nonlinear stresses and relative displacements, finite element model 2-13789  
 Al/NbTi-Cu composite supercond. for tokamak toroidal field coils 2-11273  
 Al-Cu bimetal wire conductor, elec. resistivity stability, operating conditions effect 2-51145  
 Al-Cu-Al system, backscattering of 4 to 30 keV electrons 2-41468  
 Au-Cu thin film diffusion couples, diff. profiles 2-26145  
 Au-mica-p-Tc:Cu film MIS struct., field effect studies 2-41017  
 BaO-V<sub>2</sub>O<sub>5</sub>:Cu glass, elec. cond. and EPR spectra 2-46365  
 BaS:Cu, Bi phosphors, elec. cond. 2-51166  
 (Ca,Ba)S:Cu,Nd phosphor, electrolum. behaviour 2-22093  
 CaO:Cu, Cu<sup>2+</sup> ion pairs, EPR study 2-46369  
 Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>:Cu, β- and high-pressure phase, EPR study (*French*) 2-26734  
 CaS:Nd, Cu, electroluminesc., temp. depend. 2-31558  
 Cd aluminophosphate glass: Cu<sup>2+</sup>, ESR study 2-31274  
 Cd<sub>3</sub>As<sub>2</sub>:Cu, transport props. study 2-40943  
 CdS:Cu, Cl, activated phosphors, radiative and nonradiative recomb. centre struct. photoluminescence obs. 2-35966  
 CdS:Cu, Cl, elec. props. and imaging characts. in xerographic mode 2-23752  
 (CdS)<sub>2</sub>(ZnS)<sub>1-x</sub>:Cu, Cl, sintered layers, photocond. and acceptor centre levels 2-13138  
 CdTe:Cu high-resolution electron microscopy obs. of defects, coherent precip. and faulted loops 2-5120  
 CoSiF<sub>6</sub>.6H<sub>2</sub>O:Cu<sup>2+</sup>, phase transitions, EPR study 2-46367  
 Cs<sub>2</sub>Na<sub>2</sub>A:Cu<sup>2+</sup>, location and movement of paramagnetic Cu<sup>2+</sup> on dehydration studied by electron spin echo modulation anal. 2-2124  
 Cu and Cu/Ni layers, multiple twinning and recrystn. 2-31709  
 Cu II, excited state radiation lifetimes investig. 2-49338  
 Cu II hollow cathode laser characts. 2-15989  
 Cu in liq. Hg, lifetime-under-load and fracture kinetics 2-36971  
 Cu, STEM/X-ray microanalytical study of Bi equilib. segregation 2-31699  
 Cu, specific resistivity meas. in temp. range 20-150°C, temp. depend. (*German*) 2-38663  
 Cu surface (111) states, dislocation annihilation luminesc. 2-46793  
 Cu, surface enhanced Raman scatt. from adsorbed pyridine, triphosphene and ruthenium red 2-5704  
 Cu vapour laser, active medium gain investigation 2-34736  
 Cu<sup>2+</sup> adsorption on PbS, rest. pot. and surface photovoltage changes 2-41008  
 Cu<sup>2+</sup> electron spin echo on SiO<sub>2</sub> gel surfaces, interaction with H<sub>2</sub>O and NH<sub>3</sub> adsorbates 2-9028  
 Cu<sup>2+</sup>, ground state wave function in rhombic cryst. field 2-8778  
 Cu<sup>2+</sup> ions, config. mixing and cryst. field splitting 2-26342  
 Cu:<sup>111</sup>In, channelling and gamma-ray spectra 2-50730  
 Cu:<sup>115</sup>Sn, Mossbauer study of force const. change 2-26794  
 Cu:Al ion implanted film, corrosion inhibition, Rutherford backscatt. study 2-47228  
 Cu:Mg, internally oxidised, diffusivity and solubility-diffusivity product 2-12816  
 Cu:Mg ion implanted film, corrosion inhibition, Rutherford backscatt. study 2-47228  
 Cu:N(Ne), ion implanted, fatigue and internal friction 2-47182

## copper continued

- Cu:O thin film, RF impedance of superconducting and normal states 2-36185  
 Cu:P, anodic dissolution, composition of black anodic film (*Russian*) 2-21454  
 Cu:P, electropolishing in H<sub>3</sub>PO<sub>4</sub> solns. (*Russian*) 2-22371  
 Cu/Cr thin films, shear stress and adhesion to substrates 2-5334  
 Cu/Cu-Ni junction, schock compression relaxation obs. by EMF 2-8570  
 Cu/CuSO<sub>4</sub>/Cu system, natural convection and steady state conc. polarisation by laser interferometry 2-20511  
 Cu/Nb superlattices, SAW anomaly, Brillouin scatt. meas. 2-40663  
 Cu/Ni couple, intrinsic diffusion coeffs., determ. by multiple markers method 2-40610  
 Cu/Ni foil composites, electrodeposits, 2-phase metal layer, H-diffusion (*Japanese*) 2-8672  
 Cu/Ni-Co struct., AES, digital data processing 2-22517  
 Cu-Al<sub>2</sub>O<sub>3</sub> composite coatings, factors affecting entrapment of Al<sub>2</sub>O<sub>3</sub> particles 2-2608  
 Cu-Al<sub>2</sub>O<sub>3</sub> dispersion strengthened, strengthening and mech. props. study 2-22309  
 Cu-araldite-Cu struct., current generation by phonon drag (*Russian*) 2-17170  
 Cu-CdS Schottky barriers, exciton refl., absorpt., and photoluminesc. spectra 2-36668  
 Cu-Fe composites, cold worked in-situ, microstructural strengthening 2-41629  
 Cu-Fe thermocouple cross effects of thermoelectricity 2-26366  
 Cu-insulator-Cu struct., transmitted phonon drag obs. 2-36150  
 Cu-Mo bimetallic electrode under ultrahigh vacuum, dynamics of cathode processes 2-6040  
 Cu-Mo layer composite form. by sputter deposition 2-12943  
 Cu-Si(111) interface, photoemission study 2-9244  
 Cu-Sn thin film diffusion couple, Marker shift obs. by AES 2-50932  
 Cu-solid <sup>3</sup>He interface, thermal boundary resist., <sup>3</sup>He nucl. spin relax. study 2-30711  
 Cu-V<sub>2</sub>Ga composites, in situ prep., supercond. and mech. props. 2-13263  
 Cu+Fe collisions, K-shell X-ray prod. probability, target thickness effect 2-33697  
 Cu+H<sup>+</sup>, K-shell ionisation, total and differential cross sections meas. 2-44039  
 Cu+H<sup>+</sup>, K-shell ionisation, impact parameter depend. 2-44042  
 Cu+PN interactions, ab initio MO calcs. 2-13946  
 Cu, electronic struct., Hartree-Fock-Slater calcs. 2-43798  
 Cu<sub>1-x</sub>Fe<sub>x</sub>Rh<sub>2</sub>S<sub>4</sub>, thiospinels, Mossbauer spectra, lattice constants, seebeck coeff. 2-51508  
 CuII UV laser optimisation 2-15986  
 Cu<sub>2</sub>Se-Cu phase equil. curve refinement, coulometric titration and thermo-EMF meas. 2-40520  
 Cu(100), of methoxide, CH stretch vibr., IR spectra 2-20051  
 FCC, reson. vibrs. of self interstitials, appl. to neutron scatt. and sp. ht. 2-45432  
 Fe-Cu multilayer condensate, high temp. creep study 2-13785  
 Fe-graphite-Cu rolled strip, appl. to mating parts of friction and wear testing apparatus 2-41854  
 FeSiF<sub>6</sub>.6H<sub>2</sub>O:Cu<sup>2+</sup>, phase transitions, EPR study 2-46367  
 GaAs:Cu, heat treated substrate, photoluminescence props. studies 2-13531  
 GaAs/Cu contacts, metal diffusion, penetration depth, SEM and microprobe anal. 2-40701  
 GaP:Cu, photoluminescence spectrum 2-46694  
 GaP:Cu, TSC trace, estimation of capture cross sections 2-13007  
 GaP:Cu, triplet exciton recombination at 1.91 eV, ODMR study 2-46433  
 GaSe:Cu, defect level analysis, photoluminescence spectra 2-9184  
 Ge:Cu, defect levels, H passivation, DLTS study 2-51108  
 Ge:Cu, gamma-ray induced defect formation 2-40437  
 Ge,Se<sub>1-x</sub>Y:Cu glasses, photocond. and elec. cond., dopant effects 2-36089  
 Hg<sub>0.8</sub>Cd<sub>0.2</sub>Te:Cu, defect struct., Hall effect study 2-46031  
 HoCo<sub>5</sub>:Cu<sub>x</sub>, magnetisation reorientation and anisotropy 2-26670  
 n-InP:Cu, homogeneously compensated, electron mobility at low electron density 2-26390  
 KCl:Cu<sup>2+</sup>, absorption spectrum, MS-X, method 2-31531  
 LiF:(Mg,Cu,P), TLDs, sensitivity to LET irradi. (*Japanese*) 2-5757  
 LiNbO<sub>3</sub>:Cu, X-ray induced luminesc. 2-26977  
 NaCl:Cu, exoelectron emission during thermal annihilation of V<sub>K</sub> centres 2-17610  
 Nb/Cu multilayers, X-ray scatt., resist., and supercond. transition temp. 2-40741  
 Nb-Nb<sub>2</sub>O<sub>5</sub>-Cu/Pb proximity junctions, order parameter, spatial depend. 2-13244  
 Nb-Ti/Cu composite superconductor, formvar coated, supercond. recovery from postquench conditions 2-8911  
 Ni-Cu metallisation system for Si solar cells 2-37287  
 Ni-Cu multilayer condensate, high temp. creep study 2-13785  
 Ni-Cu thin films, interdiffusion study by mag. methods 2-26146  
 Ni<sub>2</sub>MnCu, Al, saturation magnetisation, magnetostriction 2-26649  
 O activity, electrochem. meas. 2-8647  
 Pb/Cu bimetallic thin film couple, interfacial reaction, contact resist. meas. 2-50931  
 Si:Cu, deep levels, quasi-band-struct. representation 2-40828  
 Si:Cu epitaxial layer, precipitation, STEM microanalysis study 2-30610  
 SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-K<sub>2</sub>O:Cu<sup>2+</sup> glasses, diffusion layers prod. by ion exchange, EPR and optical study 2-13332  
 Sr<sub>0.8</sub>Ba<sub>0.2</sub>Nb<sub>2</sub>O<sub>6</sub>:Cu, ferroelec. ceramics, spectral photovoltaic response 2-26431  
 Sr<sub>0.8</sub>Ba<sub>0.2</sub>Nb<sub>2</sub>O<sub>6</sub>:Cu ceramics, ageing study through photovoltaic effect 2-26432  
 Sr<sub>2</sub>Cu<sub>2</sub>Gd<sub>2</sub> phosphors, photo- and electro-luminescence 2-51709  
 Ta-Cu-Ta sandwiches, elec. field penetration near normal-supercond. interface 2-36237  
 W-Cu reinforced Nb<sub>3</sub>Sn composite superconductor, stress effects 2-8930  
 ZnO:Cu, photoluminescence, vibronic struct. 2-41410  
 ZnS:Ag, Cu, Cl phosphor powders, prep. and blue electroluminesc. 2-26992  
 ZnS:Cu, Ce, phosphorescence decay and thermolum. study 2-22099  
 ZnS:Cu, Ce phosphors, photoelectroluminesc. 2-13564  
 ZnS:Cu, Cl crystal phosphor, localised surface state spectroscopy 2-17131  
 ZnS:Cu, yellow emission of Cu centres, band shift, activator conc. depend. (*German*) 2-31541  
 ZnS:Cu,Al luminophors, energy spectrum of traps 2-46789



## copper continued

- ZnS:Cu,Gd, electroluminescent, optical props. 2-36708  
 ZnS:Cu,Mn, mechanism of Cu-induced hexagonal-cubic transformation 2-12725  
 ZnS:Cu,Nd,Cl film, laser phenomena in direct current electrolum. and cathodolum. 2-13572  
 ZnS:Cu phosphor, relation between lattice parameter and particle size 2-22092  
 ZnS:Cu single crystals, solubility of Cu<sub>2</sub>S, struct. characts. and mech. prop. anisotropy 2-12674  
 ZnSe:Cu, IR absorpt., defect accumulations 2-5667  
 ZnSe:Cu<sup>2+</sup>, optically detected mag. resonance study 2-36480  
 ZnSe:Cu(Cu,In)(Cu,Cl), luminesc. centres, activation energy of form. 2-41392

## copper alloys

see also brass; copper compounds

- Alnico 5 with Nb additions, columnar, permanent mag., mag. props. 2-17316  
 bronze, mangetoresistance, 77 to 300K 2-36017  
 bronze, single-phase, electropolishing in  $\alpha$ -H<sub>3</sub>PO<sub>4</sub> 2-27353  
 bronze, sintering, model of variation of specific surface area 2-46965  
 Copel thermocouple, uniformity improvement of thermoelectric props. 2-23634  
 dilute alloys, recrystn. temp. (Japanese) 2-51936  
 dilute impurity binding energy, correlation with heat of formation 2-1497  
 dynamic compression diagrams, method for determ. at elevated temps., alloy M1 2-41855  
 fracture, high temp., role of grain boundaries 2-41732  
 Heusler alloy, vacancy conc. and ordering (Japanese) 2-47023  
 intergranular penetration mechanism, when Cu alloys deposited on steel 2-50929  
 joints, welded and glued, strength under dynamic tensioning, alloy M1 2-41701  
 M1, spalling fracture, crit. conditions, temp. effects 2-13802  
 Manganin gauges, use in shock reverberation expts. 2-2648  
 mischmetal-Co-Cu-Fe-Mg alloys, mag. props. for permanent magnet application 2-41164  
 Monel 400, nuclear steam generator materials, pitting corrosion studies 2-4018  
 Monel 400 steam generator tubes, low cycle fatigue 2-15503  
 rare earth alloy, R<sub>2</sub>CuTi, cryst. chem. and cryst. struct. 2-8473  
 rare earth alloys, R<sub>2</sub>CuAl<sub>6</sub>, magnetism, spin relax. and hyperfine interactions 2-36484  
 rare earth ternary alloys, R<sub>2</sub>CuSi<sub>2</sub>, mag. disorder resist. 2-17058  
 rare earth ternary alloys, R<sub>2</sub>CuSi<sub>2</sub> (R-Nd, Dy, Ho, Er, Tm, Y, La), magnetisation and mag. susceptibility meas. 2-46259  
 recrystallisation, solute effect, comparison of single crystals. and polycryst. 2-22244  
 resistance to piercing, temp. effect 2-27283  
 strength and elec. props. optimisation by alloying additions (Polish) 2-27180  
 superplastic, microstructural exam. of flow behaviour 2-13778  
 Ti-Cu film, elec. resist. and impedance 2-36160  
 Ag-Au-Cu liquid alloys, surface tensions 2-45685  
 Ag-Cu, dil., electron irradiated, free migration of interstitials 2-35544  
 Ag-Cu, directionally solidified and deformed eutectic alloys with fibre structure, Hall effect and elec. cond. meas. 2-1893  
 Ag-Cu, point defect mobility, high-voltage electron microscopy study 2-21398  
 Ag-Cu (10 wt.%), elec., thermal, and mech. props. use as construction material in low temp. expts. 2-35995  
 Ag-Cu alloys, metastable phase microstruct. generated by continuous laser melt quenching 2-9346  
 Ag-Cu based ternary alloys, dendritic segregation (Russian) 2-22217  
 Al-Cu, 2017 alloy, features of Portevin-Le Chatelier effect (Japanese) 2-2560  
 Al-Cu, cryst. under nonequilib. conditions, phase diagrams 2-27146  
 Al-Cu, directionally solidified, meas. of cell and primary dendrite arm spacings 2-1806  
 Al-Cu, internal friction and creep rupture behaviour 2-47083  
 Al-Cu, low-field Hall effect, impurity effects 2-36011  
 Al-Cu, two-phase, plastic anisotropy in unidirectional deform. 2-2547  
 Al-Cu (14 wt.%),  $\theta'$  plates, TEM contrast (French) 2-40235  
 Al-Cu (2.5 wt.%), coarsening of  $\theta'$  plates, expt. determ. of mechanisms 2-13722  
 Al-Cu (2.5 wt.%), coarsening of G<sub>q</sub>' plates, influence of ledge mechanism 2-13723  
 Al-Cu (3 wt.%), pre-precipitate microstruct., obs. by lattice imaging technique (Japanese) 2-1448  
 Al-Cu (33 wt.%), with non-uniform cross-sections, deform. behaviour (Japanese) 2-51985  
 Al-Cu (4 wt.%), two-phase alloys, plastic anisotropy in load reversal tests 2-51976  
 Al-Cu (4 wt.%), yield stress of alloys containing plate-like precipitates, expt. and theoretical determ. 2-22271  
 Al-Cu alloy, 2024-T3, anodisation in H<sub>3</sub>PO<sub>4</sub>, AES and Rutherford backscatt. study 2-22392  
 Al-Cu alloy, elastic moduli variations due to struct. changes 2-50736  
 Al-Cu alloy D76 plates, under biaxial tension, thermomech. treatment effect on mech. props. 2-51957  
 Al-Cu alloys, effect of second-phase vol. fraction on grain size stability and flow stress during superplastic flow 2-22268  
 Al-Cu alloys, role of substitutional solute atmospheres during cyclic deform. 2-5950  
 Al-Cu liquid-phase sintering, effect of gravity (Japanese) 2-5842  
 Al-Cu porous alloy, sintered, friction and wear (Japanese) 2-22333  
 Al-Cu vapour quenched films, mech. stresses 2-5336  
 Al-Cu-Mg, polygonised struct. thermal stability, Mg effect 2-27187  
 Al-Cu-Mg (4.1, 1.4 wt.%), alloy 142, age-hardening behaviour 2-2537  
 Al-Cu-Mg alloy 2024-T3, low cycle fatigue life prediction by acoustic emission 2-52020  
 Al-Cu-Mg-Fe-Ni, superplasticity in creep (Russian) 2-5905  
 Al-Cu-Mg-Mn-Si-Fe, type D16T, nonstationary vaporisation regime on electron beam irradi. (Russian) 2-1605  
 Al-Cu-Mg-Si-Fe, internal friction and creep rupture behaviour 2-47083  
 Al-Cu-Ti, Ti effects on stress corrosion characts. 2-47240  
 Al-Mg-Ti-Cu, castings, struct. and mech. props., Na impurity effect 2-27241  
 Al-Mg-Zn-Cu alloys, stress corrosion cracking after precompression 2-13847

## copper alloys continued

- Al-Si-Cu-Zn-Mg-Ti, cryst. and struct., effect of cooling rate and Zn, Mg and Ti additions 2-1549  
 Al-Sn-Cu, solidification by rapid cooling, mechanism (Japanese) 2-9342  
 Al-Sn-Cu, solidified by rapid cooling, microstruct. (Japanese) 2-2503  
 Al-Zn-Mg-Cu alloy 7075-T6, low cycle fatigue prediction by acoustic emission 2-52021  
 Al-Zn-Cu, transform. during isochronal cooling, Cu addition influence 2-27170  
 Al-Zn-Mg-Cu, 7000 series, low cycle fatigue behaviour, effect of alloy chem. and heat treatment 2-17355  
 Al-Zn-Mg-Cu, alloy 7075-T651, effects of warm working 2-47064  
 Al-Zn-Mg-Cu, high strength, heat treatment, struct. and props. 2-27243  
 Al-Zn-Mg-Cu, slip behaviour, effect of solute content 2-47141  
 Al-Zn-Mg-Cu, stress corrosion characts., effect of heat treatment and Cu content 2-37004  
 Al-Zn-Mg-Cu (5.9, 2.6, 1.7 wt.%), fatigue crack propag., effect of microstruct. 2-9405  
 Al-Zn-Mg-Cu (6, 2, 0.01-2.1 wt.%), high strength, low cycle fatigue behaviour in T7351 condition 2-27276  
 Al-Zn-Mg-Cu (6.2, 2.5, 1.7 wt.%), type 7010, fatigue crack initiation at notches 2-27259  
 Al-Zn-Mg-Cu-Fe-Ni(Zr), struct. and mech. props., Fe with Ni or Zr addition effect 2-51991  
 Al-Zn-Mg(-Cu), Guinier-Preston zone form., early stages, neutron scatt. invest. 2-51905  
 Al<sub>2</sub>Cu crystal, simulation of melt cryst. growth (French) 2-8456  
 Au-Cu-Fe(Mn) alloys, low temp. elec. cond., scatt. mechanisms 2-35997  
 Au-Cu-Fe(Mn) spin glass, RKKY interaction, conduction electron mean free path depend. 2-46271  
 AuCu, polycrystalline film, vacuum condensate, atomic ordering, thickness depend. (Russian) 2-51020  
 Au<sub>2</sub>Cu, anomalous internal friction peak after quenching and deform. 2-47094  
 Be-Cu foil-substrate system, photoacoustic effect, substrate effects 2-30533  
 Cd-Zn eutectic alloy, phase diagram, pseudopot. method and thermodynamics 2-22198  
 Ce-Cu, amorphous, mag. susceptibility and sp. ht. 2-31201  
 CeCu, valence state of Ce, lattice const., mag. props. and X-ray absorption meas. 2-40320  
 CeCu<sub>2</sub>Si<sub>2</sub>, near-edge struct. in X-ray absorpt. spectrum 2-41455  
 CeCu<sub>2</sub>Si<sub>2</sub>, superconductivity, absence 2-46188  
 Ce(Ni<sub>1-x</sub>Cu<sub>x</sub>)<sub>5</sub>, valence state of Ce, lattice const., mag. props. and X-ray absorption meas. 2-40320  
 Co-Cu, grain size distribution during coarsening in liquid matrix (Korean) 2-41579  
 Cu/Cu-Ni junction, shock compression relaxation obs. by EMF 2-8570  
 Cu/Ni, composition modulated struct., interplanar mag. coupling, AC susceptibility study 2-36400  
 Cu-(Nb<sub>1-x</sub>Ta<sub>x</sub>), Sn supercond. in situ multifilamentary wire, crit. currents 2-8931  
 Cu-Ag alloys, discontinuous precip. reaction, invest. using electron microscopy and X-ray diff. 2-2511  
 Cu-Al, concentrated alloy, internal friction 2-45343  
 Cu-Al, dil., electronic impurity scatt. anisotropy, mag. field induced surface-state resons. meas. 2-13058  
 Cu-Al, dil., impurity diffusion study by NMR 2-41217  
 Cu-Al, dil. alloy, dislocation struct. of [321] crystals grown by Bridgman method, Al addition effects (Japanese) 2-12603  
 Cu-Al, linear dislocation multipole structures, weak beam electron microscopy obs. 2-25895  
 Cu-Al, liquid, free energy and other thermodynamic props., conc. depend. 2-12779  
 Cu-Al, stacking faults of dissociated glide dislocations 2-45205  
 Cu-Al (0.1 wt.%) single crystal, substruct. stabilisation by particles of a second phase (Russian) 2-51910  
 Cu-Al (10.1 wt.%), internal friction meas. during tempering 2-47089  
 Cu-Al (13-16 at.%), elec. and optical props., influence of short range order (German) 2-31806  
 Cu-Al (2.5 wt.%), intergranular cavitation fracture in presence of a priori crack 2-47155  
 Cu-Al (9 wt.%), microcalorimetric eval. of disordering under different mech. solicitations 2-41602  
 Cu-Al alloy, flow-softening during hot compression 2-47118  
 Cu-Al alloys, ordered linear dislocation multipoles struct. 2-8524  
 $\alpha$ -Cu-Al alloys, short range ordering, specific heat and elec. resistivity, temp. depend. 2-5220  
 Cu-Al low stacking fault energy alloy, dislocation multipoles, diffraction contrast electron micrograph obs. 2-25885  
 Cu-Al-Fe, C62500 Al bronze, laser quenched, cavitation erosion, surface layer transform. 2-9458  
 Cu-Al-Fe, phase transform. under anomalous elastic deform. 2-47031  
 Cu-Al-Fe (14, 4 wt.%) ion plated coating, wear under arduous metal-forming conditions 2-30778  
 Cu-Al-Ni, nonlinear reson. near martensitic transform. 2-47101  
 $\beta_1$ -Cu-Al-Ni (14, 4.1 wt.%), elastic and anelastic props., effect of thermoelastic martensitic transform. 2-47102  
 Cu-Al-Si, two-phase, hardened, mech. props. and damping capacity, Si addition effect 2-5919  
 Cu-Al-Si-Co (2.8, 1.8, 0.4 wt.%), superplastic, doubt over existence of Region 12-31730  
 Cu-Al-Ti-Hf, precipitation of particles during internal oxidation (Russian) 2-22218  
 Cu-Au, anodic dissoln., O<sub>2</sub> reduction and corrosion 2-5987  
 Cu-Au, short-range order and Fermi surface, X-ray diff. study 2-50587  
 Cu-Au, short-range order hardening 2-36868  
 Cu-Au-Ge, dilute, thermoelec. power, impurity scatt. contrib. 2-5393  
 Cu-Au-Ge (Ni-Ge), Hall coeff. for isotropic electron scatt. 2-36019  
 Cu-Be,  $\alpha$ -solid, soln. neutron bombarded, decomposition study (Russian) 2-12644  
 Cu-Be-Co (2 wt.%, 0.3 wt.%), phys. props. 2-17684  
 Cu-Bi alloys at 700 to 1100°C, thermodynamics and liquidus equilibrium 2-41582  
 Cu-Bi liq. alloys, viscosity (German) 2-1648  
 Cu-Bi-S, thermodynamics of metallic impurities in Cu saturated CuS, 1423 to 1573K 2-41583  
 Cu-Cd, electrocrystallisation on Cu substrate, effect of electrolyte type 2-1797  
 Cu-Cd(Mg)(Zr)(Cr), Cu-Cr-Zr(Mg) and Cu-Zr-Mg, heat resistance, elec. cond. and strength 2-27244



## copper alloys continued

- Cu-Co, liquid alloys, thermodynamic study (*Japanese*) 2-27144  
 Cu-Co (1 at.%), plastic behaviour of polycryst. wire deformed by simultaneous torsion and extension at 78K 2-47120  
 Cu-Co (2at.%), age-hardened single crystals, creep behavior 2-31734  
 Cu-Co (3.36 wt.%), single phase, scaling behaviour, 700-1000°C 2-27339  
 Cu-Co solid soln., elec. resist. and mag. susceptibility 2-30861  
 Cu-Co solid solns., elec. resist. at low temp., annealing effect 2-45934  
 Cu-Fe multifilamentary composites, in situ formed, mag. hysteresis loops 2-13315  
 Cu-Fe supersaturated solid soln., Mossbauer spectrum model, rel. to Fe atom states 2-41236  
 Cu-Fe-Zr, dispersion hardenable, temp. depend. of internal friction (*Polish*) 2-36904  
 Cu-Ga alloys, Fermi level shift study by X-ray absorpt. spectroscopy 2-1812  
 Cu-Ge, single cryst., kinetics of plastic flow 2-51981  
 Cu-Ge (8 at.%) single crystals, in situ obs. of deform. twinning 2-40412  
 Cu-Ge (8.7 at.%), shock pulses, strengthening effect of deform. twins and dislocations 2-17688  
 Cu-Ge alloys, Fermi level shift study by X-ray absorpt. spectroscopy 2-1812  
 $\alpha$ -Cu-Ge alloys, Fermi surface dimensions, nonlinear composition depend. 2-40758  
 Cu-H, electronic struct. of interstitial H 2-21526  
 Cu-In, interdiffusion and Kirkendall effect 2-5282  
 Cu-In, self-diffusion of Cu, solute enhancement 2-40590  
 Cu-In (1.7 at.%), single crystal growth by Bridgman method 2-46910  
 Cu-Mg splat cooled alloy, mag. susceptibility (*Russian*) 2-5522  
 Cu-Mn, dil., Hall effect 2-17048  
 Cu-Mn, dil., heat capacity in strong mag. field 2-36361  
 Cu-Mn, resistivity anomaly, influence of addition of third metal (*German*) 2-36005  
 Cu-Mn, rod, energy dissipation with independent flexural-torsional vibrs. 2-52158  
 Cu-Mn, spin glass, AC susceptibility 2-31213  
 Cu-Mn, spin glass, anisotropy energy, transverse susceptibility study 2-31206  
 Cu-Mn, spin glass, DC susceptibility, field depend. 2-31214  
 Cu-Mn, spin glass dynamics, neutron spin echo, polarisation and AC susceptibility study 2-31211  
 Cu-Mn, spin glass freezing temp., sp. ht. anomaly 2-31202  
 Cu-Mn (40 to 88 wt.%) alloys, shape-memory effect (*Russian*) 2-9385  
 Cu-Mn (5 at.%), spin dynamics and sound propagation near the spin-glass transition 2-51416  
 Cu-Mn alloy, ESR modes and Edwards-Anderson theory of spin-glass state 2-36354  
 Cu-Mn alloy, negative magnetoresistance 2-36018  
 Cu-Mn spin glass, dynamics detected by zero and longitudinal field  $\mu$ SR 2-36362  
 Cu-Mn-Al, atomic ordering processes, X-ray diff. study 2-1434  
 Cu-Mn-Al (20.6, 34.7 at.%), displaced hysteresis loop upon mag. annealing 2-26687  
 Cu-Nb dendritic A15 superconducting composite, large-scale casting and wire fabrication 2-13678  
 Cu-Nb ultrafine multifilamentary composites, Young's modulus enhancement 2-17698  
 Cu-Nb<sub>3</sub>Sn untwisted composite, AC losses, critical current density 2-13256  
 Cu-Nb-Si, phase diagram (*German*) 2-13701  
 Cu-Nb-Sn, cold powder-metallurgy processed multifilamentary composite, fabrication, current density 2-13681  
 Cu-Nb-Sn multifilamentary in situ wires, high-temp.-gradient casting 2-13682  
 Cu-Nb-Sn(Ge), dil. alloy, superconductor, glass coated melt spinning, mech. props. 2-22185  
 Cu-Ni, angle-resolved photoemission, KKR-CPA treatment of disorder 2-9248  
 Cu-Ni, binary solid solutions, self-diffusion theory 2-1654  
 Cu-Ni, differential sputtering and surface segregation, enhanced diffusion effect 2-5786  
 Cu-Ni, dil., surface segregation, simple theoretical model applied 2-45693  
 Cu-Ni, elec. resist., coexisting at. and mag. clustering effects 2-1887  
 Cu-Ni, local density of unoccupied states, X-ray L absorpt. edge meas. 2-13589  
 Cu-Ni (0.5-5 wt.%), strength anomalies at low temps. 2-27181  
 Cu-Ni alloy, config. of {100} dislocation walls formed during fatigue 2-40392  
 Cu-Ni alloy, surface modification through chemisorption of hydrocarbons 2-51004  
 Cu-Ni alloy crystallisation, FCC and diamond type binary cryst. growth kinetics 2-12527  
 Cu-Ni alloy resistance to NH<sub>3</sub> corrosion in simulated steam condenser conditions 2-37007  
 Cu-Ni alloys, sp. ht., spin fluctuation effects 2-30617  
 Cu-Ni alloys, specific vol., variation with comp. 2-35445  
 Cu-Ni alloys, sputter-induced solute segregation in surface layer during A ion bombardment (*Japanese*) 2-2515  
 Cu-Ni surface, preferential sputtering, static SIMS study 2-13613  
 Cu-Ni-Al-Mn, quasi-periodic struct. form. sequence (*Russian*) 2-5876  
 Cu-Ni-Co (50, 21, 29 wt.%), mech. and mag. hardening 2-17686  
 Cu-Ni-Fe decomposed solid solns., plastic deform. effect on mag. props. (*Russian*) 2-21862  
 Cu-Ni-Fe-Mn, assessment of quality of surface film on cooling water side of condenser tubes 2-5993  
 Cu-Ni-O, Cu-rich region, liquidus equilibria and soln. thermodynamics 2-5854  
 Cu-Ni-Sn, laser surface melting, AES study and corrosion resist. 2-47264  
 Cu-Ni-Ti alloys ageing characts. 2-5900  
 $\alpha$ -Cu-Ni-Zn, internal friction and elastic moduli meas. 2-47091  
 $\alpha/\beta$ -Cu-Ni-Zn, microduplex, superplastic, cavity growth 2-31732  
 Cu-Ni-Zn, order-disorder transform., heat treatment role 2-36852  
 Cu-Ni(Ge), dilute, thermoelec. power, impurity scatt. contrib. 2-5393  
 Cu-P alloys, effect of second-phase vol. fraction on grain size stability and flow stress during superplastic flow 2-22268  
 Cu-P binary alloys, amorphous state formation, thermal stability, melt quenching 2-30408  
 Cu-P splat cooled alloy, mag. susceptibility (*Russian*) 2-5522

## copper alloys continued

- Cu-Pd, dilute, Fermi surface and impurity scatt., de Haas-van Alphen meas. 2-12958  
 Cu-Pd, ordered, struct., FCC-BCC transform. and mech. props. (*Russian*) 2-21064  
 Cu-Pd (9-86 at.%) sputter-induced surface composition change, Auger study 2-46849  
 Cu-Pt, dilute, Fermi surface and impurity scatt., de Haas-van Alphen meas. 2-12958  
 Cu-Pt alloys, material sputtered by Ar<sup>+</sup>, ang. distrib. 2-46914  
 Cu-Rh, dilute, Fermi surface and impurity scatt., de Haas-van Alphen meas. 2-12958  
 Cu-S splat cooled alloy, mag. susceptibility (*Russian*) 2-5522  
 Cu-Sb, creep cavitation, influence of impurity segregation 2-41612  
 Cu-Sb, self-diffusion of Cu, solute enhancement 2-40590  
 Cu-SiO<sub>2</sub>, dispersion hardened, diffusion creep threshold 2-41686  
 Cu-SiO<sub>2</sub> alloy single crystals, high temp. deform. (*Japanese*) 2-2561  
 Cu-Sn, diffusional interaction with Nb, Nb<sub>3</sub>Sn layer growth 2-40304  
 Cu-Sn, liquid, free energy and other thermodynamic props., conc. depend. 2-12779  
 Cu-Sn, self-diffusion of Cu, solute enhancement 2-40590  
 Cu-Sn (12 and 15 wt.%), deformability improvement by hot extrusion and boride grain refining additions (*German*) 2-13755  
 Cu-Sn (1.1 at.%), single crystal growth by Bridgman method 2-46910  
 Cu-Sn alloys, eutectoid transformation  $\gamma \rightarrow \alpha + \epsilon$  (*Russian*) 2-13713  
 Cu-Sn spherical powders, sintering, causes of scrap, porosity effect 2-31657  
 Cu-Sn-Al-Fe-Ni-Mn, fracture and mech. props., effect of comp. and crystn. conditions 2-41729  
 Cu-Sn-Cr, ultrasonic waves damping factors, rel. to microstruct. 2-13880  
 Cu-Sn-Ga/Nb-Hf, multifilamentary supercond., crit. current, strain effects 2-17251  
 Cu-Sn-(Ni,Al,Ge,In), phase transforms. 2-51916  
 Cu-Te, contact melting investigation (*Russian*) 2-1590  
 Cu-Ti (4 at.%), solution treated single crystals, and polycrystals, cyclic deform. 2-36934  
 Cu-Ti liq. alloy, thermochemistry 2-8624  
 Cu-transition metal alloys, electromech. polishing 2-47285  
 Cu-Zn, concentrated alloy, internal friction 2-45343  
 Cu-Zn, new phase, growth kinetics, saturation of Cu single crystals with Zn vapour (*Russian*) 2-35424  
 Cu-Zn, single crystal, kinetics of plastic flow 2-51981  
 Cu-Zn, US wave dispersion anomaly 2-45394  
 Cu-Zn (37.65 at.%), reverse martensitic transform., resulting dislocation structs. 2-51896  
 Cu-Zn (47.3 wt.%), martensite burst temp., effect of plastic deform. 2-51898  
 Cu-Zn alloys, effect of second-phase vol. fraction on grain size stability and flow stress during superplastic flow 2-22268  
 Cu-Zn alloys, stress corrosion cracking in NH<sub>4</sub>OH solns. 2-9453  
 Cu-Zn low stacking fault energy alloy, dislocation multiples, diffraction contrast electron micrograph obs. 2-25885  
 Cu-Zn system, solid particle impact treatment, oblique section autoradiography 2-2654  
 Cu-Zn(Mn(Pb) alloys, anal. by Grimm glow discharge-emission spectrometry (*Japanese*) 2-52259  
 Cu-Zn-Al, acoustic emission during martensitic transform., energy meas. 2-36856  
 Cu-Zn-Al, high damping alloys, dynamic props. 2-47109  
 Cu-Zn-Al, internal friction meas. rel. to two way memory effect 2-47099  
 Cu-Zn-Al, martensitic transformation study by coupled enthalpy and acoustic emission meas. 2-2509  
 $\beta$ -Cu-Zn-Al, precipitates, commensurate-incommensurate transition 2-45568  
 Cu-Zn-Al, pseudoelastic, hysteresis loop, strain-rate, amplitude and temp. depend. 2-47098  
 Cu-Zn-Al, stress induced hexagonal martensite 2-51903  
 Cu-Zn-Al (25.5 at.%), partial martensitic transform., electron-acoustic microscopy 2-19224  
 $\beta$ -Cu-Zn-Al alloy, calorimetric study of ordering 2-2541  
 Cu-Zn-Al high-damping coil spring, pseudoelastic behaviour 2-47100  
 Cu-Zn-Al(15.1, 15.1 at.%), acoustic signal emitted during martensitic transformation (*French*) 2-17677  
 Cu-Zr, amorphous, bulk and surface electron struct., positron annihilation study 2-51743  
 Cu-Zr, amorphous film, electronic struct., optical spectra study (*French*) 2-22044  
 Cu-Zr splat cooled alloy, mag. susceptibility (*Russian*) 2-5522  
 Cu-Zr(Fe), glassy, vitrification, bulk and surface positron annihilation study (*Russian*) 2-46817  
 Cu<sub>90</sub>Al<sub>10</sub> (100) surfaces obs. of Tamm-type state, angle-resolved photoemission study 2-13149  
 Cu<sub>3</sub>Au alloy, two-body interatomic interaction and props. 2-1617  
 Cu<sub>3</sub>Au, ordered, Fermi surface and electronic struct. 2-40761  
 Cu<sub>3</sub>Au ordered alloys, proton,  $\alpha$ , and ion irradi., atomic replacement, resistivity meas. 2-8547  
 (Cu<sub>1-x</sub>Co<sub>x</sub>)<sub>2</sub>MnSn Heusler alloy, mag. props. 2-46283  
 CuCr film, superconducting Kondo effect study using DC Josephson current 2-31091  
 CuMn, spin glass susceptibility above T<sub>g</sub> 2-36356  
 CuMn spin-glass, high temp. susceptibility meas. 2-21803  
 Cu<sub>72</sub>Mn<sub>28</sub>, micromagnet, remanence and relax. 2-2080  
 Cu<sub>2</sub>MnAl, Heusler alloy, Hall effect and magnetoresistance 2-36010  
 Cu<sub>2</sub>MnAl, optical absorpt. spectrum within RPA 2-9163  
 Cu<sub>2</sub>MnAl, order-disorder transition, X-ray diff. study 2-1610  
 (Cu<sub>2</sub>Ni<sub>1-x</sub>)<sub>2</sub>P<sub>16</sub>B<sub>4</sub>Al<sub>3</sub>, spin glass transition study 2-31182  
 Cu<sub>2</sub>NiZn, order and domain strengthening in high purity and commercial specimens 2-47049  
 Cu<sub>2</sub>NiZn, order-strengthening mechanism, electron microscopy study 2-51891  
 Cu<sub>50</sub>Ni<sub>50-x</sub>Zn<sub>x</sub>, order-disorder transition in quasi-binary cross-section 2-41605  
 Cu<sub>3</sub>Pd, ordering under electron irradi. 2-30494  
 Cu<sub>3</sub>Pd<sub>1-x</sub>, chemical-shift effects and valence-electron spectra 2-2411  
 CuPt, crystallographic orientation effects in energy dispersive X-ray analysis 2-40236  
 Cu<sub>2</sub>Rh<sub>1-x</sub>, mag. props., mag. susceptibility and NMR meas. 2-17261  
 $\eta$ -Cu<sub>2</sub>Si-Si, eutectic alloy, unidirectionally solidified, microstructure 2-36846  
 CuSn, amorphous, elec. resist. Faber-Ziman theory calc. 2-45932  
 Cu<sub>3</sub>Sn, aspects of diffusion in intermetallic phase (*German*) 2-1681



# copper alloys continued

- $\text{Cu}_3\text{Sn}$ , thermal expansion coefficient in temperature range  $-180^\circ\text{C}$  to  $+200^\circ\text{C}$  2-26085  
 $\text{CuSnIn}$  bronze/Nb single core A15 diffusion layers, influence of In on supercond. props. (*German*) 2-13219  
 $\text{Cu}_{50}\text{Ti}_{50}$ , amorphous, electron irradiation damage, positron lifetime meas. 2-50709  
 $\text{CuZn}$  30 sheets, struct. and texture study on cold rolling (*German*) 2-2530  
 $\beta\text{-CuZn}$  single crystals, plastic deform. at low temps. 2-51972  
 $\text{CuZr}_2$ , amorphous, crystn., X-ray diff. and elec. resist. studies 2-12502  
 $\text{Cu}_{100-x}\text{Zr}_x$ , amorphous, supercond., mag. susceptibility, and thermal relax. 2-17188  
 $\text{Cu}_{100-x}\text{Zr}_x$  glasses, thermopower meas., 80 to 300K 2-26365  
 $\text{Fe-Cu}$ , computer supported evaluation of the Gibbs-Duhem-equation at 1873K (*German*) 2-13696  
 $\text{Fe-Cu}$ , liq. phase sintered, grain boundary wetting, temp. depend. 2-35869  
 $\text{Fe-Cu}$ , sintered, steam treatment effect on wear resistance 2-22393  
 $\text{Fe-Cu}$  system, phase diagram,  $\alpha(\delta)/\gamma$  equilibrium 2-13697  
 $\text{Fe-Cu-Ni}$ , 2-13729  
 $\text{Fe-Cu}$ -graphite, dynamic hot pressing, antifriction characts. 2-17648  
 $\text{Fe-CuNi}$  sheathed thermocouple, reference standard for calibrating industrial thermocouples (*German*) 2-15166  
 $\text{Fe-Cu(C)}$ , (5,5) wt.%, influence of speed on wear 2-36976  
 $\text{Fe-Ni-Co-Cu}$ , reverse martensite transform. stabilization of austenite (*Chinese*) 2-2508  
 $\text{Fe-Ni-Cu-Si-Mn-Cr-C}$ , cast austenitic, struct. and mech. props., heat treatment effect 2-51953  
 $\text{Ga-Ag-S}$  solvent, dil. soln. of S, thermodynamic study 2-51878  
 $\text{Ga-Cu}$ , liquid, elec. cond. and mag. susceptibility (*Russian*) 2-51143  
 $\text{GdCu}$ , anomalous elasticity and anelasticity at low temps. 2-1544  
 $\text{Ge-Cu}$  thermocouple, thermoelectric conversion (*French*) 2-47505  
 $\text{In-Cu}$  dispersion-hardening pastes, phase composition 2-5856  
 $\text{La}_{70}\text{Cu}_{30}$ , amorphous, heat treatment effects below crystn. temp., supercond. props. and normal state resist. 2-36195  
 $\text{La}_{70}\text{Cu}_{30}$ , amorphous, supercond. penetration depth 2-31046  
 $\text{La(NiCu)}_5$ , absorpt. of  $\text{H}_2$ , electron conc. effect 2-35697  
 $\text{Mg}_2\text{Cu-H}_2$  system for hydrogen storage, influence on props. of Al addition 2-37465  
 $\text{Mn-Cu}$  alloys, metallographic method 2-41846  
 $\text{Mn-Cu}$  rods, energy dissipation with interconnected bending and torsional vibrs., static stresses effect 2-41699  
 $\text{Mn-Cu}$  spin-glasses, scaling of nonlinear susceptibility 2-31196  
 $\text{Mn-Cu-Fe(10.4, 1 wt.%)}$ , Mossbauer study of structural and mag. transitions 2-17679  
 $\text{8-Mn-Cu}$  alloys, Mn-rich, phonons and martensitic transform. 2-16729  
 $\text{Mo-Cu(NiCo)}$ , pseudobinary, phase boundary reactions 2-17665  
 $\text{Nb-Cu}$  composite superconductor, anisotropic critical fields 2-31111  
 $\text{Nb}_3\text{Sn-Cu}$ , microstructure study (*Chinese*) 2-17661  
 $\text{Nb}_3\text{Sn-Cu}$ , superconductor wire, prep. by in situ process, optimisation of props. 2-2043  
 $\text{Nb}_3\text{Sn-Cu}$  composite, powder preparation, critical current density 2-13680  
 $\text{Nb}_3\text{Sn-Cu}$  filamentary superconducting wire, in situ prep. and props. 2-8942  
 $\text{Nb}_3\text{Sn-Cu}$  supercond. wire, fabrication by external diffusion 2-51848  
 $\text{Ni-Cu}$ , dil., surface segregation, simple theoretical model applied 2-45693  
 $\text{Ni-Cu}$ , electron irradi., short-range clustering and long-range periodic decomp. 2-45278  
 $\text{Ni-Cu}$ , electronic struct., CNDO/2 tight-binding method calcs. 2-40980  
 $\text{Ni-Cu}$ , magnetic domain wall pinning by lattice defects 2-26653  
 $\text{Ni-Cu}$ , subband resist. and spontaneous resist. anisotropy, two-current model 2-1888  
 $\text{Ni-Cu}$  alloys, solid solns., internal friction (*Russian*) 2-36862  
 $\text{Ni-Cu-Zn}$ , electrodeposition from sulphate bath, current efficiency 2-46960  
 $\text{Ni-Ti-Cu}$ , thermoelastic, dislocation relax. in martensitic phase, internal friction meas. 2-47104  
 $\text{NiCu}_{1-x}$ , modulation temp. spectroscopy of elementary excitations 2-31462  
 $\text{NiCu}_{1-x}$ , surface core-level binding energy shifts 2-21648  
 $\text{Pb-Cu}$ , elec. resistance and mag. susceptibility (*Russian*) 2-1885  
 $\text{Pd-Cu}$  system, mixing enthalpies, expt. determ. using high temp. calorimetry (*German*) 2-35702  
 $\text{Pd-Cu-H}$ , solid solns., thermodynamic behaviour 2-40548  
 $\text{Pd-Cu-H}$  system, Cu ion implanted and H-charged supercond. transition temp. meas. 2-36170  
 $\text{Pd}_{77.5}\text{Cu}_{22.5}\text{Si}_{16.5}$ , amorphous, crystn. kinetics study using US meas. 2-40285  
 $\text{Pd}_{77.5}\text{Cu}_{22.5}\text{Si}_{16.5}$ , amorphous, creep, stress relax. and struct. charge 2-13769  
 $\text{Pd}_{77.5}\text{Cu}_{22.5}\text{Si}_{16.5}$ , amorphous, shear crack propag., plastic flow 2-31757  
 $\text{Pd}_{77.5-x}\text{Cu}_{22.5+x}\text{Fe}_{1.5}(\text{Mn})_x$ , amorphous, phonon thermal cond., 0.3 to 10K effect of impurities 2-12865  
 $\text{Pd}_{77.5}\text{Cu}_{22.5}\text{Si}_{16.5}\text{Cu}_{0.060}$ , metallic glass, US studies at low temp. 2-45388  
 $\text{PrCu}_3$ , paramagnetic susceptibility cryst. field influence 2-8953  
 $\text{PrCu}_3$ , crystal field, neutron diff., sp. ht. and mag. susceptibility study 2-21542  
 $\text{PrCu}_3$ , enhanced nsl. ordering neutron diff. study 2-36322  
 $\text{PrCu}_3$ , critical phenomena at nucl. mag. ordering transition 2-36367  
 $\text{Sc-Cu-Si}$  system, cryst. struct. of two phases 2-8479  
 $\text{Si-Cu}$  saturated solns. in melt, elec. cond., temp. depend. 2-5378  
 $\text{Si-Cu}$  system, mixing enthalpies, expt. determ. using high temp. calorimetry (*German*) 2-35702  
 $\text{Sm(CoCu)}_5$ , structural transform. rel. to coercivity (*Czech*) 2-46343  
 $\text{SmCu}_4$ , Knight shift and mag. susceptibility, temp. depend. 2-2152  
 $\text{SmCu}_5$ , Knight shift and mag. susceptibility, temp. depend. 2-2152  
 $\text{Sn-Cu-Ag}$  system, O activity coeff. calc. 2-13992  
 $\text{Ti-Cu}$ , metallic glass, structural model, short range order 2-21032  
 $\text{Ti-Cu-Al (4.26 wt.%)}$ ,  $\text{Ti}_2\text{Cu}$  precipitation, microanalytical investigation (*German*) 2-13733  
 $\text{TiBe}_{2-x}\text{Cu}_x$ , magnetisation curves for large x 2-41163  
 $\text{Ti}_{1-x}\text{Cu}_x$ , amorphous, negative magnetoresistance at high mag. fields 2-36013  
 $\text{TiCu}_2\text{FeBe}_{2-x-y}$ , itinerant magnetism, magnetisation and Mossbauer studies 2-31151  
 $\text{TiNiCu}$ , composite materials, transform. plasticity and large reversible deform. (*Russian*) 2-36917

# copper alloys continued

- $\text{UCu}_2\text{Ge}_2$ , antiferromagnetic-ferromagnetic phase transition, neutron diff. study 2-36346  
 $\text{U(Ni}_{1-x}\text{Cu}_x)_2$ , chemical shift of  $L_{\alpha 1}$  line, lattice parameter, composition depend. 2-46833  
 $\text{V-Cu}$ , self-diffusion and impurity diffusion mechanism 2-5268  
 $\text{V-Cu-H}$ , internal friction study 2-45363  
 $\text{V-Ga/Cu-Ga-Al}$  composite system, metallurgical processing, superconducting props. of  $\text{V}_3\text{Ga}$  wires 2-13686  
 $\text{V}_3\text{Ga-Cu}$  in situ multifilamentary composite, preparation and superconducting props. 2-13683  
 $\text{W-Cu-Ni(Co)}$ , pseudobinary, phase boundary reactions 2-17665  
 $\text{Y-Fe-Cu}$ , Mossbauer effect study of recoil free functions 2-46447  
 $\text{YbCuAl}$ , intermediate valent, thermal expansion, sp. ht. and resist. 2-16823  
 $\text{YbCuAl}$ , specific heat, press. depend. 2-30616  
 $\text{YbCu}_2\text{Ge}_2$ , superconducting, absence 2-46188  
 $\text{YbCu}_2\text{Si}_2$ , press. and temp. depend. of mag. susceptibility 2-36308  
 $\text{YbCu}_2\text{Si}_2$ , valence fluctuation cpds., optical struct. near 20 meV 2-9152  
 $\text{Zr-Cu-Fe-Mo-V}$ , high corrosion resistant alloy, creep and creep fracture (*Czech*) 2-31752  
 $\text{Zr-Fe-Cu-W}$  alloy oxide film, correl. between phase composition and corrosion kinetics, Mossbauer investig. 2-21929  
 $\text{ZrCu}$  alloys, amorphous supercond. low energy excitations 2-36220  
 $\text{Zr}_{1-x}\text{Cu}_x$ , amorphous, negative magnetoresistance at high mag. fields 2-36013  
 $\text{Zr}_{70}\text{Cu}_{30}$  glasses, supercond. transition temp. and upper crit. field 2-36197  
 $\text{ZrCu}_{1-x}$  glasses, electronic props. and supercond. 2-36196
- ## copper compounds
- see also copper alloys*  
 $\text{bis(ethyl acetato)Cu(II)}$  complex with thiourea and substituted thioureas, IR and electronic spectra 2-4272  
 $\text{chalcofenides}$ , on p-constituent heterojunctions, stable composition (*Russian*) 2-1996  
 $\text{copper(II)}$  with salicylaldehyde S-methylthiosemicarbazone, cryst. struct. 2-21132  
 $\text{copper phthalocyanine binder}$  photoreceptor, trapping levels, TSC study 2-17086  
 $\beta\text{-copper phthalocyanine thin films}$ , transient photocurrents, thermal quenching effect 2-17108  
 $\text{CuS}$  spectrally selective coating, chemically deposited, optical props. and emissivity 2-9680  
 $\text{diethylammonium copper tetrachloride}$ , antiferromag. reson., effects of mag. dipolar interaction 2-9041  
 $\text{dimethylammonium copper bromochloride}$ , ferromag., hyperfine interactions, Br NMR study 2-2144  
 $\text{dimethylammonium copper bromochloride}$ , mag. struct. and props. 2-36318  
 $\text{dimethyldithiocarbamate}$ , ionisation energies, LCAO CNDO/2 calcs. 2-34298  
 $\text{formate tetrahydrate}$ , H bonded ferroelec., neutron scatt. studies 2-31389  
 $\text{halides, cryst. binding and thermophysical props.}$  2-45106  
 $\text{bis(isopropylammonium) tetrachlorocuprate(II)}$ , thermochromism, NMR and EPR, mag. behaviour 2-13460  
 $\text{isopropylammonium copper(II) chloride}$ , thermochromic phase transitions, cryst. struct. and NMR 2-12574  
 $\text{isopropylammonium tribromocuprate(II)}$ , thermochromism, NMR and mag. susceptibility 2-12727  
 $\text{phthalocyanine, } \beta\text{-phase}$ , improved purification method using sublimation, electrophotographic appl. 2-36768  
 $\text{phthalocyanine films}$ , photocurrents,  $\text{O}_2$  and  $\text{H}_2$  effects on thermal quenching and thermally assisted optical quenching 2-26438  
 $\text{phthalocyanine films}$ , photocurrents thermal quenching and thermally-assisted optical quenching 2-26437  
 $\text{polyethylene imine-Cu(II) complex formation}$ , polymer coil struct. change (*Russian*) 2-20223  
 $\text{polystyrene: Cu phthalocyanine films}$ , dielec. props. 2-21939  
 $\text{rare earth cpds., } \text{RCu}_2\text{Ge}_2$  ( $\text{R}=\text{Gd, Tb, Dy, Ho, Er, Tm}$ ), mag. susceptibility meas., 4.2 to 200K (*French*) 2-31150  
 $\text{TCNQ-Cu charge transfer salt}$ , semicond. film, vibr. and XPS spectra, Auger obs. 2-31600  
 $\text{(Ag, Cu, HgI}_2\text{)}$ , hysteresis in ionic cond. and excess heat capacity, phenomenological theory 2-50915  
 $\text{Ag}_{1.55}\text{Cu}_{0.45}\text{S}$ , transport props. and cryst. struct. 2-30938  
 $\text{Al-Cu-B}$  system, B-rich phases grown from melts, X-ray diff. study 2-46904  
 $\text{B}_2\text{O}_3\text{-Na}_2\text{O-CuO}$  glasses, effect of melting temp., EPR and NMR studies 2-1411  
 $\text{Ba}_3\text{La}_2\text{Cu}_4\text{O}_{14+y}$ , electric transport and mag. props., progressive semicond.-semimetallic transition 2-40977  
 $\text{Ba}_3\text{La}_2\text{Cu}_4\text{O}_{14+y}$ , progressive semiconductive-semimetallic transition, struct. aspects and energy levels 2-40359  
 $\text{Ba(Zn}_{1-x}\text{Cu}_x)_2\text{Fe}_6\text{O}_{27}$ , hexagonal ferrite, mag. and Mossbauer study 2-21767  
 $\text{CdS:CuCl}_2$ , baked layers, effects on elec. and photoelectrical props. 2-30983  
 $\text{CdS:CuInSe}_2$ , vacuum deposition of  $\text{CuInSe}_2$  on CdS, experimental methods 2-37237  
 $\text{CdS-Cu}_2\text{S photovoltaic cell}$  crystallographic anal. using SEM and EBIC mode 2-27632  
 $\text{CdS-Cu}_2\text{S solar cells}$ , window layer deposition 2-37235  
 $\text{CdS-Cu}_2\text{S solar cells}$ , junction-field and collection efficiency in current saturation range 2-37340  
 $\text{CdS-Cu}_2\text{S solar cells}$ , CdS film fabrication by chemical spray deposition-exchange process 2-37367  
 $\text{CdS-Cu}_2\text{S thin film heterojunctions}$ , photovoltaic properties 2-36135  
 $\text{CdS-CuInSe}_2$  thin-film high-efficiency solar cells, development 2-37364  
 $\text{(CdZnS)/Cu}_2\text{S solar cells}$ , thin-film, polycrystalline 10% conversion efficiency 2-32080  
 $\text{CdZnS-Cu}_2\text{S thin film solar cells}$ ,  $\text{Cu}_2\text{S}$  and CdS lattice constants mismatch reduction for cell conversion efficiency optimisation 2-27635  
 $\text{CdZnS-Cu}_2\text{S thin film solar cells}$ , 10% conversion efficiency 2-37322  
 $\text{Cd}_{1-x}\text{Zn}_x\text{S/Cu}_2\text{S photovoltaic cells heterojunction energy band lineups}$  anal. 2-27637  
 $\text{CeCu}_2\text{Si}_2$ , spin dynamics, neutron scatt. study 2-26584  
 $\text{CeCu}_2\text{Si}_2$ , thermal expansion study 2-30638  
 $\text{CsCl-CuCl}_2\text{-H}_2\text{O}$  system, phase diagram 2-51788  
 $\text{CsCuCl}_2$ , antiferromagnetic cryst., elastic const. temp. depend., US vel. study 2-25968



## copper compounds continued

- CsCuCl<sub>3</sub>, Jahn-Teller phase transitions, <sup>133</sup>Cs quadrupole perturbed NMR study 2-21897  
 CsCuCl<sub>3</sub>, magnetic susceptibility study 2-41114  
 CsCuCl<sub>3</sub>, phase diagram, Neel temp. 2-26629  
 p-(Cu,Ag)<sub>2</sub>Se, thermoelectric props., transport model 2-17104  
 (Cu,Zn)Cs<sub>2</sub>(SO<sub>4</sub>)<sub>2</sub>·6H<sub>2</sub>O Tutton salt, diluted, pulsed ENDOR experiments 2-5604  
 Cu (II)-thiopolycarboxylic complexes, mag. moments, IR and electronic spectra 2-4271  
 Cu complex, 3-ethoxy-3-oxobutylaldehyde bi(thiosemicarbazone), resonance Raman spectra 2-5697  
 Cu complex, binuclear, with paraxylyl connecting group, ((CuCl<sub>2</sub>·C<sub>18</sub>H<sub>20</sub>N<sub>2</sub>)<sub>2</sub>)·2H<sub>2</sub>O, X-ray struct. anal. 2-8501  
 Cu complex, copper (pyridine)<sub>2</sub> chloride, phase diagram, Neel temp. 2-26629  
 Cu complex, copper(I) thiocyanate β-modification, cryst. struct. and polymorphism 2-12543  
 Cu complex, Cu II monochloroacetate tetrahydrate, EPR spectra obs. 2-9027  
 Cu complex, Cu phthalocyanine evaporated film, refractive index and apparent density 2-9209  
 Cu complex, Cu(II) phthalocyanines, heat capacity from 4 to 45K 2-30613  
 Cu complex, Cu(II)-bis-ethylenediamine electronic spectra and struct. 2-31524  
 Cu complex, Cu(II)-poly(styrenesulphonate), struct. study by transient electric dichroism 2-20098  
 Cu complex, dichloro(4H-1,2,4-triazole), Cu II, mag. phase transition, NQR and mag. suscep. obs. 2-13373  
 Cu complex, γ-bis(N-methyl salicylaldimine) copper(II), EPR and mag. props., 1.5 to 300K 2-41188  
 Cu complex, platocyanin, cryst., electronic struct. of blue Cu active site, EPR study 2-26730  
 Cu complex, resonance Raman study 2-5698  
 Cu complex, tetraphenylporphyrin copper, liq. soln., excited states, high press. luminesc. 2-43971  
 Cu complex 1-phenyl-3-methyl-4-acetyl-pyrazolone-5, struct., IR and NMR spectra, cond. meas. 2-3103  
 Cu complex (isopropylammonium) 2-CuCl<sub>4</sub>, chain system mag. susceptibility calc. 2-21776  
 Cu complex Cu(NH<sub>3</sub>)<sub>4</sub>Ag(SCN)<sub>3</sub>, coord. configurations 2-21089  
 Cu complex of 1-phenyl-3-methyl-4-trifluoroacetyl-pyrazolone-5, synthesis, struct., IR and NMR spectra, cond. meas. 2-26909  
 Cu complex with 3-nitroaniline, IR and electronic spectra, mag. and cond. meas. 2-26911  
 Cu complex with stable nitroxide radical, struct. 2-12560  
 Cu I 578.2 nm transition Doppler-free spectra using polarisation intermodulated excitation spectroscopy 2-7518  
 Cu II complex, trans-tetra(micronazole) Cu II chloride dihydrate, EPR and optical spectra (French) 2-21873  
 Cu zeolites, physical characteristics, CNDO/2 calc. 2-29526  
 Cu<sup>2+</sup> complex with DNA, melting and binding, UV spectra study 2-6214  
 Cu/CuSO<sub>4</sub>/Cu system, natural convection and steady state conc. polarisation by laser interferometry 2-20511  
 Cu-complex, 2,2'-bipyridine copper(II), IR and EPR study 2-49465  
 Cu-S 2-41433  
 Cu<sub>2</sub>-S-CdS backwall solar cells, sprayed ITO layers characts. determ. for cell efficiency optimisation 2-27633  
 Cu<sub>2</sub>-S-FeS-PbS melts, activities at 1200°C 2-8646  
 Cu<sub>2</sub>-CdS polycrystalline heat-treated solar cells, atomic absorption anal. and auger depth profiles 2-37325  
 (Cu<sub>1-x</sub>Ag<sub>x</sub>)(In<sub>1-y</sub>Ga<sub>y</sub>)Te<sub>2</sub>, lattice const. values 2-12554  
 CuAlO<sub>2</sub>, single cryst. growth and cryst. struct. refinement 2-40349  
 CuAlS<sub>2</sub> blue crystals, growth and impurity characts. 2-31614  
 CuAsS, NQR study 2-41227  
 CuAsSe, HCC cryst. struct. 2-5090  
 Cu<sub>2</sub>As<sub>2</sub>Te<sub>70</sub>, amorphous, elec. resist. at high press., time depend. 2-30888  
 Cu<sub>3</sub>B<sub>2</sub>O<sub>7</sub>Br, cryst. struct. determ. 2-25820  
 Cu<sub>3</sub>B<sub>2</sub>O<sub>7</sub>Cl, dielec. anomalies 2-9110  
 Cu<sub>3</sub>B<sub>2</sub>O<sub>7</sub>Cl, ferroelectric phase transition, pyroelectric and dielec. meas., thermodynamic model 2-31412  
 Cu<sub>3</sub>B<sub>2</sub>O<sub>7</sub>Cl, improper ferroelec., pyroelec. response, effects of defects 2-36541  
 CuBr, D-X system, rot. struct. investig. 2-24676  
 CuBr, ground state dissociation energy, pot. energy curves calcs. 2-29677  
 CuBr, interacting bixcition ground state, invariant expansion and transmission spectra 2-12975  
 CuBr laser, helical transversely excited 2-44334  
 CuBr, light refraction in exciton part of spectrum (Russian) 2-13441  
 CuBr, optical props. and band struct., press. depend. 2-13448  
 CuBr, Raman study of excitonic molecule excited states 2-46568  
 CuBr, resonant Brillouin scatt. 2-2300  
 CuBr TE laser, operating characts. 2-11684  
 CuBr-LiBr, molten salt systems, mass spectrometric study, enthalpies and entropies of form. 2-9589  
 CuBr<sub>2</sub><sup>-</sup>, resonance Raman spectra 2-4302  
 Cu<sub>2</sub>-x-CdS heterojunctions, photoeffect props. and manufacturing methods (Russian) 2-1997  
 CuCl, band struct. at high press., disproportionation effects 2-35938  
 CuCl, diamagnetic susceptibility anomaly, theoretical model 2-51393  
 CuCl, dynamical relax. processes of excitonic polaritons, picosecond induced absorption study 2-46633  
 CuCl, energy levels, ab initio HF MO calcs. 2-11402  
 CuCl, exciton and excitonic mol. diffusion const. determ. using tunable picosec. grating method 2-1839  
 CuCl, exciton-polaritons by two-photon absorpt. 2-8761  
 CuCl, excitonic polariton superbroadened distrib. 2-40805  
 CuCl, excitonic polariton dynamics 2-45838  
 CuCl [Γ]-excitonic molecules, two-photon transition, polarisation rot. effects 2-44024  
 CuCl laser, burst-mode, temp. depend. 2-7748  
 CuCl, molten, tracer diffusion coeffs. meas., 450 to 750°C 2-26093  
 CuCl, optical props. and band struct., press. depend. 2-13448  
 CuCl, polariton renormalisation due to excitonic molecule formation 2-30804  
 CuCl, quantum size effect in excitonic absorpt. spectrum (Russian) 2-13577

## copper compounds continued

- CuCl, reson. Raman scatt. and luminescence from highly excited states 2-22025  
 CuCl, resonant photon-photon scattering and approx. spherical symm. 2-1833  
 CuCl, SAW characteristics 2-40661  
 CuCl, superdiamagnetic nature 2-21766  
 CuCl, two-photon transitions to exciton states 2-5352  
 CuCl, volume compression study up to 7 GPa 2-40485  
 CuCl-Ag thin-film photosensitive system, photoinduced dichroism, Weigert effect 2-46538  
 CuCl-KCl, molten salt systems, mass spectrometric study, enthalpies and entropies of form. 2-9589  
 CuCl-LiCl, molten salt systems, mass spectrometric study, enthalpies and entropies of form. 2-9589  
 (CuCl)<sub>2</sub>, energy levels, ab initio HF MO calcs. 2-11402  
 CuCl<sub>2</sub><sup>2-</sup>, paramag. compound in D<sub>2d</sub> symm., covalence reduction factors 2-29517  
 CuCl<sub>2</sub><sup>2-</sup>, resonance Raman spectra 2-4302  
 CuCl<sub>2</sub>-xBr<sub>x</sub>, phonon polariton study, Raman spectra 2-1843  
 CuCl<sub>2</sub>-xBr<sub>x</sub>, Raman study of polaritons and phonons 2-45847  
 CuCl<sub>2</sub>·2H<sub>2</sub>O, AFMR in wide range of freqs. and mag. fields (Russian) 2-17342  
 CuCl<sub>2</sub>·2H<sub>2</sub>O, antiferromagnetic cryst., elastic const. temp. depend., US vel. study 2-25968  
 CuCl<sub>2</sub>·2H<sub>2</sub>O(2D<sub>2</sub>O), NMR study of orientational phase transition 2-46286  
 Cu<sub>2</sub>Co<sub>1-x</sub>Cr<sub>2x</sub>S<sub>4</sub> chalcogen spinel system, elect. and mag. props., temp. depend. 2-31135  
 CuCo<sub>2</sub>S<sub>4</sub>, carrollite, electronic struct., mol. orbital calcs. 2-40751  
 CuCr<sub>2</sub>S<sub>4</sub>, deviation from the Bloch law (Russian) 2-9003  
 (CuCr<sub>2</sub>S<sub>4</sub>)<sub>x</sub>(Cu<sub>0.5</sub>In<sub>0.5</sub>Cr<sub>2</sub>S<sub>4</sub>)<sub>1-x</sub>, mag. elec. and thermoelectric props. 2-9005  
 xCuCr<sub>2</sub>S<sub>4</sub>-(1-x)Cu<sub>0.5</sub>Ga<sub>0.5</sub>Cr<sub>2</sub>S<sub>4</sub>, nonuniform mag. state, crystallography (Russian) 2-5079  
 Cu<sub>0.88</sub>Cr<sub>2</sub>Se<sub>3.44</sub>Br<sub>0.64</sub>, magnetic anisotropy, determ. using FMR 2-26626  
 Cu<sub>2</sub>Cr<sub>2</sub>Se<sub>4</sub>-xBr<sub>x</sub>, elec. props., anion substitution effect, cond. max. near Curie temp. 2-36044  
 CuF, energy levels, ab initio HF MO calcs. 2-11402  
 CuF, yellow system, rot. cond. hyperfine struct., fluoresc. obs. 2-49493  
 Cu<sub>0.5</sub>Fe<sub>0.5</sub>Cr<sub>2</sub>S<sub>4</sub>, ferromagnetic semicond., hyperfine interactions and mag. props. 2-26346  
 Cu<sub>1-x</sub>Fe<sub>x</sub>Cr<sub>2</sub>S<sub>4</sub>, thiopinsels, Mossbauer spectra, lattice constants, seebeck coeff. 2-51508  
 Cu<sub>1-x</sub>Fe<sub>x</sub>Cr<sub>2</sub>(S<sub>0.7</sub>Se<sub>0.3</sub>)<sub>4</sub>, thiopinsels, Mossbauer spectra, lattice constants, seebeck coeff. 2-51508  
 CuFe<sub>2</sub>O<sub>4</sub>, cation distrib., effective electrostatic energy versus cryst. field stabilisation energy 2-25802  
 CuFe<sub>2</sub>O<sub>4</sub>, cubic ferrite, magnetocrystalline anisotropy, FMR study 2-13289  
 CuFe<sub>2</sub>O<sub>4</sub>, spin-reorientation transition and mag. anisotropy 2-8970  
 Cu<sub>1-x</sub>Fe<sub>2+x</sub>O<sub>4</sub>, XPS study of Cu<sup>+</sup> and Cu<sup>2+</sup> ion distrib. (French) 2-5792  
 Cu<sub>1-x</sub>Fe<sub>2+x</sub>O<sub>4-x</sub>, ferrite, cation vacancy distrib. calc. 2-50873  
 Cu<sub>2</sub>Fe<sub>2-x</sub>O<sub>4</sub>, effect of Cu conc., Mossbauer study 2-5607  
 CuFeS<sub>2</sub>, band struct., self consistent discrete variational Xα calc. 2-12969  
 CuFeS<sub>2</sub>, chalcopyrite, standard energy of combustion in F, bomb calorimetry, standard enthalpy of form. 2-27468  
 CuFeS<sub>2</sub>, natural chalcopyrite, colour centre decay, thermolum. meas. 2-5758  
 p-CuGa<sub>1-x</sub>In<sub>x</sub>S<sub>2</sub>/n-ZnSe heterojunction LPE growth from In soln. 2-16966  
 CuGaIn<sub>1-x</sub>Se<sub>2</sub> solid solns., band gap, comp. depend., transmission spectra 2-46603  
 CuGaS<sub>2</sub>, angular phonon dispersion in bound exciton spectra 2-5747  
 CuGaTe<sub>2</sub>, anisotropic thermal expansion, X-ray diffraction study 2-1642  
 Cu(H<sub>2</sub>O)<sub>6</sub><sup>2+</sup> complex, aq. soln., H<sub>2</sub>O exchange, EXAFS method appl. 2-27021  
 Cu<sub>2</sub>HgI<sub>4</sub>, microwave conductivity near order-disorder phase transition 2-21378  
 CuI, ionic cond. and thermoelec. power 2-1657  
 CuI, mobile ion density, EXAFS investig. 2-22117  
 CuI, optical props. and band struct., press. depend. 2-13448  
 CuI, phase transitions at high press., differential scanning calorimetry 2-21302  
 CuI-NaI, molten salt systems, mass spectrometric study, enthalpies and entropies of form. 2-9589  
 CuI-RbCl-(CuCl) system, phase diagram and solid state ionics 2-17672  
 Cu(II) (difluorodithiophosphate)<sub>2</sub>, ionisation energies, LCAO CNDO/2 calcs. 2-34298  
 Cu(II) (dithiophosphate)<sub>2</sub>, ionisation energies, LCAO CNDO/2 calcs. 2-34298  
 Cu(II) carboxylates adducted with triphenylphosphine oxide, electronic, IR, EPR and mag. susceptibility 2-46270  
 Cu(II) complex, bi-chelate series, ligand mutual influence effect, struct., CNDO calcs. 2-34304  
 CuII complex, imipramine hydrochloride, isolation and struct. obs. 2-29575  
 Cu(II) complex with ethylenediamine derivatives of 2,2'-dihydroxychalcones, synthesis and IR spectra 2-46565  
 Cu(II) complexes, L-amino acid salts, chirality origin charge transfer bands 2-729  
 Cu(II) complexes, mixed, induced distant Cotton effect 2-4355  
 Cu(II), imidazole complexes, electronic spectra in soln. 2-24717  
 Cu(II) mesoporphyrin IX dimethyl ester, luminesc. and ESR spectra in toluene soln. 2-46659  
 Cu(II) propionate complexes with heterocyclic N-oxide adducts, electronic, IR and EPR spectra, mag. props. 2-46566  
 Cu(II) pyrazole complexes, electronic spectra in soln. 2-24717  
 Cu(II) pyridine complexes, mag. moments, IR and electronic spectra 2-4271  
 CuII-phosphine dioxide complexes, EPR spectra, ligand binding 2-43951  
 CuInGa<sub>(1-y-z)</sub>Se<sub>2</sub>Te<sub>2(1-y-z)</sub> heterojunction solar cells prep., RF sputtering technique, characts. 2-37371  
 CuInS<sub>3</sub>, crystal growth, horizontal Bridgman method 2-17615  
 CuInS<sub>3</sub>, growth on GaP substrate, by chem. vapour deposition 2-5828  
 CuInS<sub>3</sub>, photovoltaic material, growth and elec. props., solar cell and cell array appls. 2-36106  
 CuInS<sub>3</sub>Fe, low freq. B<sub>1</sub> mode, IR absorption and Fourier transform spectroscopy 2-31529



## copper compounds continued

- CuInS<sub>2</sub>/Fe, vibrational modes, impurity effects, IR spectra study 2-16735  
 CuInSe<sub>2</sub>, anisotropic thermal expansion, X-ray diffraction study 2-1642  
 n-CuInSe<sub>2</sub> crystals, optical absorpt., 0.9 to 1.0 eV 2-22024  
 CuInSe<sub>2</sub> epitaxial layers, on [110] and [100]-oriented GaAs substrates, struct. using RHEED 2-1784  
 CuInSe<sub>2</sub> epitaxial layer growth on GaAs, struct. and elec. props., substrate surface polarity influence 2-35902  
 CuInSe<sub>2</sub>, hole effective masses, optical study 2-40762  
 CuInSe<sub>2</sub>, oxidation, AES, SIMS and XPS studies 2-27315  
 CuInSe<sub>2</sub> single crystal, carrier heating by microwave elec. field 2-8834  
 CuInSe<sub>2</sub>, thin films, ion-beam sputtered, characterisation 2-8737  
 CuInSe<sub>2</sub>-CdS thin film solar cells, development 2-37326  
 n-CuInSe<sub>2</sub>-p-GaSe heterojunction, photoelec. and elec. props. 2-17152  
 CuInTe<sub>2</sub>, anisotropic thermal expansion, X-ray diffraction study 2-1642  
 CuInTe<sub>2</sub> single crystals, as-grown elec. props. 2-46011  
 CuK<sub>2</sub>(SO<sub>4</sub>)<sub>2</sub>·6H<sub>2</sub>O powder-<sup>3</sup>He-II interface, thermal resistance in mag. field, 0.7 to 1.8 K 2-35882  
 CuLaS<sub>2</sub> sheet cryst. struct. formed by (La<sub>2</sub>S<sub>3</sub>), (CuS<sub>4</sub>) tetrahedra (*French*) 2-12546  
 CuM<sub>1-1-x</sub>Fe<sub>x</sub>S<sub>2</sub> (M=Al, Ga, In), mag. interactions between Fe(III) ions 2-41121  
 Cu<sub>1-x</sub>Mo<sub>x</sub>S<sub>8</sub> single cryst., supercond. upper crit. field anisotropy 2-46218  
 Cu<sub>1-x</sub>Mo<sub>x</sub>S<sub>8</sub>, supercond., specific heat and crit. field 2-31051  
 Cu<sub>1-x</sub>Mo<sub>x</sub>S<sub>8</sub>, supercond., electron-phonon interaction studies 2-36273  
 Cu<sub>1-x</sub>Mo<sub>x</sub>S<sub>8</sub>, magnetoresistance anisotropy, Fermi surface (*Russian*) 2-26413  
 Cu<sub>2</sub>Mo<sub>2</sub>S<sub>8</sub>, struct. transition, triple well pot. model 2-16775  
 Cu<sub>2</sub>Mo<sub>2</sub>S<sub>8</sub>, supercond., phonon density of states meas. 2-16734  
 Cu<sub>2</sub>Mo<sub>2</sub>S<sub>8</sub> film, critical currents and pinning forces 2-17252  
 Cu<sub>2</sub>Mo<sub>2</sub>S<sub>8</sub> film, critical currents and pinning forces 2-21748  
 Cu<sub>2</sub>Mo<sub>2</sub>S<sub>8</sub> film, normal and supercond. state, electronic spectrum parameters and interaction consts. calc. (*Russian*) 2-41059  
 Cu<sub>2</sub>Mo<sub>2</sub>S<sub>8</sub>, single cryst., supercond., Hall coeff. and resist. meas. 2-17099  
 Cu<sub>1-x</sub>Mo<sub>x</sub>S<sub>8</sub>-y<sub>2</sub>-Se<sub>2</sub>Te<sub>2</sub>, Chevrel phase, struct. and props. 2-16638  
 Cu<sub>2</sub>Mo<sub>2</sub>Se<sub>8</sub>, superconducting, T<sub>c</sub> and press. induced phase transition 2-36181  
 Cu<sub>0.9</sub>NbO<sub>2</sub>F<sub>4</sub>, cryst. struct. rel. to MoO<sub>3</sub> type struct. 2-1460  
 CuO film, exoelectron emission 2-9255  
 Cu<sub>2</sub>O crystal, exciton spectrum determ. by double optical reson. method 2-41232  
 Cu<sub>2</sub>O, deformed single crystal, X-ray extinction contrast 2-35506  
 Cu<sub>2</sub>O, elec. cond. at high temp. and thermodynamic study of point defects 2-5406  
 Cu<sub>2</sub>O, exciton luminescence 2-46709  
 Cu<sub>2</sub>O, feasibility as a selective surface in 'dark mirror' scheme 2-9685  
 Cu<sub>2</sub>O, mag. field enhanced exciton luminescence, polarisation and intensity 2-46754  
 Cu<sub>2</sub>O, phonon dispersion curves, shell model 2-45463  
 Cu<sub>2</sub>O, picosecond spectroscopy, exciton dynamics, two-photon absorpt. 2-9165  
 Cu<sub>2</sub>O, reson. Brillouin scatt., expt. 2-2298  
 Cu<sub>2</sub>O Schottky-barrier solar cells, minority carrier diffusion length meas. for Cu-Cu<sub>2</sub>O junctions 2-37389  
 p-Cu<sub>2</sub>O semiconductor electrode in acetonitrile soln., photoelectrochem. behaviour 2-27442  
 Cu<sub>2</sub>O, study of non-thermalised luminesc. spectra 2-31553  
 Cu<sub>2</sub>O(s), standard Gibbs energy of formation, 1066-1220°C 2-16816  
 Cu<sub>2</sub>P, black anodic film, anodic dissolution of Cu:P (*Russian*) 2-21454  
 Cu<sub>2</sub>PS<sub>2</sub>Cl, superionic cond., excess sp. ht. at low temp. 2-30619  
 Cu<sub>16</sub>Rb<sub>17-x</sub>Cl<sub>30-(17+x)</sub> solid electrolyte, polarization study 2-21380  
 CuS, positive electrode for rechargeable Li cells 2-47468  
 CuS, thermodynamic props. 2-26079  
 Cu<sub>1-x</sub>S-GaAs heterojunction photoconverter 2-22651  
 Cu<sub>2</sub>-S and Cu<sub>1.93</sub>S, low chalcocite and djurleite, Cu coord. behaviour 2-21074  
 Cu<sub>2</sub>S fast ion conductor, mobile ion distrib. and anharmonic thermal motion 2-21379  
 Cu<sub>2</sub>S, thermodynamic props. 2-26079  
 Cu<sub>2</sub>S thin films, phase transition study 2-12764  
 Cu<sub>2</sub>S thin films, struct. and optical props. 2-51034  
 Cu<sub>2</sub>S/CdS sintered solar cells, controlled annealing of sintered CdS layer effects on photovoltaic performance 2-6172  
 Cu<sub>2</sub>S/CdS solar cells, transient photovoltaic effect 2-52352  
 Cu<sub>2</sub>S/CdS solar cells prepared by organometallic chemical vapor deposition: preliminary stage 2-37368  
 Cu<sub>2</sub>S/Zn<sub>1-x</sub>Cd<sub>x</sub>-S heterojunction solar cells formed on sprayed Zn<sub>2</sub>Cd<sub>1-x</sub>S films, properties 2-27636  
 Cu<sub>2</sub>S-(Cd,Zn)S thin-film high-efficiency solar cells, development 2-37364  
 Cu<sub>2</sub>S-CdS dry process solar cells, CdS carrier concentration influence on cell props. 2-27634  
 Cu<sub>2</sub>S-CdS solar cells degradation, lateral diffusion effects 2-37324  
 Cu<sub>2</sub>S-CdS sprayed backwall solar cells for terrestrial appls., reliability 2-37321  
 Cu<sub>2</sub>S-CdS sprayed solar cells, losses 2-37320  
 Cu<sub>2</sub>S-ZnCdS thin film solar cells, cross diffusion of Cd and Zn 2-37323  
 Cu<sub>2-x</sub>-S, NMR and ionic cond. 2-12826  
 Cu<sub>2-x</sub>-S-CdS frontwall thin film solar cells, influence of performance of surface props. of Cu<sub>2-x</sub>-S 2-27631  
 Cu<sub>2-x</sub>-S-CdS thin film solar cells with dual impurity distrib. in base 2-37214  
 Cu<sub>2-x</sub>-S-ZnS heterostruct., electroluminescence 2-17552  
 Cu<sub>2</sub>S thin film deposition, flash evaporation technique, morphological and optical investigations 2-41533  
 Cu<sub>2</sub>S/CdS photocells, characteristics 2-47476  
 Cu<sub>2</sub>S/CdS solar cells, characterisation by photocapacitance IR quenching 2-22619  
 Cu<sub>2</sub>S-CdS integrated thin film solar panels fabrication technology 2-27638  
 Cu<sub>2</sub>S-CdS thin-film heterostruct. solar cell, struct. and phase studies by X-ray diffr. 2-37366  
 Cu<sub>2</sub>S-CdS ungridded solar cell material, defect detect. by laser scanning 2-37365  
 CuSO<sub>4</sub>+PbO, exchange reaction, thermooanalytical and mass spectroscopic study 2-41891  
 CuSO<sub>4</sub>·K<sub>2</sub>SO<sub>4</sub>·6H<sub>2</sub>O-liquid <sup>3</sup>He interface, thermal boundary resist., mag. coupling 2-30738  
 Cu<sub>2</sub>SbS<sub>3</sub>I<sub>2</sub>, unit cell parameters, NQR study 2-41227  
 Cu<sub>2</sub>SbSe<sub>2</sub> and Cu<sub>2</sub>SbS<sub>3</sub>I<sub>2</sub>, NQR study 2-41227  
 Cu<sub>2</sub>Se, α=β phase transition, X-ray diffr. study 2-8467

## copper compounds continued

- Cu<sub>2</sub>Se, mobile ion density, EXAFS investig. 2-22117  
 Cu<sub>2</sub>Se, molten, semicond.-metal transition 2-5444  
 Cu<sub>2</sub>Se, phase transition to superionic phase, thermal expansion, electron diffr., and electronic cond. 2-26452  
 Cu<sub>2</sub>Se-Cu phase equil. curve refinement, coulometric titration and thermo-EMF meas. 2-40520  
 Cu<sub>2-x</sub>-Se, form. in solid state, phase transformations, reaction kinetics 2-16771  
 Cu<sub>2-x</sub>-Se, NMR and ionic cond. 2-12826  
 CuSi, gaseous molecule, dissoci. energy, mass-spectrometric determ. (*German*) 2-28929  
 CuSiF<sub>6</sub>·6H<sub>2</sub>O, structure instability near first-order transition 2-35462  
 Cu<sub>2</sub>SiS<sub>6</sub>, cryst. struct., orthorhombic system (*French*) 2-12545  
 Cu<sub>2</sub>TaS<sub>6</sub>, isomer shift of 6.2 KeV nucl. transition of <sup>181</sup>Ta 2-36485  
 Cu<sub>2</sub>Te, dissociation press. meas. 2-9535  
 Cu<sub>2</sub>Te, molten, semicond.-metal transition 2-5444  
 Cu<sub>2</sub>TiSe<sub>2</sub>, liquid, elec. cond. and thermoelec. power 2-13063  
 Cu<sub>2</sub>TiSe<sub>2</sub>, solid and liquid states, elec. cond., thermoelectric power, thermal cond. 2-13075  
 Cu<sub>2</sub>V<sub>2</sub>O<sub>3</sub>, β-phase, quasi-one-dimensional conductor, metallic cond. 2-13047  
 Cu<sub>3</sub>VS<sub>4</sub>, Li<sup>+</sup> insertion studies 2-22442  
 Cu<sub>3</sub>VS<sub>4</sub>, Raman linewidth of phonon modes induced by hydrostatic press., resonant enhancement 2-46590  
 CuWO<sub>4</sub>, antiferromag. zigzag chains of spin 1/2 (*French*) 2-5559  
 Cu<sub>2</sub>Zn<sub>1-x</sub>Fe<sub>x</sub>O<sub>4</sub>, slow cooled and quenched, struct. and lattice parameter changes 2-30442  
 Cu<sub>2</sub>Zn<sub>1-x</sub>Fe<sub>x</sub>O<sub>4</sub> system, slow cooled and quenched, mag. hysteresis studies 2-36387  
 Cu(1) complex, chloro(bis(z-pyrimidyl)disulphide) copper (1) monohydrate, coplanar, mol. mechanics and orbital calcs. 2-29527  
 GeTe-Bi<sub>2</sub>Te<sub>3</sub>-Cu<sub>2</sub>Te quaternary system, electrophys. props. of GeTe-based solid solns., double doping effect 2-13089  
 K<sub>2</sub>Cu<sub>2</sub>(MoO<sub>4</sub>)<sub>4</sub> crystal growth from melt, cryst. struct. 2-1465  
 La<sub>4-x-2y</sub>Ba<sub>2+2y</sub>Cu<sub>2-2y</sub>O<sub>10-2y</sub>, cryst. struct. (*French*) 2-8496  
 LaCu<sub>2</sub>Si<sub>2</sub>, thermal expansion study 2-30638  
 Mn<sub>1-x</sub>Cu<sub>x</sub>Sb thin films, magneto-optical props., Curie temp. 2-9212  
 (NH<sub>4</sub>)<sub>2</sub>CuBr<sub>2</sub>·2H<sub>2</sub>O, 3-D Heisenberg ferromag., direct expt. determ. of gap exponent 2-26646  
 NH<sub>4</sub>NO<sub>3</sub>:CuO, struct. phase transitions, EPR study 2-51451  
 Na<sub>1.9-2x</sub>Cu<sub>2</sub>V<sub>1-x</sub>O<sub>30</sub>, prep., struct. and ESR characts. 2-41512  
 Na<sub>2</sub>Mg<sub>8-x</sub>Cu<sub>2</sub>Si<sub>12</sub>O<sub>30</sub>, ESR and diffuse refl. spectra, ZZ to 298K (*French*) 2-41186  
 Ni<sub>1-x</sub>Cu<sub>x</sub>(1-x)<sub>2</sub>Fe<sub>2</sub>O<sub>4</sub> (0≤x≤1) ferrites, structural and magnetic properties 2-2060  
 Ni<sub>1-x</sub>Cu<sub>x</sub>S<sub>2</sub>, elec. cond., Hall effect, thermoelectric power 2-26388  
 Os-Cu clusters in SiO<sub>2</sub> supported catalysts, EXAFS obs., cluster struct. 2-27023  
 Rb<sub>2</sub>CuBr<sub>2</sub>·2H<sub>2</sub>O, 3-D Heisenberg ferromag., direct expt. determ. of gap exponent 2-26646  
 RbCuCl<sub>3</sub>, cooperative Jahn-Teller distorted struct. 2-8497  
 RbCu<sub>2</sub>Cl<sub>3</sub>(1-x<sub>2</sub>-x<sub>1</sub>Cl<sub>2</sub>) (0≤x≤0.40) solid electrolyte system, stability 2-40570  
 RbCu<sub>2</sub>Cl<sub>3</sub>(1-x<sub>2</sub>-x<sub>1</sub>Cl<sub>2</sub>) (0≤x≤0.40) solid electrolyte system, elec. cond. 2-40593  
 RbCu<sub>2</sub>Cl<sub>3</sub>-x<sub>2</sub>-x<sub>1</sub>Cl<sub>2</sub> solid electrolyte, prep. and characterization 2-16876  
 (Se<sub>0.5</sub>Te<sub>0.5</sub>)<sub>1-x</sub>Cu<sub>x</sub>, liquid, metal-nonmetal transition, mag. susceptibility study 2-40791  
 (Se<sub>0.5</sub>Te<sub>0.5</sub>)<sub>1-x</sub>Cu<sub>x</sub>, liquid semiconductor, elec. cond., thermopower and mag. susceptibility 2-40909  
 Si-Cu<sub>2</sub>Si semipermeable anode for Si electrorefining 2-41534  
 SnO<sub>2</sub>-AnS-Cu<sub>2</sub>S-ZnS:Mn(Cu)-AP thin film cell, shortwave electrolum. 2-26996  
 γ-(Zn,Me)<sub>2</sub>(PO<sub>4</sub>)<sub>2</sub>, (Me=Mg, Mn, Fe, Co, Cu, Ni, Cd), solid solns., crystal chem. 2-16626  
 Zn<sub>x</sub>Cu<sub>1-x</sub>Fe<sub>2-9-3x</sub>O<sub>4</sub> (x=0.3, 0.4, 0.5) polycrystalline ferrites, initial permeab. and var. of magnetisation with Zn content 2-13317

## copper zinc alloys see brass

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## Corbino effect

see also Hall effect

No entries

## Coriolis force

see also rotation

- allene-d<sub>4</sub>, ν<sub>9</sub>+ν<sub>11</sub>-ν<sub>11</sub>, ν<sub>10</sub>+ν<sub>11</sub>-ν<sub>11</sub> hot band system, rot. lines, vibr. l-type doublings 2-4256  
 circumferentially periodic rotating structs., free undamped vibrs. 2-8079  
 cometary nuclei, rapidly rotating, effect of Coriolis force on dust zoning 2-32954  
 1,1-ethylene-d<sub>2</sub>, IR study of a-axis Coriolis interacting band system, vibr. and rot. parameters 2-34404  
 formyl fluoride-d<sub>1</sub>, laser microwave double reson. and microwave meas., Coriolis interaction 2-49469  
 liquids, vibrational relax., anharmonicity, Coriolis coupling, and solvent effect contribs. 2-4371  
 methyl bromide, rot. anal. of interacting IR bands 2-49413  
 methyl fluoride, IR spectrum, rovibrational anal., Fermi type and Coriolis reson. 2-4278  
 PD<sub>3</sub>, IR spectrum, rot. anal., equilib. struct., quadratic force field 2-4279  
 SiF<sub>2</sub>, IR spectrum, Coriolis coupling, vibr. transition moments 2-4276

## cornea see eye

## corona

see also electric breakdown; flashover; solar corona

- air, condensation nuclei creation by negative corona discharge 2-30346  
 air, DC positive streamer corona enhancement due to electronegative gas addition 2-25668  
 charge storage and transport in dielectrics, corona method 2-8860  
 corona discharge generated in O<sub>2</sub> in point-to-plane gap subjected to chopped DC positive voltage 2-30275  
 corona-onset field strength calcs. and equiv. radius concept 2-8365  
 DC flare discharge in certain technological processes 2-44934  
 detection of corona discharges, limitation rel. to relevant communication theory for system noise and pulse detection in noise 2-12422  
 discharged current characts., from needle electrode, applications to thunderclouds detection 2-10120  
 electric wind in a system of electrodes corona needle-plane 2-16535  
 humidity effects, in diverging electric field, theory and expt. 2-16525  
 hyperboloid of revolution-plane configuration electrodes, obs. 2-16534



**corona continued**

- insulation, effects of corona and partial discharges, alleviation and exploitation 2-12420
- monopolar ions production by travelling wave corona discharge for electrostatic precipitators 2-20814
- monopole antenna, response to EM pulse with corona, transmission line model 2-44191
- multichannel switch triggered by low-voltage auxiliary discharges 2-48726
- negative point-to-plane corona, electrode degradation 2-12423
- nonuniformities in laser-produced plasmas, optical probe obs. 2-1338
- particle charging in corona fields in air by wine bombardment and diffusion in dark space 2-12424
- point to plane corona, Warburg's law derivation 2-1360
- polyvinylidene fluoride film, uniaxially stretched, corona poled at elevated temp., piezoelec. const. 2-46488
- positive corona pulse characteristics from two interacting needles in air 2-20961
- positive needle, influence of wind 2-20962
- synchronous generator laminar insulation system phenomena preceding breakdown under action of strong electric field (*Polish*) 2-35335
- unipolar corona discharge in hyperboloid-plane gap, calc. and obs. 2-16533
- voltampere characteristics of corona discharge with nonlinear ion mobility, calc. method 2-40190
- Z-pinch, dense, ion temp. and density distrib. in corona 2-50428
- C plasma, laser produced, visible spectrum 2-1343
- SF<sub>6</sub> gas, positive/negative point-plane corona inception under DC and 60 Hz conditions 2-12421
- SF<sub>6</sub>, point-plane corona pulses 2-20954
- SF<sub>6</sub> rod-plane gaps, pre-breakdown discharges under positive switching impulses 2-40203

**coronagraphs**

- see also *solar corona*
- external resulting systems for coronagraphs, theoretical evaluation of efficiency 2-53084
- K-coronameter with reflex monitor at 5303 Å, appl. to electron density meas. in coronal active regions 2-6538
- miniature non-eclipse coronagraph, appl. in atmospheric obs. of outer solar corona 2-42595
- Spacelab Lyman  $\alpha$  and white light coronagraphs program 2-32847

**corporecular streams** see *cosmic rays; solar wind***correlation methods**

see also *correlators*

- auditory evoked potential of freely moving cats during repeated d-amphetamine, cross correlation analysis 2-22775
- auditory stimuli, cross correlation analysis of averaged slow wave field potentials 2-47612
- clipped photon correlations, self-scaling 2-24950
- conservative Hamiltonian system, correlation function method for stochastic transition detection 2-23577
- cross-correlation functions meas. of stochastic processes, statistical errors 2-158
- decorated lattices, one- and two-dimensional, model study 2-48629
- diffuser performance prediction, set of correlations 2-30258
- generalised Boltzmann-Enskog model, correl. functions asymptotics 2-48604
- holography based on intensity correlation 2-34701
- horizontal-line two-phase pressure drop computation program 2-20730
- image processing, hybrid optical-digital, using pattern recognition methods for correl. signal evaluation 2-861
- incoherent optical correlation techniques and appls. 2-29788
- interferometer, split-band, Z 2-23713
- medical diagnosis of foetal bradycardias, automatic 2-18327
- microprocessor-based instrument for correlation chromatography and data processing 2-22500
- molecular correlation function approaches, to dielec. relax., review 2-9083
- non-contacting level measurement of irregular surfaces using coded ultrasound and cross correlation analysis 2-48670
- optical differential processing of images, stroke-classification of Chinese characters (*Chinese*) 2-7720
- optical image correlation using acoustooptic spatial light modulator and CCD detector 2-44200
- rough surface microstructure change and motion tracking meas., real-time speckle correl. by holographic matched filtering 2-42990
- seismic data anal. by time series methods, seismic history of Vrancea area, Rumania (1935-77) 2-37781
- semiconductor detection unit for X-rays, with correlation charge-sensitive preamplifier 2-7439
- solar magnetic field, two-point correl. function rel. to flux tubes models 2-10365
- speckle interferometry, signal to noise ratio for power spectrum and autocorrel. function anal. 2-53108
- state-space models of gravity disturbance gradients, Kalman filters design for inertial navigation system 2-6301
- stochastic signals, detection, angular correlation appl. 2-24527

**correlation theory**

see also *correlators; information theory*

- acoustic correlation processing, effect of propagation fluctuation 2-29930
- nonstationary aircraft noise, statistical estimation of correlation 2-11885
- pulsars interstellar scintillation, correl. props. of saturated scintillations in space and time 2-42705
- time-variant characts. of an underwater sound channel, correlation meas. method 2-29906
- underwater acoustic signal detect. threshold effects in time-delay estimation via cross-correlation 2-44536

**correlators**

- see also *correlation methods; correlation theory; information theory*
- acousto-optical correlator, time integrating, based on light polarisation processing 2-24965
- anomalous correlator of resonantly scatt. light 2-44381
- Fabry Perot prefiltering, unfocused optical correlator 2-7724
- Fresnel zone plate coded images, optical scanning reconstruction 2-24954
- holographic intensity correlator using a laser cathode-ray tube 2-44219
- holographic pattern recognition methods 2-34695
- integrated optical spatial filters, passive and active 2-4617
- intensity/phase autocorrelator for ultrashort optical pulse meas. 2-29868
- optical correlator, coherent, emitter spectrum width influence on output signal (*fr*) 2-39725

**correlators continued**

- optical memories, large capacity, correlator appls. 2-862
- real-time correlator for photon statistics investigations 2-11650
- ZnO-Si, induced junction monolithic SAW storage correlator 2-50006

**correspondence principle**

No entries

**corrosion**

- see also *corrosion protection; corrosion testing; electrochemistry; stress corrosion cracking; surface chemistry*
- advanced high temp. reactor materials (*German*) 2-468
- AGR, implications for condensate purification of operation at pH 9.6 2-4012
- alloys, amorphous, as corrosion-resistant optical storage media 2-987
- alloys, fatigue crack growth, high temp., design approach for correl. over wide range of parameters 2-31794
- alloys, microcryst., prep. from metallic glasses, novel materials technology 2-51846
- amorphous alloys, recent studies, review (*Japanese*) 2-26354
- aqueous corrosion problems, in energy systems 2-2606
- basalt fibres, chemical durability 2-22356
- binary alloys, morphology of uniform adherent scales 2-47247
- biofouling in simulated OTEC evaporator tubes on at-sea research platform at Punta Tuna, Puerto Rico 2-6167
- boiler, denting corrosion, inhibition, model expts. 2-15495
- BWR, corrosion product deposition, activity transportation, parametric study 2-19676
- calcines from reprocessing plant, leaching props. chem. composition 2-39148
- CANDU steam generator, corrosion studies under fault water conditions 2-19656
- cast iron piston rings, improvement of corrosion and wear resist. by nitriding (*Russian*) 2-31829
- corundum, platelike, basic props. effect on liq. metal resist. 2-41773
- deposits, on coolant circuit of RBMK-1000 (reactor), decontamination by dissoln. 2-7390
- E glass, strength in soln. of varying pH 2-27310
- E-glass fabric, organic acid effect 2-17753
- engineering design for corrosive environment 2-9440
- epoxy, Ag filled, conductive paste, morphology and corrosion resist. 2-13832
- fission reactor material corrosion products, synthesis for simulation studies 2-19674
- fuel element sheathing corrosion in data processing from nuclear reactor operating modes (*Bulgarian*) 2-7226
- glass, chemical stability for radioactive waste fixation 2-13835
- glass, devitrified and technical, strength, seawater influence 2-5918
- glass, leach tests for radioactive waste storage 2-34118
- glass, plate, chem. stability, electrochem. treatment effect 2-22349
- glass, SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-K<sub>2</sub>O-RO, colourless container, chem. resist. 2-22351
- glass enamels, corrosion 2-36986
- glass surface reacted with water, elec. resist. 2-1658
- glasses, with chem. stability, synthesis 2-27134
- graphite, corrosion by H<sub>2</sub>O in HTR core (*German*) 2-459
- graphite, corrosion by water and air penetration in PNP-500 reactor (*German*) 2-500
- graphite for HTGR, macroporosity changes under oxygen corrosion 2-49108
- Hastelloy B, high temp. behaviour in HCl/water vapour atmos. 2-43610
- high-temperature corrosion in energy systems 2-5974
- Inconel 617 structural materials for HTGR, corrosion behaviour in impure He gas 2-6055
- information retrieval, report of European Federation of Corrosion 2-42807
- kinetic model, interaction of gases with solid surface (*French*) 2-26260
- leach test specimen sizes, selection criterion 2-39147
- loop reactor unit, corrosion product precip. fom N<sub>2</sub>O<sub>4</sub> coolant (*Russian*) 2-4022
- Magnox Al-80, etched, corrosion in dry steam at 10<sup>5</sup> Pa press., 373 to 573K 2-31834
- 2-mercaptobenzothiazole, corrosion inhibitor, radiation chemistry, nuclear reactor appl. 2-29388
- metal corrosion influencing factors and protective measures (*French*) 2-37001
- metallic glasses, low metalloloid content, crystallisation to form high strength microcrystalline alloys 2-31710
- metals, electrodisolution and corrosion by AC 2-47238
- mild steel components in reactors and steam generators, operation experience 2-4008
- molecular beam surface scattering apparatus, for vel. and ang. distrib. meas. 2-9235
- molten salts, problems of corrosion and electrometallurgy in the nuclear field (*French*) 2-27330
- nuclear materials, corrosion and cladding expts., 1942-45 2-18855
- nuclear plant decontamination methods, aspects 2-4023
- nuclear power plant aqueous primary cooling circuits, nitrate form. prevention using ethanol 2-43584
- nuclear reactor materials, corrosion related problems 2-49136
- nuclear steam generating systems, chem. thermohydraulics 2-4010
- nuclear steam generator materials, pitting corrosion studies 2-4018
- nuclear steam generators, system chemistry consideration 2-4011
- oxide film exam. by taper section 2-6013
- polyamides, constructional, natural ageing, effect on mech. props. 2-17758
- polymer/concrete composites, review of physical props. 2-13783
- polymeric coatings, scale and corrosion parameters at a geothermal loop experimental facility 2-13856
- PWR model steam generators, corrosion resistance 2-49153
- PWR steam generator corrosion control, condensate polisher appl. 2-19664
- quartz-glass, heat-resist., corrosion resist. 2-9441
- radioactive waste, in borosilicate glass, standard leach test 2-39149
- radioactive waste, leach testing 2-39142
- radioactive waste, leaching behaviour, conf., Argonne, IL, USA (Sept. 1980) 2-38361
- radioactive waste, leaching from SYNROC B and borosilicate glass 2-39145
- radioactive waste, vitrified, aqueous leaching mechanisms 2-39143
- radioactive waste, vitrified, immobilisation, glass corrosion concepts appl. 2-39139



# corrosion continued

radioactive waste, vitrified, leach tests, pH control 2-39144  
single tube steam generator, stress corrosion cracking 2-19652  
solid fluorides as electrolytes, strong resistance to corrosion by fluorinated reagents (*French*) 2-16896  
solid materials, chem. resist. to conc.  $H_3PO_4$  soln. 2-5965  
solidified waste, leach testing rig for high press. 2-43548  
steam generators, corrosion due to acid chloride in coolant 2-19654  
steam generators, denting corrosion with water leaking in 2-15504  
steam generators, recirculating, denting, lab. study 2-19655  
steam generators, solute concentration in crevices 2-19653  
steam turbine condenser brass tube corrosion damage anal. 2-52118  
steel, 2.25%Cr ferritic, H effect on corrosion by high temp. water 2-9454  
steel, Alloys 800, 600, 690, materials requirements for PWR steam generator tubing 2-4009  
steel, austenitic, corrosion in flowing high temp. water 2-17790  
steel, austenitic stainless, interaction with Li, effect on struct. and mech. props. 2-41798  
steel, austenitic stainless, intergranular corrosion, dislocation struct. influence 2-17779  
steel, austenitic stainless, intergranular corrosion, influence of Si additions 2-47241  
steel, austenitic stainless, low C, corrosion behaviour in mineral acids 2-31838  
steel, austenitic stainless, pitting potential study using potentiodynamic technique 2-41780  
steel, C, eroded surface under salt water, SEM study 2-5980  
steel, C and weathering, corrosion products, IR and Raman spectroscopy 2-52110  
steel, C-Mn, exposed to NaCl acidified solns., H absorpt. and evolution kinetics 2-31826  
steel, carbon, corrosion and chemistry study under steam blanketing 2-19650  
steel, carbon, erosion-corrosion in nuclear steam generators 2-19645  
steel, corrosion-erosion, chemistry effects in steam generators 2-19646  
steel, Cr-Al, corrosion, high temp. effect of Al content (*Korean*) 2-22377  
steel, Cr-Mo, cyclic crack growth at low stress intensities, influence of fatigue underloads 2-27278  
steel, Cr-Mo, LMFBR steam generator materials experience 2-4020  
steel, Cr-Mo (9, 1%), deposition and corrosion studies in high press. boiler loop 2-19651  
steel, Cr-Ni-Co-Mo-Mn, corrosion-resist., heat treatment and mech. props. 2-41640  
steel, crevice, pot. and pH meas. in NaCl soln. and artificial sea water 2-47222  
steel, ferritic stainless, Cr-Mo-Ti stabilised, sensitisation, influence of heat treatment 2-47243  
steel, ferritic stainless, crevice corrosion initiation resist., influence of selective oxidation 2-13839  
steel, high-Cr, increasing passivation ability and corrosion resist. by Pd surface alloying 2-31849  
steel, hydrogen corrosion, Mo additions influence 2-41806  
steel, low C, H conc. in samples exposed to geothermal fluids 2-17766  
steel, mild, corrosion in cultures of ferric Fe reducing bacterium isolated from crude oil, polarisation characts. 2-27325  
steel, mild, high-Si, corrosion mechanism in high press.  $CO_2$  2-41796  
steel, mild, in aerated  $NaNO_2$ , passivity, linear polarisation resistance study 2-9457  
steel, mild, low-Si, corrosion mechanism in high press.  $CO_2$  2-41795  
steel, mild, response to water chemistry changes, hysteresis effects 2-19647  
steel, mild, scale and corrosion parameters at a geothermal loop experimental facility 2-13856  
steel, Ni-Cr-Mn, ferrite-containing, precipitation and corrosion processes after isothermal annealing 2-2518  
steel, reinforcement in pozzolana cement concretes, corrosion behaviour 2-31840  
steel, reinforcement in pozzolana cement concretes, corrosion, exposure testing 2-31841  
steel, stainless, 304 and 316, crevice corrosion, critical flux composition for initiation 2-22368  
steel, stainless, corrosion in molten LiF-BeF<sub>2</sub> 2-41800  
steel, stainless, electrochemical corrosion, surface plastic deform. influence in cavitation-erosion failure 2-17774  
steel, stainless, low-Cr ferritic, heating in vacuum effect on surface props. 2-47260  
steel, stainless, orthopaedic implants in animals, corrosion and passivation behaviour 2-9893  
steel, stainless, type 304, hot rolled, pitting corrosion and pickling treatment 2-47237  
steel, stainless, type 430, etching technique development for intergranular corrosion resist. determ. 2-27323  
steel, supercritical boilers using ammonia-hydrazine water treatment, formation of magnetite in feedwater circuits 2-27355  
steel 4340, electrochemical DC and AC methods of rate determ. 2-41830  
steel steamplant alloy pitting and crevice corrosion meas. methods (*Dutch*) 2-52095  
steels, crevice corrosion, enrichment of H and Cl ions 2-9455  
steels compatibility in FBR in high temp. Na (*Japanese*) 2-7160  
steels implanted with unseparated ions and selected ions, comparison between props. 2-5981  
superalloy, hot corrosion, protective coatings and surface treatment 2-17789  
SYNROC, crushed and cored, continuous flow leaching 2-39140  
transition metal phosphides, vapour deposited, corrosion stability at high temp. 2-41769  
water chemistry in reactor systems; conference, Bournemouth, England (Oct. 1980) 2-18819  
water cooled reactor, materials corrosion and corrosion cracking 2-24339  
water pollution aspects at Swiss PTT, protection measures, corrosion problems, quantitative and qualitative measurements (*German French*) 2-14176  
Zircaloy clad fuel rods,  $ZrO_2$  corrosion films, eddy current meas. 2-24333  
Zircaloy-2, phase involved during corrosion in hot water at 350°C 2-31837  
Zircaloy-4, cladding embrittlement due to inner surface oxidation 2-43529  
Ag-Al alloys reflectivity for use in solar reflectors 2-47449  
AgI film conductivity in Ag/ $\beta$ -AgI/21Py cell 2-16878  
Al alloy, component failure anal. 2-31867

# corrosion continued

Al alloy, stress corrosion cracking and corrosion fatigue, specimen thickness effects 2-41711  
Al alloys, corrosion by Al salts, chemical nature 2-22367  
Al alloys, quenching in polyethylene oxide solution, effect on struct. and props. 2-27197  
Al and alloys, corrosion, microbiological, in fuel/water systems, redox pot. 2-47226  
Al surface laser irradiated, corrosion behaviour 2-9474  
Al-Li-X alloys, microstruct., mech. props., and corrosion resist. 2-31740  
Al-Si filler metal, influence of element additions for Al-brazing optimisation (*Chinese*) 2-22223  
Al-Zn(-Sn)(-In), sacrificial anodes, sea water testing 2-52093  
B fibre reinforced Mg-Al-Zn-Mn, corrosion resist. and electrochem. characts. 2-36995  
C fibre reinforced Al, component reactions, matrix comp. effect 2-36920  
C fibre reinforced Al, effect of SiC coating on C fibres 2-36994  
C fibre reinforced Al composite, corrosion and mech. props., carbide phase content effect 2-41556  
Cem-Fil fibres, chemical durability 2-22356  
Co-Cr perpendicular recording medium by vacuum deposition, mag. and struct. props. 2-26690  
CoO-CeO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>, glass form. regions and phys. props. 2-8442  
Cr coating, on Zn, outdoor performance 2-2628  
Cr, corrosion in ortho-phosphoric acid 2-17788  
Cr-H<sub>2</sub>O system, elevated temp. potential-pH diagrams 2-27326  
Cr, atmospheric corrosion, chronological prediction (*Czech*) 2-9456  
Cu, corrosion in SO<sub>2</sub>, pure and pre-oxidised specimens, 500-950°C 2-27336  
Cu, dissoln. in N HNO<sub>3</sub> soln., effect of local mag. field 2-41815  
Cu, galvanokinetic behaviour, in Na<sub>3</sub>PO<sub>4</sub>-NaCl aq. soln. 2-47227  
Cu, sulphidation inhibition by B implantation 2-27322  
Cu:Al ion implanted film, corrosion inhibition, Rutherford backscatt. study 2-47228  
Cu:Mg ion implanted film, corrosion inhibition, Rutherford backscatt. study 2-47228  
Cu-Au, anodic dissoln., O<sub>2</sub> reduction and corrosion 2-5987  
Fe (111) surface, water vapour adsorption, LEED and work function changes meas. 2-26206  
Fe, Armcro, corrosion in molten LiCl-KCl eutectic salt, effect of O (*Korean*) 2-41790  
Fe, corrosion in neutral soln., anode to cathode area ratio 2-52094  
Fe, corrosion in ortho-phosphoric acid 2-17788  
Fe, dissoln. in N HNO<sub>3</sub> soln., effect of local mag. field 2-41815  
Fe, electrochem. in molten Na<sub>2</sub>SO<sub>4</sub> at 1173K, thermodynamic diagrams 2-5978  
Fe, electrochemical DC and AC methods of rate determ. 2-41830  
Fe sintered, friction in liq. corrosive medium, electrochem. phenomena effect 2-41763  
Fe-Cr, corrosion in ortho-phosphoric acid 2-17788  
Fe-Cr (20 wt.%), scaling in H<sub>2</sub>-H<sub>2</sub>O-H<sub>2</sub>S mixtures 2-47254  
Fe-Cr-Mo base amorphous alloys, spontaneous corrosion passivation in 6 N HCl 2-31846  
Fe-Mn, sulphidation, Mossbauer spectroscopy study 2-41782  
Fe-Mn-Cr base amorphous alloys, corrosion behaviour, Mn content effects 2-31845  
Fe-Ni-Cr, Alloy 800, corrosion, high-temp. in carburising, oxidising and sulphidising environments 2-27337  
Fe-Si (10-40 wt.%), anodic processes, galvanostatic conditions 2-47223  
Fe-Si-Nb(Cr)(V), anodic processes, galvanostatic conditions 2-47224  
Fe<sub>80</sub>B<sub>20</sub>, glassy metals, corrosion and dissoln. 2-31858  
Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, glassy metals, corrosion and dissoln. 2-31858  
Fe<sub>3</sub>O<sub>4</sub> deposition on steam generator tube surface, steel corrosion 2-19649  
GaAs crystals, selective corrosion and selective growth (*Chinese*) 2-9438  
n-GaAs, photoelectrochem. corrosion, kinetic anal. 2-30966  
n-GaAs, photoelectrochemical corrosion, effect of Au monolayer 2-13181  
Li<sub>2</sub>O-ZnO-P<sub>2</sub>O<sub>5</sub> glasses, pH effect on durability 2-5968  
Mn, sulphidation in H<sub>2</sub>S-H<sub>2</sub> atmospheres, 1073-1273K 2-27338  
Mn-Cr base amorphous alloys, corrosion behaviour, Mn content effects 2-31845  
MnO-CeO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>, glass form. regions and phys. props. 2-8442  
Mo-H<sub>2</sub>O system, elevated temp. potential-pH diagrams 2-27326  
Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, subcrit. crack growth, effect of corrosion 2-36944  
Na<sub>2</sub>O-BaO-Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> glasses, alkaline durability 2-52085  
Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glass, subcrit. crack growth, effect of corrosion 2-36944  
Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glasses, weathering and water leaching 2-52073  
Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glasses, SnO<sub>2</sub> coated, effects of alkaline solns. on surfaces 2-52074  
Na<sub>2</sub>O-CaO-SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>-Al<sub>2</sub>O<sub>3</sub>(B<sub>2</sub>O<sub>3</sub>)(B<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>), bioglass, chem. comp., Vickers hardness, chemical durability (*Japanese*) 2-41774  
Na<sub>2</sub>O-SiO<sub>2</sub> glass, subcrit. crack growth, effect of corrosion 2-36944  
Na<sub>2</sub>O-SiO<sub>2</sub>-ZrO<sub>2</sub>(MgO)(TiO<sub>2</sub>), glass, corrosion by aq. soln. with various pH values (*Japanese*) 2-22360  
Nb alloys, creep in molten Li 2-41696  
Nb-Zr-C, interaction with Li, O content influence 2-41799  
Nb-Zr-C, interaction with molten In-Ga-Sn 2-41801  
Ni, electrochem. and morphological study in mineral acids, influence of purity grade and anion type 2-47225  
Ni, plated, corrosion in formamide-water mixtures, solvent comp. effect 2-47230  
Ni-base superalloy, precip. hardened, statistical alloy design (*Korean*) 2-41618  
Ni-Cr, Alloy 800, susceptibility to intergranular corrosion 2-52092  
Ni-Cr electrodeposit, Cr finished, corrosion on brass and steel substrates 2-47261  
Ni-Cr-Fe, heat treatment effect on stress and corrosion in BWR, PWR environment 2-29345  
Ni-Cr(Mo) and Ni-Cr-Mo fibres, corrosion and oxidation resist., prod. and strength props. 2-41550  
Ni-Mo-Cr, Hastelloy, long-term ageing characts. 2-9361  
Ni-Mo-Cr and Ni-Mo(Cr), corrosion resist. 2-2620  
Ni-resist, type-2, austenitic cast Fe, potentiometric study of corrosion 2-27327  
NiO-CeO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>, glass form. regions and phys. props. 2-8442  
n-NiTiO<sub>3</sub>, photoelectric and photochem. response 2-51224  
Pb, fibre reinforced, anodic corrosion 2-22353  
Pb-acid battery grids, pasted, corrosion-resist, composite cell testing 2-9640  
PbS crystals, n- and p-type, corrosion rate in HNO<sub>3</sub> 2-17750



**corrosion continued**

- PbS, void-free electrode, prep. and anodic behaviour, influence of O 2-6042
- Pt oxide coated Ti anodes, durability in D-ribono-γ-lactone electro-reduction process 2-9439
- Pt-H<sub>2</sub>O system, elevated temp. potential-pH diagrams 2-27326
- Ru oxide coated Ti anodes, durability in D-ribono-γ-lactone electro-reduction process 2-9439
- SO<sub>4</sub><sup>2-</sup> melts, anion-cation interactions, spectrosc. obs. 2-41378
- Si<sub>3</sub>N<sub>4</sub> ceramics, sintering techniques, material props. and appls. 2-5841
- SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> ceramics, dense, corrosion resist. in H<sub>2</sub>SO<sub>4</sub> solns. 2-22350
- SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-BaO-Na<sub>2</sub>O glass system for high numerical-aperture optical fibres 2-49848
- Sn in NaCl soln., corrosion and passivity, inorganic anions effect 2-22375
- SrTiO<sub>3</sub> photoanodes for photoelectrochemical cells, photocorrosion 2-22635
- ThF<sub>4</sub>-AlF<sub>3</sub>-YF<sub>3</sub>-BaF<sub>2</sub> system glasses, with large optical transmission band, high chem. resist. (*French*) 2-13512
- Ti as construction material in biomedical electronics (*Czech*) 2-52650
- Ti, corrosion resistance improvement by Pd ion implantation 2-21164
- Ti enamel and coatings, corrosion and leaching in citric acid solns. 2-5982
- Ti, oxide film thickening in aq. soln., rel. to anion type and conc. 2-5979
- Ti-H<sub>2</sub>O system, elevated temp. potential-pH diagrams 2-27326
- UO<sub>2</sub> fuel, irradiated, leaching and dissolution 2-39141
- Zn-Co, electrodeposition mechanism 2-22179
- Zr alloy oxide films, correl. between phase composition and corrosion kinetics, Mossbauer investig. 2-21929
- Zr, metal and alloys, hydriding in electrochemical corrosion 2-19658
- Zr-Nb (1 wt.%) alloy, deposition corrosion products on heat-irradiated surfaces, microstructure anal. (*Bulgarian*) 2-9451
- ZrO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> heat resistant materials, sintered, corrosion stability in molten glass 2-31810

**corrosion control** *see corrosion protection***corrosion fatigue** *see stress corrosion cracking***corrosion fatigue testing** *see corrosion testing***corrosion prevention** *see corrosion protection***corrosion protection**

- see also anodisation; corrosion; corrosion protective coatings; packaging; pH control*
- BWR intergranular stress corrosion cracking, causal factors and mitigation 2-39163
- BWR startups, dissolved O<sub>2</sub> and H<sub>2</sub>O<sub>2</sub> concentration control procedures 2-4066
- carbonate fuel cell technology progress 2-22606
- central receiver system utilising molten nitrate salts for heat transfer and energy storage, materials requirements 2-6128
- ceramic type protective coatings for high temp. reactors (*German*) 2-474
- engineering design for corrosive environment 2-9440
- Incoloy 800 and Inconel 600, steam generator tube for PHWR, NaH<sub>2</sub>PO<sub>4</sub> evaluation as denting inhibitor 2-4016
- Magnox reactor corrosion, in-core monitoring developments 2-15582
- metal corrosion influencing factors and protective measures (*French*) 2-37001
- nuclear power station concrete press. vessel., 20 MN breaking load tension member development (*German*) 2-4031
- online surveillance and monitoring of plant reliability, conf., London, England (Sept. 1980) 2-15581
- organic corrosion inhibitors, relationship between molecular structure, inhibitive efficiency 2-27305
- photoelectrochemical solar cells, photocorrosion process on n-GaAs and corrosion prevention 2-22627
- steam plant cooling ccts., chemical indices limit values (*Rumanian*) 2-17765
- steel, austenitic stainless, stress corrosion cracking, MgCl<sub>2</sub> soln., influence of alkali halide additions 2-13841
- Al, corrosion protection by Zn suspension in aqn. glycol soln. 2-22369
- Al, dissolution in HCl, retardation, effect of B-diketo cpds. 2-13843
- Al substrate cleaning using alkaline soln., prevention of metal pitting corrosion by Mg<sup>2+</sup> ion addition 2-31832
- Al-Mn (1.3%), corrosion inhibition by furfuraldehyde (salicylaldehyde) 2-47239
- Al-Zn-Sn alloy sacrificial anodes, heat treatment effects 2-31839
- Co based superalloy, attack by chemical and electrolytic processes 2-47221
- Cu-base alloys, assessment of quality of surface film on cooling water side of condenser tubes 2-5993
- Cu-benzotriazole, absorpt. isotherm 2-45711
- Cu-Ni alloy resistance to NH<sub>3</sub> corrosion in simulated steam condenser conditions 2-37007
- Ni, based superalloy, attack by chemical and electrolytic processes 2-47221

**corrosion protective coatings**

- aluminosilicate interface, corrosion inhibiting an Al alloys, IR reflection and electron spectra 2-5988
- ceramic coatings as positive current collectors for Li-Al/FeS<sub>2</sub> batteries 2-47469
- ceramic oxides for coating of metals via colloidal intermediates 2-9473
- coloured polymeric coatings fabrication, by plasma polymerisation 2-17631
- CVD coatings, applications 2-31855
- durability, kinetic eval. at high temps. 2-27350
- enamel, development in the USSR for steam boilers 2-47267
- fuel cell appl. 2-22601
- gas turbine appls., industrial, coatings in-service experience and lab. tests 2-31817
- gas turbine engines, industrial, thermal barrier coatings for thermal insulation and corrosion resistance 2-31818
- metal with protective layer coating, corrosion, diffusion model (*French*) 2-2609
- modification by ion implantation, ion beam anal. 2-45215
- Nichrome, oxidation resistant coating on Mo, electrophoretically deposited 2-41817
- plasma arc sprayed coatings for sucker rod appl. 2-17786
- plasma deposited coatings formed from mechanically alloyed powders 2-17622
- polypyrrole thin film, stabilisation of n-Si photoanodes to surface corrosion in aqueous electrolyte 2-5971

**corrosion protective coatings continued**

- scale and corrosion parameters at a geothermal loop experimental facility 2-13856
- silicide overlay coatings on Ni based alloys, oxidation and hot corrosion resistance 2-31854
- steam turbines, low press., avoiding corrosion by coating 2-22391
- steel, alloy, thin-sheet, durability, effect of corrosion protective coatings 2-27351
- steel, bearing, localized-corrosion resistant coatings 2-13863
- superalloy, hot corrosion, protective coatings and surface treatment 2-17789
- thermal spray coatings, appl. in US Navy 2-17785
- Ag reflectors for solar appl., protective coatings 2-22548
- Al for nuclear elements 2-47266
- AlN coatings on Mo, prep. by RF reactive ion plating, deposition mech. 2-13658
- BN, protective film prep. in silica tubes by thermal characterisation 2-41768
- Ca, corrosion protective coatings on Fe substrate 2-22387
- Co based oxide containing detonation gun coatings, high-temp. impact sliding wear and oxidation resist. 2-31853
- Co-Cr-Al coating containing active element additions, erosion resistance 2-31821
- Co-Cr-Al-Y laser treated coatings, struct. 2-30769
- Co-Cr-Al-Y plasma sprayed coatings for aircraft gas turbine appl. 2-47262
- Cr coated mild steel, behaviour in Na polysulphide environment 2-22565
- Cr rich diffusion coating for low C steel for S container in Na-S cells 2-22564
- Cr<sub>2</sub>O<sub>3</sub> conversion coatings on Zn plating 2-22376
- Cu-Ni-Sn, laser surface melting, AES study and corrosion resist. 2-47264
- Fe, protective coatings by anodic coupling polymerization of o-allylphenol 2-27328
- Fe-(Ni), galvanic coatings on steel (*Russian*) 2-9392
- Mo, plasma arc spray coatings for fluidic pyrometer 2-15175
- MoSi<sub>2</sub>, protective coating on Mo, cyclic oxidation testing 2-27372
- Na-S cell, corrosion resistant current collector, tests 2-22596
- Ni, coatings, on Cu electrodes, for wear and corrosion resistance 2-22373
- Ni coatings deposited by low temp./low conc. plating process, corrosion resistance 2-22374
- Ni-Al (Ti) plasma coatings, influence on fatigue and corrosion fatigue of medium-C steel 2-17776
- Ni-Al powdered protective coatings on steel, phase struct. changes 2-22385
- Ni-Co-Cr-Al-Y laser treated coatings, struct. 2-30769
- Ni-Cr-Al-Y laser treated coatings, struct. 2-30769
- Ni<sub>3</sub>Al<sub>4</sub>, aluminisation of Ni, formation of intermetallic phases 2-13848
- Pt-Al coatings, effect on high cycle fatigue behaviour of Ni based superalloys 2-31850
- SiO<sub>2</sub>, plasma deposition on GaAs 2-47217
- Sn corrosion protective coatings on Fe substrate 2-22387
- Ti and Ti alloy plasma-sprayed coatings, microstruct. and reaction processes, metallography 2-13865
- Ti, oxide coated, fatigue strength 2-27279
- Ti-Al, oxide coated, fatigue strength 2-27279
- TiCoSi<sub>2</sub>, protective coating on Mo, cyclic oxidation testing 2-27372
- WCob diffusion layer on hard WC-TiC-Co alloys, prep. and props. X-ray diffr. obs. 2-41787
- Zn, on steel, hydrogen embrittlement of coating 2-9467
- Zn-Co alloys, electrodeposited, Mossbauer study of chemical state of Co 2-31330
- ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub> thermal barrier coatings, charact. by Raman spectroscopy 2-31510

**corrosion testing**

- electrochemical DC and AC methods of rate determ. 2-41830
- HTGR, steam generator materials performance 2-4007
- Incoloy 800 and Inconel 600, steam generator tube for PHWR, NaH<sub>2</sub>PO<sub>4</sub> evaluation as denting inhibitor 2-4016
- Inconel 600, corrosion in LWR coolant by cationic resin beads 2-4017
- on-line corrosion monitoring, during aromatic hydrocarbon chlorination 2-31986
- plastics, <sup>3</sup>H penetration, autoradiographic study 2-2652
- plated finishes, review of corrosion tests 2-9509
- polyamide, H<sub>2</sub>SO<sub>4</sub> penetration, <sup>35</sup>S autoradiographic study 2-2652
- PWR steam generator materials, Cu and Ni compounds effects on corrosion 2-4013
- rate eval. by Faradaic rectification method 2-27363
- reactor fuel performance testing with respect to pellet clad interaction 2-7167
- steel, maraging Cr-Ni type, strength characts. at elevated operating temps. 2-52047
- steel, stainless, automatic inspection of intergranular corrosion tendency, potentiostat programmers' appl. 2-37017
- steel, stainless, optical inspection of small-diameter deep bores using rod optics with low-light television and still photography 2-9517
- steel, stainless type 304, intergranular corrosion and end-grain pitting by various test methods 2-27365
- steel in concrete, AC impedance technique in immersed conditions 2-5992
- Al alloy D16T, thin walled parts, max. corrosion determ. 2-22398
- Al-Mg, alloy 5083, stress corrosion testing 2-27364
- Al<sub>2</sub>O<sub>3</sub>, anodic film, corrosion resistance evaluation, Hunter's method 2-27368
- Co-P magnetic electroless thin films, effective life 2-41166
- Cu-base alloys, assessment of quality of surface film on cooling water side of condenser tubes 2-5993
- Fe, corrosion and passivation, autoradiography using labelled electrolytes 2-2655
- Mo, cyclic oxidation testing of protective coatings, MoSi<sub>2</sub> and TiCoSi<sub>2</sub> 2-27372

**corundum**

- see also ruby; sapphire*
- catalyst carriers, prod. for NH<sub>3</sub> disoc. 2-41569
- charge trapping, optical absorpt., photocond., and luminesc. meas. 2-40963
- corundum:Cr, influence of impurity on defect struct. (*Russian*) 2-17029
- crystal growth, by seed rotation method 2-2426
- electrocorundum, spherical granules prod. from thermoplastic slips 2-41570



**corundum continued**

- electrocorundum refractories, props., effect of SiO<sub>2</sub> and MgO-containing additives 2-36932  
 electron irradiated, thermolum. curves, influence of impurities and heat treatment atm., trap parameters 2-41436  
 impurity inhomogeneity, in single crystals 2-30479  
 interdoublet ESR spectrum of Mo<sup>3+</sup> ions 2-21876  
 neutron irradi., F<sup>+</sup> centre, ENDOR study 2-17366  
 optical, thermal, and polaron energy levels 2-17000  
 optical profiled crystals, evolution of defect struct. 2-2436  
 platelike, basic props. effect on liq. metal resist. 2-41773  
 polycrystalline, intermediate energy ion bombardment, effect on props. 2-25947  
 reaction with killed steel 2-41772  
 refractories, creep rel. to SiO<sub>2</sub> content, annealing temp. and microstruct. 2-36931  
 sintered, <sup>4</sup>He diffusion, mass spectrometric study 2-40604  
 surface microhardness, interaction of aqueous copolymer dispersion with surface (*Russian*) 2-2599  
 synthetic, specific heat data in temp. range 80-300K 2-16812  
 thermochemical soln., of corundum 2-52244  
 Al<sub>2</sub>O<sub>3</sub>:Mo<sup>3+</sup> corundum, Mo<sup>3+</sup> zero field splitting, EPR study 2-17332  
 α-Al<sub>2</sub>O<sub>3</sub>:Ti<sup>3+</sup>, impurity energy states 2-17000  
 (Al<sub>2</sub>O<sub>3</sub>)<sub>2</sub>MgO spinels, elastic and anelastic effects, precipitation 2-45373  
 NiO-α-Al<sub>2</sub>O<sub>3</sub>, quasibinary system, phase equilibria in subsolidus region, 1000-1920°C 2-9340  
 NiO+α-Al<sub>2</sub>O<sub>3</sub>-NiAl<sub>2</sub>O<sub>4</sub> interfacial reaction, Rutherford backscatt. obs., depth profiles, volatilisation effects 2-27479  
 ZrO<sub>2</sub>:Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> heat resistant materials, sintered, corrosion stability in molten glass 2-31810

**cosmic background radiation**

- see also radiofrequency cosmic radiation*  
 anisotropy and origin of high energy cosmic rays 2-18666  
 diffuse far IR and sub-mm emission, origin 2-42730  
 diffuse far UV background, possible detect. of line emission from hot galactic corona 2-10517  
 Friedmann Universe, background blackbody density 2-6694  
 galactic soft X-ray background stellar contrib. 2-10532  
 Galaxy, IR background source confusion model rel. to IR counterparts of type II OH masers 2-14942  
 gamma-ray background, contrib. of quasars to 2 keV to 100 MeV background radiation 2-6686  
 gamma-ray background, rel. to neutrino dating of galaxy form. epoch 2-42765  
 Hubble flow isotropy 2-38351  
 microwave background radiation, obs. of decrement toward distant galaxy cluster (0016+16) 2-33187  
 quadrupole anisotropy in cosmic background radiation, observational evidence for non-Friedmannian Universe 2-10537  
 selfgravitating fluid influenced by primordial background radiation 2-10533  
 thermal background and moving local 100 Mpc radius, effect on cosmic rays 2-10282  
 X-ray background, contrib. of quasars to 2 keV to 100 MeV background radiation 2-6686  
 X-ray background and Einstein observatory obs. 2-48355  
 Si particle detectors, background noise caused by sea level cosmic rays 2-43672

**cosmic dust**

- see also meteoroids*  
 AFGL 618, planetary nebula precursor, near-IR spectrum of circumstellar dust ring 2-3288  
 amorphous interstellar grains, origin 2-38279  
 Barnard 35, dust temp. from far IR and submillimetre obs. rel. to mol. cloud heat source 2-33115  
 bipolar nebula, struct., evolution and origin model involving dust distrib. 2-14901  
 3C 273, quasar 3.3 μm dust emission reexamined 2-33183  
 Centaurus A (NGC 5128), obs. of H I assoc. with dust lane 2-3307  
 charged micron-sized grains in outer planetary magnetospheres 2-53129  
 Comet Howard-Koomen-Michels (1979 XI), Sun-grazing comet, dust tail struct. and dynamics 2-18739  
 comet nucleus dust, electrostatic charging and emission 2-10356  
 comets, dust zoning of rapidly rotating nuclei 2-32954  
 comets, dusty, nuclei visibility, effect of single scatt. by dust 2-38119  
 Earth-Moon system formation by gravitational accretion in dust disc 2-32870  
 electric potential 2-42646  
 elliptical radio galaxies with dust lanes, model for stationary states of interstellar gas 2-38312  
 emission from comets at large heliocentric distances 2-53176  
 forbidden line ratios, dust sensitive 2-32858  
 Friedmann Universe, rotating dust ellipsoid evolution 2-33189  
 in galaxies, obs. of 3.3 μm emission feature 2-38314  
 globular cluster cores, dust cloud effects, radiation transfer and press., models 2-18784  
 globular clusters, polarisation of light scattered by dust particles 2-28518  
 grain settling in contracting protoplanetary cloud 2-3207  
 HD 147419, Wn6, evidence for small dust grains from anomalous far UV interstellar extinction 2-6605  
 IC 418, planetary nebula, internal dust absorpt. rel. to C II dielectronic recomb. lines 2-6657  
 ice grains, detect. in Kleinmann-Low nebulae in Orion from IR spectrum 2-33110  
 intergalactic dust, quasar reddening and effects on microwave background spectrum 2-28581  
 interplanetary dust, book 2-38379  
 interplanetary dust, definition of albedo and appl. to irregular particles 2-32950  
 interplanetary dust in stratosphere, IR spectra obs. 2-38111  
 interplanetary grains collisional processes, unlikely origin for β-meteoroids 2-32958  
 interstellar dust, as precursor of Ca,Al-rich inclusions in carbonaceous chondrites 2-38143  
 interstellar dust, grain surface reactions rel. to chemistry in low and intermediate density clouds 2-14910  
 interstellar dust, sputtering and collisions in three-phase medium rel. to Ca-Al rich inclusions in meteorites 2-32959  
 interstellar-dust clouds assoc. with Herbig-Haro objects and refl. nebulae, 18 cm OH lines obs. 2-3298

**cosmic dust continued**

- interstellar dust distrib. in region  $l^{\text{II}}=301^{\circ}$ ,  $b=-18^{\circ}$  to  $-31^{\circ}$ , correl. with H I distrib. 2-38277  
 interstellar dust distribution used for star formation region mapping (*French*) 2-10519  
 interstellar dust grains mass towards δ Scorpii, rel. to interstellar C abundance 2-42733  
 interstellar dust in neutral and ionized gas, origin of diffuse far IR and sub-mm emission 2-42730  
 interstellar extinction distrib., model rel. to IR background source confusion for OH-IR stars 2-14942  
 interstellar extinction law in dusty H II regions, results from stellar UVRI photometry 2-3291  
 interstellar grains, cosmic ray interaction rel. to H<sub>2</sub> prod. in dense mol. clouds 2-28533  
 interstellar grains, nature of carrier of diffuse bands 2-53347  
 interstellar grains and from galactic plane at high longitudes 2-48316  
 interstellar grains composition, obs. of diffuse absorpt. bands between 2.9 and 4.0 microns 2-33119  
 interstellar grains size, IR photometry and polarisation obs. in Orion 2-6647  
 interstellar MgO particles, spectroscopic evidence 2-42734  
 IRC+10216 (CW Leonis), grain species and mol. species in circumstellar shell 2-53381  
 late-type stars, circumstellar dust shells obs. using heterodyne spatial interferometry at 11 μm 2-53254  
 Local Group galaxies stellar spheroids dust cloud anal., BI<sub>k</sub> obs. 2-3300  
 Mars, generation mechanism for local dust storm 2-18727  
 Mars, Viking orbiter obs. of local dust storm in Chryse region 2-18728  
 Mars twilight sky brightness, dust effects 2-14796  
 microwave background thermalization 2-38343  
 molecular clouds towards 3C 133, 3C 123 and W51, mag. field determ., UHF obs. 2-6652  
 NGC 1068, Seyfert 2 galaxy, effects of dust on He I 10830 Å flux 2-28553  
 NGC 4151, Seyfert 1.5 galaxy, thermal dust emission contrib. to near IR continuous spectrum 2-28547  
 NGC 4151, type I Seyfert galaxy, contrib. of dust thermal radiation to IR continuum 2-28546  
 in NGC 6302, high excitation nebula, spectroscopic evidence for dust grains 2-3294  
 NGC 7479, SB(s)c galaxy, bar and bar-arm region, dust and stellar content 2-53359  
 Orion MC-1, evidence for dust density vars. from high resolution submillimetre map 2-42731  
 Orion Nebula, continuum and dust props., UV obs. 2-6649  
 Orion Nebula particles scatt. efficiency 2-38268  
 α Orionis, dust shell size, IR speckle interferometry obs. 2-23338  
 Period Comet Tempel Tuttle, dust distrib. from Leonid shower anal. 2-38133  
 Periodic Comet Stephan-Oterma (1980g), thermal emission from dust, JHK obs. 2-38123  
 Periodic Comet Swift Tuttle, dust activity models 2-32956  
 quasar emission line clouds, dust abundance, UV obs. 2-14948  
 quasars, high redshift, dust shell hypothesis constraints from EHF obs. 2-38337  
 S88 interstellar molecular cloud, dust cooling rate rel. to cloud energetics 2-28525  
 early solar system dust, electron microscopy obs. 2-6571  
 supernovae, Type II, interaction of radiation with circumstellar dust 2-33052  
 Vela supernova remnant, dust grains disruption rel. to interstellar Ca II line in HD 72127A 2-42732  
 zodiacal dust-plasma interactions, observational consequences 2-38035  
 H II region water masers, hot gas cold dust pumping 2-6653
- cosmic radiation** *see cosmic background radiation*  
**cosmic radiations, radiofrequency** *see radiofrequency cosmic radiation*  
**cosmic radio waves** *see radiofrequency cosmic radiation*  
**cosmic ray absorption** *see cosmic ray propagation*  
**cosmic ray alpha-particles and helium nuclei**  
 antihelium flux, upper limit between 130 and 370 MeV/nucleon 2-10288  
 solar cosmic rays, ion heating at cyclotron freq. rel. to <sup>3</sup>He-rich events 2-48199  
 solar cosmic rays, role of epithermal electrons in <sup>3</sup>He enrichment 2-48198  
 solar flare particles, study of ratio between proton fluxes and low-energy α-particles 2-3167
- cosmic ray apparatus**  
*see also particle detectors*  
 A/D converter unit design for cosmic ray air shower expts. 2-48154  
 Compton telescope, appl. to gamma radiation meas. between 0.4 Me and 7 MeV at balloon altitudes 2-10289  
 double neutron monitor appl. to cosmic ray multiplicity studies 2-48155  
 drift chambers as track detectors for heavy ions 2-43689  
 EAS muon scintillator detectors, pulse profiles study 2-3197  
 Fly's Eye for EAS obs. 2-10283  
 gamma-ray scintillation detector, calibration procedure 2-10327  
 interactions of cosmic rays with medium, conference, Leningrad, USSR, (1979 November 30 to December 2) 2-42770  
 muon detector, appl. to sidereal anisotropy meas. at 1500 GV 2-10279  
 muon in EAS, system to record time spread 2-3196  
 multiple neutron meas. with NM-64 neutron monitor 2-48156  
 research at Florence (1928-32) 2-18856  
 scintillation detector for low energy electrons in upper atmos. 2-10326  
 spectrometer for low energy electrons calibration 2-28351  
 TP-2 mass spectrometer for solar cosmic rays and radiation belts anal. 2-28350
- cosmic ray composition**  
*see also cosmic ray alpha-particles and helium nuclei; cosmic ray deuterons; cosmic ray electrons; cosmic ray mesons; cosmic ray muons; cosmic ray neutrinos; cosmic ray nuclei; cosmic ray photons*  
 abundance enhancement prod. by collisionless shocks 2-32787  
 antihelium flux, upper limit between 130 and 370 MeV/nucleon 2-10288  
 antineutrons, prod. by neutron oscillation 2-10291  
 antiproton flux in closed Galaxy model, theory 2-32777  
 antiproton flux measurement and search for antihelium 2-10288  
 antiproton-proton ratio calc. 2-53031  
 extensive air showers, elongation rate, rel. to composition, origin 2-3170  
 galactic cosmic ray B,C,N and O nuclei, isotopic and elemental comp. obs. 2-23197



**cosmic ray composition continued**

- galactic cosmic rays, Sc to Mn element abundances 2-18665
- highly ionising particles at Mountain altitude 2-28305
- low energy ions, spectral and comp. vars. during energetic storm particle event 2-32785
- research at Florence (1928-32) 2-18856
- solar cosmic rays, anomalous comp. prod. by flare epithermal electrons 2-48198
- solar cosmic rays, ion heating at cyclotron freq. as cause of anomalies in comp. 2-48199
- solar flare nuclear reactions and cosmic ray isotopic composition 2-18755
- solar flare particles, characts. of flares emitting  $^3\text{He}$  or Fe enriched cosmic rays, 1977 September to December 2-14837
- solar flare particles, study of ratio between proton fluxes and low-energy  $\alpha$ -particles 2-3167
- ultraheavy cosmic rays ( $24 \leq Z \leq 59$ ), abundances as indicators of nucleosynthesis and accel. processes 2-32786
- $Z=6$  to 14 cosmic ray nuclei, charge and isotopic comp. at source 2-53030
- Fe nuclei, abundances and energy spectra from 1 to 10 GeV 2-10287
- Ni nuclei, abundances and energy spectra from 1 to 10 GeV 2-10287

**cosmic ray deuterons**

No entries

**cosmic ray effects and interactions***see also high-energy cosmic ray interactions*

- Bruderheim chondrite, radioactivity data rel. to galactic cosmic rays gradients 2-48116
- chondrite parent body stratigraphy, cosmic ray exposure age study 2-53187
- interactions of cosmic rays with medium, conference, Leningrad, USSR, (1979 November 30 to December 2) 2-42770
- interstellar gas, implications of antiproton flux meas. and search for antihelium 2-10288
- interstellar grains, cosmic ray interaction rel. to  $\text{H}_2$  prod. in dense mol. clouds 2-28533
- interstellar molecular clouds, constraint on prompt supernova cosmic ray prod. from  $\gamma$ -ray obs. 2-6512
- interstellar molecular clouds, contrib. of cosmic ray irradiation to number of apparent  $\gamma$ -ray sources 2-28534
- ionization of  $\text{NH}_3$  in molecular clouds near galactic centre 2-28537
- Kirin chondrite, cosmogenic nuclides and irradiation history 2-53184
- Lahrauli ureilite meteorite, mineralogy, comp. and cosmic ray track density 2-14829
- light elements nucleosynthesis review 2-3192
- lunar rocks, particle exposure ages and erosion rates 2-42616
- lunar soil, irradiation history 2-42618
- meteorite (Angra dos Reis), Xe spallation systematics 2-28421
- meteorite exposure ages (*Japanese*) 2-28416
- multiplicity studies, double neutron monitor 2-48155
- radio sources, electrons energy gain by synchrotron self-absorpt. rel. to source brightness temp. 2-42758
- research at Florence (1928-32) 2-18856
- solar flare particle effects in lunar rocks, rel. to long term vars. in flare activity 2-48195
- Fe meteorites, spallogenic rare gases concs. in meteorites with anomalous  $^{107}\text{Ag}$  2-38141

**cosmic ray electrons**

- energy spectrum, transition radiation, INTERCOSMOS-17 satellite meas. 2-3169
- radio sources, electrons energy gain by synchrotron self-absorpt. rel. to source brightness temp. 2-42758
- relativistic, low energy, construction and calibration of spectrometer 2-28351
- scintillation detector for low energy electrons in upper atmos. 2-10326
- solar epithermal electrons, role in form. of anomalous comp. of solar cosmic rays 2-48198
- transport and propagation of relativistic electrons in galaxies, analytic solns. 2-33148

**cosmic ray energy spectra**

- abundance enhancement prod. by collisionless shocks 2-32787
- antiprotons, flux meas. rel. to energy spectrum 2-10288
- atmospheric cosmic rays observed with emulsion chambers, energy spectra 1-50 TeV 2-28302
- electrons, energy spectrum, transition radiation, INTERCOSMOS-17 satellite meas. 2-3169
- galactic cosmic rays, effects of particle drift on interplanetary transport and energy spectra 2-10285
- gamma-ray diffuse flux, spectrum meas. between 0.4 MeV and 7 MeV using Compton telescope 2-10289
- high energy cosmic ray anisotropy and origin 2-18666
- isotropic intensity variations during August-September 1979, rigidity spectrum 2-6513
- Jupiter magnetosphere, O and S ions energy spectra and phase space densities 2-32905
- low energy ions, spectral and comp. vars. during energetic storm particle event 2-32785
- muon spectrum at sea level, derivation from primary cosmic ray energy spectrum 2-53032
- particle track prod., cosmic ray heavy nuclei spectra determ. in meteorites 2-48191
- plasma firehose instability suppressed by impulsively accel. hard energy spectra cosmic rays 2-32830
- solar flare particles, charact. rigidity rel. to long term vars. in flare activity 2-48195
- solar flare particles, spectral indices for protons and low-energy  $\alpha$ -particles 2-3167
- TeV range cosmic rays, origin, relative abundances (*German*) 2-10290
- Fe nuclei, abundances and energy spectra from 1 to 10 GeV 2-10287
- Ni nuclei, abundances and energy spectra from 1 to 10 GeV 2-10287

**cosmic ray geophysical effects** *see geophysical aspects of cosmic rays***cosmic ray jets** *see cosmic ray showers and bursts***cosmic ray mesons**

- Jupiter, origin for energetic mesons, interplanetary mag. field accel. 2-48118

**cosmic ray muons**

- atmospheric cosmic rays observed with emulsion chambers, energy spectra 1-50 TeV 2-28302
- EAS, system to record time spread 2-3196
- EAS muon scintillator detectors, pulse profiles study 2-3197

**cosmic ray muons continued**

- multiplicity studies, double neutron monitor 2-48155
- muon pencil beam event, prod. cross section, BB cascade decay 2-23971
- muon spectrum at sea level, derivation from primary cosmic ray energy spectrum 2-53032
- photonuclear energy loss for high-energy muons 2-42560
- sidereal anisotropy of cosmic ray flux. meas. near 1500 GV 2-10279
- variation spectra remote sensing rel. to interplanetary mag. field inhomogeneities 2-28307

**cosmic ray neutrinos**

- Dirac neutrinos in early cosmology 2-14960
- high energy neutrinos, appl. to dating of epoch of galaxy form. 2-42765
- Neutrino Astronomical Object, form. and struct. (*Chinese*) 2-18773
- SO(15) fermion family unification, weak interaction and solar neutrino mixing 2-19287
- solar neutrino flux, low energy consequences of intermediate mass neutrinos 2-19285
- solar neutrino problem, possible solns. 2-6584

**cosmic ray neutrons**

- albedo neutron flux, solar diurnal anisotropy meas. 2-53029
- barometric effect on spectrum of primary vars. 2-14737
- geomagnetic aa index correl. variability, effect of CR drift in interplanetary mag. field 2-28300
- measurement of multiple neutrons with NM-64 monitor 2-48156
- oscillation, as source of cosmic ray antineutrons 2-10291
- solar wind MeV nucleon flux assoc. with corotating interaction regions enhancement interpretation 2-32792

**cosmic ray nuclei**

- see also cosmic ray alpha-particles and helium nuclei; cosmic ray neutrons; cosmic ray protons*
- abundances of elements Sc to Mn 2-18665
- galactic cosmic ray B,C,N and O nuclei, isotopic and elemental comp. obs. 2-23197
- highly ionising particles at Mountain altitude 2-28305
- particle track prod., cosmic ray heavy nuclei composition determ. in meteorites 2-48191
- Fe nuclei, abundances and energy spectra from 1 to 10 GeV 2-10287
- Ni nuclei, abundances and energy spectra from 1 to 10 GeV 2-10287

**cosmic ray-nucleus reactions**

- for inelastic cosmic ray-nucleus scattering, see "cosmic ray-nucleus scattering"*
- ( $p,\pi$ ), 10 and 22.6 GeV, cosmic ray, in emulsion, slow pion emission 2-43483

**cosmic ray-nucleus scattering**

No entries

**cosmic ray origin***see also cosmology; element origin*

- antineutrons, prod. by neutron oscillation 2-10291
- antiprotons origin near Earth and in SNRs (*Russian*) 2-14734
- charged particles superadiabatic accel. by shock waves, diffusion approximation sol. 2-3166
- effects of nucleosynthesis and supernovae in OB associations 2-3287
- extensive air showers, elongation rate, rel. to composition, origin 2-3170
- galactic cosmic ray B,C,N and O nuclei, comp., constraints on source 2-23197
- galactic cosmic rays, charge and isotopic comp. of  $Z=6$  to 14 nuclei at source 2-53030
- high energy astrophysics rel. to cosmic ray origin, book 2-38378
- high energy cosmic ray anisotropy and origin 2-18666
- high energy particles 2-10283
- Jupiter, origin for energetic mesons, interplanetary mag. field accel. 2-48118
- particle acceleration by large-scale supersonic and subsonic turbulent plasma motions, theory 2-48115
- solar low energy ions, interplanetary accel. rel. to spectral and comp. vars. 2-32785
- supernovae, constraint on prompt cosmic ray prod. from  $\gamma$ -ray obs. 2-6512
- TeV range cosmic rays, origin, relative abundances (*German*) 2-10290
- ultraheavy cosmic rays ( $24 \leq Z \leq 59$ ), abundances as indicators of nucleosynthesis and accel. processes 2-32786

**cosmic ray photons***see also cosmic ray X-rays; solar cosmic ray photons*

- atmospheric cosmic rays observed with emulsion chambers, energy spectra 1-50 TeV 2-28302
- cosmic gamma-ray scintillation detector, calibration procedure 2-10327
- galactic gamma-ray emission components 2-38310
- gamma radiation, obs. between 0.4 MeV and 7 MeV at balloon altitudes using Compton telescope 2-10289
- gamma-ray background. rel. to neutrino dating of galaxy form. epoch 2-42765
- gamma-ray emission, enhanced electron fluxes 2-48308
- gamma-ray scintillation detector, calibration procedure 2-10327
- high-energy, interactions in Earth's mag. field 2-28304
- solar energetic transients (50 keV-100 MeV) 2-53028

**cosmic ray propagation**

- 11-year variation of cosmic rays, eqn. of anisotropic diffusion 2-48121
- abundance enhancement prod. by collisionless shocks 2-32787
- acceleration, effect of losses on diffusive scatt. through shock waves 2-10280
- acceleration from massive black hole accretion discs at galactic centres 2-14926
- acceleration in galactic compact synchrotron sources 2-28568
- acceleration in planetary bow shock waves 2-38081
- anisotropy of low-energy particles, kinetic theory of interplanetary transport 2-48117
- electrons transport and propagation in galaxies, analytic solns. 2-33148
- galactic cosmic ray, comp., constraints on propag. 2-23197
- galactic cosmic rays, implications of antiproton flux meas. and search for antihelium 2-10288
- galactic cosmic rays, solar modulation in outer heliosphere 2-10286
- galactic cosmic rays scatt. in interstellar space due to mag. field irregularities 2-32778
- heliospheric magnetic field cosmic ray transport, gradient and curvature drifts effects 2-10284
- interplanetary propagation, anal. of particles superadiabatic accel. by shock waves 2-3166
- interplanetary propagation, effects of particle drift on cosmic rays transport 2-10285



**cosmic ray propagation continued**

- interplanetary propagation, effects of shock waves on cosmic ray intensities 2-3168
- interplanetary propagation, theoretical anal. of scintillations observed from space 2-18667
- interplanetary propagation of relativistic particles in corotating interaction regions 2-23198
- interstellar acceleration (*Russian*) 2-32779
- interstellar propagation, antiproton flux in closed Galaxy model 2-32777
- Jupiter magnetosphere, O and S ions diffusion eqn. anal. 2-32905
- muon variation spectra remote sensing rel. to interplanetary mag. field inhomogeneities 2-28307
- origin of high energy particles and acceleration 2-10283
- plasma firehose instability suppressed by impulsively accel. hard energy spectra cosmic rays 2-32830
- protons, modulation and acceleration in interplanetary medium 2-14735
- solar cosmic rays diffusion coeff. radial depend. in heliosphere for O and He 2-28301
- solar flare particles propag., time depend Green's functions of transport eqn. 2-32780
- solar low energy ions, interplanetary accel. rel. to spectral and comp. vars. 2-32785
- solar wind MeV nucleon flux assoc. with corotating interaction regions enhancement interpretation 2-32792
- solar wind shock wave causing intensity increase, Dec. 13 1966 obs. 2-48123
- transport equation, time depend. Green's functions 2-32780

**cosmic ray protons**

- antiproton flux in closed Galaxy model, theory 2-32777
- antiproton flux measurement and search for antihelium 2-10288
- antiproton-proton ratio calc. 2-53031
- antiprotons, prod. by neutron oscillation 2-10291
- antiprotons origin near Earth and in SNRs (*Russian*) 2-14734
- heliosphere, proton gradients and particle drifts 2-32781
- solar, rise time, equivalent diffusion coeff., mean free path 2-42559
- solar flare of 1971 September 1, prompt injection of relativistic protons 2-53214
- solar flare particles, evidence for long term vars. in solar flare activity 2-48195
- solar flare particles, study of ratio between proton fluxes and low-energy  $\alpha$ -particles 2-3167
- solar nonrelativistic protons, modulation and acceleration in interplanetary medium 2-14735
- solar proton energy spectra, forecast model 2-48119

**cosmic ray showers and bursts**

- see also cosmic ray electrons; cosmic ray X-rays*
- air showers, subcore formation, high P<sub>e</sub> effects 2-304
- Cherenkov light pulse shape, from extensive air showers 2-18668
- Cherenkov/particle front time delays rel. to mass of primary 2-18669
- EAS detection and nature 2-10283
- EAS muon scintillator detectors, pulse profiles study 2-3197
- extensive air showers, elongation rate, rel. to composition, origin 2-3170
- mini-Centauro events, extensive air shower component fluctuation explanation 2-28306
- muon in EAS, system to record time spread 2-3196
- nonrandom component study in Southern Hemisphere 2-28303
- photons, high-energy, interactions in Earth's mag. field 2-28304

**cosmic ray solar modulation**

- 11-year cosmic ray variations, evidence from short-term vars. in cosmogenic <sup>14</sup>C, (1909-1952) 2-48120
- 11-year variation of cosmic rays, eqn. of anisotropic diffusion 2-48121
- albedo neutron flux, solar diurnal anisotropy meas. 2-53029
- anisotropy at Earth due to solar extended mag. field hemispheres orientation 2-32952
- anisotropy of low-energy particles, kinetic theory of interplanetary transport 2-48117
- corona transients responsible for solar cycle modulation 2-14738
- Forbush decreases effect on ionosphere, VLF EM wave propag. and radio noise anal. 2-32782
- galactic cosmic rays, gradients in plane of ecliptic from radioactivity data for Bruderheim chondrite 2-48116
- galactic cosmic rays, solar modulation in outer heliosphere 2-10286
- galactic cosmic rays heliolatitude variation from Dhajala chondrite radiation history 2-42556
- heliospheric magnetic field cosmic ray transport, gradient and curvature drifts effects 2-10284
- intensity depressions correl. with vars. of parameters of interplanetary medium 2-3168
- interplanetary propagation of relativistic particles in corotating interaction regions 2-23198
- isotropic variations of cosmic ray intensity during August-September 1979, obs. 2-6513
- particle drift effects on cosmic ray transport, results using more realistic diffusion coeffs. 2-10285
- protons, modulation and acceleration in interplanetary medium 2-14735
- radial gradient out to 23 AU and long-term var. 2-42558
- scintillations observed from space, theoretical anal. 2-18667
- solar wind cavity pulsations, effect on cosmic rays 2-10281
- solar wind shock wave causing intensity increase, Dec. 13 1966 obs. 2-48123
- time depend. Green's functions of transport eqn. 2-32780
- tri-diurnal variation of galactic cosmic rays 2-42557
- <sup>14</sup>C tree ring record since 300 AD, evidence for solar changes 2-18750

**cosmic ray variations**

- see also geomagnetism*
- 11-year cosmic ray variations, evidence from short-term vars. in cosmogenic <sup>14</sup>C, (1909-1952) 2-48120
- 11-year variation of cosmic rays, eqn. of anisotropic diffusion 2-48121
- albedo neutron flux, solar diurnal anisotropy meas. 2-53029
- anisotropy at Earth due to solar extended mag. field hemispheres orientation 2-32952
- barometric effect on spectrum of primary vars. 2-14737
- diurnal anisotropy var. (1973-78) 2-48122
- galactic cosmic rays, diurnal variation fourth harmonic (1968-79) 2-42555
- galactic cosmic rays, solar modulation in outer heliosphere 2-10286
- intensity-depressions correl. with vars. of parameters of interplanetary medium 2-3168
- intensity diurnal variation, power spectral techniques anal. 2-23223

**cosmic ray variations continued**

- interplanetary propagation of relativistic particles in corotating interaction regions 2-23198
- interplanetary radial gradient out to 23 AU and long-term var. 2-42558
- isotropic variations of cosmic ray intensity during August-September 1979, obs. 2-6513
- low energy ions, spectral and comp. vars. during energetic storm particle event 2-32785
- periodic and recurrent vars. in GeV-10 TeV range 2-32784
- scintillations observed from space, theoretical anal. 2-18667
- secular variation over 10<sup>5</sup> years, evidence from space erosion of meteorites 2-14831
- sideral anisotropy of cosmic ray flux. meas. near 1500 GV 2-10279
- solar flare particles, integrated proton fluence rel. to long term vars. in flare activity 2-48195
- solar wind cavity pulsations, effect on cosmic rays 2-10281
- solar wind MeV nucleon flux assoc. with corotating interaction regions enhancement interpretation 2-32792
- solar wind shock wave causing intensity increase, Dec. 13 1966 obs. 2-48123
- tri-diurnal variation of galactic cosmic rays 2-42557

**cosmic ray X-rays**

- solar flare hard X-ray emission, nucl. fusion model 2-14842

**cosmic rays**

- see also cosmic ray apparatus; cosmic ray composition; cosmic ray effects and interactions; cosmic ray energy spectra; cosmic ray origin; cosmic ray propagation; cosmic ray showers and bursts; cosmic ray solar modulation; cosmic ray variations; galactic cosmic rays; geophysical aspects of cosmic rays; high-energy cosmic ray interactions; primary cosmic rays; solar cosmic ray particles*
- conference, Paris, France (July 1981) 2-28610
- high energy cosmic rays anisotropy due to large matter vol. motion rel. to thermal background radiation 2-10282

**cosmic X-rays *see cosmic ray X-rays*****cosmogony *see cosmology*****cosmology**

- see also black holes; element origin; general relativity; red shift*
- 0016+16, red galaxies cluster at z=0.54, cosmological implications of multicolor photometry 2-33165
- adiabatic perturbations in weakly nonlinear regime, evolution 2-33195
- anisotropic Universes, quantised scalar field, pair creation 2-53398
- baryogenesis without the out-of-equilibrium decay of superheavy bosons 2-53402
- baryon production at TeV temps., unified theory 2-23901
- baryon-proton ratio in SU(5) axion model, grand unified theories 2-19290
- Bertotti-Robinson metric, quantum effects 2-23357
- Bertotti-Robinson Universe, canonical quantisation, singularities 2-38549
- bi-metric procedure, appl. to inertia-free mechanics 2-10314
- Bianchi type I anisotropic cosmological model with a collisionless gas 2-42766
- Bianchi type I cosmology, quantum fluctuations singularities 2-6779
- Bianchi type-I radiation-filled Universe in general scalar tensor theory 2-3315
- Big Bang, massive scalar fields, generation by conformal transform. 2-14967
- big bang cosmology, broken local symmetry and new TeV physics 2-48375
- big bang model, nucleosynthesis calculations primordial abundance of <sup>4</sup>He and <sup>2</sup>H 2-42762
- book 2-23386
- book 2-42806
- calibration boson creation in conformally flat spaces (*Russian*) 2-32836
- chaotic universe, Friedmann in mean, soln. of eqns. 2-10541
- chaotic Universe with ultrarelativistic matter, modified big bang and disorder constraints 2-3318
- closed cosmological Friedmann model, spontaneous symmetry breaking 2-14966
- collapsing gaseous protoclusters of galaxies, initial fragmentation 2-33196
- conceptual relationship to materials science 2-23355
- condensation phenomena in expanding universe, Mach-Poincare gravodynamic theory 2-10536
- conformal invariant Lagrangian including gravity, Yang-Mills fields in cosmological metric 2-48378
- cosmic strings and domains in unified theories 2-48371
- CP violation in particle physics and cosmology in unified gauge theories 2-43240
- curved space-time, atom as probe 2-10658
- deceleration parameter taking intergalactic extinction into account 2-14954
- density parameter, statistical measure using clusters of galaxies 2-38281
- Dirac neutrinos in early cosmology 2-14960
- distance indicator for rich clusters of galaxies using binary galaxies 2-38315
- domain walls formation in grand unified model 2-48922
- early Universe, anti-gravity regime existence 2-48379
- early Universe, baryon asymmetry and low energy parity restoration 2-53400
- early Universe, first order phase transition, magnetised black hole and wormhole prod. 2-53399
- early Universe, first-order phase transition, wormhole and black hole fate 2-53397
- early Universe, inhomogeneity form., initial value problem method 2-6690
- early Universe, neutrino rest mass and Jeans clustering 2-28584
- early Universe, origin of struct. from thermal fluctuations 2-42764
- early Universe, thermodynamics of quark-hadron matter phase transition, QCD confinement 2-23356
- early Universe model, superdense matter, high spin effects 2-29215
- Eddington's cosmological number, rel. to Einstein's number criterion and Rydberg's rational system of dimensions (*German*) 2-10535
- effective action in coord. space, early universe prediction 2-28737
- Einstein equations, with vacuum polarisation, cosmology soln., singularity problem 2-53403
- Einstein gravity with cosmological constant, stability props. 2-48370
- Einstein static universe, symmetry breaking and restoration 2-6692
- Einstein-Cartan-Maxwell-Bianchi cosmologies 2-33192
- Einstein-Maxwell equations, with matter and EM field, cosmological soln. 2-53392



## cosmology continued

- elementary quantum, consequences in physics and astrophysics of minimal energy quantum 2-53078
- EM field generated by cosmic vorticity 2-10539
- empirical evidence 2-14968
- empty Robertson-Walker space-time instabilities 2-6770
- energy-momentum tensor, Reissner-Nordstrom metric 2-42915
- expanding universe, finit. creation of particles, quantum equivalence principle formulation 2-10955
- expanding universes, finite temp. quantum fields 2-42763
- fermion pair creation near cosmological singularity 2-48373
- first-order phase transitions in the early Universe 2-33202
- fractional charge states, astrophysical prod. in broken QCD 2-23939
- Friedman cosmological models, fermions creation (*Russian*) 2-38352
- Friedman quasi-Euclidean cosmological model, vector meson creation and vacuum polarisation effects (*Russian*) 2-53404
- Friedmann cosmology, curvature-squared terms effect 2-33200
- Friedmann model, Reggeisation, cosmological solns. 2-48571
- Friedmann Universe, expanding matter annihilation 2-6694
- Friedmann Universe, graviton creation near cosmological singularity 2-48594
- Friedmann Universe, props. and evolution, quantum statistics approach 2-42767
- Friedmann Universe anisotropic structures growth 2-33189
- Friedmann Universe in a quantum gravity model 2-48374
- Friedmann universes, neutrinos of non-zero mass 2-28585
- Friedmann-like singularities in Szekeres' cosmological models 2-38346
- Friedmann-Robertson-Walker universes with quantised matter, general-relativistic many-particle system formalism appl. 2-53395
- fundamental physics, conf., Bogota, Columbia (July-Aug., 1979) 2-10554
- galactic populations distinguished by right/left handed neutrinos 2-14961
- galaxies active nuclei, cosmological evolution, in galaxy mergers model 2-38302
- galaxies formation, thermal evolution of gas with primordial chemical comp. in gravit. contraction 2-3309
- galaxy clusters evolution, implications of X-ray struct. of cluster (0016+16) at ( $z=0.54$ ) 2-33164
- galaxy clusters formation, stability of contracting pancakes 2-14928
- galaxy formation, blini theory, rel. to superinflated models 2-38824
- galaxy formation epoch, neutrino dating 2-42765
- galaxy formation in early Universe, massive neutrino effects 2-33188
- galaxy red shift for inhomogeneous cosmological models 2-6688
- generalised field theory 2-33191
- Godel Universe, canonical quantisation, singularities 2-38549
- Goldstone field, cosmological density fluctuation production 2-33198
- grand unification and cosmology—an environmental impact statement 2-29056
- grand unification beyond SU(5), cosmological consequences 2-29038
- grand unified theories, cosmological constraints 2-29058
- grand unified theories, statistical concepts 2-53394
- grand unified theories, statistical notions, applicability to early Universe 2-29055
- grand unified theory impact on cosmology 2-43253
- gravitation radiation from cosmic strings 2-18988
- gravitational collapse, shear-free, with heat flow 2-28587
- gravitational constant variability implications 2-10307
- gravitational entropy in self-consistent thermodynamic cosmological soln. 2-42925
- gravitational instability in hot Universe with nonzero rest mass primordial neutrinos 2-3319
- gravitational instability in multicomponent fluid, anal. rel. to relativistic cosmology 2-42592
- gravitational scale covariant kinetic theory for particles and photons 2-10305
- gravitational scale covariant theory appl. to stellar structure and evolution 2-10306
- gravity, scale invariant formulation based on conspiracy hypothesis 2-14761
- GUTs, gauge hierarchies and symmetry behaviour at high temps. 2-6983
- hierarchical cosmology, qualitative discussion 2-14956
- hierarchical cosmology, total number of levels 2-14957
- hierarchical models of unified theories 2-3457
- high-energy physics, contemporary status and prospects 2-48900
- homogeneous isotropic model, excitation evolution, single-loop quantum gravitational corrections (*Russian*) 2-14965
- Hubble constant, lower limit from microwave background decrement towards distant cluster (0016+16) 2-33187
- Hubble constant from supernovae expansion rates, continuum radiation scatt. effects 2-23315
- inflationary Universe, horizon, flatness, homogeneity, isotropy and primordial monopole problems 2-48380
- inhomogeneous perfect fluid cosmologies 2-38519
- Kerr metric in an expanding universe 2-28583
- large-scale structures of Universe, book 2-33252
- Lemaître cosmological model, cosmological constraints on elementary particle mass 2-38349
- leptoquarks, cosmological constraints on masses and couplings in GUT's 2-7015
- light elements nucleosynthesis review 2-3192
- linearly expanding Universe, particle creation spectrum, high-energy behaviour 2-53396
- Machian gravitation, bimetric, cosmology study 2-6691
- magnetic monopoles, duality and cosmological phase transitions 2-48875
- Majorana masses, photon gas heating and cosmological constraints on neutrinos 2-15318
- mass formula in a cosmogenesis model 2-38350
- massive neutrino radiative decay lifetime, Universe evolution after recombination era 2-28588
- massive neutrinos, decay rel. to photoionisation of intergalactic medium 2-48333
- matter-antimatter domains in the Universe, vacuum walls soln. baryon asymmetry in GUTs 2-10540
- metagalaxy expansion, early high density hypothesis 2-10534
- metric from matter, general relativistic invariant theory 2-3462
- metric size function appl. in evolution of galaxies 2-38280
- microwave background spectrum distortion by intergalactic dust, implications from quasar reddening 2-28581
- microwave background thermalization 2-38343
- minimal SU(S) grand unified theory, early Universe phase struct. 2-18994
- cosmology continued
- missing mass problem, rel. to observability of gravitational scintillation 2-28333
- monopole pair creation, radiation effects in early Universe 2-29065
- negative masses and the energy-sources of the Universe 2-6689
- neutrino dominated Universe, galaxies formation and clusters of galaxies 2-53366
- neutrino mass and Universe expansion (*Norwegian*) 2-10316
- neutrino masses, from large-scale struct. of space time, upper bounds 2-6693
- neutrinos, stable, right-handed, cosmological bounds on masses 2-53401
- neutron electric dipole moment as cosmic seismometer in grand unified theories 2-29057
- Newton's constant: generation, cosmological consequences, scale invariance breaking 2-38545
- non-Friedmannian Universe observational evidence from quadrupole anisotropy in C background radiation 2-10537
- nonsingular, spontaneous breakdown of C, P, CP, T, CPT and G symmetries 2-18803
- nonsingular model, conformally flat, density of massless vector bosons calc. 2-48372
- nontwisting N-type solns. with cosmological constants 2-28727
- on observational constraints against symmetric cosmologies 2-14958
- open Universe created from de Sitter space 2-48369
- origin of closed Universe and anthropogenic principle (*Russian*) 2-14964
- orthogonal Bianchi cosmologies, bounds of physical quantity time evolution 2-28586
- particle collisions in expanding Universe (*Russian*) 2-53405
- particle masses, cosmological and quantum constraints, teaching 2-48462
- physics reviews, book 2-28617
- planckon vacuum model, cosmology, mass formula 2-38537
- post-recombination Universe, evolution of perturbations, shape effects 2-14959
- primaevial adiabatic perturbations, constraints from mass distrib. 2-6687
- primordial intergalactic cloud one-dimensional collapse, instability 2-28589
- primordial intergalactic clouds, physical state 2-14931
- primordial Universe and particle physics 2-33197
- primordial Universe matter-antimatter separation by rotating black holes 2-14953
- proton decay effects 2-38345
- QSO absorption spectra, H I Lyman  $\alpha$  line, cosmological evolution 2-38332
- quadratic redshift-distance law, observational mag. cutoff bias, correction 2-38288
- quantum conformal fluctuations of gravity in a singular space-time 2-53393
- quantum cosmology and geometric quantization 2-14955
- quantum effects in cosmological models with singularities 2-23358
- quantum equivalence principle, rel. to kernel  $G(x,x')$ , cosmological particle prod. 2-10954
- quasar evolution, new interpretation of  $V/V_m$  test 2-28577
- quasar lifetimes and space density 2-38333
- radio source counts, cosmological implications of revised statistical estimate at 5 GHz 2-38323
- radio sources, extragalactic, with very steep decimetre wave spectrum, cosmological implications 2-6679
- Regge-Wheeler equation with sources for both even and odd parity perturbations of the Schwarzschild geometry 2-38347
- right-handed neutrino interactions in the Early Universe 2-15333
- Robertson-Walker flat background with relativistic eqn. of state 2-38344
- Robertson-Walker space-times, geodesic incompleteness stability 2-6769
- Robertson-Walker universe, renormalised energy-momentum tensor 2-38348
- Robertson-Walker universe, space curvature 2-10538
- scalar field gravitational coupling, cosmological first order phase transition 2-18993
- scale invariant gravitation theory and gravit. const. var. 2-38048
- scale invariant gravitational Lagrangian, supplementation by matter Lagrangian, Kembhavi and Pollock's form 2-38049
- scale-invariant gravitation theory, reformulation and astrophysical test 2-3190
- Schwarzschild-de Sitter wormholes creation by cosmological first-order phase transition 2-48376
- self-gravitating scalar field with cubic nonlinearity, Einstein eqns. solns. 2-3464
- self-similar cosmological models 2-38512
- self-gravitating fluid influenced by motions and background radiation, eqn. of state 2-10533
- semiclassical Gowdy  $T^3$  cosmological model, singularity avoidance 2-48381
- singularities, matter and physical fields influence, book contrib. 2-33201
- SO(10) left-right symmetric GUT, neutrino mass and cosmological baryon excess 2-23887
- spatially homogeneous cosmologies, nonscalar singularities 2-6778
- spontaneous compactification, gauge symmetry and the vanishing of the cosmological constant 2-33199
- Stokesian fluids and cosmology 2-3316
- SU(5)—SU(3)×SU(2)×U(1), Coleman-Weinberg mechanism in early cosmology 2-43233
- supersymmetry and cosmological term 2-43227
- superinflated models, cosmology appls., review 2-38824
- symmetry restoration in conformally flat metrics for QED and Gross-Neveu model 2-3737
- universal magnetic field evidence, reviews 2-33190
- Universe baryon asymmetry generation in left-right symmetric grand unified theories 2-286
- Universe coarse grained structure and galaxy sizes (*Russian*) 2-3202
- Universe density perturbations leading to galaxy form. 2-48326
- Universe expansion as indirect cause of cosmological redshift 2-3314
- Universe expansion time, rel. to dynamical age of Local Group of galaxies 2-3311
- Universe lepton number and grand unified theories 2-14963
- Universe model 2-48382
- Universe multi-production by first-order phase transition of vacuum 2-48377
- Universe size and age determ. 2-38351
- Universe structure evolution, role of Einstein observatory obs. 2-48355
- Universes rotating, time-dependent, Einstein eqns., finite nonsingular solns. 2-33194
- vacuum strings, evolution and cosmological consequences 2-14962



**cosmology continued**

- wave eqns. for particles with spin in constant curvature Riemannian space 2-48567
- Zel'manov-Grishchuk cosmological homogeneity criterion, geometry 2-42761
- zero metal stars, mass estimate rel. to Universal gas mass 2-33086
- $^2\text{H}(\alpha,\gamma)$ , cross-section, rel. to  $^6\text{Li}$  prod. in big bang 2-39040
- He abundance radio meas., radioastronomy and elementary particle cosmology 2-3317
- He, primordial, form. in early Universe and predicted abundance 2-33193

**cosmotrons**

No entries

**Costa Ribeiro effect** *see dielectric phenomena; phase transformations*

**Cotton-Mouton effect** *see birefringence; magneto-optical effects*

**Cottrell atmospheres**

- creep curves, dislocation transformation model based on nonlinear oscill. 2-25897
- dislocation images due to impurity atmos., electron micrographs 2-45172
- dislocation-point defect interactions studied by US meas. during cyclic deform. 2-45242
- Fe alloys containing O, high temp. mag. aftereffect 2-21843
- NiAl, creep props., high temp., effect of graphite impurity 2-13775

**Cottrell locking** *see Cottrell atmospheres*

**Couette flow**

*see also jets*

- boundary layer topped by a density interface 2-35128
- conducting dusty fluid, MHD motion between parallel plates 2-8238
- disperse two-phase mixture, low velocity rotating Couette flow, microconvection, heat transfer enhancement 2-4828
- incompressible immiscible fluids in rotating system, Couette flow and heat transfer 2-8161
- micropolar fluid creeping motion eqns., sphere resist. to translational, rot. motion 2-39970
- nonisothermal Couette flow, stability conditions 2-8114
- nonlinear viscoplastic fluid, Couette flow, radiative and convective heat transfer 2-25372
- plastic viscoelastic fluids theory appl. 2-25353
- polymer solutions, Couette flow, Taylor stability, mol. models 2-35184
- polymerising fluid, circular Couette flow 2-12224
- between prolate spheroids, unstable flow and rot. in narrow gap, arbitary axis ratio 2-50320
- Taylor vortex flow, coupled-mode eqns. 2-20685
- Taylor vortex flow, transition from laminar flow, visualisation study 2-20774
- thermodynamic fluctuation theory 2-30091
- thermoviscoelastic fluid in Couette flow, Taylor stability 2-30100
- transition determ. in finite geometries 2-12126
- viscous incompressible flow, between rotating cylinders, flow instabilities and transitions 2-25357
- viscous incompressible fluid, marginal stability of Couette flow, spin decay 2-50278
- $^4\text{He}$ , normal fluid, circular Couette flow, emergence of periodic mode in turbulent region 2-39896
- $^4\text{He}$ , superfluid, rotating Couette flow, second sound meas. 2-21413

**counter accessories**

*see also counting circuits*

No entries

**counters**

- see also Cherenkov counters; counting tubes; fission counters; Geiger counters; proportional counters; scintillation counters; semiconductor counters; spark counters*
- fission fragment detector for cross section and angular distrib. meas. 2-4178
- liquid scintillation counting techniques for inorganic radiochemicals 2-43662
- multi-scalar system 2-29484
- optical counter response to dry and liquid particles of different shape and refractive index 2-15277
- particle counters calibration and operating standards 2-38734

**counters (circuits)** *see counting circuits*

**counting circuits**

*see also coincidence circuits; pulse height analysers; scaling circuits*

- digital ratemeter using input pulse rate averaging 2-4180
- injector pulse counter for a linear accelerator 2-39274
- ion counting circuit, rate meter 2-19204
- lifetime meas. of positrons and positronium in condensed media 2-24516
- microprocessor driven ultrafast multichannel event counter 2-24517
- photon counting systems, one-electron pulse selector circuit 2-19900
- radioisotopic instrument accuracy, optimisation of detector load (*Russian*) 2-614
- selective sampling method for high count-rates 2-19910

**counting tubes**

*see also dekatrons*

No entries

**country planning** *see town and country planning*

**county planning** *see town and country planning*

**coupled superconductor devices** *see superconducting junction devices*

**couplers (electric connectors)** *see electric connectors*

**couplers (waveguide)** *see waveguide couplers*

**coupling (process)** *see joining processes*

**CP invariance**

- baryogenesis without the out-of-equilibrium decay of superheavy bosons 2-53402
- canonical Fermi mass matrix for pure generation structure 2-38760
- charge conjugation, parity asymmetry, discovery 2-3727
- chiral  $\sigma$  model, with quarks and gluons, strong CP violation, symm. breakdown 2-48866
- conjugation-charge parity asymmetry, discovery (*Chinese*) 2-10576
- cosmology, nonsingular, spontaneous breakdown of C, P, CP, T, CPT and G symmetries 2-18803
- fermion-fermion condensates and CP violation 2-23869
- grand unified models with automatic Peccei-Quinn symmetry 2-29037
- ground unification and proton stability in chiral SU(8) theory 2-43247
- Higgs boson masses, upper bounds in Weinberg-Salam model with three Higgs doublets 2-19292
- instanton angles  $\theta$ , CP-invariance consequences 2-29059

**CP invariance continued**

- Klein-Kaluza theory, CP invariance, fermion dipole electric moment 2-3669
- Kobayashi-Maskawa CP violation, neutron dipole moment effect 2-38849
- minimal flavor unification via multigenerational Peccei-Quinn Symmetry 2-29043
- mirror symmetry breaking (*Norwegian*) 2-38808
- muon decay, CP-even and CP-odd transverse polarisation of electron (*Russian*) 2-23982
- neutrino oscillations, CP invariance test (*Russian*) 2-11044
- neutron elec. dipole moment calc., intermediate states 2-48990
- neutron electric dipole moment, CP and T invariance test 2-38882
- O(10) grand unified theory, baryon asymmetry and low energy parity restoration 2-53400
- positronium, weak interaction effects study in Weinberg-Salam model 2-29052
- QCD, fractional topological charge and chirality selection rules 2-43290
- quarks/leptons radial excitation model 2-48960
- SO(10) model with harmless axion, baryon nonconservation 2-48923
- strong CP solution with SU(5) $\otimes$ SU(5) 2-29028
- SU(2) $_L$  $\times$ SU(2) $_R$  $\times$ U(1) gauge theory, quark mass matrices, CP violation 2-15303
- SU(5) model with hierarchical fermion masses and phantom axion 2-19291
- SU(7) flavour unification scheme, strong CP and flavour problems simultaneous solns. 2-48926
- superlight grand unified axion in SU(5) model 2-19296
- supersymmetric technicolour model of particle physics 2-11016
- superweak calibration scheme, oscills. and CP-violation (*Russian*) 2-15305
- symmetry violation, general 2-3726
- unified gauge theories, CP violation in particle physics and cosmology 2-43240
- Universe baryon asymmetry generation in left-right symmetric grand unified theories 2-286
- weak interaction theories with dynamical symmetry breaking, review 2-288
- B decays, CP violation observability,  $Z^0$  resonance 2-43335
- $B^0$ - $B^0$  mixing, CP violation in six quark model 2-11002
- $B^0$ - $B^0$  mixing, strong interaction corrections to CP violation in six-quark model and QCD 2-43292
- $B^0$ - $B^0$  system, mass mixing and CP violation in six-quark model, radiative corrections 2-43303
- $D \rightarrow K\pi\nu$ , CP violation mechanism in SU(2) $_L$  $\times$ U(1) model 2-43333
- $D^0$ ,  $D^0_s$  mass difference and CP violation in SU(2) $\times$ U(1) gauge model 2-19376
- $\gamma$ , EM interaction, P and CP conserving schemes 2-29100
- $K \rightarrow 2\pi$  and CP violation, Higgs boson exchange models 2-48979
- $K^+ \rightarrow \pi^0 \mu^+ \nu$ ,  $\mu^+$  CP nonconserving polarisation 2-3772
- $K^0$ , light neutrals, CP violation, gauge theory calc., heavy quark mass 2-38876
- $\nu \rightarrow \nu\gamma(e^+e^-)$ , neutrino oscills., physical processes involving Majorana neutrinos 2-43344

**CPA calculations**

- alloys, random, angle-resolved photoemission, KKR-CPA treatment of disorder 2-9248
- alloys, short range order, density of states in locator CPA generalisation 2-8745
- Anderson model, periodic, elec. resist. and metal-insulator transition 2-16992
- Anderson model, periodic, with Falicov-Kimball type interaction, valence transition 2-51131
- anthracene-pyromellitic anhydride, isotopically mixed, charge-transfer exciton bandwidth, refl. and luminesc. spectra 2-17537
- disordered systems, electronic states 2-40770
- ferromagnet, randomly diluted anisotropy, para-spin-flop critical field, CPA calc. 2-5548
- finite temperature magnetism, single-site spin fluctuation theory 2-2050
- Heisenberg antiferromagnet, randomly diluted, uniaxial anisotropy, effective medium approach 2-46273
- Heisenberg model, anisotropic, bond disordered, magnon density 2-31162
- Hubbard model, localised electron states, rel. to ferromagnetism theory 2-1865
- intermediate valence compounds, transport props. studied within alloy analog approx. of periodic Anderson model 2-17038
- metal surface, vibr. interaction between adsorbed CO mols., dipole-dipole interaction 2-45709
- mixed valence compounds, periodic Anderson model, dynamic props. 2-30850
- multiple acoustic scatt. by random distrib. of discrete scatterers, quasicrystalline-coherent pot. approx. 2-16159
- periodic lattice, jump diffusion of particle, CPA calcs. 2-45606
- random media, multiple scatt., coherent pot. propagators, fluctuations 2-40861
- semiconductor ternary alloys, local field effects and IR optical props. 2-22028
- semiconductors, amorphous, transport properties, coherent pot. and random walk methods 2-40898
- semiconductors, cyclotron resonance lineshape, quantum statistical theories, review 2-46385
- semiconductors, impurity band metal-insulator transition and off-diagonal disorder 2-40796
- spatially disordered systems, electron localisation calcs. 2-40848
- spin glass state, electronic theory 2-13302
- transition elements binary alloys, with short-range order, electron density of state calc. 2-5340
- transition metals, magnetic props., method of localised fluctuations (*Russian*) 2-21759
- $\text{Ag}_1-\text{Pd}_x$ , mass and lifetime enhancement due to disorder, residual resist., KKR-CPA calc. 2-30880
- $\text{Cu}_{99}\text{Al}_{0.1}$  (100) surfaces obs. of Tamm-type state, angle-resolved photoemission study 2-13149
- Fe, magnetic properties calc. by functional integral method, review 2-31124
- $\text{Ga}_1-\text{Al}_x\text{As}$ , local field effects and IR optical props. 2-22028
- $\text{Gd}_1-\text{Re}_x\text{Al}_3$  (Re=Dy, Ho, Er), Curie temp., theoretical calc. 2-21793
- Ge, amorphous, electronic struct., CPA study 2-12959
- p-H-Ne crystals, phonon CPA calcs. 2-45669
- Nb-Mo alloys, electron-phonon interaction calc. 2-40806



**CPA calculations continued**

- Ni, magnetic properties calc. by functional integral method, review 2-31124  
 Ni-Ru, ferromagnetic, electronic struct., multi-band CPA calc. 2-5344  
 Pb-H(D), supercond. phonons in CPA with off diagonal disorder 2-31110  
 PdH(D), supercond., props. from off-diagonal CPA phonon spectrum 2-31049  
 Si, amorphous, electronic struct., CPA study 2-12959  
 Si-H, amorphous, transport props., CPA calc. 2-40907  
 TiC<sub>x</sub>N<sub>1-x</sub>, density of states and X-ray spectra 2-46829

**CPT invariance**

- cosmology, nonsingular, spontaneous breakdown of C, P, CP, T, CPT and G symmetries 2-18803

**crack detection**

see also cracks

- acoustic imaging techniques for nondestructive testing 2-17839  
 adaptive filtering appl. 2-17818  
 alloy spike detection and charact. in power transistors using trans. acoustic microscopy 2-17852  
 ALOK system, remote controlled automated US inspection 2-52139  
 angle beam interrogation method, detecting ability 2-41839  
 automated material defects detection, using TV camera 2-52165  
 B-scan resolution enhancement using Fourier transform holography 2-17845  
 badly oriented defects, orientation and size determ. by focused US probes 2-17816  
 brittle creep rupture detection at welds by AE 2-41823  
 butt weld, automatic interpretation of radiographic monitoring 2-2671  
 C-shaped specimen, fatigue crack growth behaviour, through and part-through cracks (*Japanese*) 2-9493  
 C-shaped specimen, J<sub>IC</sub> evaluation by US method (*Japanese*) 2-9494  
 coarse grained material, US testing, signal to noise ratio improvement by signal averaging 2-17866  
 complex defect signals from multifrequency eddy current tests, quantitative eval. (*German*) 2-52150  
 composite material, US methods for characterising response 2-17822  
 composites, thermographic detection of adhesive-bond and interlaminar flaws 2-31862  
 crack start determination by acoustic method 2-13884  
 debond inspection in solid rocket motor section, acoustical chirp frequency and computer correl. technique 2-17855  
 defect reconstruction and classification by phased arrays 2-52140  
 density nonuniformity detection in barrier from flux of scattered  $\gamma$ -radiation 2-27387  
 detectoscope with electronic directional scanning, acoustical component 2-2675  
 dimensioning flaws in pipeline girth welds by radiographic methods 2-13901  
 directivity pattern of oblique-entry probe, calc. 2-6011  
 ductile creep rupture detection at welds by AE 2-41824  
 eddy current appl. 2-13928  
 elastic wave scattering by a flaw, new method of calc. 2-17862  
 engineering materials, quantitative US eval. of mech. props., review 2-17821  
 fatigue crack initiation, assessment by acoustic emission 2-17826  
 fatigue testing, HF. reson. freq. changes due to plastic deform. and crack initiation 2-41821  
 fatigue testing machine, computer controlled, lifetime and crack growth meas. 2-37038  
 ferromagnetic resonance flow detection, using eddy current detector 2-17808  
 fibreglass laminate with simulated flaws orthogonal to surface, thermal NDT using liquid crystals 2-52126  
 fission reactor material, elastic moduli meas., 20 to 1100°C, US method 2-17830  
 focused probe for US angle beam testing 2-17842  
 focused probes for US detection, imaging and sizing of flaws 2-17841  
 focused sound field, US eval. of materials 2-17843  
 formation and subcritical growth, from small defects, elec. potential monitoring 2-27369  
 fracture mechanics implications 2-9511  
 glass, crack velocity measurement, modified sonic technique 2-5998  
 glass ceramics, critical flaw size meas. rel. to fracture toughness, SEM backscatt. electron image appls. 2-17809  
 graphite fibre reinforced epoxy laminate, fatigue damage monitoring by US mapping 2-9500  
 heterogeneous materials, fracture acoustic signals parameters rel. to dimensions of breaks in continuity 2-37032  
 high efficiency photoacoustic cell utilizing PZT for flaw detection 2-17795  
 holographic interferometry, real-time 2-17792  
 hybrid microelectronic appl. of acoustic microscopy 2-17851  
 initiation detection method from crack growth studies 2-6000  
 internal surface inspection with wide-angle projection viewer 2-2666  
 Kerkhof method, modified, crack velocity measurement, modified sonic technique 2-5998  
 laser probe detection of Stoneley wave interactions with material boundary defects 2-17860  
 laser probe for SAW meas., appl. to crack detection in NDT 2-44610  
 long wavelength elastic wave Rayleigh scattering 2-17861  
 longitudinal creeping wave appl. and creeping wave probes 2-47289  
 luminescent inspection, experimental study of stress fields around static and dynamic cracks 2-35097  
 magnetic stray flux technique, theoretical and exptl. results (*German*) 2-41840  
 metal, anomaly detection by electric discharge in gases 2-9516  
 metal, structural parameter charact. by velocity and attenuation meas. of US waves 2-17820  
 metal, synthetic aperture US imaging 2-17840  
 near-surface crack detection by ultrasound 2-17815  
 notch depth determ., technique using pulse-echo Rayleigh waves 2-41837  
 nuclear reactor units, colour flow detection, high temp. 2-13879  
 phase insensitive transducer-theory and application 2-17824  
 pipeline distributed processing system for real time pattern recognition applications 2-17847  
 point density and defect characterization via measurements of ultrasonic bulk waves 2-13919  
 pulsed US flow detection, transducers, review of theory 2-2683  
 radiographic index technique for defect sizing in pipe welds 2-13899  
 crack detection continued  
 rails, US flow evaluation with programmable calculator 2-41838  
 real-time video imaging of internal flaws, high resolution US B-scan imaging 2-52141  
 sizing with scattered US waves 2-17819  
 steel, austenitic stainless, US detection and meas. of defects, literature survey 2-13870  
 steel, austenitic stainless, US flow detection technique for welds 2-17802  
 steel, austenitic weld, coarse grained material, US testing, signal to noise ratio improvement by signal averaging 2-17866  
 steel, ferritic, R curve determ., appl. of AC pot. drop technique 2-13873  
 steel, HSLA, fail-safe mag. permeability inspections 2-2637  
 steel, mild and structural, AE associated with fracture processes 2-31868  
 steel, Mn, ferritic, AE during crack growth, sources 2-31870  
 steel, Mn-C, acoustic emission source localisation using broadband acquisition technique 2-37037  
 steel, pressurised water reactor, review of AE appl. 2-17804  
 steel, quantitative determ. of grain size and inhomogeneity detection by US backscattering meas. 2-17823  
 steel, stainless, Ni plated, specimen preparation using electroless technique 2-27332  
 steel, stainless, pipe weld, crack detection using US signal processing, appl. of adaptive learning networks 2-13918  
 steel, structural and weldments, AE rel. to deform. and fracture 2-31869  
 steel, US reflection and transmission by rough, planar defects containing water, MnS and Al<sub>2</sub>O<sub>3</sub> 2-52168  
 steel, weld defect dimensioning by US methods (*French*) 2-52167  
 steel austenitic stainless, crack depth meas. in overlays by US testing 2-9518  
 steel crack deformation analysis, using moire fringe multiplication (*German*) 2-22402  
 stress intensity factor measurement of surface cracks, surface acoustic wave probe appl. 2-17817  
 stressed struct. surface coating technique to detect open cracks 2-2663  
 submerged solid body, mech. wave scatt., resonances, flaw detection appl. 2-16166  
 subsurface-flaw detection with models ITs-61 or -70 US head wave probes 2-27391  
 surface flaw charact. using acoustic microscopy 2-17850  
 surface layer inspection using US head waves, probe 2-2673  
 thermally sprayed coatings, NDT by US combined with holographic interferometry (*German*) 2-52148  
 thin plates and diaphragms, optical technique 2-2662  
 transducer design for pulsed US flow detection 2-27388  
 tube testing with concentric US transducers, optimisation 2-17844  
 tubes, NDT by encircling sensors 2-41835  
 ultrasonic transducer beam intensity distributions analyser, using computers, metal plate flaw detection 2-50033  
 ultrasound diffraction, elastodynamic ray theory appl. 2-16263  
 US appl., new techniques for quantitative NDE 2-31865  
 US detect imaging system, new 2-52142  
 US flaw size determ. using response envelope width 2-13868  
 US imaging, two transducer test bed 2-17846  
 US materials charact., conf. Gaithersburg, USA (June 1978) 2-14978  
 US methods for characterising response 2-17822  
 US pipe inspection, involute search unit 2-9499  
 US spectroscopy, water immersion method, computerized model for flaw size and direction calc. 2-9498  
 weld defect detection, X-ray and US exam. 2-41826  
 X-ray flux scanning, improved performance 2-2672  
 Al alloy castings, plate quality, X-ray eval., comparative tests (*French*) 2-47269  
 Al multilayered adhesively bonded structures, appl. of adaptive learning networks to US signal processing, flaw classification 2-17854  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>, membrane, mech. quality control using acoustic emission 2-31864  
 SiO<sub>2</sub>, fused optical flats, US interactions with thin air layers 2-17858  
 Zr-Nb (2.5 wt.%), crack growth at elevated temps., acoustic emission monitoring 2-31860

**crack-edge stress field analysis**

see also penny-shaped cracks

- annular crack in infinite elastic solid, axisymmetric problem approximate soln. 2-25303  
 approximate description of crack kinking and curving 2-50188  
 boundary layer phenomenon in plastic zone near rapidly propagating crack tip 2-20608  
 branched external cracks in interface between elastic materials 2-50191  
 brittle materials, fatigue analysis using indentation flaws 2-8562  
 centre cracked tension specimen, finite width correction 2-25308  
 combined modes of loading, crack initiation criteria 2-35086  
 compact round specimens, stress-intensity factors and crack-opening displacements 2-25306  
 compact tension specimens, local stress intensity factor distrib., 3D finite element anal. 2-44683  
 composite laminates, strength, 3-D fracture mech. approach 2-13874  
 compression fracture process, stability, two-layer high-pressure vessel example 2-39863  
 creeping material, stress and plane strain fields at tip of stationary tensile crack 2-8089  
 critical stress intensity factor, determ. at brittle crack arrest 2-13797  
 cyclic delayed failure, crack propag. rel., effect of stress wave shape 2-12668  
 cylinder, hollow, with internal circumferential cracks, torsional stress state 2-4754  
 cylindrical tensioned bodies, cracked, linear elastic fracture mechanics computation 2-25305  
 disc in elastobrittle state, thermally loaded, kinetics and load-bearing capacity 2-39865  
 displacement field around crack tip of Al alloy strip, holographic and speckle interferometry obs. (*Chinese*) 2-8101  
 ductile materials, fast fracture and crack arrest according to Dugdale model 2-1143  
 dynamic crack growth, theory 2-12095  
 dynamic fracture, quasi-brittle, damping due to crack edge failure zones 2-50178  
 dynamic stress intensity determ., optical caustics method, plasticity effect 2-12096  
 elastic dielectric with dispersion, stress and EM field near crack 2-4752  
 elastic inclusions in three-dimensional body, singly and doubly periodic system 2-4769



**crack-edge stress field analysis continued**

elastic inhomogeneous body, crack-tip anal., boundary integral eqn. 2-25301  
 elastic medium, incompressible, finitely deformed, penny-shaped crack, initiation and propag. 2-12091  
 elastic models of cracked materials, behaviour under load 2-4771  
 elastic perfectly-plastic material, steady-state fields near rapidly propagating crack-tip 2-30065  
 elastic-plastic crack problems, three-dimensional finite element anal. 2-20611  
 elastic-plastic material, fast fracture crack-tip fields 2-8093  
 elastic-plastic material, thermally loaded, crack-tip stress and strain singularity 2-12101  
 energy release rates for plane crack 2-50190  
 energy-release rate and crack kinking under combined loading 2-50189  
 equilibrium crack stress and cohesive force analysis (*Chinese*) 2-35088  
 error analysis, for determ. of stress intensity factors from isochromatic crack tip fringe patterns 2-12092  
 finite elastostatics, Sanders' energy release rate integral and conservation laws 2-1140  
 fracture, dislocation-free zone model 2-45332  
 glasses, slow crack growth, post-indentation 2-2584  
 Griffith coplanar cracks in infinitely long elastic strip, crack energy 2-16267  
 Griffith crack, pressure necessary to open to given shape in orthotropic solid 2-8090  
 half plane under impact load, transient response of finite crack 2-50192  
 half-plane, anisotropic, weakened by hole or cut, boundary value problems of elasticity 2-25250  
 high strain rate region around a running crack tip, noncontact meas. (*Japanese*) 2-4756  
 high temperature, crack growth by micropore coalescence 2-39858  
 indentation fracture, stress field anal. 2-50744  
 LMFBR welded components, thermally stressed, linear elastic fracture mech. applic. 2-39111  
 luminescent inspection, experimental study of stress fields around static and dynamic cracks 2-35097  
 macrocrack models analysis and improvement 2-39864  
 metals, fatigue, props. of surface microcrack propag. (*Japanese*) 2-35584  
 microvoid-crack interaction, stress distrib. in ligament calc. 2-39857  
 momentary arrest of moving crack approaching material discontinuity 2-8086  
 multiply connected area with holes and cracks, elasticity theory plane problems 2-20544  
 nonlocal fracture criterion, expt. verification 2-5932  
 numerical determination of stress intensity factors, three iterative methods 2-12089  
 oblique single edge cracks, subjected to tension, determ. of modes I and II stress intensity factors 2-4765  
 optical method of reflected caustics, error analysis in stress intensity factor evaluation 2-25334  
 pipe, stainless steel, dynamic girth crack propag., sensitivity study on numerical anal. 2-4773  
 pipes, split ring use in modelling ductile axial crack extension 2-4772  
 plane bodies with crack in elastic, elastic-plastic regions, finite element anal. 2-39862  
 plane elasticity crack problems, singular integral equations, iterative soln. 2-16266  
 plane external crack 2-50179  
 plane specimens and cylindrical shells under large-scale yielding, finite element fracture analysis 2-39859  
 plane strain crack instability under small-scale yielding conditions 2-20606  
 plate, finite internally cracked, mixed boundary problem 2-4763  
 plate, slantly notched, crack tip strain anal., Moire fringe method (*Chinese*) 2-25331  
 plate, thin infinite elastic, external crack problem, transform method of soln. 2-12102  
 plate, very thin infinite brittle, fragment size distrib., microcrack reactions 2-12083  
 plate, with periodic system of holes, brittle fracture, cracks from hole contours 2-25320  
 plate thick, with central crack, stress intensity factor 2-39856  
 plate with a crack, strength, triangular hole influence 2-25317  
 plate with through flaw, bending, hybrid stress finite element anal. 2-50118  
 plates, adhesively bonded orthotropic, cracked, stress intensity factors 2-25312  
 plates, cracked, mode III stress intensity factor evaluation using refl. caustics method 2-1144  
 plates, stress intensity around cracks, influence of finite stringers 2-12086  
 plates with sharp-ended incisions, transversely isotropic, stress-strain condition 2-25318  
 polyethersulphone, fracture behaviour 2-47180  
 polymer/crazing, two-dimensional quasifracture 2-47157  
 polynomial finite element accuracy for crack problems 2-39860  
 rectangular crack, three-dimens., stress intensity factor 2-12097  
 rectangular cracks, two, under impact load, transient anal. of stress waves 2-4760  
 rectangular sheet, cracked, with linearly varying and displacements 2-12087  
 rotating disk, internal crack located at arbitrary position 2-12088  
 round bars, fatigue cracking, stress intensity factors 2-8091  
 semi-external crack extension, in infinite body 2-44682  
 semielliptical cracks, along the bore of a hole, crack face pressure 2-4766  
 shell, shallow cracked, stress-intensity factors 2-16269  
 shell with longitudinal notches, closed orthotropic cylindrical, elastic equilib. 2-25319  
 shells, laminated anisotropic cylindrical, finite element model for through cracks anal. 2-4761  
 stationary crack, bending stress distrib. at tip from Reissner's theory 2-25304  
 stress waves in crack propagation, study by finite element method 2-1149  
 subsurface crack in elastic half space, elastodynamic stress-intensity factors 2-50193  
 surface-cracked plates and shells, elastic-plastic fracture mechanics parameters 2-20560  
 tensile quasi-static fracture models, comparative study 2-20605

**crack-edge stress field analysis continued**

thin plate, stress intensity factor at bilaterally-bent crack in bending 2-12090  
 times for crack initiation and propagation, correlation 2-12094  
 tip stress intensity, in elasticity and plasticity 2-25307  
 transition elements, quadratic and cubic, use as crack tip elements 2-1145  
 Al alloy AK4-1T1, fatigue crack growth rate, rel. to stress intensity factor, correl. anal. 2-22325  
 Al alloy sheet, 2024-T3, crack opening stress level formulas 2-12667  
 V, H embrittlement, electron microscopy study 2-13815  
**crack inspection** *see crack detection*  
**crack-tip stress field analysis** *see crack-edge stress field analysis*  
**cracking** *see cracks; fracture*  
**cracking, stress corrosion** *see stress corrosion cracking*  
**cracking, thermal stress** *see thermal stress cracking*  
**cracks**  
*see also crack detection; crack-edge stress field analysis; crazing; fatigue cracks; penny-shaped cracks; stress corrosion cracking; thermal stress cracking*  
 $\alpha$ -brass, intergranular creep cavities, growth mechanism 2-41685  
 alloy steel, type 38KhNVA, elastoplastic strain field in mouth zone of crack 2-13804  
 aluminosilicate refractories, crack stability in work-of-fracture test 2-37024  
 brittle solids, crit. stress intensity factors, evaluation by indentation method with low crack-to-indentation ratios 2-50754  
 cantilever beam vibration, rigid clamping by use of welded joints, crack depth in joint, comments and reply 2-8074  
 carbon steel, strengthening at crack tip by current pulse. (*Russian*) 2-2575  
 cement paste, loading history effect on tensile props. 2-27234  
 ceramic ware, strain meas. by holographic interferometry (*Japanese*) 2-47292  
 ceramics, elastic/plastic indentation damage, median/radial crack system 2-52029  
 ceramics, ferroelec., domain struct., crack growth conditions 2-50759  
 ceramics, subcritical crack growth, brittle fracture (*Russian*) 2-5940  
 circular hole under biaxial load 2-50175  
 combined modes of loading, crack initiation criteria 2-35086  
 composite material dynamic response modelling, mixtures theories 2-30066  
 composite materials, fracture strength, correl. 2-50757  
 composite polymer materials, wound, simulation of conditions giving processing defects 2-36835  
 composites, lifetime prediction under const. load 2-17732  
 concrete, internal crack progress detection by embedded graphite rods 2-27275  
 concrete, loading history effect on tensile props. 2-27234  
 crack front configuration, geometrical effect 2-25313  
 crack growth, in detrimental gaseous environments 2-41740  
 crack nucleation site distrib., influence in fracture probability (*German*) 2-30060  
 creep crack growth, critical anal. 2-30518  
 creep-ductility material, growth of dominant crack 2-50758  
 crystal, cracked, entropy, cell cluster calcs. 2-8638  
 double cantilevered beam model, crack extension 2-8092  
 ductile crack, in plain strain large-scale yielding, virtual initiation anal. 2-25299  
 ductile materials, plane strain crack growth, viability of crack tip opening angle as characterising parameter 2-8087  
 dynamic crack propag. behaviour, microscopic approach (*Japanese*) 2-4758  
 dynamic crack propag. behaviour, microscopic approach (*Japanese*) 2-4759  
 dynamic crack propagation in pipes, predictive models 2-25321  
 dynamic fracture and crack propagation, expt. studies 2-16268  
 dynamically loaded crack tip, local heating study (*Czech*) 2-29992  
 elastic bodies, prestressed, and limiting cases 2-50185  
 elastic bodies with initial stress, crack theory, tear cracks 2-30070  
 elastic bodies with initial stresses, three dimensional shear crack problem 2-25316  
 elastic media, cavitation under hydrostatic tension 2-50621  
 elastic plane, infinite, crack edge contact 2-50172  
 elastic wave diffraction by a crack, mathematical theories 2-16261  
 elastic waves, longitudinal and transverse, scatt. by sub-surface crack 2-44676  
 elastic waves and microstruct., conf., Oxford, England (Dec. 1980) 2-28602  
 elasticity, concentrated loads, singular integral eqns., appl. to crack problem 2-16231  
 ellipsoidal nonuniformity material, heating due to elec. losses, temp. stresses 2-25224  
 EM inspection method 2-27378  
 epoxy glue joints, static crack stability determ. 2-13908  
 extension by kink propagation, atomistic model 2-30519  
 fast running crack, effect of surface energy on temp. rise 2-4764  
 ferroelectrics, microscopic fracture mechanisms, dislocation model 2-31429  
 fracture, multiaxial probability distrib. function relative coeff. 2-4755  
 glass, ion exchanges, bending strength, surface damage effect 2-13818  
 glass, subcritical crack growth, brittle fracture (*Russian*) 2-5940  
 graphite, subcritical crack growth, brittle fracture (*Russian*) 2-5940  
 hydroxyapatite ceramics, biocompatible, mech. behaviour 2-9415  
 igneous rocks, shock-induced microfractures characterisation by differential strain anal. 2-22975  
 Inconel 617, Ni-base superalloy, creep rupture props. at 1000°C, vacuum environment effect 2-47151  
 indentation, fracture initiation 2-50756  
 infinite body, extension of semi-external crack 2-44682  
 intergranular crack nucleation and fracture 2-27261  
 ionic crystal, mechanochem. decomposition and fast-electron emission 2-27059  
 isotropic medium weakened by periodic system of circular holes and rectilinear cracks, thermoelasticity problem 2-50099  
 kinetic equations, stochastic formulation (*Chinese*) 2-40478  
 kinked crack, fracture angle prediction, nearby inclusion effect 2-12098  
 lattice crack dynamics 2-44687  
 lenticular bubble, ductile extension under high energy ion bombardment rel. to blistering and flaking 2-1528



## cracks continued

linear thermoelastic problem of a uniform heat flow disturbed by an infinite row of parallel circumferential edge cracks along a cylindrical cavity 2-50755  
 macrocrack formation and acoustic emission in brittle fracture 2-12676  
 macrodamage focus, irreversible growth, statistical criterion 2-12677  
 metal film, vacuum deposited on polydimethylsiloxane gel, rubbery and glassy states 2-51816  
 metals, rel. between mech. prop. and critical fracture angle of a slanted crack (*Chinese*) 2-22298  
 microcracked medium with friction, model (*French*) 2-39813  
 mode III fast fracture arrest by elastic to viscoplastic material props. transition 2-50187  
 momentary arrest of moving crack approaching material discontinuity 2-8086  
 nonlinear effect in mode II crack problems 2-50177  
 upper oceanic crust, preferred crack orientation rel. to seismic anisotropy obs. 2-18382  
 on the stress trajectories of membrane forces in cracked reinforced concrete slabs 2-12084  
 on thermal boundary front observed during dynamic crack propagation (*Japanese*) 2-4757  
 Oshima granite, influence of strain rate on microcrack redistrib. and strength under uniaxial compression 2-32507  
 parameters measurement, by method of holography and speckle interferometry 2-4471  
 particle fragmentation, impossibility due to ductile-brittle transition 2-8563  
 path-stability of a crack crossing a beam in bending 2-44688  
 photovoltaic solar modules, mechanical failure anal., fracture mechanics appl., cracking mechanisms for Si and cover materials 2-42022  
 pipe, axially through crack motion 2-20612  
 pipes, circumferentially cracked, wall breakthrough, plastic fracture instability analysis 2-30072  
 plane elasticity, numerical integration 2-10608  
 plane problem of a crack on the interface between two elastic wedges 2-44684  
 plastic zone size, toughness and crack growth, specimen size effects 2-52017  
 plastically twisted, H-induced cracking 2-22321  
 plate, elastic wave diff. by surface crack 2-50168  
 plate with circular hole, failure resulting from array of surface cracks 2-50176  
 plates, bent elastic, cracked, energy release, thickness effects 2-12099  
 plates thin elastic, weakened by cracks, bending 2-4768  
 PMMA, laser irr. effect on microstructure (*Russian*) 2-21173  
 polycarbonate film, plane stress deformation zone at crack tip 2-13777  
 polycarbonate thin film, micromechanics and kinetics of deformation zones at crack tips 2-13800  
 polyethylene, low density blown film, strain cone, at crack corner 2-22306  
 polymers, crack healing theory 2-16714  
 polymers, crystalline, tensile failure, brittle fracture, crazing, microcrack growth, free radical prod. 2-47164  
 polymers, high, fracture phenomena in cutting process, cutting conditions 2-47166  
 polymers, lifetime prediction under const. load 2-17732  
 polystyrene, erosion under glass bead impingement 2-22334  
 polystyrene, indentation fracture initiation, slip-line field analysis 2-27280  
 polystyrene, tensile stress cracks resist. determ. (*German*) 2-22319  
 pop-in crack propag., acoustic energy emission 2-52013  
 powder metallurgy products, bonded, strength and ductility 2-36810  
 quarter-point element misuse 2-50180  
 rings, thick-walled plastic, and rotating discs, crack initiation during expansion 2-8085  
 rings and tubes with longitudinal cracks, buckling 2-30049  
 rock, dilatant, memory, relaxation and microfracturing 2-28069  
 rock testing, size effect on fracture mechanism 2-32497  
 shaft with circumferential crack, torsional vibration 2-50149  
 slab, elastic, infinite, containing flat annular crack under torsion, mixed boundary value problem 2-20607  
 small sphere on flat surface, area of contact 2-4776  
 solar cells and solar cell welds, scanning laser acoustic microscope examination 2-27690  
 solids, inelastic, fracture criterion 2-30064  
 stable crack extension, with nonlinear fracture criterion, finite element simulation 2-30069  
 stainless steel films, in situ strained, tensile cracks, HVEM study 2-22328  
 stationary and extending cracks, relationship between J-integral and crack opening displacement 2-30066  
 stationary crack, bending stress distrib. at tip from Reissner's theory 2-25304  
 steel, alloy, quenched and tempered, sharp crack and blunt notch toughness behaviour 2-47288  
 steel, ASE 4340, external stress effect on H blistering 2-2585  
 steel, C, discs, pitting process, optical microscopy and SEM obs. 2-27300  
 steel, Cr, crack initiation and propagation, microstruct. effect (*German*) 2-13823  
 steel, Cr-Mo (1.25, 0.5 wt%), welded to 4Cr25Ni20 steel, brittle cracks along welded fusion zone (*Chinese*) 2-31780  
 steel, Cr-Mo (2.25, wt%), stress relief cracking, multicomponent segregation effects 2-52005  
 steel, crack growth and fracture toughness, temp. variation effects 2-41712  
 steel, ferritic, stress relief heat treatment rel. to crack form. (*German*) 2-51961  
 steel, low alloy, crack growth, effects of overstressing 2-31769  
 steel, low C, plate, fatigue strength with a sharp notch and precrack under plane bending 2-5925  
 steel, mild, crack tip plastic flow, expt. study 2-13794  
 steel, morphology of upper bainite (*Chinese*) 2-27190  
 steel, porous, sintered, strength rel. to design relevant data (*German*) 2-41724  
 steel, side grooved specimens obs. 2-17728  
 steel, stainless, weld overlay, H-induced cracking in heat-affected zone of steam generator forging 2-4015  
 steel, tool, cold working, ductility after heat treatment in salt soln. (*German*) 2-22288  
 stress intensity for interacting flaws, photoelastic determ. 2-52051

## cracks continued

stress intensity for interacting flaws 2-52050  
 structural alloys, fracture mechanics approach to creep crack growth, review 2-52016  
 structural failure, fracture and cracking, mechanical aspects (*German*) 2-44681  
 three-dimensional, J-integrals, theoretical study (*Japanese*) 2-20609  
 transformation toughening, size effects assoc. with thermodynamics of constrained transform. 2-51922  
 two-phase material, particle size depend. of thermoelastic stress intensity factor 2-21203  
 velocity meas., modified sonic technique 2-5998  
 viscoelastic materials, kinetic criteria for crack, global energy balance 2-25309  
 viscoelastic materials, kinetic criteria for crack, global energy balance 2-25310  
 viscoelastic matrix material of brittle fibre reinforced unit cell, quasistatic thermal crack growth 2-8094  
 wear, dislocation theory approach 2-44690  
 wear crack initiation, effect of second-phase particles 2-25981  
 wedge, elastic, shear wave diff. by edge crack 2-39849  
 welds, eval. of cracks detected (*German, English*) 2-52038  
 woven plastic glasses, crack resistance depend. on stacking 2-36970  
 Zircaloy, pellet-cladding interaction failure, occurrence on power ramping 2-29323  
 $Al_2O_3$ , crack-void interaction, bending strength of polycryst. samples 2-13798  
 $Al_2O_3$ , large-grained, microcracking 2-47173  
 $Al_2O_3$ -MgO, transparent spinel, fusion casting 2-51849  
 $\beta$ - $Al_2O_3$ - $Na_2O$  solid electrolyte, failure modes 2-26133  
 $Al_2O_3$ -refractories, micro- and macrocrack growth 2-31765  
 Au-Sn-Al metallisations on GaAlAs, interfacial struct. studies 2-8713  
 B, vacuum deposited coating, mech. props., cracks and wrinkles 2-21476  
 C vacuum deposited coating, mech. props., cracks and wrinkles 2-21476  
 $CaCO_3$ , crack formation at twin boundaries 2-50667  
 Co-Cr-Al-Y coating, low press. plasma applied, mech. props. 2-45794  
 Cr alloys, cracking during electrospray alloying, invest. using acoustic emission and metallography (*Russian*) 2-9391  
 Cu, intergranular crack nucleation and fracture 2-27261  
 Fe, pure polycrystalline, internal friction effect of H, low temps. 2-22261  
 Fe-C alloys and structural steel, AE during tensile tests 2-31873  
 Fe-Si (3.25 wt%), propag. of rapidly moving crack, effect of twins (*Russian*) 2-22305  
 $Gd_2O_3$ , monoclinic, microcracking behaviour 2-49113  
 H-metal interatomic potential, calc. 2-40479  
 $HfO_2$ , thermal expansion, axial and linear 2-5251  
 InBi, impact-induced fracture 2-27272  
 $LiNbO_3$  used in SAW devices, effects of ferroelec. domains on surface struct. 2-26188  
 $MgF_2$ , intergranular slow crack growth 2-17731  
 $MgF_2$ , vacuum deposited coating, mech. props., cracks and wrinkles 2-21476  
 Mo, effective surface fracture energy, critical crack length (*Russian*) 2-2578  
 NaCl, yield stress influence on fracture 2-45334  
 $Na_2O$ - $B_2O_3$ - $SiO_2$  glass, subcrit. crack growth, effect of corrosion 2-36944  
 $Na_2O$ -CaO- $SiO_2$  glass, median crack initiation and propag. beneath a disc glass cutter 2-27268  
 $Na_2O$ -CaO- $SiO_2$  glass, subcrit. crack growth, effect of corrosion 2-36944  
 $Na_2O$ - $SiO_2$  glass, subcrit. crack growth, effect of corrosion 2-36944  
 $Na_{1-x}Si_xZr_{1-x}O_2$ , NASICON, chemical stability in liq. Na, fracture and cracking 2-52251  
 Nb<sub>3</sub>Sn composites, crit. currents strain response, alloying effects 2-13264  
 Nb<sub>3</sub>Sn filamentary superconductor, bronze processed, microstruct. effects under strain 2-8918  
 Ni-base superalloys, astroloy, grain boundary microcracking after room temp. deform. 2-41737  
 $Pb(Zr_{0.5}Ti_{0.48}O_3)_2$ , influence of microcracking and slow crack growth on planar coupling coeff. 2-31777  
 $Pd_{40}Si_{20}$ , amorphous, shear-crack propagation in tearing, critical shear stress for inhomogeneous flow 2-27247  
 Si steel strengthening at crack tip by current pulse (*Russian*) 2-2575  
 SiC, fracture toughness as function of indentation crack parameters 2-36947  
 $Si_3N_4$  ceramics, indentation plasticity and fracture 2-31774  
 $Si_3N_4$ , fracture toughness as function of indentation crack parameters 2-36947  
 SiO<sub>2</sub>, core optical fibre, tribolum. spectrum 2-46791  
 SiO<sub>2</sub> layers on annealed InP, cracking 2-8741  
 $\alpha$ -Ti, crack nucleation and propagation under tensile loading, in situ HVEM obs. (*Chinese*) 2-5921  
 Ti in-situ coating of JFT-2 Tokamak [titanium] (*Japanese*) 2-22165  
 Ti-Al-V(Fe-Ag), crack initiation and propagation, microstruct. effect (*German*) 2-13823  
 UO<sub>2</sub>, fuel pellets, thermal-mechanical behaviour model 2-39150  
 UO<sub>2</sub>(H<sub>2</sub>PO<sub>4</sub>)<sub>2</sub>, mechanoluminescence and space groups 2-22091  
 V-Ga wires and tapes, quench cracking, low-temp. brittleness, transition temp. 2-13679  
 V-Si, laser induced defects, material interactions 2-50704  
 ZnS, IR transparent material, contact damage reduction by hard ThO<sub>2</sub> coating 2-9443  
 ZnSe, dislocation mobility and microcrack formation, elec. field effects 2-45182  
 ZrO<sub>2</sub>, partially stabilised by CaO, crack branching and propagation 2-17730  
 ZrO<sub>2</sub>, thermal expansion, axial and linear 2-5251  
 ZrO<sub>2</sub>, Y<sub>2</sub>O<sub>3</sub> stabilised, plasma sprayed ceramic-turbine seals, sputtered primer for improved thermal shock resist. 2-31852

cracking model, nuclear see nuclear cracking model

## crazing

see also stress corrosion cracking  
 dynamic crack propag. behaviour, microscopic approach (*Japanese*) 2-4758  
 nylon-6,6, semicryst., fatigue damage and fracture mechanism 2-21225  
 PCTFE, craze vel., depend. on stress and N<sub>2</sub>, O<sub>2</sub>, Ar absorption and diffusion 2-47163  
 PMMA, craze initiation under biaxial stress, air and environmental crazing 2-47209



## crazing continued

- PMMA, glassy, brittle fracture, crazing, ductile-brittle transition 2-47165  
 PMMA/methanol system, environmental crazing, acoustic emission applic. 2-47291  
 poly(vinylidene fluoride), semicryst., fatigue damage and fracture mechanism 2-21225  
 polycarbonate, craze microstruct., small angle X-ray scatt. study 2-47167  
 polycarbonate, environmental craze growth 2-47211  
 polycarbonate, surface craze growth kinetics after exposure to n-heptane 2-47205  
 polyethersulphone, fracture behaviour 2-47180  
 polyethylene, stress whitening, struct. fluctuations theory 2-47143  
 polyacetal, semicryst., fatigue damage and fracture mechanism 2-21225  
 polymer/crazing, two-dimensional quasifracture 2-47157  
 polystyrene, craze microstruct., small angle X-ray scatt. study 2-47167  
 polystyrene, fracture of crazes by propag. of interfacial stress waves 2-52025  
 polystyrene, glassy, brittle fracture, crazing, ductile-brittle transition 2-47165  
 polystyrene, glassy, craze and fatigue resist., surface treatments, protective coatings, light refl. obs. 2-47168  
 polystyrene, impact, environmental stress cracking 2-31814  
 polystyrene, indentation fracture initiation, slip-line field analysis 2-27280  
 polystyrene/methanol system, environmental crazing, acoustic emission applic. 2-47291  
 propylene-ethylene block copolymers, cryst., stress whitening, X-ray, SEM and calorimetry obs. 2-47134  
 styrene polymers, OsO<sub>4</sub> stained, crazes 2-31812  
 thermoplastics, energy related failure criteria 2-22320  
 PCV, glassy, brittle fracture, crazing, ductile-brittle transition 2-47165

creation hypothesis, continuous *see cosmology*creation of electron pairs *see electron pair production*

## creep

- see also creep fracture; creep testing; diffusion creep; elastic aftereffect; irradiation induced creep; recovery-creep; stress relaxation*  
 $\alpha$ -brass, intergranular creep cavities, growth mechanism 2-41685  
 alkali silicate glasses, relaxation transitions and deform. below glass-transition temp. 2-9364  
 alloys, strengthening against creep 2-5888  
 alloys, superstructure Li<sub>2</sub>, plastic behaviour under low temperature creep 2-1488  
 anisotropic materials, hardening model 2-31743  
 anisotropic solids, creep theory 2-50120  
 aortic valve tissue, viscoelastic props. 2-22783  
 austenite, high temp. creep, effect of precip. of intragranular M<sub>23</sub>C<sub>6</sub> particles 2-22272  
 Bernoulli-Euler beam, creep, relaxation and cyclic behaviour using state-variable constitutive model 2-4734  
 butyloxybenzylidene-octylaniline, smectic B phase, Newtonian shear creep 2-5167  
 cavitation, influence of impurity segregation 2-41612  
 celluloid, softened, deform. behaviour under complex loading 2-2549  
 ceramics, creep and creep fracture, microstruct. depend. 2-51987  
 cladding tube ballooning problem with account of displacement and bending components 2-39112  
 composite cylinders, creep transition theory under uniform internal pressure 2-39830  
 composite materials for flywheel energy storage system, creep characts. determ. 2-22662  
 composites, lifetime prediction under const. load 2-17732  
 concrete structure, viscoelastic and thermal behaviour with reference to containment vessel 2-4730  
 concrete structures, differential creep stress analysis 2-20548  
 constitutive equation, based on creep-hardening surface concept 2-30031  
 correspondence principle in theory of creep with finite deformations. 2-44662  
 crack growth, critical anal. 2-30518  
 crack growth, dominant, in creep-ductile material 2-50758  
 crack tip, stationary tensile, stress and plane strain fields 2-8089  
 cyclic and other loading, stress-strain relations 2-50133  
 cylinder, thermoelastoplastic creep, external load effect 2-12052  
 cylinder, thin-walled, internally pressurised, bending and torsion with creep 2-12053  
 data representation in terms of Hart's phenomenological theory or hyperbolic sine eqn. 2-31746  
 deformation mechanism diagrams, coords. and modifications 2-41676  
 deformation mechanism diagrams, cryst. system and stacking-fault energy effects (*Japanese*) 2-2571  
 deformation processes, interactive 2-40470  
 diamond structure crystal, creep law 2-35578  
 2,2-dimethyl propanoic acid, sub-grain-boundary self-diffusion (*French*) 2-1662  
 dislocation creep, review 2-50660  
 dislocation transformation model based on nonlinear oscill. 2-25897  
 dynamic restoration mechanisms in hot working 2-41641  
 Earth crust, deformation by continental ice sheets 2-6361  
 epoxy-fibreglass tension member support, ultimate strength, creep 2-13788  
 failure limit curve construction using damage (*Polish*) 2-25272  
 fatigue crack propagation-creep data, displaying method 2-30062  
 fibre composites, stresses and deformations during thermal cycling and loading (*Russian*) 2-2554  
 fine-grained materials, influence of pipe diffusion 2-25978  
 forsterite (Mg<sub>2</sub>SiO<sub>4</sub>) single crystals, high-temp. creep meas. 2-28068  
 glasses, oxide, viscosity in glass transition range (*Japanese*) 2-22290  
 grain boundary structure and sliding, role of impurities 2-40410  
 gravity-loaded halfspace, stress functions for creep around cavity or inclusion 2-12048  
 Hastelloy X welded joint, creep behaviour 2-15501  
 Incoloy 800, dislocation struct. influence on internal friction after short-time creep (*Polish*) 2-27210  
 Inconel 706, influence of Ti, Nb, Al additions on struct. and mech. props. (*French*) 2-27229  
 Inconel 800, creep-deformed, small-angle neutron scattering study of voids 2-2562  
 inelastic analysis, benchmark problems, modelling and accuracy of solns. 2-34138  
 inelastic constitutive law derivation through equivalence and limit considerations, numerical treatment (*German*) 2-30038

## creep continued

- inhomogeneous ageing body, boundary-value creep problem 2-25275  
 internal stresses, power-law creep 2-1552  
 Lexan samples, large deform. creep behaviour 2-27227  
 lithosphere-aesthenosphere postseismic rebound due to creep, multilayer model 2-32462  
 low stresses, identification of creep processes 2-8558  
 metals, deformation, inelastic, math. theory 2-21218  
 metals, deformation, rel. to fracture, under low-cycle creep 2-31759  
 metals, fracture modes, creep and hot working 2-41731  
 metals, locally macroscopic creep investigation 2-30045  
 metals, low deformability, defects and long-term strength calc. 2-41727  
 metals, low-cycle fatigue and cyclic creep 2-2580  
 metals, Nelson curves for H attack, model calc. 2-50751  
 metals, polycrystalline, microfracture during high-temp. creep 2-41728  
 metals, strain hardening hypothesis, vector variant, and high-temp. creep kinetic eqns. 2-50750  
 models of inelastic deformation of materials, applic. 2-50748  
 nonlinear creep analysis using finite element equilb. anal. and mean value of equiv. shear modulus 2-4733  
 nonlinear creep buckling analysis of initially imperfect shallow spherical shells 2-12037  
 nonlinear viscoelasticity, two-site model theory 2-44659  
 nuclear fuel pin cladding, creep relaxation, bending and ovaling stresses 2-39158  
 nylon 6, drawn and phase, anisotropic mechanical props., compliance const. 2-17694  
 phosphosilicate glass/Al-Si thin film structs., stress, temp. depend. 2-1804  
 pipe, bending and torsion, with creep 2-24320  
 pipe, thin-walled oval, under internal pressure and creep conditions, stresses and strains 2-25276  
 plates, rectangular, temp.-depend. creep buckling 2-30042  
 polycrystals, cavitating, high temp. creep rate/stress relationships 2-30517  
 polydibutylaminophosphazine, relax. and mech. props. (*Russian*) 2-51966  
 polyester fibres, modification of struct. by stretching and thermal treatment (*German*) 2-22287  
 polyethylene, chalk filled, creep under complex loading with elongation and torsion 2-22277  
 polyethylene, deformation kinetic parameters, chain rupture 2-1551  
 polyethylene, deformation kinetic parameters, chain rupture 2-5178  
 polyethylene, high-density, creep in plane stress state under nonsteady load 2-36923  
 polyethylene, low density, relax. props. under tension, temp., press. and vol. effects (*Russian*) 2-21232  
 polymeric materials, creep prediction for complex stress state 2-35580  
 polymers, crack healing theory 2-16714  
 polymers, lifetime prediction under const. load 2-17732  
 polymers, vitreous, deform. kinetics 2-21215  
 polypropylene, thermostimulated creep study of mech. energy loss 2-47136  
 PTFE, creep in plane stress state under nonsteady load 2-36923  
 PVC, and chlorinated, weakly plasticised, temp. time variations of physical and mech. props. (*Russian*) 2-41668  
 recovery of dislocation structure, assoc. with net plastic strain 2-31737  
 recrystallisation, dynamic, during creep and hot working 2-41624  
 rock, creep behaviour, appl. of generalised rheological model (*Japanese*) 2-35579  
 shells, orthotropic cylindrical, finite creep at elevated temps. 2-20546  
 sialons, densification, role of Se<sub>2</sub>O<sub>3</sub> 2-9319  
 solids, deform. and fracture, power-type constitutive eqns. 2-30005  
 solids, deformation, inelastic, math. theory 2-21218  
 static and cyclic creep at high temp., comparison using equiv. stress concept 2-41675  
 steam turbine components, service life determ. and evaluation 2-52124  
 steel, 1Kh18N9T and SiOC, elastoplastic deformation and failure, plane stressed condition with proportional loading 2-31760  
 steel, austenitic, heat-resistant, types 21-4N with precipitates and SUS 304, internal stress during high temp. creep (*Japanese*) 2-27230  
 steel, austenitic stainless, Bailey-Orowan eqn. 2-47122  
 steel, austenitic stainless, Cr-Ni (25, 20 wt.%), internal friction during steady state creep 2-47082  
 steel, austenitic stainless, creep, high-temp., form. of multipoles 2-9368  
 steel, austenitic stainless, creep curves, intergranular microcavities 2-31731  
 steel, austenitic stainless, cyclic creep and endurance under plane stress state conditions 2-2570  
 steel, austenitic stainless, precipitate-free, high temp. creep, grain boundary sliding 2-27255  
 steel, C, cyclic creep behaviour, max. stress and stress ratio effects 2-5926  
 steel, Cr-Mo, fission reactor steam generator components, creep, ductility, fatigue 2-15489  
 steel, Cr-Mo-(V), heat-resist., long-term strength under creep conditions 2-41683  
 steel, Cr-Mo-V, pearlitic, heat-resist., struct., defectiveness and service during prolonged operation, restoration heat treatment 2-41638  
 steel, Cr-Mo-V, steam pipe material, max. creep strain rel. to defectiveness 2-41684  
 steel, Cr-Mo-V cast, quenching, tempering and ageing rel. to mech. props. 2-13750  
 steel, Cr-Ni, deform. history effect on creep (*Czech*) 2-47137  
 steel, creep-rupture props., 426-872°C 2-31795  
 steel, ferritic, low-alloy, creep, decarburisation effect 2-15487  
 steel, H attack, kinetics 2-17734  
 steel, high strength low alloy, creep resist., microstruct. effects 2-27238  
 steel, merchant, room temp. creep 2-31741  
 steel, pearlitic, steam-pipe, operational reliability after 150000-20000 hours 2-41682  
 steel, precip. hardening, deform. under thermal cycling, neutron irradi. and stress 2-51996  
 steel, stainless, crept. angular frequency of cavitated boundaries on sectioning plane 2-50664  
 steel, stainless, Type 316, nonelastic deform., unified phenomenological model 2-41671  
 steel, stainless, Type 316, nonelastic deform., unified phenomenological model 2-41672  
 steel, stainless 316, metallographic assessment of structural degradation during creep-fatigue 2-5995



## creep continued

steel, stainless AISI 316, stress rupture optimisation using computer programme 2-31775  
 structural materials, stress state kinetics near stress raisers under high-temp. creep conditions 2-41705  
 tensile, high temp., comparison of stationary and nonstationary 2-51983  
 thermoplastics, energy related failure criteria 2-22320  
 $\alpha$ -Ti, creep behaviour, low stress, effect of quenching 2-22284  
 transient, high-temp., phenomenological description for non-stationary loading 2-47126  
 transient, kinetic eqns. selection, dislocation theory 2-25979  
 transient creep, in bending tests 2-47119  
 vacancy diffusion and dislocation recovery mechanisms 2-5182  
 vinyl chloride-vinyl acetate copolymer, weakly plasticised, temp. time variations of physical and mech. props. (Russian) 2-41668  
 visco-elastic stochastic strain modelled as second movement white noise process 2-20552  
 viscous material, power law, analysis under plane-strain condition using complex stream, stress functions 2-50134  
 void sheets nucleation, in creep and hydrogen attack 2-27217  
 Zircaloy 4, creep and stress relaxation, data representation in terms of Hart's phenomenological theory or hyperbolic sine eqn. 2-31746  
 Zircaloy-2 fuel cladding tubes, external pressure creep (Japanese) 2-11179  
 Zircaloy-4, high-temp. transient creep, phenomenological description for non-stationary loading 2-47126  
 Zircaloy-4, static and cyclic creep at 800°C, equiv. stress concept 2-41675  
 Ag-Cu (10 wt.%), elec., thermal, and mech. props. use as construction material in low temp. expts. 2-35995  
 Al alloy, creep under stress, varying principal directions 2-31735  
 Al alloy AK4-1T, prior creep strains effect on instantaneous elastoplastic deform. 2-41706  
 Al alloy D16AT, transient creep, kinetic eqns. selection, dislocation theory 2-25979  
 Al, creep under conditions of superplasticity in torsion (Russian) 2-5906  
 Al, deform. mechanism maps, coords. and modifications 2-41676  
 Al, dynamic internal friction and dynamic modulus meas. 2-45351  
 Al, jumpleike deformation during low temp. creep, rel. to supercond. 2-22292  
 Al, polycrystalline, microfracture during high-temp. creep 2-41728  
 Al-Cu-Mg-Fe-Ni, superplasticity in creep (Russian) 2-5905  
 Al-Mg (3 wt.%), stress sensitivity parameter in high temp. creep 2-41693  
 Al-Zn (10 wt.%), solid soln. alloy, recovery and work hardening rates, 523-823K 2-27189  
 $\alpha$ -Al<sub>2</sub>O<sub>3</sub> refractories, creep rel. to SiO<sub>2</sub> content, annealing temp. and microstruct. 2-36931  
 Al<sub>2</sub>O<sub>3</sub>, refractories obtained from different sources, props. 2-27121  
 As-S glasses, retarded elasticity in glass transition range, creep meas. 2-13761  
 B fibre reinforced Al, damage accumulation during low-cycle deform. 2-36921  
 BN, wurtzite form,  $\gamma$ - $\beta$  transition during high press. creep, fine struct. study 2-35683  
 Be, superplasticity and built-in zones 2-17717  
 C fibre reinforced Al, damage accumulation during low-cycle deform. 2-36921  
 $\beta$ -Co, transient stage in low stress viscous creep 2-5915  
 Co-base superalloy, cast, MM509, air embrittlement 2-36955  
 Cr-Mo-V, pearlitic, steam-pipe, operational reliability after 150000-20000 hours 2-41682  
 Cu, creep and cavity growth at low stresses 2-51975  
 Cu, jumpleike deformation during low temp. creep, rel. to supercond. 2-22292  
 Cu, prolonged extension, creep contrib. (Polish) 2-27215  
 Cu single crystal, substruct. stabilisation by particles of a second phase (Russian) 2-51910  
 Cu-Al (0.1 wt.%) single crystal, substruct. stabilisation by particles of a second phase (Russian) 2-51910  
 Cu-Al (2.5 wt.%), intergranular cavitation fracture in presence of a priori crack 2-47155  
 Cu-Co (2at.%), age-hardened single crystals, creep behavior 2-31734  
 $\alpha$ -Fe, creep, transient phenomena, dislocation struct. behaviour (Czech) 2-31751  
 Fe, Fe solid solns. and steels, self-diffusion and heterodiffusion, review 2-50904  
 Fe, steady-state creep, influence of oxidation 2-2569  
 Fe-Cu multilayer condensate, high temp. creep study 2-13785  
 Fe<sub>40</sub>Ni<sub>18</sub>B<sub>18</sub>Mo<sub>4</sub>, Metglas 2826 MB, mech. props., effect of external mag. field 2-9428  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, amorphous, creep, stress relax, and struct. charge 2-13769  
 Mg, deformation mechanisms, creep behaviour, 473 to 820K 2-13770  
 Mg-Y-Zr-Nd-Zn, as-cast, creep rates, influence of Nd and Zn additions 2-9377  
 MgO refractory, fired, high-temp. creep behaviour 2-47146  
 MoGe(In)(Te)(C), deform., high temp., effect of ion implantation 2-47142  
 NaCl, compressive creep, dislocation struct. after stress reduction, etch pits obs. 2-25884  
 Nb alloys, creep in molten Li 2-41696  
 Ni, cavity form. mechanism, high temp. oxidation 2-41775  
 Ni-Al-Mo-base superalloys, microstruct. features 2-41689  
 Ni-base superalloys, single crystals, creep props. at 760°C (French) 2-22279  
 Ni-Cr superalloy, IN597, long term isothermal ageing at 850°C, microstruct. and creep props. 2-41673  
 Ni-Cr-Co alloys, Waspalloy, fatigue life, low cycle, high temp., effect of time-depend. processes 2-31768  
 Ni-Cu multilayer condensate, high temp. creep study 2-13785  
 NiAl, creep props., high temp., effect of graphite impurity 2-13775  
 Pb, creep, work-hardening rates derived from instantaneous elongation upon sudden load increments 2-9382  
 Pd<sub>75</sub>Cu<sub>25</sub>Si<sub>1.65</sub>, amorphous, creep, stress relax, and struct. charge 2-13769  
 Si crystal, creep law 2-35578  
 Si whiskers, creep 2-12951  
 SiAlON, thermomech. props. and statistical anal. (French) 2-36968  
 SiC, thermomech. props. and statistical anal. (French) 2-36968  
 SiC-AlN, hot-pressed, fabrication and charact. 2-36817

## creep continued

SiN, reaction-bonded, mech. behaviour under various thermal and mech. conditions 2-9414  
 Si<sub>3</sub>N<sub>4</sub>, hot-pressed, activation energies from densification, creep, grain-boundary sliding 2-31666  
 Si<sub>3</sub>N<sub>4</sub>, thermomech. props. and statistical anal. (French) 2-36968  
 Silcomps, thermomech. props. and statistical anal. (French) 2-36968  
 Ti alloys, prior creep strains effect on instantaneous elastoplastic deform. 2-41706  
 Ti alloys VT3-1 and VT22, cycling influence on mech. props. 2-51997  
 Ti, creep, steady state, effect of polycryst. grain size 2-22285  
 Ti, effect of cooling from  $\alpha$  range (French) 2-51980  
 $\alpha$ -Ti, transient stage in low stress viscous creep 2-5915  
 Ti-Al-Zr-Sn-Nb, IMI 829, fatigue behaviour 2-31770  
 UO<sub>2</sub>, isostatic hot-pressing 2-5850  
 Y<sub>2</sub>O<sub>3</sub>, high temp. creep, phenomenological anal. 2-5181  
 Zn, electron-plastic effect, elec. current parameters effect 2-21949  
 Zn, polycrystalline, microfracture during high-temp. creep 2-41728  
 Zn-Al, transient creep during transformations 2-21221  
 Zn-Al (0.4 wt.%), fine grain, creep characts. (Russian) 2-9383  
 Zn-Al (1.1 wt.%), creep behaviour 2-27218  
 $\alpha$ -Zr, creep behaviour in vicinity of 0.5 T<sub>m</sub> 2-17714  
 Zr-Cu-Fe-Mo-V, high corrosion resistant alloy, creep and creep fracture (Czech) 2-31752  
 Zr-Nb (2.5 wt.%), internally pressurized tubes, in reactor deform. 2-49115

## creep fracture

alloy, crack growth behaviour and theoretical modelling 2-5953  
 brittle creep rupture detection at welds by AE 2-41823  
 cavity growth, fatigue failure at high temps. 2-50752  
 ceramic polycrystals, creep rupture, effects of inhomogeneity 2-13791  
 ceramics, creep and creep fracture, microstruct. depend. 2-51987  
 crack propagation, review of new developments 2-13805  
 diffusive crack growth model 2-52030  
 ductile creep rupture detection at welds by AE 2-41824  
 glass fibre reinforced polyester, creep rupture and damage mechanisms 2-27308  
 grain boundary structure and sliding, role of impurities 2-40410  
 graphite/epoxy laminates, creep rupture and viscoelastic moduli 2-52022  
 high temperature, crack growth by micropore coalescence 2-39858  
 Inconel 617, Ni-base superalloy, creep rupture props. at 1000°C, vacuum environment effect 2-47151  
 internal friction and creep rupture behaviour 2-47083  
 machine part design, creep eqn. coeffs. rel. to damage accumulation 2-41752  
 metals, fracture modes, creep and hot working 2-41731  
 Mimonin 105, effects of room-temp. prestrain on creep-fracture 2-2588  
 polycrystals, cavitation, high temp. creep rate/stress relationships 2-30517  
 polymer, residual strength determ. 2-17733  
 steel, alloy, creep, pore formation onset, time-to-rupture (Russian) 2-5936  
 steel, austenitic stainless, neutron irradiated, creep-fatigue crack propagation, cavity form. and linkage 2-31771  
 steel, austenitic stainless type 304, creep and fatigue fracture 2-51977  
 steel, bainitic CrMoV, mismatch effect in creep props. on creep damage distrib. 2-41739  
 steel, Cr-Mo-V, creep fracture 2-52036  
 steel, creep-rupture props., 426-872°C 2-31795  
 steel, structural, max. tensile stress criterion use in eval. of long-term strength in plane stress 2-41751  
 structural alloys, fracture mechanics approach to creep crack growth, review 2-52016  
 structural materials, stress state kinetics near stress raisers under high-temp. creep conditions 2-41705  
 Al, C ion effect on creep and fracture 2-17737  
 Al-Cu-Mg-Fe-Ni, superplasticity in creep (Russian) 2-5905  
 Al<sub>2</sub>O<sub>3</sub>, polycryst., creep cavitation effects 2-13790  
 Cu, cyclic damage mechanism, interactions at elevated temps. 2-47176  
 $\alpha$ -Fe-Sn, intergranular creep fracture at migrating and sliding grain boundaries 2-13813  
 Ni-Al-Mo-base superalloys, microstruct. features 2-41689  
 Ni-base superalloy, precip. hardened, statistical alloy design (Korean) 2-41618  
 Ni-Cr superalloy, IN597, long term isothermal ageing at 850°C, microstruct. and creep props. 2-41673  
 Zr-Cu-Fe-Mo-V, high corrosion resistant alloy, creep and creep fracture (Czech) 2-31752

## creep-recovery see recovery-creep

## creep testing

advanced high temp. reactor materials (German) 2-468  
 automated unit for mechanical testing in nuclear reactor channels 2-37012  
 bending tests, transient creep 2-47119  
 internal stress meas. apparatus in plastic microstrain range (French) 2-30076  
 loading device for tubular samples within reactors 2-2669  
 Mark C fuel irradiation tests (German) 2-11201  
 metals, failure resistance evaluation under fatigue and creep conditions 2-47279  
 micromechanical props. anal., automatic system 2-43005  
 pressure vessels, thin walled, cylindrical and spherical, biaxial creep testing 2-13892  
 rupture testing in H<sub>2</sub> at high pressures and temps. 2-43007  
 standard material, destructive tests on stress induced swelling (German) 2-15531  
 steel, maraging Cr-Ni type, strength characts. at elevated operating temps. 2-52047  
 steel, stainless, ferritic, oxide dispersion strengthened, prep. and mech. props. 2-41548  
 steel, structural, max. tensile stress criterion use in eval. of long-term strength in plane stress 2-41751  
 test results scattering 2-52151  
 Al alloys, failure resistance evaluation under fatigue and creep conditions 2-47279  
 Ni alloy 263, US method of nondestructive creep eval. 2-9513  
 Ti alloy IMI 230, US method of nondestructive creep eval. 2-9513

## crestatrons see travelling-wave-tubes

## crimping

No entries



critical constants, thermal see critical points

### critical current density (superconductivity)

- A15 compounds and elementary composite superconcs., supercond. props. alteration by elastic strain 2-21710  
amorphous alloys, supercond. props., review 2-31023  
hard and composite superconductors, plastic strain and flux jumps 2-31115  
multifilamentary composites, crit. current strain depend., use of MAXIM-SUPER computer program 2-13266  
multistrand superconductor, magnetisation rel. to volt-ampere charact. 2-5493  
research activities at Electrotechnical Institute, Slovak Acad. of Sciences, review 2-17183  
type II superconductor, induced-voltage waveform. response to time-varying mag. field 2-26569  
BaPb<sub>1-x</sub>Bi<sub>x</sub>O<sub>3</sub> film, grain boundary Josephson current 2-2035  
Cu-Nb-Sn untwisted composite, AC losses, critical current density 2-13256  
Cu-Nb-Sn, cold powder-metallurgy processed multifilamentary composite, fabrication, current density 2-13681  
Cu-Nb-Sn multifilamentary in situ wires, high-temp.-gradient casting 2-13682  
Cu-V<sub>3</sub>Ga composites, in situ prep., supercond. and mech. props. 2-13263  
Cu<sub>2</sub>Mo<sub>8</sub>S<sub>8</sub> film, critical currents and pinning forces 2-17252  
Cu<sub>2</sub>Mo<sub>8</sub>S<sub>8</sub> film, critical currents and pinning forces 2-21748  
Mo-Rh based metallic glasses, superconductivity 2-36177  
(Nb,Ta)<sub>1-x</sub>Sn multifilamentary wires, bronze process fabrication, supercond. props. 2-13259  
Nb-Ti (50 wt.%) supercond., flux penetration and AC losses 2-36217  
Nb-Ti alloy, superconductors, present status and pot. for improvement 2-21746  
Nb-Ti multifilamentary composites, microstruct. rel. to crit. current density, TEM study 2-13734  
Nb-Ti multifilamentary wires, neutron irradi. effects on crit. current density 2-13261  
Nb-Ti-Ta(Hf), supercond. crit. field, H<sub>c2</sub>, enhancement by alloy additions 2-13248  
Nb<sub>3</sub>Al, multifilamentary, precip. from supersaturated BCC phases, supercond. props. 2-26532  
Nb<sub>3</sub>Ge long tape with T<sub>c</sub> above 20K 2-8926  
Nb<sub>3</sub>Sn composite-processed, alloying addition effect on comp., growth rate and supercond. props. 2-21743  
Nb<sub>3</sub>Sn, composites preparation, props. and improvements in current-carrying capacities in high mag. fields 2-13685  
Nb<sub>3</sub>Sn filamentary superconductor manufactured by solid-liq. diffusion process 2-8937  
Nb<sub>3</sub>Sn, multifilamentary, internal bronze fabrication, supercond. props. 2-13260  
Nb<sub>3</sub>Sn, multifilamentary, crit. current strain depend., use of MAXIM-SUPER computer program 2-13266  
Nb<sub>3</sub>Sn multifilamentary conductors, bending, tensile stress effect on critical currents 2-8924  
Nb<sub>3</sub>Sn multifilamentary conductors, Al, Cu stabilised, heat pulses effects 2-8925  
Nb<sub>3</sub>Sn multifilamentary wires, low temp. phase transform. and strain depend. of critical current density 2-5509  
Nb<sub>3</sub>Sn multifilamentary wires, in situ prep., high field crit. current density, mech. stresses effect 2-13262  
Nb<sub>3</sub>Sn neutron irradi., diffusion layers, pinning forces 2-13253  
Nb<sub>3</sub>Sn, neutron irradi., scaling low, exptl. test, critical current density 2-13257  
Nb<sub>3</sub>Sn, superconductivity, ZrO<sub>2</sub> precipitation effect on J<sub>c</sub> (Chinese) 2-17250  
Nb<sub>3</sub>Sn wire, bronze-processed, flux pinning 2-8922  
Nb<sub>3</sub>Sn/Nb-Ti composite-processed superconductor, high field props. 2-17241  
Nb<sub>3</sub>Sn-Cu, superconductor wire, prep. by in situ process, optimisation of props. 2-2043  
Nb<sub>3</sub>Sn-Cu composite, powder preparation, critical current density 2-13680  
PbMo<sub>8</sub>S<sub>8</sub> film, critical currents and pinning forces 2-17252  
PbMo<sub>8</sub>S<sub>8</sub> film, critical currents and pinning forces 2-21748  
PbMo<sub>8</sub>S<sub>8</sub> wires, critical current density, critical field 2-17253  
Sn cylindrical Josephson junctions 2-31075  
Sn<sub>1-x</sub>Mo<sub>x</sub>S<sub>8</sub> thin film, critical currents, transition temp. 2-17254  
V-Ga/Cu-Ga-Al composite system, metallurgical processing, superconducting props. of V<sub>3</sub>Ga wires 2-13686  
V<sub>3</sub>Ga bronze processed wires, effect on props. of adding In, Zn, Mn 2-8923  
V<sub>3</sub>Ga, multifilamentary, precip. from supersaturated BCC phases, supercond. props. 2-26532  
V<sub>3</sub>Ga, neutron irradi., scaling low, exptl. test, critical current density 2-13257  
V<sub>3</sub>Ga tapes, supercond., microstruct. and crit. current density, prep. by composite process 2-13255  
V<sub>3</sub>Ga-Cu in situ multifilamentary composite, preparation and superconducting props. 2-13683  
V<sub>3</sub>Ga<sub>2</sub>, composites preparation, props. and improvements in current-carrying capacities in high mag. fields 2-13685  
V<sub>3</sub>Si, supercond., pinning parameters 2-41092  
V<sub>3</sub>Si, voids induced by fast neutron irradi., critical temp. and current meas. 2-31015  
Va<sub>3</sub>Ga tapes, supercond. props., prep. by composite process 2-13254

### critical currents

- see also critical current density (superconductivity); flux creep; flux flow; flux pinning  
C In, superconducting microbridge, crit. current temp. depend. 2-36263  
ferromagnetic superconductor thin film, maximum lossless current 2-36293  
films, alloys, periodically modulated, crit. current and fields 2-31117  
Josephson junction, distributed inhomogeneous static props. (Russian) 2-26560  
Josephson SNS junction, mag. thermoelec. effect 2-31099  
Josephson steps produced by critical current amplitude modulation 2-36238  
Josephson weak links, crit. currents, electron interaction effects 2-31082  
multistrand superconductor, magnetisation rel. to volt-ampere charact. 2-5493  
research activities at Electrotechnical Institute, Slovak Acad. of Sciences, review 2-17183

### critical currents continued

- SQUID, resistive, with large crit. current, Josephson oscillation 2-17231  
superconducting thin films, axiomatic heating model for lower critical currents 2-21713  
superconductive metallic weak links, heating and dynamic enhancement 2-31102  
superconductor with diffusion transition temp., props. (Russian) 2-5488  
superconductor-insulator-supercond. microbridges, fabrication, elec. props. and modelling 2-46205  
superconductor-normal (insulator)-supercond. struct., crit. supercurrent, temp. depend. near transition temp. 2-31080  
thermally insulated superconductor, normal zone propag. 2-5490  
thin film, critical currents and elec. fields 2-21745  
(TMTSF)<sub>2</sub>ClO<sub>4</sub>, supercond., anisotropic, three dimens. ordering 2-26535  
type II superconductors, helical instability of force-free vortex configurations 2-36287  
vortex systems and their images, commensurate-incommensurate phase transition 2-46224  
Al filament, crit. pair-breaking current far below T<sub>c</sub> 2-36292  
Al strip, transient voltage response to supercrit. current pulse 2-31041  
Al superconducting strip, freq. depend. of AC crit. current amplitude 2-41057  
Al, supercritical current pulses, voltage response, temp. depend. time delay 2-36276  
Al, voltage response time delay to supercritical current pulses 2-31108  
Cu-(Nb<sub>1-x</sub>Ta<sub>x</sub>)<sub>3</sub>Sn supercond. in situ multifilamentary wire, crit. currents 2-8931  
CuSnIn bronze/Nb single core Al<sub>15</sub> diffusion layers, influence of In on supercond. props. (German) 2-13219  
Er<sub>0.58</sub>Hf<sub>0.42</sub>Rh<sub>4</sub>B<sub>2</sub>Nb oxide-Nb point contact junction, temp. depend. of Josephson current 2-2037  
Nb microbridges, fluctuation induced transition between superconducting and dissipative states 2-31077  
Nb S-N and N-S junctions, electrical characts. 2-5504  
Nb superconducting bridge, short variable-thickness, vortex flow regime 2-8921  
Nb-Hf/Cu-Sn-Ga, multifilamentary supercond., crit. current, strain effects 2-17251  
Nb-Ti (50 wt.%), phase distrib. and size, US vibr. influence (Russian) 2-5494  
Nb<sub>3</sub>Sn-Nb-bronze composites, supercond. props., stress effects 2-13265  
Nb<sub>3</sub>Al ribbons, critical currents in mag. field (Russian) 2-51387  
Nb<sub>3</sub>Sn composite superconductor, effect of prestress on supercond. props. 2-8928  
Nb<sub>3</sub>Sn composite supercond., cooled by normal and superfluid He, stability 2-26564  
Nb<sub>3</sub>Sn composites, crit. currents strain response, alloying effects 2-13264  
Nb<sub>3</sub>Sn, filamentary, supercond. props., stress effects, mag. fusion energy program appl. 2-21747  
Nb<sub>3</sub>Sn filamentary superconductor, bronze processed, microstruct. effects under strain 2-8918  
Nb<sub>3</sub>Sn, multifilamentary, strained, self-healing effect 2-21744  
Nb<sub>3</sub>Sn multifilamentary superconductor, strain-scaling law, uniaxial and bending strains 2-8929  
Nb<sub>3</sub>Sn multifilamentary wire, crit. current in high mag. field 2-5510  
Nb<sub>3</sub>Sn multifilamentary wires, crit. current and pinning behaviour, 4.2K to crit. temp. 2-13258  
Nb<sub>3</sub>Sn, strain effect on critical current 2-2044  
Nb<sub>3</sub>Sn, W-Cu reinforced, composite superconductor, stress effects 2-8930  
Nb<sub>3</sub>Sn wire, critical current, sample-holder thermal contraction effect 2-5511  
Nb<sub>3</sub>Sn/Cu/Nb<sub>3</sub>Sn, high transition temp. supercond.-normal supercond. microbridge 2-31086  
Pb Josephson junction, energy gaps and crit. current, quasiparticle injection effects 2-36265  
Pb-Ag-Pb, supercond.-normal-supercond. film struct., quantised resist. 2-36270  
Sn microbridges, fluctuation induced transition between superconducting and dissipative states 2-31077  
Sn, superconducting microbridges, dielec. discharge fabricated, crit., excess and enhanced currents 2-36261  
V-V<sub>3</sub>O<sub>5</sub>-Pb(CdS-In) Josephson junction, max. supercurrent, temp. depend. 2-36267  
V<sub>3</sub>Ga wire, critical current, sample-holder thermal contraction effect 2-5511  
Zr<sub>85</sub>Si<sub>15</sub> amorphous superconductor, flux flow, critical currents 2-36290
- critical field, superconducting** see superconducting critical field
- critical fluctuations**  
see also fluctuations in superconductors  
adsorbed overlayer, critical properties near transition temp. using LEED intensity 2-1761  
anomalous fluctuations near nonequilib. soft transitions, Rayleigh-Benard instability in nematics 2-3546  
BBOA, smectic A-smectic B transition, proton NMR study 2-35686  
critical end points, renormalisation group study in 4-e dimensions 2-48662  
ferroelectrics, incommensurate, mag. resonance and relaxation 2-31260  
ferromagnet, easy-plane spin 1, quantum crit. phenomena, zero temp. series expansion 2-36366  
ferromagnet, isotropic, critical dynamic scaling,  $\epsilon$  expansion to two loop order 2-46306  
Heisenberg ferromagnet, amorphous, thermodynamic props., exchange integral fluctuations, crit. region behaviour 2-8993  
neutron scatt. cross sections and symm. near displacive and mag. phase transitions 2-16542  
nonlinear dynamics, low freq. correl. functions 2-48617  
PAA, and homologues, nematic-isotropic phase transition, proton spin-lattice relax. study 2-16794  
phase transitions, ultrasonic studies, velocity, propagation 2-45532  
rare earth Kramers ferromagnets, spin dynamics in paramag. phase, density matrix approach 2-2051  
spin van der Waals model, fluctuation and susceptibility 2-6807  
TGs(Se), crit. fluctuations, mean-field soln. of Ising model 2-46497  
two-dimensional incompressible flows, critical phenomena 2-18908  
Au-Fe, dilute, crit. behaviour at onset of ferromag., dynamic response meas. 2-2076  
H<sub>2</sub>, adsorbed on W (110) plane, field emission current fluctuation method obs., surface diffusion and phase transition 2-1769  
H<sub>2</sub>, solid quadrupolar glass phase, mol. orientational fluctuations, nuclear relax. rate obs. 2-35842



**critical fluctuations continued**

- HCl and HCl-DCI, pretransitional clusters and heterophase fluctuations at ferroelec. transition,  $^{35}\text{Cl}$  NQR study 2-26836  
 $\text{KMnF}_3$ , dynamic critical behaviour in sound propagation 2-45396  
 $\text{K}_3\text{Mn}_2\text{F}_7$ , EPR crit. line broadening near Neel temp. 2-26736  
 $\text{PrCu}_2$ , critical phenomena at nucl. mag. ordering transition 2-36367  
 $\text{RbCaF}_3\text{Gd}^{3+}$ , order parameter fluctuations near ferroelastic phase transition, EPR study 2-31277  
 $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ , protonic conductivity, crit. fluctuations contrib. 2-16854

**critical mixtures**

- cellulose triacetate mesomorphic solns. form. in halogenated org. acids and trifluoroacetic acid-dichloromethane mixtures 2-45022  
 o-chloroaniline-iso-octane, critical systems, ultrasonic velocity and absorpt. determ. 2-45379  
 o-chloroaniline-n-heptane, critical systems, ultrasonic velocity and absorpt. determ. 2-45379  
 n-decane-nitrobenzene, critical systems, ultrasonic velocity and absorpt. determ. 2-45379  
 n-hexane-perfluoro-n-hexane, excess volumes, in crit. soln. region 2-45547  
 isobutyric acid-water critical mixtures, shear induced birefringence 2-2214  
 isobutyric acid-water mixtures, phase separation, light scatt., hydrodynamic effects 2-36661  
 liquid mixture, binary, crit. resist. and dielec. anomalies at phase separation point, effective medium theory 2-1876  
 2,6-lutidine/water binary liq. mixture, flow birefr. near crit. point 2-2215  
 3-methylpentane-nitroethane, critical conc. fluctuations, decay rate 2-45548  
 nitrobenzene-n-hexane critical mixtures, shear induced birefringence 2-2214  
 nitroethane-iso-octane, critical binary mixture, specific heat, Rayleigh-Brillouin scatt. 2-51620  
 PMMA-soln. chlorinated polyethylene, compatibility, upper crit. soln. temp. 2-12450  
 polyamic acid plus ether systems, reversible phase separation, crit. miscibility 2-45008  
 polyisobutylene solution in toluene, conc., NMR obs. of demixing process 2-46409  
 polymer mixture, binary, anomalous behaviour in region of layer separation 2-30575  
 polystyrenes, monodisperse, ternary system with cyclohexane, phase equil., comp., separation factor 2-45009  
 propane-isomeric hexane mixtures, critical states 2-21284  
 water-ethyl alcohol-butyl alcohol-iso-octane, 3-phase equilb. and tricritical point 2-1606  
 $\text{H}_2\text{SO}_4\text{-H}_2\text{O}$  droplets, nucleation and growth, expansion cloud chamber observations 2-26030

**critical opalescence**

- microemulsion, single-phase system, crit. behaviour 2-14013  
 polymer mixture, binary, anomalous behaviour in region of layer separation 2-30575

**critical phenomena**

- see also *critical fluctuations; critical mixtures; magnetic transitions; phase equilibrium; phase transformations; renormalisation*  
 1/n expansion, crit. amplitude ratio 2-48659  
 $\epsilon$  expansion, crit. amplitude ratio 2-48659  
 $\phi^4$  model on two-dimens. lattice, crit. and crossover behavior 2-42961  
 Abelian Higgs models, phase transitions 2-38766  
 anisotropic cubic system with ionic anisotropy, crossover behaviour 2-28816  
 anisotropic cubic systems with long and short range interactions, critical behaviour 2-28815  
 anti-parallel aligning ferrimagnets, critical behaviour 2-17288  
 Ashkin-Teller model, two-dimens., crit. exponents 2-48639  
 Baxter-Wu model with quenched impurities, critical behaviour 2-136  
 binary liquid, dynamic universality and critical sound velocity 2-16724  
 biological systems, noise-induced transitions 2-6212  
 Bose gas, nonideal, zero temp. crit. behaviour 2-33419  
 Bose model, crit. behaviour, self-consistent approach 2-6818  
 boundary spin correlations, renormalisation group explanation of nonuniversal decay 2-38602  
 Cayley tree, polymer statistics, branching point fugacity 2-149  
 chemical instabilities and broken symmetry, hard mode case 2-6032  
 classical linear chain, nonanalytic thermodynamics, crit. density 2-3518  
 classical spin systems sp. ht. and inhomogeneous differential approximations 2-3514  
 clock model, N-state, topological excitations, two-dimens. transitions 2-140  
 correlated electron system, model Hamiltonian, crit. phenomena and phase transitions, book contrib. 2-10770  
 cross-over behaviour due to random perturbations, rigorous relations 2-132  
 deterministic chaos, irregular time development in nonlinear dynamic systems (German) 2-3485  
 diffusion-limited aggregation, computer simulation, rel. to dendritic growth 2-23565  
 dilute Baxter-Wu model, finite size scaling anal. 2-3513  
 discrete hydrodynamics, critical fixed points 2-3382  
 eight-vertex operators, rel. to Gaussian operators, renormalisation connection 2-38585  
 electrical conductivity, randomly distributed, renormalisation group approach 2-21546  
 energy density in semi-infinite systems, crit. behaviour 2-3530  
 fermion system, planar model, classical double Coulomb gas, crit. props. 2-23591  
 ferroelastic, critical behaviour and elastic props. 2-1586  
 ferroelastic, critical behaviour and elastic props. 2-5206  
 ferromagnetic superconductor, Vonsovsky-Zener type model, multicritical behaviour 2-31060  
 field theoretical model, regularised, critical exponents 2-48655  
 finite size scaling 2-38587  
 flexible polymer, theta solvent, end to end distance behaviour, red space renormalisation group approach 2-16550  
 fluid, sound propag., mode-coupling approach 2-50767  
 fluids, crit. transport props., fixed dimensional computation 2-40515  
 fractal lattices, transport, rel. to backbone, critical exponents 2-28796  
 fractals with dimensionality  $\sim 1$ , crit. phenomena and topology 2-10744  
 fundamental physics, conf., Bogota, Columbia (July-Aug., 1979) 2-10554  
 gravitation effect near crit. point (Russian) 2-23602

**critical phenomena continued**

- hard mode instabilities, inverted-type bifurcations, reductive perturbation approach 2-3545  
 hard mode instability, critical dynamics 2-10766  
 Hubbard model, density fluctuations, quantum renormalisation group approach 2-45797  
 inhomogeneous critical systems, scaling theory of boundary spin correlations 2-38603  
 interface in  $1+\epsilon$  dimensions, crit. dynamics 2-28797  
 interfaces between fluid phases, book contrib. 2-10774  
 internal pipe flow, critical boiling conditions determ. (German) 2-39982  
 Ising model, decorated with singular crit. surface and modified crit. exponents 2-42956  
 Ising model, one-dimensional, dynamic crit. exponent 2-23590  
 Ising model, two-dimensional, with impurity bonds, crit. behaviour 2-42954  
 Ising model with vacancies, critical behaviour, crossover to classical behaviour 2-31225  
 Ising modified two-dimensional model, critical props. 2-51424  
 Ising universality class model, struct. phase transition, crit. behaviour 2-30565  
 kinetic Van der Waals spin models, dynamic renormalization, critical behaviour 2-26634  
 lattice field theories, fermions, gauge fields and supersymmetry 2-23817  
 lattice systems, off-axis string tension and rot. symm. restoration 2-6805  
 magnetic critical exponent determ. methods, review (Polish) 2-17294  
 mixed Heisenberg and Ising-like model, critical temp. 2-3554  
 model illustration of scientific method, book contrib. 2-10771  
 noncentrosymmetric crystal, critical behaviour 2-21272  
 on higher order WKB approximations for the calculation of energy levels, book contrib. 2-10653  
 one-dimensional and two-dimensional systems, substrate effects on long range order and neutron scatt. characts. 2-1764  
 optical instability, critical behaviour, phase transition theory, stochastic model 2-4551  
 order parameter, leading singularity corrections in systems at upper critical dimension 2-33478  
 percolation, anisotropic, network simulation 2-19035  
 percolation, critical exponents, renormalisation field-theoretic approach 2-150  
 Percus-Yevick equation, critical point scaling 2-5032  
 perturbative and lattice QCD, critical phenomena in strong interaction physics 2-48941  
 polymer, in random medium, self-avoiding walk on random strips model 2-48611  
 Potts  $\phi^4$  field theory, anisotropic, crossover, quadratic symm. breaking effect 2-42963  
 Potts model, four-state, crit. exponents and marginality Monte Carlo renormalisation group 2-42962  
 preturbulent states and renormalisation group for simple models 2-3493  
 quartic map, 1-dimens., iterative props., crit. lines and tricrit. behaviour 2-18867  
 Random Ising model with long-range interactions 2-126  
 random systems, critical behaviour 2-51413  
 random-bond Ising model and n-vector model, upper bonds to correlation functions 2-125  
 random-bond Ising model on square lattice, ferromag. phase existence 2-36372  
 range of validity of the 6- $\epsilon$  expansion for percolation 2-33444  
 renormalisation group, large-n limit, differential formulation 2-33705  
 scaling theory for the criticality of fluids between plates 2-33300  
 singularities and susceptibility 2-28819  
 square-well fluid, specific heat function nonclassical crit. behaviour 2-8628  
 statistical mechanics, critical phenomena, aspects of renormalisation group theory 2-155  
 stochastic theory, renormalization group theory interpretation 2-10775  
 strong interaction physics, critical phenomena in statistical, bag and QCD models 2-23956  
 Thomas-Fermi model, gravitational phase transition 2-42931  
 three-dimensional Ising model, high-temp. series and renormalisation calcs. 2-19044  
 three-dimensional lattice, two-dimens. defect, local crit. exponents for  $n \rightarrow \infty$  2-48631  
 three-phase mixtures, balanced conditions and universality at critical point (Dutch) 2-48657  
 triangular lattice, quantum frustration, renormalisation group approach 2-2086  
 two-dimensional bond percolation, crit. exponents 2-48637  
 two-dimensional Ising system, roughening transition, surface tension, droplet shapes 2-33454  
 two-dimensional percolation, logarithmic corrections to critical behaviour from series expansion 2-10733  
 Union Jack lattice with three-spin interactions, spin and external field depend. crit. exponents 2-153  
 XY claim in transverse field, finite size scaling and crossover phenomena 2-3516  
 Yang-Lee edge singularity, critical exponents, renormalisation field-theoretic approach 2-150  
 Yvon-Born-Green eqn. in critical region, Fourier space anal. 2-28811  
 Z(N) spin systems, duality and criticality 2-38589  
 Ising model, critical properties from Monte Carlo coarse graining and renormalization 2-134  
 $\text{LiTb}_2\text{Y}_{1-p}\text{F}_6$ , critical props., phase diagram 2-51407  
 $\text{RbMnCl}_3$ , ferroelastic, critical behaviour and elastic props. 2-1586  
 $\text{RbMnCl}_3$ , ferroelastic, critical behaviour and elastic props. 2-5206

**critical points**

- see also *boiling point; melting point*  
 adsorbed system, commensurate order, multicrit. points and finite sizes 2-1751  
 ammonium sulphate-water-ethanol-benzene mixture, ultrasonic absorpt. near tricritical point 2-16722  
 amphiphilic molecules monolayers phase transitions model (French) 2-8688  
 anisotropic two-dimensional Heisenberg antiferromagnet, critical behaviours, phase diagrams 2-2097  
 Ashkin-Teller, d=2 model, Hamiltonian study 2-19042  
 binary liquid critical points, turbidity studies using spectrophotometer cuvette 2-42995



**critical points continued**

- binary liquids, light scatt. intensity, quenching near and above critical point 2-41376  
 binary mixture, critical line derivatives near critical points 2-35252  
 charge density wave systems and superconductors, infinite order critical points 2-21513  
 cholesteric-isotropic-blue phase triple point 2-40543  
 classical fluid, critical viscosity crossover function 2-21344  
 constructive and Euclidean field theory and connections to statistical mechanics 2-33737  
 correlated site-bond percolation in 2-D, Monte Carlo study of phase diagram 2-21809  
 critical end points, renormalisation group study in 4-e dimensions 2-48662  
 critical phenomena at  $T=0$  and stochastic quantization 2-10720  
 cubic eqn. of state calcs. 2-28807  
 di(methylammonium)hexachlorostannate, crit. phase transition, calorimetric and IR study 2-1608  
 energy density correlation at large momentum, scaling function 2-19060  
 ethane, critical points, effect of water 2-8600  
 ferroelectric semiconductor, tricritical point in strong EM wave field 2-9103  
 ferromagnet, easy-plane spin 1, quantum crit. phenomena, zero temp. series expansion 2-36366  
 fluid critical behaviour at gas-liquid critical point, book contrib. 2-10773  
 fluids, Yvon-Born-Green, integral equation and critical corals. 2-44999  
 Freon-113, scaled equation of state near phase separation boundary 2-35637  
 frustrated layered Ising model, free energy, critical points 2-46317  
 gel points, critical phenomena, percolation theory appl. 2-14014  
 Heisenberg to Ising behaviour crossover exponent calc. using fourth-order  $\epsilon$  expansion 2-10730  
 Heusler ternary alloys,  $M_2MnAl$  ( $M=Cu, Ni, Co, Pd, Pt$ ), order-disorder transition, X-ray diff. study 2-1610  
 Ising layered model with competing axial interactions, mean-field approx. 2-17306  
 Ising model, infinite range, tricrit. point 2-46321  
 Ising model, two-dimensional, layered, critical points 2-46316  
 Ising model for equil. polymerisation 2-152  
 Ising systems, inhomogeneous, boundary spin correl., nonuniversal and anomalous decay 2-10736  
 isotropic liq. to nematic liq. cryst. transition, specific heat anomalies 2-35685  
 liquid-vapour critical phenomena, asymm. Landau-Ginzburg-Wilson model 2-8603  
 2,6-lutidine/water binary liq. mixture, flow birefr. near crit. point 2-2215  
 membranes, lipid-protein interactions, lipid phase transition 2-27783  
 methane adsorbed on graphite, neutron scatt. obs. of triple pt. and phase transitions 2-1763  
 Monte Carlo renormalization-group transformations in momentum space 2-112  
 nematic-smectic-A-smectic-C multicritical point 2-45580  
 nematic-isotropic phase transition, thermodynamical behaviour, influence of smectic phase 2-16793  
 nitrobenzene-heptane binary fluid, coexistence curve 2-5215  
 nitroethane-cyclohexane, dielec. const. anomaly near crit. soln. point 2-36500  
 non-aqueous solutions 2-6705  
 nucleation centre form. near phase transition crit. points 2-35648  
 oil-in-water microemulsions, crit. behaviour 2-14012  
 order parameter description of glassy state 2-5058  
 phase transitions, degenerate critical point 2-28805  
 phase transitions with coupled order parameters, fluctuation theory 2-48663  
 PMMA in acetonitrile and chlorobutane solvents, coil expansion, association and phase separation 2-20995  
 PMMA-cosolvent systems, crit. temp. depression 2-12512  
 polystyrene-cyclohexane, dielec. const. anomaly near crit. soln. point 2-9073  
 Potts ferromagnet, crit. frontiers 2-17302  
 Potts model, two-layer, with four-body interaction, crit. point 2-48633  
 Potts model with infinitely degenerate ground state 2-3511  
 propane, triple pt. temp., meas. on solid-liq. and solid-solid transitions 2-35654  
 self-dual Ising chain in a transverse field with multispin interactions 2-46318  
 simple cubic lattice, Ising model, free energy, lower band approx. 2-33443  
 site bond percolation in ferromagnetic and antiferromag. Ising model, renormalisation group approach 2-15119  
 sound waves near critical points, nonlinear theory, dynamical regime 2-44512  
 spin glasses with short-range interaction in BPW approx., susceptibility temp. depend. below freezing temp. 2-8979  
 superconductors, two-dimens., quantum fluctuations, crit. behaviour 2-26556  
 systems with tensor order parameter, critical point dynamics, percolation, liquid crystals 2-19047  
 tetrafluoromethane monolayers on graphite, triple pt. phase diagram and two-dimens. behaviour 2-1765  
 tricritical logarithms in three dimensions 2-3543  
 two dimensional Ising lattice gas model, percolation props., real space renormalisation group study 2-3523  
 water, viscosity and thermal cond. in critical region, isothermal compressibility calc. 2-40611  
 water supercritical dense fluid solns., at high press., sub- and supercrit. temps. 2-9154  
 water-ethyl alcohol-butyl alcohol-isooctane, 3-phase equil. and tricritical point 2-1606  
 X-Y Lifshitz point model, biaxial, ferromag.-modulated transition, renormalisation group anal. 2-51419  
 Yvon-Born-Green equation of state, criticality obs. 2-48660  
 Ar dense liquid, depolarised light scatt. intensity, pot. effect 2-31436  
 C, phase diagram near solid-liquid gas triple point using laser heating system 2-8599  
 $C_6Li$ , graphite intercalation cpd., universality, tricriticality, and Potts transition 2-40535  
 $CO_2$ , critical points, effect of water 2-8600  
 Cr, Neel transition, first-order, effect of uniaxial stress 2-46280  
 $D_2$ , equilibrium isotopes, triple point temp. 2-35650

**critical points continued**

- H, adsorbed on W (110) plane, field emission current fluctuation method obs., surface diffusion and phase transition 2-1769  
 $H_2$ , equilibrium isotopes, triple point temp. 2-35650  
 $^3He$ , liquid, thermal cond. near liquid-vapour crit. point 2-35824  
 $^3He$ , normal and superfluid phases, sp. ht. meas. phase diagram 2-30690  
 $^3He$ , superfluid phases in mag. field., grand pot., Green's function approach 2-30688  
 $^3He$ - $^4He$  decomposing mixture, light scatt. obs. near tricritical point 2-35829  
 $^3He$ - $^4He$  mixtures, Rayleigh scatt. light intensity and linewidth, near gas-liq. crit. point 2-36662  
 $^4He$ , anomalous viscosity near gas-liq. crit. point obs. 2-35728  
 $^4He$ , equation of state, approx. of P-T data near crit. point (Russian) 2-40615  
 Hg-In metallic solns., thermodynamic and elec. props. near crit. points 2-1883  
 Hg-Xe film, supercond., universal current scaling 2-36232  
 $KMnF_3$ , cubic-to-tetragonal phase transition under uniaxial press., tricrit. points 2-30591  
 Kr-methane system, liq.-vapour equil. 2-26031  
 $Li-NH_3$ , system, phase diagram exam. in  $Li(NH_3)_3$  cpd. region 2-17669  
 MnP, Lifshitz point, mean field and renormalisation group calcs. 2-26637  
 $N_2$  liquid, thermodynamic props. from perturbation theory for ISM fluids 2-30628  
 $NH_4Cl$  solid solns., thermodynamic props. near tricrit. points 2-35711  
 $NH_4Cl$ ,  $Br_x$  solid solns., thermodynamic props. near tricrit. points 2-35711  
 Na- $NH_3$  solution, phase coexistence above consolute point 2-21287  
 Ni(111), chemisorbed O 2-1752  
 O adsorbed on Ni(111), transition of the Heisenberg model with cubic anisotropy 2-12909  
 $Pb(Fe_{0.5}Nb_{0.5})O_3$ , EPR linewidth, crit. point anomalies 2-46368  
 $Sm_{0.87}Gd_{0.13}S$ , temperature-press. phase diagram up to 30 kbar at 300-750K 2-45572  
 Xe monolayer on grafoil, heat capacity, density-temp. phase boundary, triple pt. 2-1773  
 Xe, optical susceptibility scaling corr. 2-36589  
**critical temperature, superconducting** *see superconducting transition temperature*  
**CRO** *see cathode-ray oscilloscopes*  
**crocidolite** *see asbestos*  
**crops** *see farming*  
**cross-sections (nuclear)** *see nuclear reactions and scattering*  
**crossstalk**  
 optical multi/demultiplexers for single-mode fibre transmission 2-16120  
**crowdions**  
 radiation cascades in crystals, spatial distrib. of defects, theory 2-45247  
**CRT** *see cathode-ray tubes*  
**crushing**  
 $PbTiO_3$ - $PbZrO_3$ - $Pb(W_{0.5}Cd_{0.5})O_3$  pyroceramic electret with vitreous phase, prep. and characteris. 2-51866  
**crushing strength** *see compressive strength*  
**cryogenic pumps** *see cryopumping*  
**cryogenics**  
*see also cryopumping; cryoscopy; cryostats; cryotrons; Joule-Thomson effect; low-temperature production; low-temperature techniques; magnetic cooling; refrigeration*  
 Allen-Bradley resistors, resist. creep at low temps. 2-33540  
 antifriction materials for cryogenic environments, review 2-22343  
 casting and tensile testing of material freezing at cryogenic temps. 2-2665  
 cold trap, thermal loss (Japanese) 2-19113  
 conference, Los Angeles, CA, USA (Aug. 1981) 2-33228  
 cooling vessel, lightweight design with thin cooling jacket and walls aerospace appl. 2-189  
 cryochemical synthesis products, kinetics of sublimation drying 2-52170  
 cryocondensation on dielectric surfaces, TSC obs. 2-26471  
 Dewar flask, multishielded, construction and performance 2-48709  
 engineering materials, conf. Madison, WI, USA (Aug. 1979) 2-18815  
 ferromagnetic refrigerants, 4.2 to 300K, materials selection criteria 2-33536  
 flowmeter calibration, using piston installation 2-30250  
 four circle neutron diffractometer, use of single stage closed cycle cryorefrigerator 2-11346  
 Francis Bitter National Magnet Laboratory, USA, cryogenic research facilities 2-18847  
 future of cryogenic technology in india and role of engineers 2-15178  
 gravitational radiation antenna, low temp., at Stanford, status 2-28744  
 itinerant ferromagnet, low temp. props., functional integral approach 2-31128  
 liquid containers, open, heat transfer in floating insulations 2-33535  
 liquid in piston flow, phase slip and heat transfer in film boiling 2-25370  
 liquids, portable calibration densimeter 2-19087  
 mass meas., resonance high frequency level sensor appl. (Russian) 2-23649  
 measurement, control and evaluation of cryothermal test with a large IBM computer 2-33556  
 NMR gyroscope, rotation-sensing device, He isotope appls. 2-23610  
 paramagnetic salt thermometer, very high resolution, for use below 7K 2-33526  
 pipes flooded with liquid  $N_2$ , cooling down expt. on models 2-185  
 plug and socket, 100 A, for use at liq. He temp. 2-33538  
 polycarbonate, molecular activity in cryogenic temp. range, thermally stimulated current meas. 2-7690  
 power consumption reduction (German) 2-33542  
 radiotelescope, low-noise mm-wave Schottky mixer receiver for astronomical obs. from 80-120 GHz 2-42601  
 radiotelescope, mm-wave receiver, 200-350 GHz range, all solid-state, appl. 2-42600  
 resistance thermometer, based on Cu-Ni-Fe-Mn alloy, 4.2 to 120K 2-23630  
 rotating cryogenic Benard cell 2-25476  
 seal, having spiral wound gasket 2-6858  
 strain gauges, matched characts. for use at cryogenic temperatures 2-48697  
 structural materials, mech. and phys. props. requirements (Japanese) 2-43026



**cryogenics continued**

- superconducting gyroscope, cryogenic gas spin-up system 2-33543
- superconducting magnet current leads, effect of coolant loss 2-19141
- TCNQ salts, HMTSF-TCNQ and TMTSF-DMTCNQ, quasi-one-dimens. cond., metallic cond. at liq. He temp. 2-21572
- temperature gauge, using fibre optic light transmission, sensing crystal 2-48707
- temperature scales, Helsinki and NBS intercomparison in millikelvin region 2-33489
- time to cool a cryogenic object by a gaseous cryogenic agent 2-16316
- (TMTSF)<sub>2</sub>PF<sub>6</sub>, quasi-one-dimens. cond., metallic cond. at liq. He temp. 2-21572
- tunnel diode oscillators, stabilisation using supercond. cavities 2-33411
- UHF ultra-low noise cryogenic FET preamplifier 2-33541
- US level sensor for cryogenic liquids 2-33539
- Westerbork Synthesis Radio Telescope, multifrequency cryogenically cooled front end receiver 2-48147
- wind tunnel force instrumentation, using strain gauge balances 2-38641
- Ag, electrical resistivity, low temp., cold work effect 2-36001
- Ar, liquid, dielectric breakdown rel. to press., voltage polarity, pulse width and impurity 2-5636
- AuFe-NbTi millikelvin temperature thermocouple thermometer 2-33527
- AuPd film, elec. props. at low temps., nonmetallic behaviour 2-30982
- Bi magnetoresistive thermometry for transient temp. meas. in liquid He 2-23635
- He, liq., rotating dewar, bayonet coupling of transfer tube investig. 2-33537
- He, liquid, dielectric breakdown rel. to press., voltage polarity, pulse width and impurity 2-5636
- Li<sub>3</sub>N, amorphous ionic conductor, sound vel. temp. depend., H impurity tunnelling 2-30534
- N<sub>2</sub>, liquid, dielectric breakdown rel. to press., voltage polarity, pulse width and impurity 2-5636
- Pb(Zr<sub>0.53</sub>Ti<sub>0.47</sub>)O<sub>3</sub> solid soln., synthesis by cryoprecip., prep. and dielec. characts. 2-41563
- Pt film, elec. props. at low temps., nonmetallic behaviour 2-30982
- Pt wire, resistance at low temp., localization effects 2-30860

**cryopumping**

- closed-cycle cryogenic pump suitable for sounding rockets use in upper atmosphere 2-43038
- cryorefrigerator, for use in cryopumps, high operational reliability (*German*) 2-10815
- cryostat, for Mossbauer studies, 4.2-300K, up to 35 kgauss 2-10809
- cryostat, production and meas. of temps. to 0.9K 2-10811
- differentially pumped transmission gas target for nuclear structure studies 2-43650
- industrial vacuum technology, using cryopumps 2-33560
- neutral beam injector, cryopump characts. (*Japanese*) 2-19121
- neutron beam injector in plasma heating facility, cryopump design (*Japanese*) 2-43614
- pump selection, below 10<sup>-2</sup> Pa, assessment criteria (*French*) 2-23655
- semiconductor production, cryopump system (*Japanese*) 2-43035
- space chambers, small, vac. pumping systems (*Japanese*) 2-43037
- space chambers, vac. pumping system (*Japanese*) 2-43036
- ultrahigh vacuum space chamber with cryopump and turbomolecular pumps (*Japanese*) 2-19122
- vacuum engineering and cryogenics, T-p relationship (*Japanese*) 2-43034
- vacuum technology, cryogenic components and accessories (*Japanese*) 2-43027
- He liquefier, ADL-Collins type, with activated charcoal 2-10813

**cryoscopes** *see cryoscopy***cryoscopy**

- benzoic acid in disulphuric and fluorosulphuric acids, cryoscopic and conductance study 2-6021
- benzoins in disulphuric and fluorosulphuric acids, cryoscopic and conductance study 2-6021
- diphenic acid in disulphuric and fluorosulphuric acids, cryoscopic and conductance study 2-6021

**cryosorption** *see sorption***cryostats**

- bushings, for high AC voltage 2-6857
- continuous flow for study of material props. at low temps. 2-187
- cryomagnetic system, 10 tesla, for neutron scatt. meas. 2-38658
- crystal deformation, on Regel'-Dubov relaxometer in range -180 to 200°C, cryostat design 2-23648
- design, for cryst. deform. on Regel'-Dubov relaxometer in range -180 to 200°C 2-23648
- dewar, super-insulated, for liq. N<sub>2</sub> 2-10810
- dilution refrigerator, high power, low heat losses, for use with nuclear cooling, 0.006K 2-33546
- dilution refrigerator in combination with an ESR spectrometer 2-33550
- electrocalorimetric apparatus for loss meas. in supercond. 2-23662
- evaporation rates baffle config. for efficient use of liquid He 2-33548
- experiments in ultra-high vac., technical problems (*Japanese*) 2-43028
- insulators; cryostat for ion implantation at low temps. 2-5137
- ion implantation, low temp., irradiation equipment for meas. down to 150 mK 2-3654
- Klipping type continuous flow cryostat with control system for low temp. studies 2-188
- measurement cell, solid dielectrics meas. 2-6838
- MINILAB, rotating nuclear demagnetisation cryostat, design and performance 2-33545
- Mossbauer studies, 4.2-300K, up to 35 kgauss 2-10809
- multiple electrical feedthrough, miniature design for vac. and cryostat use 2-38662
- nuclear fusion plant, prod. and accel. of O<sub>2</sub> pellets (*German*) 2-11272
- simultaneous measurements of thermopower, thermal conductivity, and electrical resistivity between 1.2 and 350K 2-23628
- superconducting magnetometer 2-33584
- temperature controllers, for cryogenic appl. 2-10812
- temperature production and measurement to 0.9K 2-10811
- ultrahigh vacuum cryostat for spectroscopy and laser-induced processes 2-6855
- vacuum technology, cryogenic components and accessories (*Japanese*) 2-43027
- variable temperature implantation and anal., medium energy facility 2-6917
- H, atomic, spin polarised, cryostat apparatus 2-34605
- He cryostat, for continuous maintenance of temps. below 4.2K 2-23647
- <sup>4</sup>He/<sup>3</sup>He isotopic separation, continuous flow cryostat method 2-33549

**cryotrons**

No entries

**crystal atomic structure**

- see also crystal atomic structure of alloys; crystal atomic structure of elements; crystal atomic structure of inorganic compounds; crystal atomic structure of organic compounds; electron diffraction crystallography; lattice constants; neutron diffraction crystallography; space groups; superlattices; X-ray crystallography*
- analysis, maximum entropy method 2-5061
- atomic properties, site symm. effects by diff. methods 2-1429
- centrosymmetric monocryst., stimulated Raman scatt. and parametric gain 2-11761
- Cochran structures, probabilistic approach 2-35409
- crystallites, point symmetries, finite boundaries (*German*) 2-45100
- Debye-Waller factors and anharmonic thermal smearing functions using quantum statistics 2-45507
- electronic materials, cryst. engineering 2-5066
- Fourier transforms of dipole-dipole interactions using Ewald's method 2-1413
- hexagonal systems, lattice sum and distortion field calc. program 2-16608
- inhomogeneous crystal ordering, theory (*Russian*) 2-45084
- irreducible analysis of Raman spectra for all crystal point groups 2-41346
- metals, comparison of inelastic electron and X-ray scatt. 2-44982
- mineral crystals, largest data compilation 2-37856
- modulated crystal structures, struct. factor 2-44944
- molecular crystals, modulated struct. formation 2-35410
- molecular crystals, statistical theory of structural and thermodynamic props. 2-30631
- non-centrosymmetric crystal with centrosymmetric group, conventional discrepancy indices 2-1431
- periodic systems, relativity of short-and long-range effects 2-50561
- point group labelling scheme for local lattice distortions 2-33447
- solid state struct., influencing factors 2-30425
- solid-state struct., pseudopotential radii structural maps 2-25770
- TERRIG, computer program for analysing thermal ellipsoids and rigid-body motions 2-44947
- HTiNbO<sub>3</sub>-N derivatives, intercalation cpds., comp. and struct. evolution (*French*) 2-5062

**crystal atomic structure of alloys**

- A15 structure phases, cell dimensions, at. diameters depend. 2-8481
- binary alloys, FCC, ordering and segregation reactions 2-40547
- Invar, martensitic transformation, role of incommensurate atomic struct. in mechanism 2-13720
- metal-metalloid alloys, cryst. atomic vol. 2-12541
- random alloys, interatomic spacings distribution 2-45111
- rare earth alloys, R<sub>2</sub>In<sub>2</sub>(Ti), cryst. struct., X-ray powder method 2-8478
- rare earth alloys, RAgSn and RCuTi, cryst. chem. and cryst. struct. 2-8473
- rare earth alloys, RGa<sub>3</sub>, RGe<sub>3</sub>, cryst. struct. 2-8477
- rare earth alloys, RNi<sub>2</sub>Sn<sub>2</sub>, R=La, Ce, Pr, Nd, Sm, cryst. struct., elec. and mag. props. (*Russian*) 2-50585
- rare earth alloys R-Co-B (R=Nd, Tb, Dy, Er, Kb), phase diagrams, X-ray and microscopic anal. 2-41586
- rare earth alloys R-Mo-B (R=Nd, Sm, Gd, Er), phase diagrams and cryst. struct. 2-41587
- rare earth alloys R-Ni-B (R=Nd, Sm, Gd, Dy, Er), phase diagrams, X-ray and microscopic anal. 2-41586
- rare earth alloys R-Re-B (R=Gd, Dy, Ho), phase diagrams and cryst. struct. 2-41587
- rare earth alloys R-W-B (R=Gd, Er), phase diagrams and cryst. struct. 2-12542
- steel, austenitic, martensitic transform., martensite cryst. struct. 2-47030
- steel, C, martensite structure after  $\chi'$ - $\alpha$  transition (*Russian*) 2-51892
- steel, martensitic transform. during deform.,  $\alpha$ -martensite crystallography (*Russian*) 2-5069
- steel, W-Mo, high-speed, tempering, high-temp. X-ray struct. study 2-41639
- ternary alloys ordering in self-consistent field approx. 2-3527
- ternary superconductors, struct., rel. to valence electron conc. and transition temp. 2-17194
- transition metal alloys, binary FCC, ordered struct., perturbation method 2-30435
- Al alloys, ageing laws 2-5898
- Al-Cu (3 wt.%), pre-precipitate microstruct., obs. by lattice imaging technique (*Japanese*) 2-1448
- Al-Si eutectic alloys, struct. (*Chinese*) 2-30434
- Au-Mg system, electron microscopic and electron diff. study 2-50588
- AuSn<sub>4</sub>, cryst. struct., annealing temp. depend. 2-8474
- Au<sub>3</sub>Zn<sub>2</sub>, incommensurate, cryst. struct. determ. 2-12539
- B, borides and related compounds, conf., Uppsala; Sweden (June 1981) 2-38358
- CeCo<sub>5</sub>, PrCo<sub>5</sub>, cryst. struct. and mag. props. 2-1447
- CeGe<sub>2</sub>(Si<sub>2</sub>), cryst. struct., thermal and mag. props. 2-45117
- CeNi<sub>3</sub>Sn, cryst. struct. 2-50589
- CePd<sub>3</sub>-Pt<sub>3</sub>, cryst. struct. and valence state 2-40322
- Co-Mn-Ge, crystal and mag. struct. 2-45115
- Cr<sub>100-x</sub>Al<sub>x</sub>, struct. and microstruct. study 2-21065
- Cr<sub>100-x</sub>Al<sub>x</sub>, struct. and microstructure study 2-21066
- Cu-Au, short-range order and Fermi surface, X-ray diff. study 2-50587
- Cu-Fe superalternated solid soln., Mossbauer spectrum model, rel. to Fe atom states 2-41236
- Cu-Pd, ordered, struct., FCC-BCC transform. and mech. props. (*Russian*) 2-21064
- ErCo<sub>2</sub>ErAl<sub>3</sub>, cryst. struct. and mag. props. 2-8476
- Eu-Pt system, phase diagram and cryst. struct. of phases 2-9331
- Fe-Al-C,  $\alpha$ -martensite anomalous tetragonality, role of Al and C (*Russian*) 2-51921
- Fe-C, amorphous alloys, crystn., study of struct. defects in metastable Fe<sub>2</sub>C<sub>3</sub> (*French*) 2-12489
- Fe-C (1.5-7.2 at.%), martensite, interstitial atom config., study using Mossbauer spectroscopy 2-35439
- Fe-C martensite, modulated struct. studied by electron microscopy and diff. 2-12538
- Fe-Cr,  $\alpha$ -phase, electron microsc. obs. 2-45113
- Fe-Cr-CoSi (27, 17.5, 1 wt.%), mag. and struct. transitions, mag. props. 2-26630



**crystal atomic structure of alloys continued**

- Fe-Ge-Mn(Co)(Ni), crystal and mag. struct. 2-45115  
 Fe-Mn, Fe distrib. in  $\beta$ -Mn struct., X-ray and Mossbauer effect anal. 2-35444  
 Fe-V alloy, local mag. moments and atomic ordering, continued fraction technique calcs. 2-31147  
 $\text{Fe}_{22}\text{Zn}_{78}$  cubic phase, complex struct. rel. to  $\gamma$ -brass type 2-12537  
 $\text{Gd}_{1-x}\text{Er}_x\text{Al}_2$ , cryst. struct., X-ray diffr. study 2-8475  
 $\delta\text{-HoGa}_3$ , cryst. struct. refinement 2-8480  
 $\text{HoNi}_2\text{D}_{0.8}$ , cryst. struct., neutron diffr. study 2-25815  
 $\text{Ho}_{1-x}\text{Tb}_x\text{Fe}_2$ , crystal struct. distortion and thermal expansion (*Russian*) 2-5077  
 In-Bi(Sb), cryst. struct. and supercond. after high press. treatment 2-45118  
 NaIn film prep. by sandwich-type evaporation method 2-12944  
 $\text{Nd}_2(\text{Co}_2\text{Fe}_{1-x})_{17}$ , neutron diffr., preferential site occupation and mag. struct. 2-50586  
 $\text{NdMn}_2\text{Si}_2$ , cryst. and mag. struct. 2-8959  
 Ni-Co, fatigued FCC material, eigenstresses determ. from X-ray diffr. profiles 2-27258  
 Ni-Fe, fatigued FCC material, eigenstresses determ. from X-ray diffr. profiles 2-27258  
 $\text{Ni}_3(\text{Fe,Ti})$ , conductivity, mag. moment per atom 2-40872  
 $\text{Ni}_3(\text{Mn,Ti})$ , conductivity, mag. moment per atom 2-40872  
 $\alpha\text{-Pd-Ce}$ , short range order and evidence for Pd<sub>2</sub>Ce, electron microscopy 2-16620  
 $\text{Pd}_3\text{FeH}_x$ , site occupancy and cryst. struct.,  $^{57}\text{Fe}$  Mossbauer study 2-13736  
 $\text{PrMn}_2\text{Si}_2$ , cryst. and mag. struct. 2-8959  
 $\text{PrNi}_2\text{Al}_3$  and analogues, cryst. struct. (*Ukrainian*) 2-25813  
 Sc-Cu-Si system, cryst. struct. of two phases 2-8479  
 Sr-Pb system, phase diagram and cryst. struct. of phases 2-9333  
 $\text{Th}_6\text{Mn}_{23}\text{D}_x$ , interstitial site occupancy by D atoms 2-30436  
 Ti-C, interstitial solns. with FCC and BCC lattices, interatomic interaction 2-21058  
 TiN-TiB<sub>2</sub> system, phase diagram 2-31682  
 TiNi martensite phase, cryst. struct., electron and powder X-ray diffr. data 2-12536  
 TiNi, premartensitic, characterisation of lattice displacement waves 2-36855  
 $\text{Ti}_3\text{Zr}_2\text{Si}_3$  in Ti-Al-Zr-Mo-Si Widmanstätten struct. (*French*) 2-12540  
 $\text{U-Cu}(\text{Ga})(\text{Fe})$ , mag. props. effect of 5f electron localisation 2-31236  
 $\text{V}_2\text{Ni}(\text{Pd})(\text{Pt})$ , ordered struct., stability, sp. ht. and mag. props. 2-46304  
 $\text{W-C-Ti}(\text{Zr})(\text{Hf})$ , cast, struct. and props., alloying effect 2-41743  
 $\text{Y}_6\text{Mn}_{23}\text{D}_x$ , interstitial site occupancy by D atoms 2-30436  
 $\text{YMn}_2\text{Si}_2(\text{Ge}_2)$ , cryst. and mag. struct. 2-8959  
 Zr-C, interstitial solns. with FCC and BCC lattices, interatomic interaction 2-21058  
 $\text{Zr}_3\text{Fe}$ , cryst. struct. and Zr-Fe phase diagram 2-27141

**crystal atomic structure of elements**

- metallic thin film growth, AES and LEED studies (*Japanese*) 2-1788  
 Al, shock compressed, cryst. struct. determ. (*Russian*) 2-5076  
 Am, high-pressure phase III, cryst. struct. 2-40319  
 Ar, crystalline, struct. and compression at high press. and room temp. 2-21063  
 As, structure by bond-breaking processes from rock salt, struct. enumeration 2-25809  
 As, structure by bond-breaking processes from rock salt, band struct. calc. and gauche effect 2-25810  
 Be, implications of accurate thermal parameters 2-25812  
 Be, thermal neutron transport, lattice struct. effect 2-7154  
 Co single crystal, Ar<sup>+</sup> bombardment, sputtering yield, crystal struct. effects 2-46915  
 Cr metal, aspherical charge distrib. 2-45110  
 Cs, structural and thermodynamic props. using local transition metal pseudopot. 2-8472  
 Cu powder, X-ray diffr. profile shape approx. using ternary convolution 2-12427  
 Dy, binding energy, contribs. for various structs. 2-8470  
 Ga, channellographic projection patterns at 295.77 and 4K, lattice struct. (*French*) 2-5075  
 Gd, cubic ferromag. phase, space group obs. by X-ray, electron diffr. (*German*) 2-31142  
 K, structural and thermodynamic props. using local transition metal pseudopot. 2-8472  
 Mn, electrodeposited, crystallisation, struct. and hydrogenation 2-1428  
 Mo powders, plasma reduced, phase comp. and struct. 2-31659  
 Ne, crystalline, struct. and compression at high press. and room temp. 2-21063  
 Ni powder, X-ray diffr. profile shape approx. using ternary convolution 2-12427  
 P, black, structure by bond-breaking processes from rock salt, band struct. calc. and gauche effect 2-25810  
 P, black structure by bond-breaking processes from rock salt, struct. enumeration 2-25809  
 Pt powder, X-ray diffr. profile shape approx. using ternary convolution 2-12427  
 Rb, structural and thermodynamic props. using local transition metal pseudopot. 2-8472  
 Se crystals, orthorhombic, grown from  $\text{CS}_2$  soln., structure 2-25811  
 Si, twins, grain boundaries, atomic struct. 2-50661  
 W powders, plasma reduced, phase comp. and struct. 2-31659

**crystal atomic structure of inorganic compounds**

- alkali halides, stability of NaCl, CsCl, and cubic ZnS cryst. structs. 2-45108  
 alkali metal 12-phosphomolybdates, vibr. modes, struct., laser Raman and IR obs. 2-36622  
 alkali metal 12-phosphotungstates, vibr. modes, struct., laser Raman and IR obs. 2-36622  
 alkali metal salts, complexes with polyethers, struct. and ion transport 2-21366  
 alkaline earth titanates, with isovalent substitutions, dielectric props. and structure 2-5615  
 antimonates,  $\text{R}_3\text{Sb}_2\text{O}_{12}$  (R=In, Sc, La, Pr, Tb, Yb) struct., ferroelec. and piezoelec. characts. 2-30441  
 beryllosilicate minerals, BeOSi bond role in struct. 2-21075  
 borides and boranes, struct. comparisons, review 2-40338  
 compounds isoelectronic with diamond, creation of hard and superhard materials 2-21088

**crystal atomic structure of inorganic compounds continued**

- ferrite and ferroelectric materials synthesis, oxide ion struct. characts. rel. to initial mixture density and vol. changes 2-41564  
 garnet science in France, 1971 to 1981, review 2-31118  
 graphite intercalation compound,  $\text{C}_{24}\text{Rb}$ , ordered struct., X-ray diffr. study 2-45126  
 hydrides, NMR studies, review 2-31301  
 I-III-IV Se<sub>2</sub> semiconductors, cryst. struct.; X-ray diffr. study 2-40354  
 ice, structure prediction, tests of effective pair pots. 2-40332  
 ice Ih, bond angles, bond lengths, transition barrier, from neutron scatt. 2-21056  
 ice Ih, H distrib., neutron scatt. study 2-50594  
 ice IV metastable high press. phase, struct. obs. by X-ray diffr. 2-35450  
 II-V compounds, conf., Mogilany, Poland (Sept. 1980) 2-23375  
 II-V compounds, physical and chemical props., and applications 2-25852  
 II-V compounds, properties, structure, appls. and prep., review 2-25851  
 IV-VI semiconductors, basic properties, evolving perspectives and unifying characts. 2-17066  
 jagoite, struct. analysis and ordering schemes 2-21077  
 lewisite, cubic form, plane spacing (*Portuguese*) 2-30437  
 lonsdalite, structural features and formation mechanism 2-21102  
 majorite ((Mg,Fe)SiO<sub>3</sub>), vibrational and compressional props. of mineral high-press. phase 2-22973  
 metal (II) complexes of 1-phenyl-3-methyl-4-benzoyl-pyrazolone-5, synthesis, struct., IR and NMR spectra 2-26908  
 metal hydrides, quantum-mechanical nature of atomic state of H (*Japanese*) 2-35479  
 (Mg,Fe)(Cr,Al,Fe)O<sub>4</sub>, partly inverted spinel, Mossbauer spectra 2-41239  
 molecular crystals, tetrahedral, classification in terms of cryst. structs. Debye temp., and transition or melting temp. 2-35632  
 molybdenum ternary chalcogenides, supercond., containing Mo clusters, struct. and supercond. props. 2-17244  
 nitrides, wurtzite struct., cation packing and molar volume 2-5092  
 oxides, wurtzite struct., cation packing and molar volume 2-5092  
 perovskite cryst. struct. type rel. to  $\text{K}_2\text{NiF}_4$  struct., study by method of invariants (*French*) 2-40350  
 perovskites, anion-sharing systems, cooperative Jahn-Teller ordering 2-26345  
 perovskites, orthorhombic ABO<sub>3</sub>-type, bond distances and angles influence on mag. props. 2-5098  
 portland cement clinker, unusual form of belite 2-16624  
 portlandite, role of struct. in formation of cement stone 2-35478  
 pyroarsenates,  $\text{A}_2\text{B}^{\text{IV}}\text{X}_2\text{O}_7$  type, struct. and IR charact. (*French*) 2-45121  
 pyrophosphates,  $\text{A}_2\text{B}^{\text{IV}}\text{X}_2\text{O}_7$  type, struct. and IR charact. (*French*) 2-45121  
 pyrovanadates,  $\text{A}_2\text{B}^{\text{IV}}\text{X}_2\text{O}_7$  type, struct. and IR charact. (*French*) 2-45121  
 o-pyroxenes, cation disordering rate obs. 2-35446  
 rare earth borides,  $\text{R}(\text{Os,Ir})\text{B}_4$ , (R=Nd, La, Pr), mag. behaviour and struct. chem. 2-41104  
 rare earth chalcogenides, computer-aided prediction of cryst. struct. rel. to electron struct. 2-5080  
 rare earth compounds,  $\text{R}_3\text{Ru}_4\text{Ge}_{13}$  and  $\text{R}_3\text{Os}_4\text{Ge}_{13}$ , cryst. struct., supercond., and mag. props. 2-13224  
 rare earth compounds,  $\text{R}(\text{Fe}^{3+}\text{M}^{2+})\text{O}_4$ , (M=Mg, Mn, Co, Cu and Zn), layer struct., synthesis and cryst. struct. 2-25827  
 rare earth compounds,  $\text{RfR}_4\text{Si}_{10}$ , cryst. struct., supercond., and mag. props. 2-13223  
 rare earth cpds.,  $\text{R}_2\text{Fe}_2\text{Si}_3$ ,  $\text{R}_3\text{Co}_3\text{Si}_{10}$ , and  $\text{R}_3\text{Ru}_4\text{Ge}_{13}$  (R=rare earth, Sc or Y), cryst. struct., supercond., and mag. props. 2-30449  
 rare earth cpds.,  $\text{RB}_2\text{C}_2$ , mag. props., 3-300K 2-41116  
 rare earth Ga(In,Tl)-chalcogen system, reactions and phase diagrams 2-9335  
 rare earth titanates, with isovalent substitutions, dielectric props. and structure 2-5615  
 rare earth ultraphosphates, struct. characts., IR and Raman obs. 2-41341  
 rare-earth-Rh-Si system, new ternary silicides, cryst. struct. and mag. props. 2-16625  
 semiconductor materials for quantum electronics, crystallographic struct. (*Russian*) 2-5094  
 simple ionic crystals structures, semi-quantitative theory 2-1459  
 spinel, oxygen-containing, lattice const. calc. in atomic elastic interaction approx. 2-5085  
 struct. and stability (*German*) 2-5095  
 superionic conductor, disordered, X-ray diffr. study 2-16632  
 superionic conductors, recent research, review (*Japanese*) 2-35738  
 synthesis and characterisation 2-41515  
 $\text{Te}_3\text{AsF}_6$ , synthesis and X-ray cryt. struct. 2-35447  
 ternary superconductors, crystallography of metal clusters 2-16636  
 ternary superconductors, struct., rel. to valence electron conc. and transition temp. 2-17194  
 tetracene, crystal orientation by Laue method (*Russian*) 2-25828  
 transition metal atom binary cpds., crystal structures, phenomenology 2-5078  
 transition metal dichalcogenides, cryst. chem. and struct. principles relating to pyrite, marcasite and arsenopyrite type phases 2-35457  
 transition metal phosphides, cryst. chem. of  $\text{M}_{12}\text{P}_7$  phases rel. to  $\text{M}_2\text{P}$  phases 2-40347  
 tripuite, tetragonal form, plane spacing (*Portuguese*) 2-30437  
 weberites, cryst. struct. and space-group symm. 2-1454  
 Ag complex, Ag(I) p-aminobenzoxide, X-ray diffr. struct. 2-12558  
 Ag halogenides, response functions, electronic relax. time, and cond., continuum model 2-40978  
 AgBi(Cr<sub>2</sub>O<sub>7</sub>), double dichromate, synthesis and crystallographic characts. (*French*) 2-8485  
 AgBr, evaporated layers, struct. rel. to evaporation-substrate arrangement (*Russian*) 2-21455  
 $\text{Ag}_{1.55}\text{Cu}_{0.45}\text{S}$ , transport props. and cryst. struct. 2-30938  
 $\text{AgGaGeS}_4$ , cryst. struct. determ. 2-35468  
 $\text{AgGaTe}_2$ , anomalous thermal expansion 2-12784  
 $\alpha\text{-AgI}$  type superionic cond., struct., microscopic lattice liq. model 2-21115  
 $\text{Ag}_2\text{Li}_x\text{FeO}_2$ , structure, stoichiometry, preparation 2-27115  
 $\text{AgNO}_3$ , cryst. struct. redetern. using four-circle diffractometer 2-12550  
 $\beta\text{-Ag}_2\text{O-Al}_2\text{O}_3$ , polycryst., highly non-stoichiometric, structural studies neutron diffr. obs. 2-50612  
 $\text{Ag}_2\text{SI}$  fast ionic conductor, struct., atomic pots. and phase transitions 2-21119  
 $\text{Ag}_2\text{SI}$ , superionic phases, variational lattice liq. cluster model 2-12557  
 $(\text{Ag}_2\text{Se})_{0.925}(\text{Ag}_3\text{PO}_4)_{0.75}$ , transport props. and cryst. struct. 2-30938



## crystal atomic structure of inorganic compounds continued

- Al-B-Li(Ti)(V)(Cr)(Mn)(Fe)(Co)(Ni)(Cu) systems, B-rich phases grown from melts, X-ray diff. study 2-46904  
 AlN ceramic with added  $\text{Y}_2\text{O}_3$  or Ni, structural characteristics 2-46989  
 $\text{Al}(\text{NO}_3)_3 \cdot \text{Cr}^{3+}$ ,  $\text{Fe}^{3+}$ , EPR spectra and crystal struct. 2-13333  
 $\text{AlNbO}_4$ , cryst. struct. refinement 2-25840  
 $\beta''\text{-Al}_2\text{O}_3$ -BaO(CaO), cryst. struct., X-ray diff. study 2-25844  
 $\beta''\text{-Al}_2\text{O}_3$ -K<sub>2</sub>O, struct. and ionic cond., X-ray study 2-25843  
 $\beta''\text{-Al}_2\text{O}_3$ -K<sub>2</sub>O-MgO, struct., ionic cond. and ion-ion correlations 2-26121  
 $\beta\text{-Al}_2\text{O}_3$ -M<sub>2</sub>O, (M=Ag<sup>+</sup>, Na<sup>+</sup>, K<sup>+</sup>, NH<sub>4</sub><sup>+</sup>, H<sup>+</sup>/H<sub>2</sub>O), non-stoichiometry 2-21320  
 $\beta''\text{-Al}_2\text{O}_3$ -metal oxide-ZnO(MgO), cryst. struct., neutron diff. study 2-25842  
 $\beta\text{-Al}_2\text{O}_3$ -NH<sub>4</sub><sup>+</sup>, prep., cryst. struct., and thermal decomp. 2-25847  
 $\text{Al}_2\text{O}_3$ -Na<sub>2</sub>O,  $\beta$  and  $\beta''$  phases, Na<sup>+</sup> distrib. temp. depend., NMR study 2-26119  
 $\beta''\text{-Al}_2\text{O}_3$ -Na<sub>2</sub>O, struct. and ionic cond., X-ray study 2-25843  
 $\beta\text{-Al}_2\text{O}_3$ -Na<sub>2</sub>O-Li<sub>2</sub>O, Na<sup>+</sup> distrib. temp. depend., NMR study 2-26119  
 $\beta''\text{-Al}_2\text{O}_3$ -Na<sub>2</sub>O-Li<sub>2</sub>O, struct. and cond. plane, powder neutron diff. study 2-25841  
 $\text{Al}_2\text{O}_3$ -Na<sub>2</sub>O-LiO-MgO,  $\beta$  and  $\beta''$  phases, growth, struct., comp. and ionic cond. 2-26122  
 $\beta''\text{-Al}_2\text{O}_3$ -Na<sub>2</sub>O-MgO(ZnO), struct. and ion-ion correlations, ionic cond. and Raman spectra study 2-26121  
 $\beta\text{-Al}_2\text{O}_3$ -Na<sub>2</sub>O(K<sub>2</sub>O), ion rich, quasi long range order and ionic cond. 2-26120  
 $\alpha\text{-AlOOH}$ , diaspor, polycryst., struct. parameters, X-ray diff. obs. 2-25830  
 $\text{Al}_2\text{S}_3$ , high temp. enthalpy and X-ray powder diff. data 2-50887  
 $\text{Am}_{1+x}\text{Mo}_6\text{Se}_8$ , cryst. struct., mag. and elec. props. 2-21087  
 AuBr, vibr. spectra and normal coord. anal. 2-31506  
 AuCl, vibr. spectra and normal coord. anal. 2-31506  
 AuI, vibr. spectra and normal coord. anal. 2-31506  
 B, borides and related compounds, conf., Uppsala, Sweden (June 1981) 2-38358  
 $\text{Bi}_2\text{H}_{12}(\text{NH}_3)_2$ , cryst. struct. at 123 and 298K 2-50608  
 $\text{Bi}_2\text{H}_{12}(\text{NH}_3)_2\text{N}_2\text{H}_4$ , cryst. struct. and desolvation mechanism 2-50608  
 BN, band and cryst. struct., LCAO SCF ab initio HF calc. 2-35935  
 BN, cubic, growth and characteristics of single crystal (Japanese) 2-36775  
 (BN), C<sub>1</sub>-0<x<1, struct. and props. 2-35453  
 Ba complex, Ba(Pd(NH<sub>2</sub>CH<sub>2</sub>COO)Cl<sub>2</sub>)<sub>2</sub>·2H<sub>2</sub>O, X-ray diff., struct. 2-12559  
 $\text{Ba}_9\text{Al}_2\text{F}_{24}$ , anion-excess fluorite related struct. (French) 2-8495  
 $\text{BaAs}_2$ , cryst. struct., elec., optical, and mag. props. 2-8494  
 $\text{BaCeO}_3$ , X-ray characterisation 2-30443  
 $\text{Ba}_3\text{Fe}_2\text{Ge}_2\text{O}_{14}$ , struct. determ. 2-21098  
 $\text{Ba}_3\text{La}_2\text{Cu}_6\text{O}_{14+y}$ , progressive semiconductive-semimetallic transition, struct. aspects and energy levels 2-40359  
 $\text{BaMnFeF}_7$ , cryst. struct. 2-21086  
 $\text{BaO-Eu}_2\text{O}_3\text{-TiO}_2$  system, investigation of compounds 2-50592  
 $\text{BaO-Nd}_2\text{O}_3\text{-TiO}_2$  system, investigation of compounds 2-50592  
 $\text{BaO-Pr}_2\text{O}_3\text{-TiO}_2$  system, investigation of compounds 2-50592  
 $\text{BaO-Sm}_2\text{O}_3\text{-TiO}_2$  system, investigation of compounds 2-50592  
 $\text{BaR}_2\text{Mn}_2\text{O}_7$ , R=rare earth, synthesis and cryst. struct. (French) 2-25824  
 $\text{BaRhO}_3$  polycryst., prep. and cryst. struct. 2-1455  
 $\text{BaSnO}_3\text{Fe}_2\text{O}_{11}$ , six-layer struct., mag. props. 2-50599  
 $\text{Ba}_2\text{Zn}_2\text{P}_{10}\text{O}_{30}$ , cryst. struct., decamethylphosphate ring 2-40351  
 $\text{BaZrF}_6$ , anion-excess fluorite related struct. (French) 2-8495  
 $\text{Bi}_2(\text{A}^{1+}\text{B}^{3+})_2\text{O}_{20}$ , A<sup>1+</sup>=Li, Na; B<sup>3+</sup>=P, As, Bi, new phases with silicite structure (French) 2-16621  
 $\text{Bi}^{3+}(\text{B}^{1-}\text{B}^{1+})\text{O}_4$ , ceramic prep. and characteris. 2-51530  
 $\text{Bi}_2\text{-}x\text{Ca}_2\text{-}x(\text{Sr}_2\text{-}x)(\text{Ba}_2\text{-}x)\text{O}_3$  solid soln., cryst. struct. 2-12571  
 $\text{Bi}_2(\text{CrO}_4)_2$ , synthesis and crystallographic study (French) 2-40326  
 $\text{Bi}_2\text{O}_3\text{-R}_2\text{O}_3$  solid soln., fluorite type, R=Dy, Er, Gd, cond. and struct. 2-45619  
 C, adsorption props. in electrolyte soln., cryst. struct. effects 2-30755  
 $\text{C}_2\text{N}_2$ , mol. shape and cryst. struct. calcs. 2-15919  
 $\text{CaAs}_2$ , cryst. struct., elec., optical, and mag. props. 2-8494  
 $\text{Ca}_3(\text{CrO}_4)_2$ , cryst. struct. refined 2-5100  
 $\text{Ca}_2\text{Eu}_{1-x}\text{CrO}_3$ , solid soln., distorted perovskite struct. (French) 2-50590  
 $\text{CaFe}_{1-x}\text{O}_{4+n}$ , new ferrites, prep. and characterisation, existence in Fe-Cu-O phase diagram 2-16627  
 $\text{Ca}_3\text{Ga}_2\text{Ge}_2\text{O}_{14}$ , struct. determ. 2-21098  
 $\text{Ca}_2\text{Gd}_{1-x}\text{CrO}_3$ , solid soln., distorted perovskite struct. (French) 2-50590  
 $\text{CaGeO}_3\text{-MnGeO}_3$  system, phase diagram investig. and analysis 2-41592  
 $\text{CaHoAl}_2\text{O}_7$ , synthesis and characterisation 2-41515  
 $\text{Ca}_2\text{Ho}_{1-x}\text{CrO}_3$ , solid soln., distorted perovskite struct. (French) 2-50590  
 $\text{Ca}_2\text{La}_{1-x}\text{CrO}_3$ , solid soln., distorted perovskite struct. (French) 2-50590  
 $\text{Ca}_2\text{Nd}_{1-x}\text{CrO}_3$ , solid soln., distorted perovskite struct. (French) 2-50590  
 $\text{Ca}_{10}(\text{PO}_4)_6$ , CN<sub>2</sub>□, prep., cryst. struct., and chem. reactivity rel. to bivalent ions in apatite channels 2-40348  
 $\text{Ca}_2\text{R}_{1-x}\text{CrO}_3$ , (R=Y, La, Nd, Sm, Eu, Gd, Ho, Yb) distorted perovskite struct. (French) 2-50590  
 $\text{CaSO}_4 \cdot x\text{H}_2\text{O}$ , (x=0.5, 0.67), struct. determ. 2-21099  
 $\text{Ca}_2\text{Sb}_2\text{S}_5$ , new comp. with  $\text{Sb}_2\text{S}_4$  four-membered rings (German) 2-12568  
 $\text{Y-Ca}_2(\text{Si}_2\text{O}_7)(\text{SiO}_4)(\text{OH})_2$ , crystal struct. refinement 2-35461  
 $\text{Ca}_2\text{Sm}_{1-x}\text{CrO}_3$ , solid soln., distorted perovskite struct. (French) 2-50590  
 $\text{Ca}_{10}\text{-Sr}_x(\text{AsO}_4)_6(\text{OH})_2$ , cryst. struct. and OH torsional motion 2-25823  
 $\text{CaTbAl}_2\text{O}_7$ , synthesis and characterisation 2-41515  
 $\text{Ca}_2\text{Y}_{1-x}\text{CrO}_3$ , solid soln., distorted perovskite struct. (French) 2-50590  
 $\text{Ca}_4\text{YFe}_2\text{O}_{13}$ , cryst. struct. anal., 1 MeV high resol. electron microscopy and convergent-beam electron diff. 2-1449  
 $\text{Ca}_2\text{Yb}_{1-x}\text{CrO}_3$ , solid soln., distorted perovskite struct. (French) 2-50590  
 Cd phosphides, crystal structure, P-P bond lengths and angles, energy gap and melting point 2-25853  
 $\text{Cd}_4\text{As}_2\text{I}_3$ , A=As, P, struct. and solid solns., comparative studies (French) 2-1461  
 $\text{Cd}_4\text{As}_2\text{I}_3$ , cryst. struct., comparison with  $\text{Cd}_7\text{P}_4\text{Cl}_6$  (French) 2-12564  
 $\text{Cd}_2\text{B}_2\text{O}_7$ , cryst. struct. determ. 2-25821  
 $\text{CdBiNbZrO}_7$ , mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
 $\text{CdBiTiNbO}_7$ , mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
 $\text{CdDyTiNbO}_7$ , mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
 $\text{CdGaInS}_4$  layer cryst., sp. ht. 2-8634  
 $\text{CdI}_2$ , polytypes, cubic and hexagonal layer packing studies 2-8502  
 $\text{Cd}_4\text{P}_7$ , prep. technology, cryst. struct. and semicond. props., optical absorption spectra meas. 2-25854  
 $\text{Cd}_2\text{P}_{10}$ , prep. technology, crystal struct. and semicond. props., optical absorption spectra meas. 2-25854  
 $\text{Cd}_2\text{P}_4\text{Cl}_6$ , cryst. struct., comparison with  $\text{Cd}_4\text{As}_2\text{I}_3$  (French) 2-12564

## crystal atomic structure of inorganic compounds continued

- $\text{CdS-Ag}_2\text{S}$ , transport props. and cryst. struct. 2-30938  
 $\text{Cd}_2\text{Sb}_2\text{S}_{11}$ , crystal structure determ. 2-8503  
 $\text{CdSeO}_4 \cdot \text{H}_2\text{O}$ , cryst. struct. determ. 2-21071  
 $\text{CdSmTiNbO}_7$ , mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
 $\text{Ce}(\text{HPO}_4)_2$ , cryst. struct., thermoanalysis, X-ray diff. 2-5096  
 $\text{Ce}_2\text{V}_2\text{S}_6\text{O}_7$ , mixed oxysulphides, crystallographic characters. (French) 2-8484  
 Co complex, (meso-tetraphenylporphinato) cobalt(II), electronic struct., X-ray diff. study 2-35449  
 Co complex, Co( $\gamma$ -methylpyridine N-oxide) perchlorate, crystal struct., and superexchange pathways 2-25858  
 $\text{Co}_2\text{B}_2\text{O}_7$ , cryst. struct. determ. 2-25820  
 $\text{Co}_2\text{Cr}_{1-x}\text{S}_x$ , high temp. metal-semicond. transition, elec. cond., DTA and X-ray diff. study 2-36111  
 $\text{CoI}_2$ , mag. and struct. investigations 2-26588  
 $\text{Co}_2\text{O}_4$ , polycrystalline, dispersity, struct. and mag. props. 2-21872  
 $\text{CoSe}$ , cryst. struct. determ. (Russian) 2-16635  
 $\text{CoTe}$ , cryst. struct. determ. (Russian) 2-16635  
 $\text{CrOBr}$ , crystalline parameters thermal dilatation coeffs. (French) 2-1451  
 $\text{CrOCl}$ , crystalline parameters thermal dilatation coeffs. (French) 2-1451  
 $\text{Cr}_2\text{S}_4$ , cryst. struct. and domain struct. 2-8490  
 $\text{CrSbO}_4$ , double oxide, crystal data 2-12555  
 $\text{Cs}(\text{D}_{0.64}\text{H}_{0.36})_2\text{AsO}_4$ , cryst. struct. and transition temp. 2-40329  
 $\text{CSHSO}_4$ , cryst. struct. refinement, H bonded chains of  $\text{SO}_4$  groups 2-12548  
 $\text{CSHSeO}_4$ , phase transition, dielec. and thermal studies 2-45557  
 $\text{Cs}_3\text{La}(\text{NH}_2)_6\text{NH}_3$  and  $\text{Cs}_4\text{La}(\text{NH}_2)_7\text{NH}_3$ , X-ray cryst. struct. determ. (German) 2-8492  
 $\text{CSLiMoO}_4$ , struct. and synthesis 2-21101  
 $\text{CsM}(\text{NH}_2)_3$  (M=Ca, Sr, Eu), cryst. struct. and IR spectra (German) 2-8493  
 $\text{Cs}_2\text{NaDyF}_6$ , spin density transfer, struct., NMR study 2-21894  
 $\beta\text{-CsNd}(\text{PO}_3)_4$  crystallites, cryst. struct. determ. 2-35466  
 $\text{CsNdP}_4\text{O}_{12}$ , cryst. struct. calcs. 2-35465  
 $\text{CsPF}_6$ , vibrational spectra and crystallographic props. 2-31490  
 $\text{Cs}_4\text{Sb}_4\text{S}_{23}$ , synthesis and struct. 2-12561  
 $\text{Cs}_2\text{UO}_2\text{Cl}_4$  crystal, struct. and nonlinear optics 2-40357  
 Cu complex, binuclear, with paraxylol connecting group, ((CuCl<sub>2</sub>C<sub>18</sub>H<sub>20</sub>N<sub>3</sub>)<sub>2</sub>)<sub>2</sub>·2H<sub>2</sub>O, X-ray struct. anal. 2-8501  
 Cu complex, copper(I) thiocyanate  $\beta$ -modification, cryst. struct. and polymorphism 2-12543  
 Cu complex Cu(NH<sub>3</sub>)<sub>4</sub>Ag(SCN)<sub>3</sub>, coord. configurations 2-21089  
 Cu complex with stable nitroxide radical, struct. 2-12560  
 $\text{CuAlO}_2$ , single cryst. growth and cryst. struct. refinement 2-40349  
 $\text{CuAsSe}$ , HCC cryst. struct. 2-5090  
 $\text{Cu}_3\text{B}_2\text{O}_7$ , Br, cryst. struct. determ. 2-25820  
 $\text{Cu}_{1-x}\text{Fe}_{2+x}\text{O}_4$ , XPS study of Cu<sup>+</sup> and Cu<sup>2+</sup> ion distrib. (French) 2-5792  
 $\text{CuInSe}_2$ , thin films, ion-beam sputtered, characterisation 2-8737  
 $\text{CuLaS}_4$ , sheet cryst. struct. formed by (La<sub>4</sub>S)<sub>2</sub> (Cu<sub>4</sub>S)<sub>2</sub> tetrahedra (French) 2-12546  
 $\text{Cu}_{1.8}\text{Mo}_6\text{S}_8$  single cryst., supercond. upper crit. field anisotropy 2-46218  
 $\text{Cu}_{1.8}\text{Mo}_6\text{S}_{8-y}\text{-Se}_y\text{Fe}_z$ , Chevrel phase, struct. and props. 2-16638  
 $\text{Cu}_0.6\text{NbO}_2\text{F}_4$ , cryst. struct. rel. to  $\text{MoO}_3$  type struct. 2-1460  
 $\text{Cu}_2\text{S}$  and  $\text{Cu}_{1.93}\text{S}$ , low chalcocite and djurleite, Cu coord. behaviour 2-21074  
 $\text{CuSiF}_6 \cdot 6\text{H}_2\text{O}$ , structure instability near first-order transition 2-35462  
 $\text{Cu}_2\text{SiS}_6$ , cryst. struct., orthorhombic system (French) 2-12545  
 $\text{Cu}_2\text{Zn}_{1-x}\text{Fe}_2\text{O}_4$ , slow cooled and quenched, struct. and lattice parameter changes 2-30442  
 $\text{DTaWO}_6$ , D site location from neutron powder diff. data 2-21118  
 $\text{ErBa}_2$ , neutron diff. studies of cryst. and mag. struct. 2-40345  
 Eu complex, dimethyl sulphoxide europium nitrate, cryst. struct., X-ray study (Chinese) 2-40325  
 $\text{EuAs}_3$ , cryst. struct., elec., optical, and mag. props. 2-8494  
 $\text{EuMo}_2\text{S}_4$ , phase transition, specific heat, elec. cond. 2-26042  
 $\text{n-FeB}_{19}\text{S}_{15}$ , prep., electronic transport props., cryst. struct. 2-40886  
 $\text{Fe}_{1-x}\text{Cr}_x\text{NbO}_4$ , prep., cryst. struct., mag. and electronic props. 2-26440  
 $\text{FeCr}_2\text{O}_6$ , with tetrahedral vacancies, synthesis and struct. (French) 2-40327  
 $\text{FeCr}_2\text{Se}_4$ , heat treatment effects on props. 2-13276  
 $\text{Fe}_{1-x}\text{Eu}_x\text{Cr}_2\text{Se}_4$ , synthesis and physicochem. props., semicond. behaviour 2-9256  
 $\text{Fe}^{2+}\text{Fe}^{3+}[\text{PO}_4]_6$ , hydrothermal crystal. and crystal structure 2-1464  
 $\text{Fe(III)}$  complex,  $\text{NH}_4[\text{Fe(5-Br-salicylaldehyde thiosemicarbazone)}_2]$ , mag. props., cryst. struct. determ. 2-40352  
 $\text{Fe}(\text{NO}_3)_3$ , EPR spectra and crystal struct. 2-13333  
 $\text{FeNb}_2\text{S}_{10}$ , chalcogenide, cryst. struct. 2-1458  
 $\text{FeNb}_2\text{S}_{10}$ , cryst. struct. rel. to CDW 2-16629  
 $\text{FeOCl}$ , crystalline parameters thermal dilatation coeffs. (French) 2-1451  
 $\text{FeOCl}$ , intercalation cpd. with crown ether 2-21080  
 $\alpha\text{-FeOOH}$ , goethite, cryst. struct., during dehydration to haematite, Mossbauer obs. and Morin temp. of haematite 2-5606  
 $\text{Fe}_2\text{PO}_5$ , mixed valence compound, prep. Mossbauer, structural and mag. studies (French) 2-50600  
 $\text{FePS}_3$ , cathode in Li battery, synthesis, struct. and phys. props. (French) 2-32057  
 $\text{FePS}_5$ , cryst. and mag. struct., neutron diff. study 2-31144  
 $\text{Fe}_2\text{-S}$ , pyrrhotite, modulated struct. of NC-type (N=5.5) 2-45120  
 $\text{FeSbO}_4$ , double oxide, crystal data 2-12555  
 $\text{Fe}_2\text{TiO}_5$ , monoclinic polytype, struct. determ. and Mossbauer spectroscopy 2-25826  
 $\beta\text{-Ga}_2\text{O}_3\text{-Na}_2\text{O-K}_2\text{O}$ , atom distrib. rel. to mixed alkali effect 2-25845  
 $\text{GaP}$ , bond charge study by X-ray data 2-45109  
 $\text{GaSb}$ , mean square atomic displacements, neutron diffraction determ. 2-40324  
 $\text{GdAl}_2[\text{BO}_3]_4$ , crystallisation, cryst. struct. 2-47019  
 $\text{Gd(Eu)Al}_2(\text{BO}_3)_2$ , cryst. struct., f-f transition probabilities, anisotropic ligand polarisability 2-45134  
 $(\text{Gd}(\text{HCO}_3)_3(\text{H}_2\text{O})_4 \cdot \text{H}_2\text{O})_n$ , cryst. struct. determ. 2-21107  
 $\text{Gd}_2\text{Zr}_{1-x}\text{O}_{2-(1/2)x}$ , pyrochlore struct., cond. and struct. 2-45619  
 $\text{GeAsSe}$ , crystal struct. determ. 2-21091  
 $\text{GeB}_{-90}$ , rhombohedral single cryst. solid soln., X-ray diff. study 2-30444  
 $\text{GeS}_2$ , cryst. struct. determ. 2-35468  
 $\text{GeTe-AgBiTe}$  system, physicochem. investig. of phase diagram 2-5207  
 $\text{H}_2\text{AlP}_2\text{O}_{10} \cdot 2\text{H}_2\text{O}$ , IR spectroscopic investigation of proton-containing groups 2-13464  
 $\text{HCOOLi}_2\text{D}_2\text{O}$ , expt. and theoretical determ. of electron density 2-25836



# crystal atomic structure of inorganic compounds continued

- H<sub>2</sub>(UO<sub>2</sub>)<sub>2</sub>(AsO<sub>4</sub>)<sub>2</sub>·8H<sub>2</sub>O, phase II, ferroelastic character, point groups 2—35571
- H<sub>2</sub>WO<sub>3</sub>·H<sub>2</sub>O, electrochem. reduction prep., cryst. struct., and proton diffusion rates 2—30650
- Hf<sub>2</sub>Fe(Co)(Ni)P, formation with Nb<sub>2</sub>CoSi structure 2—5081
- Hf<sub>2</sub>TiO<sub>7</sub> system, phase diagram at 1600–2800°C, phase comp. and struct. 2—5866
- Hf<sub>2</sub>Sb, cryst. struct., coordination, and bonding 2—1456
- HgClBr, α- and β-phase, formation by reactions in solid state, cryst. struct. study 2—27430
- HgH<sub>2</sub>NCS<sub>2</sub>, crystallographic and spectroscopic study 2—45123
- In<sub>2</sub>Cl<sub>2</sub>·SbCl<sub>6</sub>, cryst. struct. 2—21078
- InAs, mean square atomic displacements, neutron diffraction determ. 2—40324
- In<sub>2</sub>Se<sub>3</sub>, cryst. struct. and phase transition, elec. field gradient, TDPAC study 2—26797
- KAgSe, cryst. struct. and stability criteria (*German*) 2—8491
- KBi(Cr<sub>2</sub>O<sub>7</sub>)<sub>2</sub>, double dichromate, synthesis and crystallographic characters. (*French*) 2—8485
- KBiCrO<sub>4</sub>·Cr<sub>2</sub>O<sub>7</sub>·1.5H<sub>2</sub>O, synthesis and crystallographic study (*French*) 2—40326
- K<sub>2</sub>Bi<sub>1-x</sub>F<sub>3-2x</sub>, superionic cond., struct. and ionic cond., expt. study 2—16883
- KCoF<sub>3</sub>, anisotropic atomic temp. factors 2—8482
- KCoF<sub>3</sub>, relationship between mag. and crystallographic struct. 2—36329
- K<sub>2</sub>Cu<sub>3</sub>(MoO<sub>4</sub>)<sub>4</sub>, crystal growth from melt, cryst. struct. 2—1465
- KCu<sub>2</sub>Te<sub>2</sub>, crystal struct. (*German*) 2—21092
- K(D<sub>0.95</sub>H<sub>0.05</sub>)<sub>2</sub>PO<sub>4</sub>, cryst. struct. and transition temp. 2—40329
- KD<sub>2</sub>PO<sub>4</sub>, cryst. struct., temp. and press. depend. 2—50595
- KD<sub>2</sub>PO<sub>4</sub>, cryst. struct. of tetragonal phase, temp. depend. 2—50596
- KFeF<sub>3</sub>, relationship between mag. and crystallographic struct. 2—36329
- KH<sub>2</sub>PO<sub>4</sub>, cryst. struct. and transition temp. 2—40329
- KH<sub>2</sub>PO<sub>4</sub>, cryst. struct., temp. and press. depend. 2—50595
- KH<sub>2</sub>PO<sub>4</sub>, cryst. struct. of tetragonal phase, temp. depend. 2—50596
- KH<sub>2</sub>PO<sub>4</sub>, proton pot. estimation from IR and crystallographic data 2—9139
- KH<sub>2</sub>PO<sub>4</sub>, proton potential from spectroscopic and crystallographic data 2—36618
- 2KH<sub>2</sub>PO<sub>4</sub>·H<sub>3</sub>PO<sub>3</sub>, cryst. struct. determ. 2—21072
- K<sub>3</sub>LiCl<sub>6</sub>·H<sub>2</sub>O struct. investig. by Raman spectroscopy 2—31504
- K<sub>2</sub>Li<sub>10</sub>SbO<sub>3</sub>, struct. and cond. props. (*French*) 2—5273
- KLn(MoO<sub>4</sub>)<sub>2</sub>, (Ln=Y, Dy, Ho, Er, Tm, Yb, Lu), cryst. and mol. struct., IR and Raman study 2—41362
- KMgF<sub>3</sub>, anisotropic atomic temp. factors 2—8482
- KMnF<sub>3</sub>, anisotropic atomic temp. factors 2—8482
- K<sub>0.9</sub>Mo<sub>0.1</sub>O<sub>17</sub>, quasi two dimensional metal, elec. and mag. props. meas. 2—40871
- K<sub>2</sub>NdF<sub>6</sub>, spin density transfer, struct., NMR study 2—21894
- K<sub>2</sub>NbF<sub>7</sub>, anion-excess fluorite related struct. (*French*) 2—8495
- KNiF<sub>3</sub>, anisotropic atomic temp. factors 2—8482
- K<sub>2</sub>NiF<sub>4</sub>, cryst. struct. type rel. to perovskite struct., study by method of invariants (*French*) 2—40350
- K<sub>2</sub>PtF<sub>6</sub>, charact. cryst. chem. features, X-ray struct. anal. 2—5093
- K<sub>2</sub>ReF<sub>6</sub>, anion-excess fluorite related struct. (*French*) 2—8495
- K<sub>2</sub>Ta<sub>2</sub>B<sub>2</sub>O<sub>12</sub>, piezoelectric, crystal struct. at room temp. and growth 2—25819
- KTi<sub>2</sub>TaO<sub>6</sub> and K<sub>2</sub>TiTaO<sub>6</sub>, cryst. struct. 2—1452
- α-K<sub>2</sub>Y(MoO<sub>4</sub>)<sub>2</sub> crystals, structural characters. 2—50605
- K<sub>2</sub>ZrSi<sub>2</sub>O<sub>7</sub>·H<sub>2</sub>O, cryst. struct. study 2—35467
- K<sub>4</sub>Zr<sub>2</sub>Si<sub>2</sub>O<sub>18</sub>·2H<sub>2</sub>O, cryst. struct. 2—35458
- LaB<sub>6</sub>-Gd<sub>2</sub>B<sub>6</sub>, quasi-binary system, lattice struct. and mag. susceptibility mea-s. 2—8487
- La<sub>4-2x</sub>Ba<sub>2+2x</sub>Cu<sub>2-2x</sub>O<sub>10-2x</sub>, cryst. struct. (*French*) 2—8496
- La<sub>2</sub>Co<sub>2</sub>O<sub>9</sub>, oxidation catalyst, struct. evolution and catalytic activity (*French*) 2—8483
- La<sub>2</sub>Cr<sub>2</sub>N<sub>23</sub>, prep., cryst. struct., and supercond. props. (*French*) 2—9298
- La<sub>2</sub>LiO<sub>6</sub>, ordered antiferromagnetic perovskite, crystal struct. and mag. props. (*French*) 2—8486
- La<sub>2</sub>LiRuO<sub>6</sub>, ordered antiferromagnetic perovskite, crystal struct. and mag. props. (*French*) 2—8486
- La<sub>0.33</sub>NbO<sub>3</sub>, cryst. struct. refinement 2—30448
- LaNb<sub>1-x</sub>W<sub>0.4+x/2</sub>, scheelite based compounds, cryst. chem., struct. modulation, elec. cond. 2—50601
- La<sub>1-x</sub>Nd<sub>x</sub>MgAl<sub>10</sub>O<sub>19</sub>, prep., struct., optical and mag. props. 2—31619
- La<sub>2-x</sub>Sr<sub>x</sub>CuO<sub>4-x/2+δ</sub>, cryst. struct., rel. to Cu oxidation state and O vacancy disordering 2—30444
- La<sub>1-x</sub>Th<sub>x</sub>NbO<sub>4+x/2</sub>, scheelite based compounds, cryst. chem., struct. modulation, elec. cond. 2—50601
- La<sub>2</sub>Ti<sub>2</sub>O<sub>9</sub>, synthesis, cryst. struct. and electrophys. props. 2—41562
- La<sub>2</sub>V<sub>2</sub>S<sub>2</sub>O<sub>7</sub> mixed oxysulphides, crystallographic characters. (*French*) 2—8484
- Li/(Mo<sub>0.3</sub>V<sub>0.7</sub>)<sub>2</sub>O<sub>3</sub> secondary cell solid solution cathode structural characters. 2—52323
- LiAlB<sub>4</sub>, crystal structure 2—45132
- LiBO<sub>2</sub>, crystal struct. and charge density distrib. 2—40340
- Li<sub>2</sub>B<sub>2</sub>O<sub>4</sub>(OH)<sub>2</sub>, cryst. struct., deform. electron density 2—35464
- LiCdB<sub>3</sub>, hexagonal, refined cryst. struct. 2—25833
- Li<sub>2</sub>CdBr<sub>4</sub>, ternary bromides, spinel structure, struct. and stability (*German*) 2—5095
- LiCe(PO<sub>3</sub>)<sub>4</sub>, cryst. struct. and IR spectra 2—22202
- Li<sub>2</sub>Co<sub>1-x</sub>Co<sub>2</sub>O<sub>4</sub>, spinels, cation distrib. and elec. props. 2—26423
- Li<sub>3</sub>Cr<sub>2</sub>PO<sub>16</sub>·3H<sub>2</sub>O, cryst. struct. determ. 2—35469
- LiFeSnO<sub>4</sub>, polymorphism and polymorphous transition, X-ray diff. and electron microscopy obs. 2—50575
- Li<sub>2</sub>FeV<sub>2</sub>O<sub>8</sub>, structural aspects of Li insertion 2—25850
- Li<sub>2</sub>FeV<sub>2</sub>O<sub>8</sub>, topotactic lithium reactions with ReO<sub>3</sub> related shear structures 2—27433
- LiGaSe<sub>2</sub>, single cryst. growth and characterization 2—13637
- Li<sub>2</sub>H<sub>2</sub>O, conductivity enhancement by dispersed oxide phases 2—16875
- Li<sub>2</sub>Li(SO<sub>4</sub>)<sub>2</sub>, X-ray cryst. struct. determ. 2—21110
- Li<sub>0.5</sub>(Mo<sub>0.25</sub>V<sub>0.75</sub>)<sub>2</sub>O<sub>3</sub>, structure, transport and equilibrium props. 2—26136
- Li<sub>2</sub>Nd<sub>2</sub>, crystal struct. by single-cryst. neutron diff. 2—21116
- LiRf<sub>4</sub>, R=rare earth, oxidation products, X-ray diff. and differential thermal anal. study 2—16609
- Li<sub>2</sub>ReO<sub>3</sub>, structural aspects of Li insertion 2—25850
- Li<sub>2</sub>ReO<sub>3</sub>, topotactic lithium reactions with ReO<sub>3</sub> related shear structures 2—27433
- Li<sub>2</sub>Sb<sub>2-x</sub>S<sub>20</sub>, synthesis and cryst. chem. (*French*) 2—12567
- Li<sub>2</sub>Tm(SO<sub>4</sub>)<sub>2</sub>, X-ray cryst. struct. determ. 2—21110
- LiVO<sub>2</sub>, high-pressure form, 2X2X2 NaCl superstruct. 2—12544

# crystal atomic structure of inorganic compounds continued

- Li<sub>2</sub>V<sub>2</sub>O<sub>3</sub>, structure, transport and equilibrium props. 2—26136
- Li<sub>2</sub>WO<sub>3</sub>, structure, transport and equilibrium props. 2—26136
- LiYb(SO<sub>4</sub>)<sub>2</sub>, X-ray cryst. struct. determ. 2—21110
- Li<sub>2</sub>Zn<sub>1-x</sub>Co<sub>2</sub>O<sub>4</sub>, spinels, cation distrib. and elec. props. 2—26423
- LuAlB<sub>4</sub>, single cryst. growth from Al melt, struct. refinement 2—41510
- Lu<sub>2</sub>Si<sub>2</sub>O<sub>7</sub>, floating zone grown, crystal data 2—12556
- Mg complex, (Mg(H<sub>2</sub>O)<sub>2</sub>(py))<sub>2</sub>Br<sub>2</sub>·2py, cryst. struct. (*French*) 2—12566
- Mg complex, (Mg(H<sub>2</sub>O)<sub>2</sub>(py))<sub>2</sub>Cl<sub>2</sub>, cryst. struct. (*French*) 2—12566
- MgAl<sub>2</sub>(OH)<sub>8</sub>, Mg<sub>2</sub>Al(OH)<sub>7</sub> and Mg<sub>2</sub>Al(OH)<sub>7-x</sub>(NO<sub>3</sub>)<sub>x</sub>, X-ray diff. of cryst. struct. 2—45125
- Mg<sub>2</sub>B<sub>14</sub>, crystal structure 2—40342
- MgF<sub>2</sub>, X-ray study of charge distrib. 2—25816
- Mg<sub>2</sub>NiH<sub>4</sub>, allotropic transform. (*French*) 2—22213
- MgO-ZrO<sub>2</sub>, solid solutions, thermomech. and thermophys. props. 2—5083
- β-Mg<sub>2</sub>SiO<sub>4</sub>, single crystal, X-ray diff. study 2—1450
- Mn complex, phosphacymantrene, order-disorder transition, calorimetric, X-ray and Raman diff. study (*French*) 2—50847
- Mn higher silicides, cryst. struct. and thermoelectric power characts. 2—5099
- MnAs, cryst. struct., phase transformations, X-ray diff. obs. 2—35471
- Mn<sub>2</sub>B (or orthorhombic Mn<sub>2</sub>B), cryst. struct. refinement 2—40343
- MnF<sub>2</sub>, fine particles, gas evaporated, quenched high press. phase, X-ray diff. study 2—26247
- λ-MnO<sub>2</sub>, preparation of new cryst. form from LiMn<sub>2</sub>O<sub>4</sub>+acid 2—9300
- MnPSe<sub>3</sub>, cryst. and mag. struct., neutron diff. study 2—31144
- α-MnS, electrical and mag. props., cryst. struct. 2—9032
- MnSe<sub>2</sub>S<sub>4</sub> and Mn<sub>2</sub>Se<sub>2</sub>Sc<sub>14</sub>S<sub>4</sub>, crystal struct. 2—21090
- MnSiTe<sub>3</sub>, ferrimagnetic semiconductor, mag. props., cryst. struct. 2—26669
- Mn<sub>2</sub>[VS<sub>2</sub>O<sub>18</sub>(OH)], medaite, cryst. struct., heteropolysilicate anion presence 2—21069
- Mn<sub>1-x</sub>Cu<sub>x</sub>V<sub>2-x</sub>Mo<sub>2</sub>O<sub>6</sub>, cryst. struct., Mo<sup>6+</sup> short range ordering and vacancies 2—21082
- Mo complex, cis-Mo(t-BuS)<sub>2</sub>(t-BuNC)<sub>2</sub>, struct., X-ray diff., <sup>1</sup>H and <sup>13</sup>C NMR, UV-visible and IR spectra 2—50593
- MoCl<sub>3</sub> tris-thiourea complex, Mo[SC(NH<sub>2</sub>)<sub>3</sub>]<sub>3</sub>Cl<sub>3</sub>, cryst. and mol. struct. 2—12562
- MoOCl<sub>4</sub> complex 2—35448
- MoS<sub>2</sub>, scatt. intensity calcs. 2—44969
- Mo<sub>2</sub>S<sub>8</sub>·γ-Se<sub>2</sub>Te<sub>2</sub>, Chevrel phase, struct. and props. 2—16638
- NH<sub>4</sub>BiCrO<sub>4</sub>·Cr<sub>2</sub>O<sub>7</sub>·1.5H<sub>2</sub>O, synthesis and crystallographic study (*French*) 2—40326
- N<sub>2</sub>H<sub>2</sub>F<sub>2</sub>·2HF, H-bonds, <sup>1</sup>H and <sup>19</sup>F NMR spectra, numerical anal., crystal struct. 2—13354
- NH<sub>4</sub>Fe<sup>III</sup>Fe<sup>II</sup>F<sub>6</sub>, ordered pyrochlore, antiferromag., cryst. struct. study 2—25822
- NH<sub>4</sub>HSeO<sub>4</sub>, cryst. struct. at room temp. 2—35473
- (NH<sub>4</sub>)<sub>2</sub>In(SO<sub>4</sub>)<sub>3</sub>, high temp. form, monoclinic-trigonal transition 2—25799
- (NH<sub>4</sub>)<sub>2</sub>MoO<sub>5</sub>, polarised X-ray absorpt. spectra, SCF Xα MSW calc. and cryst. struct. 2—36733
- (NH<sub>4</sub>)<sub>2</sub>TeO<sub>4</sub>, crystallographic study (*French*) 2—12565
- (NH<sub>4</sub>)<sub>2</sub>[Sb<sub>2</sub>F<sub>7</sub>(SO<sub>4</sub>)<sub>3</sub>], X-ray cryst. struct. determ. 2—50607
- Na<sub>2</sub>Al<sub>6</sub>Ge<sub>6</sub>O<sub>24</sub>(CO<sub>3</sub>)<sub>2</sub>·2H<sub>2</sub>O, cancrinite-like, cryst. struct. determ., Patterson and diff. pseudosymmetry 2—21104
- Na<sub>2</sub>Al<sub>2</sub>Si<sub>2</sub>O<sub>10</sub>·2H<sub>2</sub>O, natural natrolite, X-ray diff. refinement of cryst. struct. 2—12549
- Na<sub>2</sub>BaTi<sub>2</sub>Bi<sub>2</sub>Si<sub>2</sub>O<sub>30</sub>, leucospherite, cryst. struct. determ. 2—40356
- Na<sub>2</sub>Ca<sub>2</sub>(AlSiO<sub>4</sub>)<sub>6</sub>(CO<sub>3</sub>)<sub>1.4</sub>·2H<sub>2</sub>O, X-ray cryst. struct. determ. 2—30446
- NaCaHSiO<sub>4</sub>, Raman and IR vibr. spectrum and structural ordering 2—36633
- Na<sub>2</sub>Ca(Mn,Fe)<sup>2+</sup>(P<sub>4</sub>)<sub>6</sub>, fillowite 2—21076
- Na<sub>2</sub>Ca<sub>2</sub>(HSiO<sub>4</sub>)<sub>2</sub>PO<sub>4</sub>, optimal form. conditions and characters. 2—51838
- Na<sub>2</sub>Ca(PO<sub>3</sub>)<sub>4</sub>, cryst. struct. and IR spectra 2—22202
- Na<sub>2</sub>Ca(PO<sub>3</sub>)<sub>4</sub>, vitusite, disordered struct., X-ray determ. 2—35472
- Na<sub>2</sub>CoO<sub>2</sub> bronzes, electrochem. intercalation of Na 2—18042
- Na<sub>2</sub>Cr<sub>2</sub>Ti<sub>1-x</sub>S<sub>2</sub> system, cryst. struct., elec., mag., and NMR study 2—40360
- Na<sub>2</sub>Cu<sub>2</sub>S<sub>3</sub>, crystal struct. (*German*) 2—21092
- Na<sub>1-9-2x</sub>Ca<sub>2x</sub>V<sub>10-3x</sub>O<sub>36</sub>, prep., struct. and ESR characts. 2—41512
- Na<sub>2</sub>(SeO<sub>3</sub>)<sub>2</sub>, cryst. and mol. struct. of paraelectric and ferroelectric phases 2—40330
- Na<sub>2</sub>FeF<sub>6</sub>, cryst. struct. determ. 2—35463
- Na<sub>3-x</sub>K<sub>x</sub>W<sub>6</sub>O<sub>18</sub>, crystallographic and dielectric props., new materials having chiolite related struct. 2—17423
- NaLiV<sub>2</sub>O<sub>6</sub>, clinopyroxene, cryst. struct. 2—25834
- Na<sub>2-x</sub>Li<sub>x</sub>W<sub>6</sub>O<sub>18</sub>, crystallographic and dielectric props., new materials having chiolite related struct. 2—17423
- Na<sub>3</sub>Nd(BO<sub>3</sub>)<sub>2</sub>, cryst. struct. determ. 2—21083
- β-Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>, polycryst., highly non-stoichiometric, structural studies neutron diff. obs. 2—50612
- Na<sub>2</sub>R<sub>2</sub><sup>2+</sup>(MoO<sub>4</sub>)<sub>2</sub>, R=Mg, Co, Zn, X-ray structural study 2—35474
- Na<sub>2</sub>Se<sub>2</sub>P<sub>2</sub>O<sub>12</sub>, cryst. struct. and phase transitions 2—26047
- Na<sub>3(1-x)</sub>Se<sub>2-x</sub>(PO<sub>4</sub>)<sub>3</sub>, relation between cryst. struct. and ionic cond. 2—25848
- Na<sub>1+x</sub>Si<sub>2</sub>Zr<sub>2</sub>P<sub>3-x</sub>O<sub>12</sub>, Nasicon system, electrochem. and struct. parameters 2—16634
- Na<sub>2</sub>(Sn(SiO<sub>3</sub>)<sub>2</sub>), struct. determ. 2—21100
- Na<sub>2</sub>Te<sub>2</sub>O<sub>7</sub>, 1-6 weberite, cryst. struct. 2—1454
- Na<sub>2</sub>W<sub>2</sub>O<sub>6</sub>F<sub>3</sub> family, ferroelec.-ferroelastic props. 2—31415
- (Na<sub>2</sub>SiO<sub>4</sub>)<sub>2</sub>·NaF, cryst. struct. determ. 2—1466
- Na<sub>2</sub>Zn[Si<sub>2</sub>O<sub>6</sub>], synthetic Zn chkalovite, refine cryst. struct. determ. 2—25832
- Na<sub>1+x</sub>Zr<sub>2-x</sub>L<sub>2</sub>(PO<sub>4</sub>)<sub>3</sub> (L=Cr, In, Yb), Nasicon-type phases, ionic cond. 2—16867
- Na<sub>1+x</sub>Zr<sub>2</sub>(P<sub>3-x</sub>Si<sub>x</sub>)O<sub>12</sub>, cryst. struct. and phase transitions 2—26047
- Na<sub>2</sub>Zr<sub>2</sub>(SiO<sub>4</sub>)<sub>3</sub>, refined struct., its place in M<sub>2</sub>(TO<sub>4</sub>)<sub>3</sub> mixed frameworks 2—21105
- Na<sub>2</sub>Zr<sub>2</sub>Si<sub>2</sub>O<sub>12</sub>, crystal struct. and ionic conductivity 2—8498
- Na<sub>2</sub>Zr<sub>2</sub>Si<sub>2</sub>O<sub>12</sub>, Nasicon-type struct., thermal expansion of lattice rel. to Na<sup>+</sup> mobility 2—16868
- Na<sub>1-x</sub>Zr<sub>2</sub>Si<sub>2</sub>P<sub>3-x</sub>O<sub>12</sub>, struct. by rigid-ion model 2—25849
- Na<sub>2</sub>Zr<sub>2</sub>[Si<sub>2</sub>O<sub>18</sub>]Cl<sub>2</sub>·2H<sub>2</sub>O, cryst. struct., density and hardness 2—35470
- NbCo<sub>0.73</sub>, defect struct., elastic neutron scatt. study 2—1463
- NdAl<sub>2</sub>(BO<sub>3</sub>)<sub>4</sub>, high temp. monoclinic modification, struct. anal. 2—21097
- NdAl<sub>1.67+0.67δ</sub>(B<sub>2</sub>O<sub>3</sub>)<sub>10</sub>O<sub>4</sub>, double metaborate cryst. struct. 2—50604
- Nd<sub>2</sub>Ni<sub>1-x</sub>B<sub>2</sub>, crystal struct. and analogues (*Ukrainian*) 2—50584
- Nd<sub>2</sub>V<sub>10</sub>O<sub>28</sub>·28H<sub>2</sub>O, struct. as example of peak rhombs to interpret Patterson synthesis with multiple peaks 2—30445
- Nd<sub>2</sub>V<sub>2</sub>S<sub>2</sub>O<sub>7</sub> mixed oxysulphides, crystallographic characters. (*French*) 2—8484



## crystal atomic structure of inorganic compounds continued

- Nd<sub>2</sub>Zr<sub>1-x</sub>O<sub>2-(1/2)x</sub>, pyrochlore struct., cond. and struct. 2-45619  
 Ni complex, N,N'-ethylenebis(benzoylacetonimino)-Ni(II), cryst. and mol. struct. 2-45124  
 Ni-Mg olivine, synthetic and natural, cation ordering 2-21073  
 Ni<sub>2</sub>, mag. and struct. investigations 2-26588  
 NiNbP<sub>2</sub>, X-ray struct. determ. (French) 2-1457  
 NiPS<sub>3</sub> cathode in Li battery, synthesis, struct. and phys. props. (French) 2-32057  
 NiZn<sub>1-x</sub>Ge<sub>x</sub>, mixture, stability range (German) 2-2490  
 NiZrF<sub>6</sub>·6H<sub>2</sub>O, cryst. struct. at low temps., NMR study 2-36447  
 Ni<sub>3</sub>[(UO<sub>2</sub>)<sub>2</sub>F<sub>7</sub>]<sub>2</sub>·18H<sub>2</sub>O, cryst. struct. determ. 2-50603  
 Np<sub>1-x</sub>Mo<sub>x</sub>Se<sub>8</sub>, cryst. struct., mag. and elec. props., supercond. transition 2-21087  
 P<sub>2</sub>O<sub>5</sub>S<sub>2</sub>, cryst. synthesis and struct. 2-5086  
 (Pb,Ba)Ge<sub>2</sub>O<sub>9</sub>, ferroelec., cryst. struct. and props. 2-46492  
 (Pb,Sr)Ge<sub>2</sub>O<sub>9</sub>, ferroelec., cryst. struct. and props. 2-46492  
 Pb complex, nitrate-(m-aminobenzoate)lead(II), cryst. and mol. struct. determ. 2-40353  
 PbBr<sub>2</sub>-<sub>1-x</sub> system, phase diagram, crystal struct. X-ray diffr. obs. 2-50602  
 PbCl<sub>2</sub>-<sub>1-x</sub> system, phase diagram, crystal struct., X-ray diffr. obs. 2-50602  
 β-PbF<sub>2</sub>, superionic, computer simulation 2-16879  
 Pb<sub>2</sub>Fe<sub>2</sub>O<sub>4</sub>Cl<sub>2</sub>, synthesis, cryst. struct., and thermal expansion 2-1453  
 Pb<sub>2</sub>GaF<sub>13</sub>, anion-excess fluorite related struct. (French) 2-8495  
 PbGe<sub>2</sub>O<sub>9</sub>, ferroelec., cryst. struct. and props. 2-46492  
 Pb<sub>2</sub>(Ge<sub>1-x</sub>Si<sub>x</sub>)<sub>2</sub>O<sub>11</sub>, ferroelec. crystals, X-ray spectroscopic and dielec. studies 2-21109  
 PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, ferroelectric phase transitions 2-41308  
 Pb<sub>2</sub>(MgW)O<sub>4</sub>·La<sub>1/3</sub>(MgW)<sub>2</sub>O<sub>6</sub>, solid solns. 2-16628  
 PbO-Fe<sub>2</sub>O<sub>3</sub>-Sm<sub>2</sub>O<sub>3</sub> single crystal comp., lattice parameters and struct. defects, Sm<sup>2+</sup> solubility 2-12553  
 PbS-Ag<sub>2</sub>S, transport props. and cryst. struct. 2-30938  
 PbS-Bi<sub>2</sub>S<sub>3</sub> system, struct., phase diagram, twinning 2-45135  
 PbSe crystal, morphology, struct. and microhardness 2-5084  
 Pb<sub>1-x</sub>Th<sub>x</sub>F<sub>2+2x</sub> solid solns., ionic conductor, neutron diffr. study (French) 2-5274  
 Pb(Ti, Zr)O<sub>3</sub>, modified solid solns., phase composition, struct., electrophysical characts. 2-5082  
 Pb<sub>2</sub>TiF<sub>9</sub>, anion-excess fluorite related struct. (French) 2-8495  
 PbTiO<sub>3</sub>, low temp. phase transitions 2-45552  
 PbWO<sub>4</sub>, stoltzite and raspite forms, atomic spacings (Portuguese) 2-30438  
 Pb(Zr,Ti)O<sub>3</sub>, piezoceramic, electrophys. props. in tetragonal-rhombohedral transition region 2-41275  
 Pb<sub>3</sub>ZrF<sub>10</sub>, anion-excess fluorite related struct. (French) 2-8495  
 Pb<sub>3</sub>ZrF<sub>14</sub>, anion-excess fluorite related struct. (French) 2-8495  
 PbZrO<sub>3</sub>, cryst. and domain struct. study, ferroelectric transitions 2-41306  
 Pd complex, palladium (II) nitrosyl acetate-methylene chloride, cryst. struct. 2-35460  
 Pd complex with diene rings, cryst. struct. and spectra 2-8489  
 PdD<sub>2</sub>, struct. changes at low temp., neutron diffr. study 2-45136  
 PdH<sub>3</sub>, with primitive cubic lattice, cryst. struct. 2-25835  
 PdH<sub>1.33</sub>, tetragonal, electron diffr. study 2-35476  
 Pd<sub>2</sub>P, neutron powder diffr. of pure and deuterated samples, cryst. struct. 2-21068  
 PrCrO<sub>4</sub>, monoclinic form, charact., X-ray powder diagrams and IR spectrum 2-5088  
 Pr<sub>2</sub>V<sub>2</sub>S<sub>2</sub>O<sub>7</sub> mixed oxysulphides, crystallographic characters. (French) 2-8484  
 Pt complex, bis(oxalato)platinate salts, cation-deficient, neutron scatt. and thermopower meas., cation polarisation effects 2-30578  
 Pt complexes, cis-dichlorobis(cyclopropylamine)-Pt(II) 2-45122  
 RbAlF<sub>4</sub>, ferroelastic, struct. phase transition, cryst. struct. 2-50844  
 RbAlF<sub>4</sub>, ferroelastic phase transition and struct. 2-30584  
 Rb<sub>2</sub>Cr<sub>2-x</sub>Mn<sub>x</sub>Cl<sub>4</sub>, Cr-rich, struct. and mag. order 2-26590  
 RbCuCl<sub>3</sub>, cooperative Jahn-Teller distorted struct. 2-8497  
 RbCu<sub>2</sub>Cl<sub>3</sub>(I<sub>2-x</sub>Cl<sub>x</sub>) (0 ≤ x ≤ 0.40) solid electrolyte system, stability 2-40570  
 RbD<sub>2</sub>PO<sub>4</sub>, phase transitions and superlattice formation 2-41297  
 RbH<sub>2</sub>PO<sub>4</sub>, cryst. struct. and transition temp. 2-40329  
 RbHo(SO<sub>4</sub>)<sub>2</sub>·H<sub>2</sub>O, cryst. struct. 2-50610  
 Rb<sub>2</sub>Nd<sub>2</sub>F<sub>6</sub>, spin density transfer, struct., NMR study 2-21894  
 RbRS<sub>2</sub> (R=rare earth), invariant value, α-NaFeO<sub>2</sub> struct. type (French) 2-12551  
 Rh<sub>2</sub>B<sub>4</sub>, crystal structure 2-40341  
 SnNbO<sub>4</sub> crystals, struct. and lattice dynamics at 300 to 1000K 2-21108  
 Sc<sub>2</sub>Co<sub>2</sub>Si<sub>10</sub>, cryst. struct. and supercond. props. 2-13223  
 Sc<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, X-ray cryst. struct. determ. 2-25839  
 Si, band structure and cryst. struct., LCAO SCF ab initio HF calc. 2-35929  
 Si-P-Sb cation exchangers, struct. and thermal stability (Russian) 2-12572  
 SiB<sub>36</sub>, rhombohedral, cryst. struct. 2-40346  
 SiC, 40 H poltype, struct. determ. 2-21095  
 SiC, polytypes, cubic and hexagonal layer packing studies 2-8502  
 SiO<sub>2</sub>, cristobalite, and related tetrahedral frameworks, struct. relationships 2-5089  
 Sm<sub>1-x</sub>Ba<sub>x</sub>B<sub>6</sub>, solid solutions, valence state of Sm ions, cryst. struct. 2-30841  
 Sm<sub>1-x</sub>Ca<sub>x</sub>B<sub>6</sub>, solid solutions, valence state of Sm ions, cryst. struct. 2-30841  
 SmD<sub>2</sub>-SmD<sub>3</sub> system, phase relationships, cryst. struct. of phases 2-1587  
 Sm<sub>1-x</sub>Eu<sub>x</sub>B<sub>6</sub>, solid solutions, valence state of Sm ions, cryst. struct. 2-30841  
 SmH<sub>2</sub>-SmH<sub>3</sub> system, phase relationships, cryst. struct. of phases 2-1587  
 Sm<sub>1-x</sub>Yb<sub>x</sub>B<sub>6</sub>, solid solutions, valence state of Sm ions, cryst. struct. 2-30841  
 Sn complex, SnBr<sub>2</sub>(1,3-diethylurea), cryst. struct. Mossbauer study 2-51510  
 Sn complex, SnCl<sub>2</sub>(1,3-diethylthiourea), cryst. struct. Mossbauer study 2-51510  
 SnFe<sub>0.4</sub>Mo<sub>0.6</sub>S<sub>8</sub>, powder neutron diffr. study of Sn and Fe sites 2-16637  
 SnGa<sub>2</sub>Si<sub>10</sub> and Sn<sub>2</sub>Ga<sub>2</sub>S<sub>8</sub> obtained in Ga<sub>2</sub>S<sub>3</sub>-SnS system (French) 2-36839  
 SnS, cryst. struct. refinement, distorted octahedron with 3 Sn-S bonds (French) 2-12547  
 SrAs<sub>3</sub>, cryst. struct., elec., optical, and mag. props. 2-8494  
 SrCeO<sub>3</sub>, X-ray characterisation 2-30443  
 SrGeO<sub>3</sub>, cryst. struct. determ. 2-25837

## crystal atomic structure of inorganic compounds continued

- SrGeO<sub>3</sub>, cryst. struct. and its place in alkaline-earth metagermanates and metasilicates series 2-50606  
 Sr<sub>2</sub>IrD<sub>3</sub>, order-disorder transition square pyramidal IrD<sub>3</sub> units, neutron powder diffr. obs. 2-50576  
 Sr<sub>2</sub>Na<sub>0.5</sub>R<sub>0.5</sub>XO<sub>6</sub> (R=La, Gd, Eu; X=W, U), energy transfer phenomena, cryst. struct. 2-13540  
 SrNb<sub>2</sub>O<sub>6</sub>, cryst. struct. refinement 2-21111  
 Sr<sub>2</sub>Fe<sub>2</sub>O<sub>7</sub>, R=rare earth, synthesis and cryst. struct. (French) 2-25824  
 SrTiO<sub>3</sub>, highly perfect cryst., extinction corrections 2-25817  
 Ta<sub>2</sub>Fe(Co)(Ni)P, formation with Nb<sub>2</sub>CoSi structure 2-5081  
 h-Ta<sub>2</sub>Ge, cryst. struct., coordination, and bonding 2-1456  
 δ-Ta<sub>2</sub>O<sub>5</sub>, phase formation and atomic struct. 2-35477  
 TaS<sub>3</sub>, semicond., prep. under high press., and cryst. struct. 2-25825  
 TaSe<sub>2</sub>, 2H polytype, commensurate CDW phases, transition temps. 2-45571  
 TbB<sub>4</sub>, neutron diffr. studies of cryst. and mag. struct. 2-40345  
 Tb<sub>2</sub>Ga<sub>2</sub>O<sub>13</sub>, refinement of coordinates of O<sub>2</sub> ions 2-35475  
 ThNH<sub>4</sub>, cryst. struct. and enthalpy of form. 2-9338  
 TiCo<sub>0.76</sub>, defect struct., elastic neutron scatt. study 2-1463  
 TiNb<sub>2</sub>O<sub>6</sub>, reduction path, phase equilib. and cryst. struct. of phases 2-41889  
 TiNb<sub>2</sub>O<sub>6</sub> and Ti<sub>2</sub>Nb<sub>10</sub>O<sub>29</sub>, reduction, phase equilib. and cryst. struct. of phases 2-41888  
 TiO, ordered defective struct. described using open packing of cube units 2-40328  
 TiO<sub>2</sub>-Th<sub>2</sub>O<sub>3</sub> system, phase diagram at 1100-1750°C, phase comp. and struct. 2-5865  
 TiS<sub>2</sub>, nonstoichiometric, struct. refinement 2-40358  
 TiS<sub>2</sub>(Se<sub>1-x</sub>Te<sub>x</sub>)(SeTe), crystal struct. and chem. bond characts. (French) 2-5091  
 Ti<sub>2</sub>V<sub>1-x</sub>S<sub>4</sub>, cryst. struct. and mag. props. 2-8950  
 TiBi(Cr<sub>2</sub>O<sub>7</sub>)<sub>2</sub> double dichromate, synthesis and crystallographic characteris. (French) 2-8485  
 TlInTe<sub>2</sub>-TlNdTe<sub>2</sub> system, substitutional solid solns. form. and characts., switching props. 2-40522  
 Ti<sub>4</sub>(Pt(CN)<sub>4</sub>)CO<sub>3</sub>, one-dimens. metal, synthesis and mol. struct. 2-30440  
 TiR<sub>2</sub>F<sub>10</sub>, R=rare earth, crystal chem. study (French) 2-16622  
 TiSbTe<sub>2</sub>-2PbTe cross section, phase diagram and elec. props. 2-12721  
 Ti<sub>2</sub>SnS<sub>3</sub>, cryst. struct., studies in the SnS-Ti<sub>2</sub>S system (French) 2-12569  
 U-B-C, phase relationships and cryst. struct. 2-41596  
 U<sub>2</sub>CO<sub>2</sub>Si<sub>2</sub>, X-ray single cryst. struct. determ. 2-30447  
 U<sub>2</sub>Fe<sub>2</sub>Si<sub>2</sub>, X-ray single cryst. struct. determ. 2-30447  
 UO<sub>2</sub>, mag. struct. and lattice deform. 2-36316  
 UO<sub>2</sub>-Zr-rare earth oxide systems, oxygen content, lattice struct. 2-4024  
 γ-U<sub>2</sub>O<sub>7</sub>, atomic array similarities with U<sub>4</sub>O<sub>9</sub> 2-45133  
 U<sub>4</sub>O<sub>9</sub>, atomic array similarities with γ-U<sub>2</sub>O<sub>7</sub> 2-45133  
 UO<sub>2</sub>CrO<sub>4</sub>·5.5H<sub>2</sub>O, cryst. struct. determ. 2-21106  
 V complex μ-oxo (oxobis (8-quinolinolato) vanadium(V)) (oxobis (8-quinolinolato) vanadium(IV)) ion, synthesis and cryst. and mol. struct. 2-8500  
 V complex dioxo bis (8-quinolinolato) vanadium(V) ion, cryst. and mol. struct. 2-8500  
 VO<sub>2</sub>, monoclinic, tetragonal rutile-type and triclinic phases, structural relations 2-12552  
 VOB<sub>2</sub>, crystalline parameters thermal dilatation coeffs. (French) 2-1451  
 VOCl, crystalline parameters thermal dilatation coeffs. (French) 2-1451  
 VOCl, dynamics of intercalated mols., X-rays, NMR line widths and inelastic neutron scatt. studies 2-46389  
 α-VOPO<sub>4</sub>, polymorphism, structural explanation, X-ray diffr. obs. 2-50598  
 2VO<sub>2</sub>SO<sub>4</sub>·H<sub>2</sub>SO<sub>4</sub>, single-cryst. X-ray struct. determ. (French) 2-21070  
 W complex, bis(tetrathiontungsstate(VI)-S<sub>2</sub>S<sub>2</sub>)oxotungsstate(IV), synthesis and mol. struct. 2-8499  
 Y<sub>1-x</sub>Mg<sub>x</sub>CrO<sub>3</sub>, cryst. struct. and electrophysical props. 2-13065  
 YNbO<sub>4</sub>, X-ray cryst. struct. determ. at room temp. 2-25838  
 Y<sub>2</sub>Ru<sub>2</sub>Ge<sub>3</sub> and Y<sub>2</sub>Os<sub>2</sub>Ge<sub>3</sub>, cryst. struct. and supercond. props. 2-13224  
 YbAlB<sub>2</sub> and Yb<sub>2</sub>AlB<sub>6</sub>, single cryst. growth from Al melt, struct. refinement 2-41510  
 YbZrF<sub>6</sub>, cubic, cryst. struct., X-ray and neutron diffr. determ. 2-21085  
 γ-(Zn,Me)<sub>2</sub>(PO<sub>4</sub>)<sub>2</sub> (Me=Mg, Mn, Fe, Co, Cu, Ni, Cd), solid solns., crystal chem. 2-16626  
 Zn complex with stable nitroxide radical, struct. 2-12560  
 Zn complex Zn<sub>0.81</sub>(Pt(C<sub>2</sub>O<sub>4</sub>)<sub>2</sub>)<sub>6</sub>·6D<sub>2</sub>O, obs. of four crystalline phases by neutron diffr. 2-21094  
 Zn<sub>1-x</sub>Eu<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, synthesis and physicochem. props., semicond. behaviour 2-9256  
 ZnP<sub>2</sub>, crystal structure, P-P bond lengths and angles, energy gap and melting point 2-25853  
 ZnS, polytypes, cubic and hexagonal layer packing studies 2-8502  
 ZnS-CDs, synthesis and cocrys. under hydrothermal conditions, phase form., analysis and struct. 2-41505  
 Zn<sub>2</sub>SiO<sub>4</sub>-Be<sub>2</sub>SiO<sub>4</sub> system, Mn-activated solid soln. form. and characts. 2-40552  
 Zr(Ca)O<sub>2-x</sub>, superionic conductor, disordered, X-ray diffr. study 2-16632  
 Zr<sub>4</sub>Co(Ni)P, formation with Nb<sub>2</sub>CoSi structure 2-5081  
 ZrF<sub>4</sub>(H<sub>2</sub>O), X-ray cryst. struct. determ. 2-21067  
 ZrH<sub>1.66</sub>, neutron diffr. invest. at low temps. (Russian) 2-35455  
 ZrO<sub>2</sub> fibres, from extrusion of solns., cryst. struct. form. 2-41574  
 ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub> solid electrolyte, phase change and mech. props. after ageing 2-13715

## crystal atomic structure of organic compounds

- acetamide hemihydrochloride, struct. by neutron diffr. at 120K 2-21122  
 9-anti-acetoxo-11-exo-(2-nitrophenylthio)-4-oxapentacyclo-[6,5,0,0<sup>2,6</sup>,0<sup>7,11</sup>,0<sup>10,13</sup>]-tridecane, cryst. and mol. struct. 2-21130  
 acrylic polymers with biphenyl fragments in side branchings, cryst. and liq. cryst. struct. (Russian) 2-21047  
 n-alkanes, mol. packing effects on solid-state chem. shifts 2-13363  
 p-n-alkoxybenzoic acids, smectogenic, isotropic cryst. struct. 2-12582  
 p-n-alkoxybenzylidene anilines, p-hologenated, crystalline and smectic phases, struct. (French) 2-1395  
 4,4'-di-n-alkyloxazoybenzenes, mol. packing coeffs. rel. to liq. cryst. props. 2-12581  
 anilinium bromide, struct. in low-temp. phase 2-21123  
 1-anilino-3-phenylimino propene-(1), cryst. struct. determ. 2-12573  
 azurin, X-ray diffr. data at 2.7 Å resolution 2-9764  
 benzene, mol. shape and cryst. struct. calcs. 2-15919  
 benzophenone-potassium iodide-iodine-trichloromethane complex, cryst. struct., comparison with benzophenone-lithium pentaideide 2-50619



**crystal atomic structure of organic compounds continued**

benzoyl perfluoro-propenyl methylene triphenylarsorance, cryst. and mol. struct., X-ray study (*Chinese*) 2-40361  
 bis(2-fluoro-2,2-dinitroethyl)nitramine, crystal and mol. struct. 2-12578  
 bis(4'-p-hexylhydroxybenzylidene)-1,4-phenylenediamine, cryst. struct. 2-35397  
 trans-bis(8-aminoquinoline)aquazinc(II)tetrachlorozincate(II), struct., X-ray diff. 2-16639  
 bis(ethylammonium)tetrachlorocadmate, and isotopic analogs, low temp. Raman spectra 2-51564  
 bis(triethylammonium)hexachlorostannate, struct., H-bonds, IR spectra 2-21125  
 bis-( $\beta$ -alaninium tetrachlorocuprate (II), cryst. struct., susceptibility and EPR 2-31272  
 bis-p-toluenesulphonate of 2,4-hexadiene 1,6-diol, monomer, cryst. and mol. struct., neutron diff. study 2-50614  
 10-bromo-1,6-methano-2-aza[10]annulene, mol. struct. using X-ray struct. anal. 2-11580  
 2-bromo-3-oxo-6,6-diphenyl-bicyclo [3.1.0.] hexane-1-carbonitrile, cryst. and molec. struct. 2-1469  
 N-4-n-butoxybenzylidene-4'-octylaniline, cryst. struct., mol. struct., and cryst.-smectic B transition 2-5107  
 caesium salt of thiosemicarbazone complex of Fe(III), cryst. struct.,  $\text{Fe}^{\text{III}}\text{S}_2\text{O}_7\text{N}_2$  coordination unit 2-25863  
 calcium oxalate monohydrate, whewellite, twin laws, struct. and growth approach 2-25905  
 calcium oxalate trihydrate 2-21124  
 carboranes, struct. trends, review 2-40338  
 1-(3'-chloro-2'-oxo-5'-cyanopyrrolidinyl)methylene-2-oxo- $\beta$ -D-arabinofuranooxazoline, struct. 2-12579  
 chloro-tenacisin igenin, cryst. struct., X-ray diff. study (*Chinese*) 2-30452  
 cholesterol n-alkanoate esters, positron lifetime parameters rel. to cryst. struct. 2-9216  
 $\alpha$ -chymotrypsin, Kendrew model coordinates, precise and accurate method of meas. 2-40309  
 copper(II) with salicylaldehyde S-methylthiosemicarbazone, cryst. struct. 2-21132  
 cotton celluloses II and III, struct., electron diff. obs. 2-45071  
 cyscin, fundamental struct. 2-21121  
 decapeptide cyclo-[L-Val-L-Hy-I], cyclic, cryst. struct. 2-21131  
 1,7-di(thiomethylcyclopentylthial)1,4,7-triaminoheptane, . cryst. struct. determ. 2-21126  
 1,5-di(thiomethylcyclopentylthial)diaminopentane, cryst. struct. determ. 2-21126  
 di-p-methylphenylphosphoric acid, solid state struct. 2-5103  
 di-p-phenolate-thianium dihydrazide, X-ray cryst. struct. study and IR spectroscopy 2-25861  
 3,5-diamino-1H-1,2,4-triazole, cryst. and mol. struct. 2-25859  
 1,12-diaminododecane dihydrochloride monohydrate, X-ray crystallography and Raman spectrum 2-50616  
 dicalcium strontium propionate, paraelec. phase, struct. and optical activity 2-30454  
 dicarbonyl(hexaethylbenzene)(triphenylphosphine)chromium, crystal and mol. struct., NMR 2-35481  
 2,4-diformyl p-tolyl alcohol, cryst. struct. determ. 2-21126  
 dihydrobenzanthracenes, spiroanthronyl-substituted, excimer luminesc., rel. between fluoresc. and mol. geometry 2-49489  
 cis-1,5-dimethyl-3,3,7,7-tetraphenylcyclotetrasiloxane-1,5-diol, cryst. struct. determ. 2-40367  
 4,4'-dimethyl-1,1'-binaphthyl, racemate and optically active forms, cryst. s-struct. 2-5102  
 dipotassium oxalate monohydrate, spectroscopic data use in least-squares refinement 2-45137  
 DNA duplexes, struct. factor calcs. 2-2842  
 ferrocene carboxaldehyde, intramol. and intermol. dynamics in the two phases 2-30422  
 ferrocene carboxaldehyde, struct. of the two low temp. cryst. phase 2-30455  
 fluorecine perchlorate, cryst. struct. and mol. conform. (*French*) 2-8504  
 hexethylbenzene, crystal and mol. struct., NMR 2-35481  
 4-iodophenoxyacetic acid, X-ray struct. determ. 2-21127  
 isopropylammonium copper(II) chloride, thermochromic phase transitions, cryst. struct. and NMR 2-12574  
 dl-8-isotestosterone, mol. and cryst. struct. determ., X-ray anal. 2-2844  
 lactate dehydrogenase, pig heart, crystn. and struct. determ. 2-22697  
 (methyl-ONN-azoxy)methyl  $\beta$ -D-glucopyranoside, cryst. struct. determ. 2-21121  
 1-methylmercury-2-benzyl-o-carborane, X-ray diff., struct., intermol. coordination 2-16640  
 2-methylthio- $\Delta^2$ -6,9-dioxo-1,3-diazacycloundecane hydroiodide, cryst. and mol. struct. 2-35459  
 molecular crystals, tetrahedral, classification in terms of cryst. struct. Debye temp., and transition or melting temp. 2-35632  
 monocrotaline pyrrolizidine alkaloid, crystal struct., X-ray determ. 2-1470  
 monocrotaline-n-oxide, cryst. struct. determ. 2-12580  
 nickelocene, disordered and metastable ordered structs., X-ray diff. study (*French*) 2-25857  
 N-(4-n-octyloxybenzylidene)-4'-butylaniline, cryst. and mol. struct., cryst.-smectic G transition 2-50529  
 one-dimensional conductors with I chains, structural aspect 2-25856  
 oxalic acid dihydrate, joint X-ray and neutron data refinement 2-25680  
 peryleniumyl salts, one-dimens. metals, electrochem. synthesis and char-acts. 2-27068  
 N-phenyl anthranilic acid, solid, broad line NMR spectra, molecular motion 2-46388  
 N-phenylacridone, cryst. and mol. struct. 2-21134  
 2-phenylimino-2-methyl-3-phenyl-1,3,2-oxazaphospholane, cryst. and mol. struct. 2-40366  
 3',5'-(Rp)-phosphoranilidate, 2'-deoxyadenosine cyclic, config. assessment by  $^{31}\text{P}$ - $^{15}\text{N}$  spin-spin coupling 2-12575  
 picriaftarragenin, epoxy cpd., cryst. struct., X-ray diff. determ. (*Chinese*) 2-25855  
 polyacetylene, AsF<sub>6</sub> doped, cryst. struct., neutron diff. study 2-45073  
 polyacetylene, doped, cryst. and mol. struct. and elec. cond. 2-45072  
 polyacetylene, doped, one dimens. disordered cryst., vibr. dynamics and struct. 2-51565  
 polyacetylene, elec. transport, mag. and struct. props., review 2-45976  
 polyarylates, crystallisation, struct. and props., initial compound struct. and reaction condition effects (*Russian*) 2-45081

**crystal atomic structure of organic compounds continued**

polyarylene imides, chain conform. and packing in cryst. regions, atom-atom pot. and X-ray obs. (*Russian*) 2-30458  
 polyethylene, macromolecular struct. 2-4434  
 polyfunctional macrocyclic  $\text{K}^+$  complex, cryst. struct. as solid-state model of  $\text{K}^+$  channel 2-52432  
 polymers, melting point and cryst. struct. param. correl. (*Russian*) 2-21280  
 polyphenylene, AsF<sub>6</sub> doped, cryst. struct., neutron diff. study 2-45073  
 polytetrafluoroethylene, cryst. struct. of low temp. phase (II) 2-40370  
 potassium tetraoxalate, hydrogen bonds, X-ray redeterm. of cryst. struct. 2-45142  
 potassium trans-iodo-nitro-bis(dimethylglyoximate) cobalt (III), cryst. and mol. struct. 2-25860  
 $\beta$ -propanolol, mol. conformation, crystal data (*French*) 2-35480  
 pyrene complex, mol. and cryst. struct., X-ray diff. study 2-5106  
 pyridine based intercalation compounds with VOCl<sub>3</sub>, dynamics and struct. study 2-46389  
 pyridinium-1-dicyanomethylide, appl. of 2 different aspherical-atom formalisms to low-temp. diff. data 2-45138  
 rare earth oxalates, vibr. freqs., cryst. struct., laser Raman and IR study 2-36621  
 semicarbazide-nitric acid molecular complex, cryst. and mol. struct. 2-8505  
 sodium methanesulfonate, cryst. struct. determ. 2-21120  
 sodium oxalate, vibr. freqs., cryst. struct., laser Raman and IR study 2-36621  
 southern bean mosaic virus, struct. determ., techniques used at 2.8 Å resoln. 2-22696  
 spiropyrene, photochromic, cryst. and mol. struct. 2-30456  
 TCNQ, charge transfer complex, cryst. and molecular struct. 2-25862  
 TCNQ salt, 2,5-difluoro TCNQ, electron acceptor, cryst., mol. and electronic structs. 2-50617  
 TCNQ salt, (DMPP)(TCNQ)<sub>4</sub>(H<sub>2</sub>O)<sub>x</sub>, low temp. organic cond., struct. and elec. props. 2-26372  
 TCNQ salt, tetrafluoro-7,7,8,8-TCNQ, cryst. and mol. struct., soln. spectra 2-1468  
 TCNQ salt, TTF-2,5-difluoro TCNQ, cryst. struct. Madelung energy 2-50618  
 TCNQ salts, TCNQF, cryst. struct., evidence for strong one-dimensional coupling of mol. dipole moments 2-21129  
 d-19-nor-8-iso-10-iso-testosterone, mol. and cryst. struct. determ., X-ray anal. 2-2844  
 tetrachlorotetrakis(diethylsulfide) dimolybdenum(II), centrosymmetric-noncentrosymmetric ambiguity, importance of weak reflections 2-25682  
 trakis(trimethylsiloxy)silane, X-ray cryst. struct. 2-8507  
 tetramethylphosphine, cryst. struct. and mol. conform., <sup>1</sup>H NMR invest. 2-5591  
 3,3,7,7-tetraphenylcyclotetrasiloxane-1,1,5,5-tetrol-pyridine, H-bonds, cryst. struct. determ. 2-40368  
 tetraphenylmethylenediphosphine oxide, struct., X-ray diff. study 2-12577  
 tetrathiotetracene  $(\text{TTT})_2^{2+}$  with  $(\text{Cu}_2\text{Br}_4)^{2-}$  tetrabromodicyprate dianion, conducting complex, struct. 2-21133  
 2-thio-2-ethoxy-4-methyl-1,3-di-t-butyl-1,3,2-diazaphosphorinane, . cryst. struct. 2-45143  
 thiomethylcyclopentylthial 1,4,7-triaminononamide, cryst. struct. determ. 2-21126  
 (TMTSF)<sub>2</sub>PF<sub>6</sub>, quasi-one-dimens. cond., cryst. struct. and transport props. at ambient press. 2-26371  
 s-triazine, cryst. struct. determ. 2-12576  
 tricarboyl(hexaethylbenzene)chromium, crystal and mol. struct., NMR 2-35481  
 tricarboyl(hexethylbenzene)molybdenum, crystal and mol. struct., NMR 2-35481  
 3-tricyanovinyl-N-methylcarbazole, cryst. and mol. struct. determ. 2-40369  
 trimethyltin complex, X-ray cryst. struct. 2-8506  
 triphenylethoxymethane, cryst. struct., IR study 2-50615  
 trityl peroxide, X-ray structural study and conformational calc. 2-30457  
 uridine 3', 5'-cyclic phosphate, cryst. struct., X-ray diff. study (*Chinese*) 2-30451  
 valinomycin potassium picrate, crystal struct. determ. by single-crystal X-ray diff. 2-52431  
 valinomycin [MeAla<sup>+</sup>], cryst. struct. anal. 2-40371  
 yeast RNA <sub>MET</sub> crystn., phasing low-resoln. struct. factors by matricial direct methods 2-2839  
 [(C<sub>6</sub>H<sub>5</sub>)<sub>3</sub>P<sup>+</sup>CH(COC<sub>6</sub>H<sub>5</sub>)<sub>2</sub>]<sup>+</sup>Br<sup>-</sup>·C<sub>2</sub>H<sub>5</sub>OH, cryst. struct., X-ray study 2-5105  
 FeOCl-ferrocene, intercalation cpd., X-ray and Mossbauer reson. studies 2-21128  
 $\text{K}^+[\text{HOC}(\text{CH}_3)_2\text{C}(\text{CH}_3)_2\text{OPHO}_2]^- \cdot \text{H}_2\text{O}$ , cryst. struct., X-ray diff. study 2-5104

**crystal binding**

see also binding energy; lattice energy  
 (111) FCC thin films, epitaxy on (110) BCC substrates by coherence, ideal epitaxial configurations 2-51033  
 A15 structure phases, cell dimensions, at. diameters depend. 2-8481  
 alkali bromide crystals, modified electronic charge densities 2-1439  
 alkali halides, crystal binding energies and Gruneisen-Anderson parameters 2-1437  
 alkali halides extended interionic potential 2-40315  
 alkali metal alloys, disordered, heat of form., density functional pseudopot. approach 2-5247  
 alkali metal alloys, disordered, heat of form., density functional pseudopot. approach 2-8639  
 alkali metal halide, crystals, photoelasticity, interionic pots., permittivity 2-36594  
 alkali metal halides, compressibility, Broat sum rule, Debye-Waller factor, melting 2-12698  
 anharmonic atomic chain, destructive energy fluctuations 2-50581  
 borate polyhedra, bond distances, X-ray spectra and electron density distributions, calcs. using ab initio methods 2-35436  
 chemical bonding, early work in relation to solid state physics 2-1441  
 hard-sphere solids with one fluid component, diffusion coeff., perturbation calc. 2-45105  
 ice Ih, bond angles, bond lengths, transition barrier, from neutron scatt. 2-21056  
 intermolecular contacts in crystals of elements and organic cpds. 2-50578



# crystal binding continued

- ionic crystals, electrostatic bonding energy, electrostatic interaction during growth 2-25806
- ionic crystals, electrostatic field at surface, electrostatic interaction during growth 2-25807
- ionic crystals, melt-grown, foreign ion distrib. coeff. as function of ionic radius 2-12621
- ionic solids, relative stability of zinc-blende and rocksalt structs., pseudopot. and crit. ionicity 2-30432
- lamina and semi-infinite point charge lattices, electrostatic pot. and field in surface region 2-21055
- metals and alloys, chemical bonding, valence model (*German*) 2-30433
- microhardness correlation with dislocation mobility in semimetals, ionic and covalent crystals 2-16652
- naphthalene crystal, intermol. interaction, orientational depend. 2-44037
- $\alpha$ -Pu, valence levels, XPS obs. 2-45816
- rectangular interfacial atomic meshes, ideal epitaxial configurations 2-51031
- simple metals, electronic props., electronegativity scales and alloy formation 2-26320
- stability in random field produced by vibr. of continuous medium (*Russian*) 2-25808
- ternary semiconductors, chalcopyrites, electronic props. 2-35431
- transition metal atom binary cpds., crystal structures, phenomenology 2-5078
- AgNO<sub>2</sub>, cryst. struct., Ag-N bond covalency 2-12550
- Ba<sub>1-x</sub>La<sub>x</sub>Cu<sub>0.4+y</sub>O<sub>1.4+y</sub>, progressive semiconductive-semimetallic transition, struct. aspects and energy levels 2-40359
- Bi, temperature depend. of Young's modulus in different crystallographic directions 2-5172
- CaO, electronic band struct. at lower mantle press. 2-52831
- CdI<sub>2</sub> type crystals, binding, struct., Raman and far IR spectra 2-46609
- CsHSO<sub>4</sub>, cryst. struct. refinement, H bonded chains of SO<sub>4</sub> groups 2-12548
- Cu halides, cryst. binding and thermophysical props. 2-45106
- Fe<sub>2</sub>B and FeB, bonding rel. to struct. and mag. props., photoemission meas. and ab initio calcs. 2-13628
- Ga chalcogenides, electronic props. 2-40316
- GaP, bond charge study by X-ray data 2-45109
- La-B films on Ta substrate, AES and work function changes 2-40743
- NaCl-NaBr mixed diatomic crystals, static and elastic props. 2-35432
- Nb-Zr-C, electronic struct., dispersion hardening, interatomic bonds 2-45822
- Pb, diamond cubic phase, phys. and structural props. 2-1440
- Si, bond charge asphericity and temp. depend. 2-1443
- Si:H, implanted, vibrational spectra 2-41354
- Th<sub>4</sub>Mn<sub>2</sub>D<sub>12</sub>, interstitial site occupancy by D atoms 2-30436
- Ti compounds, electron struct. and chemical binding 2-1438
- Ti-C, interstitial solns. with FCC and BCC lattices, interatomic interaction 2-21058
- $\beta$ -Ti-Fe, relative force constant determ., Mossbauer second-order Doppler shift 2-51505
- Ti<sub>2</sub>(Se<sub>2</sub>)<sub>2</sub>(SeTe), crystal struct. and chem. bond characts. (*French*) 2-5091
- Ti halides, cryst. binding and thermophysical props. 2-45106
- V compounds, electron struct. and chemical binding 2-1438
- Y<sub>4</sub>Mn<sub>2</sub>D<sub>12</sub>, interstitial site occupancy by D atoms 2-30436
- Zr-C, interstitial solns. with FCC and BCC lattices, interatomic interaction 2-21058

# crystal chemistry

- see also *crystallography*
- actinide compounds, crystal chemistry and electronic struct. 2-21081
- 2-amino-1,3 thiazole, parameters, space group and powder diagrams (*French*) 2-45140
- deacetylpanacine, cryst. data 2-45141
- heterovalent solid solns., ionic radii influence of formation, effect of atom. no. in unit cell 2-50872
- II-V compounds, physical and chemical props., and applications 2-25852
- metals and alloys, chemical bonding, valence model (*German*) 2-30433
- mixed conducting solid, kinetic studies, electrochem. method 2-17121
- rare earth alloys, RAgSn and RCuTi, cryst. chem. and cryst. struct. 2-8473
- rare earth alloys, RRh<sub>2</sub>Sn<sub>2</sub>, supercond. and mag. props., Mossbauer study 2-13383
- rare earth borides, R(Os, Ir)<sub>4</sub>B<sub>4</sub> (R=Nd, La, Pr), mag. behaviour and struct. chem. 2-41104
- rare earth compounds, R<sub>2</sub>Fe<sub>3</sub>Si<sub>3</sub>, supercond. and mag. props., Mossbauer study 2-13383
- sfdp systematic classification, of chem. compounds, minerals, oxides 2-50573
- synthesis and characterisation 2-41515
- transition metal dichalcogenides, cryst. chem. and struct. principles relating to pyrite, marcasite and arsenopyrite type phases 2-35457
- transition metal phosphides, cryst. chem. of M<sub>12</sub>P<sub>7</sub> phases rel. to M<sub>2</sub>P phases 2-40347
- B-C phases, C rich, stoichiometric limits 2-41595
- B-C system, phase analysis 2-41593
- Bi oxides, complex, with layered structs., crystallo-chem. props. (*Japanese*) 2-50562
- Bi<sub>1-x</sub>Ba<sub>x</sub>O<sub>(3-x)/2</sub>, cryst. chemistry anal. elec. props. 2-21383
- Bi<sub>1-x</sub>Ca<sub>x</sub>O<sub>(3-x)/2</sub>, cryst. chemistry anal. elec. props. 2-21383
- Bi<sub>1-x</sub>Sr<sub>x</sub>O<sub>(3-x)/2</sub>, cryst. chemistry anal. elec. props. 2-21383
- CaHoAl<sub>2</sub>O<sub>7</sub>, synthesis and characterisation 2-41515
- CaTbAl<sub>2</sub>O<sub>7</sub>, synthesis and characterisation 2-41515
- Cd phosphides, crystal structure, P-P bond lengths and angles, energy gap and melting point 2-25853
- Cu<sub>2</sub>S and Cu<sub>1.998</sub>S, low chalcocite and djurite, Cu coord. behaviour 2-21074
- Fe-Si (3 wt.%) single crystals grown by floating zone melting, Si inhomogeneities and striations 2-36781
- GaAs, expt. determ. of bonding of III and V elements 2-35871
- Ga<sub>2</sub>Se polymorphs, EXAFS study 2-41454
- GdIG, departure from stoichiometry, 800 to 1400°C 2-5238
- GeO<sub>2</sub>, deposited on quartz crystal surface, RHEED struct. obs., epitaxy relations 2-16961
- K(M<sub>1</sub>W<sub>1-x</sub>)<sub>2</sub>O<sub>6</sub> (M=Li, Al, Ti or Nb) cryst. chem., polymorphism and dielec. props. 2-5237
- LaCrO<sub>4</sub>, cryst. data, X-ray powder data 2-45127
- LaNb<sub>1-x</sub>W<sub>x</sub>O<sub>4+x/2</sub>, scheelite based compounds, cryst. chem., struct. modulation, elec. cond. 2-50601

# crystal chemistry continued

- La<sub>1-x</sub>Th<sub>x</sub>NbO<sub>4+x/2</sub>, scheelite based compounds, cryst. chem., struct. modulation, elec. cond. 2-50601
- Li<sub>3</sub>Mg<sub>2</sub>XO<sub>6</sub>, X=Nb, Ta, Sb, cryst. data, X-ray powder diff. data 2-45130
- Na<sub>3</sub>La(BO<sub>3</sub>)<sub>2</sub>, crystallographic data 2-21083
- Na<sub>1-x</sub>Zr<sub>x</sub>L<sub>x</sub>(PO<sub>4</sub>)<sub>3</sub> (L=Cr, In, Yb), Nasicon-type phases, ionic cond. 2-16867
- Nb<sub>2</sub>Ge superconductor, chem. vapour deposition, expt. and thermodynamic studies 2-36794
- SiB<sub>36</sub>, rhombohedral, cryst. struct. 2-40346
- SiC single crystal polytypes, deviations from stoichiometry 2-5236
- SnO<sub>2</sub>, deposited on quartz crystal surface, RHEED struct. obs., epitaxy relations 2-16961
- p-SnTe epitaxial thin film, elec. transport, nonstoichiometry effect 2-8901
- TiO<sub>2</sub>, deposited on quartz crystal surface, RHEED struct. obs., epitaxy relations 2-16961
- TiO<sub>2</sub>, dissociative evaporation in vacuum and oxidising atmosphere, thermodynamic anal. 2-6052
- TiR<sub>3</sub>F<sub>10</sub>, R=rare earth, crystal chem. study (*French*) 2-16622
- U-B-C, phase relationships and cryst. struct. 2-41596
- UCo, system, microwave reson. effect, stoichiometry depend. 2-9039
- UO<sub>2</sub>, synthetic and natural, XPS obs. of phase comp., U ions content and bonds, uraninites analysis 2-37125
- UO<sub>2</sub>(H<sub>2</sub>AsO<sub>4</sub>)<sub>2</sub>·H<sub>2</sub>O, crystal data, Guinier pattern 2-45131
- UO<sub>2</sub>(H<sub>2</sub>PO<sub>4</sub>)<sub>2</sub>·H<sub>2</sub>O, crystal data, Guinier pattern 2-45131
- YAG:Nd, Czochralski grown crystal, residual stress, high temp. annealing effect (*Chinese*) 2-45144
- YIG, departure from stoichiometry, 800 to 1400°C 2-5238
- Zn<sub>1-x</sub>Cd<sub>x</sub>S(Se)(Te), solid solution, crystallochemical struct. and phase diagram 2-47016
- ZnF<sub>2</sub>, crystal structure, P-P bond lengths and angles, energy gap and melting point 2-25853

# crystal classes see crystal symmetry

# crystal cleavage see brittle fracture

# crystal defects

- see also *Cottrell atmospheres; crowdions; crystal inclusions; crystal microstructure; defect electron energy states; disclinations; dislocations; grain boundaries; impurity-defect interactions; phonon-defect interactions; point defects; stacking faults; twinning*
- acoustoluminescence, self-defect mechanism (*Russian*) 2-13580
- anthracene: 2-hydroxyanthracene cryst., fluoresc. lifetime and site-selective photochem. 2-51694
- anthracene-2-hydroxyanthracene, energy transfer and chemical reactivity, luminesc. obs. 2-46717
- axisymmetric cavity, steady state diffusional growth on grain boundary 2-5108
- benzil, growth and perfection from undercooled melt 2-31622
- condensed systems of particles with only translational mobility, differential geom. of defects 2-21136
- continuum theory of lattice defects rel. to non-Euclidean geom. in linear approx. 2-21135
- critical temperature, influence of plastic deform. 2-17182
- diamond, platelet defects., high resolution electron microscopy, SEM and electron energy loss spectra 2-25908
- diamond, type I, structural defects, ultra-HV TEM obs. 2-35502
- diamond, type IIb, electron irradiated, luminesc. excitation 2-41409
- diffusion controlled defect accumulation: restricted by recomb., kinetics 2-1513
- diffusion controlled defect annihilation, kinetic eqns. 2-21347
- dimyristoylphosphatidylcholine, hydrated, conc. depend. EPR spectra, defect annealing effect 2-11598
- dissipative solids with internal defects and imperfections, stability phenomena 2-16250
- dynamics at struct. phase transitions 2-30482
- electron microscopy conf., Tallin, USSR (Oct. 1979) 2-38355
- electronic structure of crystal defects and disordered systems, Summer School, Aussois, France (Sept. 1980) 2-38354
- Einvar,  $\gamma$ -phase form. mech., kinetics and singularities (*Russian*) 2-22212
- ferroelectric, relaxation currents, theory 2-36508
- ferroelectric solid soln., correlated defect sites, ferroelec. props. calc. 2-31390
- ferroelectric transitions, defects role, sp. ht., US absorpt. and soft mode linewidth study 2-31405
- ferromagnetic amorphous alloys, theory of coercive field 2-21832
- fluorites, disorder and elec. props. 2-21365
- giant garnets at Gore Mountain, Warren County, New York, parting planes as indicator of late brittle deform. 2-18424
- gauge fields for electrons in crystals with topological defects 2-35965
- geometrical approach to theory of structural defects 2-21138
- graphite, lattice properties, bonding and thermal props. 2-50582
- graphites, characterisation using positron lifetimes, struct. defects 2-17568
- homogenisation approach to microscopic damage model derivation (*French*) 2-1141
- Howie-Whelan differential eqns. for electron microscopy, explicit solutions 2-1375
- HVEM, recent progress, appls. to study of props. of metallic materials (*Chinese*) 2-19214
- inert gases, solid and liquid, exciton self-trapping, defect prod. 2-41388
- insulators, amorphous, radiation induced defect centres, ESR studies 2-31286
- lattice imaging, recent developments 2-48852
- lattice sums for long-range interactions involving charged defects in non-cubic ionic crystals 2-40373
- lauric acid, dielec. permittivity and loss, anomalous behaviour due to defect and impurity centres 2-9070
- magnetic material with line defects, dynamic critical index 2-51409
- metal, defect production, fission neutron source for study 2-29331
- metal, defects detected by spin precession methods, review 2-30848
- metal, displacement cascades and TEM investig., review 2-30487
- metals, Joule heating, temp.-elec. domains, defects effect 2-36023
- metals, low deformability, defects and long-term strength calc. 2-41727
- metals, plastically deformed, structural defect role during exoelectron emission (*Russian*) 2-2422
- metals, polycrystalline, microfracture during high-temp. creep 2-41728
- Mossbauer effect and appls. in materials research 2-31338



# crystal defects continued

multispecies continued, radiation damage, collision density approach 2-5153  
 naphthalene-chrysene, mixed cryst., impurities and defects, delayed luminesc. obs. 2-5738  
 nonlinear elastic medium, force per unit surface of defect 2-21137  
 optical thin-film coatings produced by vacuum process, columns, voids and nodules 2-49953  
 packing defect vectors, sign determ. in thin weakly absorbing crystals 2-44989  
 phase transitions, defect contribution to anomalies 2-45551  
 polycarbonate films, nuclear tracks chem. etching, pore formation study 2-45146  
 polydiacetylene crystal, defect struct. during polymerisation, X-ray topography study 2-45145  
 polyethylene, high-density, cryst., mech. props., hydrostatic pressure effect 2-51998  
 polymers, cryst., mech. props., hydrostatic pressure effect 2-51998  
 pore and vacancy profiles during bulk evaporation 2-8514  
 pyrographite, neutron irradi., XPS 2-13620  
 quartz, crystalline, gamma-neutron irradiated, electrooptical anharmonicity, defects effect 2-13454  
 quartz, defect struct., piezoelectric coupled thickness shear influence, X-ray diffr. obs. (Russian) 2-16642  
 quartz, synthetic, plate-like defect obs. by light scatt. tomography 2-25865  
 quartz-silicate amorphous net, influence of bond breaking on optical stability (Russian) 2-2227  
 radiation effects, conf., Besancon, France (May 1981) 2-28601  
 semiconductor characterisation by Raman scatt. 2-17476  
 semiconductor material/device characteris. using two-wavelength laser scanner 2-16057  
 semiconductors, EBIC contrast of lattice defects 2-25698  
 semiconductors, photoconductivity and negatively correlated defect effects 2-40962  
 semiconductors, X-ray topographic anal. 2-30366  
 Si, electron bombarded, nuclei optical polarisation and excited triplet states 2-2162  
 sputter deposited film preparation method for improved microstruct. 2-13645  
 steel, Cr-Mo-V, pearlitic, heat-resist., struct., defectiveness and service during prolonged operation, restoration heat treatment 2-41638  
 steel, stainless, defect prod. by neutrons at 4.7K 2-29330  
 TEM images, diffr. contrast, kinematical theory 2-44993  
 p-terphenyl-tetracene, energy transfer and chemical reactivity, luminesc. obs. 2-46717  
 tetracene, crystal orientation by Laue method (Russian) 2-25828  
 TGS, ferroelectric, relaxation currents 2-36509  
 three-dimensional lattice, two-dimens. defect, local crit. exponents for  $n \rightarrow \infty$  2-48631  
 volume defects in nonlocal micropolar elasticity 2-30008  
 weak-beam electron microscopy, review 2-48850  
 X-ray diffraction, dynamic, wavefronts studied from photoelectric effect/reflection diagrams 2-41447  
 AgCl(Br), ionic transport, anomalously high, defect mechanisms 2-21399  
 Al, defect prod. by neutrons at 4.7K 2-29330  
 Al, polycrystalline, microfracture during high-temp. creep 2-41728  
 Al-Mg and Al-Li(Zn)-Mg, corrosion cracking, role of defects near boundary 2-17772  
 Al-Mo(Cd), highpower laser effects 2-50705  
 Al-Zn, ultrasonic study of mixed dumbbell tunnelling 2-45391  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-NH<sub>4</sub><sup>+</sup>, defect struct. and low dimensionality effects, proton NMR study 2-26773  
 Bi films, defect density, substrate temp. depend., elec. resist. study 2-51027  
 Bi thin films, elec. resist., defect contrib. as function of deposition rate, annealing effect 2-46175  
 CaF<sub>2</sub>:Tb<sup>3+</sup>(Yb<sup>3+</sup>), defect clustering identification using three body energy transfers 2-22076  
 Cu, defect prod. by neutrons at 4.7K 2-29330  
 Cu:<sup>111</sup>In, channelling and gamma-ray spectra 2-50730  
 Fe:Dy(Ar)(Sb), ion implanted single crystal, Rutherford backscattering and channelling anal. 2-45220  
 GaAs, antisite defect 2-26321  
 GaAs electron irradiated, anisotropic defect introduction 2-12641  
 GaAs, laser annealing induced defects 2-40433  
 GaAs:O(C), crystal microstruct., impurities effect, TEM study 2-40419  
 GaAs:Si MBE layer, doping 2-12616  
 GaAs-AlAs interface, antisite defect 2-26321  
 GaAs-Ga<sub>1-x</sub>Al<sub>x</sub> multilayer epitaxial heterocomps., elec. active defects, combined SEM and TEM obs. 2-50620  
 GaP, cryst. defects, correlation between light and electron microscopy images 2-25880  
 GdIG, departure from stoichiometry, 800 to 1400°C 2-5238  
 Ge epitaxial films on GaAs (110), surface defect struct., LEED study 2-8694  
 H<sub>2</sub>, solid surface, two-dimensional layer, localized electron mobility (Russian) 2-21426  
 Hg<sub>0.8</sub>Cd<sub>0.2</sub>Te, defect struct., Hall effect study 2-46033  
 Hg<sub>0.8</sub>Cd<sub>0.2</sub>Te:Cu, pure and doped, defect struct., Hall effect study 2-46031  
 Hg<sub>0.8</sub>Cd<sub>0.2</sub>Te:In, defect struct., Hall effect study 2-46032  
 InP, X-ray dispersive double cryst. topography 2-28840  
 KBr, laser pulse irradiated, pore formation 2-1519  
 KBr:Li(Na), X-irrad., F-H<sub>2</sub> pair conversion into  $\alpha$ -I<sub>A</sub> pairs 2-40375  
 KClO<sub>4</sub> gel grown crystals, microstructs. 2-45177  
 KTaO<sub>3</sub>-Li, defect induced fluctuations, dielec. and optical props. meas. 2-26889  
 LiAl fast-ion electrode, defects and disorder 2-21300  
 LiFeO<sub>2</sub>, elec. props. and phase transform., complex admittance study 2-30935  
 Lil, ionic conduction, composition and imperfections effects 2-21371  
 MgO powder, defects mechanically activated by compressive, shear stress,  $\gamma$ -irrad. effect 2-35540  
 MgO powder, mech. treated by pressure and shear, disorder, X-ray and EPR obs. 2-35483  
 Mo, 15 keV D<sub>2</sub><sup>+</sup> ion irradiated, TEM study of defects 2-40442  
 Mo-Zr (300 ppm), defect prod. by neutrons at 4.7K 2-29330  
 n-MoS<sub>2</sub>/I<sub>2</sub>/Pt electrochemical solar cell, with layer-type semiconductor anodes, performance 2-6143  
 NaCl, laser pulse irradiated, pore formation 2-1519

# crystal defects continued

Nb-Zr (300 ppm), defect prod. by neutrons at 4.7K 2-29330  
 Nb<sub>2</sub>Sn, collision cascade simulation 2-12635  
 Ni, defect prod. by neutrons at 4.7K 2-29330  
 Ni, FCC nuclei, obtained by reduction of NiO, lattice imaging (French) 2-50490  
 Ni, sputtered, columnar shadowing defects growth, O<sub>2</sub> addition effect 2-12942  
 Ni-Ti, equiatomic, macroscopic length changes during B2 $\rightleftharpoons$ R and M $\rightleftharpoons$ B2 transitions 2-47028  
 PbO-Fe<sub>2</sub>O<sub>3</sub>-Sm<sub>2</sub>O<sub>3</sub> single crystal comp., lattice parameters and struct. defects, Sm<sup>3+</sup> solubility 2-12553  
 Pt-Co, L1<sub>0</sub> struct., defects atomic struct., FIM study (Russian) 2-12583  
 Pt-Ir, L1<sub>0</sub> struct., defects atomic struct., FIM study (Russian) 2-12583  
 RbI, laser pulse irradiated, pore formation 2-1519  
 Si (111), polished, diffuse X-ray scatt. 2-1713  
 Si, cathodoluminescence imaging 2-31564  
 n-Si crystals, electron scatt. by clusters, Hall effect and magnetoresist. study 2-26415  
 Si crystals, Czochralski-grown, thermally induced microdefects 2-36778  
 Si, Czochralski grown, internal gettering centres and SiO<sub>2</sub> precip. nucleation 2-40424  
 Si, defect accumulation due to ion irradi., influence of cryst. struct. state 2-16689  
 Si, defect creation and recomb. lifetime due to high energy and  $\gamma$ -irradiation 2-50715  
 Si, elastically bent, Borrmann effect 2-44970  
 Si, elastically bent crystals, with uniformly distributed defects, anomalous transmission of X-rays (Russian) 2-40224  
 Si, evaluation using electron-hole drops (Japanese) 2-51696  
 Si, impurities and defects, effect on semicond. technology, book 2-15  
 Si, laser annealing, rel. to LPE (Japanese) 2-5777  
 Si, laser damage gettering and lifetime improvement appl. 2-12637  
 Si, mag. perception, influence of thermal neutron irradiation (Russian) 2-40441  
 Si, proton bombarded, annealing IR spectroscopy and X-ray topography study 2-1531  
 Si, radiation damage simulation 2-30499  
 Si radiative defect formation rate, charge depend., numerical estimate 2-16673  
 Si, single crystals, neutron diffr. study of defects 2-50659  
 Si surface, (111), thermally cleaned, electron states and H chemisorpt., defect model 2-1986  
 Si, thermally annealed Czochralski wafers, ambient effects on defect formation 2-50627  
 Si wafer processing, defect and contamination control 2-25866  
 Si:As, implanted, laser or electron beam annealed, defect form., electron beam induced current study 2-45271  
 Si:O, C, luminescence, thermally-induced defects 2-46748  
 Si-SiO<sub>2</sub> system obtained by Si oxidation in water vapour, electrophys. props. (Russian) 2-21682  
 SiC layer epitaxial growth by sublimation sandwich method, struct. defects 2-35903  
 SmCo<sub>5</sub> permanent magnets, deform. sintered, struct. and mag. props. 2-31245  
 Th<sub>3</sub>N<sub>4</sub>, nonstoichiometric, elec. correl. and defect struct. 2-51171  
 Th<sub>3</sub>N<sub>4</sub>O, nonstoichiometric, elec. correl. and defect struct. 2-51171  
 TiO<sub>2</sub>, ordered defective struct. described using open packing of cube units 2-40328  
 UC, single cryst., defects due to fission damage 2-16683  
 UO<sub>2+x</sub>, defect struct., coordination model 2-35484  
 U<sub>3</sub>O<sub>8</sub>, defect struct., coordination model 2-35484  
 V film, vacuum deposited, annealing kinetics, elec. resist. study 2-45785  
 V-Zr, defect prod. by neutrons at 4.7K 2-29330  
 V<sub>2</sub>Si, supercond., pinning parameters 2-41092  
 YAG:Nd, Czochralski grown crystal, residual stress, high temp. annealing effect (Chinese) 2-45144  
 YIG, departure from stoichiometry, 800 to 1400°C 2-5238  
 YIG, solid-phase synthesis and sintering, kinetics and mechanism, electrophys. props. 2-41516  
 Zn, polycrystalline, microfracture during high-temp. creep 2-41728  
 ZnS single cryst., martensitic and diffusional transitions, transition temp. and kinetics 2-5216  
 ZnSe:Cu, IR absorpt., defect accumulations 2-5667

## crystal dislocations see dislocations

## crystal electron states see electron energy states (condensed matter)

## crystal energy see lattice energy

## crystal etching see etching

## crystal faces

binary crystals, FCC and diamond type, growth kinetics, lattice model and kinetic eqns. 2-12525  
 diamond, natural crystals, surface morphology obs. on dodecahedral faces 2-45697  
 Au particles, single cryst. nm size, habit planes determ. 2-12930  
 CaCO<sub>3</sub>, calcite cleavages, thermal etch pit obs. 2-25879  
 CaCO<sub>3</sub>, calcite crystals, soln. growth, etching of cleavage faces 2-16611  
 CaCO<sub>3</sub>, synthetic calcite crystal, cleavage face etch pits, low-angle grain boundaries 2-25902  
 CaCO<sub>3</sub>, synthetic calcite crystal, perfect (100) cleavage, inclined dislocations 2-35500  
 CaF<sub>2</sub> natural crystals, growth defects, optical micrograph and X-ray topograph obs. 2-12599  
 FeGe<sub>2</sub> crystals, growth rate influence, on lateral face development character, Czochralski method 2-21050  
 GeS single crystals, vapour grown, surface morphology and facet anal. 2-30725  
 Na<sub>2</sub>Al<sub>2</sub>Si<sub>2</sub>O<sub>10</sub>·2H<sub>2</sub>O natrolite crystal, dislocation etching behaviour of hydrothermal and organic acid etchants 2-12601  
 SnI<sub>2</sub> crystals grown in silica gels, {100} face microtopography, striation obs. 2-35416  
 Y<sub>2</sub>Fe<sub>2</sub>O<sub>7</sub> layers, grown epitaxially on spheres, facet formation 2-1782

## crystal field interactions

### see also crystal hyperfine field interactions

n-alkane:copper porphrin, phosphoresc. spectrum, Zeeman effect, crystal field splitting 2-36686  
 chelates, energy transfer, high press. luminesc. study 2-36681  
 clay minerals, 1:1 layer pipe, mag. props. and struct. 2-26589  
 complexes, adenine and adenosine chloroderivatives, mag. and vibr. props. 2-36640  
 complexes, f-f transitions, optical activity 2-51544



## crystal field interactions continued

- corundum, interdoublet ESR spectrum of  $\text{Mo}^{3+}$  ions 2-21876  
cubic system with  $^3\text{T}$  term, Jahn-Teller effect, allowing for spin-orbit interaction and trigonal crystal field, eigenfunction soln. 2-17036  
p-(p-ethoxyphenylazo) phenyl alkanoates, liq. cryst., internal field parameters 2-17034  
f-shell, strong cubic field scheme calcs. 2-45918  
ferromagnetic superconductors, phase transition, influence of spin dynamics 2-13227  
formic acid, dimer and crystal, excited state proton tunnelling, fine struct., IR spectra 2-26886  
group 11 complexes, adenine and adenosine chloroderivatives, mag. and vibr. props. 2-36640  
hexagonal crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50572  
high spin  $d^5$  systems, conditions for isotropic g-tensor 2-51137  
hindered rotational energy levels of linear ions in trigonal and tetragonal crystalline fields 2-45916  
II-VI semiconductors,  $V^{2+}$  photoluminescence, energy matrix diagonalisation calc. 2-51662  
ionic crystals with paramagnetic impurities, nuclear quadrupole spin-lattice relax. 2-5600  
lanthanide complexes, 4f to 4f transitions, electric dipole strengths calc. 2-51134  
lanthanide crystal field theory, single overlap model 2-51135  
metal complexes, substituted ligand effect on radiationless transitions 2-17513  
metals, Bloch electron dielectric matrix, exchange-correlation effects (*Russian*) 2-45873  
(Mg,Fe)(Cr,Al,Fe) $\text{O}_4$ , partly inverted spinel, Mossbauer spectra 2-41239  
mixed valence compounds, crystal field effects on mag. susceptibility 2-41103  
molecular crystals, optical spectra, effective-field method, Frenkel theory of excitons 2-51090  
monoclinic crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50571  
neodymium formate, cryst. field levels, Stark splitting, laser induced fluorescence, study 2-36680  
next nearest neighbour ions in octahedral symmetry, dynamic cryst. field contribs. 2-36295  
organic molecular crystal, elec. fields, microscopic dielec. theory 2-36582  
orthorhombic crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50571  
photoelectron spectra of  $3d^n$  ions, core levels, formalism 2-51772  
point groups as subgroups of limiting group, cryst. field splitting determ. 2-1430  
poly(chromium phosphinate) one-dimensional Heisenberg antiferromag., static and dynamic susceptibility 2-13279  
rare earth complex, crystals, ligand induced nonradiative relax. 2-31537  
rare earth Kramers ferromagnets, spin dynamics in paramag. phase, density matrix approach 2-2051  
rare earth metals, cubic, magnetoelastic Hamiltonian, cond. electron contrib. 2-26717  
rare earth metals, magnetic circular dichroism spectra, Zeeman effect (*Flemish*) 2-9135  
rare earth phases,  $\text{RPd}_2$  ( $R=\text{La, Pr, Tb, Er}$ ), heat capacity and magnetisation meas. 2-50881  
rare earth ternary superconductors, neutron scatt. studies 2-17195  
rare-earth systems, magnetoelastic interactions, crystal field levels 2-8777  
relativistic nuclei, electrodisintegration by cryst. periodic field upon channelling 2-35560  
Rochelle salt: Cu single crystals, optical props. 2-46652  
spin-equilibria interpretation, semi-classical approach 2-51389  
spin-orbit interactions in superexchange, coupling coeff. and operator algebra for chain  $\text{O}^+\text{CSU}_2$  2-45925  
spinel, cation distrib., effective electrostatic energy versus cryst. field stabilisation energy 2-25802  
strontium tartrate tetrahydrate:  $\text{Fe}^{3+}$ , electronic absorpt. spectra 2-46647  
superexchange, spin orbit interaction coupling coeff. and operator algebra for chain  $\text{O}^+\text{CSU}_2$  2-45925  
tetragonal crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50571  
tetragonal  $d^3$  systems, spin-orbit coupling ligand field asymmetry 2-40858  
tetrameric clusters, hybrid electron-nuclear states 2-36338  
TGS- $\alpha$ -alanine, Cu(Cr), spontaneous polarisation and internal field 2-51521  
TGS, sp. ht. and permittivity, effect of impurities 2-8633  
transition metal complexes, trigonal prismatic and bipyramidal systems ground state and mag. props. 2-13022  
transition metal halides, layered, two-phonon progressions associated with vibronic excitons 2-50807  
transition metal ion in tetragonally or trigonally distorted cubic crystal field, spectroscopic splitting factors (*Chinese*) 2-21541  
triclinic crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50571  
trigonal crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50572  
trimeric clusters, Dzhaloshinskii antisymm. exchange interactions 2-36339  
 $\text{Al}_2\text{O}_3$  precipitated structure, SIMS and EPR spectra of tracer ions  $\text{Cr}^{3+}$  and  $\text{Fe}^{3+}$  2-9030  
 $\text{Al}_2\text{O}_3$ : $\text{Mo}^{3+}$ , corundum,  $\text{Mo}^{3+}$  zero field splitting, EPR study 2-17332  
 $\text{Al}_2\text{O}_3$ : $\text{Ni}^{3+}$  ( $\text{Mn}^{3+}$ ), Jahn-Teller system, effect of stress, EPR data anal. 2-45924  
 $\text{BaCrO}_4$ , elec. quadrupole interaction, TDPAC obs. 2-36483  
 $\text{BaCrO}_7$ , elec. quadrupole interaction, TDPAC obs. 2-36483  
 $\text{BaNiF}_4$ , two-dimensional antiferromag., linear mag. birefringence and double-exciton transitions 2-5661  
 $\text{BaZnF}_4$ :Mn, growth, EPR and luminescence 2-26735  
 $\text{Bi}_2\text{Ge}_2\text{O}_7$ : $\text{Eu}^{3+}$ , emission and excitation spectra, Stark levels and crystal field parameters 2-13537  
 $\text{CaF}_2$ : $\text{Tb}^{3+}$  ( $\text{Yb}^{3+}$ ), defect clustering identification using three body energy transfers 2-22076  
 $\text{CdI}_2$ : $\text{Ni}^{2+}$ , crystal field and spin-orbit coupling, near IR d-d transitions study 2-22022  
 $\text{CdS}$ : $\text{Cr}^{2+}$ , configuration mixing and cryst. field splitting 2-51136  
n- $\text{CdSnAs}_2$ , Shubnikov-de Haas effect, band struct., spin-orbit and crystal field splitting 2-40934  
 $\text{CdTe}$  doped with Fe group impurities, mag. susceptibility (*Russian*) 2-26580

## crystal field interactions continued

- $\text{CdTe}$ : $\text{Co}^{2+}$ , cryst. field splitting, press. induced changes, IR spectra study 2-26944  
(Ce, $\text{M}$ ) $\text{Al}_3$  ( $\text{M}=\text{La, Y, Sc}$ ), spin dynamics, neutron scatt. study 2-26584  
Ce compounds, with unstable 4f shells, Gruenisen parameter 2-16743  
 $\text{CeAl}_2$ , spin dynamics, neutron scatt. study 2-26584  
 $\text{CeAl}_3$ , low temp. magnetoresist., cryst. field and Kondo effects 2-5390  
 $\text{CeB}_6$ , spin dynamics, neutron scatt. study 2-26584  
 $\text{CeCu}_2\text{Si}_2$ , spin dynamics, neutron scatt. study 2-26584  
 $\text{Ce}_2\text{La}_{1-x}\text{C}_2$ , mag. and elec. props., mag. resist., cryst. field effect 2-8973  
 $\text{Ce}_{0.9-x}\text{La}_x\text{Th}_{0.1}$ , mixed valence alloy, mag. excitations, mag. susceptibility and neutron diffr. study 2-45913  
 $\text{CeSb}(\text{Bi})$ , anomalous mag. props., anisotropic p-f mixing mechanism 2-8952  
 $\text{CoI}_2$ , crystal field and spin-orbit coupling, near IR d-d transitions study 2-22022  
 $\text{Cr}_2\text{O}_3$ , internal strain effects, ion-lattice interaction parameters 2-17032  
 $\text{Cs}_2\text{CdCl}_4$ : $\text{Co}^{2+}$ , polarised absorpt. spectra, 300 and 77K 2-46641  
 $\text{CsH}_3(\text{SeO}_4)_2$ , hydrogen bond network, antiferroelectric phase transition  $^2\text{D}$  and  $^{133}\text{Cs}$  NMR study 2-51481  
Cu complex, Cu(II)-bis-ethylenediamine electronic spectra and struct. 2-31524  
Cu complex,  $\gamma$ -bis(N-methyl salicylaldimine) copper(II), EPR and mag. props., 1.5 to 300K 2-41188  
 $\text{Cu}^{2+}$ , ground state wave function in rhombic crystal field 2-8778  
 $\text{Cu}^{2+}$  ions, config. mixing and cryst. field splitting 2-26342  
 $\text{DyRh}_2\text{B}_4$ , Mossbauer study of ground state 2-17382  
 $\text{ErRh}_2\text{B}_4$ , Mossbauer study of ground state 2-17382  
 $\text{Eu}_2(\text{MoO}_4)_3$  ( $(\text{WO}_4)_3$ ), mag. susceptibility study 2-26601  
Fe complexes, protoporphyrinato iron (III), ligand field effects, g-values, EPR study 2-26729  
 $\text{Fe}^{2+}$  ions, config. mixing and cryst. field splitting 2-26342  
 $\text{Fe}_2\text{O}_3$ , haematite, magneto-optical props. (*Russian*) 2-26871  
GaAs, collective coordinates of tetrahedral cluster, inner displacement effect 2-13028  
GaAs:Cr, phonon scatt. by impurities, thermal cond. meas. 2-8584  
GaSe, polymorphic stability, band struct. and phonon spectra study 2-40786  
 $\text{Gd}^{4f}$  level splitting in aq. solns. of inorganic salts 2-51138  
 $\text{Gd}^{3+}$  in rare earth trifluorides, spin Hamiltonian parameters of  $\text{Gd}^{3+}$ , superposition model anal. 2-17035  
 $\text{GdOCl}$ : $\text{Eu}^{2+}$ , free ion and cryst. field parameters, Stark levels, fluores. 2-9178  
 $\text{GdPO}_4$ , saturation of paramagnetism, cryst. field effect 2-21788  
 $\alpha$ - $\text{HfO}_2$  crystal, NWR under press., H bond influence on internal field 2-46423  
 $\text{HfV}_2$ , electric field gradient and phase transition 2-26340  
 $\text{Ho}(\text{OH})_3$  crystal, mag. thermal and optical absorpt. props. 2-8963  
 $\text{Ho}(\text{OH})_3$  crystals, mag. and thermal props. 2-26596  
KCl, R-centres, optical absorpt.  $R_2$  band, lineshape calc. 2-2320  
 $\text{KCoF}_6$ , multiplet struct. of inner core absorption spectra 2-2371  
 $\text{KCr}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$ - $\text{KAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$  mixed cryst., Cr ion crystal field spectra, absorpt. spectra 2-41385  
 $\text{KdY}(\text{MoO}_4)_2$ , cryst. field parameter study 2-26343  
 $\text{Ker}(\text{MOO}_4)_2$ , crystal field, sp. ht. and absorpt. spectra study 2-45593  
 $\text{KMnF}_3$ , multiplet struct. of inner core absorption spectra 2-2371  
 $\text{LaCl}_3(\text{F}_3)$ , internal strain effects, ion-lattice interaction parameters 2-17032  
 $\text{LaCl}_3(\text{LaBr}_2)\text{:Np}^{3+}$  2-1871  
 $\text{LaOCl}$ : $\text{Eu}^{2+}$ , free ion and cryst. field parameters, Stark levels, fluores. 2-9178  
 $\text{LaOF}$ :rare earth ion doped, crystal fields and luminesc. props. 2-40855  
 $\text{La}_{1-x}\text{Pr}_x\text{Sn}_3$  crystal field mag. anisotropy 2-31137  
 $\text{LiAl}_2\text{O}_4$ : $\text{Cr}^{3+}$ , energy levels and wave functions calcs. 2-17033  
 $\text{LiF}$ : $\text{V}^{2+}$ , associated impurity-vacancy defect electronic struct. 2-40830  
 $\text{LiGa}_2\text{O}_4$ : $\text{Cr}^{3+}$ , energy levels and wave functions calcs. 2-17033  
 $\text{LiYF}_4$ : $\text{Nd}^{3+}$ , energy levels, high resolution absorpt. spectra 2-9141  
 $\text{LuPO}_4$ : $\text{Fe}^{3+}$ , EPR spectra, crystal field splittings 2-36412  
 $\text{MgS}$ : $\text{Mn}^{2+}$ , phosphor, luminescence and EPR spectra (*French*) 2-22082  
 $\text{NaBr}$ : $\text{Eu}^{2+}$ , precipitated phase, optical absorpt. and luminesc. spectra 2-41408  
 $\text{NaCl}$ : $\text{Yb}^{2+}$ , IR luminesc. and absorpt. spectra of  $4f^{14} \rightarrow 4f^{13}5d$  transition 2-51668  
 $\text{NaI}$ : $\text{Eu}^{2+}$ , precipitated phase, optical absorpt. and luminesc. spectra 2-41408  
Ni hexammines, ESR line temp. broadening, cryst. field and exchange consts. (*Russian*) 2-17329  
 $\text{Ni}^{2+}$  complex, nickel antipyrine, cryst. field parameters, IR and visible absorpt. spectra 2-17479  
 $\text{Ni}^{2+}$  compounds, optical absorpt. spectra, origin of yellow colour 2-22042  
 $\text{NiI}_2$ , crystal field and spin-orbit coupling, near IR d-d transitions study 2-22022  
 $\beta$ - $\text{Ni}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$ , field induced spin ordered states, low dimensionality 2-41147  
O adsorbed on Ni(111), transition of the Heisenberg model with cubic anisotropy 2-12909  
 $\text{Pb}_3(\text{PO}_4)_2$ : $\text{Mn}^{2+}$  ( $\text{Gd}^{3+}$ ), ferroelec. transition, EPR study 2-21874  
Pr alloys, amorphous, sp. ht., nonaxial crystal field model 2-31199  
 $\text{PrCu}_2$ , paramagnetic susceptibility crystal field influence 2-8953  
 $\text{PrCu}_5$ , crystal field, neutron diffr., sp. ht. and mag. susceptibility study 2-21542  
 $\text{PrNi}_5$ , elec. resist., longit. magnetoresist. and thermal cond., temp. depend., cryst. field effect 2-8785  
 $\text{Rb}_2\text{ZnBr}_4$ , NMR evidence for solitons and phasons 2-51498  
 $\text{Rb}_2\text{ZnCl}_4$ , NMR study of electric field gradients 2-2147  
 $\text{ScPO}_4$ : $\text{Fe}^{3+}$ , EPR spectra, crystal field splittings 2-36412  
 $\text{Sm}_2(\text{MoO}_4)_3$  ( $(\text{WO}_4)_3$ ), mag. susceptibility study 2-26601  
 $\text{SnCd}$ , lattice damage at recoil Sm impurity 2-25943  
 $\text{Sr}_2\text{Nb}_2\text{O}_7$ , ferroelec. normal phase, ESR study, 250°C 2-41184  
 $\text{ThGeO}_4$ : $\text{Er}^{3+}$  ( $\text{Nd}^{3+}$ ) ( $\text{Ho}^{3+}$ ) crystal field, EPR and optical absorption spectra study 2-26943  
 $\text{ThS}_2$ : $\text{Gd}^{3+}$ , EPR spectra 2-21878  
 $\text{Ti}^{3+}$  type ions in cubic field, Jahn-Teller effect of B absorption band 2-2318  
( $\text{Ti}, \text{La}_{1-x}$ ) $\text{B}_{13}$  susceptibility and magnetisation, cryst. field and exchange effects (*French*) 2-5521  
 $\text{TmRh}_2\text{B}_4$ , Mossbauer study of ground state 2-17382  
TmSe, trivalent and intermediate valent, dynamic susceptibility, inelastic neutron scatt. study 2-31164  
 $\text{V}_2\text{O}_5$ , origin of split-off conduction bands 2-16988



**crystal field interactions continued**

- Xe, physisorbed on W(100), angle-resolved photoelectron emission 2-5795  
 YAG:Nd<sup>3+</sup>, <sup>4</sup>I<sub>9/2</sub> ground level, cryst. field splitting 2-51133  
 Y<sub>2</sub>O<sub>3</sub>:Eu<sup>3+</sup>, cryst. field anal., appl. of electrostatic and ang. overlap models 2-13024  
 YOCl:Eu<sup>3+</sup> free ion and cryst. field parameters, Stark levels, fluores. 2-9178  
 YPO<sub>4</sub>:Fe<sup>3+</sup>, EPR spectra, crystal field splittings 2-36412  
 YPd<sub>3</sub>, cryst. field effects in ESR of Dy<sup>3+</sup>, Er<sup>3+</sup> and Yb<sup>3+</sup> 2-36422  
 YbAG electronic Raman scatt. data, crystal-field analysis 2-45919  
 YbGG, electronic Raman scatt. data, crystal-field analysis 2-45919  
 YbP<sub>2</sub>O<sub>7</sub>, saturation of paramagnetism, cryst. field effect 2-21788  
 ZnCs<sub>2</sub>(SO<sub>4</sub>)<sub>2</sub>·6H<sub>2</sub>O:Cr<sup>2+</sup>, optical absorpt. spectrum, cryst. field parameters 2-26945  
 ZnMn dil. single crystals, mag. anisotropy at low temps. 2-36357  
 ZnS:Fe<sup>2+</sup>, spin-forbidden transitions, optical absorpt. spectra 2-51633  
 ZnS:Se(Ti)(V)(Mn)(Fe)(Co)(Ni), impurity electronic struct., Green's function method 2-40823

**crystal field splitting** *see crystal field interactions***crystal field theory** *see crystal field interactions***crystal filters** *see crystal field interactions***crystal films**

- PbTiO<sub>3</sub>-PbZrO<sub>3</sub>-PbNb<sub>2/3</sub>Mn<sub>2/3</sub>O<sub>3</sub>-PbW<sub>1/2</sub>Mn<sub>1/2</sub>O<sub>3</sub> systems, temp. stability of reson. freq., comp. depend. 2-41313

**crystal growth**

- see also crystal growth from melt; crystal growth from solution; crystal growth from vapour; crystal purification; crystallisation; dendrites; epitaxial growth; nucleation*  
 binary crystals, FCC and diamond type, growth kinetics, lattice model and kinetic eqns. 2-12525  
 binary multiphase system, diffusion growth kinetics, Matano-Boltzmann method (Russian) 2-50901  
 coalescence theory, particles dispersed within matrix, pot. created by point sources and wells of matter (French) 2-35693  
 diamond, C<sup>+</sup> ion implantation, crystal growth, proton channelling 2-45212  
 diamond, crystal growth-sector boundary luminesc. 2-41434  
 diamond synthesis, crystn. kinetics in Mn-Ni-C system containing Group III metal carbides 2-41503  
 dicalcium strontium propionate, ferroelectric domains, growth pyramid 2-36575  
 electronic materials, cryst. engineering 2-5066  
 free surface, growth step formed by edge dislocation (Russian) 2-16647  
 frost layer growth and densification under forced convection and densification 2-4704  
 galvanostatic crystal growth under diffusion control, powdered metal form. theory 2-46962  
 historical development of crystal growth (German) 2-10562  
 II-V compounds, physical and chemical props., and applications 2-25852  
 ionic crystals, electrostatic bonding energy, electrostatic interaction during growth 2-25806  
 ionic crystals, electrostatic field at surface, electrostatic interaction during growth 2-25807  
 materials science and engineering in space 2-51779  
 metallic thin film, AES and LEED studies (Japanese) 2-1788  
 microgravity environment, single cryst. growth in space (Japanese) 2-22153  
 microprocessor-controlled crystal growth, design and implementation 2-27061  
 nucleation, rectangular parallelepiped nuclei, homogeneous and heterogeneous conditions 2-45086  
 nucleation rate of 2D square shaped nucleus for cryst. growth rate calc. 2-35412  
 one-component crystals, kinetic eqn. method, comparison with Monte Carlo results 2-1427  
 organic metals and their supercond., review (Japanese) 2-5483  
 phase separation, boundary layer theory (Dutch) 2-50867  
 phase transition driving force, chemical potential difference calc. 2-35640  
 plagioclase oscillatory zoning, pathological case of crystal growth 2-32518  
 rare earth-transition metal alloy synthesis (Bulgarian) 2-16610  
 snow, crystal growth, surface nucleation 2-45085  
 solar cells, principles and technology (Spanish) 2-42004  
 solid-phase crystals, growth, obs. by synchrotron X-ray topography (French) 2-1369  
 surface induced press. in anisotropic crystals, existence 2-1425  
 surface structure during melting or cryst. growth at high temp. 2-45540  
 synthesis and characterisation 2-41515  
 thin film formation, conf., Fonyod, Hungary (Sept.-Oct. 1980) 2-48399  
 thin film growth, intermediate stage, Monte Carlo simulation 2-51049  
 thin films, surface chemical phenomena and growth 2-51048  
 transient thermal convection, during orbital spaceflight 2-1197  
 CaHoAl<sub>2</sub>O<sub>7</sub>, synthesis and characterisation 2-41515  
 CaTbAl<sub>2</sub>O<sub>7</sub>, synthesis and characterisation 2-41515  
 CeMgAl<sub>2</sub>O<sub>7</sub>, single cryst. growth (German) 2-8461  
 CsLiMoO<sub>4</sub>, struct. and synthesis 2-21101  
 ErH<sub>2</sub>, crystal growth, Er metal hydrided at 950°C 2-9272  
 Fe, whisker, residual resistance ratio and mag. domain wall (Japanese) 2-5337  
 LaMgAl<sub>2</sub>O<sub>7</sub>, single cryst. growth (German) 2-8461  
 Mn, electrodeposited, crystallisation, struct. and hydrogenation 2-1428  
 P<sub>2</sub>O<sub>5</sub>, cryst. synthesis and struct. 2-5086  
 Si cluster growth sequence, up to amorphous phase 2-45036  
 Si solar cells, low cost manufacturing based on multiple EFG ribbon technology 2-18070

**crystal growth from gel**

- comparison between gel and solution grown crystals. 2-27069  
 diglycine nitrate, single cryst. growth in SiO<sub>2</sub> gel 2-2430  
 electric field application for large crystal growth by diffusion method 2-27067  
 ferroelectrics and dielectrics, explanatory cryst. growth techniques 2-36772  
 review 2-17613  
 tetramethoxysilane as gel forming agent in crystal growth 2-46898  
 Ag, electrolytically gel grown crystals, surface microstructure and morphology 2-12890  
 CaCO<sub>3</sub>, influence of elec. field on rhythmic crystn. in agar gel 2-46895  
 CaHPO<sub>4</sub>·2H<sub>2</sub>O, brushite crystals grown rapidly in silica gel, morphology and surface struct. 2-45090

**crystal growth from gel continued**

- KClO<sub>4</sub> gel grown crystals, microstructs. 2-45177  
 NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>, comparison between gel and solution grown crystals. 2-27069  
 NiMoO<sub>4</sub>, single crystal development from crystalline agglomerates at gel interface 2-8462  
 (NiMoO<sub>4</sub>·xH<sub>2</sub>O) crystals, effect of impurity on, habit in SiO<sub>2</sub> gel 2-51785  
 PbCO<sub>3</sub>, electric field application for large crystal growth by diffusion method 2-27067  
 PbS crystals, growth from interacting colloids in gels 2-9262  
 SnI<sub>2</sub>, crystals grown in silica gels, {100} face microtopography, striation obs. 2-35416  
 (Sr,Ba<sub>1-x</sub>)Co<sub>3</sub>, symmetrical cryst. aggregates, grown by SiO<sub>2</sub> gel technique, morphological aspects 2-9260  
 ZnS crystals, growth from interacting colloids in gels 2-9262

**crystal growth from melt**

- see also liquid phase epitaxial growth; zone melting*  
 benzil, growth and perfection from undercooled melt 2-31622  
 binary solid solutions, monocrystal growth from melt, solution of regularity equation (Russian) 2-13636  
 Bridgman crystal growth, thermal modelling 2-45088  
 Bridgman growth, of crystals, vac. tight quartz ampoule with interface demarcation 2-27074  
 capillary properties, in cryst.-melt system during growth and melting of crystals. 2-1414  
 convective effects, review 2-30429  
 corundum optical profiled crystals, evolution of defect str. 2-2436  
 corundum single crystals, possibility of controlling impurity inhomogeneity 2-30479  
 crystal-melt interface, struct. and thermodynamics, review 2-12528  
 crystallisation front, open inclusions role of supercooled melt in gas bubbles formation 2-50569  
 crystallisation front of melt, impurities conc. at boundary 2-50568  
 cyclohexanol, low entropy melt, kinetics of cryst. growth (Russian) 2-8460  
 Czochralski crystal growth system with a periodic crystal growth rate and no back-melting 2-40305  
 Czochralski crystal growth system with a periodic crystal growth rate and back-melting 2-40306  
 Czochralski growth, hydrodynamics, heat and mass transfer 2-35419  
 Czochralski growth, of some oxide single crystals, fluid flow, temp. field 2-8457  
 Czochralski growth, periodic modulation effect on growth rate 2-25782  
 Czochralski method, melt mixing improvement 2-41508  
 defect-free crystals, growth kinetics 2-21051  
 facet effect, thermal conditions influence 2-1417  
 free surface energy, on profiling of crystals, pulled from melt, anisotropy effect 2-25771  
 freezing, transition from convection-controlled to conduction-controlled growth 2-4705  
 growth kinetics, of defect-free crystals, from melt 2-21051  
 ionic crystals, melt-grown, foreign ion distrib. coeff. as function of ionic radius 2-12621  
 level control of liquids in crystallisation, microprocessor applns. (German) 2-9266  
 Li<sub>1-x</sub>Na<sub>x</sub>NbO<sub>3</sub>-SrNb<sub>2</sub>O<sub>6</sub>, Czochralski growth, constitutional supercooling and cryst. quality (Chinese) 2-40302  
 low entropy melt, kinetics of cryst. growth (Russian) 2-8460  
 M<sup>1</sup>Cl<sub>2</sub>M<sup>2</sup>Cl<sub>2</sub>, oriented microinclusions on crystallisation from melt (Russian) 2-13639  
 microgravity experiment possibilities 2-31624  
 nucleation phenomena, and thermodynamics 2-25781  
 nylons, (6) and (6,6), cryst. state extrusion of melt crystallised and soln. grown crystals. 2-13763  
 oxide crystals, grown by Czochralski method, fluid flow effect on gas bubbles formation 2-1421  
 polypropylene, biaxially oriented, double crystallisation 2-16759  
 RAD process polysilicon sheets growth and performance progress 2-18071  
 rare earth gallium garnets, Czochralski grown, lattice parameters and distrib. coeffs. as function of Ca, Mg and Zr concs. 2-45091  
 semitransparent crystals grown from melts, thermocouple reading, radiant heat exchange effect 2-15171  
 solid solution, binary, comp. control of homogeneous single crystals, during melt growth 2-5806  
 solidification, solvent redistribution, solute trapping, impurity uptake, applic. to laser beam annealing 2-50865  
 Stepanov crystal growth, temp. distrib. characts. for simultaneously growing several plates 2-1416  
 succinonitrile, low entropy melt, kinetics of cryst. growth (Russian) 2-8460  
 techniques and surface phenomena 2-36776  
 temperature distribution, in transient profiled crystals. 2-1415  
 Al, cryst. plates, numerical calc. of isotherms during growth by Bridgman method 2-25787  
 Al single crystal growth by Bridgman and G'Sell methods 2-46905  
 Al spherical monocrystal growth in zero gravity (Russian) 2-2438  
 Al-alloys, profiled, heat removal rate procedure near growth surface, shapers classification 2-2435  
 Al-alloys, suppression of dendrites growth producing surface bulges on components 2-2437  
 Al-B-Li(Ti)(V)(Cr)(Mn)(Fe)(Co)(Ni)(Cu) systems, B-rich phases grown from melts, X-ray diff. study 2-46904  
 Al<sub>2</sub>Cu crystal, simulation of melt cryst. growth (French) 2-8456  
 Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-LiO-MgO, β and β' phases, growth, struct., comp. and ionic cond. 2-26122  
 B, growth and dissolution in nitric acid, impurity effects 2-40303  
 BaB<sub>2</sub>, single crystals, growth and props. 2-27075  
 BaTiO<sub>3</sub>, refractive index above T<sub>c</sub> 2-46526  
 BaZnF<sub>4</sub>:Mn, growth, EPR and luminescence 2-26735  
 BeAl<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, spectroscopic and lasing props. 2-17538  
 Bi, Bridgman grown crystal, (111) plane orientation, temp. gradient and growth rate effect 2-25776  
 Bi single crystals, preferred growth 2-46902  
 Bi-Sb solid soln., comp. control of homogeneous single crystals, during melt growth 2-5806  
 Ca<sub>3</sub>Al<sub>2</sub>SiO<sub>8</sub>, gehlenite single cryst., Czochralski growth 2-5808  
 CaB<sub>2</sub>, single crystals, growth and props. 2-27075  
 CaS single crystal, melt growth and props., X-ray diff., optical absorpt. and ESR obs. 2-46903



## crystal growth from melt continued

- Cd<sub>2</sub>Te,  $\text{H}_2\text{O}^{3+}$ , semiconductor, growth, IR spectra and elec. cond. 2-13638  
 Cd<sub>2</sub>Te, Mg<sub>2</sub>S, solid solns., formation mechanism 2-31623  
 CdSnAs<sub>2</sub>, single cryst. and layer growth from soln. in melt, solvents invest. 2-41509  
 Cu cryst. plates, numerical calc. of isotherms during growth by Bridgman method 2-25787  
 Cu, dislocation struct. of [321] crystals grown by Bridgman method, Al addition effects (*Japanese*) 2-12603  
 Cu, dislocation-free single crystals, thermal conditions in Czochralski growth 2-2433  
 Cu-Al, dil. alloy, dislocation struct. of [321] crystals grown by Bridgman method, Al addition effects (*Japanese*) 2-12603  
 Cu-In (1.7 at.%), single crystal growth by Bridgman method 2-46910  
 Cu-Ni alloy crystallisation, FCC and diamond type binary cryst. growth kinetics 2-12527  
 Cu-Sn (1.1 at.%), single crystal growth by Bridgman method 2-46910  
 CuAlO<sub>2</sub>, single cryst. growth and cryst. struct. refinement 2-40349  
 CuInSn<sub>2</sub>, crystal growth, horizontal Bridgman method 2-17615  
 EuMgAl<sub>11</sub>O<sub>19</sub>, crystal growth and physical props. 2-22159  
 FeGe<sub>2</sub>, crystals, growth rate influence, on lateral face development character, Czochralski method 2-21050  
 GaAs, Czochralski grown, liq. encapsulated technique, elec. compensation, melt stoichiometry effect 2-51164  
 GaAs dendritic web, grown by liq. encapsulation, characterisation 2-2427  
 GaAs large diameter bulk crystals for microwave device technology 2-17619  
 GaAs, melt grown, physical props. 2-22158  
 GaAs, thermal conditions effect on large-diameter growth of single crystals. 2-2432  
 GaAs, undoped semi-insulating, growth by liquid encapsulated Czochralski method 2-12622  
 GaAs:Cr, dislocation density variation 2-30468  
 GaS, Hall effect and TSC study 2-26414  
 GaSb single crystals, with low dislocation density, LEC growth technique 2-27072  
 GaSb, undoped single crystals, obs. of growth striations 2-35421  
 GaSb:Te, Czochralski grown, impurity distrib., cathodoluminesc. study 2-51715  
 GaSe single crystals, growth 2-31620  
 Ga<sub>2</sub>Se<sub>3</sub> phase equilibria, DTA, X-ray diffractometer and cryst. growth obs. 2-51885  
 Gd-Ga garnet crystals, growth spirals 2-45175  
 Gd<sub>2</sub>Sc<sub>2</sub>Al<sub>2</sub>O<sub>12</sub>, pure and Nd<sup>3+</sup> doped Bridgman-Stockburger growth of single crystals. 2-31618  
 Ge single crystals, grown in different directions, radial distrib. of dopant 2-1498  
 Ge single crystals, grown in batches by Stepanov method, impurity distrib. 2-1504  
 Ge:Ga heavily doped single crystals grown from melt, interface breakdown 2-25777  
 Ge-As solid solution, lattice const. meas. 2-21103  
 Ge-Si solid soln., comp. control of homogeneous single crystals during melt growth 2-5806  
 InP, growth and cryst. quality by liq. encapsulated Czochralski technique 2-5809  
 n-InP single cryst., electron mobility and minority carrier lifetime 2-13093  
 InP, undoped single cryst., identification of faulted prismatic dislocation loops 2-8520  
 InP:Co, single cryst. growth and elec. props. 2-9264  
 InP:O, horizontal Bridgman growth, O doping effect, Hall effect meas. 2-16667  
 InSb, anal. and control of solidification by differential dilatometry 2-1424  
 InSe, cryst. growth 2-2492  
 KBr crystals, nearly perfect growth by Czochralski method, characterisation 2-27073  
 KCl crystals, nearly perfect growth by Czochralski method, characterisation 2-27073  
 K<sub>2</sub>Cu<sub>3</sub>(MoO<sub>4</sub>)<sub>4</sub>, crystal growth from melt, cryst. struct. 2-1465  
 KMg<sub>1-x</sub>M<sub>x</sub>F<sub>3</sub> (M = V<sup>2+</sup>, Co<sup>2+</sup>, Ni<sup>2+</sup>) mixed crystals, growth by Czochralski method 2-31621  
 KMg<sub>2</sub>[AlSi<sub>3</sub>O<sub>10</sub>].F<sub>2</sub> crystals, growth from melt, morphology and gas cavity distribution 2-8463  
 LaMgAl<sub>11</sub>O<sub>19</sub>, crystal growth and physical props. 2-22159  
 La<sub>1-x</sub>Nd<sub>x</sub>MgAl<sub>11</sub>O<sub>19</sub>, crystal growth and physical props. 2-22159  
 La<sub>1-x</sub>Nd<sub>x</sub>MgAl<sub>11</sub>O<sub>19</sub>, prep., struct., optical and mag. props. 2-31619  
 La<sub>2</sub>Zr<sub>2</sub>O<sub>7</sub>, total and electronic cond. 2-51158  
 LiAlO<sub>2</sub>, single crystal, Czochralski growth, props. 2-2439  
 LiGaSe<sub>2</sub>, single cryst. growth and characterization 2-13637  
 LiLu<sub>0.5-x-y</sub>Er<sub>0.5</sub>Tm<sub>0.5</sub>Ho<sub>0.5</sub>F<sub>4</sub>, scheelite single crystals, Czochralski growth and laser charact-s. 2-5807  
 LiNbO<sub>3</sub>, Czochralski growth, rot. striations (*Chinese*) 2-40301  
 LiVO<sub>3</sub>, single cryst. prep. and opt. props. 2-41511  
 LiY<sub>0.5-x-y</sub>Er<sub>0.5</sub>Tm<sub>0.5</sub>Ho<sub>0.5</sub>F<sub>4</sub>, scheelite single crystals, Czochralski growth and laser charact-s. 2-5807  
 LuAlB<sub>4</sub>, single cryst. growth from Al melt, struct. refinement 2-41510  
 Mg<sub>2</sub>Al<sub>2</sub>Si<sub>2</sub>O<sub>12</sub>, pyrope, fusion at high press. and rapid cryst. growth from melt 2-16760  
 Mg<sub>2</sub>SiO<sub>4</sub>, Czochralski grown forsterite, HF-HCl-H<sub>2</sub>O dislocation etchant for (100), (001) faces 2-12598  
 MnBi-Bi eutectic, rate change transients in Bridgman-Stockburger growth 2-51792  
 Na<sub>1-9-2x</sub>Cu<sub>x</sub>V<sub>12</sub>O<sub>30</sub>, prep., struct. and ESR characts. 2-41512  
 NaFeO<sub>2</sub>, crystallization and  $\alpha$ - $\beta$  phase transform. 2-1426  
 NaNbO<sub>3</sub>, bladed crystals, growth and investigation 2-5805  
 NdMgAl<sub>11</sub>O<sub>19</sub>, crystal growth and physical props. 2-22159  
 $\alpha$ -,  $\beta$ -,  $\alpha$ -PbGe<sub>2</sub>O<sub>6</sub>, polymorphism, growth and certain props. 2-50609  
 $\gamma$ -poly(vinylidene fluoride), crystalline, conformational defects and associated mol. motions 2-16603  
 PrMgAl<sub>11</sub>O<sub>19</sub>, crystal growth and physical props. 2-22159  
 Si bicrystals growth and characterisation for solar cells 2-17618  
 Si crucible recharging method, used for solar cells 2-51796  
 Si crystal purity in melt growth maintained using refractory liners 2-46907  
 Si, Czochralski bulk flow, parameter sensitivity study 2-25779  
 Si, Czochralski grown, heat treated, O precipitation, C-O nucleation centres, IR spectra study 2-50861  
 Si, Czochralski grown, O<sub>2</sub> precip. 2-51918

## crystal growth from melt continued

- Si, Czochralski-grown, high temp. annealed, octahedral precipitates 2-2514  
 Si, defect formation during high-temp. inert gas annealing 2-30460  
 Si dendritic web, wide ribbon used for solar cell manufacture 2-46908  
 Si, dislocation-free Czochralski and float-zone crystals, yield strength 2-1548  
 Si, gamma-ray irradi., uniaxial deform. influence on nonequilibrium carrier recombination 2-26410  
 Si, heat-exchanger method of crystal growth, using no moving parts 2-51794  
 Si ingot-casting process, Heat Exchanger Method, solar cell fabrication appl. 2-37352  
 Si melt level automatically controlled, using laser beam monitoring 2-46909  
 Si, metallurgical grade, sheet growth using edge-supported pulling, for solar cells 2-36779  
 Si monocrystalline sheet formation for solar cells, ingot technology 2-52361  
 Si, refined metallurgical, single crystal and polycrystalline solar cells, AM1 efficiency study 2-14075  
 Si ribbon, edge defined film growth, twin boundaries, etching and TEM study 2-50662  
 Si ribbon defects removal process, used for solar cells 2-52083  
 Si ribbon growth, controlled by gravity feed 2-51793  
 Si ribbon high-rate growth 2-27076  
 Si ribbon solar cells, conversion efficiency rel. to growth conditions and processing variables 2-37348  
 Si, semicrystalline ingots, obtained using unidirectional crystallisation, elaboration study 2-18076  
 Si shaping dies, use of Si<sub>3</sub>N<sub>4</sub>-BeO ceramic 2-51795  
 Si sheets, large area, using EFG tube growth, for solar cells 2-36780  
 Si single crystals, grown from melt, appearance of dislocations 2-1418  
 Si strip production, by Stepanov method with wetted shaper 2-2434  
 Si wafer, Czochralski grown, photolum. characteris. of thermally-induced defects 2-17535  
 Si wafers large-diameter, grown by Czochralski method, recombination props. (*Russian*) 2-21601  
 Si wide ribbon, used for solar cell manufacture, crucible assembly 2-46906  
 Si<sub>2</sub>Ho<sub>2</sub>P<sub>2</sub>, grown from melt, second phase inclusion impurity conc. 2-5150  
 Si<sub>2</sub>O<sub>3</sub>, influence of C on precipitation of O<sub>2</sub> 2-12763  
 Si<sub>2</sub>Yb<sub>2</sub>P<sub>2</sub>, grown from melt, second phase inclusion impurity conc. 2-5150  
 Si-Ge alloy crystallisation, FCC and diamond type binary cryst. growth kinetics 2-12527  
 Si-Ge alloys for IR detection, Czochralski growth and crucible-free process prep. 2-22160  
 SmMgAl<sub>11</sub>O<sub>19</sub>, crystal growth and physical props. 2-22159  
 SrB<sub>4</sub> single crystals, growth and props. 2-27075  
 SrTiO<sub>3</sub>, reduced crystals, nonstoichiometry, EPR invest. 2-17337  
 SrWO<sub>4</sub>, crystallisation from Na<sub>2</sub>WO<sub>4</sub> melt, differential thermal anal. obs. 2-17616  
 SrWO<sub>4</sub> crystn. from Na<sub>2</sub>WO<sub>4</sub> melts, diff. thermal anal. 2-12529  
 SrWO<sub>4</sub>, melt crystallisation, DTA, rate const. variation with crystn. temps. and cooling rates 2-16612  
 Te, grown by Czochralski method, basal plane etch pit orientation 2-25881  
 TlBiTe<sub>2</sub> single crystals, cryst. growth and specimen prep. for TEM 2-9265  
 TiBr crystals, growth from melt, relax. of quasi-equilib. 2-25788  
 V<sub>2</sub>O<sub>3</sub> single crystals, of controlled stoichiometry, growth and elec. props. 2-36777  
 V<sub>2</sub>O<sub>3</sub>-P<sub>2</sub>O<sub>5</sub> glass melt, electrocrystn. of VO<sub>x</sub> cpds. used in threshold switches 2-17617  
 YAG:Nd, Czochralski grown crystal, residual stress, high temp. annealing effect (*Chinese*) 2-45144  
 YAG:Nd crystals grown by Czochralski method, supercooling and dislocation generation during interface conversion (*Chinese*) 2-8464  
 YAG:Nd<sup>3+</sup> Bridgman-Stockburger grown single crystals, real crystn. rate and effect on cryst. quality 2-31617  
 Y<sub>3</sub>Al<sub>2</sub>O<sub>12</sub>, garnet, energies of dislocations 2-12593  
 YB<sub>3</sub> single crystals, growth and props. (*Japanese*) 2-51797  
 YbAlB<sub>4</sub> and Yb<sub>2</sub>AlB<sub>6</sub>, single cryst. growth from Al melt, struct. refinement 2-41510  
 ZnGeP<sub>2</sub>, IR absorpt., brightening effect, heat treatment effects 2-36654  
 ZnSe crystals, as-grown from melt, growth and elec. props. 2-40891  
 ZrO<sub>2</sub>, stabilised single crystals, growth and optical performance, SiO<sub>2</sub> influence 2-51791

## crystal growth from solution

- see also crystal growth from gel; liquid phase epitaxial growth  
 absorption-interferometric study of cryst. growth from soln. 2-10857  
 advance velocity of steps, under vol. and surface diffusion influence 2-25785  
 alkaline earth metal metasilicates, crystn. by saturated soln. slow cooling in metal chloride melt 2-35418  
 carnallite, vacuum crystallisation 2-35420  
 comparison between gel and solution grown crystals. 2-27069  
 computer simulation of growth of thick layers from solutions of finite solute concentration without convection 2-45092  
 corundum single crystals, growth by seed rotation method 2-2426  
 difficultly soluble compounds, method for studying 2-27071  
 diglycine sulphate, anhydrous single crystals, evaporation method growth and etching 2-12526  
 diglycine sulphate, dielec. props. and vibr. spectra 2-36497  
 electrolyte crystal growth theory, parabolic rate law 2-45094  
 ferroelectrics and dielectrics, explanatory cryst. growth techniques 2-36772  
 flux growth, use of cryst. seal 2-5804  
 growth parameters, from observed step patterns, quantitative estimation 2-25784  
 holographic studies, of soln. surrounding growing or dissolving cryst. 2-25778  
 lithium methylammonium sulphate, cryst. growth, quantitative analysis and thermal decomp. props. 2-41506  
 metal salt powders, sparingly soluble, slow precipitation from aq. soln., growth kinetics 2-25775  
 microscopic study by compound holographic interference and conventional microscope 2-10864  
 molecular crystal, long-chain, growth mechanism, surface characterisation (*Japanese*) 2-50566



**crystal growth from solution continued**

monolayer adsorption mechanism, theory of cryst. growth from impure soln. 2-12524  
 nucleation phenomena, and thermodynamics 2-25781  
 nylons, (6) and (6,6), cryst. state extrusion of melt crystallised and soln. grown crystals. 2-13763  
 peryleniumyl salts, one-dimens. metals, electrochem. synthesis and charact. 2-27068  
 quartz, synthetic, influence of seed sector localisation on cryst. quality (*French*) 2-1420  
 quartz crystals, grown hydrothermally in NaCl and KCl solns., growth patterns on rhombohedral faces 2-9258  
 Rochelle salt, growth rate of crystals. growing in aq. solns. 2-27070  
 Rochelle salt crystal growth from soln., surface diffusion model, activation energy, supersaturation 2-50564  
 seed crystal support, temperature controlled 2-46901  
 $\text{TeI}_2\text{AsF}_6$ , synthesis and X-ray cryst. struct. 2-35447  
 TGS crystal growth from soln. with ethyl alcohol additions 2-36773  
 TGS ferroelectric cryst. growth on Space Shuttle, holographic recording 2-15974  
 two-dimensional nucleation, crystallisation kinetics in binary soln. 2-35417  
 YIG crystals, isothermal growth by  $\text{PbF}_2\text{-B}_2\text{O}_3$  flux evaporation 2-2428  
 $\alpha\text{-AlPO}_4$ , berlinite crystals, hydrothermal synthesis 2-51790  
 $\text{AlPO}_4$ , hydrothermal growth, pressure-vol.-temp. rels. in  $\text{H}_2\text{O-H}_3\text{PO}_4\text{-AlPO}_4$  system 2-25783  
 BN, cubic, growth and characteristics of single crystal (*Japanese*) 2-36775  
 $(\text{Ba,Pb})(\text{NO}_3)_2$  crystals, growth from aq. soln., distrib. of elements 2-31616  
 $\text{BaCO}_3$ , hydrothermal synthesis, lattice constants 2-9261  
 $\text{BaMoO}_4$ , precipitation from aq. soln., cryst. growth kinetics 2-25772  
 $\text{BaSO}_4$  seed crystals, growth kinetics in suspension, cryst. size distrib. 2-25774  
 Bi double dichromates,  $\text{MBi}(\text{Cr}_2\text{O}_7)_2$ ,  $\text{M}=\text{Ag, K, TI, MH}_4$  and Rb, synthesis and crystallographic characters. (*French*) 2-8485  
 $\text{CaCO}_3$ , calcite, heterogeneous precipitation kinetics, rate const. and growth rate 2-45093  
 $\text{CaCO}_3$ , calcite crystals, soln. growth, etching of cleavage faces 2-16611  
 $\text{CaCO}_3$ , synthetic calcite crystal, cleavage face etch pits, low-angle grain boundaries 2-25902  
 $\text{CaMoO}_4$ , precipitation from aq. soln., cryst. growth kinetics 2-25772  
 $\text{Ca}_3(\text{PO}_4)_2\text{OH}$ , crystals. grown in aq. soln. at  $37^\circ\text{C}$ , morphology 2-9259  
 $\text{CaSO}_4$ , crystal intergrowth, effect of addition of electrolytes on crystallisation contacts formation 2-5063  
 $\text{CaSO}_4$ , supersaturated solns., formation of crystallisation contacts 2-1419  
 $\text{CaSO}_4\cdot 2\text{H}_2\text{O}$ , cryst. growth in  $\text{NH}_3$  soln. 2-2431  
 CdS film, n-n junction system 2-8893  
 $\text{Ce}_2(\text{SO}_4)_3\cdot 8(\text{H}_2\text{O})$ , prep. and characterisation study 2-5801  
 $\text{CoCr}_2\text{O}_4$ , spinel phase, unusual twinning 2-1494  
 $\text{Cs}_2\text{CuCl}_4\cdot 2(\text{H}_2\text{O})$  single crystals, growth 2-51788  
 $\text{Cs}_2\text{Cu}_2\text{Cl}_7\cdot 2\text{H}_2\text{O}$  single crystals, growth 2-51788  
 $\text{Cs}_2\text{Cu}_2\text{Cl}_{10}\cdot 2\text{H}_2\text{O}$  single crystals, growth 2-51788  
 $\text{CsNiMF}_6$  ( $\text{M}=\text{Fe, CR}$ ), flux growth, use of cryst. seal 2-5804  
 $\text{CsR}_2\text{P}_2\text{O}_7$  ( $\text{R}=\text{rare earth, growth, morphology and struct.}$  2-22156  
 $\text{Fe}_2^{3+}\text{Fe}_2^{2+}[\text{PO}_4]_6$ , hydrothermal crystn. and crystal structure 2-1464  
 $\alpha\text{-Fe}_2\text{O}_3$ , haematite, prep. by oxidation-precip., effect of heating 2-51946  
 $\text{H}_2\text{O-H}_3\text{PO}_4\text{-AlPO}_4$  system, pressure-vol.-temp. behaviour, rel. to hydrothermal growth of  $\text{AlPO}_4$  2-25783  
 $\alpha\text{-Hgl}_2$ , crystal growth using vapour phase and sealed tube, forced flux method 2-22157  
 KCl, vacuum crystallisation to carnalite from hot liquor 2-35420  
 $\text{KCl}:\text{Cd}^{2+}$ , linear crystn. rate of KCl, Cd ions influence, adsorption role (*Russian*) 2-31615  
 $\alpha\text{-K}_2\text{Cr}_2\text{O}_7$ , anomalous cryst. growth, rel. between cryst. struct. and morphology 2-5803  
 $\text{K}_4\text{Fe}(\text{CN})_6\cdot 3\text{H}_2\text{O}$ , polytype form. conditions, stat. temp. control 2-40312  
 $\text{K}_1\text{-Li}_1\text{TaO}_3$  crystal growth by slow-cooling method, NMR meas. of Li content, phase diagram 2-46900  
 $\text{KMnF}_3\text{-KCoF}_3$ , mixed crystals, hydrothermal growth 2-51787  
 $\text{K}_2\text{MnO}_2$  with  $\alpha\text{-MnO}_2$  struct., needle-shaped cryst. growth by molten salt electrolysis 2-46899  
 $\text{K}_2\text{NiF}_3$ , flux growth, use of cryst. seal 2-5804  
 $\text{K}_3\text{Ta}_2\text{B}_5\text{O}_{19}$ , piezoelectric, crystal struct. at room temp. and growth 2-25819  
 $\text{KTiOPO}_4$  crystals, nonlinear optical props. 2-961  
 $\text{LiNbO}_3$  single cryst. films, LPE growth for SAW devices 2-2467  
 $\alpha\text{-LiNbO}_3$ , cryst. growth and elec. props., Chinese research 2-46896  
 $\text{NH}_4\text{H}_2\text{PO}_4$ , comparison between gel and solution grown crystals. 2-27069  
 $\text{NH}_4\text{H}_2\text{PO}_4$ , cryst. growth from soln. surface diffusion model, activation energy, supersaturation 2-50564  
 $\text{NH}_4\text{H}_2\text{PO}_4$  monocrystals, growth rate of (100) faces in mag. fields 2-1422  
 $\text{NH}_4\text{H}_2\text{PO}_4$ , nucleation from aqueous soln., impurity effect 2-35413  
 $\text{NH}_4\text{HSO}_4$ , partly deuterated, ferroelectric props. 2-31425  
 $\text{NaHCO}_3$ , crystallisation in  $\text{NH}_3$ -soda process, metastable zone 2-25773  
 $\text{Na}_2\text{MnO}_4$  crystals, hydrothermal synthesis and props. 2-2429  
 $\text{NaNbO}_3$ , bladed crystals, growth and investigation 2-5805  
 $\text{Na}_2[\text{AlSiO}_4]_6(\text{CCl}_3)_{1-x}(\text{OH})_{2x}\cdot n\text{H}_2\text{O}$  ( $x=0.03\text{-}0.05$ ), single crystal growth, props. 2-51789  
 $\text{NbB}_2$ , single crystals. grown from soln., characteris., hardness anisotropy prismatic slip 2-9417  
 $\text{NdOCl}$  single crystals, flux growth 2-51786  
 Ni complexes, bis(1,3-dithiol-2-thion-4,5-dithiolato)-nickelate and donor-acceptor cpd. with TTF, synthesis, elec. and mag. props. (*French*) 2-36025  
 $\text{PbCO}_3$ , hydrothermal synthesis, lattice constants 2-9261  
 $\text{Pb}(\text{Fe}_0\text{Nb}_{0.5})\text{O}_3$ , ferroelec. crystal, high-temp. soln. growth, single domain obs. 2-46897  
 $\text{PbGeGe}_2\text{O}_4$  single crystals, growth and certain props. 2-36774  
 $\text{Pb}(\text{Mn}_0\text{Nb}_{0.5})\text{O}_3$ , ferroelec. crystal, high-temp. soln. growth 2-46897  
 $\text{Rb}_2\text{MnO}_2$  with  $\alpha\text{-MnO}_2$  struct., needle-shaped cryst. growth by molten salt electrolysis 2-46899  
 S, single crystals, prep. from soln. 2-40307  
 $\text{Sb}(\text{SbNb}_{1-x})\text{O}_4$  single cryst., synthetic, dielec. props., crystn. parameter variation 2-51511  
 Se crystals, orthorhombic, grown from  $\text{CS}_2$  soln., structure 2-25811  
 Si-Ti, solution growth for 3 to 5  $\mu\text{m}$  photocond. detectors 2-17614  
 $\text{SrCO}_3$ , hydrothermal synthesis, lattice constants 2-9261  
 $\text{SrMoO}_4$ , precipitation from aq. soln., cryst. growth kinetics 2-25772

**crystal growth from solution continued**

$\text{SrTiO}_3$ , reduced crystals., nonstoichiometry, EPR invest. 2-17337  
 $\text{SrWO}_4$  crystallisation from  $\text{Na}_2\text{WO}_4$  melt, DTA, thermodynamic and kinetic parameters 2-35415  
 $\text{TaB}_2$ , single cryst. growth by floating zone and Al soln. methods, characteris. 2-9263  
 $\text{TiB}_2$ , single crystals. grown from soln., high temp. hardness, solvent influence (*Japanese*) 2-9416  
 $\text{Ti}_4(\text{Pt}(\text{CN})_4)\text{CO}_3$ , one-dimens. metal, synthesis and mol. struct. 2-30440  
 $\text{Y}_2\text{Al}_2\text{O}_{12}$  garnet, energies of dislocations 2-12593  
 $\text{Y}_2\text{Fe}_2\text{O}_{12}$  crystals, growth 2-27159  
 $\text{YIG}(\text{Ga})$ ,  $\text{PbO-PbF}_2$  flux-grown crystals, lattice distortions caused by growth striations near surface 2-45089  
 $\text{ZnO}$ , single cryst. prep. by soln. slow cooling and flux reaction technique 2-36771  
 $\text{ZnO}$  thin plates, prep. and microstruct. 2-51784  
 $\text{ZnO-B}_2\text{O}_3\text{-H}_2\text{O}$  system, phase formation under hydrothermal conditions 2-50567  
 $\text{ZnO-B}_2\text{O}_3\text{-Na}_2\text{O}(\text{K}_2\text{O})\text{-H}_2\text{O}$  systems, phase formation under hydrothermal conditions 2-50567  
 $\text{ZnS}$ , crystn. from soln., X-ray anal., luminesc. 2-41507  
 $\text{ZnS-CdS}$ , synthesis and cocrystn. under hydrothermal conditions, phase form., analysis and struct. 2-41505

**crystal growth from vapour**  
 see also vapour phase epitaxial growth  
 chemical transport, in closed tubes 2-46890  
 diamond, homogeneous crystallisation from gas phase 2-5064  
 growth parameters, from observed step patterns, quantitative estimation 2-25784  
 ice, growth kinetics from vapour phase, growth forms 2-25786  
 ice crystals, grown from vapour phase, growth rates and growth forms 2-46892  
 molecular crystals, nucleation from vapour on anthracene microcrystals, UV radiation effect 2-8458  
 2,2,6,6-tetramethyl piperidino oxy, TANANE, cryst. growth and transition mechanism (*Japanese*) 2-17612  
 $\text{TSeT-I}_2$ , quasi-one-dimens. cond. cation-radial salts, synthesis and characteris. 2-21569  
 C, deposition during decomp. of methylchlorosilanes 2-13634  
 $\text{CdAs}_2$ , crystal growth and vitreous state form. in  $\text{Cd-As-I}$  system 2-27066  
 $\text{Cd}_3\text{As}_2$ , crystal growth and morphology, Miller indices, X-ray and optical meas. 2-25789  
 $\text{Cd}_2\text{P}_3$ , prep. technology, cryst. struct. and semicond. props., optical absorption spectra meas. 2-25854  
 $\text{Cd}_2\text{P}_{10}$ , prep. technology, crystal struct. and semicond. props. optical absorption spectra meas. 2-25854  
 $\text{CdS}$ , single crystal growth from vapour 2-2425  
 $\text{CdS}$  single crystals, growth by vapour-phase hydrogen transport 2-46891  
 $\text{CdS}$  tetrapod-like crystals, growth in smoke prepared by gas evaporation 2-51782  
 $\text{CdTe}$ , crystals, vapour phase growth 2-27063  
 $\text{Cr}_2\text{Si}_3$ , whiskers and hollow crystals, chem. vapour growth 2-30779  
 $\text{Cu-Zn}$ , new phase, growth kinetics, saturation of Cu single crystals. with Zn vapour (*Russian*) 2-35424  
 $\text{CuAlS}_2$ , blue crystals, growth and impurity charact. 2-31614  
 $\text{Fe}_{1-x}\text{Eu}_x\text{Cr}_2\text{Se}_4$ , synthesis and physicochem. props., semicond. behaviour 2-9256  
 $\text{GaAs}$ , growth rate anisotropy and growth in gas transport systems 2-27065  
 $\text{GaP}$  cryst., morphology and mechanism of growth from gas phase 2-27064  
 Ge chemical transport, with  $\text{H}_2\text{O}$  (*German*) 2-30428  
 $\text{GeSe-GeI}_4$  system, chem. vapour transport and thermal behaviour, microgravity data 2-51780  
 $\alpha\text{-Hgl}_2$ , crystal growth using vapour phase and sealed tube, forced flux method 2-22157  
 $\text{Hgl}_2$ , role of polyethylene in platelet growth 2-36769  
 $\text{In}_2\text{O}_3$ , cryst. growth from vapour phase 2-31613  
 $\text{In}_2\text{SnO}_3\text{-Si}$  solar cells fabrication using ion beam milling/sputter deposition and low pressure oxide growth process 2-37230  
 $\text{MgAl}_2\text{O}_4$  spinel synthesis by reaction of  $\text{Al}(\text{OH})_3+\text{MgCO}_3+\text{MgCl}_2$  eutectic mixture 2-41504  
 $\text{PbSe}$  crystal, morphology, struct. and microhardness 2-5084  
 $\text{PbTe}$ , diffusive-convective physical vapour transport from Te-rich solid source 2-45087  
 (SN), single crystals, improved growth method 2-31612  
 (SN), whiskers, prep. and struct. 2-16975  
 Si ribbon crystals, deposited from gas phase, growth and struct. 2-22154  
 $\text{SiC}$ , crystallisation kinetics, mass transfer during growth 2-5067  
 $\text{SiC}$ , deposition during decomp. of methylchlorosilanes 2-13634  
 $\alpha\text{-SiC}$ , growth of single crystals, analytical monitoring of  $\text{N}_2$  2-27499  
 $\text{Sm}_2(\text{SiO}_4)_3$ , whiskers, growth and X-ray study 2-51068  
 $\text{SnO}_2$ , cryst. growth from vapour by reaction of Sn with  $\text{H}_2\text{O}$  vapour 2-51781  
 $\text{TiB}_3$ , chemical vapour transport by different transport agents, expt. and thermodynamics models 2-35422  
 $\text{TiO}_2$ , anatase, single crystals, growth by chem. transport reactions 2-51783  
 $\text{TiO}_2$ , brookite, single crystals, growth by chem. transport reactions 2-51783  
 $\text{TiO}_{17}$  crystal growth by chemical vapour transport 2-46894  
 $\text{V}_2\text{S}_4$ , single cryst. growth, some thermodynamic considerations for vapour transport process 2-27062  
 $\text{V}_2\text{S}_8$ , single cryst. growth, some thermodynamic considerations for vapour transport process 2-27062  
 $\text{WO}_{2.9}$  needles grown in electron microscope, domain obs. 2-46893  
 YIG single crystals, growth by chem. vapour transport, thermodynamic anal. of  $\text{Y}_2\text{Fe}_2\text{O}_{12}\text{-CCl}_4$  system 2-30427  
 $\text{YVO}_4\text{:Eu}$ , phosphor, cryst. growth by chem. transport method 2-9257  
 $\text{ZnCr}_2\text{O}_4$ , single cryst. growth by chem. transport 2-17611  
 $\text{Zn}_{1-x}\text{Eu}_x\text{Cr}_2\text{Se}_4$ , synthesis and physicochem. props., semicond. behaviour 2-9256  
 $\text{Zn}_3\text{P}_2$ , single cryst. growth 2-13635  
 $\text{Zn}_3\text{P}_2$ , single-crystal growth using closed-tube horizontal vapour transport system, bulk elec. props. 2-36770

**crystal hyperfine field interactions**

L-alanine;  $\text{Cu}(\text{II})$ , nuclear quadrupole coupling tensor and hyperfine coupling tensor, ENDOR spectra 2-36476



## crystal hyperfine field interactions continued

- alkali halides, spin-lattice relax. mechanisms of  $V_k$  and related centres 2-41195  
alkaline earth halides, spin-lattice relax. mechanisms of  $V_k$  and related centres 2-41195  
amorphous alloys, atomic struct., mag. meas., review 2-30399  
anthracene, photoionisation and mag. field modulated recomb., time resolved fluorese. 2-46680  
anthracene-tetracyanobenzene charge transfer crystals, optical nuclear polarisation via hyperfine relax. 2-51500  
antiferromagnet, spin wave dynamics due to interaction with nucl. subsystem 2-36335  
cubic solids, elec. field gradients, point defects effects 2-13023  
cyanoguanidine single cryst., X-ray irradi., EPR spectra at  $-60^\circ\text{C}$  to room temp. 2-21870  
diamond: Fe, ion implanted, Mossbauer effect evidence of high internal press. 2-2168  
dilute alloys, impurity binding energy, correlation with heat of formation 2-1497  
dimethylammonium copper bromochloride, ferromag., hyperfine interactions, Br NMR study 2-2144  
1,8-diphenylnaphthalene radical anion, transannular electron, ENDOR study 2-51499  
EPR, photoacoustic detection 2-26753  
F-centres, impurity, ground state and optical props. 2-21530  
ferromagnetic metals, hyperfine fields at impurities 2-51139  
hyperfine constant, g-values, linear scaling. 2-45915  
hyperfine magnetic fields at  $^{57}\text{Fe}$  nuclei, press. depend. regularities 2-51485  
inorganic cpds., NQR study 2-5601  
iron picolinate, dimer and monomer, Mossbauer study 2-51507  
magnetic ions in metals, theory of ESR, review 2-46360  
metal, defects detected by spin precession methods, review 2-30848  
metal-H systems, isotope effect on electronic struct. of H, review 2-41224  
metallic solids, amorphous, Mossbauer spectroscopy studies 2-31340  
metals and alloys, noncubic, elec. field gradient, PAC studies 2-31352  
Mossbauer effect and appls. in materials research 2-31338  
paramagnetic ion-ligand electron-nucleus interactions in absence of  $\sigma$  or  $\pi$  bonds 2-17037  
pentacene in p-terphenyl crystals, photoexcited triplet state, electron spin echoes 2-9022  
Permalloy,  $^{119}\text{Sn}$  Mossbauer obs. of ordering process, mag. hyperfine field, annealing influence, elec. resist. 2-9058  
phenacyl chloride, X-ray irradi., ENDOR and ELDOR spectra 2-9057  
quartz crystals  $\mu^+e^-$  hyperfine interactions 2-41243  
rare earth alloys,  $\text{RFe}_2$ ,  $\text{RAI}_2$  and  $\text{RZn}$ , 4f moment determ. from NMR 2-46420  
rare earth alloys,  $\text{RFe}_2$  2-8985  
rare earth compounds,  $\text{RRh}_4\text{B}_4$ , superconductivity and magnetism 2-17199  
rare earth impurities in ferromag. host metals, nucl. orientation 2-46397  
rare earth-iron intermetallics,  $\text{RFe}_2$ , NMR study of hyperfine field parameters and mag. moments 2-31324  
Si, electron bombarded, nuclei optical polarisation and excited triplet states 2-2162  
spin precession methods appl. to materials science problems 2-31341  
textured interaction, angular correlation and distrib. expts. formulation 2-26341  
time-dependent hyperfine interaction studies 2-26339  
transition metals, hyperfine interaction studies of He trapping 2-31342  
tungstates, quadrupole interactions,  $^{182}\text{W}$  Mossbauer spectra (French) 2-5612  
two-layer system, EPR spectra changes by inhomogeneous plane stress distrib. 2-41177  
zinc thiodiacetate:  $\text{Cu}^{2+}$ , EPR spectrum, g-tensor and hyperfine parameters 2-51455  
[ $\text{MnF}_6$ ] $^{4-}$  complexes in fluorides, superhyperfine interactions and covalency contrib. to axial zero field splitting 2-5373  
 $\text{Ag}^{2+}$ :CKI, outward relax., isotropic superhyperfine tensor 2-40857  
 $\text{Ag}^{111}$  in foil, quenched, vacancy detrapping, TDPAC study 2-12632  
Al, electric field gradient tensor in crystals, with dil. vacancy conc. 2-21545  
 $\text{Al}(\text{NO}_3)_3 \cdot 9\text{H}_2\text{O}$ :  $\text{Fe}^{3+}$ , Mossbauer study of hyperfine struct. 2-31329  
 $\alpha\text{-Al}_2\text{O}_3$ , neutron irradi.,  $\text{F}^+$  centre, ENDOR study 2-17366  
 $\text{Ba}(\text{Zn}_{1-x}\text{Mn}_x)_2\text{Fe}_{10}\text{O}_{27}$  ( $\text{M}=\text{Ni}, \text{Cu}$ ), hexagonal ferrite, mag. and Mossbauer study 2-21767  
 $\text{CaF}_2$ :  $\text{Pr}^{3+}$ , optical hole burning by superhyperfine interactions 2-36691  
 $\text{CaO}$ :  $\text{Cu}$ ,  $\text{Cu}^{2+}$  ion pairs, EPR study 2-46369  
 $\text{Cd-Mg}$ ,  $^{111}\text{Cd}$  probe nuclei, electric field gradient, quadrupole coupling const., TDPAC meas. 2-17372  
 $\text{Cd}_{1-x}\text{Mn}_x\text{Te}$ , transition from spin glass to single impurity behaviour 2-36360  
 $\text{ClO}$ , matrix isolated in  $\text{CO}_2$ , EPR spectra (German) 2-39425  
Co complex, triazene-1-oxide-Co(II), forbidden hyperfine lines in EPR spectra 2-36415  
Co III complexes, Co III (tris-tropolonate and tris-4-isopropyltropolonate),  $^{57}\text{Co}$ -labelled, Mossbauer study 2-46445  
Co-P (9 at.%) amorphous ferromag., NMR spectrum, discontinuous variation during heating (Russian) 2-5590  
 $\text{Co}_2\text{MnSn}$ , Sn hyperfine field distrib. meas. 2-31327  
 $^{58}\text{CoFe}$  and  $^{60}\text{CoFe}$ , nuclear spin lattice relax. 2-26777  
 $\text{Cr}(\text{CO})_5$ :  $\text{Fe}(\text{CO})_5$  single cryst., EPR spectrum 2-36413  
 $\text{Cr}_2\text{O}_3$ :  $^{57}\text{Fe}$ , Mossbauer study of mag. hyperfine interactions (Russian) 2-13382  
 $\text{CsCuCl}_3$ , Jahn-Teller phase transitions,  $^{133}\text{Cs}$  quadrupole perturbed NMR study 2-21897  
 $\text{CsFeCl}_3 \cdot 2\text{H}_2\text{O}$ , crystal field effects, Mossbauer study 2-26795  
 $\text{CsFeCl}_3 \cdot 2\text{H}_2\text{O}$ , mag. ordering, Mossbauer study 2-26796  
Cu,  $^{111}\text{In}$  implanted, brute force/NMR expt. 2-36451  
Cu II complex, trans-tetra(micronazole) Cu II chloride dihydrate, EPR and optical spectra (French) 2-21873  
Cu-Fe supersaturated solid soln., Mossbauer spectrum model, rel. to Fe atom states 2-41236  
 $\text{Cu}_2\text{Fe}_2\text{Cr}_2\text{S}_4$ , ferromagnetic semicond., hyperfine interactions and mag. props. 2-26346  
 $\text{Cu}_2\text{Rh}_{1-x}$ , mag. props., mag. susceptibility and NMR meas. 2-17261  
 $\text{DyH}_3$ , hexagonal, non-axial elec. field gradient at Dy nucleus,  $^{161}\text{Dy}$  Mossbauer reson. 2-26791  
Er, magnetic struct., mag. hysteresis effect Mossbauer study 2-36328  
 $\text{Er}_6\text{Mn}_{21}\text{H}_{21}$ , mag. order obs. using Mossbauer effect 2-21772

## crystal hyperfine field interactions continued

- $\text{Er}_2\text{-xPr}_x\text{Co}_7$ , mag. props., Mossbauer effect 2-36385  
 $\text{ErRh}_2\text{B}_4$ , mag. supercond., hyperfine mag. field, Mossbauer study 2-36216  
 $\text{EuPt}_3$ , valence instability effect on mag. hyperfine interaction at very high press., Mossbauer study 2-2166  
 $\text{EuSr}_{1-x}\text{S}_x$ , dil. Heisenberg ferromag. and spin-glasses, NMR and Mossbauer effect studies 2-31357  
Fe cluster, magnetism and electronic struct. 2-41102  
Fe, cubic ferromagnet, pseudoquadrupole effect 2-36375  
Fe, muon hyperfine fields 2-46451  
Fe ultrafine particles, Mossbauer effect, hyperfine fields 2-46435  
 $\text{Fe}^{183}\text{Ta}$ , dil., Knight shift from hyperfine field anal. of NMR-ON results 2-46400  
Fe-Al, Mossbauer spectra hyperfine struct. parameters 2-5613  
Fe-B (18 wt.%), amorphous and crystalline, NMR study 2-26771  
Fe-Co film, NMR, conduction electron spin reorientation 2-5593  
Fe-Mn(Au), dil., hyperfine field, press. and temp. depend. 2-35980  
Fe-Mo(Ti)(Nb), dilute, muon hyperfine fields 2-46451  
 $\text{Fe}_{3-x}\text{M}_x\text{Si}$  ( $\text{M}=\text{transition metal}$ ), spin echo NMR study 2-9056  
 $\text{Fe}_3\text{AlSi}_{1-x}$ , mag. hyperfine field and isomer shift, Mossbauer study 2-17374  
 $\text{Fe}_{73}\text{Al}_{27}\text{Si}_{0.4}$ , amorphous, mag. props. and crystn. 2-46441  
 $\text{FeMn}_x\text{Al}$ , Mossbauer spectrum, hyperfine struct. investig. 2-13380  
 $(\text{Fe}_{1-x}\text{Mn}_x)_{80}\text{B}_{20}$ , amorphous, mag. props., magnetisation and Mossbauer effect study 2-26666  
 $\text{Fe}_{1-x}\text{Mn}_x\text{Si}$ , hyperfine field, NMR satellites 2-46406  
 $(\text{Fe}_{1-x}\text{Mn}_x)_2\text{S}_3$ , hyperfine coupling tensor anisotropy,  $^{57}\text{Fe}$  Mossbauer study 2-41237  
 $(\text{Fe}_{1-x}\text{Ni}_x)_{80}\text{B}_{20}$ , metallic glass, mag. and Mossbauer study 2-21921  
 $(\text{Fe}_{1-x}\text{Ni}_x)_{75}\text{P}_{15}\text{B}_6\text{Al}_1$ , amorphous, Mossbauer study 2-31356  
 $\text{Fe}_2\text{Ni}_7\text{Si}_3\text{B}_{13}$ , amorphous spin glass, Mossbauer study 2-31331  
 $\alpha\text{-Fe}_2\text{O}_3$ , ultrafine particles, Mossbauer effect, hyperfine fields 2-46435  
 $\text{Fe}_2\text{O}_3$ - $\text{TiO}_2$  system, monoclinic phase struct. determ. and Mossbauer spectroscopy 2-25826  
 $\text{Fe}_2\text{O}_4$ , ultrafine particles, Mossbauer effect, hyperfine fields 2-46435  
FeOCl and intercalates, lattice dynamics, hyperfine interactions and mag. ordering temp. 2-41241  
FeOCl, intercalation cpd. with crown ether 2-21080  
 $\alpha\text{-FeOOH}$ , goethite, cryst. struct. during dehydration to haematite, Mossbauer obs. and Morin temp. of haematite 2-5606  
 $\text{Fe}_2\text{PO}_4$ , mixed valence compound, prep. Mossbauer, structural and mag. studies (French) 2-50600  
 $\text{Fe}(\text{Sb}_{1-x}\text{Te}_x)_2$ ,  $^{57}\text{Fe}$  Mossbauer effect study, struct. transforms. 2-13379  
 $\text{Fe}_2\text{SnMo}_6\text{S}_8$ , Chevrel phase cpd., Mossbauer studies of mag. props. 2-17380  
 $\text{Fe}_2\text{TiO}_3$ , Mossbauer study, mag. ordering temp. 2-31334  
 $\text{Fe}_3\text{-xV}_x\text{Si}$ , hyperfine field, NMR satellites 2-46406  
 $^{57}\text{Fe}^{3+}$  in trigonal symmetry, EPR and ENDOR spectra, generalised spin Hamiltonian calcs. 2-5576  
GaAs, optical detection of NMR under optical pumping, spin-exchange averaging between electronic states 2-17369  
GaAs-type semiconds., electron-nucleus spin system, optical orientation in inclined mag. field 2-35981  
GaP, ESR of deep double donor  $\text{P}_{\text{Ga}}$  2-13337  
GdAl $_3$ , cubic ferromagnet, pseudoquadrupole effect 2-36375  
GdCo $_3$ , Laves phase,  $^{59}\text{Co}$  NMR study 2-17349  
 $\text{HgSe:Mn}^{2+}$ , hyperfine constant, g-values, linear scaling. 2-45915  
Ho, magnetic struct., mag. hysteresis effect Mossbauer study 2-36328  
HoCo $_3$ , Laves phase,  $^{59}\text{Co}$  NMR study 2-17349  
 $\text{In}_2\text{Se}_3$ , cryst. struct. and phase transition, elec. field gradient, TDPAC study 2-26797  
 $\text{Ir}_{1.07}\text{Mn}_{1.07}\text{Sn}_{0.86}$ , Sn hyperfine field distrib. meas. 2-31327  
 $\text{KCl:}(\text{Fe}(\text{CN})_6)^{4-}$ , X- and  $\gamma$ -irrad., ESR studies 2-31267  
 $\text{KH}_2\text{PO}_4$ -type ferroelectrics and antiferroelectrics, cationic dynamics, paramag. probes 2-36490  
 $\text{LiFeCo}_2\text{TeO}_8$ , spinel,  $^{57}\text{Fe}$  and  $^{127}\text{Te}$  Mossbauer study 2-41240  
 $\text{LiFeNi}_2\text{TeO}_8$ , spinel,  $^{57}\text{Fe}$  and  $^{127}\text{Te}$  Mossbauer study 2-41240  
 $\text{Li}_2\text{FeV}_2\text{O}_8$ , Mossbauer study 2-26802  
 $\text{Li}_2\text{O}$ , neutron and ion irradi. damage, ESR study 2-17338  
 $\text{Li}_2\text{Ta}_{1-x}\text{Fe}_x\text{S}_2$ , intercalation cpd., electronic struct., Mossbauer effect study 2-31343  
 $\text{Li}_{1-x}\text{-yZn}_{1-x}\text{(CrO}_4\text{)}_4$ , LISICON crystals, superionic cond., NMR study (Chinese) 2-31294  
 $\text{Mg}_2\text{Mn}_{2-3}\text{Fe}_{01}\text{O}_4$ , Mossbauer study of cation distrib. and lattice distortion 2-21928  
 $\text{Mg}_2\text{SiO}_4$ , forsterite, elec. field gradient calc., overlap contrib. 2-35977  
 $\text{MnCl}_2 \cdot 4\text{H}_2\text{O}$ , NMR of oriented  $^{54}\text{Mn}$  nuclei 2-26778  
 $\text{Mn-V}_{1-x}\text{Al}_x$ , hyperfine field, NMR satellites 2-46406  
 $\text{NaBrO}_3$  crystal,  $^{23}\text{Na}$  shielding tensor, NMR study 2-17350  
 $\text{Na}_2\text{Mg}_{3-x}\text{Cu}_x\text{Si}_2\text{O}_{10}$ , ESR and diffuse refl. spectra, ZZ to 298K (French) 2-41186  
 $\text{NdCo}_2$ , Laves phase,  $^{59}\text{Co}$  NMR study 2-17349  
 $\text{NdFe}_2$ , Laves phase cpds., Mossbauer study of mag. props. 2-31355  
Ni, cubic ferromagnet, pseudoquadrupole effect 2-36375  
Ni, Hf ion implanted, laser pulse melting, TDPAC, Rutherford backscatt. and channelling meas. 2-31351  
 $\text{Ni}_2\text{MnSn}$ , Heusler alloys, Sn hyperfine field distrib. meas. 2-31327  
 $\text{NpCo}_2\text{Si}_2$ , antiferromagnet, high press. Mossbauer study 2-46442  
 $\text{Np}_2\text{Si}_3$ ,  $^{237}\text{Np}$  Mossbauer spectra 2-31336  
 $\text{PbF}_2$ :  $\text{Mn}^{2+}$ ,  $^{19}\text{F}$ -Mn transferred hyperfine interaction, NMR study 2-17352  
 $\text{Pd}_3\text{FeH}_x$ , site occupancy and cryst. struct.,  $^{57}\text{Fe}$  Mossbauer study 2-17376  
 $\text{Pd}_2\text{MnSn}$ , Sn hyperfine field distrib. meas. 2-31327  
 $\text{PrFe}_2$ , Laves phase cpds., Mossbauer study of mag. props. 2-31355  
 $\text{PtMnSn}$ , Sn hyperfine field distrib. meas. 2-31327  
 $\text{RbBr:}(\text{Fe}(\text{CN})_6)^{4-}$ , X- and  $\gamma$ -irrad., ESR studies 2-31267  
 $\text{RbCl:}(\text{Fe}(\text{CN})_6)^{4-}$ , X- and  $\gamma$ -irrad., ESR studies 2-31267  
 $\text{RbFeCl}_3 \cdot 2\text{H}_2\text{O}$ , crystal field effects, Mossbauer study 2-26795  
 $\text{RbFeCl}_3 \cdot 2\text{H}_2\text{O}$ , mag. ordering, Mossbauer study 2-26796  
 $\text{Rb}_2\text{ZnCl}_4 \cdot \text{Mn}^{2+}$ , commensurate-incommensurate transitions, EPR study 2-31266  
 $\text{Si:Au}$ , Fe, hyperfine interactions of Au-Fe complex, electronic struct., EPR obs. 2-45920  
 $\text{Si:Au:Fr}$ , EPR study, hyperfine interactions 2-41187  
 $\alpha\text{-SiO}_2$ :  $(\text{AlO}_4/\text{H}^+)^{4-}$ , mag. props. of centres by EPR 2-26742  
 $\alpha\text{-SiO}_2$ :  $(\text{AlO}_4/\text{Li}^+)^{4-}$ , mag. props. of centres by EPR 2-26742  
 $\alpha\text{-SiO}_2$ :  $\text{AlO}_4$ , mag. props. of centres by EPR spectra 2-26741  
 $\text{Sn}_2\text{Mo}_2\text{S}_8$ , supercond. transition temp., stoichiometry effect, Mossbauer study 2-31001



**crystal hyperfine field interactions continued**

- Ta, strain elec. field gradient tensor, temp. depend., acoustic NMR study 2-46393  
 TbCo<sub>2</sub>, Laves phase, <sup>59</sup>Co NMR study 2-17349  
 TiO<sub>2</sub>, reson. Raman scatt., quadrupolar interactions effect 2-51589  
 UO<sub>2</sub> complexes, luminesc. excited state splitting 2-41400  
 USn<sub>3</sub>, neutron or gamma irradiated, Mossbauer effect study 2-30498  
 VSi<sub>2</sub>, Knight shift, high temp. NMR study 2-41219  
 V<sub>2</sub>Si, electronic struct. and quadrupole interactions, cluster model 2-26349  
 V<sub>2</sub>Si, Knight shift, high temp. NMR study 2-41219  
 YAlO<sub>3</sub>:Eu<sup>3+</sup>, anisotropic mag. shielding and quadrupole coupling consts. of <sup>151</sup>Eu<sup>3+</sup> and <sup>153</sup>Eu<sup>3+</sup>, NQR study 2-17364  
 YAlO<sub>3</sub>:Eu<sup>3+</sup>, nuclear mag. moment anomaly of Eu<sup>3+</sup>, optical hole burning and optically detected NQR expts. 2-2163  
 YAlO<sub>3</sub>:Pr<sup>3+</sup>, mag. hyperfine tensor, NMR study 2-26770  
 YIG, substituted with diamag. ions, <sup>57</sup>Fe NMR line splitting, cation distrib. 2-9054  
 Y<sub>6</sub>Mn<sub>23</sub>:Fe, mag. order, Mossbauer study 2-26587  
 Y<sub>6</sub>Mn<sub>23</sub>H<sub>36</sub>:Fe, mag. order, Mossbauer study 2-26587  
 YPd<sub>3</sub>:Er(Dy)(Yb), cryst. field effects on ESR 2-36423  
 YbFe<sub>2</sub>, Laves phase cpds., Mossbauer study of mag. props. 2-31355  
 ZnSe:Cu<sup>2+</sup>, optically detected mag. resonance study 2-36480  
 Zr(Fe<sub>1-x</sub>Al<sub>x</sub>)<sub>2</sub>, Laves phase, mag. hyperfine interactions, <sup>57</sup>Fe Mossbauer study 2-46438  
 Zr(Fe<sub>1-x</sub>Co<sub>x</sub>)<sub>2</sub>, Laves phase, mag. hyperfine interactions, <sup>57</sup>Fe Mossbauer study 2-46438  
 Zr(Fe<sub>1-x</sub>Mn<sub>x</sub>)<sub>2</sub>, ferromag., mag. transition, <sup>55</sup>Mn NMR spin echo study 2-26788

**crystal imperfections see crystal defects****crystal inclusions**

- crystallisation front, open inclusions role of supercooled melt in gas bubbles formation 2-50569  
 crystallisation front of melt, impurities conc. at boundary 2-50568  
 diglycine sulphate, anhydrous single crystals, evaporation method growth and etching 2-12526  
 disclination loops, rectangular wedge, elastic props. 2-8518  
 elastic media, cavitation under hydrostatic tension 2-50621  
 Hofmann type inclusion cpd., Raman and IR spectra 2-2271  
 III-V semiconductor, elemental group V deposits in native oxides, surface refl. Raman scatt. detection 2-17475  
 light-scattering tomography, lattice defects, characterisation of crystals (Japanese) 2-17499  
 M<sup>1</sup>Cl<sub>2</sub>:M<sup>1</sup>Cl<sub>2</sub>, oriented microinclusions on crystallisation from melt (Russian) 2-13639  
 metals, fracture modes, creep and hot working 2-41731  
 metals and alloys, BCC lattice, ductile-brittle transition, nonmetallic inclusions influence 2-52045  
 metals with inclusions, ductile fracture cavity growth and coalescence (German) 2-27285  
 naphthalene, melting, heterogeneous inclusion motion and dislocation generation in premelting regime (Russian) 2-45541  
 naphthalene crystal, near melting point, movement of foreign impurity 2-30659  
 nonlinear viscous material, stress conc. analysis on circular rigid inclusion 2-16243  
 polished metal surface, high-precision linear measure evaluation 2-42986  
 steel, alloy, Ni-Co, Charpy impact props., role of oxide and sulphide particles 2-13820  
 steel, constructional, BCC lattice, ductile-brittle transition, nonmetallic inclusions influence 2-52045  
 steel, Cr-Mo-V, creep fracture 2-52036  
 steel, low-alloy, powder forged, preforming treatments influence on mech. props., inclusion content 2-41736  
 steel, mild, H diffusion, effect of sulphide inclusions 2-41730  
 steel, mild, hot rolled sheet, MnS inclusion effect on mech. props. 2-51959  
 steel, Ni-Cr, fracture toughness effect of solute segregation 2-47175  
 steel, nonmetallic inclusions, role in metallurgical quality 2-5951  
 steel, rimming, inclusions and O behaviour after refining with base oxygen furnace 2-13738  
 steel, structural, fractures inspection for nonmetallic inclusions using TEM and C replicas 2-47276  
 steel castings, containing shrinkage, tests to determ. fatigue strength 2-9490  
 steel developments, carbon and alloy types 2-22241  
 stilbene, melting, heterogeneous inclusion motion and dislocation generation in premelting regime (Russian) 2-45541  
 transformation toughening, contrib. to fracture toughness 2-51923  
 transformation toughening, size effects assoc. with thermodynamics of constrained transform. 2-51922  
 wear crack initiation, effect of second-phase particles 2-25981  
 Al and Al alloys 7075 and 7050, AE during tensile and compressive deform., microstruct., effect 2-31883  
 Al<sub>3</sub>Ga<sub>1-x</sub>Sb<sub>x</sub>, LPE (Japanese) 2-2469  
 CaHPO<sub>4</sub>·2H<sub>2</sub>O, brushite crystals grown rapidly in silica gel, morphology and surface struct. 2-45090  
 CdS film exhibiting residual cond., lux-ampere characts., superlinearity 2-1957  
 Cu, fatigue hardening and nucleation of persistent slip bands 2-51933  
 Fe, cast, grey, Mg modified, struct. state effect on failure 2-41755  
 Fe, cast, high-eutectoid, inoculated two-layer spheroidal graphite inclusion form. (Ukrainian) 2-27165  
 Fe, cast, microscopic distrib. of local strains under static load 2-41708  
 Fe-C alloys and structural steel, AE during tensile tests 2-31873  
 GaAs, radiation defect annealing, redistrib. of point defects 2-4152  
 InP, defects, birefringence study, comparison with electrochemical etching 2-40397  
 KCl, monocrystal, gas-liquid inclusions, migration model 2-1676  
 KCl:Pb, optical breakdown threshold, temp. depend., effect of impurities 2-25924  
 KClO<sub>4</sub> gel grown crystals, microstruct., 2-45177  
 KH<sub>2</sub>PO<sub>4</sub> crystals, improving bulk laser damage resist. by pulsed laser irradiation 2-50694  
 (Mg,Fe)SiO<sub>2</sub>, olivine, Fe-rich, grown by floating zone method, defect structs. 2-50646  
 NaCl, monocrystal, gas-liquid inclusions, migration model 2-1676  
 Si:Ho,P, grown from melt, second phase inclusion impurity conc. 2-5150  
 Si:Yb,P, grown from melt, second phase inclusion impurity conc. 2-5150

**crystal inclusions continued**

- SiC ceramic, inclusions of grain boundaries, EELS (TEM study) 2-35511  
 SiC layer epitaxial growth by sublimation sandwich method, struct. defects 2-35903  
 SiO<sub>2</sub> film, obtained in presence of catalyst, struct. and morphology, substrate contaminations influence 2-40710  
 ZnS:Cu single crystals, solubility of Cu<sub>2</sub>S, struct. characts. and mech. prop. anisotropy 2-12674  
 ZrO<sub>2</sub> stabilised single crystals, growth and optical perfection, SiO<sub>2</sub> influence 2-51791
- crystal internal fields see crystal field interactions**
- crystal interstitials see interstitials**
- crystal lattice structures see crystal atomic structure**
- crystal microphones see microphones**
- crystal microstructure**  
 for microstructural changes, see also phase transformations, hardening, heat treatment, metalworking  
 see also crystal defects; crystal inclusions; crystallites; dendritic structure; domain boundaries; domains; electron microscope examination of materials; eutectic structure; grain boundaries; grain size; Guinier-Preston zones; mosaic structure (microstructure); noncrystalline state structure; precipitation; segregation; subboundary structure; superlattices; texture; X-ray diffraction examination of microstructure  
 ALHA77005 achondrite, olivine orientation 2-42663  
 alloy design, microstructural synthesis 2-5869  
 backscattered US wave charact. 2-31875  
 binary alloys, effect of second-phase vol. fraction on grain size stability and flow stress during superplastic flow 2-22268  
 brass, type L62 structure and props. changes on heating and deform. (Russian) 2-5908  
 carbonitrided, struct. and props. 2-22383  
 ceramics, creep and creep fracture, microstruct. depend. 2-51987  
 cermet film, changes in struct. and composition during heat treatment, oxidation (Russian) 2-5894  
 corundum, platelike, basic props. effect on liq. metal resist. 2-41773  
 elastic waves and microstruct., conf., Oxford, England (Dec. 1980) 2-28602  
 granular composite films, microstruct. and dielec. props. 2-52063  
 HV electron microscopy, in situ experiments, recording images of rapid structural changes (French) 2-12438  
 II-V compounds, amorphous and cryst., thin films, prep., struct., elec. and optical props. 2-26262  
 martensitic transformations, thermoelastic, shape memory behaviour 2-47027  
 metal silicide-Si interface, microstructure and elec. props. (Japanese) 2-26499  
 NASICON, ceramic solid electrolyte (Polish) 2-30652  
 Nimonic 105, effects of room-temp. prestrain on creep-fracture 2-2588  
 olivine, solid state Fe reduction, planetary and meteoritic evolution implications 2-23233  
 orientation and Microstructure of Watts and bright nickel electrodeposits 2-41627  
 piezoelectric ceramics, recent developments in Japan 2-46480  
 polycrystalline materials, grain misorientation 2-45204  
 polyurethane, rigid foams, microstruct. rel. to density 2-51869  
 porcelain materials, microstruct. data and mech. props., correl. 2-22224  
 rare earth Ga(In,Tl)-chalcogen system, reactions and phase diagrams 2-9335  
 refractories, structural anisotropy, rel. to ultrasonic propag. 2-45402  
 semiconductor, microstructural information from opt. props. in near IR to near UV range 2-21972  
 sputter deposited film preparation method for improved microstruct. 2-13645  
 steel, 22 NiMoCr 3 7, microstruct. and Bloch wall arrangement 2-17310  
 steel, 65Cr4W3Mo2VNb, microstructure, mechanical properties and heat treatment 2-27216  
 steel, alloy, gas nitriding in medium of NH<sub>3</sub> and CO<sub>2</sub> 2-52103  
 steel, alloy, nitriding in vac. 2-22381  
 steel, Cr, crack initiation and propagation, microstruct. effect (German) 2-13823  
 steel, Cr (12 wt.%), carbide dispersion carburizing (Japanese) 2-27183  
 steel, Cr (13-25 wt.%), carburised, struct. form. and wear resist. 2-51951  
 steel, Cr-Mo, anal. of carbides formed during accel. ageing 2-51958  
 steel, Cr-Mo-(Ni), effect of alloying on struct. and props. of nitrided case 2-22382  
 steel, Cr-Mo-(V), heat-resist., long-term strength under creep conditions 2-41683  
 steel, Cr-Mo-V, alloying elements redistrib. after ageing under stress 2-41642  
 steel, Cr-Mo-V, creep fracture 2-52036  
 steel, Cr-Mo-V, steam pipe material, max. creep strain rel. to defectiveness 2-41684  
 steel, Cr-Zr, Zr effect on props. 2-2565  
 steel, creep resistant, struct. deform. under thermal tensioning 2-41700  
 steel, CrNiMo, medium-C, correlations between numerical fracture characts. and fracture toughness (Chinese) 2-22301  
 steel, heat treatment temp. rel. to phase diagram 2-47069  
 steel, high-strength, corrosion fatigue, factors in crack growth accel. 2-22389  
 steel, high-temperature thermomechanical treatment, sprayer cooling effect on struct. and props. 2-51955  
 steel, low alloy, medium- and high-strength, AE during ductile fracture, effect of proof stress, composition and microstruct. 2-31872  
 steel, low C, impact loading, initial microstruct. effect (Czech) 2-31781  
 steel, low C, US attenuation and microstruct. 2-31876  
 steel, low-C, water vapour effect on fatigue crack tip stress and strain distrib., crack propag. energy 2-2581  
 steel, martensitic 9Ni, microstruct. and chemical changes during two-phase tempering, Mossbauer study 2-31349  
 steel, Mn, sintered powder, effect of compacting pressure and 0.5% Mo on props. 2-9313  
 steel, Ni (3.5 wt.%), AE during deform. and fracture, microstruct. effect 2-31871  
 steel, Pb containing, struct., machinability, heat treatment and appls. 2-36885  
 steel, stainless, hydrogenated, struct. and resist. to deform. 2-27239  
 steel, stainless, Ti, 316, microstruct. after ageing and after neutron irradiation (French) 2-51947



## crystal microstructure continued

- steel, stainless 304 and 21-6-9, unflawed, AE under biaxial stresses 2-31874
- steel, tool, hardened and tempered, martensite decomp. and nonuniformity 2-51950
- steel, tubular, C-Mn, hot-rolled, low ductility tensile failures (*German, English*) 2-41690
- steel, type U10A, microstructure after laser irradi. and quenching (*Russian*) 2-2535
- steel, V-Cr, Z 2-51911
- steel, V-Ni medium C, carbide phase soln. and precipitation, Ni addition effect 2-51911
- steel, weld metal, transform. behaviour 2-17676
- steel, wrought, low C Cr-Ni, austenitic stabilisation during tempering (*Czech*) 2-47063
- steel containing coarse second phase, ductile fracture 2-2574
- steel fibre reinforced steel composite, reinforcement effect on struct. and mech. props. 2-41557
- steel plate, and strip, controlled rolling 2-22237
- steel wires, HSLA, hydrogen induced delayed failure 2-27262
- steels, high-speed, powder-processed, rel. between microstruct. and strength 2-9387
- steels, influence of temper rolling on transient stage of cyclic deform. 2-41628
- steels, martensitic, HY80, HY130, 4140, fatigue macrocrack growth, threshold and mid- $\Delta K$  range 2-9394
- X-ray techniques, high resolution, in semiconductors and insulators 2-5022
- Ag, electrolytically gel grown crystals, surface microstructure and morphology 2-12890
- Al alloy AL-4, electrohydroimpulse working, effect on struct. and props. 2-1777
- Al alloys, quenching in polyethylene oxide solution, effect on struct. and props. 2-27197
- Al alloys, rapidly quenched, optimization of processing conditions 2-41631
- Al and Al alloys 7075 and 7050, AE during tensile and compressive deform., microstruct., effect 2-31883
- Al and alloys, AE during deform., microstruct. effect 2-31882
- Al, plasma sputtered, struct. and props. (*Russian*) 2-2576
- Al, use of Ga-induced brittle fracture, for grain struct. anal. (*German, English*) 2-52156
- Al-Ge, morphology of eutectics with metastable phases 2-17662
- Al-Li alloys, thin-foil prep. ion-beam thinning, precipitation 2-31698
- Al-Li system, alloy development 2-31693
- Al-Li-X alloys, microstruct., mech. props., and corrosion resist. 2-31740
- Al-Mg-Ti-Cu, castings, struct. and mech. props., Na impurity effect 2-27241
- Al-Pb, structural props., prepared in quasi-weightless conditions (*Russian*) 2-2501
- Al-Si (11.3 at.%), microstructure, negative magnetoresistivity and supercond. props., heat treatment effects (*Chinese*) 2-21706
- Al-Si eutectic alloy, cast and heat treated, microstruct. and mech. props. (*German*) 2-47068
- Al-Si-Cu-Zn-Mg-Ti, cryst. and struct., effect of cooling rate and Zn, Mg and Ti additions 2-1549
- Al-Sn-Cu, solidified by rapid cooling, microstruct. (*Japanese*) 2-2503
- Al-Zn-Mg-Cu, high strength, heat treatment, struct. and props. 2-27243
- Al-Zn(Cu)(Si)-Mg, polygonised struct. thermal stability, Mg effect 2-27187
- AlN ceramic with added  $Y_2O_3$  or Ni, structural characteristics 2-46989
- AlN, effects of various additives on sintering 2-27133
- $\alpha-Al_2O_3$  refractories, creep rel. to  $SiO_2$  content, annealing temp. and microstruct. 2-36931
- $Al_2O_3$  refractories,  $PO_4$ -bonded, strength and microstruct. 2-31728
- Au film, ion plated, frictional and morphological characts. 2-30775
- Au-Ge laser-annealed ohmic contacts on GaAs, microstruct. and resistivity 2-21675
- Au-Mn system, 2D antiphase structs. based on  $DO_{22}$  struct. high-velocity-high resoln. microscopy 2-40233
- C fibre reinforced C composite, fibre infiltration from propane by CVD, microstruct. and fracture behaviour 2-41716
- CdS, mechanically treated, acceptor impurity diffusion, dislocation study (*Russian*) 2-1666
- CdS, microstructural changes in high electric fields 2-26066
- Co steel, Covar, oxidation in various media (*Russian*) 2-2612
- Co-Fe-B-(Si), metallic glass, crystn., Lorentz microscopy study 2-21033
- Co-Re sputtered film, effect of orientation and microstructure on mag. props. 2-21848
- Co-Sm, magnetic domain and cryst. microstruct., Lorentz electron microscopy study 2-21817
- $Cr_{100-x}Al_x$ , struct. and microstruct. study 2-21065
- $Cr_{100-x}Al_x$ , struct. and microstruct. study 2-21066
- Cu alloy, superplastic, microstructural exam. of flow behaviour 2-13778
- Cu rods, impact on target, plastic deformation and microstruct. 2-51982
- Cu-Al (10.1 wt.%), internal friction meas. during tempering 2-47089
- Cu-Al-Si, two-phase, hardened, mech. props. and damping capacity, Si addition effect 2-5919
- Cu-Cd(Mg)(Zr)(Cr), Cu-Cr-Zr(Mg) and Cu-Zr-Mg, heat resistance, elec. cond. and strength 2-27244
- Cu-Sn-Al-Fe-Ni-Mn, fracture and mech. props., effect of comp. and crystn. conditions 2-41729
- Cu-Zn, electrohydroimpulse working, effect on struct. and props. 2-17777
- CuZn 30 sheets, struct. and texture study on cold rolling (*German*) 2-2530
- Dy-Sb system, phase diagram construction and antimonides characts. 2-41584
- Fe, Armco, diffusion coated with Ga, influence of comp. of impregnating medium 2-41803
- Fe, Armco, nitriding in vac. 2-22381
- Fe, cast, grey, Mg modified, struct. state effect on failure 2-41755
- Fe, cast, grey, microstruct. form. during solidification 2-27162
- Fe, sintered powder, effect of compacting pressure and 0.5% Mo on props. 2-9313
- Fe-Cr-Co, permanent magnet, heat treated in miscibility gap, mag. props. 2-36983
- Fe-Cr-Co-Si (27, 17.5, 1 wt.%), mag. and struct. transitions, mag. props. 2-26630
- Fe-Cr-V-Mn-C, cast, microstruct. characts. and elements distrib. 2-51888

## crystal microstructure continued

- Fe-Ni-Cu-Si-Mn-Cr-C, cast austenitic, struct. and mech. props., heat treatment effect 2-51953
- Fe-Si (6.5 wt.%) ribbons, mag. props. and grain struct. after annealing 2-26665
- GaAs:Si, heavily doped, annealing-induced changes, Si defect conc. depend. 2-30889
- GaAs-metal ohmic contacts, microstructure, correl. with elec. characts., electron microscopy obs. 2-40700
- GeTe-AgBiTe<sub>2</sub> system, physicochem. investig. of phase diagram 2-5207
- InP-metal ohmic contacts, microstructure, correl. with elec. characts., electron microscopy obs. 2-40700
- KH<sub>2</sub>(SeO<sub>3</sub>)<sub>2</sub>, ferroelastic, internal friction, domain struct. dynamics 2-40481
- LiF, microstructural changes in high electric fields 2-26066
- LiNbO<sub>3</sub>, influence of domain structure on generation and propagation of elastic waves (*Polish*) 2-26199
- MgO-ZrO<sub>2</sub> fibre composite, microstructure and high temp. resistance (*Russian*) 2-2520
- Mo-Cu-Ni(Co), pseudoalloys, phase boundary reactions 2-17665
- Mo-Si contacts, P ion implantation effects 2-8531
- Mo-Si films, elec. transport and microstruct. 2-51346
- Mo-Zr-Nb-C, struct. and props. for reinforcing composite materials 2-36886
- Nb-Mo(Ti)(Zr), nitrided, struct., phase comp., and hardness 2-52106
- Nb-Ti (50 wt.%), phase distrib. and size, US vibr. influence (*Russian*) 2-5494
- Nb-Ti multifilamentary composites, microstruct. rel. to crit. current density, TEM study 2-13734
- Nb-Zr-C, interaction with Li, O content influence 2-41799
- Nb<sub>2</sub>Sn, composites preparation, props. and improvements in current-carrying capacities in high mag. fields 2-13685
- Nb<sub>2</sub>Sn filamentary superconductor, bronze processed, microstruct. effects under strain 2-8918
- Nb<sub>2</sub>Sn, internal friction and elastic softening 2-16717
- Ni base superalloy MM-002, HfC precipitation 2-41610
- Ni-Cr, heat-resist., dispersion strengthening with ZrO<sub>2</sub> 2-51927
- Ni-Cr-B-Si matrix, reaction with carbide additives during fusion 2-17784
- Ni-Cr-Co-Mo-Al-W-Ti-C, heat-resist., cryst. and dislocation struct., var. during cutting 2-51989
- Ni-Ni<sub>3</sub>Sb<sub>2</sub> eutectic system alloys, undercooling-structure relationship obs. (*Japanese*) 2-31689
- Pb film, ion plated, frictional and morphological characts. 2-30775
- Pb-Bi, Josephson junction counter electrodes, microstruct., thermal cycling effects, 298 to 42K 2-51945
- Pb-Bi film, Josephson junction electrodes, thermal stability 2-51944
- Pb-In-Au Josephson junction electrodes, microstruct. and strain, thermal stability 2-51943
- (PbTiO<sub>3</sub>)-(PbCeO<sub>3</sub>)<sub>1-x</sub>(PbNb<sub>2</sub>O<sub>6</sub>)<sub>2-x</sub>(MnO<sub>2</sub>)<sub>m</sub> system, piezoelectric, dielectric props. 2-41273
- Pb(Zr,Sn,Ti)O<sub>3</sub> ceramic, microstructure effect on electrocaloric props. 2-41278
- Pb(Zr,Ti)O<sub>3</sub>-Sr, sintering, preparation piezoelectric props. 2-41541
- Pt sputtered film, microstruct., X-ray diff. study 2-51022
- Sb film, cryst. struct., amorphous state influence 2-45779
- Si, Czochralski grown, stacking faults and oxide microdefects 2-16660
- Si, microstructural changes in high electric fields 2-26066
- Si single cryst. slices, formation of surface nitrides 2-9447
- Si-H, amorphous-microcryst. mixed phase film, photoluminesc. 2-26960
- Si(In (Sb) implanted amorphous layers, defect and solubility limit study 2-30477
- Si:N<sup>+</sup>, formation of Si<sub>3</sub>N<sub>4</sub> by laser annealing 2-50675
- Si:P film, microstructure and sheet resistance 2-30480
- SiC base refractories, high-temp. strength 2-52008
- SiC, polycrystalline, containing excess Si after neutron and ion irradi., microstruct. 2-30496
- $\beta$ -SiC, reaction bonded, ultra-fine grained, microstruct. and props. 2-9412
- SiN hot-pressed, influence of phase comp. and grain struct. on thermal shock resist. 2-9355
- SiN, reaction-bonded, mech. behaviour under various thermal and mech. conditions 2-9414
- SiN, reaction-bonded, microstruct. effects on thermal diffusivity 2-8682
- Si<sub>3</sub>N<sub>4</sub> ceramic materials, comp., fabrication, and props. 2-51862
- Si<sub>3</sub>N<sub>4</sub>, hot-pressed, intergranular phase, phase separation and crystn. evidence 2-31679
- Si<sub>3</sub>N<sub>4</sub>, reaction-bonded, effect of rate-controlling nitriding and nitriding atmospheres on formation 2-36882
- SmS, Sm<sub>2</sub>S<sub>3</sub>, Sm<sub>3</sub>S<sub>4</sub>, condensed layers, form. and struct., phase composition 2-5316
- TaSe<sub>2</sub>-2H, incommensurate microstructure, charge density waves 2-35703
- Ti and Ti alloy plasma-sprayed coatings, microstruct. and reaction processes, metallography 2-13865
- Ti, oxide coated, fatigue strength 2-27279
- Ti-Al, oxide coated, fatigue strength 2-27279
- Ti-Al(V-Fe-Ag), crack initiation and propagation, microstruct. effect (*German*) 2-13823
- Ti-V-Si alloy, heterogeneous precipitation of  $\omega$  phase 2-5883
- TiN<sub>x</sub>, quenched and aged, supercond. transition temp. enhancement 2-30997
- TiN<sub>x</sub>, strain hardening, mech. stability 2-2529
- TiBiSe<sub>2</sub>-PbSe, phase diagram, electrophysical props. 2-9334
- U(Al,Fe) dil. alloys, TEM obs. of microstruct. rel. to hardness 2-43557
- V<sub>2</sub>Ga<sub>2</sub>, composites preparation, props. and improvements in current-carrying capacities in high mag. fields 2-13685
- V<sub>2</sub>Hf(Zr) and V<sub>2</sub>Hf<sub>0.5</sub>Zr<sub>0.5</sub> superconductivity, mag. susceptibility 2-36183
- VN, cubic, powders synthesis, MgB<sub>2</sub> catalyst appl. 2-13692
- W microcrystals, strength determ. 2-40480
- W-C-Ti(Zr)(Hf), cast, struct. and props., alloying effect 2-41743
- W-Cu-Ni(Co), pseudoalloys, phase boundary reactions 2-17665
- YIG, solid-phase synthesis and sintering, kinetics and mechanism, electrophys. props. 2-41516
- Zn-Al eutectoid, internal friction and thermal losses 2-30525
- Zn-Pb, structural props., prepared in quasi-weightless conditions (*Russian*) 2-2501
- ZnO ceramics, non-ohmic, microstruct. TEM, SEM, and X-ray diff. study 2-50875
- ZnO:K, hot-pressed, microstructural defects, TEM study 2-5132



**crystal microstructure continued**

- ZnO(Se)(S), RF sputtered film struct., TEM, X-ray and electron diff. obs. 2-40746  
 Zr-Nb (1 wt.%) alloy, deposition corrosion products on heat-irradiating surfaces, microstructure anal. (*Bulgarian*) 2-9451  
 Zr-Nb-Ru (2.5, 0.3wt.%), quenched, microstruct. and mech. props. 2-41646  
 ZrO<sub>2</sub>-SiO<sub>2</sub> refractories (high ZrO<sub>2</sub>), microstruct. and firing of casts 2-41572  
 Zr<sub>2</sub>Ti<sub>2</sub>Sn<sub>2</sub>O<sub>4</sub> ceramics (x+y+z=2), existence range, structural and dielec. props. 2-36842

**crystal morphology**

- benzil, growth and perfection from undercooled melt 2-31622  
 calcium oxalate monohydrate, whewellite, twin laws, struct. and growth approach 2-25905  
 diamond, natural crystals, surface morphology obs. on dodecahedral faces 2-45697  
 difficultly soluble compounds, method for studying 2-27071  
 equilibrium forms, stability, review (*Japanese*) 2-1433  
 equilibrium shape of crystals (*Russian*) 2-12533  
 HV electron microscopy, in situ experiments, recording images of rapid structural changes (*French*) 2-12438  
 ice, growth kinetics from vapour phase, growth forms 2-25786  
 ice crystals, grown from vapour phase, growth rates and growth forms 2-46892  
 isonitrosacetanilide derivatives, cryst. form. and struct. 2-30453  
 phase equilib., Ising model, two dimens., cryst. shapes at finite temp. 2-45101  
 polyacetylene, doped, cryst. and mol. struct. and elec. cond. 2-45072  
 polyacetylene, I and AsF<sub>5</sub> doped, morphology, SEM study 2-45077  
 polyacetylene, I doped, three dimensional orientation, doping and isomerisation effects 2-45075  
 polyacetylene film, epitaxial synthesis, shear flow method 2-45074  
 polyacetylene films, prep. by Luttinger's catalyst, morphology and isomerisation 2-45076  
 polyethylene melt crystallised, chain folding study 2-12507  
 spiral crystals, review (*Chinese*) 2-25794  
 texture sample orientation distrib. function reproducibility from pole figures, ghost corrections 2-12532  
 two-phase bodies, continuously interconnected, internal morphology 2-30570  
 Ag, electrolytically gel grown crystals, surface microstructure and morphology 2-12890  
 Al-Si eutectic alloys, struct. (*Chinese*) 2-30434  
 Al<sub>2</sub>O<sub>3</sub> powders, ultrafine, particle growth in plasma-chem. reactions 2-31669  
 B, growth and dissolution in nitric acid, impurity effects 2-40303  
 BaC<sub>2</sub>O<sub>4</sub>·nH<sub>2</sub>O, morphologic, crystallographic charact. and surface props., grinding effect (*French*) 2-9299  
 CaC<sub>2</sub>O<sub>4</sub>·H<sub>2</sub>O, morphologic, crystallographic charact. and surface props., grinding effect (*French*) 2-9299  
 CaHPO<sub>4</sub>·2H<sub>2</sub>O, brushite crystals grown rapidly in silica gel, morphology and surface struct. 2-45090  
 Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>·OH, crystals, grown in aq. soln. at 37°C, morphology 2-9259  
 Cd<sub>3</sub>As<sub>2</sub>, crystal growth and morphology, Miller indices, X-ray and optical meas. 2-25789  
 CdS single crystals, evaporation and formation of negative whiskers 2-35914  
 CsR<sub>2</sub>PO<sub>4</sub> (R=rare earth, growth, morphology and struct. 2-22156  
 Fe-C lath martensite, anal. of habit plane traces 2-40321  
 Fe-Ni-Ti, austenite precipitation hardened, decomp., struct. mechanism (*Russian*) 2-22247  
 Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layers on GaAs, morphology and misfit dislocations 2-5319  
 GaAs layers, vapour phase growth rate and morphology, elec. field effect 2-36792  
 GaP cryst., morphology and mechanism of growth from gas phase 2-27064  
<sup>4</sup>He, solid-superfluid interface, roughening transition 2-1704  
 K<sub>2</sub>C<sub>2</sub>O<sub>4</sub>·H<sub>2</sub>O, morphologic, crystallographic charact. and surface props., grinding effect (*French*) 2-9299  
 α-K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>, anomalous cryst. growth, rel. between cryst. struct. and morphology 2-5803  
 KMg<sub>1/3</sub>(AlSi<sub>2</sub>O<sub>10</sub>)<sub>2</sub>·F<sub>2</sub> crystals, growth from melt, morphology and gas cavity distribution 2-8463  
 Mo-Si contacts, P ion implantation effects 2-8531  
 n-MoS<sub>2</sub>/I<sub>2</sub>/Pt electrochemical solar cell, with layer-type semiconductor anodes, performance 2-6143  
 Na<sub>1+x</sub>Y<sub>1-x</sub>(PO<sub>4</sub>)<sub>3</sub> ionic conductor, conduction paths 2-16871  
 (NiMoO<sub>4</sub>·xH<sub>2</sub>O) crystals, effect of impurity on habit in SiO<sub>2</sub> gel 2-51785  
 α-, β-, α-PbGeGe<sub>2</sub>O<sub>9</sub>, polymorphism, growth and certain props. 2-50609  
 PbSe crystal, morphology, struct. and microhardness 2-5084  
 (SN), single crystals, improved growth method 2-31612  
 Si film, encapsulated, zone-melting recrystn. on SiO<sub>2</sub>, morphology and crystallography 2-51012  
 SiO<sub>2</sub> film, obtained in presence of catalyst, struct. and morphology, substrate contaminations influence 2-40710  
 SnO<sub>2</sub> powders, ultrafine, particle growth in plasma-chem. reactions 2-31669  
 (Sr,Ba<sub>1-x</sub>)Co<sub>3</sub>, symmetrical cryst. aggregates, grown by SiO<sub>2</sub> gel technique, morphological aspects 2-9260  
 TiN(C)(B<sub>2</sub>) powders, ultrafine, particle growth in plasma-chem. reactions 2-31669

**crystal orientation**

- (111) FCC overlayers, ideal epitaxial configurations on (110) BCC substrates 2-51032  
 ghost phenomena in mathematical texture anal. using standard functions 2-25795  
 Kikuchi patterns, accurate determ. of crystallographic orientation 2-40230  
 length meas. in single crystal and polycrystalline aggregate with preferred orientation, US method 2-17827  
 metal crystals, orientation determ. using TV image system 2-13915  
 metals, laser pulse melting, epitaxy and allotropy, expt. study 2-50702  
 molecular crystals, low symmetry, computer-assisted orientation 2-50574  
 naphthalene crystal, intermol. interaction, orientational depend. 2-44037  
 nylons, (6) and (6,6), cryst. state extrusion of melt crystallised and soln. grown crystals. 2-13763  
 optical planar waveguide, freq. mixing, cryst. orientation effect 2-11747

**crystal orientation continued**

- polycrystalline materials, cryst. and sample symmetries influence in ODF of crystallites 2-25793  
 polycrystalline single-phase material, orientation relationships in solid transforms. and distrib. of grain misorientations 2-45104  
 polyvinylidene fluoride films, drawn and rolled, X-ray pole figures 2-16600  
 precipitation systems, orientation relationships 2-35429  
 rectangular interfacial atomic meshes, ideal epitaxial configurations 2-51031  
 sapphire, wear model in abrasive environment 2-25982  
 semiconductor characterisation by Raman scatt. 2-17476  
 spiral crystals, review (*Chinese*) 2-25794  
 steel, austenitic stainless, H-induced ε-martensite, TEM invest. 2-31695  
 texture sample orientation distrib. function reproducibility from pole figures, ghost corrections 2-12532  
 TGS, oblique cut crystals, advantages for pyroelec. appls. 2-36542  
 thin films, surface chemical phenomena and growth 2-51048  
 X-ray analysis, energy dispersive crystallographic orientation effects 2-40236  
 Al, single cryst., orientation effects on cutting mechanism 2-45184  
 Al, surface and bulk plasmon losses, relative intensity variation due to cryst. orientations, low energy EELS study 2-17582  
 Bi, Bridgman grown cryst., (111) plane orientation, temp. gradient and growth rate effect 2-25776  
 Bi single crystals, preferred growth 2-46902  
 Co-Cr films for perpendicular recording, RF sputtering deposition 2-26691  
 Co-Cr films for perpendicular mag. recording, opposing targets sputtering deposition 2-27082  
 Co-Cr films with perpendicular magnetic anisotropy, RF sputtering prep., coercivity and X-ray orientation 2-26689  
 Co-Cr perpendicular recording medium by vacuum deposition, mag. and struct. props. 2-26690  
 Co-Ru film, perpendicular mag. state, RF sputtering 2-16965  
 Cu, fatigue hardening, mechanisms in single crystals, effect of strain amplitude and orientation 2-27186  
 Cu, persistent slip bands, form near regions of surface damage 2-35510  
 Cu, recryst., solute effect, comparison of single crystals and polycrystals. 2-22244  
 Cu-Zn, new phase, growth kinetics, saturation of Cu single crystals with Zn vapour (*Russian*) 2-35424  
 Fe, crystal orientation determ. using back-refl. Kossel camera in electron probe microanalyser (*Japanese*) 2-1372  
 Fe, oxidation, (001) and (112) crystals, growth and struct. of oxide films, 200-300°C 2-2622  
 Fe-P alloys, P segregation, rel. to grain boundary struct. 2-22222  
 Ge crystals, with diamond struct., reorientation during growth of twins 2-21159  
 K halides, B1→B2 transition, B2 preferred orientation 2-12534  
 Mo, dislocation-free channels formed by plastic deform., initial struct. effect (*Russian*) 2-22267  
 Nb, cyclic deformation of single crystals 2-5175  
 Ni-base superalloy, asymm. fatigue hardening model for single crystals. 2-51929  
 Ni-Cr-Al-Co, anisotropic fatigue hardening of single cryst. at elevated temps. 2-13814  
 Pt sputtered film, microstruct., X-ray diff. study 2-51022  
 Rb halides, B1→B2 transition, B2 preferred orientation 2-12534  
 Si film, 2D grating graphoepitaxy from Si-Au supersaturated soln. 2-41535  
 Si, float zone, oxidation, strong orientation depend. of formation of surface stacking faults 2-50668  
 Sn-Ge, In diffusion along interphase twist boundaries 2-35744  
 Ti crystal orientation determ. using back-refl. Kossel camera in electron probe microanalyser (*Japanese*) 2-1372

**crystal oscillators** *see crystal resonators***crystal properties**

- see also crystal chemistry*  
 crystalline elements, properties from philosophy 2-33265

**crystal purification**

- see also zone refining*  
 β-copper phthalocyanine, improved purification method using sublimation, electrophotographic appl. 2-36768  
 metals, multi-stage purification process 2-9268  
 AgI, extremely pure, prep. by direct interaction of Ag and I above melting point 2-13633  
 Si, electrorefining, semipermeable anode 2-41534  
 Si surface, oxidation in presence of catalyst, SiO<sub>2</sub> film struct. and morphology, substrate contaminations influence 2-40710

**crystal resonant gamma-ray interactions** *see Mossbauer effect***crystal resonators**

- see also piezoelectric oscillations*  
 1/f noise in macroscopic physical systems, relax. time fluctuations as source 2-51263  
 AFC and phase control, Loran-C system appl. 2-3556  
 piezoelectric resonators, natural freq., effect of intrinsic streams in deposited thin films 2-16973  
 quartz, natural freq., effect of intrinsic stresses in deposited thin films 2-16973  
 ultrasonic absorption in resonator, automatic meas. (*French*) 2-20494  
 Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>, electrostrictive ceramic, low Q electromechanical resonator 2-17413  
 PbZrO<sub>3</sub>-PbTiO<sub>3</sub>-MnO<sub>2</sub> solid solns., piezoelec. props. rel. to chem. comp. near morphotropic phase transition 2-9092

**crystal structure**

- see also crystal atomic structure; crystal microstructure; crystal morphology; crystal orientation; crystal symmetry; crystallography; granular structure; polymorphism*  
 Kendrew model coordinates, precise and accurate method of meas. 2-40309  
 spindle stage (book) 2-18827  
 Bi oxides, complex, with layered structs., crystallo-chem. props. (*Japanese*) 2-50562

**crystal surface and interface vibrations**

- adhesive thin films, interface waves, adhesive bond strength determ. 2-2647  
 adsorbate induced optical phonons, book contrib. 2-40665  
 adsorbates, EELS, dipole electron scatt., book contrib. 2-41469



**crystal surface and interface vibrations continued**

- adsorbates, electron impact vibr. excitation, angle and energy depend., book contrib. 2-41470
- adsorbates, refl. absorpt. IR spectroscopy study, book contrib. 2-41370
- adsorbates at metal surfaces, surface enhanced Raman scatt., book contrib. 2-41371
- adsorbed layers, one-dimensional chain, dynamics in periodic pot., quantum calc. 2-26232
- adsorbed layers, surface vibrs. study by neutron scatt., book contrib. 2-40666
- adsorbed layers, vibr. modes, IETS study, book contrib. 2-39459
- adsorbed species on metals, vibrs. rel. to ligand vibrs. in metal clusters and complexes, book contrib. 2-39376
- anisotropic crystals, low temp. heat capacity, surface contrib. (*Russian*) 2-26068
- atomic scattering, inelastic, model surface phonon dispersion relations 2-1727
- bicrystal, thermal cond. signals produced by freq. crossing between reson. scatt. centres 2-50935
- $\alpha$ -brass, surface (110), adsorbed O, vibr. spectra, EELS study 2-51753
- charged particle interacting with many-particle target, self-energy near surface 2-31588
- cubic crystals, surface Brillouin scatt., anisotropy effects 2-5726
- desorption kinetics, surface Debye temp. 2-30739
- diazines, adsorbed on Ag electrode, Raman spectra enhancement, vibr. modes 2-5706
- dynamical systems with nonlinear polarisability, nonlinear excitations 2-46461
- effective mass approx. for surface phonons 2-50991
- electron spectroscopy, symmetry arguments, book contrib. 2-36738
- fluid-solid interfaces, transport processes, fluid layer equil. fluctuations 2-50999
- graphite, physisorbed O<sub>2</sub>, vibr. bands in photoemission spectra 2-13623
- graphite, surface atomic displacements, He atom scatt. study 2-36748
- graphite (0001) slab, with adsorbed Xe monolayers, lattice dynamical calc. 2-40664
- graphite surface phonon dispersion, He atoms reson. scatt. study 2-50983
- hydrocarbon monolayers on graphite, vibr. dynamics and melting effect 2-1766
- inelastic molecular beam scattering from surfaces, book contrib. 2-41485
- insulating slab, effective charge tensor and acoustic sum rule 2-30814
- interfaces, excited atom and molecule deactivation 2-5447
- ion scattering study of surface phonons and Debye temp. 2-50984
- isotropic solids interface, Raman scatt. in total refl. condition 2-5720
- Kapitza conductance, defective interface, interface wave model 2-35879
- Kapitza thermal boundary resist., solid-solid interface, acoustic mismatch model 2-30740
- light scattering from thermally excited surface phonons and magnons 2-2304
- light scattering spectra of solids, surface and size effects, book contrib. 2-51605
- metal film, evaporated wedge-shaped films, attenuation and phase vel. of hypersound by multiple-beam interferometry 2-26198
- metal surface, adsorbed diatomic mol., vibrational excitation intensities 2-2247
- metal surface, adsorbed species, EELS study 2-22127
- metal surface, electronic damping of vibrating dipole 2-35877
- metal surface, long-range electron-phonon scatt. 2-12902
- metal surface, vibr. interaction between adsorbed CO mols., dipole-dipole interaction 2-45709
- metal surfaces, phonons, hydrodynamic eqns. 2-50987
- metal-dielectric interface, phonon and photon reson. absorpt. 2-30737
- metal-oxide interface, thermal resistance 2-5460
- metals, FCC and BCC, (100) surface modes calc. 2-50990
- methyl isocyanide, adsorbed on Rh, tunnelling spectra, top metal electrode effect 2-35892
- overlayer-covered surfaces, dynamics, elastic Green functions anal. 2-1726
- phenol, adsorbed layer, tunnelling spectra at mK temps. 2-35891
- phonon film injector, temp. dynamics 2-25996
- piezoelectric resonators, natural freq., effect of intrinsic streams in deposited thin films 2-16973
- prestressed crystals, Rayleigh waves, lattice dynamics and elastic wave theory 2-45704
- pyridine-Cl<sup>-</sup>, adsorbed on Ag electrode, surface enhanced Raman scatt., overtones and c-ombination modes 2-5708
- quartz, acoustic wave mode conversion coeffs. at cryst.-vacuum interface 2-45706
- relaxing surface, lattice vibr. instability (*Chinese*) 2-21436
- sapphire, acoustic wave mode conversion coeffs. at cryst.-vacuum interface 2-45706
- semiconductor interface physics, conf., Williamsburg, VA, USA (Jan. 1981) 2-6702
- semiconductor surface depletion layer, multipolariton modes 2-8760
- solids and liquids, light scatt. by surface vibrs. 2-2305
- surface polariton props. in vibr. reson. region in transition layer 2-1845
- surface science, recent advances 2-21434
- thin films, Brillouin scattering, phonon modes, elastic constns., surface phonons 2-5767
- two-dimensional melting and dynamics 2-1597
- vibrational spectroscopy of adsorbates, book 2-38375
- Ag, inelastic electron scatt. from adsorbed N<sub>2</sub>, CO, O<sub>2</sub>, and H<sub>2</sub> 2-2389
- Al<sub>2</sub>O<sub>3</sub>, adsorption of formic acid, vibr. modes, IETS study, book contrib. 2-39459
- Al<sub>2</sub>O<sub>3</sub>:Fe<sup>2+</sup>, V<sup>2+</sup> bicrystal, freq. crossing and inelastic scatt. at surfaces 2-45644
- Au film, surface Brillouin scatt., ripple and elastooptic coupling 2-5727
- CMN-liquid <sup>3</sup>He (<sup>4</sup>He-<sup>4</sup>He) interface, thermal resist. below 100 mK 2-35880
- CO, adsorbed on Fe, tunnelling spectra, top metal electrode effect 2-35892
- CdS, Brillouin scatt. via surface exciton polaritons, theory 2-46622
- CdS, surface Brillouin scatt., elasto-optic and ripple mechanisms 2-5725
- Cr, surface phonons calc. 2-50990
- Cr (100), adsorbed CO, S, and methanol, surface vibr. modes, EELS study 2-17581
- Cu (100), adsorbed methoxide, vibr. damping, IR spectra study 2-45707
- Cu (111) and (001), adsorbed CO isotopic mixture overlayers, collective vibr. modes 2-12903
- Cu, adsorption of CO, refl. absorpt. IR spectroscopy study, book contrib. 2-41370

**crystal surface and interface vibrations continued**

- Cu surface, (100), adsorbed H<sub>2</sub>, D<sub>2</sub>, HD, rot. transitions, EELS study 2-46843
- Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelectric, surface polariton states, ATR spectra 2-30734
- Ge, ballistic phonon flux modulation by the He gas film at solid/superfluid He interface 2-50981
- He film, phonon induced desorption, time const. 2-45665
- He films, phonon induced desorption at low temp., polarisation depend. 2-45666
- <sup>3</sup>He monolayer, incommensurate solid, on graphite, orientational ordering 2-12876
- <sup>4</sup>He incommensurate solid monolayer on graphite, orientational ordering 2-12876
- <sup>4</sup>He, liq.-solid interface, capillary effects on phonon transmission 2-40616
- HgTe, polar zero-gap semicond., surface polaritons 2-1985
- KCl (001) surface phonons, inelastic atom scatt. time of flight spectra study 2-50982
- LiF (001) surface phonons, inelastic atom scatt. time of flight spectra study 2-50982
- MgO, adsorption of formic acid, vibr. modes, IETS study, book contrib. 2-39459
- Mo surface, (100), phonon spectra and incommensurate reconstruction, lattice dynamics calc. 2-50969
- NaCl(Br), first-order Raman scatt. induced by Na and Ag colloids 2-5715
- Ni (100), chemisorption of CO, geom., vibr. freqs., ionisation pot., and photoelectron spectrum 2-1743
- Ni (100) surface, chemisorption of H, Cl, Na, O and S, bonding calcs. 2-12905
- Ni (111), adsorption of O, adsorbate induced optical phonons, book contrib. 2-40665
- Ni (111)-C and Ni (111), chemisorption of methyl cyanide (isocyanide), vibr. study, EELS spectra 2-46842
- Ni particles, chemisorbed CO, H<sub>2</sub> and ethylene, vibr. bands, Raman spectra study 2-29606
- Ni surface, (111), adsorbed O, phonon spectrum, force const. calc. 2-50988
- Ni surface (111), adsorbed O, surface phonon calcs., loss function 2-50992
- Ni, surface phonons calc. 2-50990
- P+, small clusters, chemisorbed benzene, enhanced Raman scatt. 2-41365
- Pb small particles, supercond. transition temp., size depend., surface phonon softening contrib. 2-26544
- PbS, phonon spectra and static defects, surface changes effects (*Russian*) 2-12904
- Pt (111), chemisorbed ethylene and acetylene, vibr. spectra, Co complex analogue 2-4282
- Pt, desorption of H<sub>2</sub>, studied by He beam diffr. Debye-Waller effect, surface vibr. 2-51001
- Pt, Raney, chemisorption of benzene, neutron inelastic scatt. study 2-16938
- Pt surface, (111), adsorbed NO and CO interactions 2-26227
- Si inversion layers, remote polar phonon scatt. for hot electrons 2-30972
- Si, ion scatt., 0.1 to 2 MeV, struct. sensitive surface peak, Monte Carlo simulation 2-13614
- Si surface, (111), lattice dynamics and reconstruction, microscopic theory 2-50989
- Si:H-Pd(Pt), amorphous Si:H, interface phonons, interference enhanced Raman scatt. study 2-51592
- Si-Al(Au) interface acoustic phonons, Brillouin scatt. study 2-51615
- SiC, phonon spectra and static defects, surface changes effects (*Russian*) 2-12904
- SrTiO<sub>3</sub>(100), surface optical phonons 2-26204
- W (001), adsorption of H, adsorbate induced optical phonons, book contrib. 2-40665
- ZnO, acoustic wave mode conversion coeffs. at cryst.-vacuum interface 2-45706

**crystal symmetry**

- see also crystallography; group theory
- atomic properties, site symm. effects by diff. methods 2-1429
- bicrystal, grain boundary anal. using TEM 2-21158
- binary crystals, FCC and diamond type, growth kinetics, lattice model and kinetic eqns. 2-12525
- boracites, phase transitions theory with multicomponent transition parameters 2-26016
- cell reduction, and lattice symmetry determ. 2-25791
- cholesteric blue phase single crystals, polarisation microscopy 2-12476
- coherency strains in elastic free energy, semi-discrete model 2-21207
- colour groups, Landau phase transitions, and possible species of ferroic crystals. 2-45098
- convergent beam electron diffraction, holz lines, detection of phase transition symmetry changes 2-25696
- critical neutron scatt. cross sections and symm. near displacive and mag. phase transitions 2-16542
- crystallites, point symmetries, finite boundaries (*German*) 2-45100
- crystals, stress-strain curves, anharmonicity and symmetry 2-45323
- D<sub>4d</sub> groups, single and double, props. and isomorphisms 2-16614
- dicalcium strontium propionate, ferroelectric domains, growth pyramid 2-36575
- FCC crystals, finite plastic strain in sixfold symm. 2-25973
- helical spin density wave due to antisymmetric exchange interaction 2-41118
- hexagonal crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50572
- incommensurate crystal phases, vibr. spectra 2-45428
- irreducible analysis of Raman spectra for all crystal point groups 2-41346
- kaolinite type minerals, polytypism, layer stacking visualization 2-28065
- magnetic axial point subgroups, appl. to low temp. phase symm. in anisotropic crystals. 2-8465
- magnetic lattice, nonspatial symmetry group 2-48642
- monoclinic crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50571
- N-dimensional translation lattice, lattice point row and plane arrangements 2-35427
- non-centrosymmetric crystal with centrosymmetric group, conventional discrepancy indices 2-1431
- nonrigid crystals, symm. groups 2-16615
- On<sub>h</sub> atomic shells, symmetry coords. 2-35425



**crystal symmetry continued**

- orientationally disordered crystals, struct. factor, case of arbitrary space, site and mol. pt. group 2-25674
- orthorhombic crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50571
- p-poly symm., space groups, derivation of 5-dimens. crystallographic symm. groups 2-1432
- P-symmetries, geometric classification 2-35426
- planar monotypic ribbons of hexagons and squares and homologous series between them, symmetry 2-12531
- point groups; cyclic and dihedral, as subgroups of limiting group 2-1430
- polycrystalline materials, cryst. and sample symmetries influence in ODF of crystallites 2-25793
- precipitation systems, orientation relationships 2-35429
- rare earth-Rh-Sn system, cryst. symm. and struct. of phases I, II and III 2-12542
- single crystal diffractometric determ. of cryst. system and space group (*Japanese*) 2-8396
- soft disc model, zero temp., zero pressure states, crystallinity 2-40310
- surface induced press. in anisotropic crystals, existence 2-1425
- tetragonal crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50571
- tetragonal crystals, class  $D_4$ , energetic spectrum struct., dispersion laws 2-40503
- time reversal symmetry and the Raman scattering by crystals 2-45464
- trigonal crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50571
- trigonal crystal systems, Shubnikov point group corepresentations, Clebsch-Gordan coeffs. 2-50572
- trigonal-trigonal symm., odd coeffs. in texture calcs. 2-21052
- $\beta$ -CsNd(PO<sub>3</sub>)<sub>4</sub> crystallites, cryst. struct. determ. 2-35466
- CsNdP<sub>2</sub>O<sub>12</sub>, cryst. struct. calcs. 2-35465
- INPS<sub>4</sub>, class 4 crystals, Raman spectra, circular dichroism 2-36651
- KLiSO<sub>4</sub>, phase transitions, EPR study 2-31281
- K<sub>2</sub>SeO<sub>4</sub>, O sublattice disorder, Raman spectra study 2-31474
- LaOCl:R<sup>3+</sup> (R=Sm, Eu, Tb, Dy, Tm), fluoresc., local crystal symmetry 2-41403
- LuOCl:R<sup>3+</sup> (R=Sm, Eu, Tb, Dy, Tm), fluoresc., local crystal symmetry 2-41403
- MnAs, cryst. struct., phase transformations, X-ray diffr. obs. 2-35471
- RbMnCl<sub>3</sub>, ferroelastic domain struct. rel. to antiferromag., optical study 2-26869
- Rb<sub>2</sub>ZnCl<sub>4</sub>, ferroelec., low temp. phase 2-17425
- SbSI, ferroelectric transition, low temp. phase symmetry 2-8465
- ScOCl:R<sup>3+</sup> (R=Sm, Eu, Tb, Dy, Tm), fluoresc., local crystal symmetry 2-41403
- Se crystals, orthorhombic, grown from CS<sub>2</sub> soln., structure 2-25811

**crystal whiskers** see *whiskers (crystal)***crystalline-amorphous transformations** see *amorphisation***crystallisation**

- see also *crystal growth; dendrites; heat of crystallisation; nucleation*
- acrylic polymers with biphenyl fragments in side branchings, cryst. and liq. cryst. struct. (*Russian*) 2-21047
- aliphatic-aromatic copolyesters: synthesis and crystallization studies 2-40296
- alkaline earth metal metasilicates, crystn. by saturated soln. slow cooling in metal chloride melt 2-35418
- p-alkyl-p'-alkoxy-azoxybenzene mesophases, glass transition, DSC study 2-35691
- alloy design, microstructural synthesis 2-5869
- alloys, microcryst., prep. from metallic glasses, novel materials technology 2-51846
- amorphous alloys, mech. props., thermal stability 2-31787
- amorphous alloys, phase separation, TEM technique 2-37035
- anthraquinone, electric spark discharge pretreated, sublimation on mica surface 2-35660
- biological materials, phys., biochemical and physiological effects of low temp., review 2-32169
- ceramic, crystn. of glass of liq. segregated in grain boundaries 2-12490
- copolyamides, crystn. under elevated press. 2-12513
- crystal ordering, theory 2-40300
- crystallisation front, open inclusions role of supercooled melt in gas bubbles formation 2-50569
- crystallisation front of melt, impurities conc. at boundary 2-50568
- diamond, crystallisation at atmospheric press. 2-5065
- diamond, crystn., elec. charge influence on metastable phase nucleation 2-50565
- diamond, crystn., influence of pulse plasma chem. content under thermodynamic instability 2-2460
- diamond, homogeneous crystallisation from gas phase 2-5064
- diamond synthesis, crystn. kinetics in Mn-Ni-C system containing Group III metal carbides 2-41503
- difficultly soluble compounds, method for studying 2-27071
- Earth upper mantle, fractional crystallisation rel. to geochemistry of therozite-bearing phonolitic lavas 2-22978
- epitaxial crystallisation from melt, surface molecular dynamics method investig. 2-1801
- ethylene-propylene copolymers, strain birefringence 2-26861
- eutectic alloy, direct crystallisation with laminar struct. formation 2-47018
- Fe-Al-B amorphous system, annealing effects on crystallisation process (*Japanese*) 2-22242
- ferroelectric crystal substrates, boundary layers of water rel. to elec. props. of substrate ellipsometry study 2-45752
- glass fibre, weakened by heat treatment, correl. between struct. and strength 2-41645
- glass forming melts, mol.-kinetic model for critical cooling rates 2-8445
- glasses, silicate anions anal. using trimethylsilylation method (*Japanese*) 2-8443
- guanine, crystallisation under the influence of water, IR and UV absorpt. spectra 2-2354
- heat and mass transfer processes accompanying crystallisation, weak body forces, numerical investigation 2-30121
- heat resistant materials for medium and high temp. ranges, crystn. temp. review (*German*) 2-472
- ingot solidification, continuous casting, intensive heat transfer (*Russian*) 2-9344
- lactate dehydrogenase, pig heart, crystn. and struct. determ. 2-22697
- melt crystallisation on massive substrate, approx. calcs. (*Russian*) 2-1779

**crystallisation continued**

- metal hydroxides, amphoteric, dissolution and crystn. mechanism from NaOH soln., ionic equilibria and cryst. phases 2-30426
- metallic alloys, glass-forming ability, theoretical aspects 2-8613
- metallic glass, phys. props., research developments, correl. of technological parameters and mag. props. 2-8437
- metallic glasses, isothermal transform., activation energies 2-12732
- metallic glasses, low metalloloid content, crystallisation to form high strength microcrystalline alloys 2-31710
- metallic solids, amorphous, Mossbauer spectroscopy studies 2-31340
- metals and alloys, kinetics, mag. field and thermoelectromotive forces effects, convective flow 2-12530
- microgravity experiment possibilities 2-31624
- molten salt-oil contact heat exchanger theoretical and exptl. investig. (*French*) 2-28852
- optical glass, crystallisation tendency, rel. to viscosity and chem. comp. 2-26057
- oriented crystallisation, in process of reaction diffusion, supersaturation determ. (*Russian*) 2-8660
- peritectic and degenerate eutectic structures, morphological similarity (*Russian*) 2-35423
- PET fibres, crystallinity, approx. X-ray meas. (*Polish*) 2-35406
- poly(vinylidene fluoride),  $\alpha$ - and  $\gamma$ -phase, soln. grown crystal annealing 2-16601
- poly-L-lactic acid-pentaerythritol tetrabromide, eutectic crystallisation, mol. wt. effects 2-16613
- polyamide-6 fibres, crystallinity, approx. X-ray meas. (*Polish*) 2-35406
- polyarylates, crystallisation, struct. and props., initial compound struct. and reaction condition effects (*Russian*) 2-45081
- polycarbonate, plasticised, phase profiles (*Russian*) 2-35404
- polyester blend, compatibility and phys. props. 2-30420
- polyethylene, dynamic mech. props., crystal morphology effects 2-30415
- polyethylene, extended-chain crystals, behaviour under high temp. and press., DTA and X-ray obs. 2-45066
- polyethylene, extended-chain crystals, phase transitions at high temp. and press., direct obs. using PSPC X-ray system 2-45065
- polyethylene, isothermally crystallised bulk, SAXS study 2-45069
- polyethylene, melt crystn. initial fold length, Raman spectra, melting point and X-ray scatt. obs. 2-45070
- polyethylene cryst. grown from soln., isothermal annealing and swelling, SAXS 2-40298
- polyethylene fibrillar films, high mol. wt., effect of nitric acid and  $\gamma$ -rays on melting behaviour (*Japanese*) 2-30417
- polyethylene oxide-Li salt electrolytes, thermal history-cond. relationship 2-40598
- polyethylene terephthalate, P-containing, thermal stability 2-47311
- polyethylene-polystyrene blends, 2-phase, differential thermal analysis (*French*) 2-45534
- cis-1,4-polyisoprene, orientation crystn. and stress-strain props. 2-47148
- polymers, state of order studies using computer-supported Raman spectroscopy 2-5690
- polypropylene, biaxially oriented, double crystallisation 2-16759
- polypropylene, isotactic, crystn. kinetics 2-12508
- polypropylene, isotactic, melting and crystallisation, high press. DTA obs. 2-45538
- polypropylene crystallisation kinetics anal. by IR spectroscopy 2-21042
- polytetramethylene oxide, interlamellar crystallisation 2-21043
- polyurethane elastomers hard segments struct., X-ray diffr. and conformational anal. 2-40297
- PVC, micromodifications and compositions based on it, additive and stress effects (*Russian*) 2-40289
- pyrene-anthracene supercooled eutectic, photocrystallisation, photographic applications (*Russian*) 2-26027
- quartz ceramic, sintering and crystn., influence of mould material and moulding process 2-5848
- refractory materials, crystallisation methods, mathematical models of heat transport 2-35157
- rubber, natural and synthetic mixture, mol. motion, strain induced crystallisation, pulsed NMR obs. 2-46411
- sapphire, IR radiation accompanying crystallisation 2-26919
- semiconductor film form. from laser erosion plasma scatt. by heated screen 2-41537
- sodium tungsten bronzes, electrodeposition, crystallisation overpotential 2-51837
- solid solution, comp. control of homogeneous single crystals. during melt growth 2-5806
- terephthalate copolymer, crystallinity, DSC obs. (*Japanese*) 2-30416
- transition metal-P binary alloys, amorphous state formation, thermal stability, melt quenching 2-30408
- two-dimensional nucleation, crystallisation kinetics in binary soln. 2-35417
- undercooled melts and glasses, electrochem. behaviour, thermodynamic props., galvanic cells 2-13967
- vacuum crystallisation apparatus, appl. to carnalite 2-35420
- vitrocrystalline protective coatings, formation of crystalline phase in electrostatic field 2-5051
- water film, nonfreezing, thermocrystn. flow on capillary surface 2-35224
- Al, anodization in aqueous borate and borate-glycol solns., anodic barrier film form. 2-41814
- Al, thermomechanical treatment, dislocation arrays stability rel. to deform. temp. 2-5127
- Al-alloys, suppression of dendrites growth producing surface bulges on components 2-2437
- Al-Mg(Cu)(Si), cryst. under nonequilib. conditions, phase diagrams 2-27146
- Al-Si, crystn. process and as-cast struct., Sb effect, Si dissolution in Al-Si melt 2-36844
- Al-Si-Cu-Zn-Mg-Ti, cryst. and struct., effect of cooling rate and Zn, Mg and Ti additions 2-1549
- Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> fibre, structural changes during heating, oxide additives influence 2-5217
- As-Te, glass-forming tendency, comp. depend. 2-26058
- As<sub>2</sub>X<sub>3</sub>, X=S, Se or Te, semiempirical calc. of Tamman curves 2-8449
- Au film, point defects, exoelectron emission, photostimulated emission and oriented growth on NaCl 2-45757
- Ba<sub>2</sub>Ge<sub>2</sub>TiO<sub>8</sub>, glass-ceramic and single crystals., piezoelec. props. 2-51529
- Bi, influence of electric current on impurity distrib. 2-8455
- CaAl<sub>2</sub>Si<sub>2</sub>O<sub>8</sub>, anorthite, cryst. nucleation barrier, undercooling and glass crystn. expts. 2-1593
- CaCO<sub>3</sub>, influence of elec. field on rhythmic crystn. in agar gel 2-46895
- CaO-Al<sub>2</sub>O<sub>3</sub> glasses, crystn. characts., SEM study 2-50553



## crystallisation continued

- CaO-FeO-SiO<sub>2</sub>, crystn. of glasses and formation of sitals 2-8448  
 CaO-MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> pyroxene glasses, catalysed crystn. using Cr<sub>2</sub>O<sub>3</sub>, nucleation rate, conc. and temp. depend. 2-40288  
 Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>OH, crysts. grown in aq. soln. at 37°C, morphology 2-9259  
 CaSO<sub>4</sub>, supersaturated solns., formation of crystallisation contacts 2-1419  
 CdS:In layer and whisker, vapor reaction growth, luminesc. spectrum 2-46674  
 CdSAs<sub>2</sub>, single cryst. and layer growth from soln. in melt, solvents investig. 2-41509  
 Co-Fe-B-(Si), metallic glass, crystn., Lorentz microscopy study 2-21033  
 Co-M-B (M=transition metal), amorphous alloys, mech. props., thermal stability 2-31787  
 Co<sub>1-x</sub>P<sub>x</sub> films, amorphous to cryst. kinetic transitions, nucl. spin echo study 2-26789  
 Co<sub>84</sub>Si<sub>15</sub>Fe<sub>1.5</sub> amorphous alloy, electron irradiation effects (Ukrainian) 2-25929  
 Cr-Ni thin films, micromechanisms of crystn. 2-45041  
 Cu, electrocrystn. in presence of levelling and brightening additives, electrochem. dissolution of single crystals 2-31833  
 Cu-Cd, electrocrystallisation on Cu substrate, effect of electrolyte type 2-1797  
 Cu-Ni alloy crystallisation, FCC and diamond type binary cryst. growth kinetics 2-12527  
 Cu-Sn-Al-Fe-Ni-Mn, fracture and mech. props., effect of comp. and crystn. conditions 2-41729  
 Cu<sub>25</sub>Au<sub>75</sub> amorphous, elec. resist. at high press., time depend. 2-30888  
 CuZr<sub>2</sub>, amorphous, crystn., X-ray diffraction and elec. resist. studies 2-12502  
 ErAl<sub>3</sub>, thin film, occurrence of modulated phases 2-8734  
 Er<sub>1-x</sub>Gd<sub>x</sub>Al<sub>3</sub> thin film, occurrence of modulated phases 2-8734  
 (Fe,Co)<sub>100-x</sub>(Ta,W)<sub>x</sub>, RF sputtered amorphous films, mag. and thermal props. 2-36397  
 Fe based metallic glasses, test of electronic stability criterion 2-35401  
 Fe, cast, high-eutectoid, inoculated two-layer spheroidal graphite inclusion form. (Ukrainian) 2-27165  
 Fe-B, amorphous, with transition metal substituents, mag. props. and crystn., cluster form. 2-8997  
 Fe-B, amorphous-cryst. transform., coercive force and TEM obs. 2-8438  
 Fe-B (17 at.%), amorphous, high press. crystn. and struct. transitions 2-30409  
 Fe-B amorphous and crystallised alloys, phase diagram magnetisation, elec. resist. and thermal expansion meas. 2-17664  
 Fe-B amorphous metals, electron optical study 2-16598  
 Fe-B metallic glass, struct. relaxation, crystn., internal friction and elastic modulus 2-47085  
 Fe-B-Si-C-Al, amorphous, crystn. temp., mag. props. 2-41160  
 Fe-C, amorphous alloys, crystn., study of struct. defects in metastable Fe<sub>2</sub>C<sub>3</sub> (French) 2-12489  
 Fe-Ni based metallic glasses, crystn., effect of electron irradiation, in-situ HVEM study 2-21040  
 Fe-Zr-B, amorphous, form. range, mag. props. and thermal stability 2-31243  
 Fe<sub>80</sub>B<sub>20</sub>, amorphous, annealing behaviour on continuous heating 2-17690  
 Fe<sub>80</sub>B<sub>20</sub>, amorphous, phase transitions, laser-induced 2-25748  
 Fe<sub>80</sub>B<sub>20</sub>, metallic glass, crystn. kinetics, TEM and DSC study 2-35399  
 Fe<sub>82</sub>B<sub>18</sub>-xBe, metallic glasses, <sup>57</sup>Fe Mossbauer spectra study 2-17375  
 Fe<sub>75</sub>Al<sub>14</sub>Si<sub>10.4</sub>, amorphous, mag. props. and crystn. 2-46441  
 Fe<sub>1-x</sub>B<sub>x</sub>, amorphous film, Curie and crystn. temp., Hall effect meas. 2-51149  
 FeGe, crystals, growth rate influence, on lateral face development character, Czochralski method 2-21050  
 Fe<sub>82-x</sub>M<sub>18</sub> alloys, amorphous, effects of additions on crystn. temps. 2-1410  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, amorphous, Lorentz electron microscopy study of domain struct. 2-5562  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, crystn., X-ray invest. (German) 2-35403  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, anelasticity and struct. relaxation 2-45357  
 FeNiBSi amorphous alloys, thermoelec. power singularities 2-21568  
 Fe<sub>32</sub>Ni<sub>36</sub>Cr<sub>14</sub>P<sub>12</sub>B<sub>6</sub> metallic glass, crystallisation and mech. props. 2-8447  
 Fe<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> based glasses, crystn. in ferromag. phase, effect of chem. comp. 2-25753  
 (GaSb)<sub>1-x</sub>Ge<sub>x</sub>, metastable single phase polycryst., from annealing of amorphous mixtures 2-51015  
 GdAl<sub>3</sub>[BO<sub>3</sub>]<sub>4</sub>, crystallisation, cryst. struct. 2-47019  
 Ge, amorphous, solid-phase epitaxial crystn. on Si (100) 2-12932  
 Ge, amorphous, transition temp. and heat of crystn., DSC determ. 2-8435  
 Ge amorphous film, laser induced crystallisation 2-16595  
 Ge film, amorphous, laser processing, explosive crystn., liq. layer existence 2-45265  
 Ge film, amorphous, scanned laser crystn., phase boundary kinetics meas. 2-45264  
 Ge-B-Ga, amorphous, crystn. temp., mag. props. 2-41160  
 Ge-S glasses, crystn., positron annihilation and Doppler broadening study 2-22108  
 Ge-Se system, elec. cond. in glassy and liq. states 2-26392  
 Ge-Se-Te system glasses, elec. cond. over wide temp. range, struct. component 2-5403  
 GeSe<sub>2</sub> glass, reversible reconstruction and crystn. under laser irradiation, Raman scatt. study 2-30410  
 Ge<sub>1-x</sub>Si<sub>x</sub>, amorphous, transition temp. and heat of crystn., DSC determ. 2-8435  
 Ge<sub>2</sub>Si<sub>100-x</sub> amorphous films, crystn. on SiO<sub>2</sub> growth kinetics 2-5327  
 Ge<sub>2</sub>Si<sub>100-x</sub> amorphous layers, heterostruct. fabrication by solid phase growth 2-8736  
 Hf-B eutectic system, crystn. at ultrahigh cooling rate 2-41600  
 HfO<sub>2</sub>-TiO<sub>2</sub> system, phase diagram at 1600-2800°C, phase comp. and struct. 2-5866  
 InSb, anal. and control of solidification by differential dilatometry 2-1424  
 InSb:Te,Se,S epitaxial layers conc. profiles rel. to crystn. conditions 2-5144  
 InSb-NiSb, semiconducting, crystallisation speed influence on elec. props. and struct. (Russian) 2-5382  
 In<sub>70</sub>Te<sub>30</sub> amorphous, elec. resist. at high press., time depend. 2-30888  
 KCl:Ce<sup>3+</sup>, linear crystn. rate of KCl, Cd ions influence, adsorption role (Russian) 2-31615  
 K<sub>2</sub>Fe(CN)<sub>6</sub>·3H<sub>2</sub>O, polytype form. conditions, stat. temp. control 2-40312

## crystallisation continued

- La<sub>70</sub>Cu<sub>30</sub>, amorphous, heat treatment effects below crystn. temp., supercond. props. and normal state resist. 2-36195  
 Li<sub>2</sub>O-SiO<sub>2</sub> glass, crystn., activation energy from derivative DTA curves 2-5049  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, struct. state change of Cu<sup>II</sup> and Mn<sup>V</sup> during g. crystn., ESR obs. 2-41190  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-TiO<sub>2</sub>-(ZrO<sub>2</sub>), crystn., laser Raman spectroscopy 2-12491  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-TiO<sub>2</sub> system glasses, phase separation kinetics at pre-talliation stage, small-angle X-ray scatt. 2-40560  
 Li<sub>2</sub>O<sub>2</sub> SiO<sub>2</sub>, double nucleation in identical glass (Czech) 2-30411  
 Li<sub>3</sub>Sb<sub>2</sub>-S<sub>8</sub>, synthesis and cryst. chem. (French) 2-12567  
 MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glasses, density and upper temp. limit of crystn. 2-25754  
 MnO<sub>2</sub>, electrocrystallisation from Mn ore (German) 2-27101  
 Mo film on cleaved CaF<sub>2</sub>, electron microscopy of oriented crystallisation 2-45755  
 Mo-Ga, crystallisation in outer-space conditions 2-27169  
 (NH<sub>4</sub>)<sub>2</sub>Al(SO<sub>4</sub>)<sub>2</sub> alum, crystn. spectroscopic determ. of trace contaminants 2-9584  
 NH<sub>4</sub>ClO<sub>4</sub>-KClO<sub>4</sub> solid soln., mechanoformation, thermal behaviour and combustion 2-9301  
 Na<sub>2</sub>Ca<sub>2</sub>[HSiO<sub>4</sub>]<sub>2</sub>·PO<sub>4</sub>, optimal form. conditions and characteris. 2-51838  
 NaFeO<sub>2</sub>, crystallization and α-β phase transform. 2-1426  
 NaHCO<sub>3</sub>, crystallisation in NH<sub>3</sub>-soda process, metastable zone 2-25773  
 NaIn film prep. by sandwich-type evaporation method 2-12944  
 Nb-Si (19 at.%), amorphous, high press. crystn. and struct. transitions 2-30409  
 Nd<sub>1-x</sub>Fe<sub>x</sub> amorphous alloys, melt-spun, crystallisation and mag. props. 2-17314  
 Ni coatings, with (211) texture, electrocrystn., TEM, X-ray anal. 2-30767  
 Ni-Cr-B-Si matrix, reaction with carbide additives during fusion 2-17784  
 Ni-M-B (M=transition metal), amorphous alloys, mech. props., thermal stability 2-31787  
 Ni-P metallic glass, struct. relaxation, crystn., internal friction and elastic modulus 2-47085  
 Ni<sub>80</sub>B<sub>20</sub>, amorphous sheets, electroless deposited, internal friction and dynamic modulus behavior 2-21230  
 Ni<sub>45</sub>Fe<sub>20</sub>Co<sub>20</sub>Cr<sub>10</sub>Mo<sub>5</sub>B<sub>16</sub>, metallic glass, crystn., effect of electron irradiation 2-35402  
 (NiMo<sub>0.4</sub>xH<sub>2</sub>O) crystals, effect of impurity on habit in SiO<sub>2</sub> gel 2-51785  
 Pb superconducting film, quench-condensed, electron tunnelling and resist. meas. 2-36244  
 PbGeGe<sub>2</sub>O<sub>4</sub> single crystals, growth and certain props. 2-36774  
 Pb-Nb<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> system, precipitation of ferroelec. PbNb<sub>2</sub>O<sub>6</sub> and dielec. props. of crystallised glasses (Japanese) 2-51917  
 PbTiO<sub>3</sub>, amorphous, crystallisation process 2-40524  
 PbTiO<sub>3</sub>, amorphous, crystallisation, Raman study 2-41340  
 PbTiO<sub>3</sub>, amorphous, phase transition, dielectric anomalies 2-41301  
 Pd-Si (20 at.%), amorphous, high press. crystn. and struct. transitions 2-30409  
 Pd<sub>0.775</sub>Cu<sub>0.6</sub>Si<sub>0.165</sub>, amorphous, crystn. kinetics study using US meas. 2-40285  
 Pd<sub>80</sub>Si<sub>20</sub>, amorphous, internal friction peaks 2-47084  
 Sb film, cryst. struct., amorphous state influence 2-45779  
 Sb thin film, amorphous, impulse stimulated crystallisation 2-45039  
 Sb-GaSb, metallic, crystallisation speed influence on elec. props. and struct. (Russian) 2-5382  
 Sb(Sb<sub>1-x</sub>Nb<sub>x</sub>)<sub>2</sub>O<sub>4</sub> single cryst., synthetic, dielec. props., crystn. parameter variation 2-51511  
 Se amorphous film, vapour deposited, optical loss as meas. of crystallinity 2-36724  
 Se, amorphous films, crystn., elec. cond. study 2-45038  
 Se amorphous films, influence of history on spherulitic crystn. 2-51820  
 Se film, amorphous to crystalline transition, thickness depend. 2-40720  
 Se-S, vitreous, influence of S admixture on crystallisation kinetics (German) 2-5052  
 Se-Te, vitreous, influence of Te admixture on crystallisation kinetics (German) 2-5052  
 Se-Te system, equilib. phase diagram 2-22200  
 Se<sub>2</sub>Te<sub>1-x</sub> amorphous system, kinematical transform. and struct. ageing, glass transition, enthalpy, thermal anal. 2-50551  
 Si, amorphous, pattern laser annealing by pulsed laser 2-17578  
 Si, amorphous, transition temp. and heat of crystn., DSC determ. 2-8435  
 Si, amorphous film, crystallisation, atomistic model 2-50549  
 Si amorphous film, laser crystallisation (French) 2-16970  
 Si amorphous film on Si<sub>3</sub>N<sub>4</sub>/glass substrate, crystallisation as function of CW laser scan speed 2-50707  
 Si amorphous film on SiO<sub>2</sub>, crystn. by CW laser irradiation 2-51013  
 Si, amorphous films, explosive crystn. in solid and liq. phases 2-40269  
 Si, amorphous implanted, phase transitions produced by pulsed laser or electron irradiation 2-45283  
 Si film, crystn. front periodic motion during beam annealing 2-5313  
 Si films, CVD, amorphous and polycryst., cond. mechanism 2-46171  
 Si, ion implanted, amorphous, ultrashort pulse laser annealing 2-45266  
 Si islands, laser crystallised on fused SiO<sub>2</sub>, microstrain, Raman scatt. study 2-45750  
 Si, laser annealing and crystallisation 2-1503  
 Si liquid-solid interface, laser-induced crystn. study 2-45742  
 Si single crystals, grown from melt, appearance of dislocations 2-1418  
 Si:Au, crystal-liquid interface vel. during pulsed laser annealing 2-31591  
 a-Si:F:H, electrical, spectral and doping properties 2-45790  
 Si:H, amorphous, ultrashort laser pulse annealing, expt. study 2-21170  
 Si:H, crystalline, reactive sputtering fabrication, struct. study by X-ray diffraction and optical spectra 2-1792  
 a-Si:H films, impurity doping, morphological study, electrical and optical properties 2-45789  
 Si-Ge alloy crystallisation, FCC and diamond type binary cryst. growth kinetics 2-12527  
 SiC, mass transfer during growth 2-5067  
 Si<sub>3</sub>N<sub>4</sub>, hot-pressed, intergranular phase, phase separation and crystn. evidence 2-31679  
 Sm-Co, amorphous mag. films, struct. changes during crystn. (Chinese) 2-1406  
 Sn-Ag(Au), amorphous films, transport props. and phase stab., electron count. effect 2-35987  
 Sn-Nb, crystallisation in outer-space conditions 2-27169  
 Sn-Pb (40 wt.%), crystallisation in outer-space conditions 2-27169



**crystallisation continued**

- ( $\text{Sn}_{0.5}\text{Se}_{0.5}$ )<sub>2</sub>( $\text{As}_{0.5}\text{Ge}_{0.5}\text{Se}_{0.5}$ )<sub>100-x</sub> glasses and glass-ceramics, Mossbauer study 2-21923
- $\text{SrWO}_4$  crystallisation from  $\text{Na}_2\text{WO}_4$  melt, DTA, thermodynamic and kinetic parameters 2-35415
- $\text{SrWO}_4$  crystn. from  $\text{Na}_2\text{WO}_4$  melts, diff. thermal anal. 2-12529
- $\text{SrWO}_4$  melt crystallisation, DTA, rate const. variation with crystn. temps. and cooling rates 2-16612
- $\text{Te}_{80}\text{Ge}_{20-x}\text{As}_x$  ( $A=\text{Sb, Bi}$ ), glass transition and crystn. effects, thermal anal. 2-12499
- Ti-B eutectic system, crystn. at ultrahigh cooling rate 2-41600
- Ti-Pd (20 at.%) amorphous supercond. alloy, crystallisation temp. (Chinese) 2-21707
- Ti-Ta-Si, amorphous, crystallisation induced superconductivity 2-13213
- $\text{TiO}_2$  double nucleation in 1.38  $\text{Na}_2\text{O}$ ·1.38  $\text{B}_2\text{O}_3$ ·3.50  $\text{SiO}_2$  (Czech) 2-30411
- $\text{TiO}_2$ - $\text{TiB}_2$ - $\text{O}_3$  system, phase diagram at 1100-1750°C, phase comp. and struct. 2-5865
- $\text{TiAsX}_2$ ,  $X=\text{S, Se}$  or  $\text{Te}$ , semiempirical calc. of Tamman curves 2-8449
- TlInTe-TlInTe<sub>2</sub> system, substitutional solid solns. form. and charact., switching props. 2-40522
- V-B eutectic system, crystn. at ultrahigh cooling rate 2-41600
- $\text{V}_{66}(\text{Fe}_{1-x}\text{Ge}_x)_{34}$ , metallic glass, struct. and elec. props. 2-21031
- $\text{V}_2\text{O}_5$ - $\text{P}_2\text{O}_5$  glass melt, electrocryst. of  $\text{VO}_x$  cpds. used in threshold switches 2-17617
- $\text{WO}_3$ - $\text{Li}_2\text{O}$ ( $\text{Na}_2\text{O}$ )( $\text{K}_2\text{O}$ ) glasses, rapid quenching technique prep., electrochromic props. 2-31674
- $\text{WO}_3$ - $\text{Na}_2\text{O}$ - $\text{P}_2\text{O}_5$ - $\text{Eu}^{3+}$  glasses, phase separation and crystn., luminesc. study 2-46682
- YAG: $\text{Nd}^{3+}$  Bridgman-Stockbarger grown single crystals, real crystn. rate and effect on cryst. quality 2-31617
- $\text{Y}_{0.66}\text{Fe}_{0.34}$ , metallic glass, crystn. process, microscopic changes 2-21035
- $\text{Y}_2\text{Fe}_2\text{O}_7$  crystals, growth 2-27159
- ZnO opacified glazes, liquation rel. to crystn. 2-25747
- $\text{ZnO-B}_2\text{O}_3\text{-H}_2\text{O}$  system, phase formation under hydrothermal conditions 2-50567
- $\text{ZnO-B}_2\text{O}_3\text{-Na}_2\text{O(K}_2\text{O)-H}_2\text{O}$  systems, phase formation under hydrothermal conditions 2-50567
- $\text{ZnS-CdS}$ , synthesis and coocrystn. under hydrothermal conditions, phase form., analysis and struct. 2-41505
- Zr-B eutectic system, crystn. at ultrahigh cooling rate 2-41600
- Zr-Si, amorphous ribbons, formation range, thermal stability, mech. and supercond. props. 2-31675
- Zr, $\text{Cu}_{1-x}$  glasses, electronic props. and supercond. 2-36196
- $\text{ZrO}_2$  stabilised single crystals, growth and optical perfection,  $\text{SiO}_2$  influence 2-51791
- $\text{ZrO}_2\text{-Cr}_2\text{O}_3$  system, phase equilib. DTA and X-ray diffr. study (French) 2-27158

**crystallite texture** see texture**crystallites**

see also crystal microstructure

- apatite crystallites, new mode of growth 2-27112
- catalyst, on powdered solid, preferentially exposed plane determ. by differential neutron diffr. (French) 2-5087
- ceramics, particle orientations characterisation by EPR 2-31264
- cylindrical crystallites, diffr. line profiles and Scherrer constants 2-44961
- distorted crystallite aggregates, X-ray diffr. developments 2-5023
- elasticity theory, capillary phenomena (Russian) 2-25977
- II-VI semiconductor solid solution, X-ray analysis of comp. nonuniformity 2-5025
- II-VI solid solution, X-ray analysis of comp. nonuniformity 2-5025
- pentacene polycrystalline film, dichroism, substrate effect on crystallite orientation 2-46537
- point symmetries, finite boundaries (German) 2-45100
- polycrystalline materials, cryst. and sample symmetries influence in ODF of crystallites 2-25793
- polypropylene, cryst., melting and mixing with amorphous elastomers, dynamic mech. obs. (Russian) 2-21279
- polyvinylidene fluoride films, drawn and rolled, X-ray pole figures 2-16600
- Ag film, growth on  $\text{PbS}\{111\}$ , RHEED study 2-5326
- $\text{Al}_2\text{O}_3\text{-Fe}^{3+}$ , particle orientations characterisation by EPR 2-31264
- $\text{Al}_2\text{O}_3\text{-SiO}_2$  mullite, fused, texture anisotropy and mech. props. 2-41622
- Au crystallites on KBr cleavage plane, mobility 2-45631
- Au film, epitaxial growth on  $\text{PbS}\{111\}$ , RHEED study 2-5326
- Au particles, single cryst. nm size, habit planes determ. 2-12930
- C, pyrolytic, Si-containing, struct. props. and graphitisation 2-41633
- $\text{Co}_3\text{O}_4$  polycrystalline, dispersity, struct. and mag. props. 2-21872
- $\text{CoTaC}_4$  eutectics, X-ray diffr. determ. of thermal interphase stresses 2-13877
- Cu film, epitaxial growth on  $\text{PbS}\{111\}$ , RHEED study 2-5326
- Fe-Co, metal pigment, coercivity and unit particle size 2-26680
- $\text{Fe}_3\text{N}_4$  pigment, coercivity and unit particle size 2-26680
- MgO crystallites, extended fine struct. in electron energy loss spectra 2-2393
- Ni atomic clusters in alkane media, mag. and chem. props. 2-7693
- Ni coatings, with (211) texture, electrocrystn., TEM, X-ray anal. 2-30767
- NiO, reduction, lattice imaging of Ni FCC nuclei (French) 2-50490
- PbSe films, evaporated, structural defects and photosensitivity 2-51018
- Pd crystallites,  $\text{Al}_2\text{O}_3$  supported, in oxygen, form. of pits, role of interfacial phenomena, TEM 2-12886
- Ti, rolling texture anal. using crystallite orientation distrib. function (Russian) 2-51934
- Ti/Au thin films, interdiffusion and phase formation, expt. study 2-45749
- ZnO films prep. by oxidation of diethyl zinc 2-21460

**crystallographic shear**

- alloys,  $\beta$ -phase, interactions of martensitic transform. strains with soft elastic modes 2-21296
- metals, internal friction in plastic deform., general dislocation dynamic model 2-45348
- polymers, high, fracture phenomena in cutting process, cutting conditions 2-47166
- rutile structure cpds., Raman active modes, Gruneisen parameters, and deform. pot. 2-45505
- steel, martensitic transform. during deform.,  $\alpha$ -martensite crystallography (Russian) 2-5069
- $\text{Fe}_2\text{TiO}_4$ , monoclinic, defect struct., electron microscopy and diffr. studies 2-25907

**crystallography**

- see also crystal atomic structure; electron diffraction crystallography; gamma-ray diffraction; isomorphism; lattice constants; neutron diffraction crystallography; space groups; X-ray crystallography
- Annual Review of Materials Science, book 2-48405
- book for Earth science and other solid state students 2-28618
- cell reduction, and lattice symmetry determ. 2-25791
- coincidence site lattices, generation in cubic system, formulation 2-25673
- conference, XI national conference, India (Jan. 1980) 2-3328
- continuous redefinition of subject 2-1365
- correlated atomic vibrs., in Debye model, temp. depend. 2-25675
- Cremer-Pople ring puckering coordinates, standard deviations 2-4405
- crystallites, cylindrical, diffr. line profiles and Scherrer constants 2-44961
- electron density distribution, graphical representation in isolines 2-20964
- Enneper (sine-Gordon) equation applied to cryst. physics, standing-wave solns. 2-25767
- FORTTRAN program for crystallographic data eval. 2-16538
- high-pressure, crystallography, review 2-48721
- Isovector structures with plane grids 2-45099
- lattice-row, and lattice plane preservation in isomorphic sub-groups in space group P1 2-45097
- modulated structure analysis, appl. to polytypes 2-25796
- molecular plotting program 2-44966
- OD groupoid families, symbols for referring to OD structs. (polytypes) consisting of different layers 2-45095
- orientationally disordered crystals, struct. factor, case of arbitrary space, site and mol. pt. group 2-25674
- physical properties anisotropy, graphoanalytical study 2-45083
- polycrystalline materials, cryst. and sample symmetries influence in ODF of crystallites 2-25793
- polyhedron in Durer's Melencolia I, quantitative symmetry anal. 2-21202
- polytypes, modulated struct. anal. 2-25796
- reductional symmetry, of tensors 2-21053
- seven-membered rings, identification of conformational type 2-24884
- six regular polygons, at a four-connected vertex 2-44946
- small-angle scattering, avoiding cutoff effects in integral transformations 2-35354
- spindle stage (book) 2-18827
- stereoscopic images, of cryst. structs., production by computer 2-25676
- TERRIG, computer program for analysing thermal ellipsoids and rigid-body motions 2-44947
- texture, reliability of reproduced ODF's, standard functions 2-44959
- texture calculations, with even and odd coeffs., generalised library program 2-47050
- zeolites, review, synthesis, props. and characterisation 2-1366

**crystals**

see also bicrystals; crystal structure; crystallography; dendrites; epitaxial layers; liquid crystals; plastic crystals; whiskers (crystal)

No entries

**Curie point** see Curie temperature; ferroelectric Curie temperature**Curie point writing** see thermomagnetic recording**Curie temperature**

see also ferroelectric Curie temperature

- alloys, binary, ferromagnetic, order-disorder transitions, specific heat 2-21794
- amorphous alloys, struct. and mag. props. 2-30400
- amorphous ferromagnet, dilution effects, dense randomly packed hard sphere model 2-31220
- amorphous ferromagnets, Curie temp., susceptibility, coordination number fluctuation effects 2-46258
- binary alloys, SRO and mag. props. 2-2092
- conference, Kharkov, USSR (Sept. 1979) 2-28593
- critical susceptibility exponent, broadening effects 2-26631
- cubic lattice with ferromagnetic ordering, Ising model, Devil's staircase behaviour 2-2094
- differential susceptibility of nonlinear magnetic materials (Polish) 2-26602
- Einvar alloy 44NKMT, inspection of heats using Curie temperature 2-9487
- ferrimagnet, Curie-Weiss Neel model 2-5540
- ferromagnet, heterogeneous, mag. isotherms, Arrott plots, conc. fluctuations 2-36376
- ferromagnet, heterogeneous, mag. surface states near Curie point (Russian) 2-13316
- ferromagnetic alloys, heterogeneous, Curie, temp., press. depend. 2-8975
- ferromagnetic materials, mag. balance for magnetisation meas. (Russian) 2-10827
- ferromagnetic plate, phase diagram near Curie point, Landau-Lifschitz eqns. 2-46287
- ferromagnetic resonance linewidths above Curie point 2-51473
- Heisenberg ferromagnet, amorphous, thermodynamic props., exchange integral fluctuations, crit. region behaviour 2-8993
- Heisenberg ferromagnet, HCP lattice, spin wave spectrum and crit. temp. 2-41156
- Ising ferromagnetic alloy mixed cryst., phase diagram 2-51426
- magnetic properties of ( $\text{Co}_{1-x}\text{Mn}_x$ )<sub>2</sub>P compounds 2-41113
- metallic glasses, structural relax., Curie temp., rel. to quenching conditions 2-26628
- prussian blue, and several kinds of additives, thermal decomp. products (Japanese) 2-2754
- rare earth compounds,  $\text{R(Rh}_{1-x}\text{Ru}_x)_2\text{B}_2$ , pressure effects on superconducting in mag. transition temp. 2-17204
- rare earth cpds.,  $\text{RB}_2\text{C}_2$ , mag. props., 3-300K 2-41116
- rare earth intermetallics,  $\text{RMn}_2\text{Si}_2$  and  $\text{RMn}_2\text{Ge}_2$ , mag. props. study 2-2073
- rare-earth-Rh-Si system, new ternary silicides, cryst. struct. and mag. props. 2-16625
- semiconductors, magnetic, magnetic and structural phase transitions, HP mag. props. (Russian) 2-46290
- spin- $1/2$  BCC Ising ferromagnet, Curie temp., three-spin interactions effects 2-2090
- transition metal-base amorphous alloys, mag. props., comp. depend. 2-31244
- transition metals, magnetic props., method of localised fluctuations (Russian) 2-21759
- transition metals and oxides, 3d, catalytic props. in mag. transition temp. region 2-31948
- Au-Fe, dilute, crit. behaviour at onset of ferromag., dynamic response meas. 2-2076
- $\text{BaSn}_{0.9}\text{Fe}_{0.47}\text{O}_{11}$ , six-layer struct., mag. props. 2-50599



## Curie temperature continued

- BaTiO<sub>3</sub>, single crystals, growth, by travelling solvent zone technique 2-27077  
 CdCr<sub>2</sub>Se<sub>4</sub>, non-linear paramagnetic effect near Curie temp. 2-36306  
 Cd<sub>1-x</sub>Al<sub>x</sub>Co<sub>3</sub>, constitution, struct. and mag. props. 2-47199  
<sup>248</sup>CmP, mag. transition temps., mag. susceptibility study 2-41115  
<sup>248</sup>CmSb, mag. transition temps., mag. susceptibility study 2-41115  
 Co<sub>100-x</sub>Ti<sub>x</sub>, amorphous ferromagnetic thin films, mag. props. FMR and magnetisation meas. 2-36398  
 Co<sub>84</sub>Si<sub>15</sub>Fe<sub>1</sub>B<sub>2.5</sub>, amorphous alloy, electron irradiation effects (Ukrainian) 2-25929  
 Cu-Ni-Fe decomposed solid solns., plastic deformation effect on mag. props. (Russian) 2-21862  
 Cu<sub>2</sub>Co<sub>1-x</sub>Cr<sub>2x</sub>S<sub>4</sub> chalcogen spinel system, elect. and mag. props., temp. depend. 2-31135  
 (Cu<sub>1-x</sub>Co<sub>x</sub>)<sub>2</sub>MnSn Heusler alloy, mag. props. 2-46283  
 (CuCr<sub>2</sub>S<sub>4</sub>)(Cu<sub>0.5</sub>In<sub>0.5</sub>Cr<sub>2</sub>S<sub>4</sub>)<sub>1-x</sub>, mag. elec. and thermoelectric props. 2-9005  
 Cu<sub>2</sub>Cr<sub>2</sub>Se<sub>4</sub>-Br<sub>x</sub>, elec. props., anion substitution effect, cond. max. near Curie temp. 2-36044  
 CuMn, spin glass susceptibility above T<sub>f</sub> 2-36356  
 CuMn spin-glass, high temp. susceptibility meas. 2-21803  
 (Cu<sub>2</sub>Ni<sub>1-x</sub>)<sub>75</sub>P<sub>16</sub>B<sub>6</sub>Al<sub>3</sub>, spin glass transition study 2-31182  
 ErCo<sub>2</sub>-ErAl<sub>2</sub>, cryst. struct. and mag. props. 2-8476  
 Er<sub>1-x</sub>Ho<sub>x</sub>Rh<sub>4</sub>B<sub>4</sub>, reentrant ferromagnetic superconductor, magnetisation 2-17210  
 Er<sub>2-x</sub>Pr<sub>x</sub>Co<sub>17</sub>, mag. props., Mossbauer effect 2-36385  
 ErRh<sub>2</sub>B<sub>4</sub>, mag. Landau parameter determ. 2-36304  
 ErRh<sub>2</sub>B<sub>4</sub>, magnetisation, susceptibility, superconducting transition 2-17209  
 EuO films, mag. heterogeneity, Curie temp. elevation, mag. susceptibility meas., 77 to 300K 2-26695  
 EuO:Gd, ferromag. semicond., magnon spectrum and Curie temp. 2-13299  
 EuS:Gd, ferromag. semicond., magnon spectrum and Curie temp. 2-13299  
 Eu<sub>1-x</sub>Sm<sub>x</sub>O, mag. quasimolecules, mag. props. 2-17275  
 Fe, ferromagnetic, itinerant-electron system, Ising model and Bethe approx. 2-26642  
 Fe, magnetovolume effects, local-band theory 2-26719  
 Fe, thermodynamic excitations, spin waves and Curie temp., d-band model 2-36301  
 α-Fe:Zn, Zn diffusion, mag. transitions effect 2-40602  
 Fe-B, amorphous, mag. behaviour under press., invar-like prop. 2-9016  
 Fe-B, amorphous, with transition metal substituents, mag. props. and crystn., cluster form. 2-8997  
 Fe-B-Si-C-Al, amorphous, crystn. temp., mag. props. 2-41160  
 Fe-Co, order-disorder transitions, specific heat 2-21794  
 Fe-Cr-Si-B amorphous ribbons, mag. props. 2-36384  
 Fe-Rh, pressure-temp. mag. phase diagram 2-36347  
 Fe-transition metal amorphous binary alloys, Curie temp., magnetisation 2-36341  
 Fe-Zr-B, amorphous, form. range, mag. props. and thermal stability 2-31243  
 Fe<sub>2</sub>AlSi<sub>1-x</sub>, mag. hyperfine field and isomer shift, Mossbauer study 2-17374  
 Fe<sub>80</sub>B<sub>20</sub>, metallic glass, thermomagnetic and transport props. 2-26362  
 Fe<sub>75</sub>B<sub>14</sub>Si<sub>10</sub>Al<sub>1</sub>, amorphous, mag. props. and crystn. 2-46441  
 Fe<sub>81</sub>B<sub>15</sub>Si<sub>3</sub>C<sub>2</sub>, metallic glass, thermomagnetic and transport props. 2-26362  
 Fe<sub>1-x</sub>B<sub>x</sub>, amorphous film, Curie and crystn. temp., Hall effect meas. 2-51149  
 (Fe<sub>1-x</sub>Mn<sub>x</sub>)<sub>80</sub>B<sub>20</sub>, amorphous, mag. props., magnetisation and Mossbauer effect study 2-26666  
 (Fe<sub>2</sub>Mn<sub>1-x</sub>)<sub>75</sub>P<sub>16</sub>B<sub>6</sub>Al<sub>3</sub>, spin glass transition study 2-31182  
 Fe<sub>65</sub>Ni<sub>35</sub>, Invar alloy, magnetovolume effects, local-band theory 2-26719  
 Fe<sub>10</sub>Ni<sub>70</sub>B<sub>20</sub>Si<sub>1</sub>, amorphous, second order mag. phase transition 2-2077  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>16</sub>B<sub>6</sub>, amorphous ferromagnet, magnetisation study 2-46347  
 (Fe<sub>1-x</sub>Ni<sub>x</sub>)<sub>75</sub>P<sub>16</sub>B<sub>6</sub>Al<sub>3</sub>, spin glass transition study 2-31182  
 (Fe<sub>1-x</sub>Ni<sub>x</sub>)<sub>77</sub>Si<sub>17</sub>B<sub>13</sub>, amorphous, breakdown of magnetism, susceptibility and Mossbauer meas. 2-8976  
 Fe<sub>2</sub>Sn<sub>1-x</sub>, amorphous, mag. phase diagram 2-36342  
 Fe<sub>90</sub>Zr<sub>10</sub>, amorphous ribbon, Curie temp. pres. depend. 2-13297  
 Gd, strain effect on heat capacity near Curie temp. 2-13307  
 Gd, thermal expansion near Curie temp. 2-46305  
 Gd, US wave absorpt. near Curie point, mag. field influence 2-41175  
 Gd-Fe amorphous film, RF magnetron sputtering and mag. props. 2-36782  
 Gd<sub>1-x</sub>Er<sub>x</sub>Al<sub>2</sub>, Curie temp., spin-disorder resist. and residual resist. 2-35991  
 Gd<sub>1-x</sub>Re<sub>x</sub>Al<sub>2</sub> (Re=Dy, Ho, Er), Curie temp., theoretical calc. 2-21793  
 Gd<sub>2</sub>Y<sub>1-x</sub>Co<sub>x</sub>, magnetic behaviour and exchange interactions 2-46262  
 Gd-B-Ga, amorphous, crystn. temp., mag. props. 2-41160  
 HoCo<sub>2</sub>, mag. excitations, neutron scatt. study 2-51396  
 Li-Ti-Zn ferrite, effect of MnO<sub>2</sub> and Bi<sub>2</sub>O<sub>3</sub> additives on props. (Slovak) 2-2105  
 LiNH<sub>4</sub>SO<sub>4</sub> single crystals, piezoelec. props. 2-31384  
 LiTb<sub>0.5</sub>Ho<sub>0.45</sub>F<sub>4</sub>, random Ising dipole coupled ferromag., mag. susceptibility 2-46261  
 LiTb<sub>2</sub>Y<sub>1-x</sub>F<sub>4</sub>, critical props., phase diagram 2-51407  
 MgO-CdO-Fe<sub>2</sub>O<sub>3</sub> system, phase comp., X-ray and mag. analysis 2-5864  
 Mn<sub>1-x</sub>Cu<sub>x</sub>Sb thin films, magneto-optical props., Curie temp. 2-9212  
 MnSb alloy, mag. props. depend. on press. and temp. (Russian) 2-13298  
 MnSb<sub>1-x</sub>Sn<sub>x</sub> thin films, magneto-optical props., Curie temp. 2-9212  
 MnSiTe<sub>3</sub>, ferrimagnetic semiconductor, mag. props., cryst. struct. 2-26669  
 Mn<sub>0.7</sub>Zn<sub>0.3</sub>Cr<sub>2</sub>Fe<sub>2-x</sub>O<sub>4</sub>, ferrite, Mossbauer study of Cr conc. effect (French) 2-13381  
 Nd<sub>1-x</sub>Fe<sub>x</sub> amorphous alloys, melt-spun, crystallisation and mag. props. 2-17314  
 Ni (100), surface magnetism near crit. region, spin-polarised electron scatt. study 2-31197  
 Ni, electrical resistance near T<sub>c</sub>, critical parameters 2-21561  
 Ni, ferromagnetic, itinerant-electron system, Ising model and Bethe approx. 2-26642  
 Ni, magnetovolume effects, local-band theory 2-26719  
 Ni<sub>1-x</sub>Cu<sub>x</sub>(1-x)Fe<sub>2</sub>O<sub>4</sub> (0≤x≤1) ferrites, structural and magnetic properties 2-2060  
 NiMn, theory of finite temp. magnetism, local environment effect and glass-like phase 2-46295  
 (NiO)<sub>1</sub>(2B<sub>2</sub>O<sub>3</sub>.PbO)<sub>1-x</sub> glass, mag. props. 2-36332

## Curie temperature continued

- Pb<sub>2</sub>(Ge<sub>1-x</sub>Si<sub>x</sub>)<sub>2</sub>O<sub>11</sub> ferroelec. crystals, X-ray spectroscopic and dielec. studies 2-21109  
 Pr<sub>1-x</sub>Al<sub>x</sub>Co<sub>3</sub>, constitution, struct. and mag. props. 2-47199  
 PrNi<sub>2</sub>, nuclear susceptibility and thermodynamic anal. of nucl. sp. ht. 2-36330  
 Sm<sub>1-x</sub>Er<sub>x</sub>Rh<sub>4</sub>B<sub>4</sub>, antiferromagnetic-ferromagnetic transition 2-17286  
 Sn<sub>1-x</sub>Cr<sub>x</sub>Te, mag. props., effect of isothermal annealing 2-41161  
 Sr(Co<sub>1-x</sub>Mn<sub>x</sub>)O<sub>3</sub>, cubic perovskite struct., mag. props. meas. 2-26618  
 Tb-Fe amorphous film, RF magnetron sputtering and mag. props. 2-36782  
 Tb<sub>0.4</sub>Fe<sub>0.6</sub>, magnetic props. and struct. (Chinese) 2-31256  
 Tb<sub>2</sub>Gd<sub>1-x</sub>, orientational phase transition near Curie point 2-31174  
 Th<sub>2</sub>Fe<sub>2</sub>H<sub>4</sub>, mag., struct., and surface props. 2-35701  
 TiCu<sub>2</sub>FeBe<sub>2-x-y</sub>, itinerant magnetism, magnetisation and Mossbauer studies 2-31151  
 Ti-Cr-S(Se)(Te) system cpds., mag. props. and struct. 2-51398  
 α-TmHx solid solns., mag. transition temps., magnetisation meas. 2-13295  
 TmRh<sub>4</sub>B<sub>4</sub>, mag. props. study 2-17321  
 U-Co alloys, mag. props. temp. and field depend., 4.2 to 300K 2-8961  
 UCu<sub>2</sub>Ge<sub>2</sub>, antiferromagnetic-ferromagnetic phase transition, neutron diffraction study 2-36346  
 UFe<sub>2</sub>-UCO<sub>2</sub> system, elec. and mag. props., model of strong scatt., temp. and field depend. 2-8784  
 WC-Co hard alloys, thermomag. method for Co determ. 2-36348  
 WFe<sub>2</sub>O<sub>12</sub>, changes in Curie temp. induced by neutron irradiation 2-41139  
 Y<sub>2</sub>Fe<sub>2</sub>O<sub>12</sub>, exchange interaction influence on NMR freq. 2-36454  
 Y(Mn<sub>1-x</sub>Fe<sub>x</sub>)<sub>2</sub> structural and mag. props. (Chinese) 2-21821  
 ZnMnFe<sub>2-x</sub>O<sub>4</sub>Cr(Al)(In), dielec. props., elec. cond., mag. props., lattice constants, dopant effects 2-51524  
 Zr(Fe<sub>1-x</sub>Co<sub>x</sub>)<sub>2</sub>, magnetic order range, magnetisation and Mossbauer study 2-46341  
 Zr<sub>1-x</sub>Ti<sub>x</sub>Mn<sub>2</sub>H, mag., crystallographic and H<sub>2</sub> storage characts. 2-41127  
 ZrZn<sub>2</sub>, triplet supercond., elec. cond. and mag. study 2-36187

## curium

- see also nuclei with .....  
 surface ionisation, ionisation pots. studied by mass spectra 2-17591

## curium compounds

- <sup>248</sup>CmP, mag. transition temps., mag. susceptibility study 2-41115  
<sup>248</sup>CmSb, mag. transition temps., mag. susceptibility study 2-41115

## current (electric) see electric current

## current algebra

- see also elementary particle theory; hadron current; light cones; quantum field theory  
 axions and second class currents, common basis in chiral U1 symmetry 2-38819  
 baryon mag. moments, spectrum-generating group theory 2-3784  
 euclidean lattice QCD, Susskind fermions, U(1) axial current 2-23922  
 field theories, noncovariance, light-cone quantisation, scale-invariance 2-29004  
 hyperon nonleptonic decays, in weak interaction theories 2-48983  
 jets, degree of coherence in Kopylov-Podgovetsky-Cocconi formulae 2-43389  
 light quark vacuum condensate, QCD sum rules, PCAC, spontaneous masses 2-11021  
 massless high spin particles, Lorentz covariant energy-momentum tensor and current 2-6955  
 N-8 supergravity, duality rotations for interacting fields 2-48596  
 QCD, currents, symm. breaking, mass spectra 2-23938  
 QCD chiral currents, vacuum polarisation, massive quarks effect 2-29013  
 QCD effective Lagrangian, canonical quantisation axial anomaly 2-38854  
 scalar fields, conserved currents, mass spectra, Killing eqns., Goldstone theorem, classification scheme 2-19317  
 strong and neutral PCAC, chiral-symmetry breaking schemes 2-23874  
 supercurrents, N-extended supersymmetry irreducible off-shell representation 2-28993  
 U(1) axial anomaly, effective Lagrangian formulation, rel. to QCD 2-38820  
 CN, deeply inelastic scatt., quark jets, structure functions, currents 2-43361  
 D-κπ, weak decays, quark dynamics in current algebra 2-317  
 Δ, mass calc. in QCD from quark currents 2-19338  
 K-ππ, weak decays, quark dynamics in current algebra 2-317  
 KN-X, unitarity corrections, sigma terms 2-281  
 N, mass calc. in QCD from quark currents 2-19338  
 NN scatt., solitary wave exchange pots., currents 2-3803  
 κK system scatt. lengths calc. in chiral models with quark and baryons (Russian) 2-33857  
 πN coupling constant, in 1/N expansion 2-49006  
 πN-X, unitarity corrections, sigma terms 2-281

## current density

- see also critical current density (superconductivity); electron density  
 electrochemical H-Cl energy storage system, optimisation for minimum capital investment 2-22461  
 electroless plating, meas. of instantaneous rate by electrochem. method 2-6041  
 multifilamentary A15 superconductors, developments at IGC (USA), review 2-8936  
 one-dimensional eddy current problem, considering variable permeability and various boundary conditions (German) 2-24913  
 photoelectrolysis cell, current-voltage characteristics 2-22632  
 semiconductor, current density calc., additivity of ohmic and space charge limited currents 2-46007  
 submicron devices, current equations for velocity overshoot 2-51180  
 superconductor, filamentary, current distrib. near end 2-36278  
 unipolar corona discharge in hyperboloid-plane gap, calc. and obs. 2-16533  
 Cu-(Nb<sub>1-x</sub>Ta<sub>x</sub>)<sub>3</sub> Sn supercond. in situ multifilamentary wire, crit. currents 2-8931  
 Fe, corrosion in neutral soln., anode to cathode area ratio 2-52094  
 InSn<sub>0.5</sub>Ta<sub>0.5</sub>O<sub>5</sub>-ZnS:Mn-Ta<sub>2</sub>O<sub>5</sub>-Al thin film struct., DC electrolum. 2-46764  
 Pb-acid cells, industrial motive power type current density and electrolyte distrib. 2-9638  
 Pt foil, H diffusivity and solubility, determ. using electrochem. permeation methods (Japanese) 2-1672



**current density continued**

- Si  $n^+p$  diffused solar cell, effect of junction depth on performance 2-32070  
 Si, polycrystalline, carrier transport and recombination processes at grain boundaries under optical illumination 2-36105

**current distribution**

- see also *current density*  
 electron density and plasma current distrib. meas. in Tokamak plasma using sub-MM waves 2-40182  
 fields of source current distrib. in free space 2-39532  
 unipolar corona discharge in hyperboloid-plane gap, calc. and obs. 2-16533

**current fluctuations**

- see also *noise*  
 semiconductor, lightly doped, excess low-frequency noise in hopping conduction 2-46086  
 semiconductor junctions, periodic structure, current oscils. 2-41007  
 SQUID, resistive, with large crit. current, Josephson oscillation 2-17231  
 GaSe, injection-induced impurity breakdown, low freq. current oscils. 2-13086  
 H, adsorbed on W (110) plane, field emission current-fluctuation method obs., surface diffusion and phase transition 2-1769  
 Si hot carrier p-n junction, current oscils. 2-17154  
 Si, p-n junction, current fluctuations, during secondary breakdown 2-36133

**current measurement, electric** see *electric current measurement***current-mode logic** see *emitter-coupled logic***current transients** see *transients***currents algebra** see *current algebra***curvature measurement**

- aspheric surfaces, measurement by optical differential technique 2-7906  
 flatness testing using IKP-2 interferometer 2-48763  
 hydrogel contact-lens convex surface curvature meas., clinical use of Kontr-Mess system 2-32298  
 reflecting grid method for curvature and twist 2-25336  
 shock wave refractive index change and curvature in shock waves by angled beam refraction 2-4909

**curvature of field** see *aberrations***curve fitting**

- energy dispersive X-ray spectrometry, spectral interference resolution using sequential simplex 2-43158  
 energy-dispersive X-ray spectrometry, curve-fitting techniques and appls. 2-43157  
 energy-dispersive X-ray spectrometry, detectability limits and deconvolution, statistical considerations 2-43156  
 linearised least squares techniques for model exp  $(A_1 + A_2x)$  2-38409  
 matrix mutual orthogonality and parameter independence 2-10583  
 noisy data, fitting algorithm for  $y=A(1-\exp(kx))$  2-23603

**cutting**

- see also *machine tools; machining*  
 constructional materials, laser beam cutting, development and anal. of math. models (Russian) 2-9520  
 polymers, high, fracture phenomena in cutting process, cutting conditions 2-47166  
 saws, disc cutting, motional stability (Russian) 2-8030  
 steel, alloy, drilling, influence of liq. Sn-Zn and powder Sn-Zn suspension cutting fluids 2-2591  
 steel, tool, effect of clearance angle on wear 2-47190  
 steel plate fabrication noise problem rel. to air-arc gouging 2-9739  
 tools of complex structure, brittle fracture mechanism (Japanese) 2-22308  
 Al, single cryst., orientation effects on cutting mechanism 2-45184  
 Fe-Si (3.25 wt.%), grain-oriented, core-loss, effect of cutting operation 2-17744  
 Ni-Cr-Co-Mo-Al-W-Ti-C, heat-resist., cryst. and dislocation struct., var. during cutting 2-51989  
 Si ingot slicing with internal diameter saw, low-cost solar cell technology, economics 2-37363  
 Si slicing using machine using multicutting wire technology 2-18077  
 WC cutting tips, wear in turning particleboard (Japanese) 2-9421

**CVD** see *chemical vapour deposition***CVD coatings**

- ceramic coatings as positive current collectors for Li-Al/FeS<sub>2</sub> batteries 2-47469  
 film, semiconducting, struct., X-ray diffr. study 2-45788  
 narrow stripe visible laser, proton isolated, grown by metalorganic CVD, lasing characts. 2-44285  
 phosphosilicate glass/Al-Si thin film structs., stress, temp. depend. 2-1804  
 tribological and protective coatings by chemical vapour deposition, applications 2-31855  
 AlAs-Al<sub>1-x</sub>Ga<sub>1-x</sub>As-GaAs superlattices, absorpt., stimulated emission and clustering 2-46794  
 B CVD coating, D<sub>2</sub> trapping meas. for tokamak fusion test reactor 2-12948  
 n-B, semicond., CVD prep. and elec. props. 2-40885  
 B-C, CVD deposited, comp. and struct. changes, temp. and supersaturation effects 2-40715  
 n-B-Si, semicond., CVD prep. and elec. props. 2-40885  
 CdSe film, deposited from heteroorganic cpds., exciton absorpt. 2-5761  
 CuS spectrally selective coating, chemically deposited, optical props. and emissivity 2-9680  
 GaAlAs DH shallow proton stripe laser grown by metalorganic CVD, current threshold uniformity 2-44283  
 GaAs-GaAlAs, stripe DH laser, Zn-diffused, metalorganic CVD grown 2-49772  
 Ge epitaxial layers on Si, CVD and vacuum deposited, phys. and elec. props. 2-51024  
 Ge<sub>1-x</sub>C<sub>x</sub> CVD coating, struct. and optical props. 2-45773  
 InP epitaxial film, metalorganic CVD, elec. props. 2-21698  
 InP-SiO<sub>2</sub>(Si<sub>3</sub>N<sub>4</sub>) MIS capacitors, interface props., C-V meas. 2-8884  
 Mo black film, CVD, of high IR reflectance and significant solar absorptance 2-22655  
 Mo CVD coating, He ion irradiation effects 2-12651  
 Mo-MoO<sub>3</sub> black Mo thin film, CVD growth and H<sub>2</sub> reduction 2-21464  
 Nb-Ge-B, A-15 compound, supercond. props. 2-46215  
 Nb-Ge(-Si) CVD films, supercond. crit. temp. 2-30991  
 Nb-Si CVD films, supercond. crit. temp. 2-30991  
 Nb<sub>2</sub>Ge composite tape conductors, total AC losses 2-36277

**CVD coatings continued**

- Nb<sub>2</sub>Ge, supercond. Tape, preparation by continuous CVD process (Chinese) 2-41523  
 Nb<sub>2</sub>(Ge,Ga)<sub>1-x</sub> A-15 compound, supercond. props. 2-46215  
 Nb<sub>2</sub>Sn tapes, CVD, dynamic stability (Chinese) 2-41097  
 Ni, laser CVD on SiO<sub>2</sub>, physical props. 2-22171  
 Si, amorphous, CVD growth, struct., optical, and elec. props. 2-40274  
 Si, amorphous, optical gap and refractive index (French) 2-9211  
 Si, amorphous, plasma deposited and CVD coatings, ion implantation, elec. cond. and photoluminesc. 2-40905  
 Si CVD films, polycryst., elec. props., depend. on grain size and impurity doping conc. 2-30981  
 Si films, CVD, amorphous and polycryst., cond. mechanism 2-46171  
 Si on sapphire, low-density defect 2-45764  
 Si polycryst. on SiO<sub>2</sub>, recrystallisation by dual electron beam processing, lateral seeding technique 2-46912  
 Si polycrystalline film production in H<sub>2</sub> medium, chemical process, appls. (Bulgarian) 2-46930  
 Si, polycrystalline thin film, pulsed laser recrystallisation, SEM technique 2-51057  
 Si, single cryst. on oxide, CW laser induced lateral seeding process 2-12934  
 Si:B, H amorphous CVD film, hydrogenation effect, elec. cond. and ESR meas. 2-40906  
 Si:F, H amorphous CVD film, hydrogenation effect, elec. cond. and ESR meas. 2-40906  
 Si:P, ion implanted, I-V characts., temp. depend., elec. cond. model 2-51356  
 Si:P CVD layers, refr. index, absorption coeff., free carrier model 2-31577  
 Si:P film, LPCVD, polycryst., grain size and resist. 2-13202  
 SiC CVD layer, blistering reduction with pre-dosing (Japanese) 2-25945  
 Si<sub>3</sub>N<sub>4</sub> CVD film encapsulation for GaAs wafer during post-implant annealing 2-41634  
 Si<sub>3</sub>N<sub>4</sub> film, CVD or thermally grown, Rutherford backscatt., AES and ellipsometric study 2-51021  
 Si<sub>3</sub>N<sub>4</sub> film, MNOS struct., electron traps, photoionisation cross-section 2-46135  
 Si<sub>3</sub>N<sub>4</sub>-C amorphous CVD composites, struct. and thermal props. 2-30773  
 SiO<sub>2</sub> low press. CVD film, deposited by SiH<sub>2</sub>Cl<sub>2</sub>-N<sub>2</sub>O mixture, Cl distrib. and surface roughness 2-45761  
 SiO<sub>2</sub>-InSb interface form., XPS study 2-26235  
 Ti-C-N coated WC-Co hard alloy, TiB<sub>2</sub> interaction 2-40607  
 TiB<sub>2</sub>, CVD, as selective solar absorber 2-22656  
 TiC, CVD coating on sintered WC-Co substrate (Korean) 2-5835  
 TiC, CVD coatings on cemented WC tool bits, morphology 2-30731  
 TiC coating, surface erosion under <sup>4</sup>He<sup>+</sup> and D<sup>+</sup> ion irradiation 2-12650  
 TiC, laser CVD on stainless steel, physical props. 2-22171  
 TiC vapor deposited coatings, sputtering under D<sup>+</sup> and <sup>4</sup>He<sup>+</sup> bombard. 2-13615  
 TiO<sub>2</sub>, laser CVD on SiO<sub>2</sub>, physical props. 2-22171  
 V<sub>2</sub>O<sub>5</sub>, amorphous CVD coating, prep., elec. cond. and EPR spectra 2-40739  
 ZnC-C chemical gas-phase deposited, Hall effect 2-5419  
 ZnO film, absorption edge shift at high carrier densities 2-13582  
 ZnS<sub>2</sub>Se<sub>1-x</sub>, polycryst., prepared by CVD, struct. and optical props. 2-45769  
 n-ZnSe organometallic CVD layer, cond. mechanism 2-51355  
 ZnSe:N(P), organometallic CVD growth, shallow acceptor doping, photoluminesc. study 2-51107  
 ZrB<sub>2</sub>, CVD, as selective solar absorber 2-22656  
 ZrB<sub>2</sub> coatings for photothermal absorber appls., 2-22652

**CVD epitaxial growth** see *vapour phase epitaxial growth***CVD thin films** see *CVD coatings***cyanogen, C<sub>2</sub>N<sub>2</sub>** see *carbon compounds***cyclopentadienylides** see *organometallic compounds***cyclotron resonance**

- for ion cyclotron resonance spectroscopy see *mass spectroscopy; for ion cyclotron resonance heating see plasma heating*  
 see also *diamagnetism; dopplers*  
 cyclotron maser instability, as resonant limit of space charge wave interaction with EM structure 2-20285  
 degenerate semiconductors, magnetoresistance and cyclotron resonance, in strong EM wave 2-17097  
 electromagnetic systems, dispersion characteristics with perturbations of general form 2-29772  
 electron cyclotron resonance maser, kinetic theory considering space charge effect 2-20286  
 maser, compact 2-39607  
 metal, doppleron excitation, open orbits effect 2-51470  
 metal, surface impedances in mag. field 2-8856  
 metallic ferromagnets, located in inclined mag. field, slowly decaying waves near cyclotron reson. (Russian) 2-46387  
 metals, surface impedance near cyclotron-wave and cyclotron resonances (Russian) 2-51279  
 MIS struct., cyclotron-phonon reson. 2-36438  
 plasma, discharge cleaning, in JFT-2 Tokamak (Japanese) 2-30342  
 plasma, H atom flux meas. using quadrupole mass analyser 2-1344  
 plasma EM wave absorption and reflection at electron cyclotron freq. harmonics 2-12317  
 quasi-Landau resonance spacing, WKB approx. 2-45859  
 relativistic cyclotron-resonance maser amplifiers 2-44227  
 semiconductor superlattice, Stark-cyclotron longitudinal waves 2-5430  
 semiconductor film, size quantised, cyclotron reson. 2-46386  
 semiconductor superlattice, cyclotron reson., high freq. cond. tensor 2-5585  
 semiconductors, conference, Hakone, Japan (Sept. 1980) 2-18813  
 semiconductors, cyclotron reson. line width due to impurity scatt., theory 2-21883  
 semiconductors, cyclotron resonance lineshape, quantum statistical theories, review 2-46385  
 semiconductors, fluctuation levels, cyclotron resonance in random potential (Russian) 2-13343  
 semiconductors, free carrier cyclotron resonance linewidth due to ionised impurities 2-31289  
 semiconductors, hot electron effects in crossed mag. and static microwave elec. fields 2-46036  
 semiconductors, submillimeter-magneto spectroscopy 2-21884  
 Tokamak, electron cyclotron resonance discharge cleaning (Japanese) 2-25633



**cyclotron resonance continued**

- two-dimensional system, Anderson localisation in Landau levels, Hall cond. and cyclotron resonance lineshape 2-51101  
 Ag, cyclotron mass anisotropy and electron-phonon interaction 2-45810  
 Ag surface, air oxidized, work function, photoelectric determ., cyclotron resonance from secondary electron emission technique 2-46868  
 Al,Ga<sub>1-x</sub>As-GaAs heterojunction, selectively doped, cyclotron reson. linewidth 2-51467  
 Bi, electron interactions, subband transitions study 2-26307  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, electronic props. near semiconductor-semimetal transition, magneto-plasma resonance 2-2137  
 GaAs, cyclotron emission investig. as function of doping 2-5586  
 GaAs, hot electron nonMaxwellian distrib. function in mag. field, cyclotron emission study 2-46038  
 GaAs, impurity spectra, cyclotron resonance in high mag. fields 2-22054  
 GaAs laser cyclotron resonance, Zeeman absorpt. 2-41205  
 GaAs, photo-excited, far IR magnetoabsorption (*Japanese*) 2-36609  
 n-GaAs, photoconductivity, far-IR two-photon transitions and two-photon cyclotron resonance 2-40973  
 GaAs-GaAlAs interface, cyclotron emission, two-dimens. character of electron gas 2-5586  
 GaP, studies using megagauss fields 2-31290  
 p-Ge, far IR emission from population-inverted hot-carrier system 2-46771  
 Ge laser cyclotron resonance, Zeeman absorpt. 2-41205  
 p-Ge, submillimeter radiation amplification by cyclotron res. of light holes in intraband optical excitation 2-51469  
 Ge:Li, Hall effect, cyclotron resonance study of converted regions 2-40941  
 n-InAs accumulation layers, far IR cyclotron reson. and Shubnikov-de Haas oscils. 2-41020  
 InAs-GaSb superlattices in high magnetic fields, band struct., elec. and optical props. 2-21669  
 InP, cyclotron emission investig. as function of doping 2-5586  
 InP, impurity spectra, cyclotron resonance in high mag. fields 2-22054  
 n-InSb, cyclotron resonance, defect levels 2-21885  
 InSb, free carrier cyclotron resonance linewidth due to ionised impurities 2-31289  
 InSb, hot electron energy relaxation, screening by shallow donor impurities 2-40950  
 InSb, impurity spectra, cyclotron resonance in high mag. fields 2-22054  
 InSb laser cyclotron resonance, Zeeman absorpt. 2-41205  
 InSb, photo-excited, far IR magnetoabsorption (*Japanese*) 2-36609  
 InSb, photoexcited hot carriers, far IR cyclotron reson. and emission 2-46384  
 Mo, Doppler-shifted acoustic cyclotron reson., magneto-acoustic effects (*Russian*) 2-13342  
 n-GaAs, far IR two-photon transitions, magnetophotocond. 2-13126  
 PbTe, screening breakdown in Voigt cyclotron resonance 2-26751  
 Si (001) MIS transistors, cyclotron resonance of inversion layers 2-51468  
 Si inversion layers, 2D electron gas, freq. depend. memory function elec. cond. meas. 2-51318  
 Si inversion layers, two-dimens. electron system, mag. field induced Wigner glass 2-40988  
 Si laser cyclotron resonance, Zeeman absorpt. 2-41205  
 Si surface inversion layer, uniaxially stressed, electron cyclotron reson. 2-13155  
 W, Doppler-shifted acoustic cyclotron reson., magneto-acoustic effects (*Russian*) 2-13342

**cyclotrons**

- see also microtrons; synchrocyclotrons*  
 beam sharing system between Linac and separated-sector cyclotron (*Japanese*) 2-835  
 cyclotron, historical development, 1930-80 2-48478  
 harmonic wave instability on costreaming electron beams 2-7432  
 heavy-ion beam sweeping apparatus for uniform irradiation of samples 2-43653  
 Indiana University, cyclotron facility, data acquisition system 2-7459  
 ion source temporal stability increase 2-19823  
 isochronous, amplitude and phase control of first harmonic of magnetic field 2-15644  
 isochronous, amplitude and phase control of first harmonic of magnetic field 2-19801  
 LINKER, intercomputer communication system for cyclotron facility 2-7448  
 magnets, fast field mapping device 2-168  
 maser instabilities, macroscopic theory, fluid dynamical approach 2-49720  
 medical, design for a multiple target system 2-2947  
 proton cyclotron, using supercond. separate sectors 2-24457  
 sector magnet for IPCR separated sector cyclotron 2-7418  
 Texas A&M cyclotron polarised ion source 2-39255  
 TRIUMF cyclotron, remote handling maintenance system 2-24463  
 VICKSI accelerator system, operating experience 2-11309

**Czocharski method** *see crystal growth from melt*

**D-layer** *see D-region*

**D mesons**

- decay modes and lifetimes, quantum flavour dynamics 2-33775  
 diffractive  $\psi$  and DD muoprod., azimuthal depend., gluon spin, parity and  $k_{\perp}$  test 2-24003  
 photon and gluon radiative weak decays and inclusive decays 2-48981  
 weak hadronic decay, QCD effects 2-23976  
 D<sup>-</sup>K<sup>0</sup> $\pi^+$ , quark decay topologies, factorisation with vacuum insertion 2-43336  
 D<sup>-</sup>K $\pi$ , weak decays, quark dynamics in current algebra 2-317  
 D<sup>-</sup>K $\pi\nu$ , CP violation mechanism in SU(2)<sub>L</sub>×U(1) model 2-43333  
 D<sup>-</sup>leptons, direct yield, QCD calc. (*Russian*) 2-11046  
 D<sup>0</sup>, D<sup>+</sup>, charmed hadrons lifetime meas. review 2-15336  
 D<sup>0</sup> and D<sup>+</sup> mesons lifetime difference and annihilation diagram (*Russian*) 2-7025  
 D<sup>0</sup>(D<sup>+</sup>), inclusive and two-body hadronic decay study 2-43338  
 D<sup>0</sup>→K<sup>0</sup> $\pi^+$ (K<sup>-</sup> $\pi^+$ ), unitarity constraints for decay branching ratios 2-33829  
 D<sup>0</sup>→K<sup>0</sup> $\pi^+$ e<sup>+</sup> $\nu_e$ , from  $\gamma$ N, decay lifetime (*Russian*) 2-11056  
 D<sup>0</sup>→K<sup>0</sup>K<sup>+</sup>( $\pi^+\pi^-$ ), Cabibbo-suppressed decays, effective nonleptonic Hamiltonian calc. (*Russian*) 2-7026  
 D<sup>0</sup>→K<sup>0</sup> $\pi^+\pi^-\pi^0$ , decay detection using rapid cycling H bubble chamber 2-39264  
 D<sup>0</sup>→K<sup>+</sup> $\pi^-\pi^+\pi^-$ , from  $\gamma$ N, decay lifetime (*Russian*) 2-11056

**D mesons continued**

- D<sup>+</sup> nonleptonic weak decays, QCD nonleading corrections, dimensional reduction 2-316  
 D<sup>+</sup>→ $\pi^+\pi^+K^-$ , W-exchange dominance hypothesis 2-33824  
 D<sup>+</sup> semileptonic branching ratio, mass and QCD corrections 2-43334  
 D<sup>+</sup>→D<sup>0</sup> and D<sup>+</sup>→D<sup>0</sup> EM mass difference 2-43348  
 D<sup>0</sup>, D<sup>+</sup> mass difference and CP violation in SU(2)<sub>L</sub>×U(1) gauge model 2-19376  
 D<sup>0</sup>K<sup>0</sup>e<sup>+</sup> $\nu_e$ , form factors, QCD short distance behaviour 2-11045  
 $\gamma$ N, D<sup>0</sup>, D<sup>+</sup> inclusive photoproduction cross section 2-29116  
 $\gamma$ N→D<sup>0</sup>D<sup>0</sup>, charmed part decays (*Russian*) 2-11056  
 $\gamma$ N→D<sup>+</sup>X, 75-200 GeV, inclusive prod. cross-section 2-326  
 $\mu$ N→ $\mu$ DDX, charm muoproduction, intrinsic charm and photon-gluon fusion contrib. 2-19386  
 pp, s<sup>1/2</sup>=62 GeV, DD charm meson pair prod. cross section 2-33863  
 pp→D<sup>0</sup>DX, s<sup>1/2</sup>=62 GeV, charm meson pairs associated prod. meas. 2-29142  
 pp→D<sup>+</sup>X, 12 GeV, cross-section 2-29159  
 pp→De<sup>+</sup>X, 62 GeV, p<sub>T</sub> depend. 2-43385  
 pp→DeX, 62 GeV, longitudinal momentum distrib. 2-38908  
 pp→ex, 52.7 GeV, high P<sub>T</sub> single prod., D meson contrib. 2-352  
 pp→ $\Lambda_b^0$ M<sub>b</sub><sup>+</sup>X ( $\Lambda_c^+$ DX), charm and beauty prod. cross section comparison 2-24036  
 $\pi$ p, D meson formation, parton model (*Russian*) 2-24046  
 $\pi$  p, 70 GeV, single electron prod. from D meson decay 2-353

**D-region**

- S Atlantic anomaly region, precipitation during mag. storm disturbance 2-23175  
 disturbances of mid-latitude following mag. storm 2-32737  
 incoherent scattering, thermally induced chemical fluctuation effects 2-14666  
 ion recombination coefficients from electron density var. rel. to ionisation rate v ar. 2-38017  
 ionisation processes during total solar eclipse 2-42526  
 polar region electron distrib. in dark sector 2-48070  
 radar reflections properties and structure 2-48079  
 radiowave partial reflections, amplitude statistics 2-42538  
 VLF signals from ground based transmitter, electron density profile in D-regions 2-53003  
 winter anomaly, aeronomic and meteorological aspects, review 2-32706

**D/A conversion** *see digital-analogue conversion*

**damage, radiation** *see radiation effects*

**damping** *see dams*

**damping**

- see also dislocation damping; internal friction*  
 alloys, internal friction phenomena associated with diffusionless phase transforms 2-47095  
 beam, rectangular, bending, damping and fatigue 2-30033  
 beam, simply supported, under vibration, material damping and radiation sound pressure 2-50147  
 beams, composite, vibration-damped, finite element analysis 2-1137  
 building acoustics, total loss factor 2-49997  
 columns, damped, cantilevered, subjected to axial loads, reson. instabilities 2-4740  
 complex dynamic systems, noise control problem, supplementarity of damping and isolation 2-20467  
 curved heat exchanger tubes, damping factor meas. using EM exciter, stationary and flowing water conditions 2-12112  
 design elements, vibr. reliability increase by vibr. damping 2-30056  
 dynamic fracture, quasi-brittle, damping due to crack edge failure zones 2-50178  
 dynamic system, non-reverberant to reverberant transition 2-34999  
 dynamic vibration absorbed, optimum tuning and damping 2-20596  
 epoxy polymers, crosslinking density influence on low-temp. relax. nature (*Russian*) 2-51964  
 epoxyamine polymers of polycondensation and polymerisation types, relax. processes (*Russian*) 2-51965  
 glass-fibre reinforced epoxy (polyester resin), damping 2-50762  
 harmonic oscillator, damped, quantum mech. treatment (*Chinese*) 2-28680  
 Heisenberg ferromag. classical continuum chain, soliton damping and energy loss 2-46332  
 impact machine noise diagnostic rules and energy accountancy laws 2-9749  
 liquid crystal, smectic, freely-suspended films, mech. prop. meas. and B-A transition 2-16582  
 Maglev system, superconducting, with sheet guideways, magnetic damping and stiffness coefficient 2-49622  
 martensitic alloys, damping spectrum rel. to dislocation motion 2-47096  
 mechanical oscillatory systems, identification (*Russian*) 2-30001  
 metal, damping and mech. props. 2-51970  
 metals, damping under combined stress loading 2-50153  
 mica reinforced Al alloy, damping capacity, resistivity, thermal expansion and machinability 2-12785  
 multiple scale Fourier transform, appl. to oscillations and wave problems 2-38451  
 non-linear problems of vibration protection (*Russian*) 2-12074  
 oscillating systems, damping, delay, slowly varying parameters, asymptotic method 2-18871  
 pipelines, vibration damping props. of Folgoizol coating 2-25175  
 polydimethylaminophosphazene, relax. and mech. props. (*Russian*) 2-51966  
 rigid mass connected to elastic half-space by elastic rod, transient torsional vibrs. 2-25236  
 ring damped railway wheels, modal damping ratios 2-11899  
 rod, energy dissipation with independent flexural-torsional vibrs. 2-52158  
 sandwich panel, damped, backed by cavity, acoustoelasticity 2-44548  
 shock isolators response with linear and quadratic law damping 2-8073  
 spin dynamics and sound propagation near the spin-glass transition 2-51416  
 steel, austenitic Cr-Ni-Mn type, martensite transform. effect on cyclic strength and damping during deform. 2-52048  
 steel, C, multilayer material, impact strength and damping props. 2-17706  
 steel, Si-Al-(Co)-Mn, graphitised, with ferrite and ferrite-carbide matrix, damping props. 2-2566  
 stick-slip motion, crit. vel., influence of Coulomb, viscous and accel. depend. terms of kinetic friction 2-25983  
 tapered circular beam as dynamic vibration absorber 2-50152  
 torsional vibration pickups natural period lengthening magnetic device (*Japanese*) 2-37991



**damping continued**

- US transducer damping due to lack of parallelism in piezoelec. element 2-11995
- vibrating systems, discrete, damped, eigenvalue computation, reduction and iteration (*German*) 2-28645
- vibration absorbing device, optimisation (*Russian*) 2-8029
- vibration and noise control, materials 2-25178
- viscoelastic substrates, high speed rolling friction, hysteretic damping factor determ. 2-52056
- wave modes in solar mag. flux tubes, propag. speeds and acoustic damping 2-48206
- Al, stress waves, laser induced, damping 2-16716
- Al-Ag (13.5 at. %), torque oscills. damping, magnetisation curves, fluxoid pinning (*Russian*) 2-17247
- Cu, stress waves, laser induced, damping 2-16716
- Cu-Al-Si, two-phase, hardened, mech. props. and damping capacity, Si addition effect 2-5919
- Cu-Zn-Al, high damping alloys, dynamic props. 2-47109
- Cu-Zn-Al high-damping coil spring, pseudoelastic behaviour 2-47100
- Fe, cast, grey, internal friction spectrum and damping capacity 2-47092
- Ni-Co (0 to 70 wt. %), relation between damping capacity and magneto-mechanical props. (*Japanese*) 2-26715
- Pb, amplitude depend. damping and modulus defect, normal-supercond. transition effect 2-46198
- Zn-Al, superplastic, high damping and modulus characts. 2-47093
- Zn-Al alloy castings, damping capacity and mech. props. 2-47170

**dams**

- see also *civil engineering; hydroelectric power stations*
- Brantley damsite, New Mexico, relation of geophysical meas. to hydraulic conductivity 2-37897
- flood control on the Parana and Paraguay rivers 2-10087
- Mica Reservoir (McNaughton Lake), 1973-8 seismicity 2-52730
- Nurek Reservoir, Tadzhikistan, USSR, induced seismicity 2-28022

**dark space** see *discharges (electric)***data acquisition**

- see also *CAMAC; data handling; indicators; recorders*
- aerospace industry test methods advances, conf., Indianapolis, IN, USA (April 1981) 2-38367
- AI-4096 multichannel analyzer, preliminary processing of experimental data 2-19898
- airgun firing data, ASR-80R system (*Japanese*) 2-32650
- asynchronous transmission communication loop configuration 2-23619
- BDC 500 branch driver controller for nuclear data acquisition 2-24547
- booster, CAB, minicomputer for high-rate CAMAC data acquisition, presentation 2-24535
- booster, CAB, minicomputer for high-rate CAMAC data acquisition 2-24536
- bulk memory processor for data acquisition 2-7479
- CAMAC data acquisition systems using Perkin-Elmer 32-bit computers 2-19918
- CAMAC I/O software system 2-11365
- cardiac electrophysiology computerised instrumentation 2-18324
- cardiopulmonary data-acquisition system, computerised control of stress rates 2-2969
- cardiovascular signal recorder, dual microprocessor data handling system 2-52604
- CERN SPS experiments, data acquisition using VAX computer 2-11368
- channelling expts., microprocessor appl. (*Chinese*) 2-35554
- cyclotron facility, data acquisition system 2-7459
- data acquisition interface, microprogrammed CAMAC branch driver 2-7466
- data handling system redundancy, availability analysis 2-29374
- dielectric partial discharge monitoring, electrical and acoustic detect. computer-controlled data acquisition 2-13420
- digital voltage meas. using microprocessor 2-48472
- dilution refrigerator, automated temp. control and data acquisition system 2-15177
- electrochemical analysis appl. of microprocessors 2-172
- electron spectrometry, data acquisition and control system 2-49214
- electronic control devices for particle detectors 2-29485
- energy conservation test facility 2-37434
- estuaries environmental data collection, low-cost data buoy system 2-42499
- event analysis language compiler for TUNL 2-7463
- event analysis program for nuclear data acquisition 2-7471
- fast, time-sliced, multiple data bus structure for overlapping I/O and CPU operations, nuclear appl. 2-7475
- FASTBUS slaves, logic and timing requirements 2-7461
- FASTBUS standard, current status 2-11367
- fatigue crack growth rate data acquisition system for linear and nonlinear fracture mechanics appl. 2-22314
- front end event selection with microprogrammed branch driver, using Q data acquisition 2-7468
- gamma-ray spectrometer, data acquisition system 2-11363
- gravity data management, field to publication 2-52707
- heart rate data acquisition, cardiostachometers using KIM-1 single board computer 2-27864
- heavy ion accelerator, data acquisition and monitoring system 2-11361
- heavy nuclei fission expts. automation with TPA-i1001 minicomputer 2-7445
- high speed CAMAC data acquisition system using a bank-switchable bulk memory 2-7474
- high-energy experiment NA3, acquisition system, CAMAC auxiliary controller 2-19930
- high-energy experiments, fast microprocessor appls. 2-19938
- high-energy physics, microprocessor event analysis in parallel with CAMAC data acquisition 2-19920
- hot cell facility, computerised data acquisition 2-24441
- in-service inspection using data acquisition and processing system (*Japanese*) 2-24385
- industrial process heat installation data acquisition and instrumentation system 2-9628
- intense pulsed neutron source, scattering instruments, data acquisition system 2-7449
- LAMPF, data acquisition system for nuclear chemistry 2-7450
- laser spectroscopy, one- and two-photon, microcomputer-based data acquisition and laser control circuitry 2-19090
- linear accelerator, microprocessor control and data acquisition system 2-7480

**data acquisition continued**

- microcomputer system for data acquisition and analysis of synaptic relationships 2-47745
- microcomputer system for data processing and acquisition (*Japanese*) 2-35021
- microcomputer-based data acquisition, display, and control system for vestibulo-spinal Hoffmann reflex experiments 2-18352
- microcomputers for data acquisition and preprocessing 2-52708
- microdensitometry, processor-controlled 2-23703
- microprocessor driven ultrafast multichannel event counter 2-24517
- microprocessor-based solar data acquisition system 2-38002
- microstructure design for materials, information system 2-52123
- million channel pulse height analyser for data acquisition, multi-microprocessor system 2-7477
- Mirror Fusion Test facility, data acquisition and control executive, software design 2-7455
- multi-scalar system 2-29484
- multichannel data acquisition and processing system for blast and thermal environments 2-38636
- multichannel data logger for heat pumps using C90 cassettes 2-52378
- multiple-user data acquisition and analysis system for high flux beam reactor 2-11364
- multiplexed electric sensor pairs bridge ect. arrangement with differential amplifier 2-48685
- MWPC with cathodic read-out, acquisition and calibration electronics 2-43723
- neuromuscular bioelectric events, real time data acquisition and analysis using microcomputer system 2-22847
- neutron activation analysis, microprocessor-controlled data acquisition instrument 2-7464
- nuclear data acquisition, CHADAC system 2-24552
- nuclear data acquisition, minicomputer, microprocessor and FASTBUS appls. at Brookhaven 2-24539
- nuclear data acquisition and anal., operating system, experience with Concurrent and Sequential PASCAL 2-11366
- nuclear data analysis, modular interactive system 2-7457
- nuclear laboratory, data acquisition system, CAMAC-based, using VAX 11/780 and MBD branch driver 2-7465
- nuclear physics, computerised data acquisition, conf., Oak Ridge, TN, USA (May 1981) 2-10544
- nuclear physics calculations, partitioned data sets appl. 2-7460
- nuclear power station, data acquisition system for emergency planning 2-15688
- nuclear research facility, GANIL, data acquisition system 2-7458
- nucleon decay detector, data acquisition and triggering system, pattern recognition 2-24549
- oceanographic undulating recorder Mark 2, for environmental parameters obs. 2-42501
- off-line event-mode data processing program MULTIP 2-7470
- Omega automated laser control and data acquisition 2-920
- parallel preprocessor appl. in high-energy physics 2-7473
- parallel/serial CAMAC driver for nuclear data acquisition 2-7482
- physics, exptl., computer controlled data acquisition systems (*Japanese*) 2-15153
- piezoelectric vibration/press. transducers, programmable signal conditioners, data acquisition system appls., interface with lab. computer 2-19095
- poolside fuel rod scanning, data acquisition and reduction system 2-24366
- pulmonary performance, non-invasive continuous monitoring 2-47682
- pulse height analyser, microcomputer-based 2-49238
- Q system for data acquisition and anal., operation on RSX-11M 2-7453
- radiation monitoring, computer control, process computer appl. 2-49187
- radioheliograph at Nancy (*French*) 2-6537
- Raman scattering, O<sub>2</sub>/CO<sub>2</sub> ratio in air, computerised apparatus 2-10194
- raster-scanned terminal to emulate Tektronics 4010 for data acquisition system 2-7484
- remote sensing, data collection platforms for local Earth data transmission to satellites, problems (*German*) 2-37973
- Rutherford backscattering spectrometry, automatic beam alignment for channelling meas. 2-19815
- seismological data, computerised processing, Moxa-Jena system (*German*) 2-37972
- SIMS, SMI-300 ion microscope, data acquisition and processing system 2-3661
- Spin Spectrometer, fast parallel preprocessor design 2-7483
- SRDF reliability data collection system of Electricite de France, pump reliability data 2-24382
- strain gauge data acquisition system improvement (*German*) 2-3572
- tandem accelerator, data acquisition and anal. system, real-time programming 2-7454
- Triangle Universities nuclear lab., data acquisition system 2-7451
- two-coordinate microscopy data analysis by microprocessor 2-48767
- two-phase flow meas., microprocessor-based instruments 2-20782
- UA<sub>2</sub> detector, triggering, data acquisition 2-19923
- university of Washington nuclear physics. Data acquisition system 2-7452
- US multichannel pulsed Doppler blood flowmeter, minicomputer-based 2-18280
- wind, data sampling techniques for mean wind speed estimation 2-14557
- wind tunnel instrumentation, shock-wave boundary-layer interaction obs., by laser anemometer 2-16408
- W.K. Kellogg laboratory, nuclear data acquisition system 2-7456
- zero power reactors, data acquisition system 2-11362
- CO monitoring system, using nondispersive IR analyser 2-32159

**data communication equipment**

- see also *telemetering equipment*
- microprocessor-controlled universal message multiplexer for high-energy physics appl. 2-19931
- optical fibres, advantages (*German*) 2-11839
- optical fibres, principles, manufacture and data transmission (*French*) 2-34906

**data communication systems**

- asynchronous transmission communication loop configuration 2-23619
- balloon-borne ion mass spectrometer, control and data transmission system 2-15267
- fast, time-sliced, multiple data bus structure for overlapping I/O and CPU operations, nuclear appl. 2-7475
- fast Amsterdam multiprocessor, system hardware, processor communication 2-19926



**data communication systems continued**

- LINKER, intercomputer communication system for cyclotron facility 2-7448
- microprocessor network for high-energy physics expts., serial link 2-24564
- optical fibre tapped tee single-mode data distrib. system 2-7879

**data compression**

see also information theory

- ECG simultaneous noise filtering and data compression, computer algorithm 2-47746
- EEG classification by signal expansion on orthogonal KL bases 2-52661
- fast Walsh transform ECG data compression algorithm 2-47747
- measurement data compression using orthogonal transforms (Slovak) 2-15133

**data dictionaries** see database management systems**data handling**

see also data reduction and analysis

- geodetic requirements for DBMS 2-52700
- graphic interactive computer systems for geodetic data and mapping 2-52710
- radioheliograph at Nancy (French) 2-6537

**data loggers**

- gamma ray well logging resolution 2-14630
- laboratory tape recording methods, analogue and digital 2-3570
- marine bedforms movement monitor, with EPROM data storage 2-42493
- multichannel data logger for heat pumps using C90 cassettes 2-52378
- oceanographic microprocessor-based data logger 2-6474
- piezoelectric vibration/press. transducers, programmable signal conditioners, data acquisition system appls., interface with lab. computer 2-19095
- strain gauge data acquisition system improvement (German) 2-3572

**data preparation**

- gravity data management, field to publication 2-52707
- National Geodetic Survey Database, horizontal observations validation 2-52706

**data processing (administrative)** see administrative data processing**data reduction and analysis**

see also data acquisition

- Bathymetric Data Reduction Subsystem (BDRS) 2-52821
- cardiovascular signal recorder, dual microprocessor data handling system 2-52604
- chromatography, gel permeation, data analysis using computing integrator 2-176
- chromatography computing, advanced integration system design and characts. 2-175
- computer code SOXS for X-ray spectra synthesis 2-47399
- computer-controlled high-speed data receiver-processor, ESR spectroscopy appl. 2-19148
- deconvolution of signals from scientific meas. instruments 2-15154
- distribution-of-differences method for variance of data with outliers 2-6840
- dynamic expression evaluator for real time applications 2-7478
- ECG serial comparison using statistical signal analysis 2-6280
- EEG during mental activity, analysis using multiple time-domain parameters 2-22720
- EEGs of epileptic patients, computer evaluation system 2-37691
- electrochemical analysis appl. of microprocessors 2-172
- electron micrographs, stereological data collection and processing, BASIC microcomputer program 2-48688
- field enhanced impurity motion in dielec. liquids, computer-aided identification of model parameters 2-4899
- flowmeter reference set, total conversion coeff. evaluation 2-25472
- geophysical prospecting, method of reducing terrain relief effects from VLF-EM data 2-37754
- gravity anomalies analysis, determ. of number and parameters of isolated sources 2-14631
- gravity data management, field to publication 2-52707
- gravity observations at sea, topographic-isostatic reduction of profile gravimetric obs. 2-6302
- high-energy physics, microprocessor event analysis in parallel with CAMAC data acquisition 2-19920
- image simulation on dot-density plot 2-15151
- introductory physics lab., microcomputer data management 2-48451
- IR spectrometer, microprocessor-based, for multicomponent quantitative analysis 2-234
- linearised least squares techniques for model exp ( $A_1 + A_2x$ ) 2-38409
- magnetotelluric inversion, analytic one-dimensional scheme 2-9925
- matrix mutual orthogonality and parameter independence 2-10583
- meteorology, objective anal. (Chinese) 2-23114
- microcomputers for data acquisition and preprocessing 2-52708
- Mossbauer spectra statistical correl. 2-41234
- multicomponent decay anal. using max. likelihood method 2-39276
- neuromuscular bioelectric events, real time data acquisition and analysis using microcomputer system 2-22847
- neutron polarisation meas. facility and polarisation data anal. methods 2-39275
- noisy data, fitting algorithm for  $y = A(1 - \exp(kx))$  2-23603
- nuclear material safeguards, loss estimation, sequential methods (French) 2-7197
- nuclear safeguards, containment/surveillance instruments, performance anal. 2-7399
- oceanographic undulating recorder Mark 2, for environmental parameters obs. 2-42501
- on-line system for track chamber film anal. 2-43739
- particle physics experiments, online data filtering, dead-time reduction 2-19937
- poolside fuel rod scanning, data acquisition and reduction system 2-24366
- pottery sample sorting of same provenience from neutron activation analysis data bank 2-22499
- pulse height analyser, microcomputer-based 2-49238
- radio astronomy, reduction of double-beam obs. of extended radio sources 2-6542
- real-time US receiving system, monolithic array transducer, microcomputer for data acquisition (Japanese) 2-11964
- remote sensing, reduction of satellite magnetometer data for geological studies 2-32673
- reverse Fourier neutron time-of-flight expt., correl. in statistical anal. 2-44975

**data reduction and analysis continued**

- reverse Fourier neutron time-of-flight expt., correl. in statistical anal. 2-44976
- safeguards, integrated data evaluation system, design 2-7402
- safeguards, statistical anal. of data evaluation, verification of defects 2-7198
- SAIPS, information and computing system, neutron spectra determ. methods (Russian) 2-589
- SAMPO80 gamma spectrum anal. program for minicomputer 2-24476
- SAR imaging of ocean waves, theory 2-6377
- seismic data inversion in  $r$ - $p$  plane, techniques 2-18594
- shock oscillations on spiked body obs., flow visualisation using laser interferometer 2-20786
- solar granulation, comparison of optical and digital Fourier transformation 2-6577
- solar limb observations anal., effect of geometrical smearing on photospheric brightness fluctuations 2-38060
- solar limb observations analysis, data restoration in tilted reference frame 2-38059
- spectral analysis, prediction and extrapolation, appls. to EEG and evoked response 2-32341
- US attenuation measurement, microcomputer system for data processing and acquisition (Japanese) 2-35021
- X-rays spectral distrib. from attenuation data using iterative computational method 2-43740
- $\gamma$ -ray spectrum anal. method using IAEA test spectra, quantitative evaluation 2-43741
- Co(III)-amine complexes at Hg electrodes, computer-aided meas. of kinetic parameters of reactions 2-22501

**data structures**

- dynamic expression evaluator for real time applications 2-7478
- IGN geodetic database, feasibility study 2-52701

**data tables** see collections of physical data**data transmission equipment** see data communication equipment**data transmission systems** see data communication systems**database management systems**

- Canada's National Gravity Data Base, organisation and management 2-52716
- geodetic data management, conf. Copenhagen, Denmark (May 1981) 2-48400
- geodetic requirements for DBMS 2-52700
- German Geodetic Research Inst. database 2-52712
- gravimetric data management at BGI [Bureau Gravimetrique International] 2-52709
- gravity data management, field to publication 2-52707
- IGN geodetic database, feasibility study 2-52701
- large volume geodetic and geophysical data management 2-52704
- Mexican geodetic database 2-52702
- North America Datum, redesign of software 2-52711
- supernova database, proposed creation 2-53114

**dating, Earth** see geochronology**dating, radioactive** see radioactive dating**Davydov splitting**

- molecular excitons, coherent states and Davydov splitting 2-1836
- naphthalene N-h<sub>2</sub> and N-d<sub>2</sub>, triplet T<sub>1</sub> Davydov components, high resolution excitation spectra 2-46655
- naphthalene-d<sub>8</sub>, phosphoresc., direct excitation spectra, Davydov components 2-46660
- phenanthrene cryst., nonlinear polariton effects 2-41389
- HoVO<sub>4</sub>, Van Vleck paramag., Davydov splitting 2-45923

**Davydov states** see Davydov splitting**dawn** see twilight**dawn chorus** see atmospheric**dayglow** see airglow**d.c. machines**

see also d.c. motors

- EM guns and launchers, conf., San Diego, CA, USA (Nov. 1980) 2-48391
- kinetic energy accumulator electric machines starting characts. determ. 2-47521

**d.c. motors**

- analysis of solar powered electric water pumps/ 2-37186
- annular permanent magnet, demagnetising stability 2-26675
- photovoltaic drive system for water pumping using solar cell array and DC motor, performance anal. 2-9656

**d.c. sputtering**

- magnetron sputtering, deposition rate depend. on power input, comparison with RF magnetron sputtering 2-22167
- reactive sputtering mechanism, review 2-46860
- solar absorbing films, in-line sputter coating plant fabricated, props. 2-2807
- Al, DC and RF magnetron sputtering, deposition rate depend. on power input 2-22167
- Ba ferrite films with perpendicular mag. anisotropy, DC sputtering prep. 2-27083
- InP oxide film deposition on InP for MOSFET appls. 2-36141
- In<sub>2</sub>O<sub>3</sub>/Sn<sub>2</sub>O<sub>3</sub> film, DC magnetron sputter deposition 2-51808
- Nb-Ge films, DC sputtering prep. and struct. rel. to supercond. props. 2-30992
- Si:H(B)(P), amorphous DC sputtered coating, doping and elec. props. 2-40726
- Ti-Al thin film, reactive cosputtering, struct. modification 2-45780
- Ti-Si thin film, reactive cosputtering, struct. modification 2-45780
- TiO<sub>2</sub>, semiconducting thin film photoelectrodes for photoelectrochemical cells 2-27708

**d.c. to a.c. invertors** see invertors**de Haas-van Alphen effect**

see also diamagnetic properties of substances; diamagnetism

- Fermi surface neck region, screw dislocations influence on de Haas-van Alphen signals 2-21493
- graphite, neutron irradiat., de Haas-van Alphen freqs. 2-35924
- ideal layered crystals, low-temp. diamagnetism (Russian) 2-13271
- metals, electron gas, de Haas-van Alphen effect 2-35922
- metals, mag. oscillations, discovery and early history 2-21492
- two-dimensional quantum plasma magnetoconductivity tensor, anal. 2-1936
- Au-Ag, conc. alloy, de Haas-van Alphen effect 2-35921



**de Haas-van Alphen effect continued**

- Cu-Pd(Pt)(Rh), dilute, Fermi surface and impurity scatt., de Haas-van Alphen meas. 2-12958  
 Cu<sub>3</sub>Au, ordered, Fermi surface and electronic struct. 2-40761  
 Hg<sub>3-4</sub>AsF<sub>6</sub>, Fermi surface press. depend. 2-35926  
 LaSn<sub>3</sub>, de Haas-van Alphen effect and linear muffin-tin orbital band struct. 2-40757  
 Mg, coherent mag. breakdown, de Haas-van Alphen study 2-45809  
 Na, de Haas-van Alphen effect under press. 2-45808  
 Nb, Fermi surface, press. effect, de Haas-van Alphen meas. 2-45811  
 Nb<sub>3</sub>Sn, cubic, tetragonal single cryst. and polycrystalline, upper critical field meas. 2-21739  
 Tb, de Haas-van Alphen effect and exchange-split Fermi surfaces 2-45807  
 WC, single crystal, phys. props. and crystal growth (*Japanese*) 2-1813  
 Y, Fermi surface cross-sections under press., mag. struct. (*Russian*) 2-26274  
 ZnZn<sub>2</sub>, Fermi surface de Haas-van Alphen study 2-35923

**Debye-Huckel theory**

- superionics, sublattice disorder driven by Coulomb forces 2-40517

**Debye-Scherrer cameras** *see cameras; X-ray crystallography apparatus***Debye temperature**

- see also specific heat*  
 Al<sub>5</sub> compounds, supercond. transition temp. and Debye temp. correlation 2-46200  
 algorithm for determ. of Debye temp. from heat capacities 2-26012  
 alkali hydrides and deuterides, lattice dynamics shell model and deform. dipole model 2-8585  
 alkali metal halides, comparison of evaluation methods 2-21260  
 charact. temps., computer calc. from enthalpy data 2-5245  
 covalent substances, Debye temp., mass and bond length influence 2-1579  
 crystal melting, thermal and elastic props. change 2-21274  
 desorption kinetics, surface Debye temp. 2-30739  
 dimethyltin-dichloride, Mossbauer study of Debye temp. 2-46437  
 γ-Dy<sub>2</sub>S<sub>3</sub>, heat capacity, mag. susceptibility and optical meas. at low temp. 2-40563  
 fine metallic particles, structure and props. 2-51069  
 glass hosts, impurities dephasing, temp. depend. 2-51128  
 halides, potential energy function for repulsive interaction 2-16746  
 hexagonal and tetragonal crystals, elastic Debye temps. 2-8590  
 ionic substances, Debye temp., mass and bond length influence 2-1579  
 metal hydrides, Debye temp. rel. to heat of formation 2-30561  
 metals, sound absorption and propagation above Debye temp. (*Russian*) 2-45408  
 molecular crystals, tetrahedral, classification in terms of cryst. structs. Debye temp., and transition or melting temp. 2-35632  
 semiconductor compounds, diamond-like, Debye temperature estimation using Lindemann rule 2-35629  
 surface phonon and Debye temp., ion scatt. study 2-50984  
 transition metal oxides, normal modes of vibrs. 2-26003  
 trigonal II Laue symm. crysts., Debye temp. 2-35630  
 trimethyltin chloride sulphoxide, Mossbauer study of Debye temp. 2-46437  
 triphenyltin chloride, Mossbauer study of Debye temp. 2-46437  
 X-ray determ. procedure, of Debye temp. 2-50823  
 X-ray diffraction determ. (*Chinese*) 2-30559  
 Ag, AA 2-21261  
 Al, relation between Debye temp., elasticity and thermal expansion 2-21261  
 Al, specific heat press. depend. 2-1634  
 Au film, Debye temp., X-ray diff. determ. 2-51065  
 BaO, Debye temp. of oxides with NaCl struct. 2-16744  
 CaO, Debye temp. of oxides with NaCl struct. 2-16744  
 CdO, Debye temp. of oxides with NaCl struct. 2-16744  
 CoO, Debye temp. of oxides with NaCl struct. 2-16744  
 Cu, polycrystalline, elastic constants, 4 to 295K 2-1546  
 Cu, specific heat press. depend. 2-1634  
 Fe<sub>2</sub>TiO<sub>5</sub>, Mossbauer study, mag. ordering temp. 2-31334  
 GaS(Se)(Te), Debye temp. study (*Russian*) 2-21264  
 GeTe, low temp. elec. resist. and Debye temp. 2-13079  
 K, lattice dynamical props. 2-21250  
 K, single cryst., X-ray diff. study, anharmonicity 2-45499  
 K, sp. ht., evidence of phasons 2-12773  
 Li, anharmonic features, X-ray diff. study 2-45502  
 MgO, Debye temp. of oxides with NaCl struct. 2-16744  
 MnO, Debye temp. of oxides with NaCl struct. 2-16744  
 Mo (110) surface structure, LEED determ. 2-26189  
 Nb<sub>3</sub>Al, neutron irradi., sp. ht., 1.3 to 25K, supercond. transition temp. 2-17213  
 Nb<sub>3</sub>Sn, Al<sub>5</sub> phase, normal-state sp. ht. in high mag. fields, 1.3 to 25K 2-16814  
 NiO, Debye temp. of oxides with NaCl struct. 2-16744  
 PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, sp. ht., 140 to 790K, anomalies at ferroelec. transition and 673K 2-8629  
 PbS, phonon spectra and static defects, surface changes effects (*Russian*) 2-12904  
 SiC, phonon spectra and static defects, surface changes effects (*Russian*) 2-12904  
 SrO, Debye temp. of oxides with NaCl struct. 2-16744  
 Ta-W, elastic constants 2-50737  
 TiS crystals, specific heats at low temps. 2-35708  
 TiSe crystals, specific heats at low temps. 2-35708  
 TiSe, lattice dynamics and sp. ht. 2-16745  
 TiTe crystals, specific heats at low temps. 2-35708  
 V-O solutions, high temp. thermodynamics 2-5230  
 V<sub>3</sub>GaH<sub>8</sub>, sp. ht., 1.2 to 20K 2-30618  
 V<sub>3</sub>GaH<sub>8</sub>, sp. ht., lattice parameters, and supercond. props., 1.2 to 20K, comp. depend. 2-26552  
 V<sub>2</sub>O<sub>5</sub>, amorphous layers, hopping cond., disorder energy 2-45981  
 Yb<sub>3</sub>X<sub>1-x</sub>Cl<sub>3</sub>·6H<sub>2</sub>O:Gd<sup>3+</sup>, EPR line width, Yb<sup>3+</sup> spin-lattice relax. 2-46372  
 Zr<sub>2</sub>Cu<sub>1-x</sub> glasses, electronic props. and supercond. 2-36196  
 ZrF<sub>4</sub>-ThF<sub>4</sub>-BaF<sub>2</sub> system glasses, elastic constants 2-12660

**Debye-Waller factors**

- see also lattice dynamics*  
 alkali metal halides, compressibility, Broat sum rule, Debye-Waller factor, melting 2-12698  
 anharmonic Debye-Waller factors and struct. phase transitions 2-50818

**Debye-Waller factors continued**

- atomic displacements close to point defects from static Debye-Waller factor measurement 2-16541  
 graphite, surface atomic displacements, He atom scatt. study 2-36748  
 graphite intercalation cpds., struct. studies using (001) X-ray diff. 2-12563  
 graphite surface phonon dispersion, He atoms reson. scatt. study 2-50983  
 hexamethylenetetramine, HF, mol. modes, Debye-Waller factor effect, neutron inelastic spectra 2-21262  
 molecular modes, high freq., theory of effective Debye-Waller factor 2-35631  
 naphthalene, X ray system, electron-phonon coupling, phosphoresc. line-shape anal. 2-22069  
 naphthalene with d(β-naphthyl)-1,2-ethylene, pure electronic transition band in absorpt. and fluorescence spectra (*Russian*) 2-13562  
 nonideal harmonic crystal, complex Debye-Waller factor and nearly forbidden Bragg refls. 2-45509  
 point groups, anharmonic thermal smearing functions using quantum statistics 2-45507  
 semiconductors, II-VI and III-V, compressibilities, Debye-Waller factors and melting criteria 2-1580  
 BaTiO<sub>3</sub>, Debye-Waller factors, temp. depend. 2-45503  
<sup>4</sup>He, superfluid, surface electron lattice mobility, ripplons effect, weak coupling theory 2-35781  
 K, lattice dynamical props. 2-21250  
 KH<sub>2</sub>PO<sub>4</sub>-type ferroelectrics, anharmonic Debye-Waller factors and struct. phase transitions 2-50818  
 Li, anharmonic features, X-ray diff. study 2-45502  
 LiAl fast-ion electrode, defects and disorder 2-21300  
 Mg, thermal expansion and temp. var. of negative second moment of its freq. spectrum 2-12786  
 Ni, Debye-Waller factor, energy dispersive X-ray diff. meas. 2-30560  
 Pt, desorption of H<sub>2</sub>, studied by He beam diff. Debye-Waller effect, surface vibr. 2-51001  
 RbBr, temp. depend. of Debye-Waller factor 2-21263  
 RbCl, temp. depend. of Debye-Waller factor 2-21263  
 Sn<sub>2</sub>Mo<sub>2</sub>S<sub>8</sub>, supercond. transition temp., stoichiometry effect, Mossbauer study 2-31001  
 TbAl<sub>2</sub>, localised modes, γ-ray resonant absorption study 2-45486  
 TbO<sub>2</sub>, localised modes, γ-ray resonant absorption and specific heat study 2-45486  
 UC, atomic displacement around C vacancy (*French*) 2-50629  
 V<sub>2</sub>Si, defect structures determ. by ion channelling and X-ray diff. 2-45295  
**decay periods (radioactive)** *see radioactive decay periods*  
**decay schemes (radioactive)** *see radioactive decay schemes*  
**decay theory (nuclear)** *see nuclear decay theory*  
**decision theory** *see decision theory and analysis*  
**decision theory and analysis**  
*see also Bayes methods; dynamic programming*  
 acoustic emission detection, decision interval choice (*Rumanian*) 2-50007  
 epileptic EEG, decision-theoretic and syntactic pattern recognition techniques 2-22849  
 nuclear power plant safety parameter display systems evaluation 2-49170  
 nuclear power station, operate-shutdown decision and test policy of safety systems 2-7321  
 proliferation routes, comparative risk, multiattribute decision theory anal. 2-49199  
**decoding**  
*see also demodulation*  
 nuclear medicine pictures, coding and decoding 2-37673  
**decomposition**  
*microstructure features and processes only; for other aspects see dissociation and pyrolysis*  
*see also spinodal decomposition*  
 Diazo compounds, dark catalytic decomposition (*Russian*) 2-27437  
 Elinvar, γ-phase form. mech., kinetics and singularities (*Russian*) 2-22212  
 FBR mixed oxide fuels, residue composition from decomposition (*German*) 2-11189  
 multicomponent system, diffusion phenomena, precipitation and gas porosity (*Russian*) 2-5260  
 polyacrylamide soln., orientational effects in stream and strand decomposition 2-25405  
 polyoxyethylene aqueous soln., orientational effects in stream and strand decomposition 2-25405  
 steel, γ→α phase transform., Cr and Ni redistribution, STEM X-ray microanal. 2-36857  
 steel, alloy, 9Kh2MF, austenite decomposition kinetics 2-36863  
 steel, alloy, tempering, transforms. during 2-41636  
 steel, austenitic, decomposition of martensite formed during tempering, X-ray diff. obs. (*Russian*) 2-27136  
 steel, C, martensite decomposition, formed from polycryst. austenite, X-ray diff. study 2-22195  
 steel, Hadfield's, thermomech. treated, isothermal decomp. of austenite 2-2545  
 steel, tool, hardened and tempered, martensite decomp. and nonuniformity 2-51950  
 Al alloys, quenching in polyethylene oxide solution, effect on struct. and props. 2-27197  
 Al-Zn-Mg (6 at.% Zn, 0.81, 1.73 at.% Mg), early decomp. behaviour, isothermal resist. curves analytical description 2-17681  
 Al-Zn-Mg supersaturated alloy, decomposition behaviour, heat treatment influence 2-13724  
 Al-Zn-Mg-Cu-Fe-Ni(Zr), struct. and mech. props., Fe with Ni or Zr addition effect 2-51991  
 Al-Zn(3 wt.%), Guinier-Preston zones during decomposition 2-45588  
 Na<sup>+</sup>β-Al<sub>2</sub>O<sub>3</sub>, elec. degradation 2-51868  
 Al<sub>2</sub>TiO<sub>3</sub> decomposition by isothermal heating, reaction kinetics (*Japanese*) 2-31902  
 B<sub>2</sub>O<sub>3</sub>-PbO-Al<sub>2</sub>O<sub>3</sub> glass system, dynamical scaling, small angle X-ray scatt. study 2-12500  
 Ce-Al alloys, quenched, metastable phases, resistivity and struct. during heating 2-13040  
 Cu-Be, α-solid, soln. neutron bombarded, decomposition study (*Russian*) 2-12644  
 Cu-Ni-Al-Mn, quasi-periodic struct. form. sequence (*Russian*) 2-5876  
 Cu-Ni-Fe decomposed solid solns., plastic deform. effect on mag. props. (*Russian*) 2-21862  
 Cu-Sn alloys, eutectoid transformation γ→α+ε (*Russian*) 2-13713



# decomposition continued

- Fe rod embedded in Ni-Al matrix, intrinsic boundary dislocations, anisotropic elastic fields 2-36900
- Fe-base alloys,  $\gamma \rightarrow \alpha$  phase transform., Cr and Ni redistribution, STEM X-ray microanal. 2-36857
- Fe-Co-V, Vicalloy, cellular decomposition (*Russian*) 2-13726
- Fe-Co-V-Ni, Vicalloy, cellular decomposition (*Russian*) 2-13726
- Fe-Cr-Co, mag. hard, high-temp. transform 2-41604
- Fe-Cr-Ni (7, 2 wt.%), decomp. of austenite, kinetic and microstruct. study 2-9347
- Fe-Ni-Ti, austenite precipitation hardened, decomp., struct. mechanism (*Russian*) 2-22247
- Fe-Si-C (1.9, 4.2 wt.%), rapidly solidified,  $\epsilon$ -phase form., study using SEM, TEM, X-ray diffr. and DTA 2-31691
- Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, atom probe FIM study of microstruct. after annealing 2-36874
- GaAs:O(C), crystal microstruct., impurities effect, TEM study 2-40419
- LaNi<sub>4</sub>Al<sub>0.1</sub>-H<sub>2</sub> system, form. and decomp. kinetics, press. depend. 2-26059
- MgO-Y<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub>, phase relationships, eutectoid decomp., influence of Y<sub>2</sub>O<sub>3</sub> 2-47012
- Ni-Cu, electron irradi., short-range clustering and long-range periodic decomp. 2-45278
- Ni-Ti (9.6 at.%), magnetic study on phase decomposition 2-17663
- Pd-Si alloys, binary phase diagram and mag. props. (*German*) 2-31683
- Ti alloys, decomposition of metastable  $\beta$  phase during continuous heating (*Russian*) 2-22219
- V-Ga-Ce (16, 1 wt.%), irradi. conditions on mechanical props. 2-13757
- Zn-Al eutectoid alloy, superplastic, room temp. decomp. 2-27137
- ZnS single cryst., martensitic and diffusional transitions, transition temp. and kinetics 2-3216

## decomposition, spinodal see spinodal decomposition

## decomposition, thermal see pyrolysis

## decorative coatings

- metallic coating, plating and anodising 2-31813
- Au decorating particles on NaCl, Ar<sup>+</sup> ion bombard., surface topology electron microscope obs. 2-45286
- Rh electrodeposition, appls. 2-2470

## deep level transient spectra see deep level transient spectroscopy

## deep level transient spectroscopy

- see also deep levels
- computer analysis of exponential transients 2-19089
- digitalized equipment for automatic DLTS measurement (*Japanese*) 2-51111
- electron capture-cross-section determination by transient-current trap-filling experiments 2-21525
- macrolaxator barrier layer model in deep level spectroscopy 2-17022
- MOS system, surface states and minority carrier generation meas. by DLTS (*Japanese*) 2-21678
- MOSFET, Si<sup>+</sup> implanted, deep level distribution profiling system 2-51113
- optimum lock-in averaging in DLTS meas. 2-51103
- Schottky diodes, temp. dependence of peak heights in DLTS, computer simulation 2-12992
- semiconductor, dislocations and electron processes, review (*Polish*) 2-13003
- semiconductors, deep level distribution profiling system 2-51113
- semiconductors, deep level thermal and optical spectroscopy 2-40835
- semiconductors, deep levels, meas. techniques, DLTS, thermally stimulated capacitance, photocapacitance and photocurrent meas. methods (*Japanese*) 2-13001
- single thermal scan DLTS method 2-17011
- AlGaAs-GaAs solar cells, deep-level defects, low temp. periodic annealing effects 2-32066
- AlGaAs-GaAs solar cells, proton irradi., radiation-induced deep-level defects, annealing, DLTS, SEM 2-32084
- Al<sub>x</sub>Ga<sub>1-x</sub>As p-n junction solar cells, grown-in deep-level defects 2-37393
- n-Al<sub>x</sub>Ga<sub>1-x</sub>As, Schottky barrier, MBE growth, deep levels, substrate growth temp. effects, DLTS study 2-17009
- As<sub>2</sub>Se<sub>3</sub> film, amorphous, localised states, optical DLTS meas. 2-45899
- n-CdTe:Al, DLTS study of deep levels 2-35962
- n-CdTe:Al, deep centres, charact. 2-51115
- n-GaAs, D<sup>+</sup> irradiated, carrier removal 2-1533
- GaAs, ion implanted, defects produced by laser annealing 2-1523
- GaAs, MO-CVD grown under different Ga/As mol fractions, deep levels 2-5832
- n-GaAs, spectroscopic line fitting to DLTS data 2-26326
- GaAs, VPE layers, implanted and annealed, elec. and optical props. 2-46164
- GaAs:C, metal-organic VPE, elec. and optical props. of deep levels 2-8768
- n-GaAs-oxide layer, interface defect states effect on electronic props. 2-26509
- GaInAs-AlInAs structures grown by molecular beam epitaxy 2-21456
- Ge bicrystal, grain boundary levels, transient capacitance meas. 2-51117
- Ge:Cu, defect levels, H passivation, DLTS study 2-51108
- p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, deep levels, correlation with photodiode performance 2-1856
- InP:Cr(Fe), thermal and optical studies of deep levels, DLTS and DLOS techniques 2-51127
- InP:Fe<sup>+</sup>, optical and capacitance spectroscopy 2-30925
- InP:Fe<sup>2+</sup>, deep impurity centres, photoluminesc. and DLTS study 2-51656
- InP:Zn, p<sup>+</sup>n junction diodes and Schottky barriers, deep levels, Zn diffusion effects, DLTS study 2-12994
- Se film, amorphous, localised states, optical DLTS meas. 2-45899
- n-Si, DLTS spectrum charges due to electron irradi. 2-17012
- Si epitaxial layers on Si substrate, elec. props. 2-41029
- p-Si, float zone, in CCD imagers, deep levels study 2-12996
- Si, ion implanted, residual defects after pulsed laser annealing obs. 2-50683
- n-Si, neutron and 2 MeV electron damage, comparison by DLTS 2-8545
- Si Schottky diodes, ion implanted, deep level distribution profiling system 2-51113
- Si, self-implanted amorphous layers, CV and capacitance transient anal. 2-50713
- Si wafer, Au gettering by P diffusion and Ar implementation, mech. and limitations 2-1671
- Si:C, O, role of C in precipitation of O, IR and DLTS studies 2-21315

# deep level transient spectroscopy continued

- Si:H, amorphous, light induced changes, computer modelling of admittance and DLTS 2-36090
- a-Si:H, meas., and anal. of current transients, DLTS and TSC obs. 2-46020
- Si:In X-centre, trapping parameters, DLTS studies 2-5361
- Si:P:H, deformed, hydrogen passivation of defects 2-13004
- Si:Te, donor levels, excited states, junction space-charge, IR absorption and ESR meas. 2-26323
- Si:V<sup>+</sup>(Mn<sup>2+</sup>)(S<sup>2-</sup>)(Zn<sup>2+</sup>), properties of repulsive centres, DLTS steady (*German*) 2-1860
- SiO<sub>2</sub>, induced defects due to ion beam lithography (*Japanese*) 2-50717

## deep levels

- see also deep level transient spectroscopy
- (100) superlattice, vacancy induced band gap levels 2-45883
- amorphous semiconductors, hot carrier thermalization, deep trapping and recombination 2-46016
- charge trapping in dielectrics, bulk trapping phenomena, review 2-8818
- core levels, angle resolved XPS, short range order theory 2-46870
- covalent semiconductor, chem. trends of deep impurity levels, review 2-26332
- cubic nongyrotropic crystal with deep impurities, polarisation nonlinear rot. and high freq. Kerr effect 2-34860
- diamond, defects, unrelaxed neutral vacancy and substitutional N, energy levels 2-26324
- Green's function formalism, quasi-band-struct. representation 2-40828
- II-VI semiconductors, excited states at deep centres, nonradiative recomb. processes 2-8770
- III-V semiconductor, medium deep localised levels, binding mech. 2-35964
- III-V semiconductors and ternary alloys, deep levels, ideal-vacancy-induced 2-30823
- impurity deep levels, optical transitions in elec. field,  $\delta$ -pot. model calc. 2-51637
- IV-VI semiconductor, defect states, optical and magneto-optical meas. 2-17510
- macrolaxator barrier layer model in deep level spectroscopy 2-17022
- MOS capacitor, physical characterisation of deep bulk levels by MOS conductance technique 2-46144
- one dimensional trapping problem, time decay of excitations 2-1862
- point defects electronic struct., cyclic cluster models with quantum-chemical hamiltonians 2-51102
- PTFE-polyhexafluoropropylene electret, charge relaxation, surface phenomena role 2-17399
- rare earth compounds, Tb<sup>3+</sup>(Eu<sup>3+</sup>) doped, photoluminescence, synchrotron radiation excitation 2-51664
- Schottky diodes, temp. dependence of peak heights in DLTS, computer simulation 2-12992
- semiconductor, deep charged centres, ground state energy, photoionization cross section, model electron pot. calc. 2-17014
- semiconductor, Huang-Rhys factor determ. 2-12997
- semiconductor, multiphonon nonradiative recomb., successive electron and hole capture by deep level defect 2-13548
- semiconductor, nonCoulombic traps, electric field enhanced emission of carriers 2-40922
- semiconductor, photolum. and photolum. excitation spectroscopy characteris., review 2-17533
- semiconductor, point-defect energy levels, impurity environment effect 2-26322
- semiconductor, two photon optical edge absorption involving deep impurity levels, electroabsorpt. and magnetoabsorpt. 2-13527
- semiconductor, two-photon ionisation of deep impurity centres 2-30829
- semiconductor junctions with deep impurity levels, admittance, space charge anal. 2-13169
- semiconductor p-n diodes, deep centres local distrib., photocapacitance study 2-26489
- semiconductors, cubic, phonon transport mechanism, influence of dynamical Jahn-Teller effect 2-45645
- semiconductors, deep centres spin relax. via singlet and triplet excitons 2-36410
- semiconductors, deep level thermal and optical spectroscopy 2-40835
- semiconductors, defects, electronic struct. 2-40833
- p-Si for nuclear emission detectors, deep-level investig. (*Russian*) 2-21532
- SOS, heteroepitaxial, electronic characterization by surface photovoltage spectroscopy 2-41030
- p-terphenyl, cryst., laser-excited delayed fluoresc. 2-22079
- thermolum. dosimeters, response characts. nonlinearity mech., review 2-29440
- trap activation energy, evaluation from TSC meas. 2-36057
- wide gap semiconductors, density of localised states determ. from field effect 2-35918
- AgGaS<sub>2</sub>, deep levels, optically controlled EPR study 2-5580
- AlGaAs-GaAs solar cells, deep-level defects, low temp. periodic annealing effects 2-32066
- AlGaAs-GaAs solar cells, proton irradi., radiation-induced deep-level defects, annealing, DLTS, SEM 2-32084
- Al<sub>x</sub>Ga<sub>1-x</sub>As DH laser, deep level luminesc., spatial distrib. 2-915
- Al<sub>x</sub>Ga<sub>1-x</sub>As, grown by MOVPE, luminescence 2-9182
- Al<sub>x</sub>Ga<sub>1-x</sub>As p-n junction solar cells, grown-in deep-level defects 2-37393
- Al<sub>x</sub>Ga<sub>1-x</sub>As:Cr variable gap semicond. solid solns., deep impurity centres and impurity photoluminescence 2-17025
- Al<sub>x</sub>Ga<sub>1-x</sub>As:Ge(Sn)(Te) epitaxial layers, photolum. rel. to surface composition (*Russian*) 2-9189
- Au/Si<sub>3</sub>N<sub>4</sub>/p-Si structure, charge transfer, temp. depend. 2-17163
- Au-GaAs Schottky barrier, deep centres, photoionisation cross sections and optical charging rates 2-13012
- Bi<sub>2</sub>GeO<sub>7</sub>, wide-gap semicond., free carrier exclusion in current-voltage characts. 2-36050
- Bi<sub>2</sub>SiO<sub>20</sub>, illumination-induced impurity photoconductivity 2-46075
- CaF<sub>2</sub>:Dy, nonlinearity in response characts. of thermolum. dosimeter, review 2-29440
- CaSO<sub>4</sub>:Dy, nonlinearity in response characts. of thermolum. dosimeter, review 2-29440
- CdCr<sub>2</sub>S<sub>4</sub>, ferromagnetic semicond., cathodolum. characts. of electron spectrum 2-46785
- p-CdSb, undoped, photoelec. props. 2-46074
- n-CdTe:Al, deep centres, charact. 2-51115
- Cu<sub>2</sub>S/CdS solar cells, characterisation by photocapacitance IR quenching 2-22619



## deep levels continued

- Ga<sub>1-x</sub>Al<sub>x</sub>As, deep impurities, cross-section for photoionisation to conduction bands 2-35968  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layers, electron mobility 2-13076  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, photocond. storage obs. at low temp. 2-46071  
 p-Ga<sub>1-x</sub>Al<sub>x</sub>As:Ge, LPE grown, charge compensation, photoluminescence spectrum 2-17517  
 GaAs, compensation mechanisms related to deep B implantation 2-50678  
 GaAs, deep charged centres, ground state energy, photoionization cross section, model electron pot. calc. 2-17014  
 GaAs, electron trap and hole trap discharge ratio, temp. dependence (*Japanese*) 2-30818  
 GaAs, energy levels of deep traps 2-45889  
 GaAs, MO-CVD grown under different Ga/As mol fractions, deep levels 2-5832  
 GaAs p<sup>+</sup>-n-n<sup>+</sup> structs., nonequilib. minority carriers, effective lifetime in lightly doped n-type region 2-17155  
 GaAs, semi-insulating, deep donor, near IR optical absorpt. 2-17507  
 GaAs:Cr, intrinsic density, band gap and effective mass parameters, Cr acceptor capture coeff. 2-51203  
 GaAs:Te(Si), Cr<sup>2+</sup>, surface (110) photovoltage spectroscopy of Cr<sup>2+</sup> 2-26462  
 GaAs-AlAs (100) superlattice, vacancy induced band gap levels 2-45883  
 GaP, deep level defect, thermochem. model 2-51119  
 GaP, deep levels in light-emitting devices, electron trap and hole trap discharge ratio, temp. dependence (*Japanese*) 2-30818  
 GaP diodes, deep recombination centre parameters, TSC study 2-35972  
 GaP:Cr, photoluminesc., near IR-visible up conversion 2-49819  
 GaP:Cu, TSC trace, estimation of capture cross sections 2-13007  
 GaP:ZnO, epitaxial films deep level parameters by fabrication of double surface-barrier diodes 2-51126  
 GaSb surface (110), substitutional defect deep levels 2-51271  
 Ga<sub>2</sub>Se<sub>3</sub> thin films in MS/IS structure, elec. props., localised states influence 2-26479  
 Ge, amorphous, electronic struct., CPA study 2-12959  
 Ge:Zn, second impurity level, activation energy, random field effects 2-51124  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, obs. of deep levels with optical modulation spectroscopy 2-51109  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, photogenerated carrier lifetime, deep levels, optical modulation spectroscopy 2-51732  
 InGaAsP, deep level centre photolum., comp. depend. 2-5751  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, deep vacancy levels theory (*French*) 2-40818  
 InP, deep levels prod. by pairs of impurities 2-1857  
 InP:Cr, deep level states, press. depend. and k-space localisation 2-35967  
 InP:Cr(Fe), thermal and optical studies of deep levels, DLTS and DLOS techniques 2-51127  
 InP:Fe, deep-level photocond., energy scheme 2-30924  
 InP:Fe, thermally stimulated cond. investigation 2-26407  
 InSb, deep acceptors, M<sub>1</sub> defect accumulation kinetics after electron irradi. 2-40831  
 Mg<sub>2</sub>SiO<sub>4</sub>:Tb, nonlinearity in response characts. of thermolum. dosimeter, review 2-29440  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te epitaxial films, photoluminesc., effect of impurities 2-36696  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te: Cd, carrier density, temp. depend. 2-17089  
 Pd-GaAs Schottky diodes, current-voltage and capacitance-voltage characts., electron irradi. effects 2-13165  
 Se, amorphous, deep traps, activation energy, TSC meas. 2-13014  
 Si, A-centres, field depend. of thermal activation energy, electron capture cross sections and relax. time, using capacitance transient spectroscopy 2-45887  
 Si, amorphous, electronic struct., CPA study 2-12959  
 n-Si, deep centres introduced by Ar ion bombardment 2-30826  
 Si, deep impurity levels, cluster model, EHT calc. 2-8767  
 Si, deep level luminesc. spectra and decay lifetime meas., scanning cathodoluminesc. microprobe system 2-28943  
 Si, excited states at deep centres, nonradiative recomb. processes 2-8770  
 Si, ion implanted, laser and electron beam annealed, deep levels, DLTS study 2-51105  
 Si, neutron irradi., deep level defect, ODMR study 2-31326  
 Si, solar cell, n<sup>+</sup>-p, electron irradi. and annealing effects 2-2786  
 Si solar cells, thermal stability of impurities 2-37289  
 n-Si:Al, p<sup>+</sup>-n reversed biased junction, deep centre admittance (*Spanish*) 2-30956  
 Si:Au(Pt), deep levels, effect on device performance (*Japanese*) 2-30818  
 Si:Cr, energy levels and degeneracy ratios determ. from Hall coeffs. 2-30825  
 Si:Cu, quasi-band-struct. representation 2-40828  
 Si:Fe, deep levels, capacitance transient spectroscopy 2-17018  
 Si:Fe, deep levels, photocapacitance study 2-12998  
 n-Si:Fe, solid soln. precip., capacitance study 2-16804  
 Si:H, P, amorphous, dispersive transport nd electronic struct. 2-26408  
 a-Si:H, Schottky barrier structures, capture cross-section and density of deep gap states 2-41013  
 a-Si:H, thermal and optical space charge spectroscopy of gap states 2-45900  
 Si:H amorphous Schottky diode, electron transport and deep localized state kinetics 2-46101  
 Si:N amorphous film, elec. and optical props. 2-17074  
 Si:S, sharp-line photocond. 2-17113  
 Si:Ti, silolelectronic bound exciton luminesc. lines, role of deep acceptors 2-17529  
 Si/GaP interface, impurity deep traps 2-51267  
 Si-SiO<sub>2</sub> MIS struct., Ar ion implanted, deep levels, C-V characts. meas. 2-13010  
 SiC:B, impurity states 2-13013  
 α-SiC:B, photocapacitance effect, photon capture cross sections 2-17115  
 Si<sub>3</sub>N<sub>4</sub> film, MNOS struct., electron traps, photoionisation cross-section 2-46135  
 Ta-Ta<sub>2</sub>O<sub>5</sub>-MnO<sub>2</sub> system, space-charge-limited cond., Poole-Frenkel effect 2-41022  
 TiO<sub>2</sub>, diffusion doped, elec. and optical props. 2-5369  
 W surface (001), EELS angular depend., clean and adsorbate covered surfaces 2-51754  
 ZnS:Se(Ti)(V)(Mn)(Fe)(Co)(Ni), impurity electronic struct., Green's function method 2-40823  
 ZnS(V<sub>2</sub>):Mn, collision excitation cross-sections and energy levels of deep and very deep centers in electroluminescence 2-46762

## deep levels continued

- ZnSe:N(P), organometallic CVD growth, shallow acceptor doping, photoluminesc. study 2-51107  
 ZnSiO<sub>4</sub>:Mn<sup>2+</sup>(Mn<sup>2+</sup>,As), photoexcited and photostimulated luminesc. and cond. 2-51670
- defect electron energy states**  
*see also colour centres; deep levels*  
 alkali halides, coloured, electron recombination kinetics with α-centres 2-21528  
 alkali halides, Z<sub>1</sub> centre, approx. pseudopot. calc. 2-30817  
 amorphous group V semiconductors, defects, theoretical study 2-1859  
 amorphous solids, two-level systems, relax. time 2-40847  
 chalcogenide glass film, defect struct. 2-45056  
 chalcogenide glasses, charged dangling bonds model 2-13015  
 chalcogenide glasses, defect and impurity effects 2-45906  
 chalcogenide glasses, defects, dispersive transport, valence alternation model, review 2-40837  
 chalcogenide glasses, photoconductivity, slow relax. via D centres 2-21632  
 chalcogenide glasses, quasimolecular defects, rel. to elec. and optical props. 2-13016  
 compound semiconductors, dislocations, elec. and dynamic props. 2-40834  
 corundum:Cr, influence of impurity on defect struct. (*Russian*) 2-17029  
 cubic perovskites, impurity levels associated with Fe<sup>3+</sup>-V<sub>O</sub>, Fe<sup>3+</sup>-V<sub>O</sub>, Ti<sup>4+</sup>-V<sub>O</sub> centres 2-45879  
 D<sup>-</sup> centre wave function, energy spectrum calcs. 2-17023  
 diamond, defects, unrelaxed neutral vacancy and substitutional N, energy levels 2-26324  
 diamond, electron irradi., TR12 vibronic band, uniaxial stress effects 2-13519  
 diamond, resonant excitation of GR 1, luminescence and cathodoluminescence study 2-46685  
 diamond, vacancy electronic struct., cyclic cluster models with quantum-chemical hamiltonians 2-51102  
 dislocations, intersecting, localised and delocalised states (*Russian*) 2-45891  
 donor-acceptor compounds, Coulomb shift of charge transfer bond 2-40822  
 edge dislocation, electronic struct. calc., KKR approach 2-30819  
 ePR as a tool for investigating defects 2-41198  
 fluorite structure crystals, H-centres, geometry and charge distrib. 2-12589  
 gauge fields for electrons in crystals with topological defects 2-35965  
 Hubbard chain, half-filled, soliton-like doping 2-45796  
 II-VI semiconductors, zincblende struct., surface vacancies 2-26461  
 III-V semiconductors, lattice defects electronic struct. 2-40829  
 III-V semiconductors, zincblende struct., surface vacancies 2-26461  
 IV-VI semiconductor, defect states, optical and magneto-optical meas. 2-17510  
 metallic bicrystal model, equilib. density matrix of conduction electron gas 2-17028  
 one-dimensional conductor, org., irradi. induced disorder and effects on transport props. 2-30870  
 oxide phases investigation using inversion voltammetry with C paste electrode 2-52256  
 point defects electronic struct., cyclic cluster models with quantum-chemical hamiltonians 2-51102  
 polyacetylene, doped, charged defect states 2-45902  
 polyacetylene, solitons domination of electronic props. 2-22056  
 polyparaphenylene, doped, charged defect states 2-45902  
 semiconductor, dislocations and electron processes, review (*Polish*) 2-13003  
 semiconductor, electronic states introduced by ideal vacancy or surfaces, tight binding (orbital removal) method 2-8769  
 semiconductor crystals, interstitial atoms, electronic struct. calc. 2-21539  
 semiconductors, bound electron states influence on dislocation kink mobility 2-35496  
 semiconductors, compensated, localised charge carriers, particle statistics and transport 2-17085  
 semiconductors, covalent, electronic struct. of bulk and surface vacancies, short- and long-range-order effects 2-13005  
 semiconductors, covalently bonded, reconstructed dislocations, electronic struct. 2-26329  
 semiconductors, D<sup>-</sup> centres in high mag. fields 2-21540  
 semiconductors, defects, electronic struct. 2-40833  
 semiconductors, influence of rare-gas atoms on defect electron spectrum 2-17020  
 semiconductors, large-scale pot. relief, temp. depend. 2-8771  
 semiconductors containing defects with negative electronic correlation energy, charge carrier statistics 2-51160  
 Si, electron bombarded, nuclei optical polarisation and excited triplet states 2-2162  
 silicate glasses containing Sb oxide or As oxide, elec. props. 2-16897  
 Summer School on electronic structure of crystal defects and disordered systems, Aussois, France (Sept. 1980) 2-38354  
 TCNQ salts, quasi-one-dimens. cond., neutron irradi., IR spectra and defects influence 2-31467  
 transition metal b.c.c. dilute alloys, electronic theory of screw dislocation motion 2-1476  
 Wigner crystal, two-dimens., defect states and melting transition, theory 2-1848  
 5, glassy, photo-induced ESR 2-46377  
 Al, electric field gradient tensor in crystals with dil. vacancy conc. 2-21545  
 Al, self-consistent vacancy electron struct. 2-40825  
 AlAs, intrinsic defect theory 2-45884  
 As amorphous film, UHV sublimed, elec. and optical props. 2-46172  
 As<sub>2</sub>S<sub>3</sub>, amorphous, intimate valence alternation pairs, exciton and pair recombination, ODMR study 2-46432  
 As<sub>2</sub>S<sub>3</sub>, glass, electron beam induced defects, elec. and optical props. 2-45280  
 As<sub>2</sub>Se<sub>3</sub>, glass, electron beam induced defects, elec. and optical props. 2-45280  
 As<sub>2</sub>Te<sub>2</sub>(Se<sub>2</sub>), single polaron hopping contrib. to AC cond. 2-40903  
 BaTiO<sub>3</sub>:Cr(Sn), contact voltammetry investig., acceptor defects form., dielec. nonlinearity rel. to synthesis conditions 2-41283  
 Bi films, defect density, substrate temp. depend., elec. resist. study 2-51027  
 Bi<sub>2</sub>GeO<sub>20</sub>, defect states, elec. cond. and photoconductivity 2-1863



**defect electron energy states continued**

- CaMoO<sub>4</sub>, dipole centres, thermally stimulated depolarisation currents and optical absorpt. spectra 2-46466  
 CaO:Mg, neutron irradi., ODMR study of electron transfer from excited F centres 2-46430  
 CdS, dislocation energy states, piezo-optical investigation, photoluminescence and absorption spectra obs. 2-51123  
 CdS, small-angle light scatt. by dislocations, green luminescence 2-46628  
 CdS:Cu,Cl, activated phosphors, radiative and nonradiative recomb. centre struct. photoluminescence obs. 2-35966  
 CdSe, generation-recombination noise and defect levels 2-26455  
 CdTe, dislocation electronic state calcs. 2-40821  
 CdTe p-n junctions, electrolytically prepared, emission props. 2-2347  
 Cr halides, lattice static calc. of F-centre absorption energy 2-46642  
 GaAs, anion antisite defects, electronic props. 2-17017  
 GaAs, antisite defect 2-26321  
 n-GaAs, D<sup>+</sup> irradiated, carrier removal 2-1533  
 GaAs, intrinsic defect theory 2-45884  
 GaAs, lattice defects electronic struct. 2-40829  
 n-GaAs:S, electron irradi., As anti-site defects, EPR study 2-36429  
 GaAs-AlAs interface, antisite defect 2-26321  
 n-GaAs-Au Schottky barrier height increase, Fermi energy pinning behaviour 2-5451  
 n-GaAs-oxide layer, interface defect states effect on electronic props. 2-26509  
 GaP, anion antisite defects, electronic props. 2-17017  
 GaP, intrinsic defect theory 2-45884  
 GaP, vacancy electronic struct. 2-45882  
 Ge bicrystal, grain boundary levels, transient capacitance meas. 2-51117  
 Ge, dislocations, elec. and dynamic props. 2-40834  
 Ge, donor local field corrections to binding energies 2-21536  
 Ge, laser-induced metastable states 2-45895  
 Ge, self-interstitials and vacancies, absolute zero to melting temp., review 2-30461  
 Ge:Pd, Sb,  $\gamma$ - and electron-irrad., complex formation, primary defects charge state effect 2-40436  
 Ge-Se, glass, doped, elec. transport props. 2-45971  
 Ge-Te, glass, doped, elec. transport props. 2-45971  
 Ge<sub>1-x</sub>C<sub>x</sub>, amorphous, ESR g-values due to dangling bonds, EHT calc. 2-36430  
 Ge<sub>1-x</sub>Se<sub>x</sub> glass, paramag. defects, thermal quenching and generation, ESR study 2-5581  
 Ge<sub>1-x</sub>Se<sub>x</sub>Te films, charged defects, Poole-Frenkel effects study 2-45992  
 HgCdTe, recombination processes in 3 to 5  $\mu$ m 2-21529  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-x</sub>P<sub>x</sub>, deep vacancy levels theory (French) 2-40818  
 InP(As), intrinsic defect theory 2-45884  
 n-InSb, cyclotron resonance, defect levels 2-21885  
 La compounds, inner level and vacancy electronic spectra structure 2-1825  
 LiF, defect props., modified INDO calc. 2-40824  
 LiF, electronic structure, hole centres (Russian) 2-21527  
 LiF:V<sup>4+</sup>, associated impurity-vacancy defect electronic struct. 2-40830  
 LiNbO<sub>3</sub>, computation of O vacancy electron energy levels using a semi-continuum model 2-5364  
 Na, monovacancy, electronic struct. and energetics, density matrix approach 2-5365  
 NaCl crystal, donor-acceptor pairs, tunnel and thermally induced luminesc. 2-51724  
 NaF, electronic struct. of F-centre 2-17010  
 NaI crystal, donor-acceptor pairs, tunnel and thermally induced luminesc. 2-51724  
 n-Pb<sub>1-x</sub>Sn<sub>x</sub>Se, intrinsic defect energy levels, galvanomag. coeffs. meas. 2-30830  
 Se, amorphous, single polaron hopping contrib. to AC cond. 2-40903  
 Se, amorphous film, photostruct. fatigue 2-21624  
 Si (111) thin film, vacancy electronic levels 2-30827  
 Si, amorphous, bipolaronic ground-state and dangling-bond clusters 2-40846  
 Si, amorphous, defects, localised states, Staebler-Wronski effect, Meyer-Neldel rule 2-40837  
 Si, amorphous, laser-induced metastable states 2-45895  
 Si, amorphous, photolum., influence of excitation density and n-type doping 2-46734  
 Si, amorphous and crystalline, positron annihilation studies using Doppler broadening techniques 2-51739  
 Si amorphous RF sputtered coating, photocond., optical and EPR props. 2-40722  
 n-Si, DLTS spectrum charges due to electron irradi. 2-17012  
 Si, dislocation core struct. calcs. 2-26330  
 Si, dislocation states, optical excitations, photocond. meas. 2-51232  
 Si, dislocations, elec. and dynamic props. 2-40834  
 Si, donor local field corrections to binding energies 2-21536  
 p-Si, electron irradi., defect state photoionisation cross-section photocapacitance study 2-17026  
 p-Si, electron irradi., Hall mobility, pot. relief analysis 2-5420  
 Si, electron-hole droplet nucleation, role of shallow impurities and defects, photolum. study 2-2339  
 Si, electronic struct. of bulk and surface vacancies, short- and long-range-order effects 2-13005  
 Si,  $\gamma$ -irrad., defect levels, electron thermal emission rate, TSC study 2-21603  
 Si, p<sup>+</sup>-n diode, neutron and electron irradiation effects on defect energy levels (Korean) 2-13002  
 Si p-n junction, alpha particle irradi., radiation defects 2-12647  
 Si, plastically deformed, radiative recomb. on dislocations, energy state in band gap 2-9186  
 Si, self-interstitials and vacancies, absolute zero to melting temp., review 2-30461  
 Si, stacking faults, intrinsic and extrinsic, energy levels calc. 2-21531  
 Si surface, (111), point defects, electronic struct., tight binding calc. 2-46094  
 Si, unreconstructed 30° partial dislocations, electronic struct., pseudopotential and minimum basis set calc. 2-21534  
 Si, vacancy electronic structure, tight binding study 2-40833  
 Si, ZX 2-12999  
 Si:B(P), amorphous, defect-dopant atom interaction 2-40274  
 Si:H, amorphous, dangling bond state within mobility gap, identification by ESR spectroscopy 2-41196  
 Si:H, amorphous, density of states, dangling bond state, tight binding calc. 2-40750  
 Si:H, amorphous, electronic struct. of model defect 2-40820

**defect electron energy states continued**

- Si:H, amorphous, laser beam defect creation, luminesc. and ODMR study 2-35533  
 Si:H, amorphous, positron annihilation studies using Doppler broadening techniques 2-51739  
 Si:H, amorphous, reactively sputtered, solar cell, electron-hole recombination 2-42002  
 Si:H, amorphous, role of dangling bond as radiative center, ODMR 2-41233  
 Si:H, amorphous ion beam deposited coating, EPR spin density 2-40723  
 a-Si:H, defect creation by optical excitation, ODMR study 2-45255  
 a-Si:H, recomb. processes and gap states, time-resolved luminesc. meas. 2-46736  
 a-Si:H,B(P), luminesc. spectrum, effect of dangling bond states 2-46670  
 Si:H amorphous films, luminesc. spectra, defect induced red shift 2-17536  
 Si:H amorphous films, photocreation of defects, light-induced cond. changes, doping depend. 2-36091  
 a-Si:H films, reversible field-induced doping effect 2-51192  
 Si:H(B)(P), amorphous DC sputtered coating, doping and elec. props. 2-40726  
 Si:P,H, deformed, hydrogen passivation of defects 2-13004  
 Si-SiO<sub>2</sub> interface defects, low temp. annealing and hydrogenation 2-8885  
 Si-SiO<sub>2</sub> interfaces, electronic struct. of defects, extended muffin-tin orbital calc. 2-8853  
 Si<sub>1-x</sub>C<sub>x</sub>, amorphous, ESR g-values due to dangling bonds, EHT calc. 2-36430  
 n-SiC(6H), electron bombarded, subthreshold defect form., cathodoluminescence obs. 2-51718  
 Si<sub>1-x</sub>Ge<sub>x</sub>, amorphous, ESR g-values due to dangling bonds, EHT calc. 2-36430  
 SiO<sub>2</sub>, electronic energy struct. of vacancy and divacancy 2-17019  
 SiO<sub>2</sub> glass, defect centres, <sup>29</sup>Si hyperfine struct. of nonbridging O hole centre and peroxy radical 2-31283  
 SiO<sub>2</sub> optical fibres, as-drawn and irradi., photoluminesc. study, role of nonbridging O defect centres 2-13536  
 SiO<sub>2</sub> glow-discharge films, amorphous photoluminesc. study 2-46669  
 $\alpha$ -Sn, semicond., electronic struct. of bulk and (111) surface, self-consistent pseudopot. calcs. 2-46091  
 WO<sub>3</sub> (001), defect states in surface region, UPS study 2-13629  
 ZnO, intrinsic defects, ESR study (German) 2-25867  
 ZnSe, doped, luminescence centres, activation energy of form. 2-41392
- defects, crystal** see *crystal defects*
- defibrillators**  
 see also *patient treatment*  
 cardiological service, instrumentation for resuscitation and intensive care departments 2-22852  
 microprocessor based analyser, precision calibrator and tester appl. 2-18340
- deformation**  
 see also *bending; cold working; creep; drawing (mechanical); elastic deformation; elongation; ferroelasticity; plastic deformation; shape memory effects; thermomechanical treatment*  
 beam transverse shear and rotary inertia Gaussian model 2-18910  
 biological soft tissues, large deform. anal. 2-18238  
 chalcopyrite structure crystals, deformation, internal ionic displacements 2-40474  
 coherent optical metrology, rel. between strain and derivatives of observed displacement 2-30075  
 composite plate with polar orthotropy, stress conc. near circular aperture during stretching 2-20558  
 composite shell structures, finite element analysis 2-20564  
 contact interface, deformation of asperities (Japanese) 2-27253  
 cylindrical surface under axial load, deformation meas. by holographic interferometry (Japanese) 2-15146  
 disperse systems, solid-state particles struct., diff. study 2-8550  
 Earth crust, deform. of near-surface layers from geodetic meas. 2-6343  
 Earth crust, Quaternary and geodetically measured movements in Tokai district, Central Honshu, Japan 2-32483  
 Earth crust, strain and displacement meas. for June 9, 1980 Victoria, Mexico, earthquake 2-32432  
 Earth crust deformation measurement, laser interferometer appl. 2-52957  
 Earth crust seismotectonic deformation mechanism, use for earthquakes mechanisms and prediction 2-22938  
 Earth long-term surface deformation, finite element modelling of preseismic fault slip process 2-32447  
 elastoplasticity, large strain, incremental constitutive eqn. 2-20550  
 fabrics, plain-weave, coated, deform. anal. by biaxial extension (Japanese) 2-21214  
 fibre reinforced plastics, adhesive joint strength, effect of joint shape and lap length (Japanese) 2-5949  
 finite amplitude longitudinal wave propag., initial strain effect 2-30053  
 formability maps, review 2-52003  
 free surface role in onset of flow in open channel heated unevenly from above 2-16384  
 fuel element sheathing deformation in data processing from nuclear reactor operating modes (Bulgarian) 2-7226  
 Garm region USSR, seismotectonic deformation from earthquake anal. 2-22939  
 garnet layer, Ne implanted, stress distrib. determ., nondestructive method 2-9491  
 in-plane deformation meas. using holographic moiré 2-24970  
 liquid crystal, smectic, freely-suspended films, mech. prop. meas. and B-A transition 2-16582  
 liquid drop in gas stream, deceleration and deformation 2-50309  
 liver viscoelastic properties, rat obs. using deform. by compression 2-2885  
 lung deformation, isotropy and homogeneity, dog expts. 2-14274  
 magnetic bubble materials, ion implanted, strain distrib. modelling 2-2111  
 mechanical loading, static and dynamic, instrument with modulating capability 2-25335  
 metal, damage variable role in elec. resist. (French) 2-5381  
 mixed-oxide fast reactor fuel pins, direct obs. of fuel-cladding mech. interaction 2-47128  
 moiré interferometry method, for in-plane and out-of-plane displacement meas. 2-50209  
 molten polymers, transient deformation, rheological model evaluation 2-35099  
 Oshima granite, influence of strain rate on dilatancy and strength under uniaxial compression 2-32507



**deformation continued**

- PET melt-spun fibres, struct., radial diversification (*Polish*) 2-36928  
 physicochemical mechanics of materials, methodology 2-5916  
 pipes, split ring use in modelling ductile axial crack extension 2-4772  
 poly( $\gamma$ -benzyl-L-glutamate), liq. crystn. spherulites, light-scattering study of deform. 2-45023  
 polyethylene, dynamic mech. props., crystal morphology effects 2-30415  
 polyethylene films, spherulite deformation, light diffr. and X-ray obs. (*Russian*) 2-31764  
 polymer materials, fibre reinforced, mechanical and thermal props., test facilities, down to 4.2K 2-22405  
 polystyrene, uniaxially strained, polymer coil relax. obs. by small angle neutron scatt. 2-40250  
 polystyrene coil undergoing stress relax., small angle neutron scatt. 2-21041  
 rock, shear strain and fracture energy of stick-slip events in large scale biaxial expt. 2-18383  
 rock deformability measurement, experience with in situ meas. techniques 2-32667  
 rock deformation, anal. of most important aspects of folding mechanism 2-52842  
 rock deformation, parting in giant garnets as indicator of late brittle deform. 2-18424  
 rock deformation, sutural folding as one of characteristic forms 2-47863  
 rocks, hydromechanical behaviour of deformable fracture subject to normal stress 2-32506  
 rocks strain relaxation, general charact. rel. to sample preparation for large-scale tests 2-32498  
 rubber, aerosol filled, dielec. relax. mol. mobility, strain effects (*Russian*) 2-46474  
 rutile structure cpds., Raman active modes, Gruneisen parameters, and deform. pot. 2-45505  
 semi-circular grooves in round shafts under torsion, stress conc. factors investig. 2-41674  
 sheet surface damage, in unlubricated strip-draw test, sheet holding method effect 2-52000  
 steel, C-Mn (0.015, 1.3 wt.%), influence of prestrain and strain ageing on cleavage fracture 2-2587  
 steel, low C, low cycle fatigue, grain size effects 2-47152  
 steels, dual-phase, review 2-51847  
 steels and Armco Fe, friction, expt. and theory 2-9430  
 stiff fibre reinforced sheets, deformation, finite plane stress 2-8052  
 stressed solid, equil. vacancy conc. near free surface and healing of pores by self-diffusion 2-35493  
 thin shells theory, asymptotic method of anal. 2-15021  
 thin-walled member with open cross-section, nonlinear theory (*Serbian*) 2-35052  
 two-block polymer chains, mechanical loss tangent, freq. depend. (*Russian*) 2-30514  
 welded structure deformations, acoustic sensing elements 2-5991  
 Al anodic films, intrinsic stresses meas. 2-47229  
 Al, deformed, X-ray line profile anal. 2-50647  
 Al/NbTi-Cu composite conductor, nonlinear stresses and relative displacements, finite element model 2-13789  
 Cu-SiO<sub>2</sub> alloy single crysts., high temp. deform. (*Japanese*) 2-2561  
 Fe-C alloys, ductility deterioration due to nonuniform distrib. (*Japanese*) 2-9370  
 Gd<sub>2</sub>Ga<sub>2</sub>O<sub>7</sub>·Ne<sup>+</sup>, strain and damage profiles, X-ray diffraction and backscatt. anal. 2-45290  
 He, liq., ordering of two-dimens. system of electrons 2-5293  
 MgO powder, defects mechanically activated by compressive, shear stress,  $\gamma$ -irrad. effect 2-35540  
 Na<sub>2</sub>O-SiO<sub>2</sub> glass, fluctuations in ionic current induced by mech. strain 2-27302  
 Nb-Hf/Cu-Sn-Ga, multifilamentary supercond., crit. current, strain effects 2-17251  
 Si, gamma-ray irrad., uniaxial deform. influence on nonequilibrium carrier recombination 2-26410

**deformation lines** *see Luder's bands***degenerate semiconductor materials** *see degenerate semiconductors***degenerate semiconductors**

- see also heavily doped semiconductors; superconducting semiconductors*  
 band splitting under laser irradiation 2-41316  
 composition dependence of energy gap of (CdTe)<sub>1-x</sub>(In<sub>2</sub>Te)<sub>x</sub> with  $x < 0.02$  2-40780  
 cooling by adiabatic magnetisation in ultra-quantum region 2-28856  
 Einstein relation, generalised, thermal noise calc. 2-36056  
 ferromagnetic degenerate semicond. in paramag. phase, thermopower, contrib. of localised spins heat flux 2-36073  
 magnetoresistance and cyclotron resonance, in strong EM wave 2-17097  
 multiband, generalised Einstein relation for diffusivity-mobility ratio 2-36058  
 narrow-gap, Fermi-Dirac integrals and Fermi energy 2-45979  
 p-n junction, surface EM wave excitation, mag. field induced transparency 2-46124  
 piezoelectric semicond., degenerate magnetoacoustic phenomena, transverse US propag. effects 2-51240  
 semiconductor ultrathin film, non-parabolic, Einstein relation, size quantisation effect 2-13198  
 zero-gap semiconductors, dielec. function mag. field depend. 2-21596  
 n-Ag<sub>2</sub>Se, elec. props. 2-1926  
 $\alpha$ -Ag<sub>2</sub>Se, oriented thick films, Fermi level position, Hall effect 2-46040  
 n-Cd<sub>3</sub>As<sub>2</sub>, diffusivity-mobility ratio, carrier degeneracy effect 2-5401  
 Cd<sub>3</sub>P<sub>2</sub>, resist., Hall coeff., thermolec. power, band gap, pressure effects 2-26401  
 Cu<sub>2</sub>Cr<sub>2</sub>Se<sub>4</sub>·Br<sub>2</sub>, elec. props., anion substitution effect, cond. max. near Curie temp. 2-36044  
 EuB<sub>2</sub>-C<sub>2</sub>, electron localization and transport props., ESR study 2-41199  
 p-GaAs, degenerate, low temp. luminesc., doping effect 2-36695  
 p-GaAs, linear photogalvanic effect (*Russian*) 2-40972  
 p-GaAs:Te, heavily doped, degenerate, photoluminescence 2-26979  
 p-GaSb, degenerate, low temp. luminesc., doping effect 2-36695  
 GaSb on TTF-TCNQ and (TMTSF)<sub>2</sub>PF<sub>6</sub>, tunnelling props. and gap opening 2-26476  
 p-Ge, light-hole band overpopulation in strong crossed elec. and mag. fields 2-40924  
 Ge-GaAs n-n heterojunction, electron transport 2-8864  
 n-InAs accumulation layers, far IR cyclotron reson. and Shubnikov-de Haas oscils. 2-41020

**degenerate semiconductors continued**

- In<sub>2</sub>S<sub>3</sub>, polycrystalline and amorphous film, manufacture and appls. (*Russian*) 2-1790  
 n-InSb, degenerate, US propag., magnetoacoustic phenomena 2-51241  
 n-InSb, Landau levels nonthermal broadening, transverse magnetoresist. and photomag. effect 2-8822  
 InSb, laser beam self-focusing, mag. field enhancement, kinetic approach 2-49836  
 n-InSb, non-parabolic, ultrathin films, Einstein relation, size quantisation effect 2-13198  
 n-InSb, piezoelectric semicond., degenerate, magnetoacoustic phenomena, transverse US propag. effects 2-51240  
 n-InSb, US attenuation, transverse mag. field effect 2-26451  
 n-Mg<sub>1-x</sub>Cd<sub>x</sub>Te, degenerate, carrier conc. depend. of Auger lifetime 2-36059  
 Sn<sub>1-x</sub>Cr<sub>x</sub>Te, mag. props., effect of isothermal annealing 2-41161

**dekattrons**

No entries

**delay lines***see also acoustic delay lines*

- multiple wire magnetostrictive delay line for improved signal and reduced reflections 2-48725  
 single-mode fibre recirculating delay lines, filter response 2-44461  
 traveling mirror compressor delay line with nonconstant capacitance 2-20907

**delayed neutrons**

- A=93-98, 127-131, 142-148, delayed neutron emission probability,  $\beta$ -activity, half-lives 2-33958  
 fission products, short-lived nuclear data appl. 2-19586  
 spherical nuclei, Gamov-Teller resonances and collective isobaric 1<sup>+</sup> states, microscopic description (*Russian*) 2-29240  
 step-wise time depend. backward Kolmogorov eqn. with delayed neutrons in counting statistics 2-39096  
 yields from ENDF/B-V data 2-391  
<sup>9</sup>Be, excited states, beta recoil and width influence on delayed particle spectra 2-19503  
<sup>252</sup>Cf(n,f), delayed neutron energy spectra, six-group representation 2-39012  
<sup>87</sup>Kr, delayed neutron emitter, neutron reson. study 2-19507  
<sup>A</sup>Li, A=9, 11, beta-delayed neutron emission probabilities 2-19500  
<sup>1</sup>Li, beta-delayed two-neutron and three-neutron emission 2-19496  
<sup>A</sup>Na, A=27-31, beta-delayed neutron energy spectra 2-19505  
<sup>A</sup>Na, A=30-32, beta-delayed two-neutron emission 2-19496  
<sup>A</sup>Na, A=30-34, beta-delayed neutron emission time spectrum study 2-19501  
<sup>3</sup>Na, beta-delayed three-neutron emission study 2-19499  
<sup>237</sup>Np(n,f), delayed neutron energy spectra, six-group representation 2-39012  
<sup>A</sup>Pu(n,f), A=239-241, delayed neutron energy spectra, six-group representation 2-39012  
<sup>A</sup>Rb, A=96-99, beta-delayed two-neutron decay studies 2-19497  
<sup>98</sup>Rb, beta-delayed two-neutron emission 2-376  
<sup>100</sup>Rb, beta-delayed neutron emission 2-19496  
<sup>232</sup>Th(n,f) delayed neutron energy spectra, six-group representation 2-39012  
<sup>A</sup>U(n,f), A=235-238, delayed neutron energy spectra, six-group representation 2-39012  
<sup>235</sup>U(n,f), chemical depend. of delayed neutron yield 2-3976

**delayed protons**

- A=65 to 121, delayed-proton precursors, beta and gamma strength functions 2-19491  
 A=96 to 117, neutron-deficient isotopes, beta-delayed proton emission study 2-19489  
<sup>A</sup>Cs, A=114,116, beta-delayed proton and alpha emission 2-19490  
<sup>99</sup>Pd<sup>m</sup>, proton rich nuclei decay, nuclear spectroscopy, 14s high spin isomer 2-19494  
<sup>93m</sup>Ru, beta-delayed proton precursor study 2-19493  
 Sn region, A=105-122, nuclide masses close to proton drip line 2-19435  
<sup>A</sup>Sn, A=103, 105, beta-delayed proton precursors from (<sup>38</sup>Ni,X) 2-24184

**delays***see also distributed parameter systems*

- sensor array time delay estimation for multipath propagation 2-44593

**demagnetisation***see also magnetisation*

- Alnico 5 with Nb additions, columnar, permanent mag., mag. props. 2-17316  
 amorphous alloys, HF mag. props. 2-26658  
 DC motors, annular permanent magnet, demagnetising stability 2-26675  
 ferromagnetic superconductor, coexistence of magnetic domain structure and superconductivity 2-13230  
 grain anisotropy, effect in alternating field demagnetisation 2-6364  
 refrigeration below 1K in space, review 2-33555  
 steel plates, ferromagnetic, Fe losses, hysteresis and eddy currents 2-51442  
 Fe-B, amorphous, permivar effect, domain struct. stabilisation 2-8995  
 Fe-Cr-Co, permanent magnet, heat treated in miscibility gap, mag. props. 2-36983  
 SmCo, permanent magnets, deform. sintered, struct. and mag. props. 2-31245

**demagnetisation, adiabatic** *see magnetic cooling***Dember effect**

- solar cell, high-low emitter, in concentrated sunlight, analytical model 2-27616  
 AgCl/AgI epitaxial photographic emulsion, photographic props. 2-10895  
 Si:H amorphous solar cells, n-i-p and p-i-n structs., Dember effects 2-52365

**demodulation***see also modulation*

- Alcator A Tokamak, electron cyclotron emission, submillimeter heterodyne receiver calibration 2-44904  
 holographic near-real-time displays using electronic recording 2-11667  
 Josephson heterodyne sub MM wave detector at high thermal background levels 2-43086  
 microvibration meas. by heterodyne speckle interferometry 2-12116  
 optical FSK heterodyne detect. expts. using semicond. laser transmitter and local oscillator 2-4541  
 tunnel junction, nonhysteretic, microwave direct and heterodyne detect. 2-17228



**demography**

- energy/environment models for regional planning and management, overview 2-22522  
Poland, cancer deaths due to radiation from building materials 2-14293

**demonstrations**

- includes student experiments*  
*see also student laboratory apparatus*  
beats as moving interference patterns, ripple tank and computer simulation methods 2-48443  
beta spectroscopy experiment for students 2-38385  
birefringence meas., polarised light technique 2-48471  
conical light beam generation for smoke-chamber demonstrations 2-28636  
digital voltage meas. using microprocessor 2-48472  
electrostatic pot. gradient meas. near sea level 2-28630  
gamma-ray absorpt. coeff. as a function of energy 2-48459  
geometrical optics, using conc. parallel light beams 2-48470  
human circulation, demonstration model 2-38388  
inelastic electron tunnelling spectroscopy, advanced undergraduate laboratory expt. 2-42820  
laser mode phases anal. by interferometry 2-28634  
liquids, optical props., laser meas., student demonstration 2-48447  
Moseley's law confirmation by X-ray absorpt. coeff. meas. as a function of energy 2-48460  
NMR spectrometer for advanced laboratory courses with appl. 2-42823  
PMMA, radiation degradation investig. 2-6722  
powder diffraction patterns on the Tel-X-Ometer 80 2-42833  
soap film analogue of Fermat's principle and Snell's law 2-48475  
transmission line impedance measurement using a sinusoidal signal generator 2-48465  
ultimate Cartesian diver set 2-28635  
CS<sub>2</sub>, liq., vibr. spectrosc., assignments, teaching expt. 2-10573  
<sup>235</sup>Cf, spontaneous fission, student expts. 2-28628

**dendrites**

- see also crystal growth*  
diffusion-limited aggregation, computer simulation, rel. to dendritic growth 2-23565  
steel, type 20, microdoping and solidification influence on ingot struct. and props. (Russian) 2-2500  
Al-alloys, suppression of dendrites growth producing surface bulges on components 2-2437  
Al-Cu, directionally solidified, meas. of cell and primary dendrite arm spacings 2-1806  
Al-Mg-Si, directionally solidified, meas. of cell and primary dendrite arm spacings 2-1806  
 $\alpha$ -FeOOH, synthetic acicular particles, dendrite obs., TEM study 2-16976  
GaAs dendritic web, grown by liq. encapsulation, characterisation 2-2427  
In<sub>2</sub>O<sub>3</sub>, cryst. growth from vapour phase 2-31613  
Mo, cathodic needle growth from Mo(CO)<sub>6</sub> vapours at high elec. fields 2-51066  
Si crystal growth, wide ribbon used for solar cell manufacture, crucible assembly 2-46906  
Si dendritic web, wide ribbon growth, used for solar cell manufacture 2-46908  
Si electrodeposition on graphite 2-9292

**dendritic crystals** *see dendrites***dendritic structure**

- alloys, solidifying, processes of heat and mass exchange during dendrite struct. formation 2-22211  
ice, transient freezing process with supercooling using pure water (Japanese) 2-26025  
ingots, axi-symmetric, macrosegregation, effect of fluid flow 2-9353  
solidification, effects of vibr. 2-2502  
Ag, electrolytically gel grown crystals, surface microstructure and morphology 2-12890  
Ag-Cu alloys, metastable phase microstruct. generated by continuous laser melt quenching 2-9346  
Ag-Cu based ternary alloys, dendritic segregation (Russian) 2-22217  
Al-Cu, directionally solidified, meas. of cell and primary dendrite arm spacings 2-1806  
Al-Mg-Si, directionally solidified, meas. of cell and primary dendrite arm spacings 2-1806  
Cu-(Nb<sub>1-x</sub>Ta<sub>x</sub>)<sub>3</sub> Sn supercond. in situ multifilamentary wire, crit. currents 2-8931  
Fe-FeSi (29-33 at%Si) hypoeutectic films, transition from dendritic to lamellar struct. 2-27166  
Fe-Ni-X, X=Ge, P, Au or Pt, ternary partition coeff., expt. determ. 2-36860  
Nb<sub>3</sub>Sn-Cu filamentary superconducting wire, in situ prep. and props. 2-8942  
Ni-base superalloys, single crystals, creep props. at 760°C (French) 2-22279  
Ni-Cr-Co-Mo, Rene 95 superalloy powder, precip., STEM and TEM study 2-47032

**dense fluids, theory** *see liquid theory***densification**

- see also density; powders; sintering*  
ceramic microstructure orientation by hot-forming methods 2-46988  
ceramics, compaction mechanism, fine batches, effect of intermediate layers 2-22186  
chalcogenide glass film, origin of photocontraction effect 2-35910  
clay based ceramics, separation of sintering mechanisms 2-31670  
clay products, vitrification separation in isothermal sintering (French) 2-36825  
hot isostatic pressing, development and appl. 2-2474  
polystyrene powder compacts, dynamic mech. props., effect of particle surface treatment (Japanese) 2-36893  
porous materials, sintered, cold extrusion forging 2-13670  
powder densification in pressing, differential eqns. 2-13669  
powder forging, anal. of consolidation 2-9307  
powder metallurgy products, bonded, strength and ductility 2-36810  
powders, dispersive consolidation during pressing process 2-46967  
powders, plastic self-compaction 2-17642  
rare earth thiohafnates, self-propagating high-temp. synthesis 2-41543  
 $\beta$ -sialon system, densification behaviour during reaction hot-pressing 2-9320  
sialons, densification, role of Sc<sub>2</sub>O<sub>3</sub> 2-9319  
steel, 4640, repeated phase transformation effect on sintering 2-46972

**densification continued**

- steel, low-alloy sintered, density effect on fracture behaviour, model investig. 2-41735  
steel, Mn, sintered powder, effect of compacting pressure and 0.5% Mo on props. 2-9313  
Stellite 6 alloy, liq. phase sintering 2-46973  
3Al<sub>2</sub>O<sub>3</sub>.2SiO<sub>2</sub>, mullite containing powders, sintering, composition effects 2-51857  
3Al<sub>2</sub>O<sub>3</sub>.2SiO<sub>2</sub>, mullite containing powders, agglomeration effects 2-51858  
Al protective coatings on steel, pulsed deposition transition zones (Russian) 2-2614  
AlN, densification kinetics during hot pressing 2-27125  
AlN, effects of various additives on sintering 2-27133  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>, fabrication scheme using fast firing method 2-27129  
Al<sub>2</sub>O<sub>3</sub> powders, densification in liq. phase presence 2-31665  
Al<sub>2</sub>O<sub>3</sub>, refractories obtained from different sources, props. 2-27121  
Al<sub>2</sub>O<sub>3</sub>.TiO<sub>2</sub>, strength and thermal expansion obs. (Japanese) 2-31729  
Al<sub>2</sub>TiO<sub>2</sub>.Fe<sub>2</sub>TiO<sub>5</sub>, strength and thermal expansion obs. (Japanese) 2-31729  
Al<sub>2</sub>TiO<sub>2</sub>.MgTi<sub>2</sub>O<sub>7</sub>, strength and thermal expansion obs. (Japanese) 2-31729  
B<sub>2</sub>C, sintering, effect of C on microstruct. and mech. props. 2-41565  
BN-SiO<sub>2</sub> ceramics, hot pressing, props. 2-31673  
C, non-graphitising, graphitisation and densification under high press. (Japanese) 2-22411  
C-LaB<sub>6</sub> system, powder, hot-pressing 2-51845  
cc Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> composites, transform. toughening, fabrication and fracture toughness 2-51925  
Cr<sub>3</sub>C<sub>2</sub>-Ni(15 wt.%), hot pressing conditions effect on densification and struct. 2-41553  
Cr<sub>2</sub>O<sub>3</sub>-ZrSiO<sub>4</sub>, ceramics, densification (Japanese) 2-22190  
Cu powder compacts, deform. induced changes in density 2-13672  
Fe powder, atomised, pressing characts., particles porous struct. effect on compressibility 2-41551  
Fe sintered powder, effect of compacting pressure and 0.5% Mo on props. 2-9313  
MgAl<sub>2</sub>O<sub>4</sub> spinel, pure and LiF doped powders, compaction features 2-41542  
MgO, high-density, production 2-36816  
MgO, pure and LiF doped powders, compaction features 2-41542  
MgO, sintering in presence of heteroorg. cpd. additives, effect on mech. props. 2-51853  
Na<sub>3</sub>P<sub>2</sub>B<sub>5</sub>O<sub>11</sub> (Na<sub>3</sub>P<sub>2</sub>B<sub>5</sub>O<sub>17</sub>) glass, superionic cond., densification effect 2-16889  
Ni powder compacts, deform. induced changes in density 2-13672  
Pb(Zr,Ti)O<sub>3</sub>, densification and sintering 2-41540  
Pb(Zr,Ti)O<sub>3</sub>-Sr, sintering, preparation piezoelectric props. 2-41541  
 $\beta$ -SiC, effects of applied pressure on hot-rolling 2-27130  
SiN ceramics, kinetics of densification and phase transformations 2-9349  
Si<sub>3</sub>N<sub>4</sub>, classification, Cl<sub>2</sub> impurity effects 2-51860  
Si<sub>3</sub>N<sub>4</sub> high density, prep. by gas press. sintering 2-51854  
Si<sub>3</sub>N<sub>4</sub>, hot-pressed, activation energies from densification, creep, grain-boundary sliding 2-31666  
Si<sub>3</sub>N<sub>4</sub> powders, hot pressing behaviour, effect of different sintering agents 2-22187  
Si<sub>3</sub>N<sub>4</sub>-Y<sub>2</sub>O<sub>3</sub>/Al<sub>2</sub>O<sub>3</sub>, densification by dual N<sub>2</sub> press. process 2-36820  
Su powder compacts, deform. induced changes in density 2-13672  
Ta-N-ZrB<sub>2</sub>-ZrN(WC) comp., densification and wear resist. 2-31661  
YIG, solid-phase synthesis and sintering, kinetics and mechanism, electrophys. props. 2-41516  
Y<sub>2</sub>O<sub>3</sub>, pure and LiF doped powders, compaction features 2-41542  
ZnO, densification, optimisation during sintering 2-36822  
Zn<sub>3</sub>P<sub>2</sub> pellets, effect of compacting pressure on elec. cond. 2-52060

**densimeters** *see densitometry***densitometers** *see densitometry***densitometry**

- see also photometry*  
autoradiograms, density sum meas., densitometers comparison 2-206  
cryogenic liquids, portable calibration densimeter 2-19087  
decane, evaporating thin film, heat transfer in contact line region, microphotometric obs. 2-10842  
developed photographic image, optical density meas. (German) 2-38709  
electron micrograph computer image processing using flat-bed scanning microdensitometer 2-249  
electrophotographic copies, optical density, carrier powder grain size influence (German) 2-28918  
femoral bone densitometry, autonomous apparatus (French) 2-32318  
laser microdensitometer for spectrographical measurements 2-23706  
macrophages, rat lung <sup>144</sup>Ce autoradiogram meas. by densitometry or photometry 2-6293  
magnetic float densimeter for the measurement of changes in water density on aeration 2-48732  
microdensitometer transfer functions for a slit aperture with random angular misalignment 2-23705  
microdensitometers, computer controlled, coordinate error investig. (Russian) 2-204  
microdensitometry, processor-controlled 2-23703  
optronic differential nitometer (Russian) 2-43113  
Scanning 3 microdensitometer, autoradiograph evaluation 2-207  
subcommisural organ, secretory activity, densitometric meas. of cellular parameters 2-27955  
two-phase flow meas., microprocessor-based instruments 2-20782  
Ag deposits, surface roughness using microdensitometer analysis of replica electron micrographs, autocovariance functions 2-10783  
Mg deposits, surface roughness using microdensitometer analysis of replica electron micrographs, autocovariance functions 2-10783

**density**

- see also atmospheric pressure and density; density measurement; density of gases; density of liquids; density of solids*  
elastic half space transient response to torsional load 2-44651  
solar corona, density gradients rel. to lower-hybrid waves and solar radar echoes 2-10366  
Universe primeval adiabatic density perturbations, power spectrum constraints from mass distrib. 2-6687  
Sb, solid, dissoln. in molten Bi, static conditions 2-8625



density, atmospheric see atmospheric pressure and density  
density, vapour see density of gases  
**density measurement**  
see also *hydrometers*  
aerodynamic flows, density meas. using laser induced fluoresc. (French) 2-50344  
aqueous solns. density meas. by  $\gamma$ -ray backscattering method 2-48676  
cermets, nondestructive testing, scanning  $\gamma$ -ray method 2-47278  
compressible flow density gradient meas., by noise deflectometry 2-16343  
fibrous materials, density determining method 2-13907  
fuel flow and density meas., reference installations 2-30251  
granular refractory materials, errors associated with bulk density determ. 2-28841  
layered acoustic medium, density and compressibility profiles from precritical incidence data 2-23452  
oxide melts, physico-chemical props., meas. apparatus (Slovak) 2-1540  
periclast aggregates, bulk density meas. by water method 2-28842  
porous materials, density determining method 2-13907  
porous particles, small, density meas. by mercury porosimetry 2-27398  
powders, density determining method 2-13907  
shock tube expt., density profiles of boundary layers predicting by laser interferometry 2-20791  
specific gas density, Pb-salt diode laser tunability utilisation 2-22694  
thin film metallisation, relative density meas. using electron microprobe or SEM 2-23789  
Te, at high temps. and pressures. 2-15149

**density of gases**  
air in open-cell polyurethane foam for ultrasonic freqs. 2-35609  
gas, local temp. and density meas. by coherent anti-Stokes light scatt. method 2-20809  
hydrocarbon fluid mixtures, viscosity, density and thermal cond. prediction, computer program in FORTRAN 2-8656  
measurement by laser beam, Pb-salt diode laser tunability utilisation 2-22694  
metal vapour in heat pipe, interferometric meas. of large number density 2-4910  
van der Waals liquid-vapour coexistence curve, parametric soln., student calc. 2-48448  
D-T, dielec. consts. elec. cond., 20 to 26K, density depend. 2-35265  
He, cryogenic two phase upward flow, meas. of void factor 2-8211  
He-Ar mixtures, acoustic vel. and density 2-35264  
Kr, thermodynamic props., density determ. 2-40022  
N, quasistationary glow discharge, contraction, interferometric meas. of distrib. of density of gases 2-16523  
N<sub>2</sub>, cryogenic two phase upward flow, meas. of void factor 2-8211

**density of liquids**  
see also *hydrometers*  
4-alkoxyphenyl-4-alkylbenzoate nematic mixtures, anisotropic and dynamic scatt. props. 2-21002  
acetone, liquid, vibr. relaxation and mol. short range order, Raman spectra 2-17489  
alcohols, structure in bulk props. 2-5035  
4-alkylamino-4'-cyanobiphenyls, mesomorphic liq. crystals, synthesis and props. 2-50530  
p-n-alkyloxybenzylidene p-cyanoanilines (p=haloanilines), monolayers and bilayers in smectic phases 2-16587  
benzene-water-2-propanol, densities and heat capacities per unit vol. meas. 2-12768  
binary Lennard-Jones systems, mass depend. of self diffusion coeff. determ. by mol. dynamics simulation 2-21336  
diatomic fluid structure near a wall 2-20992  
dimethyl sulphoxide-alcohol binary mixtures, US rel. and isentropic compressibility determ. 2-12683  
N,N-dimethylaniline+chloroform mixture, isentropic compressibility calc. from US velocity and density meas. 2-30527  
N,N-dimethylaniline+methylene chloride mixture, isentropic compressibility calc. from US velocity and density meas. 2-30527  
1,3-dioxane, dil. aqs. soln., density and specific heat of liquids 2-21321  
p-(p-ethoxy phenyl azo) phenyl propionate, liq. cryst., US velocity and specific vol. 2-45382  
n-p-ethoxy-benzyliden-p-n-butylaniline, isotropic phase, Brillouin scatt. under high press. 2-51619  
hard sphere fluid, chemical pot., scaled particle theory, Monte Carlo methods 2-44995  
HBT-OBT binary mixtures, optical and dilatometric props. 2-30384  
heptyl alcohol, density determ. at various temp. and press., equation of state 2-35563  
hexamethylphosphorotriamide aq. soln. structure stabilisation, US velocity obs. 2-1561  
n-hexane-perfluoro-n-hexane, excess volumes, in crit. soln. region 2-45547  
hydrocarbon fluid mixtures, viscosity, density and thermal cond. prediction, computer program in FORTRAN 2-8656  
inert gases, liquefied, dielectric const. determ. (Russian) 2-13395  
isoamyl alcohol, density determ. at various temp. and press., equation of state 2-35563  
liquefied natural gas densities, four mathematical models for prediction 2-1541  
liquid crystalline mixtures, refr. indices, density, birefringence and order parameters 2-36588  
MBBA, isotropic phase, Brillouin scatt. under high press. 2-51619  
metal, liq.-vapour interface, struct. in density profile 2-30720  
methane, orthobaric liq. densities and second virial coeffs. correl. 2-21268  
methane-methanol fluid binary system, phase equilb. and PVT data, 2-45522  
monohydric alcohols, dielectric relaxation, mechanism of dipolar orientation (Japanese) 2-21938  
monolayer, insoluble, surface self-diffusion, density instability in bulk role 2-35867  
one-dimensional quantum fluids, effective harmonic fluid approach to low energy props. 2-30712  
organic binary liquid mixtures, molecular interaction determinations using US methods 2-21235  
oxide melts, physico-chemical props., meas. apparatus (Slovak) 2-1540  
pentylicyanobiphenyl, nematic liq. cryst., pretransitional behaviour of density 2-50539  
phospholipid bilayer, correl. length and lateral compressibility in presence of thermodynamic density fluctuations 2-16705  
polymers, Rao const. determ. 2-8573

**density of liquids continued**  
seawater, density meas. rel. to international one-atmosphere eqn. of state 2-6372  
solutions, solid-like contributions in liqs. and molar vol. from dielec. studies 2-20985  
spherical and disk like mol. in liq., self diffusion coeff., viscosity and density 2-16829  
superfluid density and helicity modulus, renormalisation group calc. 2-45657  
trioxane, dil. aqs. soln., density and specific heat of liquids 2-21321  
van der Waals liquid-vapour coexistence curve, parametric soln., student calc. 2-48448  
water, dissolved air effects 2-16702  
Ba, liquid, thermophysical props. 2-35562  
Ca, liquid, thermophysical props. 2-35562  
Cs, liquid, thermophysical props. 2-35562  
DCl, heat capacity and density of solutions in D<sub>2</sub>O, at 283.15, 298.15 and 313.15K 2-5240  
Ga-Te, liq. alloys, density and elec. cond. 2-45309  
Gd, density and thermal expansion in temp. range 293-1850K 2-40575  
H<sub>2</sub>O, liquid, Monte Carlo simulations between two rigid walls 2-1381  
He, cryogenic two phase upward flow, meas. of void factor 2-8211  
<sup>3</sup>He-A, flow dissipation and superfluid density, temp. hysteresis effects 2-35818  
<sup>3</sup>He-A, hydrodynamic order parameter variables, static susceptibilities 2-35810  
<sup>4</sup>He, adsorbed on pyrolytic graphite, superfluid asset, vapour press. and density study 2-40644  
<sup>4</sup>He, anomalous viscosity near gas-liq. crit. point obs. 2-35728  
<sup>4</sup>He, ground state, hard-core square well pot. parameters redeterm. 2-50950  
<sup>4</sup>He, superfluid, critical counterflow in narrow channels 2-35786  
<sup>4</sup>He, superfluid density, renormalisation group and  $\epsilon$  expansion 2-45656  
<sup>4</sup>He, thermodynamic and transport parameters,  $\lambda$  point to 4.2K, cubic spline fits 2-21343  
In-Te, liq. alloys, density and elec. cond. 2-45309  
K, thermodynamic props. in 1000 to 1800K 2-35020  
KCl, molten, thermodynamic props., molecular dynamics simulation 2-12458  
MgCl<sub>2</sub> aq. soln., heat capacities and volume, long range order transitions 2-50877  
N<sub>2</sub>, cryogenic two phase upward flow, meas. of void factor 2-8211  
Na, thermodynamic props. in 1000 to 1800K 2-35020  
Na-K eutectic alloys 2-35020  
NaCl, heat capacity and density of solutions in D<sub>2</sub>O, at 283.15, 298.15 and 313.15K 2-5240  
NaI in alcoholic solns., structure in bulk props. 2-5035  
NaOD, heat capacity and density of solutions in D<sub>2</sub>O, at 283.15, 298.15 and 313.15K 2-5240  
Na<sub>2</sub>SO<sub>4</sub>, molten, surface tension, SO<sub>2</sub> gas effect 2-16930  
Ne liquid, neutron scatt. data anal., isothermal density derivative of pair correl. function 2-40247  
S-As<sub>2</sub>S<sub>x</sub> chalcogenide system, structural viscosity of melts, density and refractive index 2-50899  
Se<sub>80</sub>Te<sub>20</sub>-S<sub>x</sub>, liquid, elec. cond. and bond conc. 2-30942  
Ti-Te, liq. alloys, density and elec. cond. 2-45309  
Ti<sub>2</sub>Te<sub>3</sub>(S<sub>2</sub>Se), electrophys. props. over solid and liq. range, added S and Se effect 2-40883  
UF<sub>6</sub> liquid, density, conductivity, viscosity and ionic dissoc. 2-8551  
UO<sub>2</sub>(NO<sub>3</sub>)<sub>2</sub>, tributyl phosphate extraction system, density, viscosity and surface tension meas. (Chinese) 2-19683

**density of solids**  
alkali silicate glasses, viscous flow, fluctuation microcavity vol., activation vol. and molar vol. 2-8450  
aluminofluorophosphate glass, effect of additions of groups II and III fluorides on struct. and props. 2-8451  
aluminous cement/perlite composite, low density, mech. props. 2-51963  
coal, Pittsburgh seam, thermophys. props. 2-5253  
ferrite and ferroelectric materials synthesis, oxide ionic struct. characts. rel. to initial mixture density and vol. changes 2-41564  
germanate glasses, O anomalies, rel. to props. 2-5055  
granular refractory materials, errors associated with bulk density determ. 2-28841  
graphite, HTGR struct. components, material characts. and eval. 2-41831  
ice, density, lattice energies and bulk moduli 2-39461  
ice, structure prediction, tests of effective pair pots. 2-40332  
LIF, thermal neutron irradi., density depend. on radiation heating temp., macropores form. (Russian) 2-16682  
metal-thermoplastic system, structural changes in surface layer of plastic due to sliding friction 2-31799  
metals and alloys, density, review of F.C. Achard's work (1788) 2-13739  
NASICON, ceramic solid electrolyte (Polish) 2-30652  
nonuniformity detection in barrier from flux of scattered  $\gamma$ -radiation 2-27387  
periclast aggregates, bulk density meas. by water method 2-28842  
poly(p-phenylene benzobisthiazole) films, struct. study 2-21462  
polyethylene, macroporphs. and rheological props. (Russian) 2-25271  
polyethylene, stress whitening, struct. fluctuations theory 2-47143  
polymers, amorphous, hydrostatic extrusion, extrudate props. 2-47135  
polypropylene, isotactic, crystn. kinetics 2-12508  
polyurethane, rigid foams, microstruct. rel. to density 2-51869  
PVC, fatigue crack propag., mol. wt. and specimen history effects, glass transition temp. 2-47162  
spheres, limiting densities for dense random packing 2-51843  
steel, low-alloy sintered, density effect on fracture behaviour, model invest. 2-41735  
steel, low-alloy sintered, density effect on tensile strength, fracture toughness and fatigue crack propag. 2-41734  
tetrahydrofuran, thermal cond., heat capacity and phase diagram under press. 2-50945  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>, form. by electrophoresis (Polish) 2-27127  
Al<sub>2</sub>O<sub>3</sub>, refractories obtained from different sources, props. 2-27121  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>, spray-dried, homogenisation, phase form. and sintering 2-5846  
Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, mullite, fused, texture anisotropy and mech. props. 2-41622  
B-C phase struct. and props., X-ray and density studies 2-40339  
B<sub>2</sub>O<sub>3</sub>-BaTiO<sub>3</sub>-Na<sub>2</sub>O glasses, Raman spectra, anomalous refr. index and density 2-13470  
B<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O (LiCl) glass, diborate and metaborate, fast Li<sup>+</sup> cond. 2-16886



**density of solids continued**

- BaB<sub>2</sub>, single crystals, growth and props. 2-27075  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, chem. comp. determ. by polarography, electron probe, density and electron backscatt. meas. 2-27494  
 C, pyrolytic, Si-containing, struct. props. and graphitisation 2-41633  
 CaB<sub>2</sub>, single crystals, growth and props. 2-27075  
 (CeO<sub>2</sub>)<sub>0.82</sub>(GdO<sub>1.5</sub>)<sub>0.18</sub>, sintered, density and ionic cond. 2-5261  
 Co-base amorphous alloys, density, conc. depend. 2-30506  
 CoO-CeO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>, glass form. regions and phys. props. 2-8442  
 Cr, electrodeposited, low contraction, parameter optimization 2-12947  
 CrBr<sub>3</sub> bladed crystals, lattice parameters, pycnometric density, stability in air, melting pt., surface struct. 2-40331  
 CsI<sub>2</sub>O-HIO<sub>3</sub>, phase equilibria, X-ray and thermal anal. (*Chinese*) 2-31684  
 Cu, compact, sintering, effect of compacting pressure and temp. (*German*) 2-13676  
 Cu complex, Cu phthalocyanine evaporated film, refractive index and apparent density 2-9209  
 Cu-Ni alloys, specific vol., variation with comp. 2-35445  
 EuB<sub>6</sub>, prep. by hot pressing 2-5844  
 Fe-base amorphous alloys, density, conc. depend. 2-30506  
 Fe-Ni-Al, ageing in region of reverse martensitic transform., phys. props. change (*Russian*) 2-51942  
 Gd, density and thermal expansion in temp. range 293-1850K 2-40575  
 Ge, amorphous UHV deposited films, struct., elec. and optical props. 2-40732  
 H<sub>2</sub>, induced near IR spectra of p- and normal solid phases up to 12 kbar 2-30708  
<sup>3</sup>He-<sup>4</sup>He solid solution, HCP, thermal cond., density depend. 2-45676  
 K, Bi<sub>1-x</sub>F<sub>3-x</sub>, superionic cond., struct. and ionic cond., expt. study 2-16883  
 KF-BiF<sub>3</sub>, fluoride phase, ionic cond., density and lattice const., composition depend. 2-16882  
 LaB<sub>6</sub>-GdBr<sub>3</sub>, quasi-binary system, lattice struct. and mag. susceptibility meas. 2-8487  
 LiAlO<sub>2</sub>, single crystal, Czochralski growth, props. 2-2439  
 Li<sub>3</sub>Mg<sub>2</sub>TaO<sub>4</sub>, density and cell content 2-45130  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-P<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub> system pyroceramics, props. 2-9436  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-TiO<sub>2</sub> glasses, elastic props., comp. depend., rel. to density and refr. index 2-13768  
 MgO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glasses, density and upper temp. limit of crystn. 2-25754  
 MnO-CeO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>, glass form. regions and phys. props. 2-8442  
 Mn<sub>0.48</sub>Zn<sub>0.48</sub>Fe<sub>0.04</sub>O<sub>4</sub>, prod. by high-temp. treatment method, density and mag. props. (*Russian*) 2-31663  
 Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub> system glasses, comp. and struct. effect on mech. characts. 2-41756  
 Na<sub>2</sub>Zr<sub>7</sub>[Si<sub>6</sub>O<sub>18</sub>]Cl<sub>2</sub>H<sub>2</sub>O, cryst. struct., density and hardness 2-35470  
 Ni-base amorphous alloys, density, conc. depend. 2-30506  
 Ni-Cr, plasma deposited, props. anal. using dimensionless complex parameters 2-41552  
 NiO-CeO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>, glass form. regions and phys. props. 2-8442  
 Pb<sub>1-x</sub>(Zr<sub>0.5</sub>Ti<sub>0.5</sub>)O<sub>3-x</sub> ceramics, microstruct. and props., effect of processing and excess PbO 2-5845  
 RbCu<sub>2</sub>Cl<sub>3</sub>(I<sub>2-x</sub>Cl<sub>x</sub>) (0 ≤ x ≤ 0.40) solid electrolyte system, elec. cond. 2-40593  
 RbI<sub>2</sub>O-HIO<sub>3</sub>, phase equilibria, X-ray and thermal anal. (*Chinese*) 2-31684  
 Se-Te system, equil. phase diagram 2-22200  
 Si-H, plasma deposited amorphous film, density 2-35912  
 SiC, prod. by Acheson furnace, synthesis parameters and props. (*Polish*) 2-31668  
 Si<sub>3</sub>N<sub>4</sub>-C, CVD, amorphous, density and deposition rate 2-9286  
 SiO<sub>2</sub> films, amorphous, DC reactive sputtering prep., anomalous phys. props. 2-30764  
 SiO<sub>2</sub>-TiO<sub>2</sub>, glass, thermal expansion rel. to heat treatment 2-30639  
 SiO<sub>2</sub>-TiO<sub>2</sub> glasses, rel. to thermophys. props. 2-30406  
 SrB<sub>2</sub>, single crystals, growth and props. 2-27075  
 TaC film, reactive ion beams sputtering (*Japanese*) 2-27086  
 Ti<sub>2</sub>Te<sub>3</sub>S(Se), electrophys. props. over solid and liq. range, added S and Se effect 2-40883  
 UO<sub>2</sub>, thermophysical props., review 2-50880  
 YB<sub>4</sub> single crystals, growth and props. (*Japanese*) 2-51797

**density of states, electron** *see electronic density of states***deoxyribonucleic acids** *see DNA***deperming** *see demagnetisation***desalination**

- hybrid solar powered desalination plant 2-18032  
 integrated wind and solar powered desalination facility 2-18034  
 renewable energies as resources for desalination process (*French*) 2-14045  
 solar energy water desalination in the United States and Saudi Arabia 2-18029  
 solar power, design 2-18033  
 solar power, development in the USA 2-18031  
 system design for a commercial solar Brayton cycle central receiver water desalination plant 2-18030

**desalting** *see desalination***describing functions**

- dynamic models of tidal estuaries 2-37155

**descriptors** *see vocabulary***design aids**

- see also design engineering; nomograms*  
 fission reactor pressure vessels, pumps, valves, and piping, general design criteria given by ASME code, survey (*Croatian*) 2-15515  
 heat pumps, air source, electrically driven, for domestic space heating with minimum energy consumption, computer 2-52380  
 solar collector top loss coefficient calc. by radiation network method 2-52381

**design engineering**

- see also systems engineering*  
 800 MWe HTGR gas-turbine power plant design 2-29320  
 artistic designs, number theory appl. 2-33379  
 domestic solar photovoltaic power systems 2-32062  
 parabolic trough solar collector design, geography and weather influences, analysis 2-6174  
 photovoltaic medical refrigerator, design requirements critique 2-37192  
 radioactive waste systems design criteria requiring modification 2-29351

**design engineering continued**

- thin adiabatic desiccant beds, design and testing for solar air conditioning appls. 2-6173  
 NH<sub>3</sub> turbine design for OTEC plants 2-6159
- desk calculators** *see calculating apparatus*
- desk-top computers** *see minicomputers*
- desorption**  
 adsorbed molecules, desorption rate const. preexponential factor, lateral interactions effect 2-16947  
 AES, EELS, thermal desorption, and work function meas. 2-12918  
 alloys, stainless, H ingress and egress during electrolyte charging, surface wave study 2-45701  
 cyclopropane, chemisorption and reaction on Ir (110) surface 2-40674  
 1,4-dinitronaphthalene, electrical cond., effect of adsorpt. of vapours 2-26381  
 emulsion polymerisation kinetics, Smith-Ewart eqn. 2-47340  
 ergosterol, charge state depend. of desorption induced by fast heavy ions 2-14298  
 fast heavy-ion induced desorption, secondary ion yields 2-50994  
 gas desorption from liquids due to chemical reaction 2-9570  
 glycylglycine, charge state depend. of desorption induced by fast heavy ions 2-14298  
 α-H<sub>2</sub>, reaction kinetics of O<sub>2</sub> and N<sub>2</sub> absorption at high temp. (*German*) 2-45738  
 kinetic theory 2-16941  
 metal oxides and O adsorpt. layers, electron stimulated desorption 2-26231  
 metals, thermal He desorption spectrometry, defect chemistry 2-45719  
 molecular sieve material, γ-ray induced outgassing 2-40683  
 9-nitroanthracene, electrical cond., effect of adsorpt. of vapours 2-26381  
 nonequilibrium plasma chemical reactors, catalytic processes (*French*) 2-52249  
 phonon-mediated physisorption for gas-solid systems approaching monolayer coverage, quantum statistical theory 2-16953  
 plasma etching, mechanisms, review 2-27309  
 plasma-chemical etching, rate increase through radiative stimulation of descript. 2-31816  
 rate const., lateral interactions effect, lattice-gas model 2-16951  
 rhodamine 6G molecule adsorbed on W, ion photodetachment by laser pulses (*Russian*) 2-16957  
 secondary ion yield measurements from desorption by variable energy ions 2-22131  
 steel, H embrittlement, gaseous, rate controlling process 2-12675  
 steel, stainless, ion induced desorption of CO, CO<sub>2</sub>, H<sub>2</sub> and methane, influence of O<sub>2</sub> and water vapour 2-8710  
 steel, strain hardening rate, changes during adsorption and desorption of H during cathodic charging 2-22243  
 surface Debye temperature in desorption kinetics 2-30739  
 surface science, recent advances 2-21434  
 temperature programmed desorpt., computed, precursor state effects 2-45728  
 thermal desorption spectra, kinetic anal. 2-40667  
 thermal desorption of particles experiencing disoc. reaction in adsorbed layer, transient processes of surface ionisation 2-22489  
 transition metal surface, of H<sub>2</sub>, ang. distrib. and desorption intensity (*Japanese*) 2-1737  
 transition metals, hyperfine interaction studies of He trapping 2-31342  
 Ag (100), coadsorption of K, Cl and O LEED, AES, work function, and thermal desorption meas. 2-1745  
 Ag (110) surface, clean and O-covered, adsorption and reaction of water 2-16950  
 Al alloy, surface characterization and gas desorpt. meas. (*Japanese*) 2-21432  
 Al, cast, H partitioning in pure specimens, determ. by dynamic evolution meas. 2-16802  
 γ-Al<sub>2</sub>O<sub>3</sub>, adsorpt.-desorpt., of metal ions, static obs. 2-45716  
 γ-Al<sub>2</sub>O<sub>3</sub>, adsorpt.-desorpt., of metal ions, press. jump obs. 2-45717  
 α-Al<sub>2</sub>O<sub>3</sub>, sintered, <sup>4</sup>He diffusion, mass spectrometric study 2-40604  
 BaTiO<sub>3</sub>, surface electronic struct. and composition at 1500K in high vac. 2-50974  
 CO adsorption on Ni(111) surface, struct. exam. 2-40673  
 CaF<sub>2</sub>, ion bombarded F desorpt., electron beam induced, AES, EELS and XPS study 2-25931  
 Cd, excited levels population in electron beam, electron stimulated desorpt. effects 2-44104  
 Cd<sub>0.2</sub>Hg<sub>0.8</sub>Te, anodic surface layer, surface and in-depth anal. 2-51063  
 CdSe thin film, thermal desorption of chemisorpt. O<sub>2</sub> and CO, elec. resist. var. obs. 2-35890  
 CsI, charge state depend. of desorption induced by fast heavy ions 2-14298  
 ErT<sub>2</sub> films, He release rate, temp. depend. 2-5300  
 Fe polycrystalline surface, interactions with K, O<sub>2</sub> and N<sub>2</sub>, AES, work function and thermal desorption meas. 2-16939  
 Fe, strain hardening rate, changes during adsorption and desorption of H during cathodic charging 2-22243  
 Fe surface, N<sub>2</sub> + 3H<sub>2</sub> → 2NH<sub>3</sub> catalysis, AES and thermal desorpt. study 2-41922  
 GaAs (110), H<sub>2</sub>O dosed, photon stimulated ion desorption of H<sup>+</sup> ions 2-1740  
 GaAs surface, {100}, condensed Pb films, thermal desorption spectra 2-21437  
 Ge (111), adsorption of O<sub>2</sub>, AES, thermal desorption, work function, and EELS study 2-12917  
 Ge, energy spectrum of surface recombination centres, effect of sorption processes 2-1980  
 H<sub>2</sub>O, collective dissociative desorption from glass, prod. by flash tube 2-52233  
 H<sub>2</sub>O, photodesorption from glass surface, efficiency spectral distrib. 2-35895  
 He film, phonon induced desorption, time const. 2-45665  
 He films, phonon induced desorption at low temp., polarisation depend. 2-45666  
<sup>4</sup>He films, phonon induced desorpt. 2-40645  
 Ho, D release by low energy H ions, dose and energy dependence 2-43608  
 InSb, MBE, RHEED study of free Sb surface lifetime on InSb 2-40713  
 Ir (110), chemisorption and decomp. of NO, thermal desorption, XPS, UPS, AES, LEED, and contact pot. meas. 2-12913  
 Ir (110), chemisorption of N<sub>2</sub> and coadsorption of H<sub>2</sub>, thermal desorption, XPS, UPS, AES, and LEED meas. 2-12914



**desorption continued**

- Ir, chemisorpt. of O<sub>2</sub> on (110) face, surface struct., LEED and thermal desorpt. obs. 2-21445  
 LaB<sub>6</sub> (100) single cryst. surface, O<sub>2</sub> interaction and oxides thermal desorption 2-1729  
 LaNi<sub>5</sub>, absorption-desorption of H<sub>2</sub>, thermodynamics, differential heat flow calorimetry 2-8704  
 LaNi<sub>5</sub>, absorption-desorption of H<sub>2</sub>, thermodynamics for single-phase regions, differential heat flow calorimetry 2-8705  
 LaNi<sub>5</sub>-H, plateau press. and hysteresis, annealing effect 2-41928  
 LiOH, Li<sub>2</sub>O, neutron irradiated, kinetic studies of T release 2-43606  
 Mo, adsorption of F, Cl, and Br, binding energies 2-40695  
 Mo, surface imaging by pulsed laser stimulated field desorption of field adsorbed atoms 2-2421  
 Nb films, impurity distrib., AES and photon simulated ion desorpt. study 2-35526  
 Nb surface, (110), H<sub>2</sub> adsorpt.-desorpt. kinetics 2-35893  
 Nb<sub>2</sub>Sn 2-35526  
 Ni (III), adsorbed CO, electron-stimulating desorption 2-51000  
 Ni (100), chemisorbed CO, photon stimulated desorption due to multielectron excitations 2-12908  
 Ni (110), clean and O covered, adsorption and reaction of water 2-16952  
 Ni (111), adsorption of NO, electron stimulated desorption and LEED study 2-12912  
 Ni, surface (100), alkali metal covered, CO adsorpt. 2-40696  
 O thermodesorption from CdSe surface pot. change as a result 2-16956  
 Pd (331) stepped surface, struct. stability and chemisorption props. of O<sub>2</sub>, and NO 2-1746  
 Pd, adsorption/desorption of CO, surface struct. effects 2-16948  
 Pd surface, adsorbed, NO(NO-CO)(NO-O<sub>2</sub>), IR spectra, thermal desorption and XPS study 2-50997  
 Pt, adsorption of H<sub>2</sub> and CO, electron stimulated and thermal desorption spectra 2-26223  
 Pt, adsorption of O<sub>2</sub>, thermal desorption and electron stimulated desorption study 2-5305  
 Pt surface, (111) and (100), PBr(HCl) adsorpt., superlattice formation, thermal desorpt. mass spectra study 2-45726  
 Pt surface, of H<sub>2</sub>, studied by He beam diffr. Debye-Waller effect, surface vibr. 2-51001  
 Pt surface, with and without chemisorbed O<sub>2</sub>, growth mech. of Ag film 2-45756  
 Pt surface (111), interaction with H<sub>2</sub> studied by He beam diffr. 2-41941  
 Pt, surface imaging by pulsed laser stimulated field desorption of field adsorbed atoms 2-2421  
 Pt, thermal desorpt. of Ar and Xe, gas-surface interaction dynamics 2-40692  
 Pt(110), adsorption of SO<sub>2</sub>, AES, flash desorption and CO titration studies 2-16940  
 Re, polycrystalline, chemisorbed <sup>15</sup>N<sub>2</sub>, thermal desorpt. mass spectroscopy 2-1736  
 Rh surface, (100), adsorpt. of Ag, thermal desorption and AES study 2-26225  
 Rh, surface distrib. of field adsorbed H, imaging atom-probe study 2-8711  
 Rh(110), adsorption of SO<sub>2</sub>, AES, flash desorption and CO titration study 2-16940  
 Ru surface, (001), H<sub>2</sub>O and NH<sub>3</sub> electron stimulated desorpt. ion angular distrib. 2-45725  
 Ru(001), of NO, mol. fluoresc., rot. state distrib. 2-29654  
 Sb, MBE, RHEED study of free Sb surface lifetime on InSb 2-40713  
 Si (111), nitridation by N atoms, LEED, AES, desorption, and mass spectra meas. 2-17757  
 α-Si:H, RF sputtered, <sup>15</sup>N ion irradi., H effusion 2-5161  
 α-Si:H glow-discharge films, evolution of H<sub>2</sub> 2-40682  
 SiO<sub>2</sub> gel and aerogel, of aliphatic amines and aldehydes, contact angle, oriented adsorpt. and desorpt. 2-16943  
 SrTiO<sub>3</sub>, surface electronic struct. and composition at 1500K in high vac. 2-50974  
 T, from Al, chem. forms. 2-43605  
 TbCo<sub>3</sub> hydrides, H desorption isotherms, isopolaths in press. plateaus 2-26060  
 Ti (001) surface, adsorbed O<sub>2</sub>, photo stimulated desorption, Auger spectra 2-40689  
 Ti-Co-Fe, absorption-desorption characts. of H<sub>2</sub> 2-8703  
 Ti<sub>2</sub>Ni<sub>3</sub>, amorphous, H absorption and desorption characts., surface oxide and metalloid element effects 2-30752  
 TiO<sub>2</sub>, surface photogeneration of singlet O<sub>2</sub> 2-41910  
 W, desorption of C, Ar ion bombardment expt. Auger spectra 2-26207  
 W ions, field-evaporated, multiple post-ionisation 2-2420  
 W single cryst., He desorption 2-1739  
 W-C, decarbonisation reactions, electron stimulated and flash desorption study 2-47374  
 YCo<sub>5</sub> hydrides, H desorption isotherms, isopolaths in press. plateaus 2-26060  
 ZrV<sub>1.2</sub>Cr<sub>0.8</sub>Hy, temp.-programmed desorption 2-5301  
 ZrV<sub>1.6</sub>Fe<sub>0.4</sub>Hy, temp.-programmed desorption 2-5301  
 ZrV<sub>2</sub>H<sub>x</sub>, thermal desorption spectra from bulk 2-16945

**detection (demodulation) see demodulation****detectors**

- see also electric sensing devices; hydrophones; infrared detectors; microwave detectors; nonelectric sensing devices; particle detectors; photodetectors; ultraviolet detectors*  
 combustible gas detection instruments, performance standards effects 2-31993  
 ion microprobe mass anal., ultrahigh vacuum, appl. to H detection 2-15263  
 optical fibre, light detection without splice 2-39761  
 resonant-mass gravitational wave detectors, random noise 2-48603  
 O sensor, using non-metallic electrodes (*Chinese*) 2-37112  
 Pt filament in hydrocarbon flow, thermionic emission at low press. 2-9238

**determinants**

- see also matrix algebra*  
 Wiener integrals, associated Fredholm determinants 2-23405

**detonation**

- see also explosions; shock waves*  
 converging detonations, temp. meas., emission spectral matching method, appl. to plasma 2-22446  
 converging shocks with heat addition 2-39952

**detonation continued**

- equations of state of gases, determ. from detonation vel. meas. 2-1279  
 heterogeneous system detonation, interphase heat and mass transfer (*Russian*) 2-1226  
 multifrontal detonation wave struct. formation, numerical simulation 2-44765  
 plane wave, diffr. round small angle, approx. analytical soln. (*Chinese*) 2-4859  
 super-compressed detonation wave propagation, gas dynamic eqn. soln. 2-16340  
 thermal detonations, propag. through dispersions of hot liq. fuel in cooler liq. coolants, two-phase flow model 2-44748  
 two-phase detonations static and dynamic impulses 2-44749  
 F<sub>2</sub>-D<sub>2</sub>-Ar(He)(CO<sub>2</sub>) mixtures, detonation investig. 2-22451  
 Pb(N<sub>3</sub>)<sub>2</sub>, low energy laser initiation of single crystals. 2-13956  
 UO<sub>2</sub>-Na, quasi-steady propag. of thermal detonations, two-phase flow model 2-44748

**detonation spraying see powder spraying****deuterium**

- adsorbed on Cu (100), rot. transitions, EELS study 2-46843  
 adsorbed on W (110) plane, field emission current fluctuation method obs., surface diffusion and phase transition 2-1769  
 atom, Rydberg const. determ. by crossed laser beam spectroscopy 2-11416  
 atomic, spin polarised, ground state energy, correlated basis function calc. 2-45663  
 α Carinae (Canopus), upper limit for D abundance 2-33012  
 D<sup>-</sup> ion source for neutral beam injectors 2-25639  
 D-T pellet heated by laser, thermal cond. study 2-4118  
 dense gas, Rayleigh Brillouin spectra meas. 2-43926  
 depolarisation of negative muons in H (*Russian*) 2-49611  
 depth profiling with nuclear microanalysis, deconvolution technique 2-41952  
 diffusion in PTFE 2-30656  
 diffusion in transition metals, activation energy 2-12810  
 diffusivity in amorphous and crystallised Pd-Si alloys 2-12856  
 dilute solutions in Mn thermodynamics, 555 to 700K 2-1637  
 equilibrium isotopes, triple point temp. 2-35650  
 gas, viscosity meas. by transient flow method 2-40020  
 interstellar reaction scheme, extension to D chemistry and mol. isomers 2-53349  
 ions, backscattering from solid targets, empirical formulas 2-17587  
 isotope separation by IR laser multiple-photon dissoci. 2-15914  
 liquid, quadrupole interactions, differential vapour press. meas. 2-44136  
 metal:H(D), saturation and isotope mixing during low temp. implantations 2-50671  
 meteorites, D/H ratios meas. in unequilibrated ordinary chondrites 2-38149  
 molecule, B' <sup>1</sup>Σ<sub>u</sub><sup>+</sup> states, adiabatic correction and pot. energy curve 2-7535  
 molecule, electron impact dissociative ionisation in threshold region by monoenergetic beam 2-7655  
 molecule, supersonic free jet, rot. relax. CARS spectra 2-43919  
 NMR spin echoes and mol. motion in solids 2-5602  
 oxidation to D<sub>2</sub>O, appl. of mol. beam surface scatt. apparatus, vel. and ang. distrib. meas. 2-9235  
 pellets, for nuclear fusion plants, cryostat for prod. and accel. (*German*) 2-11272  
 permeation through Ni membrane type detector, deuterium behavior in Na loop 2-484  
 plasma, <sup>3</sup>He recovery, optimal plasma conditions 2-39211  
 plasma, Alfvén wave cyclotron resonance heating, resonance absorpt. 2-50405  
 plasma, laser heating, neutron yield, electron temp. and reflectivity (*Chinese*) 2-25597  
 primordial abundances, hot big-bang nucleosynthesis calcs. 2-42762  
 separation technology, present status (*Japanese*) 2-11205  
 solid, loaded Rayleigh waves on lightly loaded interfaces, appl. to Kapitza conductance 2-12900  
 solid, low temp. eqns. of state to 0.37 Mbar 2-40510  
 solid, quadrupole interactions, differential vapour press. meas. 2-44136  
 solid, Stark shift radiation-induced IR spectra 2-36612  
 solubility in metals, interstitial impurity atoms equilibrium positions calc. 2-1474  
 thermodynamic props., 500 to 909K 2-40554  
 trapping in B CVD coatings for tokamak fusion test reactor 2-12948  
 BaTiO<sub>3</sub>:D, impurity IR-absorpt. study 2-46639  
 D<sup>+</sup> beam, high current, production by charge exchange in Na 2-43656  
 D<sup>+</sup> high energy beam, non-H<sub>2</sub> neutralisation, appl. to plasma heating 2-40128  
 D-<sup>3</sup>He reactor, alternate fusion fuel cycle research 2-24411  
 D-D reactor, alternate fusion fuel cycle research 2-24411  
 D-T gas, dielec. consts. elec. cond., 20 to 26K, density depend. 2-35265  
 D-T plasma, adiabatic compression as generation method with thermonuclear parameters 2-25621  
 D-T plasmas, isobarically compressed inertially compressed, ignition criterion 2-8273  
 D-T reactor, alternate fusion fuel cycle research 2-24411  
 D+Br<sub>2</sub>(CF<sub>3</sub>I)(C<sub>2</sub>F<sub>5</sub>I)(C<sub>3</sub>F<sub>7</sub>I), reactive scatt. of supersonic at. beam 2-37066  
 D+ClF, reaction products, influence of isotope effect on energy distrib. 2-17889  
 D+F<sub>2</sub>, distorted wave method, vibr.-rot. product distrib. 2-47314  
 D+HBr, reactive cross section, classical trajectory study 2-41877  
 D+HBr, reactive differential cross sections obtained from high averaged trajectory data 2-52178  
 D+HCl(v=0,j)→DCI(v≤1,j')+H light-heavy-light reaction, quantum dynamical approx. 2-37065  
 D+H<sub>2</sub>(HCl), exchange reactions barrier heights, generalized reson. VB calc. 2-2708  
 D+O<sub>2</sub>→OD+O, kinetic isotope effects, thermal rate coeffs., quasiclassical trajectory calcs. 2-27424  
 D<sup>+</sup>+CO<sub>2</sub>, vibr. excitation, mode selectivity and time effects 2-44051  
 D<sub>2</sub>, dissolved in Ar, rototranslational absorpt. spectra, density effects 2-29564  
 D<sub>2</sub>, molecules fusion, probability estimate through bose degeneracy 2-10705  
 D<sub>2</sub>-F<sub>2</sub>-CO<sub>2</sub>, chemical amplifier of nanosec. pulses, numerical optimisation 2-34740  
 D<sub>2</sub>-HCl-Ar(He), thermally pumped, gain and energy parameters 2-20296



## deuterium continued

- D<sub>2</sub>-He, moderately dense mixtures, light scatt. in hydrodynamic regime 2-35268  
 D<sub>2</sub>-He, Rayleigh Brillouin spectra meas. 2-43926  
 D<sub>2</sub>-O<sub>2</sub> plasma, fusion by explosive-driven implosions 2-49181  
 D<sub>2</sub>-SF<sub>6</sub>, interdiffusion coeffs., temp. effects 2-20805  
 D<sub>2</sub>+Ar(Kr)(Xe), metastable atoms, collisional de-excitation cross sections expt. 2-24822  
 D<sub>2</sub>+C<sup>+</sup>, chemiluminescence spectra, product state distrib. 2-47327  
 D<sub>2</sub>+CO, rot. excitation, differential cross sections and time of flight distrib. meas., energy loss spectra 2-44090  
 D<sub>2</sub>+Cl<sup>+</sup>(F<sup>-</sup>)(H<sup>-</sup>), electron detachment, direct coupling, charge exchange, shape resonances 2-44070  
 D<sub>2</sub>+H, interaction pot. determ. from absolute integral cross section meas. 2-15871  
 D<sub>2</sub>+He<sup>+</sup>, collisional dissociation, metastable atom prod. 2-37068  
 D<sub>2</sub>+O, rate consts. meas., O conc., resonant absorpt. meas. 2-47316  
 D<sub>2</sub>+H<sub>2</sub>O, proton transfer, unimolecular decay and isotope scrambling, crossed mol. beam studies 2-13936  
 D<sub>2</sub>(J<sub>d</sub>), vibr., rot. consts., ab initio pot. energy curve 2-49311  
 DT mixture compression by elec. exploded cylindrical shell, thermonuclear fusion probability calc. 2-29427  
 DT sphere, isentropic compression, method of characts. 2-15623  
 F<sub>2</sub>-D<sub>2</sub>-Ar(He)(CO<sub>2</sub>) mixtures, detonation investig. 2-22451  
 H/D isotopic comp. in high-freq. discharge, spectrosc. determ. 2-50470  
 H-D isotope exchange in ion-neutral reactions, laboratory studies and interstellar implications 2-53350  
 H+D, excitation transfer rate 2-44825  
<sup>2</sup>H NMR, isotopic labelling in natural abundance, appl. to vinyl compounds (French) 2-21893  
 Ho, D release by low energy H ions, dose and energy dependence 2-43608  
 Li<sub>3</sub>N:D, crystal struct. by single-cryst. neutron diffr. 2-21116  
 Lu-D, solid solution, anelastic effects 2-45365  
 Nb:D, localised vibr. spectra of light interstitials 2-26010  
 Nb:N:D, influence of N impurities on diffusion coeff. 2-45626  
 Pb:D, ion implanted, supercond. transition temp. 2-31000  
 Pb:D, localised modes, tunnelling study 2-35625  
 Pd-D alloy, location of low-temp. resistivity anomaly 2-21639  
 SiO<sub>2</sub>:D film, D conc. meas. by SIMS, charact. of wet thermal oxidation of Si 2-17746  
 Sn:D, ion implanted, supercond. transition temp. 2-31000  
 Ta:D, localised vibr. spectra of light interstitials 2-26010  
 Ta:D, localised vibr., rel. to H(D) pot. 2-21258  
 Ta:N:D, influence of N impurities on diffusion coeff. 2-45626  
 V:D, localised vibr. spectra of light interstitials 2-26010

## deuterium compounds

see also heavy water

- D<sub>2</sub>O laser Thomson scattering and sub-MM wave heterodyne receiver meas. for Alcatraz C Tokamak 2-40178  
 dispersions of lipid/D<sub>2</sub>O, phase separation detection by <sup>2</sup>D NMR meas. (German) 2-14007  
 interstellar molecules, D chemistry rel. to DX/HX ratios 2-53349  
 D<sub>2</sub> ice, total neutron cross sections at 77 and 15K for E<sub>n</sub>=0.3 and 100 MeV 2-43520  
 DBr, electronic spectra and struct. in UV region above X<sup>2+</sup> 2-24722  
 DBr, liq. struct. determ. by slow neutron scatt. 2-35374  
 DBr+F, nonadiabatic reactions, dynamics, isotope effect, pot. energy surface 2-9538  
 DBr+H, reactive cross section, classical trajectory study 2-41877  
 DCN, pot. and dipole moment surfaces, force consts., HF SCF CI calcs. 2-29512  
 DCO<sup>+</sup>, rot. consts., MW obs. 2-4264  
 D<sub>2</sub>CO, excited by N<sub>2</sub> laser, time-resolved fluoresc., collision and mag. field effects 2-49478  
 DCl, heat capacity and density of solutions in D<sub>2</sub>O, at 283.15, 298.15 and 313.15K 2-5240  
 DCl-HCl mixed crystals, far IR and Raman spectra investigated in lattice mode region 2-36616  
 DF pulsed chemical laser with diff.-limited beam divergence 2-44268  
 DF, R-branch line laser operation 2-49743  
 DF, trace gas minimum detectable quantities using high resolution spectroscopy 2-27758  
 DF/HF pulsed chemical laser, UV prescribed, H<sub>2</sub>/D<sub>2</sub> donor and driving circuit parameter effects 2-44335  
 DF-CO<sub>2</sub> optically pumped transfer laser 2-928  
 DF-HF chemical laser, pulsed, magnetically confined electron beam initiation 2-49770  
 α-DiO<sub>3</sub>, manifestation of H bond in NQR spectra (Russian) 2-41228  
 DN<sub>2</sub><sup>+</sup>, millimeter and submillimeter rot. transitions 2-29567  
 D<sub>2</sub>O, absorption coefficient at laser wavelength, temp. depend. 2-7553  
 D<sub>2</sub>O, H<sub>2</sub>O and their isotopic mixtures, Raman spectra, intermol. coupling of bending vibr. 2-34423  
 D<sub>2</sub>O high power pulsed ring resonators in far IR 2-39674  
 D<sub>2</sub>O mode-locked optically pumped lasers, lathargic gain and short pulse generation 2-39631  
 D<sub>2</sub>O vapour, laser emission 2-39624  
 D<sub>2</sub>O+H<sup>+</sup>, proton transfer, unimolecular decay and isotope scrambling, crossed mol. beam studies 2-13936  
 DOF, vibr., H bonds, Raman study 2-51570  
 DOF-HOF, vibr., H bonds, Raman study 2-51570  
 D<sub>2</sub>S, liq., proton and deuteron spin-lattice relax. times, press. and temp. depend. 2-26776  
 DSO, microwave spectra, hyperfine coupling, rot., centrifugal distortion and spin-rot. const. 2-15777  
 D<sub>2</sub>Se+O, chemiluminescence, b<sub>0</sub><sup>+</sup> to X<sub>2</sub><sup>1</sup>g emissions of Se<sub>2</sub> and Te<sub>2</sub> 2-52211  
 DSiCl<sub>3</sub>, liq. and solns., mol. motion, relax. times, Raman bandwidths study 2-31461  
 DT, solid, Stark shift radiation-induced IR spectra 2-36612  
 DT sphere, initially uniform and finally nonuniform, isentropic compression, numerical anal. 2-19768  
 DTaWO<sub>6</sub>, D site location from neutron powder diffr. data 2-21118  
 D<sub>2</sub>Te+O, chemiluminescence, b<sub>0</sub><sup>+</sup> to X<sub>2</sub><sup>1</sup>g emissions of Se<sub>2</sub> and Te<sub>2</sub> 2-52211  
 DUO<sub>2</sub>AsO<sub>4</sub>.4D<sub>2</sub>O, diffusion and cond. mech. from neutron diffr. evidence 2-21377  
 HCl-DCI, pretransitional clusters and heterophase fluctuations at ferroelec. transition, <sup>35</sup>Cl NQR study 2-26836  
 H<sub>2</sub>S-D<sub>2</sub>S system, photoacoustic detection of H-D exchange 2-47302

## deuteron effects

- Cu, interstitial atom trapping and D localisation at <sup>57</sup>Co impurities 2-30484  
 n-GaAs, carrier removal 2-1533

deuteron interactions see deuteron-nucleus reactions; hadron-deuteron interactions; lepton-deuteron interactions; meson-deuteron interactions; photon-deuteron interactions; proton-deuteron interactions

## deuteron-nucleus reactions

- for inelastic deuteron-nucleus scattering, see 'deuteron-nucleus scattering'  
 see also nuclear fusion  
 atomic nucleus structure and nuclear spectroscopy, conf., Leningrad, USSR (March, 1980) 2-33209  
 collective states, differential cross-section for <sup>2</sup>H splitting (Russian) 2-11081  
 inclusive proton spectra study in terms of spectator break-up and projectile Coulomb dissociation 2-15411  
 nucleons ang. correl. functional depend. 2-19549  
 ultrarelativistic deuteron elastic and inelastic scatt. cross section calc. 2-425  
 (d,X), A=12-208, medium energy total cross sections, adiabatic effects 2-39038  
<sup>27</sup>Al(d,<sup>4</sup>He)<sup>23</sup>Na, high resolution study, DWBA anal. 2-7109  
<sup>191</sup>Au(d,<sup>3</sup>He)<sup>188</sup>Pu, 108 MeV, supersymmetry scheme selection rules 2-34050  
 Au(d,X), product asymmetry using normalisation w.r.t. Rutherford scatt. 2-34005  
<sup>10</sup>B(d,α)<sup>8</sup>Be, three particle channels study 2-43466  
<sup>10</sup>B(d,p), 29 to 170 keV, back-angle differential cross sections 2-34051  
<sup>10</sup>B(d,π<sup>-</sup>), 600 MeV, coherent pion prod. spectra and differential cross section 2-43493  
<sup>9</sup>Be(d,α), 1.45-2.55 MeV, vector anal. capacity, energy depend. 2-34004  
<sup>9</sup>Be(d,nx), 0-50 MeV, neutron characts., therapy source appl. 2-19810  
<sup>9</sup>Be(d,p), 29 to 170 keV, back-angle differential cross sections 2-34051  
<sup>9</sup>Be(d,p)<sup>10</sup>Be, vector analysing capacity, energy depend. 2-43491  
<sup>9</sup>Be(d,π<sup>-</sup>), 600 MeV, coherent pion prod. spectra and differential cross section 2-43493  
<sup>9</sup>Be(d,2α), 3, 4 MeV, <sup>7</sup>Li\* (4.63 MeV) excited state asymmetrical decay 2-24242  
<sup>9</sup>Be(d,pol,α)<sup>7</sup>Li, differential cross section and asymmetry meas. 2-19548  
<sup>8</sup>Br(d,xn)<sup>7</sup>Kr→<sup>73</sup>Br, A=79.81, excitation function, medical appl. 2-52627  
<sup>12</sup>C(d,<sup>6</sup>Li)<sup>8</sup>Be, reaction, angular distrib. ghost anomaly (Russian) 2-24246  
<sup>12</sup>C(d,α)<sup>10</sup>B, Ex=1.74 MeV, isospin violating two-step reactions, S-matrix anal. 2-15412  
<sup>12</sup>C(d,n<sub>0</sub>)<sup>13</sup>N, 7-10 MeV, differential 0° cross section measured by beam stopping 2-24243  
<sup>12</sup>C(d,n), pol.d.n, 5-15 MeV, polarisation transfer, to 1. to DWBA 2-34052  
<sup>13</sup>C(d,<sup>7</sup>Li)<sup>8</sup>Be, reaction, angular distrib. ghost anomaly (Russian) 2-24246  
<sup>14</sup>Ce(d,nγ), 13.5 MeV 2-19419  
<sup>A</sup>Cl(d,t), A=35,37,23 MeV, Cl positive parity states, strengths, DWBA anal. 2-3843  
<sup>A</sup>Cr(d,X), A=52-54, 13.6 MeV, total reaction cross sections 2-34048  
<sup>161</sup>Dy (d,pp), 10 MeV, <sup>164</sup>Dy bands and interband transition multipolarities, J<sup>π</sup>, IC coeffs. 2-373  
<sup>19</sup>F(d,α)<sup>17</sup>O, cross section study 2-47393  
<sup>2</sup>H(d,n)<sup>3</sup>He, 10-100 keV, data discrepancies 2-43518  
<sup>2</sup>H(d,n)<sup>3</sup>He, 3-6 MeV, forward absolute cross section meas. 2-43492  
<sup>2</sup>H(d,n)<sup>3</sup>He, 8 MeV, small-angle neutron polarisation study 2-39037  
<sup>2</sup>H(d,n)<sup>3</sup>He, baryonic exchange mechanism at intermediate energy, microscopic anal. 2-19553  
<sup>2</sup>H(d,n)<sup>3</sup>He, fusion rates in HD molecule 2-3985  
<sup>2</sup>H(d,p), 1-13 MeV, <sup>4</sup>He levels, resonances, anal. powers, differential cross section 2-15364  
<sup>2</sup>H(d,p), D-state asymptotic normalisation of <sup>2</sup>H, <sup>3</sup>H wavefunctions from tensor pol. continuation 2-49064  
<sup>2</sup>H(d,p), R-matrix anal. for fusion system 2-3987  
<sup>2</sup>H(d,p)<sup>3</sup>H, 10-100 keV, data discrepancies 2-43518  
<sup>2</sup>H(d,p)<sup>3</sup>H, fusion rates in HD molecule 2-3985  
<sup>2</sup>H(d,pp)nn, 80 MeV, cross section calc. assuming n-p final-state interactions 2-34055  
<sup>2</sup>H(d,n)<sup>3</sup>He, 10-100 keV, data discrepancies 2-43518  
<sup>2</sup>H(<sup>3</sup>H,n)<sup>4</sup>He, nuclear synthesis reaction in muonic molecule dμ (Russian) 2-29274  
<sup>2</sup>H(d,n), A=2,3, R-matrix anal. for fusion system 2-3987  
<sup>3</sup>He(d,p)<sup>4</sup>He, 15-40 MeV, cross section and vector analysing power iT<sub>11</sub> meas. 2-34053  
<sup>6</sup>Li(d,α), pol.d, 7.92 MeV, T<sub>21</sub> anal. power standard for tensor polarised deuterons 2-390  
<sup>6</sup>Li(d,α)<sup>4</sup>He, direct cross sections (Russian) 2-24247  
<sup>6</sup>Li(d,n)<sup>3</sup>He, total cross section meas. 2-34047  
<sup>6</sup>Li(d,p), 29 to 170 keV, back-angle differential cross sections 2-34051  
<sup>7</sup>Li(d,2α), 13.6 MeV, <sup>3</sup>He and <sup>4</sup>He short lived states decay, ang. correlations 2-33946  
<sup>7</sup>Li(d,2n)<sup>3</sup>He, total cross section meas. 2-34047  
<sup>7</sup>Li(d,n), 35 MeV, neutron spectra on thick Li for FMIT 2-4125  
<sup>7</sup>Li(d,π<sup>-</sup>)<sup>8</sup>B, 300 and 600 MeV, coherent pion prod. spectra and differential cross section 2-43493  
<sup>25</sup>Mg(d,<sup>4</sup>Li)<sup>21</sup>Ne, high resolution study, DWBA anal. 2-7109  
<sup>14</sup>N(d,n), pol.d.n, 5-15 MeV, polarisation transfer, to 1. to DWBA 2-34052  
<sup>23</sup>Na(d,<sup>3</sup>He), 13.6 MeV, differential cross sections, quasicluster direct transfer (Russian) 2-426  
<sup>93</sup>Nb(d,d'X), 56 MeV, continuum energy spectra, vector and tensor analysing powers obs. 2-34056  
<sup>156</sup>Nd(d,t)<sup>145</sup>Nd, 16 MeV pol. deuterons, levels and spins 2-19414  
<sup>A</sup>Ni(d,α), A=58,60,80 MeV, Co high-spin states 2-33891  
<sup>6</sup>Od(d,α), pol.d, 8.06 MeV, T<sub>21</sub> anal. power standard for tensor polarised deuterons 2-390  
<sup>6</sup>Od(n), pol.d.n, 5-15 MeV, polarisation transfer, to 1. to DWBA 2-34052  
<sup>45</sup>Sc(d,X), 13.6 MeV, total reaction cross sections 2-34048  
<sup>74</sup>Se(d,n), 12,13.5 MeV, <sup>73</sup>Br deformed high spin levels, J<sup>π</sup>, transitions and T<sub>1/2</sub> 2-33884  
<sup>28</sup>Si(d,n), pol.d.n, 5-15 MeV, polarisation transfer, to 1. to DWBA 2-34052



# deuteron-nucleus reactions continued

Sm(d,  $^3\text{He}$ ), 50 MeV,  $^{147,149,151,153}\text{Pm}$  proton hole states,  $J^\pi$ , spectroscopic strengths and transitions 2-24078  
Ta(d,X), 4.2 GeV/c per nucleon,  $\pi^-$  meson momentum and ang. characts. (*Russian*) 2-34057  
 $^{48}\text{Ti}(d,X)$ , 13.6 MeV, total reaction cross sections 2-34048  
 $^{51}\text{V}(d,X)$ , 13.6 MeV, total reaction cross sections 2-34048  
 $^{186}\text{W}(d,2n\gamma)$ , 13.6 MeV,  $^{186}\text{Re}$  isomer states, g-factors 2-33900

# deuteron-nucleus scattering

elastic scatt. in large ang. momentum limit 2-24244  
inelastic, anal. abilities of D semi-spin-flip 2-15413  
odd deformed nuclei, inelastic scatt. near Coulomb barrier 2-19551  
ultrarelativistic deuteron elastic and inelastic scatt. cross section calc. 2-425  
 $^{12}\text{C}(d_{\text{pol}},d)$ , differential cross section and asymmetry meas. 2-19548  
 $^3\text{H}(d,d)$ , 4.6 GeV/c, elastic scatt. differential cross section at small angles (*Russian*) 2-24248  
 $^3\text{He}(d,d)$  He, 15-40 MeV, cross section and vector analysing power  $iT_{11}$  meas. 2-34053  
 $^4\text{He}(d,d)$ , elastic scatt., vector polarisation meas. 2-24241  
 $^4\text{He}(d,d)$ , elastic scatt., rigid projectile approx. 2-19550  
 $^{208}\text{Pb}(d,d)$ , giant reson., Coulomb excitation, coupled channel calc. 2-33990

# deuteron photodisintegration

low energy theorem 2-3895  
photoabsorption sum rule, two-body effects 2-49066  
 $\gamma d \rightarrow np$ , 650-1000 MeV proton polarisation (*Russian*) 2-11057  
 $\gamma d \rightarrow pn$ , 0.18 to 0.6 GeV, differential cross section meas., dibaryon effects 2-43364  
 $^2\text{H}(\gamma,pn)$ , deuteron D state and N-N interaction, forward photodisintegration implications 2-34010  
 $^2\text{H}(\gamma,n)$ , 10-70 MeV, pol.  $\gamma$ , neutron asymmetry meas. 2-395  
 $^2\text{H}(\gamma,n)$  H, exchange current role in disintegration 2-3898  
 $^2\text{H}(\gamma,pn)$ , E1 density transitions, dynamical dipole polarisability 2-43476

# deuteron polarisation

double scattering apparatus for large angle polarisation meas. 2-24532  
inelastic scattering, anal. abilities of D semi-spin-flip 2-15413  
propanediol deuterated, NMR spectrum for polarisation meas. 2-19916

**deuteron scattering** *see* **deuteron-nucleus scattering**; **hadron-deuteron scattering**; **lepton-deuteron scattering**; **meson-deuteron scattering**; **photon-deuteron scattering**; **proton-deuteron scattering**

# deuterons

*see also* **cosmic ray deuterons**  
diquark deuterons with  $J^P=0^-$  2-29084  
energy loss in C foils at 50-150 keV per nucleon 2-615  
meson exchange currents,  $\pi NN$  form factors (*Korean*) 2-11097  
structure function from eN inelastic scatt., QCD test 2-24002  
Cu, energy-loss straggling of deuterons 2-43736  
 $^2\text{H}$  wave function, asymptotic S-state amplitude 2-24131

**developers (photographic)** *see* **photographic materials**

**development, photographic** *see* **photographic process**

**development management** *see* **research and development management**

**diagnosis, patient** *see* **patient diagnosis**

**diagnostics, particle beam** *see* **particle beam diagnostics**

**diagnostics, plasma** *see* **plasma diagnostics**

# diagrams

*see also* **circuit diagrams**; **Feynman diagrams**; **flowcharting**; **nomograms**; **phase diagrams**  
deformation mechanism diagrams, coords. and modifications 2-41676

**dialogue programming** *see* **interactive programming**

**dialogue systems** *see* **interactive systems**

# diamagnetic properties of substances

*see also* **de Haas-van Alphen effect**; **diamagnetism**  
alkaline earth hexamines, anomalous mag. susceptibilities 2-36305  
CCl<sub>3</sub> Bi, diamagnetic susceptibility impurities effect 2-26582  
cyano-alkyl-biphenyl liquid crystals, polarisabilities and susceptibilities 2-50515  
disc-like molecules, mag. susceptibility of mesophases 2-26581  
methylammonium cadmium tetrachloride, layer cpd., heat capacity meas. 2-5242  
organosilicon compounds, diamagnetic susceptibilities, semiempirical calcs. 2-5518  
transition metal complexes, mag. props., vibronic levels, photoelectron spectra satellites 2-9241  
triphenylene alkoxybenzoates, disc-like, fluid mesophase, X-ray diffr. study and mag. field effects 2-25741  
AgAs(Bi)(Sb)S<sub>2</sub> crystals and glasses, mag. susceptibility and chem. bond 2-5517  
CaSO<sub>4</sub>:Sm, phosphor, photoinduced change in mag. susceptibility 2-46235  
CdS, high press. quenched, semicond., pairing of holes rel. to complex mag. props. 2-31136  
Cr<sub>1-x</sub>Ir<sub>x</sub>O<sub>2</sub> solid soln., mag. props. (*French*) 2-26599  
Cu-Zr(Mg)(P)(S) splat cooled alloy, mag. susceptibility (*Russian*) 2-5522  
CuCl, diamagnetic susceptibility anomaly, theoretical model 2-51393  
Ge, deformed, diamagnetic susceptibility of indirect excitons (*Russian*) 2-5525  
Ge, uniaxially deformed, excitons and excitonic molecules in mag. field (*Russian*) 2-5354  
Li<sub>2</sub>ZrSe<sub>2</sub>, semiconductor-metal transition upon intercalation 2-21504  
Nb, barrier against flux exit 2-21741  
NbTa, barrier against flux exit 2-21741  
PbIn, barrier against flux exit 2-21741  
Pd<sub>1-x</sub>Ag<sub>x</sub> system, mag. susceptibility temp. and comp. effects 2-46239  
S<sub>2</sub>, magneto-electrets, mag. susceptibility induced paramagnetism, temp. effect 2-26577  
(SN<sub>2</sub>), props. and appls., review 2-8794  
ScS(Se)(Te), magnetic susceptibility meas. by Faraday method 2-46237  
Si:P, magnetisation meas. down to 1.5K 2-26578  
V, barrier against flux exit 2-21741

**diamagnetic resonance** *see* **cyclotron resonance**

# diamagnetism

*see also* **cyclotron resonance**; **de Haas-van Alphen effect**; **diamagnetic properties of substances**  
free-electron gas, inhomogeneous diamagnetism at impurity 2-46233  
ideal layered crystals, low-temp. diamagnetism (*Russian*) 2-13271

# diamagnetism continued

magnetic susceptibility near phase transition point to current state (*Russian*) 2-46234  
metals, transverse current correl. and neutron scatt., diamag. screening 2-25692  
molecular second-order properties calcs. (*French*) 2-4413  
nematic liquid crystals, diamagnetism and orientational order 2-50523  
NMR lineshape in magnetically diluted cryst. 2-21898  
permanent magnet, contactless diamagnetic suspension calcs. 2-49618  
superconducting percolating clusters, diamag. susceptibility 2-36210  
superconductor, quasi one-dimens., fluctuation effects 2-36235  
superconductors with dielec. gap on Fermi surface, EM props. 2-31055  
CdS, superdiamagnetic nature 2-21766  
CuCl, superdiamagnetic nature 2-21766  
ZnSe, anomalous mag. props. 2-21763

# diamond measurement

calibrating diamond draw-plate, by laser diffractometric method 2-28837  
fibre-optic single-mode waveguides, parameter determ., simple method 2-49931  
Fraunhofer diffraction pattern anal. of opaque object using self-scanned photodiode array (*French*) 2-24941  
glass particle-detector track diameter and area meas. 2-49223  
laser beam spot radius meas. by scanning knifeedge (*Chinese*) 2-25055  
optical fibre diameter variation display technique 2-39755  
optical fibre preform core dia. meas. by fluoresc. 2-34904  
optical fibres, nondestructive meas. of core radius, numerical aperture and cutoff wavelength 2-25119  
otical fibre diameter; regulation and control by automatic system, BIS-2 meter 2-19079  
quartz fused spheres, interferometric meas. of diameters 2-38632

# diamond

channelled electrons  $\gamma$ -radiation expt. investigation (*Russian*) 2-40455  
colloids, electro-optical props., rel. to theory of spheroidal particle polarisability 2-26864  
composite metallic-binder tools, EM inspection method 2-27378  
compounds isoelectronic with diamond, creation of hard and superhard materials 2-21088  
condensed phase-gas phase transform. near graphite-liquid-vapour triple point 2-45546  
conference, Oxford, England (April 1981) 2-23364  
correlated ground state 2-45870  
covalent crystals, lattice energy, electron-gas functional theory 2-1446  
crystal growth-sector boundary luminesc. 2-41434  
crystallisation, elec. charge influence on metastable phase nucleation 2-50565  
crystallisation, influence of pulse plasma chem. content under thermodynamic instability 2-2460  
crystallisation at atmospheric press. 2-5065  
defects, unrelaxed neutral vacancy and substitutional N, energy levels 2-26324  
deformed, elec. props. 2-27303  
diamond:As(B), synthetic, luminescence wave obs. (*Russian*) 2-22095  
diamond:B, heavily doped, elec. cond. mechanisms, 2 to 700K 2-45986  
diamond:Fe, ion implanted, Mossbauer effect evidence of high internal press. 2-2168  
diamond powders, H chemisorption, effect of preceding heat treatment 2-5298  
dynamic Jahn-Teller effect in E and T electronic states 2-8779  
electron channelling, planar,  $\gamma$ -emission spectrum 2-46450  
electron irradi., TR12 vibronic band, uniaxial stress effects 2-13519  
face (100), H chemisorpt., ab initio SCF model calcs. 2-21440  
films, deposition from beams of C ions 2-31629  
ground state props., ab initio density functional pseudopot. method 2-40318  
hardness tester diamond taper angle and tip radius microscopy with special eyepiece 2-48771  
high pressure anvil cell, film-oscillating method for X-ray diffr. 2-25683  
homogeneous crystallisation from gas phase 2-5064  
ion beam analyses 2-45231  
ion channelling, minimum yields 2-16696  
lattice sums calcs. 2-8582  
local field effects and dielectric response matrix 2-1850  
natural, dislocation-rich, cathodoluminescence study 2-31565  
natural, vibronic bands, luminesc. and absorpt. spectra 2-51653  
natural crystals, surface morphology obs. on dodecahedral faces 2-45697  
nonlinear screening of positive point charges, spatial dielec. function 2-21524  
optical absorption spectrum, 1.71 eV phonon sideband of GR1 centre 2-46643  
phonon spectrum calc. with force consts. determ. from mol. vibr. spectra 2-50805  
planar channelling trajectories 2-25951  
platelet defects., high resolution electron microscopy, SEM and electron energy loss spectra 2-25908  
radiation detector, characts. and sensitivity to  $^{60}\text{Co}$  radiation 2-29481  
radiation emitted by ultrarelativistic positrons (*Russian*) 2-51735  
resonant excitation of GR 1, luminescence and cathodoluminescence study 2-46685  
semiconducting, excited states of shallow acceptor from photocond. 2-51118  
semiconducting, polycryst. synthetic, negative N-type resist. 2-21590  
sintering, for use as a high pressure anvil 2-23659  
struct.-energy calcs. using pseudopot. and localised Gaussian orbitals 2-30815  
surface (111), bulk-like struct., LEED determ. 2-35872  
surface (111), surface states form., UPS study 2-8848  
synthesis, crystn. kinetics in Mn-Ni-C system containing Group III metal carbides 2-41503  
synthesis by plasmachemical method, low press. autoepitaxy conditions 2-27096  
synthetic, relaxation phenomena in N-type negative resistance region 2-26994  
synthetic, strength, gaseous medium and temp effect 2-13816  
synthetic single cryst., fatigue crack propag. 2-22322  
type I, structural defects, ultra-HV TEM obs. 2-35502  
type IIb, electron irradiated, luminesc. excitation 2-41409  
vacancy electronic struct., cyclic cluster models with quantum-chemical hamiltonians 2-51102  
(BN), C<sub>1-x</sub>, 0 < x < 1, struct. and props. 2-35453



**diamond** continued

- C<sup>+</sup> ion implantation, crystal growth, proton channelling 2-45212  
Co-diamond system, sintering behaviour at high temp. and press. 2-51864

**diaphragms**

see also valves

- electron magnetic spectrometer adjustment for 1 eV resolution 2-48737  
low-volume acoustic resonator (silator) analysis and expt. 2-14160  
vibration and noise control, materials 2-25178  
Be-Al composite diaphragm for dome-type loudspeaker, vacuum deposition production method (*Japanese*) 2-25219

**dichroism**

see also magnetic circular dichroism; pleochroism

- acridines, substituted, in stretched polyvinyl alcohol film, linear dichroism study 2-43953  
alkyl-cyanobiphenyls, order parameter determ. in nematic phase using far IR spectroscopy 2-13493  
amino cpds. in liq. cryst. matrices, electronic spectra 2-43935  
anthraquinone derivatives, long-chain, multilayers, electronic spectra and mol. orientation 2-36716  
azo cpds. in liq. cryst. matrices, electronic spectra 2-43935  
beam splitters at visible wavelengths, astron. appl. 2-32854  
capsidol and 1-epicapsidol, configuration, <sup>1</sup>H and <sup>13</sup>C NMR, circular and mag. circular dichroism 2-24729  
chiroptical techniques, fast kinetic studies, stopped flow circular dichroism and related methods 2-14373  
circular dichroism spectroscopy, biological molecules exam. appl. 2-6288  
colloidal dispersion, Rayleigh-Gans-Debye approx., birefringence and conservative dichroism 2-34654  
colloids, electro-optical props., rel. to theory of spheroidal particle polarizability 2-26864  
cubic crystal, refr. index dispersion in impurity absorpt. band region using deform. induced birefr. 2-36595  
 $\beta$ -cyclodextrin complexes with monosubstituted benzenes, circular dichroism, vibr. anal. 2-15833  
 $\alpha$ -cyclohexanones, deuterated, optical activity due to isotopic substitution, vibr. circular dichroism, configurations 2-20096  
(R)-cyclopentanone-d<sub>1</sub>, conformational isotope effect, absolute config., circular dichroism spectra 2-34459  
diacetylene monomol. layer struct., IR dichroism and ESR study 2-29638  
dimethylammonium cadmium tetrachloride, dichroism meas. in far IR 2-5655  
N,N-dimethylaniline, in polyethylene matrix, linear dichroism obs. 2-24720  
dye molecules, vibr. relax. investigation by ultrafast induced dichroism 2-49552  
europium oxydiacetate, optical activity, circular dichroism spectra 2-26859  
D-glyceraldehyde-3-phosphate dehydrogenase fluoresc. derivative, circular dichroism study 2-32179  
light propagation in absorbing cholesterics and twisted nematics 2-7716  
localised mol. orbitals, IR and Raman vibr. optical activity intensities, unified approach 2-15767  
macromolecules, in polymer matrices, linear dichroism study 2-15936  
(+)-(3R)-methylcyclohexanone, vibr. circular dichroism, CNDO calcs. 2-11407  
molecular dimer, electronic coupling limit, absorption and circular dichroism line shape 2-34461  
naphthalene, 1,2-disubstituted, donor and acceptor groups, polarisation, excited states, dichroism obs. 2-24767  
neopentyl-I-d-chloride, vibr. circular dichroism CNDO calcs. 2-11406  
optically active crystals, of middle system, azimuth, ellipticity, phase difference and dichroism determ. 2-51547  
optically active molecules, passage of electron beam, electron optic dichroism 2-15952  
pentacene polycrystalline film, dichroism, substrate effect on crystallite orientation 2-46537  
phenoxazone 9 vibr. relax. investigation by ultrafast induced dichroism 2-49552  
pheophytin A, solns., linear and circular birefringence and dichroism study 2-27773  
phthalimides, rot. motion in liq. and gas, amplification, dichroism kinetics obs. 2-24765  
poly(2,6-dimethyl 1,4-phenylene oxide)-atactic polystyrene blends, orientation, FT IR obs. 2-46604  
poly(1,1,2-diaminopropane sebacamide, optical rot. dispersion and circ. dichroism 2-46536  
polyacetylene epitaxial layers, optical and elec. anisotropy 2-46598  
polynucleotide complex poly(s<sup>2</sup>C).poly(I), circular dichroic spectra as function of pH 2-24768  
polynucleotide complex poly(s<sup>2</sup>C).poly(I), vectorial representation of circular dichroic spectra 2-24769  
polyurethane elastomers, segmented, inversion of IR-dichroism (*Russian*) 2-43955  
pyrene in stretched low density polyethylene, IR linear dichroism studied using Fourier-transform spectroscopy 2-49470  
pyromellitic diethanolhydride, cryst. and solns., vibr., IR and Raman obs. 2-2243  
rare earth garnet, sublattice contrib. to second-order magneto-optical effects 2-21993  
retinyl acetate, lowest excited singlet state origin investig. 2-43954  
rhodamine 6G, vibr. relax. investigation by ultrafast induced dichroism 2-49552  
speckle patterns, one-dimens. elongated dichromatic, surface roughness depend. 2-7718  
spectroscopy, polarised light absorption, multiple-beam interference, Fresnel losses, dichroism 2-24766  
theory of birefringence and dichroism for biological tissue or composites of aligned particles 2-11634  
thermal deflection Fourier transform spectroscopy for high-sensitivity absorpt. and dichroism meas. 2-43093  
triquinacenes, substitution and deuterium isotope effects, chirality, IR absorpt. and circular dichroism obs. 2-34460  
vibrational circular dichroism and absorpt. intensities, MO calcs. 2-29500  
vibrational optical activity, IR and Raman obs. 2-20032  
<sup>1</sup>ATI, atomic, A=203, 205, parity nonconservation obs. 2-4404  
Ag-AgCl emulsion, interferograms obtained from photodichroic recording of partially coherent vibrs. 2-48758

**dichroism** continued

- Ag-AgCl film, spectral dips in Ag colloidal band, Weigert and Herschel effects 2-2358  
Ag-CuCl thin-film photosensitive system, photoinduced dichroism, Weigert effect 2-46538  
Co complexes, cis-(Co(X)(en)<sub>2</sub>)<sup>+</sup> (X=CN<sup>-</sup>, NO<sub>2</sub><sup>-</sup>, NCS<sup>-</sup>, N<sub>3</sub><sup>-</sup>, Cl<sup>-</sup>), directional ion assoc., CD meas. 2-44033  
Cu complex, Cu(II)-poly(styrenesulphonate), struct. study by transient electric dichroism 2-20098  
Cu(II) complexes, L-amino acid salts, chirality origin charge transfer bands 2-729  
Eu complex, Eu(oxydiacetate)<sub>3</sub><sup>3-</sup>, f-f transition, optical props. calcs. 2-51545  
Ho complex, Ho(oxydiacetate)<sub>3</sub><sup>3-</sup>, f-f transition, optical props. calcs. 2-51545  
InPS<sub>4</sub> class 4 crystals, Raman spectra, circular dichroism 2-36651  
K<sub>3</sub>Nd<sub>2</sub>(NO<sub>3</sub>)<sub>6</sub>, single cryst., absorpt., emission and circular dichroism 2-26932  
K<sub>3</sub>Pr<sub>2</sub>(NO<sub>3</sub>)<sub>6</sub>, single cryst., absorpt., emission and circular dichroism 2-26932  
LiF,  $\gamma$ -irrad., refr. index dispersion in impurity absorpt. band region using deform. induced birefr. 2-36595  
Pd complexes, Pd II thioether peptides, circular dichroism, MCD and HPLC obs. 2-39428  
Pr complex, Pr(oxydiacetate)<sub>3</sub><sup>3-</sup>, f-f transition, optical props. calcs. 2-51545  
Rb.UO<sub>2</sub>.3NO<sub>3</sub>, X-ray dichroism and polarised anomalous scattering of UO<sub>2</sub> ion 2-46820  
Tb complex, Tb(oxydiacetate)<sub>3</sub><sup>3-</sup>, f-f transition, optical props. calcs. 2-51545  
Y.Fe<sub>2</sub>O<sub>7</sub>.Ru, angular variation of mag. linear dichroism 2-21992  
YIG:Ca film, mag. linear dichroism, stability of Fe<sup>3+</sup> centre 2-21991  
Zn<sub>3</sub>P<sub>2</sub>, birefringence, dichroism, absorption edge, anisotropy 2-26862

**dictionaries** see glossaries

dielectric breakdown see electric breakdown

dielectric constant see permittivity

**dielectric depolarisation**

see also dielectric polarisation

- p-cyanophenyl-p'-caproyloxbenzoate liq. cryst. cells, effect of dielec. coatings on charge carrier behaviour 2-51519  
high-resistivity solids, electric relax. currents 2-13397  
one-dimensional conductor, temp. and freq. depend. complex dielec. const., depolarisation factor 2-21516  
polyvinylfluoride films, soln. grown, effect of injection contacts on depolarisation behaviour 2-26812  
TGS, doped with metal ions, pyroelec. props. 2-2191  
TGS, pure and doped, domain struct. study 2-36578  
TGS, ultrasonic props. near phase transition 2-45406  
 $\alpha$ -AgI, order-disorder transition, Raman depolarization ratio, temp. depend. 2-21301  
PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, ferroelectric phase transitions 2-41308  
Pb(Sc<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>-Pb(Sc<sub>0.5</sub>Ta<sub>0.5</sub>)O<sub>3</sub>, diffuse ferroelectric transition 2-41303  
Pb(Zr,Ti)O<sub>3</sub>, high press. dielectric props. 2-41262

**dielectric devices**

see also capacitors; ferroelectric devices; insulators; piezoelectric devices; pyroelectric devices; space-charge limited devices

- KCl dielectric charged-particle detector efficiency 2-43693

**dielectric function**

- acousto-optical interaction in mag. field, reson. effects 2-41326  
alkali metals and alloys, structure determ., electron-ion plasma 2-30383  
Brillouin zone integration for calculating intra-band joint densities of states 2-45806  
contours of constant principal angle and constant principal azimuth in the complex  $\epsilon$  plane 2-39563  
crystals, generalised pseudoatom theory 2-45415  
degenerate zero-gap semiconductors, dielec. function mag. field depend. 2-21596  
diamond, local field effects and dielectric response matrix 2-1850  
diamond, nonlinear screening of positive point charges, spatial dielec. function 2-21524  
dielectrics, nonlinear energy transport of radiation, due to virtual biexciton formation 2-41317  
dimethylammonium cadmium tetrachloride, dichroism meas. in far IR 2-5655  
EELS, normalisation method 2-9231  
electron fluid, two-dimensional, oscillating susceptibility and g-factor 2-17004  
EM wave propagation in gyrotropic media near dipole transition freq. 2-34635  
fluorozirconate type glasses, material dispersion characts. determ. 2-17430  
inert gases, fluid, intermolecular interaction influence on Kerr const. 2-36601  
interfaces, excited atom and molecule deactivation 2-5447  
local bare electron ion pseudopot. extraction from phonon dispersion curves 2-5196  
local bare electron ion pseudopot. extraction from phonon dispersion curves 2-8587  
metal surface, long-range electron-phonon scatt. 2-12902  
metals, Bloch electron dielectric matrix, exchange-correlation effects (*Russian*) 2-45873  
metals, dielectric matrix using the non-local model potential approach 2-8766  
narrow and wide gap materials, optical and electronic props., model based studies 2-31441  
one-dimensional conductor, temp. and freq. depend. complex dielec. const., depolarisation factor 2-21516  
organic molecular crystal, elec. fields, microscopic dielec. theory 2-36582  
plasma, collisionless, coherent renormalisation theory (*Chinese*) 2-25494  
plasmons, UV, dielectric function in short lifetime limit 2-21517  
polymer coatings, plasma deposited, colored, metal codeposition technique 2-44419  
quasi-one-dimensional CDW distorted solid, charge density fluctuations 2-30812  
renormalisation of dielec. response, appl. to effective ion interactions and phonons 2-12985  
Rochelle salt, dynamical study including proton-optical phonon interaction 2-36547  
semiconductor, dielectric function, transverse 2-26316



# dielectric function continued

- semiconductor, heavily doped, random impurity potential effects on resonance Raman scattering 2-17472  
semiconductor, longitudinal dielec. function, small wave vector and freq. depend. 2-40809  
semiconductor, microstructural information from opt. props. in near IR to near UV range 2-21972  
semiconductor, optical nonlinearity and bistability due to biexciton form. 2-44375  
semiconductor ternary alloys, local field effects and IR optical props. 2-22028  
semiconductor-dielectric interface, surface plasmon damping due to rough boundary scatt. 2-35960  
semiconductors, cubic crystals, optical anisotropy 2-17438  
semiconductors, doped, dielectric function model 2-35957  
semiconductors, optical props., calc. using first-principles electronic struct. 2-13442  
small sphere, polarisability including nonlocal effects, semiclassical method 2-13430  
solid, calc. from optical reflection spectra using Kramers-Kronig anal. (German) 2-26809  
superconducting film, dielectric response functions and collective oscill. spectrum (Russian) 2-2032  
superconductor thin film, collective modes, inductive excitation and propagation. 2-36224  
transition metals, optical props., 0.1-500 eV, data compilation 2-36586  
transition metals, total binding energy calcs. (Russian) 2-51100  
two-dimensional electron system, cond. derivation rel. to dielec. function 2-26313  
 $n^+$ -Si, surface plasmons, ATR spectra 2-2234  
Al, modified Ashcroft pseudopotential 2-35616  
Al surface, electron-hole pair excitations, dielectric function, photoemission 2-36758  
Au<sub>2</sub>Al, diffusion-formed, optical props., ellipsometric study 2-17432  
BN, hexagonal, interband transitions anisotropy, UV reflectivity spectra study (French) 2-22043  
BaMnF<sub>4</sub>, magnetoelectric, Landau theory predictions 2-41170  
CdS, dielectric function, renormalization with increasing excitation 2-45867  
CdS, excitonic polariton dispersion, excitation induced renormalisation effects 2-1835  
CdTe, electronic band struct. calcs. 2-40782  
CePd<sub>3</sub>, valence fluctuation cpds., optical struct. near 20 meV 2-9152  
Co-Al<sub>2</sub>O<sub>3</sub>, cermet selective films, photothermal conversion, effective dielectric function bounds 2-9683  
Co<sub>2</sub>, lattice vibr., polarised far IR reflection spectra study 2-17473  
Cs complex, Cs<sub>2</sub>(TCNQ)<sub>2</sub>, mol. vibr. and charge transfer states, polarised reflectance study 2-36637  
Cu-Zr, amorphous film, electronic struct., optical spectra study (French) 2-22044  
Cu<sub>2</sub>MnAl, optical absorpt. spectrum within RPA 2-9163  
Fe<sub>1-x</sub>O, wustite, reflection spectrum anal. 2-2316  
Ga<sub>1-x</sub>Al<sub>x</sub>As, local field effects and IR optical props. 2-22028  
GaAs, amorphous, disorder effects and optical props. 2-2357  
GaAs, dielectric functions, impurity scatt., Thomas-Fermi theory 2-51097  
GaAs, electronic band struct. calcs. 2-40782  
GaN epitaxial layers, refl., 5 to 30 eV, dielec. function and electron energy loss function 2-22045  
GaP, amorphous, disorder effects and optical props. 2-2357  
Ge, electronic struct., quantitative disorder effect 2-21495  
Ge, nonlinear screening of positive point charges, spatial dielec. function 2-21524  
GeSe<sub>2</sub>, refl. spectra (Russian) 2-13507  
<sup>3</sup>He, solid, magnetically ordered, birefringence 2-35851  
InP, electronic band struct. calcs. 2-40782  
InSb dielectric response function for sub-MM radiation interacting with quasi-free carrier gas, high mag. field 2-36070  
KBr·OH<sup>-</sup>, AC dielec. consts., dipole-dipole interactions 2-26317  
KCl, dielec. function matrix and lattice dynamics 2-45869  
LaB<sub>6</sub>, characteristics of conduction electrons, optical study 2-9161  
Li-Na, liquid, structure determ., electron-ion plasma 2-30383  
LiF thin film, optical vibr. modes by thermal emission 2-17594  
LiGaO<sub>2</sub>, IR active modes, absolute Raman cross-sections and effective charge parameters 2-2277  
Mg, surface oxidation, spectroscopic ellipsometry study 2-47256  
NaCl, focused laser beam deform., multiphoton polaron and avalanche optical breakdown models 2-7813  
NaCl·OH<sup>-</sup>, AC dielec. consts., dipole-dipole interactions 2-26317  
NaCrS<sub>2</sub>, reflectivity spectrum, Kramers-Kronig anal., optical functions, band struct. 2-26935  
Ni<sub>2</sub>, lattice vibr., polarised far IR reflection spectra study 2-17473  
PbI<sub>2</sub>(2H), reson. Brillouin scatt. of exciton polaritons 2-46621  
Pd, imaginary part of dielec. absorption, direct calc. 2-21523  
PdH, optical absorption, density of states and dielec. function calc. 2-51540  
(SN)<sub>x</sub>, energy band struct. and Fermi surface 2-30795  
Si, amorphous, energy gap determ. from optical meas. 2-13437  
Si, electronic struct., quantitative disorder effect 2-21495  
Si, imaginary part of dielec. absorption, direct calc. 2-21523  
Si, nonlinear screening of positive point charges, spatial dielec. function 2-21524  
Si-SiO<sub>2</sub> inversion layer, excitonic effects on optical absorption, shielded potential approx. 2-51314  
SrTiO<sub>3</sub>, dielectric dispersion hyper-Raman scatt. study 2-46560  
SrTiO<sub>3</sub>, far IR dispersion determ. by hyper-Raman spectroscopy 2-13481  
SrTiO<sub>3</sub>(100), surface optical phonons 2-26204  
YbCu<sub>2</sub>Si<sub>2</sub>, valence fluctuation cpds., optical struct. near 20 meV 2-9152  
Zn<sub>3</sub>P<sub>2</sub>, reflectivity spectra, Kramers-Kronig anal. 2-26937  
ZnSiP<sub>2</sub>, optical props. from electron energy loss meas., 3-40 eV 2-51542

# dielectric hysteresis

- ferroelectric crystals, domain wall dynamics, acoustic emission study 2-45386  
ferroelectrics, polarisation reversal, dielectric, viscosity effects 2-31428  
piezoelectric hysteresis, kinematic theory 2-31383  
 $\beta$ -polyvinylidene fluoride, ferroelec. switching 2-36565  
resonant nonlinear medium, coherent radiation, self effects, hysteresis 2-49838  
TGS, doped with metal ions, pyroelec. props. 2-2191  
TGS, single cryst., pyroelec. props. at elec. bias field 2-21950

# dielectric hysteresis continued

- TGS and its deuterated form, optical activity 2-36592  
TGS crystal growth from soln. with ethyl alcohol additions 2-36773  
vinylidene fluoride/trifluoroethylene copolymer, ferroelectric props. 2-31423  
BaTiO<sub>3</sub>, ferroelec. meas., digital computation methods 2-31431  
Ca(NO<sub>3</sub>)<sub>2</sub>, phase transition study (French) 2-46515  
CsLiMoO<sub>4</sub>, ferroelectric phase transitions, optical, dielec. and X-ray obs. 2-36568  
KH<sub>2</sub>AsO<sub>4</sub>, dielec. meas. and discontinuity at paraelectric-ferroelec. phase transition 2-2202  
LiTaO<sub>3</sub>, single cryst., dielec. and pyroelec. props. 2-31385  
(NH<sub>4</sub>)<sub>2</sub>ZnCl<sub>4</sub>, ferroelec. phase transitions, dielec., thermal, and X-ray diff. meas. 2-2201  
NaH<sub>2</sub>(SeO<sub>3</sub>)<sub>2</sub>, single cryst., pyroelec. props. at elec. bias field 2-21950  
PLZT, influence of press. on phase transitions 2-2206  
Pb(Fe<sub>1/2</sub>Nb<sub>1/2</sub>)O<sub>3</sub>-Pb(Mg<sub>1/2</sub>W<sub>1/2</sub>)O<sub>3</sub> solid soln., phase anal. 2-26831  
5PbO.2P<sub>2</sub>O<sub>5</sub>, improper ferroelectricity, dielec., pyroelectric charge and thermal expansion meas. 2-9112  
Pb(Zr,Ti)O<sub>3</sub>, high press. dielectric props. 2-41262  
PbZrO<sub>3</sub>, single cryst. and ceramic, pyroelec. effect 2-2192  
Rb<sub>2</sub>ZnBe<sub>4</sub>, ferroelec., dielec. props. 2-26833  
Rb<sub>2</sub>ZnCl<sub>4</sub>, ferroelec., transitions and struct. 2-30580  
SrBa<sub>1-x</sub>Nb<sub>x</sub>O<sub>6</sub>, inhomogeneous cryst., polarisation reversal 2-26810  
SrTiO<sub>3</sub>, dielectric nonlinearity study 2-2177
- dielectric-loaded waveguides**  
metal clad dielec. film waveguide with low refractive index buffer layer, guided mode-surface plasma mode resonant coupling 2-16109  
permittivity and loss tangent of dielectrics, for waveguide microwave methods 2-46453  
piezoelectric waveguides, metallized, acoustoelectric effect 2-40974
- dielectric loss angle** *see dielectric losses*
- dielectric loss-angle measurement** *see dielectric loss measurement*
- dielectric loss measurement**  
*see also dielectric losses*  
aC power-loss measurements in solid dielectric materials at industrial frequency 2-6870  
apparent negative value, causes 2-43046  
HV, microcomputer-based system 2-33573  
liquid conductance at high frequencies meas., using non-contact system 2-15192  
nondestructive, AC current-testing method and measurement equipment 2-8370  
unifying admittance calc. 2-6878
- dielectric losses**  
*see also loss angle*  
t-nitrobutane, dielec. behaviour and mol. motion near 215K phase transition 2-2176  
aligned nematic mesophase, dielec. loss theory 2-5624  
aniline, substituted, benzene soln., dielectric dispersion, relax. mechanism at MW frequencies 2-17397  
anilines, chloro- and nitro-subst., benzene soln., dielectric absorpt. study, relaxation times 2-21936  
biogenic steroids at microwave frequencies 2-18256  
bis(methylammonium)tetrachlorozincate, struct. phase transitions, X-ray diff., thermal, dielec. and optical meas. 2-45566  
bushings, low temperature, for high AC voltage 2-6857  
EBBA, dielec. props. in metastable and stable cryst. phases, -30° to 25°C 2-9072  
4-n-heptylamino benzoic acid, in mixtures with 4-cyano benzoic acid and 4-fluoro benzoic acid, dielec. rels. 2-13385  
high-resistivity solids, electric relax. currents 2-13397  
hopping cond. in disordered system, freq. depend., dielec. loss-angle tangent study 2-36048  
kerosene, dielectric const., depend. on electric field freq., magnetisation and applied mag. field 2-21930  
lauric acid, dielec. permittivity and loss, anomalous behaviour due to defect and impurity centres 2-9070  
lithium acetylacetonate, dielec. behaviour and IR spectra 2-13390  
lossy solutions, EPR, solvent effects 2-28876  
low temperature effects on dielec. const. and loss, review 2-9086  
lutidines, 2,4-, 2,6- and 3,5-, dielectric relax. and dipole moment at microwave freq. 2-46471  
N-methylformamide, aq. solns., dielectric relax., losses and consts. 2-21940  
mica crystals, structural props. under dielec. load 2-5621  
mica flake integrated sheet/epoxy laminates, mech. and elec. props. 2-27222  
nylon 66 film, water effect on secondary dielec. relax. 2-26814  
oil, transformer, ferrofluids, dielectric const., depend. on electric field freq., magnetisation and applied mag. field 2-21930  
paraffin oil solvent, viscoelastic relax. at 9.8 GHz 2-31375  
paraffin oil-benzene mixture solvent, viscoelastic relax. at 9.8 GHz 2-31375  
5-n-pentyl-2-(4-n-nonyloxyphenyl)-1,3-dioxane, nematic phase, dielec. and electrooptic behaviour 2-36515  
permittivity and loss tangent of dielectrics, for waveguide microwave methods 2-46453  
phenolic Mannich bases, dielectric loss, IR study 2-26882  
poly(chlorotrifluoroethylene), oriented, dielec. anisotropy 2-9080  
polyethylene, dielec. loss reduction by vac. melting extraction (Japanese) 2-2596  
polypropylene, dielec. loss reduction by vac. melting extraction (Japanese) 2-2596  
polystyrene: Cu phthalocyanine films, dielec. props. 2-21939  
polystyrene, absorpt. currents in temp. range 323-413K, dielectric loss and relax. 2-13404  
polystyrene-chloranil, absorpt. currents in temp. range 323-413K, dielectric loss and relax. 2-13404  
quartz crystals, structural props. under dielec. load 2-5621  
quartz crystals, electrical characts., gamma ray effects 2-21941  
silicate glasses, dielec. props. and struct., liquation regions 2-5623  
TCNQ salts, freq. depend. cond. and permittivity, localised states, investig. (French) 2-5617  
tellurate glasses, O anomalies, rel. to props. 2-5055  
TGS, deuterated, complex permittivity dispersion 2-36495  
Al<sub>2</sub>O<sub>3</sub> crystals, structural props. under dielec. load 2-5621  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, AC cond. and dielec. loss, 10<sup>2</sup> to 10<sup>11</sup> Hz 2-26123  
As-S-Fe glass, dielec. const. and loss angle (Russian) 2-26816



**dielectric losses continued**

- As-Se glasses, dielectric consts., loss tangents, depend. on composition 2-17386
- As<sub>2</sub>Ge<sub>10</sub>Te<sub>65</sub>, amorphous, dielec. const. and loss meas. 2-17390
- As<sub>2</sub>Se<sub>3</sub> glass, AC transport and struct. relax. 2-40904
- As<sub>2</sub>Se<sub>3</sub>, glassy, dielec. losses and permittivity, temp. depend. 2-2182
- As<sub>2</sub>Se<sub>3</sub>, amorphous, dielec. const. and loss meas. 2-17390
- BN film, plasma deposition, dielectric props. (*Russian*) 2-2457
- B<sub>2</sub>O<sub>3</sub>-CaO-V<sub>2</sub>O<sub>5</sub>-V<sub>2</sub>O<sub>4</sub>, DC and AC elec. props. 2-36504
- BaO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> celsian ceramic, DC cond., dielec. loss 2-5890
- Ba<sub>0.4</sub>Sr<sub>0.6</sub>Nb<sub>2</sub>O<sub>6</sub>, dielec. anomalies 2-26813
- Ba<sub>2</sub>Sr<sub>1-x</sub>TiO<sub>3</sub> films, microwave dielec. props., broad phase transition 2-46460
- Bi<sup>3+</sup>(B<sub>1-x</sub><sup>1/2</sup>B<sub>1/2</sub><sup>1/2</sup>)O<sub>4</sub>, ceramic prep. and characteris. 2-51530
- Bi<sub>2</sub>GeO<sub>10</sub> single cryst., dielec. losses and permittivity 2-17398
- Bi<sub>2</sub>SiO<sub>7</sub> single cryst., dielec. losses and permittivity 2-17398
- CO<sub>2</sub>, collision induced absorption at 0.091 cm<sup>-1</sup>, rel. to dielec. losses 2-701
- CO<sub>2</sub>, collision induced microwave absorpt., dielec. loss and quadrupole moment (*French*) 2-7543
- CaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, sintered ceramic, dielec. props. 2-9081
- CsH<sub>2</sub>PO<sub>4</sub>, X-ray and γ-ray irradiated, polarisation props. characts., domain struct. 2-51534
- CsHSeO<sub>4</sub>, phase transition at 128°C, dielec. permitt., DTA and dielec. permitt. thermal hysteresis meas. 2-35674
- α-Fe<sub>2</sub>O<sub>3</sub>, high dielec. const. and anomalous characts., 500 Hz to 1.6 MHz 2-31364
- GaAs, nuclear electric resonance, dielectric loss meas. (*Russian*) 2-13429
- GeO<sub>2</sub>-Na<sub>2</sub>O glass, low alkali, dielectric relaxation strength 2-51525
- KH<sub>2</sub>PO<sub>4</sub>, dielectric props., conduct., multilayer capacitor, electrooptic study 2-13394
- KH<sub>2</sub>PO<sub>4</sub> ferroelec., dielectric props., plastic deform. and radiation defect influence 2-36502
- KIO<sub>4</sub>, dielec. props. and cond. 2-36501
- LiNbO<sub>3</sub> bicrystal, thermal bonding, influence of planar diffusion bonded boundaries on props. 2-26840
- MoO<sub>3</sub> films, capacitance, dielec. loss, and destructive breakdown study 2-51528
- NaBH<sub>4</sub> complex with polyethylene oxide, ionic correl. and dielec. loss 2-17400
- NaH<sub>2</sub>(SeO<sub>3</sub>)<sub>2</sub>, single cryst., pyroelec. props. at elec. bias field 2-21950
- NaIO<sub>4</sub>, dielec. props. and cond. 2-36501
- NaSCN complex with polyethylene oxide, ionic correl. and dielec. loss 2-17400
- Ni-Zn ferrites, effect of transition elements on dielectric props. 2-13391
- α-, β-, α-PbGeO<sub>3</sub>, polymorphism, growth and certain props. 2-50609
- Pb<sub>1-x</sub>La<sub>x</sub>Zr<sub>1-x</sub>Ti<sub>x</sub>O<sub>3</sub> ceramic, dielectric props. 2-46455
- PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, ferroelectric phase transitions 2-41308
- (PbTiO<sub>3</sub>)<sub>x</sub>(PbCeO<sub>3</sub>)<sub>1-x</sub>(PbNb<sub>2</sub>O<sub>6</sub>)<sub>2</sub>(MnO<sub>2</sub>)<sub>m</sub> system, piezoelectric, dielectric props. 2-41273
- Pb(Zr,Ti)O<sub>3</sub>, 4 and 8 type ceramics, high field props. 2-41249
- Pb<sub>1.02</sub>(Zr<sub>0.76</sub>Fe<sub>0.10</sub>Nb<sub>0.10</sub>Ti<sub>0.04</sub>)<sub>1-x</sub>U<sub>2</sub>O<sub>3</sub>, elec. cond., pyroelectricity 2-45959
- Sb(Sb,Nb<sub>1-x</sub>)O<sub>4</sub> single cryst., synthetic, dielec. props., crystn. parameter variation 2-51511
- SiN, with spinel admixtures, pressureless sintering, props. 2-9321
- Ta<sub>2</sub>O<sub>5</sub>, amorphous, hopping cond. freq. depend., dielec. loss-angle tangent study 2-36048
- TlBr-TlI KRS-5 crystals at 95 GHz, meas. of permittivity and loss tangent 2-51512
- TlBr-TlI(TlCl), permitt. and loss tangent meas. at 95 GHz 2-41255
- TlCl-TlBr KRS-6 crystals at 95 GHz, meas. of permittivity and loss tangent 2-51512
- Ti<sub>2</sub>SnSe<sub>8</sub>, glassy, dielec. losses and permittivity, temp. depend. 2-2182
- ZnMnFe<sub>2.05</sub>O<sub>4</sub>:Cr(Al)(In), dielec. props., elec. cond., mag. props., lattice constants, dopant effects 2-51524

**dielectric materials**

- see also *antiferroelectric materials; dielectric thin films; electrets; ferroelectric materials; glass; insulating materials; insulation; piezoelectric materials*
- EM field behaviour 2-45928
- liquids, conduction current and DC breakdown voltage (*Korean*) 2-17401
- multipolar moments, plurality of mean densities (*French*) 2-21958
- noise in dielectric materials 2-51522

**dielectric measurement**

- see also *dielectric loss measurement; permittivity measurement*
- charge distrib. meas., high resolution laser pulse method 2-43050
- condition of material, diagnostic method 2-6869
- conductivity profile reconstruction in time domain, optimisation 2-33566
- cryostat cell, for solid dielectrics meas. 2-6838
- ferroelectric crystal, dielec. susceptibility, polarisation and cond., meas. method 2-28861
- microwave interferometric for dielectric slabs effective thickness meas. 2-23665
- permeability measurement, mode-displacement method 2-48722
- piezoelectric AA for electroacoustic transducers (*German*) 2-23675
- polymer electret film, polarization distrib. determ. using periodic heating 2-36529
- polymers, in ionising radiation field, at 10 Hz freq., -100 to 200°C 2-36498
- solid-state computer-controlled system for swept-freq. meas. of dielectric props. at microwave frequencies 2-42241

**dielectric phenomena**

- see also *dielectric hysteresis; dielectric losses; dielectric properties of substances; dielectric relaxation; dielectric resonance; electric strength; ferroelectricity; photodielectric effect; piezoelectricity; solvated electrons*
- cholesteryl laurate, liq. cryst. phase transformation, thermodielectric electret 2-46468
- conference, Canterbury, England (Sept. 1980) 2-6707
- cylindrical magnetodielectric excited by step EM field wave propag. mechanism (*Russian*) 2-49639
- insulation, conf., Whitehaven, PA, USA (Oct. 1981) 2-10548
- symmetrical wave excitation, using two linked logarithmic spirals on dielectric substrate (*Russian*) 2-44176
- thermal noise as dielec. diagnostic method 2-6869

**dielectric polarisation**

- see also *Barkhausen effect; dielectric depolarisation*
- 4-alkylamino-4'-cyanobiphenyls, mesomorphic liq. crystals, synthesis and props. 2-50530
- amorphous material, hopping transport, dielec. polarisation 2-5407

**dielectric polarisation continued**

- azoxybenzene, switching transients, polarisation 2-36507
- benzene, cond. currents and space charge formation in dielec. liquids 2-5642
- bis tetramethyl ammonium tetrabromocuprate, phase transition, dielec. meas., ferroelectricity obs. 2-45558
- bone healing, elec. enhancement, human skeleton inherent polarisation pattern 2-37526
- boracites, dielec. anomalies 2-9110
- t-butyl derivatives, (CH<sub>3</sub>)<sub>3</sub>CX (X=Cl, Br, NO<sub>2</sub>, CN), mol. reorientation, calorimetry, dielectric, NMR, neutron and X-ray scatt. study 2-30421
- cellulose acetate-polyvinyl acetate blend, TSC obs. of polarisation behaviour, blending influence 2-46465
- centrosymmetric prototype phase, Landau-Devonshire theory with rotationally invariant expansion coefficients 2-46481
- ceramics, counterpoled, polarisation and elastic vibr. distrib. laser probe meas. 2-36505
- classical polarisability, var. method 2-21932
- crystal in nonpolar incommensurate phase, spontaneous polarisation 2-36512
- dialcohols, dielec. relax. and permittivity (*Spanish*) 2-13403
- dicalcium strontium propionate, switching transients, polarisation 2-36507
- disperse systems, of spherical particles, dielectric relaxation profiles 2-2180
- double layer on disperse particles, polarisation and dipolephoresis in steady DC field, electroosmosis effect 2-31954
- ferroelectric, antiferroelectric, improper and incommensurate phase transitions, symmetry aspects 2-41291
- ferroelectric, modulation spectroscopy characteris., review 2-15243
- ferroelectric crystal, dielec. susceptibility, polarisation and cond., meas. method 2-28861
- ferroelectric polarization fluctuations, mean field coupled Ising spins, Monte Carlo simulation 2-36506
- ferroelectric semiconductors, fluctuonic electron states, photoferroelectric phenomena 2-45825
- ferroelectrics, nonlinear dielec. props., mag. field effects 2-31420
- ferroelectrics, nonvarying and decreasing of P<sub>r</sub> with cooling from T<sub>c</sub> 2-17420
- ferroelectrics, polarisation echo theory, electric and elastic susceptibility (*Russian*) 2-13401
- ferroelectrics, polarisation reversal, dielectric viscosity effects 2-31428
- Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec. surface, ion beam refl. and chemical etching study 2-30722
- granular composite films, microstruct. and dielec. props. 2-52063
- guanidinium aluminium sulphate hexahydrate, domain dynamics 2-36576
- high-resistivity solids, electric relax. currents 2-13397
- inhomogeneous dielectric bodies of random shape, polarisability variational estimates 2-817
- KTaO<sub>3</sub>:Li electric dipole glass, birefringence 2-13446
- laser-induced ripple patterns in dielec. materials, polarisation charge model 2-9225
- liquid crystal, smectic, dipole ordering, antiferroelec. and helicoidal types 2-35380
- liquid crystals, pyroelec. props. 2-9095
- liquid ferroelectric crystal, DOBAMBC, second optical harmonic generation 2-49826
- macroions, cylindrical, elect. and convective polarization 2-21933
- magneto-electret, charge origin 2-36510
- metal surface and polar liquid, adhesive interaction, mutual polarisation influence 2-30717
- molecular complexes, conduction and dielectric polarisation 2-14186
- molecular correlation function approaches, to dielec. relax., review 2-9083
- monatomic fluid, dielectric const., polarisability, classical description 2-2174
- monohydric alcohols, dielectric relaxation, mechanism of dipolar orientation (*Japanese*) 2-21938
- neutral dielectric bodies, planar interface, polarisation theory 2-2178
- (NH<sub>4</sub>)<sub>2</sub>FeF<sub>6</sub>, low temp. phase, remanent polarisation (*French*) 2-31371
- noise in dielectric materials 2-51522
- nonaqueous electrolyte solns., props. in microwave and far IR region 2-9219
- Nylon 11 films, γ-form, piezoelectricity X-ray studies 2-17410
- nylon film, space charge polarisation 2-36523
- perovskite ferroelectrics, martensitic transform. theory and mechanism 2-46500
- poly(ethylene terephthalate), amorphous film, persistent internal polarisation, orientation and conduct. 2-17087
- polymer electret film, polarization distrib. determ. using periodic heating 2-36529
- polymers, polar dielectric, thermally stimulated currents, polarisation, non-linear effects 2-51520
- polypropylene films, TSC studies 2-21935
- polyvinylidene fluoride, nature of pyroelectricity at low temps. 2-9096
- polyvinylidene fluoride, phase changes and piezoelec. effects 2-36532
- polyvinylidene fluoride films, structure changes during dielec. polarization, study by far IR Fourier transform spectroscopy 2-13402
- protons, conduction and dielectric polarisation 2-14186
- pyroelectric properties, dipolar structural elements influence 2-17418
- pyroelectricity and piezoelectricity, surface state effects, electronic redistribution 2-31387
- quadrupole moments, anomalous temp. depend. near struct. phase transitions 2-46498
- quasi-one-dimensional metals, amplitude solitons and cond. 2-30875
- Rochelle salt, ferroelectric phase transitions, electroacoustic interaction, polarisation echo study (*Russian*) 2-41310
- Schiff's bases, ferroelec. liq. crystals, tilt, pitch, and polarisation, temp. depend. 2-21014
- semiconductor, optical nonlinearity and bistability due to biexciton form. 2-44375
- TGS:α-alanine, Cu(Cr), spontaneous polarisation and internal field 2-51521
- TGS, Brillouin scatt. in pure and γ-irrad. crystals 2-36656
- TGS, doped with metal ions, pyroelec. props. 2-2191
- TGS, ultrasonic props. near phase transition 2-45406
- TGS ferroelectric crystal, radiation damaged, polarization switching 2-36564
- TGS powder-silicone rubber composite, ferroelectricity 2-36549
- TGS thin film, ferroelec. props. 2-36580



**dielectric polarisation continued**

- transverse field coupled to acoustic phonons, longitudinal spin dynamics 2-36546
- tris-sarcosine calcium chloride, ferroelectric transition, soft modes 2-36557
- tris-sarcosine calcium chloride bromide, dielectric studies 2-36556
- tris-sarcosine calcium chloride, switching parameters, temp., elec. field and press. depend. 2-26811
- vinylidene fluoride/trifluoroethylene copolymer, ferroelectric props. 2-31423
- vinylidene fluoride/trifluoroethylene copolymer film polarisation, pyroelec. response and X-ray diff. meas. 2-31369
- Al<sub>2</sub>O<sub>3</sub> film, anodised amorphous, DC cond. and dielec. polarisation, thickness depend. and defects role 2-30987
- As<sub>2</sub>Se<sub>3</sub>, amorphous, isothermal dielec. relax currents 2-46473
- BaF<sub>2</sub>:LaF<sub>3</sub>, polarisation effects associated with space charges, ionic thermal current meas. 2-13400
- BaTiO<sub>3</sub>, ferroelec. meas., digital computation methods 2-31431
- BaTiO<sub>3</sub>, ferroelec. surface, ion beam refl. and chemical etching study 2-30722
- BaTiO<sub>3</sub>, refractive index above T<sub>c</sub> 2-46526
- BaTiO<sub>3</sub>:Co, diffuse phase transition, dielec. meas. 2-9104
- Bi<sub>2</sub>Sb<sub>2</sub>, SI solid-solution ferroelectric semiconds., free energy and singularity 2-5649
- Ca<sub>2</sub>(WO<sub>4</sub>)<sub>2</sub>, electrophys. props., struct. transitions influence 2-41250
- CdF<sub>2</sub>:NaF, surface polarisation model, comparison with TSC and dielec. relax. data 2-9075
- CsH<sub>2</sub>AsO<sub>4</sub> and CsD<sub>2</sub>AsO<sub>4</sub>, dielectric response meas., polarisation fluctuations 2-41282
- CsH<sub>2</sub>PO<sub>4</sub>, spontaneous strain anomaly in ferroelec. phase, dilatometric meas. 2-1640
- CsH<sub>2</sub>PO<sub>4</sub>, X-ray and  $\gamma$ -ray irradiated, polarisation props. characts., domain struct. 2-51534
- CsLiMoO<sub>4</sub>, ferroelectric phase transitions, optical, dielec. and X-ray obs. 2-36568
- CsLiMoO<sub>4</sub>(WO<sub>4</sub>), ferroelectric transitions, dielec. and elastic study 2-31408
- Cu<sub>16</sub>Rb<sub>4</sub>Cl<sub>7+3</sub>, solid electrolyte, polarization study 2-21380
- GeAs, dynamic effective charges and piezoelec. consts. 2-2190
- Ge:Li film, amorphous, electret effect 2-17395
- KCl:OH<sup>-</sup>, dipolar polarisation (*Russian*) 2-17394
- KD<sub>2</sub>PO<sub>4</sub> with ADP impurities, lattice polarisation, proton ordering 2-41258
- KD<sub>2</sub>PO<sub>4</sub>:KH<sub>2</sub>AsO<sub>4</sub>, X-irrad., ferroelec. polarisation reversal, AsO<sub>4</sub><sup>4-</sup> ESR study 2-51533
- KH<sub>2</sub>AsO<sub>4</sub> and KD<sub>2</sub>AsO<sub>4</sub>, dielectric response meas., polarisation fluctuations 2-41282
- KH<sub>2</sub>AsO<sub>4</sub>, dielec. meas. and discontinuity at paraelectric-ferroelec. phase transition 2-2202
- KH<sub>2</sub>(1-x)D<sub>2</sub>xPO<sub>4</sub>, polarisation relax., light scatt. study 2-41261
- KH<sub>2</sub>PO<sub>4</sub>, dielectric response meas., polarisation fluctuations 2-41282
- KH<sub>2</sub>PO<sub>4</sub>, ferroelectric phase transitions, electroacoustic interaction, polarisation echo study (*Russian*) 2-41310
- KH<sub>2</sub>PO<sub>4</sub>, piezoelectric polarisation oscils. near phase transition 2-41259
- KH<sub>2</sub>PO<sub>4</sub>, spontaneous polarisation mechanism 2-36513
- KH<sub>2</sub>PO<sub>4</sub>, transverse polarisation dynamics near phase transition 2-41257
- KH<sub>2</sub>PO<sub>4</sub> type cryst., ferroelectric resonance and nonlinear effect 2-36545
- KH<sub>2</sub>PO<sub>4</sub> type cryst., first order ferroelec. phase transition theory 2-36553
- KNbO<sub>3</sub>, spontaneous polarisation calcs. 2-46462
- KNbO<sub>3</sub>, tetragonal, band struct. and spontaneous polarisation 2-8753
- K<sub>2</sub>SeO<sub>4</sub>, calc. props. of incommensurate phase 2-2205
- KTaO<sub>3</sub>:Gd<sup>3+</sup>, elec. field induced ESR line shift, polarisation nonlinear effect, spin Hamiltonian calc. 2-26739
- K<sub>2</sub>Zn(SO<sub>4</sub>)<sub>2</sub>, langbeinite type, pyroelec. props. 2-5644
- LiF, polarisation effects at small-angle boundaries, space charge distrib. 2-26819
- LiNbO<sub>3</sub>, dielectric spontaneous pol. below 50K 2-46467
- LiNbO<sub>3</sub>:Fe, Hall photocurrents 2-21630
- LiTaO<sub>3</sub>, single cryst., dielec. and pyroelec. props. 2-31385
- (NH<sub>4</sub>)<sub>2</sub>AlF<sub>6</sub>, low temp. phase, remanent polarisation (*French*) 2-31371
- (NH<sub>4</sub>)<sub>2</sub>BeF<sub>4</sub>, ferroelectric phase transitions, X-ray dilatometric study 2-21954
- NH<sub>4</sub>HSeO<sub>4</sub>, influence of hydrostatic press. on phase transition 2-36571
- NH<sub>4</sub>HSeO<sub>4</sub>, phase transition at 261K, US study, permittivity and polarisation meas. 2-36569
- NaK<sub>1-w</sub>(NH<sub>4</sub>)<sub>w</sub> tartrates, 0.18 < w < 0.92, dielec. props., piezoelec. props., birefringence 2-36596
- NaNO<sub>3</sub>, ferroelectric cryst., radiation damaged, polarization switching 2-36564
- Ni<sub>2</sub>B<sub>2</sub>O<sub>7</sub>, ferroelec.-ferromag.-ferroelastic phase, elec. and optical meas. 2-31392
- PLZT ceramic, dielectric eqn. of state in Curie range 2-46494
- PLZT ceramic, linear electro-optical effect, domain struct. 2-46541
- PLZT, influence of press. on phase transitions 2-2206
- Pb(Fe<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>, ferroelectric domain study 2-46519
- Pb<sub>2</sub>Ge<sub>2</sub>O<sub>11</sub>, circular photogalvanic effect (*Russian*) 2-31328
- PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, ferroelectric phase transitions 2-41308
- Pb<sub>2</sub>MgNb<sub>2</sub>O<sub>9</sub>, electrets and photoelectrets 2-46463
- Pb(Ti, Zr)O<sub>3</sub>, tetragonal-rhombohedral transition, changes in dielectric constant 2-5616
- Pb(Ti,Zr<sub>1-x</sub>)O<sub>3</sub> type ceramics, acoustic emission and piezoactivity 2-46485
- PbZrO<sub>3</sub>, single cryst. and ceramic, pyroelec. effect 2-2192
- Pb(Zr,Ti<sub>1-x</sub>)O<sub>3</sub>, elec. props. study 2-45960
- $\alpha$ -poly(vinylidene fluoride), longit. polarisation by kink propag. 2-17391
- RbD<sub>2</sub>H<sub>2</sub>PO<sub>4</sub>, polarisation meas., Landau free energy expansion coeffs. 2-41260
- RbD<sub>2</sub>PO<sub>4</sub>, phase transitions and superlattice formation 2-41297
- RbH<sub>2</sub>AsO<sub>4</sub>, dielectric response meas., polarisation fluctuations 2-41282
- RbH<sub>2</sub>(SeO<sub>4</sub>)<sub>2</sub>, elec. props. near phase transition 2-41309
- RbLiMoO<sub>4</sub>, ferroelectric transitions, dielec. and elastic study 2-31408
- Rb<sub>2</sub>ZnBe<sub>4</sub>, ferroelec., dielec. props. 2-26833
- SrAlF<sub>6</sub> family, ferroelec. behaviour and phase transitions 2-31414
- Sr<sub>0.5</sub>Bi<sub>0.5</sub>Nb<sub>2</sub>O<sub>6</sub>:Cu ceramics, ageing study through photovoltaic effect 2-26432
- Sr<sub>2</sub>Ba<sub>1-x</sub>Nb<sub>2</sub>O<sub>6</sub>, electrets and photoelectrets 2-46463
- Sr<sub>2</sub>Ba<sub>1-x</sub>Nb<sub>2</sub>O<sub>6</sub>, inhomogeneous cryst., polarisation reversal 2-26810
- SrF<sub>2</sub>:LaF<sub>3</sub>, polarisation effects associated with space charges, ionic thermal current meas. 2-13400
- SrTiO<sub>3</sub>, dielectric nonlinearity study 2-2177

**dielectric polarisation continued**

- SrTiO<sub>3</sub>, electrets and photoelectrets 2-46463
- Tl<sub>3</sub>TaS<sub>4</sub>, spontaneous polarisation, pyroelectric current meas. 2-36514
- dielectric power factor** see power factor
- dielectric properties of gases**
- dielectric fluids, electric field effects, statistical mechanics 2-2189
- dipolar fluid mixtures, dielectric const. investigation 2-2173
- hexafluoropropylene, dielec. strength under breakdown and prebreakdown conditions 2-25486
- monatomic fluid, dielectric const., polarisability, classical description 2-2174
- vapour-mist dielectrics, cooling and insulating media for vapour-cooled power transformers 2-16419
- CO<sub>2</sub>, collision induced absorption at 0.091 cm<sup>-1</sup>, rel. to dielec. losses 2-701
- D-T, dielec. consts. elec. cond., 20 to 26K, density depend. 2-35265
- SF<sub>6</sub>, dielectric strength, 500 to 1800K 2-30271
- dielectric properties of liquids and solutions**
- 4-alkoxyphenyl-4-alkylbenzoate nematic mixtures, anisotropic and dynamic scatt. props. 2-21002
- acetaldehyde aqueous solns., struct. and dielect. props. 2-5622
- alcohols, dipole correl. function calcs. from time domain spectroscopy data 2-46454
- 4-alkoxyphenyl-4-alkylcyclohexanecarboxylate nematic mixtures, anisotropic and dynamic scatt. props., mol. length effect 2-8424
- alkyd resin fractions, dielectric relax. and elec. cond. 2-46470
- 4-alkylamino-4'-cyanobiphenyls, mesomorphic liq. crystals, synthesis and props. 2-50530
- allyl bromide liq., dielect. relax. studies 2-26804
- allyl ethers liq., dielect. relax. studies 2-26804
- aniline, substituted, benzene soln., dielectric dispersion, relax. mechanism at MW frequencies 2-17397
- anilines, chloro- and nitro-subst., benzene soln., dielectric absorpt. study, relaxation times 2-21936
- 7-azaindole, self-assoc. in nonpolar solvents 2-41884
- azo compounds, dipole moment and dielectric relax. 2-51523
- benzene, cond. currents and space charge formation in dielec. liquids 2-5642
- benzoylformic acid, soln. cryst. and glassy state dipole moment, IR spectra, dielectric consts. 2-17388
- binary mixture, crit. resist. and dielec. anomalies at phase separation point, effective medium theory 2-1876
- bromobenzene, dielec. relax., effect of dilution (*Japanese*) 2-21937
- n-butyl isocyanate-n-nonyl isocyanate copolymer, dielec. relax. of isotropic and lyotropic solns. 2-21943
- charge generation in dielec. liq. by laminar flow in tube, quantitative theory 2-31434
- chlorobenzene, dielec. relax., effect of dilution (*Japanese*) 2-21937
- cholesteric liquid cryst., successive transitions in AC elec. field 2-40539
- cholesteric liquid crystal, dielec., high vel. amplitude struct. formation 2-35598
- cholesteryl laurate, liq. cryst. phase transformation, thermodielectric electret 2-46468
- cholesteryl laurate-cholesteryl caprylate mixture, smectic-C, ferroelec. and pyroelec. props. (*Rumanian*) 2-26826
- ciano bi-cyclohexanes, nematic liq. cryst., elec. permittivities and elastic consts. 2-17384
- ciano nematics, pre-transitional effects in elec. permittivity 2-16786
- p-cyanophenyl=p'-caproyloxybenzoate liq. cryst. cells, effect of dielec. coatings on charge carrier behaviour 2-51519
- dialcohols, dielec. relax. and permittivity (*Spanish*) 2-13403
- dielectric fluids, electric field effects, statistical mechanics 2-2189
- dielectrophoretic levitation, electrode geometries 2-3590
- dilute suspensions of colloids, dielect. response and conductivity 2-46458
- dimethylformamide, appl. soln., dielectric const. and struct. props. 2-13389
- dimethylsulphoxide, aq. soln., dielectric const. and struct. props. 2-13389
- dipolar fluid, two dimens., dielect. const. and thermodynamics 2-21931
- dipolar fluid in elec. field, bulk dielec. props. 2-36583
- dipolar fluid mixtures, dielectric const. investigation 2-2173
- discharge, short high-current, anodic and cathodic voltage drop determ. 2-8380
- N,N-disubstituted amides solns., self-association, dielectric permittivity anal. 2-13386
- EHD convection in liquid dielectrics by laser light scattering 2-12241
- electric current generation by laminar flow 2-12796
- electrically stressed liquid dielectrics, bulk electroconvection 2-12242
- electrodialytic polymers, charge carrier exchange with dielec. liquids 2-6063
- electrolytes, aq. solns., compressibility, structural aspects, electrostriction 2-40459
- electrolytes, dielectric permittivity, elec. saturation effects 2-51517
- electroviscous effect in dielectric liquids 2-12806
- ester liquid crystal mixtures for dynamic scattering at elevated temperatures 2-35387
- ethylcellosolve, dielectric permittivity, relax. processes 2-31373
- fluid, polarization density profiles for dipoles against an electrified wall in the MS and RLHNC approximations 2-25701
- fluids of classical deformable mols., dielect. const. 2-51514
- formaldehyde aqueous solns., struct. and dielect. props. 2-5622
- indole, substituted, high press. luminesc. in solns. 2-2326
- inert gases, fluid, intermolecular interaction influence on Kerr const. 2-36601
- iodobenzene, dielec. relax., effect of dilution (*Japanese*) 2-21937
- isomyl bromide, dielec. relax., effect of dilution (*Japanese*) 2-21937
- kerosene, dielectric const., depend. on electric field freq., magnetisation and applied mag. field 2-21930
- liquid crystal guest-host displays, dielec., electro-optical, and phase change props. 2-5043
- liquid crystal materials for field-effect electro-optical devices 2-12469
- liquid dielectric subjected to AC elec. field, behaviour of gaseous bubble 2-12244
- lossy solutions, EPR, solvent effects 2-28876
- macroions, cylindrical, elect. and convective polarization 2-21933
- MBBA, homeotropic nematic liquid crystal, ultrasound irrad., complex permittivity meas. 2-1387
- metal-dielectric liquid interfaces, charge transfer 2-13415
- methylcellosolve, dielectric permittivity, relax. processes 2-31373
- methylcellosolve-dimethoxyethane, dielectric permittivity, relax. processes 2-31373



**dielectric properties of liquids and solutions continued**

- N-methylformamide, aq. solns., dielectric relax., losses and consts. 2-21940  
 microemulsions and lyotropic liquid crystalline mesophase, dielectric props. 2-21477  
 microwave bridge method for meas. complex permittivity of liquids 2-23666  
 microwave radiation of water surface, dielectric property variations influence 2-47882  
 mineral oil under external bubble injection, electrically induced pressure 2-12243  
 monotomic fluid, dielectric const., polarisability, classical description 2-2174  
 monohydric alcohols, dielectric relaxation, mechanism of dipolar orientation (*Japanese*) 2-21938  
 nematic liquid cryst., dielec. relax. and glass transition 2-51526  
 nematic liquid cryst., electroconvective flow and domain instabilities 2-16561  
 nematic liquid cryst. mixtures containing different ring systems, elastic, dielec., and optical props. 2-12471  
 nematic liquid crystals, development and trends rel. to display appls. 2-5041  
 nematic liquid crystals, dynamic dielectric anisotropy rel. to mol. struct. 2-51515  
 neutral dielectric bodies, planar interface, polarisation theory 2-2178  
 nitroethane-cyclohexane, dielec. const. anomaly near crit. soln. point 2-36500  
 n-octyl bromide, dielec. relax., effect of dilution (*Japanese*) 2-21937  
 oil, transformer, ferrofluids, dielectric const., depend. on electric field freq., magnetisation and applied mag. field 2-21930  
 oil-external microemulsions, dielectric relax. over freq. range from 0.5 to 100 MHz, surface cond. 2-13406  
 organic liquids, dielectric const., mag. field depend. 2-26805  
 paraffin oil solvent, viscoelastic relax. at 9.8 GHz 2-31375  
 paraffin oil-benzene mixture solvent, viscoelastic relax. at 9.8 GHz 2-31375  
 5-n-pentyl-2-(4-n-nonyloxyphenyl)-1,3-dioxane, nematic phase, dielec. and electrooptic behaviour 2-36515  
 4'-pentylphenyl-4-alkyloxychalcogenbenzoates, refr. index and dielec. const. 2-30390  
 permittivity microwave reflection meas. in waveguide T-junction 2-15191  
 permittivity of liquids, electrode polarisation effect on meas. error 2-23668  
 phenolic Mannich bases, dielectric loss, IR study 2-26882  
 phenols, para-substituted, internal rotations, low temp. dielectric relax. study 2-15921  
 plane layer of dielectric liquid, overstable electrothermal instabilities 2-13432  
 sera from patients with different pathological conditions, differences in dielec. constant 2-47593  
 smectic phases, dielectric props. and struct. 2-12486  
 solid-liquid interfaces, effect of particles on electric-field induced phenomena 2-13412  
 solutions, dielec. const. theory 2-41251  
 solutions, solid-like contributions in liqs. and molar vol. from dielec. studies 2-20985  
 spheroidal drops, stability in homogeneous electric fields 2-25408  
 stressed dielectric liquids, cavitation dynamics 2-12188  
 thiophenols, para-substituted, internal rotations, low temp. dielectric relax. study 2-15921  
 trans, trans-cyclohexyl cyclohexanoates, liq. cryst., optical and dielec. const. 2-16576  
 water, permittivity meas., relax. behaviour at microwave freq. 2-41254  
 H<sub>2</sub>O, permanent dipole and quadrupole moment on thermodynamic char. of hydrophobic effect 2-21327  
 He, breakdown, electrode surface influence 2-2186  
 He, first voltage breakdown, electrode behaviour 2-2185  
 He, liquid, pulsed electric breakdown delay time 2-36527  
<sup>3</sup>He-A, dielectric const., anisotropy meas. 2-45658  
 LiClO<sub>4</sub>, ionic clusters in low dielec. const. media, conductivity meas. 2-35723

**dielectric properties of solids**

- t-nitrobutane, dielec. behaviour and mol. motion near 215K phase transition 2-2176  
 alkali metal halide, crystals, photoelasticity, interionic pots., permittivity 2-36594  
 amorphous material, hopping transport, dielec. polarisation 2-5407  
 bis(methylammonium)tetrachlorozincate, struct. phase transitions, X-ray diff., thermal, dielec. and optical meas. 2-45566  
 bis tetramethyl ammonium tetrabromocobaltate, phase transition, dielec. meas. 2-45558  
 bis tetramethyl ammonium tetrabromocuprate, phase transition, dielec. meas., ferroelectricity obs. 2-45558  
 bis tetramethyl ammonium tetrabromozincate, phase transition, dielec. meas. 2-45558  
 boracites, dielec. anomalies 2-9110  
 breakdown discharge channel, oscillation, expt. obs. 2-46476  
 t-butyl derivatives, (CH<sub>3</sub>)<sub>2</sub>CX (X=Cl, Br, NO<sub>2</sub>, CN), mol. reorientation, calorimetry, dielectric, NMR, neutron and X-ray scatt. study 2-30421  
 cellulose acetate-polyvinyl acetate blend, TSC obs. of polarisation behaviour, blending influence 2-46465  
 charge storage and transport in dielectrics, corona method 2-8860  
 conference, Canterbury, England (Sept. 1980) 2-6707  
 constants and structural data calc. from optical reflection spectra using Kramers-Kronig anal. (*German*) 2-26809  
 crystal growth techniques in search for new materials 2-36772  
 devil's staircase, light scatt., dielec. and elastic props. 2-41314  
 dicalcium strontium propionate, paraelec. phase, struct. and optical activity 2-30454  
 dimethyl tin difluoride cryst. methyl group rotation 2-35411  
 EBBA, dielec. props. in metastable and stable cryst. phases, -30° to 25°C 2-9072  
 electric field distributions, stress wave probing 2-17428  
 electric waves, transverse, propagation in dielec. doubly periodic struct. 2-821  
 ferroelectric crystals with antiparallel layer domains, dielec., piezoelec. and elastic props. 2-46521  
 ferroelectric thin films, UHF dielectric props. 2-41284  
 ferroelectrics, dielectric properties in incommensurate phase region 2-41286

**dielectric properties of solids continued**

- ferroelectrics, nonlinear dielec. props., mag. field effects 2-31420  
 ferroelectrics, nonvarying and decreasing of P<sub>r</sub> with cooling from T<sub>c</sub> 2-17420  
 fluorocarbon polymer films, prep. by RF sputtering and plasma polymerisation of freons, elec. and optical props. 2-21705  
 heteroorganoplast composites, prep., mech. and elec. props. 2-36836  
 hostaphan, thin sheets, electret props., thermally stimulated depolarisation 2-2179  
 ice, dielectric constant, theory 2-9071  
 ice Ih, ferroelec. phase transition and dielec. const. anisotropy 2-26832  
 incommensurate phase, light scatt., dielec. and elastic props. 2-41314  
 ionic crystals, Yamashita-Kurosawa dielec. theory, optic mode frequencies and Gruneisen parameters 2-25994  
 Kapton, irradiated dielectrics, material parameters effect on charging characts. 2-40997  
 lauric acid, dielec. permittivity and loss, anomalous behaviour due to defect and impurity centres 2-9070  
 layered media, oscillatory elec. instability accompanying charged particle motion, space charge wave prop. 2-9088  
 liquid crystals, pyroelec. props. 2-9095  
 lithium acetylacetonate, dielec. behaviour and IR spectra 2-13390  
 local field, Clausius-Mossotti relation, statistical interpretation 2-48450  
 low temperature effects on dielec. const. and loss, review 2-9086  
 low-mobility transport in perfect dielec. crystals 2-8801  
 lunar soil samples study by EPR and microwave meas. (*Rumanian*) 2-28362  
 many-body universal approach to dielec. relax. of solids 2-9084  
 methyl methacrylate-styrene and methyl methacrylate-p-chlorostyrene copolymers, dielec. relax. and glass transition temp. 2-46472  
 mono-methyl pyridines, cryst. methyl group rotation 2-35411  
 molecular correlation function approaches to dielec. relax., review 2-9083  
 molecular mechanisms underlying dielec., mech. and NMR relax. 2-9085  
 Nafion perfluorosulphonate membranes, low temp. behaviour, proton NMR, neutron scatt., dielectric and Mossbauer meas. 2-52245  
 neutral dielectric bodies, planar interface, polarisation theory 2-2178  
 (NH<sub>4</sub>)<sub>2</sub>FeF<sub>6</sub>, low temp. phase, remanent polarisation (*French*) 2-31371  
 n-p-octyloxybenzylidene-p-toluidine, liq. cryst., dielec. relax. in solid phases at low temperatures 2-2184  
 one-dimensional box model, effect of weak hopping on behaviour 2-21957  
 one-dimensional conductor, temp. and freq. depend. complex dielec. const., depolarisation factor 2-21516  
 permittivity of crystals and generalised f theorem 2-13393  
 PMMA, electron avalanche, acoustic emission meas. 2-51239  
 polyacetylene films, 1-doping profile, dielec. and X-ray anal. study 2-45239  
 polymers, dielec. meas. in ionising radiation field, at 10 Hz freq., -100 to 200°C 2-36498  
 polyolefins, electrically stressed, kinetics of degradation 2-17891  
 polyolefins, fluorinated, dielectric props., glass transition dissipation factor 2-21959  
 polypropylene magneto-electret, dielectric behaviour effect of duration of poling mag. field 2-31368  
 polystyrene: Cu phthalocyanine films, dielec. props. 2-21939  
 polystyrene, thermomagnetically treated, thermally stimulated discharge current 2-51518  
 PTFE, electron avalanche, acoustic emission meas. 2-51239  
 PTFE in liquid N<sub>2</sub> in strong electric field, durability study 2-47202  
 PVC films, diffusion of benzene, toluene and styrene (*Russian*) 2-26144  
 quasi-one-dimensional metals, amplitude solitons and cond. 2-30875  
 resorption current, determ. from initial space charge distrib. 2-31377  
 Rochelle salt, deuterated, dielec. relax. and complex dielec. const. (*Russian*) 2-26815  
 Rochelle salt-powdered mica-wood dust-shellac mixture, 3 cm dielec. behaviour 2-46452  
 silicate glasses, dielec. props. and struct., liquation regions 2-5623  
 space charge distribution, determ. from resorption current 2-31376  
 streamers of solid dielectrics, theoretical props., model 2-17405  
 Teflon, irradiated dielectrics, material parameters effect on charging characts. 2-40997  
 TGS: α-alanine, Cu(Cr), spontaneous polarisation and internal field 2-51521  
 TGS: α-alanine near phase transition, thermal capacity and dielectric props., hydrostatic press. effect (*Russian*) 2-16811  
 TGS, single cryst., pyroelec. props. at elec. bias field 2-21950  
 TGS crystal growth from soln. with ethyl alcohol additions 2-36773  
 thermal-dielectric quotient for characterizing dielectric heat conductors 2-16912  
 triglycine sulfate, doped with substitutional and interstitial impurities, elec. props. and domain struct. 2-21951  
 trissarcosine calcium chloride, switching parameters, temp., elec. field and press. depend. 2-26811  
 Ag<sub>4</sub>IWO<sub>4</sub>, ionic cond., AC cond. and dielec. response 2-26112  
 Ag<sub>3</sub>Si(Br), structural phase transition, dielec. and neutron scatt. studies 2-16777  
 Al<sub>2</sub>O<sub>3</sub> film, anodised amorphous, DC cond. and dielec. polarisation, thickness depend. and defects role 2-30987  
 As-Ge-Te glasses, pure and doped, elec. and dielec. props. 2-17075  
 As-Se glasses, dielectric consts., loss tangents, depend. on composition 2-17386  
 As<sub>2</sub>Ge<sub>10</sub>Te<sub>55</sub>, amorphous, dielec. const. and loss meas. 2-17390  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, isothermal dielec. relax currents 2-46473  
 As<sub>2</sub>Se<sub>3</sub>, glassy, dielec. losses and permittivity, temp. depend. 2-2182  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, dielec. const. and loss meas. 2-17390  
 B, borides and related compounds, conf., Uppsala, Sweden (June 1981) 2-38358  
 B<sub>2</sub>O<sub>3</sub>-CaO-V<sub>2</sub>O<sub>5</sub>-V<sub>2</sub>O<sub>4</sub>, DC and AC elec. props. 2-36504  
 BaF<sub>2</sub>, rare earth doped, R=rare earth, cluster relaxation meas. 2-9079  
 Ba<sub>1-x</sub>La<sub>x</sub>F<sub>2+x</sub>, small-signal AC response, 300 to 820K 2-40594  
 Ba<sub>1-x</sub>La<sub>x</sub>F<sub>2+x</sub>, superionic cond., cond. enhancement and dielec. response 2-16884  
 Ba<sub>0.4</sub>Sr<sub>0.6</sub>Nb<sub>2</sub>O<sub>8</sub>, dielec. anomalies 2-26813  
 BaTiO<sub>3</sub>:Co, diffuse phase transition, dielec. meas. 2-9104  
 BaTi<sub>1-x</sub>Sn<sub>x</sub>O<sub>3</sub>, phase transitions, dielectric props. 2-46510  
 BaTi<sub>1-x</sub>Zr<sub>x</sub>O<sub>3</sub>, phase transitions, dielectric props. 2-46510  
 Bi<sub>2</sub>GeO<sub>20</sub> single cryst., dielec. losses and permittivity 2-17398  
 BiSi, permittivity at microwave freq., 2-36503  
 BiSeI, permittivity at microwave freq., 2-36503  
 Bi<sub>2</sub>SiO<sub>20</sub>, photoelectret state 2-31372  
 Bi<sub>2</sub>SiO<sub>20</sub> single cryst., dielec. losses and permittivity 2-17398



**dielectric properties of solids continued**

- Bi<sub>2</sub>Ti<sub>3</sub>O<sub>12</sub>, ceramics, grain oriented, fabrication and elec. props. 2-31662  
 CaF<sub>2</sub>, rare earth doped, R=rare earth, cluster relaxation meas. 2-9079  
 CaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, sintered ceramic, dielec. props. 2-9081  
 Ca<sub>3</sub>(VO<sub>4</sub>)<sub>2</sub>, electrophys. props., struct. transitions influence 2-41250  
 CeO<sub>2</sub>:Y<sub>2</sub>O<sub>3</sub>, dil. solid solns., network of charged defects, dielec. relax. 2-21944  
 CsCl, cryst. slab of oscill. charges, elect. field K-depend. 2-5650  
 CsH<sub>2</sub>AsO<sub>4</sub> and Cs<sub>2</sub>AsO<sub>4</sub>, dielectric response meas., polarisation fluctuations 2-41282  
 CsHSO<sub>4</sub>, phase transition, dielec. const. and sp. ht. study 2-13388  
 CsHSO<sub>4</sub>, phase transition at 128°C, dielec. permitt., DTA and dielec. permitt. thermal hysteresis meas. 2-35674  
 CsHSeO<sub>4</sub>, phase transition, dielec. and thermal studies 2-45557  
 CsZnI<sub>4</sub>, phase transitions, dielec. study 2-26807  
 α-Fe<sub>2</sub>O<sub>3</sub>, high dielec. const. and anomalous charact., 500 Hz to 1.6 MHz 2-31364  
 GaAs, anodic oxide film, comp. and dielec. strength, SIMS study 2-47214  
 GaAs, dielectric functions, impurity scatt., Thomas-Fermi theory 2-51097  
 GaN film, RF reactively sputtered, dielec. props. 2-13422  
 Ge, chemical etching and cleaning procedures 2-2597  
 Ge, chemical etching and cleaning procedures 2-9437  
 GeO<sub>2</sub>-Na<sub>2</sub>O glasses, transport props., impurity OH effect 2-8668  
<sup>3</sup>He, magnetically ordered, dielec. tensor 2-21424  
 III-V semiconductors, chemical etching and cleaning procedures 2-2597  
 III-V semiconductors, chemical etching and cleaning procedures 2-9437  
 InSb, anodic oxide film, comp. and dielec. strength, SIMS study 2-47214  
 KH<sub>2</sub>AsO<sub>4</sub> and KD<sub>2</sub>AsO<sub>4</sub>, dielectric response meas., polarisation fluctuations 2-41282  
 KH<sub>2</sub>PO<sub>4</sub>, dielectric props., conduct., multilayer capacitor, electrooptic study 2-13394  
 KH<sub>2</sub>PO<sub>4</sub>, dielectric response meas., polarisation fluctuations 2-41282  
 KH<sub>2</sub>PO<sub>4</sub>, ferroelec., dielectric props., plastic deform. and radiation defect influence 2-36502  
 KIO<sub>4</sub>, dielec. props. and cond. 2-36501  
 K<sub>2</sub>Mg<sub>2</sub>Ti<sub>3</sub>-xO<sub>16</sub>-Cs, one-dimens. superionic cond., freq. depend., dielec. response 2-1663  
 K<sub>2</sub>SeO<sub>4</sub>, ferroelectric transitions and quantum effects, high press. effect 2-41293  
 KTa<sub>1-x</sub>Nb<sub>x</sub>O<sub>3</sub>, surface layer, acoustic reson. and dielec. susceptibility meas. 2-2175  
 KTaO<sub>3</sub>:Li, defect induced fluctuations, dielec. and optical props. meas. 2-26889  
 LiGaSe<sub>3</sub>, dielectric const. and bond parameters 2-51513  
 LiInSe<sub>2</sub>, dielectric const. and bond parameters 2-51513  
 LiKSO<sub>4</sub>, pyroelectric, piezoelectric, dielectric and structural props. 2-46487  
 LiNbO<sub>3</sub>, bicrystal, thermal bonding, influence of planar diffusion bonded boundaries on props. 2-26840  
 LiTaO<sub>3</sub>, single cryst., dielec. and pyroelec. props. 2-31385  
 MnO, dielectric anomaly near mag. phase transition 2-26808  
 MnO, dielectric anomaly near mag. phase transition 2-36493  
 Mn<sub>0.5</sub>Zn<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub>, polycrystalline, permittivity, conductivity and dielectric relax. 2-5625  
 (NH<sub>4</sub>)<sub>2</sub>AlF<sub>6</sub>, low temp. phase, remanent polarisation (French) 2-31371  
 (NH<sub>4</sub>)<sub>2</sub>ZnCl<sub>4</sub>, ferroelec. phase transitions, dielec., thermal, and X-ray diff. meas. 2-2201  
 NaBH<sub>4</sub> complex with polyethylene oxide, ionic correl. and dielec. loss 2-17400  
 NaCl, cryst. slab of oscill. charges, elect. field K-depend. 2-5650  
 NaH<sub>2</sub>(SeO<sub>3</sub>)<sub>2</sub>, single cryst., pyroelec. props. at elec. bias field 2-21950  
 NaIO<sub>4</sub>, dielec. props. and cond. 2-36501  
 Na<sub>3-x</sub>K<sub>x</sub>W<sub>2</sub>O<sub>8</sub>, crystallographic and dielectric props., new materials having chiolite related struct. 2-17423  
 Na<sub>3-x</sub>Li<sub>x</sub>W<sub>2</sub>O<sub>8</sub>, crystallographic and dielectric props., new materials having chiolite related struct. 2-17423  
 NaNO<sub>2</sub>, <sup>23</sup>Na nuclear spin-lattice relaxation near phase transition 2-41220  
 NaSCN complex with polyethylene oxide, ionic correl. and dielec. loss 2-17400  
 PbO, single cryst., dielec. const. meas. 2-41253  
 Pb(Zr,Ti)O<sub>3</sub>, solid solutions, pyroelectric and dielectric props. 2-13424  
 Pb(Zr<sub>0.5</sub>Pb<sub>0.5</sub>)O<sub>3</sub>, Pb,FeNbO<sub>4</sub> system, pyroelec. ceramics 2-46489  
 Pb(Zr<sub>1-x</sub>Ti<sub>x</sub>)O<sub>3</sub>, ferroelec., nature of morphotropic transition region 2-31426  
 Rb<sub>2</sub>D(SeO<sub>4</sub>)<sub>2</sub>, dielec. const. and phase transition 2-13387  
 RbH<sub>2</sub>AsO<sub>4</sub>, dielectric response meas., polarisation fluctuations 2-41282  
 Rb<sub>2</sub>H(SeO<sub>4</sub>)<sub>2</sub>, dielec. const. and phase transition 2-13387  
 Rb<sub>2</sub>ZnBe<sub>4</sub>, ferroelec., dielec. props. 2-26833  
 SbSI and SbS<sub>0.7</sub>Se<sub>0.3</sub>I, soft phonon modes near phase transition, microwave dielec. spectroscopy 2-31363  
 Sb(Sb<sub>1-x</sub>Nb<sub>x</sub>)O<sub>4</sub> single crystal, synthetic, dielec. props., crystn. parameter variation 2-51511  
 SbSeI, permittivity at microwave freq., 2-36503  
 Si, chemical etching and cleaning procedures 2-2597  
 Si, chemical etching and cleaning procedures 2-9437  
 SiO<sub>2</sub>, fused, irradiated dielectrics, material parameters effect on charging charact. 2-40997  
 (Sr,Ba)Nb<sub>2</sub>O<sub>6</sub> ceramics, hot-pressed, props. 2-26806  
 Sr<sub>0.6</sub>Ba<sub>0.39</sub>Nb<sub>0.6</sub>O<sub>6</sub> single cryst., microwave dielec. props. at 35 and 58 GHz 2-26841  
 Sr,Ba<sub>1-x</sub>Nb<sub>x</sub>O<sub>6</sub>, inhomogeneous cryst., polarisation reversal 2-26810  
 SrF<sub>2</sub>, rare earth doped, R=rare earth, cluster relaxation meas. 2-9079  
 Ta<sub>2</sub>O<sub>3</sub> thin films, elec. props. and XPS-AES anal. for thermal, reactive and anodic types 2-17177  
 TlBr-TlI KRS-5 crystals at 95 GHz, meas. of permittivity and loss tangent 2-51512  
 TlBr-TlI(TlCl), permitt. and loss tangent meas. at 95 GHz 2-41255  
 TlCl-TlBr KRS-6 crystals at 95 GHz, meas. of permittivity and loss tangent 2-51512  
 Ti<sub>2</sub>SnSe<sub>8.6</sub>, glassy, dielec. losses and permittivity, temp. depend. 2-2182  
 YIG, electrostriction meas. 2-10820

**dielectric properties of substances**

see also antiferroelectricity; dielectric depolarisation; dielectric function; dielectric materials; dielectric measurement; dielectric phenomena; dielectric polarisation; dielectric properties of gases; dielectric properties

**dielectric properties of substances continued**

of liquids and solutions; dielectric properties of solids; electric strength; optical susceptibility; permittivity; piezoelectricity; pyroelectricity  
 benzene, monosubstituted derivatives, interface response, dielectric relax., permittivity meas. (French) 2-17396

**dielectric relaxation**

see also dielectric resonance

- acetaldehyde aqueous solns., struct. and dielect. props. 2-5622  
 alcohols, dipole correl. function calcs. from time domain spectroscopy data 2-46454  
 alcohols, monohydric, mechanism of dipolar orientation (Japanese) 2-21938  
 alcohols, normal primary, dielectric permittivity and relaxation (Spanish) 2-31361  
 alkyl resin fractions, elec. props. 2-46470  
 allyl bromide liq., dielect. relax. studies 2-26804  
 allyl ethers liq., dielect. relax. studies 2-26804  
 amorphous material, hopping transport, dielec. polarisation 2-5407  
 aniline, substituted, benzene soln., dielectric dispersion, relax. mechanism at MW frequencies 2-17397  
 anilines, chloro- and nitro-subst., benzene soln., dielectric absorpt. study, relaxation times 2-21936  
 azo compounds, dipole moment and dielectric relax. 2-51523  
 benzene, monosubstituted derivatives, interface response, dielectric relax., permittivity meas. (French) 2-17396  
 benzophenone anion solvation in n-propanol at 146K investigated by pulse radiolysis, absorpt. spectra 2-52242  
 bromobenzene, dielec. relax., effect of dilution (Japanese) 2-21937  
 n-butanol in tetrachloromethane solns., dielec. relax. and dipole moments 2-13405  
 t-butyl derivatives, (CH<sub>3</sub>)<sub>3</sub>CX (X=Cl, Br, NO<sub>2</sub>, CN), mol. reorientation, calorimetry, dielectric, NMR, neutron and X-ray scatt. study 2-30421  
 n-butyl isocyanate-n-nonyl isocyanate copolymer, dielec. relax. of isotropic and lyotropic solns. 2-21943  
 cellulose acetate-polyvinyl acetate blend, TSC obs. of polarisation behaviour, blending influence 2-46465  
 chlorobenzene, dielec. relax., effect of dilution (Japanese) 2-21937  
 cholesteryl halopropionate, mesomorphism, phase transition study and dielec. relax. meas. 2-12743  
 dialcohols, dielec. relax. and permittivity (Spanish) 2-13403  
 dimethacrylate dense network polymer compositions, thermal, strain-strength and struct. props. (Russian) 2-30515  
 disperse systems, of spherical particles, dielectric relaxation profiles 2-2180  
 ethylcellosolve, dielectric permittivity, relax. processes 2-31373  
 formaldehyde aqueous solns., struct. and dielect. props. 2-5622  
 heptanol in tetrachloromethane solns., dielec. relax. and dipole moments 2-13405  
 4-n-heptylamino benzoic acid, in mixtures with 4-cyano benzoic acid and 4-fluoro benzoic acid, dielec. rels. 2-13385  
 4-n-heptyloxybenzylideneamino-4'-cyanobiphenyl 2-12748  
 ice, dielectric relax. by charged dislocation process 2-31374  
 internal vectorial variables, transformations in thermodynamic theory of dielectric relaxation 2-36517  
 intervalence mixtures and charge transfer adducts, site-transfer electronic cond., dielectric relax., hopping mechanism 2-13073  
 iodobenzene, dielec. relax., effect of dilution (Japanese) 2-21937  
 isomyl bromide, dielec. relax., effect of dilution (Japanese) 2-21937  
 liquid crystal, smectic, dipole ordering, antiferroelec. and helicoidal types 2-35380  
 liquids, dielec. relax., effect of dilution (Japanese) 2-21937  
 low temperature effects on dielec. const. and loss, review 2-9086  
 lutidines, 2,4-, 2,6- and 3,5-, dielectric relax. and dipole moment at microwave freq. 2-46471  
 many-body universal approach to dielec. response of solids 2-9084  
 methyl methacrylate-styrene and methyl methacrylate-p-chlorostyrene copolymers, dielec. relax. and glass transition temp. 2-46472  
 methylcellosolve, dielectric permittivity, relax. processes 2-31373  
 methylcellosolve-dimethoxyethane, dielectric permittivity, relax. processes 2-31373  
 N-methylformamide, aq. solns., dielectric relax., losses and consts. 2-21940  
 molecular correlation function approaches, review 2-9083  
 molecular mechanisms underlying dielec., mech. and NMR relax. 2-9085  
 nematic liquid cryst., dielec. relax. and glass transition 2-51526  
 nematic phases, freq. depend. of threshold voltage of Fredericksz effect 2-45018  
 nonlinear theory, phonon mean free path 2-5626  
 nylon 66 film, water effect on secondary dielec. relax. 2-26814  
 n-octyl bromide, dielec. relax., effect of dilution (Japanese) 2-21937  
 n-p-octyloxybenzylidene-p-toluidine, liq. cryst., dielec. relax. in solid phases at low temperatures 2-2184  
 4-n-octyloxybenzylideneamino-4'-cyanobiphenyl, new low temp. phase, enthalpy, dielectric relax. 2-12748  
 oil-external microemulsions, dielectric relax. over freq. range from 0.5 to 100 MHz, surface cond. 2-13406  
 paradox in dielec. discharge current form., speculations 2-9082  
 paraffin samples, low temp. dielec. relax., deuteration shifts 2-5620  
 PBMA, antiplasticised, dielec. relax. 2-21942  
 phenols, para-substituted, internal rotations, low temp. dielectric relax. study 2-15921  
 phenols, substituted, intramol. H bonded, dielec. relax. processes 2-2183  
 piezoelectric relaxation in ferroelectric AgNa(NO<sub>2</sub>)<sub>2</sub> 2-41276  
 polyethylene, low temp. dielec. relax., deuteration shifts 2-5620  
 polyethylene terephthalate film, thermally stimulated polarisation current on heating, cooling and reheating (Japanese) 2-31370  
 polymer, thermomechanical pretreatment effect on struct. and physical props. (German) 2-31714  
 polymer, water tree growth rate, freq. dependence rel. to dielec. relaxation in host 2-13421  
 polymer chain dynamics, 1-D Ising model, dielectric relax. 2-4433  
 polypropylene films, TSC studies 2-21935  
 polyvinylidene fluoride, nature of pyroelectricity 2-2194  
 polyvinylidene fluoride, nature of pyroelectricity at low temps. 2-9096  
 propanol in tetrachloromethane solns., dielec. relax. and dipole moments 2-13405  
 propylene carbonate, DC conductivity, permittivity and dielec. relaxation of supercooled liquid, 5 mHz to 5 MHz 2-5411  
 PTFE-polyhexafluoropropylene electret, charge relaxation, surface phenomena role 2-17399



**dielectric relaxation continued**

- quartz crystals, electrical characts., gamma ray effects 2-21941  
 Rochelle salt, deuterated, dielec. relax. and complex dielec. const. (*Russian*) 2-26815  
 Rochelle salt, dynamical study including proton-optical phonon interaction 2-36547  
 rubber, aerosol filled, dielec. relax. mol. mobility, strain effects (*Russian*) 2-46474  
 segmented ester polyurethane, ultrasonic and dielectric meas. 2-12694  
 semiconductor diode struct., permittivity temp. depend. influence on current-voltage characts. 2-36053  
 semiconductors, quasiintrinsic lifetime and relax. regimes, high injection levels 2-46026  
 smectic phases, dielectric props. and struct. 2-12486  
 o-terphenyl, supercooled liq., homodyne light beating spectroscopy 2-31521  
 TGS, Brillouin scatt. in pure and  $\gamma$ -irrad. crystals 2-36656  
 thin film dielectric structures and dielectrics with relaxation polarisation, dielectric relaxation process anal. from experimental results (*Czech*) 2-9078  
 thiophenols, para-substituted, internal rotations, low temp. dielectric relax. study 2-15921  
 transient-state model accounting for lag of cooperative effect, dielec. susceptibility effects 2-5627  
 vectorial internal variables and dielectric and magnetic relaxation phenomena 2-36516  
 viscous liqs. polarisable dipolar mols., dynamic Kerr effect and dielec. relax., linear and non-linear effects 2-29640  
 water, permittivity meas., relax. behaviour at microwave freq. 2-41254  
 Ag<sub>2</sub>HgI<sub>4</sub> superionic conductor, ionic cond. and dielec. relaxation 2-16853  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sup>+</sup>, mech. and elec. relaxation meas. 2-16718  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, AC cond. and dielec. loss,  $10^2$  to  $10^{11}$  Hz 2-26123  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, superionic conductor, low freq. responses, model 2-21361  
 As-Ge-Te glasses, pure and doped, elec. and dielec. props. 2-17075  
 As<sub>2</sub>S<sub>3</sub>, amorphous, isothermal dielec. relax currents 2-46473  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, isothermal dielec. relax currents 2-46473  
 As<sub>2</sub>Se<sub>3</sub> glass, AC transport and struct. relax. 2-40904  
 BaF<sub>2</sub>, rare earth doped, R=rare earth, cluster relaxation meas. 2-9079  
 BaF<sub>2</sub>:R (R=rare earth), dipole complex relax. 2-17393  
 Ba<sub>1-x</sub>La<sub>x</sub>F<sub>2+x</sub>, small-signal AC response, 300 to 820K 2-40594  
 Ba<sub>1-x</sub>La<sub>x</sub>F<sub>2+x</sub>, superionic cond., cond. enhancement and dielec. response 2-16884  
 Ba<sub>0.4</sub>Sr<sub>0.6</sub>Nb<sub>2</sub>O<sub>6</sub>, dielec. anomalies 2-26813  
 CaF<sub>2</sub>, rare earth doped, R=rare earth, cluster relaxation meas. 2-9079  
 CaF<sub>2</sub>:R (R=rare earth), dipole complex relax. 2-17393  
 CdF<sub>2</sub>:NaF, surface polarisation model, comparison with TSC and dielec. relax. data 2-9075  
 CeO<sub>2</sub>:Y<sub>2</sub>O<sub>3</sub> dil. solid solns., network of charged defects, dielec. relax. 2-21944  
 Cs(H<sub>1-x</sub>D<sub>x</sub>)<sub>2</sub>PO<sub>4</sub>, RF complex dielectric const., sound velocity 2-41247  
 $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, high dielec. const. and anomalous characts., 500 Hz to 1.6 MHz 2-31364  
 GeO<sub>2</sub>-Na<sub>2</sub>O glass, low alkali, dielectric relaxation strength 2-51525  
 GeO<sub>2</sub>-Na<sub>2</sub>O glasses, transport props., impurity OH effect 2-8668  
 KH<sub>2</sub>(<sub>1-x</sub>)D<sub>2</sub>PO<sub>4</sub>, polarisation relax., light scatt. study 2-41261  
 KH<sub>2</sub>PO<sub>4</sub>, piezoelectric polarisation oscills. near phase transition 2-41259  
 K<sub>2</sub>SeO<sub>4</sub>, dielectric critical slowing-down near incommensurate-ferroelec. transition point 2-41296  
 LiClO<sub>4</sub> in solutions, dielect. relax. meas. 2-2181  
 LiNbO<sub>3</sub>, Bragg modulator, relax. processes 2-4586  
 Mn<sub>0.5</sub>Zn<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub>, polycrystalline, permittivity, conductivity and dielectric relax. 2-5625  
 NaClO<sub>4</sub> in solutions, dielect. relax. meas. 2-2181  
 Na<sub>2</sub>O-SiO<sub>2</sub> glass, elec. relax. from hydrated surface layers 2-13407  
 Pb(Zr<sub>1-x</sub>Ti<sub>x</sub>)O<sub>3</sub>, elec. props. study 2-45960  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, dielectric critical slowing-down near incommensurate-ferroelec. transition point 2-41296  
 SF<sub>6</sub>, dielectric strength, 500 to 1800K 2-30271  
 SrF<sub>2</sub>, rare earth doped, R=rare earth, cluster relaxation meas. 2-9079  
 SrF<sub>2</sub>:R (R=rare earth), dipole complex relax. 2-17393  
 ZnMnFe<sub>0.25</sub>O<sub>4</sub>:Cr(Al)(In), dielec. props., elec. cond., mag. props., lattice constants, dopant effects 2-51524

**dielectric resonance**

- see also *dielectric relaxation; paraelectric resonance*  
 GaAs, nuclear electric resonance, dielectric loss meas. (*Russian*) 2-13429  
 KH<sub>2</sub>PO<sub>4</sub> type cryst., ferroelectric resonance and nonlinear effect 2-36545  
 PbTiO<sub>3</sub>-PbZrO<sub>3</sub>-PbNb<sub>2/3</sub>Mn<sub>2/3</sub>O<sub>3</sub>-PbW<sub>1/2</sub>Mn<sub>1/2</sub>O<sub>3</sub> systems, temp. stability of reson. freq., comp. depend. 2-41313

**dielectric strength see electric strength****dielectric susceptibility see optical susceptibility****dielectric thin films**

- see also *ferroelectric thin films; insulating thin films; optical films; piezoelectric thin films*  
 amorphous, electronic transport, review 2-8906  
 anodic oxide film, comp. and dielec. strength, SIMS study 2-47214  
 fluid, elec. forces influence on dynamics and stability 2-35870  
 granular composite films, microstruct. and dielec. props. 2-52063  
 ion implantation in microelectronics, bibliography 2-42809  
 Mylar electrets, high-resolution probing of space-charge densities using electron beam 2-9090  
 nylon film, mechano-electret, spontaneous TSC 2-46478  
 nylon film, space charge polarisation 2-36523  
 oxide film form. from laser plasma, operating mode 2-46913  
 perfluoroalkoxy film, nonmetallized electret, charge storage 2-36528  
 permittivity meas., using tuned window in microwave range 2-15193  
 permittivity microwave meas. by input impedance method 2-15194  
 polaron effect enhancement 2-21506  
 polyimide thin films, DC conduction mechanisms, current-voltage characts. over range 26°C to 100°C 2-17179  
 polymer electret film, polarization distrib. determ. using periodic heating 2-36529  
 polysiloxane films, anomalous props., permittivity dependence on temp. and press, resistivity 2-36165  
 PTFE-polyhexafluoropropylene electret, charge relaxation, surface phenomena role 2-17399  
 PVC-polyvinyl acetate copolymer films, secondary relaxation, PSD and TSD studies 2-46479  
 refractive index determ. using immersion liqs., ellipsometry and multiple-beam interferometry methods 2-10848

**dielectric thin films continued**

- regions of occurrence of E- and H-discharges, plasma dielectric films (*Russian*) 2-1355  
 SCL currents with Coulomb trapping centres 2-2022  
 space heating, heat mirror coatings for energy conserving windows 2-39723  
 styrene thin films, plasma polymerized, electric breakdown studies rel. to self-healing 2-13418  
 Teflon in MIM structure, charge storage and transport in electron-irradiated and corona-charged dielectrics 2-36167  
 thermoluminescent, laser heating 2-17558  
 thin film dielectric structures and dielectrics with relaxation polarisation, dielectric relaxation process anal. from experimental results (*Czech*) 2-9078  
 AlN covered p-CdTe, annealing effects (*Japanese*) 2-40609  
 Al<sub>2</sub>O<sub>3</sub> covered p-CdTe, annealing effects (*Japanese*) 2-40609  
 BaF<sub>2</sub> film, MBE grown dielectric 2-26820  
 Ba<sub>0.5</sub>Sr<sub>0.5</sub>TiO<sub>3</sub> films, microwave dielec. props., broad phase transition 2-46460  
 CaF<sub>2</sub> film, MBE grown dielectric 2-26820  
 GaAs, anodic oxide film, comp. and dielec. strength, SIMS study 2-47214  
 GaN film, RF reactively sputtered, dielec. props. 2-13422  
 Ge<sub>3</sub>N<sub>4</sub>-n-GaAs MIS devices, interface characts. determ. 2-30970  
 In, granular films, electron plasma oscills. 2-13197  
 LiF, vac. evap., intrinsic stress determ. using cantilevered plate technique 2-21472  
 MoO<sub>3</sub> films, capacitance, dielec. loss, and destructive breakdown study 2-51528  
 Si-rare earth oxide film MOS struct., negative resist., switching and signal generation 2-46149  
 Si<sub>3</sub>N<sub>4</sub> covered p-CdTe, annealing effects (*Japanese*) 2-40609  
 SiO<sub>2</sub> covered p-CdTe, annealing effects (*Japanese*) 2-40609  
 SiO<sub>2</sub> low temp. Photo-CVD oxide processing for semicond. device fabrication 2-51831  
 Yb<sub>2</sub>O<sub>3</sub> film on Cr, refractive index thickness depend., reflection ellipsometry study 2-46807

**dielectric triodes see space-charge limited devices****dielectrics see dielectric materials****diesel-electric locomotives**

- noise control research by General Motors 2-7975

**diesel engines see internal combustion engines****difference amplifiers see differential amplifiers****difference equations**

- boundless Markov chain, distrib. with continuous time (*Russian*) 2-10713  
 Cauchy problem, degenerating equations through method of finite differences (*Russian*) 2-10586  
 chemisorbed atoms, indirect interaction, Green's operator method. (*German*) 2-45734  
 discrete coordinates, orthogonalization method 2-3367  
 finite difference between divergent sum and integral 2-33273  
 glass melt, dissolution and growth of rising bubble containing single gas 2-35206  
 ice, vertical wall, melting into fresh water by free convection, finite difference calc. 2-4706  
 linear stochastic difference systems, moment stability 2-28778  
 liquid, incompressible viscous, conservative difference eqns. in Euler variables (*Russian*) 2-30375  
 magnetohydrodynamics, convergence of successive-pass method for difference scheme of one-dimensional system 2-44794  
 matrix Schrodinger spectral problem, evolution eqns. associated with discrete analogue 2-33340  
 Minkowski space, discrete dynamical difference eqns. 2-38426  
 multi-time expansion and universality in one-dimensional difference equation 2-33437  
 multiple solutions and bifurcation of finite difference approximations to some steady problems of fluid dynamics 2-33299  
 multisphere volume conductor, biopotentials, finite difference soln. 2-14230  
 myocardial pacemaker cells, entrainment model based on phase response curve 2-52465  
 neutron transport theory, finite-difference method loops, internal materials problems (*German*) 2-445  
 nonlinear multispecies Fokker-Planck calc. program, FPPAC, finite difference method 2-16427  
 one-dimensional steady state fluid problems, pseudo-unsteady difference schemes 2-6749  
 plane waves on sphere and some appl. 2-10979  
 plate, rectangular, linear elastic behaviour, finite difference soln. of first-order partial differential eqns. 2-1123  
 preturbulent states and renormalisation group for simple models 2-3493  
 projectile mushrooming, force calc. in one-dimens. finite difference model 2-16270  
 random repeated impact process, ball bouncing on randomly vibrating surface 2-35093  
 rectangular plates, semi numerical analysis 2-39817  
 Schrodinger eqn., one-dimens., eigenvalues and eigenvectors, difference eqn. method 2-3412  
 shell roof limit analysis 2-50111  
 subharmonic and superharmonic nonlinear oscillations, difference eqn. analysis 2-44554  
 transient analysis of solar air heaters using a finite difference technique 2-37180  
 transonic flow, steady three-dimens., about wing, computation by relax. method (*Chinese*) 2-4848  
 viscous flow computations, convergence accel. 2-15037  
 weather prediction, nonlinear computational instabilities (*Chinese*) 2-10109  
**difference amplifiers**  
 multiplexed electric sensor pairs bridge cct. arrangement with differential amplifier 2-48685  
**difference calculus see differentiation**  
**difference equations**  
 see also *boundary-value problems; difference equations; Green's function methods; integro-differential equations; linear differential equations; Navier-Stokes equations; nonlinear differential equations; partial differential equations*  
 asymptotic postbuckling stresses determ. 2-50138  
 beam, elastic, equilib. modes according to Hess soln. 2-25297



**differential equations continued**

- beam, thin-walled pretwisted, displacement and strain fields for extension, bending, torsion and warping 2-1127
- bimetallic disc stress anal. model 2-12023
- Bogomolny equation, spherically symm., corresponding lattice model, soliton solns. 2-48632
- calculus of variations, inverse problems 2-18876
- canonical systems of differential eqns., stationary solns. 2-32823
- cantilever column in elastic medium, buckling, differential eqns. 2-20565
- complex variable differential eqns. in shell theory, asymptotic solns. (Chinese) 2-44555
- compressible flow patterns, streamline coordinates use in numerical soln. 2-20700
- concrete structures stress, force method 2-50106
- continuum electrons in a Coulomb field, wave functions asymptotic form 2-42894
- degenerate four-wave mixing, two-dimens. vectorial theory, phase-conjugate image beam 2-958
- diffusion singular processes, stochastic differential eqns. for characterising 2-6730
- directed set of Sturm-Liouville operators, eigenvalues asymptotic estimates 2-42896
- discretisation error estimations (German) 2-23409
- dissipative solids with internal defects and imperfections, stability phenomena 2-16250
- distributional biharmonic equation 2-38448
- double strange attractors in rigid body motion with linear feedback control 2-18878
- dynamic response by means of functions of matrices 2-18887
- dynamic stability upon high-frequency parametric excitation 2-38421
- elastic-plastic torsion model 2-23421
- EM fields, appl. of Bergeron's method to anisotropic media 2-49627
- Euler-Lagrange eqns. differential geometry and Lagrangian dynamics inverse problem 2-3372
- gas suspension with capillary-porous particles, construction of flow-motion equations 2-44779
- groundwater flow, macroscopic differential eqns. from statistical mechanical theory 2-23031
- gyroscope calc., elastically suspended, nonstationary motion in magnetic fields (Chinese) 2-33513
- irreversible processes models and stochastic calculus 2-19021
- lagrangian systems, first integrals 2-42850
- linear dynamic system state vector meas. using Kalman-Bucy filter (Russian) 2-157
- linear evolution equations, stiff system, modified singular perturbation method 2-23406
- linear operator non-polynomial differential eqns., soln. method 2-33274
- Lorenz equations, mode truncation effect on periodic solutions 2-38441
- net, circular shroud, nonlinear vibr. 2-25298
- nonlinear creep buckling analysis of initially imperfect shallow spherical shells 2-12037
- nonstationary regimes in heat engineering systems, freq. methods appl. 2-10747
- optical fibres, single-mode, polarisation representation using Stokes parameters 2-39747
- ordered products of exponential operators by similarity transformations 2-38466
- Painleve type, rel. to evolution eqns. solvable by inverse scatt. 2-15088
- parallel nerve fibres stability properties 2-6221
- perfect gas, three-dimens. flows in narrow ducts 2-50315
- periodic systems, asymptotic stability on slow timescales 2-11162
- perturbed ladder operator method, eigenvalues and eigenfunctions from finite difference considerations 2-10638
- plates, weakened, strong fluctuations (Russian) 2-1126
- powder densification in pressing, differential eqns. 2-13669
- qualitative theory, relation to turbulence theory 2-23451
- rolling contact finite element model 2-12103
- Runge-Kutta-Nystrom 9th order formula with stepwise control (German) 2-23408
- shell, three-layer, carrying a moving inertial load, nonlinear oscillations 2-25295
- shells, cylindrical, with different boundary conditions, stability, boundary parameters method 2-8062
- skeletal frames, large displacement analysis 2-20521
- solar cells, semiconductor device equations, numerical solutions 2-52360
- solution method for diff. eqn. containing symbolic functions 2-28
- stiff ordinary differential equations, semiimplicit adaptive Runge-Kutta method soln. 2-22419
- stochastic dynamical systems, qualitative theory 2-3501
- Stokes equation, conditions for numerical solution (French) 2-38411
- structural elements, fundamental vibr. freq., collocation by derivatives approach 2-16256
- structure analysis, numerical integration comparison 2-39840
- symmetry, nonpointlike transforms. 2-23407
- thermoelement, anisotropic, temp. distrib. in mag. field, energy characts. optimisation 2-18109
- Thomas-Fermi atom, Poisson equation iterative solution 2-7503
- Tokamak, plasma transport eqns., numerical soln. 2-16428
- transient analysis of solar air heaters using a finite difference technique 2-37180
- transport eqns. in slab geometry, unified formalism for spatial discretisation schemes 2-49093
- Van der Pol and related equations, series solutions 2-48480
- vortex-in-cell method, exact extension to infinite domain 2-50277
- wave equations, one-dimensional, method of solution (Russian) 2-15059
- weak field eqns., cylindrically symmetric, static solns. 2-6766

**differential scanning calorimetry** see thermal analysis

**differential thermal analysis** see thermal analysis

**differentiation**

- see also differential equations
- interpolation formula using Taylor's formula of operational calculus (German) 2-10582
- quasi-differentiating concept, possible optical implementation 2-20259
- symbolic differentiation and substitution program 2-23415
- transient acoustic response of submerged shells, DAA2 and IDCA models 2-20575

**diffraction**

- see also acoustic wave diffraction; diffraction gratings; diffractometers; electromagnetic wave diffraction; electron diffraction; neutron diffraction
- detonation plane wave, diffr. round small angle, approx. analytical soln. (Chinese) 2-4859
- inverse diffraction, duality and optimal control 2-38447
- screens, spherical nonclosed, wave scatt. theory 2-33376
- three wave interaction, diffr. and dispersion effects 2-38453
- velocity inversion of diffracted waves 2-14415
- water waves, diffraction by short obstacles, numerical modelling 2-28092

**diffraction gratings**

- see also holographic gratings
- achromatic grating interferometer appls., emulsion refr. index effect 2-19166
- acousto-optic spectral analyser using grating components 2-7892
- acousto-optic spectrum analyser 2-11803
- apodisation use for stray light reduction 2-49886
- application in low energy X-ray region 2-28948
- asymmetric triangular grating profiles, with 90° groove angles, prod. by ion-beam erosion 2-1047
- blazed grating, very high X-ray efficiency 2-48853
- canonically blazed transmission gratings: analysis and modelling results in soft X-ray region 2-28966
- channel divider for fibre-optics communication lines with spectral multiplexing 2-39743
- coaxial open cavity with reflective diffraction grating, electrodynamics 2-11618
- convex reflection diffraction gratings, resolution testing 2-16094
- coupled-wave theory, invariant imbedding formulation 2-24935
- cylindrical concave diffraction grating, manufactured with multimode slab waveguide 2-25108
- DFB semiconductor lasers with chirped grating, axial-mode selectivity and threshold gain 2-4509
- dye laser, narrow band, tuned with two gratings (Chinese) 2-20346
- dye laser, single-mode pulsed 2-44281
- dye laser resonator, grating tuned, beam expanding prism influence on linewidth and expansion ratio 2-25040
- dye laser subnanosec. narrow linewidth pulse generation by grazing-incidence on two gratings 2-7796
- echelle grating, Bausch and Lomb R4, actual blaze angle 2-49884
- echelle spectrograph for image dissector tube 2-28906
- echelle spectrographs at grazing incidence 2-48799
- efficiency testing device, 0.7-25 µm region 2-49961
- faint object spectrograph 2-53090
- far IR surface wave, electromagnetic study of grating-enhanced excitation 2-39567
- far-zone coherence significance for sources or scatterers with hidden periodicity 2-49668
- fibre-optic magnetooptical grating switch 2-20412
- generalised ray-tracing for diffraction gratings of arbitrary form 2-11802
- grating-prism combination equivalence with Michelson transmission-type echelle 2-16091
- gratings, classical and crossed, microwave range of diffr., expt. investigation 2-825
- grazing-incidence grating for single-freq. tunable pulsed dye laser 2-39669
- holographic laser scanner for high resolution imaging appls. 2-11672
- holographic optical elements for laser radiation spectral and ang. charact. control 2-44212
- image transmission, two-dimens., through optical fibres by wavelength multiplexing 2-49943
- infinite plane grating, theory for EM wave diffr. 2-49632
- integrated optics, fabrication of gratings 2-20402
- jittered arrays of periodic structures, regularity diagnostic using diffr. patterns 2-860
- laser beam profile shaping with binary diffr. gratings 2-7820
- laser pulse properties and fast mol. relax. process investigation using combined laser-induced grating and transient-absorb. expts. 2-16046
- laser radars using linear detector arrays, beam profile shaping 2-49808
- laser resonator, wide-aperture, plane, field investigation 2-34806
- light radiation from dielectric waveguide, depend. on surface corrugation 2-20432
- linear encoder for imaging grating strip, spherical mirror 2-49684
- liquid cryst. diffr. gratings, diffr. maxima broadening 2-30388
- microgratings, electron-beam directly written, for integrated optical circuits 2-4618
- monolithic integrated microgratings and photodiodes for wavelength demultiplexing 2-44487
- non-Littrow mountings, perfect blaze in TM case, systematic numerical study 2-1013
- object surface slope meas. by transmission of a grating (German) 2-33495
- open dielectric waveguides, generalised two-dimensional coupled-mode anal. of curved and chirped periodic structures 2-1018
- optical constant measurement using transmission gratings in soft X-ray region 2-31439
- optical heterodyne detector with diffraction grating integrated onto surface of Si photodiode 2-7890
- optical heterodyne detector with integrated diffraction grating on diode surface 2-23721
- optical multi/demultiplexers for single-mode fibre transmission 2-16120
- optical periodic waveguides, microwave modelling 2-1021
- parallel plate grating with dielec. loading, diffr. of plane wave 2-34640
- perfect grating rhomb laser beam sampler, aberrations for diverging beam 2-25107
- periodic structure recording in photopolymer layers 2-34683
- periodic structures for guided-wave optical interferometer 2-4614
- phase diffr. gratings, efficiency expression 2-49673
- phase grating, diffusely illuminated, reversing-wave-front interferometry of radiation, coherence effect 2-48759
- phase grating fabrication using deep UV lithography 2-39730
- phase reflection gratings, higher-order modes 2-1012
- phenomenological theory of perfectly conducting grating 2-49887
- photofabrication techniques for producing optical scales, reticles, gratings, masks and standards 2-25148
- photon echo stimulated from accumulated freq. gratings, generation and detection, theory 2-20371
- planar demultiplexer with chirped grating for optical fibre systems, WDM technique 2-7887



**diffraction gratings continued**

- planar Rowland spectrometer for fibre-optic wavelength demultiplexing 2-33645  
 PMMA thin film masks, for use in electron beam lithography, thickness profile determ. 2-23784  
 Raman excitation of surface polaritons with surface roughness explained in terms of Wood anomalies of gratings 2-1844  
 Rayleigh's theory of partially reflecting gratings 2-4579  
 Rayleigh methods in reflection by grating, power balance and integrated-square errors 2-11617  
 Rayleigh surface wave propag. across large-amplitude grating 2-42872  
 reflection grating for millimetre and submillimetre waves (*Chinese*) 2-11800  
 reflection gratings, lossless, general modal theory 2-24940  
 rhodamine 6G dye laser with compounds resonator pumped by Xe-ion laser 2-16030  
 rotating diffr. gratings, light diffr. and dispersion 2-49664  
 ruling engine, machining devices; with piezoelectric control (*Japanese*) 2-20436  
 ruling engine, with piezoelectric control (*Japanese*) 2-20435  
 schlieren systems, coherent imagery of rectangular grating objects 2-851  
 SEM magnification standard, grating or conjugated struct. 2-10922  
 signal quality estimation by harmonic analysis (*Chinese*) 2-49885  
 surface EM waves, excitation by diffr. grating 2-16095  
 surface periodic gratings, guided wave scatt., perturbation field theory, normal-mode anal. 2-39562  
 test plate rulings for microscopy, comparison of works of Nobert, Fasoldt and Grayson 2-28639  
 thick grating focusing-device-design using Poynting-vector-optics 2-16092  
 thick-grating non-divergent focusing device, two dimens. analysis 2-7853  
 thin films optical const. meas. using transmission gratings in soft X-ray range 2-31574  
 thin plates and diaphragms, optical technique for defect detection 2-2662  
 thin-film DFB laser emission, wavelength tuning method 2-44351  
 transmission gratings as sampling target, image intensity control produced by spatial freq. sampling 2-854  
 transmission gratings for EUV, fabrication 2-1014  
 UV-PRIM astronomical spectrograph, aspherical diffraction gratings design (*French*) 2-32851  
 volume grating filtering characts. for zero-freq. elimination 2-4580  
 waveguides, composite, grating struct. investigation 2-34891  
 Wood's anomaly angular alignment gratings 2-1015  
 X-ray grating spectrometers, rocket- and satellite-borne (*Japanese*) 2-32840  
 X-ray spectroscopy using Au transmission diffraction gratings 2-28963  
 X-ray transmission grating spectrometer 2-28964  
 Ag gratings coated with dye monolayer assemblies, light emission 2-22075  
 As<sub>2</sub>S<sub>3</sub> amorphous film waveguide with optical grating devices 2-49901  
 Au transmission gratings with submicrometre spatial periods, fabrication, holographic lithog., X-ray lithog. and microplating 2-39728  
 CO<sub>2</sub> waveguide lasers containing diffr. grating, coupling losses 2-39619  
 CuCl, exciton and excitonic mol. diffusion const. determ. using tunable picosec. grating method 2-1839  
 GaAs (100) planes, grating corrugation form (*Chinese*) 2-20400  
 LiNbO<sub>3</sub>:Ti waveguide, segmented photoresist Bragg grating for static spatial filter 2-4617  
 SiO<sub>2</sub> high-aspect-ratio gratings, wet and dry processing technologies, UV polarizer appl. 2-39729

**diffraction instruments** see *diffractometers***diffraction model**

- diffraction  $\psi$  and  $D\bar{D}$  muon prod., azimuthal depend., gluon spin, parity and  $k_{\perp}$  test 2-24003  
 elastic scattering, scaling, diffraction, convergent polynomial expansion method 2-29093  
 identical particle scattering, diffractive eigenstates, cross-sections 2-48964  
 s-channel approach to diffractive processes 2-43318  
 $\gamma p \rightarrow \gamma p$ , 50-130 GeV, differential cross-section, diffractive forward peak 2-29112  
 $\gamma p \rightarrow pX$ , 20-140 GeV, diffractive photon dissc. 2-329  
 hp-hp, QCD Born approx. anal., diffractive prod. (*Russian*) 2-11075  
 $K^- p \rightarrow K^- \pi^+ \pi^-$ , 10, 16 GeV/c,  $K^- \pi^-$  scatt. information extraction based on one-pion exchange model 2-19403  
 $NN \rightarrow N\pi$ , diffractive dissociation, unified model with rescatt. (*Russian*) 2-11140  
 $np \rightarrow (\pi^+ p)p$ , diffractive dissociation, pseudovector  $\pi N$  interaction (*Russian*) 2-43381  
 $\nu N \rightarrow \mu^+ X$ ,  $J/\psi$  meson diffractive prod. via neutral currents 2-48973  
 pp, 100-300 GeV, forward elastic scatt., hadronic diffraction cone universal shrinkage 2-49012  
 $pp \rightarrow A_c^+ X$ , diffractive production of charm, parton distrib., QCD evolution role 2-29073  
 $pp \rightarrow pX$ , ISR energies, inclusive diffr. dissc. 2-43388  
 $\pi N \rightarrow \pi^+ \pi^-$  excited pion state prod. during 40 GeV diffractive dissociation (*Russian*) 2-19402  
 $\pi N \rightarrow \pi N$ , diffractive scatt., quark models 2-24024  
 $\pi^+ p$ , average charged multiplicity and KNO scaling, diffractive component 2-33862  
 $\psi$  diffractive photoprod. 60-300 GeV, energy and t depend. 2-38888  
 $K^+ p$ , average charged multiplicity and KNO scaling, diffractive component 2-33862

**diffractometers**see also *X-ray diffractometers*

- diameter meas. of calibrating diamond draw-plate, by laser diffractometric method 2-28837  
 $\gamma$ -ray diffractometer, design and performance at 0.12 Å 2-38729  
 four circle neutron diffractometer, use of single stage closed cycle cryorefrigerator 2-11346  
 graphical methods for planning diffractometer line exposures 2-8390  
 powder diffractometer, high-resoln. time-of-flight, at ZING-P' pulsed neutron source 2-44979  
 surveying optical diffractometer, diffr. patterns, from electron micrographs 2-29866

**diffusion**

- see also *bioidiffusion*; *diffusion in gases*; *diffusion in liquids*; *diffusion in solids*; *electromigration*; *membranes*; *osmosis*; *permeability*; *self-diffusion*; *surface diffusion*; *thermal diffusion*; *turbulent diffusion*  
 aircraft trailing, turbulent vortices, stratified fluids, numerical soln. 2-20676  
 Am stars, diffusion rel. to metallicity, review 2-23314

**diffusion continued**

- biomolecular reactions in solns., diffusion eqn. approach 2-48644  
 bistable pot., functional integral approach 2-38572  
 Brownian particle diffusion above potential barrier, external field effects 2-42974  
 capacity and quantum mechanical tunnelling 2-6795  
 cation exchange membrane, bionic cell with SrCl<sub>2</sub> and KCl, mass and charge transfer, hydrostatic pressure gradient 2-17919  
 Cauchy problem, for diffusion and Schrodinger eqns., on Riemannian manifold, rel. to classical mechanics 2-23480  
 cellulose acetate membrane, water vapour diffusion, permeation and integral sorption kinetics 2-12798  
 chaotic systems, diffusion onset, universal scaling 2-28784  
 chemical kinetics, path integrals 2-6018  
 chemical reaction rate, time resolved laser pump-probe technique 2-27408  
 chemical reaction-diffusion system, to travelling wave fronts evolution of large scale fluctuations 2-17910  
 chemical reactions, diffusion controlled, interacting pots., boundary conditions, sink term methods 2-9527  
 chemical reactions and conc. depend. diffusion coeff., integral transforms 2-31899  
 combustion waves, in solid, spinning propag. 2-17894  
 contaminant dispersion in laminar shear flows 2-16279  
 convective diffusion problems, boundary layer refinements 2-50259  
 cosmic rays transport, appl. of realistic diffusion coeffs. to particle drift effects 2-10285  
 defect accumulation, diffusion controlled, kinetics, recomb. restriction 2-1513  
 detailed balance characterisation using Onsager-Machlup theory 2-48621  
 diffusion-controlled reaction at nonuniform surface, kinetics 2-37104  
 directed percolation network, diffusion 2-23582  
 distributed kinetic systems, component stimulated diffusion and differentiation 2-42972  
 double diffusive convection, subcritical instability, asymptotic anal. 2-44730  
 electron beam in ionosphere, guiding centre of diffusion theory rel. to artificial auroral streak widths 2-6489  
 equivalent linearisation of nonlinear stochastic differential eqn., entropy-minimum aspect 2-3537  
 free diffusion in ternary systems, expt. and phenomenological theory correl. 2-15123  
 general stochastic difference equations, weak convergence to a diffusion 2-15113  
 generalized diffusion coefficient in one-dimensional random walks with static disorder 2-19026  
 groundwater, implications of aquitard diffusion for <sup>14</sup>C dating in confined aquifers 2-23036  
 Hamiltonian systems exhibiting chaotic motion, nonlinear diffusion 2-38582  
 heat transfer, homogenisation of the stationary diffusion equations in flat-tened cylindrical dominance (*French*) 2-42971  
 homogeneous media, isotropic props. (*French*) 2-42857  
 hot peculiar stars, diffusion model for anomalous He abundances 2-23313  
 hyperbolic diffusion equation, relaxational and dispersed medium, chemical reaction, thermodynamics 2-12246  
 inverse problem for the steady state diffusion equation 2-48652  
 laminar boundary layer, heat and mass transfer, coeff. change (*German*) 2-50237  
 Lorentz models, stochastic, diffusion properties 2-48651  
 lumping method for transport phenomena 2-42966  
 macromolecules, effective diffusion coeff., wavevector depend. 2-15110  
 methane, laminar diffusion flame, thermal radiation, boundary layer eqns. 2-31921  
 multicomponent systems, thermodynamics, diffusion coeff. 2-38605  
 multidimensional, recurrence, ergodicity, central limit theorem 2-3540  
 negative photoresists, refractive index modulation by mol. diffusion 2-10889  
 NMR pulsed gradient diffusion meas., residual gradient and lineshape distortions 2-23695  
 nonequilibrium systems, fluctuation theory 2-6031  
 nonlinear reaction-diffusion eqns. symmetries and solns. 2-23428  
 nuclear magnetic relaxation, anisotropic rot. diffusion rel. to internal motion 2-24746  
 oil-in-water microemulsions, crit. behaviour 2-14012  
 optimal Petrov-Galerkin methods through approximate symmetrization 2-48646  
 particles in Riemannian space, constraint and non-holonomy, diffusion eqn. 2-23598  
 pattern formation in systems with nonlocal interactions 2-47299  
 penetrative convection at low Peclet number 2-35149  
 physical constraints in numerical calculations of diffusion 2-6811  
 polycrystals, grain boundary diffusion effective coeff. 2-45632  
 quasi-linear equation in cylindrical symmetry, difference schemes 2-38608  
 random animals, percolation clusters and compact clusters, diffusivity and radius 2-10731  
 random lattice, diffusion, effective medium approx. 2-28804  
 reaction-diffusion equations, steady state soln. stability 2-145  
 reaction-diffusion systems, comparison and stability theorems 2-10751  
 reaction-diffusion systems, stability results by quasisoln. method 2-48643  
 relaxation model, pure diffusion and drift 2-45607  
 rigorously diffusive deterministic map 2-19053  
 Schrodinger dynamics, reformulation as Dirichlet form, stochastic process 2-23496  
 singular processes, stochastic differential eqns. for characterising 2-6730  
 Smoluchowski equation, appl. to diffusion approx. 2-12801  
 spherical drops of conc. solns., diffusophoresis in viscous binary mixture 2-26098  
 spheroidal Brownian particle, rotational diffusion 2-48616  
 stationary disc electrode, in rotated fluid, convective diffusion study 2-8162  
 Stefan problem, homogenisation, appl. to mag. composite media 2-10745  
 Stefan problem, nonlinear diffusion eqn. homogenisation 2-4685  
 stochastic diffusion in const. pot. fields, Brownian motion 2-42969  
 stochastic mag. field, anomalous diffusion effect (*Chinese*) 2-19050  
 stratosphere, vertical eddy diffusion transport meas. from vertical O<sub>3</sub> profile 2-14553  
 suspension, Brownian diffusion of small particle, excluded vel. effect 2-15111



**diffusion continued**

thin hard rod fluid, mol. dynamics study, transport props. scaling behaviour 2-3539  
transient diffusion anal. with stable and rapid soln. 2-48648  
two coupled linear reaction-diffusion eqn. solns. 2-6809  
two-phase media in electric field, diffusion and multiv. models 2-4894  
Venus lower ionosphere, diffusion-thermal heat flow and ion temp. anisotropy 2-6553  
void diffusion in porous medium with surface diffusion, mean free path theory 2-40015  
HgMn stars, parameter free diffusion for abundance anomalies 2-23312

**diffusion coefficient** *see diffusion***diffusion creep**

grain boundary sliding, contrib. to axial strain 2-40475  
mechanisms, high temp., universal parameter critical evaluation 2-12666  
metallic thin film, electromigration induced damage, diffusive creep model 2-26150  
Nabarro-Herring and Coble creep, effect of grain shape 2-40476  
superplasticity and creep, significance of grain boundary sliding 2-40469  
Cu-SiO<sub>2</sub>, dispersion hardened, diffusion creep threshold 2-41686

**diffusion in gases**

*see also self-diffusion in gases; thermal diffusion in gases*  
binary diffusion coeff. from known interatomic pots. (Russian) 2-16412  
bubble mass transfer, mol. and convective diffusion 2-12213  
combustion in a liquid, theory 2-13954  
dense gases, marker interdiffusion coeff. meas. using NMR 2-44813  
diffuser behaviour, conical, inlet boundary layer blockage effects at different Reynolds and Mach numbers 2-8173  
diffusion-mobility relation, Einstein's contrib. 2-15131  
gas flow velocity, prekinetic explanation of Graham's law 2-18846  
gas fluidised beds, vertical internals, axial solids mixing, diffusion, bubble chars. 2-20741  
holographic interferometry method of enhanced sensitivity, gas-liquid diffusion exam. 2-20275  
inert-gas mixtures, collision-induced far-IR absorpt. 2-44824  
isobaric diffusion of two gases diluted by a third 2-25482  
laser control of gas diffusion 2-39680  
light induced, in monochromatic wave field 2-35257  
methane diffusion flame, crossed-beam, background-free CARS 2-13960  
modified Gram-Maxwell technique, interdiffusion coeff. determ. 2-40019  
nonequilibrium gas, test particle motion produced by reson. radiation 2-44809  
solid solution, diffusion form. accompanying supply of diffusing atoms through gas interlayer (Russian) 2-35730  
ternary gas mixtures, diffusion and thermodiffusion coeff., higher-order approx. 2-16411  
three-component gas mixt. diffusion in two flask system 2-44808  
Ar-SF<sub>6</sub>, interdiffusion coeffs., temp. effects 2-20805  
Ar+Cl<sup>-</sup>, tests of interaction pots., ion mobility and diffusion coeff. calcs. 2-34539  
CO<sub>2</sub>-N<sub>2</sub>, mixing laser, performance using rapid mixing technique 2-885  
D<sub>2</sub>-SF<sub>6</sub>, interdiffusion coeffs., temp. effects 2-20805  
H-H<sub>2</sub>, binary diffusion coeff. calc. from spherically averaged interaction pot. 2-50355  
H<sub>2</sub>-O-Ar mixtures, transport props. at high temps. 2-8256  
H<sub>2</sub>-SF<sub>6</sub>, interdiffusion coeffs., temp. effects 2-20805  
He diffusion and viscosity coeffs. in stellar atmospheres, numerical anal. 2-53070  
He-SF<sub>6</sub>, interdiffusion coeffs., temp. effects 2-20805  
He+H<sup>+</sup> (Br<sup>-</sup>), tests of interaction pots., ion mobility and diffusion coeff. calcs. 2-34539  
Kr-CO<sub>2</sub> binary systems, diffusion coeff. temp. depend. 2-35256  
Ne-CO<sub>2</sub> binary systems, diffusion coeff. temp. depend. 2-35256  
Xe-CO<sub>2</sub> binary systems, diffusion coeff. temp. depend. 2-35256  
XeCl<sup>-</sup> well depth from Cl<sup>-</sup> mobility and diffusion data 2-8260  
XeF<sup>-</sup> well depth from F<sup>-</sup> mobility and diffusion data 2-8260

**diffusion in liquids**

*see also electromigration; self-diffusion in liquids; thermal diffusion in liquids*  
activation parameters for transport and thermal expansion 2-12789  
benzene, solns., rot. motion, Raman linewidth study 2-41364  
binary liquid, spinodal decomposition, hydrodynamic singularity 2-35698  
bovine serum albumin, diffusivity, hydrodynamic effects 2-34607  
cellulose acetate-H<sub>2</sub>O system, diffusion of H<sub>2</sub>O vapour, differential transient sorption kinetics and equilb. 2-12797  
coefficient meas., chromatographic method 2-12791  
combustion in a liquid, theory 2-13954  
conditional-distribution and free-volume theory analysis, diffusive motion, thermodynamic props. 2-12445  
cyano biphenyl-terphenyl mixture, supercooled, anisotropic diffusion of 1,1'-diacetyl ferrocene, Mossbauer study 2-35742  
cyclohexane-d<sub>6</sub>-(d<sub>12</sub>), rot. diffusion consts., Raman linewidths, NMR T<sub>1</sub> data 2-26884  
cyclohexene, hydrogenation on a PtAl<sub>2</sub>O<sub>3</sub> catalyst, intraparticle diffusion effects 2-27472  
defect annihilation, diffusion controlled, kinetic eqns. 2-21347  
3,3'-diethyloxadecarboxyanine iodide rot. reorientation, viscosity and temp. effects, anisotropic absorpt. study 2-20991  
diffusion from mixed to polymeric medium with moving boundary 2-28800  
electrochemiluminescence, diffusion kinetics 2-51710  
electrolyte solutions, self-balancing high-precision AC Wheatstone bridge for diffusion process obs. 2-23673  
eutectoid/eutectic cells, stability 2-41601  
ferrofluid, translational diffusion in a mag. field, particle size determ. 2-14011  
gas impurity diffusion through plane surface into a melt, math. soln. 2-35721  
grain size distribution during coarsening in liquid matrix (Korean) 2-41579  
groundwater, dissolved salts, convective diffusion during filtration into drainage (Russian) 2-32138  
hard sphere model in region of fluid metastability, diffusivity 2-1377  
heavy water, diffusion of some species of different charge and mass 2-26091  
n-hexane, liq., tracer diffusion coeffs., diaphragm cell and chromatographic techniques 2-45603  
highly viscous solutions, diffusion effects in initiator decomp. 2-35720  
holographic interferometry method of enhanced sensitivity, gas-liquid diffusion exam. 2-20275

**diffusion in liquids continued**

holographic interferometry use, review (Rumanian) 2-16831  
leach test specimen sizes, selection criterion, diffusion model 2-39147  
liquid junction, solutions transport, irreversible thermodynamics, quantum analogy 2-10750  
LPE mass transfer processes and influence on epitaxial layer growth rate 2-5838  
macromolecular solutions, diffusion effects in initiator decomp. 2-35720  
MBBA, supercooled, anisotropic diffusion of 1,1'-diacetyl ferrocene, Mossbauer study 2-35742  
metal transport in Hg, liq. amalgams struct. 2-30643  
micellar diffusivity at low NaCl conc., light scatt. meas. 2-40580  
molecular rotations, generalised M-diffusion model 2-16544  
multicomponent diffusion in liquid mixtures by chromatographic and NMR techniques 2-30640  
multicomponent systems, apparent diffusion coeff., definition and interpretation 2-30641  
multispecies diffusion fluxes algorithm 2-12790  
nucleosomes hydrodynamic props. 2-37485  
oligoester acrylates, linear and branched plasticiser, diffusion and solubility of S 2-45602  
optical waveguide fabrication by diffusion from molten nitrate mixtures 2-39737  
β-picaline-water solution, diffusion coeff. (Russian) 2-8652  
poly-α-methylstyrene in cyclohexane, diffusion and sedimentation (Russian) 2-21345  
polyamide-benzimidazole in DMA and H<sub>2</sub>SO<sub>4</sub>, hydrodynamic props. and equilb. rigidity (Russian) 2-1346  
polymer colloids, phase equilibria and transport 2-5221  
polymer diffusion in dilute solution 2-8650  
polymer dilute solutions, diffusion coeff., temp. and conc. depend. 2-21338  
polymer melts, dynamics of primitive chain, computer simulation 2-30380  
polymer melts, equilibrium dynamics, computer simulation 2-30378  
polymer mixture, molten compatible, thermodynamic props., mutual diffusion coeff. (French) 2-16828  
polymer soln., dil., diffusion const. meas. by moire method (Japanese) 2-30642  
polymer solutions, Kirkwood-Riseman diffusion tensor, stability criteria 2-5256  
polyoxyethylene, semidilute solns., cooperative phenomena, conc. depend. 2-5255  
polystyrene, diffusion coeff., conc. dependence at various mol. weights and temps 2-21337  
polystyrene in tetrahydrofuran, effect of chain overlap on translational diffusion 2-5257  
polystyrene in water, appl. of quasioelectric light scatt. spectroscopy, multiple scatt. suppression by homodyne coincidence technique 2-15237  
prolate molecules in soln., rot. motion of luminesc. 2-20120  
radial thin layer cells, steady state mass transfer in reversible metal systems 2-27440  
reaction rates, diffusion theory for multiple pot. barriers 2-37044  
serum albumin, bovine, aq. solns., struct. props. 2-22698  
solid particle in liquid media in nonuniform elec. fields, dielectrophoretic response 2-26095  
solute dispersion in laminar flow through tubes by simultaneous diffusion and convection 2-12120  
stationary electrode temperature, influence on diffusion 2-31925  
Taylor dispersion technique for diffusivity meas., instrument theory and design 2-12792  
three-component solns., solvatofluorochromism kinetics, diffusion and complex form. 2-49308  
US effects on mass transfer of atomization and dispersion in liquids 2-11879  
water, diffusion of some species of different charge and mass 2-26091  
water, shallow, contaminant spreading in non-uniform currents 2-6403  
CO<sub>2</sub>, liq., depolarised Rayleigh scatt., molecular orientation in wide density range 2-22040  
CsCl, ionic diffusion in water-dioxan mixtures (French) 2-12794  
Fe-C and Fe-Fe<sub>3</sub>C eutectics, interphase spacing and growth temp. rel. to growth vel. 2-31694  
Ge, molten, diffusion coeff. of Ga 2-35722  
He film, superfluid, renormalisation of vortex diffusion const. 2-1701  
In-Pb(Sn)(Ti), liquid, dil., diffusivity, solubility, and activity of O, effect of solute additions 2-26094  
K<sub>2</sub>CO<sub>3</sub> condensation of liq. force surface, droplet mass transfer effect 2-26183  
Na in silicate melt spheres, diffusion and volatilisation rel. to chondrules form. 2-10361  
Sb, solid, dissoln. in molten Bi, static conditions 2-8625  
Ti-Al-V(9, 3 at.%), specific heat, diffusivity and thermal cond. in 750-1700K temp range 2-5239

**diffusion in plasma** *see plasma transport processes***diffusion in solids**

*see also electromigration; ionic conduction in solids; self-diffusion in solids; surface diffusion*  
α-brass, intergranular creep cavities, growth mechanism 2-41685  
alkali galliosilicate glasses, A<sub>2</sub>O-Ga<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, migration of He 2-12852  
alloy, liq.-phase sintering, compact porosity changes due to diffusional impregnation 2-31654  
alloy, oxidation, metal lattice diffusion effect 2-47252  
alloys, binary substitutional, phenomenological anal. of diffusion coeffs., correl. and vacancy flux effects 2-21348  
alloys, binary substitutional, phenomenological anal. of diffusion coeffs., correl. and vacancy flux effects 2-21349  
alloys, NMR expts., review 2-31300  
alloys, polyphase, microstruct. changes in presence of externally appl. pot. gradients 2-41616  
aluminising packs, halide activated, kinetics of gas transport 2-30660  
barriers in layered contact structures 2-8882  
binary alloys, oxide solid soln. form. during internal oxidation 2-47253  
binary interdiffusion, frame of reference and intrinsic diffusivities (Japanese) 2-45634  
binary multiphase system, diffusion growth kinetics, Matano-Boltzmann method (Russian) 2-50901  
binary oxides, chemical and self-diffusion coeffs. as function of O<sub>2</sub> activity 2-1656  
bonding, diffusion, theoretical model 2-41864



## diffusion in solids continued

- cellulose nitrate-poly(vinyl pyrrolidone) blend membranes, ultrafiltration and dialysis charact. 2-14005
- ceramic mixture, saturated, transfer of water diffusion couple method 2-26143
- chemical reaction in two-component solid soln., grain boundary diffusion mechanism (*Russian*) 2-45638
- chemical-diffusion coefficients, in alloys, electrochem. technique determ. 2-45633
- chemoepitaxial nucleation of new phase, influence of ratio of heterodiffusion coeffs. and interface energies (*Russian*) 2-40744
- corrosion protective coatings, durability, kinetic eval. at high temps. 2-27350
- creep, vacancy diffusion and dislocation recovery mechanisms 2-5182
- creep cavitation, influence of impurity segregation 2-41612
- creep Nabarro-Herring and Coble, effect of grain shape 2-40476
- Cs halides, additively doped, Cs colloids, precip. and growth kinetics 2-25874
- cyclic delayed failure, crack propag. rel., effect of stress wave shape 2-12668
- Darken formulae (*Russian*) 2-12808
- defect annihilation, diffusion controlled, kinetic eqns. 2-21347
- deformation mechanism diagrams, cryst. system and stacking-fault energy effects (*Japanese*) 2-2571
- deformation processes, interactive 2-40470
- detonation spray deposited coatings, diffusion zones detection 2-41853
- diffusion constants determ. from partially narrowed NMR line 2-41223
- dilute alloys, matter transport by vacancies, linear response theory, impurity correlation factor 2-35745
- disordered solid, entropy at low temp., hydrodynamic theory 2-30632
- disordered solids, third law of thermodynamics, low temp. props. 2-45596
- elastic porous media, diffusion process anal. using semi-analytical finite element scheme 2-20745
- elastic waves, plane harmonic, and diffusion in solids (*Polish*) 2-8658
- electro-optic cryst., hologram superlattices, radiation defects kinetic parameters determ. 2-2219
- enamel/metal interface, X-ray Auger microanalysis of Fe 2-35900
- enhanced low temperature diffusion of electron-beam evaporated aluminium into SiO<sub>2</sub> thin films 2-50925
- fast impurity transport, in some group III and IV host metals 2-1673
- filamentary Al<sub>5</sub> superconductors, developments in the UK, review 2-8935
- fine-grained materials, creep, influence of pipe diffusion 2-25978
- glass, leached, evidence for interdiffusion of hydronium and alkali ions 2-12844
- glass substrate, diffusion of K<sup>+</sup>, fabrication of optical waveguides 2-16111
- grain boundary grooving by volume diffusion, nonlinear evolution eqn. (*French*) 2-2729
- grain boundary sliding, diffusional creep, contrib. to axial strain 2-40475
- grain boundary steps, props. and effects, appl. to diffusion-induced grain boundary migration 2-40414
- Haven ratio near order-disorder transitions in highly defective solids, computer simulation study 2-5263
- HTR fuel pellets, Ag migration behaviour (*German*) 2-15528
- II-V semiconductor compounds, thermal dissociation and evap. mechanism, single cryst. growth, diffusion role 2-41873
- implants diffusion, with position depend. diffusion coeff. 2-16903
- impurity diffusion profile for case of diffusion with assoc. 2-35741
- interaction after heating, surface phase form., LEED, EELS, AES, TEM, and photoelectron spectra 2-35747
- interface physics, conf., Williamsburg, VA, USA (Jan. 1981) 2-6702
- intergranular penetration mechanism, when Cu alloys deposited on steel 2-50929
- interstitials, trapping in solid solns. 2-40377
- ion bombardment of solids, first order diffusion approx. to atomic redistribution. 2-21189
- irreversible thermodynamic approach to the diffusion in solids accompanied by deformation 2-5264
- low-density polyethylene, diffusion studies of antioxidants 2-16906
- material migration, developments (*German*) 2-1649
- material transport under irradiation (*German*) 2-1677
- matter transport by vacancies, linear response theory, five-freq. model 2-35746
- metal, double layer oxide film form. by anion interstitial diffusion 2-9461
- metal, oxidation, metal lattice diffusion effect 2-47252
- metal with protective layer coating, corrosion, diffusion model (*French*) 2-2609
- metal-GaAs junctions, transition region, diffusion profile 2-2004
- metallic glass, phys. props., research developments, correl. of technological parameters and mag. props. 2-8437
- metallic glass, structural relaxation and atomic mobility, mag. anisotropy meas. 2-45358
- metals, deformation, rel. to heterodiffusion of charged impurity particles 2-21217
- metals, diffusion coeffs., determ. by elec. resist. meas. 2-35729
- metals, H permeation, electrochem. meas. 2-21394
- metals, interstitial electrotransport, numerical simulation 2-35748
- metals, Nelson curves for H attack, model calc. 2-50751
- metals, pure, oxide layer growth, two-phase, quasi-steady state 2-27335
- metals, purification by electro- and thermotransport (*German*) 2-1674
- metals and alloys, anomalous diffusion during pulse loading (*Russian*) 2-1669
- mixed conductors, review 2-17122
- MoSi<sub>2</sub>, contact metallurgy technique by using ion-beam mixing 2-1679
- multicomponent system, diffusion phenomena, precipitation and gas porosity (*Russian*) 2-5260
- muon diffusion at low temp. 2-45604
- naphthalene, phosphorescence study of critical exciton annihilation 2-46700
- Nb<sub>2</sub>Sn diffusion layers, bronze route, AES study 2-8909
- neopentane absorbed upon TiO<sub>2</sub>, NMR spectra, rot. and translational diffusion coeff. 2-13355
- network polymers, diffusion, model calcs. 2-45605
- oriented crystallisation, in process of reaction diffusion, supersaturation determ. (*Russian*) 2-8660
- Ostwald ripening, spherical grain size determ. from average area of intersection annealing 2-9505
- PCTFE, absorption and diffusion of N<sub>2</sub>, O<sub>2</sub>, Ar, effects on craze vel. 2-47163

## diffusion in solids continued

- periodic lattice, jump diffusion of particle, CPA calcs. 2-45606
- plate during two-sided diffusion impregnation, stress-strain state 2-25256
- point defect-dissolution interaction, using rate theory 2-1512
- poly methyl vinyl ether, inert gas permeation 2-16901
- poly methyl vinyl ketone, inert gas permeation 2-16901
- polyacetylene, diffusion of SbF<sub>5</sub> and I<sub>2</sub> 2-40601
- polyacetylene, p-type, dopant profiles and optical and electrical props. 2-35529
- polycrystalline materials, effect of grain size on diffusion 2-26103
- polyethylene films with barrier layer of grafted polyacrylonitrile, sorpt. kinetics, diffusion coeff. and solubility (*Russian*) 2-26233
- polyethylenes, empirical relation for diffusion of gases, interpretation in terms of fractional free volume 2-8673
- polymer, block, anthracene mol. diffusion coeff. meas., inductive-resonance energy transfer use 2-45636
- polymer plates, moisture viscoelasticity problem, numerical soln. 2-5902
- polymers, amorphous, sorption and diffusion of alcohols 2-30658
- polymers, structured, diffusion, role of penetrant struct. 2-45628
- polyvinyl alcohol membranes, nonequilib. electrolyte permeability 2-12807
- porous solids, periodic capillary models of diffusion 2-8657
- PTFE, diffusion of H, D and T 2-30656
- PVC film, surface treatment, effects of ion beam bombardment or ion beam sputter deposition (*Japanese*) 2-35550
- PVC films, diffusion of benzene, toluene and styrene (*Russian*) 2-26144
- PVC pipes, high density, carrier lines, He gas recovery 2-3584
- quasi-one-dimensional fast ion conductor, NMR relaxation by paramag. impurities 2-21911
- rubber, interpretation in terms of fractional free volume 2-8673
- semiconductor, charged impurity diffusion, mathematical analysis 2-21397
- semiconductor, electric field enhancement calc. for degenerate diffusion process 2-45630
- semiconductors, charged impurity diffusion, analytic expression 2-21395
- semiconductors, ion diffusion, irradiation enhanced, ionisation mechanism 2-16904
- semiconductors, oxide films, plasma growth, review 2-46946
- separation of chemical compound, in matrix defects, theory of diffusion limited formation (*Russian*) 2-8659
- solid solution, diffusion form. accompanying supply of diffusing atoms through gas interlayer (*Russian*) 2-35730
- solid solution, interdiffusion in an external electric field taking into account nonequilibrium vacancies (*Russian*) 2-21400
- solids, elec. conducting, deformation, rel. to heterodiffusion of charged impurity particles 2-21217
- solute segregation, role in grain boundary diffusion 2-21316
- steel, austenitic stainless, type 304, H and D transport at elevated temp. 2-5276
- steel, C, absorption of H in acid pickling, inhibitors influence 2-27349
- steel, C, diffusion coatings of Cr-Ti 2-27347
- steel, C, H attack cavity growth mode 2-47177
- steel, containing  $\epsilon$ -Cu precipitates, H<sub>2</sub> evolution (*Japanese*) 2-45622
- steel, Cr-Mo, low alloy, segregation of Cr to prior austenite boundaries during quenching 2-5875
- steel, H traps, coverage in diffusion 2-45627
- steel, low alloy, H absorpt. phenomenon in H<sub>2</sub>S soln. (*Japanese*) 2-22313
- steel, mild, H diffusion, effect of sulphide inclusions 2-41730
- steel, Nb microalloyed, dynamic recovery and recrystallisation on Nb(CN) coarsening 2-51912
- steel, stainless, H content and diffusion coefficient, meas. by electrochem. technique (*Japanese*) 2-21391
- steel, stainless, nitriding using C-containing additives 2-52102
- steel, stainless, void nucleation, solute addition effects 2-50625
- steel, strip, mechanical activation as pretreatment process for vacuum deposition 2-13862
- steel ball bearings, C-diffusion during rolling contact fatigue, high resolu. autoradiography determ. 2-2636
- superplasticity and creep, significance of grain boundary sliding 2-40469
- surface alloying, use of grain boundary diffusion 2-17764
- surface conc. change during diffusion saturation at const. rate 2-33475
- symmetric alloy, ID decomp. and aggregation of precipitates 2-2519
- ternary diffusion, restrictions on the (<sup>2</sup>D) matrix 2-45635
- thin film diffusion couples, diff. profiles 2-26145
- TiSi<sub>2</sub>, intercalation rate of Li<sup>+</sup>, electrochem. determ. 2-40606
- transition metals, H and  $\mu^+$  diffusion, activation energy 2-12810
- transition zone in bimetals (*Russian*) 2-1678
- viscoelastic media, theory 2-23599
- Zircaloy-2, microstructural features of hot press. bonding with stainless steel type ATSI 304 2-30661
- Zircaloy-2 and -4, neutron irradiation, dislocation struct. 2-50649
- Ag, electron irradiated, free migration of interstitials 2-35544
- Ag, ion implanted, of Al 2-12847
- Ag-Cu, point defect mobility, high-voltage electron microscopy study 2-21398
- Ag-Cu(Ni), dil. alloys, electron irradiated, free migration of interstitials 2-35544
- Ag-Te, amorphous semicond. film, prep. by diffusion and elec. cond. 2-45772
- AgBr, diffusion of Rb<sup>+</sup>, Frenkel defect form. energy 2-12854
- AgCl(Br), ionic transport, anomalously high, defect mechanisms 2-21399
- AgI-Ag<sub>2</sub>WO<sub>4</sub>, vitreous superionic conductor, ionic diffusion coeffs. 2-16905
- AgI-Ag<sub>2</sub>WO<sub>4</sub>(Ag<sub>2</sub>MoO<sub>4</sub>):Cu<sup>+</sup>, Na<sup>+</sup> glass, superionic cond. and diffusion 2-16890
- Ag<sub>3</sub>Li<sub>1-x</sub>FeO<sub>3</sub>, structure, stoichiometry, preparation 2-27115
- Ag<sub>3</sub>RbI<sub>3</sub>, I diffusion coeffs. and conc. profiles 2-30653
- (Al,Ga)As heterostruct. fabricated by isothermal diffusion of Al, props. 2-12941
- Al, cast, H partitioning in pure specimens, determ. by dynamic evolution meas. 2-16802
- Al,  $\mu^+$  motion,  $\mu$  spin rot. study 2-36491
- Al, polycrystalline, internal friction, medium temp. 2-45353
- Al, stress induced migration of symmetric tilt boundaries 2-8676
- Al:Cu thin films diffusion coeff., influence of noise driving force 2-1652
- Al/Cu bimetallic thin film couple, interfacial reaction, contact resist. meas. 2-50931
- Al/n-Si, small area laser beam annealing, subsurface-alloying and deep Al penetration 2-1517
- Al-Ag system evap. at 10<sup>-4</sup> Torr, Rutherford backscatt. and AES analysis of O distribution, diffusion barrier form. 2-27032



## diffusion in solids continued

- Al-B fibre composite, structural instability and damping props. (*Russian*) 2-2534  
 Al-Cr, rapidly solidified, coarsening of intermetallic particles 2-41611  
 Al-Cu (2-5 wt.%), coarsening of G<sub>q</sub> plates, influence of ledge mechanism 2-13723  
 Al-Fe, rapidly solidified, coarsening of intermetallic particles 2-41611  
 Al-GaAs (110), exchange reaction, angle integrated photoemission study 2-8695  
 Al-GaAs interfaces, at. geometry, soft XPS and elastic LEED studies 2-8714  
 Al-Mg alloys, H<sub>2</sub> permeation 2-50993  
 Al-Ni, rapidly solidified, coarsening of intermetallic particles 2-41611  
 Al-Zn, interdiffusion, hydrostatic press. effects 2-50933  
 Al-Zn (10 wt.%), solid soln. alloy, recovery and work hardening rates, 523-823K 2-27189  
 Al-Zn (38 at.%), spinodal decomp., various stages 2-47007  
 Al<sub>2</sub>Ga<sub>1-x</sub>As interdiffused layer formed at GaAs-Al interface 2-12857  
 Al<sub>2</sub>O<sub>3</sub>, <sup>59</sup>Fe tracer diffusion 2-50926  
 α-Al<sub>2</sub>O<sub>3</sub>, sintered, <sup>4</sup>He diffusion, mass spectrometric study 2-40604  
 α-Al<sub>2</sub>O<sub>3</sub>:Cr<sup>3+</sup>(Ti<sup>4+</sup>)(Mg<sup>2+</sup>), deformed by basal slip, dislocation substruct. 2-35499  
 β-Al<sub>2</sub>O<sub>3</sub>:Li<sub>2</sub>O, diffusion of water into cond. plane, IR absorpt. study 2-45629  
 β-Al<sub>2</sub>O<sub>3</sub>:Na<sub>2</sub>O(Ag<sub>2</sub>O), ionic cond., Haven ratio and percolation problem 2-26127  
 As<sub>2</sub>S<sub>3</sub>-Ag light-sensitive system, behaviour during laser beam irradi. (*Russian*) 2-16679  
 Au, ion implanted, of Al 2-12847  
 Au, submonolayer growth on GaAs (001)c(4×4), AES and RHEED study 2-1793  
 Au/Sn thin film couples, interdiffusion, TEM, X-ray and Rutherford backscatt. study 2-21403  
 Au-Ag thin film couples, interfacial reactions, Auger depth profiling, TEM, and contact resist. meas. 2-8678  
 Au-Cu thin film diffusion couples, diff. profiles 2-26145  
 Au-InP system, binary cpd. form., 320 to 360°C 2-1680  
 Au-Ge-GaAs ohmic contact, low temp., sintered 2-51301  
 B CVD coating, D<sub>2</sub> trapping meas. for tokamak fusion test reactor 2-12948  
 B CVD on Be surface 2-13655  
 B, controlled two-stage diffusion model (*Russian*) 2-1650  
 B<sub>2</sub>O<sub>3</sub>-AgI-Ag<sub>2</sub>O: Cu<sup>+</sup>, Na<sup>+</sup> glass, superionic cond. and diffusion 2-16890  
 CaO/ZrO<sub>2</sub>, interdiffusion 2-50930  
 CdAs<sub>2</sub>(P<sub>2</sub>), thermal dissoc. and evap. mechanism, single cryst. growth, diffusion role 2-41873  
 CdS, ionic processes occurring under combined action of illum. and elec. field 2-30927  
 CdS, mechanically treated, acceptor impurity diffusion, dislocation study (*Russian*) 2-1666  
 CdS-metal interface, reactive interdiffusion and electronic barriers, reactive interlayer control of Schottky barrier height, photoemission study 2-40608  
 p-CdTe, covered with dielec. films, annealing effects, diffusion phenomena and carrier conc. (*Japanese*) 2-40609  
 CoGa, aspects of diffusion in intermetallic phase (*German*) 2-1681  
 CsI:Na(Tl<sup>+</sup>)(Eu<sup>2+</sup>)(Sr<sup>2+</sup>), V<sub>k</sub> centre migration, thermolum. and TSC meas. 2-8675  
 Cu, creep and cavity growth at low stresses 2-51975  
 Cu, ion implanted, of Al 2-12847  
 Cu, of Al along dislocations 2-8674  
 Cu, of Sb, coeffs. calc. from single meas., activation enthalpy 2-16902  
 Cu/Ni couple, intrinsic diffusion coeffs., determ. by multiple markers method 2-40610  
 Cu/Ni foil composites, electrodeposits, 2-phase metal layer, H-diffusion (*Japanese*) 2-8672  
 Cu-Al, dil., impurity diffusion study by NMR 2-41217  
 Cu-In, interdiffusion and Kirkendall effect 2-5282  
 Cu-Sn, diffusional interaction with Nb, Nb<sub>3</sub>Sn layer growth 2-40304  
 Cu-Sn thin film diffusion couple, Marker shift obs. by AES 2-50932  
 CuCl, exciton and excitonic mol. diffusion const. determ. using tunable picosec. grating method 2-1839  
 Cu<sub>2</sub>S-CdS solar cells degradation, lateral diffusion effects 2-37324  
 Cu<sub>2</sub>S-ZnCdS thin film solar cells, cross diffusion of Cd and Zn 2-37323  
 Cu<sub>3</sub>Sn, aspects of diffusion in intermetallic phase (*German*) 2-1681  
 ErH<sub>2</sub>, crystal growth, Er metal hydride at 950°C 2-9272  
 Fe, anomalous mass transfer under shock loading, Mossbauer study (*Russian*) 2-1668  
 Fe, Arcco, absorption of H in acid pickling, inhibitors influence 2-27349  
 Fe, Arcco, diffusion coated with Ga, influence of comp. of impregnating medium 2-41803  
 α-Fe, electron irradiated, positron annihilation, self-interstitial migration in stage III 2-21183  
 α-Fe, of C, coeffs. calc. from single meas., activation enthalpy 2-16902  
 Fe, oxidation, growth and struct. of oxide films on polycrystal., 240-320°C 2-2623  
 α-Fe:Zn, Zn diffusion, mag. transitions effect 2-40602  
 Fe-C-Si (Ni, Mn, Cr), grain boundary ferrite allotriomorphs, growth kinetics 2-16659  
 Fe-Cr (18%) alloy, volumic diffusion of S, 850 to 1200°C (*French*) 2-16898  
 γ-Fe-Ni alloys, diffusion and electrotransport of C 2-16908  
 Fe-Ni-X, X=Ge, P, Au or Pt, ternary partition coeff., expt. determ. 2-36860  
 Fe-Sn, α-solid soln., interdiffusion (*Japanese*) 2-12858  
 Fe-Zn (9-32 wt.%), grain boundary migration, diffusion-induced, metallographic study 2-12609  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, atom probe FIM study of microstruct. after annealing 2-36874  
 FeTi phase, effect of oxide phase and βTi phase on hydriding characts. (*Japanese*) 2-8623  
 FeTi-(Mn) alloys, H storage props. 2-22409  
 GaAl As LPE layers, Al profiles, appl. of method for fitting error functions to data 2-8738  
 GaAlAs DH laser, strain related degradation phenomena, SEM cathodoluminescence and induced current study 2-39652  
 GaAlAs-GaAs DH lasers, low threshold narrow stripe, controlled Zn diffusion 2-7790  
 GaAs, α-particle irradi., primary defects migration 2-16690  
 GaAs, electron trap outdiffusion due to thermal treatment 2-51104

## diffusion in solids continued

- GaAs, irradiated, point defect mobility 2-12586  
 GaAs, of Zn, for optical waveguide modulators 2-49896  
 GaAs:Fe, heat treated substrate, photoluminescence props. studies 2-13531  
 GaAs:Mn, heat treatment below Si<sub>3</sub>N<sub>4</sub> encapsulant of Mn implant, dopant profiles and diffusion mechanism (*French*) 2-5897  
 GaAs:Se(S), impurity profile, implantation temp. and crystallinity depend. 2-40423  
 GaAs:Zn, annealed, diffusion profiles meas. 2-26139  
 GaAs:Zn, nonequilib. substitutional-interstitial Zn diffusion, photoluminesc. study 2-16899  
 GaAs:Zn<sup>+</sup>, implanted layers, photoluminescence study 2-41422  
 GaAs-Cu(Ag)(Zn)(Sn)(Al) contacts, metal diffusion, penetration depth, SEM and microprobe anal. 2-40701  
 GaAs-Sn layers, laser annealed, interface struct. and diffusion 2-30757  
 GaAs-ZnSe heterojunction interface, LPE conditions effect 2-45748  
 GaP:Ag(Au), influence of heat treatment on distrib. of diffused impurities 2-26141  
 GaP:N, Al<sup>2+</sup> postimplantation gettering effects in p-n junctions 2-12627  
 p-GaP/Au-Zn contact system, out-diffusion process, barrier metals effect 2-46128  
 Ge:Al, ion implanted, annealing behaviour obs., Al conc. profiles determ. 2-45241  
 Ge-GaAs superlattices, MBE growth 2-8728  
 GeTe<sub>4</sub>:Ag, amorphous films, Ag diffusion kinetics, Rutherford backscatt. study 2-45625  
 H diffusion with trapping, numerical modelling 2-16838  
 H<sub>2</sub>, solid, diffusion of <sup>3</sup>He, quasi-one-dimensional, NMR meas. 2-45673  
 H<sub>2</sub>-H solid solution, H atom recombination speed const. temp. depend. (*Russian*) 2-12879  
 Hf, hydride, phase, diffusion of H<sub>2</sub> 2-16900  
 Hg<sub>2</sub>Cd<sub>1-x</sub>Cr<sub>2x</sub>Se<sub>4</sub>, solid soln. thin films, isothermal epitaxial growth on CdCr<sub>2</sub>Se<sub>4</sub> single cryst. substrate (*Japanese*) 2-31637  
 Hg<sub>0.9</sub>Cd<sub>0.1-x</sub>Te, undoped and In and Ag doped, interdiffusion study 2-12859  
 In<sub>0.5</sub>Ga<sub>0.47</sub>As on InP substrate, Mn as p-type dopant, distrib. coeff., room temp. mobility and diffusion coeff. 2-25914  
 In<sub>2</sub>O<sub>3</sub> vapour deposited films, O<sub>2</sub> diffusion 2-50927  
 InP, diffusion of Cd at 680°C, p-n function formation 2-12850  
 InP, pulse annealing; diffusion from As<sub>2</sub>Se<sub>3</sub> surface film 2-2383  
 InP:Zn, diffusion profiles of Zn determ. using SIMS with primary Cs ion bombardment (*French*) 2-5148  
 InP:Zn, p<sup>+</sup>n junction diodes and Schottky barriers, deep levels, Zn diffusion effects, DLTS study 2-12994  
 InP-metal interfaces, atomic and electronic struct., XPS and elec. meas. 2-8880  
 KBr cleavage plane, Au crystallite mobility 2-45631  
 KCl, monocrystal, gas-liquid inclusions, migration model 2-1676  
 KCl:SO<sub>4</sub><sup>2-</sup> anion migration enthalpy, preexponential frequency factor, ionic thermocurrent meas. 2-12851  
 LaCo<sub>2</sub>, absorption of H<sub>2</sub>, thermodynamic and kinetic characts., diffusion coeff. determ. 2-41926  
 Li diffusion thermodynamics and kinetics in V<sub>6</sub>O<sub>13</sub> 2-26148  
 LiAl, chemical-diffusion coefficients, electrochem. technique determ. 2-45633  
 LiAl composite electrodes in solid state battery 2-27583  
 Li<sub>2</sub>Na<sub>2</sub>WO<sub>6</sub> bronze, thermodynamics and kinetics of electrochemical Li insertion 2-27434  
 Li<sub>2</sub>O-GeO<sub>2</sub> glasses, ion exchange interaction with molten alkali nitrates and refr. index gradient 2-26147  
 α-Lu<sub>2</sub>O<sub>0.01</sub>, ion implanted and thermally diffused, D lattice location, channeling study 2-35517  
 Mg, polycrystalline, internal friction, medium temp. 2-45353  
 λ-MnO<sub>2</sub>, preparation of new cryst. form. from LiMn<sub>2</sub>O<sub>4</sub>+acid 2-9300  
 Mo-MoSi<sub>2</sub> system, diffusion and phase redistribution kinetics during deform. (*Russian*) 2-1667  
 Mo-Re alloy film on Si substrate annealing behaviour, interdiffusion obs. 2-8890  
 MoO<sub>3</sub>/ZrO<sub>2</sub>-CaO/Mo system, O transfer kinetics at solid electrolyte-electrode interfaces 2-41994  
 NaCl crystal, radiation enhanced Br diffusion 2-21392  
 NaCl, monocrystal, gas-liquid inclusions, migration model 2-1676  
 Nb, diffusion of C (*Russian*) 2-5275  
 Nb, of Zr, coeffs. calc. from single meas., activation enthalpy 2-16902  
 Nb single crystals, implanted Ne atoms anal. using nuclear reson. reactions 2-45219  
 Nb:N,H(D), influence of N impurities on diffusion coeff. 2-45626  
 Nb-H solution, sound attenuation due to density wave decay (*Russian*) 2-12691  
 NbSi<sub>2</sub>, contact metallurgy technique by using ion-beam mixing 2-1679  
 Nb<sub>3</sub>Sn filamentary superconductor manufactured by solid-liq. diffusion process 2-8937  
 Nb<sub>3</sub>Sn layer growth, Sn diffusion in Cu-Sn coated Nb 2-40304  
 Nb<sub>3</sub>Sn multifilamentary superconductor, manufacture by external diffusion method 2-8938  
 Ni based oxide dispersion strengthened alloys, struct. interdiffusional degradation of aluminate coatings 2-30768  
 Ni coated Al, detonation spray deposition, diffusion zones detection 2-41853  
 Ni, H permeation, electrochem. meas., in specimens undergoing plastic deform. 2-21393  
 Ni, H permeation, electrochem. meas. 2-21394  
 Ni, oxidation in SO<sub>2</sub>, effect of Au, Pt and W marker materials 2-9469  
 Ni porous-massive monometal couple, Ni<sup>63</sup> tracer diffusion 2-45637  
 Ni:In, grain boundary diffusion of In, meas. by SIMS 2-35739  
 Ni/Ni<sub>2</sub>Si interface, effect of O impurities study 2-30968  
 Ni-Al system, O<sub>2</sub> surface conc. change during diffusion saturation at const. rate 2-33475  
 Ni-Co/Cu struct., chem. interdiffusion, AES, digital data processing 2-22517  
 Ni-Cu(Mn) thin films, interdiffusion study by mag. methods 2-26146  
 Ni-Zn ferrite form. process mechanism 2-22189  
 Ni<sub>2</sub>Al<sub>3</sub>, multiphase layer growth, math. modelling of diffusion 2-8677  
 NiSi formation, effects of implanted O using <sup>4</sup>He<sup>+</sup> backscattering spectroscopy study 2-1502  
 (P<sub>2</sub>O<sub>5</sub>)<sub>0.8</sub>(Li<sub>2</sub>O)<sub>0.2</sub> glass, impurity diffusion study by NMR 2-41217  
 Pb/Cu bimetallic thin film couple, interfacial reaction, contact resist. meas. 2-50931  
 Pb<sub>1-x</sub>Bi<sub>x</sub>F<sub>2+x</sub> symmetrical cells, interfacial phenomena 2-14064  
 β-PbF<sub>2</sub> symmetrical cells, interfacial phenomena 2-14064



## diffusion in solids continued

- Pd, annealed and cold rolled, diffusivity and solubility of  $H_2$  (*Japanese*) 2-12853
- Pd/Ni foil composites, electrodeposits, 2-phase metal layer, H-diffusion (*Japanese*) 2-8672
- Pd-based solid solutions, containing H and noble metal substitutional component, kinetic behaviour 2-40549
- Pd-Si, electron bombardment and post-thermal annealing, cpd. form. 2-8543
- Pd-Si amorphous and crystallised alloys, diffusivities of H and D 2-12856
- Pd<sub>3</sub>Si form. on slightly oxidised Si, oxide effects, TEM and Auger spectroscopy obs. 2-16958
- Pd<sub>30</sub>Si<sub>70</sub> metallic glass, Gorsky relaxation and H diffusion 2-5278
- Pt foil, H diffusivity and solubility, determ. using electrochem. permeation methods (*Japanese*) 2-1672
- Pt paste electrodes on  $(CeO_{2.99}O)(Gd_{2.03}O)_{0.1}$  solid electrolyte diffusion-limited charge transport 2-13972
- Pt-Si, electron bombardment and post-thermal annealing, cpd. form. 2-8543
- PtSi form. on slightly oxidised Si, oxide effects, TEM and Auger spectroscopy obs. 2-16958
- Si (111)/Au interface, AES, EELS, LEED and depth profiling study, UHV conditions 2-21446
- Si, amorphous, K, Rb, and Cs atom diffusion 2-45624
- Si, columnar, diffusion parameters optimisation using two-step diffusion of phosphorus 2-18081
- Si, diffusion, thermophysical characteristics 2-8662
- Si, diffusivity of O during steam oxidation 2-45621
- Si, dislocated, diffusion of Au, kick-out mechanism 2-50924
- Si, gettering and redistrib. of O, 300 to 500°C 2-8536
- Si, impurity diffusion, kick-out mechanism, analytical soln. 2-26138
- Si ion implanted layers, interference of As and O<sub>2</sub> diffusion 2-50928
- Si, MBE, background and dopant impurities in film and film-substrate transition region, elec. transport 2-5145
- Si, masking oxide effect on diffusion 2-1670
- Si, mono- and polycrystalline, As doping using laser-induced diffusion 2-16669
- Si, model of impurity diffusion from oxide source 2-12846
- Si, of group V impurities, review (*Japanese*) 2-5262
- Si, of O, diffusion coeffs., O profiles, heat treatment effects 2-35740
- Si, open-tube diffusion of Al 2-12848
- Si, oxidation by O<sub>2</sub>, model 2-22354
- Si polycrystalline diffused p-n junction solar cells, grain boundaries effect in I-V characts. 2-52337
- Si solar cells polycrystalline effects of special processing on diffusion lengths 2-18084
- Si wafer, Au gettering by P diffusion and Ar implementation, mech. and limitations 2-1671
- Si:B, impurity diffusion and distrib. in surface layer during sublimation 2-26142
- Si:B, impurity redistrib. under proton irradi. 2-1506
- Si:B, ion implanted, point defect generation during oxidation, loop annealing technique 2-25869
- Si:B, radiation-stimulated diffusion influence on sputtering 2-36785
- Si:Fe, deep trap conc., in-depth profile 2-1858
- Si:H, amorphous, chem. bonding and H diffusion, <sup>1</sup>H NMR study, 20 to 530°C 2-41221
- Si:H, amorphous, H<sub>2</sub> exodiffusion, comparison with elec. cond. meas. 2-45623
- a-Si:H glow-discharge films, evolution of H<sub>2</sub> 2-40682
- Si:Li polycrystalline solar cells, effect of diffusion on grain boundary transport and minority carrier recombination 2-37399
- Si:P, influence of oxygen on radiation-stimulated diffusion 2-26140
- p-Si:P, ion bombarded, doping by radiation accelerated diffusion 2-30476
- Si:P, phase formation process influence on diffusion 2-40603
- Si:P(B), diffusant influence on O<sub>2</sub> distrib. 2-35528
- Si:P(B)(Li), ionized impurity diffusion, influence of an internal electric field 2-21396
- Si:S(Se) IR detector, spectral response, dopant diffusion vapour press. effect 2-219
- Si-Cr interface, evidence of room temp. intermixing, photoemission study 2-9247
- Si-Pd interface, Pd/Si and PdSi bulk diffusion couple, thermal stability, X-ray diffr. study 2-51005
- SiO<sub>2</sub>, amorphous, radiation-stimulated diffusion of metallic impurities and self-diffusion 2-40600
- SiO<sub>2</sub> film, thermal, bulk and interface trapped charge generation, H<sub>2</sub>O diffusion effect 2-26526
- SiO<sub>2</sub>:Na thermally grown film, role of cations in struct. formation (*Russian*) 2-40745
- SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-MgO-K<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>:Fe<sup>3+</sup> glass-ceramic, CGW-9658, transport and reactivity of H<sub>2</sub> 2-22488
- SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-K<sub>2</sub>O:Cu<sup>2+</sup> glasses, diffusion layers prod. by ion exchange, EPR and optical study 2-13332
- SiO<sub>2</sub>-GaAs interface, props. of spin-on interfaces 2-2013
- Sn-Ge, In diffusion along interphase twist boundaries 2-35744
- Ta:N,H(D), influence of N impurities on diffusion coeff. 2-45626
- Ti, adsorption and dissolution of H<sub>2</sub>, digital simulation 2-50866
- Ti alloys, phase transform. in alloys heat hardened by high speed heating (*Russian*) 2-36851
- Ti, anomalous mass transfer under shock loading, Mossbauer study (*Russian*) 2-1668
- Ti film, evaporated on Mo substrate, interdiffusion processes (*Japanese*) 2-21402
- Ti, H diffusion coeffs., determ. by nuclear physics method 2-12845
- Ti, hydride phase, diffusion of H<sub>2</sub> 2-16900
- α-Ti, nitrided, N diffusion profile determ., appl. of techniques for preparing and grinding diffusion layers 2-12849
- Ti/Au thin films, interdiffusion and phase formation, expt. study 2-45749
- Ti-Al-V, H diffusion coeffs., determ. by nuclear physics method 2-12845
- Ti-Al-V (6.4 wt.%) thin film, vacuum condensation process characts. (*Russian*) 2-2447
- Ti-C-N coated WC-Co hard alloy, TiB<sub>2</sub> interaction 2-40607
- Ti-Ni, H diffusion coeffs., determ. by nuclear physics method 2-12845
- TiB<sub>2</sub> film electrode behaviour in Si vacuum deposited thin film solar cell 2-40716
- TiC CVD coatings on cemented carbide, nucleation and growth, phenomenological study 2-51052
- TiO<sub>2</sub> xPt ceramic, preparation, elec. props. 2-46987

## diffusion in solids continued

- TiS<sub>2</sub>+Li<sup>+</sup> electrointercalation at solid soln. liq. soln. electrodes, mass transport and heterogeneous rate parameters 2-22467
- (U<sub>0.75</sub>, Pu<sub>0.25</sub>)O<sub>2</sub>, dynamically heated, fission product release 2-24311
- U, hydrogenation reaction kinetics and mechanism 2-27428
- UO<sub>2</sub>, bubble diffusion model 2-43556
- V, of Fe, 938-1815°C 2-5277
- V thin films, O<sub>2</sub> diffusion coeff. determ. 2-40605
- V-Mn(Fe)(Co)(Ni)(Cu), self-diffusion and impurity diffusion mechanism 2-5268
- V<sub>6</sub>O<sub>13</sub>, composite electrodes in solid state battery 2-27583
- WC-TiC-Co, prep. and props. of WCoB diffusion layer, X-ray diffr. obs. 2-41787
- W(110) segregation of C monolayers 2-26190
- Zn-Al eutectoid alloys, superplastic roles of interphase and intercryst. boundary sliding 2-41667
- Zn<sub>3</sub>P<sub>2</sub>:Mg, p-n homojunction solar cells, Mg diffusion, junction depth, collection efficiency meas. 2-52340
- Zn<sub>3</sub>P<sub>2</sub>:Mg solar cells, interface reactions 2-42020
- Zn<sub>3</sub>P<sub>2</sub>:Mg solar cells, interface reactions 2-42023
- ZnSe crystals, effect of heat treatment in Zn, Se, Cd vapour on optical and electro-optical props., diffusion coeffs. determ. 2-13450
- ZnSe, doped, luminescence centres, activation energy of form. 2-41392
- ZnSe: alkali metal ion, interstitials energy of form. 2-30459
- ZnSe:Al, formation of low resist. In contacts 2-21673
- ZnTe, laser induced O diffusion, photoluminesc. study, 2-50923
- α-Zr, dislocation core diffusion and unpinning 2-45196
- Zr, irradiation growth, intrinsic anisotropy of point defect diffusion rates 2-45285
- ZrO<sub>2</sub>, Y<sub>2</sub>O<sub>3</sub> stabilized, fast O<sub>2</sub> diffusion, quasielastic light scatt. study 2-16907
- diffusion pumps**
- gas laser operation, vacuum technology 2-34782
- pump contour, effect on pumping speed (*German*) 2-10818
- pump selection, below 10<sup>-2</sup> Pa, assessment criteria (*French*) 2-23655
- silicate ester, Si(OC<sub>4</sub>H<sub>9</sub>)<sub>4</sub>, diffusion pump fluid 2-43032
- space chambers, small, vac. pumping systems (*Japanese*) 2-43037
- diffusivity** see *diffusion*
- diffusivity, thermal** see *thermal diffusivity*
- digital-analogue conversion**
- see also *analogue-digital conversion*
- betatron energy control system 2-19802
- digital function generator, based on D/A converter, electrochemical appls. 2-22506
- room acoustics, digital simulation system (*German*) 2-44577
- digital circuits**
- see also *digital integrated circuits; pulse circuits*
- drift chambers, multiple time digitizers and trigger system 2-606
- programmable digital fading control for transparency slide projectors (*German*) 2-28879
- ratemeter using input pulse rate averaging 2-4180
- voice synthesizing cts. using linear predictive coding techniques (*Italian*) 2-11953
- digital communication systems**
- fibre optic, receiver design 2-1043
- fibre-optic digital communication system equipment GaAlAs DH laser diode and Si avalanche photodiode receiver 2-7880
- optical fibre communication experiment at 5 Gbit/sec, transmitter, fibre and receiver design 2-25115
- three-level balanced code for optical communications systems 2-34943
- digital control**
- electrostatic accelerator control systems developments 2-11317
- fission reactor start-up and shut-down using digital hierarchical decentralised information system 2-7256
- programmable digital fading control for transparency slide projectors (*German*) 2-28879
- rotating-mirror cameras, adaptive digital control 2-48830
- solar line-focus collector, analytical dynamic modelling, control appl. 2-37449
- digital discs** see *video and audio discs*
- digital filters**
- see also *multidimensional digital filters; signal processing; wave digital filters*
- discrete velocity filter design for seismic data processing 2-37987
- FIR digital filter design for portable analytical instruments 2-47424
- X-ray spectral anal., least-squares fit with digital filters 2-43159
- X-ray spectrum deconvolution, multiple least squares fitting 2-43160
- digital instrumentation**
- see also *digital readout; digital voltmeters*
- balances, automatic, nonlinear theory 2-6837
- barometer, battery-operated with digital indication (*German*) 2-10185
- biomedical oscilloscope, digital variable persistence, γ-camera appl. 2-18296
- car noise evaluation, digital equipment for real time sound intensity meas. 2-44620
- coder for current and voltage pulses of relativistic electron accelerator 2-15682
- codes for current and voltage pulses of relativistic electron accelerator 2-19897
- contact thermometers, technology, characts. (*French*) 2-28853
- DFCM 500 8-digit freq. and capacitance meter, mains or Ni-Cad battery operation 2-33564
- DMM, 4-1/2 digit hand-held 2-3575
- FIR digital filter design for portable analytical instruments 2-47424
- impedance, transients and noise detection method 2-34994
- iterative algorithms for errors correction 2-28820
- laser anemometry, shock-wave boundary-layer interaction obs. in wind tunnels 2-16408
- micrometer, high-speed, with time conversion 2-42988
- micrometer screws, digital error correction (*Polish*) 2-6821
- microscope photometry, by voltage to freq. conversion, analogue meas. and digital processing 2-48741
- muscle mechanics, simple digital instrument for time meas. 2-14371
- p-n junction, minority carrier lifetime meas. by laser scanning digital system (*Rumanian*) 2-41000
- portable digital thermometers, structural design problems (*Russian*) 2-15169
- temperature measurement, survey of digital devices (*Russian*) 2-33522
- thermal conducting of solids meas., automatic device (*Russian*) 2-23626



**digital instrumentation continued**

- titrator with a digital display 2-27501
- vibration testing using random-process digital simulator 2-23625

**digital instruments** *see digital instrumentation***digital integrated circuits**

- NMOS linear photodiode arrays, for autofocus system for lens shutter cameras 2-33674

**digital readout**

*see also digital instrumentation*

- microscope design with coordinate meas. table 2-28891

**digital signals**

- flow signal conversion meas., digital processing methods (*German*) 2-40009

**digital simulation**

- acicular particles, coercivity and packing density 2-26677
- acoustic space parameter simulation (*German*) 2-34996
- ADAPT geo-based modelling system, appl. in water resource management 2-23041
- air pollution, photochemical grid model 2-37477
- alkaline earth fluorides: R (R=rare earth), dopant-interstitial binding energies, lattice simulation calc. 2-40428
- amorphous solids, structural defects, computer model statistical anal. 2-1408
- amorphous state, electron microscopic images, computer simulation and interpretation 2-30489
- antiproton prod. within fixed acceptance, optimisation and efficiency 2-39256
- apparent acceleration simulation 2-18881
- aquifer compressed air energy storage model 2-17995
- aquifer field test for compressed air energy storage 2-17996
- aquifer thermal energy storage: a numerical simulation of Auburn University field experiments 2-9687
- atomic power station reactors, kinetic equations simulation, metrological testing (*Russian*) 2-19595
- automated system for nuclear data measurements and optimization 2-4195
- axially channelled electrons, radiation, computer simulation 2-12652
- axially channelled electron radiation, computer simulation 2-25953
- BCC, rolled, computer simulation of surface texture development (*Japanese*) 2-47236
- beats as moving interference patterns, ripple tank and computer simulation methods 2-48443
- BWR, nodal methods for three-dimensional simulator 2-34112
- cable models, finite segment, fluid force representation Lagrange equations 2-20522
- cellular sorting, classical molecular approach to computer simulation 2-52458
- coastal aquifer, salinity intrusion, simulation using limited quantities of computer resources 2-47932
- cold tandem rolling, mathematical model for dynamic digital simulation and differential eqn. of tension (*Chinese*) 2-2524
- concentrating photovoltaic-thermal systems vs. side-by-side systems, cost effectiveness 2-37331
- crystal growth parameters, from observed step patterns, quantitative estimation 2-25784
- dechannelling, planar, influence of dislocations, computer simulation model 2-45301
- diffusion-limited aggregation, computer simulation, rel. to dendritic growth 2-23565
- dipole magnetic calc. for vel. filter SHIP and fusion expts. computer simulation 2-245
- dislocation clumps, computer simulation of electron micrograph contrast 2-40388
- dislocation motion through random network of local defects, cryst., hardening 2-5118
- dislocation multiplication and steady-state nonlinear vibr., US effects 2-50639
- dispersion hardened alloy, computer simulation of AE during yield (*Japanese*) 2-13741
- education, Boltzmann processes, gas kinetics, energy space model, computer simulation 2-48439
- elastic-plastic torsion differential equation model 2-23421
- electron micrograph linear image processing, and anomalous scattering 2-7728
- EPRI Reliability and Maintainability Analyser for reliability simulation of complex systems, design and construction 2-4103
- EPRI Reliability and Maintainability Analyser for reliability simulation of complex systems 2-4104
- far-field noise levels for source in a rectangular enclosure 2-16187
- fatigue, static and dynamic expts., statistical reproducibility 2-31766
- ferroelectric polarization fluctuations, mean field coupled Ising spins, Monte Carlo simulation 2-36506
- fibre composite, modelling of fracture micromechanisms (*Russian*) 2-2579
- fission reactor, faster than real-time simulation by the modular modeling system 2-15595
- fission reactor simulation language, DSNP, appl. to transients 2-49103
- float glass stretching, two-dimens. computer simulation model 2-36831
- fluid transmission system for wave energy converters 2-37156
- fluid-solid interaction and fluid acoustical effects, piping system dynamics 2-11244
- fusion materials irradiation test facility simulation, lithium and heat transport systems for abnormal events study 2-39224
- garnet films, implanted bubble, dynamics of formation of statically stable 2II Bloch lines 2-26699
- garnet layer, Ne implanted, stress distrib. determ., nondestructive method 2-9491
- gas explosions, hazard assessment (*Japanese*) 2-52208
- gas-filled spark gap triggered RLC ccts. 2-25669
- growth of thick layers from solns. of finite solute conc. without convection, computer simulation 2-45092
- heliostat characterisation at solar central receiver test facility, Albuquerque, USA 2-6130
- hydrologic modelling, real time information system and interface 2-23042
- ICF theoretical studies 2-15621
- image simulation on dot-density plot 2-15151
- impurity in nonlinear lattice, interaction with soliton, computer simulation study 2-16737

**digital simulation continued**

- injection laser modulation dynamics, large-signal circuit model for simulation 2-4506
- interacting Brownian particles, generalised Langevin eqn. derivation 2-38571
- intestinal permeability to low molecular weight probes (polyethyleneglycol 400), multicompartmental model, simulation 2-32186
- inversion layers, inhomogeneous, elec. cond., Hall effect, 2D resistor network computer simulation 2-51322
- ion beam exposures profiles in PMMA, computer simulation 2-45297
- Ising spin glass model with long-range interaction, entropy 2-8991
- Josephson junctions, chaos and noise rise, digital computer simulations 2-21724
- laser annealing of Si, computer model of lattice temp., carrier conc. and temp. 2-45259
- Lennard-Jones system, 2-dimens., melting, computer simulation 2-33484
- level-crossing detection methods, computer simulation 2-4246
- linear accelerator, quadrupole RF focusing, high current beam dynamics, space charge effect 2-24455
- liquid photovoltaic/thermal collectors for residential applications 2-37329
- long-term storage of solar heat 2-18146
- magnetic refrigeration, transitional process to final stable Brayton cycle, computer simulation 2-33552
- metals, interstitial electrotransport, numerical simulation 2-35748
- methanation of CO and CO<sub>2</sub> for heat production 2-7223
- microprocessor-controlled nuclear steam supply system simulator for evaluation and training 2-29379
- MIM cathode, modelling of electron emission 2-22143
- molecular fluids, principal moments of inertia, quantum corrections and computer simulations 2-20989
- Monte Carlo computer simulation of microclusters, surfaces, and interfaces 2-21478
- MOS structures, nonuniformly doped, ideal C-V curves calc. 2-36147
- multi-microcomputer system for Monte Carlo calculations 2-23413
- multifrontal detonation wave struct. formation, numerical simulation 2-44765
- multisphere volume conductor, biopotentials, finite difference soln. 2-14230
- narrow-band ocean systems 2-18598
- NMR, spin-lattice relax. time meas., inhomogeneous mag. field errors, computer simulation 2-31310
- nonlinear wave equation, computer simulation of solitary waves 2-23454
- nuclear power plant availability improvement, transient analysis model 2-29376
- ocean wave simulation (*Chinese*) 2-32532
- orbital image sensor geometry simulation, in FORTRAN 2-18580
- packed-bed thermal storage unit, transient temp. response to general variation in rate of through flow 2-14127
- parabolic trough solar collector design, geography and weather influences simulation based on SOLTES code 2-6174
- photovoltaic arrays, effects of cell sorting and module matching on array output 2-37332
- photovoltaic cells, parabolic trough, technique for comparison 2-27684
- photovoltaic power systems, scaled down, hardware simulation 2-18066
- photovoltaic power systems, simulation and design 2-37333
- photovoltaic systems, stand-alone residential parametric anal. and SOLSTER simulation model 2-37334
- physical systems using Monte Carlo and molecular dynamics methods 2-10587
- plasma with conductor-dielec. disc, sheath struct. and current-voltage characteristics, numerical simulation 2-44864
- polymer chain, diffusional dynamics of particular points 2-29735
- polymer melt spinning, interactive computer simulation program 2-46996
- polymer melts, dynamics of primitive chain, computer simulation 2-30380
- polymer melts, entanglement dynamics, computer simulation 2-12446
- polymer melts, equilibrium dynamics, computer simulation 2-30378
- polymer melts, static props. of primitive chain, computer simulation 2-30379
- polymer solutions, entanglement dynamics, computer simulation 2-12446
- polymers, soln. and bulk melt chain systems, Monte Carlo and mol. dynamics simulation 2-8409
- Prandtl integral equations, discrete vortices method solution 2-18904
- pressurisation transients in BWR, RAMONA computer code simulations 2-15599
- PWR LOCA, determ. variation and sensitivity in computer models 2-43524
- PWR simulated geometries, heat transfer and two-phase flow, computer program 2-4064
- PWR transient tests for verifying reactor system transient analysis computer codes 2-4065
- random linear networks, effective medium theory, conductance distrib. 2-15124
- random paths and random surfaces on digital computer 2-19250
- randomly oriented sample, broad band NMR spectra simulation 2-26765
- regional simplified solar cooling design charts 2-18017
- RETRAN-02 computer-code for best-estimate analysis of LWR systems 2-3997
- rolling contact finite element model 2-12103
- room acoustics, digital simulation system (*German*) 2-44577
- rotating-mirror cameras, adaptive digital control 2-48830
- satellite anomalous attitude motion computing 2-42578
- scattered ions angular measurement with perfectron 2-15266
- Schottky diodes, temp. dependence of peak heights in DLTS, computer simulation 2-12992
- self-powered neutron detector construction and exptl. results (*German*) 2-11360
- semiconductors, dispersive electronic transport, multiple trapping, computer simulation 2-51198
- semiconductors, wide gap, localised electron density determ. by field effect 2-45877
- shaped electron beam current distrib., Monte Carlo modelling 2-49650
- Solar Array Manufacturing Industry Simulation program for photovoltaic modules, user evaluation 2-37358
- solar energy concentration LINSOL model 2-18025
- solar flat plate collector system for computer controlled baseboard hot water system 2-2780
- solar heating and cooling simulation programs for electric utilities 2-18134
- solar heating and cooling simulation programs for electric utilities, assessment and evaluation project, five major activities 2-18135



**digital simulation continued**

- solar powered heat pumps characts. 2-18020
- solar radiation model 2-37182
- solar salt-gradient pond surface convective layer numerical model 2-18024
- solar single-pass water heating system performance anal. 2-18027
- solar system, high-resolution graphics 2-18700
- solidification, computer simulation 2-47021
- speech intelligibility in rooms, prediction using modulation transfer function, a ray-tracing computer model 2-20476
- speech isolation, formulation by generalised inverse of matrices in freq. domain 2-29950
- sputtering, monocrystal, theoretical aspects, book contrib. 2-46863
- stratification in cooling lakes, long term simulation 2-28106
- SU(2) lattice gauge theory, Monte Carlo simulation program 2-23814
- supercooled liquid, icosahedral bond orientational order, computer simulation 2-12443
- superionic crystals and melts, vibrations and diffusion of atoms, computer simulation 2-45496
- supersonic flow, viscous, around solid of revolution, bow separation zone, computer simulation 2-30176
- synthetic tomography, computer evaluation, ultrasound imaging using multi-element transducers 2-44601
- system simulation using particles, book 2-18828
- thermionic combustor application to combined gas and steam turbine power plants 2-18116
- time-of-flight spectrum simulator for neutron elastic and inelastic scattering 2-24286
- tomography using Fresnel zone plate, optical reconstruction numerical simulation (*French*) 2-52611
- transient analysis of solar air heaters using a finite difference technique 2-37180
- vacancy struct. in grain boundaries, computer simulation 2-12584
- vibration testing using random-process digital simulator 2-23625
- viscous flow sintering kinetics, dynamic computer simulation 2-8057
- wedge dislocation loops and dipole determ. by bright-field image halos 2-1484
- wind power plants incorporation and impact in generation expansion planning 2-32018
- WWER premises during LOCA in blowdown period, program package for NPS behaviour anal. (*Bulgarian*) 2-7268
- X-ray spectral distrib. from attenuation data using iterative computational method 2-43740
- $\gamma$ -ray absorpt. coeffs., semiempirical formulae 2-46809
- Al<sub>2</sub>Cu crystal, simulation of melt cryst. growth (*French*) 2-8456
- Ar, electron swarm parameters 2-25487
- Br<sub>2</sub>, photodissoc., cage effect in presence of N<sub>2</sub> at high press., computer simulation 2-47363
- Cu, sputtering, Ar ion bombardment induced hypersonic shock waves, computer simulation 2-2394
- Fe, BCC, grain boundary self-diffusion, evidence for vacancy mechanism, mol. dynamics simulation 2-35731
- GaAs films, epitaxial growth simulation 2-5322
- (H<sub>2</sub>O)<sub>n</sub> clusters formation, equilib. const. computer simulation 2-39520
- I laser, photolytic, nuclear pumped, photon transport computer code simulation 2-44338
- Kr, electron swarm parameters 2-25487
- KrF laser, electron beam excited, output performance, computer simulation 2-44337
- Mo, atomistic computer simulation of dilatation due to edge dislocation 2-21149
- MoS<sub>2</sub>, scatt. intensity calcs. 2-44969
- NaCl-type cryst., simulation of dislocation motion 2-21151
- NaMgF<sub>3</sub>, cubic perovskite struct., fast ion cond. study 2-21390
- Nb<sub>2</sub>Sn, collision cascade simulation 2-12635
- Ni<sub>2</sub>Ti-Ni<sub>3</sub>Al, eutectic point, computer estimation 2-21276
- Pd-Si, amorphous, radial distribution function, structure factor, neutron diff. obs. 2-30407
- Si, amorphous solar cell, computer simulation 2-52342
- Si, Czochralski bulk flow, parameter sensitivity study 2-25779
- Si n-p solar cells, computer model 2-37335
- Si surface-barrier detectors, proton-induced nuclear reactions 2-24500
- Ti, adsorption and dissolution of H<sub>2</sub>, digital simulation 2-50866
- UO<sub>2</sub>, structural and dynamic props. at high temp. 2-16843
- V<sub>2</sub>Si, defect structures determ. by ion channelling and X-ray diff. 2-45295
- W, dechannelling of axially channelled electrons, single string approx. 2-25959
- ZrO<sub>2</sub>, anion deficient, defect struct., rel. to ionic cond. 2-21167

**digital storage**

- see also *cryotrons; magnetic storage; optical storage; random-access storage; semiconductor storage*
- beam-line multiwire proportional chambers memory system 2-43722
- RO<sub>2</sub>-based electrochemical light switch 2-11806

**digital systems**

- see also *computer networks; multiprocessing systems; real-time systems; sampled data systems*
- electroreflectance meas. in vacuum UV region using digital detector systems and H discharge tube (*Japanese*) 2-21984
- synchroniser, for spectra discrete recording 2-19194

**digital voltmeters**

- minicomputer calibration 2-33571

**digitisers** see *analogue-digital conversion***dilatometers** see *extensometers***dilute alloys**

- see also *impurity electron states; Kondo effect; magnetic properties of dilute systems*
- electron-phonon interaction and deviations from Matthiessen's rule at high temperatures 2-13057
- impurity binding energy, correlation with heat of formation 2-1497
- impurity exciton band, density of states and absorpt. line profile 2-5353
- impurity-host force-const. ratios, method for determ. 2-40508
- Kondo problem for alloys with rare earth impurities, exact soln. 2-36309
- matter transport by vacancies, linear response theory, five-freq. model 2-35746
- matter transport by vacancies, linear response theory, impurity correlation factor 2-35745
- noble metal-rare earth dil. alloys, anisotropic scatt. by rare earth impurities, high mag. field effect 2-26361
- noble metal-transition metal, dil., Hall effect 2-17048

**dilute alloys continued**

- solid-solution hardening, strength anomalies at low temps. 2-27181
- thermoelectromag. transport coeff., quantum oscillations, Kubo formula and CPA model calc. 2-1895
- transition metal alloys, bonding effects, Mossbauer isomer shift study 2-46440
- transition metal b.c.c. dilute alloys, electronic theory of screw dislocation motion 2-1476
- transition metal dil. alloys, trace elements depth profiles, AES spectrum subtraction method 2-41949
- Ag-Cu(Ni), dil. alloys, electron irradiated, free migration of interstitials 2-35544
- Ag-Gd(Er), muon diffusion detection by paramag. impurity introduction 2-31360
- Ag-Mn, dilute alloy, Korringa relax. rate of Mn ion 2-26619
- Al alloys, dilute, cold worked, low freq. internal friction peaks, strain amplitude 2-47079
- Al-Au dilute alloy for moderate-strength, high cond. appls. 2-5489
- Al-Be(Ca)(K)(Li)(Mg), irradiat., interstitial-solute complexes, configs. and binding energies 2-30483
- Al-C-B interstitial solid soln., mixing energy (*Russian*) 2-5228
- Al-Co dilute alloy for moderate-strength, high cond. appls. 2-5489
- Al-Ga (Si), dil., electron irradiated, interstitial trapping by Ga or Si atoms 2-35543
- Al-Mg, dil. quenched and annealed, vacancy migration energy, positron annihilation meas. 2-13585
- Al-Mg, dil., quenched, vacancy clustering, impurity effects, recovery curves 2-40426
- Al-Mg(Zn), dil., vacancy clustering, Doppler broadening positron study 2-41445
- Al-Ni<sub>3</sub>Sb dilute alloy for moderate-strength, high cond. appls. 2-5489
- Al-Sc(Ti)(V)(Co)(Ni), dil., low field Hall coeff., virtual bound state effect 2-13044
- Al-Ti(V), giant low field magnetoresistance and Hall effect 2-36014
- Al-Zn(Sb), pulsed laser annealing 2-50700
- Au-Er, dil. alloy, effects of near surface layer on EPR lineshapes, low temp. study 2-36421
- Au-Fe, Kondo system, thermoelec. transport parameters 2-36021
- Au-Gd(Er), dil., muon diffusion detection by paramag. impurity introduction 2-31360
- Au-Mn dilute alloy, spin glass and mixed phase EPR study 2-31207
- Bi<sub>1-x</sub>Sb<sub>x</sub>, dil. alloys, magnetoacoustic attenuation, large dip and hump type quantum oscils. 2-16980
- Bi<sub>1-x</sub>Sb<sub>x</sub>, dil. alloys, magnetoacoustic attenuation, large dip and hump type quantum oscils. 2-16981
- Ce<sub>1-x</sub>Gd<sub>x</sub>Pd<sub>3</sub>, dil. alloy, elec. and thermal cond. 2-21559
- Ce<sub>1-x</sub>Y<sub>x</sub>Pd<sub>3</sub>, elec. and thermal cond. 2-21559
- <sup>58</sup>CoFe and <sup>60</sup>CoFe, nuclear spin lattice relax. 2-26777
- Cu-(dilute alloys), reocryst. temp. (*Japanese*) 2-51936
- Cu-Al, dil., impurity diffusion study by NMR 2-41217
- Cu-Al, dil. alloy, dislocation struct. of [321] crystals grown by Bridgman method, Al addition effects (*Japanese*) 2-12603
- Cu-Al, electronic impurity scatt. anisotropy, mag. field induced surface-state resons. meas. 2-13058
- Cu-Au-Ge, dilute, thermoelec. power, impurity scatt. contrib. 2-5393
- Cu-Mn alloy, ESR modes and Edwards-Anderson theory of spin-glass state 2-36354
- Cu-Nb-Sn(Ge), dil. alloy, superconductor, glass coated melt spinning, mech. props. 2-22185
- Cu-Ni(Ge), dilute, thermoelec. power, impurity scatt. contrib. 2-5393
- Cu-Pd(Pt)(Rh), Fermi surface and impurity scatt., de Haas-van Alphen meas. 2-12958
- Fe: rare earth, dopant distrib. studied by internal friction 2-45238
- Fe-C, solute peak associated with grain boundaries 2-45150
- Fe-Mn, dil., local order, conc. and temp. depend., <sup>55</sup>Mn NMR study 2-46390
- Fe-Mn(Au), dil., hyperfine field, press. and temp. depend. 2-35980
- Fe-Mo(Ti)(Nb), dilute, muon hyperfine fields 2-46451
- K-Rb, low-field magnetoresist. at 4.2K 2-21564
- Mo-B alloy, B segregation, nuclear reactions study (*Russian*) 2-13725
- Mo-Zr (300 ppm), defect prod. by neutrons at 4.7K 2-29330
- Nb-Zr (300 ppm), defect prod. by neutrons at 4.7K 2-29330
- Pb-Ag, dilute molten, O<sub>2</sub> activities 2-5243
- Pb-Au, dil. alloy, electron irradiat., dipion formation, resistivity annealing spectra study 2-36880
- Pb-Au, dilute molten, O<sub>2</sub> activities 2-5243
- Pb-Mn, dilute, supercond., impurity bands, electron tunnelling obs. 2-2039
- PbMn dilute alloy, bound states in energy gap 2-38022
- Pd-Fe, dil., thermoelec. power, 5 to 100 mK, secondary thermometer apls. 2-30864
- Pd-Fe, dilute alloy, paramagnetic, mag. order, neutron scattering study 2-8960
- Pd-Fe dilute alloys, thermoelec. power, spin glass freezing obs. 2-36022
- Pd-Sn, very dil., force const. change of Mossbauer <sup>119</sup>Sn impurity nuclei 2-51503
- Re-Pt (1.0 wt.%), recrystallised surface, work function surface composition 2-51282
- <sup>103</sup>RuFe, dilute alloy, nuclear spin-lattice relax. study of mag. moment 2-26594
- SnCd, lattice damage at recoil Sn impurity 2-25943
- Th-Ce, extremely dilute, intermediate valence, TDPAD study 2-2169
- Th-Dy, dil., Dy<sup>3+</sup> electronic spin relax. in supercond. state, Mossbauer study 2-36213
- U(Al,Fe) dil. alloys, TEM obs. of microstruct. rel. to hardness 2-43557
- V-Ta, dilute alloy, phonon sp. ht. at low temp. 2-30622
- V-W, dilute alloy, phonon sp. ht. at low temp. 2-30622
- V-Zr, defect prod. by neutrons at 4.7K 2-29330
- Zn-Al (0.4 wt.%), fine grain, creep characts. (*Russian*) 2-9383
- ZnMn dil. single crystals, mag. anisotropy at low temps. 2-36357

**dimensions**

- mineral crystals, largest, data compilation 2-37856
- numerical quantities, dimensional analysis 2-19072

**dimers** see *molecules***dineutrons** see *neutrons***Dingle temperature**

- metals, electron gas, de Haas-van Alphen effect 2-35922
- Cu-Pd(Pt)(Rh), dilute, Fermi surface and impurity scatt., de Haas-van Alphen meas. 2-12958



**Dingle temperature continued**

n-InSb, Landau levels nonthermal broadening, transverse magnetoresist. and photomag. effect 2-8822  
Na, de Haas-van Alphen effect under press. 2-45808

**diode lasers** *see semiconductor junction lasers***diode sputtering**

Si:H, amorphous, sputtering conditions effect on H content and Si-H bonding 2-2444

**diode tubes** *see diodes***diodes**

*see also plasma diodes; rectifier tubes; semiconductor diodes*  
conductance and capacitance meas., computer-assisted system using phase sensitive technique 2-38666  
foilless diodes, analytic and numerical studies 2-582  
high current relativistic electron accelerators, vacuum diodes, stability of operation 2-39259  
He filled diodes, electric breakdown initiated by long-lived metastable states (*Croatian*) 2-4914  
Kr filled diodes, electric breakdown initiated by long-lived metastable states (*Croatian*) 2-4914  
Si:H, amorphous, electrical characterisation 2-37225

**dipole antennas**

discrete image representation for dipoles near dissipative Earth 2-42265  
discrete plus continuous image representation for dipoles near dissipative Earth 2-42266  
miniature electric field probe with resistive transmission lines, anal. 2-15184

**dipole moment, electric** *see electric moments***dipole moments, magnetic** *see magnetic moments***Dirac electron theory** *see Dirac equation; electron theory***Dirac equation**

*see also electron theory*  
Aharonov-Bohm, effect, mag. flux quantisation 2-38757  
baryon-meson interaction model (*Russian*) 2-49004  
bispin, conservation of square and projection, Dirac eqn. 2-3706  
classical charged nonlinear Dirac field in Coulomb pot., bound states 2-28677  
co-ordinate and momentum space representations 2-43175  
comments on Dirac eqn. with mass and arbitrary spin (*French*) 2-6987  
conditions for convergence of variational solutions of Dirac's equation in a finite basis 2-49273  
constants of motion for linear evolution systems 2-10940  
CP<sup>-1</sup> model, Dirac eqn. classical solns., Green functions 2-33712  
curved space-time, atom as probe 2-10658  
Dirac's electron theory, 1932-1934 A.D. 2-28623  
directly interacting relativistic point particles, constraint Hamiltonian dynamics 2-48498  
electron, quantum mechanics generalisation, leading to electron theory 2-10568  
electron in mag. field, Dirac equation 2-43205  
electron in space-time, spinor propag., spin precession and nongeodesic orbits 2-3693  
electron-monopole scattering, confinement 2-43210  
elementary derivation (*German*) 2-38805  
EM fields, method of solving Dirac eqn. 2-3740  
fermions, motion in axial mag. field, anomalous moments effect 2-38845  
fundamental interactions theory developments, Winter School, Karpeaz, Poland (Feb.-March, 1980) 2-48384  
gauge theories in particle physics, book 2-42802  
generalised Dirac eqn. for constant EM fields, Green's function 2-3739  
generalized Dirac equation with four orthogonal families of spin 1/2 solutions 2-3743  
GL(2f,C)×GL(2c,C) gauge-theoretical foundation of color geometrodynamics 2-43213  
Klein-Kaluza theory, CP invariance, fermion dipole electric moment 2-3669  
magnetic-moment operator of the relativistic electron 2-38883  
massless Dirac particles in supercritical Coulomb fields 2-38840  
matter coupled Yang-Mills fields, invariant solns. with Dirac spinors 2-48896  
moyer, D.F. 2-18838  
non-existence of eigenvalues of Dirac operators 2-38844  
noncompact gauge group for Dirac eqn. 2-48908  
nonlinear Compton scatt., relativistic treatment 2-38822  
one particle Dirac equation, Moore's new method of obtaining approximate solns. 2-19939  
particle production in a slowly alternating electric field 2-43263  
potential scatt. of Dirac particles 2-15297  
proper time and Dirac eqn. 2-10937  
relativistic equal-time eqn. for composite particles, derivation from Bethe-Salpeter eqn. 2-3715  
relativistic many-body theory of nuclear structure 2-33935  
relativistic quantum field theoretical model for nuclear slab collision dynamics 2-38969  
relativistic quantum mechanics on stochastic phase space 2-42908  
relativistic single-channel quantum-defect theory 2-34323  
space-time structure, symm. 2-48918  
stochastic model, for Schrödinger zitterbewegung and plane wave 2-33318  
stochastic phase spaces for spin 1/2 particles, Dirac dynamics 2-264  
time-dependent perturbation theory, algorithm 2-28683  
two-dimensional interacting Fermi field on lattice, probabilistic ideas 2-48879  
two-dimensional nonlinear system, decomposition and reproduction using Backlund transform. 2-38494  
vortex-fermion system, zero modes of Dirac eqn. 2-23833  
wave equation in interaction with EM field 2-19247  
qq bound states in funnel-type pot., relativistic wave functions 2-43300  
QQ-systems, Schrödinger vs. Dirac bound state spectra, effective power-law pot. Lorentz structure 2-38865  
H, relativistic atom, Dirac and EM fields interaction 2-48519  
H-like ions, 2s-2p transitions, wavelength meas. 2-11423

**direct current machines** *see d.c. machines***direct current motors** *see d.c. motors***direct energy conversion**

*see also bioenergy conversion; cells (electric); chemical energy conversion; magnetohydrodynamic conversion; photothermal conversion; plasma diodes; solar energy conversion; thermionic conversion; thermoelectric conversion*

**direct energy conversion continued**

alloys, energy conversion using elastic martensitic reaction (*German*) 2-47507  
conference, Atlanta USA, 1981 Aug. 2-18816  
economics, science and society test 2-42819  
energy-related materials, research opportunities 2-27113  
geothermal isobutane-isopentane mixture condensation film coefficients 2-9622  
geothermal Lysholm engine performance characts. 2-9624  
HDR energy programme 2-9620  
mixed hydrocarbon binary thermodynamic cycles 2-9621  
multispeed electrical generator application to wind turbines 2-32020  
negative-ion injectors, recuperator, expt. simulation 2-14121  
performance and operational experience of a prototype binary geothermal power plant 2-9623  
power generation from laser-produced plasma (*Japanese*) 2-6182  
superconductive magnetic energy storage system characts. 2-18143  
technology, 3-year technologist program 2-33260

**direct nuclear reactions and scattering**

*see also pick-up reactions; stripping reactions*  
deep inelastic heavy ion collisions, anticorrelated ang. momentum distrib., transport model 2-7116  
direct radiative capture formalism, cross section sensitivity 2-43470  
heavy ion collisions, light particle jettison reactions as direct processes 2-33992  
heavy ion fusion-fission, adiabatic and sudden interaction pots., asymmetric target-projectile combinations 2-24255  
heavy ion transfer reactions, optical model depend. 2-3945  
heavy-ion direct reactions, review 2-24273  
(HI, HI') direct reactions, inelastic transition form factors, semiclassical theory 2-15398  
knockout reactions with real and virtual photons, direct mechanism 2-3888  
preequilibrium decay, energy spectra symmetrical and asymmetrical decay 2-33996  
sticking coeff. in strong-absorption model 2-24214  
three cluster fish bone model 2-24143  
( $\gamma, n$ ), 0.2 to 1 GeV on light and medium mass nuclei, mass-yield depend. 2-393  
( $\gamma, p$ ), 0.2 to 1 GeV on light and medium mass nuclei, mass-yield depend. 2-393  
(p,p), ang. momentum depend. pots., shell effects, direct reactions effects 2-24229  
Ag(<sup>12</sup>C, X), 86 MeV/N, projectile fragments, energy spectra, fragmentation model 2-7114  
Ag(<sup>20</sup>Ne, X), 860 MeV, H and He isotope emission from projectile fragmentation 2-34068  
<sup>27</sup>Al(<sup>18</sup>O, X), 100 MeV, direct transfer, DWBA and diffraction anal. 2-29291  
(Ar, X), 800 MeV/N,  $\pi^+$ , p, d, t, <sup>3</sup>He,  $\alpha$  inclusive cross sections for large angle prod. 2-430  
Au(<sup>12</sup>C, X), 86 MeV/N, projectile fragments, energy spectra, fragmentation model 2-7114  
(C, X), 800 MeV/N,  $\pi^+$ , p, d, t, <sup>3</sup>He,  $\alpha$  inclusive cross sections for large angle prod. 2-430  
<sup>12</sup>C(<sup>12</sup>C, X), 86 MeV/N, projectile fragments, energy spectra, fragmentation model 2-7114  
<sup>12</sup>C( $\alpha, \alpha$ ), low energy direct channel Regge-pole approach, differential cross section 2-24249  
<sup>40</sup>Ca( $n, \gamma$ ), quadrupole radiation, semi-direct model anal. 2-24232  
<sup>60</sup>Er(<sup>8</sup>Kr, X), 8.2 MeV/u, product ang. depend., dissipative phenomena, fragmentation component 2-34065  
<sup>56</sup>Fe(p,n), 20-35 MeV, analogue state, isovector deformation parameter 2-24110  
<sup>2</sup>H( $\alpha, \gamma$ ), cross-section, rel. to <sup>6</sup>Li prod. in big bang 2-39040  
<sup>2</sup>H(e,e'), parity violation, Weinberg model test, breakup channels 2-33847  
<sup>3</sup>He(<sup>4</sup>He, p), 14 MeV, pol. target, anal. power ang. distrib. 2-39011  
<sup>3</sup>He(p, <sup>2</sup>p)<sup>4</sup>He, intermediate energy, disintegration cross section (*Russian*) 2-24237  
<sup>4</sup>He(p, <sup>2</sup>p)<sup>3</sup>He, knockout reaction, wave function relativisation (*Russian*) 2-11139  
<sup>4</sup>He(p, <sup>3</sup>p)<sup>3</sup>He, knockout reaction, wave function relativisation (*Russian*) 2-11139  
<sup>6</sup>Li nucleus direct photodisintegration cross-section calc. (*Russian*) 2-29255  
<sup>6</sup>Li(d,  $\alpha$ )<sup>4</sup>He, direct cross sections (*Russian*) 2-24247  
<sup>7</sup>Li(p,  $\gamma$ ), giant resonance, rel. to direct capture model 2-39033  
<sup>4</sup>Li(<sup>3</sup>He, <sup>3</sup>He), A=6, 7, 33.3 MeV, pol. <sup>3</sup>He, differential cross sections, anal. powers, optical parameters 2-3892  
<sup>4</sup>Li(<sup>3</sup>He, t), A=6, 7, 33.3 MeV, pol. <sup>3</sup>He, differential cross sections, anal. powers, optical parameters 2-3892  
<sup>23</sup>Na(d, Be), 13.6 MeV, differential cross sections, quasicluster direct transfer (*Russian*) 2-426  
(Ne, X), 400, 800, 2100 MeV/N,  $\pi^+$ , p, d, t, <sup>3</sup>He,  $\alpha$  inclusive cross sections for large angle prod. 2-430  
Ni(<sup>20</sup>Ne, X), 860 MeV, H and He isotope emission from projectile fragmentation 2-34068  
<sup>4</sup>Pd(p,p), 6 MeV, A=102, 104, 106, 108, 110, elastic, inelastic, direct cross section, CC anal. 2-34019  
<sup>28</sup>Si(HI, X), HI=<sup>6</sup>Li, <sup>12</sup>C, fusion and direct reactions, cross sections, optical and statistical anal. 2-19588  
Ta(<sup>20</sup>Ne, X), 860 MeV, H and He isotope emission from projectile fragmentation 2-34068  
<sup>232</sup>Th(p, xn+yp) reactions, 6.8 to 20.2 MeV, cross-sections 2-29267  
<sup>89</sup>Y( $\gamma, p$ )<sup>88</sup>Sr, proton escape width in giant dipole reson., expt. determ. 2-34011

**directional antennas** *see directive antennas***directional couplers**

bistable integrated directional coupler switch, remotely controlled, in optical fibre link 2-25146  
electro-optical co-axial optical directional couplers using tube guide surrounding single-mode rod 2-7895  
optical all-fibre directional couplers, single-mode and multimode, for WDM 2-4592  
optical coaxial dielectric directional coupler 2-44441  
optical fibre interferometers with (3×3) directional couplers, analysis 2-7873  
optical glass waveguides formed by Ag<sup>+</sup> ion exchange, stripe waveguides, directional couplers and bends, optical filter appls. 2-11859



**directional couplers** continued

- power reflection meas. of optical fibres by sinusoidal modulation of light intensity 2-34897
- GaAs epitaxial layer photoelastic electro-optical directional couplers, 1.15  $\mu\text{m}$ , strain-induced waveguides 2-7889
- $\text{LiNbO}_3$  electro-optic directional coupler integrated with pyroelec. waveguide detector, optical bistability 2-7885
- $\text{LiNbO}_3$  optical directional coupler, gating of Gbit rate diode laser pulse trains 2-7811

**directional patterns** see antenna radiation patterns**directive antennas**

- adaptive receiving array interference nulling schemes compared 2-44585
- IR antenna using corner reflector, EM coupling with 10 micron laser radiation 2-38689

**directors (programs)** see supervisory and executive programs**dirty superconductors**

- anisotropic, charge imbalance relaxation by elastic scattering 2-36206
- films, alloys, periodically modulated, crit. current and fields 2-31117
- impure anisotropic superconductor,  $T_c$ , BCS theory 2-31005
- inhomogeneous, transition temp. and crit. mag. field of localised supercond. states, proximity effect 2-17239
- Josephson junction with direct cond., steady-state props., kinetic inductance (*Russian*) 2-26557
- kinetic equations, quasiclassical Green's function formalism 2-36209
- nonequilibrium supercond., depairing influence on charge imbalance 2-36246
- nonequilibrium superconductors, kinetic eqns. 2-31032
- two-band superconductors with Anderson impurities, sp. ht. discontinuity 2-13237
- two-dimensional dirty superconductors, universal resist. transition 2-46202
- type I, two-dimensional, vortex-antivortex pair dissociation dynamics 2-31109
- Al, superconductor with paramag. impurities, strong coupling calc. 2-46189
- Pb/Ag proximity junction, anomalous quasiparticle mass renormalisations 2-46209

**discharge lamps**

- see also arc lamps; flash lamps; fluorescent lamps; metal vapour lamps
- Grimm's glow discharge lamp, modified, appl. to steel anal. 2-43105
- H Lyman- $\beta$  lamp with cooled LiF window 2-4569

**discharge lasers** see gas lasers**discharge tubes** see gas discharge tubes**discharges (electric)**

- see also arcs (electric); electric breakdown; exploding wires and foils; flashover; glow discharges; high-frequency discharges; lightning; partial discharges; positive column; sparks; surface discharges; Townsend discharge
- air, electric strength recovery in gaps after sliding discharge along surface of insulator 2-1362
- anthraquinone, electric spark discharge pretreated, sublimation on mica surface 2-35660
- aryloxy surface modification by  $\text{N}_2$  plasma electrodeless HF capacitive discharge (*Russian*) 2-5967
- atmospheric pressure discharges, action of DC and UHF electric fields, plasma parameters and electric characteristics 2-18505
- cylindrical discharge chamber for plasma accelerator study (*German*) 2-16516
- cylindrical discharge with nonuniform gas heating, reson. level population 2-8385
- dark current flow and positively charged particles meas. in uniform field vacuum gap 2-5015
- DC flare discharge in certain technological processes 2-44934
- diamagnetic signal in a plasma column with an inflection point 2-44927
- dielectric liquid, discharge, short high-current, anodic and cathodic voltage drop determ. 2-8380
- dielectric materials, erosion by plasma pulses of grazing discharges 2-25919
- discharge behaviour of electrodeposited  $\text{PbO}_2$  and Pb electrodes 2-37204
- discharged current characts., from needle electrode, applications to thunderclouds detection 2-10120
- electrodeless discharge, AF and RF oscills. prod., external light effect 2-16455
- electron cyclotron resonance plasma, discharge cleaning (*Japanese*) 2-30342
- electron cyclotron resonance plasma, H atom flux meas. using quadrupole mass analyser 2-1344
- electron drift in nonuniform electric field, numerical soln. 2-16530
- electron energy distribution function in a discharge controlled by an electron beam 2-30353
- ellipsometric model for investigating electrode processes in gas discharges 2-19161
- energy balance determ., using optomechanical anemoid 2-1358
- energy characteristics for plasmatron melting of metals (*Russian*) 2-1351
- erosion accelerators focus, plasma-dynamic discharges dynamics and emission 2-44916
- gas, local temp. and density meas. by coherent anti-Stokes light scatt. method 2-20809
- gas discharge, nonlinear theory of strata 2-44937
- gas discharge, nonself sustaining and with inhomogeneous ionisation in gap (*Russian*) 2-8371
- gaseous breakdown studies using modified image convertor streak camera 2-35343
- high pressure gas-vacuum boundary layer discharge 2-8381
- high pressure gases, diffuse breakdown model at homogeneous electric field strengths 2-20941
- high-voltage, in liquid, optical meas. of channel and shock wave expansion speeds 2-30351
- hollow cathode discharge as a plasma source for  $\text{H}^-$  production 2-12336
- hot cathode, double sheath, hydrodynamic description 2-16457
- human electrostatic discharge waveforms measurement 2-47595
- inductively coupled plasma discharge, gas flow dynamics 2-9597
- inert and molecular gas mixtures, discharge instability (*Russian*) 2-8372
- inert gas discharge, plasma sheath transition, kinetic theory 2-40124
- inert gas mixtures, electrically excited, electron energy distrib. and transport coeffs., Boltzmann stability eqn. calc. (*Chinese*) 2-25665
- inert gases, kinetics of relax. of electron excitation and form. of excimer mol. (*Russian*) 2-8328
- insulator, short-circuit discharge, carrier retrapping effect 2-31379

**discharges (electric)** continued

- ion charge state in reflecting discharge, plasma density oscills. effects 2-20828
- ion source based on Penning cell, discharge characteristics 2-35342
- ion sources, neutral beam injection, prototype for high current density ion beam production 2-48837
- ionised plasma centrifuge with plasma gun discharge in crossed E- and H-fields, separation of elements 2-1364
- laser electronics and systems, book 2-48413
- luminous waves in a pulsed discharge 2-44940
- magnetic multipole discharge role of anode area 2-34229
- magnetron discharge appl. to high rate reactive ion etching of  $\text{SiO}_2$  2-27314
- metal, anomaly detection by electric discharge in gases 2-9516
- metastable products time of flight anal. from gas discharge 2-35320
- microwave induced plasma design,  $\text{TM}_{010}$  cavity utilisation for optical emission spectroscopy 2-25591
- non-self-sustaining discharge, periodically pulsed in gas flow (*Russian*) 2-40194
- nonelectronegative gases, non self-sustained vol. discharges, current-voltage charact. 2-50366
- optical discharges, review 2-12415
- ozonator, current pulse oscillograms 2-16418
- particle exhaust efficiency with expanded boundary divertor in plasma discharges 2-35271
- Penning discharges, modified, high resistance mode, current-voltage characts., floating pot. distrib. meas. 2-16528
- periodic accel. tube discharges investigation with capacitive pickup array 2-11314
- plasma, acoustic oscillations, gas temp. meas. 2-20861
- plasma, underdense, laser beam filamentation 2-50412
- plasma column, surface waves, complete obs. of mode conversions at dispersion degenerate points 2-20848
- plasma diagnostics in  $\text{SF}_6$  pulse discharges (*German*) 2-25659
- polyethylene, low density and cross-linked, light detection during the initiation of electrical treecing at room temperature 2-13408
- polyethylene, structural changes under influence of elec. discharges (*Russian*) 2-13829
- polythene, high density, space charge and short-circuit discharge 2-31378
- propagating wave packet formation in resistive phase of HV straight discharge 2-40204
- pulse discharges, diagnostics using Michelson interferometer with ruby laser (*Czech*) 2-35334
- pulsed, electrode erosion and spectrum, laser radiation effects 2-44930
- pulsed high current discharge ccts., voltage and current meas. 2-15189
- pulsed induction discharge, for shock wave form. and propag. in plasma 2-35336
- pulsed rotating plasma discharge, ion temp. and mag. field, spectral meas. 2-20938
- regions of occurrence of E- and H-discharges, plasma dielectric films (*Russian*) 2-1355
- relativistic electron beam in nonself sustaining discharge, effect of self mag. field of plasma current 2-1363
- relaxation generator based on non-self-sustained volume discharge 2-44938
- resonance characteristics utilisation for laser radiated power stabilisation (*Russian*) 2-20314
- sharp-angled mag. trap plasma heating (*Russian*) 2-25590
- T-10 Tokamak, low-q discharges, impurity distrib. 2-12411
- tetrachloroethane, RF discharge, decomposition products, EPR spectra (*German*) 2-25666
- tetrachloroethane, RF low pressure discharge, decomposition, gas chromatography, time resolved spectra (*German*) 2-16521
- tetrafluoromethane, electrical discharges, etching and plasma characts. 2-20956
- Tokamak, electron cyclotron resonance discharge cleaning (*Japanese*) 2-25633
- unipolar corona discharge in hyperboloid-plane gap, calc. and obs. 2-16533
- vacuum drift gap, electron current oscillations 2-50474
- volume beam-plasma discharge form. in crossed fields 2-35345
- Z-discharge, low pressure, plasma generation and decay for tokamak experiment (*Japanese*) 2-25670
- Z-pinch, neutron and hard X-ray generation (*Russian*) 2-40142
- Al, liner, cylindrical shell, EM implosion in Z-pinch discharge 2-50429
- Ar, continuous optical discharge, theoretical model 2-25600
- Ar, electric strength recovery in gaps after sliding discharge along surface of insulator 2-1362
- Ar hot cathode discharges, LF longitudinal waves 2-20944
- Ar hot cathode discharges, LF longitudinal waves, hydrodynamical model 2-20945
- Ar- $\text{H}_2$ - $\text{N}_2$ , combined discharges, suppression of spiral instability at atmospheric press. in longitudinal mag. field 2-40198
- Ar-Kr- $\text{F}_2$  gas mixture, plasma props. under steady discharge condition (*Chinese*) 2-8367
- Ar- $\text{SF}_6$ , electric strength recovery in gaps after sliding discharge along surface of insulator 2-1362
- $\text{ArF}^+$  molecules excited by fast discharge, stimulated emission 2-4494
- Au vapour laser, pulsed (*Chinese*) 2-25028
- CO discharge, electron energy distrib. and vibr. population 2-30349
- CO electric-discharge continuous-flow laser using  $\text{H}_2$ -containing mixture 2-25002
- CO electron-beam-controlled discharge laser, kinetics and energy characts. 2-34730
- CO laser discharge, UV sustained 2-4492
- CO pulsed high-pressure laser, electron-beam-controlled 2-34794
- $\text{CO}_2$ , dissociation by plasma-chemical process in nonequilibrium microwave discharge 2-41896
- $\text{CO}_2$  electron-beam-controlled discharge lasers, review 2-34719
- $\text{CO}_2$  electron-beam-controlled discharge laser, kinetics and energy characts. 2-34730
- $\text{CO}_2$  fast-axial-flow longitudinal-discharge lasers, kinetic modelling 2-39616
- $\text{CO}_2$  high freq. capacitive discharge 10.6  $\mu\text{m}$  gain 2-44242
- $\text{CO}_2$  laser amplifiers, electron-beam controlled, gain meas. 2-49800
- $\text{CO}_2$  laser discharge vibr. population distrib. meas. with tunable diode laser 2-49727
- $\text{CO}_2$  photoionisation laser with high pulse repetition freq. 2-44239
- $\text{CO}_2$  pulse-periodic waveguide laser pumped by longitudinal capacitor discharge 2-34798
- $\text{CO}_2$  technological laser with closed gasdynamic channel, numerical investigation 2-49729



**discharges (electric) continued**

- CO<sub>2</sub>-He(N<sub>2</sub>) high freq. capacitive discharge 10.6  $\mu$ m gain 2-44242  
 CO<sub>2</sub>-N<sub>2</sub>-He mixture, transverse discharge, laser radiation amplification (French) 2-24988  
 CO<sub>2</sub>-N<sub>2</sub>-He-O<sub>2</sub> electron beam sustained discharge, elect. field distrib. 2-44942  
 CO(v) chemiluminescence in CS<sub>2</sub>/O<sub>2</sub> and CS<sub>2</sub>/O<sub>2</sub>/N<sub>2</sub>O-flames, elec. collision quenching 2-2715  
 CS<sub>2</sub> vapour, mol. emission spectra in low press. discharges 2-39438  
 Cd I, metastable state alignment in gas discharge 2-44931  
 CsH spectroscopy, formation in elect. discharges 2-48792  
 Cu laser-active level excitation efficiency in electric discharges 2-49742  
 Cu, vapour, dense, discharge and lasing characteristics 2-29809  
 Cu vapour laser (Chinese) 2-20290  
 CuBr TE laser, operating characts. 2-11684  
 H<sub>2</sub> electron-beam-controlled discharge laser, kinetics and energy characts. 2-34730  
 HCl-He discharge, mixture, limiting charact. (Russian) 2-40193  
 HD VV 2-34730  
 HF electric-discharge chem. laser operating at high pulse repetition freq. 2-34799  
 He 3'D level excited by nanosecond discharge, decay rates 2-4367  
 He, electronic and ionic discharges, cylindrical geometry effects (French) 2-44921  
 He hot cathode discharge, positive column, response to current perturbation, elec. field, electron density and drift vel. relax. 2-16527  
 He plasma, excitation transfer of 3'P, D-3'D by atomic collisions, Wigner's spin conservation rule violation 2-15751  
 He\* 468.6 nm emission from hollow cathode discharge by restricting inner cathode wall 2-5013  
 He-CO discharge, electron energy distrib. and vibr. population 2-30349  
 He-Ne laser power stabilisation (Russian) 2-4485  
 He-Ne plasma, discharge noise relation to light output 2-44929  
 Hg vapour lamps ignition physical process and theory (Russian) 2-50473  
 HgBr X-ray preionised electric-discharge laser, scaling studies 2-4497  
 HgBr<sub>2</sub>/HgBr dissociation laser, elec. beam preionised 2-7755  
 HgCd\*, discharge studies 2-34488  
 KrCl\* molecules excited by fast discharge, stimulated emission 2-4494  
 KrF\* discharge e-beam controlled laser, ionisation instability (Chinese) 2-24996  
 KrF\* molecules excited by fast discharge, stimulated emission 2-4494  
 LiTaO<sub>3</sub>, spark radiation 2-51535  
 N, non-self-sustaining discharge, current flow mechanism near cathodes 2-20959  
 N<sub>2</sub> AC discharge, stability investig. (Russian) 2-40195  
 N<sub>2</sub> discharge, stationary electron energy distrib., relaxation times 2-25501  
 N<sub>2</sub>, ionisation coeff. in vol. discharge 2-40205  
 N<sub>2</sub>-C<sub>2</sub> mixture in positive column, electron energy distrib. 2-8373  
 N<sub>2</sub>-O<sub>2</sub> 4:1 mixture, electron distrib. function 2-20947  
 N<sub>2</sub> discharge, externally maintained, instability effect on energy input and maximum conc. of chemically active particles 2-40200  
 NF<sub>3</sub>, electrical discharges, etching and plasma characts. 2-20956  
 NO production in laboratory discharge, atmospheric implications 2-28130  
 NO<sub>x</sub> production in laboratory discharge, atmospheric implications 2-28130  
 Ne, electronic and ionic discharges, cylindrical geometry effects (French) 2-44921  
 Ne short-lived states excited by microwave discharge, dye laser intracavity absorpt. obs. 2-11435  
 Ne, superradiation characteristics obs. at 614.3 nm in pulsed discharge in capillary 2-44248  
 Ne-N<sub>2</sub>, external electrode gas discharge, wall charge distrib. meas. 2-20942  
 Ne+O<sub>2</sub>, afterglow, quenching rate const., O I spectra 2-43973  
 SF<sub>6</sub>, electric strength recovery in gaps after sliding discharge along surface of insulator 2-1362  
 SiH<sub>4</sub>-Ar plasma, Si atom diffusion and Si:H amorphous film deposition 2-35274  
 Xe, electric strength recovery in gaps after sliding discharge along surface of insulator 2-1362  
 Xe, powerful nonsteady discharge theory stabilising walls vaporisation effect 2-20948  
 XeBr\* excimer laser with electron beam and discharge excitation, radiation characts. 2-29808  
 XeCl\* excimer laser with electron beam and discharge excitation, radiation characts. 2-29808  
 XeCl\* molecules excited by fast discharge, stimulated emission 2-4494  
 XeF\* excimer laser with electron beam and discharge excitation, radiation characts. 2-29808

**discharges (partial) see partial discharges****disclinations**

- carbonaceous mesophase, struct. and phys. props., rel. to disc-like mols. 2-25739  
 continuum theory of lattice defects rel. to non-Euclidean geom. in linear approx. 2-21135  
 crystals, deformed, plastic rotation theory 2-5180  
 fibre reinforced composites, disclination model of fibre peeling 2-36960  
 glass, point and line defects 2-40284  
 hexapentoxyltriphenylene, hexagonal discotic mesophase, disclinations and walls (French) 2-12463  
 liquid crystals, smectic A and canonic, curvature defects 2-16585  
 loops, rectangular wedge, elastic props. 2-8518  
 material bodies with dislocations and disclinations, Yang-Mills type minimal coupling theory 2-23442  
 MBBA-air interface, disclination obs. 2-5047  
 MBBA-cholesteryl nonanoate mixture, cholesteric, electrooptical effects and EHD instabilities 2-1392  
 petroleum pitch, mesophase dynamics, hot-stage cinemicroscopy obs., disclinations form. 2-40258  
 smectic C and C\* phases, existence of singular lines in focal domains (French) 2-40260  
 Somigliana dislocation loops, interaction with elastic strain fields 2-50641  
 two-dimensional system, melting theory, Monte Carlo simulation, particle system behaviour 2-1600

**discontinuous control systems see sampled data systems****discontinuous metallic thin films**

- coalescence grown, quantitative struct. evaluation, statistical model 2-21459  
 electrical resistivity changes during vapour and gas adsorption, review (Russian) 2-30974  
 island metal condensates, early size distrib. evolution 2-26257  
 island-like structure, modelling of elec. field effects on growth 2-8726  
 structure, elec. cond., statistical description 2-26261  
 Ag island film, adsorbed dye molecules, luminescence 2-26976  
 Ag island film, dye-coated, enhanced optical absorpt. 2-2352  
 Ag island film, luminesc. obs. during elec. current passage 2-36707  
 Ag island film with adsorbed dye, enhanced surface SHG and two-photon dye luminesc. 2-11755  
 Ag island films, fluoresce. lifetimes and yields of adsorbed mols. 2-43981  
 Ag island films, optical props., particle shape determ. 2-36723  
 Ag particles on polymer-replica substrates, surface-enhanced Raman scatt. 2-51596  
 Ag structures produced by microlithography, enhanced surface Raman scatt., plasmon reson. 2-5765  
 Ag-AgCl film, spectral dips in Ag colloidal band, Weigert and Herschel effects 2-2358  
 Al, granular, resist. transitions, vortex unbinding 2-17249  
 Al, granular, vortex motion dynamics of two-dimens. supercond. 2-2034  
 Al granular superconducting film, microwave characts. DC resist., long-range supercond. 2-17217  
 Au discontinuous film, density of states meas. 2-41028  
 Au particles, single cryst. nm size, habit planes determ. 2-12930  
 Au particles grown on MoS<sub>2</sub> vacuum-cleaved surfaces, double positioning, obs. by electron microscopy 2-8727  
 Au, structure, elec. cond., statistical description 2-26261  
 Ba, adsorption on Re (1010) and Mo (112), island form. 2-45731  
 Cu, on C, growth in TEM, statistical anal. of successive stages 2-40704  
 In, granular, on CdS, lack of proximity effect coupling 2-31068  
 In, granular films, electron plasma oscils. 2-13197  
 KCl, granular films, growth and resistance 2-17633  
 Ni film, discontinuous, photoelectron spectroscopy 2-41499  
 Pb granular films, growth and resistance 2-17633  
 Sm thin films, elec. resist., effect of AC and DC electric fields 2-30975

**discrete symmetries**

- see also C invariance; CP invariance; CPT invariance; P invariance; parity; T invariance  
 Dirac monopole, rotational symm., symplectic mechanics 2-28986  
 SU(5) grand unified model, cosmic domain walls formation 2-48922  
 supersymmetric quantum field theory internal symmetry freedom of choice 2-43219  
 Thomas precession, discrete symm. breaking, Lorentz group elements 2-33319

**discriminators**

- broadband instantaneous microwave freq. meas., discriminator technique, low-cost appl. 2-38665  
 leading edge discriminator for  $\gamma$ -ray time of flight spectroscopy 2-49237  
 low-level ultrafast differential discriminator for photomultipliers appl. 2-43726  
 timing and positioning discriminators, quad BGO detector for positron computed tomography 2-49216  
 timing discriminator using leading-edge extrapolation 2-24514

**disinclinations see disclinations****disintegration (radioactive) see radioactivity****disintegration energies see radioactivity****dislocation anchoring see dislocation pinning****dislocation arrays**

- bicrystal, symmetrical, energy and elastic field of dislocation arrays, anisotropic elasticity theory 2-5115  
 grain boundaries, symmetrical tilt, high-angle, intrinsic secondary grain boundary dislocation arrays 2-12611  
 intercrystalline boundaries, branching condition, O-lattice model 2-25904  
 prismatic, cross-slip and stresses 2-50652  
 steel, austenitic stainless, residual strength and microstruct., effect of shock deform. 2-47139  
 steel, austenitic stainless, tensile response, influence of shock-loading temp. and pulse duration 2-47140  
 steel, Cr-Mo-(V), heat-resist., long-term strength under creep conditions 2-41683  
 superplasticity, structural, dislocation motion and grain boundary sliding 2-41687  
 Zircaloy-2 and -4, neutron irradi., dislocation struct. 2-50649  
 Al, thermomechanical treatment, dislocation arrays stability rel. to deform. temp. 2-5127  
 Au/AuPd bicrystals, hexagonal dislocation networks, TEM contrast 2-25887  
 Cu-Al alloys, ordered linear dislocation multipoles struct. 2-8524  
 Cu-Zn (37.65 at.%), reverse martensitic transform., resulting dislocation structs. 2-51896  
 Fe-Se (3.25 wt.%), subboundary dislocations incorporated in deformation twin 2-50665  
 GaAs, thermal conditions effect on large-diameter growth of single crystals 2-2432  
 InP epitaxial layer, defect obs. and correl. with device performance 2-5333  
 InP, undoped single cryst., identification of faulted prismatic dislocation loops 2-8520  
 Ni-Al-Mo-base superalloys, microstruct. features 2-41689  
 Ni<sub>3</sub>Al-Mo, eutectic, directionally solidified, low cycle fatigue behaviour 2-36953

**dislocation breakaway, pinned see dislocation damping****dislocation climb**

- absorption preference of point defects by dislocation 2-35531  
 alloys, strengthening against creep 2-5888  
 alloys, strengthening mechanisms 2-5887  
 high-temperature interactions, modelling 2-17644  
 internal friction associated with high-temperature dislocation mobility 2-45350  
 Orowan dislocation loops, cross-slip and climb (Russian) 2-21145  
 oxides, climb motion of dislocation 2-40386  
 radiative creep, effect of dislocation glide 2-1520  
 rare earth oxides, cubic-C, high temp., plasticity, dislocation behaviour 2-30509  
 recovery of dislocation structure, assoc. with net plastic strain 2-31737



**dislocation climb continued**

- Al, polycrystalline, internal friction, medium temp. 2-45353  
 GaAs single crystals, helicoidal twisting of dislocations, projection etching, SEM and TEM obs. 2-45174  
 Mg, deformation mechanisms, creep behaviour, 473 to 820K 2-13770  
 Mg, polycrystalline, internal friction, medium temp. 2-45353  
 NaCl:Ni precipitation induced dislocation struct. obs. 2-12600  
 Si, climb of dissociated dislocations 2-25892  
 Si, surface temp. evaluation of multi-scan electron beam irradiation samples, TEM obs. and optical pyrometry meas. 2-50712  
 Si:B, ion implanted, point defect generation during oxidation, loop annealing technique 2-25869  
 TiC, polycrystalline, mech. props. 2-51984  
 W<sub>2</sub>C, deformed at high temps., obs. of dislocations 2-40394  
 YIG single crystals deformed at high temp., dissociation of dislocations with  $a/2\{111\}$  Burgers vectors 2-40393  
 Y<sub>2</sub>O<sub>3</sub>, high temp. creep, phenomenological anal. 2-5181

**dislocation damping**

see also Bordon effect

- alloy, precipitation strengthened, AE from dislocation motion 2-31881  
 alloys, stainless, H ingress and egress during electrolyte charging, surface wave study 2-45701  
 amplitude dependent dislocation damping, temp. depend. 2-45158  
 crystals, deformed, dislocation resonance peak 2-45164  
 drag by equidistant point defects, damped vibr. string model 2-45169  
 internal friction associated with high-temperature dislocation mobility 2-45350  
 kink model of dislocation mobility and dislocation-point defect interactions 2-45161  
 metals, dislocation relax. processes 2-40400  
 metals, internal friction caused by intrinsic dislocation relax., review 2-40399  
 point defect dragging, theory 2-45162  
 point-defect drag, continuous and pinning-point-drag effects 2-45170  
 rigid rod model of dislocation resonance including applications to point defect drag 2-45163  
 steel, 14HG, thermochem. treatment influence on internal friction processes (Polish) 2-27211  
 steel, austenitic, cold worked, internal friction peaks 2-47077  
 steel, Si, grain oriented, secondary recrystn. kinetics, high temp. background damping 2-47052  
 steel, stainless, FCC, time dependent dislocation pinning by H atoms, surface US studies 2-50642  
 viscous formation of dislocation amplitude-dependent hysteresis (Russian) 2-5125  
 Ag, cold worked, internal friction and modulus defect, temp. depend. (Polish) 2-36907  
 Al, thermally activated double kink generation during cyclic deformation, US study 2-45185  
 Al-Ga (0.5 wt.%), cold work internal friction peak at low temp. 2-45342  
 Au-Cd, internal friction and elastic modulus near martensitic transform. 2-47105  
 CsI, deformation characts. under pulsed loading, dislocation dynamics 2-50745  
 Cu, dislocation damping, dynamic 2-45191  
 Cu, dislocation pinning effects, US attenuation and vel. meas. 2-45194  
 Cu, dislocation resonance damping, temp. depend. 2-45192  
 Cu, electron irradiation, internal friction background and peaking effect 2-45339  
 Cu, electron irradiated, internal friction, oxidising and reducing anneals effect 2-47078  
 Cu, internal friction peaking effect, lattice dynamics model 2-45346  
 Cu, plastically deformed, dislocation struct., US investig. 2-45190  
 Cu, US attenuation temp. depend., plastic deformation effects 2-45409  
 Cu:N(Ne), ion implanted, fatigue and internal friction 2-47182  
 Cu-Al, concentrated alloy, internal friction 2-45343  
 Cu-Zn, concentrated alloy, internal friction 2-45343  
 Fe, dislocation relax., effect of H changing 2-40406  
 Fe, dislocation struct. generated by low temp. deform. and associated damping phenomena 2-40405  
 $\alpha$ -Fe, Snoek-Koster relax., role of screw dislocations and C-vacancy pairs 2-40407  
 Fe-Si alloy, plasticity, internal friction and struct. (Polish) 2-36905  
 KCl, deformed cryst.,  $\gamma$ -irrad., dislocation damping coeff. 2-16653  
 LiF crystal, dislocation motion damping const., press. depend. 2-45193  
 MgO, dislocation-point defect interaction, internal study 2-45187  
 Mo, dislocation relax. peaks, internal friction meas. 2-40401  
 NaCl crystal, dislocation motion damping const., press. depend. 2-45193  
 NaCl crystals, recovery of internal friction 2-5185  
 NaCl, deformed cryst.,  $\gamma$ -irrad., dislocation damping coeff. 2-16653  
 NaCl, dislocation photodamping with F-centres, internal function study 2-45188  
 Nb, dislocation motion, internal friction study 2-40402  
 Nb, H-dislocation interactions and intrinsic dislocation relax. 2-40403  
 Nb-O, Snoek-Koster relaxation 2-47114  
 Ni base alloy, time dependent dislocation pinning by H atoms, surface US studies 2-50642  
 Ni:H, cold-worked, internal friction peaks 2-8568  
 Ni-Ti(Cu), thermoelastic, dislocation relax. in martensitic phase, internal friction meas. 2-47104  
 Pb, damping decrement and modulus defect, amplitude depend., dynamic dislocation drag influence 2-50658  
 Pb, dislocation damping, dynamic 2-45191  
 Pb:Ti(Sn)(Bi)(Cd)(Sb), normal and supercond., dislocation-impurity interactions, US absorpt. study 2-45410  
 Sb, internal friction, overdamped and underdamped dislocation unpinning 2-45341  
 Si, deformed, dislocation relax. study 2-25891  
 Si whiskers, low temp. internal friction 2-26266  
 Sn, dislocation resonance at room temp. 2-12608  
 Ta, dislocation motion, internal friction study 2-40402  
 Ta, dislocation relax. peaks, intrinsic and impurity depend. effects 2-40404  
 Ta-O, Snoek-Koster relaxation (German) 2-47115  
 Ta-O, Snoek-Koster relaxation 2-47114  
 V, dislocation motion, internal friction study 2-40402  
 Zn single cryst., internal friction under impact loading 2-45347  
 $\alpha$ -Zr, dislocation core diffusion and unpinning 2-45196  
 $\alpha$ -Zr, dislocation relaxation in a random array of solutes 2-45189  
 Zr, internal friction, dislocation-point defect interactions 2-45345

**dislocation density**

- alloy design, for fracture resist. 2-5957  
 austenite, high temp. creep, effect of precip. of intragranular  $M_{23}C_6$  particles 2-22272  
 condensed systems of particles with only translational mobility, differential geom. of defects 2-21136  
 continuum theory of lattice defects rel. to non-Euclidean geom. in linear approx. 2-21135  
 corundum single crystals, possibility of controlling impurity inhomogeneity 2-30479  
 deformed single crystal, X-ray extinction contrast 2-35506  
 diamond, deformed, elec. props. 2-27303  
 diamond structure crystal, creep law 2-35578  
 diffusion of dislocations, mathematical anal., appl. to conc. tails 2-1675  
 diglycine sulphate, anhydrous single crystals., evaporation method growth and etching 2-12526  
 electron micrograph contrast due to dislocation clumps, computer simulation 2-40388  
 flow and strain hardening kinetics 2-2523  
 graphite, nucl. grade, NDT eval. of fatigue damage using US meas., phys. and mech. props. correl. 2-41832  
 ice I<sub>h</sub>, US attenuation near melting point 2-45389  
 martensitic alloys, damping spectrum rel. to dislocation motion 2-47096  
 metals, FCC, pure fatigued, persistent slip bands, cyclic slip irreversibility 2-45168  
 metals, subgrain strengthening 2-41619  
 metals and alloys, dislocations, group velocity 2-12595  
 olivine, synthetic, defect structures 2-8519  
 pentagonal etch pits, regular, eccentricity 2-5123  
 plastic deformation, phys. model 2-45321  
 quartz, synthetic, influence of seed sector localisation on cryst. quality (French) 2-1420  
 quartz grains, natural, electron irradiation damage obs. 2-25934  
 rigid rod model of dislocation resonance including applications to point defect drag 2-45163  
 steel, 22 NiMoCr 3 7, microstruct. and Bloch wall arrangement 2-17310  
 steel, austenitic, heat-resistant, types 21-4N with precipitates and SUS 304, internal stress during high temp. creep (Japanese) 2-27230  
 steel, austenitic stainless, Cr-Ni (25, 20 wt.%), internal friction during steady state creep 2-47082  
 steel, austenitic stainless, H solubility, effect of thermomech. treatment and surface condition 2-35700  
 steel, Cr-Ni, deform. history effect on creep (Czech) 2-47137  
 steel, ferritic stainless, serrated flow 2-27236  
 steel, high strength low alloy, creep resist., microstruct. effects 2-27238  
 steel, low-C, strain hardening, mech. ageing effect 2-2527  
 steel, Nb microalloyed, dynamic recovery and recrystallisation on Nb(CN) coarsening 2-51912  
 steel, Ni (3.5 wt.%), AE during deform. and fracture, microstruct. effect 2-31871  
 Stepanov crystal growth, temp. distrib. characts. for simultaneously growing several plates 2-1416  
 thermoelastic martensitic crystal, hyperelasticity, dislocation model 2-25975  
 Al, deformed, recovery, length changes and stress effects 2-41621  
 Al, thermomechanical treatment, dislocation arrays stability rel. to deform. temp. 2-5127  
 Al-Mn, precipitation and recrystn., internal friction study 2-47037  
 Al-Zn (40 wt.%), aged, cellular dissoln., mechanism and kinetics 2-36858  
 Al-Zn-Mg-Cu, alloy 7075-T651, effects of warm working 2-47064  
 $\alpha$ -Al<sub>2</sub>O<sub>3</sub>:Cr<sup>3+</sup>(Ti<sup>3+</sup>)(Mg<sup>2+</sup>), deformed by basal slip, dislocation substruct. 2-35499  
 BeAl<sub>2</sub>O<sub>4</sub>, chrysoberyl, synthetic single crystals., X-ray topographic obs. of dislocations 2-21155  
 Bi<sub>1-x</sub>Ca<sub>x</sub>Fe<sub>1-x</sub>V<sub>0.12</sub>O<sub>12</sub> crystal, ferromag. reson. linewidth anisotropy, theory (Chinese) 2-26752  
 CaCO<sub>3</sub>, calcite crystals, soln. growth, etching of cleavage faces 2-16611  
 CaCO<sub>3</sub>, crack formation at twin boundaries 2-50667  
 CaCO<sub>3</sub>, synthetic calcite crystal, cleavage face etch pits, low-angle grain boundaries 2-25902  
 Cd single crystals., X-ray topographic study of substruct. and dislocations (Japanese) 2-8522  
 CdS laser screen characts., dislocation influence 2-34768  
 CdTe, plastic deform., photoplastic effect, dislocation obs. by TEM 2-8556  
 Cu alloy, superplastic, microstructural exam. of flow behaviour 2-13778  
 Cu, dislocation resonance damping, temp. depend. 2-45192  
 Cu, dislocation struct. of [321] crystals grown by Bridgman method, Al addition effects (Japanese) 2-12603  
 Cu, plastically deformed, dislocation struct., US investig. 2-45190  
 Cu, plastically deformed, unsuitability of Wiedemann-Franz law 2-36003  
 Cu single cryst., Young's modulus low temp. peak 2-47080  
 Cu-Al, dil. alloy, dislocation struct. of [321] crystals grown by Bridgman method, Al addition effects (Japanese) 2-12603  
 Fe {100}-surfaces, single crystal., delayed dislocation emission from hard-ness indentations 2-12597  
 Fe, pure, ion beam irradiation, dislocation and void prod. 2-21190  
 Fe-C lath martensite, anal. of habit plane traces 2-40321  
 $\alpha$ -Fe-Ti, H-induced slip and twinning 2-50656  
 GaAs dendritic web, grown by liq. encapsulation, characterisation 2-2427  
 GaAs heteroepitaxial layer deposited by laser pulse, condensation mechanism 2-35904  
 GaAs:Cr, dislocation density variation 2-30468  
 Ga<sub>0.95</sub>In<sub>0.05</sub>As, Sb<sub>1-x</sub>, epitaxial layers, defect formation characts. 2-51039  
 GaP, cryst. defects, correlation between light and electron microscopy images 2-25880  
 GaSb single crystals, with low dislocation density, LEC growth technique 2-27072  
 Gd, strain effect on heat capacity near Curie temp. 2-13307  
 Ge, amorphous, solid-phase epitaxial crystn. on Si (100) 2-12932  
 Ge:Au, gamma irradiation, radiation defects interaction with impurity 2-12633  
 Ge-As solid solution, lattice const. meas. 2-21103  
 InGaAs, reduction in dislocation densities in MBE step graded growth 2-21450  
 In<sub>0.05</sub>Ga<sub>0.95</sub>As-In<sub>0.95</sub>Ga<sub>0.05</sub>As<sub>1-x</sub>P<sub>x</sub>-GaAs heteroepitaxial system, dislocation struct., buffer layer effect 2-35504  
 InP, growth and cryst. quality by liq. encapsulated Czochralski technique 2-5809  
 n-InP single crystal., electron mobility and minority carrier lifetime 2-13093



**dislocation density continued**

- KCl-KBr mixed crystals, gamma-ray induced F-bands study 2-40379  
 KH<sub>2</sub>PO<sub>4</sub> crystals, laser damage threshold, dislocation density influence 2-25921  
 LiF, dislocation struct., influence of deform., hardening curves 2-45198  
 LiF, influence of free abrasive conc. on defective zone parameters (*Russian*) 2-5966  
 LiF, phonon-dislocation dipole interaction at low temp., effect on thermal and US props. 2-45483  
 (Mg,Fe)SiO<sub>2</sub>, olivine, Fe-rich, grown by floating zone method, defect structs. 2-50646  
 Mg<sub>2</sub>Mn<sub>1-x</sub>Fe<sub>x</sub>O<sub>4</sub>, epitaxial ferrite-spinel layer form. mechanism on MgO substrate 2-12927  
 MgO powder, mech. treated by pressure and shear, disorder, X-ray and EPR obs. 2-35483  
 Mo, atomistic computer simulation of dilatation due to edge dislocation 2-21149  
 Mo, dislocation-free channels formed by plastic deform., initial struct. effect (*Russian*) 2-22267  
 Na<sub>2</sub>Al<sub>2</sub>Si<sub>2</sub>O<sub>10</sub>·2H<sub>2</sub>O natrolite crystal, dislocation etching behaviour of hydrothermal and organic acid etchants 2-12601  
 NaCl, influence of free abrasive conc. on defective zone parameters (*Russian*) 2-5966  
 NaCl:Ca crystal, defect struct. and dislocation obstacles, yield point at different strain rates 2-25896  
 NaCl-type cryst., simulation of dislocation motion 2-21151  
 Ni, dislocation mobility, enhanced, due to H, direct obs. of HVEM 2-12607  
 Ni, laser irradiation, defect structures and surface alloying 2-50701  
 Ni polycrystalline, push-pull deformed, vacancy behaviour during loading cycle, elec. resist. meas. 2-36930  
 Ni shiny coatings, struct. investigation, defects (*Russian*) 2-1780  
 Ni, struct. changes, accompanying cyclic heat treatment, influence of strain hardening (*Russian*) 2-36877  
 Ni<sub>3</sub>Fe orderable alloy, work hardening, grain size effect, dislocation density 2-27188  
 PbSe films, evaporated, structural defects and photosensitivity 2-51018  
 Pt sputtered film, microstruct., X-ray diff. study 2-51022  
 Si, electron irradiated, TEM and channelling anal. of defects 2-25937  
 Si film, grain boundaries, TEM and EBIC obs. 2-30472  
 Si film on sapphire, implanted, laser annealed, dislocations, twins 2-25893  
 Si, MBE films, dislocation density, growth conditions depend. 2-1785  
 Si on sapphire, low-density defect 2-45764  
 Si, seeds for growing single crystals by zone melting without crucible, dislocation density 2-41513  
 Si:P(B), diffusant influence on O<sub>2</sub> distrib. 2-35528  
 Si-SiO<sub>2</sub>-Si implanted epitaxial struct., interfacial struct., channelling study 2-30758  
 SiC layer epitaxial growth by sublimation sandwich method, struct. defects 2-35903  
 Sn, dislocation resonance at room temp. 2-12608  
 YIG crystal, ferromag. reson. linewidth anisotropy, theory (*Chinese*) 2-26752  
 Zn, bicrystal, plastic strain incompatibility effect on 0.1% proof stress 2-13786  
 Zn, dislocation loops and stacking faults, obs. using etch pit technique (*Japanese*) 2-5119  
 ZnO thin plates, prep. and microstruct. 2-51784  
 α-Zr, fatigue, cold work effect at elev. temp. 2-31772  
 Zr-Nb (2.5 wt.%), internally pressurized tubes, in reactor deform. 2-49115

**dislocation dipoles**

- acoustic harmonic generation by dislocation dipoles and loops 2-21238  
 grain boundary steps, props. and effects, appl. to diffusion-induced grain boundary migration 2-40414  
 internal friction, assoc. with stress-gradient induced ordering, elastic quadrupoles of asymm. solute atom-vacancy pairs 2-1490  
 ionic crystals, charged dislocation-point defect complex, elec. field effects 2-45159  
 semiconductor, tetravalent, single charged dislocation 2-45165  
 steel, austenitic stainless, creep, high-temp., form. of multipoles 2-9368  
 wedge dislocation loops and dipole determ. by bright-field image halos 2-1484  
 α-Al<sub>2</sub>O<sub>3</sub>, sapphire, dislocation dipoles, break-up into loops, improved model 2-50653  
 α-Al<sub>2</sub>O<sub>3</sub>:Cr<sup>3+</sup>(Ti<sup>3+</sup>)(Ti<sup>4+</sup>)(Mg<sup>2+</sup>), deformed by basal slip, dislocation substruct. 2-35499  
 Cd single crystals, X-ray topographic study of substruct. and dislocations (*Japanese*) 2-8522  
 Cu-Al, linear dislocation multipole structures, weak beam electron microscopy obs. 2-25895  
 Cu-Al low stacking fault energy alloy, dislocation multipoles, diffraction contrast electron micrograph obs. 2-25885  
 Cu-Zn low stacking fault energy alloy, dislocation multiples, diffraction contrast electron micrograph obs. 2-25885  
 Cu<sub>3</sub>NiZn, order-strengthening mechanism, electron microscopy study 2-51891  
 Ge, dislocation nucleation process as point defect condensation 2-25878  
 KCl(Br), deformation resist., elec. field effect 2-35577  
 LiF, deformation resist., elec. field effect 2-35577  
 LiF, phonon-dislocation dipole interaction at low temp., effect on thermal and US props. 2-45483  
 NaCl, deformation resist., elec. field effect 2-35577  
 NaCl, dislocation photodamping with F-centres, internal function study 2-45188  
 NaCl:Sr, pretreated, effect of activator content on thermolum. 2-13579  
 NaCl:Sr, UV irradiated, deformed, glow curve meas. 2-5759  
 NiO, single cryst., HVEM high-temp. in situ expts. 2-50648  
 Si, dislocation nucleation process as point defect condensation 2-25878  
 Si, electron irradiated, defects study by electron microscopy 2-45274  
 Si, ion implanted, directional distrib. of Burgers vectors of dislocation loops 2-16648  
 Si, ion implanted atomic defect chain configuration identification 2-25890  
 ZnSe, dislocation mobility and microcrack formation, elec. field effects 2-45182

**dislocation drag**

- damping, drag by equidistant point defects, damped vibr. string model 2-45169

**dislocation drag continued**

- damping including point-defect drag, continuous and pinning-point-drag effects 2-45170  
 kinks on moving dislocations, impurity atoms interaction 2-1514  
 metals, dislocation drag by electron wind (*Russian*) 2-45952  
 metals and alloys, dislocations, group velocity 2-12595  
 point defect dragging in dislocation damping, theory 2-45162  
 rigid rod model of dislocation resonance including applications to point defect drag 2-45163  
 Al alloys, dilute, cold worked, low freq. internal friction peaks, strain amplitude 2-47079  
 Al, dislocation drag coefficients 2-35498  
 Al, yield stress in mag. fields up to 62 kOe (*Russian*) 2-41677  
 Cu, dislocation damping, dynamic 2-45191  
 Cu, dislocation resonance damping, temp. depend. 2-45192  
 Pb, amplitude depend. damping and modulus defect, normal-supercond. transition effect 2-46198  
 Pb, damping decrement and modulus defect, amplitude depend., dynamic dislocation drag influence 2-50658

**dislocation energy**

- bicrystal, symmetrical, energy and elastic field of dislocation arrays, anisotropic elasticity theory 2-5115  
 elastic field at edge of dihedral interface in isotropic elasticity (*French*) 2-45167  
 spinodally modulated structures, energetics of dislocation motion 2-25875  
 Ga, dislocation glide systems, justification by dislocation specific energies 2-40390

**dislocation etching**

- diglycine sulphate, anhydrous single crystals, evaporation method growth and etching 2-12526  
 olivine, synthetic, defect structures 2-8519  
 pentagonal etch pits, regular, eccentricity 2-5123  
 steel, austenitic stainless, intergranular corrosion, dislocation struct. influence 2-17779  
 BaF<sub>2</sub>, dislocation outcrop images and etch pits, optical and X-ray topographic obs. 2-35501  
 Bi surface (111), etch pit occurrence 2-50643  
 CaCO<sub>3</sub>, calcite cleavages, thermal etch pit obs. 2-25879  
 CaCO<sub>3</sub>, calcite crystals, soln. growth, etching of cleavage faces 2-16611  
 CaCO<sub>3</sub>, cleavage surface, chem. and thermal etching 2-50644  
 CaCO<sub>3</sub>, synthetic calcite crystal, cleavage face etch pits, low-angle grain boundaries 2-25902  
 CaCO<sub>3</sub>, synthetic calcite crystal, inclined dislocation nature 2-35500  
 CaF<sub>2</sub> natural crystals, growth defects, optical micrograph and X-ray topographic obs. 2-12599  
 Cu, dislocation struct. of [321] crystals grown by Bridgman method, Al addition effects (*Japanese*) 2-12603  
 Cu, neutron irradi., slip band form., yield and stage I deform. 2-41709  
 Cu, rapidly cooled crystals, etch peak form. on (111) surface, optical and electron obs. (*Japanese*) 2-12604  
 Cu-Al, dil. alloy, dislocation struct. of [321] crystals grown by Bridgman method, Al addition effects (*Japanese*) 2-12603  
 Fe {100}-surfaces, single crystal, delayed dislocation emission from hardness indentations 2-12597  
 n-GaAs, dislocation observation by new anodic etch 2-16649  
 GaAs single crystals, helicoidal twisting of dislocations, projection etching, SEM and TEM obs. 2-45174  
 GaP substrates, LEC, microdefects study by TEM and etching 2-45176  
 Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec. ferroelastic, orthogonal domain wall interactions 2-30469  
 InP, Czochralski grown, defects, etching obs. 2-40395  
 InP, defects, birefringence study, comparison with electrochemical etching 2-40397  
 InP epitaxial layer, defect obs. and correl. with device performance 2-5333  
 InP, undoped single crystal, identification of faulted prismatic dislocation loops 2-8520  
 InP:Sn(Ge)(S), etched and unetched, dislocation obs. and Huber etching assessment 2-40396  
 KH<sub>2</sub>PO<sub>4</sub>, dislocation studied by etch pit technique 2-30464  
 α-LiIO<sub>3</sub>, single crystals, dislocation loops 2-50651  
 Mg<sub>2</sub>SiO<sub>4</sub>, Czochralski grown forsterite, HF-HCl-H<sub>2</sub>O dislocation etchant for (100), (001) faces 2-12598  
 Mg<sub>2</sub>SiO<sub>4</sub> single crystals, studies of helical dislocations, polygonisation and dislocation pile-ups 2-12596  
 Mo, dislocation motion and multiplication, etch pitting and Nomarski differential interference contrast techniques 2-35507  
 Mo<sub>1-x</sub>W<sub>x</sub>Se<sub>2</sub> single crystals, dislocation etching and dissolution kinetics 2-35503  
 Na<sub>2</sub>Al<sub>2</sub>Si<sub>2</sub>O<sub>10</sub>·2H<sub>2</sub>O natrolite crystal, dislocation etching behaviour of hydrothermal and organic acid etchants 2-12601  
 NaCl, compressive creep, dislocation struct. after stress reduction, etch pits obs. 2-25884  
 NaCl crystals, dissolution kinetics study at dislocation sites using optical topographic technique 2-1628  
 Si, dislocation-free single crystal, neutron irradi. and heat treatment effect on microdefects 2-5159  
 Si, laser damage gettering and lifetime improvement appl. 2-12637  
 Si, MBE films, dislocation density, growth conditions depend. 2-1785  
 Si, neutron irradi. dislocation-free crystals, annealing influence on elec. and struct. props. 2-40440  
 Si, plastically deformed, dislocation-point defect interaction, rel. to elec. props. 2-45178  
 Si, wafer, thermally induced defect behaviour and effective intrinsic gettering sink 2-35505  
 VAl, single crystals, dissolution studies 2-21314  
 Zn, dislocation loops and stacking faults, obs. using etch pit technique (*Japanese*) 2-5119

**dislocation glide see slip****dislocation interactions**

- see also impurity-dislocation interactions; vacancy-dislocation interactions  
 absorption preference of point defects by dislocation 2-35531  
 annihilation radius, energy criterion calc. 2-25877  
 anthracene, low-temp. fluorescence excitation spectra (*Russian*) 2-13560  
 crystal surface, step formation and defects interaction (*Russian*) 2-45698  
 damping, drag by equidistant point defects, damped vibr. string model 2-45169  
 damping including point-defect drag, continuous and pinning-point-drag effects 2-45170



**dislocation interactions continued**

- dislocation motion through random network of local defects, cryst., hardenr., 2-4518  
 dislocation-point defect interactions studied by US meas. during cyclic deform. 2-45242  
 elastic interaction of dislocations with point defects 2-45244  
 ferrites, effects of substituted atoms on C interaction energy with dislocations (Russian) 2-8523  
 high-temperature, modelling 2-17644  
 internal friction associated with high-temperature dislocation mobility 2-45350  
 ionic crystals, charged dislocation-point defect complex, elec. field effects 2-45159  
 irradiated plate, point defects stationary distrib. and nonstationary filling of voids (Russian) 2-21168  
 metal, effective electron mass, phonon attenuation effect (Russian) 2-5341  
 metals, dislocation relax. processes 2-40400  
 metals, pure, high temperature damping spectra 2-45349  
 point defect dragging in dislocation damping, theory 2-45162  
 point defect elastic fields, effect on mobility in cryst. pot. relief 2-25876  
 point defect-dislocation interaction, using rate theory 2-1512  
 point obstacle-dislocation, interactions, interaction parameter distrib. 2-50691  
 polyethylene crystals, irradi. hardening model, interaction between cross-links and dislocations 2-47048  
 radiation creep, low temp., theory, taking account of microscopic processes in dislocation cores 2-45329  
 steel, austenitic stainless, grain boundary dislocations, extrinsic, effect on state of random boundaries 2-35512  
 steel, Ti, low C, nitridable, cold forming processes 2-36871  
 superconductors, internal friction at kHz freqs. near crit. temp. 2-46197  
 superconductors, manifestation of dynamical effects in plastic flow 2-31039  
 thermal conductivity, dislocation effects, phonon scatt. by strain fields 2-50940  
 viscous formation of dislocation amplitude-dependent hysteresis (Russian) 2-5125  
 Ag, electron irradi., dislocation-point defect complexes stability, Bordoni effect study 2-45186  
 Ag-Al, electron irradiated, extended jog motion on dissociated dislocations, weak beam electron microscopy obs. 2-25886  
 AgCl, UV illuminated,  $\gamma$ -irrad.  $\text{Cd}^{2+}$  doped, load relax. studies 2-41647  
 Al, internal friction, dislocation-dislocation loop interaction mechanism, impurity conc. effects 2-45340  
 Al, quench-hardened single crystal, yielding and stage I deform., influence of specimen geometry 2-13784  
 Al, US shear wave-dislocation interaction, nonlinear 2-45195  
 Al-Mg (5.5 at.%), cold worked, recovery, role of Mg atoms 2-47051  
 $\alpha$ -Al<sub>2</sub>O<sub>3</sub>, sapphire, dislocation dipoles, break-up into loops, improved model 2-50653  
 Al4Zn1.6Mg, overaged, deform. microstruct. and crack form. in low-cycle fatigue (Serbian) 2-9388  
 CdTe, plastic deform., photoplastic effect, dislocation obs. by TEM 2-8556  
 Cu, electron irradi., dislocation-point defect complexes stability, Bordoni effect study 2-45186  
 Cu surface (111) states, dislocation annihilation luminesc. 2-46793  
 Fe, high-purity, defect investigations. using mag. aftereffect and internal friction (Polish) 2-27205  
 Fe-based single crystals, shear band form., fatigue-induced 2-41710  
 Fe-C-Si (Ni, Mn, Cr), proeutectoid ferrite growth kinetics, influence of carbide precip. 2-17682  
 Fe-Cr-Ni commercial alloys, irradi. induced swelling 2-50716  
 Ge, dislocation-misfit defect interaction 2-1510  
 K, strained, elec. resist., electron-phonon scatt. 2-36000  
 Mg, dislocation-point defect interactions 2-45243  
 MgO, dislocation-point defect interaction, internal study 2-45187  
 Mo, dislocation relax. peaks, internal friction meas. 2-40401  
 NaCl, single slip, internal stresses and dislocation mobility, stress relax. method 2-16655  
 NaCl-type cryst., simulation of dislocation motion 2-21151  
 Nb, dislocation behaviour of single crystals with [110] and [100] tensile axis at low temp. 2-1483  
 Ni, plasticity rel. to magnetism (Russian) 2-9384  
 Ni, Z 2-26653  
 Ni-base alloys,  $\gamma'$  precipitating, new aspects of particle hardening mechanisms, theoretical concepts 2-36869  
 Ni-Cr-Al-Ti-Mo, tensile behaviour, elevated temp., influence of coherency strain 2-9380  
 Ni-Cr(Cu) alloys, magnetic domain wall pinning by lattice defects 2-26653  
 Ni-Mn (5 wt.%), effect of impurity content on magnetomech. interaction 2-26718  
 Pb, dislocation damping, dynamic 2-45191  
 Si, dechannelling from secondary defects, TEM and MeV He<sup>+</sup> channelling study 2-16695  
 Si, dislocation-misfit defect interaction 2-1510  
 Si, plastically deformed, dislocation-point defect interaction, rel. to elec. props. 2-45178  
 Si wafer, mechanical damage gettering effect 2-25917  
 Zn, electron-plastic effect, elec. current parameters effect 2-21949  
 Zr, internal friction, dislocation-point defect interactions 2-45345

**dislocation jog motion** *see* dislocation jogs**dislocation jogs**

- absorption preference of point defects by dislocation 2-35531  
 radiation creep, low temp., theory, taking account of microscopic processes in dislocation cores 2-45329  
 rare earth oxides, cubic-C, high temp., plasticity, dislocation behaviour 2-30509  
 Ag-Al, electron irradiated, extended jog motion on dissociated dislocations, weak beam electron microscopy obs. 2-25886  
 Al, polycrystalline, internal friction, medium temp. 2-45353  
 $\alpha$ -Al<sub>2</sub>O<sub>3</sub>, sapphire, dislocation dipoles, break-up into loops, improved model 2-50653  
 CdTe, plastic deform., photoplastic effect, dislocation obs. by TEM 2-8556  
 Mg, polycrystalline, internal friction, medium temp. 2-45353

**dislocation locking**

- see also Cottrell atmospheres*  
 Nb, strain-aging phenomenon, competition between hardening and recovery (French) 2-9359  
 Ni-base superalloys, Inconel 718 and Waspaloy, high temp. deform., recrystn. and ageing effects 2-9381  
 Si, dislocation-free Czochralski and float-zone crystals, yield strength 2-1548
- dislocation loops**  
*see also vacancy condensation loops*  
 acoustic harmonic generation by dislocation dipoles and loops 2-21238  
 creep under irradiation, microstructure developments 2-30485  
 diamond, type I, structural defects, ultra-HV TEM obs. 2-35502  
 dislocation loops, rectangular wedge, elastic props. 2-8518  
 FCC crystals, secondary slip systems, glide and climb stresses due to isolated primary edge and screw dislocations 2-25899  
 graphite, neutron irradiation damage, substitutional B effect 2-25938  
 ice single crystals, stacking fault formation by cooling 2-16661  
 ionic crystal, extended defects produced by irradi. and TEM obs. (French) 2-30500  
 irradiation damage, sink strength theory 2-21169  
 mineral, extended defects produced by irradi. and TEM obs. (French) 2-30500  
 Nimonic PE16, defect struct. in dual beam irradi. material, TEM obs. 2-43609  
 olivine, synthetic, defect structures 2-8519  
 Orowan dislocation loops, cross-slip and climb (Russian) 2-21145  
 oxide, extended defects produced by irradi. and TEM obs. (French) 2-30500  
 phosphosilicate glass/Al-Si thin film structs., stress, temp. depend. 2-1804  
 point-defect migration into infinitesimal dislocation loop 2-40429  
 prismatic, cross-slip and stresses 2-50652  
 rare earth oxides, cubic-C, high temp., plasticity, dislocation behaviour 2-30509  
 single dislocations, nonlinear elastic models 2-45171  
 Somigliana dislocation loops, interaction with elastic strain fields 2-50641  
 SOS film, cryst. quality improvement by O implantation and thermal annealing 2-51023  
 steel, austenitic stainless, Cr-Ni (25, 20 wt.%), internal friction during steady state creep 2-47082  
 steel, austenitic stainless, creep, high-temp., form. of multipoles 2-9368  
 steel, irradi. effects study using HVEM and energy dispersive X-ray analysis of films (French) 2-30497  
 US effects on dislocation multiplication and steady-state nonlinear vibrs. 2-50639  
 viscous formation of dislocation amplitude-dependent hysteresis (Russian) 2-5125  
 wave-front behaviour of accelerating dislocations 2-30463  
 wedge dislocation loops and dipole determ. by bright-field image halos 2-1484  
 Wiedersich formula, expt. study by twofold series loading of cryst. (Russian) 2-25900  
 Al, internal friction, dislocation-dislocation loop interaction mechanism, impurity conc. effects 2-45340  
 Al, quench-hardened single crystal, yielding and stage I deform., influence of specimen geometry 2-13784  
 $\alpha$ -Al<sub>2</sub>O<sub>3</sub>:Cr<sup>3+</sup>(Ti<sup>3+</sup>)(Mg<sup>2+</sup>), deformed by basal slip, dislocation substruct. 2-35499  
 Au:He, spontaneous precipitation of He 2-13727  
 Cd electron irradiated, diffuse X-ray scatt. and elec. resist. meas. 2-21179  
 Cd single crystals, X-ray topographic study of substruct. and dislocations (Japanese) 2-8522  
 CdS:In, anisotropic cond. after plastic deform., cond. along dislocations 2-45982  
 CdTe, plastic deform., photoplastic effect, dislocation obs. by TEM 2-8556  
 CdTe:Cu high-resolution electron microscopy obs. of defects, coherent precip. and faulted loops 2-5120  
 Co-Ni-Cr-Mo, cold-rolled and recovered, internal friction meas. 2-41664  
 Cu, dislocation resonance damping, temp. depend. 2-45192  
 Cu, electron irradiated, atom displacement threshold energy, nucleation and growth of dislocation loops, electron microscopy obs. 2-25933  
 Cu, fatigue hardening, mechanisms in single crystals, effect of strain amplitude and orientation 2-27186  
 Cu, plastically deformed, dislocation struct., US investig. 2-45190  
 Fe-Al single cryst., ordered B2 type, annealing-out of quenched-in vacancies 2-47065  
 GaAs:Si (Te), cathodoluminescence and dislocation struct. 2-31566  
 GaP, cryst. defects, correlation between light and electron microscopy images 2-25880  
 GaP substrates, LEC, microdefects study by TEM and etching 2-45176  
 Ge, electron irradiated, defects study by electron microscopy 2-45274  
 Ge:As, precipitation-induced defects, X-ray diffr. study, three-crystal spectrometry 2-45181  
 InP, Czochralski grown, defects, etching obs. 2-40395  
 InP, undoped single cryst., identification of faulted prismatic dislocation loops 2-8520  
 $\alpha$ -Li<sub>2</sub>O, single crystals, dislocation loops 2-50651  
 (Mg,Fe)SiO<sub>3</sub>, olivine, Fe-rich, grown by floating zone method, defect structs. 2-50646  
 NaCl:Ni precipitation induced dislocation struct. obs. 2-12600  
 Nb, microstruct. and strength, effect of He 2-36914  
 Ni-base alloys, Nimonic PE 16 and 105,  $\gamma'$ -precipitating, new aspects of particle hardening mechanisms, TEM study 2-36870  
 Ni-Cr-Al-Ti, Alloy 800,  $\gamma'$ -particle coarsening and yield, TEM study 2-31701  
 Ni-Cr-Al-Ti-Mo, tensile behaviour, elevated temp., influence of coherency strain 2-9380  
 Ni<sub>3</sub>Al-Mo, eutectic, directionally solidified, low cycle fatigue behaviour 2-36953  
 Pb:Ti(Sn)(Bi)(Cd)(Sb), normal and supercond., dislocation-impurity interactions, US obspt. study 2-45410  
 Si, B ion implanted, defects after oxidation 2-52064  
 Si, climb of dissociated dislocations 2-25892  
 Si Czochralski crystal, elec. characterisation of cryst. defects and O<sub>2</sub> using gate controlled diode 2-26488



**dislocation loops continued**

- Si, dechannelling from secondary defects, TEM and MeV He<sup>+</sup> channelling study 2-16695  
 Si, dislocation-free single crystal, neutron irradiation and heat treatment effect on microdefects 2-5159  
 Si, electron irradiated, defects study by electron microscopy 2-45274  
 Si, ion implanted, directional distribution of Burgers vectors of dislocation loops 2-16648  
 Si, self-annealing implantation, elec. and struct. characterisation 2-50681  
 Si, surface temp. evaluation of multi-scan electron beam irradiation samples, TEM obs. and optical pyrometry meas. 2-50712  
 Si, swirl A-defect struct. and form., elastic energy calc. 2-45166  
 Si:As, ion implanted, pulsed electron beam annealing 2-50710  
 Si:As<sup>+</sup>(P<sup>+</sup>), extended defect depth profiling, channelling, Rutherford backscattering meas. 2-12628  
 Si:B, ion implanted, annealed, rod defects, TEM obs. 2-25883  
 Si:B, ion implanted, defect formation during annealing 2-45179  
 Si:B, ion implanted, point defect generation during oxidation, loop annealing technique 2-25869  
 Si:B<sup>+</sup>, single crystal, TEM and AES study of ion bombardment 2-25913  
 Si:B(As)(In), pulsed laser annealing, melting phenomena 2-46837  
 Si:In (Sb) implanted amorphous layers, defect and solubility limit study 2-30477  
 Si:P, implanted, MeV He<sup>+</sup> dechannelling from secondary defects 2-30505  
 Ti-O(Al) alloy single crystal, slip band morphology and development (*Russian*) 2-5124  
 TiC, polycrystalline, mech. props. 2-51984  
 Zn, dislocation loops and stacking faults, obs. using etch pit technique (*Japanese*) 2-5119  
 Zr, irradiation growth of single crystals 2-45284

**dislocation motion**

- for dislocation relaxation see dislocation damping  
 see also dislocation climb; slip  
 accelerating dislocations, wave-front behaviour 2-30463  
 acoustic harmonic generation by dislocation dipoles and loops 2-21238  
 albite, dislocation-assisted diffusion of O 2-35743  
 alloy, precipitation strengthened, AE from dislocation motion 2-31881  
 alloy, solute effect on strength and strain hardening 2-51931  
 compound semiconductors, dislocations, elec. and dynamic props. 2-40834  
 creep, vacancy diffusion and dislocation recovery mechanisms 2-5182  
 creep curves, transformation model based on nonlinear oscill. 2-25897  
 crystalline materials, high temp. deform., determ. by strain-rate change test 2-2634  
 diamond, type I, structural defects, ultra-HV TEM obs. 2-35502  
 diatomic chain dynamics as parabolic periodic substrate 2-5113  
 diffusion of dislocations, mathematical anal., appl. to conc. tails 2-1675  
 dislocation-point defect interactions studied by US meas. during cyclic deform. 2-45242  
 dispersion hardened alloy, computer simulation of AE during yield (*Japanese*) 2-13741  
 edge dislocation non-uniform motion, dynamic solns. 2-21148  
 edge dislocations, nonuniformly moving 2-8516  
 edge dislocations, phonon generation and energy localisation 2-45485  
 elastic half-space, dislocation motion, displacement discontinuity derivative on wave propag. 2-25285  
 elastic precursor decay and radiation from nonuniformly moving dislocations 2-8515  
 HV electron microscopy, in situ experiments, recording images of rapid structural changes (*French*) 2-12438  
 internal friction associated with high-temperature dislocation mobility 2-45350  
 ionic crystals, charged dislocation-point defect complex, elec. field effects 2-45159  
 kink model of dislocation mobility and dislocation-point defect interactions 2-45161  
 kinks on moving dislocations, impurity atoms interaction 2-1514  
 localized and delocalized states at intersecting dislocations (*Russian*) 2-45891  
 martensitic alloys, damping spectrum rel. to dislocation motion 2-47096  
 metals, internal friction in plastic deform., general dislocation dynamic model 2-45348  
 metals, pure, high temperature damping spectra 2-45349  
 microhardness correlation with dislocation mobility in semimetals, ionic and covalent crystals 2-16652  
 motion through random network of local defects, cryst. hardening 2-5118  
 oxides, climb motion of dislocation 2-40386  
 Peierls barrier calc., tension-Frenkel-Kontorova model 2-12594  
 plastic deformation, phys. model 2-45321  
 point defect elastic fields, effect on mobility in cryst. pot. relief 2-25876  
 rigid rod model of dislocation resonance including applications to point defect drag 2-45163  
 semiconductors, bound electron states influence on dislocation kink mobility 2-35496  
 semiconductors, covalently bonded, reconstructed dislocations, electronic struct. 2-26329  
 spinodally modulated structures, energetics of dislocation motion 2-25875  
 statistical theory of dislocation dynamics, math. props. 2-25898  
 superconductors, manifestation of dynamical effects in plastic flow 2-31039  
 thermoelastic martensitic crystal, hyperelasticity, dislocation model 2-25975  
 transition metal b.c.c. dilute alloys, electronic theory of screw dislocation motion 2-1476  
 velocity, kink form. mechanism depend. 2-40383  
 Ag, internal friction, high temp., and dislocation motion 2-45352  
 Al, dynamic internal friction and dynamic modulus meas. 2-45351  
 Al, foil, dislocation motion, pulsed NMR study 2-31321  
 Al, internal friction, high temp., and dislocation motion 2-45352  
 Al, movement of grain boundary dislocations in recrystallising interfaces 2-40413  
 Al, quench-hardened single crystal, yielding and stage I deform., influence of specimen geometry 2-13784  
 Al, US shear wave-dislocation interaction, nonlinear 2-45195  
 Au<sub>3</sub>Cu, anomalous internal friction peak after quenching and deform. 2-47094  
 CdTe, plastic deform., photoplastic effect, dislocation obs. by TEM 2-8556  
 Cu, Bauschinger effect, pure and dispersion hardened specimens 2-2548

**dislocation motion continued**

- Cu, dislocation damping, dynamic 2-45191  
 Cu, internal friction, high temp., and dislocation motion 2-45352  
 Cu whiskers, stress-strain curves rel. to lattice distortions, X-ray topography obs. 2-35913  
 Cu:N(Ne), ion implanted, fatigue and internal friction 2-47182  
 Cu-SiO<sub>2</sub>, dispersion hardened, diffusion creep threshold 2-41686  
 Fe, Armo, acoustic emission mechanisms during plastic deform. 2-22275  
 Fe, cathodic H-changing, Rayleigh wave attenuation study 2-40662  
 Fe, steady-state creep, influence of oxidation 2-2569  
 Ge, dislocation mobility changes during slip direction inversion (*Russian*) 2-5128  
 Ge, dislocation-misfit defect interaction 2-1510  
 Ge, dislocations, elec. and dynamic props. 2-40834  
 Ge:Ga(Sb), single crystal, high temp. dislocation mobility under applied stress 2-45183  
 KCl, acoustoluminescence excitation (*Russian*) 2-22103  
 LiF crystal, dislocation motion damping const., press. depend. 2-45193  
 MgO, energy stored as result of plastic deform., surface state effect 2-35575  
 Mo, dislocation motion and multiplication, etch pitting and Nomarski differential interference contrast techniques 2-35507  
 Mo tensile-loaded single crystals, dislocation behaviour in HVEM column 2-45173  
 NaCl, acoustoluminescence excitation (*Russian*) 2-22103  
 NaCl crystal, dislocation motion damping const., press. depend. 2-45193  
 NaCl, energy stored as result of plastic deform., surface state effect 2-35575  
 NaCl, influence of temp. and impurities on mean free path of mobile dislocations, nucl. spin relax. study 2-40430  
 NaCl single crystals, elec. pulses influence on distance travelled by dislocations 2-1491  
 NaCl:Ca, influence of deform. on mechanical props., defect interactions 2-35532  
 NaCl:Ca crystal, defect struct. and dislocation obstacles, yield point at different strain rates 2-25896  
 NaCl-type crystal, simulation of dislocation motion 2-21151  
 Nb, deformed, dislocation mobility, internal friction and TEM obs. 2-35509  
 Ni, internal friction, high temp., and dislocation motion 2-45352  
 Si, dislocation mobility changes during slip direction inversion (*Russian*) 2-5128  
 Si, dislocation motion in planar struct. (*Russian*) 2-1477  
 Si, dislocation-misfit defect interaction 2-1510  
 Si, dislocations, elec. and dynamic props. 2-40834  
 Si, dislocations, generation and multiplication, in situ X-ray topographic studies at elevated temps. 2-40391  
 Si, live X-ray topography 2-1478  
 Si, plastically deformed, dislocation-point defect interaction, rel. to elec. props. 2-45178  
 Sn, dislocation resonance at room temp. 2-12608  
 Ta, dislocation relax. peaks, intrinsic and impurity depend. effects 2-40404  
 Zn-Al, transient creep during transformations 2-21221  
 ZnSe, dislocation mobility and microcrack formation, elec. field effects 2-45182  
 α-Zr, dislocation core diffusion and unpinning 2-45196
- dislocation motion, nonconservative** see dislocation climb  
**dislocation motion hindrance** see dislocation drag
- dislocation multiplication**  
 alloy, solute effect on strength and strain hardening 2-51931  
 fatigue crack propagation, stochastic model for damage accumulation (*Japanese*) 2-8564  
 metals, FCC, pure fatigued, persistent slip bands, cyclic slip irreversibility 2-45168  
 sintering reaction (*German*) 2-46975  
 steel, low C, fatigue life distrib., effect of cyclic strain ageing (*Japanese*) 2-5947  
 US effects on dislocation multiplication and steady-state nonlinear vibrs. 2-50639  
 Wiedersich formula, expt. study by twofold series loading of cryst. (*Russian*) 2-25900  
 Mo, dislocation motion and multiplication, etch pitting and Nomarski differential interference contrast techniques 2-35507  
 Si, dislocations, generation and multiplication, in situ X-ray topographic studies at elevated temps. 2-40391  
 Y<sub>2</sub>O<sub>3</sub>, high temp. creep, phenomenological anal. 2-5181
- dislocation nucleation**  
 creep under irradiation, microstructure developments 2-30485  
 intergranular penetration mechanism, when Cu alloys deposited on steel 2-50929  
 martensitic transformations, nucleation on dislocations 2-17678  
 naphthalene, melting, heterogeneous inclusion motion and dislocation generation in premelting regime (*Russian*) 2-45541  
 stilbene, melting, heterogeneous inclusion motion and dislocation generation in premelting regime (*Russian*) 2-45541  
 CaCO<sub>3</sub>, crack formation at twin boundaries 2-50667  
 Ge, dislocation nucleation process as point defect condensation 2-25878  
 LiF, polarisation effects at small-angle boundaries, space charge distrib. 2-26819  
 Si, dislocation nucleation process as point defect condensation 2-25878  
 Si whiskers, creep 2-12951
- dislocation pile-ups**  
 critical temperature, influence of plastic deform. 2-17182  
 dislocation spacing in pile-ups at grain boundaries, calc. 2-45197  
 FCC crystals, secondary slip systems, glide and climb stresses due to isolated primary edge and screw dislocations 2-25899  
 flexible slipping dislocations, passage through plane dislocation accumulations of network type, model 2-35497  
 fracture, dislocation-free zone model 2-45332  
 Orowan dislocation loops, cross-slip and climb (*Russian*) 2-21145  
 steel, austenitic stainless, creep, high-temp., form. of multipoles 2-9368  
 steel, austenitic stainless, dislocation emission, strain-induced, from grain boundaries 2-25882  
 steel, austenitic stainless, work hardening, effect of H 2-36881  
 steel, ferritic stainless, α-phase precip. hardened, fracture props. and ductility improvement 2-17725  
 superplasticity, structural, dislocation motion and grain boundary sliding 2-41687



**dislocation pile-ups continued**

- Al-Cu (4 wt.%), yield stress of alloys containing plate-like precipitates, expt. and theoretical determ. 2-22271  
 Cu, Bauschinger effect, pure and dispersion hardened specimens 2-2548  
 Cu-Ti (4 at.%), solution treated single crystals, and polycrystals, cyclic deform. 2-36934  
 Cu<sub>2</sub>NiZn, order-strengthening mechanism, electron microscopy study 2-51891  
 Mg<sub>2</sub>SiO<sub>4</sub> single crystals, studies of helical dislocations, polygonisation and dislocation pile-ups 2-12596  
 ZnSe, dislocation mobility and microcrack formation, elec. field effects 2-45182

**dislocation pinning**

- see also *dislocation damping*  
 creep, transient, kinetic eqns. selection, dislocation theory 2-25979  
 crystals, deformed, dislocation resonance peak 2-45164  
 ice I<sub>h</sub>, US attenuation near melting point 2-45389  
 internal friction associated with high-temperature dislocation mobility 2-45350  
 rare earth oxides, cubic-C, high temp., plasticity, dislocation behaviour 2-30509  
 rigid rod model of dislocation resonance including applications to point defect drag 2-45163  
 steel, austenitic stainless, creep, high-temp., form. of multipoles 2-9368  
 steel, H10N7K10M5, quenched and aged internal friction peak at 250K, shear modulus change (Polish) 2-27207  
 steel, Mo(V), dual-phase, props. and struct., effect of heat treatment 2-9376  
 steel, quenched and aged, N18K8M5T steel, internal friction and shear modulus changes, 320 to 650K (Polish) 2-27208  
 steel, stainless, FCC, time dependent dislocation pinning by H atoms, surface US studies 2-50642  
 steels, alloy, internal friction, rel. to temper brittleness 2-47090  
 trapping effect on sink strength 2-50624  
 Ag, cold worked, internal friction and modulus defect, temp. depend. (Polish) 2-36907  
 Ag, electron irradi., dislocation-point defect complexes stability, Bordoni effect study 2-45186  
 Al, neutron irradiated, effect of point defects on room temp. internal friction 2-25985  
 Al, thermomechanical treatment, dislocation arrays stability rel. to deform. temp. 2-5127  
 Cu, [110] surface, high temp. dislocation internal friction (Russian) 2-1486  
 Cu crystal, bent, elec. resistivity, annealing effect 2-13827  
 Cu, dislocation pinning effects, US attenuation and vel. meas. 2-45194  
 Cu, dislocation resonance damping, temp. depend. 2-45192  
 Cu, electron irradi., dislocation-point defect complexes stability, Bordoni effect study 2-45186  
 Fe, Armco, acoustic emission mechanisms during plastic deform. 2-22275  
 Fe, internal friction amplitude depend. at low temp. 2-41655  
 Fe, microplasticity and internal friction, 4 to 250K 2-41680  
<sup>3</sup>He, BCC and HCP, dislocation pinning and unpinning, amplitude and temp. depend., US study 2-30710  
 KTa<sub>1-x</sub>Nb<sub>x</sub>O<sub>3</sub>, surface layer, acoustic reson. and dielec. susceptibility meas. 2-2175  
 K<sub>2</sub>ZnCl<sub>4</sub>, incommensurate-commensurate transition, impurity effects 2-41295  
 Mg, internal friction spectrum after plastic deform., impurities effect 2-41659  
 Mo, internal friction, amplitude and temp. depend., 5.9 to 300K 2-41651  
 Mo, internal friction, amplitude depend., 5.9 to 300K, rel. to dislocation unpinning 2-50655  
 NaCl crystals, recovery of internal friction 2-5185  
 Nb, dislocation motion, internal friction study 2-40402  
 Ni base alloy, time dependent dislocation pinning by H atoms, surface US studies 2-50642  
 Rb<sub>2</sub>ZnCl<sub>4</sub>(Br<sub>4</sub>), incommensurate-commensurate transition, impurity effects 2-41295  
 SiO<sub>2</sub>, Czochralski grown, precipitated O redissolution, expt. study 2-50860  
 Ta, dislocation motion, internal friction study 2-40402  
 V, dislocation motion, internal friction study 2-40402  
 Y<sub>2</sub>O<sub>3</sub>, high temp. creep, phenomenological anal. 2-5181  
 α-Zr, dislocation core diffusion and unpinning 2-45196

**dislocation relaxation** see *dislocation damping***dislocation scattering**

- used for *carrier scattering by dislocations*  
 alkali metals, elec. resist., phonon-dislocation scatt. and phonon drag contrib. 2-21577  
 metals, noble and polyvalent, electron-dislocation scatt. relax. time anisotropy 2-45943  
 semiconductor, dislocations and electron processes, review (Polish) 2-13003  
 Cu crystal, bent, elec. resistivity, annealing effect 2-13827  
 n-InP single crystal, electron mobility and minority carrier lifetime 2-13093  
 p-InSb, light and heavy hole mobility and conc., effect of dislocations (Russian) 2-26395  
 Te, galvanomagnetic phenomena, effect of α-edge dislocations (Russian) 2-40946

**dislocation sources**

- see also *Frank-Read sources*  
 crystals, deformed, dislocation resonance peak 2-45164  
 steel, austenitic stainless, dislocation emission, strain-induced, from grain boundaries 2-25882  
 Y<sub>2</sub>O<sub>3</sub>, high temp. creep, phenomenological anal. 2-5181

**dislocation structure**

- austenite, high temp. creep, effect of precip. of intragranular M<sub>23</sub>C<sub>6</sub> particles 2-22272  
 corundum single crystals, possibility of controlling impurity inhomogeneity 2-30479  
 creep, dislocation mechanisms in poly- and single crystals. 2-50660  
 creep, transient, kinetic eqns. selection, dislocation theory 2-25979  
 creep under irradiation, microstructure developments 2-30485  
 deformation, high-temp., internal stresses 2-12664  
 deformed single crystal, X-ray extinction contrast 2-35506  
 diamond, natural, dislocation-rich, cathodoluminescence study 2-31565  
 diamond, type I, structural defects, ultra-HV TEM obs. 2-35502

**dislocation structure continued**

- FCC crystals, low-energy dislocation cell structs. produced by cross-slip 2-50657  
 fibre reinforced composites, disclination model of fibre peeling 2-36960  
 forsterite (Mg<sub>2</sub>SiO<sub>4</sub>) single crystals, high-temp. creep meas. 2-28068  
 Frank-Read source, UV effects, dislocation configurations 2-5117  
 heterostructures equilb. dislocation configurations 2-5121  
 Incoloy 800, dislocation struct. influence on internal friction after short-time creep (Polish) 2-27210  
 L1, ordered alloys, struct. stability and deform. behaviour 2-12665  
 localized and delocalized states at intersecting dislocations (Russian) 2-45891  
 olivine, synthetic, defect structures 2-8519  
 Orowan dislocation loops, cross-slip and climb (Russian) 2-21145  
 polydiacetylene, single crystals. 2-8402  
 prime candidate alloy, optimisation of struct. and props. by rapid solidification 2-31692  
 quartz grains, natural, electron irradi. damage obs. 2-25934  
 recovery 2-31737  
 steel, austenitic, ce Mn-Cr-Ni, SCC and stacking fault energy (Czech) 2-31842  
 steel, austenitic stainless, dislocation emission, strain-induced, from grain boundaries 2-25882  
 steel, austenitic stainless, intergranular corrosion, dislocation struct. influence 2-17779  
 steel, austenitic stainless, stress corrosion cracking susceptibility, effect of plastic deform. and recrystn. treatments 2-51872  
 steel, austenitic stainless 316, influence of δ-ferrite on precipitation, thermal ageing 2-5880  
 steel, high strength low alloy, creep resist., microstruct. effects 2-27238  
 steels, martensitic, HY80, HY130, 4140, fatigue macrocrack growth, threshold and mid-ΔK range 2-9394  
 weak-beam electron microscopy, review 2-48850  
 wurtzite interface, mismatch dislocation dangling bond distrib. 2-8517  
 zinc blende interface, mismatch dislocation dangling bond distrib. 2-8517  
 Al, AE response during tensile straining (Slovak) 2-31753  
 Al, deformed, recovery, length changes and stress effects 2-41621  
 Al, grain boundaries, sliding behaviour and dislocation struct. 2-40411  
 Al highly deformed large crystal, struct. changes, Lang X-ray topographic obs. 2-12602  
 Al-Zn-Mg (2.8, 1.9 wt.%), precip. on low-angle grain boundaries 2-17683  
 Al-Zn-Mg (4.9, 1.2 wt.%), peak aged, fatigued, persistent slip bands, dislocation struct. and precip. 2-36935  
 Al-Zn-Mg (5, 1 wt.%), peak aged, fatigued, persistent slip bands in front of Stage I cracks 2-36936  
 Al-Zn-Mg-Cu, 7000 series, low cycle fatigue behaviour, effect of alloy chem. and heat treatment 2-17735  
 α-Al<sub>2</sub>O<sub>3</sub>:Cr<sup>3+</sup>(Ti<sup>3+</sup>)(Mg<sup>2+</sup>), deformed by basal slip, dislocation substruct. 2-35499  
 Al<sub>4</sub>Zn<sub>1.6</sub>Mg, overaged, deform. microstruct. and crack form. in low-cycle fatigue (Serbian) 2-9388  
 BaF<sub>2</sub>, dislocation outcrop images and etch pits, optical and X-ray topographic obs. 2-35501  
 BeAl<sub>2</sub>O<sub>4</sub>, chrysoberyl, synthetic single crystals, X-ray topographic obs. of dislocations 2-21155  
 CaCO<sub>3</sub>, crack formation at twin boundaries 2-50667  
 Cd single crystals, X-ray topographic study of substruct. and dislocations (Japanese) 2-8522  
 Cu, diffusion of Al along dislocations 2-8674  
 Cu, dislocation induced elec. resistivity during bending 2-5386  
 Cu, dislocation struct. of [321] crystals grown by Bridgman method, Al addition effects (Japanese) 2-12603  
 Cu, electron bombard., Bordoni relax. processes, dislocation classes 2-41657  
 Cu, plastically deformed, dislocation struct., US investig. 2-45190  
 Cu-Al, dil. alloy, dislocation struct. of [321] crystals grown by Bridgman method, Al addition effects (Japanese) 2-12603  
 Cu-Al, linear dislocation multipole structures, weak beam electron microscopy obs. 2-25895  
 Cu-Al alloys, ordered linear dislocation multipoles struct. 2-8524  
 Cu-Ge (8.7 at.%), shock pulses, strengthening effect of deform. twins and dislocations 2-17688  
 Cu-Zn (37.65 at.%), reverse martensitic transform., resulting dislocation struct. 2-51896  
 Cu<sub>2</sub>NiZn, order-strengthening mechanism, electron microscopy study 2-51891  
 Fe {100}-surfaces, single crystal, delayed dislocation emission from hardness indentations 2-12597  
 α-Fe, creep, transient phenomena, kinetics and role of internal stress (Czech) 2-31750  
 α-Fe, creep, transient phenomena, dislocation struct. behaviour (Czech) 2-31751  
 Fe, deformed, dislocations obs. by high-field susceptibility meas. 2-1489  
 Fe, dislocation struct. generated by low temp. deform. and associated damping phenomena 2-40405  
 Fe, plastically deformed at 195 and 77K, mag. domain patterns and dislocation struct. 2-46333  
 Fe-based single crystals, shear band form., fatigue-induced 2-41710  
 α-Fe-H, deformed, internal friction peaks 2-41656  
 Fe-Si (3 wt.%), single crystals, containing reintroduced twins, cyclic deform. 2-22316  
 Fe-Si (3.25 wt.%), grain-oriented, core-loss, effect of cutting operation 2-17744  
 GaAs substrate, dislocation behaviour during LPE of Ga<sub>x</sub>Al<sub>1-x</sub>As 2-1480  
 GaAs:Si (Te), cathodoluminescence and dislocation struct. 2-31566  
 GaAs-GaAlAs:Zn CVD layers, cryst. defect incorporation during growth 2-31635  
 GaAs(111)-In<sub>0.05</sub>Ga<sub>0.95</sub>As<sub>0.95</sub>P, heteroepitaxial system, formation of discrepancy dislocations 2-45754  
 GaP, cryst. defects, correlation between light and electron microscopy images 2-25880  
 Ge, Lomer dislocation core struct. 2-45180  
 In<sub>0.05</sub>Ga<sub>0.95</sub>As-In<sub>0.05</sub>Ga<sub>0.95</sub>As<sub>0.95</sub>P-GaAs heteroepitaxial system, dislocation struct., buffer layer effect 2-35504  
 InP epitaxial layer, defect obs. and correl. with device performance 2-5333  
 Li, sample prep. for TEM (French) 2-50650  
 LiF, dislocation struct., influence of deform., hardening curves 2-45198



**dislocation structure continued**

- $\text{Li}_0.5\text{Fe}_{2.5}\text{O}_4$  substruct. and partial dislocations, duration of grinding influence 2-50645  
 $\text{MgO}$ , laser pulse induced dislocation struct., surface damage 2-1518  
 $\text{Mo}$ , dislocation-free channels formed by plastic deform., initial struct. effect (*Russian*) 2-22267  
 $\text{Mo-Au}$  bilayer epitaxial films, phase boundaries form. in high condensation temp. ranges 2-45741  
 $\text{NaCl}$ , compressive creep, dislocation struct. after stress reduction, etch pits obs. 2-25884  
 $\text{NaCl}$ , laser pulse induced dislocation struct., surface damage 2-1518  
 $\text{NaCl:Ca}$  crystal, defect struct. and dislocation obstacles, yield point at different strain rates 2-25896  
 $\text{NaCl:Ni}$  precipitation induced dislocation struct. obs. 2-12600  
 $\text{Nb-Ti}$  (50 wt.%), phase distrib. and size, US vibr. influence (*Russian*) 2-5494  
 $\text{Ni}$ , dislocation mobility, enhanced, due to H, direct obs. of HVEM 2-12607  
 $\text{Ni}$  electrodeposits, growth twins and polycrystallinity development 2-8525  
 $\text{Ni}$ , laser irradiation, defect structures and surface alloying 2-50701  
 $\text{Ni}$ , struct. changes, accompanying cyclic heat treatment, influence of strain hardening (*Russian*) 2-36877  
 $\text{Ni}$ , texture orientation transition due to rolling temp. lowering (*Russian*) 2-13744  
 $\text{Ni-Al-Mo}$ , aligned eutectics, fatigue at elevated temps. 2-36952  
 $\text{Ni}$ -base alloys, Nimonic PE 16 and 105,  $\gamma$ -precipitating, new aspects of particle hardening mechanisms, TEM study 2-36870  
 $\text{Ni-Cr-Al-Co}$ , anisotropic fatigue hardening of single cryst. at elevated temps. 2-13814  
 $\text{Ni-Cr-Al-Ti}$ , Alloy 800,  $\gamma$ -particle coarsening and yield, TEM study 2-31701  
 $\text{Ni-Cr-Co-Mo-Al-W-Ti-C}$ , heat-resist., cryst. and dislocation struct., var. during cutting 2-51989  
 $\text{Ni}_2\text{Cr}$ , substructure after laser irradiation (*French*) 2-12606  
 $\text{Ni}_3\text{Fe}$ , substructure after laser irradiation (*French*) 2-12606  
 $\text{NiFe}_2\text{O}_4$ , substruct. and partial dislocations, duration of grinding influence 2-50645  
 $\text{Ni}_3\text{V}$ , strength characts. and dislocation struct. (*Russian*) 2-21153  
 $\text{PbS/PbSe(Te)}$  epitaxial bicrystals, growth spirals on phase boundaries, electron microscopic discernment 2-45740  
 $\text{Pd/Au}$  bicryst. film, pseudomorphic epitaxial growth, deposit thickness depend., TEM study 2-35909  
 $\text{Pd-Au/Au}$  bicryst. film, pseudomorphic epitaxial growth, deposit thickness depend., TEM study 2-35909  
 $\text{Pt-Au(Pd)}$  bilayer epitaxial films, phase boundaries form. in high condensation temp. ranges 2-45741  
 $\text{Sb}_2\text{S}_3$ , epitaxial growth on  $\text{PbTe}$  with diffusion interaction at phase boundary 2-51040  
 $\text{Si}$ , dislocations, generation and multiplication, in situ X-ray topographic studies at elevated temps. 2-40391  
 $\text{Si}$ , lattice images of  $30^\circ$  partial dislocation cores 2-25889  
 $\text{Si}$ , Lomer dislocation core struct. 2-45180  
 $\text{Si:P}$ , implanted, MeV  $\text{He}^+$  dechannelling from secondary defects 2-30505  
 $\text{SiC}$ , polycrystalline, containing excess Si after neutron and ion irradiation, microstruct. 2-30496  
 $\text{Si}_3\text{N}_4$  ceramics, indentation plasticity and fracture 2-31774  
 $\text{SnSe}$  condensed film, dislocation struct. of twin boundaries, electron microscopic obs. 2-45199  
 $\text{Ti-O(Al)(Nb)}$  alloys, work hardening rate rel. to dislocation struct., 4.2 to 373K 2-22245  
 $\text{TlBiTe}$ , single crystals., cryst. growth and specimen prep. for TEM 2-9265  
 $\text{W-C}$ , deformed at high temps., obs. of dislocations 2-40394  
 $\text{Y}_2\text{O}_3$ , high temp. creep, phenomenological anal. 2-5181  
 $\text{Zn-Al}$  (0.4 wt.%), fine grain, creep characts. (*Russian*) 2-9383

dislocation translation see slip

**dislocations**

- For pipe diffusion, see diffusion in solids. See also dislocation ...  
 see also Bordoni effect; Cottrell atmospheres; disclinations; edge dislocations; grain boundaries; prismatic dislocations; screw dislocations  
 algebra of tensor operators, appls. to classical elasticity and dislocation continuum theory 2-20532  
 alloys, superstructure  $\text{Li}_2$ , plastic behaviour under low temperature creep 2-1488  
 anisotropic elastic medium, Somigliana dislocation 2-21146  
 anisotropic layer of molecules, melting behaviour, liq. cryst. layer form. 2-5211  
 anthracene, cryst., lattice defect influence on exciton states, luminesc. study 2-26971  
 antiferromagnets, NMR line profile, influence of dislocation-created elastic stresses (*Russian*) 2-51477  
 commensurate-incommensurate transitions on surfaces 2-1722  
 corundum optical profiled crystals, evolution of defect struct. 2-2436  
 coupled molecular dislocation processes causing relaxation and flow 2-12592  
 creep, dislocation mechanisms in poly- and single crystals. 2-50660  
 $\text{Cs}$  halides, additively doped,  $\text{Cs}$  colloids, precip. and growth kinetics 2-25874  
 dechannelling, planar, influence of dislocations, computer simulation model 2-45301  
 displacement and stress fields of a general dislocation close to a free surface of an isotropic solid 2-5116  
 $\text{DO}_{19}$  ordered structure, planar fault stability and energy 2-45208  
 electron micrographs, images due to impurity atmos. 2-45172  
 electron microscopy and X-ray images, theory of dislocation contrast 2-40387  
 entropy of fusion, vibr. dislocations 2-16761  
 epitaxy, interface problems, review 2-51047  
 FCC-BCC interface, appl. of surface dislocation theory 2-45739  
 FCC-HCP martensitic transform, US effects 2-47025  
 ferroelectrics, microscopic fracture mechanisms, dislocation model 2-31429  
 flexible slipping dislocations, passage through plane dislocation accumulations of network type, model 2-35497  
 gauge fields for electrons in crystals with topological defects 2-35965  
 graphite, lattice properties, bonding and thermal props. 2-50582  
 HVEM, recent progress, appls. to study of props. of metallic materials (*Chinese*) 2-19214  
 ice, dielectric relax. by charged dislocation process 2-31374

**dislocations continued**

- ice  $\text{I}_h$ , ageing phenomena, internal friction, X-ray topography meas. (*French*) 2-12680  
 II-VI semiconductor film, elastic props. and defects, lattice mismatch of film-substrate systems 2-12946  
 III-V semiconductors, structural defects, birefringence study 2-40397  
 internal friction, dislocation model, continuous distrib., with inhomogeneous sliding along high-angle grain boundaries 2-45354  
 internal friction and US attenuation in solids, conf., Lausanne, Switzerland (July 1981) 2-38360  
 irradiation damage, sink strength theory 2-21169  
 lattice with dislocation core, nonlinear heat transfer 2-12001  
 light-scattering tomography, lattice defects, characterisation of crystals (*Japanese*) 2-17499  
 linearised gauge theory, traction boundary value problem 2-50637  
 liquid crystal, two-dimensional melting and dynamics 2-1597  
 liquid crystals, smectic A and C, curvature defects 2-16585  
 material bodies with dislocations and disclinations, Yang-Mills type minimal coupling theory 2-23442  
 materials science concepts, rel. to materials science concepts 2-23355  
 melting and liq. and glassy states 2-26023  
 metal-polymer-metal boundaries, US interface wave attenuation 2-45703  
 metalloproteins, EPR, dislocation strain broadening effects 2-27771  
 misfit dislocation theory, for continuous distribs. of interface dislocations 2-21152  
 nonlinear elastic medium, force per unit surface of defect 2-21137  
 organic molecular crystals, dislocation excitons and manifestations in optical spectra 2-22063  
 oscillations, parametric excitation 2-50640  
 piezomagnetic effect associated with dislocations, amplification by longitudinal mag. field (*Russian*) 2-5570  
 planar channelling and dechannelling probability, dislocation effects, harmonic oscillator approx. 2-35556  
 plate, isotropic, dislocation config. stress fields 2-50076  
 polystyrene latexes, crystal struct. of  $\text{RCO}_5$  and  $\text{R}_2\text{CO}_{17}$  types (R=rare earth) (*Japanese*) 2-45062  
 positron trapping from defects, positronium desorption rate, thermodynamic calc. 2-13020  
 quartz, synthetic, Burgers vectors of dislocations, determ. by computer simulation 2-50638  
 semi-infinite boundaries, anisotropic elasticity, dislocations at common edge 2-40382  
 semiconductor, dislocations and electron processes, review (*Polish*) 2-13003  
 semiconductor heterostructure, ultrathin film, partial dislocations, columnar growth, clustering and pinhole formation 2-12919  
 semiconductor thin layers, dislocation imaging in electron beam induced current mode of SEM and STEM 2-1481  
 semiconductors, conference, Oxford, England (April 1981) 2-23364  
 semiconductors, EBIC contrast of lattice defects 2-25698  
 semiconductors, SEM appls. in EBIC and cathodoluminesc. modes 2-30371  
 semiconductors, structural defects, dynamic characts., internal friction method 2-1555  
 solid, two-dimensional melting and dynamics 2-1597  
 solute atom-dislocation interaction, arbitrary soln. thermodynamics 2-1511  
 statistical theory of polycrystalline plasticity 2-40471  
 steel, containing  $\epsilon$ -Cu precipitates,  $\text{H}_2$  evolution (*Japanese*) 2-45622  
 steel, high Mn, wrought, phase comp. and props., effect of C, Mn, Ni and N concs. 2-51938  
 STEM, EBIC image profiles of dislocations 2-30466  
 superstructure, possibility of domain boundary superposition and thermal work hardening 2-51939  
 synthetic quartz plate, AT cut, X-ray topographic study of imperfections 2-21154  
 transition metal complexes, EPR, dislocation strain broadening effects 2-27771  
 two dimensional commensurate-incommensurate transitions and dislocations 2-50850  
 two-dimensional melting, gauge fields and geometric approach to order 2-154  
 two-dimensional melting mechanisms, computer simulation studies 2-1598  
 two-dimensional system, melting theory, Monte Carlo simulation, particle system behaviour 2-1600  
 wear, dislocation theory approach 2-44690  
 Wigner crystal, two-dimens., defect states and melting transition, theory 2-1848  
 X-ray and thermal neutron scatt. near second-order phase transition 2-16651  
 X-ray techniques, high resolution, in semiconductors and insulators 2-5022  
 Ag, electrical resistivity, low temp., cold work effect 2-36001  
 Ag, small particles, dislocations, direct lattice imaging 2-5122  
 AgCl film on  $\text{NaCl}$ , anisotropic theory of crystal-film interface 2-5311  
 $\text{Al}_0.4\text{Ga}_{0.6}\text{As:Ge}$  LPE film, dislocation clusters, TEM obs. 2-45762  
 Au, small particles, dislocations, direct lattice imaging 2-5122  
 Au-Ag thin film couples, interfacial reactions, Auger depth profiling, TEM, and contact resist. meas. 2-8678  
 BN, wurtzite form,  $\gamma \rightarrow \beta$  transition during high press. creep, fine struct. study 2-35683  
 CdS, dislocation energy states, piezo-optical investigation, photoluminescence and absorption spectra obs. 2-51123  
 CdS, mechanically treated, acceptor impurity diffusion, dislocation study (*Russian*) 2-1666  
 CdS(Te), defect struct., high resolution TEM study 2-30473  
 $\text{Co}_{88}\text{Ni}_{12}$ , US attenuation and vel. changes during FCC-HCP martensitic transform. 2-47026  
 $\text{CoSi}_2$ -Si epitaxial layers on Si(111) substrate, TEM and Rutherford backscatt. anal. 2-40703  
 Cu, fatigued single crystal, void formation, positron annihilation meas. 2-35485  
 Cu-Ge (8 at.%) single crystals, in situ obs. of deform. twinning 2-40412  
 Cu-Ni alloy, config. of {100} dislocation walls formed during fatigue 2-40392  
 Cu-Zn-Al, internal friction meas. rel. to two way memory effect 2-47099  
 $\alpha$ -Fe, electronic struct. and dislocation splitting, alloying elements influence (*Russian*) 2-51077  
 Fe, magnetic and magnetomechanical props., influence of dislocation structs. 2-26712



**dislocations continued**

- Fe, oxidation FeO grain size and cavities effects 2-41779  
 Fe rod embedded in Ni-Al matrix, intrinsic boundary dislocations, anisotropic elastic fields 2-36900  
 Fe-Al single cryst., ordered B2 type, annealing-out of quenched-in vacancies 2-47065  
 (Ga,Al)As-GaAs heteroepitaxial layers, stacking faults and substructure 2-35515  
 Ga,Al<sub>1-x</sub>As epitaxial layers on GaAs, morphology and misfit dislocations 2-5319  
 GaAs (100) surface, cathodoluminesc. lifetime pattern meas. 2-31563  
 GaAs, cathodoluminescence lifetime patterns of surface near dislocations 2-46780  
 GaAs epitaxial layers, soln. grown, steps on facets 2-30761  
 GaAs LED, struct. defects, TEM studies 2-5332  
 GaAs:Ge LPE film, dislocation clusters, TEM obs. 2-45762  
 GaAs:Zn(Se), ion implanted, annealed, TEM study 2-25894  
 GaAs<sub>1-x</sub>P<sub>x</sub>-GaAs, partial misfit dislocation formation during heteroepitaxy 2-21465  
 GaInAsP-InP DH laser material, nonradiative regions correlation with dislocation clusters 2-34751  
 Ga<sub>0.5</sub>In<sub>0.5</sub>P film on GaAs, anisotropic theory of crystal-film interface 2-5311  
 Ga<sub>0.5</sub>In<sub>0.5</sub>P MBE film, struct. and photolum. props. 2-45758  
 Ga<sub>0.5</sub>In<sub>0.5</sub>P-GaAs MBE DH, interface recombination vel. and misfit strain, photoluminescence study 2-22073  
 GaP LED, struct. defects, TEM studies 2-5332  
 GdIG, spin reorientation transition induced by mag. field, dislocations influence 2-46285  
 Ge, EPR of electrons at dislocations obs. 2-31282  
 Ge epitaxial layers on Si, CVD and vacuum deposited, phys. and elec. props. 2-51024  
 He, liq., two-dimens. Wigner and electron crystn., dislocation mediated melting 2-1706  
 He monolayers, on grafoil, dislocation-mediated two-dimens. melting, thermodynamic manifestations 2-1700  
 Hg<sub>x</sub>Cd<sub>1-x</sub>Te crystals, electrically and optically active defects 2-1479  
 InP, defects, birefringence study, comparison with electrochemical etching 2-40397  
 Mo-N solid solution, internal friction study 2-45367  
 NaCl crystals, glide band decoration from proton irradiation 2-25941  
 NaCl, natural Galite, proton irradi., dislocation decoration 2-45287  
 Ni-Si, surface segregation induced by ion irradi. (French) 2-41613  
 Ni-Si, formation on Si, TEM obs. 2-51030  
 PbO<sub>2</sub> films, nucleation and growth on Ti substrate, SEM and TEM study 2-51029  
 PbS/PbSe bicrystals, misfit dislocations distrib. determ. by energetic He ion channelling 2-40398  
 Pd/Au bicryst. film, pseudomorphic epitaxial growth, deposit thickness depend., TEM study 2-35909  
 Pd-Au/Au bicryst. film, pseudomorphic epitaxial growth, deposit thickness depend., TEM study 2-35909  
 Pd<sub>2</sub>Si-Si(111) epitaxial interface struct. and propag., TEM obs. 2-45747  
 Si, Czochralski grown, stacking faults and oxide microdefects 2-16660  
 Si, defect investigations, sensitivity of EBIC technique 2-1482  
 Si, dislocation core struct. calcs. 2-26330  
 Si, dislocation states, optical excitations, photocond. meas. 2-51232  
 Si, dislocations, EBIC contrast and resolution 2-30467  
 Si, gettering and redistrib. of O, 300 to 500°C 2-8536  
 Si, hot-pressed, tilt boundary, TEM and electron diff. study 2-30470  
 Si, lattice images of 30° partial dislocation cores 2-25889  
 Si layers, CW laser annealed, EBIC contrast rel. to residual defects, X-ray, TEM, and SEM obs. 2-30465  
 Si, plastically deformed, radiative recomb. on dislocations, energy state in band gap 2-9186  
 Si, polycrystalline, X-ray topography and photoresponse of grain boundaries, solar cell appls. 2-37402  
 Si single crystals, grown from melt, appearance of dislocations 2-1418  
 Si, unreconstructed 30° partial dislocations, electronic struct., pseudopotential and minimum basis set calc. 2-21534  
 Si:B, ion implanted, Auger study 2-45224  
 Si:P, impurity effect in stacking fault energy 2-45209  
 Si:P,H, deformed, hydrogen passivation of defects 2-13004  
 Ti-V-Si alloy, heterogeneous precipitation of  $\omega$  phase 2-5883  
 V film, grain boundary struct. with grains of three orientations (Russian) 2-21157  
 WC-Co cold-upsetting tool, surface layer struct. 2-17743  
 WSe<sub>2</sub>, stacking fault energy, electron microscopy weak beam method 2-1495  
 YAG:Nd crystals grown by Czochralski method, supercooling and dislocation generation during interface conversion (Chinese) 2-8464  
 Zn-N, exptl. estimation of interaction parameter  $e_0$ , dislocation meas. 2-1487  
 ZnO:K, hot-pressed, microstructural defects, TEM study 2-5132  
 Zr-Nb-Ru (2.5, 0.3wt.%), quenched, microstruct. and mech. props. 2-41646

**disordered systems, vibrational states** *see vibrational states in disordered systems*

**disperse systems**

- see also aerosols; Brownian motion; colloids; dust; emulsions; foams; fog; gels; powders; smoke; sols; suspensions*  
 alloy, dispersed system stability, Gibbs-Thomas relation 2-50871  
 aqueous system, nucleation, mag. field effects 2-41946  
 chemical equilibrium shifts, role of size factors 2-47384  
 coagulation processes, kinetics, singularities 2-37045  
 complex permittivity determ. in microwave range 2-19135  
 convective heat and mass transfer from objects immersed in filtering granular bed 2-35210  
 dispersed liquid flow interaction with heated surface 2-30215  
 double layer on disperse particles, polarisation and dipolephoresis in steady DC field, electroosmosis effect 2-31954  
 finely dispersed particles, precipitation from cooled gas flow transverse to heat exchanger surface 2-14008  
 flow, holdup and axial mixing in packed extraction column, meas. technique 2-25433  
 flow of continuous medium in channel filled with dispersed material, two-phase heat transfer 2-25373  
 flow through dispersed particles, drag calc., appl. to multiphase flow and fluidised bed study 2-20728  
 gas dispersion in liq., onset of jetting conditions 2-35195

**disperse systems continued**

- gas liquid dispersions, mass transfer determ. 2-27482  
 gas-liquid, close-packed, coalescence effects (German) 2-31951  
 granular materials, rapid 2-D shearing flow, constitutive eqns. 2-20737  
 heat conduction, inverse problem solution, dispersed media, freezing, thawing, thermophysical charact. determ. 2-12005  
 heat exchange between a surface and an agitated layer of dispersed material 2-35045  
 heavy gas dispersion, spreading, gravity, density excess, calculus anal. treatment 2-30217  
 heterogeneous catalysis research, Mossbauer spectroscopy appls. 2-7582  
 homopolymers, polydisperse viscoelastic props., transient network model 2-17702  
 hyperbolic diffusion equation, relaxational and dispersed medium, chemical reaction, thermodynamics 2-12246  
 kaolinite, solid phase deform. under influence of adsorbed water and organic compounds 2-35451  
 latex dispersed in water, laser beam anisotropic scatt., rel. to two-dimens. theory 2-7719  
 light signal spatial filtering by layer of dispersive medium 2-39569  
 lipid/D<sub>2</sub>O dispersions, phase separation detection by <sup>2</sup>D NMR meas. (German) 2-14007  
 liquid-liquid, close-packed, coalescence effects (German) 2-31951  
 liquid-liquid droplet system, mass transfer effect, surface renewal phenomena 2-4878  
 lubricating oil, metallic particle transport in plasma emission and atomic absorption spectrometry 2-9578  
 metal-based sintered materials after melting and solidification at various gravity levels, dispersion charact. Space 1 expt. 2-27120  
 molten metal matrix composites, dispersed particles behaviour, Spacelab 1 experiment 2-27119  
 monodisperse particle system, radiation transport 2-39903  
 particle transport in fluid media under reduced gravity (German) 2-8218  
 particle-fluid heat transfer and dispersion in fluidised beds 2-25434  
 phthalocyanine, x-phase metal free, photocond. particles dispersed in polymer matrix, carrier generation efficiency 2-13123  
 polydisperse dilute sprays, evaporation, size distrib. parameter influence 2-30212  
 polymer bridging forces in liquid/liquid systems 2-35864  
 polymer dispersion mech. props., US absorption study, relation of particles to film props. (German) 2-22281  
 polymer solns. polydisperse system conformations, bimodal distrib. 2-16549  
 polystyrene solns., steady flow and stress relax. anal. 2-20715  
 polystyrene solns., with polybutadiene particles, rubbery plateau modulus 2-1157  
 powder dispersion in liquid, surface processes 2-47381  
 retarded van der Waals interaction, between plates and spheres, approx. expressions 2-27484  
 self-excited oscillatory motion of particles in a uniform electric field 2-47382  
 solid-state particles struct., diff. study 2-8550  
 solution of rod-like particles with different lengths, phase transitions 2-30603  
 spherical particles, charged, uniform, coherent stream production 2-16371  
 spherical particles, charged, uniform, for studying matter in extreme states 2-16370  
 thermal detonations, propag. through dispersions of hot liq. fuel in cooler liq. coolants, two-phase flow model 2-44748  
 thermoplastic slip, sliding friction in ceramics casting process 2-41757  
 turbulent two-phase dispersions, bubble coalescence, size effect, relevance to heat, mass and momentum transfer 2-12204  
 two phase flow, particle density determ. 2-35209  
 two-component dispersed flow, heat transfer meas. 2-8150  
 two-phase disperse mixture, low velocity rotating Couette flow, microconvection, heat transfer enhancement 2-4828  
 two-phase media in electric field, diffusion and multivel. models 2-4894  
 ultradisperse materials, thermolec. props. 2-36115  
 vapour-mist dielectrics, cooling and insulating media for vapour-cooled power transformers 2-16419  
 water, sat. vapour in disperse medium, nonsteady filtration 2-25437  
 AgI dispersions, Ostwald ripening rates, Ag conc. effect, turbidimetry study 2-14016  
 AgI multiphase disperse systems, AC elec. cond. enhancement 2-16877  
 Al<sub>2</sub>O<sub>3</sub>, ultradisperse particles, phase comp. 2-20831  
 LiCl, dispersed second phase particles, enhanced ionic cond., <sup>7</sup>Li NMR study (Chinese) 2-41206  
 LiI.H<sub>2</sub>O, conductivity enhancement by dispersed oxide phases 2-16875  
 SiO<sub>2</sub>, aminated, disperse, X-ray irradiation, EPR (German) 2-46382  
 UO<sub>2</sub>-Na, quasi-steady propag. of thermal detonations, two-phase flow model 2-44748  
 ZrO<sub>2</sub>, ultradisperse particles, phase comp. 2-50834

**dispersion (wave)**

- see also acoustic dispersion; optical dispersion*  
 coordinate-free approach to wave reflection from an anisotropic medium 2-39538  
 crystals, longitudinal wave propag., continuous nuclei, dispersive criterion 2-3390  
 dispersion delay lines, compressed linearly-frequency modulated signals, temp. dependence of time location 2-1099  
 energy-momentum tensor for dispersive waves, transformation props. 2-23472  
 magnetosphere whistlers, effect of parallel elec. field on wave dispersion and particle precip. 2-10247  
 radiowave propagation in ionosphere, freq. dispersion during transmission and refl., review of theoretical studies 2-18618  
 seismic Rayleigh waves, group vel. dispersion curves rel. to crustal struct., of Qinghai-Xizang Plateau (Chinese) 2-2999  
 three wave interaction, diff. and dispersion effects 2-38453  
 two-dimensional wave eqn., dispersion analysis of finite element semidiscretizations 2-42867

**dispersion hardening**

- see also precipitation hardening*  
 alloy, computer simulation of AE during yield (Japanese) 2-13741  
 alloy design, microstructural synthesis 2-5869  
 alloys, strengthening against creep 2-5888  
 glass, toughening by metallic particles 2-17687  
 oxides, high refractory, supershardening from liq. phase (Ukrainian) 2-13740



**dispersion hardening continued**

- prime candidate alloy, optimisation of struct. and props. by rapid solidification 2-31692  
 steel, Cr (12 wt.%), carbide dispersion carburizing (*Japanese*) 2-27183  
 steel, Cr-Ni-Co-Mo-Mn, corrosion-resist., heat treatment and mech. props. 2-41640  
 steel, die, modified with nitrides, props. and heat treatment 2-22230  
 steel, stainless, ferritic, oxide dispersion strengthened, prep. and mech. props. 2-41548  
 Al-Al<sub>3</sub>Ni, eutectic, improvement of mechanical props. (*French*) 2-41554  
 Al-Mg, dispersion strengthened by mech. alloying 2-17689  
 Al-Mg (5 wt.%), internal friction, grain boundary effect of environment 2-51962  
 Cr-TaC(NbC)-MgO-Ti, rubbing surfaces rupture charact., 20-1000°C 2-17742  
 Cu alloys, strength and elec. props. optimisation by alloying additions (*Polish*) 2-27180  
 Cu, Bauschinger effect, pure and dispersion hardened specimens 2-2548  
 Cu-Al<sub>2</sub>O<sub>3</sub>, dispersion strengthened, strengthening and mech. props. study 2-22309  
 Cu-Fe-Zr alloy, dispersion hardenable, temp. depend. of internal friction (*Polish*) 2-36904  
 Cu-SiO<sub>2</sub>, dispersion hardened, diffusion creep threshold 2-41686  
 Fe-Ti (3.85 wt.%), carbide dispersion carburizing (*Japanese*) 2-27182  
 In-Cu dispersion-hardening pastes, phase composition 2-5856  
 Nb alloys, solid-solution and dispersion strengthened, strength, ageing duration effect 2-13754  
 Nb-Zr-C, electronic struct., dispersion hardening, interatomic bonds 2-45822  
 Nb-Zr-C (1, 0.1 wt.%),  $\epsilon$ - $\alpha$  transformation, plasticity and fracture (*Russian*) 2-5870  
 Ni, dispersion hardened coating, autocatalytic deposition 2-17782  
 Ni-Cr, heat-resist., dispersion strengthening with ZrO<sub>2</sub> 2-51927  
 Ni-Cr-Nb, discontinuous precipitation, alloying addition influence (*Russian*) 2-51908  
 Ni-Cr-Nb, dispersion-hardening alloys, discontinuous precip. process development, cold plastic deformation influence 2-5885

**dispersion power, rotatory** *see optical rotation***dispersion relations**

- see also dispersion (wave); Kramers-Kronig relations; Mandelstam representation; N/D method; phonon dispersion relations; phonons; plasma instability; plasma waves; S-matrix theory*  
 $\gamma\gamma$ - $\gamma\gamma$ , 0-400 MeV, Compton effect, finite energy sum rules (*Russian*) 2-10553  
 crystal, polar model, collective excitations (*Russian*) 2-5356  
 dispersion sum rule for the energy-momentum tensor 2-43228  
 electron gas, inhomogeneous, linear response functions 2-40810  
 ferrimagnetic plate, anisotropic, magnetostatic wave propag., field strength and orientation effect 2-41167  
 fixed t low energy KN and KN amplitude 2-10994  
 fundamental physics, conf., Bogota, Columbia (July-Aug., 1979) 2-10554  
 $g_{\text{NEK}}$  determination from  $k^0$  regeneration data 2-10996  
 gas dynamics difference schemes, use of dispersion props. (*Russian*) 2-30161  
 Gell-Mann-Low function, spectrality condition and invariant charge asymptotic behaviour 2-263  
 graphite intercalation cpds., electronic dispersion relations, energy bands 2-12956  
 hydroelastic systems, waves and dispersion relations 2-50226  
 ion beam plasma, linear dispersion eqn. calcs. (*Japanese*) 2-35292  
 isoscalar quadrupole and rotational modes, schematic model of collective states 2-24080  
 linear transport problem, spectral representation, dispersion relations 2-38613  
 liquid layer, acoustic wave propag., dispersion relation 2-11873  
 metal interfaces, plasmon dispersion effects 2-26318  
 MHD wave propagation in magnetically structured solar atmosphere, dispersion relations 2-53233  
 molten salt, metal doped, collective motions 2-40808  
 nonNewtonian fluid, channel flow, dispersion of soluble matter 2-25404  
 nuclear Compton amplitude and exchange effects, dispersive approach 2-11126  
 partially ionised laser plasma, dispersion theory (*Russian*) 2-8336  
 piezoelectric magnetoactive semicond., magnetoactive, stimulated Raman scatt. from electron plasma wave and mol. vibrs. 2-49818  
 pion coupling to He, Li, Be, C, N, O, review 2-49035  
 pole approx. to unphysical part of left hand cut, sufficiency 2-10992  
 polymers, insulating and metallic, expression for dispersion interaction of two infinite linear chains 2-768  
 Rayleigh surface wave propag. across large-amplitude grating 2-42872  
 real analytic quantity, dispersion relations, sum rules 2-38821  
 ring waveguide in container filled with anisotropic magneto-dielectric, EM wave spectrum (*Russian*) 2-44177  
 spinodal phase separation, dispersion rel. of hyperbolic transport eqns. appl. 2-40556  
 surface wave scattering analysis 2-8698  
 TM<sub>MC</sub>, one-dimensional antiferromagnet, one-and two-magnon excitations 2-8966  
 X-ray edge problem, dispersion relation approach with contact pot. model 2-46825  
 $\gamma\pi \rightarrow \pi^+ \pi^-$ , pion prod. in reson. region, phenomenological anal. using fixed-t dispersion relations 2-43362  
 $\gamma\pi \rightarrow \pi^+ \pi^- (\pi^0 \pi^0)$ , pion prod. in reson. region, phenomenological anal. using fixed-t dispersion relations 2-43362  
 KN, low and intermediate energy physics, conf., Rome, Italy, (Mar. 1980) 2-10551  
 KN, use of zeros in dispersion relation and coupling crust. calc. 2-10998  
 KN dispersion theory, review 2-10995  
 KN forward scattering amplitudes, zerology 2-10997  
 KN interaction near threshold, dispersion relations 2-11062  
 KN resonances, phase shift anal. 2-10993  
 KN scatt., dispersion relation appls. 2-11070  
 pp, 100-300 GeV, forward elastic scatt., hadronic diffraction cone universal shrinkage 2-49012  
 pp $\rightarrow$ pp, crossing, Regge behaviour, residues, in Mandelstam dual model 2-23957  
 $\pi\Delta \rightarrow \pi\Delta$ , coupling const. determ. from Adler conditions 2-19396  
 $\pi\pi$  data, dispersion relations, partial wave anal., resonances 2-10991  
 $\pi\pi$  phase shift anal., current status 2-10990  
 $\pi\pi$  scatt., possible evidence for strong Van der Waals forces 2-7046

**dispersion relations continued**

- $\pi\pi \rightarrow \pi\pi$ , coupling const. determ. from Adler conditions 2-19396  
 Ar hot cathode discharges, LF longitudinal waves, hydrodynamical model 2-20945  
 BaTiO<sub>3</sub>, dielectric dispersion, Brillouin spectra study 2-46456  
 n-CdS, piezoelectric, Brillouin instability 2-21243  
 Cr-Mn, frozen magnon theory 2-26612  
 CuBr, resonant Brillouin scatt. 2-2300  
 GaSb:Te, pressure induced alteration of energy spectrum (*Russian*) 2-5368

**dispersions** *see disperse systems***dispersoids** *see disperse systems***displacement measurement**

- cylindrical surface under axial load, deformation meas. by holographic interferometry (*Japanese*) 2-15146  
 diffuse object spatial displacement meas. accuracy using holographic interferogram data 2-33496  
 discrete photodetectors in interferometric systems 2-48762  
 double exposure speckle photography, extension of measurable displacement limits 2-48673  
 double speckle interferometry, out-of-plane displacement disturbance on in-plane displacement (*Chinese*) 2-43074  
 foetal movement, meas. using a strain-gauge transducer 2-14347  
 holographic attachment, for machine for field of displacements determ. 2-2644  
 holographic displacement analysis with multimode fibre optics 2-24972  
 holographic interferogram incoherent superposition for three-dimens. displacement meas. 2-34694  
 holographic multiplexing techniques for sequential hologram interferometry with diffusely illuminated objects 2-868  
 holography, Dennis Gabor memorial symposium, Haifa, Israel (Mar. 1980) 2-33216  
 holography and speckle techniques for deformation and vibr. anal. 2-12115  
 in-plane displacement and strain meas. by speckle interferometry and moiré derivation 2-10855  
 interferometric, laser radiation divergence effect (*Russian*) 2-3558  
 lateral motion real-time anal. using laser speckle direct obs. method 2-15205  
 microvibration meas. by heterodyne speckle interferometry 2-12116  
 microwave interferometer appl., in electromagnetically semi-transparent medium 2-10788  
 optical sensors for displacement measurement 2-6831  
 shock parameters meas. with noncontacting fibre optic lever vibration transducers 2-12111  
 spatial resolution in microanalysis by electron energy loss selected imaging 2-6927  
 speckle photography, white light, out-of-plane deform. elimination 2-215  
 speckle photography data numerical processing by Fourier transform 2-34663  
 three-dimensional displacement meas., sandwich holography and regulated path length interferometry 2-48753

**displacive transformations**

- see also martensitic transformations; polymorphic transformations; reverse martensitic transformations; soft modes*  
 biphenyl, cryst., temp. effect, phase transition, fluoresc. 2-26952  
 biphenyl, incommensurate phase dynamics, phasons 2-45510  
 carrier scatt. from neutral point defects near displacive phase transition 2-36034  
 critical neutron scatt. cross sections and symm. near displacive and mag. phase transitions 2-16542  
 feldspars, ternary, diffusive and displacive transforms. 2-21288  
 ferroelectric phase transitions, model descriptions 2-26839  
 ferroelectric transitions, defects role, sp. ht., US absorpt. and soft mode linewidth study 2-31405  
 insulators, incommensurate phase transitions, phonons role 2-45563  
 ionic solids, phase transformations, first-principles theory 2-30564  
 lattice dynamics 2-45518  
 macroscopic analysis method for displacive structs., hexagonal NiAl s to orthorhombic MnP type transition appl. (*French*) 2-35664  
 nepheline, time-temp. study of satellite intensities 2-35430  
 plagioclases, diffusive and displacive transforms. 2-21288  
 quartz,  $\alpha$ - $\beta$  structural transition, Si-O-Si bond angle enlargement 2-45517  
 soft mode and clusters in one-dimensional model 2-16747  
 tetrachloro-p-benzoquinone, displacive transition, elastic and photoelastic anomalies 2-35677  
 transverse sound propagation near displacive transition points 2-45407  
 s-triazine, mol. cryst., ferroelasticity, phase transitions, eqn. of motion approach 2-50846  
 weakly coupled nonlinear chains, struct. phase transitions 2-35666  
 AgCrS<sub>3</sub>, conduction ions partly-filled 2D-hexagonal sublattice, phase diagram 2-21303  
 Cr<sub>2</sub>B<sub>2</sub>O<sub>7</sub>Cl<sub>3</sub>, improper ferroelec. transition, disorder-order parameters, Raman scatt. study 2-31411  
 CsHSO<sub>4</sub>, phase transition, dielec. const. and sp. ht. study 2-13388  
 CsSrCl<sub>3</sub>:Gd<sup>3+</sup>, displacive phase transitions, ESR spectra obs. 2-36424  
 H<sub>2</sub>, chemisorbed on W (001) and Mo (001) surfaces, substrate rearrangement and 2D ordering 2-1755  
 KNbF<sub>3</sub>, lattice instability and struct. phase transition 2-45512  
 KNbO<sub>3</sub>, cubic-tetragonal phase transition, lattice dynamics 2-45516  
 KZnF<sub>3</sub>, lattice instability and struct. phase transition 2-45512  
 PbHPO<sub>4</sub>, ferroelectric, order onset, struct. study 2-35667  
 SrTiO<sub>3</sub>, point defect scatt. near displacive transform. 2-36034  
 $\alpha$ -U, phenomenological approach (*French*) 2-21289

**display devices**

- see also liquid crystal displays*  
 electrochromic, inorganic materials developments 2-17448  
 holographic near-real-time displays using electronic recording 2-11667  
 LED array displays coastal-tide data 2-23123  
 liquid displacement due to surface tension elec. modulation, passive display and optical switching appls. 2-7858  
 oil-film modulator for projection TV system (*German*) 2-25097  
 Ca:Sr (R=rare earth), DC electrolum. 2-46767  
 RuO<sub>2</sub>-based electrochemical light switch 2-11806  
 SrS:R (R=rare earth), DC electrolum. 2-46767



display equipment *see* display instrumentation

display instrumentation

*see also* cathode-ray tube displays; display devices; screens (display)

arrhythmia monitoring system, computerised dynamic 3D joint interval histogram display 2-47736

car noise evaluation, digital equipment for real time sound intensity meas. 2-44620

digital signal processing, display enhancement for seismic interpretation 2-18589

electro-optical, visual perception of depth 2-27807

fission reactor control-room, display method, Janus 2-11229

high-resolution weather satellite pictures, image display, testing and alignment 2-42490

lightning impulse voltages recording by wave memories (German) 2-42489

microcomputer-based data acquisition, display, and control system for vestibulo-spinal Hoffmann reflex experiments 2-18352

nuclear power plant safety parameter display systems evaluation 2-49170

VDT operations, radiation and industrial hygiene survey 2-27825

display instruments *see* display instrumentation

display systems *see* display instrumentation

disruptive voltage *see* electric breakdown

dissemination of information *see* information dissemination

dissipation (heat) *see* cooling

dissociation

*see also* electrolytic dissociation; heat of dissociation; ionisation; molecular dissociation; molecular dissociation energies; photodissociation acid-base compound solns., stimulated emission characs., protolytic reaction rate influence 2-7758

air-H<sub>2</sub>S equilibria under Claus furnace conditions 2-31943

chloral polymers, prep., thermal, mech. and elec. props., degradation 2-45079

Hofmann type inclusion cpd., Raman and IR spectra 2-2271

II-V compounds, physical and chemical props., and applications 2-25852

II-V semiconductor compounds, thermal dissoc. and evap. mechanism, single cryst. growth, diffusion role 2-41873

ionic crystal, mechanochem. decomposition and fast-electron emission 2-27059

polyolefins, electrically stressed, kinetics of degradation 2-17891

(rare-earth)<sub>2</sub>O<sub>3</sub>, reactive atmosphere processing 2-37061

solid explosives, compressive wave-induced reactions, microscopic theory 2-41879

tetralin, laser-powered homogeneous dissociation, NMR and IR spectra obs. 2-47328

CdAs<sub>2</sub>(P<sub>2</sub>), thermal dissoc. and evap. mechanism, single cryst. growth, diffusion role 2-41873

CsI monocryst., electron irradi., surface dissoc. and secondary emission investig. 2-21184

Cu<sub>2</sub>Te, dissociation press. meas. 2-9535

Fe oxides, carbothermal metallisation, mechanism and kinetics (Russian) 2-22415

H<sub>2</sub>O, dissociation in thermoelectrochem. cycles, max. ballast (Russian) 2-9689

Li<sup>+</sup> ionic conductors, decomp. mechanisms 2-41897

Li<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub> matrix, ferrite form., Se<sub>2</sub>O<sub>3</sub>-CeO<sub>2</sub>-CoC<sub>2</sub>O<sub>4</sub> activator effect 2-22441

MnO, carbothermal metallisation, mechanism and kinetics (Russian) 2-22416

NH<sub>3</sub>,  $\alpha$ -Al<sub>2</sub>O<sub>3</sub> catalyst carriers prod. 2-41569

O<sub>3</sub>, heterogeneous thermal explosive dissociation 2-27478

O(<sup>3</sup>P)+H<sub>2</sub>, high energy classical trajectory study, cross sections and rate const., exchange and dissoc. processes 2-37048

SiO filler for rubber, prep. 2-47005

SnO<sub>2</sub> film, electron beam induced dissociation and conductivity 2-25930

Th<sub>2</sub>Fe<sub>2</sub>H<sub>3</sub>, mag., struct., and surface props. 2-35701

TiO<sub>2</sub>, dissociative evaporation in vacuum and oxidising atmosphere, thermodynamic anal. 2-6052

UF<sub>5</sub> liquid, density, conductivity, viscosity and ionic dissoc. 2-8551

dissolution *see* dissolving

dissolving

*see also* solubility; solutions; solvation

alloys, multicomponent, rates of solution during electrochem. forming, methods of calc. (Russian) 2-8619

calcines from reprocessing plant, leaching props. chem. composition 2-39148

corrosion products, on coolant circuit of RBMK-1000 (reactor), decontamination by dissoln. 2-7390

crystal, growing or dissolving, holographic studies of surrounding soln. 2-25778

gas bubble dissolution and growth asymptotic expansion description 2-37106

glass, chemical stability for radioactive waste fixation 2-13835

glass, leached, evidence for interdiffusion of hydronium and alkali ions 2-12844

glass melt, dissolution and growth of rising bubble containing single gas 2-35206

ionic crystal surfaces, dissolution mechanisms 2-8617

leach test specimen sizes, selection criterion 2-39147

leach testing 2-39142

metal hydroxides, amphoteric, dissolution and crystn. mechanism from NaOH soln., ionic equilibria and cryst. phases 2-30426

metals, electrodisolution and corrosion by AC 2-47238

metals, stress corrosion cracking monitoring, by acoustic emission 2-41861

photosensit., monomolecular, dissolution model 2-40561

polyethylene, dissolution, thermofluctuation rupture of stressed bonds (Russian) 2-30608

radioactive waste, crystalline, Al, Ti and Zr component dissolution, hydrothermal conditions 2-39146

radioactive waste, in borosilicate glass, standard leach test 2-39149

radioactive waste, leaching behaviour, conf., Argonne, IL, USA (Sept. 1980) 2-38361

radioactive waste, leaching from SYNROC B and borosilicate glass 2-39145

radioactive waste, vitrified, aqueous leaching mechanisms 2-39143

radioactive waste, vitrified, leach tests, pH control 2-39144

solid materials, chem. resist. to conc. H<sub>3</sub>PO<sub>4</sub> soln. 2-5965

solid solutions, interstitial 2-40551

solidified waste, leach testing rig for high press. 2-43548

dissolving continued

spherical particles, charged, uniform, coherent stream production 2-16371

steel, austenitic stainless, single crystal, faceting dissoln. and stress corrosion cracking in H<sub>2</sub>SO<sub>4</sub>-NH<sub>4</sub>SCN soln. (Japanese) 2-2618

steel, austenitic stainless, stress corrosion cracking susceptibility, effect of plastic deform. and recrystn. treatments 2-51872

steel, C, high strength wire, stress corrosion cracking 2-13840

steel, ferritic stainless, Cr-Mo-Ti stabilised, sensitisation, influence of heat treatment 2-47243

steel, high tension HT55, corrosion fatigue crack growth, mech. effects of corrosion products 2-41777

steel, low C, H conc. in samples exposed to geothermal fluids 2-17766

steel, mild, SCC S<sup>2-</sup> ion effects 2-22372

steel, stainless, 18/10, precipitation and dissolution of Ti (C,N) (Polish) 2-27176

SYNROC, crushed and cored, continuous flow leaching 2-39140

Ag, liq., O activity, electrochem. meas. 2-8647

Ag-Au alloy in HNO<sub>3</sub>, selective dissolution of Ag, oxide form. 2-47255

Al alloy, stress corrosion cracking and corrosion fatigue, specimen thickness effects 2-41711

Al, dissolution in HCl, retardation, effect of B-diketo cpds. 2-13843

Al-Mg, dispersion strengthened by mech. alloying 2-17689

Al-Mg (2 wt.%), dissolution of beta-phase, effect of cold work, fracture stress 2-5891

Al-Si melt, Si dissolution, Sb effect on Al-Si crystn. process and as-cast struct. 2-36844

Al-Zn (40 wt.%), aged, cellular dissoln., mechanism and kinetics 2-36858

Al-Zn-Mg-Cu, alloy 7075-T651, effects of warm working 2-47064

Al-Zn-(Sn)-(In), sacrificial anodes, sea water testing 2-52093

Al<sub>2</sub>O<sub>3</sub>, dense, aged in water and physiological media, Ca migration 2-50686

Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> refractories, chem. phase anal. 2-41957

B, growth and dissolution in nitric acid, impurity effects 2-40303

BaF<sub>2</sub>, single crystals, selective etching and solution in salts and acids 2-13828

CaCO<sub>3</sub>, vaterite, prep. of spherical powders, transition to calcite in water (Japanese) 2-36807

CaCl<sub>2</sub>, accelerating admixture in Portland cement concrete 2-37089

Cu, anodic dissolution and cathodic deposition, Fe (II) ions effect 2-13659

Cu, dissoln. in N HNO<sub>3</sub> soln., effect of local mag. field 2-41815

Cu, electrocrystn. in presence of levelling and brightening additives, electrochem. dissolution of single crystals. 2-31833

Cu, liq., O activity, electrochem. meas. 2-8647

Cu:P, anodic dissolution, composition of black anodic film (Russian) 2-21454

Cu-Au, anodic dissoln., O<sub>2</sub> reduction and corrosion 2-5987

Fe, corrosion in neutral soln., anode to cathode area ratio 2-52094

Fe, dissoln. in N HNO<sub>3</sub> soln., effect of local mag. field 2-41815

Fe-C-S, liq., C dissoln. rate, influence of S 2-1620

Fe-Si (10-40 wt.%), anodic processes, galvanostatic conditions 2-47223

Fe-Si-Nb(Cr)(V), anodic processes, galvanostatic conditions 2-47224

Fe<sub>80</sub>B<sub>20</sub>, glassy metals, corrosion and dissoln. 2-31858

Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, glassy metals, corrosion and dissoln. 2-31858

Gd<sub>3</sub>Ga<sub>5</sub>O<sub>12</sub>, LPE growth and dissolution, physical chem. of garnet molten solns. 2-46959

Li<sub>2</sub>O-ZnO-P<sub>2</sub>O<sub>5</sub> glasses, pH effect on durability 2-5968

Mo<sub>1-x</sub>W<sub>x</sub>Se<sub>2</sub> single crystals, dislocation etching and dissolution kinetics 2-35503

NaCl crystals, dissolution kinetics study at dislocation sites using optical topographic technique 2-1628

Ni, dissoln. kinetics in Sn 2-8626

Ni, electrochem. and morphological study in mineral acids, influence of purity grade and anion type 2-47225

Ni, H permeation, electrochem. meas., in specimens undergoing plastic deform. 2-21393

Ni-Fe, dissoln. and passivation, influence of S (French) 2-47246

Ni-Ni<sub>3</sub>Al-Mo,  $\gamma/\gamma'$ - $\alpha$  aligned eutectic composite, elevated temp. stability of phases 2-22228

Ni-Zr metallic glass, thermally activated internal friction peaks, dissolved H<sub>2</sub> related 2-47086

NiO film, dissoln. in fused NaCl-KCl at 973K by anodic polarisation 2-9450

O chemisorbed on W (110), island form. and dissolution, LEED study 2-1757

Pb-, Sn, Te crystals, mechanism of chem. polishing 2-47201

Pd-based solid solutions, containing H and noble metal substitutional component, thermodynamic behaviour 2-40548

Pd-based solid solutions, containing H and noble metal substitutional component, kinetic behaviour 2-40549

Pd-Zr metallic glass, thermally activated internal friction peaks, dissolved H<sub>2</sub> related 2-47086

Sb, solid, dissoln. in molten Bi, static conditions 2-8625

Sb, solid, dissoln. into molten Bi, interfacial phenomena 2-1750

SiO<sub>2</sub> glass, stress corrosion, dissolution rate in water, press. depend. 2-36992

Ti enamel and coatings, corrosion and leaching in citric acid solns. 2-5982

UO<sub>2</sub> fuel, irradiated, leaching and dissolution 2-39141

V<sub>2</sub>O<sub>5</sub>, amorphous, hydration process, IR and Raman study 2-51578

VaF<sub>2</sub> single crystals, dissolution studies 2-21314

distance measurement

ADS 1737, 2446, 2612, 2799, visual binary stars, dynamical parallaxes from new orbital elements (French) 2-3273

aspheric rotatory surfaces measurement 2-7912

astronomical distance measurement, implications of IR luminosities of M-type supergiants 2-10412

binary stars, distances determ. from high ang. resolution interferometry 2-53106

cataclysmic variable stars, distances determ. from K-band photometry 2-14862

electro-optical distance measuring instrument, two channel laser modulation (German) 2-28880

extra-galactic distance scale determ. appl. of obs. of novae 2-33149

galactic centre, distance determ. from IR photometry of Mira variables in Baade windows 2-38213

normal galaxies, effect of distance uncertainties on multidimensional statistical analysis 2-33142



**distance measurement continued**

- geodesy, use of meteorological meas. for computing refractive effects on electro-optical distance meas. 2-6305
- holographic-interferometric triangulation technique for distance and surface contour meas. (*German*) 2-24973
- HV 1369, Cepheid at possible depth of 32 kpc in SMC, VBLUW photometry rel. to period and distance 2-6598
- Local Group galaxies, Universe expansion stopping distance rel. to group dynamical age 2-3311
- Nova Coronae Austrinae 1981, distance and location rel. to galactic bulge 2-10437
- O-type subdwarf stars, distances and absolute magnitudes from spectroscopic obs. 2-3253
- operative position finding, artificial satellite appls. in navigation, geophysics and surveying, dist. meas., radio interferometry (*German*) 2-28238
- proximity meas. to conducting samples, using eddy-current gauges, influence of DC magnetic field 2-6833
- pulsars, distances and distrib. in galactic plane 2-33058
- pulsed optical rangefinder, averaging of readings 2-49874
- pulsed solid state laser, range of apparatus (*Rumanian*) 2-19082
- radar ranging of planets, relativistic effects 2-10335
- radio sources, compact, near supernova remnants, H I absorption distances 2-48346
- radiotelescope, mm-wavelength, surface meas. by modulated laser beam 2-14778
- stellar open clusters, distances and reddening determ. from Geneva photometric boxes 2-38256
- stellar parallaxes measurement, appl. of interferometry and direct imaging 2-53062
- stellar trigonometric parallaxes, systematic effects determ. from inter-observatory comparisons 2-14846
- US measurement, used for automatically focused camera lenses 2-10891
- Na cooled breeder reactor, distance meas. under Na by ultrasonic means (*German*) 2-11231

**distillation**

- see also *isotope separation*
- ethanol-water, binary distillation, heat and mass transfer meas. 2-30122
- methanol-water, binary distillation, heat and mass transfer meas. 2-30422
- self-flushing still temp., automatic electronic control 2-48692
- solar pond driven distillation and power production system 2-22552

**distortion, electric** see *electric distortion***distortive transformations** see *solid-state phase transformations***distributed Bragg reflector lasers**

- GainAsP-InP BH distributed-Bragg-reflector integrated-twin-guide lasers, 1.58  $\mu$ m wavelength 2-29814
- GainAsP-InP BH distributed Bragg reflector integrated-twin-guide laser emitted at 1.5 to 1.6  $\mu$ m 2-29830
- T 2-29829

**distributed control**

- asynchronous transmission communication loop configuration 2-23619
- monitoring and control systems at European Hybrid Spectrometer, distributed processing appls. 2-24538

**distributed feedback lasers**

- complex coupling coefficient effect on DFB lasers 2-44324
- dispersion relations with strong modulations 2-11733
- dye DFB laser, N<sub>2</sub> laser pumped, UV and blue picosecond pulse generation 2-49782
- dye lasers, N<sub>2</sub>-laser pumped, amplified spontaneous emission 2-20302
- dye lasers, ultrashort pulse generation, energy characts. 2-44272
- dye lasing based on DFB as method for ultra short pulse length meas. 2-44357
- fluoromethane distributed feedback gas laser (*German*) 2-16015
- fluoromethane optically pumped 496  $\mu$ m DFB gas laser 2-11713
- methyl fluoride distributed feedback laser, optically pumped, 496  $\mu$ m wavelength 2-39636
- optical fibre surrounded by gain modulated dye soln., DFB laser action, evanescent field coupling 2-20309
- POPOP vapour DFB laser 2-44280
- rhodamine 6G laser, ultrashort pulse generation, temporal characts. 2-44270
- semiconductor lasers with chirped grating, axial-mode selectivity and threshold gain 2-4509
- strong periodic modulations, theory based on complex Hill eqn. 2-39613
- thin-film DFB laser emission, wavelength tuning method 2-44351
- two-dimensional HALO laser excited by N<sub>2</sub> laser (*Hungarian*) 2-34713
- GaAs DFB laser, optically pumped, with variable grating period, mode selectivity and threshold gain in 2-4509
- InGaAsP-InP CW lasers, low-threshold-current, distributed feedback 2-49776
- InGaAsP-InP distributed-feedback BH lasers emitting at 1.57  $\mu$ m, room-temp. CW operation 2-29818

**distributed parameter networks**

- linear filters, Grassmann manifold-based theory 2-23503

**distributed parameter systems**

- EM flow transducer, dynamic characts. estimate 2-25469

**distributed processing**

- see also *computer networks; multiprocessing systems*
- CELLO detector, distributed intelligence appls. 2-19921
- hydrometeorological data, remote transmission and processing (*Italian*) 2-28211
- microprocessor controlled laser velocimeter, subsonic wind tunnel appl. 2-40010
- monitoring and control systems at European Hybrid Spectrometer, distributed processing appls. 2-24538
- pipeline distributed processing system for real time pattern recognition applications 2-17847
- W.K. Kellogg laboratory, nuclear data acquisition system 2-7456

**distributions, statistical** see *statistical analysis; statistics***district heating**

- 200 MW urban nuclear district heating plant design 2-27577
- combined heat and power nuclear systems, construction and economic assessment 2-47456
- development support by Federal German Government (*German*) 2-27740
- economics of solar, geothermal and conventional space heating 2-2781
- nuclear powered, Scandinavian approach (*Norwegian*) 2-27576
- regional supply concerns supplying low-temperature heat for space heating, economic aspects (*German*) 2-32096

**district heating continued**

- steam turbine, mass and volumetric flowrate calc. 2-44803
- technical aspects of solar energy systems for low-calorie applications (*Dutch*) 2-37174

**dividers, voltage** see *voltage dividers***dividing circuits**

- pulse amplitude dividing circuit for nuclear applications 2-19895

**DLTS** see *deep level transient spectroscopy***DNA**

- absorption spectrum for wavelengths greater than 300 nm 2-27774
- adenine-thymine base pair, electronic struct., semiempirical calcs. 2-37487
- Bacillus stearothermophilus, permeable cells, effects of  $\gamma$ - and UV-radiation on DNA synthesis (*Russian*) 2-52552
- bacteriophage T7 structure from small-angle X-ray scatt. data 2-52429
- bases, efficiency of two-stage photolysis by high-power UV laser radiation 2-37633
- binding of DNA to acridine dyes, investigated by triplet excited static probe technique and fluoresc. meas. 2-49257
- cerebellar neurons, DNA struct. alterations after whole-brain irradiat., rat expts. 2-18259
- chemical modification, NMR spectrosc. investig. 2-4426
- chromosomal nonhistone protein-DNA complexes, cell specific, in HeLa chromatin,  $\gamma$ -ray induced crosslinking 2-22798
- DNA-polar peptide specific recognition by ultraviolet resonance Raman spectroscopy 2-14201
- double helical structure 2-14195
- double helix, plasticity 2-47558
- double helix terminal regions, resonant and localised breathing modes 2-2838
- duplexes, struct. factor calcs. 2-2842
- E. coli, repair of  $\gamma$ -induced single- and double-strand DNA breaks (*Russian*) 2-52553
- epidermis, rat, induction and repair of DNA breaks by electron irradiat. 2-32275
- eucaryotic cells, DNA double-strand breaks induction, dose rate effect 2-47652
- fibroblasts, human, deficient in glutathione, induction and repair of single-strand DNA breaks 2-42161
- gamma-radiolysis of oxygenated aq. solns., alterations at the sugar moiety 2-42160
- irradiation, transient post-irradiat. defect in newly synthesised DNA 2-52572
- laser irradiation, initiation of defects in secondary struct. 2-2897
- leukaemia cells, mouse, hyperthermic potentiation of X-ray effects on survival and DNA 2-32274
- leukocyte DNA of rat peripheral blood, repair after total body  $\gamma$ -irradiat. (*Russian*) 2-42141
- Micrococcus radiodurans cells, formation and repair of  $\gamma$ -irradiat.-induced DNA breaks (*Russian*) 2-42140
- mouse ovary, X-irradiat., effect on DNA synthetic activity 2-32265
- nucleic acids and amino acids, struct. analogies 2-32174
- oocytes, statistical dosimetry of radiation from DNA-bound <sup>3</sup>H 2-47718
- pentaziridinocyclodiphosphathiazene-DNA interactions, antitumour agent, Raman spectra 2-18169
- phage M13, single-stranded DNA, radiation-induced base substitution mutagenesis 2-22794
- phonons in double helix 2-47560
- polymerase  $\alpha$  and  $\beta$  activity, HeLa S3 cells,  $\gamma$ -irradiat. effects 2-37629
- polynucleotide structure transitions, Raman negative hypochromism, resonance conditions 2-11604
- proflavine-DNA complexes, mechanism for strand-break induction after visible light exposure 2-42136
- protein-DNA, cross-links, UV-induced, and the possibility of elimination thereof (*Russian*) 2-42149
- Raman spectra of low freq. collective modes 2-27769
- repair studies, MWPC with cathode coupled delay line read-out 2-42237
- reversed-phase ion-pair chromatography of oligodeoxyribonucleotides 2-42067
- strand breaks, normal rejoining in ataxia telangiectasia fibroblast lines after low X-ray exposure 2-27848
- strand-breaks induced by ionising radiation, effects of hyperthermia on repair 2-27851
- structure, rotation, linking number 2-14194
- superhelical, effect of base-pair stability 2-37496
- thymocytes, rat, in vivo X-irradiat., chromatin internucleosomal breakage obs. 2-18263
- thymus DNA, calf, US irradiat. effect on template activity 2-47630
- X-ray induced damage, immunological detect. 2-52585
- Cu<sup>2+</sup> complex with DNA, melting and binding, UV spectra study 2-6214
- H-bonded and complimentary base pair systems, pot. energy curves 2-635

**document retrieval** see *information retrieval***domain boundaries**

- for boundaries between magnetic domains and electric domains see *magnetic domain walls and electric domain walls respectively*
- see also *antiphase boundaries*
- ceramics, ferroelec., domain struct., crack growth conditions 2-50759
- hexapentoxotriphenylene, hexagonal discotic mesophase, disclinations and walls (*French*) 2-12463
- inhomogeneous solids, nonlinear waves near first-order phase transitions (*Russian*) 2-26013
- plastic flow of thin layers, theory (*Russian*) 2-12043
- polyethylene-thermoplastic rubber blends, mech. props., depend. on shear and thermal history 2-13810
- superstructure, possibility of domain boundary superposition and thermal work hardening 2-51939
- triglycine sulfate crystals, temp. change influence on domain struct. and surface energy density of walls 2-51431
- Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec. ferroelastic, orthogonal domain wall interactions 2-30469
- NdP<sub>2</sub>O<sub>14</sub>, elastic nonlinearity and ferroelastic domain wall motion 2-30523

**domains**

- see also *antiphase domains; crystal microstructure; domain boundaries; electric domains; magnetic domains*
- ammonium hydrogen oxalate, domain struct., microscopic obs. 2-2208
- bis(methylammonium)tetrachlorozincate, struct. phase transitions, X-ray diff., thermal, dielec. and optical meas. 2-45566



## domains continued

- Brownian motion of domain wall with higher order phonon interactions 2-19024  
 cholesteric liquid cryst., bubble domain, form. and erasure by applied field 2-8423  
 cholesteric-nematic mixtures, bubble domains and striped domains, mol. alignment models 2-21005  
 domains appearing below chevron threshold voltage, characts. nematic liquid crystals 2-1396  
 ferroelectrics, microscopic fracture mechanisms, dislocation model 2-31429  
 p-n-heptyloxybenzoic acid, smectic C and nematic phases, dynamic scatt. with storage 2-16572  
 liquid crystal, nematic, SAW excited, mol. orientation effects with periodic domain struts. 2-1390  
 liquid crystals, chiral smectics C, surface boundary toric defects (*French*) 2-16554  
 liquid crystals, twisted, flexoelectric effect (*Russian*) 2-21027  
 MBBA-cholesteril formate-SCB, liquid cryst., DC-controllable bubble domains 2-8419  
 multidomain states in ordered phase of crystals. 2-40518  
 nematic liquid cryst., electroconvective flow and domain instabilities 2-16561  
 nematic Merck phases, electroconvective domains 2-45027  
 p-nonyloxybenzoic acid, doped, smectic C phase, electrooptical props. 2-9130  
 polyethylene, amorphous domain struct., PMR study 2-17357  
 polypropylene, amorphous domain struct., PMR study 2-17357  
 twisted nematic cell, tilt domain form. and evaluation 2-25726  
 Z(N) models in random field, crossover from discrete to continuous behaviour 2-133  
 Ag film growth on SiO<sub>2</sub>, AES and RHEED study 2-45759  
 Cr<sub>3</sub>S<sub>4</sub>, cryst. struct. and domain struct. 2-8490  
 Ge epitaxial films on GaAs (110), surface defect struct., LEED study 2-8694  
 Nb<sub>3</sub>Sn, internal friction and elastic softening 2-16717  
 Ni<sub>3</sub>B<sub>2</sub>O<sub>3</sub>(Br), ferromag., ferroelec. and ferroelastic domains, birefringence and Faraday effect study 2-31430  
 PdD<sub>3</sub>, struct. changes at low temp., neutron diffr. study 2-45136  
 Pt sputtered film, microstruct., X-ray diffr. study 2-51022  
 RbMnCl<sub>3</sub>, ferroelastic domain struct. rel. to antiferromag., optical study 2-26869  
 Sb<sub>2</sub>O<sub>3</sub>I (2MA), ferroelastic, photoswitching 2-25976  
 Si surface, quenched clean (111), disordered  $\sqrt{(19)} \times \sqrt{(19)}$  struct. obs. by LEED and UPS 2-1723  
 WO<sub>2.9</sub> needles grown in electron microscope, domain obs. 2-46893

## domestic appliances

see also ovens; refrigerators

electric water heating in the home, advantages (*French*) 2-47448

## doping, semiconductors see semiconductor doping

## doping profiles

- III-V semiconductor multilayer struct. profiling method, contact resistance meas. along angle lapped surface (*German*) 2-46106  
 ion bombardment, near-surface composition changes, Monte Carlo simulation 2-45293  
 low energy implant simulation using target tilt 2-5135  
 measurement using computerised IR microspectrophotometer 2-19195  
 metal:H(D), saturation and isotope mixing during low temp. implantations 2-50671  
 MIS structures, minority carrier lifetime and doping profile determ. by photoinjection 2-17161  
 MOS capacitor, B doped, generation lifetime, C-1 characteristics, meas. 2-26506  
 MOS structure, low-doped, pulsed photoinjection, characteris. of doping level and minority carrier lifetime 2-17164  
 polyacetylene, AsF<sub>5</sub> doped, cryst. struct., neutron diffr. study 2-45073  
 polyacetylene, diffusion of SbF<sub>5</sub> and I<sub>2</sub> 2-40601  
 polyacetylene, doped, cryst. and mol. struct. and elec. cond. 2-45072  
 polyacetylene, doped and undoped, SEM and Castaing microprobe studies 2-16671  
 polyacetylene, I and AsF<sub>5</sub> doped, morphology, SEM study 2-45077  
 polyacetylene, I doped, three dimensional orientation, doping and isomerisation effects 2-45075  
 polyacetylene, p-type, dopant profiles and optical and electrical props. 2-35529  
 polyacetylene films, I doping profile, dielec. and X-ray anal. study 2-45239  
 semiconductor dopant and trap conc. profiles meas. method junction capacitance techniques 2-50688  
 simultaneous deposition and ion implantation technique 2-8529  
 thin films, H profiling, <sup>1</sup>H(p,p) appl. 2-45232  
 X-ray fluorescence spectroscopy, determ. of centroid depths 2-47414  
 Al:Sb, ion implanted, laser treated, depth profiles 2-46836  
 Al/n-Si, small area laser beam annealing, subsurface alloying and deep Al penetration 2-1517  
 n-AlGaAs:Be, p-n junction formation by Be<sup>+</sup> implantation 2-51287  
 AsF<sub>5</sub>, intercalated in polyacetylene (polyphenylene), cryst. struct., neutron diffr. study 2-45073  
 Cu<sub>2</sub>S/CdS solar cells, characterisation by photocapacitance IR quenching 2-22619  
 Fe:N<sup>+</sup> ion implant, depth profile, stopping power, backscatt. meas. 2-45234  
 GaAs, cyclotron emission investig. as function of doping 2-5586  
 GaAs, ion implanted and laser annealed, residual damage, TEM study 2-30502  
 GaAs, redistribution of implanted O 2-50687  
 GaAs, single step selective implantation technology using proximity annealing, 10 GHz FET fabrication 2-16666  
 GaAs:Fe, impurity redistrib. on annealing, saturation density 2-1508  
 GaAs:Mn, heat treatment below Si<sub>3</sub>N<sub>4</sub> encapsulant of Mn implant, dopant profiles and diffusion mechanism (*French*) 2-5897  
 n-GaAs:S, MBE layers, electrochem. S doping 2-45222  
 GaAs:Se, ion implantation, substrate orientation effects 2-25915  
 GaAs:Se(S), impurity profile, implantation temp. and crystallinity depend. 2-40423  
 GaAs:Si, ion implanted and annealed, carrier conc. profiles, C-V meas. techniques 2-12623  
 GaAs:Si (Te), cathodoluminescence and dislocation struct. 2-31566  
 GaAs:Sn, laser implantation, impurity distrib. 2-35518  
 n-GaAs:Sn, laser-assisted doping from Sn evaporated films, ohmic contact form. 2-35521  
 GaAs:Zn, nonequilib. substitutional-interstitial Zn diffusion, photoluminesc. study 2-16899  
 GaAs(Sb)(P):Te, ion implanted, laser annealing, Mossbauer spectroscopy study 2-30481  
 GaP, solubility and distrib. ratios of transition metal impurities in melt-cryst. system 2-5146  
 GaP:Mg, ion implanted, minority carrier diffusion length meas. 2-26411  
 GaP:N, Al<sup>3+</sup> postimplantation gettering effects in p-n junctions 2-12627  
 GaSb:Te, Czochralski grown, impurity distrib., cathodoluminesc. study 2-51715  
 Ge:Al, ion implanted, annealing behaviour obs., Al conc. profiles determ. 2-45241  
 Ge-Se:Ag films, photo and electrochem. doping, AES and XPS study 2-45051  
 In<sub>0.53</sub>Ga<sub>0.47</sub>As on InP substrate, Mn as p-type dopant, distrib. coeff., room temp. mobility and diffusion coeff. 2-25914  
 p-In<sub>0.75</sub>Ga<sub>0.25</sub>As<sub>0.55</sub>P<sub>0.45</sub>:Cd LPE layer, doping characts. and elec. props. 2-41031  
 InP, cyclotron emission investig. as function of doping 2-5586  
 InP, LPE-grown, effect of substrate orientation on electrical properties 2-26522  
 InP, proton implanted, range determ. by SIMS analysis 2-5166  
 InP, semi-insulating, Fe and Cr redistrib. 2-8537  
 InP:Fe, Mg(Zn), ion implanted, struct. and elec. props. 2-21163  
 InP:Sn(Ge)(S), etched and unetched, dislocation obs. and Huber etching assessment 2-40396  
 InP:Te, ion implanted, laser annealing, Mossbauer spectroscopy study 2-30481  
 InP:Zn, diffusion profiles of Zn determ. using SIMS with primary Cs ion bombardment (*French*) 2-5148  
 LiNbO<sub>3</sub>:Ti, spectral determ. of Ti distrib. 2-8535  
 MgO:C, depth profiling, temp. and time-dependent behaviour 2-35524  
 Nb single crystals, implanted Ne atoms anal. using nuclear reson. reactions 2-45219  
 PbS, PbSe abrupt p-n junctions, R<sub>0</sub>A product, dopant conc. effect 2-21665  
 Si, dopant profile broadening, melting phenomenon and laser annealing 2-1522  
 Si epitaxial film deposition in CVD reactor, transients 2-22172  
 Si epitaxial layers on Si substrate, elec. props. 2-41029  
 Si extrinsic focal plane arrays, influence of material props. 2-15227  
 Si, independent control of dopant profiles in As-B structures by pulsed laser processing 2-50689  
 Si, ion implanted, solute trapping after laser annealing 2-45262  
 Si, ion implanted, supersaturated alloy form. during epitaxial regrowth, substitution solubility limitations 2-45261  
 Si, ion implanted wafer, impurity and local damage distrib. using channelled He microbeam 2-45299  
 Si, MBE, background and dopant impurities in film and film-substrate transition region, elec. transport 2-5145  
 Si, p-n junction depths, impurity profiles, XFA 2-47414  
 Si, SIMS dopant profiling and trace-level impurity analysis 2-31981  
 Si, self-implanted amorphous layers, swept-line electron beam annealing 2-50713  
 Si:As, atom and carrier depth distrib. for channelled 300 keV As ions, SIMS study 2-5163  
 Si:As, CW laser and electron beam annealed, Rutherford backscatt. and SIMS anal. 2-46847  
 Si:As, dopant distrib., sheet resist., spreading resist, junction depth, SIMS, and IR spectra meas. 2-12624  
 Si:As, implanted, CW laser annealed, real-time monitoring of opt. props. 2-46617  
 Si:As, ion implanted, doping profiles and elec. activation, Rutherford backscatt. study 2-25916  
 Si:As, ion implanted, laser annealed, Si MBE growth, doping profile, Rutherford backscatt. study 2-51813  
 Si:As, ion implanted, radiation damage determ. by profiling oxide growth rate 2-40448  
 Si:As<sup>+</sup> ion implant, depth profile, stopping power, backscatt. meas. 2-45234  
 Si:As<sup>+</sup>(P<sup>+</sup>), extended defect depth profiling, channelling, Rutherford backscattering meas. 2-12628  
 Si:B, amorphous, profile distortions and at. mixing in SIMS anal. 2-45236  
 Si:B, B profiling using neutron induced reaction <sup>10</sup>B(n,α)<sup>7</sup>Li 2-2751  
 Si:B, doping profile, SIMS layer-by-layer anal., matrix effects 2-51762  
 p-Si:B, heavily doped, defect profiles formed by light ion irr., B distrib. effect 2-16691  
 Si:B, ion implanted, Auger study 2-45224  
 Si:B, P, ion implanted, doping profiles, implantation sequence effect 2-45228  
 Si:B, particle track etch method for B anal. using <sup>10</sup>B(n,α)<sup>7</sup>Li reaction 2-12630  
 Si:B layers, secondary ion emission anomalies, depth profiling (*Ukrainian*) 2-27041  
 Si:B(As)(In), pulsed laser annealing, melting phenomena 2-46837  
 Si:Bi, furnace and laser annealed, backscatt. and channelling anal., depth distrib. 2-45253  
 Si:Bi, SIMS profile distortions, Rutherford backscatt. study 2-51755  
 Si:Cs, ion implanted, dopant retention, backscatt. study 2-45217  
 n-Si:Fe, deep trap conc., in-depth profile 2-1858  
 Si:Fe implanted layer, lattice damage, compressive stress, TEM study 2-45291  
 Si:Ga, high dose implanted, thermal annealing and elec. activation 2-5147  
 Si:Ga(Sb), MBE grown, sharp profiles with high and low doping levels 2-16670  
 Si:Ge, ion irr., damage, complex-refr. index profiles 2-5654  
 Si:H,B amorphous film, elec. props., optical props. 2-46176  
 Si:H amorphous films, gas phase doped or ion implanted 2-40735  
 Si:H<sup>+</sup>(He<sup>2+</sup>), ion implanted, range distrib. characts., Monte Carlo calc. 2-45302  
 Si:O, ion implanted, complex refractive index, light wave propagation 2-46532  
 Si:P, doping profile from <sup>31</sup>P(p,α)<sup>28</sup>Si yield (*Chinese*) 2-37113  
 Si:P, electron irradiated, TEM and channelling anal. of defects 2-25937  
 Si:P film, microstructure and sheet resistance 2-30480  
 Si:P neutron transmutation doping, slow neutron distrib. 2-3917



**doping profiles continued**

- Si:P(Kr) implanted layer annealing using laser beam 2-46838  
 Si:Pb, ion implanted, dopant range, damage depth, backscatt. and channelling anal. 2-45216  
 Si:Sb, polycrystalline, ion implanted, doping profiles and elec. resist., annealing effects 2-50685  
 Si:Sb(In) depth distrib., from laser irradi. evaporated layers 2-45252  
 Si:Sn(Fe), laser implantation, impurity distrib. 2-35518  
 Si:Se, ion implanted, dopant retention, backscatt. study 2-45217  
 Si-SiO<sub>2</sub> MOS system, As implants through SiO<sub>2</sub> layer, TEM, Rutherford backscatt. and device characts. study 2-40450  
 YAG:<sup>149</sup>Nd, dopant distrib., autoradiographic study 2-5149

**Doppler broadening see Doppler effect****Doppler effect**

- see also atomic spectra; red shift; spectral line breadth*  
 atmosphere, boundary layer, vertical sounding, changes in acoustic signal charact. 2-37961  
 atmosphere radaracoustic sounding, estimation of Doppler freq. pulsation energy spectra (Russian) 2-44517  
 black holes, unstable photon orbit amplification by stimulated emission, red shift effects 2-53313  
 blood flow in therapeutic arteriovenous fistulas, Doppler US evaluation 2-27859  
 blood velocity measurement by fibre optic laser Doppler anemometry 2-42191  
 blood velocity measurements, US scattering, theoretical study 2-47628  
 charged dust particles, dynamics in elec. field, laser Doppler velocimetry study 2-4908  
 cubic metals, Mossbauer recoilless fraction and second-order Doppler shift 2-2164  
 Dicke narrowing reduction of the Doppler contribution to a line width 2-39597  
 dielectric slab, linearly accelerated, EM wave reflection and transmission 2-44172  
 dynamic tensile curves, determ. with ring samples, opt. method 2-2668  
 frequency standards stability improvement, cooling atomic ions with lasers 2-15135  
 gas, resonant CARS, review 2-16063  
 heavy ion beams, laser cooling 2-7427  
 human digital arteries, noninvasive pulsed Doppler blood flow vel. meas. and calc. flow 2-32239  
 laser anemometer, output noise gradient spectrum modelling (Russian) 2-4903  
 laser anemometer, separated turbulent boundary layer in supersonic flow obs. 2-16408  
 laser anemometry, optical discriminator for Doppler frequency shifts (Russian) 2-4904  
 laser interferometry, dynamic and dosimetric characterisation of irradiated solids (Romanian) 2-19174  
 laser radar and appls., review 2-14637  
 laser sweep anemometer for velocity profile measurement (French) 2-35241  
 laser velocimetry for a large wind tunnel 2-40013  
 LMFBR, spectral shift effects on reactivity coeffs. induced by Doppler broadening 2-15434  
 metal, Mossbauer impurity atom, vacancy trapped, second-order Doppler shift, anharmonicity effect 2-21925  
 metals and alloys, amorphous, positron annihilation and positive muon study 2-9214  
 methyl cyanide, linewidth param. in rot. spectrum 2-7606  
 microprocessor-based Doppler sonar current profiler 2-6473  
 Mossbauer transmission curves, influence of Doppler motion freq. and amplitude 2-5610  
 nonrelativistic Doppler effect 2-38395  
 optical Ramsey fringes, shape and position, effect of vel. averaging 2-25079  
 quasimolecules, collisionally excited, autoionisation, nonperturbative treatment 2-49522  
 radar surveillance of sea-state, surface current and surface wind 2-42498  
 ring gas laser, light-induced optical nonreciprocity 2-20376  
 ring laser wobble frequency, mirror vibrs. effect 2-11729  
 SAR imagery of ocean waves 2-6378  
 SAR response to orbital motion of azimuth ocean waves 2-28249  
 smog forecasting, accurate Doppler radar meas. of atmospheric speed of sound (Russian) 2-44516  
 solar limb prominence interferometry at 656.3 nm, H $\alpha$  line widths interpretation 2-10388  
 sonography of extra-cranial arteries supplying the brain (German) 2-42179  
 structural materials in fast reactors, Doppler effect 2-7158  
 sub-Doppler submillimeter spectroscopy using molecular beams 2-29731  
 theory, in field of point-shaped sources of sound (German) 2-7913  
 US, blood flow detect. by intersecting zone Doppler unit 2-37637  
 US assessment of cardiac stroke vol., beat-by-beat, in exercise 2-52589  
 US blood flowmeter, minicomputer-based 2-18280  
 US blood flowmeters appl. (Spanish) 2-6284  
 US blood velocity signals, instantaneous freq., mean freq. and variance of mean freq. estimators 2-14302  
 US CW Doppler FHR signals, meas., extraction and processing (Chinese) 2-9842  
 US Doppler examination of the peripheral blood vessel system (German) 2-42180  
 Venus, surface reflection of radio waves, analysis of shape of Doppler spectra 2-38091  
 vortex characterisation and identification by Doppler ultrasound 2-18277  
 whistler mode signals in magnetosphere, Doppler freq. shifts 2-10265  
 Be+H<sup>+</sup>, quasifree electron bremsstrahlung 2-19990  
<sup>13</sup>C(n,n $\gamma$ ),  $\gamma$ -ray line Doppler broadening, C content determ. 2-9591  
 Ge-S glasses, crystn., positron annihilation and Doppler broadening study 2-22108  
 H line spectrum interpretation in galaxies active nuclei, importance of Doppler differential effect 2-28561  
 H<sup>+</sup>, UV transitions and struct. investig. using relativistic doppler effect 2-7517  
 HCO<sup>+</sup>, mol. struct. by microwave substitution method 2-20205  
<sup>4</sup>He film, persistent current meas. in rotating superleak 2-40627  
 Mg, positron trapping at vacancies PALS 2-50628  
 Mo, Doppler-shifted acoustic cyclotron reson., magneto-acoustic effects (Russian) 2-13342  
 NO<sub>2</sub>, sub-Doppler laser spectra in 592.5 nm region. 2-7563

**Doppler effect continued**

- Na atoms, sputtered from NaCl, vel. distrib., Doppler shift laser fluorescence meas. 2-41471  
 Si, amorphous and crystalline, positron annihilation studies using Doppler broadening techniques 2-51739  
 Si:H, amorphous, positron annihilation studies using Doppler broadening techniques 2-51739  
 $\beta$ -Ti-Fe, relative force constant determ., Mossbauer second-order Doppler shift 2-51505  
 W, Doppler-shifted acoustic cyclotron reson., magneto-acoustic effects (Russian) 2-13342

**Doppler shift see Doppler effect****dopplers**

- metal, doppleron excitation, open orbits effect 2-51470  
 metals, acoustic spin-doppleron reson. (Russian) 2-17345  
 metals, dopplers and Gantmakher-Kaner effect (Russian) 2-46054  
 W, dopplers and Gantmakher-Kaner effect (Russian) 2-46054

**dosimeters**

- see also dosimetry; thermoluminescent dosimeters*  
 albedo neutron dosimeters used as area monitors on concrete walls 2-558  
 calibration,  $\alpha$ -particle irradi. chamber 2-43630  
 CR-39 carbonate plastic as neutron albedo and threshold dosimeter 2-43628  
 Diacel as a high exposure  $\gamma$ -ray dosimeter 2-43620  
 dichromate solutions, routine kGy dosimetry 2-49189  
 electret dosimeter for neutrons and gamma rays 2-15638  
 electrets for use as dosimeters in radiography 2-52633  
 ethanol-chlorobenzene dosimeter, appl. to spectrophotometry of coloured secondary complexes 2-43624  
 FBX dosimeter, dose-rate and fractionation studies 2-43623  
 FBX dosimeter, use for calibration of <sup>60</sup>Co and high-energy teletherapy machines 2-52639  
 film dosimeters, filtered X-ray set for calibration (Bulgarian) 2-7374  
 Harwell personnel film dosimeters, early, remeas. 2-29442  
 ionisation chamber, recombination correction for pulsed, swept radiation, theory 2-49246  
 ionisation chamber, recombination correction for pulsed, swept radiation, expt. 2-49247  
 ionisation chambers, free-air, corrections for scatt. photons 2-49226  
 Kodak NTA dosimeter, computed response for moderated neutron spectra 2-49188  
 metaphosphate glass dosimeters, radiophotoluminesc., time-resolved study 2-19911  
 multisegmented ion chamber for CT scanner dosimetry 2-6266  
 passive monitoring of <sup>222</sup>Rn and  $\gamma$ -ray exposures in houses, dosimeters for 2-42226  
 personal noise dosimeters, MSHA program for type testing and calibration 2-11974  
 personnel dosimetry devices, film badge rel. to pocket chamber dosimeter 2-34214  
 radiochromic dye dosimeters, radiation-exposed, delayed darkening study 2-29437  
 rapid neutron dosimetry, using nuclear emulsions (French) 2-9875  
 KI quartz glass, colorimetric  $\gamma$ -ray dosimeter 2-19776  
 Si diode neutron dosimeters, annealing effect on response 2-49249

**dosimetry**

- see also dosimeters; radiation detection and measurement; radiation monitoring*  
 acoustic, long-term noise exposure meas. 2-11944  
 acoustic noise dose overestimation in presence of impulsive noise 2-11942  
 acoustic noise dose overestimation in response to impulsive noise 2-11943  
 air, average energy to create ion pair by U and Pb ions 2-44820  
 airborne discharges, collective doses from UK nuclear industry 2-32141  
 alpha particles, by exoelectron emission (Czech) 2-49190  
 binaural noise dosimetry 2-11945  
 bladder wall dose following administration of <sup>99m</sup>Tc-microspheres and DTPA 2-32334  
 bone cancers from Ra, dose-response anal. 2-32282  
 bone-marrow interface, Monte Carlo calc. of dose distrib. during diagnostic X-ray exam. 2-2948  
 brachytherapy, computerised dose predictions, exam. of consistency and accuracy 2-27907  
 Browns Ferry Unit-3 cavity neutron spectral analysis 2-39180  
 C-CD, gamma-induced noise anal. and meas. 2-29435  
 Chinese high background radiation area, aspects of environmental radiation and dosimetry 2-27908  
 collective dose, appl. to population health risk prediction 2-39246  
 computerised tomography, dosimetry survey of systems from 10 manufacturers 2-37676  
 computerised tomography overscanning, dose minimisation 2-2955  
 conference, Nagasaki, Japan (Oct. 1980) 2-23360  
 conference on radiological impact of nuclear facilities Lausanne, Switzerland (Oct. 1981) 2-28606  
 cylindrical ion chamber for neutron dosimetry, characts., book contrib. 2-19884  
 data guide for reactor neutron metrology, activation and fission reactions 2-14988  
 diagnostic X-ray machine, exposure meas. solar cell appl. 2-47727  
 dose calibration at high event-densities, overlapping counts correction 2-43627  
 electron beam dose planning using discrete Gaussian beams, Math. background 2-52634  
 electron beam dose measurements in water and polystyrene, comparative studies using various dosimeters 2-49192  
 electron beams from a Saturne linear accelerator, radiation parameters 2-47725  
 electron central-axis depth dose data, analytic representation 2-37682  
 electron therapy, intra-operative: dosimetry, field shaping and other considerations 2-42220  
 electron-optical X-ray image intensifiers under clinical conditions, conversion factor meas. (German) 2-18299  
 embryo and foetus, human, exposure due to medical X-ray exposure 2-47717  
 emergency reference levels of dose, NRPB's advice 2-14338  
 environmental  $\gamma$ -ray dose-rate meas. guide 2-11288  
 environmental dose distrib., site and pathway depend. 2-39243  
 exposure and dose rate characts. for 6.2 MeV source photons through Pb, Fe, concrete shields 2-7371  
 extended source, radiation field exposure determ. (Chinese) 2-34211  
 external irradiation doses, from ground-deposited radioactivity 2-29455



## dosimetry continued

- fast neutron dosimetry, nonhydrogenous ionisation chamber appl. 2-19791
- FFTF, dosimeter positioning handling and counting system 2-24362
- food consumption rates, choice for radiation dose assessments 2-42223
- gamma constant and the gamma equivalent in dosimetry 2-6825
- gamma-beam therapy planning optimisation (*Russian*) 2-32310
- gamma-irradiation,  $^{60}\text{Co}$ , low vs. high dose rates in acute reaction of pig skin 2-2905
- gamma-ray submersion dose, air-ground interface effect 2-32332
- Gammacell 220 drawer transit doses, magnitude and position dependence 2-9878
- gonadal dose obtained from treatment of nasal carcinoma by ionising radiation 2-22831
- graphite ionisation chambers, ionisation error due to porosity 2-19892
- high-energy electrons, dose estimation using ionisation chambers (*Czech*) 2-19914
- Hiroshima and Nagasaki, implications of new dose estimates, cancer risks and neutron RBE 2-22829
- Hiroshima and Nagasaki, revised dose estimates 2-22828
- IBR-30 reactor Dubna, biological channel neutron beam characteristics (*Russian*) 2-49160
- image intensified fluoroscopy, dose efficiency 2-37683
- index of dose-equivalent, irradiation geometry effect 2-22827
- interstitial radiotherapy, with parallel linear composite radiation sources, optimum dose field (*Russian*) 2-27902
- ion chamber for kerma determ., characts., book contrib. 2-19877
- ion chamber for neutron dosimetry, book 2-18823
- ion chambers, kerma determ. 2-19781
- ion chambers for neutron dosimetry, effective measuring position 2-19785
- ion chambers for photon dosimetry, minimum operational requirements, book contrib. 2-19875
- ion implantation, beam optics design, overview 2-4447
- ion implantation, correlation between electrostatic scan pattern and local dose nonuniformities 2-7376
- ion implantation, dose control technique 2-7377
- ion implantation, dosimetry meas. 2-6921
- ion implantation dose uniformity improvement by compensated scan pattern generator 2-7379
- ion implantation equipment and techniques, conf., Kingston, Ont., Canada (July 1980) 2-3323
- ion implantation system with X-Y scanning, sweep freq. optimal, selection 2-7378
- ionisation chamber meas., stopping power influence 2-19891
- ionisation chambers, effective meas. point for in-phantom meas. with photons 2-19784
- ionisation chambers, fast neutron beam dosimetry physics group experiences in USA, book contrib. 2-22833
- ionisation chambers for fast neutron dosimetry, characts., book contrib. 2-19879
- ionisation chambers for neutron dosimetry cavity theory and its practical implications 2-19780
- ionisation chambers in phantom irradiated by neutron beams, dose meas. 2-22837
- ionising radiation, protection, effects and dose levels (*Danish*) 2-27910
- kerma values by particle type [dosimetry] 2-22835
- kerma values for therapy appl. 2-22836
- KT ion chamber characts., book contrib. 2-19876
- laryngeal cancer, radiation pathomorphism (*Russian*) 2-42138
- low ionisation current meas., dosimetric problem 2-19890
- LR-115 cellulose nitrate, fast neutron tracks 2-43702
- lubricant  $\gamma$ -ray dosimeter 2-9879
- lung tissues, radiation dose estimates from Rn daughters 2-27901
- LWR press. vessel surveillance dosimetry improvement program 2-7267
- LWR pressure vessel damage dosimetry, least squares anal. 2-4045
- lymph node total irradiation, dynamic dose-shaping by gravity-oriented absorbers 2-42221
- lymphocytes, in vitro irradiation, by tritiated water, absorbed dose 2-18305
- lyoluminescence dosimetry of a pion<sup>+</sup> beam, comparison with ionisation chamber meas. 2-32335
- macrophages, rat lung  $^{144}\text{Ce}$  autoradiogram meas. by densitometry or photometry 2-6293
- mammography, comparison of TLD and ion chamber dosimetry 2-37681
- mammography, energy-balance approach to dose calc. 2-32339
- marrow, active, dose distrib. determ. for paediatric pelvis and spine 2-37685
- maximum annual dose-rate, air pathway, time-depend. variations 2-32320
- methane- $\text{CO}_2$ - $\text{N}_2$ , tissue-equivalent gas mixture,  $W_R$  values computation 2-19783
- microdosimetry, conf., Oxford, England (Sep. 1980) 2-32323
- microdosimetry, criteria for equivalence of spherical and cylindrical proportional counters 2-24505
- microdosimetry of radiation quality variations in fast neutron irradiation of homogeneous phantoms 2-47722
- microdosimetry of range-modulated  $\text{Ne}^{10+}$  beams 2-47726
- mixed-field dosimetry using ionisation chambers, uncertainty anal. 2-19787
- MOS ionisation dosimetry device fabrication and testing 2-29436
- multiple-source facility, dose limit adherence calc. 2-29457
- natural radiation exposure indoors 2-14339
- neutron beam displacement factors, meas. using activation dosimeters 2-37684
- neutron dose distribution in ordinary concrete shield,  $\text{B}_4\text{C}$  filter effect, reactor neutron beam 2-7383
- neutron dose-equivalent, spectrum-averaged, difficulties in calc. 2-32333
- neutron dosimetry, biological aspects 2-2957
- neutron dosimetry, experience with ionisation chamber by ECNEU group, book contrib. 2-22834
- neutron dosimetry for external beam therapy, European protocol 2-2949
- neutron dosing gauge based on albedo dosimetric method (*Croatian*) 2-52640
- neutron personal film monitoring, equiv. radiation dose behind proton accelerator shielding 2-11285
- neutron source for reactor dosimetry,  $\Sigma$ -ITN facility 2-43629
- neutron therapy, RBE values, acceptable photon dose conversion to limiting neutron dose 2-27881
- neutron therapy facility, dose equiv. next to target shield 2-2954
- neutron therapy for pelvic tumours, dose-effect relations for tumour control and complication rate 2-2930

## dosimetry continued

- neutrons, 15 MeV, comparison of dose determ. methods 2-43626
- neutrophil count, dose evaluation and time course prognosis by haematological indices rel. to  $\gamma$ -irrad. (*Russian*) 2-32329
- noise, hazard evaluation rel. to freq. of hearing loss in exposed population 2-22832
- non-hydrogenous ionisation chambers, relative neutron sensitivity 2-19788
- NRBP ion chamber for neutron dosimetry appl., characts., book contrib. 2-19882
- nuclear and space radiation effect, conf., Seattle, WA, USA (July 1981) 2-32315
- nuclear cardiovascular studies, resulting radiation exposure 2-52636
- nuclear criticality accident dosimetry system performance 2-7303
- nuclear medicine personnel, fingertip and whole body exposure 2-6265
- nuclear power plants, radiation doses due to accidental radioactive release, quick assessment (*German*) 2-11280
- nuclear power station V-1, radiation protection and radiological supervision (*Slovak*) 2-7387
- nuclear tests at Nevada, 1951-70, exposure of offsite population 2-2950
- oblique incidence corrected electron isodose curves from the modified Kawachi formula 2-14337
- occupational dose distrib., theoretical anal., dose limits effect 2-9876
- occupational exposure in academic sector of China 2-52635
- oesophageal dosimetry during cardiac catheterisation (*French*) 2-32338
- oocytes, statistical dosimetry of radiation from DNA-bound  $^3\text{H}$  2-47718
- organ dose estimation for highly degraded neutron spectra, ICRU phantom limitations 2-2951
- pancreatic cancer, radiotherapy, irradiation dose efficacy (*Russian*) 2-42194
- pencil eye shields for  $^{60}\text{Co}$  radiation, dosimetric evaluation 2-27906
- personnel dosimetry intercomparison studies at the Health Physics Research Reactor, 1974-80 2-47716
- phantom materials for radiation dosimetry, liqs. and gels 2-47715
- photon-beam dose calcs., evaluation of density correction algorithms in CT treatment planning 2-42224
- population doses and risk estimates from occupational exposures in Japan, 1978 2-47719
- population doses and risk estimates from occupational exposures in Japan, 1978 2-47720
- prediction models, error propag. 2-29458
- proportional counter method, photon dose fraction determ. in neutron beam, expt. uncertainty 2-19792
- radiation therapy, irregular field calcs., formalism 2-2956
- radiobiological model to choose field alternation in tumour irradiation (*Russian*) 2-42216
- radiochromic dye optical waveguides, broad-range dosimetry 2-24432
- radioisotope intracavity tubes, dosimetric consequences of asymmetric positioning of active source 2-27905
- radioisotopes, human intake, committed dose equivalents rel. to age at intake 2-18302
- radioisotopes, internal exposure, modified power function model 2-32331
- radioisotopes, worker intake limits 2-14336
- radiotherapy,  $^{60}\text{Co}$  beam, effect of small inhomogeneities 2-37680
- radiotherapy, extended field, using 10 MV X-rays, meas. and calc. of ovary and foetus dose 2-42219
- radiotherapy, external, linear and nonlinear optimisation of doses (*French*) 2-32337
- radiotherapy, grid diaphragm, open field and intracavity gamma therapy types, dose field form. (*Russian*) 2-27903
- radiotherapy, tissue compensators design, WBEAM program for dose distrib. calc. 2-37664
- radiotherapy  $^{60}\text{Co}$  beam, second scatt. contrib. 2-37679
- rapid neutron dosimetry (*French*) 2-9875
- real-time dose prediction system, for nuclear accidents 2-39238
- reference standard manufacture, advanced equipment design by ion implantation 2-6922
- renal radiopharmaceuticals, dosimetry, importance of bladder radioactivity 2-27904
- response-dose model for estimating lifetime tumour risks when cell killing occurs 2-14290
- review of cancer treatment and detect. 2-38353
- RF and microwave absorpt. by spherical multilayer biological systems 2-52637
- safety determ. of working in neutron radiation fields, detector error evaluation 2-19775
- scattered radiation distributions around CT scanners and hazard to personnel 2-37677
- semiconductor device failures due to neutron irradiation, microdosimetric approach 2-12645
- skyshine calcs., neutron and secondary gamma-ray transport in air-over ground geometry 2-39226
- solar UVA received by patients undergoing oral psoralen photochemotherapy, biologically effective dose 2-18304
- spherical ion chamber IC-17A for neutron dosimetry, characts., book contrib. 2-19881
- spinal mineral anal., low-dose CT scanning 2-47704
- SSNTD for neutron dosimetry, comparison of various types 2-11281
- TE ion chamber, thimble type, dosimetry appl., book contrib. 2-19878
- TE ion chamber, tube length at gas exhaust port, influence on response, book contrib. 2-19888
- TE ion chamber meas. for neutron dosimetry, interpretation and corrections and book contrib. 2-19885
- TE ion chambers model IC-17 for dose meas., calibration constancy 2-19886
- TE ionisation chambers, displacement correction factor 2-19786
- terrestrial food chains, radioecology following accident release, season depend. 2-39247
- therapeutic 10 MV photon beam, mag. anal. of radiation components 2-47721
- therapeutic electron beams, mean energy, Monte Carlo calcs. 2-2953
- therapeutic neutron beams,  $p(42)\text{Be}$ , dose rate and penetration rel. to target thickness 2-37658
- thimble ionisation chamber for neutron dosimetry appl., characts., book contrib. 2-19880
- tissue equivalent plastic ionisation chambers, response characts. in photon and neutron fields, book contrib. 2-19887
- tissue-equivalent ionisation chambers, performance tests 2-19889
- TLD results near nuclear power plant, evaluation method 2-39232
- TNO spherical tissue equivalent ion chamber for neutron dosimetry, characts., book contrib. 2-19883
- UK universities, exposure patterns and ALARA 2-32330



**dosimetry continued**

- US, diffuse exposure field, average dose absorption by biological specimens 2-32336  
 UV increase due to atmos. ozone depletion 2-27841  
 W-values relevant for neutron dosimetry 2-19782  
 wall return of  $^{252}\text{Cf}$  neutrons at the SEFOR calibration center 2-7394  
 wastes geological disposal, dose evaluation models 2-39162  
 water chemistry in reactor systems, conference, Bournemouth, England (Oct. 1980) 2-18819  
 X- and  $\gamma$ -rays absorbed in muscle at boundary of bone and metals (*Russian*) 2-42218  
 X-ray beam, dose-profile changes within and beyond low density material 2-47724  
 X-ray radiation, dosimetric characts. meas. (*Russian*) 2-42217  
 X-ray therapy, improvement of small-field penumbra and dose distrib. for a 4 MV accelerator 2-42206  
 n- $\gamma$  dose meas. in water phantom for 18.4 MeV neutrons 2-19789  
 AlP glass and thermoluminescent dosimeter system, dose response temp. depend. (*Czech*) 2-43750  
 AlP glass thermoluminescent dosimeters, dose response range (*Czech*) 2-43751  
 CaS:B, thermolum. phosphor, phys. parameters, operation importance 2-22101  
 $\text{CaSO}_4$ :Dy phosphor with high Dy conc., high level  $\gamma$ -dosimetry 2-29438  
 $\text{CaSO}_4$ :Dy ribbon, TLD-900, kinetics and thermolum. parameters at low dose levels 2-22100  
 $\text{CaSO}_4$ :Dy ribbon, TLD-900, dosimetric props. in low dose region 2-22830  
 $\text{CaSO}_4$ :Tm, TLDs, sensitivity to LET irradi. (*Japanese*) 2-5757  
 CdTe detector characteristics for  $\gamma$  dosimetry 2-43625  
 $^{60}\text{Co}$  dosimetry, postal intercomparison using TLDs by secondary standard dosimetry labs. 2-47723  
 $^{137}\text{Cs}$ , body burdens in selected adult male Japanese 2-52644  
 $^{54}\text{Fe}(\text{n},\text{p})^{54}\text{Mn}$ , cross sections for the ENDF/B-V dosimetry file 2-4140  
 $^{54}\text{Fe}(\text{n},\gamma)^{54}\text{Fe}$ , cross sections for the ENDF/B-V dosimetry file 2-4140  
 I radioisotopes dosimetry 2-52638  
 $^1\text{I}$ , A = 123,124,125,131, dose calcs. in thyroid gland of mouse, rat and man 2-18303  
 $^{131}\text{I}$  applied to *Tradescantia* inflorescence, calc. of  $\beta$ -ray absorbed dose rate 2-18265  
 $^{85}\text{Kr}$  irradiation facility using pressurisation-dissolution method 2-7428  
 LiF:(Mg,Cu,P), TLDs, sensitivity to LET irradi. (*Japanese*) 2-5757  
 Mg-Ar ion chamber sensitivity to high energy neutrons 2-19790  
 $\text{Mg}_2\text{SiO}_4$ :Tb, TLDs, sensitivity to LET irradi. (*Japanese*) 2-5757  
 Pu, determ. in smcr. samples and air filters 2-37126  
 Rn daughters, error in working-level hour, calcs. when  $\alpha$ -energy is not discriminated 2-9877  
 Rn doses in mines and homes 2-42222  
 Rn exhalation rates in dwellings in Poland 2-2952  
 $^{222}\text{Rn}$  in public water supplies in the area of Houston, Texas, population exposures estimation 2-22826  
 $^{75}\text{Se}$ -selenofolate, metabolism and dosimetry in humans 2-47714  
 $\text{SiO}_2$ , irradiated, electron-hole recombination from microdosimetry viewpoint 2-30905  
 $^{99\text{m}}\text{Tc}$  stock solution, system for low radiation dose handling 2-37678  
 $^{238}\text{U}$  decay constant, dosimetry and standards, fission-track dating workshop 2-4186  
 $^{238}\text{U}$   $\lambda$ , values and neutron dosimetry reappraisal in fission track dating 2-4185

**double heterostructure lasers** see *semiconductor junction lasers*

**double layers (electric)** see *electrochemistry; liquid theory*

**double nuclear magnetic resonance**

see also *INDOR*

- alkali halide structures, double spin flips, cross-relax. rates 2-21917  
 aromatic compounds, twisted nitro groups,  $^{17}\text{O}$  and  $^{14}\text{N}$  double NQR spectra 2-11509  
 AX spin system, double reson. spectrum, relax. effects 2-24759  
 1,3-dioxacyclohept-5-ene and its 2-substituted derivatives, conformational props.,  $^1\text{H}$  and  $^{13}\text{C}$  DNMR 2-24758  
 heteronuclear two dimens. spectroscopy, double reson. 2-15203  
 1-methylcytosine hemihydroiodide nucleotide base pair,  $^{14}\text{N}$  NQR double reson. obs. 2-24739  
 4-n-pentyl-4'-cyanobiphenyl nematic liq. cryst., D and  $\text{H}^+$  NMR 2-21916  
 smectic phases, chiral and achiral, local orientational ordering, mag. reson. study 2-12481  
 $\text{CsMnF}_3$ , easy plane antiferromag., parametric double reson. of nucl. mag. n. (*Russian*) 2-26790  
 $\text{H}_2\text{SO}_4$ : $\text{H}_2\text{O}$ , oxonium ion nucl. quadrupole double reson. 2-24740  
 K salts, double NQR, solid effect and thermal mixing 2-5599  
 $\text{MnCO}_3$ , easy plane antiferromag., parametric double reson. of nucl. mag. n. (*Russian*) 2-26790

**double refraction** see *birefringence*

**double refraction, electric** see *electro-optical effects*

**double refraction, magnetic** see *magneto-optical effects*

**double resonance, electron nuclear** see *ENDOR*

**doublet antennas** see *dipole antennas*

**DPPH, diphenylpicrylhydrazyl** see *organic compounds*

**drag reduction**

- airfoils, boundary layer, lift and drag Navier-Stokes eqns. 2-50247  
 asymptotic solution to the problem of drag of a fluid by a moving plate 2-20714  
 base drag reduction by base or external burning 2-20767  
 breakaway flows, convergence and regularisation of discrete eddy method (*Ukrainian*) 2-1233  
 drag on sphere as function of density, appl. to Peralta and Zwanzig method 2-20628  
 effect of polymer molecular variables on drag reduction 2-4866  
 electrodes on rotating disc, mass transfer and friction reduction, polymer additives effects (*French*) 2-25399  
 free-stream turbulence flow past circular cylinders 2-16287  
 incompressible fluid with variable physical props. in tube in porous walls, drag and heat transfer in laminar motion 2-25352  
 jets, semibounded, drag and heat transfer calc. by means of Karman integral rel. 2-8198  
 laminar and turbulent boundary layers 2-4791  
 lipid bilayer membranes, drag coefficient, trans. and rot., Navier Stokes equations 2-6219

**drag reduction continued**

- multi-solid particle system transport phenomenon anal. at higher Reynolds numbers by Karman-Pohlhausen method 2-25347  
 polyethylene oxide solns. in square duct and capillary flow, along reduction, solvent effects 2-20755  
 power-law fluids, solid sphere in swarm, drag coeffs. and void functions 2-35114  
 relaxation drag, of slender profile in steady plane flow (*German*) 2-4864  
 sphere, drag, wind tunnel walls effect 2-25406  
 spherical bubble, drag, coeff., effect of convection 2-30216  
 two-dimensional flow, perpendicular to flexible impervious membrane 2-16348

**drawability** see *ductility*

**drawing (mechanical)**

- formability maps 2-52003  
 nylon 6 film, effects of drawing on photoconductivity (*Japanese*) 2-26430  
 nylon 6/LiCl mixtures, spun fibres, production and props. 2-46999  
 optical fibres, new primary coating method using thermoplastic tube 2-7896  
 poly(vinylidene fluoride) film, stretching induced  $\gamma$ - $\beta$  transition 2-16602  
 poly(vinylidene fluoride) films, phase I, piezoelec. and pyroelectric response, poling field and drawdepend. 2-17411  
 poly(vinylidene fluoride) films, subject to stretching, Brillouin scattering studies 2-9435  
 polyethylene films, spherulite deformation, light diff. and X-ray obs. (*Russian*) 2-31764  
 polymer fibre reinforced metals, powder technology, mech. props. (*German*) 2-36815  
 polymer melt spinning, interactive computer simulation program 2-46996  
 polypropylene, drawn, morphology and stress relax., ultrasonic attenuation investig. 2-13762  
 polypropylene films, macromolecular orientation, NMR study 2-7686  
 polyvinyl alcohol, hot drawn, ring shaped discontinuous struct. form. in cross section (*Japanese*) 2-31704  
 polyvinylidene fluoride films, drawn and rolled, X-ray pole figures 2-16600  
 propylene-ethylene block copolymers, cryst., stress whitening, X-ray, SEM and calorimetry obs. 2-47134  
 PVC film, plasticized uniaxially stretched, deform. anal. during re-drawing (*Japanese*) 2-21213  
 steel, alloy, plastic strain ratio, variation with strain level 2-17715  
 steel, austenitic stainless, drawing texture, pole figures (*Japanese*) 2-5893  
 steel, ferritic, stress relief heat treatment rel. to crack form. (*German*) 2-51961  
 steel, Si-Cr valve, cold-drawn, fracture-mechanics anal. (*Chinese*) 2-22299  
 steel fibre reinforced steel composite, reinforcement effect on struct. and mech. props. 2-41557  
 viscoelastoplastic strip, photoviscoplastic study of slip lines and principle stress trajectories during drawing with back tension 2-12109  
 Al-polyethylene, sandwich laminates, cold press workability 2-13745  
 Cu wire, fine, electroplastic drawing, reduction in breaking tendency (*Russian*) 2-9393  
 Cu-Nb-Sn multifilamentary in situ wires, high-temp.-gradient casting 2-13682  
 Fe-Pd (18 to 52.5 at.%) alloy, cold drawn, mag. props., by mag. meas. and X-ray diff. 2-21833  
 Nb-Ti (50 wt.%) phase distrib. and size, US vibr. influence (*Russian*) 2-5494  
 Nb<sub>3</sub>Sn, neutron irradi., scaling low, exptl. test, critical current density 2-13257  
 Nb<sub>3</sub>Sn, ultrafine multifilament composite wires, processing limits 2-13684  
 P<sub>2</sub>O<sub>5</sub> glass optical fibres, of low m.p. 2-51865  
 Ti, comparative study of deep drawability with Zr (*French*) 2-2543  
 V<sub>3</sub>Ga, neutron irradi., scaling low, exptl. test, critical current density 2-13257  
 Zn-Al eutectoid alloy sheet, bulge forming of deep-drawn superplastic cup 2-2563  
 Zr, comparative study of deep drawability with Ti (*French*) 2-2543

**drop model (nuclear)** see *nuclear liquid drop model*

**droplets** see *drops*

**drops**

- annular flow, droplet-to-liquid film exchange rates, neutron tagging meas. 2-24372  
 atmosphere, drop sizes in clouds and fog rel. to multiple scatt. effects on optical propag. 2-32640  
 axisymmetric dielectric drop in uniform electric field, shape 2-20719  
 breakup in multiphase flow, anal. for reactor safety 2-4089  
 catastrophic breakup, two-stage Rayleigh-Taylor model 2-25429  
 cloud droplet turbulent mixing (*Russian*) 2-47954  
 cloud droplets, effect of size on depolarisation anisotropy 2-32643  
 cloud droplets, particle counting rel. to Downlink Laser Cloud Propagation Experiment 2-32646  
 creeping flows, drop dynamics 2-12186  
 creeping motion, Newtonian interface 2-25424  
 diffusion-controlled evaporation of a moving droplet 2-12185  
 drag in translating fluctuating flow 2-12187  
 ethanol, thermal diffusion, cloud chamber meas, nucleation rate variation with supersaturation 2-8596  
 evaporation into dry air and steam at high temps. 2-4711  
 fluid droplet inside liquid drop, thermo-capillary flow 2-12198  
 formation in flowing liquids released from noles 2-25421  
 free surface motion, numerical techniques, appl. to drop 2-30187  
 gas flow, drag and unsteady flow at a liquid drop anal. 2-16362  
 gas flow in shock tubes and nozzles, droplet breakup regimes 2-30205  
 heat exchange during condensation of water vapor on vertical water-repellent pipes 2-44731  
 Ising models, low-dimensional, droplet theory 2-28794  
 isolated droplet generator for atomisation studies in flames 2-23726  
 liquid, in gas, scattering of viscoelastic waves, multipole resonances 2-16264  
 liquid drop, light scatt. by sound 2-39570  
 liquid drop effects in meteors 2-23261  
 liquid drop in gas stream, deceleration and deformation 2-50309  
 liquid droplet shape in presence of quantized vortex 2-35859  
 liquid drops on solid substrate, equilib. and linear tension 2-1708  
 liquid-liquid droplet system, mass transfer effect, surface renewal phenomena 2-4878  
 modified droplet model for spinodal singularities 2-33483



**drops continued**

- non-supported droplet, drying process, heat transfer coeff. 2-35185
- nonstationary charged drops in nonspherical configs., Rayleigh limit 2-20740
- nonwetting fluid droplet, press. drop. induced flow through capillary tube with constriction, inertial and viscosity forces effect (*French*) 2-8191
- photography of mass transport phenomena and flames, using laser illuminating source 2-15257
- polymer bridging forces in liquid/liquid systems 2-35864
- radio wave propagation, computed transmission through rain in 1 to 400 GHz range 2-23044
- rain, attenuation coeffs., absorpt. coeffs. and radar refl. factor, depend. on freq. and temp. 2-47989
- rain, drop size distrib. rel. to microwaves absorpt. coeffs. 2-3058
- raindrop meas. in near-field using laser disdrometer 2-52934
- raindrops, attenuation, freq. scaling using path-averaged drop size distrib. 2-42449
- sessile-drops and captive bubble meridians and props., capillary phenomena 2-50
- sound absorption by suspended water droplets in air flow in tube, 2 kHz to 50 kHz 2-20444
- spherical, motion in temp. gradient in viscous binary mixture 2-20739
- spherical drops of conc. solns., diffusophoresis in viscous binary mixture 2-26098
- spheroidal, stability in homogeneous electric fields 2-25408
- spray droplet sizing system using television camera and minicomputer, pattern recognition procedures 2-33494
- statistical mechanics of inhomogeneous fluids 2-18906
- supercooled water droplets in air flow, dynamics in undisturbed state and after compressed shock 2-44777
- three-dimensional flow, motion of a sphere in crossed electric and mag. fields 2-12234
- turbulent droplet flow in circular tubes, convective heat transfer 2-50272
- water droplet, contact angle on polymer surface, hysteresis effect, polymer mol. dynamics effect 2-45684
- water droplets, radiative heating and evaporation 2-12724
- Au, liquid, rapidly frozen, ion sources, droplet emission, SEM obs. 2-36767
- Ga, liquid, ion source, droplet emission, Rutherford backscatt. spectrometry 2-36767
- H<sub>2</sub>O, aerosol drops, heating, evaporation, rupture, laser radiation, optical consts. 2-9575
- H<sub>2</sub>SO<sub>4</sub>-H<sub>2</sub>O droplets, nucleation and growth, expansion cloud chamber observations 2-26030
- He vapour, positive ion droplet size comparison with Thomson eqn. 2-35657
- <sup>4</sup>He(<sup>3</sup>He) microdroplets, transparency in heavy atom collisions 2-30683
- ln, liquid, ion sources, droplet emission, TEM 2-36767
- K<sub>2</sub>CO<sub>3</sub> condensation of liq. force surface, droplet mass transfer effect 2-26183

**drying**

- aerodynamics of an eddy dryer for liquid materials 2-30202
- compression heat pumps, industrial application in drying and concentrating processes, technical and economic factors (*French*) 2-2798
- cryochemical synthesis products, kinetics of sublimation drying 2-52170
- dehydration technology of thermo- and moisture labile materials, thermal features 2-35046
- grain, solar heated dehumidification system in India 2-9633
- heat pumps, gas engine fed, for malting drying kilns (*French*) 2-47514
- non-supported droplet, drying process, heat transfer coeff. 2-35185
- plaster blocks drying installation using heat pumps (*French*) 2-2799
- solar air heater performance anal. and optimisation 2-14117
- system development using heat pumps and the Brayton cycle (*French*) 2-2797

**dual resonance model** *see duality and dual models***duality (mathematics)**

- percolation, two dims. direct, duality transformations and resistance problems 2-10737
- Signorini problem in elastostatics, reciprocal formulation 2-18893

**duality and dual models***see also Veneziano model*

- Abelian Higgs model, phase transition due to vortex condensation and quark confinement 2-6959
- baryon decuplet, interrelations between Regge trajectory parameters and mass formulas (*Russian*) 2-38870
- dual topological unification theory, bilinear eqn. for cylinder, Pomeron residue 2-29091
- exact axially symmetric multimultipole solns. construction 2-10970
- exact multimultipole solns. construction in Yang-Mills-Higgs system 2-10973
- Fermi string model, equivalence to QCD 2-6997
- gauge theory, stable self-dual monopoles, mag. charges 2-15286
- general Abelian systems, duality transformations 2-43184
- Geometroelectrodynamics string model aspects 2-38860
- hadron multiplicity distributions in a dual model 2-19356
- hadron-hadron interactions and leading particle effect in dual-parton model 2-3821
- hadronic amplitudes in dual models with Regge trajectories quantised slope (*Russian*) 2-33818
- hadronic cross-sections, topological supersymmetric struct. 2-24045
- Hamilton-Jacobi theories for strings 2-7017
- lattice gauge theories in 4-dimens., decoupling points and dual symmetric perturbation theory 2-19241
- lattice gauge theory, Wilson loop weak coupling perturbative calcs., string tension 2-6945
- lattice model, in two-dimens., spin waves, vortices, fermions, duality 2-23804
- lattice systems, off-axis string tension and rot. symm. restoration 2-6805
- magnetic monopoles, duality and cosmological phase transitions 2-48875
- N-8 supergravity, duality rotations for interacting fields 2-48596
- Nambu strings, stationary props. 2-19355
- narrow-resonance models with nonlinear Regge trajectories 2-43317
- noninteger topological charge, self-dual soln. 2-3765
- O(2) two-dimens. supergravity quantisation, string model critical dims. 2-23539
- quasi-two-body hadronic reactions,  $\pi NN$ ,  $\pi N\Delta$ ,  $\pi\pi p$  form factors 2-33896
- relativistic string model generalisation in geometrical approach 2-11030
- relativistic-invariant field theory three-dimensional model, integrable by universe scatt., transform 2-258

**duality and dual models continued**

- string action, formulation 2-3750
- topological interpretation of multi-quark states 2-7018
- Yang-Mills theory, dual variables and conserved currents 2-43215
- Yang-Mills theory, self dual monopole solns. (*Chinese*) 2-28979
- Yang-Mills theory, self-dual field solns., edth operator, associated Green's functions 2-23524
- Yang-Mills-Higgs system in 2+1 dims., quantum gauge fields topology and duality 2-29000
- Z(N) spin systems, duality and criticality 2-38589
- $e^+e^-$ , resonance production, asymptotic cross-sections, duality ideas 2-3764
- $e^+e^-$  heavy quarks, string model calc. 2-23953
- KN backward scattering, high energies, Regge pole model in SU<sub>3</sub> 2-29133
- pp-pp, crossing, Regge behaviour, residues, in Mandelstam dual model 2-23957
- $\pi^-p \rightarrow \Lambda^0 K^0$ , hyperon exchange, Regge model in SU<sub>3</sub> 2-29135
- W production, duality theory (*Dutch*) 2-15328

**ductile-brittle transition***see also embrittlement*

- alloy, long-range ordered, brittle to ductile transition, grain size effect 2-27260
- chloroprene rubber, molecular motions studied by NQR, radiothermoluminescence, and dynamical method, glass transition (*Russian*) 2-24906
- engineering materials, fracture instability, effect of material inhomogeneity 2-12672
- metals and alloys, BCC lattice, ductile-brittle transition, nonmetallic inclusions influence 2-52045
- NDT, fracture mechanics implications 2-9511
- particle fragmentation, impossibility due to ductile-brittle transition 2-8563
- PMMA, glassy, brittle fracture, crazing, ductile-brittle transition 2-47165
- polycarbonate, impact strength, effects of internal stress, ageing and thickness 2-52024
- polyimide matrices, bulk and films, elastic, strength, and relax. props. 2-36926
- polystyrene, glassy, brittle fracture, crazing, ductile-brittle transition 2-47165
- steel, constructional, BCC lattice, ductile-brittle transition, nonmetallic inclusions influence 2-52045
- steel, Cr-Mo, with different grain sizes, test temp. influence on impact fatigue crack growth 2-5996
- steel, Cr-Mo-V cast, quenching, tempering and ageing rel. to mech. props. 2-13750
- steel, Cu-Ni-Nb, high strength low alloy, processing and heat treatment 2-31717
- steel, Cu-Ti-B, high strength low alloy, processing and heat treatment 2-31717
- steel, dual-phase, H embrittlement phenomena, SEM study 2-9407
- steel, ductility at high temps. 2-41688
- steel, fracture toughness parameters rel. to ductile-brittle transition temp. (*Czech*) 2-47171
- steel, impact strength and critical brittleness temperature, sample dims. influence 2-37021
- steel, low C, brittle-ductile state diagram in impact bending 2-52044
- steel, low-alloy, ductile-brittle transition temp., comparison for DWTT and impact specimens 2-13795
- steel, low-alloy, laminated pipes, impact strength and cold brittleness threshold, effect of number of layers 2-13796
- steel, structural and weldments, AE rel. to deform. and fracture 2-31869
- steels, Mn-Mo-Ni, temper embrittlement, ductile-brittle transition temp. 2-15502
- stress intensity for interacting flaws 2-52050
- Co-Cr-Al-V coating, low press. plasma applied, mech. props. 2-45794
- Fe-Si (2.6 wt.%) single crystal, quasibrittle fracture and cleavage initiation in different environments 2-5955
- Mo, ductilisation of electron-beam welds, C addition effects 2-47158
- PCV, glassy, brittle fracture, crazing, ductile-brittle transition 2-47165
- TiC, polycrystalline, mech. props. 2-51984

**ductile fracture***see also ductile-brittle transition; notch ductility*

- crack, in plain strain large-scale yielding, virtual initiation anal. 2-25299
- creep rupture detection at welds by AE 2-41824
- fracture toughness, ductile rupture, evaluation with Charpy-V type specimens, influence of notch root radius 2-9489
- geothermal, reservoir, disc-shaped, stability when subjected to hydraulic and thermal loading 2-9618
- LMFBR welded components, thermally stressed, linear elastic fracture mech. applic. 2-39111
- material complex fracture mechanics techniques 2-16265
- metals, viscous, growth of debonded void at rigid secondary particle 2-45333
- metals with inclusions, ductile fracture cavity growth and coalescence (*German*) 2-27285
- pipe, stainless steel, dynamic girth crack propag., sensitivity study on numerical anal. 2-4773
- pipes, split ring use in modelling ductile axial crack extension 2-4772
- plane specimens and cylindrical shells under large-scale yielding, finite element fracture analysis 2-39859
- plastic-stability models, assessment 2-40477
- polyacrylamide fibres containing free macroradicals, strength, EPR study 2-5958
- polyethylene fibres containing free macroradicals, strength, EPR study 2-5958
- polyethylene-thermoplastic rubber blends, mech. props., depend. on shear and thermal history 2-13810
- polypropylene fibres containing free macroradicals, strength, EPR study 2-5958
- pressure tube failure, ductile fracture anal. 2-4025
- rigid fibre reinforced composites, rolling parameters 2-27184
- rings, thick-walled plastic, and rotating discs, crack initiation during expansion 2-8085
- stable phase of ductile fracture in two and three dims., final stretch model 2-50186
- steel, alloy, Ni-Co, Charpy impact props., role of oxide and sulphide particles 2-13820
- steel, C, ductile fracture strain, deformation mode and deformation history effects 2-5927



**ductile fracture continued**

- steel, fracture at different stages of H embrittlement 2-41726  
 steel, low alloy, medium- and high-strength, AE during ductile fracture, effect of proof stress, composition and microstruct. 2-31872  
 steel, low-alloy, ferritic-pearlitic, fracture toughness energy content, VC precipitates influence 2-5960  
 steel, low-alloy sintered, density effect on fracture behaviour, model investig. 2-41735  
 steel, low-alloy sintered, density effect on tensile strength, fracture toughness and fatigue crack propag. 2-41734  
 steel, mild, crack initiation, slow crack growth, unstable propag. of ductile fracture 2-9403  
 steel, nonmetallic inclusions, role in metallurgical quality 2-5951  
 steel, nuclear press. vessel, crack tip energy dissipation and elastic-plastic fracture toughness 2-22315  
 steel containing coarse second phase, ductile fracture 2-2574  
 steels, ductile structural, rel. between stretched zone parameters and fracture toughness 2-27271  
 structures containing flaws, ductile fracture anal. 2-30073  
 thermo-plastic shear instability criterion, applied to surface cracking 2-4742  
 Al-Si, sliding wear, surface topography, SEM study 2-9426  
 Cu-Sn-Al-Fe-Ni-Mn, fracture and mech. props., effect of comp. and crystn. conditions 2-41729  
 Nb-Zr-C (1, 0.1 wt.%),  $\epsilon \rightarrow \alpha$  transformation, plasticity and fracture (*Russian*) 2-5870  
 Ni, pit depth obs. by stereofractography 2-41753  
 Ni, role of interfaces in H embrittlement 2-41741

**ductility**

see also ductile fracture; notch ductility

- alloys, ductility evaluation, by microfracture with indenter 2-2642  
 crack growth, slow, meaning of elastic-plastic fracture criteria 2-8088  
 crack growth in ductile materials, viability of crack tip opening angle as characterising parameter 2-8087  
 creep-ductility material, growth of dominant crack 2-50758  
 ductile materials, fast fracture and crack arrest according to Dugdale model 2-1143  
 dynamic restoration mechanisms in hot working 2-41641  
 epoxy-rubber, particulate composite, low temp. behaviour 2-17726  
 glass fibre reinforced polystyrene, molecular orientation effect on mech. props. 2-13782  
 Hastelloy X, high-temp. alloy, carburisation effects conductivity 2-31738  
 high strength alloys, microcryst., prep. by devitrification of metallic glasses 2-9311  
 Inconel 617, high-temp. alloy, carburisation effects conductivity 2-31738  
 lenticular bubble, ductile extension under high energy ion bombardment rel. to blistering and flaking 2-1528  
 machine part design, creep eqn. coeffs. rel. to damage accumulation 2-41752  
 metals, ductile, fracture toughness calc. 2-2589  
 metals, erosion model, by spherical particles impinging at normal incidence 2-25984  
 metals, fracture modes, creep and hot working 2-41731  
 model of ductile medium with account of struct. changes 2-50747  
 Nimonic 86, high-temp. alloy, carburisation effects conductivity 2-31738  
 Nimonic PE 16 superalloy, thermomechanically processed, precipitation, deform. and fracture 2-51948  
 powder metallurgy products, bonded, strength and ductility 2-36810  
 prime candidate alloy, optimisation of struct. and props. by rapid solidification 2-31692  
 solids, high velocity deformation, micromechanical study 2-21220  
 steel, austenitic stainless, residual strength and microstruct., effect of shock deform. 2-47139  
 steel, austenitic stainless Cr-Mn, mech. props. and phase transforms. at +20 and -196°C 2-27240  
 steel, C, absorption of H in acid pickling, inhibitors influence 2-27349  
 steel, cost stainless, low temp. mech. props., appl. in Isabelle magnet tubes 2-19832  
 steel, Cr-Mn, low C, martensitic, high strength, props. and heat treatment 2-27246  
 steel, Cr-Mo, fission reactor steam generator components, creep, ductility, fatigue 2-15489  
 steel, Cr-Mo-Ni-Mn, effect of partial replacement of Ni by Mn 2-5914  
 steel, Cr-Mo-V, tensile ductility, effects of autenitization temp. and impurities 2-51993  
 steel, ductility at high temps. 2-41688  
 steel, ductility operating life determination 2-37011  
 steel, ferritic stainless,  $\chi$ -phase precip. hardened, fracture props. and ductility improvement 2-17725  
 steel, H-charged, ductility determ. 2-5959  
 steel, high Mn, wrought, phase comp. and props., effect of C, Mn, Ni and N concs. 2-51938  
 steel, low alloy, grain boundary melting and hot embrittlement on overheating (*Japanese*) 2-25980  
 steel, low alloy cylindrical specimens, rolling contact fatigue, effect of Tuffriding 2-27286  
 steel, low C, sulphide cracking resist., thermomech. working conditions influence 2-41805  
 steel, low-alloy, avoiding transverse cracking by surface temp. control 2-2573  
 steel, low-C, sulphide cracking resist., multiple alloying influence 2-17778  
 steel, maraging Cr-Ni type, strength characts. at elevated operating temps. 2-52047  
 steel, metallurgical props., US vibr. effect 2-47053  
 steel, mild, strain rate history and temperature effects on torsional-shear behaviour 2-27223  
 steel, mixed structures resulting from quenching, mech. props. 2-51954  
 steel, Mn, austenitic, strengthening by deform. and ageing 2-36891  
 steel, Mn, low-C, strain hardening 2-22231  
 steel, Mo(V), dual-phase, props. and struct., effect of heat treatment 2-9376  
 steel, Mo-V-Cr-W, high-speed, high-temp. ductility, hot gasostatic pressing parameters influence 2-41698  
 steel, Ni-Cr-Mo-V, caustic stress corrosion cracking, effect turbine steam impurities 2-52091  
 steel, stainless, ferritic, oxide dispersion strengthened, prep. and mech. props. 2-41548  
 steel, structural, biphasic, high-strength and ductility, differentiated treatment 2-2564

**ductility continued**

- steel, tool, cold working, ductility after heat treatment in salt soln. (*German*) 2-22288  
 steel, tool, cold working, secondary hardening and ductility investig. (*German*) 2-22289  
 steel, tool, ductility, static and dynamic torsion tests (*Polish*) 2-9375  
 steel, tubular, C-Mn, hot-rolled, low ductility tensile failures (*German, English*) 2-41690  
 steel, ultrahigh C, preparation, props. and potential 2-36892  
 steel containing coarse second phase, ductile fracture 2-2574  
 steel developments, carbon and alloy types 2-22241  
 steel fibre reinforced steel composite, reinforcement effect on struct. and mech. props. 2-41557  
 steel tool reln. of Si content to ductility (*German*) 2-22338  
 steels, C-Mn, C-Cr-Ni, Hot-ductility in temp. range 1339-1561K 2-31742  
 structural failure, fracture and cracking, mechanical aspects (*German*) 2-44681  
 thermo-plastic shear instability criterion, applied to surface cracking 2-4742  
 TMI-2 core/vessel/shield configuration, neutron spectral shift effects evaluation 2-29400  
 Zircaloy-4 cladding, chemical interaction with simulated fission products at elev. temp. 2-49112  
 Al protective coatings on heat-resist. steel, mech. props. 2-27348  
 Al-Cu-Mg (4.1, 1.4 wt.%), alloy 142, age-hardening behaviour 2-2537  
 Al-Li system, alloy development 2-31693  
 Al-Li-X alloys, microstruct., mech. props., and corrosion resist. 2-31740  
 Al-Mg-Ti-Cu, castings, struct. and mech. props., Na impurity effect 2-27241  
 Al-Zn-Mg, 7075, toughness, effect of thermomech. treatment 2-47161  
 Al-Zn-Mg-Cu, high strength, heat treatment, struct. and props. 2-27243  
 Al-Zn-Mg-Cu, slip behaviour, effect of solute content 2-47141  
 Al-Zn-Mg-Cu (5.9, 2.6, 1.7 wt.%), fatigue crack propag., effect of microstruct. 2-9405  
 Al-Zn-Mg-Cu-Fe-Ni(Zr), struct. and mech. props., Fe with Ni or Zr addition effect 2-51991  
 Co-base superalloy, cast, MM509, air embrittlement 2-36955  
 Co-Cr-Al-Y coating, low press. plasma applied, mech. props. 2-45794  
 Co-Cr-Al-Y plasma sprayed coatings for aircraft gas turbine appl. 2-47262  
 Cu-Sn (12 and 15 wt.%), deformability improvement by hot extrusion and boride grain refining additions (*German*) 2-13755  
 Fe, Armco, absorption of H in acid pickling, inhibitors influence 2-27349  
 Fe, fracture, intergranular, cathodic pot., effect of grain boundary chem. 2-9406  
 Fe-base superalloy, IN903A, grain boundary embrittlement 2-9408  
 Fe-C alloys, ductility deterioration due to nonuniform distrib. (*Japanese*) 2-9370  
 Fe-Cr-Si, deform., embrittling  $\sigma$ -phase precipitate effects 2-47046  
 Fe-Ni-Cr alloy 800 H, high-temp. alloy, carburisation effects conductivity 2-31738  
 Fe-Si alloy, plasticity, internal friction and struct. (*Polish*) 2-36905  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, atom probe FIM study of microstruct. after annealing 2-36874  
 Mo, ductility improvement by forming surface layer containing B 2-31836  
 Ni-B-Ge system, metallic glass form., struct. and mech. props. 2-12493  
 Ni-B-Si-Cr brazing alloy, rapidly solidified surface melts 2-16935  
 Ta, strength and plasticity characts., temp. and strain rate effect 2-51999  
 Ti alloys VT3-1 and VT22, cycling influence on mech. props. 2-51997  
 Zn-Al eutectoid alloy, superplastic, room temp. decomp. 2-27137  
 Zr-Si, amorphous ribbons, formation range, thermal stability, mech. and supercond. props. 2-31675

**duplicating** see reproduction (copying)

**dusk** see twilight

**dust**

see also cosmic dust

- Atlantic aeolo-marine dust deposits used to find Late Quaternary wind and climate 2-10171  
 atmosphere, meas. of trace elements in resuspended dust from school playgrounds 2-6206  
 atmosphere, multi-element airborne dust meas. for Walsall, England, (January to December 1979) 2-6202  
 atmosphere, multi-element airborne dust meas. for Walsall, England (December 1977 to November 1978) 2-6203  
 atmosphere, Sahara desert particle size profiles radiative flux meas., particle nonsphericity obs. 2-32587  
 atmosphere, volcanic aerosol reducing planetary albedo 2-28207  
 atmosphere particulates deposition onto forest vegetation 2-14545  
 atmospheric imaging, desert dust spectral effects 2-14607  
 atmospheric turbidity, Potsdam, E.Germany (*German*) 2-6405  
 desert dust, spectral effects on remote sensing data 2-52930  
 detection and measurement of dust in high-pressure gas mains by radiometric methods (*German*) 2-33609  
 loading of Ar plasma in thermal blow-down expt., Mie scatt. single particle counting 2-20934  
 metal dusts and fumes, mag. props. meas. technique 2-48730  
 Mt. St. Helens, USA, eruption ash chem. and mineralogical composition 2-32475  
 polluted urban air of German cities, dust polycyclic aromatic hydrocarbon content 2-2821  
 Sahara atmospheric particles, chem. composition (*French*) 2-24235  
 Sahara desert, atmosphere aerosol, size spectra vertical profiles, radiative flux obs. 2-32586  
 storm complex over Sudan (April 1973) 2-42443

**dust storms** see storms

**dwarf stars**

see also white dwarfs

- GX Andromedae, chromospheric lines in red dwarf flare star 2-38189  
 AE Aquarii, cataclysmic binary, spectral type of absorpt. line component from spectroscopic and photometric obs. 2-33030  
 CX Aurigae, K-type dwarf variable star, spectral type obs. 2-53277  
 BD+26°730, BY Draconis star, starspot cycle evidence, spectral/photometric anal. 2-10425  
 AC Cancri, possible ex-nova, UVB photometry 2-42702  
 YZ Canis Minoris, flare star, coordinated X-ray, optical and radio obs. of flaring activity 2-53269



## dwarf stars continued

- $\mu$  Cassiopeiae, unresolved binary star; astrometric anal. from Sproul 61 cm refractor photographs 2-3270  
 $\alpha$  Centauri A, chromospheric Mg II lines profiles and interstellar Mg II density 2-53257  
 DO Cephei, 1975 B photoelec. photometry of flare star 2-53281  
 UV Ceti, synchronous UVB flare obs. 2-23301  
 UV Ceti stars, flares, high energy obs. comparison with Sun 2-53272  
 UC Ceti stars, theory of X-ray emission from stellar coronae 2-42701  
 UV Ceti stars in General Catalogue of Trigonometric Parallaxes, parallaxes and absolute magnitudes 2-42693  
 chromospheric UV obs. 2-53244  
 coronae of single late-type dwarfs, nonflare microwave emission detection 2-28449  
 DDO photometry of late-type dwarfs of young and old disk populations 2-38172  
 BY Draconis stars, discovery technique involving one spectral obs. 2-10422  
 F-M dwarfs, coronae, soft X-ray emission in cool half of H-R diagram 2-28439  
 F-type dwarf stars, transition region struct. from UV emission lines obs. 2-38181  
 flare stars, IR and visible flares, photometry obs. 2-42694  
 flare stars, ratio of X-ray to optical luminosity rel. to chromosphere response to flare heating 2-28485  
 flare stars, starspot temp. and area determ. from V and R light curves 2-28462  
 flare stars, UV photoelectric monitoring (1977-80) 2-10460  
 flare stars around Orion Nebula, detections from U-band photometry 2-10442  
 flare stars calorimetric characts. and inverse Compton effect 2-14859  
 flare stars in associations, relation between UVB colorimetric characts. and association age (*Russian*) 2-53297  
 flare stars in Orion, positions, magnitudes and finding charts for new discoveries 2-38066  
 flare stars in Pleiades, new detections and flare repetitions obs. 2-10443  
 flare stars in Pleiades, U-band photographic obs. 2-38207  
 G185-32 and G191-16, new ZZ Ceti stars 2-33002  
 U Geminorum, cataclysmic variable, white+red dwarf, accretion disk spectra, component masses, obs. 2-10417  
 Gliese 825, flare star in solar neighbourhood, UV spectral obs. 2-33042  
 Gliese 867 A, UV Ceti binary star in solar neighbourhood, chromosphere emission, UV obs. 2-33042  
 HD 15638, remarkably active cool star, X-ray and optical obs. 2-33014  
 HD 1835, BY Draconis star, brightness var., BV obs. 2-42696  
 HD 36705, new bright X-ray emitting RS Canum Venaticorum star, X-ray and optical obs. 2-33074  
 HD 86590, RS CVn star, red and white dwarf, spectroscopic orbital elements, obs. 2-33066  
 Hyades, coronae as X-ray sources, survey 2-10336  
 EV Lacertae, flare star, photoelectric obs. in (1980) 2-10446  
 late type stars far UV line anal., atm. characts., obs. 2-18759  
 AD Leonis, chromospheric lines in red dwarf flare star 2-38189  
 RU Lupi, T Tauri star, high-dispersion spectra 2-10406  
 M-type emission line stars from two objective prism lists, additional and newly-named variable stars 2-38065  
 M-type stars, chromosphere H and Na line profiles, visible obs. 2-3252  
 main-sequence dwarf stars, photospheric flow rel. to stellar winds 2-32985  
 AU Microscopii, UV Ceti star in solar neighbourhood, chromosphere emission, UV spectral obs. 2-33042  
 nearby stars, sample completeness and luminosity function 2-48227  
 North Galactic Pole dwarf stars, space density, kinematics and distance, BVRI obs. 2-53258  
 EQ Pegasi, flare star, preflare diminution in quiescent flux 2-42692  
 AI Phoenicis, solar-type eclipsing binary, optical obs. of primary min. with IUE satellite 2-38245  
 extreme Population II stars, C/Fe ratios meas. 2-3251  
 red dwarf stars, intrinsic polarisation meas. 2-10430  
 red dwarfs in Cousins' VRI system, photometric props. 2-18762  
 solar type stars, Li abundances and Ca II K-line chromosphere flux 2-10401  
 South Galactic Pole 17-type dwarfs, scale height 2-53265  
 subdwarfs UV excess and vel. used to determine halo chemical gradient, visible obs. 2-33004  
 V471 Tauri, eclipsing binary, white+red dwarf, light curve anal., uvby obs. 2-28502  
 BE Ursae Majoris, red+white dwarf, spectral variability anal., visible obs. 2-10458  
 van Biesbroeck 8, reddest red dwarf 2-23297  
 X-ray luminosities, contrib. to galactic soft X-ray background 2-10532

## dye lasers

- acid-base compound solns., stimulated emission characts., protolytic reaction rate influence 2-7758  
 2-amino-4-cyano-3,5-diarylfuran new class of lasing dyes 2-29812  
 amplified spontaneous emission from  $N_2$ -laser pumped dye lasers 2-20302  
 beamsplitter programs, for TI-59 with PC-100 printer 2-44433  
 benzoxazole derivative vapours, stimulated emission of UV radiation 2-49745  
 benzoxazoles, spectral and luminesc. props. to assess lasing capacity, theoretical determ. 2-49511  
 4,4'-bis-butylloxyloxy quarterphenyl, spectral purity 2-49744  
 carbazine laser dye, fluorescence quantum yield 2-43983  
 cascade energy transfer dye lasers with wide tuning range 2-20303  
 coumarin 102, dye stability, temp., UV filter and solvent purity effects 2-44273  
 coumarin 102 synchronously pumped dye laser, improved performance by operating at increased repetition rate 2-4500  
 coumarin 1-uracine energy transfer dye laser, characts. 2-15998  
 coumarin 480 I J dye laser, XeCl laser pumped 2-15997  
 coumarin 481F, spectral purity 2-49744  
 coumarin vapour lasers, spectral and time characts., 470-540 nm range 2-39645  
 coumarin vapours, stimulated emission, 485-520 nm range 2-39644  
 CW dye laser, alkali vapour irr., plasma prod. 2-40136  
 CW dye laser with phase-conjugate mirror, longit. modes and aberration-correction props. 2-25008  
 CW laser passive mode locking with contacted and non-contacted absorbers 2-11732

## dye lasers continued

- CW mode-locked, pumped directly by Ar ion laser, near IR picosecond pulse generation 2-44326  
 CW tunable, absolute wavelength of Na lines determ. 2-34333  
 DFB dye lasers, ultrashort pulse generation, energy characts. 2-44272  
 DFB dye lasing as method for ultra short pulse length meas. 2-44357  
 DFB laser,  $N_2$  laser pumped, UV and blue picosecond pulse generation 2-49782  
 dichlorodifluoromethane as dye laser tuning gas, refr.-index meas. 2-20315  
 7-dimethylamino-4-methylcoumarin-fluorescein disodium salt, dye mixture laser, gain depend. on donor conc. 2-34743  
 double-wavelength flash-lamped pumped laser SHG and sum freq. generation in  $KH_2PO_4$  cryst. 2-20368  
 dye-jet laser pumped by second harmonic of Q-switched mode-locked  $Nd^{3+}$ :YAG laser 2-34749  
 energy transfer dye laser,  $\alpha$ -NPO-BBOT, characteristics (*Japanese*) 2-11694  
 etalon-tuned, wavelength calibration 2-25004  
 fibre light propagation, amplification by evanescent wave coupling 2-1040  
 figure of merit for laser dyes 2-4501  
 flashlamp-pumped dye laser, injection locking at small injection powers 2-20350  
 flashpumped two-freq. dye laser, high power short pulse generation 2-20349  
 frequency control dye laser on at. reference scanned by mag. field (*French*) 2-4528  
 Fresnel reflection halo lasers, planar laser action of 2D disc-shaped active material 2-20339  
 gain increase through dye self absorpt. identification and alleviation in laser pumped dye lasers 2-909  
 Halo laser, two-dimens. operation (*German*) 2-44277  
 hard mode locking 2-16042  
 7-hydroxy-6-glucosido coumarin, dye laser system, solvent effects, laser emission, UV, visible and fluoresc. obs. 2-34746  
 injection locked flashlamp pumped, cavity resonances, narrow bandwidth oscillation 2-7798  
 intracavity absorption line shape of He, super-regen model 2-680  
 IR lasing, narrow-band, linearly scannable, between 1.09 and 1.12  $\mu m$  2-11719  
 laser pumped long cavity dye laser, Ta subnanosecond light pulse generation, spectral band modulation 2-11691  
 laser pumped tunable dye laser, subnanosecond pulse generation, cavity length change effect 2-11689  
 laser pumped tunable dye laser, subnanosecond pulse generation, rate eqn. model 2-11690  
 laser-pumping flashlamps, failure, reson. mechanism 2-11707  
 lasing under Cu vapour laser radiation influence 2-4504  
 LD-490, dye stability, temp., UV filter and solvent purity effects 2-44273  
 light amplification anisotropy by dye solns., tensor description 2-34747  
 liquid crystal matrix variable polarisation dye laser 2-16026  
 mixed dyes, output props. and energy transfer 2-34750  
 mode coupling, semiclassical theory (*Chinese*) 2-25006  
 mode-locked laser oscill. using self-pumped phase-conjugate refl. in Eastman Kodak type A 9740 and A 9860 dyes 2-11730  
 mode-locked pumping theory 2-34748  
 mode-locked synchronously pumped CW dye laser pulse emission obs. using streak-camera 2-11695  
 multimode CW lasers, quantum intensity fluctuations, intracavity laser spectroscopy sensitivity 2-39643  
 $\alpha$ -2-(1-naphthyl)-5-phenyl oxazole, dye laser, effect of solvent on gain 2-34744  
 narrow band dye laser tuned with two gratings (*Chinese*) 2-20346  
 optical whiteners, Ranipal and Ranipal-S, lasing action, spectral study 2-34745  
 organic solution laser, coaxial pump props., influence of laser efficiency 2-7756  
 oscillator-amplifier eight-cell dye laser, pumped at 308 nm, spectral coverage optimisation 2-20298  
 oxazine 17 tunable high-repetition-rate lasers pumped by Cu vapour laser 2-44279  
 oxazine laser dye, fluorescence quantum yield 2-43983  
 passively mode-locked CW dye laser theory 2-44230  
 phase conjugate mirror resonator for CW dye laser 2-11731  
 phenyl-acetoxy anthracene derivatives, laser emission 2-20301  
 2-phenylbenzoxazole vapour, lasing 2-11693  
 picosecond dye laser, synchronously pumped, theory 2-44271  
 picosecond optical pulse waveform, single-shot meas. using optical fibres and Pockels cell 2-11736  
 polyatomic organic molecules, electron beam pumping, excitation mechanism 2-15910  
 POPOP vapour DFB laser 2-44280  
 power supply for dye Q-switched lasers, simple charging and triggering cct. (*Chinese*) 2-25026  
 PTP-dioxane I J dye laser, XeCl laser pumped 2-15997  
 pulse energy and stability regions in passively mode locked dye laser with linear cavity config. 2-39641  
 pulse generation, subnanosecond, by grazing-incidence on two gratings 2-7796  
 pulsed dye laser, 5 J 1.8  $\mu sec$  pulse 10 pps, for Raman spectroscopy in combusting media 2-25034  
 pulsed dye laser cell design 2-39671  
 Raman spectrometer employing pulsed dye laser and gated analogue detection 2-28909  
 resonator, grating tuned, beam expanding prism influence on linewidth and expansion ratio 2-25040  
 rhodamine 110 (6G,B) tunable high-repetition rate lasers pumped by Cu vapour laser 2-44279  
 Rhodamine 6G, aq. solns., influence of surface active materials on laser efficiency 2-7757  
 rhodamine 6G, dye stability, temp., UV filter and solvent purity effects 2-44273  
 rhodamine 6G, halo type, panoramic radiation (*French*) 2-44274  
 rhodamine 6G, laser dye, photobleaching study 2-34852  
 rhodamine 6G I J dye laser, XeCl laser pumped 2-15997  
 rhodamine 6G DFB laser, ultrashort pulse generation, temporal characts. 2-44270  
 rhodamine 6G dye laser, high power efficient, pumped by Cu vapour laser 2-39642



**dye lasers continued**

- rhodamine 6G dye laser, output spectrum alteration under mode locking conditions 2-44356  
 rhodamine 6G flash-lamp pumped dye laser, cavity dumped PTM mode operation (*Chinese*) 2-20299  
 rhodamine 6G image intensifier, pumped by ruby laser (*Russian*) 2-11848  
 rhodamine 6G in methyl methacrylate and methacrylic acid copolymer, photo and thermal bleaching 2-20373  
 rhodamine 6G laser, highly stable acousto-optic mode-locking using active feedback 2-7809  
 rhodamine 6G laser, reliable high power repetitive pulsed, pumping by linear preionised flashlamps 2-25033  
 rhodamine 6G mode-locked CW laser, subpicosec. pulse internal amplification 2-20351  
 rhodamine 6G pumped by Nd:YAG freq.-doubled source, sub-picosec. pulse generation and amplification 2-4503  
 rhodamine 6G single-mode CW laser radiation freq. doubling in reson. passive ring cavity 2-4502  
 rhodamine 6G synchronously pumped dye laser-amplifier system, high-energy picosec. pulses 2-39670  
 rhodamine 6G with compounds resonator pumped by Xe-ion laser 2-16030  
 rhodamine-6G, flashlamp pumped dye laser, spectral and spatial props. 2-20300  
 ring dye laser, rapid freq. scanning 2-20332  
 ring frequency-doubled CW laser, UV transitions obs. in Eu 2-673  
 ring laser, travelling wave, subpicosecond pulse generation using synchronous double-modulation 2-4533  
 ring lasers, synchronously pumped and hybrid, subpicosecond pulse generation 2-11727  
 single-frequency tunable pulsed dye laser with diffraction grating 2-39669  
 single-mode CW dye laser, Michelson mode selectors, spatial hole burning compensation 2-7784  
 single-mode pulsed dye laser, design criteria and operating characts. 2-7785  
 single-mode pulsed dye laser 2-44281  
 stilbene 3 synchronously pumped dye laser, improved performance by operating at increased repetition rate 2-4500  
 subnanosecond pulses, develop. using spiking phenomena and regenerative oscil. effect 2-25005  
 subpicosecond CW passively mode-locked ring dye laser, time-resolved fluorescence spectroscopy appls. 2-34788  
 synchronously mode-locked and internally freq.-doubled CW dye laser anal. 2-44275  
 synchronously pumped, temporal and spectral studies, autocorrel. meas. detailed interpretation 2-11692  
 p-terphenyl, pumped by high energy XeCl pulses, laser characts. 2-29811  
 thermally induced laser pulsing to measure weak optical absorptions 2-23740  
 thin film optical waveguiding evanescent, with corner reflecting resonator 2-918  
 three-mirror coupled cavity dye lasers with lamp excitation 2-49785  
 transverse-pumped dye amplifier, analytical theory 2-44276  
 tunable dye laser study from 330-975 nm using XeCl excimer laser UV pumping source 2-7821  
 tunable high-repetition-rate lasers pumped by Cu vapour laser 2-44279  
 tunable picosecond pulse generation, 750 to 780 nm by passive and synchronous modelocking 2-16041  
 tunable waveguide dye laser, 200 W power output and narrow bandwidth 2-7789  
 UV, fluorescence characteristics of dye vapours (*Japanese*) 2-4918  
 wideband dye laser as source in spectral information-transmission system 2-34796  
 Ar-pumped dye laser operation 700-800 nm region, energy transfer dye mixture 2-44278  
 2,2'-dimethylparaterphenyl laser emission at 77K 2-25007  
 N<sub>2</sub> laser-pumped dye lasers at atmospheric pressure, use in subnanosec. time-correlated photon counting spectroscopy 2-10877

**dynamic braking** *see braking***dynamic nuclear polarisation***see also CIDNP; Overhauser effect; solid effect*

- 1,4-bis(trifluoromethyl)benzene, free radical, X-band, <sup>1</sup>H and <sup>19</sup>F dynamic nucl. polarisation study 2-49466  
 octafluorotoluene, free radical, X-band, <sup>19</sup>F dynamic nucl. polarisation study 2-49466  
 perfluoro-tert-butanol, interactions with nitroxide radical, interspecies H-bonding, <sup>1</sup>H and <sup>19</sup>F relax. and DNP meas. 2-20093  
 phenol, interactions with nitroxide radical, interspecies H-bonding, <sup>1</sup>H and <sup>19</sup>F relax. and DNP meas. 2-20093  
 trans-polyacetylene, spin dynamics, dynamic nucl. pol., nucl. relax. and EPR study 2-46427  
 Si, electron bombarded, nuclei optical polarisation and excited triplet states 2-2162  
 1,2,4-trifluorobenzene, free radical, X-band, <sup>1</sup>H and <sup>19</sup>F dynamic nucl. polarisation study 2-49466  
 CC Ga<sub>0.5</sub>In<sub>0.5</sub>P, nuclear spin system reson. cooling, cond. electrons g-factor effect 2-36478  
<sup>57</sup>Fe nuclear spin system cooling matching NMR and ferromag. reson. frequencies 2-36486  
 GaP, nuclear spin system reson. cooling, cond. electrons g-factor effect 2-36478  
 Si, nuclear optical pol., mag. impurities effect (*Russian*) 2-41230  
 Si-Dy, amorphous, <sup>29</sup>Si nuclear moments, optical polarisation 2-36479

**dynamic programming**

- acoustic noise of supersonic transport aircraft at takeoff, flight path optimisation using dynamic programming 2-11916  
 cantilever variable cross section optimal design, dynamic programming 2-20530  
 energy resource development systems, dynamic linear programming models 2-22553  
 fuzzy expectation values in multistage optimization problems, nuclear reactor investment strategy example 2-15433  
 partial elliptical equation solution, appl. of dynamic programming method (*Russian*) 2-3357

**dynamic response**

- nuclear power station U-tube boilers, dynamic thermal-hydraulic behaviour 2-24378  
 road bridge dynamic response and infrasonic pressure level due to loaded vehicle 2-14141

**dynamic stability** *see stability***dynamic testing***see also fatigue testing*

- cylindrical shell with torispherical head, model tests and stress anal. 2-25338  
 fibre reinforced composites, high-speed test instrument, adhesive forces meas. 2-9485  
 glass, ion exchanges, bending strength, surface damage effect 2-13818  
 heteroorganoplast composites, prep., mech. and elec. props. 2-36836  
 impact testing, samples flexing simulation 2-9480  
 instrumented falling weight impact tester, design and appl. 2-27375  
 load time data, verification of compliance corrections used in determining load line energies 2-13889  
 low-cycle testing, indirect deform. meas. 2-9481  
 Manganin gauges, use in shock reverberation expts. 2-2648  
 mechanical impedance method, dynamic viscoelastic characts. determ. 2-20616  
 metal, dynamic tear test method, eval. of standard, interlaboratory test program 2-13893  
 metal, temp. relationship of mech. props. using explosive loading and impulse elec. heating 2-52161  
 metals, crack resistance determination, under high strain rates 2-37008  
 metals, dynamic compression diagrams, method for determ. at elevated temps. 2-41855  
 metals, dynamic tensile testing by rot. hammer (*Polish*) 2-9503  
 metals, shock compression in elastoplastic loading waves, expt. study 2-2641  
 notched strip, very long, under high velocity tension, dynamic stress conc. (*Japanese*) 2-4777  
 plastics, dynamic testing for meas. of rheological parameters (*Hungarian*) 2-52130  
 polymeric materials, mechanical characteristics determination, at elevated temps. 2-37018  
 polypropylene, crosslinked, phys. and mech. props. 2-47144  
 rod, energy dissipation with independent flexural-torsional vibrs. 2-52158  
 solids under impulsive loading, deform. and fracture 2-30512  
 static indeterminate structures, resist. of elements with different stiffness to cyclic elastoplastic strain 2-13912  
 steel, dynamic tear test method, eval. of standard, interlaboratory test program 2-13893  
 steel, tool, ductility, static and dynamic torsion tests (*Polish*) 2-9375  
 tensile curves, determ. with ring samples, opt. method 2-2668  
 vibration loaded mechanical system, vibr.-response spectrum form effect on loading extent 2-50220  
 Cu alloy M1, dynamic compression diagrams, method for determ. at elevated temps. 2-41855  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub>-SiO<sub>2</sub> and Li<sub>2</sub>O-K<sub>2</sub>O(Ag<sup>+</sup>)-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass ceramics, deform. rate influence on bending strength and failure 2-52046  
 Ti-Al-Mo, dynamic compression diagrams, method for determ. at elevated temps. 2-41855

**dynamic symmetry**

- E(8) grand unified theory, dynamical symmetry breaking 2-19295  
 general relativity, symmetry in geometrodynamics 2-28726  
 Gross-Neveu model, Kosterlitz-Thouless phase transition, dynamical asymmetry breaking 2-33706  
 relativistic oscillator, dynamical symmetry group and spherical function props. on hyperboloids (*Russian*) 2-3430  
 scalar field compositeness effect on dynamical symmetry breaking patterns 2-19257  
 SO(10)<sub>V</sub> × SO(10)<sub>II</sub>, flavour-colour-hypercolour unification 2-43255  
 spin-zero structureless point charge in EM field, Schrodinger eqn. dynamical symmetries 2-18950  
 SU(2)<sub>L</sub> × SU(2)<sub>R</sub> × U(1) gauge theory, quark mass matrices, dynamical symm. breaking 2-15303  
 SU(2) gauge theory, dynamical symmetry breaking 2-3714  
 SU(3) × U(1) weak-EM gauge theory, dynamical symm. breaking 2-23893  
 SU(3) as a spectrum generating group 2-43226  
 SU(4) as a spectrum generating group 2-43226  
 SU(6) grand unified theory without fundamental Higgs scalars 2-43248  
 time-dependent Schrodinger eqn. symmetry, pot. classification by maximal kinematical symmetry 2-18952  
 two-dimensional field theories, nonlocal-symmetry Ward identities 2-29008  
 unified field theories, internal-symmetry group 2-29036  
 unified field theory model, internal symmetry groups origin and forms 2-33777  
 weak interaction theories with dynamical symmetry breaking, review 2-288  
 σ-meson mass in QCD and dynamical symmetry breaking 2-48943  
<sup>193</sup>Au, positive parity states, dynamical supersymmetries 2-19440  
<sup>3</sup>He, superfluid, dynamical Lie group model 2-1690

**dynamics**

- see also ballistics; fluid dynamics; force; friction; haemodynamics; impact (mechanical); kinematics; resonance; rotating bodies; rotation; vibrating bodies; vibrations*  
 buckling, load dropping rapidly with time, crit. parameters determ. 2-4744  
 3C 345, quasar, centimetre-wave obs. rel. to superluminal motion 2-33179  
 classical dynamic systems, equivalent descriptions, differential geometry 2-38418  
 collisionless systems of gravitating massees, evolution rel. to form. of galaxies and galaxy clusters 2-28569  
 Coma Berenices cluster of galaxies, dynamical anal. model (*French*) 2-48341  
 constrained dynamical system, with external forces, consistency 2-38416  
 elliptical galaxies, dissipative processes rel. to corals. between luminosity, metallicity and vel. dispersion 2-14930  
 elliptical radio galaxies with dust lanes, model for stationary states of interstellar gas 2-38312  
 galaxies, N-body simulations of disc-halo systems 2-14929  
 galaxies, nonlinear instability of Maclaurin disc of stars surrounded by giant halo 2-42749



**dynamics continued**

- galaxies inner Lindblad resonance, nonlinear theory for self-consistent bars 2-33145  
 Innisfree meteorite, photographic anal. of fragmentation, dynamics and luminosity 2-14828  
 intermittency in the presence of noise 2-33279  
 Local Group of galaxies, dynamical age and mass 2-3311  
 local symmetry vector, first integral, inverse problem 2-38417  
 Mach-Poincaré gravodynamic theory, appl. to condensation phenomena in expanding universe 2-10536  
 nonlinear dynamic systems, qualitative catastrophe theory (*Dutch*) 2-48500  
 one-dimensional modelling of tidal power schemes 2-37152  
 particle flow, numerical integration errors due to linearisation 2-38438  
 smoke flow, buoyancy-induced, in enclosures, mathematical modelling 2-44775

**dynamometers**

- see also force measurement*  
 crack resistance determination, under high strain rates, of metals 2-37008  
 mechanical loading, static and dynamic, instrument with modulating capability 2-25335  
 surface grinding, two dimensional dynamometer (*Japanese*) 2-43008  
 surface grinding applications, theoretical study (*Chinese*) 2-38644

**dysprosium**

- see also nuclei with .....*  
 AC sp. ht. rel. to mag. transitions 2-2082  
 atom, isotope shifts, visible-UV obs. 2-49318  
 binding energy, contris. for various struts. 2-8470  
 hydrostatic press. derivatives of elastic consts. 2-40465  
 photoelectric cross sections anal., attenuation coeff. meas. for 72.1, 123.6 and 279 keV photons 2-43139  
 subshell ionisation cross section meas. using HIXE and comparison with theories 2-51745  
 texture and mag. props. after rolling and annealing (*Russian*) 2-22236  
 tribophysical pulverisation 2-47185  
 CaF<sub>2</sub>:Dy, nonlinearity in response characts. of thermolum. dosimeter, review 2-29440  
 CaF<sub>2</sub>:Dy<sup>3+</sup> activated ionic cryst., thermally stimulated polarization current kinetics 2-46469  
 CaSO<sub>4</sub>:Dy, Bi, phosphors; X-ray induced fluorescence and phosphorescence 2-26956  
 CaSO<sub>4</sub>:Dy, nonlinearity in response characts. of thermolum. dosimeter, review 2-29440  
 CaSO<sub>4</sub>:Dy, phosphorescence and thermoluminescence study 2-46746  
 CaSO<sub>4</sub>:Dy phosphor with high Dy conc., high level  $\gamma$ -dosimetry 2-29438  
 CaSO<sub>4</sub>:Dy ribbon, TLD-900, kinetics and thermolum. parameters at low dose levels 2-22100  
 CaSO<sub>4</sub>:Dy ribbon, TLD-900, dosimetric props. in low dose region 2-22830  
 CaSO<sub>4</sub>:Dy thermoluminescent dosimeters, effects of different climatic conditions on performance 2-29439  
 Dy<sup>2+</sup>, ESR in YPd<sub>3</sub>, cryst. field effects 2-36422  
 Dy<sup>2+</sup>:CaF<sub>2</sub>, pot. as continuously tunable far-IR laser 2-44303  
 Dy+H<sup>+</sup>, L-shell X-ray prod. cross sections meas. 2-44043  
<sup>161</sup>Dy isomer polarised nuclei,  $\gamma$ -laser creation possibility (*Russian*) 2-5608  
 Fe:Dy, ion implanted single crystal, Rutherford backscattering and channelling anal. 2-45220  
 Y<sub>2</sub>O<sub>3</sub>S Dy<sup>3+</sup>, Tb<sup>3+</sup> phosphor, photoluminesc. and cathodoluminesc., Tb<sup>3+</sup> enhancement mechanism 2-51666  
 YPd<sub>3</sub>:Dy, cryst. field effects on ESR 2-36423  
 ZnO:DyAg, phosphors, electrolum. and photolum. obs. 2-5744

**dysprosium alloys**

- Al-Mg-Dy, mech. props., Dy effect 2-27242  
 Dy-Fe/Gd-Fe double layer film, amorphous, thermomag. writing 2-31188  
 Dy-Sb system, phase diagram construction and antimonides characts. 2-41584  
 DyAl<sub>3</sub>, narrow domain walls, pulsed NMR study 2-41229  
 DyCo<sub>2</sub>, cryst. struct. distortion and magnetostriction 2-45119  
 DyCo<sub>2</sub>-DyAl<sub>3</sub>, soft X-ray emission spectrum 2-46830  
 DyCu<sub>2</sub>Si<sub>2</sub>, mag. disorder resist. 2-17058  
 DyCu<sub>2</sub>Si<sub>2</sub>, magnetisation and mag. susceptibility meas. 2-46259  
 DyFe<sub>2</sub>, heat capacity, crystal-field effects, mag. props. 2-8985  
 DyFe<sub>2</sub>, magnetisation meas. of magnetostriction, mag. moments and anisotropy (*Russian*) 2-21835  
 DyFe<sub>2</sub>, NMR study of hyperfine field parameters and mag. moments 2-31324  
 DyNi<sub>2</sub>, thermal expansion and magnetostriction, 5 to 290K 2-26086  
 Dy<sub>1-x</sub>Sm<sub>x</sub>, mag. props. study 2-31146  
 Dy<sub>0.7</sub>Tb<sub>0.3</sub>Fe<sub>2</sub>, magnetoelastic effects, hysteresis loop width (*Russian*) 2-51446  
 Gd<sub>1-x</sub>Re<sub>x</sub>Al<sub>2</sub> (Re=Dy, Ho, Er), Curie temp., theoretical calc. 2-21793  
 Si-Dy, amorphous, <sup>29</sup>Si nuclear moments, optical polarisation 2-36479  
 Th-Dy, dil., Dy<sup>2+</sup> electronic spin relax. in supercond. state, Mossbauer study 2-36213

**dysprosium compounds**

- see also dysprosium alloys*  
 $\gamma$ -Dy-S<sub>3</sub>, heat capacity, mag. susceptibility and optical meas. at low temp. 2-40563  
 DyVO<sub>4</sub>, sp. ht. and thermal cond. in applied mag. field 2-50941  
 Bi<sub>2</sub>O<sub>3</sub>-Dy<sub>2</sub>O<sub>3</sub> solid soln., fluorite type, cond. and struct. 2-45619  
 CdDyTiNbO<sub>6</sub>, mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
 Dy complex, Tb<sup>3+</sup>Dy<sup>3+</sup> (ammoniaisopropiondiacetato).4H<sub>2</sub>O, luminesc., circular dichroism, energy transfer 2-46722  
 DyB<sub>2</sub>C<sub>3</sub>, mag. props. 3-300K 2-41116  
 DyCu<sub>2</sub>Ge<sub>2</sub>, mag. susceptibility meas., 4.2 to 200K (*French*) 2-31150  
 DyFe<sub>2</sub>H<sub>12</sub>, Mossbauer spectroscopy and bulk magnetisation meas. 2-31345  
 DyFeO<sub>3</sub>, antiferromagnet-weak ferromagnet phase transition, antiferromag. boundary of nucleation line (*Russian*) 2-41125  
 DyFeO<sub>3</sub> crystals, with banded domain struct., light diff. 2-51430  
 DyFeO<sub>3</sub> orthoferrite, magneto-optical study of mag. phase coexistence near Morin temp. 2-31179  
 DyGa<sub>2</sub>O<sub>12</sub>, IR and Raman study (*French*) 2-41361  
 DyH<sub>3</sub>, hexagonal, non-axial elec. field gradient at Dy nucleus, <sup>161</sup>Dy Mossbauer reson. 2-26791  
 Dy<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelectric-ferroelastic, phase transition, cathodo- and photolum. study 2-36550

**dysprosium compounds continued**

- Dy<sub>2</sub>Mo<sub>2</sub>S<sub>8</sub>, antiferromag. supercond., mag. order effect on H<sub>c2</sub> 2-13247  
 Dy<sub>2</sub>Mo<sub>2</sub>S<sub>8</sub>, mixed state, upper crit. field 2-17243  
 DyO, electronic spectra, rot. and vibr. anal. 2-39416  
 DyO<sub>3</sub>, Sn<sub>2</sub>S<sub>5</sub>, superconducting and mag. props. 2-46191  
 Dy(P<sub>1-x</sub>V<sub>x</sub>)O<sub>4</sub>, random anisotropy system, magnetisation, mag. ordering and optical absorption 2-13296  
 DyRh<sub>2</sub>B<sub>4</sub>, Mossbauer study of ground state 2-17382  
 DyRh<sub>2</sub>Si<sub>2</sub>, new ternary silicides, cryst. struct. and mag. props. 2-16625  
 Dy(RuRh<sub>1-x</sub>)<sub>4</sub>B<sub>4</sub>, interaction of superconductivity and magnetism 2-17203  
 Dy(RuRh<sub>1-x</sub>)<sub>4</sub>B<sub>4</sub>, superconductivity, ferromagnetism and antiferromagnetism 2-31010  
 Dy<sub>2</sub>S<sub>3</sub>-CaS system, phase relationships 2-17666  
 DyVO<sub>4</sub>, specific heat at Jahn Teller transition 2-30624  
 DyVO<sub>4</sub> type crystals, Jahn-Teller ferrodistorstion antiferroelec., elementary excitations in elec. field 2-13026  
 DyVO<sub>4</sub>, undergoing cooperative Jahn-Teller effect, thermal cond. meas. 2-45640  
 HfO<sub>2</sub>-Dy<sub>2</sub>O<sub>3</sub> system, high temp. solid solns., ordering 2-25797  
 KDy(MoO<sub>4</sub>)<sub>2</sub>, antiferrodistortive Jahn-Teller ordering 2-8606  
 KDy(MoO<sub>4</sub>)<sub>2</sub>, cryst. field parameter study 2-26343  
 KDy(MoO<sub>4</sub>)<sub>2</sub>, orthorhombic crystals, polarised IR and Raman spectra 2-41362  
 LaDyB<sub>4</sub>, surface composition, temp. depend. Auger spectra obs. 2-30723  
 TiDy<sub>2</sub>F<sub>10</sub>, crystal chem. study (*French*) 2-16622  
 TiSe<sub>2</sub>:Dy, structural diagram, DTA and hardness meas. 2-22204  
 YAG:Cr, antiferromag., fine struct. of R absorption lines of Cr<sup>3+</sup> 2-26940  
 Y<sub>1-x</sub>Dy<sub>x</sub>Al<sub>3</sub>B<sub>4</sub>O<sub>12</sub>, luminesc., conc. quenching 2-41416

**E-layer *see E-region*****E-region**

- see also sporadic-E layer*  
 S Atlantic anomaly region, precipitation during mag. storm disturbance 2-23175  
 auroral E-region, radar waves incoherent scatt. 2-10243  
 critical frequencies, effect of sunspots numbers and solar faculae 2-28280  
 critical frequency prediction 2-23156  
 current convective instability in auroral E-region, theory 2-6503  
 directional elec. currents in nocturnal E-region layers 2-53002  
 disturbed polar E-region, effects of decreased electron-ion recombination coeffs. 2-52994  
 drift speed at low latitudes, interplanetary mag. field effects 2-42518  
 electric field over Millstone Hill, model 2-14667  
 electron content during Waterhole expt. 2-3126  
 electron density, var. during solar eclipse, 1980 February 16, rel. to geomag. effect (*Chinese*) 2-3142  
 equatorial Cowling conductivity, longitudinal depend. 2-32705  
 equatorial electrojet E-region, Joule heating, rel. to electron and neutral gas temps. 2-32732  
 evening sector elec. field and electron density obs. 2-52987  
 Farley-Buneman instability, two-layer model 2-48069  
 geomagnetic field variations of short period due to solar eclipse effects 2-6307  
 instabilities produced by solar eclipse, 1980 February 16, obs. (*Chinese*) 2-3123  
 ionisation irregularities drift vel., interplanetary mag. field effects 2-42519  
 ionosonde echo amplitudes with quasi-periodic freq. depend. 2-32738  
 low-latitude E-region drifts, changes assoc. with counter electrojet events 2-23167  
 nighttime tropical ionisation sources 2-28260  
 nocturnal intermediate layer with F-region, characts. 2-28279  
 nonthermal equilibrium between electrons and neutrals 2-28273  
 plasma instabilities at high-latitude 2-14678  
 polar region electron distrib. in dark sector 2-48070  
 polar region elevated electron temps. obs. and anal. 2-18625  
 pulsating cosmic radio noise absorption due to E-region plasma waves 2-42514  
 radar echoes interpretation from 100 km using phased antenna array 2-28230  
 radio wave reflection, crit. freq. solar and latitude depend. 2-42535  
 response to solar EUV flares 2-14671  
 severe auroral disturbances effect on equatorial ionosphere 2-52992  
 slant E rel. to polar cap plasma flow entry region 2-10263  
 solar eclipse disturbance of electron density, 16 Feb. 1980 over China (*Chinese*) 2-48064  
 thermal electron behaviour near Sq current focus (*Japanese*) 2-32704  
 NO<sub>x</sub> influence on electron conc. rel. to solar zenith angle (*French*) 2-14650

**ear**

- see also hearing*  
 basilar membrane stiffness in guinea pig, direct meas. 2-22768  
 basilar membrane vibration meas. using electronic speckle pattern interferometry 2-42114  
 brainstem response audiometry, ear-canal rel. to mastoid electrode placement 2-18317  
 canal pressure at threshold in children and adults rel. to pure-tone sensitivity 2-22765  
 cochlear hearing loss, brainstem auditory evoked elec. response 2-18221  
 cochlear transduction system, parallel filtering 2-9811  
 cochleas, guinea pig and human, rate-versus-intensity functions and AF responses 2-32215  
 eardrum shape, computerised moire fringe interactive analysis 2-213  
 input immittance meas. for human ear 2-32368  
 microdissection within SEM using new micromanipulator 2-27948  
 middle ear, guinea pig, changes in acoustic impedance after exposure to impulse noise and air blast 2-32252  
 reflex, acoustic, effects of aging on magnitude 2-52505  
 vestibulo-ocular reflex and visual-vestibular interaction, quantification for clinical diagnosis 2-47616  
 wind-induced sound pressures at the human ear 2-11939

**ear microphones *see microphones*****earphones**

- see also hearing aids*  
 No entries

**Earth**

- see also Earth composition; Earth orbit; Earth rotation; Earth structure earthquakes; geochemistry; geochronology; geodesy; geomagnetic varia*



**Earth continued**

- tions; geomagnetism; terrestrial atmosphere; terrestrial electricity; terrestrial heat  
accretion history and composition of terrestrial planets 2-38085  
albedo of atmosphere, lessened by effect of volcanic aerosol 2-28207  
astronomical cause for terrestrial events with 50 to 100 Myr periodicity 2-52847  
atmospheres, view of gaseous envelopes surrounding members of solar system, book 2-48417  
effective temperature determ. 2-10306  
evolution (book) 2-23388  
formation by gravitational accretion in dust disc 2-32870  
gravitational moment on Venus, influence on Venus reson. rot. 2-6555  
indifferent equilibrium shape (IES-geoid), effects of gravity slippage 2-6298  
IR radiation pressure, effect on artificial satellite orbital motion 2-18678  
natural gas reserves of nonbiological origin in Earth's interior, hypothesis (*German*) 2-52276  
neutron rare charge nonconserving decays, contrib. to current in Earth 2-23978  
orbit eccentricity secular changes effect on lunar motion 2-28361  
origin, evidence for late-accreting chondritic component from siderophile abundances in upper mantle 2-9981  
planet formation and evolution, application of Pb isochronism statistics 2-14795  
planet formation from solar nebula, composition and phase equilibria 2-6551  
primordial history, formation and evolution (*Russian*) 2-3012

**earth (electric)** *see* **earthing**

**earth (soil)** *see* **soil**

**Earth age** *see* **geochronology**

**Earth atmosphere** *see* **terrestrial atmosphere**

**Earth composition**

*see also* **Earth structure**

- Aleutian island arc magmas,  $^{143}\text{Nd}/^{144}\text{Nd}$ ,  $^{87}\text{Sr}/^{86}\text{Sr}$  and trace element constraints on petrogenesis 2-42355  
Archaean crust (3800 Myr) in E India, Sm-Nd data rel. to early mantle differentiation 2-6348  
Archaean gabbro-anorthosite complex at Tessiuyakh Bay, Labrador, tectonic setting, rock chemistry and metamorphism 2-37860  
Archaean mantle heterogeneity, deduced from W.Australian rocks 2-28047  
sub-Atlantic Ocean mantle, fine-scale isotopic heterogeneity 2-37808  
mid Atlantic Ridge, basalt compositional variation 2-52779  
basalt glasses from Mid-Atlantic Ridge (29°N to 73°N), first-order major element var. 2-32515  
basalts, trace element conc. patterns rel. to hotspots and chemical evolution of mantle 2-10002  
birth and growth (book) 2-23387  
calc-alkaline granite batholiths of Sierra Nevada and Peninsular Ranges, California, Nd and Sr isotopic study 2-42359  
Caledonian plutonic intrusions in Britain, geochemical props. rel. to origin 2-38381  
Coso volcanic field, California, Pleistocene high-silica rhyolites 2-42288  
garnet two-mica granites in Ruby Mountains, Nevada, comps. rel. to petrogenesis 2-42364  
groundwater from bedrock, Ra content and  $^{226}\text{Ra}/^{228}\text{Ra}$  activity ratio 2-10086  
hybrid granodiorites intruding accretionary prism in SW Alaska, comps. rel. to origin 2-42363  
Iceland,  $^{238}\text{Th}/^{234}\text{U}$  disequilibrium in historical lavas 2-37792  
igneous rock reference sample, Be content of NIMROC 2-52767  
Kalka layered basic intrusion, central Australia, Nd-Sr isotopic evidence for extreme crustal contamination 2-37861  
Kane Fracture Zone, basalt compositional variation 2-52779  
lavas of Mt. Edgecumbe volcanic field, Alaska, comps. rel. to tholeiitic and calc-alkaline volcanism 2-32476  
N Maine, Ordovician volcanic rocks tectonic setting from trace element anal. 2-6353  
upper mantle, Pt and Pd minerals in lherzolite xenoliths 2-37864  
mantle fluid component, comp. rel. to origin of alkaline igneous rocks 2-37868  
mantle heterogeneity, rel. to minor and trace element geochemistry of volcanic rocks from Galapagos spreading centre 2-32514  
mantle radioactive elements depletion and convection 2-28042  
metalliferous sedimentary rocks, Scotland,  $^{143}\text{Nd}/^{144}\text{Nd}$  ratios rel. to Nd isotopic comp. of Iapetus seawater 2-37891  
New England Batholith, E Australia, geochemical vars. in time and space 2-42361  
noble gas concentrations, solar nebular condensation hypothesis 2-14794  
oceanic basalts of W Atlantic Ocean, geochemistry rel. to construction processes at Cretaceous ridge axis 2-22968  
oceanic basalts of W Atlantic Ocean, magma fractionation rel. to eruptive chronology 2-22967  
oceanic carbonatite volcano on Santiago, Cape Verde Islands, geology, mineralogy and geochemistry 2-37819  
oceanic igneous rocks from DSDP leg 62, comp. rel. to H evolution of Hess Rise, N Pacific Ocean 2-22969  
oceanic mantle, comp. rel. to lithospheric age depend. of off-ridge volcano prod. 2-18417  
oceanic palaeocrust in circum-Pacific ring, features of comp. form. and developments 2-47862  
olivine, major, minor and trace element anal., ion microprobe techniques 2-6071  
organic matter in Precambrian rocks, clues to origin and development of living systems 2-53193  
orogenic andesites and plate tectonics (book) 2-23391  
Palaeogene sediments from Zhamsanin crater, USSR, comps. rel. to origin of irghizites and zhamsaninites 2-14464  
petroleum, hydrothermal, in mineralised mounds of Guaymas Basin, comp. rel. to origin 2-37848  
phonolitic lavas, lherzolite-bearing, major and trace element comp. rel. to geochemistry and evolution 2-22978  
plagioclase, crystal growth model rel. to oscillatory compositional zoning 2-32518  
planet formation from solar nebula, composition and phase equilibria 2-6551  
primordial history from composition anal., comparison with meteorite comp. (*Russian*) 2-3012

**Earth composition continued**

- pyroxene, low-Ca, major, minor and trace element anal., ion microprobe techniques 2-6071  
Qorqut granite complex (Late Archaean), SW Greenland, struct. and comp. rel. to origin 2-42366  
radioelements, concs. in deep profile through Precambrian basement of Vredefort structure 2-42304  
rare earth metals, partitioning between sanidine and coexisting volcanic glass 2-42286  
rocks, potential of large scale tests for geochemical expts. 2-32666  
sediments anoxic interstitial waters, Fe (II), Mn (II) and sulphide ions meas. techniques 2-52952  
siderophile element abundances in upper mantle, evidence for sulphide signature and equilib. with core 2-9981  
St. Francois Mountains, Missouri, USA, geochem. of Precambrian volcanics 2-42298  
St. Francois Mountains, Missouri, USA, geology of Precambrian calderas 2-42296  
two-mica granites of NE Nevada, comps. and mineralogy rel. to origin 2-42365  
Usu volcano, Japan,  $^{13}\text{C}/^{12}\text{C}$  and  $^{87}\text{Sr}/^{86}\text{Sr}$  ratios of volcanic gases and rocks (*French*) 2-52789  
volcanic glasses, electron microprobe analysis of Na content 2-6072  
volcanic rock complexes, Mesozoic, of N. Vietnam, comps. rel. to geological and tectonic conditions 2-52792  
volcanic rocks, metamorphosed, and volcanic neck in Sierra Nevada, California, petrology and geochronology 2-42302  
Vredefort structure, implications of radioelement profile for continental heat flow 2-42305  
Wadi Shwas volcanics, Saudi Arabia, element comp. and island arc character 2-9977  
whole rock U-Pb systems, new interpretive procedure and appl. to Vredefort crustal profile 2-42307  
zircon, U-Pb systems in fragments of single grain 2-52841  
Eu in subducted sediments used to constrain their role in island arc magmatism 2-10013  
FeO, cryst. struct. at lower mantle conditions 2-9984  
Ir abundance anomaly in Brazos River section, Texas, at Cretaceous-Tertiary boundary 2-6338  
MgO, cryst. struct. at lower mantle conditions 2-9984  
Mn, hydrothermal, distrib. in bottom waters over Juan de Fuca Ridge 2-18469  
 $^{222}\text{Rn}$  content of groundwater as earthquake precursor, worldwide data evaluation 2-32444  
U, geochemistry of sediments of Orca Basin, north-west Gulf of Mexico 2-10035
- Earth core**  
convection, hydromag. stability of Kennedy-Higgins model 2-42323  
core-mantle boundary, calc. of internal flattening 2-37789  
dynamo, core dipole moment behaviour and buoyancy prod. 2-37759  
dynamo theory and mean field MHD (book) 2-48415  
formation by segregation of metallic phase with/without reduction 2-23233  
geodetic measurement techniques allowing meas. of Earth interior props. (*Chinese*) 2-48016  
inhomogeneities from gravity and seismic obs. 2-37734  
inner core, struct. from obs. of spheroidal shear modes 2-32463  
liquid outer core, region stable to thermal convection 2-32461  
magnetic signals and secular var. 2-42259  
models 2-47833  
PKP wavefield, Kirchhoff integral appl. 2-22897  
rotation of inner core due to geomag. dynamo effects 2-52724  
seismic wave interaction with rough core-mantle boundary, observable effect 2-9969  
seismic waves, scatt. on underside refl. at core-mantle boundary 2-6332  
velocity components at top of Earth's core determ. from mag. obs. at Earth surface, new methodology 2-18399

**Earth crust**

*see also* **geology; oceanic crust**

- active margins, IPOD drilling program results 2-42347  
N.Alaska continental shelf, sediment and crust acoustic props. 2-3007  
SW Alaska origin of hybrid granodiorites intruding accretionary prism 2-42363  
Almklovdaalen peridotite massif, Norway, struct. anal. 2-10004  
igneous orogeny, metamorphic pressure estimates and sediment volumes 2-37799  
E. Alps-Pannonian Basin area, magnetotelluric sounding obs. 2-27984  
N American Cordilleras, Nevada-Utah overthrust belt struct. (*French*) 2-3000  
NW Anatolia, suture zone of Tethys Ocean (*French*) 2-22933  
Anatolia, S.W. Turkey, Neogene and Quaternary intracontinental faults evolution (*French*) 2-10173  
Andaman-Nicobar region and Burma, geodynamics from tectonic stresses and regional seismicity 2-14450  
Andean cordillera, igneous history of region around 46°S 2-28049  
Andean lavas (Peru), O, Sr, Nd, Pb isotope and trace element variations 2-52758  
W.Antarctica, palaeomag. evidence for displaced terrain 2-18410  
N. Appalachians, continental plate over peripheral Ordovician bulge 2-37831  
arc magmatic rocks recording palaeomag. fields and banded structure 2-32394  
Archaean crustal development models and Lewisian gneiss geochemistry 2-14422  
Archaean gabbro-anorthosite complex at Tessiuyakh Bay, Labrador, tectonic setting, rock chemistry and metamorphism 2-37860  
Argentera massif, sinistral strike slip faulting (Alpine episode) (*French*) 2-6337  
Arizona, USA, crust struct. indicative of past thinning process 2-9991  
NE. Asia, struct. of continental margin rift system (Okhotsk-Anadyr rift) 2-37810  
Atlantic, uppermost mantle seismic attenuation and velocity 2-42271  
Atlantic/USA continental margin, development and geology 2-42315  
Atlas Tunisia, structural interpretation (*French*) 2-10010  
SE. Australia, palaeomagnetic overprinting and thermal and geologic history 2-6314  
Australian passive continental margin prebreakup tectonics 2-42317  
Australian-Antarctic depression, struct. and tectonic origin 2-47848  
Azumason Volcano, Japan, distrib. of elec. resistivity and geomag. field components in Zyododaira area 2-32393



## Earth crust continued

- N.Baikal frozen and thawed rocks, seismic vels. 2-14411  
 N Baikal region rift basins interior struct. and seismicity 2-52783  
 Baikal rift zone, anomalous mantle rel. to temp. regime of Earth's crust 2-9982  
 Baikal Rift Zone, crustal model rel. to earthquakes depths and seismic controlling factors 2-14413  
 Baikal rift zone, discovery of intracrustal seismic waveguide 2-52782  
 Baikal Rift Zone, isostatic anomalies calc. 2-14446  
 Baikal Rift Zone, relative displacement of tectonic plates 2-14445  
 Baja, California, fault pattern and motion rel. to N.America (*French*) 2-10009  
 Bara Basin, Sudan, gravity exploration for groundwater 2-37898  
 Barberton Mountain Land, S.Africa, geology indicating rifted Archaean continental margin 2-47837  
 basic intrusion near Haliburton, Ontario, cooling history 2-6341  
 Basin and Range province, tectonic implications of terrestrial heat flow in Arizona 2-22940  
 basin struct., telluric current anomaly, modelling with boundary value problem 2-2993  
 batholiths, obs. of seismic refls. from basal contacts 2-42303  
 Benue Trough, Nigeria, gravity anomaly study of tectonic origin 2-37845  
 Benue Trough, Nigeria, gravity interpretation of struct. and tectonics 2-14465  
 Betic Cordilleras, SE Spain, Alpine tectonics and diapir struct. 2-22930  
 birth and growth (book) 2-23387  
 Black Sea basin, deep geological struct. and heat flow 2-6347  
 Bohemian Massif, crustal and mantle structure from Rayleigh wave dispersion 2-37801  
 Bohemian Massif, temp. and struct. of lithosphere 2-9995  
 British Isles, Caledonian plutonism rel. to crustal growth 2-38381  
 British Isles, structure and tectonics, book 2-33253  
 Burma and Andaman-Nicobar region, geodynamics from tectonic stresses and regional seismicity 2-14450  
 Calabrian arc (S.Italy) geodynamic evolution, use of structural anal. 2-52795  
 Calaveras fault, California, propagating episodic creep and aseismic slip 2-10020  
 Calaveras Fault, California, USA, obs. of episodic slip 2-10026  
 calc-alkaline granite batholiths of Sierra Nevada and Peninsular Ranges, California, Nd and Sr isotopic study 2-42359  
 S.California, crust strain accumulation, 1973-80 period 2-32465  
 California, P-wave lateral vel. gradients near major strike-slip faults 2-14409  
 S California, USA, P<sub>v</sub> velocity anisotropy 2-28019  
 S.California uplift, accuracy of geodetic measurements 2-2987  
 Cambay Basin, India, Mehmabad-Billimora profile crustal struct. seismic sound ing 2-18403  
 S.Canadian Cordillera, transverse lineation in deep struct. (*French*) 2-37824  
 carbonate platforms of passive continental margins 2-47838  
 NW Caribbean, isotope study of Quaternary alkaline volcanic events 2-52757  
 Celtic Sea tectonics and Variscan Front location 2-22958  
 Chile, Late Palaeozoic stratigraphy, struct. and tectonic framework 2-32453  
 Colorado Plateau, Arizona, USA, deep cryst. struct., seismic study 2-14426  
 Columbia River Basalt flows, correl. using palaeosecular mag. field data 2-52725  
 continental, rifting, general 2-10015  
 continental accretion, relation between oceanic plateaus and allochthonous terrains 2-10031  
 deep continental crust, fluid evolution and graphite genesis 2-37809  
 continental crustal origin of two-mica granites of NE Nevada, evidence from comps. and mineralogy 2-42365  
 passive continental margin development rel. to mantle convection 2-42332  
 continental margin evolution, thermomechanical model 2-42333  
 continental margins, conf., July 1980, Paris, France 2-38362  
 continental margins of Atlantic type, subsidence and tectonics 2-42318  
 continental passive margins, main types 2-42310  
 continental plate break-up by crust thinning process 2-42337  
 continental plates, seismic props. var. with age rel. to isostatic compensation 2-37768  
 continental structure, petrology and evolution, cross-section study 2-37796  
 Coso volcanic field, California, Pleistocene high-silica rhyolites 2-42288  
 creep due to solid Earth tides 2-42331  
 late Cretaceous lithostratigraphy, Catalan Pyrenees, Spain, contrib. of heavy minerals (*French*) 2-37823  
 Damara belt, Namibia, tectonic history deduced for palaeomag. evidence 2-10029  
 Darfur Swell, Africa, gravity constraints on isostatic compensation 2-18398  
 S Dead Sea area, crust struct., seismic obs. 2-37785  
 Dead Sea Rift, active faulting and crust struct. 2-37839  
 Dead Sea Rift, conf., Sept. 1979, Israel 2-33230  
 Dead Sea Rift, plate tectonics rel. to sedimentary rocks 2-37840  
 Dead Sea Rift, seismic vel. struct. of crust-mantle transition 2-37812  
 Dead Sea rift, struct. of crust and upper mantle 2-37811  
 Dead Sea rift evolution 2-22964  
 Dead Sea Rift in N.Israel, magnetotelluric study of high-cond. layer 2-37760  
 Dead Sea transform, crust struct. rel. to plate kinematics 2-37842  
 Dead Sea-Jordan rift zone, crust struct., mag. and gravity study 2-37813  
 deep crust structure, discontinuity underlain by molten rock (*Japanese*) 2-9976  
 deformation and fault creep (*Chinese*) 2-32409  
 deformation by continental ice sheets 2-6361  
 deformation measurement, appl. of laser interferometer 2-52957  
 deformation measurement by zero method pendulum (*Rumanian*) 2-32687  
 deformation of near-surface layers, determ. from geodetic meas. 2-6343  
 deformations and block rot. from palaeomagnetic obs. 2-23134  
 delamination of lithospheric thermal boundary from overlying continental crust 2-10025  
 diapirism in northern Tunisia 2-22929  
 dislocation model for Rn response to distant events earthquakes 2-32429  
 Dover Fault, tectonic boundary between Gander and Avalon Zones of NE Newfoundland Appalachians, age and origin 2-42280

## Earth crust continued

- earthquake triggering by tidal stress tensor (*Chinese*) 2-32411  
 East Mesa geothermal field, California, plausible two-dimensional vertical model 2-42308  
 Egletons granite, France, two superposed strains, petrofabric study (*French*) 2-42328  
 Egypt, alkaline ring complexes in SE Desert, emplacement ages 2-3002  
 elastic waves attenuation in one-dimensional inhomogeneous elastic media 2-9967  
 Elberton granite pluton, in Georgia Inner Piedmont, USA, cooling history 2-28046  
 Enisei Ridge region, Siberia, age of Upper Precambrian deposits 2-52785  
 W Europe, tectonic stress field 2-22957  
 fault motion, three-dimensional spontaneous rupture propag. rel. to earthquake source mechanism 2-9954  
 fault motion random model, time dependent case 2-37805  
 fault slip, results from geophysical expts. in large scale tests 2-32495  
 Fennoscandia, electrical crust-mantle struct. 2-47799  
 folded zone formation and development model 2-47853  
 folding mechanism, anal. of most important aspects 2-52842  
 external French Alps, thrust tectonics and crustal shortening from seismic cross-section 2-14447  
 Fukuoka Prefecture, Japan, active fault outcrops (*Japanese*) 2-32455  
 Garm region USSR, seismotectonic deformation from earthquake anal. 2-22939  
 geodynamic evaluation of external Hellenids, Southern Peloponnissus, Greece (*French*) 2-18406  
 Geodynamics Program, conf., July 1980, Paris, France 2-42786  
 geologic and tectonic maps of the World 2-32648  
 geosyncline formation and development model 2-47853  
 geothermics, borehole temp. stabilisation theory rel. to true formation temp. estimation 2-28040  
 Geysers-Clear Lake region, California, crust gravity and seismic velocity struct. 2-14427  
 global tectonic regionalisation for seismological data anal. 2-27996  
 Goddard pendant, Sierra Nevada, California, gravity model and structural implications 2-32512  
 S-type granite origin by crustal melting, implications of phase relations of muscovite granite 2-42360  
 gravity field model with gradational-layered struct. 2-9911  
 gravity sounding, approximate method for direct three-dimensional problem 2-9912  
 gravity sounding, determ. of harmonic moments of disturbing bodies from gravity anomalies 2-38000  
 gravity sounding, equivalence of gravit. potential induced by perturbation masses with varying density 2-6303  
 N Greenland Fold Belt, structural geology 2-22931  
 growth continental crust, geodynamic models 2-47851  
 Guerande, France, primary granitic structures (*French*) 2-10008  
 E. Gulf of Aden continental margin, struct. and early development 2-32459  
 NE Gulf of Aden continental margin, very early diffusive extension 2-42336  
 Gulf of Aqaba (Eilat) rift, tectonic development 2-37841  
 Gulf of Tonkin and vicinity geology and Bouguer gravity anomalies 2-47828  
 S Hawaii, model of crust seismic velocity 2-28018  
 heat flow, determ. in three DSDP boreholes near Japan Trench 2-32468  
 Hercynian progressive shearing deformation, Monts d'Arree, France (*French*) 2-18407  
 Hercynian Thrusts, Eastern Sardinia, rel. between X lineation, microfold axis and shear schistosity (*French*) 2-42326  
 High Ruzizi volcanic series, (South Kivu, Zaire) (*French*) 2-6336  
 W. Himalaya, structural evolution of crustal section 2-37807  
 Himalayas, crust struct. and tectonics, gravity survey study 2-52766  
 Himalayas, tectonic evolution and crust struct. 2-47854  
 Himalayas of Pakistan, uplift history deduced from fission track ages 2-52806  
 Hoggar Massif, Africa, free air gravity evidence for lithosphere alteration 2-10003  
 Hokkaido, Japan, crust and mantle struct., seismic study 2-42309  
 Honshu, Japan, Poisson's ratios investigation with three methods 2-9973  
 igneous intrusion upward migration, convective heat transport mechanism 2-14429  
 igneous rocks granite and rhyolite 2-42283  
 E India, 3800 million-year-old crust detect. rel. to early mantle differentiation 2-6348  
 central India, crust struct. from seismic surface wave obs. 2-28017  
 India, Palk Strait region, crust-mantle boundary currents and geomag. anomalies 2-27978  
 S.India and Sri Lanka, elec. cond. struct. rel. to tectonic history 2-42262  
 India-Eurasia collision, Tibetan evidence 2-22942  
 Indian peninsular shield, gravity study and crustal struct. along deep seismic sounding profile 2-14432  
 Indus suture zone, Late Cretaceous emplacement 2-14463  
 Iranian plateau, lateral vars. of high-frequency seismic wave propag. at regional distances 2-32443  
 Ivrrea Zone and S.Calabria, uplift rel. to Hercynian orogeny in S.Europe 2-37832  
 Izu Peninsula, Japan, geodetic survey, 1979-80 obs. (*Japanese*) 2-18376  
 Izu Peninsula region, Japan, struct. of upper crust from earthquake swarm obs. in (1980) 2-32456  
 SW Japan, 3-D stress rel. to subducting Philippine Sea plate 2-52787  
 Japan, natural radioactivity map 2-47826  
 SW Japan, three-dimensional seismic struct. of subducting Philippine Sea plate 2-14448  
 SW Japan batholith, mineralogy and magma genesis 2-42301  
 Japanese islands, stress field from topography 2-52750  
 Kalka layered basic intrusion, central Australia, Nd-Sr isotopic evidence for extreme crustal contamination 2-37861  
 Kern County earthquake, California USA, deformation and White Wolf Fault 2-9963  
 NW Kii, Japan, deep crust struct. (*Japanese*) 2-9976  
 Kolyvan'-Tomsk folded zone and adjacent areas, struct. according to geologic and geophysical data 2-47865  
 N Kwanto, Kwanto, Japan, deep crust struct. (*Japanese*) 2-9976  
 Lac du Bonnet granite batholith, fracture zones revealed 2-22922  
 Lachlan Fold Belt, Australia, identification of 3 volcanic suites 2-42295  
 lamprophyre petrogenesis (of potash-rich basic lamprophyres) 2-52763  
 Limagne graben, France, struct. of crust and upper mantle 2-37814  
 lithosphere, studies based on holographic principles 2-37780



## Earth crust continued

- lithosphere sharp mechanical decoupling, temp. sensitive hydrolytic weakening 2-32464  
 lithosphere thickness on Earth and terrestrial planets, rel. to tectonic evolution 2-10345  
 Long Valley caldera, California, attenuation of P and S waves in magma chamber 2-32472  
 lower crust below Precambrian regions, type classification 2-9996  
 Madagascar Ridge deep struct. comparison with Crozet Plateau 2-18402  
 magma chamber subjected to influx of new magma, fluid dynamic behaviour 2-52765  
 magnetotelluric inversion, new technique for layered Earth interpretation 2-27974  
 Magog-Mt. Orford ophiolite sequence, Quebec, palaeomagnetic study 2-47801  
 Manaslu leucogranite (Nepal), Himalayan collision signature, model for genesis and emplacement 2-42362  
 Mariana island arc region, ocean bottom seismometer study of seismic activity 2-32416  
 Matsushiro Seismological observatory site (Japan), crustal movement obs. (*Japanese*) 2-10007  
 Mediterranean Sea basin, deep geological struct. and heat flow 2-6347  
 Messina Strait, seismicity rel. to graben struct. 2-52738  
 metamorphic belts, geobarometers and sediment volumes 2-37799  
 metamorphic rock, tectonic evolution, eastern Hercynian Rehama, Morocco (*French*) 2-42327  
 meteorite crater formation, Bingham plastic rheological model 2-53128  
 W Mexico, geologic history of igneous rocks of Sierra Madre Occidental 2-42299  
 Moroccan Meseta, motions rel. to Pangea from palaeomag. results on Permian rocks 2-14385  
 Morocco, Hercynian dislocated platform of West-African Shield (*French*) 2-22932  
 Mount Everest region, Ar isotope dating of major uplift 2-9994  
 Mount Hood area, Oregon, USA, seismic vel. struct. 2-52738  
 Mt. Edgecumbe volcanic field, Alaska, example of tholeiitic and calc-alkaline volcanism 2-32476  
 Nemuro-oki earthquake 1973, post quake aseismic faulting 2-3006  
 New Brunswick, Canada, tectonic evolution from remanence of Silurian Mascarene Group rocks 2-22890  
 New England, fault plane solns. and compressional stress 2-22894  
 Nova Scotia continental margin, structure 2-37790  
 Oahu, Hawaii, crust strain changes due to rain 2-28056  
 Oregon, western USA, subduction zone indicated by teleseismic data 2-10021  
 central Pacific gravity field anomalies, satellite-satellite tracking obs. 2-6304  
 central Mexico crustal block rot. from palaeomagnetic data 2-18416  
 S Pacific Ocean, plate tectonic reconstruction and uncertainties of finite rotations 2-32484  
 circum-Pacific ring, types of oceanic palaeocrust and features of comp., form. and development 2-47862  
 Pamir mountains, crust struct. and tectonics, gravity survey study 2-52766  
 Pangea, Early Permian configuration from palaeomag. results on rocks of N Saharan craton 2-14385  
 Pannonian Basin, Bohemian Massif, temp. and struct. of lithosphere 2-9995  
 Pannonian basin (E.Europe), heat flow model of crust and mantle 2-22946  
 Papua New Guinea, formation of rhyolite suites 2-42290  
 passive continental margins, listric normal faulting 2-42316  
 Patagonian plateau, igneous history of region around 46°S 2-28049  
 Periadriatic line, Eastern/Southern Alps, Permian/Paleozoic paleogeographic zones (*French*) 2-52752  
 peridotites under Japan Island arcs, annealing times estimated from roundness of inclusions 2-10043  
 Peru, faulting types placing constraints on crust state 2-37829  
 Pikes Peak batholith, Colorado, USA, thermogravitational diffusion in Precambrian batholith 2-42300  
 Pilbara Block, Australia, geology indicating rifted Archaean continental margin 2-47837  
 Pilbara Block, W.Australia, REE geochem., isotopes and crust evolution 2-14423  
 Pilot Mountains, Nevada, Late Mesozoic thrusting kinematics 2-3005  
 plate creation and consumption rates, vector deviation 2-10017  
 plate motion, relative importance of different driving forces 2-10016  
 plate motions and boundary forces 2-28059  
 plate tectonics, evidence from continental fragments 2-22956  
 plate tectonics between Turkey and Tibet, anal. 2-14449  
 pluton emplacement into deforming crust, strain patterns 2-22928  
 Poisson ratio of crust and upper mantle, rel. to transverse seismic waves parameters 2-47821  
 postseismic rebound due to creep, multilayer model 2-32462  
 Precambrian crust, fractionation and crystallisation rel. to Earth tectonic evolution 2-10032  
 North Pyrenean Zone, crust struct. from seismic sounding obs. 2-42274  
 Pyrenees Mountains, orogenic evolution and crust struct. 2-52803  
 Pyrenees Palaeozoic axial zone, crust struct. 2-42275  
 Qinghai-Xizang (Tibet) plateau, tectonic origin (*Chinese*) 2-47841  
 Qinghai-Xizang Plateau, crustal struct. from group rel. dispersion curves of Rayleigh waves (*Chinese*) 2-2999  
 Rhine graben, isostatic compensation model 2-32485  
 Rhinegraben, seismic vel. struct. of crust-mantle transition 2-37812  
 Rhinegraben, struct. of crust and upper mantle 2-37814  
 Rhonegraben, France, crust and upper mantle struct. 2-37814  
 rift development (*Russian*) 2-47832  
 Rikuu earthquake, Japan, surface faults of Aug. 1896 event (*Japanese*) 2-9941  
 ring structures classification and origin (*Russian*) 2-3003  
 Rio Grande rift, New Mexico, USA, crust struct. from seismic data 2-37788  
 Rio Grande rift, New Mexico, USA, deep crust struct. (*Japanese*) 2-9976  
 Rio Grande Rift, New Mexico, USA, seismic velocity struct. 2-9987  
 rock elasticity, nonlinear behaviour deduced from Earth tides 2-2988  
 Roosevelt Hot Springs area, Utah, USA, underlying body of low seismic vel. 2-28041  
 Samail ophiolite, Oman, isotope systematics of abducted oceanic crust 2-3001-  
 San Andreas area faults systems (*Russian*) 2-52815

## Earth crust continued

- San Andreas fault, California, fault system, slip rate obs. 2-28055  
 San Andreas fault, implications of permeability and strength of fault gouge under high press. 2-28072  
 San Andreas fault system, deep struct., seismic sounding study 2-9992  
 San Andreas/Gulf of California rift junction 2-42335  
 San Francisco Bay region faults, crustal deformation, plate motion, geodetic obs. 2-37837  
 Scandinavia, geomag. depth sounding, induction and coast-effect 2-27983  
 W Scotland, continental margin struct. and sediments 2-52772  
 N Scotland, Moho-offset 2-22934  
 seismic intracrustal waveguide in Continental rift zones and modern activity areas 2-52747  
 seismic reflection sounding of crust used to trace surface features to great depths 2-47839  
 seismic shakeability maps, anal. for example of Kirgizia and Uzbekistan 2-9958  
 seismic sounding, small-scale fault parameters estimation from common-depth-point seismograms 2-6327  
 seismic sounding, soln. of direct kinematic problems for homogeneous layered media 2-37784  
 seismic velocity anisotropy, effect on time-term solns. of mantle refractor anisotropy 2-9955  
 seismic wave scattering in crust and mantle, anal. of mainly forward-scattered waves 2-9970  
 seismic wave scattering in lithosphere, evaluation of effective cross-section 2-6333  
 seismic waves, scatt. and attenuation of high-freq. body waves (1 to 25 Hz) in lithosphere 2-22924  
 seismic waves scattering, through crust and upper mantle with random lateral and vertical inhomogeneities 2-6330  
 seismotectonic deformation mechanism, use for earthquakes mechanisms and prediction 2-22938  
 Sevan ophiolite zone of Minor Caucasus, ultrabasic massifs (*Russian*) 2-47829  
 SH-waves, explicit transfer function, ray theory for layered media 2-22899  
 short-period elastic deformations of near-surface layers, evidence from geodetic data 2-10019  
 W. Siberia, Palaeozoic deposits study by combined use of refr. and refl. seismic waves 2-37867  
 Siberia, Precambrian rift-like structures and metallogenic significance 2-14430  
 Sierra el Virulento, mid-Tertiary ash flow tuffs in Mexico 2-42294  
 Sierra La Primavera, Mexico, geology of rhyolitic volcanic rocks 2-42284  
 Sierra Morena, S.Spain, strain in emplaced pluton 2-22928  
 Sierra Nevada, California, USA, crust struct. from seismic refr. obs. 2-28039  
 silicic magma chambers, compositional gradients rel. to magmatism 2-42285  
 silicic volcanics of Queensland and NSW, Australia 2-42289  
 Socorro, New Mexico, magma bodies geometry and physical props. from seismic refl. profiles 2-32513  
 Socorro, New Mexico, three-dimensional seismic vel. anomalies in upper crust 2-32433  
 solid tidal tilting, obs. in West Australian goldfields 2-9910  
 Somalia-Afar triangle region, active continental margin rel. to Somalia earthquakes of (1980) 2-28033  
 Spain, central Iberian Meseta, crust and upper mantle structure 2-22935  
 Spain, K-Ar dating in Badajoz Province (*French*) 2-42279  
 St. Francois Mountains, Missouri, USA, geochem. of Proterozoic volcanics 2-42297  
 St. Francois Mountains, Missouri, USA, geology of Precambrian calderas 2-42296  
 stress corrosion cracking, rel. to use of <sup>222</sup>Rn content of groundwater as earthquake precursor 2-32444  
 stress determination for earthquakes from seismic wave anal. (*Chinese*) 2-32454  
 stress distribution, effects of periodic relief of Earth's surface 2-6342  
 stresses, gravity-induced, near topography of small slope, calcs. 2-32467  
 structure from seismic torsional oscillation eigenperiods 2-18394  
 subducted lithosphere regional compensation, effect on geoid, gravity and topography 2-10014  
 subductin zone off W Nicaragua, large earthquake prediction at quiet zone within seismic gap 2-18384  
 subducting lithosphere, thermal stresses rel. to double seismic zones 2-52739  
 subduction complex in Franciscan assemblage, N. California 2-42321  
 Sunda forearc region (Sumatra), crust struct. from gravity data 2-32391  
 surface deformation, long-term, finite element modelling of preseismic fault slip process 2-32447  
 surface deformation in crustal setting with long surfaced non-uniformity 2-18412  
 suture zones, ancient, within continents, review 2-10000  
 Switzerland, gravity survey results and uplift of Alps 2-37826  
 Taiwan, gravity and mag. studies of Taoyuan and Hsinchu area (*Chinese*) 2-22977  
 Tangshan earthquake (1976) previous fault movements and stress accumulation, geodetic data anal. 2-52729  
 Taza region, E. Rif, Morocco, crust struct. and neotectonic nappes (*French*) 2-6335  
 tectonic folding, sutural folds as one of characteristic forms of deformational process 2-47863  
 tectonic rotations in extensional regimes, palaeomag. consequences for oceanic basalts 2-22889  
 tectonic stress increase in Izu Peninsula, rel. to underground mag. dipole representation of seismomagnetic effect 2-37778  
 tectonics, conf., Paris, France (July 1980) 2-48387  
 tectonics and landforms, book 2-38380  
 Thessaloniki (N Greece), crustal tectonics from source study of 1978 earthquake sequence 2-9953  
 tholeiites from ocean ridges and continents, Nd, Sr and Pb isotopes 2-52756  
 Tibet, active normal faulting 2-22961  
 Tibetan Plateau, seismic velocity struct. and tectonic implications 2-14425  
 tidal stress rate, correl. with volcanic earthquakes at Pavlof Volcano, Alaska 2-37779  
 tilt fields, local and regional, response of open channel aqueduct water levels 2-28058  
 Timna region of Israel, tectonic activity of faults since Miocene 2-22964



**Earth crust continued**

- E.Timor, tectonic significance of deform. and metamorphism of Aileu Formation 2-32509  
 Tokai district, Central Honshu, Japan, Quaternary and geotectonically measured crustal movements 2-32483  
 Tokyo area of Japan, crust struct. deduced by explosion seismology (*Japanese*) 2-18388  
 Transbaikalia, systems investigation of gravity anomalies, transition from morphologic to processional system 2-37742  
 Transverse Ranges, California, formation by subduction of Murray transform 2-28057  
 Transylvanian Basin mantle heat flow and crust base temp. (*Rumanian*) 2-32470  
 Transylvanian Depression heat flow correl. with crust struct. (*Rumanian*) 2-32471  
 Trinity peridotite, N California, petrology and petrogenesis 2-52780  
 N Tunisia, diapirs 2-22929  
 Turkish plateau, lateral vars. of high-frequency seismic wave propag. at regional distances 2-32443  
 Tuscany geothermal area, crust and mantle elec. and seismic vel. struct. (*German*) 2-52788  
 Twin Peaks, Utah, USA, gravity and thermal model of Tertiary volcanics 2-42292  
 Twin Peaks, volcanic complex, Utah, USA (late Cainozoic) 2-42293  
 Ukrainian Shield, Moho discontinuity model (*Russian*) 2-47831  
 NW United States, extent of Late Eocene-Early Oligocene unconformity 2-22945  
 E United States, implications for continental tectonics of geomg. var. meas. 2-14382  
 United States, lithosphere stress state rel. to intraplate earthquakes 2-9972  
 United States, S-wave attenuation regional variation and freq. depend. 2-28209  
 NE USA and Canada, seismicity, earthquakes and vel. struct. patterns 2-9988  
 USA-Atlantic continental margin, struct. and evolution 2-42311  
 Vancouver Island, B.C., Canada, precise gravity survey results 2-14377  
 Vancouver Island, Canada, subduction zone indicated by teleseismic data 2-10021  
 Venetian Alps (Italy), magneto- and biostratigraphy of Cretaceous-Eocene rocks 2-37793  
 Venezuela Basin structure, vel. depth profiles 2-42282  
 Victoria, Mexico, strain and displacement meas. for earthquake of 1980 June 9 2-32432  
 N. Vietnam, Mesozoic volcanic rock complexes comps. rel. to geological and tectonic conditions 2-52792  
 volcanic ash beds of western USA, late Cainozoic volcanism 2-42287  
 Volgograd area, oil and gas deposits rel. to gravimetric data (*Russian*) 2-47830  
 Voronezh Shield, seismic wave travel time anal. 2-6322  
 Vourinos Complex, N.Greece, island arc ophiolite 2-37798  
 Vreddefort, geochronology of deep profile through Archaean basement rel. to early crustal evolution 2-42306  
 Vreddefort crusted section, appl. of new interpretive procedure for whole rock U-Pb systems 2-42307  
 Vreddefort structure, implications of radioelement profile for continental heat flow 2-42305  
 Vreddefort structure, radioelement concs. in deep profile through Precambrian basement 2-42304  
 Washington State, USA, crustal strain obs. and tectonic implications 2-9986  
 weak crustal quakes with various focal depths, activity var. 2-52733  
 Yellowstone, Wyoming, USA, REE partitioning within volcanic rocks 2-42286

**Earth electricity** *see terrestrial electricity***Earth heat** *see terrestrial heat***Earth interior**

- see also Earth core; Earth crust; Earth mantle; tectonics; volcanology*  
 density boundaries irregularities, related elastic stresses 2-52769  
 free oscillations of rotating and non-rotating Earth 2-47811  
 geodetic measurement techniques allowing meas. of Earth interior props. (*Chinese*) 2-48016  
 geomagnetic anomalies, computation of spectrum of potential field due to three-dimensional homogeneous bodies (*Chinese*) 2-3097  
 internal flattening, Earth model with self-consistent representation 2-37789  
 magmatic differentiation processes, 'viscous plates' in gabbroic cumulate of Guergueli ophiolitic complex (*French*) 2-42278  
 material properties of Earth's interior, decade of progress 2-10001  
 central Pacific gravity field anomalies, satellite-satellite tracking obs. 2-6304  
 planet formation from solar nebula, composition and phase equilibria 2-6551  
 radiogenic heat distrib. in Earth's interior, determ. via Pontryagin's maximum principle 2-22936  
 rock elasticity, nonlinear behaviour deduced from Earth tides 2-2988  
 seismic scattering rel. to seismograms complexity, conference, Canberra, Australia, (1979 December 3 to 15) 2-6704  
 seismic wave, growth and decay of wave front intensity in isotropic nonlinear elastic medium 2-6326  
 seismic wave propagation, systematic classification of layer-induced transverse isotropy 2-9949  
 seismic waves, decoupling of P and S waves in inhomogeneous media 2-9968  
 seismic waves propagation, anal. of P-wave and Rayleigh wave amplitudes in N America 2-9951  
 stress accumulation and release, statistical anal. and models 2-2994  
 surfaces of discontinuity of displacements in bodies of planetary dimensions, boundary conditions 2-9983  
 thermal pressure of mantle minerals, results for MgO at high compression and high temp. 2-32493  
 viscosity variation in Earth mantle, assessment of estimation methods for activation volume 2-42352  
 CaO, electronic band struct. at lower mantle press. 2-52831  
 MSiO<sub>4</sub> (M = Hf, Zr, U, Th), phase transitions and densities for mantle conditions 2-52822  
 NaCl, Gruneisen parameter and ( $\partial T/\partial P$ ), and lower mantle conditions 2-32505  
 SrO, high-press. phase transition at 36 GPa 2-50843

**Earth lower mantle** *see Earth mantle***Earth magnetic field** *see geomagnetism***Earth magnetic field variations** *see geomagnetic variations***Earth mantle**

- Aleutian island arc, oceanic lithosphere subduction rel. to magmas petrogenesis 2-42355  
 alkaline igneous rocks origin, anal. in light of data on fluid mantle flow 2-37868  
 N America and Europe, comparison of upper mantle structs. 2-14424  
 anisotropic gradients for Pn waves 2-28043  
 Antarctica region, P-wave velocity struct. 2-27994  
 Archaean mantle heterogeneity, deduced from W.Australian rocks 2-28047  
 Arizona, terrestrial heat flow meas. rel. to Basin and Range province tectonics 2-22940  
 Arizona, USA, crust struct. indicative of past thinning process 2-9991  
 asthenosphere boundary layer detachment due to convective instability 2-14441  
 asthenosphere frictional heating on plate interactions, plateau uplift mechanism 2-18414  
 Atlantic, uppermost mantle seismic attenuation and velocity 2-42271  
 sub-Atlantic Ocean mantle, fine-scale isotopic heterogeneity 2-37808  
 Baikal rift zone, anomalous mantle rel. to temp. regime of Earth's crust 2-9982  
 base of mantle, seismic vel. and Q factor struct. 2-9989  
 Beijing-Sahalin profile, seismic waves vertical vel. structure. in mantle (*Chinese*) 2-2995  
 Benue Trough, Nigeria, evidence for Moho uplift from gravity surveys 2-14465  
 birth and growth (book) 2-23387  
 Bohemian Massif, crustal and mantle structure from Rayleigh wave dispersion 2-37801  
 Bohemian Massif, temp. and struct. of lithosphere 2-9995  
 British Isles upper mantle struct. from Rayleigh wave dispersion 2-9979  
 S California, USA, P<sub>n</sub> velocity anisotropy 2-28019  
 chemical differentiation during Early Archaean, evidence from 3800 Myr old crust in E India 2-6348  
 chemical evolution, rel. to hotspots and basalts trace elements conc. patterns 2-10002  
 passive continental margin development rel. to mantle convection 2-42332  
 continental region thermomechanical model stability 2-52768  
 convection, effects of spherical geometry 2-10024  
 convection as a boundary layer phenomena 2-47846  
 convection currents, inferred from gravity and heat flow data 2-10011  
 convection models, effect of mineral phase transitions 2-47847  
 convection process with lateral cooling laboratory expts. 2-14443  
 convection rel. to ocean floor bathymetry and heat flow, effects of lithosphere rigidity 2-18418  
 convective and thermal history of Earth 2-52773  
 convective instability, numerical model 2-32479  
 core-mantle boundary, calc. of internal flattening 2-37789  
 creep in Earth mantle, high-temp. meas. in forsterite (Mg<sub>2</sub>SiO<sub>4</sub>) single crystals 2-28068  
 Darfur Swell, Africa, hotspot uplift model rel. to gravity anomaly and isostatic compensation 2-18398  
 Dead Sea Rift, seismic vel. struct. of crust-mantle transition 2-37812  
 Dead Sea rift, struct. of crust and upper mantle 2-37811  
 Dead Sea-Jordan rift zone, crust struct., mag. and gravity study 2-37813  
 deep earthquakes of Japan and Okhotsk Seas, focal mechanism characts. 2-9957  
 East Pacific Rise, cond. determ. from EM active source sounding 2-37803  
 Fennoscandia, electrical crust-mantle struct. 2-47799  
 flow beneath oceanic spreading centres, deduced from ophiolites 2-47857  
 Galapagos spreading centre, mantle heterogeneity rel. to minor and trace element geochemistry of volcanic rocks 2-32514  
 geochem. fractionation processes 2-47851  
 geodetic measurement techniques allowing meas. of Earth interior props. (*Chinese*) 2-48016  
 global distribution of P-wave attenuation in upper mantle 2-42270  
 gravity field model with gradational-layered structs. 2-9911  
 Hawaiian hotspot, Cenozoic latitudinal shift and implications for true polar wander 2-14440  
 heterogeneities under oceanic ridges, scale limitations 2-32469  
 Hokkaido, Japan, crust and mantle struct., seismic study 2-42309  
 Honshu, Japan, sub-Moho mantle, Poisson's ratios investigation with three methods 2-9973  
 India, Palk Strait region, crust-mantle boundary currents and geomag. anomalies 2-27978  
 Indian Ocean, upper mantle struct. beneath Ninetyeast Ridge and Broken Ridge from surface 2-9980  
 inhomogeneities from gravity and seismic obs. 2-37734  
 Iranian plateau, lateral vars. of high-frequency seismic wave propag. at regional distances 2-32443  
 isotopic composition of mantle derived rocks rel. to Earth's history 2-52755  
 isotopic structure explained by mixing histories of magma reservoirs 2-52754  
 SW Japan, three-dimensional seismic struct. of subducting Philippine Sea plate 2-14448  
 Japan subcrustal earthquake mechanisms and plate tectonic interpretation 2-9936  
 layered convection, laboratory expts. and theoretical study 2-14442  
 lherzolite xenoliths from upper mantle, Pt and Pd minerals discovery 2-37864  
 Limagne graben, France, struct. of crust and upper mantle 2-37814  
 lithosphere, studies based on holographic principles 2-37780  
 magma melt segregation from partially molten source regions, role of melt density and source region size 2-22952  
 majorite (Mg,Fe)SiO<sub>3</sub>, upper mantle mineral, vibr. and compressional props. of high-press. phase 2-22973  
 S Mid-Atlantic Ridge temp. var. 2-42329  
 midocean ridge faults, serpentinization of mantle due to seawater circulation 2-52808  
 multiphase mantle, slow movements, Stefan type 1-D problem (*Russian*) 2-28044  
 New Guinea region, mantle mass flux determ. from plate consumption rates 2-10017



**Earth mantle continued**

- New Hebrides subduction zone, earthquake mechanisms and crust. struct. 2-14403
- oceanic mantle, carbonatite magma prod. under Santiago, Cape Verde Islands 2-37819
- olivine to spinel cryst. struct. transition at high-pressure 2-14462
- SW Pacific, geoid anomalies due to mantle subduction zones 2-14376
- central Pacific gravity field anomalies, satellite-satellite tracking obs. 2-6304
- Pacific long-period Rayleigh waves for upper mantle struct. 2-42324
- N Pacific Ocean, lithospheric age depend. of mantle melting and off-ridge volcano prod. rate 2-18417
- Pacific plate,  $Q_0$ -1 model from inversion theory (*Spanish*) 2-32421
- East Pacific Rise, differential shear-wave attenuation rel. to mantle props. 2-18419
- Pannonian Basin, Bohemian Massif, temp. and struct. of lithosphere 2-9995
- Pannonian basin (E.Europe), heat flow model of crust and mantle 2-22946
- partial melt anomalies, seismic and electrical constraints on conditions 2-18401
- phonolitic lavas, lherzolite bearing, geochemistry and evolution 2-22978
- PKP wavefield, Kirchhoff integral appl. 2-22897
- plate tectonics and mantle convection, simple global model 2-10022
- Poisson ratio of crust and upper mantle, rel. to transverse seismic waves parameters 2-47821
- postseismic rebound due to creep, multilayer model 2-32462
- Rhinegraben, seismic vel. struct. of crust-mantle transition 2-37812
- Rhinegraben, struct. of crust and upper mantle 2-37814
- Rhonegraben, France, crust and upper mantle struct. 2-37814
- Rio Grande rift, New Mexico, USA, uppermost mantle P-wave vel. struct. 2-32436
- rock elasticity, nonlinear behaviour deduced from Earth tides 2-2988
- rocks partial melting at high pressure, volcanic rock origin 2-37800
- Roosevelt Hot Springs area, Utah, USA, underlying body of low seismic vel. 2-28041
- San Andreas fault system, deep struct., seismic sounding study 2-9992
- N Scotland, Moho-offset 2-22934
- seismic velocity anisotropy, effects of refractor topography and overburden anisotropy on time-term solns. 2-9955
- seismic velocity structure lowest 200 km 2-32458
- seismic wave interaction with rough core-mantle boundary, observable effect 2-9969
- seismic wave scattering in crust and mantle, anal. of mainly forward-scattered waves 2-9970
- seismic wave scattering in lithosphere, evaluation of effective cross-section 2-6333
- seismic waves, recording system and mantle wave magnitude scale 2-23124
- seismic waves, scatt. and attenuation of high-freq. body waves (1 to 25 Hz) in lithosphere 2-22924
- seismic waves, scatt. on underside refl. at core-mantle boundary 2-6332
- seismic waves scattering, through crust and upper mantle with random lateral and vertical inhomogeneities 2-6330
- Shikoku, Japan, uppermost mantle struct., seismic study 2-18404
- siderophile element abundances in upper mantle, evidence for sulphide signature and equil. with core 2-9981
- South Africa, mantle heat flux determ. from Vredefort radioelement profile 2-42305
- Spain, central Iberian Meseta, crust and upper mantle structure 2-22935
- structure from seismic torsional oscillation eigenperiods 2-18394
- structure of upper mantle from earthquake body waves (*Russian*) 2-28045
- thermal convection in upper mantle 2-22937
- thermal pressure of mantle minerals, results for MgO at high compression and high temp. 2-32493
- thermoconvective waves producing surface movements 2-10018
- Tibetan Plateau, seismic velocity struct. and tectonic implications 2-14425
- Tonga Benioff zone, P-wave velocity and thermal struct. 2-9959
- Transylvanian Basin mantle heat flow and crust base temp. (*Rumanian*) 2-32470
- trenches in oceanic crust, geoid anomalies 2-47845
- Trinidad upper mantle anal. from S-wave delay data 2-37802
- Turkish plateau, lateral vars. of high-frequency seismic wave propag. at regional distances 2-32443
- Tuscan geothermal area, crust and mantle elec. and seismic vel. struct. (*German*) 2-52788
- two layer mantle convection and lower mantle radioactive elements depletion 2-28042
- Ukrainian Shield, Moho discontinuity model (*Russian*) 2-47831
- upper mantle parameters derived from geoid anomalies of cooling lithosphere 2-32460
- NE USA and Canada, seismicity, earthquakes and vel. struct. patterns 2-9988
- viscosity of mantle below Lake Bonneville, USA, and isostatic compensation 2-52810
- viscosity variation in Earth mantle, assessment of estimation methods for activation volume 2-42352
- Voronozh Shield, seismic wave travel time anal. 2-6322
- CaO, electronic band struct. at lower mantle press. 2-52831
- FeO, cryst. struct. at lower mantle conditions 2-9984
- MSiO<sub>3</sub> (M=Hf, Zr, U, Th), phase transitions and densities for mantle conditions 2-52822
- MgO, cryst. struct. at lower mantle conditions 2-9984
- NaCl, Gruneisen parameter and ( $\partial T/\partial P$ ), and lower mantle conditions 2-32505
- SrO, high-press. phase transition at 36 GPa 2-50843

**Earth orbit**

- dynamical equinox, differing definitions in rotating reference frame and inertial frame 2-6520
- mean obliquity, differing definitions in rotating reference frame and inertial frame 2-6520
- Pleistocene orbital and climatic variations, role of glacial Arctic Ocean ice sheets 2-37876
- precession, numerical expressions 2-27968

**Earth rotation**

- see also time and latitude*
- 11-year term, phase relation with solar cycle signal in air temp. in N America 2-14539

**Earth rotation continued**

- astronomical latitude in Europe, long period terms, non-polar nature 2-14756
- atmosphere responsible for 50 day period rot. variation 2-37738
- atmospheric acoustic-gravity waves in high latitudes, rotation effects 2-14641
- atmospheric disturbances caused by rotation 2-14530
- axis inversion by heavy object close encounter, dynamical objection 2-2984
- Chandler wobble and earthquakes 2-18356
- continental drift effects 2-22876
- inner core rotation due to geomag. dynamo effects 2-52724
- dynamical equinox, differing definitions in rotating reference frame and inertial frame 2-6520
- dynamo effect, mechanism 2-22881
- earthquake triggering by Earth rotation ang. vel. changes 2-42272
- equation of time, automatic correction in non-skiatrical heliochronometer 2-3198
- Fedorov-Yumi pole coord. system comparison 2-18362
- geodesy, gravity slippage and indifferent equil. shape of Earth (IES-geoid) 2-6298
- inertial rotation measurements using passive ring resonator method, geophys. and relativity appl. 2-23702
- mean obliquity, differing definitions in rotating reference frame and inertial frame 2-6520
- Merate Observatory time and latitude results (1980) 2-32388
- nonpolar latitude variations of BIH system 2-27969
- nutation components in longitude and obliquity in IAU (1976, 1979) System of Fundamental Astronomical Constants 2-42582
- Paris Observatory time and latitude results (1979-80) (*French*) 2-32389
- polar motion, analysis using meteorological excitation function 2-37735
- polar motion, excitation mechanisms 2-22878
- polar motion Chandler component estimation 2-47787
- polar motion features (1900 to 1978) anal. of ILS and IPMS data 2-9913
- polar motion from satellite tracking data, atmospheric models effect 2-9904
- polar motion wobble oscillating with half Chandler period 2-14375
- pole shift due to asteroid collision 2-22874
- precession, numerical expressions 2-27968
- satellite Doppler positioning appl. 2-10176
- tidal variations, short period oscils. 2-9905
- time adjustment on 1982 June 30, positive leap second 2-52697
- Tokyo Astronomical Obs., Time and Latitude Bulletins (April-June 1981) 2-32811
- Tokyo Astronomical Obs., Time and Latitude Bulletins (Jan.-March 1981) 2-6521
- true polar wander, implications of Cenozoic latitudinal shift of Hawaiian hot spot 2-14440
- universal time, new definition 2-42580
- variations in 1976-8 due to 500 mb level westerly zonal winds 2-9915
- variations of rot. between 1970 and 1979 AD, lunar laser ranging obs. 2-52698
- variations over last 2000 years, effects solar activity and tidal friction 2-52699
- water exchange between ocean, atmos. and ice caps, explanations of variations 2-27973

**Earth satellites *see artificial satellites; Moon*****Earth structure**

- see also Earth composition; Earth interior*
- Baikal Rift Zone, deep crustal struct. from isostasy 2-14446
- birth and growth (book) 2-23387
- Bohemian Massif, crustal and mantle structure from Rayleigh wave dispersion 2-37801
- British Isles, book 2-33253
- Cambay Basin, India, Mehmadabad-Billimora profile crustal struct. seismic soundings 2-18403
- Canary Islands, crustal structure from seismic refraction 2-14418
- continental crust, structure, petrology and evolution, cross-section study 2-37796
- core models 2-47833
- geodynamic evaluation of external Hellenids, Southern Peloponnus, Greece (*French*) 2-18406
- Goddard pendant, Sierra Nevada, California, gravity model and structural implications 2-32512
- Guerande, France, primary granitic structures (*French*) 2-10008
- Hercynian progressive shearing deformation, Monts d'Arree, France (*French*) 2-18407
- Hess basin, E.Pacific, crustal structure and seismicity 2-22944
- W. Himalaya, structural evolution of crustal section 2-37807
- inhomogeneities distrib. in crust and mantle, results from seismic waves scatt. props. anal. 2-9970
- inner core, struct. from obs. of spheroidal shear modes 2-32463
- Ivrea Zone and S.Calabria, uplift rel. to Hercynian orogeny in S.Europe 2-37832
- Kolyvan'-Tomsk folded zone and adjacent areas, struct. according to geological and geophysical data 2-47865
- lithosphere sharp mechanical decoupling, temp. sensitive hydrolytic weakening 2-32464
- Madagascar Ridge deep struct. comparison with Crozet Plateau 2-18402
- many fixed centres problem, appls. to geophysics 2-42584
- Mont Dore volcanic massif, structure and geothermal implications from aeromagnetic data (*French*) 2-22927
- Nova Scotia continental margin, crustal structure 2-37790
- NW Philippine Sea, conductivity structure under Minami-daito Island 2-47807
- Qinghai-Xizang Plateau, crustal struct. from group rel. dispersion curves of Rayleigh waves (*Chinese*) 2-2999
- randomly stratified Earth model, seismic waves propagation 2-32445
- seismic torsional oscillation eigenperiods used for Earth struct. model 2-18394
- seismic waves scattering, models for seismic codas on Earth and Moon 2-6331
- Siberia, Precambrian rift-like structures and metallogenic significance 2-14430
- Spain, central Iberian Meseta, crust and upper mantle structure 2-22935
- surfaces of discontinuity of displacements in bodies of planetary dimensions, boundary conditions 2-9983
- upper mantle structure from earthquake body waves (*Russian*) 2-28045



earth surface processes *see* geomorphology

Earth third layer *see* Earth mantle

Earth upper layer *see* Earth mantle

## earthling

hospital installations power supplies and back-up sources in case of failure 2-47472

earthquake recorders *see* seismometers

## earthquakes

*see also* seismology

Alaska Peninsula seismic gap (Shumagin) and tectonic setting 2-9961

Alaskan earthquake of 28 March 1964, seismic wave-generated atmospheric infrasound 2-47955

Alay, USSR, precursory geomag. variations to Nov. 1978 quake 2-32425

Albstadt, Germany, 1978, earthquake damage to equipment, rel. to reactor safety (*German*) 2-538

Aleutian Islands, magnitudes and Rayleigh wave spectra of underground explosions and earthquakes 2-14414

Altai-Sayan mountains, USSR, past seismicity deduced from seismoglyphs 2-52748

Andaman-Nicobar region and Burma, tectonic stresses and regional seismicity rel. to geodynamics 2-14450

central Asia, foci mechanism features 2-22918

N Atlantic Ridge, migration of seismic events 2-52735

Baikal Rift Zone, depth of earthquakes and seismic controlling factors 2-14413

Benioff zone earthquake, hypocentre distance from slab-asthenosphere contact 2-52736

Bermuda intraplate earthquake of March 1978, significance of event 2-32434

Bouvet Island, S. Atlantic, microearthquake survey 2-47822

building structures, regulations for earthquake damage limitation 2-37767

Burma and Andaman-Nicobar region, tectonic stresses and regional seismicity rel. to geodynamics 2-14450

S. California,  $^{226}\text{Ra}$  and  $^{222}\text{Rn}$  in groundwaters, precursory phenomena 2-22914

California, Bishop Oct. 1980; strain accumulation 2-37764

central California, He gas in soil as precursory phenomenon 2-22908

California, Mammoth Lake quake in May 1980, strain accumulation 2-37764

California, prediction using groundwater stable isotope ratios 2-22907

NE Caribbean, small earthquake source parameters and scaling relations 2-27999

Carlisle, England, geomagnetic precursors to 1979 event 2-47816

catalogue of magnitudes of large shallow earthquakes (AD 1904 to 1980) 2-9971

catalogue of shallow events in central Japan (1904-25) (*Japanese*) 2-32418

Charleston, S. Carolina, 1886, rel. to Appalachian detachment 2-42330

China, geochemical methods for prediction 2-32427

cloud structure as precursor 2-22921

clustering, 2D model, prediction appl. 2-52740

Cocos plate, Pn, Sn phases from earthquakes on subducting margin 2-32431

Corinth, Greece, Feb. and March 1981 quakes and assoc. faulting 2-52731

Coyote Lake, California, Aug. 1979, strong ground motion of alluvium 2-28009

crustal strain and earthquakes rel. to well water chemical changes 2-22906

crustal stress determination from seismic wave anal. (*Chinese*) 2-32454

Dead Sea region, evidence of historical quakes found by excavation of Jericho fault 2-37787

deep earthquakes of Japan and Okhotsk Seas, focal mechanism characts. 2-9957

depth resolution of central Asia earthquakes by moment tensor inversion of Rayleigh wave data 2-14404

dislocation model for Rn response to distant events 2-32429

Earth interior, stress accumulation and release, statistical anal. and models 2-2994

El Asnam, Algeria, 1980 October 10, rupture development relations 2-37769

epicentre estimator distributions 2-22905

epicentre location, automatic method 2-23122

fault displacement, finite element description 2-28011

fault motion random model, time dependent case 2-37805

fault movement, permeability and frictional props. of San Andreas fault gouges 2-32492

fault rupture, kinematic analysis of rotated fractures 2-28024

fault rupture model, extension of 2-D shear crack with cohesion 2-32426

fault slip, results from geophysical expts. in large scale tests 2-32495

focal mechanisms in double seismic zones, role of thermal stresses in subducting lithosphere 2-52739

focal radiation pattern of strong earthquake, study using P-wave envelopes 2-6325

frictional fault plane slipping in three dimensions, numerical simulation of scalar analogue 2-9952

Friuli, Italy, May-Sept. 1976 quakes, time domain model 2-28002

Garm region USSR, seismotectonic deformation from earthquake anal. 2-22939

Central Germany earthquake of March 6, 1872, intensity estimate 2-14399

granite fault, precursory slip due time-depend. friction 2-14461

ground displacement determ., use of strong motion 2-52943

ground motion anal., numerical simulation 2-2998

Guadeloupe, earthquake hazard rel. to seismic gap in Lesser Antilles arc 2-22901

Haicheng, precursory phenomena to 1975 Chinese earthquake 2-18387

Hakodate City, Japan, seismic intensities due to local earthquakes (*Japanese*) 2-18386

Higashi-Izu earthquake, Japan, precursory tectonomagnetic precursor to Nov. 1980 event 2-18369

Hindukush events, complex seismic signatures and azimuthal study 2-28038

Hokkaido, Japan, microearthquake activity 2-52751

Iceland, precursory Radon changes before earthquakes 2-32435

Indonesian Arc data used to creat tectonic flux maps 2-18385

Indonesian earthquake (Aug. 1977) generated teleseismic waves, mode anal. 2-27992

## earthquakes continued

intensity of earthquakes, by max. likelihood estimation method (*German*) 2-14395

Izu Peninsula, Japan, 1980 earthquake and geomag. changes (*Japanese*) 2-18378

E. Izu Peninsula, Japan, 1980 quake correl. to Sagami bay deep quake 2-18368

Izu Peninsula, Japan, earthquake swarm, June and July 1980 obs. (*Japanese*) 2-18370

Izu Peninsula, Japan, geodetic survey, 1979-80 obs. (*Japanese*) 2-18376

E. Izu Peninsula, Japan, probability prediction of 1980 earthquake 2-18367

Izu Peninsula, Japan, seismicity from 1901 to 1980 and foreshock activity characts. 2-32415

Izu Peninsula (Japan) earthquake swarm, 1980, rel. to struct. of Earth upper crust 2-32456

Izu Peninsula earthquake swarm, 1980, seismic activity mode 2-32414

Izu-Hanto-Toho-Oki, 1980 earthquake, Japan, pre-and post-event gravity surveys (*Japanese*) 2-18377

Izu-Hanto-Toho-Oki, 1980 earthquake in Japan, damage report (*Japanese*) 2-18380

Izu-Hanto-Toho-Oki, 1980 earthquake in Japan, precursory elec. resist. changes (*Japanese*) 2-18379

Izu-Hanto-Toho-Oki, 1980 earthquake pre- and co-seismic crust tilt obs. 2-18375

Izu-Hanto-Toho-Oki, June 1980 earthquake, Japan, 'strong motion obs. 2-18372

Izu-Hanto-Toho-Oki (Japan), June 1980 earthquake, precursory water level changes (*Japanese*) 2-18373

Izu-Hanto-Toho-Oki earthquake, Japan, location of June 1980 event (*Japanese*) 2-18371

Izu-Oshima Kinkai (Japan), 1978 January 14, underground mag. dipole representation of seismomagnetic effect 2-37778

SW Japan, earthquake rupture mode rel. to three-dimensional struct. of subducting Philippine Sea plate 2-14448

Japan, Miyagi Pref., N. Honshu, seismicity and earthquake mechanisms 2-14394

Japan, probability prediction method for earthquakes 2-32446

NE Japan arc, vertical land movement and microearthquake activity 2-10210

Japan subcrustal earthquake mechanisms and plate tectonic interpretation 2-9936

Japanese earthquakes, preseismic terrestrial elec. resist. changes (*Japanese*) 2-9940

Jiangsu-Shandong-Anhui-Henan region focal mechanism anal., tectonic stress field (*Chinese*) 2-6316

E. Kentucky, 1980 July 27, Rn and hydrological precursors 2-22916

Kern County earthquake, California USA, deformation and White Wolf Fault 2-9963

Kilauea, Hawaii, deep volcanic tremor and magma ascent 2-32473

Kirgizia, 2-9958

Kobuk Trench, Alaska, unusual earthquake sequence, Oct. 1980 AD 2-28023

Kumamoto, S.W. Japan, periodic microearthquake activity in 1978 (November) 2-9939

Kurile Benioff zone earthquake, hypocentre location 2-52736

lithosphere-asthenosphere postseismic rebound due to creep, multilayer model 2-32462

Livermore Valley, California, Jan. 1980 earthquake sequence 2-37763

Long Valley caldera, California, attenuation of P and S waves in magma chamber 2-32472

longitudinal wave radiation from focus 2-6328

macroseismic intensity assessment from historical records and press reports 2-14398

macroseismic intensity scale (MSK-64) for earthquake magnitude 2-14400

magnitude determination based on seismic coda envelopes 2-9956

Mariana island arc region, ocean bottom seismometer study of seismic activity 2-32416

Massachusetts, USA, focal depth and mechanism of 23 Nov. 1980 quake 2-28010

mechanism, theory of time-depend. rupture 2-14406

mechanisms and prediction from seismotectonic deformation anal. 2-22938

Mica Reservoir (McNaughton Lake), 1973-8 seismicity 2-52730

microearthquakes rel. to high pore press. in low permeability granitic rock 2-42267

Middle America Trench, earthquake parameters and subduction process 2-52737

Miura peninsula, Japan, preseismic resistivity changes (*Japanese*) 2-18391

Miyagiken-oki, Japan, precursory seismicity before 12 June 1978, quake 2-18381

Montenegro, Yugoslavia, April 1979, source orientation and strength 2-32449

Montenegro, Yugoslavia, March-July 1979 earthquake sequence 2-28003

near-field surface motions excited by radiation from slip zone of arbitrary shape, anal. 2-32441

Nemuro-oki, 1973, post quake aseismic faulting 2-3006

New England, fault plane solns. and compressional stress 2-22894

New Hebrides subduction zone, earthquake mechanisms and crust. struct. 2-14403

W Nicaragua, quiet zone within seismic gap as possible location of future large earthquake 2-18384

NPP Angra 2 reactor building, pile foundation seismic anal. 2-4075

Oaxaca, Mexico, source mechanism of 29 November 1978 event 2-9965

oceanic transform fracture zones, strain release mechanism 2-52802

Okhotsk-Anadyr rift, NE. Asia continental margin rift system, recent seismicity 2-37810

Osima-O-Sima volcano (island off Japan), geothermal and seismicity obs. (*Japanese*) 2-6350

S Central Pacific, location of intraplate earthquake clusters 2-27995

Palmdale Bulge area, groundwater Rn anomaly correl. 2-22910

E Panama Basin subduction from earthquakes anal. 2-37834

parameter evaluation from macroseismic data, using computer method 2-14401

Parkfield, California, P-wave spectra of fore- and aftershocks 2-37762

Pavlov Volcano, Alaska, volcanic earthquakes correl. with solid Earth tide 2-37779

polar motion excitation mechanism 2-22878



**earthquakes continued**

- precursor seismic activity, time and space scanning technique (*Chinese*) 2-32652
- precursors, Ar/He var. in mineral spring gas emission 2-6334
- precursors and development of earthquake sources (*Chinese*) 2-32410
- precursory fault creep and crystal deformation (*Chinese*) 2-32409
- precursory soil He gas content in central California 2-22908
- precursory U concs. and  $^{234}\text{U}/^{238}\text{U}$  activity ratios in groundwater 2-22913
- prediction, appl. of telemetry ocean bottom press. obs. system at 2200 m 2-32678
- prediction, based on statistical estimates of seismic risk 2-28025
- prediction, memory, relaxation and microfracturing in dilatant rock 2-28069
- prediction, seismicity parameters preceding moderate to major earthquakes 2-32440
- prediction, tiltmeters function and prospects 2-18590
- prediction, worldwide data on  $^{222}\text{Rn}$  content of groundwater as earthquake precursor 2-32444
- prediction and b-value determination methods (*Chinese*) 2-32653
- prediction and random stress model for seismicity statistics 2-32430
- prediction in Sichuan and Yunnan provinces, atm. precipitation anal. (*Chinese*) 2-32412
- prediction using groundwater stable isotope ratios in seismically active regions of California 2-22907
- prediction using Rn and Hg emission from soil 2-22915
- preseismic fault slip process for long-term anomalous surface deforms, finite element modelling 2-32447
- Qainat, Iran, earthquakes of 14 and 27 Nov. 1979, source parameters 2-28001
- recurrence interval estimation methodology 2-18393
- Rikuu, Japan, August 1896 event, surface faults (*Japanese*) 2-9941
- Rumania 1977 March 4, slip-fault dislocations, dip angle and azimuthal orientation 2-47819
- rupturing of plate boundaries, stress redistribution following earthquake 2-14444
- San Andreas fault earthquake at Pacifica, 28 April 1979 AD 2-27998
- NW Scotland, 1974 August swarm 2-22896
- seismic energy released by foci, appl. to Vrancea earthquake (*Rumanian*) 2-32450
- seismic signature, discrimination between nuclear detonation, pattern recognition techniques appl. 2-37996
- seismo-geochemical precursors, mechanisms 2-32428
- seismogenic faulting, implications of serpentinite mechanical and frictional behaviour 2-37863
- shallow crust quakes, compression and dilatation waves radiation 2-22920
- E Shimane, Japan, May 1978 earthquake sequence and its prediction 2-9938
- Sichuan Province, China, tectonic movement and stress field, earthquake P-wave solns. (*Chinese*) 2-32478
- slow earthquake source mechanism 2-47825
- Socorro, New Mexico, hypocentres and three-dimensional vel. anomalies in upper crust 2-32433
- Somalia, East Africa, 1980, epicentres location, time 2-28033
- source mechanism, implications of three-dimensional spontaneous rupture propag. 2-9954
- source parameter determination from long period surface wave data 2-10208
- source parameter determination method using macroseismic data 2-14402
- Southern Ocean, 11 May 1976 at 52°S, 140°E focal mechanism 2-22925
- spatial distrib., four-point moment function 2-22903
- spatial distrib., three-point moment function 2-22902
- spectrum compatible earthquake simulation, comparison of the methods 2-27985
- St. Elias, Alaska, USA, Feb. 1979, mantle wave magnitude 2-27997
- stick-slip events, fracture energy in large scale biaxial expt. 2-18383
- strike slip dislocations in elastic half space with strain nuclei localised distrib. 2-9950
- strike-slip fault motion induced by incident seismic wave 2-37761
- strike-slip faulting in bi-directionally varying crust, model 2-37825
- strong ground motion calc. for finite fault quake 2-27986
- strong ground motion due to inhomogeneous faulting, model of peak vel. and accel. 2-9962
- Sumba, 1977 August 19, focal depths and moment tensor representations of assoc. shallow earthquakes 2-32442
- surface wave magnitude and station correction (*Chinese*) 2-32413
- Tabas, Iran, 16 Sept. 1978 quake, source parameters 2-28001
- Taiwan, possible effects of Earth tides on seismicity 2-22875
- Tangshan, 1976, precursory fault creep (*Chinese*) 2-32409
- Tangshan, China, 1976 July 28, foreshocks and aftershocks, mechanism (*Chinese*) 2-6315
- Tangshan, China, 1976 July 28, vars. in microseisms before and after earthquake (*Chinese*) 2-2996
- Tangshan, precursory phenomena to 1975 Chinese earthquake 2-18387
- Tangshan (1976), previous fault movements and stress accumulation, geodetic data anal. 2-52729
- Tangshan earthquake and the variation of  $\text{CO}_2$  content in hot-well water in Tianjin 2-14408
- Thessaloniki, Greece, 1978 earthquake sequence 2-47812
- Thessaloniki, Greece, moment tensor of June 1978 quake 2-28013
- Thessaloniki (N Greece) earthquake sequence, 1978, source study 2-9953
- Tibet, Sept. 14 1976, source characts. of intermediate depth event 2-2997
- time of origin and depth of focus, model calcs. 2-28020
- Tokai district, Central Honshu, Japan, earthquakes rel. to crustal movements 2-32483
- Tokyo Bay, earthquake swarm activity during 1979 (summer) 2-9937
- Tonga region, 1977 June 22, obs. of inner core spheroidal shear modes 2-32463
- Transcarpathian (Ukraine) earthquakes of 1979, dynamic characts. (*Russian*) 2-47817
- Transcarpathian region, premonitory geomagnetic variations (*Russian*) 2-47805
- triggering by tidal stress tensor (*Chinese*) 2-32411
- tsunamigenic earthquakes of NW-Pacific, physical size 2-42273
- Turkey, prediction of large quakes using earthquake swarm data 2-47813
- Turkey-Tibet region, seismicity rel. to present plate tectonics 2-14449
- Umbria, Italy, anomalous seismic vel. prior to 1979 and 1980 quakes 2-47818

**earthquakes continued**

- United States, lithosphere stress state rel. to intraplate earthquakes 2-9972
- central United States, seismic risk estimates 2-22895
- NE USA and Canada, seismicity, earthquakes and vel. struct. patterns 2-9988
- Vianca, Rumania (1977 March 4) dislocation mechanisms, wave directivity, kinematic effects 2-52741
- Victoria (Mexico), 1980 June 9, strain and displacement meas. 2-32432
- volcanic tremor ground motion, fluid driven crack model 2-14405
- Vrancea, 1977 March 04, crustal fault stress as precursor (*Rumanian*) 2-32452
- Vrancea, 1977 March 4, isoseismal map (*Rumanian*) 2-32451
- Vrancea, Rumania, 1952-76 epicentres (*Russian*) 2-28035
- water level changes accompanying fault creep 2-32439
- water level changes as precursors 2-22909
- weak crustal quakes with various focal depths, activity var. 2-52733
- World seismicity at upper end of magnitude scales 2-28012
- Xinfengjiang Reservoir induced earthquakes, focal and tectonic stress fields (*Chinese*) 2-6317
- Yunnan, China, earthquake distrib. rel. to stress field var. (*Chinese*) 2-32410

EAS see cosmic ray showers and bursts

Eberhard effect see photographic materials

ebullition see boiling

e.c.g. see electrocardiography

echelles see diffraction gratings

echelons see diffraction gratings

**echo**

- see also anechoic chambers; architectural acoustics; reverberation; sonar
- acoustic panels echo-reduction meas., modified Prony method approach 2-16155
- atmosphere, effect of gravity waves on specular echoes observed by Poker Flat MST radar 2-32566
- lower atmosphere, preliminary results from echo sounding 2-23135
- flutter echo generation and suppression in spherical domes 2-50005
- ionosphere, auroral, meas. of long delayed radio echoes 2-32718
- pulse-echo systems, analogue implementation of analytic signal processing 2-35002
- quasimonochromatic outgoing radiation pulse reflection by random surface, diffractal echoes 2-15040
- radar echoes from pre-monsoon squalls over Dum Dum, India, 1975 to 1979 2-3066
- radio-echo sounding of glacier beds, theory and appls. 2-10085
- singularity expansion method, physical content 2-4442
- solar radar echoes, new interpretation involving low-hybrid waves 2-10366
- spherical targets, echo signal scatt. calc. 2-4664
- thunderstorms radar echoes, relation of radar-estimated rainfall to satellite-based intensity 2-14555

ECL see emitter-coupled logic

**eclipses**

see also solar eclipses

- V603 Aquilae (Nova Aquilae 1918), eclipse times meas. rel. to orbital period 2-48254
- † Aurigae, UV spectrum during 1979-80 eclipse rel. to circumstellar envelope struct. 2-3269
- UW Canis Majoris, massive interacting binary star, orbital period from eclipse timings 2-38238
- δ Capricorni, eclipsing Am star, photoelectric obs. and primary eclipse time 2-28509
- ST Carinae, eclipsing binary, photoelectric minima obs. rel to ephemeris and light and colour curves 2-38240
- MT Cassiopeiae, contact binary with complete eclipses, times of minima and light curves from BV obs. 2-42719
- VV Cephei, photometric obs. during 1976-78 eclipse (*Italian*) 2-10486
- CI Cygni, eclipsing symbiotic star, photoelectric obs. during egress from eclipse 2-38204
- WW Draconis, eclipsing RS Canum Venaticorum star, primary min. time and new light elements 2-42718
- TW Draconis, semidetached binary, eclipse times rel. to short-term period var. and mass transfer 2-14884
- Io, post-eclipse brightening,  $\text{SO}_2$  condensation/sublimation 2-32902
- Io posteclipse brightening, search by Voyager spacecraft 2-3213
- LU Lacertae, W Ursae Majoris star, B-band light curve and eclipse times 2-23327
- VZ Librae, W Ursae Majoris star, photoelectric minima and light curves from UBv photometry 2-23329
- V1016 Orionis (θ<sup>1</sup> Orionis A), eclipsing binary, photoelectric UBv photometry and primary eclipse time 2-53322
- U Pegasi, W Ursae Majoris star, times of photoelectric minima (1980 September 17 to 21) 2-23328
- i Persei, b-band photometry rel. to eclipse phases 2-53323
- AI Phoenixis, solar-type eclipsing binary, optical obs. of primary min. with IUE satellite 2-38245
- Titan eclipsed by Saturn, atm. anal., visible/IR obs. 2-32945
- AH Virginis, W Ursae Majoris star, primary min. time rel. to orbital period 2-6637
- ER Vulpeculae, short-period RS CVn-like star, identification of primary min. as occultation 2-38244

**eclipsing binary stars**

- Algol binaries, mass loss and transfer, models 2-3276
- Algol binaries, totally eclipsing, cool subgiants brightness var. due to transfer events, obs. 2-28497
- Algol type binary, totally eclipsing, light curve, effect of uvby system transformation revisions 2-53251
- RT Andromedae, 1981 UBVR photometry of RS CVn binary 2-53326
- o Andromedae, emission on 1981 Nov. spectrograms, UBv luminosity 2-28512
- RT Andromedae, short-period eclipsing binary, variable light curves anal. 2-28505
- V337 Aquilae, evidence for post mass exchange stage from revised photometric elements 2-3275
- V1343 Aquilae, model involving neutron star and precessing disc, photometry anal. (*Russian*) 2-14889
- V1343 Aquilae, search for variability using normalised factorial moments (*Russian*) 2-14890
- V603 Aquilae (Nova Aquilae 1918), photometric obs. rel. to orbital period 2-48254



## eclipsing binary stars continued

- V1343 Aquilae (SS 433), 6.3-day modulation of relativistic radial vel. curve 2-53285  
 V1343 Aquilae (SS 433), mass loss rel. to X-ray and radio emission 2-42700  
 V1343 Aquilae (SS 433), possible additional relativistic effects 2-28473  
 V 1343 Aquilae (SS 433), spectral anal., orbital motion and accretion disk, spectral obs. 2-38190  
 V1343 Aquilae (SS 433), spectrum short time scale Doppler and intensity var. 2-33026  
 EO Aurigae, early-type eclipsing binary, photoelectric light curve and photometric elements 2-33078  
 † Aurigae, supergiant+dwarf, 1979-1980 eclipse, interaction region shock-fronts, UV obs. 2-38234  
 † Aurigae, UV spectrum during 1979-80 eclipse rel. to circumstellar envelope struct. 2-3269  
 44=i Bootis, W Ursae Majoris star, chromospheric emission, UV obs. 2-3271  
 44 Bootis, W Ursae Majoris type star, photoelectric light curve obs. 2-42822  
 CK Bootis (HD 128141), W Ursae Majoris star, photoelectric light curves for 1977 and (1978) 2-23325  
 Z Camelopardalis, dwarf nova, H $\alpha$ -obs. at standstill 2-28469  
 SV Camelopardalis, RS CVn star, flare activity, UVB obs. 2-38236  
 AC Cancri, possible ex-nova, UVB photometry 2-42702  
 UW Canis Majoris, massive interacting binary star, orbital period from eclipse timings 2-38238  
 UW Canis Majoris, UV spectrum obs. 2-3274  
 AM Canum Venaticorum, oscils. and period, obs. 2-42711  
 † Capricorni, eclipsing Am star, photoelectric obs. and primary eclipse time 2-28509  
 St Carinae, photoelectric minima obs. rel to ephemeris and light and colour curves 2-38240  
 GG Carinae, system struct. involving shell expansion, visible spectra obs. 2-53331  
 YZ Cassiopeiae, light curve interpretation accuracy 2-33067  
 MT Cassiopeiae, contact binary with complete eclipses, times of minima and light curves from BV obs. 2-42719  
 YZ Cassiopeiae, radii, mass, age and rot., visible spectral obs. 2-38233  
 AR Cassiopeiae, spectroscopic orbit and rot. vel. 2-42713  
 ST Centauri, UVB light curves, spectral classification and photometric solns. 2-10477  
 V716 Centauri (HD 124195), UV obs. of eclipse and identification 2-23326  
 EM Cephei, B-band light curve and photometric elements 2-38241  
 AH Cephei, B-type eclipsing binary star, spectroscopic obs. 2-38242  
 V338 Cephei, light curve, BV obs. 2-38239  
 VV Cephei, photometric obs. during 1976-78 eclipse (Italian) 2-10486  
 VV Cephei, supergiant, H $\alpha$  line anal. during 1976-8 eclipse 2-10488  
 WX Ceti, WZ Sagittae star, visible spectral obs. 2-38212  
 AA Ceti (HD 12180A), radial vel. obs. and identification of HD 12 180B as binary star 2-48279  
 5 Ceti (HR 14), new and pul ling variable star, photoelectric photometry 2-3277  
 RW Comae Berenice, W Ursae Majoris star, R-band photometry 2-18780  
 U Coronae Borealis, orbital var., possible third body, photometry obs. 2-14887  
 V1425 Cygni, B-type eclipsing binary star, spectroscopic obs. 2-38242  
 EM Cygni, dwarf nova, accretion disk spectra anal. and component masses, spectral obs. 2-10418  
 CI Cygni, eclipsing symbiotic star, photoelectric obs. during egress from eclipse 2-38204  
 CI Cygni, symbiotic eclipsing binary, viable spectral obs. (French) 2-33035  
 CI Cygni, symbiotic star 's-process episode' as eclipse ingress 2-48249  
 Cygnus X-1, black hole models with/without accretion disc, UVB anal. (Russian) 2-14891  
 Cygnus X-3, eclipsing binary model for X-ray modulation 2-6635  
 WW Draconis, eclipsing RS Canum Venaticorum star, primary min. time and new light elements 2-42718  
 BS Draconis, photometric elements 2-10478  
 TW Draconis semidetached binary system, short-term period var. and mass transfer 2-14884  
 EF Eridani (2A 0311-227), AM Herculis star, radial vels. of two emission line components 2-53314  
 EF Eridani (2A 0311-227), AM Herculis star, further photometric obs. 2-53315  
 evolution and period changes 2-14885  
 U Geminorum, cataclysmic variable, white+red dwarf, accretion disk spectra, component masses, obs. 2-10417  
 GW Geminorum, period, elements, components, BV photometry 2-33076  
 W Gruis, light elements from UVB photometry 2-10481  
 HD 134518,  $\beta$  Lyrae star, possible Population II star, UVB obs. 2-42712  
 HD 164270, WC9 star, light vars. during (June 1980) 2-10445  
 HD 5303, RS CVn star, visible/IR spectral and photometry obs. 2-33079  
 HD 8152, new W Ursae Majoris type eclipsing binary, UVB photometry, light curve and ephemeris 2-48281  
 HD 86590, RS CVn star, red and white dwarf, spectroscopic orbital elements, obs. 2-33066  
 AM Herculis, spectra, model, white dwarf albedo and mass, X-ray obs. 2-28498  
 AM Herculis, visual magnitude estimates, (1981 September 2 to October 27) 2-10485  
 AM Herculis (3U 1809+50), spectrophotometric study at max. light 2-48293  
 HZ Herculis (Hercules X-1), transfer eqn. for cyclotron line 2-6634  
 HR 7551, supergiant system, apsidal line rotation 2-33081  
 TT Hydrae, Algol type close binary, absolute dimensions and model 2-48277  
 EX Hydrae, eclipsing cataclysmic variable, variable X-ray emission model, ob. 2-48264  
 WY Hydrae, main sequence system, radii, mass luminosity and temp. photometry anal. 2-33072  
 KM=21 Hydrae (HR 3655), A3m star, uvby obs. rel. to identification as eclipsing binary 2-6639  
 LU Lacertae, W Ursae Majoris star, B-band light curve and eclipse times 2-23327  
 Lanning 10, cataclysmic binary, X-ray, UV and visible fluxes, obs. 2-38192

## eclipsing binary stars continued

- RU Leporis, period variability and new ephemeris 2-3278  
 ES Librae, dimensions, light curve anal. 2-14883  
 VZ Librae, W Ursae Majoris star, photoelectric minima and light curves from UVB photometry 2-23329  
 light curve interpretation accuracy 2-33067  
 $\beta$  Lyrae, equilib. figures for circumstellar disc. 2-33064  
 $\beta$  Lyrae, metallic spectrum 2-28510  
 minima photoelectric times from V obs. 2-53324  
 nearby stars, anal. of eclipsing binaries in General Catalogue of Trigonometric Parallaxes 2-42693  
 RZ Ophiuchi, long-period Algol-type binary, photometric obs. of 1981 eclipse 2-48280  
 RZ Ophiuchi, masses, spectral types, accretion disk characts., spectra anal. 2-28501  
 U Ophiuchi, orbital period var., possible third body, photometry anal. 2-14886  
 V1016 Orionis ( $\theta^1$  Orionis A), photoelectric UVB photometry and primary eclipse time 2-53322  
 BD Pavonis (Nova 1934), periodic light vars. detect. 2-23303  
 BB Pegasi, W Ursae Majoris star, photoelectric light curve 2-10482  
 U Pegasi, W Ursae Majoris star, times of photoelectric minima (1980 September 17 to 21) 2-23328  
 i Persei, b-band photometry rel. to eclipse phases 2-53323  
 1 Persei, new eclipsing binary with long period and elliptical or bit, photometric obs. 2-23324  
 1 Persei, preliminary photometric orbital elements 2-48284  
 $\beta$  Persei (Algol), nature and parameters (Japanese) 2-23321  
 AI Phoenixis, solar-type eclipsing binary, optical obs. of primary min. with IUE satellite 2-38245  
 photometric elements of five eclipsing binaries, revised elements 2-3275  
 UV Piscium, RS Canum Venaticorum binary, UVB photometry 2-6638  
 SZ Piscium, RS CVn star, H $\alpha$  outbursts, obs. 2-53330  
 V Puppis, IUE spectra of hot close B-type binary 2-33082  
 TY Pyxidis, RS CVn star, age, spectral type, dimensions, BV obs. 2-28504  
 $\delta$  Sagittae,  $\xi$  Aurigae star, atm. eclipses, orbital elements, visible obs. 2-53332  
 WZ Sagittae, dwarf nova, photometric study during outburst 2-10419  
 WZ Sagittae, external ring generation during 1978 outburst rel. to emission-line spectrum 2-33024  
 V505 Sagittarii, light curve vars. and interpretation 2-3272  
 V505 Sagittarii, UVB obs. 2-33077  
 SAO 072799, new bright eclipsing binary, light curve, times of minima and light elements 2-38243  
 V818 Scorpii, X-ray and optical flares detect., obs. 2-23323  
 SMC X-1/Sanduleak 160, accretion disc model for light-curve anal. 2-38250  
 southern hemisphere stars, minima and BV photometry obs. 2-53334  
 SS 433, supercritical accretion disk model 2-10431  
 statistical models 2-18777  
 CD Tauri, photometric elements 2-10478  
 V471 Tauri, RS CVn star, orbit and spectra, visible obs. 2-33071  
 V471 Tauri, white+red dwarf, light curve anal., uvby obs. 2-28502  
 V 471 Tauri (BD+16°516), RS CVn star, simultaneous photoelectric and single-trail spectroscopic obs. 2-33075  
 BL Telescopii, radius determ. for variable F-type supergiant component 2-48247  
 4 U 0900-40 (Vela XR-1=HD 77581), high-energy X-ray spectrum 2-28496  
 W Ursae Majoris, chromospheric emission, UV obs. 2-3271  
 UX Ursae Majoris, nova-like variable, UV spectrum variability obs. 2-42715  
 DN Ursae Majoris (HR 4560), bright eclipsing binary, period and ephemeris from light min. times obs. 2-38246  
 W Ursae Majoris contact binaries, evolutionary state 2-42714  
 W Ursae Majoris stars, evolution, mass, struct. and ang. momentum loss 2-14881  
 V1068 Cygni, possible long-period RS Canum Venaticorum star, photometric and spectroscopic obs. 2-48283  
 GG Velorum, Algol-type eclipsing binary, photoelectric light minimum times and light elements 2-48278  
 AH Virginis, W Ursae Majoris star, orbital period var. 2-6637  
 ER Vulpeculae, short-period RS CVn-like star, BVR photoelectric obs. during June and July (1981) 2-38244

## ecology

- aquatic organisms, power station cooling system entrainment and impingement effects, bibliography 2-6201  
 Azov Sea ecosystem, simulation model 2-37470  
 biomass uptake of atmosphere CO<sub>2</sub> 2-32591  
 ecological survey, Western Europe, suggested programme for Spacelab I 2-28321  
 electricity supply and environmental protection, need for objective legislation (German) 2-27741  
 energy conservation, ecological stability and environmental quality 2-2817  
 estuaries environmental data collection, low-cost data buoy system 2-42499  
 gasohol program, biomass conversion to liquid fuels 2-14120  
 hydropower planning in USA, ecological aspects 2-27742  
 random disasters, role in population growth, Poisson process appl. 2-3504  
 rivers in the USSR, features, ecology and hydrological regimes (Russian) 2-47929  
 small hydropower resources, environmental and ecological issues 2-2768  
 stability of ecological equilibria, optimal resources utilisation 2-47536  
<sup>241</sup>Am, biological availability in various freshwaters 2-42059  
 Zn plating electrolytes, ecological properties (German) 2-17635

## econometrics see economic cybernetics

## economic and sociologic effects

- see also demography; personnel; social aspects of automation  
 biomass derived energy in United States, social, legal and economic obstacles 2-6096  
 flood control on the Parana and Paraguay rivers 2-10087  
 imperative of renewable energy sources planning in a new economic and social order 2-22526  
 industrial noise control in Australia, worker exposure, hearing impairment, noise reduction costs 2-20471  
 peat for US energy development program, overview of program goals and accomplishments 2-22534



**economic and sociologic effects continued**

- power from nuclear fusion, economic and social choices in pursuit of goal 2-7363
- radioactive waste management, German Federal Republic developments (*German*) 2-19602
- science and technology education in Arab states and society 2-48426
- science curriculum development, Third World cultural factors 2-48425
- science in a democratic society, social, economic and political problems 2-33266
- solar cell production technologies economic impact on society 2-27705
- solar power satellite construction, technological, political and economic factors (*French*) 2-52292
- traffic noise, effects on nearby people's behaviour (*French*) 2-27752
- World energy production, ethical aspects 2-6088

**economic cybernetics**

- energy models for planning and policy assessment, review 2-27519
- energy resource development systems, dynamic linear programming models 2-22553
- energy/environment models for regional planning and management, overview 2-22522
- multisectoral stochastic optimal control model for the UK to derive future energy policies 2-17954
- oil import premium, optimal growth model 2-52279
- solar energy, consumer incentives, game theory approach 2-52306
- time-stepped energy system optimisation model (TESCOM), overview and special features 2-17957
- world oil market models, comparison of assumptions 2-52280

**economics**

- 450 MW power generation unit for Puerto Rico, OTEC versus fossil fuel/nuclear plant, evaluation 2-6163
- active solar heating and cooling systems, performance and cost 2-18121
- agricultural residue gasification, Canadian technical and economic evaluation 2-27522
- agricultural sector, energy demand in US, report 2-17958
- algae conversion to ethyl alcohol, aspects 2-6156
- alternate policy and energy source economics 2-2759
- alternative energy sources, conf. Kuwait, Feb. 1980 2-52270
- alternative H<sub>2</sub> storage methods costs estimation for large storage facilities 2-42051
- annual storage solar heating systems performance and economics 2-47522
- array subsystem development for photovoltaic array fields cost reduction 2-37315
- attached-sunspace passive solar heated residences, performance and economic estimates 2-14113
- automobile fuel economy standards 2-17960
- biogas plants in India, cost benefit analysis 2-6184
- biogas technology, energy planning role in India 2-6184
- biomass derived energy in Dominican Republic, potential assessment 2-6095
- biomass gasification of wood using catalysts, economic feasibility 2-6105
- biosynthesis of neutral solvents, advantages 2-6100
- CAES system economics 2-17998
- California energy futures, alternative societal scenarios 2-6093
- chemical heat pumps and competitive systems, cost effectiveness and energy consumption evaluation 2-22673
- coal-derived fuel utilisation in gas-turbine combined cycles 2-32015
- combined heat and power nuclear systems, economic assessment 2-47456
- combustion analysis instrumentation for fuel cost control, microprocessor-based 2-31990
- communal heating systems, thermal energy storage from energy savings view point (*Dutch*) 2-42044
- compressed air storage against water power, economic considerations for Netherlands (*Dutch*) 2-42041
- concentrating photovoltaic-thermal systems vs. side-by-side systems, cost effectiveness 2-37331
- consumption forecast, for 1980-2000 2-52278
- decentralized solar energy and the electric utilities 2-27557
- development of low power hydroelectric sites 2-6118
- domestic hot water provision, eight technologies, comparative net energy analyses 2-52382
- economy in energy through alternative sources of energy in mass-housing of developing countries 2-22524
- electric thermal storage program, impact on transmission systems 2-32122
- electric water heating in the home, advantages (*French*) 2-47448
- electricity meters calibration range validity extension using random-test-method, experience from user point of view (*German*) 2-3555
- electrochemical H-Cl energy storage system operating parameter optimisation for minimum capital investment 2-22461
- electrostatic precipitators for industrial gases cleaning, cost-effectiveness 2-47383
- energy, economic, environmental and political aspects 2-6091
- energy conversion, implications of exergy and thermal efficiencies of energy conversion 2-22527
- energy economics, science and society test 2-42819
- energy from wood, economic viability, fourteen industrial case studies 2-6109
- energy policy decisions, data value estimation methodology, USA NURE programme appl. 2-17956
- enhanced oil recovery techniques and their practical and experimental applications, economic anal. 2-52283
- estimation of wind system performance and economics using unit availability criteria 2-2767
- ethanol from biomass, process commercialisation and economic projections 2-52307
- ethanol from hardwood by continuous acid hydrolysis and fermentation, review 2-27719
- fast neutron breeder reactors, economic aspects (*French*) 2-34203
- feasibility of electricity generation from wind and solar energy (*French*) 2-17985
- Federal Germany's energy imports and balance of payments (*German*) 2-32007
- fibre optic connectors, technical and economic advantages 2-16114
- fibre optic sensor systems, applications and economic prospects 2-10793
- first-generation fuel cell demonstration and commercialisation programme in USA 2-37206
- fission research reactors, radiation protection, legal requirements fulfilment, economic considerations (*German*) 2-49172

**economics continued**

- Florida Power Corporation, cost of implementing safety proposals post-TMI 2-4142
- Florida Power Corporation OTEC planning study, USA 2-6169
- flywheel, high energy density, incorporating fibres, design and fabrication 2-22664
- geothermal energy projects, economic planning tool 2-6124
- geothermal power appl. to space heating and hot water supply (*French*) 2-2770
- German nuclear reactor construction delay costs, economic anal. (*German*) 2-15607
- German terrestrial photovoltaic activities, status 2-27686
- heat pump installation as refrigeration system for Wühl indoor skating rink (*German*) 2-32099
- high temperature reactor project in US, current economic status (*German*) 2-32037
- industrial cogeneration and integration into public supply grid, economic issues 2-37483
- institutional issues—major issues and their impact on widespread use of photovoltaic systems 2-27568
- intermediate photovoltaic system/utility interface experience 2-42030
- laser scanner design, low-cost 2-34824
- liquid fuels from biomass, assessment of technology for production 2-27527
- logging residues as energy source, feasibility study 2-6108
- low head hydroelectric power generating systems, cost effectiveness 2-6120
- low temp. energy sources usage to increase fuel utilisation efficiency 2-6111
- LWR nuclear plant shut-down costs (*German*) 2-15533
- methane-based fuel gas production, cost effectiveness (*German*) 2-9609
- methanol from bituminous coal, economic evaluation 2-52277
- Mexican, energy conservation and its effects on energy costs (*Spanish*) 2-41972
- microalgae as source of fuel oils, production economics 2-6106
- multifilamentary Al<sub>15</sub> superconductors, developments at IGC (USA), review 2-8936
- municipal refuse-burning power plant technology and economics 2-41977
- national energy plans, 1990-2000, economic and environmental impacts forecasting 2-6092
- natural resource markets, price discrimination, vertical integration and divestiture 2-17955
- nuclear and solar energies, conditions and justification of new energy sources (*Croatian*) 2-41989
- nuclear core materials limitations, economic impact 2-29310
- nuclear power plant decommissioning and spent fuel storage and disposal, financial and regulatory aspects 2-34134
- nuclear power plants and reprocessing facilities decommissioning, main parameters comparison (*German*) 2-7150
- nuclear power stations, current status of design and operation problems (*Hungarian*) 2-29357
- nuclear power stations, reliability improvement, electricity generation cost effect 2-41992
- nuclear power stations status and developments in USA in the 80s 2-24281
- nuclear power stations with PWRs, fuel elements preparation and waste disposal (*Czech*) 2-49141
- nuclear power technology in Nigeria, material resources assessment 2-52309
- oil shale development in Timahdit, Morocco, technological and economic anal. using Occidental in-situ process 2-17976
- on-board fuel storage systems of hydrogen powered vehicles, comparison of expenses 2-37464
- OPEC oil price increases, world wide economic effects (*German*) 2-37146
- opportunities in water power development 2-6122
- optimum design assessment of wind power for household electricity 2-27535
- OTEC economics anal. and applications 2-37428
- parabolic trough photovoltaic performance, technique for comparison 2-27684
- pentahedral pyramidal concentrator design for space solar array 2-37295
- phosphoric acid fuel cell system without noble metals on the anode, realization, application and economics 2-22612
- photovoltaic arrays, flat-plate design techniques, review 2-37328
- photovoltaic collectors for solar cell arrays, flat-plate and concentrating, cost-reduction efforts 2-37261
- photovoltaic conversion of solar energy current status and future development prospects 2-52369
- photovoltaic generated electricity, economic impact of state ordered avoided cost rates 2-27569
- photovoltaic power systems, off-grid, cost effectiveness in comparison to combustion engine generating sets 2-18064
- photovoltaic power systems, stand-alone, roof-top, appraisal for rural applications 2-18068
- photovoltaic system cost experience for intermediate-sized appls. 2-42029
- photovoltaic systems, costs rel. to development and appls. 2-2793
- photovoltaic technology development 2-18035
- photovoltaics for residential applications in France, future prospects 2-32079
- process gas chromatograph, microcomputer controlled, calibration cost cutting using relative response factors 2-31985
- production of synthetic crude oil from coal using the TOSCOAL pyrolysis process 2-22536
- profitability prediction in the development of new technologies (*German*) 2-37437
- projected costs for electricity and products from OTEC facilities and plantships 2-32104
- PWR, design consideration for main cooling system (*German*) 2-11233
- radioactive waste management and disposal costs 2-24301
- radioastronomy research and development, economic effects 2-42612
- rechargeable alkaline zinc/ferricyanide hybrid redox battery for utility load levelling and solar photovoltaic/wind appls. 2-22591
- regional supply concerns supplying low-temperature heat for space heating, economic aspects (*German*) 2-32096
- risk analysis of nuclear vs. fossil-fuel economics 2-32039
- salinity power production, concentration cell, economic potential 2-6187
- satellite solar power stations as world-wide energy system, market potential and physical limitations 2-27558
- satellite solar power system launch into geosynchronous orbit, transportation system and cost comparison 2-27564
- satellite solar power systems, energy balance aspects 2-27566



**economics continued**

- solar, geothermal and conventional space heating 2-2781
- solar cell arrays, lifetime and inflation in photovoltaic systems anal. 2-27706
- solar cell operation principles and manufacturing technology, Italian market potential (*Italian*) 2-47480
- solar cells, min. photovoltaic module cost projections, realistic comparison 2-37314
- solar cells, principles and technology (*Spanish*) 2-42004
- solar cells for space applications optimisation 2-27692
- solar cells technology development, for space appl. 2-27691
- solar conversion power supplies for one family housings, economic survey (*Spanish*) 2-32069
- solar energy and energy recovery, building heating appl. (*French*) 2-2776
- solar heating and cooling industry, supply problems 2-18011
- solar industrial process heat systems, cost and performance evaluation 2-18010
- solar mechanical converters, capital costs 2-32110
- solar photoelectric plants for irrigation and supply of water to agricultural users 2-6125
- solar power development programme, planning for next 20 years, United States 2-22551
- solar power for water heating, cost effectiveness 2-2772
- solar power stations, ground level versus geostationary platform, economic and technical aspects (*Italian*) 2-27562
- solar power stations, high temperature thermal dynamic cycle, technical and economic aspects (*Rumanian*) 2-2773
- solar powered system performance factors 2-18019
- solar space heating systems 2-37442
- solar thermophotovoltaic conversion for electric utility appls., feasibility 2-41990
- solid waste-to-energy plants for small communities, economic anal. 2-18139
- space heating using solar absorber converters, economics (*Portuguese*) 2-32111
- space photovoltaic generator, design and testing, rational approach 2-37293
- state energy policy development, Wisconsin experience 2-6094
- Swiss energy research, total expenditure (*German*) 2-52267
- technical and economic factors in the possible use of gas-engine driven heat pumps for space heating (*German*) 2-37424
- thermal process heating, collector cleaning costs 2-37448
- US photovoltaic industry, government-industry relationships in technology commercialisation 2-37216
- USSR energy resources current status and future development 2-47426
- wayside energy storage for recuperation of potential energy from freight trains 2-22663
- Wiehl outdoor swimming pool covers for heat losses reduction, cost-effectiveness (*German*) 2-29994
- wind power plants and power supply grid interconnection, cost aspects (*Dutch*) 2-41980
- wind turbine operational experience and potential in USA 2-37148
- wood fuel processing methods, economic assessment 2-6107
- world energy supplies in near future and stability possibilities 2-52266
- GaAs high concentration photovoltaic cells, thermal impedance effects 2-27683
- GaAs solar cells for space applications 2-27651
- GaAs solar cells for space missions, technology requirements 2-37291
- H<sub>2</sub>SO<sub>4</sub> chemical heat pumps for industry 2-22674
- Si production by dichlorosilane process, cost anal., applications in solar cells 2-47496
- Si, semicrystalline ingots, obtained using unidirectional crystallisation, elaboration study 2-18076
- U supply and demand for nuclear power 2-27578

**eddy current losses**

- conducting circular disc and thin plate in homogeneous magnetic field (*German*) 2-24915
- liquid conductance at high frequencies meas., using non-contact system 2-15192
- single-phase line with separate shielding of conductors, electromagnetic field anal. 2-34624
- steel plates, ferromagnetic, Fe losses, hysteresis and eddy currents 2-51442
- superconducting materials electromagnetic fields equations derivation from non-local macroscopic theory (*Russian*) 2-51388
- thin plates, eddy current induced by time-harmonic mag. field 2-4439
- Cu-Nb<sub>3</sub>Sn untwisted composite, AC losses, critical current density 2-13256
- Fe-Si (3 wt.%), domains struct. and EM losses at high induction amplitudes 2-31232
- Fe-Si (3 wt.%), energy loss anomaly study 2-21827
- Fe-Si amorphous ribbon materials, causes of anomalous loss 2-26647
- Fe-Si steel plate, non-oriented, Fe losses calc. 2-29751

**eddy currents***see also induction heating*

- boilers, non-destructive testing, eddy current computer anal. code 2-41860
- coatings, thin current conducting method of monitoring 2-9508
- complex defect signals from multifrequency eddy current tests, quantitative eval. (*German*) 2-52150
- computer calculation, boundary integral eqn. method 2-29749
- conducting circular disc and thin plate in homogeneous magnetic field (*German*) 2-24915
- conducting cylinder within alternating series of AC fed ring windings, centring force (*German*) 2-7700
- conductors, non-mag., non-moving, eddy-current problems, numerical anal. 2-11616
- crack detection appl. 2-13928
- cylindrical shell, field distribution due to axial currents 2-34622
- detector of bullet in body 2-18281
- EM field solution by network method, expt. verification 2-7702
- EM screen, integral eqn. anal. 2-29754
- ferromagnetic conducting plates, EM field diffusion, nonlinearity and saturation (*Spanish*) 2-11615
- ferromagnetic tube, eddy current testing, magnetic props. effect 2-13872
- films, thin current conducting method of monitoring 2-9508
- flaw detection, ferromagnetic resonance, using eddy current detector 2-17808
- induced eddy currents, in circular disc and rectangular cylinder of finite height, placed in magnetic field (*German*) 2-24912

**eddy currents continued**

- instrumentation, current status and future direction 2-13924
- Maglev system, superconducting, with sheet guideways, magnetic damping and stiffness coefficient 2-49622
- magnetic fusion reactor, eddy current induced in thin structures, finite element anal. 2-24415
- materials testing, eddy current inspection, EM square wave oscils. 2-17800
- metals, conductivity measurement, eddy current method (*Chinese*) 2-15181
- multi-layer eddy current simulators, EM charact., temp. depend. 2-2677
- multifrequency eddy current inspection techniques 2-13925
- multilayer eddy-current transducer, approx. performance calc. method 2-3578
- NDT, conf. Gaithersbury, USA, (Nov. 1977) 2-10552
- non ferrous conductivity standards, eddy current meas. 2-10779
- nonferrous metals, eddy current testing standards 2-13920
- nuclear steam generator tubing, eddy current inspection 2-13921
- nuclear steam generator tubing, eddy current inspection 2-13922
- one-dimensional eddy current problem, considering variable permeability and various boundary conditions (*German*) 2-24913
- pulsed eddy current techniques for nondestructive evaluation 2-13926
- round robin tests to determine eddy current system performance 2-13923
- saturable mag. field problems, eddy currents, finite element and permeability function anal. 2-49625
- semiconductor wafer, resist. variation meas. using photovoltaic method (*Japanese*) 2-33568
- signal processing technique rel. to eddy current inspection 2-13927
- steel industry, eddy current testing, present, past and future 2-10561
- Stefan problem, homogenisation, appl. to mag. composite media 2-10745
- superconducting loop with low capacitance point contact, mag. flux tunnelling, dissipation effects 2-36260
- testing, history, present status and future development 2-10560
- thermoelastics, anisotropic, temp. independent transport coeffs., efficiency and performance in absence of mag. field 2-46046
- three dimensional eddy current problem, mag. vector pot. and elec. scalar pot. 2-49623
- three dimensional eddy current problems, boundary integral eqns. of minimum order 2-49624
- transducer signal, computation accuracy improvement 2-3579
- transient eddy current analysis on thin conductors with arbitrary connections and shapes 2-7703
- Al alloy AK4-1, heat treatment quality inspection by EM method 2-6012
- Cu wire, nondestructive monitoring by eddy-current method 2-2640
- Mn-Zn ferrites, high permeability, magnetic spectra, effect of eddy currents 2-13314

**edge-defined film fed growth** *see crystal growth from melt***edge dislocations**

- binding force with Fermi-Dirac solute atmos. 2-50636
- branched external cracks in interface between elastic materials, edge dislocation continuous distrib. 2-50191
- crack kinking, energy release rate, edge dislocation continuous distrib. as kink model 2-50189
- diamond, type I, structural defects, ultra-HV TEM obs. 2-35502
- dihedral, elastic props. calcs. 2-40384
- dislocation boundary effect on internal stress distrib. in cryst. 2-21150
- elastic field at edge of dihedral interface in isotropic elasticity (*French*) 2-45167
- electronic struct. calc., KKR approach 2-30819
- FCC crystals, secondary slip systems, glide and climb stresses due to isolated primary edge and screw dislocations 2-25899
- ferromagnet, edge dislocation vibrs., effect on magnetisation dynamics (*Russian*) 2-41171
- free surface, growth step formed by edge dislocation (*Russian*) 2-16647
- gauge theory of defects, linearised, edge and screw dislocations 2-21147
- hollow cores caused by stress of line and planar defects, thermodynamic stability conditions 2-45160
- internal friction, assoc. with stress-gradient induced ordering, elastic quadrupoles of asymm. solute atom-vacancy pairs 2-1490
- ionic crystals, charged dislocation-point defect complex, elec. field effects 2-45159
- metals, FCC, pure fatigued, persistent slip bands, cyclic slip irreversibility 2-45168
- motion, non-uniform, dynamic solns. 2-21148
- moving, phonon generation and energy localisation 2-45485
- nonuniformly moving edge dislocation 2-8516
- oxides, climb motion of dislocation 2-40386
- Peierls barrier calc., tension-Frenkel-Kontorova model 2-12594
- point-defect migration into infinitesimal dislocation loop 2-40429
- polyethylene crystals, irradi. hardening model, interaction between cross-links and dislocations 2-47048
- Portevin-Le Chatelier effect, theory 2-35574
- spatially modulated structures, energetics of dislocation motion 2-25875
- steel, austenitic stainless, stress corrosion cracking, transgranular, orientation of cracks, tested in MgCl<sub>2</sub> soln. 2-5977
- superconductors, internal friction at kHz freqs. near crit. temp. 2-46197
- wave-front behaviour of accelerating dislocations 2-30463
- Ag, stacking faults of dissociated glide dislocations 2-45205
- Ag-Al, electron irradiated, extended jog motion on dissociated dislocations, weak beam electron microscopy obs. 2-25886
- Al, deformed, X-ray line profile anal. 2-50647
- Al, quench-hardened single crystal, yielding and stage I deform., influence of specimen geometry 2-13784
- $\alpha$ -Al<sub>2</sub>O<sub>3</sub>, sapphire, dislocation dipoles, break-up into loops, improved model 2-50653
- Au, edge dislocations, dihedral, elastic props. calcs. 2-40384
- CSl, deformation characts. under pulsed loading, dislocation dynamics 2-50745
- Cu, neutron irradi., slip band form., yield and stage I deform. 2-41709
- Cu-Al, stacking faults of dissociated glide dislocations 2-45205
- Fe, deformed, dislocations obs. by high-field susceptibility meas. 2-1489
- Fe, plastically deformed at 195 and 77K, mag. domain patterns and dislocation structs. 2-46333
- GaAs substrate, dislocation behaviour during LPE of Ga<sub>x</sub>Al<sub>1-x</sub>As 2-1480
- GaAs-GaAlAsP heterojunctions, lattice strain and misfit dislocations 2-26254
- Ge, defect structure by high resolution electron microscopy 2-25888
- Ge, dislocation nucleation process as point defect condensation 2-25878



**edge dislocations continued**

- KBr crystals., nearly perfect growth by Czochralski method, characterisation 2-27073  
 KCl crystals., nearly perfect growth by Czochralski method, characterisation 2-27073  
 LiF, phonon-dislocation dipole interaction at low temp., effect on thermal and US props. 2-45483  
 Mo, atomistic computer simulation of dilatation due to edge dislocation 2-21149  
 NaCl, heat evolution from slip bands consisting of edge and screw dislocations 2-45327  
 NaCl single crystals, elec. pulses influence on distance travelled by dislocations 2-1491  
 NbB<sub>2</sub> single cryst., defect struct. 2-40389  
 Si avalanche photodetectors, crystal defects, electron channelling imaging with SEM 2-12605  
 Si, defect structure by high resolution electron microscopy 2-25888  
 Si, dislocation nucleation process as point defect condensation 2-25878  
 Si, ion implanted atomic defect chain configuration identification 2-25890  
 SmS, influence of dislocations on carrier density 2-51207  
 Ti-O(Al) alloy single cryst., slip band morphology and development (*Russian*) 2-5124  
 VB<sub>2</sub> single cryst., defect struct. 2-40389  
 Y<sub>3</sub>Al<sub>5</sub>O<sub>12</sub>, garnet, energies of dislocations 2-12593

**education**

- see also computer science education; educational aids; educational courses; teaching; training*  
 academic work evaluation in Mexico (*Spanish*) 2-21  
 Australian mining industry, conf., July 1981, Sydney, Australia 2-33237  
 biomedical engineering education, risks of misuse of technical language 2-32344  
 cognitive preferences, and intercorrels., response format effects 2-48432  
 cognitive preferences, and intercorrels., response format effects 2-48433  
 Deutsches Museum, Munchen, science, technology and history in education 2-48469  
 ECG recorder design, portable powerline-operated, student-faculty project 2-42837  
 education conf. Rapid City, South Dakota, October 19-21, 1981 2-33259  
 electromagnetic field theory courses for electrical engineering students, teaching material (*German*) 2-42805  
 energy education program, model 2-42812  
 INSAT Indian domestic satellite communication system, education, meteorology appl. 2-42488  
 Mexico, schools and physics departments melting, November 1980 (*Spanish*) 2-3347  
 nuclear concepts and energy, course for teachers 2-42813  
 nuclear power, public acceptance, education role 2-43635  
 physics college course, interface between science and society 2-28622  
 radioactive waste, educational material development 2-42814  
 road traffic noise, effects of disturbances to schools 2-20465  
 science, conceptual change approach 2-48427  
 science and technology education in Arab states and society 2-48426  
 science curriculum development, Third World cultural factors 2-48425  
 stimulated scientific experimentation, pedagogic potentialities, ESSOR system (*French*) 2-14992  
 technical, in Hong Kong 2-48435  
 technological education, teacher training aspects 2-48436

**educational aids**

- see also student laboratory apparatus*  
 cardboard clock, educational project 2-38397  
 electronic aids for handicapped and disabled 2-6287  
 laboratory as teaching aid in teaching engineering student with specific symbol difficulties 2-33261  
 microcomputer teaching, work station console, design 2-42836  
 microcomputers in the laboratory, assembly language programming course format 2-48437  
 radiograph reproduction on 35-mm rapid-process copy film, improved lighting techniques 2-19229  
 speech training for deaf children, computer-based aid, vocal-tract cross-section display 2-18849

**educational computing**

- see also computer-aided instruction*  
 diatomic molecules, parameters calcs. using programmable calculation 2-14995  
 microcomputer to multichannel analyzer interface 2-48457  
 He, one-dimens. model, Roothaan's method calcs. 2-14997

**educational courses**

- energy conversion technology—a three year technologist program 2-33260  
 Naples University physics course including Maxwellian equations and 1st and 2nd principles of thermodynamics (*Italian*) 2-4437  
 natural science course for undergraduates majoring in nonscientific subjects 2-18834  
 nuclear power, educational workshop for media people 2-42811  
 physics, first year undergraduate course, student self-direction 2-48429  
 PSSC laboratory course, appl. to first year of college 2-48430  
 US engineering schools research and teaching practices comparison with European equivalents (*Italian*) 2-48424

**e.g. see electroencephalography****effective mass (band structure)**

- antiferromagnetic semiconductor, multivalley, energy spectrum and kinetic characts. of band electrons (*Russian*) 2-26291  
 D<sup>-</sup> band theory 2-21481  
 graphite-AlCl<sub>3</sub>, intercalate, Shubnikov-de Haas effect (*Russian*) 2-8820  
 graphite-ICl intercalate, Shubnikov-de Haas effect (*Russian*) 2-8820  
 metal, effective electron mass, phonon attenuation effect (*Russian*) 2-5341  
 metal, itinerant electron ferromagnet, electron-phonon coupling 2-21761  
 metals, US wave propag. in hydrodynamic limit, Bragg refl. force effect 2-25992  
 polar semiconductors, multiphonon resonance Raman scatt. involving hot excitons 2-41367  
 polaron effect enhancement in dielec. thin film 2-21506  
 semiconductors, electronic struct., first principles calc. 2-30793  
 simple metals, electronic props., electronegativity scales and alloy formation 2-26320  
 surface characterisation by plasma reflectivity spectra, surface damage effects 2-22013  
 transition metals, phonon anomalies 2-50803

**effective mass (band structure) continued**

- two-dimensional electron-phonon system, transverse static magnetoconductivity 2-45930  
 n-Ag<sub>2</sub>Se, elec. props. 2-1926  
 AuTe<sub>2</sub>Br, Fermi surface determ. by Shubnikov-de Haas effect 2-1811  
 B<sub>12</sub>C<sub>2</sub>, electronic struct. and semicond. behaviour 2-45826  
 Bi, Fermi surface and band parameters, press. depend. magnetoref. studies 2-13457  
 BiSb, relax. time and effective mass of charge carriers 2-8811  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, Fermi surface and band parameters, press. depend. magnetoref. studies 2-13457  
 Cd<sub>3</sub>As<sub>2</sub>, amorphous films, elec. transport props. 2-40911  
 Cd<sub>3</sub>As<sub>2</sub>, Fermi surface anisotropy, Shubnikov-de Haas meas. 2-26277  
 Cd<sub>3</sub>Hg<sub>1-x</sub>Te, photothermodynamic effect in mm and submm ranges 2-13132  
 n-CdSnAs<sub>2</sub>, Shubnikov-de Haas effect, band struct., spin-orbit and crystal splitting 2-40934  
 CuInSb, hole effective masses, optical study 2-40762  
 Cu<sub>2</sub>Mo<sub>2</sub>S<sub>6</sub> film, normal and supercond. state, electronic spectrum parameters and interaction consts. calc. (*Russian*) 2-41059  
 GaAs:Cr, intrinsic density, band gap and effective mass parameters, Cr acceptor capture coeff. 2-51203  
 GaAs-Al<sub>0.1</sub>Ga<sub>0.9</sub>As, heterojunctions and superlattices, band struct., effective mass approx. tight binding calc. 2-51292  
 GaAs-GaAlAs superlattices, band struct. calcs. 2-40784  
 GaAsSb<sub>1-x</sub>, electron effective mass values 2-5345  
 GaSb-InAs, heterojunctions and superlattices, band struct., effective mass approx., tight binding calc. 2-51292  
 In, enhanced electron mass anisotropy 2-1814  
 InAs-GaSb superlattices, band struct. calcs. 2-40784  
 InGaAsP lattice, matched to InP, growth and charact. review 2-13662  
 InGaAsP-InP DH laser, elec., threshold and temp. characts. analysis 2-913  
 InSb, narrow band gap semicond., space charge layer, multiband effective Hamiltonian anal. 2-51313  
 LaSn<sub>3</sub>, band struct., self consistent APW calc. 2-16983  
 Na, de Haas-van Alphen effect under press. 2-45808  
 PbI<sub>2</sub>(2H), reson. Brillouin scatt. of exciton polaritons 2-46621  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te, thermoelectric effect in moderate and quantising mag. field, 4.2 to 77K 2-26422  
 PbTe and Pb<sub>0.7</sub>Sn<sub>0.3</sub>Te, electronic and lattice props., intra-band magnetooptics study 2-22001  
 PbTe, indirect exchange interaction between embedded mag. ions 2-51140  
 Pd, effective cyclotron masses, many body effects 2-35927  
 Pr, excitonic mass enhancement 2-30791  
 n-Si, elec. cond., effect of effective mass change due to uniaxial strain 2-21589  
 Si surface inversion layer, uniaxially stressed, electron cyclotron reson. 2-13155  
 SiC, cubic, electron-hole liq., ground state props., valence band masses, exciton and acceptor energies 2-35947  
 SiC:N(6H) IR photoexcitation spectra of donor centres, effective masses 2-51639  
 (SnTe)<sub>1-x</sub>(PbSe)<sub>x</sub> epitaxial layers, band struct. parameters (*Russian*) 2-21499  
 TiSe, energy band struct. 2-40788  
 Zn<sub>3</sub>As<sub>2</sub>, band structure at Brillouin zone centre 2-45830  
 Zn<sub>3</sub>Hg<sub>1-x</sub>Se, Shubnikov-de Haas oscills., band struct. parameters 2-5421  
 Zn<sub>3</sub>P<sub>2</sub>, band structure at Brillouin zone centre 2-45830  
 ZnZn<sub>2</sub>, Fermi surface de Haas-van Alphen study 2-35923

**effusion**

- discharge tube for negative glow study by effusion technique 2-8366  
 gas flow velocity, prekinetic explanation of Graham's law 2-18846  
 a-Si:H glow-discharge films, evolution of H<sub>2</sub> 2-40682

**EFG see crystal growth from melt****EHD see electrohydrodynamics****EHT calculations**

- 3d-metal atom clusters, electronic struct., EHT and SW-X<sub>α</sub> calcs. (*German*) 2-49298  
 4d-metal atom clusters, electronic struct., EHT and SW-X<sub>α</sub> calcs. (*German*) 2-49298  
 5d-metal atom clusters, electronic struct., EHT and SW-X<sub>α</sub> calcs. (*German*) 2-49298  
 chemisorption of water on Ru (001) surface, cluster MO study, EHT calc. 2-31945  
 naphthalene-butadiene exciplex, extended Huckel calcs. 2-34311  
 polyethylene, stereo-irregular, electronic density of states 2-12954  
 polymeric electronic band structures, a posteriori symmetry anal. 2-39514  
 Ag clusters, chemisorption of halogen, He I photoemission spectra obs. 2-35886  
 As, structure by bond-breaking processes from rock salt, band struct. calc. and gauche effect 2-25810  
 Cu clusters, chemisorption of halogen, He I photoemission spectra obs. 2-35886  
 GaAs(110), Cl chemisorption config. study, cluster model and EHT method 2-8708  
 Ge-GaAs (111) and (111) interfaces, electronic struct., EHT calc. 2-8854  
 Ge<sub>1-x</sub>C<sub>x</sub>, amorphous, ESR g-values due to dangling bonds, EHT calc. 2-36430  
 Ge(111), Cl chemisorption config. study, cluster model and EHT method 2-8708  
 H<sub>2</sub>, model chains, electronic band structures, a posteriori symmetry anal. 2-39514  
 H<sub>2</sub>-H<sub>2</sub><sup>+</sup>(H<sub>2</sub>-H<sub>2</sub><sup>+</sup>)(O<sub>2</sub><sup>2-</sup>-H<sub>2</sub><sup>+</sup>)(S<sub>2</sub><sup>2-</sup>-H<sub>2</sub><sup>+</sup>), electron transfer, quantum chemical approach 2-39490  
 Ni (001), interaction with O<sub>2</sub>, semiempirical model pot. 2-16946  
 P, black, structure by bond-breaking processes from rock salt, band struct. calc. and gauche effect 2-25810  
 Si, deep impurity levels, cluster model, EHT calc. 2-8767  
 Si, Jahn-Teller distortion of A- and E- centres 2-1872  
 Si<sub>1-x</sub>C<sub>x</sub>, amorphous, ESR g-values due to dangling bonds, EHT calc. 2-36430  
 Si<sub>1-x</sub>Ge<sub>x</sub>, amorphous, ESR g-values due to dangling bonds, EHT calc. 2-36430  
 Si(111), Cl chemisorption config. study, cluster model and EHT method 2-8708



eigenfunctions *see eigenvalues and eigenfunctions***eigenvalues and eigenfunctions**

- anharmonic oscillator eigenvalues 2-18954
- atmosphere pressure field, eigenvector filtering of three-dimensional data 2-14554
- Backlund transformations connecting different isospectral deformation eqns. 2-28699
- baryon mag. moments, spin depend. quark-quark interaction 2-48991
- Besov spaces, embedding maps, entropy numbers, eigenvalue problems appl. 2-42895
- bound quantum systems, approx. energy levels and sizes 2-42825
- Boussinesq approx. accuracy for incompressible fluid 2-50254
- Bubonov-Galerkin eigenvalues, partitioning lower bounds 2-33345
- BWR, neutron noise and neutron wave propag. in heterogeneous media 2-39087
- Clebsch-Gordan coeffs. for SU(2) group and Han polynomials (Russian) 2-48553
- collective density oscill. in hydrodynamical approach (Russian) 2-43420
- collision processes, complex branching, Jost matrix, unified treatment 2-24806
- compact groups over fields of charact. zero, representation theory 2-33338
- complex rotation group, irreducible representation in terms of rotation angles and axis 2-28696
- complex square pot. well, eigen soln. of B-T eqn. (Chinese) 2-33923
- complex structure vibration, modal constraint method of anal., eigenvalues/eigenfunctions of struts. 2-8075
- cosmogenesis model, mass formula 2-38350
- critical indices for models with long-range interaction, renormalisation group differential 2-23849
- cubic system with  $^3T$  term, Jahn-Teller effect, allowing for spin-orbit interaction and trigonal cryst. field, eigenfunction soln. 2-17036
- damped beam with general end conditions, derivation of eigenvalues and mode shapes for bending motion 2-35061
- degenerate states perturbation theory and continued fractions 2-28684
- deterministic neural net, relation between eigenvalues and memory retention 2-42085
- dihedral groups, weight and step operators 2-23473
- Dirac operators, eigenvalue nonexistence 2-38844
- directed set of Sturm-Liouville operators, eigenvalues asymptotic estimates 2-42896
- Dunkerley procedure for higher modes 2-8064
- Einstein-Maxwell fields, prolongation struct., linear eigenvalues, SU(2,1) Lie algebra 2-89
- elastic anisotropic materials, stress anal., effects of change of reference coords. 2-25241
- electrostatic boundary value problem, zero eigenvalue of integral operator removal 2-20226
- EM field theory Green's functions, eigenfunction expansions, equiv. layers of surface charge, current sheet and polarisation 2-816
- enclosed systems, approx. eigenvalues calc. 2-33328
- field-reversed axisymmetric plasma, equilibria and MHD stability calc. 2-20836
- flexibly clamped cantilever with concentrated mass at free end, eigenfrequencies 2-20585
- fourth-order Casimir invariants and indices for simple Lie algebras 2-38811
- free boson gas in weak external pot. 2-6789
- generalised Dirac eqn. for constant EM fields, Green's function 2-3739
- ground state energy bounds for potentials  $|x|^r$  2-38483
- group representation and eigenvalue problems in quaternionic Hilbert spaces 2-33337
- harmonic oscillator, rotating, radial Schrodinger eqn., satisfaction by analytical function 2-72
- harmonic oscillator strong coupling potential with even anharmonicity 2-18947
- harmonic oscillators, exponential perturbations 2-18951
- Helmholtz equation numerical solution using elementary matrix transformations 2-1061
- inverse scatt. problem, generating operator for  $n \times n$  linear system 2-23847
- iterative optical processor, 3 power methods to compute eigenvalues and eigenvectors 2-15959
- kinetic corrections to lineshape predictions, approx. methods comparison 2-3533
- laminar flow in circular pipe, transient anal. (Chinese) 2-4888
- laser anemometry data processing, well-conditioned cubic b-spline model 2-24961
- limit of ratio of entropy over energy for weak solution of Navier-Stokes equations (French) 2-42976
- linear transport problem, spectral representation, eigenfunctions 2-38613
- matrix Schrodinger spectral problem, evolution eqns. associated with discrete analogue 2-33340
- meson wave functions with two-gluon states 2-29076
- molecular calculations, symmetry adapted functions, generation program 2-24581
- multigroup neutron transport eqn., finite elements and discrete ordinate methods comparison 2-49097
- multiple-well anharmonic oscillators, perturbation theory 2-48540
- neutron diffusion standard perturbation theory 2-34107
- neutron transport problems, practical adjoint Monte Carlo technique 2-34106
- nonlinear evolution equation in nonuniform medium, inverse scatt., method soln. 2-23458
- normalised distribution function, of Schrodinger eqn. with random potential, asymptotic behaviour (Ukrainian) 2-33316
- nuclear resonance, imperfect eigenvalue sequences statistical anal. 2-15399
- number operator CC\* in statistics of bosons and fermions 2-38560
- O(n) generator matrix elements and semisimple Lie group, Wigner coeffs. 2-33758
- one-dimensional anharmonic oscillator energy spectra 2-74
- one-dimensional Schrodinger operator, eigenvalues and resonances, small coupling constant 2-3428
- one-matrix model, large-N classical soln. 2-10966
- optical fibre cross coupling, propagating beam theory 2-16131
- optical single-mode fibres, few moments 2-1025
- partial operator equation, asymptotics of eigenvalues (Russian) 2-38471
- particle stability in storage, rings, nonlinear Sturm-Liouville eigenvalue problem 2-43657

**eigenvalues and eigenfunctions continued**

- pendulum Brownian motion, Kramers eqn. eigenvalues and eigenfunctions appl. 2-48614
  - perturbation theory, large orders and summability 2-48534
  - perturbed ladder operator method, eigenvalues and eigenfunctions from finite difference considerations 2-10638
  - plates, unilaterally-supported, postbuckling anal., nonlinear eigenvalue problems, variational inequalities 2-39842
  - QCD<sub>2</sub>, local meson operator construction from path-ordered operator 2-7001
  - quantisation, second states, off-mass shell formulations (French) 2-6756
  - quantum defect formula, exactly soluble model 2-628
  - quantum narrow-band free-space link, lower bound on information capacity 2-3409
  - quantum pendulum in WKB approx. 2-38488
  - quantum-mechanical harmonic oscillator, spectral class 2-48525
  - quartic oscillators, energy eigenvalues 2-28694
  - quasi-one-dimensional systems, electron localisation, off diagonal Green function matrix elements 2-8773
  - Rayleigh-Benard and Marangoni problems, eigenvalues 2-20644
  - reactor noise, appl. to random matrices theory 2-49105
  - relativistic oscillator, dynamical symmetry group and spherical function props. on hyperboloids (Russian) 2-3430
  - relativistic single-channel quantum-defect theory 2-34323
  - resistive ballooning modes and temp. drift instability, theory 2-25519
  - scalar instanton spectrum investigation 2-15281
  - Schrodinger eqn., one-dimens., eigenvalues and eigenvectors, difference eqn. method 2-3412
  - Schrodinger eqn. soln., stationary perturbation theory in quantum mechanics 2-3427
  - Schrodinger equation, definite integral solutions for  $x^2 + \lambda x^2 / (1 + gx^2)$  pot. 2-48543
  - Schrodinger equation second order perturbation theory, continuum states effect 2-42818
  - Schrodinger operator eigenvalues via Prufer transformations for general class of central pots. 2-18939
  - Schrodinger operator with 2D periodic family of pointwise pots. in 3D space, eigenfunctions (Russian) 2-48552
  - Schrodinger type operator, eigenvalue number, asymptotic estimate 2-38501
  - shells, shallow, under unilateral constraint, post-buckling soln. existence 2-18894
  - space-time excitons, relativistic harmonic oscillator eigenvalues 2-38753
  - spherical scatterers, degrees of freedom, Born approx. 2-4443
  - stellarators, MHD stability calc. 2-16481
  - straight-cylindrical conductor carrying rectangular periodic current, skin effect 2-36077
  - structural eigenvalues, elastic optimal design 2-16240
  - SU(3) in O(3) basis, shift operator techniques nonscalar extension 2-33755
  - three-magnon bound-state eqn. in one dimens. 2-38484
  - three-mode system, SCF CI and virtual state CI vibr. energies 2-34315
  - totally bound potentials, classical and quantal spectral comparison 2-33327
  - transport theory, an approx. method 2-3538
  - trilocal structures, momentum depend. tree functions 2-23479
  - two-centre problem, eigenvalues and wave functions (Russian) 2-6761
  - two-dimensional anisotropic compound regions mapping into isotropic regions 2-7698
  - two-dimensional system, localisation of electrons under strong mag. field 2-45876
  - two-mode lasers, correl., transients, bistability and phase-transitions analogy 2-7740
  - two-soliton systems, perturbation approach 2-23846
  - vibrating systems, discrete, damped, eigenvalue computation, reduction and iteration (German) 2-28645
  - wave mechanics, some exactly soluble problems perturbation by pot. envelope method 2-3410
  - wedge, bi-material, two-dimens., singular behaviour at vertex 2-16235
  - H, estimating tunneling phenomena 2-49269
  - H, Stark eigenvalues, real and imaginary parts, Pade summations 2-49266
  - (Nb<sub>6</sub>Br<sub>2</sub>)Cl<sub>6</sub><sup>2-</sup> cluster, LCAO SCF calculations 2-11386
  - (Nb<sub>6</sub>Br<sub>6</sub>Cl<sub>6</sub>)Br<sub>6</sub><sup>2-</sup> cluster, LCAO SCF calculations 2-11386
  - SU(3) in O(3) basis, shift operator techniques nonscalar extension 2-33756
- eigenvectors** *see eigenvalues and eigenfunctions*
- eightfold way** *see SU<sub>3</sub> theory*
- Einstein-de Haas effect**  
*see also gyromagnetic ratio*  
No entries
- einsteinium**  
*see also nuclei with .....*  
No entries
- einsteinium compounds**  
No entries
- elastic aftereffect**  
No entries
- elastic constants**  
*see also elastic moduli*  
(111) FCC thin films, epitaxy on (110) BCC substrates by coherence, ideal epitaxial configurations 2-51033  
acenaphthene, elastic constants determ. from thermal diffuse scattering of X-rays 2-1543  
alkali hydrides and deuterides, lattice dynamics shell model and deform. dipole model 2-8585  
alkali metal cyanides, phase transition, elasticity theory 2-12728  
alkali metals, elastic stiffness consts., press. depend. 2-35567  
alkali silicate glass, surface tension rel. to microhardness 2-30742  
4-n-alkylphenyl-4-n-alkanoyloxybenzoates liq. cryst. mixtures, elastic props. rel. to mol. comp. 2-8552  
alloys,  $\beta$ -phase, interactions of martensitic transform. strains with soft elastic modes 2-21296  
anisotropic media, elastic strain energy of coherent inhomogeneous precip., self-consistent model 2-41608  
band Jahn-Teller model, shear elastic mode, press. depend. near struct. transition 2-50740  
BBOA, smectic A-smectic B transition, proton NMR study 2-35686  
b.c.c. crystal, temp. depend. of ideal fracture strength 2-1553



## elastic constants continued

BCC crystals elastic consts., generalised N-particle interaction anal. 2-45314  
 biaxial nematics, elastic and flow props. 2-20999  
 bis-propyl ammonium tetrachloro zincate, ferro-paraelectric phase transitions 2-41292  
 butyloxy-benzilidene octylaniline, Brillouin scattering in  $S_A$  and  $S_B$  phases 2-2299  
 cholesteric liq. crystals, elastic consts. and tensor fields 2-40458  
 composite material, US methods for characterising response 2-17822  
 concrete members, reinforced, stiffness calc. (*Chinese*) 2-41648  
 cord-rubber composites, mech. props. 2-47147  
 cubic crystals, ballistic phonons and acoustic ray surface shape 2-12701  
 cubic crystals, elastic wave surfaces for (111) plane 2-1554  
 cubic crystals, phonon focusing and ray surface shape 2-45447  
 cyano bi-cyclohexanes, nematic liq. cryst., elec. permittivities and elastic consts. 2-17384  
 deformable arbitrary shaped body, resonant oscils. by finite element methods, considering imperfect elasticity 2-30057  
 dynamic load time data, verification of compliance corrections used in determining load line energies 2-13889  
 femoral bone, bovine, US meas. of orthotropic elastic constants 2-18237  
 ferroelectric crystals with antiparallel layer domains, dielec., piezoelec. and elastic props. 2-46521  
 free energy, elastic, coherency strains, semi-discrete model 2-21207  
 graphite fibre reinforced Al, US charact. of elastic const. and moduli 2-17829  
 HCP structure, second order inner displacement 2-40464  
 higher order elastic constants, of solids 2-50742  
 II-VI semiconductor film, elastic props. and defects, lattice mismatch of film-substrate systems 2-12946  
 inversion, propagation errors 2-21205  
 ionic substances, Debye temp., mass and bond length influence 2-1579  
 length meas. in single crystal and polycrystalline aggregate with preferred orientation, US method 2-17827  
 liquid crystal, Frank elastic consts., mol. statistical theory 2-16565  
 liquid crystal guest-host displays, dielec., electro-optical, and phase change props. 2-5043  
 lithium ammonium tartrate cryst., dielec. and elastic props. 2-36494  
 Maglev system, superconducting, with sheet guideways, magnetic damping and stiffness coefficient 2-49622  
 MBBA, nematic liquid crystal, elastic constants, light scatt. meas. 2-50734  
 MBBA nematic liquid crystal, Frank elastic const. ratio evaluation by intensity meas. of scattered light 2-45312  
 nematic liq. crystals, elastic consts. and tensor fields 2-40458  
 nematic liquid cryst. mixtures containing different ring systems, elastic, dielec., and optical props. 2-12471  
 nematic liquid crystals, elastic constants, determ. from C-V curve 2-40460  
 nematic liquid crystals, elastic constants, mol. statistical theories 2-25964  
 nematic liquid crystals, elastic constants determ. from noise meas. of scattered laser light 2-45313  
 nematic liquid crystals, elastic consts. calcs. using an anisotropic Lennard-Jones pot. 2-50732  
 noble metals, eqn. of state and elastic consts. under press. 2-30563  
 nylon 6, drawn and phase, anisotropic mechanical props., compliance consts. 2-17694  
 OHMBBA, nematic, optical determ. of viscoelastic props. 2-50733  
 Peierls-Frohlich problem and pot. with finite number of gaps 2-3529  
 plastic crystals, physical props. rel. to orientational disorder 2-12521  
 poly(p-phenylene terephthalamide) fibre, struct. and mechanical props. 2-50556  
 polyethylene, polycryst., elastic consts. determ. (*German*) 2-16709  
 polyethylene, ultrahigh-modulus, annealing and mech. constraint effect on struct., stiffness and melting 2-47072  
 polyethylene crystals, irradiation hardening model, interaction between cross-links and dislocations 2-47048  
 polyethylene terephthalate oriented films, elastic constants studies using Brillouin scatt. 2-45316  
 polymer liquid crystal, meas. of bend and splay elastic consts. by Frederik's distortion 2-16704  
 polypropylene, hydrostatically extruded, Raman and Brillouin scatt. spectra, chain orientation effects 2-46619  
 Poynting effect study (*French*) 2-4719  
 prestressed crystals, Rayleigh waves, lattice dynamics and elastic wave theory 2-45704  
 random alloys, interatomic spacings distrib., elastic energy calc. 2-45111  
 rare earth systems, magnetoelastic interaction, corrections to sp. ht., thermal expansions and elastic consts. 2-8630  
 recessed shells of revolution, DSISR program appl. 2-39816  
 rubber like elasticity theory, molecular origin of constants considering network chains steric interaction 2-12030  
 ruby, laser-pumped, electronically excited states effect on elastic consts., sound vel. changes 2-12692  
 semiconductor compounds, diamond-like, Debye temperature estimation using Lindemann rule 2-35629  
 smectic C liquid crystals, twist viscosity, mol. statistical model 2-16586  
 squaric acid, ferroelastic phase transition, theory 2-35572  
 steel, stainless 2-13758  
 tetrachloro-p-benzoquinone, displacive transition, elastic and photoelastic anomalies 2-35677  
 tetramethylammonium tetrachlorocuprate, ferroelastic-incommensurate transition, acoustic softening 2-30582  
 thermal conductivity, dislocation effects, phonon scatt. by strain fields 2-50940  
 thermoplastics, energy related failure criteria 2-22320  
 thin films, Brillouin scattering, phonon modes, elastic consts., surface phonons 2-5767  
 THS, quasilongitudinal US wave propag. in ferroelec. plane 2-25991  
 two-dimensional system, configurations generated by computer simulation, orientational order analysis method 2-5338  
 two-dimensional system, melting theory, Monte Carlo simulation, particle system behaviour 2-1600  
 US methods for characterising response 2-17822  
 X-Y model, magnetostrictive one-dimensional dimerisation 2-2046  
 Ag, pressure-volume relations and elastic consts. under press. 2-1545  
 AgGaS<sub>2</sub>, anisotropy of elastic wave propag. 2-50760  
 Ag<sub>3</sub>SbS<sub>3</sub>, elastic const. determ. (*Russian*) 2-16708  
 Al alloy, selective reinforcement by adhesive bonding with uniaxially aligned C fibre reinforced epoxy 2-27221

## elastic constants continued

Al, modified Ashcroft pseudopotential 2-35616  
 Al, whisker, elastic consts., second and third order tensile tests. 2-51067  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>, polarized Brillouin scatt. 2-17500  
 As<sub>2</sub>S<sub>3</sub> amorphous film, photoinduced elastic changes 2-40747  
 Au, pressure-volume relations and elastic consts. under press. 2-1545  
 CaF<sub>2</sub>, anharmonicity effects, phonon lifetime, rigid ion model calcs. 2-45438  
 Ca<sub>3</sub>Ga<sub>2</sub>Ge<sub>2</sub>O<sub>12</sub>, Raman and Mandel'shtam-Brillouin light scatt. 2-51601  
 cc KTa<sub>0.988</sub>Nb<sub>0.012</sub>O<sub>3</sub>, ferroelec., thermal and elastic props. at low temps. 2-30664  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te, US velocity, 1.5 to 96K, magnetic transitions effect 2-50771  
 Ce compounds, with unstable 4f shells, Gruneisen parameter 2-16743  
 Ce<sub>0.74</sub>Th<sub>0.26</sub>, elastic const., ultrasonic meas. 2-35569  
 Co<sub>0.001-x</sub>Ti<sub>x</sub>, amorphous ferromagnetic thin films, mag. props. FMR and magnetisation meas. 2-36398  
 Cs-K(Rb), solid solution, total binding energy electronic theory 2-26319  
 Cs<sub>2</sub>O-Na<sub>2</sub>O-SiO<sub>2</sub> glasses, Brillouin spectra, US vels., and mech. props. 2-13501  
 Cu, polycrystalline, elastic constants, 4 to 295K 2-1546  
 Cu, pressure-volume relations and elastic consts. under press. 2-1545  
 Cu/Nb superlattices, SAW anomaly, Brillouin scatt. meas. 2-40663  
 $\beta$ -Cu-Al-Ni (14.4 wt.%), elastic and anelastic props., effect of thermoelectric martensitic transform. 2-47102  
 Dy, hydrostatic press. derivatives of elastic consts. 2-40465  
 Fe rod embedded in Ni-Al matrix, intrinsic boundary dislocations, anisotropic elastic fields 2-36900  
 Fe-Pd,  $\gamma$ -phase, magnetisation and soft modes, neutron diffr. study 2-50821  
 Fe-Si, elastic constants, depend. on order and comp., exptl. study 2-31727  
 Fe<sub>1-x</sub>, elastic consts., US vel. meas. 2-35566  
 GaS(Se)(Te), pulse US method obs. 2-5169  
 GdCu, anomalous elasticity and anelasticity at low temps. 2-1544  
 Ge, mode Gruneisen parameters for long-wave phonons under press. 2-12712  
 GeO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>, vitreous, internal press. from elastic constants 2-25969  
 HgSe, press. effects on elastic consts. up to phase transition 2-45317  
 In-Tl, elastic phase transition, third-order invariants in Landau theory 2-40536  
 KH<sub>2</sub>(SeO<sub>3</sub>)<sub>2</sub>, ferroelastic, internal friction, domain struct. dynamics 2-40481  
 KH<sub>2</sub>(SeO<sub>3</sub>)<sub>2</sub> and KD<sub>2</sub>(SeO<sub>3</sub>)<sub>2</sub>, ferroelastic phase transition, mech. shear stress component effect 2-40537  
 KTa<sub>1-x</sub>Nb<sub>x</sub>O<sub>3</sub>, surface layer, acoustic reson. and dielec. susceptibility meas. 2-2175  
 K<sub>2</sub>ZnCl<sub>4</sub>, normal-incommensurate-commensurate transition, US attenuation 2-40495  
 Li, US attenuation and vel., effect of martensitic phase transform. 2-45393  
 LiKSO<sub>4</sub>, pyroelectric, piezoelectric, dielectric and structural props. 2-46487  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-TiO<sub>2</sub> glasses, elastic props., comp. depend., rel. to density and refr. index 2-13768  
 8-MnCu alloys, Mn-rich, phonons and martensitic transform. 2-16729  
 NH<sub>4</sub>Cl(Br), light scatt. study of dynamic critical phenomena 2-41377  
 NH<sub>4</sub>LiSO<sub>4</sub>, ferroelectric phase transition, Brillouin scatt., refr. in dices and elastic consts. meas. 2-17421  
 NaCN, cubic, absence of dispersion in elastic shear stiffness  $c_{44}$  2-45319  
 NaCl-NaBr mixed diatomic crystals, static and elastic props. 2-35432  
 NaNO<sub>3</sub>, elastic const. determ. 2-12661  
 Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>, glass, internal press. from elastic constants 2-25969  
 Na<sub>2</sub>O-GeO<sub>2</sub>, glass, internal press. from elastic constants 2-25969  
 Na<sub>3</sub>[AlSiO<sub>4</sub>]<sub>6</sub>(CCl<sub>3</sub>)<sub>3-x</sub>(OH)<sub>2x</sub>.nH<sub>2</sub>O ( $x=0.03-0.05$ ), single crystal growth, props. 2-51789  
 Nb-H, ultrasonic attenuation and velocity study of  $\alpha$ - $\alpha'$  phases 2-45559  
 NdP<sub>2</sub>O<sub>4</sub>, elastic nonlinearity and ferroelastic domain wall motion 2-30523  
 Ni-Fe single-crystal alloys, elastic stiffness coeffs. meas. at room temp. 2-12659  
 Pb, electronic and lattice-mechanical properties, pseudopotential theory 2-16619  
 PbTe, mode softening 2-45519  
 Rb-K, solid solution, total binding energy electronic theory 2-26319  
 RbCN, rotation-translation-coupling and lattice dynamics, elastic consts. determ. by Brillouin scatt. (*German*) 2-5198  
 RbNO<sub>3</sub>, cubic plastic cryst., order-disorder transition, elastic softening 2-40463  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, normal-incommensurate-commensurate transition, US attenuation 2-40495  
 Rh, lattice dynamics, specific heat, thermal expansion 2-40501  
 Si, effect of heavy doping and device implications 2-45315  
 Si, mode Gruneisen parameters for long-wave phonons under press. 2-12712  
 Si, phonon-phonon interaction temp. depend., ultrasonic meas. 2-45470  
 SiC discontinuous whisker reinforced Al, US charact. of elastic const. and moduli 2-17829  
 SnTe, mode softening 2-45519  
 Ta-W, elastic constants 2-50737  
 TiSe, lattice dynamics and elastic consts. 2-35617  
 V<sub>2</sub>Ge, polycrystalline, thermal expansion below 40K 2-30636  
 V<sub>2</sub>O<sub>3</sub>, elastic consts., hydrostatic press. effects, high press. struct. transition 2-12663  
 V<sub>2</sub>O<sub>3</sub>, elastic consts. between 300 and 640K 2-25967  
 ZrF<sub>4</sub>-ThF<sub>4</sub>-BaF<sub>2</sub> system glasses, elastic constants 2-12660

## elastic deformation

see also bending; elasticity; electrostriction; stress/strain relations; torsion  
 ageing materials, class of kernels describing creep 2-45330  
 alkali silicate glasses, relaxation transitions and deform. below glass-transition temp. 2-9364  
 anisotropic thermoelasticity, with generalised variables, invariance relations, deformation 2-12029  
 annular girder, loaded in plane, bracket support, transfer matrices calc. of deform. and internal forces (*German*) 2-25258  
 annular girder on brackets, three-dimensional loading, transfer matrices calc. (*German*) 2-25259  
 asperity interaction for pair of rough surfaces, contact analysis during sliding 2-50201



**elastic deformation continued**

- beam, curved, unlimited large deform. calc. (*German*) 2-50092  
 beam, rectangular, bending, damping and fatigue 2-30033  
 beam, rigid-plastic shallow curved large deflections 2-50119  
 beam finite element, linearly tapered, incorporating shear deform. and rotary inertia, for vibr. anal. 2-44673  
 cantilever cylindrical shell under impulsive load at free edge, transient response 2-1118  
 capillary phenomena in elasticity theory (*Russian*) 2-25977  
 cavity hyperboloid of revolution, single, transversely isotropic, elastic deform. 2-30024  
 coatings, multilayer, residual stresses 2-39812  
 composites, unidirectional, elastic-plastic deform., plane stress formulation 2-30040  
 compressible isotropic elastic material, stability conditions 2-8063  
 contact problem for heavy half-plane 2-8095  
 cracked elastic body, behaviour under load 2-4771  
 cracks, stationary and extending, relationship between J-integral and crack opening displacement 2-30066  
 crystals, uniaxial deformation, piezospectroscopy, spectral line shift, appl. to impurity study 2-9127  
 cylinder, hollow thick-walled composite dynamic stationary elastic problem (*Russian*) 2-8037  
 cylinder, parabolic, transversely isotropic, elastic deformation 2-8044  
 deforming circular inclusion in infinite strip, elastic field 2-44655  
 Earth crust, obs. of short-period elastic deform. of near-surface layers from geodetic data 2-10019  
 elastic liquid, extrusion flow jet from a capillary, swelling effect 2-12192  
 elastico-plastic solids, variable loading, five-dimensional vector spaces (*Russian*) 2-1128  
 fibre stability in elastic matrix of high-elastic deforms. (*Ukrainian*) 2-35072  
 films, cubic single cryst., elastic stresses, X-ray diffr. study 2-16974  
 glass, elastic and heat characteristics correl. 2-13767  
 halfspace indentation, second-order effects in problems for a class of elastic materials 2-35059  
 II-VI semiconductor film, elastic props. and defects, lattice mismatch of film-substrate systems 2-12946  
 incompressible elastic medium, finitely deformed, penny-shaped crack, initiation and propag. 2-12091  
 indentation, fracture initiation 2-50756  
 indentation, stress field anal. 2-50744  
 inhomogeneous elastic media, mean stress and deformation tensors relationship 2-8050  
 isotropic elastic incompressible media stressed initially by homogeneous deform., Stoneley waves propag. at interface 2-8068  
 laminates, cross-reinforced, edge effects 2-20540  
 large deformation propagation and viscoelasticity in spherical symmetry (*French*) 2-20547  
 macroscopic damage model (*French*) 2-12024  
 mechanical work and deforms., decomp. 2-30009  
 metals, nonlinear acoustic effects near electron topological transition point (*Russian*) 2-26276  
 momentless shell of revolution, initially conical, strength 2-30025  
 notch root, method of elastic-plastic stress and strain calc. 2-5912  
 nylon jacket with silicone rubber layer for optical fibre, characts. under lateral press. 2-4594  
 optical fibres, single-mode birefr. and polarisation characts. under elastic deform. 2-16123  
 Pb chalcogenides, epitaxial bicrystals, elastic deform. and stress. 2-51007  
 polymers, vitreous, deform. kinetics 2-21215  
 polypropylene hard fibres, straining mechanisms by broad line NMR meas. 2-31297  
 polystyrene, large elastic deforms. in shear and extensional flows 2-27226  
 PVC, glassy, mol. mobility, intermol. interaction, and conform. comp. under forced elastic deform. 2-47111  
 rigid body inertia tensor, elastic deform. effect 2-23424  
 shell, spherical, with circular hole, stress distrib., elastically deformed ring effect 2-4723  
 shells, cylindrical, shallow, elastoplastic flexure 2-8058  
 shells, rigid-plastic, shallow, spherical, large deforms. 2-1121  
 shells, thin, elastic-plastic deform., one class of inverse problems 2-44663  
 shells of revolution, deform. without bending under uniform press., shapes 2-20543  
 sliding of circular cylinder, deform of elastic half-space 2-50198  
 smectic A liquid crystals, permeative and hydroelastic flow 2-12123  
 solid medium, two-dimens. wave process of deform., asymptotic analysis 2-25273  
 solid-liquid interface, curved, surface stress 2-50979  
 static indeterminate structures, resist. of elements with different stiffness to cyclic elastoplastic strain 2-13912  
 steel tubes, resist. to external pressure, effect of a bend (*Russian*) 2-31719  
 strip with series of holes or inclusions, flexure 2-8035  
 surface stresses, X-ray scatt. diagnostic technique (*Russian*) 2-44974  
 TGS crystals, ferroelec. domain boundaries, X-ray topographic images 2-36581  
 tube, elastic, depressed, flattening study (*French*) 2-4775  
 unbounded elastic body containing semi-infinite cylindrical cavity 2-35058  
 Al-Ag(Cu), two-phase alloys, plastic anisotropy in load reversal tests 2-51976  
 Cu-Al-Fe, phase transform. under anomalous elastic deform. 2-47031  
 Fe rod embedded in Ni-Al matrix, intrinsic boundary dislocations, anisotropic elastic fields 2-36900  
 FeBO<sub>3</sub>, AFMR line width, inhomogeneous elastic deform. effect 2-36442  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, metallic glass, torsional elastic behaviour 2-31720  
 α-Fe<sub>2</sub>O<sub>3</sub>, AFMR line width, inhomogeneous elastic deform. effect 2-36442  
 NaNO<sub>2</sub>, ultrasonic study of phase transitions 2-45576  
 Pb-In, superelasticity resulting from twinning processes (*Russian*) 2-22257  
 Pd<sub>81</sub>Si<sub>19</sub> metallic glass, ideal elastic, anelastic and viscoelastic deform. 2-13760  
 SmS single cryst., carrier density, elastic deform. influence 2-51206

**elastic hysteresis**

- deformable arbitrary shaped body, resonant oscils. by finite element methods, considering imperfect elasticity 2-30057  
 hysteresis loop under biaxial stress conditions, material loss factors 2-12044

**elastic hysteresis continued**

- rock, dilatant, memory, relaxation and microfracturing 2-28069  
 solids, cyclic loading, piecewise modelling, discrete stress rate sensitivity 2-4731  
 CaHSO<sub>4</sub>, single cryst., plastic deform. by twinning 2-45320  
 Cu-Zn-Al, pseudoelastic, hysteresis loop, strain-rate, amplitude and temp. depend. 2-47098  
 Nb, cyclic deformation of single crystals 2-5174
- elastic limit**  
 forsterite (Mg<sub>2</sub>SiO<sub>4</sub>), single crystal, Hugoniot elastic limit from shock compression meas. 2-22974  
 graphite, synthetic, tempering, modulus of elasticity 2-5901  
 metals, elasticity and plasticity limits, strain inhomogeneity effect 2-50749  
 microconcrete hyperbolic-paraboloid shell subject to uniformly distributed load 2-13774  
 pipe, thin-shelled, stability over elastic limit under torsion (*Russian*) 2-12058  
 steel, austenitic, spring, corrosion resistant, thermal stability 2-27245  
 steel, C, scuffing under boundary lubricated conditions 2-52055  
 steel, maraging, spring, corrosion resistant, thermal stability 2-27245  
 steel, mild, strain rate history and temperature effects on torsional-shear behaviour 2-27223  
 steel, stainless, structural stability, rel. to physicomech. props. 2-17719

**elastic moduli**

- see also Poisson ratio; shear modulus; Young's modulus  
 alkali halides, stability of NaCl, CsCl, and cubic ZnS cryst. structs. 2-45108  
 alkali metals, electronic props., exchange and correlation effects, pseudo-potential model 2-30813  
 alkali silicate glasses, relaxation transitions and deform. below glass-transition temp. 2-9364  
 alkaline earth metals, equation of state and bulk modulus, partial press. contribs. 2-35639  
 aluminous cement/perlite composite, low density, mech. props. 2-51963  
 antiferromagnetic cryst., elastic const. temp. depend., US vel. study 2-25968  
 benzene, radial distrib. function, average coords. and adiabatic bulk modulus (*French*) 2-45003  
 calcium stearate, soap, plastic and viscoelastic props., meas. by hot hardness 2-47124  
 cavitation in elastic media under hydrostatic tension 2-50621  
 cement paste, loading history effect on tensile props. 2-27234  
 chlorobutyl rubber, modulus, filler content effects, phenomenological model (*Polish*) 2-35568  
 cohesive energy, bulk modulus and press. derivative of bulk modulus, determ. using Morse-Kratzer pot. 2-50580  
 composite materials, effective elastic modulus, calc. 2-35057  
 composite materials, multicomponent, bounds on transport and mechanical props. 2-13147  
 composites, brittle, toughening by second-phase particles, crack paths 2-27270  
 concrete, loading history effect on tensile props. 2-27234  
 crystal melting, thermal and elastic props. change 2-21274  
 diamond, ground state props., ab initio density functional pseudopot. method 2-40318  
 diamond, struct.-energy calcs. using pseudopot. and localised Gaussian orbitals 2-30815  
 elements, bulk electron conc. and average valence band strength correlation with elastic moduli 2-5074  
 elements, bulk electron conc. and average valence band strength correlation with elastic moduli 2-21060  
 epoxy resins, cured, dynamic mech. props. and nodular morphology 2-17705  
 ferroelastic, critical behaviour and elastic props. 2-1586  
 ferroelastic, critical behaviour and elastic props. 2-5206  
 ferroelectrics, Jahn-Teller, coupled dielec. and elastic anomalies 2-31421  
 fibre reinforced composites, multifibre, stress redistribution due to brittle fibres fracture 2-36964  
 filamentary-reinforced composite, cryogenic props., review 2-2550  
 generalised Cauchy relation, elastic const. (*Russian*) 2-45311  
 glass, toughening by metallic particles 2-17687  
 glass fibres, diameter, effect on props., for reinforced composites 2-17699  
 graphite, synthetic, tempering, modulus of elasticity 2-5901  
 heteroorganoplast composites, prep., mech. and elec. props. 2-36836  
 ice, density, lattice energies and bulk moduli 2-39461  
 ionic lattice, non-centrosymmetric, acoustic waves, elastic modulus 2-50776  
 isotropic elastic body, effective moduli, periodically distributed voids 2-4722  
 laminates, cross-reinforced, edge effects 2-20540  
 lipid bilayer, hydrophobic core, statistical mech. theory 2-16567  
 liquid metals, HF elastic moduli, influence of many-body interactions (*Russian*) 2-40462  
 metals, ductile, fracture toughness calc. 2-2589  
 metals, Gruneisen coefficient, temp. depend. at high temp. 2-12711  
 muscle, striated, bulk modulus of myofilament liq. cryst., X-ray diffr. study 2-22781  
 natural rubber, modulus, filler content effects, phenomenological model (*Polish*) 2-35568  
 Novolak resin-nitrile rubber, struct., viscoelastic behaviour (*German*) 2-25274  
 nylons, (6) and (6,6), cryst. state extrusion of melt crystallised and soln. grown crystals. 2-13763  
 pipes, circumferentially cracked, wall breakthrough, plastic fracture instability analysis 2-30072  
 plastics, flake-filled, flexural modulus (*Japanese*) 2-5911  
 plastics, humid ageing, long term 2-31716  
 poly(n-butyl acrylate)/polystyrene interpenetrating networks, mol. mixing via modulus-temp. studies 2-41661  
 polydimethylsiloxane networks, three and four functional, strain modulus 2-13765  
 polyethylene, high density, interlamellar shear process, mech. anisotropy 2-17701  
 polyethylene, ultra high modulus, creep and recovery 2-17716  
 polyethylene blends, tensile props., mixture compatibility degree of crystallinity role 2-47145  
 polyimide matrices, bulk and films, elastic, strength, and relax. props. 2-36926



**elastic moduli continued**

- polymer fibre reinforced metals, powder technology, mech. props. (*German*) 2-36815
- polymer liquid, comparison of eccentric rotating disc and oscillatory meas. of dynamic moduli 2-25965
- polymer/concrete composites, review of physical props. 2-13783
- polymers, anelasticity, physical ageing and the constant enthalpy change hypothesis 2-45356
- polymers, cross-linked, UV cured, mech. props., effect of comp. and polymerisation 2-13766
- polymers, crosslinked photochromic, photomech. effects 2-41315
- polypropylene, filled, flexibility without loss of dimens. stability, heat distortion or tensile modulus 2-31756
- polypropylene filled ethylene-propylene-ethylidene norbornene rubber, props. 2-47149
- polystyrene filled  $ZrO_2$ - $Y_2O_3$  ceramic composites, mech. props. 2-22278
- polystyrene networks, swelling in benzene and cyclohexane, rubber elasticity 2-17700
- polystyrene powder compacts, dynamic mech. props., effect of particle surface treatment (*Japanese*) 2-36893
- porous rocks, Biot-Gassmann eqns. for elastic moduli 2-35053
- PVC filled with ground glass and glass fibre powders, dynamic mech. props. (*Japanese*) 2-31721
- quartz, crystalline, elastic props. amorphisation effects., neutron irradi. 2-21186
- red cell membrane proteins, multimol. films, surface rheology 2-37507
- rocks, effect of specimen size on elastic moduli 2-32494
- solid soln., inhomogeneous, elastic energy, quasiperiodic particle distrib. 2-21057
- transformation toughening, contrib. to fracture toughness 2-51923
- transition metal alloys, FCC, elastic moduli, comp. and temp. depend., at vol. and electron conc. contribs. 2-5171
- transition metal alloys, FCC, elastic moduli, comp. and temp. depend., at vol. and electron conc. contribs. 2-8555
- transition metal boride powder, synthesis and physicomach. props. 2-41544
- wood, bending strain energy, effect of moisture content (*Japanese*) 2-9372
- $Ag_3AsS_3$ , proustite, Brillouin scatt. spectra 2-46629
- $AgCl(Br)$ , ionic transport, anomalously high, defect mechanisms 2-21399
- Al, crystal energy and struct., ab initio pseudopot. calc. 2-35961
- Al, dynamic internal friction and dynamic modulus meas. 2-45351
- Al-Cu alloy, elastic moduli variations due to struct. changes 2-50736
- Al-Mg alloy, elastic moduli variations due to struct. changes 2-50736
- Al-Mn, grain boundary and precipitation effects, internal friction and dynamic elastic modulus meas. 2-47038
- AlAs, crystal binding and density of states, pseudopot. calc. 2-45874
- $Al_2O_3$ , plasma-sprayed coatings, elastic moduli variations during structural phase transitions (*French*) 2-36901
- $(Al_2O_3)_xMgO$  spinels, elastic and anelastic effects, precipitation 2-45373
- Au-Cd, internal friction and elastic modulus near martensitic transform. 2-47105
- B-C powder, synthesis and physicomach. props. 2-41544
- BaO, Debye temp. of oxides with NaCl struct. 2-16744
- C fibre reinforced plastics, deform. and strength props. under var. loading conditions 2-36927
- CaO, Debye temp. of oxides with NaCl struct. 2-16744
- CdO, Debye temp. of oxides with NaCl struct. 2-16744
- CoO, Debye temp. of oxides with NaCl struct. 2-16744
- Cr, spin waves and thermodynamic props. (*Russian*) 2-21784
- Cr-Ni (80.4 at.%), elastic moduli, 300 to 600K, US pulse-echo overlap meas. 2-5170
- Cr-Ni (80.4 at.%), elastic moduli, 300 to 600K, US pulse-echo overlap meas. 2-8554
- CsCuCl<sub>3</sub>, antiferromagnetic cryst., elastic const. temp. depend., US vel. study 2-25968
- CsLiMoO<sub>4</sub>(WO<sub>4</sub>), ferroelectric transitions, dielec. and elastic study 2-31408
- CsNiCl<sub>3</sub>, antiferromag. chain, elastic moduli, phase comparison meas. 2-45318
- Cu, dislocation damping, dynamic 2-45191
- Cu-Zn-Al, high damping alloys, dynamic props. 2-47109
- CuCl, volume compression study up to 7 GPa 2-40485
- Dy, hydrostatic press. derivatives of elastic consts. 2-40465
- Fe, pure polycrystalline, internal friction effect of H, low temps. 2-22261
- Fe-Al (10 to 50 at.%), elastic moduli (*German*) 2-51971
- Fe-B metallic glass, struct. relaxation, crystn., internal friction and elastic modulus 2-47085
- Fe-Ni Invar alloys, bulk modulus anomalies, X-ray diffr. study 2-9017
- Fe-Ni-Cr-Mo (14.5, 14.5, 2.5 at.%), elastic moduli, 300 to 600K, US pulse-echo overlap meas. 2-5170
- Fe-Ni-Cr-Mo (14.5, 14.5, 2.5 at.%), elastic moduli, 300 to 600K, US pulse-echo overlap meas. 2-8554
- Fe-Pt Invar alloys, bulk modulus anomalies, X-ray diffr. study 2-9017
- GaAs, crystal binding and density of states, pseudopot. calc. 2-45874
- GaP, struct.-energy calcs. using pseudopot. and localised Gaussian orbitals 2-30815
- GaSe(Se)(Te), pulse US method obs. 2-5169
- Hg<sub>0.8</sub>Mn<sub>0.2</sub>Te, semimag. semicond., elastic moduli, temp. and press. depend., US vel. study 2-50738
- MgO, Debye temp. of oxides with NaCl struct. 2-16744
- MgO, thermal press. at high compression and high temp. 2-32493
- Mn-Fe (615 at.%), elastic moduli, 300 to 600K, US pulse-echo overlap meas. 2-5170
- Mn-Fe (615 at.%), elastic moduli, 300 to 600K, US pulse-echo overlap meas. 2-8554
- MnO, Debye temp. of oxides with NaCl struct. 2-16744
- Mo, phonon freq. and lattice energy, first principles LCAO calc. 2-50794
- Nb, phonon freq. and lattice energy, first principles LCAO calc. 2-50794
- Ni-Cr, plasma deposited, props. anal. using dimensionless complex parameters 2-41552
- Ni-P metallic glass, struct. relaxation, crystn., internal friction and elastic modulus 2-47085
- Ni<sub>30</sub>B<sub>70</sub>, amorphous sheets, electroless deposited, internal friction and dynamic modulus behavior 2-21230
- NiO, Debye temp. of oxides with NaCl struct. 2-16744
- P-Se-Te, glasses, elastic props., microhardness and US vel. meas. 2-9363
- Pb, dislocation damping, dynamic 2-45191
- PbO-ZnO-B<sub>2</sub>O<sub>3</sub> glasses, elastic modulus and fracture toughness 2-51969

**elastic moduli continued**

- Pb<sub>3</sub>(VO<sub>4</sub>)<sub>2</sub>, ferroelastic, internal friction and modulus effects at phase transitions 2-45375
- RbLiMoO<sub>4</sub>, ferroelectric transitions, dielec. and elastic study 2-31408
- RbMnCl<sub>3</sub>, ferroelastic, critical behaviour and elastic props. 2-1586
- RbMnCl<sub>3</sub>, ferroelastic, critical behaviour and elastic props. 2-5206
- Si, phonon freq. and lattice energy, first principles LCAO calc. 2-50794
- Si, struct.-energy calcs. using pseudopot. and localised Gaussian orbitals 2-30815
- Si<sub>3</sub>N<sub>4</sub>, solid particle erosion 2-9431
- SrO, Debye temp. of oxides with NaCl struct. 2-16744
- Ta-O, Snoek-Koester relaxation (*German*) 2-47115
- V<sub>2</sub>Si, model for arresting elastic modulus softening in supercond. state 2-31038
- Zn-Al, superplastic, high damping and modulus characts. 2-47093
- elastic moduli measurement**
- acoustic insulating materials, complex elastic modulus determ., transfer function method (*Hungarian*) 2-34982
- acoustic method for first and second kind elastic moduli meas. 2-31725
- acoustical materials, complex elasticity modulus study, transfer function method (*Hungarian*) 2-16273
- ceramic, acoustic reson. method for investig. of elastic props. and internal friction (*Polish*) 2-35098
- composite material, simultaneous determ. of shear and Young's moduli 2-9497
- composites, shear rigidity determination, taking account of layer struct. geometry 2-37033
- fibre reinforced composite, unidirectional, fibre content effect on simultaneous determ. of Young's and shear moduli 2-27366
- fission reactor material, elastic moduli meas., 20 to 1100°C, US method 2-17830
- graphite fibre reinforced Al, US charact. of elastic const. and moduli 2-17829
- metals, internal friction and elastic modulus, automatic apparatus for temp. characts. determ. 2-9488
- micromechanical props. anal., automatic system 2-43005
- polymeric materials, mechanical characteristics determination, at elevated temps. 2-37018
- programmable system for shear modulus and internal friction meas. at very low freqs. 2-43006
- rectangular strips and square plates, pulse echo method of elastic moduli determ. 2-17803
- refractory, elastic moduli meas. at high temp., pulse-echo meas. 2-17831
- relaxator device for internal friction and elastic modulus meas. at acoustic freqs. (*Polish*) 2-25341
- rigidity of cheese curd, meas. apparatus 2-33514
- structural relaxation, US pulse-echo obs. after annealing 2-31880
- thin plate, metallurgical characterization by ultrasonics 2-17828
- US materials charact., conf. Gaithersburg, USA (June 1978) 2-14978
- SiC discontinuous whisker reinforced Al, US charact. of elastic const. and moduli 2-17829
- elastic scattering of atoms and molecules**
- atom+molecule, elastic scatt., mol. orientation perturbation theory 2-4365
- Boltzmann eqn. simulation scheme, vel. correl. 2-3483
- Coulomb potentials, truncated and screened, analytical phase shifts 2-34522
- molecular scattering, close-coupling theory, integral eqn. formulation 2-44038
- resonance energies and widths near barrier maximum, uniform semiclassical calc. 2-20155
- C<sup>+</sup>+He, integral elastic scatt. cross sections meas. 2-34524
- H cold atoms in gas phase and surface, at. proc. eses 2-49543
- H-like ions, elastic scatt., by charged particles, Glauber approx. 2-24811
- H<sup>+</sup>+H scatt. at low energies, phase shifts and differential cross sections 2-34551
- p-H<sub>2</sub>, neutron collisions, elastic and rotationally inelastic cross sections 2-34592
- He<sup>+</sup>, elastic scatt. by charged particles, Glauber approx. 2-24811
- Li, <sup>2</sup>D<sup>0</sup> resonance, elastic and inelastic scatt., autoionising state saddle-point techniques 2-20156
- <sup>6</sup>Li, elastic scatt. cross section, optical model parameters, data compilation 1968 to 1981 2-38369
- Na+Xe(<sup>3</sup>S<sub>0</sub>) interaction pot. from differential scatt. cross-section 2-34550
- elastic scattering of electrons by atoms and molecules**
- see also gas phase electron diffraction
- atomic electron scatt. with polarisation, Schwinger var. calcs. 2-20185
- atomic static dipole polarisabilities, relativistic effects, appl. to electron and positron scatt. 2-4412
- atoms, electron scatt. at intermediate energy, polarisation pot. 2-44095
- atoms, high-energy electron elastic scatt. cross sections calcs. 2-20188
- atoms and ions, electron scatt., free-free absorpt., Gaunt factor models 2-7645
- bremstrahlung cross section close to high freq. limit for short range pot., resonance theory 2-15899
- collision cross sections, linear regression analysis to determine phase-shift 2-7646
- electron elastic scatt. angular distrib., crossed-beam study 2-20186
- electron scattering and charge cloud polarisation 2-7642
- gas phase electron diffr., mol. scatt. function, vibr. anharmonicity effect 2-4385
- methane, slow electron scatt., exchange approx. 2-4387
- molecular beam, electron scatt., diffr. patterns investig. 2-44091
- molecular electron scatt. with polarisation, Schwinger var. calcs. 2-20185
- molecule, slow electron scatt., exchange approx. 2-4387
- multichannel scattering, cross section calcs., R-matrix and Hulthen-Kohn methods 2-34565
- muonic hydrogen, elastic scatt. amplitude estimate 2-39509
- narrow structure study, digital technique 2-7684
- positronium, electron collisions, effect on mag. quenching 2-29733
- potential scattering, analytic scatt. length 2-33362
- spin polarised electron scatt. (*German*) 2-24861
- Ar, elastic scatt. of electrons, spin polarisation between 10 and 50 eV 2-24857
- Ar, slow-electron elastic scatt. cross section calc. 2-44094
- B<sub>2</sub>H<sub>6</sub>, differential cross sections meas. by high energy electron scatt., chemical binding effect, ab initio mol. calc. 2-7644
- Be, electron and positron scatt., static exchange on a polarisation calcs. 2-15896



**elastic scattering of electrons by atoms and molecules continued**

- CO<sub>2</sub>, electron scattering, exchange interactions, linear algebraic approach 2-24862  
 CO<sub>2</sub>, small-angle electron scatt. and electron density 2-49584  
 Ca, electron and positron scatt., static exchange on a polarisation calcs. 2-15896  
 H atom, electron collisions in mag. field (*Russian*) 2-20189  
 H, elastic and inelastic scatt., close coupling calcs. 2-49576  
 H, elastic positron scattering, and annihilation trial 2-15897  
 H, electron and positron collisions, elastic scatt., impact excitation-, eikonal-Born approx. 2-4386  
 H, positron elastic scattering, low energy P-wave phaseshifts, adiabatic approx. 2-24859  
 H<sub>2</sub>, electron scattering, elastic and inelastic cross sections, pot. model calcs. 2-24858  
 H<sub>2</sub>, electron scattering, exchange interactions, linear algebraic approach 2-24862  
 H<sub>2</sub>O molecule, electron scatt. at 0-10 eV, total cross sections 2-49577  
 H<sub>2</sub>S molecule, electron scatt. at 0-10 eV, total cross sections 2-49577  
 He, 2's state, electrons elastic scatt. 2-791  
 He, ejected-electron scattering cross sections, Compton diffusion (*French*) 2-39492  
 He, elastic electron scattering, model pot. approach 2-24856  
 He, elastic electron scattering, high energy high order Born approx. 2-29716  
 He, elastic low energy electron scatt., cross sections calc. using extended HF theory 2-11572  
 He, electron elastic scattering, cross sections, free fall model 2-49574  
 He, electron scatt. and charge cloud polarisation 2-7643  
 He, electrons elastic scatt., elastic and momentum transfer cross section meas. 2-7641  
 He+positron, low energy total cross section anal. 2-49542  
 Hg, differential cross sections 2-24860  
 K, excited state, electron scatt. cross-sections calcs. 2-44101  
 Kr, elastic scatt. of electrons, spin polarisation between 10 and 50 eV 2-24857  
 Kr, electrons elastic scatt., relativistic effects 2-34567  
 Kr, positrons elastic scatt., polarisation pot. 2-34568  
 Li, electron and positron elastic scatt. 2-20187  
 Li, low-energy electron scatt. and impact excitation, absolute total cross sections 2-4388  
 LiH, electron scattering, exchange interactions, linear algebraic approach 2-24862  
 Mg, electron and positron scatt., static exchange on a polarisation calcs. 2-15896  
 N atom, slow electron scatt., total cross-section calc. 2-29717  
 N<sub>2</sub>, electron scattering, exchange interactions, linear algebraic approach 2-24862  
 N<sub>2</sub>, electronelastic scatt. cross section from 5 eV to 1 keV 2-44092  
 Na, laser-excited, superelastic electron scatt., spin polarisations 2-44093  
 Ne atom, slow electron scatt., total cross-section calc. 2-29717  
 Ne, elastic electron scatt., bound and scatt. states, velocity depend. pot. 2-34569  
 Ne, elastic scatt. of electrons, differential cross section meas. 2-15895  
 Ne, electron scatt. and charge cloud polarisation 2-7643  
 O atom, slow electron scatt., total cross-section calc. 2-29717  
 O, elastic electron scatt., bound and scatt. states, velocity depend. pot. 2-34569  
 Rn, electrons elastic scatt., relativistic effects 2-34567  
 SO<sub>2</sub> molecule, electron scatt. at 0-10 eV, total cross sections 2-49577  
 Xe, electrons elastic scatt., relativistic effects 2-34567  
 Xe, positrons elastic scatt., polarisation pot. 2-34568

**elastic waves**

- see also *acoustic waves; Love waves; magnetoelastic waves; Rayleigh waves; seismic waves; vibrations*  
 acoustic logging, cylindrical waves in transversely isotropic media 2-16153  
 alluvial valley, dynamic stress distrib. excited by plane SH-waves 2-22893  
 anisotropic medium, wave surface cross section calcs. and singularity analysis 2-8566  
 attenuation in one-dimensional inhomogeneous elastic media 2-9967  
 ceramics, counterpoled, polarisation and elastic vibr. distrib. laser probe meas. 2-36505  
 composites, layered and fibre-reinforced, finite element analysis of harmonic waves 2-1134  
 concrete plate junctions, sound transmission and mode coupling, parametric study 2-20598  
 crystals, theory of elastic waves 2-4749  
 cubic crystals, anisotropic characts. of elastic wave propag. 2-45337  
 cubic crystals, elastic wave surfaces for (111) plane 2-1554  
 cylinder, elastic, rigidly fixed, axisymmetric normal wave dispersion (*Ukrainian*) 2-25284  
 dibutyl phthalate, supercooled liq., depolarised Rayleigh-Brillouin scatt. from shear waves 2-46620  
 dielectric transparent materials containing optical discontinuities, laser fracture, thermoelastic wave fields 2-30071  
 diffraction by a crack, mathematical theories 2-16261  
 diffraction by cracks, elastodynamic ray theory appl. 2-16263  
 diffraction by penny-shaped crack 2-4747  
 diffraction by semi-infinite stress-free boundary of finite width, matched-asymptotic soln. 2-44679  
 diffusion and plane harmonic waves in solids (*Polish*) 2-8658  
 dislocations, nonuniformly moving, elastic precursor decay and radiation 2-8515  
 dispersion in vibrating bars with polygonal cross-section 2-8069  
 elastic profiles of layered medium from reflection data, impulse point source 2-33304  
 elastic wave propagation in hexagonal honeycombs, analysis and low freq. characts. 2-34977  
 elasto-dynamic contact problem anal. by finite element methods 2-4774  
 elasto-impact bodies, separate states, virtual work, appl. to finite element anal. 2-20613  
 EM ordered media, elastic-EM reson. coupling 2-17415  
 energy transmitting joints, optimum design 2-44665  
 Epstein profiles and the Riemann P-functions 2-12081  
 fast deformation velocity measurement using laser Doppler velocity interferometer 2-44693  
 fibre-reinforced composites, study of elastic wave propagation normal to fibres 2-16715

**elastic waves continued**

- field structure for Lamé equations in rapidly restrained cylinder (*Russian*) 2-50156  
 finite amplitude longitudinal wave propag., initial strain effect 2-30053  
 fluid-saturated porous media, elastic wave propag. 2-35080  
 fluoroplastics, stress waves arising from rapid heating by laser radiation 2-30524  
 glass textile, stress waves arising from rapid heating by laser radiation 2-30524  
 half-space, dislocation motion, displacement discontinuity derivative on wave propag. 2-25285  
 hardening rigidly plastic bodies, shear waves 2-50145  
 harmonic elastic wave propagation along edge of a right-angle elastic wedge 2-7928  
 hexagonal honeycombs, high freq. characts. 2-34978  
 hole, circular, with dynamical loading applied to edge, generated plane elastic waves 2-50169  
 homogeneous isotropic elastic body, low-freq. scatt. 2-50157  
 hydroelastic systems, waves and dispersion relations 2-50226  
 incompressible half-plane with initial strains, dynamics 2-4751  
 inhomogeneous solids, elastic wave attenuation 2-45338  
 interface waves in thin adhesive films, adhesive bond strength determ. 2-2647  
 internal incompressibility and rigidity constraint elastic materials, sinusoidal waves 2-20578  
 IR imaging of solid bodies (*Russian*) 2-12108  
 isotropic elastic incompressible media stressed initially by homogeneous deform., Stoneley waves propag. at interface 2-8068  
 jointed beam system, stress propag., finite element theory 2-16252  
 laser beam control in diffused waveguide by normal elastic waves in substrate 2-20411  
 linear wave propag. in homogeneous and inhomogeneous media, dispersion relations 2-18911  
 low frequency behaviour of amplitude and phase shift 2-16262  
 magnetic bubbles interaction with elastic shock waves induced by laser pulse 2-21858  
 magnetic domain wall motion, shock wave excitation 2-21868  
 metal rod, elastoplastic, strain waves in under longit. impact 2-50163  
 metallic thin film-liquid interface, thermoelastically generated MHz waves 2-11998  
 metals, shock compression in elastoplastic loading waves, expt. study 2-2641  
 micropolar elastic solid, acceleration wave propag. 2-50150  
 microstructure effects, conf., Oxford, England (Dec. 1980) 2-28602  
 non-linear longitudinal-lateral steady-state waves in elastic bars (*Russian*) 2-48517  
 non-linear wave equation, second order soln., appl. to elasticity 2-4748  
 nonlinear elastic medium, wave propag. theory, Hadamard condition effective checking 2-23461  
 orthorhombic crystals, mean elastic wave velocities 2-5183  
 parabolic approximation for surface waves 2-22904  
 plane wave energy of elastic material mixture, phase, group and motion vels. (*Ukrainian*) 2-33294  
 plate, elastic wave diff. by surface crack 2-50168  
 plate junctions, sound transmission and mode coupling 2-20597  
 plate with circular cavity, elastic plane waves under variable loading, alternative solns. 2-39848  
 point defects as sources of micropolar effects in elastic continua 2-28668  
 polyurethane, time-dependent optical characterization in the photoviscoelastic study of stress-wave propagation 2-12679  
 precursors in proelastic media, propagation 2-22900  
 prestressed layer clamped rigidly by vibr. stamp, elastic wave generation 2-4745  
 propagation of elastic waves in half plane 2-39851  
 quasi-body surface waves, in anisotropic plate 2-50761  
 radially propagating surface and plate waves 2-39852  
 ray theory and shock formation in relativistic elastic solids 2-6747  
 rod with nonlinear-elastic attachment, longit. vibrs. 2-25294  
 rods, flexural waves, within axial plastic compressive wave 2-12082  
 scattering, from voids, bubbles, drops, multipole resonances 2-16264  
 scattering by a flaw, new method of calc. 2-17862  
 scattering by elliptical shells 2-44501  
 scattering by flaw in isotropic homogeneous solid 2-8070  
 scattering of longitudinal and transverse waves by a sub-surface crack 2-44676  
 semiconductor, mechanical-electronic relaxation due to elastic wave interactions with electrons (*Polish*) 2-25986  
 shear surface waves, on large amplitude gratings using Rayleigh hypothesis 2-1054  
 shear-wave convolution in a layered piezoelectric-semiconductor structure 2-8699  
 shell, cylindrical, two-layer, interacting with acoustic medium, three-dimens. wave processes 2-50162  
 shell, cylindrical, wave problems, asymptotic anal. 2-8066  
 shell, pulsed, spherical, surrounded by infinite elastic medium, transient response 2-44672  
 slab joints, coupling loss factors for statistical energy anal. 2-20480  
 slab joints, coupling loss factors for statistical energy anal. 2-20481  
 smoothly stratified elastic medium, stable soln. of inverse reflection problem 2-4750  
 solid, isotropic, with anisotropic cylindrical inclusions, elastic wave effect (*Ukrainian*) 2-50148  
 solid medium, two-dimens. wave process of deform., asymptotic analysis 2-25273  
 sound diffraction in a medium with an elliptical wave surface 2-7922  
 spherical layers, concentric elastic, displacements produced by elastic waves (*French*) 2-39850  
 spherically symm. stress pulse propag., asymptotic behaviour, material model (*Chinese*) 2-4746  
 steel, constructional, heat treatment inspection by electromagnetic-acoustic method 2-2679  
 submerged solid body, mech. wave scatt., resonances, flaw detection appl. 2-16166  
 surface, on cylindrical liq.-prestrained body interface, Stoneley wave theory (*Ukrainian*) 2-12066  
 surface waves, theory, rel. to refl. theory 2-18919  
 temperature invariance and curvature of slowness surfaces 2-44680  
 torsional nonstationary wave scatt. by rigid fixed sphere in elastic medium 2-44678  
 torsional wave propag. in elastic uniform waveguide (*French*) 2-50146



**elastic waves continued**

- transient elastic wave scattering by inhomogeneous obstacle, contrast in volume density of mass 2-44500  
 ultrasonic, reflection and transmission coeff. from rough planar defects 2-16260  
 velocity dispersion and attenuation meas. 2-1100  
 volume elastic waves, energy flux eqn. 2-50167  
 wedge, elastic, shear wave diff. by edge crack 2-39849  
 AgGaS<sub>2</sub>, anisotropy of elastic wave propag. 2-50760  
 Ag<sub>2</sub>SbS<sub>3</sub>, elastic const. determ. (*Russian*) 2-16708  
 Al, stress waves, laser induced, damping 2-16716  
 Ar, quantum crystal, inverse and energy surfaces, elastic waves 2-50956  
 Au-Cd, thermoelastic phase transition, acoustic emission study 2-5874  
 CdS, cryst., acoustic shear waves elliptical polarisation 2-36540  
 CdS, noncollinear interaction between elastic vol. waves 2-25167  
 CdS, RF elec. field excitation in volume elastic waves interaction 2-46082  
 Cu cylindrical projectile, normal impact against massive steel anvil at low velocity 2-27225  
 Cu, stress waves, laser induced, damping 2-16716  
<sup>3</sup>He, quantum cryst., inverse and energy surfaces, elastic waves 2-50956  
<sup>3</sup>He, quantum cryst., inverse and energy surfaces, elastic waves 2-50956  
 KNiF<sub>3</sub>, nearly cubic antiferromag., Brillouin scatt. and US propag. 2-46355  
 Kr, quantum crystal, inverse and energy surfaces, elastic waves 2-50956  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-TiO<sub>2</sub> glasses, elastic props., comp. depend., rel. to density and refr. index 2-13768  
 NdP<sub>2</sub>O<sub>4</sub>, elastic nonlinearity and ferroelastic domain wall motion 2-30523  
 Ne, quantum crystal, inverse and energy surfaces, elastic waves 2-50956  
 Sr<sub>0.6</sub>Ba<sub>0.39</sub>Nb<sub>2</sub>O<sub>6</sub>, high freq. elastic waves 2-5184  
 SrTiO<sub>3</sub>, electrostriction coeff., elec. field influence 2-41277  
 Xe, quantum crystal, inverse and energy surfaces, elastic waves 2-50956

**elasticity**

- for crack problems in elasticity see crack-edge stress field analysis  
 see also elastic constants; elastic moduli; elasticity of liquids; elastoplasticity; photoelasticity; rheology; thermoelasticity  
 acoustic polarimetry and the acousto-elastic effect 2-17837  
 adhesively bonded joint, viscoelastic-elastic anal. 2-12049  
 aeroelasticity, stability of integral-differential eqn. solns. (*Russian*) 2-50171  
 algebra of tensor operators, appls. to classical elasticity and dislocation continuum theory 2-20532  
 aligned short fibre-reinforced composite, with penny-shaped cracks, stiffness and strength 2-12100  
 anisotropic elastic materials, stress anal., effects of change of reference coords. 2-25241  
 anisotropic elastic medium, Somigliana dislocation 2-21146  
 anisotropic hereditary-elastic medium, Green's function construction 2-43  
 anisotropic media, elastic strain energy of coherent inhomogeneous precip., self-consistent model 2-41608  
 anisotropic media, three-dimensional contact problem theory 2-15029  
 annular plate, random vibr., mean-square displacement and moment 2-16253  
 apatite, cryst., transversely isotropic half-space, epicentre and epicentral axis motion 2-16238  
 arbitrary-shaped obstacles immersed in water, acoustic wave scatt. 2-16174  
 arch, circular, elastic, clamped-hinged, buckling under gas pressure 2-12062  
 Armo Fe, thin elastic cylindrical shell, sound pulse scattering (*Russian*) 2-16162  
 arteries, elastic props., nonlinear 2-layer cylindrical model 2-6239  
 bar mechanisms, elastokinematics, decoupled nonlinear eqns. 2-50161  
 bar structures, elastic, additional restraint destabilising effect, discussion and reply 2-8039  
 bars, prismatic, anisotropic, torsion, approx. soln. (*Polish*) 2-8042  
 beam, elastic, equilib. modes according to Hess soln. 2-25297  
 beam, infinite elastic, steady motion across frictionless rigid step 2-50205  
 beam, laminated, elasticity, shear stress at clamped ends 2-12033  
 beam, right, containing mixture of elastic materials, torsion (*Ukrainian*) 2-25247  
 beam, thin-walled pretwisted, displacement and strain fields for extension, bending, torsion and warping 2-1127  
 beam composite, with initial stress from moving load, stability 2-12060  
 beam theory, elasticity, dynamics, free vibrs. 2-20538  
 beams, thin, curvilinear, weight minimisation 2-50086  
 bicrystal, symmetrical, energy and elastic field of dislocation arrays, anisotropic elasticity theory 2-5115  
 bodies unbounded in several directions, elastostatics, periodic and slightly periodic boundary value problems 2-23443  
 boundary element methods, plasticity and elasticity problems, book 2-48414  
 boundary integral equations, theoretical aspects 2-42858  
 boundary value problems in elastostatics 2-15026  
 cantilever column in elastic medium, buckling, differential eqns. 2-20565  
 cantilever variable cross section, optimal design, dynamic programming 2-20530  
 capillary phenomena in elasticity theory (*Russian*) 2-25977  
 capsule freely suspended in linear shear flow, time dependent deformation 2-35207  
 Cauchy type singular equation soln. 2-38434  
 cavitation in elastic media under hydrostatic tension 2-50621  
 cavities in nonhomogeneous media, stress concs., review (*Polish*) 2-18899  
 cavity hyperboloid of revolution, single, transversely isotropic, elastic deform. 2-30024  
 coherency strains in elastic free energy, semi-discrete model 2-21207  
 column, elastic, buckling, maximum deflection estimation 2-20561  
 column, elastic, variable cross section, buckling, variational principles 2-8061  
 composite beams, elastic plastic anal. 2-39820  
 composite material dynamic response modelling, mixtures theories 2-30006  
 composite materials, mechanical behaviour, application of stress and strain polarisation tensors (*French*) 2-44  
 compressible isotropic elastic material, stability conditions 2-8063  
 concentrated loads, singular integral eqns., appl. to crack problem 2-16231  
 concrete members, reinforced, stiffness calc. (*Chinese*) 2-41648  
 contact pressures on closely conforming elastic bodies 2-50202

**elasticity continued**

- contact problem for heavy half-plane 2-8095  
 crack arrest, mode III fast fracture, by elastic to viscoplastic material props. transition 2-50187  
 crack on interface between two elastic wedges, plane problem 2-44684  
 crack theory in elastic bodies with initial stress, tear cracks 2-30070  
 crack tip stress intensity, in elasticity and plasticity 2-25307  
 crack-tip analysis for elastic inhomogeneous body, boundary integral eqn. 2-25301  
 cylinder, finite anti-plane shear, Saint-Venant type principle, nonlinearity effect 2-16234  
 cylinder, finite hollow, mixed boundary value problem of elasticity theory 2-25257  
 cylinder, hollow thick-walled composite dynamic stationary elastic problem (*Russian*) 2-8037  
 cylinder, infinite solid, under bending by conc. load, stress state 2-4726  
 cylinder pair, elastic layer bonded, with sheet in nip, steady rolling contact 2-25323  
 cylindrical shell imperfectly bonded to surrounding continuum of infinite extent, dynamic response 2-35054  
 decay conditions and limiting behaviour at infinity, of solutions to a system of elasticity equations (*Russian*) 2-6744  
 deformational thermoplasticity, variable elasticity parameters method, convergence 2-6743  
 deforming circular inclusion in infinite strip, elastic field 2-44655  
 device with a disc spring, elasto-frictional characts. (*Russian*) 2-30002  
 devil's staircase, light scatt., dielec. and elastic props. 2-41314  
 dilation theory 2-15030  
 disc, thick conical, with hole under internal pressure, axisymm. strain 2-39811  
 disclination loops, rectangular wedge, elastic props. 2-8518  
 discrete finite incompressible elasticity, compatibility condition and existence results 2-15024  
 discs, thick rim, rot., desirable stress state achievement 2-4718  
 disk, elastic circular symmetrically situated elliptic hole, equilb. (*Russian*) 2-12026  
 dislocation, elastic field at edge of dihedral interface in isotropic elasticity (*French*) 2-45167  
 displacements of elastic infinite space bounded internally by rigid inclusion, Betti's reciprocal relations 2-50095  
 dissipative solids with internal defects and imperfections, stability phenomena 2-16250  
 double chord RHS T joints modelling 2-50108  
 drift of flexibly connected frames 2-50105  
 ductile, Volterra equation model 2-33295  
 dynamic Green's tensor of elastic-half space or layered medium 2-42864  
 dynamic problems for elastic system under nonconservative loading, dynamic problems, nonlinear finite element analysis 2-35071  
 edge dislocations, dihedral, elastic props. calcs. 2-40384  
 elastic bodies with initial stresses, three dimensional shear crack problem 2-25316  
 elastic curve governed by non-convex energy, equilb. and post-buckling behaviour 2-15025  
 elastic half space, shear modulus profile 2-48503  
 elastic half-space, shear impact, transient anal. 2-39814  
 elastic interaction of dislocations with point defects 2-45244  
 elastic plate on fluid surface, finite amplitude waves 2-42865  
 elastic ring reinforced by very rigid fibres, boundary value problems, asymptotic behaviour 2-30020  
 elastic shells, internal resons. and stability 2-12028  
 elastic solid, transient response to a moving point load 2-20531  
 elastic-inelastic bodies, finite strain theory 2-8040  
 elastica-finite element computation, stability and equilb. 2-10615  
 elasto-dynamic contact problem anal. by finite element methods 2-4774  
 elasto-impact bodies, separate states, virtual work, appl. to finite element anal. 2-20613  
 elastodynamics, linear micropolar, conservation laws and jump conditions (*Chinese*) 2-3379  
 elastostatical boundary value problems, round-off errors comparison in integral eqn. formulation 2-33293  
 elastostatics, singular problems in linearised and finite theory 2-15031  
 fibre stability in elastic matrix of high-elastic deforms. (*Ukrainian*) 2-35072  
 films, cubic single cryst., elastic stresses, X-ray diff. study 2-16974  
 finite elastostatics, Sanders' energy release rate integral and conservation laws 2-1140  
 finite element elastostatics, Loubignac's iterative method 2-42861  
 fission reactor components, piping systems subjected to dynamic loads, stress and strain criteria (*German*) 2-7264  
 flexible shells, elasticity anal. 2-15032  
 friction, elastic theory 2-12107  
 frictionless contact between clamped and simply supported plates, unilateral problem (*French*) 2-23439  
 frictionless contact problems, direct automated procedure 2-50197  
 geometrically nonlinear problems, large deforms., soln. by numerical implementation of integral eqn. method 2-44653  
 gyroscope with elastic main-axis ball bearings, translational vibr. effect on errors 2-25238  
 half space, nonhomogeneous, transversely isotropic, torsion 2-48505  
 half-plane, anisotropic, weakened by hole or cut, boundary value problems of elasticity 2-25250  
 half-space, dislocation motion, displacement discontinuity derivative on wave propag. 2-25285  
 half-space, elastic, compressible, with initial stresses, Lamb's plane problem 2-8047  
 half-space, solutions for several boundary-value problems (*Chinese*) 2-18888  
 half-space, weakened by vertical cylindrical cavity, equilb., dynamic rupturing 2-50184  
 half-space with initial stresses, three-dimens. contact problems (*Ukrainian*) 2-25322  
 halfspace indentation, second-order effects in problems for a class of elastic materials 2-35059  
 heavy cantilever, deformations, elastic eqns. 2-20542  
 hemisphere embedded in elastic half-space, torsion 2-16259  
 higher order elastic constants, of solids 2-50742  
 homogeneous isotropic elastic body, low-freq. scatt. 2-50157  
 hydroelasticity, elastic solid interacting with compressible viscous liquid 2-25387  
 hydrostatic compression of solids, uniqueness conditions 2-8060  
 incommensurate phase, light scatt., dielec. and elastic props. 2-41314



## elasticity continued

- incompressible half-plane with initial strains, dynamics 2-4751  
infinite body with rigid cylindrical inclusion of finite length, tension 2-44650  
inhomogeneous ageing body, boundary-value creep problem 2-25275  
inhomogeneous elastic half space transient response to torsional load 2-44651  
inhomogeneous elastic media, mean stress and deformation tensors relationship 2-8050  
inhomogeneous solid soln. elastic energy 2-1125  
integral eqn. method, appl. to stress concentration problems 2-15027  
integral eqn. method for soln. of anisotropic elasticity problems 2-15028  
isotropic elastic body, effective moduli, periodically distributed voids 2-4722  
laminar cylindrical shells, of arbitrary open profile, free vibrations 2-30058  
limaçon torsion rel. to thin elastic rod theories 2-4717  
linear elasticity, unilateral problems, penalty/finite element anal. 2-45  
macroscopic damage model (*French*) 2-12024  
material bodies with dislocations and disclinations, Yang-Mills type minimal coupling theory 2-23442  
melting, model-free elasticity theory 2-40525  
membrane shell of hyperelastic material covering fluid free surface, oscils. in axisymm. vessel 2-25382  
micropolar elasticity, nonlocal, vol. defects 2-30008  
micropolar elastostatics, 3D, stress functions and stress function spaces of non-metric connection 2-20534  
Mooney-Rivlin materials, finite incompressible elasticity problems, asymmetric simplicial finite element method solns. 2-10614  
Navier equation, least squares finite element approximation 2-6745  
neo-Hookean membrane, large plane-to-surface deformation 2-12032  
non-linear wave equation, second order soln., appl. to elasticity 2-4748  
non-prismatic three-dimensional beam finite element model 2-12025  
nonlinear anisotropic elastic materials, parameters determ. 2-35056  
nonlinear elastic medium, force per unit surface of defect 2-21137  
nonlinear elastic medium, wave propag. theory, Hadamard condition effective checking 2-23461  
nonlinear elastostatics, boundary value problems, dual formulation 2-23441  
nonlinear theory of elasticity, dynamic problem solns., existence and uniqueness theorem 2-48501  
nonstationary elasticity problems, numerical integration method (*Russian*) 2-30026  
numerical analysis of elastic plates by segmentation method 2-20576  
optical elements with arbitrary generatrix configs., elasticity theory, axisymm. linear boundary-value problems 2-16237  
optimal support reaction in elastic frame structures 2-18890  
orthotropic bodies, elasticity plane problem soln., numerical implementation of integral eqn. method 2-25251  
orthotropic body, plane problem soln. by R-function method (*Ukrainian*) 2-48504  
panel, transient vibrations due to shock wave impact 2-25287  
parabolic umbilic catastrophe, appl. to elastic stability theory 2-18900  
partial elliptical equation solution, appl. of dynamic programming method (*Russian*) 2-3357  
penetration of elastic wedge into incompressible liquid 2-4779  
piezoceramic shell, free, eqns. of electroelasticity 2-26823  
piezoelectricity theory, nonstationary 2-44632  
plane, derivation of complex-variable formula (*Chinese*) 2-18889  
plane bodies with crack in elastic, elastic-plastic regions, finite element anal. 2-39862  
plane elasticity crack problems, singular integral equations, iterative soln. 2-16266  
plane elasticity problems, finite element method using complementary energy theorem 2-50093  
plane problem of elasticity, soln. using one version of finite-element method 2-44654  
plane problems, finite element anal. via boundary conditions relax. (*Chinese*) 2-4714  
plate, anisotropic elastic, finite torsion and flexure, one-dimens. theory 2-50103  
plate, annular heated, elastic instability under lateral pressure 2-12061  
plate, annular orthotropic, optimum problem soln. 2-12031  
plate, circular, elastic, on elastic half space, asymmetric vibrs. 2-25286  
plate, circular, transverse vibr., elastic stability 2-20592  
plate, elastic, bending, Reissner's model, boundary integral eqn. soln. 2-44652  
plate, elastic, with hole bounded by two intersecting circles, fracture (*Russian*) 2-50194  
plate, elliptic, anisotropic, arbitrarily laminated, under uniform press., closed-form soln. 2-16236  
plate, orthotropic thick circular, on elastic foundation (*Polish*) 2-8043  
plate, rectangular, linear elastic behaviour, finite difference soln. of first-order partial differential eqns. 2-1123  
plate, thick, perforated, effective elastic constants (*Chinese*) 2-25246  
plate, thin, elastic, flexural motion, nonlinear boundary layer theory near edge 2-12077  
plate, thin, elastic, flexural motions, nonlinear theory 2-12076  
plate, thin infinite elastic, external crack problem, transform method of soln. 2-12102  
plate, uniformly compressed annular, with axisymm. initial deflection, elastic instability 2-1130  
plate, with periodic system of holes, brittle fracture, cracks from hole contours 2-25320  
plate models, comparison between two- and three-dimensional (*French*) 2-42862  
plates, annular, polar-orthotropic, elastic buckling in shear 2-20566  
plates, bent elastic, cracked, energy release, thickness effects 2-12099  
plates, clamped, thermal stress distrib. 2-12034  
plates, elastic and viscoelastic, thermal lens form. due to laser nonuniform heating 2-44415  
plates, elastic-plastic anal. by hybrid-stress model and initial-stress approach 2-39804  
plates, light alloy, with strain hardening, collapse anal. 2-39825  
plates, thin, nonlinear anal. by finite element method 2-4721  
plates, weakened, strong fluctuations (*Russian*) 2-1126  
plates and shells, stress conc. at sites of axisymm. thinnings, numerical investigation 2-50097  
plates thin elastic, weakened by cracks, bending 2-4768  
polydimethylsiloxane, elastic props., stress-strain isotherms in elongation 2-13764

## elasticity continued

- polydimethylsiloxane networks, randomly crosslinked, stress-strain behaviour 2-47132  
polyethylene, dynamic mech. props., crystal morphology effects 2-30415  
polymers, entangled networks, elasticity 2-12662  
poroelastic dry body, fluid in filtration, rigid skeleton model 2-12217  
porous media models, compressible, theory of mixtures formalism 2-50078  
porous saturated elastic solid, poroelasticity equations derived from microstructure 2-16233  
Poynting effect study (*French*) 2-4719  
Prandtl integral equations, discrete vortices method solution 2-18904  
precipitates, fully coherent, self-stress fields, elasticity linear isotropic theory 2-12761  
prism, triangular elastic, with circular cylindrical hole, torsion problem 2-39805  
prismatic beams containing thin inclusions, tension 2-25255  
prismatic rods, torsion, internally constrained body theory 2-30015  
prismatic rods, torsion, internally constrained body theory 2-30016  
rail stress meas., appl. of acoustoelastic effect 2-17836  
rectangular domain mixed boundary-value problem, soln. completeness 2-6735  
Riemann boundary value problem discontinuous matrix coeff., mechanics appl. 2-28662  
rigid mass connected to elastic half-space by elastic rod, transient torsional vibrs. 2-25236  
rings, thin elastic, in-plane postbuckling under constant directional press. load 2-44668  
rod, nonuniform prismatic, elastic material distrib. to maximise torsional stiffness 2-25252  
rod with nonlinear-elastic attachment, longit. vibrs. 2-25294  
rubber, elasticity, front factor press. variation 2-21206  
sandwich panel, damped, backed by cavity, acoustoelasticity 2-44548  
satellite fuel container, surface tension struct., hydroelastic vibrations 2-30262  
semi-infinite boundaries, anisotropic elasticity, dislocations at common edge 2-40382  
semiconductor film, size-quantized, Rayleigh wave amplification by EM wave 2-1965  
shaft, elastic circular, stress conc., Green's function for body force problems 2-4715  
sheet, infinite, with infinite row of colinear straight cuts, stress and strain anal. (*Russian*) 2-47  
shell, finite helicoidal, stressed state calc. 2-25253  
shell, pulsed, spherical, surrounded by infinite elastic medium, transient response 2-44672  
shell, truncated conical, dynamic stability under pulsating torsion 2-12078  
shell elastic cylindrical, with compartments partially filled with fluid, transverse oscils. 2-25293  
shell heavy elastic cylindrical, equilib. shape 2-50102  
shell of arbitrary shape, refined appl. theory construction 2-48502  
shell of revolution, thin, shallow, precrit. equilib. and stability 2-4736  
shells, anisotropic laminate, of variable stiffness, applied theory of vibr. 2-25296  
shells, circular cylindrical, symmetrically loaded, limit anal. by linear programming (*French*) 2-1124  
shells, cylindrical, orthotropic, reinforced with elastic filler, stability in axial compression 2-30051  
shells, different-module, stability losses (*Ukrainian*) 2-12056  
shells, elastic, geometrically nonlinear thermodynamics, constitutive eqns. 2-20528  
shells, elastic geometrically nonlinear thermomechanics, variational eqn. 2-20529  
shells, mildly sloping, variable thickness and curvature with arbitrary boundary conditions, theory 2-8046  
shells, rigid-plastic, shallow, spherical, large deforms. 2-1121  
shells, thin, geometrically nonlinear behaviour, mixed finite elements based on Marguerre theory 2-30004  
shells, two-dimens., nonlinear finite element anal. 2-4716  
shells and bars, cylindrical, short, thin-walled, displacements and normal stresses taking account of shear 2-8033  
shells of rotation, rigidity matrix, anal. by finite element method (*Russian*) 2-30018  
Signorini problem in elastostatics, interior penalty methods for finite element approx. finite element analysis boundary-value problems elasticity 2-18892  
Signorini problem in elastostatics, reciprocal formulation 2-18893  
singular integral calc., limiting integral eqn. method 2-42863  
singularities removal for solns. to system of eqns. of elasticity theory (*Russian*) 2-48508  
slab, elastic, infinite, containing flat annular crack under torsion, mixed boundary value problem 2-20607  
slab, transversely isotropic elastic, in stability under axial loading 2-12059  
smoothly stratified elastic medium, stable soln. of inverse reflection problem 2-4750  
solar water heaters corrugated and cylindrical panels stiffness anal. 2-27542  
solid, two-dimens., fast stiffness formulation for finite element analysis 2-1122  
solid mechanics, bound energy definitions (*French*) 2-28656  
solids, cyclic loading, piecewise modelling, discrete stress rate sensitivity 2-4731  
Somigliana dislocation loops, interaction with elastic strain fields 2-50641  
sphere, hollow, dynamic behaviour in thermomech. shock 2-30059  
sphere, pulsating elastic, response to square pulse input 2-16232  
stability of elastic systems subjected to follower forces, Hamiltonian use 2-50141  
steel tool, surface nitride layer effect on elastic and wear props. (*German*) 2-22338  
stiffened plates, minimum weight design 2-39818  
stiffness matrices, derivation from integral equations 2-25245  
stress concentration near liquid filled cavity 2-39809  
stress elements, hybrid, plane isoparametric invariance and optimal sampling 2-20537  
strip, elastic, infinitely long, containing two coplanar Griffith cracks, stress intensity factors, crack energy 2-16267  
strip and half-plane with circular hole, stress-conc. factor (*Russian*) 2-25260



**elasticity continued**

- strip elasticity theory, punch indentation, mixed problem soln. 2-1153
- strip with series of holes or inclusions, flexure 2-8035
- structural eigenvalues, elastic optimal design 2-16240
- structure analysis, numerical integration comparison 2-39840
- surface nitride layer effect on elastic and wear props. (*German*) 2-22338
- thermoelastic martensitic crystal, hyperelasticity, dislocation model 2-25975
- thick and thin sectorial plate, finite strip model 2-10609
- thin shell theory, Green's matrices in static problems 2-28661
- thin-walled elastic structure, unified theory 2-50094
- time-harmonic elastodynamics on infinite domains, transmitting boundaries 2-23445
- transcendental equation roots, elasticity theory 2-28660
- transversely isotropic half-space, epicentre and epicentral axis motion 2-16238
- trussed type structures, explicit optimum design 2-20525
- variational principles derived from the matrix structural analysis equations 2-48507
- wedge, bi-material, two-dimens., singular behaviour at vertex 2-16235
- Ag, AA 2-21261
- AgCl film on NaCl, anisotropic theory of crystal-film interface 2-5311
- Al, relation between Debye temp., elasticity and thermal expansion 2-21261
- Al<sub>2</sub>O<sub>3</sub> ceramics, neutron irradiated, elastic props. 2-22258
- Au, edge dislocations, dihedral, elastic props. calcs. 2-40384
- B<sub>2</sub>O<sub>3</sub>-GeO<sub>2</sub> glass, retarded elasticity 2-41650
- Be, cryst., transversely isotropic half-space, epicentre and epicentral axis motion 2-16238
- Be, shock wave profile, elastic-viscoplastic constitutive model 2-1558
- Cd, cryst., transversely isotropic half-space, epicentre and epicentral axis motion 2-16238
- CdS, local states US ionization, sonolum. and acoustoelastic current 2-41440
- Cu sheet, cold-rolled texture development, three dimensional representation (*Russian*) 2-5892
- Fe-Ni-Cu-Si-Mn-Cr-C, cast austenitic, struct. and mech. props., heat treatment effect 2-51953
- Mg alloys, elastically stressed, AE during unloading 2-52135
- Mg, electron-irradiated, paraelastic interstitial defect (*French*) 2-21139
- Ni alloys, refining process of EI-437 and 617 alloys during vacuum plasma-arc remelting (*Russian*) 2-2473
- U, shock wave profile, elastic-viscoplastic constitutive model 2-1558
- UO<sub>2</sub> fuel pellets, thermal-mechanical behaviour model 2-39150
- Zn, cryst., transversely isotropic half-space, epicentre and epicentral axis motion 2-16238
- $\alpha$ -ZnF<sub>2</sub>, acoustic and optical transparency, elastic and photoelastic props. 2-45404

**elasticity of liquids**

- see also compressibility of liquids
- 4-n-alkylphenyl-4-n-alkanoyloxybenzoates liq. cryst. mixtures, elastic props. rel. to mol. comp. 2-8552
- anisotropic media, elastic energy 2-16701
- biaxial nematics, elastic and flow props. 2-20999
- N-p-butoxybenzylidene-p-n-octylaniline, dynamic shear props. near smectic A-smectic B phase transition 2-16790
- dibutyl phthalate, supercooled liq., depolarised Rayleigh-Brillouin scatt. from shear waves 2-46620
- elasto-viscous fluid, MHD flow above impulsively started plate 2-4895
- excess pressure losses in a slit 2-20624
- finite element computer model of the hole pressure problem 2-30260
- hydroelastic systems, waves and dispersion relations 2-50226
- liquid crystal, smectic, freely-suspended films, mech. prop. meas. and B-A transition 2-16582
- liquid crystals, one- and two-dimens. ordered, conference, Garmisch-Partenkirchen, Germany (Jan. 1980) 2-10550
- polyethylene melts, elongational viscosity and mol. struct. 2-30084
- polymer, randomly branched conformation, mean field theory and Flory approach 2-11599
- polymer liquid, comparison of eccentric rotating disc and oscillatory meas. of dynamic moduli 2-25965
- polystyrene and HIPS melts, determ. of capillary entrance press. losses and first normal stress difference 2-25343
- red cell membrane proteins, multimol. films, surface rheology 2-37507
- smectic liquid crystals, AC and DC mech. response 2-16706

**elasto-optical effects** see photoelasticity; piezo-optical effects**elastomers**

- see also rubber
- amorphous, mixing with melting cryst. polypropylene, dynamic mech. obs. (*Russian*) 2-21279
- epoxy polymers, elastomer modified, fracture 2-2582
- ethylene-propylene copolymers, strain birefringence 2-26861
- filled, in vac. environments, long-time stress relax. 2-41663
- oligoester acrylates, linear and branched plasticiser, diffusion and solubility of S 2-45602
- polydimethylsiloxane, elastic props., stress-strain isotherms in elongation 2-13764
- polyurethane elastomer, viscoplastic behaviour at high press. 2-16710
- polyurethane elastomers, segmented, inversion of IR-dichroism (*Russian*) 2-43955
- polyurethane elastomers charact. by <sup>13</sup>C NMR spectra 2-21902
- polyurethane elastomers hard segments struct., X-ray diffr. and conformational anal. 2-40297
- polyurethanes, containing sodium tetraphenylborate, dynamic mech. props. 2-27203
- relaxation characteristics, of strength and rupture (*German*) 2-22280
- segmented, annealing-induced morphological changes, thermal anal. obs. 2-22240
- stress/strain behaviour at constant strain rates, time and strain effects separability 2-41692
- styrene-butadiene block copolymers, thermoplastic elastomers (*Chinese*) 2-41678
- urethane elastomers, synthesis, crosslinking and macroscopic props. (*Polish*) 2-36929
- wear, fundamental aspects 2-22337

**elastoplasticity**

- alloy steel, type 38KhNVA, elastoplastic strain field in mouth zone of crack 2-13804
- alloys, biphasic isotropic, elastoplastic props., comparison with constituent props. (*French*) 2-30507

**elastoplasticity continued**

- antiplane strain, body with reinforced slit 2-4735
- bar, prismatic, of cornered cross section, elastoplastic torsion 2-30046
- bar, triangular cross-sections, torsion, theory of small elastic-plastic deformations (*Russian*) 2-39828
- beam, continuous, shakedown, improved bounds for displacements 2-30032
- beams and plates, fixed, lateral loading behaviour 2-8056
- boundary element solution scheme 2-30037
- boundary elements methods appl. to elastoplastic analysis 2-25262
- C-shaped specimen, J<sub>IC</sub> evaluation by US method (*Japanese*) 2-9494
- column, elastic-plastic model, limit surfaces, geometry changes 2-25264
- composite material dynamic response modelling, mixtures theories 2-30006
- constitutive equation, incremental, for large strain elastoplasticity 2-20550
- constitutive equation with anisotropic hardening and elastic-plastic transition 2-12047
- crack growth, slow, meaning of elastic-plastic fracture criteria 2-8088
- crack tip, rapidly propagating, plastic zone boundary layer phenomenon 2-20608
- crack-tip, rapidly propagating in elastic perfectly-plastic material, steady-state fields 2-30065
- crack-tip fields for fast fracture of elastic-plastic material 2-8093
- cracks, three-dimensional, J-integrals, theoretical study (*Japanese*) 2-20609
- creeping material, stress and plane strain fields at tip of stationary tensile crack 2-8089
- cyclic and other loading, stress-strain relations 2-50133
- cylinder, thermoelastoplastic creep, external load effect 2-12052
- cylinder rolling on elastoplastic half-space medium, stress and deform. fields (*French*) 2-4725
- deformation of an elastoplastic system in soil with a free surface loaded by pressure pulse 2-12036
- diffusion bonded precision joints, reaction pressure distrib. 2-12106
- elastic-plastic crack problems, three-dimensional finite element anal. 2-20611
- elastic-plastic models, small strain incremental theory, thermomechanics 2-35069
- elastic-plastic problems solution, existence and uniqueness, convergence of approx. solutions (*Chinese*) 2-28653
- elastoplastic structures, shakedown anal., review 2-11245
- elastoviscoplastic material submitted to cyclic load, asymptotic behaviour 2-39834
- fatigue crack prop. (*French*) 2-50124
- fibre reinforced cylinders, elastic-plastic deformations 2-16249
- final store for nuclear waste in Salzbergr, thermal and mech. effects calcs. (*German*) 2-11194
- finite element formulation based on Nadai's deform. theory for elastoplastic anal. 2-39827
- fracture mechanics, and wear 2-50208
- frame, two-storey, shakedown, improved bounds for displacements 2-30032
- integral inequalities of the elastico-plastic body theory 2-8049
- kinematic hardening rule, generalised, with memory of maximal prestress 2-39831
- large deformation finite element anal., perturbation approach 2-30017
- limit deformations in complex stress state, critical anal. 2-30047
- metal rod, elastoplastic, strain waves in under longit. impact 2-50163
- metals, elastoplastic strain theory for two-link broken paths 2-50125
- metals, FCC, mech. behaviour in plastic deform. 2-2558
- metals, porous, isotropic, elastoplastic deform. 2-50129
- metals, shock compression in elastoplastic loading waves, expt. study 2-2641
- microcracked medium with friction, model (*French*) 2-39813
- notched root, method of elastic-plastic stress and strain calc. 2-5912
- notched specimens, fracture resist. 2-5933
- pipe, thin-shelled, stability over elastic limit under torsion (*Russian*) 2-12058
- plane bodies with crack in elastic, elastic-plastic regions, finite element anal. 2-39862
- plane specimens and cylindrical shells under large-scale yielding, finite element fracture analysis 2-39859
- plate, circular, stability rel. to residual stresses (*Russian*) 2-39829
- plate, rectangular, elastic/perfectly plastic, springback after biaxial pure bending, result range of applicability 2-44658
- plate, rectangular, inelastic dynamic response, finite element anal. 2-12080
- plate, rectangular, springback after biaxial elastic-plastic pure bending 2-44657
- plate subject to pure bending, shear band development 2-25270
- polyurethane elastomer, viscoplastic behaviour at high press. 2-16710
- PVC film, plasticized uniaxially stretched, deform. anal. during re-drawing (*Japanese*) 2-21213
- rectangular parallelepiped, compression, theory of small elastico-plastic deformations (*Russian*) 2-12041
- relation modification for processes with middle curvature (*Russian*) 2-25279
- rods, flexural waves, within axial plastic compressive wave 2-12082
- shakedown, improved bounds for displacements 2-30032
- shell, shallow, interaction with rigid punch 2-25327
- shell, spherical, elastoviscoplastic, oscils. (*Polish*) 2-20599
- shells, cylindrical, shallow, elastoplastic flexure 2-8058
- shells, thin, elastic-plastic deform., one class of inverse problems 2-44663
- shells and plates with large deflections, impact loading, numerical soln. (*Russian*) 2-35067
- shells with large displacements including material nonlinearities, finite element formulation 2-8053
- solid, two-dimens., fast stiffness formulation for finite element analysis 2-1122
- solids, high velocity deformation, micromechanical study 2-21220
- steel, 1Kh18N9T and S10C, elastoplastic deformation and failure, plane stressed condition with proportional loading 2-31760
- steel, mild, circular plate, residual stress distrib. due to axial symm. temp. distrib., effect of heat input (*Japanese*) 2-21204
- steels, quenching and tempering, transform. kinetics, heat cond. and elastic-plastic stress 2-31711
- stress coining technique, theory, improvement of fatigue performance at hole 2-12085
- surface-cracked plates and shells, elastic-plastic fracture mechanics parameters 2-20560



**elastoplasticity** continued

- thermally loaded elastic-plastic material, crack-tip stress and strain singularity 2-12101
- TREAT Mk III coolant loop, thermoelastoplastic stress anal., finite-element calc. 2-7280
- variable loading, five-dimensional vector spaces (*Russian*) 2-1128
- viscoelastoplastic strip, photoviscoplastic study of slip lines and principle stress trajectories during drawing with back tension 2-12109
- workhardening solids, shakedown, bounding theorem for plastic work density 2-4732
- Al alloy AK4-1T, prior creep strains effect on instantaneous elastoplastic deform. 2-41706
- Al, tensile stresses under dynamic tension 2-50763
- Cu, tensile stresses under dynamic tension 2-50763
- Si<sub>3</sub>N<sub>4</sub>, solid particle erosion 2-9431
- Ti alloys, prior creep strains effect on instantaneous elastoplastic deform. 2-41706
- Zn-N, exptl. estimation of interaction parameter  $e_0$ , dislocation meas. 2-1487

**elastoresistance**

- metallic thin film, electrical and mechanical properties of thin metal films: Size effects, review 2-51348
- Mo<sub>2</sub>Ge<sub>1-x</sub>, amorphous film, elec. transport and struct. 2-40913

**ELDOR**

- hydroquinone radicals, paramag. centre spatial distrib., ELDOR in electron spin echo 2-36482
- membranes, EPR spectra of nitroxide spin label probes, O effect 2-15825
- phenacyl chloride, X-ray irradiat., ENDOR and ELDOR spectra 2-9057

**electrets**

- see also dielectric devices; electrostatics; photoelectrets; thermoelectrets*
- cholesteryl laurate, liq. cryst. phase transformation, thermoelectric electret 2-46468
- dosimeter for neutrons and gamma rays 2-15638
- dosimeters in radiography, use of electrets 2-52633
- film electret, anal. of thermally stimulated current due to excess charge (*Chinese*) 2-41256
- hostaphan, thin sheets, electret props., thermally stimulated depolarisation 2-2179
- magneto-electret, charge origin 2-36510
- magnetoelectret state, refractive index change due to mol. alignment during formation 2-26850
- Mylar electrets, high-resolution probing of space-charge densities using electron beam 2-9090
- nylon film, mechano-electret, spontaneous TSC 2-46478
- perfluoroalkoxy film, nonmetallized electret, charge storage 2-36528
- polymer film, polarization distrib. determ. using periodic heating 2-36529
- polymer films, electret props. anal. using two-component insulator model 2-5619
- polypropylene films, TSC studies 2-21935
- polypropylene magneto-electret, dielectric behaviour effect of duration of poling mag. field 2-31368
- polystyrene, thermomagnetically treated, thermally stimulated discharge current 2-51518
- polyvinylacetate:I<sub>2</sub> film, unpoled, thermally stimulated discharge currents 2-41264
- PTFE, TSC modelling 2-8817
- PTFE-polyhexafluoropropylene electret, charge relaxation, surface phenomena role 2-17399
- AlH<sub>3</sub>, phase transitions, pyroelec. effect, cond. anomaly, UV irradiat. effect, TSD and electret states, image form. 2-41263
- Ge:Li film, amorphous, electret effect 2-17395
- Pb(Ti<sub>0.5</sub>Pb<sub>0.5</sub>ZrO<sub>3</sub>)-Pb(W<sub>0.5</sub>Cd<sub>0.5</sub>)O<sub>3</sub> pyroceramic electret with vitreous phase, prep. and characteris. 2-51866
- S, magneto-electrets, mag. susceptibility induced paramagnetism, temp. effect 2-26577

**electric actuators**

- electromagnet actuator for left ventricular assist device 2-14360
- electron beam exposure system, positioning stage driven by hydraulic cylinder 2-28930

**electric admittance**

- metal/ $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O interface, evolution in humid atm. (*French*) 2-8877
- MOS capacitor, physical characterisation of deep bulk levels by MOS conductance technique 2-46144
- semiconductor junctions with deep impurity levels, admittance, space charge anal. 2-13169
- solid electrolytes, impurity O transport, small-signal AC response theory 2-17901
- B<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O-LiF(Li<sub>2</sub>S) glass, superionic cond. and far IR spectra, expt. and computer simulation 2-16887
- Ba<sub>1-x</sub>La<sub>x</sub>F<sub>2+x</sub>, superionic cond., cond. enhancement and dielec. response 2-16884
- Li<sub>3</sub>N-H, ionic conductivity, complex least squares fitting, admittance data 2-50919
- $\beta$ -PbF<sub>2</sub>, small signal AC response 2-17902
- Si, p-n diode, neutron and electron irradiation effects on defect energy levels (*Korean*) 2-13002
- n-Si:Al, p-n reversed biased junction, deep centre admittance (*Spanish*) 2-30956
- Si:H, amorphous, light induced changes, computer modelling of admittance and DLTS 2-36090
- ZrO<sub>2</sub>, stabilised, complex impedance and admittance 2-21386

**electric admittance measurement**

- biomedical conductimetry, non-contacting, for biological materials, theoretical investigation (*German*) 2-18312
- capacitance loss bridges, unifying admittance calc. 2-6878
- liquid conductance at high frequencies meas., using non-contact system 2-15192
- photoelectrochemical devices, steady-state elec. admittance spectroscopy, electrolyte-semiconductor interface, critical props. 2-33575

**electric amplifiers** *see amplifiers***electric arc furnaces** *see arc furnaces***electric arc welding** *see arc welding***electric arcs** *see arcs (electric)***electric breakdown**

- see also electric breakdown of gases; electric breakdown of liquids; electric breakdown of solids*
- atmosphere, obs. of two-dimensional interferometric positions of VHF lightning sources 2-18540

**electric breakdown** continued

- bilayer lipid membranes, breakdown voltage, dependence on rate of pot. diff. increase 2-6216
- dark current flow and positively charged particles meas. in uniform field vacuum gap 2-5015
- high vacuum accelerator tubes, prebreakdown and breakdown processes, review 2-11310
- spacecraft charging induced discharges, voltage gradients in solar array cavities as breakdown sites 2-38037
- thermal breakdown in dielectrics, transient solns. to thermal and elec. conductivity function eqns. 2-13416
- vacuum breakdown initiation, anode material filling of interelectrode gap 2-44941
- vacuum gap electrodes, electric breakdown, thermal instability of anode 2-12417
- vacuum-gap electrodes, electrical breakdown, thermal instability of cathode microprotruberances 2-12416
- van de Graaff generator spark channel characts. 2-15641
- Si epitaxial layers, effect of defects on voltage breakdown of p-n junctions (*Russian*) 2-2019

**electric breakdown of gases***see also electron avalanches*

- air, atm., breakdown by Nd laser radiation forming large-dia. focusing spots 2-35267
- air, corona-onset field strength calcs. and equiv. radius, concept 2-8365
- air, streamer breakdown criterion for compressed gases 2-1357
- air, voltage breakdown between closely spaced electrodes over polymeric insulator surfaces 2-50466
- air breakdown by laser pulse near surface of solid transparent dielectric (*Russian*) 2-5007
- discharge suppression in gas-inlet system, 10<sup>-2</sup>-10<sup>-3</sup> torr 2-8378
- electric field strength in leader channel of a long positive spark in air 2-44935
- electronegative gases used in technical insulating appls., breakdown development 2-1289
- freon gaseous dielectric, breakdown strength, electron attachment role 2-12267
- hexafluoropropylene, dielec. strength under breakdown and prebreakdown conditions 2-25486
- high pressure gas-vacuum boundary layer discharge 2-8381
- high pressure gases, diffuse breakdown model at homogeneous electric field strengths 2-20941
- LV insulations AC voltage insulating power (*German*) 2-50464
- monopole antenna, response to EM pulse with corona, transmission line model 2-44191
- neutral gas, simultaneous EM and electron beam induced breakdown 2-25489
- perfluorocarbon gaseous dielectric, breakdown strength, electron attachment role 2-12267
- plasma sheath, glow transition 2-20952
- resonant optical breakdown theory 2-35269
- spark breakdown of gases, plasma oscill. role, review (*Russian*) 2-40197
- tetrachloroethane, RF discharge, decomposition products, EPR spectra (*German*) 2-25666
- tetrachloroethane, RF low pressure discharge, decomposition, gas chromatography, time resolved spectra (*German*) 2-16521
- two-electrode gap immersed in arc plasma, breakdown voltage meas. 2-44821
- vacuum breakdown, Trapp and Van der Graaff's criterion anal., comment 2-40206
- vapour-mist dielectrics, cooling and insulating media for vapour-cooled power transformers 2-16419
- Ar, electron swarm parameters 2-25487
- Ar, gas, pre-breakdown ionisation current, collision processes 2-30355
- Cl, sparking pot. and secondary ionisation coeff. 2-1356
- He filled diodes, electric breakdown initiated by long-lived metastable states (*Croatian*) 2-4914
- Hg discharge lamps, break-down voltage calc. method (*Russian*) 2-50472
- Kr, electron swarm parameters 2-25487
- Kr filled diodes, electric breakdown initiated by long-lived metastable states (*Croatian*) 2-4914
- N, drift dominated electric and plasma motion, space-charge effects 2-25488
- N<sub>2</sub>, streamer breakdown criterion for compressed gases 2-1357
- N<sub>2</sub>O, breakdown field strength 2-1359
- SF<sub>6</sub>, breakdown characts. with pressure variation in uniform electric field 2-44933
- SF<sub>6</sub>, effect on the breakdown voltage of surface roughness (*Czech*) 2-8368
- SF<sub>6</sub> gas, positive/negative point-plane corona inception under DC and 60 Hz conditions 2-12421
- SF<sub>6</sub> rod-plane gaps, pre-breakdown discharges under positive switching impulses 2-40203
- SF<sub>6</sub>, streamer breakdown criterion for compressed gases 2-1357
- SF<sub>6</sub>-N<sub>2</sub> mixtures, diffusion rate of SF<sub>6</sub> into N<sub>2</sub> determ. 2-44811
- SF<sub>6</sub>-(N<sub>2</sub>)(N<sub>2</sub>O), breakdown field strength 2-1359

**electric breakdown of liquids**

- aliphatic alcohols, charging tendency, streaming electrification 2-13413
- benzenes, fluorinated, DC dielec. strengths rel. to dielec. const., stored energy theory 2-5640
- cavity dynamics, optical breakdown, initiation, shadowgraphic study 2-16354
- dielectric, high field behaviour of moderately pure liquids, complexities 2-5412
- dielectric liquid, discharge, short high-current, anodic and cathodic voltage drop determ. 2-8380
- dielectric liquids, conduction current and DC breakdown voltage (*Korean*) 2-17401
- dielectric liquids, conf., Berlin, West Germany (July 1981) 2-5628
- EHD instabilities in the breakdown of point-plane gaps in insulating liquids 2-17403
- hexane, flowing, breakdown time lag distrib. 2-5639
- high-viscosity dielectric liquids, prebreakdown phenomena 2-2187
- hydrocarbon liquid-metal interface, charge formation mechanism in double layer 2-13411
- hydrocarbons, electric breakdown process, review of expt. results 2-5633
- hydrocarbons, liquid flow electrification and zeta potential 2-13410
- hydrocarbons, prebreakdown and breakdown phenomena obs. using high-speed image converter camera with laser illum. 2-5632



**electric breakdown of liquids continued**

- hydrocarbons, prebreakdown and breakdown phenomena using point-plane geometry 2-17404
- hydrocarbons, prebreakdown disturbances and luminescence obs. using laser schlieren technique 2-5631
- hydrodynamic shock wave propag. after elec. breakdown 2-4862
- insulating hydrocarbons, strong current injection under high electric fields 2-13088
- metal-dielectric liquid interfaces, charge transfer 2-13415
- paraffin, liquid, breakdown strength rel. to gap length, electrode material, additive conc. and presence of  $O_2$ , expt. 2-2188
- permanent cavities in liquids 2-12189
- polarity effect of dielec. breakdown for various molecular structs., breakdown mechanism rel. to electron transport processes 2-5638
- prebreakdown gas phase in liquid dielec. breakdown, time resolved image sequence recording using image converter camera 2-5629
- solid-liquid interfaces, effect of particles on electric-field induced phenomena 2-13412
- streaming liquids, electrokinetic processes 2-12239
- stressed liquid, heat transfer 2-12156
- Sumoto effect, explanation on basis of increased surface tension 2-13414
- triggered breakdown, shadowgraph optical system for determ. of proportion of gap affected by discharge 2-5641
- Ar, liquid, dielectric breakdown rel. to press., voltage polarity, pulse width and impurity 2-5636
- He, breakdown, electrode surface influence 2-2186
- He, first voltage breakdown, electrode behaviour 2-2185
- He, liquid, AC breakdown strength in millimetre gap range, low-loss He cryostat appl. 2-5635
- He, liquid, dielectric breakdown, influence of electrode materials, cryogenic equipment for spark gap cooling 2-5634
- He, liquid, dielectric breakdown rel. to press., voltage polarity, pulse width and impurity 2-5636
- He, liquid, pulsed electric breakdown delay time 2-36527
- $N_2$ , liquid, AC dielectric strength for normalised spherical electrodes, statistical anal. 2-5637
- $N_2$ , liquid, dielectric breakdown rel. to press., voltage polarity, pulse width and impurity 2-5636
- $N_2$  liquid, dielectric breakdown, press. depend. bubble form. suppression 2-26817
- $N_2$ , liquid, prebreakdown phenomena study using modified schlieren system, hopping transport mechanism 2-5630

**electric breakdown of solids**

- see also impact ionisation; partial discharges; Zener effect*
- cast epoxy resins, electrical failure props. 2-41265
- delayed thermal filamentary breakdown in electrical insulators (*French*) 2-51527
- discharge channel, oscillation, expt. obs. 2-46476
- glass insulator, surface flashover measurements in vacuum and  $N_2$  gas 2-17408
- influence of probability distribution bimodality (*Slovak*) 2-40191
- insulator flashover vacuum, surface props. 2-17409
- memory effects, speculations 2-9082
- Myler thin film, surface flashover arc orientation 2-36518
- partial discharge monitoring, electrical and acoustic detect. computer-controlled data acquisition 2-13420
- PMMA, electrical aging, light scatt. study 2-36526
- PMMA immersed in oil, anomalous breakdown under DC and impulse stresses 2-17406
- polyethylene, multistress aged, impulsed dielectric breakdown 2-17407
- polyethylene, partial discharge inception voltage, systematic study 2-13419
- polyethylene film, high-temp. breakdown characts., fixed electrode system 2-13417
- polyethylene terephthalate films, elec. breakdown, influence of water 2-41267
- polymer, comparative tracking index deviation 2-37031
- polymer, water tree growth rate, freq. dependence rel. to dielec. relaxation in host 2-13421
- polymer insulating materials, surface deterioration and tracking breakdown due to glow discharge in low press. atm. (*Japanese*) 2-9087
- polymers, light detection as prebreakdown phenomena 2-17402
- polymethyl methacrylate resin, current pulses caused by electrical tree development 2-41266
- polyolefins, electrically stressed, kinetics of degradation 2-17891
- PTFE insulating material, mech. and elec. lifetime-under-load at cryogenic temps. 2-36525
- soil, electrical breakdown props., air ionisation effect, following EM pulse 2-47859
- streamers of solid dielectrics, theoretical props., model 2-17405
- styrene thin films, plasma polymerized, electric breakdown studies rel. to self-healing 2-13418
- synchronous generator laminar insulation system phenomena preceding breakdown under action of strong electric field (*Polish*) 2-35335
- Teflon, dielectric charging, straggling and soft X-ray irradiation effects 2-36519
- thin amorphous chalcogenide films, electrothermal model for breakdown, switching and memory effects 2-13206
- Al/GaAs, plasma anodised layers, elec. cond. and breakdown strength 2-52075
- As $_2$ S $_3$  film, amorphous, elec. breakdown 2-9089
- As $_2$ S $_3$  glasses, elect. props. 2-21612
- GaAs epitaxial layers, breakdown characts. 2-17080
- GaAs, laser oxidation, expt. study 2-17751
- GaAs-Al $_2$ O $_3$  devices I-V characts., hopping cond., space-charge-limited currents 2-51329
- Ge p-n junction, avalanche breakdown voltage, pressure depend. 2-30955
- Ge $_3$ N $_4$ -GaAs MIS devices, elec. characts. and memory behaviour 2-46147
- InGaAs-oxide, native grown plasma oxides and inversion layers 2-41014
- InSb, microwave breakdown, nonlinear effects 2-41269
- MoO $_3$  films, capacitance, dielec. loss, and destructive breakdown study 2-51528
- NaCl, laser-induced breakdown threshold, temp. cycling effects 2-9224
- Nb $_2$ O $_5$  film, amorphous, nature of electrical forming (*Russian*) 2-30770
- PbO-SiO $_2$ -Al $_2$ O $_3$  fritted glass, dielec. breakdown and device evaluation 2-21945
- p-Si, heavily doped, thermal breakdown 2-36524
- Si MOS structs., pre-breakdown field treatment effect on elec. props. (*Russian*) 2-2007

**electric breakdown of solids continued**

- Si p-n junction, avalanche breakdown voltage, pressure depend. 2-30955
- Si, p-n junction, current fluctuations, during secondary breakdown 2-36133
- Si, spontaneous oscills. under impurity centre breakdown conditions 2-51223
- SiO $_2$  breakdown detector, impact ionisation model, fission product detection 2-19849
- SiO $_2$  films, dielectric breakdown, time depend. 2-36520
- SiO $_2$ , thermal oxide, pulsed laser irr. effect 2-50698
- electric cables** *see cables (electric)*
- electric capacity** *see capacitance*
- electric cells** *see cells (electric)*
- electric charge**  
*see also space charge*  
Applied Technology Satellite 6, differential charging effects 2-18680  
charge distributions, non-stationary, condition to be non-radiating (*French*) 2-39529  
dielectric liquid, elec. charge generation by laminar flow in tube, quantitative theory 2-31434  
Einstein-Maxwell equations, soln. with charge from (4+1) space time 2-91  
graphite intercalation compound with K, charge distrib. 2-1852  
hydrocarbon liquid-metal interface, charge formation mechanism in double layer 2-13411  
insulating slab, effective charge tensor and acoustic sum rule 2-30814  
MOS structure, influence of Si etching in RF Ar plasma (*Russian*) 2-5468  
MOS structure, with plasma grown SiO $_2$ , charge storage, 270-420K (*Russian*) 2-5467  
pion charge radius value, rel. to values for  $m_p$  and coupling consts. 2-23999  
PTFE, irradiation effects on charge storage and cond. 2-8544  
QCD, broken in SU(3), fractional electric charge existence in diquark states 2-294  
SOS films with negative and positive interfacial charges 2-8886  
spherical particles, charged, uniform, coherent stream production 2-16371  
spherical particles, charged, uniform, for studying matter in extreme states 2-16370  
superluminal imaginary Lorentz transform of Maxwell's eqns. and elec. charge 2-38  
thin-layer interdigital transducers, static capacitance, charge and potential distrib. (*French*) 2-50046  
transition metal diborides, electronic struct. 2-40778  
travelling EM wave, retardation to zero velocity, charge formation 2-34652  
Ge(Li) coaxial detectors, charge losses in sensitive film near-surface region (*Russian*) 2-19873  
LiBO $_2$ , crystal struct. and charge density distrib. 2-40340  
LiGaO $_2$ , IR active modes, absolute Raman cross-sections and effective charge parameters 2-2277  
Nb-Ti composite high-field supercond., current-carrying, stability, elec. charge effect 2-51385  
SiO $_2$  plasma grown film, in MOS structure, 270-420K (*Russian*) 2-5467

**electric coils** *see coils***electric condensers** *see capacitors***electric conductance** *see electric admittance***electric conductance measurement** *see electric admittance measurement***electric conduction processes** *see electrical conductivity***electric conductors** *see conductors (electric)***electric connectors***see also cable jointing*

- AMP SOLARLOK connector for photovoltaic modules, reliability and maintainability 2-37411
- multipin vacuum feedthrough, miniature design 2-38662
- plug and socket, 100 A, for use at liq. He temp. 2-33538

**electric control equipment**

- see also controllers; electric actuators; electric sensing devices; switches; telecontrol equipment; telemetering equipment*
- electromechanical transmitters according to the moving field principle and their possibilities for use particularly in medical engineering (*German*) 2-9892

**electric control gear** *see electric control equipment***electric current**

- see also arcs (electric); corona; critical currents; current density; current distribution; current fluctuations; eddy currents; electrojets; leakage currents; short-circuit currents; sparks*
- conduction current during electric breakdown of dielectric liquids (*Korean*) 2-17401
- electric fields generation by steady direct conduction current (*Czech*) 2-7697
- solar atmosphere, theory 2-3230
- solar atmosphere, thermal instability of current layer rel. to form. of coronal loops 2-48197
- solar corona, elec. currents rel. to lower-hybrid waves and solar radar echoes 2-10366
- solar coronal currents in magnetised plasma due to photosphere convective motion 2-10362
- solar quiescent prominences, elec. current rel. to vertical filamentary struct. 2-48215
- source current distrib. in free space 2-39532
- Zn, electron-plastic effect, elec. current parameters effect 2-21949

**electric current measurement***see also ammeters; galvanometers*

- absolute determination, using electromagnetic oscillations (*Slovenian*) 2-43042
- AC current meas. using single-mode fibre Mach Zehnder interferometer sensor configs. 2-6877
- biological membrane patches, isolated, nerve and muscle cells, high-resolution current meas. 2-47762
- computerised polarography 2-37133
- current and power calculations in ERZU-1 tube electrode systems in conducting medium 2-28242
- electrometer preamplifier for measurement of voltage current and resistance on high resistivity materials 2-3592
- fibre optic measurement sensors 2-44475



**electric current measurement continued**

- fibre-optic current meas. sensor, using Sagnac interferometer (*French*)  
2-43001  
integrating electrometer for current meas. in range  $10^{-16}$  to  $10^{-10}$  A  
2-15187  
linear temperature programmer for thermally stimulated current meas.  
2-42998  
low ionisation current meas., dosimetric problem 2-19890  
Poggendorf and Lindeck-Rothe zero-load signal measurements methods  
(*German*) 2-10824  
Poggendorf zero load signal measurement method (*German*) 2-6874  
pulsed high current discharge ccts. 2-15189  
solar cell characteristics plotter with sample hold 2-9653  
true RMS AC measurements 2-23664  
Z-pinch plasma expts., high-density, improved voltage and current sensors  
2-48727

**electric discharges** *see discharges (electric)***electric distortion**

- see also fading*  
electrostatic field parameters meas. w.r.t. distortion due to meas. elements  
2-42992  
SAW time inversion system distortion estimation, based on delta function  
approx. 2-7978

**electric domain walls**

- ferroelectric crystal substrates, boundary layers of water rel. to elec. props.  
of substrate ellipsometry study 2-45752  
ferroelectric crystals, domain wall dynamics, acoustic emission study  
2-45386  
ferroelectric domain walls, X-ray and neutron scatt. props. 2-31432  
ferroelectric plate, domain study, pyroelec. probe technique study 2-2193  
order parameter profile near first order transition, role of elastic forces  
2-46518  
polymer, conducting, Peierls state, polarons and domain walls 2-30805  
quartz, secondary ferroic, twin wall orientation and switching dynamics  
2-31410  
symmetry and structure 2-31427  
Tanane, ferroelastic and ferroelec., planar domain wall motion 2-36574  
TGS, ferroelec., domain struct., alignment of nematic MBBA on cleavage  
surface 2-41312  
TGS crystals, ferroelec. domain boundaries, X-ray topographic images  
2-36581  
TGS ferroelectric cryst., radiation damaged, polarization switching  
2-36564  
trissarcosine calcium chloride, switching parameters, temp., elec. field and  
press. depend. 2-26811  
BaTiO<sub>3</sub>, ferroelec., lattice strain at 180° domain wall, X-ray topographic  
study 2-17427  
CsH<sub>2</sub>PO<sub>4</sub>, X-ray and  $\gamma$ -ray irradiated, polarisation props. characts.,  
domain struct. 2-51534  
KD<sub>2</sub>PO<sub>4</sub>, ferroelectric domain walls, neutron scatt. props. 2-31432  
NaNO<sub>2</sub>, ferroelectric cryst., radiation damaged, polarization switching  
2-36564

**electric domains***see also electric domain walls; ferroelectric materials*

- crystals with antiparallel layer domains, dielec., piezoelec. and elastic  
props. 2-46521  
dicalcium strontium propionate, ferroelectric domains, growth pyramid  
2-36575  
ferroelectrics, ABO<sub>3</sub> type, luminesc. props. 2-31539  
ferroelectrics, domain struct. formation by internal biasing field 2-31433  
ferroelectrics, polarisation echo theory, electric and elastic susceptibility  
(*Russian*) 2-13401  
ferroelectrics and ferroelastics, domain struct. and phase transitions,  
microscopic obs. method 2-2208  
guanidine aluminium sulphate hexahydrate, coating influence on ferroelec.  
domains, SEM study 2-36579  
guanidinium aluminium sulphate hexahydrate, domain dynamics 2-36576  
localised orthogonal domains, three-dimens. arrays, optical characts.  
2-36572  
MBBA nematic layer, asymmetric anchored, penetration depth of surface  
forces 2-16564  
metals, Joule heating, temp.-elec. domain struct. and formation 2-36023  
perovskite ferroelectrics, martensitic transform. theory and mechanism  
2-46500  
Rochelle salt, ferroelectric phase transitions, electroacoustic interaction,  
polarisation echo study (*Russian*) 2-41310  
squaric acid, thermal expansion, specific heat 2-40574  
TGS:L-alanine, ferroelectric domain struct. 2-36577  
TGS, coating influence on ferroelec. domains, SEM study 2-36579  
TGS, pure and doped, domain struct. study 2-36578  
TGS, switching transient shape 2-36562  
TGS, ultrasonic props. near phase transition 2-45406  
TGS cleavage plane, anchoring of MBBA liq. cryst. 2-16555  
triglycine sulphate, domain struct. formation by internal biasing field  
2-31433  
Ba<sub>2</sub>NaNb<sub>2</sub>O<sub>7</sub>, ferroelec. and ferroelastic domains, electron microscopic  
study 2-9115  
BaTiO<sub>3</sub>, ferroelec. meas., digital computation methods 2-31431  
BaTiO<sub>3</sub>, heteroepitaxial films, ferroelectric transition 2-46477  
Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub> crystals, electroluminescence with nonequil. domain struct.  
2-13574  
KD<sub>2</sub>PO<sub>4</sub>:KH<sub>2</sub>AsO<sub>4</sub>, X-irrad., ferroelec. polarisation reversal, AsO<sub>4</sub><sup>4-</sup> ESR  
study 2-51533  
KH<sub>2</sub>PO<sub>4</sub>, ferroelectric phase transitions, electroacoustic interaction,  
polarisation echo study (*Russian*) 2-41310  
K<sub>1-x</sub>Li<sub>x</sub>Ta<sub>1-x</sub>Nb<sub>x</sub>O<sub>3</sub>, ferroelec. transitions, Raman scatt. studies 2-26888  
KTAO<sub>3</sub>:Li, defect induced fluctuations, dielec. and optical props. meas.  
2-26889  
K<sub>2</sub>Zn(SO<sub>4</sub>)<sub>2</sub>, langbeinite type, pyroelec. props. 2-5644  
LiNbO<sub>3</sub> bicrystal, thermal bonding, influence of planar diffusion bonded  
boundaries on props. 2-26840  
LiNbO<sub>3</sub>, influence of domain structure on generation and propagation of  
elastic waves (*Polish*) 2-26199  
LiNbO<sub>3</sub> used in SAW devices, effects of ferroelec. domains on surface  
struct. 2-26188  
NH<sub>4</sub>HSeO<sub>4</sub>, domain struct., microscopic obs. 2-2208  
NH<sub>4</sub>HSeO<sub>4</sub>, ferroelectric props. near phase transition temp. 2-9098  
 $\beta$ -NaH<sub>2</sub>(SeO<sub>4</sub>)<sub>2</sub> crystal, ferroelec. and ferroelastic domain struct. dynamics  
2-36573  
NaNO<sub>2</sub>, thermal expansion along ferroelectric b-axis 2-45599

**electric domains continued**

- Ni<sub>3</sub>B<sub>2</sub>O<sub>13</sub>(Br), ferromag., ferroelec. and ferroelastic domains, birefringence  
and Faraday effect study 2-31430  
PLZT ceramic, linear electro-optical effect, domain struct. 2-46541  
PLZT ceramic, shape memory effect study 2-40468  
PLZT X/65/35, transparent ferroelec. ceramics, phase transitions 2-9102  
Pb(Fe<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>, ferroelectric domain study 2-46519  
Pb(Fe<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>, ferroelec. crystal, high-temp. soln. growth, single  
domain obs. 2-46897  
Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>, ferroelectric domain struct. optical study 2-46520  
Pb<sub>3</sub>MgNb<sub>2</sub>O<sub>9</sub>, photoluminescence rel. to ferroelec. phase transition,  
domain struct. effect 2-9176  
Pb(SCo<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>, ferroelectric domain struct. optical study 2-46520  
Pb(SCo<sub>0.5</sub>Ta<sub>0.5</sub>)O<sub>3</sub>, ferroelectric domain struct. optical study 2-46520  
Pb(Ti<sub>0.3</sub>Pb<sub>0.7</sub>)O<sub>3</sub>-PbNb<sub>2</sub>O<sub>7</sub>/Mn<sub>2/3</sub>O<sub>3</sub>-PbW<sub>1/2</sub>Mn<sub>1/2</sub>O<sub>3</sub> systems, temp. stability  
of reson. freq., comp. depend. 2-41313  
Pb(Ti,Zr<sub>1-x</sub>)O<sub>3</sub> type ceramics, acoustic emission and piezoactivity  
2-46485  
Pb(Zr,Ti)O<sub>3</sub> ceramic, domain space distrib. meas. 2-41311  
Pb(Zr,Ti)O<sub>3</sub> type piezoceramics theory 2-46504  
PbZrO<sub>3</sub>, cryst. and domain struct. study, ferroelectric transitions 2-41306  
Rb<sub>2</sub>ZnCl<sub>4</sub>, ferroelec., transitions and struct. 2-30580  
SrTiO<sub>3</sub>, dielectric nonlinearity study 2-2177  
SrTiO<sub>3</sub>, heteroepitaxial films, ferroelectric transition 2-46477
- electric double layers** *see electrochemistry; liquid theory*
- electric double refraction** *see electro-optical effects*
- electric drives**  
*see also electric propulsion*  
analysis of solar powered electric water pumps/ 2-37186  
diamond turning machine tools, air bearings and drive systems 2-7903
- electric field effects**  
*see also acoustoelectric effects; discharges (electric); electrical conductivity; electro-optical effects; electrochemistry; electrokinetics; electrodynamic effects; electroluminescence; electromechanical effects; electromigration; electron field emission; electrophoresis; field emission ion microscopy; field evaporation; field ion emission; field ionisation; high field effects; magnetoelectric effects; particle optics*  
benzene, ionisation threshold, elec. field depend. 2-20208  
benzene.Ar, ionisation threshold, elec. field depend. 2-20208  
biological effects of power freq. fields, literature survey including work in  
West and USSR 2-18241  
crystals, electron motion, channelling in axially symmetric field 2-12654  
dielectric fluid flowing along annular channel, influence of electric field of  
heat transfer 2-44791  
dielectric fluids, electric field effects, statistical mechanics 2-2189  
dielectric liquids subjected to AC fields, EHD stability 2-12240  
drop, axisymmetric dielectric, in uniform electric field, shape 2-20719  
electron flow oscillations in nonuniform crossed fields 2-15949  
fibres, movement in alternating elec. field (*Russian*) 2-31928  
fluid, polarization density profiles for dipoles against an electrified wall in  
the MS and RLHC approximations 2-25701  
fluids, boiling in elec. field, heat transfer (*Russian*) 2-30573  
humans and baboons exposed to 60 Hz electric fields, numerical determ.  
of induced currents 2-22789  
liquid crystal on cryst. substrate, texture changes (*Rumanian*) 2-45017  
metallic thin film growth, modelling of elec. field effects 2-8726  
methyl acetate, electronic struct., external elec. field effects 2-663  
methyl acetate cation radical, electronic struct., external elec. field effects  
2-663  
2-methylbutyl p-(p-n-hexyloxybenzylideneamino) cinnamate, smectic, heli-  
cal pitch, elec. field depend. near C\*-A transition 2-40263  
molecular beam, spatial separation of molecules by inhomogeneous elec-  
trostatic field 2-44141  
negative ion generator cct., O<sub>2</sub>, possible medical appl. 2-22854  
nematic liquid classes, effect on improvement of dynamic scatt. by elec-  
tron donor acceptor dopants 2-21018  
nematic liquid cryst., distortions induced by flow or elec. field conoscopic  
expts. 2-50533  
nematic liquid cryst., electroconvective flow and domain instabilities  
2-16561  
nematic liquid cryst., shear flow, stabilizing effect of elec. field, flow  
alignment 2-50236  
new method of cleaning metal objects 2-37005  
nonrelativistic electron motion, electric field effects, Monte Carlo calcs.,  
appl. to particle detection 2-11626  
organic liquids, Raman spectroscopy in external elec. field 2-2287  
polymer solution, rod-like, isotropic to liq. cryst. phase transition, elec.  
field effect 2-21307  
power overhead line electric field effects on humans and animals (*Dutch*)  
2-32246  
Rayleigh wave propagation in piezoelec.-semicond. system, transverse elec.  
field effect 2-4626  
roots of Pisum sativum, growth-inhibition rel. to 60 Hz elec. field  
parameters 2-32249  
self-excited oscillatory motion of particles in a uniform electric field  
2-47382  
solid solution, interdiffusion in an external electric field taking into  
account nonequilibrium vacancies (*Russian*) 2-21400  
solid-liquid interfaces, effect of particles on electric-field induced phe-  
nomena 2-13412  
spinal cord regeneration in Lamprey, enhancement by appl. elec. fields  
2-18243  
transition metals, electric field penetration depth, determ. by autoionisa-  
tion microscopy 2-41042  
transition radiation, alternating electric field effect 2-39551  
vitrocrystalline protective coatings, formation of crystalline phase in elec-  
trostatic field 2-5051  
water, evaporation from capillaries, effect of inhomogeneous elec. field  
2-1707  
water vaporisation, from capillary tubing in non-uniform elec. field (*Rus-  
sian*) 2-30574  
weakly-conducting fluid, flow and heat transfer in channel with plane  
walls, effect of electric field (*Russian*) 2-8227  
AgBr microcrystals, photographic film, elec. field effect, intermediate elec-  
tron capture influence 2-23755  
Na $\beta$ -Al<sub>2</sub>O<sub>3</sub>, elec. degradation 2-51868  
CaCO<sub>3</sub>, influence of elec. field on rhythmic crystn. in agar gel 2-46895  
GaAs layers, vapour phase growth rate and morphology, elec. field effect  
2-36792  
H, in elec. field, generator coord. method calcs. 2-19957



**electric field effects continued**

- He, in elec. field, generator coord. method calcs. 2-19957  
 Mo, surface imaging by pulsed laser stimulated field desorption of field adsorbed atoms 2-2421  
 Pt, surface imaging by pulsed laser stimulated field desorption of field adsorbed atoms 2-2421  
 Si:In X-centre, trapping parameters, DLTS studies 2-5361  
 Te, thin films, condensation, vacuum deposition, magnetic and electric field effects 2-12940

**electric field measurement**

- see also field plotting*  
 automatic ellipsometer for electric field measurement near liquid/solid dielectric interfaces 2-10847  
 discharged current characts., from needle electrode, applications to thunderclouds detection 2-10120  
 electrostatic field parameters, distortion suppression due to meas. elements 2-42992  
 fibre optic sensors for medical and electrotech. appls. using bifurcated fibre bundles 2-7878  
 insulating materials, surface and volume conductivity, field calcs. (*German*) 2-17128  
 isotropic electric field monitor at National Bureau of Standards, USA, design and calibration 2-28863  
 miniature electric field probe with resistive transmission lines, anal. 2-15184  
 NBS isotropic electric field monitor 2-48684  
 nonionising radiation measurement, requirements for an effective national system 2-48479  
 plasma, fluctuating elec. field meas. using He forbidden transition 2-16509  
 transducer, induction-parametric 2-171  
 vibrating-electrode field meter for meas. of electrostatic field intensities at high temps. 2-10822  
 Ag halides, photocond. meas. using microwave cavity 2-10825  
 Si surface p-n junction, surface electric field two-channel meas. using mirror electron microscope 2-23782

**electric field strength measurement** *see electric field measurement***electric fields**

- see also electric field effects; electric field measurement; electromagnetic fields; electromagnetic waves; field plotting*  
 augmented elec. and mag. field integral eqns. for scatt. from object 2-49633  
 aurora, solitary arc generation 2-42511  
 (B,H) stationary fields without source and null boundary conditions in non-linear media, existence, uniqueness and stability theorems 2-34623  
 charged cloud emerging from vent stack, electrostatic field 2-20230  
 comet tails, convection elec. fields rel. to tail rays folding phenomenon 2-38137  
 corona on hyperboloid of revolution-plane configuration electrodes, obs. 2-16534  
 dielectric cylinder, circular, infinite, internal electric field distrib. at reson. wavelengths 2-15938  
 dielectric doubly periodic struct., transverse electric wave propagation 2-821  
 dielectrics, electric field distributions, stress wave probing 2-17428  
 dielectrophoretic levitation, electrode geometries 2-3590  
 distribution within field emission systems, numerical and expt. study 2-48841  
 F-region, dynamo electric field development and spread-F 2-42532  
 generation by steady direct conduction current (*Czech*) 2-7697  
 inhomogeneous dielectric bodies of random shape, polarisability variational estimates 2-817  
 ionosphere, electric field over Millstone Hill, model 2-14667  
 magnetosphere, electric field and antenna impedance obs. by JIKIKEN 2-18660  
 magnetosphere, electrostatic shocks, small-scale structure 2-42551  
 magnetosphere, field-aligned currents and electric fields in dayside cusp 2-14717  
 magnetotail low latitude boundary layer, N-S electric field component 2-32756  
 ocean current electric field, sediment conductivity determ. 2-23116  
 organic molecular crystal, elec. fields, microscopic dielec. theory 2-36582  
 particle creation and vacuum polarisation by nonstationary elec. field 2-3741  
 penetration behind screen in nonstationary conducting medium 2-20231  
 plane-parallel circular rotating electric field generation, field equations and electrodes shape required 2-44163  
 plane-parallel insulator, electron irradiation result at atm. press. 2-5158  
 point electron and ion source optics, numerical anal. method 2-51774  
 potential relaxation for field problems with open boundaries, iterative method 2-34618  
 solar cell, vertical, internal elec. field distrib. 2-14082  
 solar wind field rel. to magnetosphere convection elec. field 2-38031  
 source current distrib. in free space 2-39532  
 stationary fields without sources in nonlinear media, existence and stability theorems 2-34636  
 strength, in leader channel of long positive spans in air 2-44935  
 surface fields excited by a vertical electric point source located on a conducting concave spherical surface 2-29748  
 synthesis of one- and two dimensional electrostatic field 2-7696  
 tandem accelerator, electrostatic field distrib. calc. 2-11322  
 thermoplastic recording for sinusoidal exposure struct., elec. field calc. (*German*) 2-29801  
 thermoplastic recording medium, electric field and potential during electrophotographic information transfer (*German*) 2-15255  
 two-dimensional anisotropic compound regions mapping into isotropic regions 2-7698  
 unipolar corona discharge in hyperboloid-plane gap, calc. and obs. 2-16533  
 Bi<sub>12</sub>GeO<sub>20</sub> phase-conjugate wave-front reflectivity, electric-field depend. 2-39698  
 CsCl, cryst. slab of oscill. charges, elect. field K-depend. 2-5650  
 He hot cathode discharge, positive column, response to current perturbation, elec. field, electron density and drift vel. relax. 2-16527  
 KNbO<sub>3</sub>:Fe<sup>2+</sup> phase-conjugate wave-front reflectivity, electric-field depend. 2-39698  
 NaCl, cryst. slab of oscill. charges, elect. field K-depend. 2-5650

**electric filters** *see filters***electric furnaces**

- see also arc furnaces*  
 application to production of fused periclase-chromite materials 2-41566  
 ceramic, sintering furnace, low cost, high temp. induction system 2-41559  
 gradient electric furnace for accelerated heating of optical coatings 2-48705  
 Maxwell's equation solution for axisymmetric invariance case (*French*) 2-34619  
 supplementary electric heating, for high productivity furnaces 2-19110

**electric generators**

- see also magnetohydrodynamic converters; turbogenerators; Van de Graaff generators*  
 battery design for use in starting diesel generator set (*Norwegian*) 2-37199  
 end bells made from non-magnetic steel, resistance to stress corrosion and H embrittlement (*German*) 2-5976

**electric glow** *see corona***electric heaters** *see electric heating***electric heating**

- see also domestic appliances; drying; electric furnaces; heating elements; induction heating; ovens; radiofrequency heating; space heating*  
 domestic hot water provision, eight technologies, comparative net energy analyses 2-52382  
 furnaces, high productivity, improved supplementary elec. heating system 2-19110  
 metal, temp. relationship of mech. props. using explosive loading and impulse elec. heating 2-52161  
 self-flushing still temp., automatic electronic control 2-48692  
 thermophysical props., determ. by direct elec. heating, review 2-2536  
 water heating in the home, advantages (*French*) 2-47448  
 water pool boiling process stabilisation at atmospheric pressure around Pt heating wire using electronic feedback system (*French*) 2-44719

**electric heating elements** *see heating elements***electric ignition**

- Hg vapour lamps ignition physical process and theory (*Russian*) 2-50473

**electric immittance**

- see also electric admittance; electric impedance*  
 ionic conductors, immittance data, three dimens. perspective plotting and fitting 2-26109

**electric impedance**

- see also electric reactance; electric resistance*  
 electrochemical cells with solid electrolytes, impedance, freq. depend. 2-31931  
 hot carrier, impedance 2-17151  
 peninsula impedance meas., Marlborough Sounds, NZ 2-42264  
 trans-polyacetylene, elec. impedance spectra 2-17175  
 type I supercond. wire, LF voltage response of direct current induced intermediate state in type I wire 2-41079  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-FeO<sub>x</sub> ionic and electronic cond. and Mossbauer study 2-26124  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O superionic conductor, low freq. responses, model 2-21361  
 Ba<sub>1-x</sub>La<sub>x</sub>F<sub>2+x</sub> superionic cond., cond. enhancement and dielec. response 2-16884  
 GaAs:Cr S-type diodes, impedance under double injection conditions, switching mechanism 2-30962  
 In wire, LF AC response of direct current induced intermediate state 2-41081  
 In-Pb alloy wire, LF AC response of direct current induced intermediate state 2-41081  
 LaCrO<sub>3</sub>/Sr, O<sub>2</sub> sensitive electrode impedance 2-8859  
 Ni electrodes, polycryst., in alkaline soln., impedance meas. 2-51305  
 Pb-H<sub>2</sub>SO<sub>4</sub> secondary cells AC impedance of PbO<sub>2</sub> formed on Pb-alloys 2-37200  
 PbF<sub>2</sub>:Na(La)(Ca), relation between bound and free ion motion 2-21389  
 Si, p-n junction, current fluctuations, during secondary breakdown 2-36133  
 Zn-MnO<sub>2</sub> primary cell impedance data anal. 2-37196  
 ZrO<sub>2</sub>, stabilised, complex impedance and admittance 2-21386

**electric impedance measurement**

- see also electric reactance measurement; electric resistance measurement*  
 bacterial culture, growing, impedance meas. of soln., 2- and 4-electrode methods (*Japanese*) 2-47771  
 bacterial testing system, microcomputerised, simultaneous meas. of elec. impedance and turbidity (*Japanese*) 2-47770  
 coatings, thin current conducting method of monitoring 2-9508  
 digital system, transients and noise detection method 2-34994  
 films, thin current conducting method of monitoring 2-9508  
 impedance measurements during the cycling of a zinc electrode 2-32048  
 Leclanche cell, Z-transform method (*French*) 2-32049  
 non-intrusive probes for liquid thin film thickness meas., nuclear reactors appl. 2-38634  
 parameter identification from impedance measurements on electrochemical reactions 2-37134  
 piezomagnetic materials, internal damping and mag. permeability disaccommodation, automated recording method 2-33587  
 plasma reactors, diagnosis using electrical impedance meas. 2-16511  
 plethysmography, overview of theory and appls. 2-14354  
 plethysmography system, multiple electrode impedance, for monitoring grazing dynamics 2-47785  
 RF excited local impedance probe, void fraction meas. in reactor coolant 2-34158  
 thoracic impedance measurement using differential impedance plethysmography 2-47739  
 transmission line impedance measurement using a sinusoidal signal generator, demonstration 2-48465  
 Zn-HgO alkaline cell, method 2-32053

**electric load** *see load (electric)***electric locomotives**

- wayside energy storage for recuperation of potential energy from freight trains 2-22663

**electric machine analysis computing**

- kinetic energy accumulator electric machines starting characts. determ. 2-47521



**electric machine testing** *see machine testing*

# electric machines

*see also d.c. machines; electric generators; electric motors; machine bearings; machine insulation; machine testing; machine windings; rotors; small electric machines; stators*

cooling by heat dissipation through heat pipes (*German*) 2-50059

sound power level nearfield meas. method 2-11983

treatment plant for coal conversion, electrical equipment protection from explosions 2-52274

# electric moments

*see also atomic electric moment; molecular moments; nuclear electric moment*

diatomic rigid polar molecule, electric quadrupole interaction energy (*Russian*) 2-24572

dielectric media, multipolar moments, plurality of mean densities (*French*) 2-21958

elect. dipole reson. 2-35266

electric dipole moment, in chiral  $\sigma$  model 2-48866

exciplex dipole moments, external elec. field influence on fluorescence 2-49502

fermions, motion in axial mag. field, anomalous moments effect 2-38845

fluoromethane, elect. dipole reson. 2-35266

fluoromethane gas, elect. and mag. props. 2-50362

ice, dielectric constant, theory 2-9071

Klein-Kaluza theory, CP invariance, fermion dipole electric moment 2-3669

lanthanide complexes, 4f to 4f transitions, electric dipole strengths calc. 2-51134

macroions, cylindrical, elect. and convective polarization 2-21933

neutron elec. dipole moment calc., intermediate states 2-48990

neutron elec. moment in QCD (*Russian*) 2-33843

neutron electric dipole moment, CP and T invariance test 2-38882

neutron electric dipole moment, flavour change and CP violation effects 2-38849

neutron electric dipole moment as cosmic seismometer in grand unified theories 2-29057

organic molecular crystal, elec. fields, microscopic dielec. theory 2-36582

polar molecules, moments in nonuniform electric field 2-4414

$^{23}\text{Na}$   $^{19}\text{F}$ , electric quadrupole interaction energy (*Russian*) 2-24572

CO gas, elect. and mag. props. 2-50362

$\text{HCl}_3$  gas, elect. and mag. props. 2-50362

HF gas, elect. and mag. props. 2-50362

K halides,  $\text{NO}_2^-$  centres, thermally stimulated depolarisation study 2-21934

$\text{LiHoF}_4$ , uniaxial ferromag., transverse elec. susceptibility, dielec. study 2-31366

$\text{LiTbF}_4$ , uniaxial ferromag., transverse elec. susceptibility, dielec. study 2-31366

Na halides,  $\text{NO}_2^-$  centres, thermally stimulated depolarisation study 2-21934

$\text{RbBr:PO}_2^-$ ,  $\text{PO}_2^-$  centres, thermally stimulated depolarisation study 2-21934

Re-Pt (1.0 wt.%), recrystallised surface, work function surface composition 2-51282

# electric motors

*see also a.c. motors; d.c. motors; linear motors; permanent magnet motors; stepping motors*

acoustic noise meas. and control (*Russian*) 2-44616

# electric noise measurement

electrochemical cell noise meas., expt. techniques, problems 2-47461

nature of 1/f noise, spectrum analyser instrumental function (*Russian*) 2-5446

physical systems, conf., Gaithersburg, MD, USA (Apr. 1981) 2-42793

semiconductor detection unit for X-rays, with correlation charge-sensitive preamplifier 2-7439

SHF power and noise spectral power density standards comparison, using bolometric transducers 2-6822

# electric potential

*see also contact potential; surface potential; voltage control; voltage measurement*

alkali halide-Ag halide liq. mix., activity coeff. and excess molar Gibbs functions at varying temp. and composition 2-12783

bushings, low temperature, for high AC voltage 2-6857

DC breakdown voltage in dielectric conduction current and DC breakdown voltage (*Korean*) 2-17401

dilute suspensions of colloids, dielect. response and conductivity 2-46458

electrostatic field pot. for charged particle system and dynamic membrane (*Ukrainian*) 2-11612

elliptical capacitors, thin, conducting, electric pot. distrib. calc. 2-20227

potentiostat, design for optimum performance using soln. resistance compensation (*Japanese*) 2-27446

ternary system, thermodynamic functions calc. using EMF meas. data 2-10757

thin-layer interdigital transducers, static capacitance, charge and potential distrib. (*French*) 2-50046

$\beta\text{-Ag}_2\text{Se}$ , electronic and electrogalvanic props., homogeneity range (*French*) 2-40890

Hg discharge lamps, break-down voltage calc. method (*Russian*) 2-50472

$\text{WO}_3$ , thermodynamic props., 700 to 900°C EMF meas. 2-41917

# electric power generation

*see also direct energy conversion; ocean thermal energy conversion; power stations; wave power generation*

American Power Conference, Chicago, IL, USA (April 1980) 2-28607

closed cycle MHD feasibility study 2-18105

cogeneration boiler design for bark and waste wood combustion 2-41976

complimentary design for geopressure geothermal methane extraction and power generation 2-9619

conference, Atlanta USA, 1981 Aug. 2-18816

disc MHD generation characts. 2-18103

economics, implications of exergy and thermal efficiencies of energy conversion 2-22527

feasibility of electricity generation from wind and solar energy (*French*) 2-17985

gas turbines thermionic combustor 2-18117

geothermal energy use (*French*) 2-17993

HV stabilisation, superconducting magnetic energy storage system characts. 2-18142

magnetic refrigeration prototype tests for superconducting technological apps. 2-19114

MHD channel heat and seed recovery 2-18108

# electric power generation continued

MHD channel performance anal. 2-18102

MHD test facilities 2-18104

MHD/steam power generation anal. 2-18101

molten carbonate fuel cells for industrial cogeneration apps. 2-22607

nuclear power future developments 2-43519

open cycle MHD, heat and seed recovery 2-18107

organic refuse bio-chemical conversion to synthetic fuel and electric power, simulating criterion 2-18141

photovoltaic technology development 2-18035

residential photovoltaic system designs 2-18036

retrofit of a coal-fired open-cycle liquid-metal MHD to steam power plants 2-18106

salinity power, salt recycle reverse vapour compression systems analysis 2-6188

salinity power production, concentration cell, economic potential 2-6187

solar energy, electricity and heat generation for homes and factories 2-22549

solar pond driven distillation and power production system 2-22552

superconductive magnetic energy storage system characts. 2-18143

technical aspects of solar energy systems for low-calorie applications (*Dutch*) 2-37174

thermionic combustor application to combined gas and steam turbine power plants 2-18116

thermoelectric power generation, heat exchanger effectiveness calc. 2-52375

unified site evaluation system for wind energy conversion 2-2766

utilization of wind/solar energy in generating electricity in Saudi Arabia 2-27537

wind power probability distribution model for large-scale electric power generation 2-27533

windmills for developing countries, new generation (*French*) 2-17984

# electric propulsion

*see also electric drives; electric vehicles; traction*

assessment of flywheel system benefits in selected vehicle applications 2-22666

effects of constant current/constant voltage charge parameters on lead acid traction cell performance 2-22576

EM gun, rotating bed reactor as power source 2-49171

EM guns and launchers, conf., San Diego, CA, USA (Nov. 1980) 2-48391

molten salt electrolyte cell for propulsion and load levelling (*German*) 2-22566

Solar Electric Propulsion solar array shuttle flight expt. 2-27641

Fe-air battery vehicle mission anal. 2-22572

Ni-Fe batteries, alternative to Pb-acid elec. vehicle propulsion, tests 2-22571

# electric reactance

*see also capacitance; inductance*

No entries

# electric reactance measurement

*see also capacitance measurement; inductance measurement*

No entries

# electric relays

*see relays*

# electric resistance

disordered linear chains in perfect conductor, Kubo formula for Landauer's results 2-1878

$\alpha\text{-Cu-Al}$  alloys, short range ordering, specific heat and elec. resistivity, temp. depend. 2-5220

Fe, whisker, crystal growth (*Japanese*) 2-5337

TiC-VC, specific electrical resistance and thermal cond. determ. 2-5384

TiC-ZrC, specific electrical resistance and thermal cond. determ. 2-5384

# electric resistance measurement

*see also ohmmeters*

electrometer preamplifier for measurement of voltage current and resistance on high resistivity materials 2-3592

Thermometrics thermistors evaluation for use at cryogenic temp. 2-182

water purity measurement by electric resistance and capacitance measurements for pollution control (*German*) 2-37480

# electric resistors

*see resistors*

# electric sensing devices

*see also instruments; measurement*

accelerometers, Si integrated microbeam PI-FET 2-33502

biosensors, biological membranes (*Japanese*) 2-14372

boundary layer transition sensors evaluation, for hypersonic wind tunnel environment 2-35246

chemical sensors, solid electrolyte coatings for electrochemical devices 2-22554

colour sensors using forbidden band sensors of graded bandgap (*Japanese*) 2-16144

conductivity probe, dynamic response meas., salt-stratified tank design 2-6454

cryogenic system, automatic liq.  $\text{N}_2$  filling system for spectroscopy expts. 2-23645

detonation stresses meas., using carbon and quartz gages in tandem arrangement 2-38639

eddy current detection, bullet detector appl. 2-18281

electroreflectance meas. in vacuum UV region using digital detector systems and H discharge tube (*Japanese*) 2-21984

flame detectors for burners, UV, electrode and photoresistive types, TTL interface (*French*) 2-48723

flaw detection, ferromagnetic resonance, using eddy current detector 2-17808

flowmeter, monolithic integrated direction-sensitive flow sensor for gas or liquid flow 2-35234

hot-film static-pressure probe for surveying flow fields, hypersonic wind tunnel appl. 2-35247

humidity sensor, using  $\text{Al}_2\text{O}_3$  dielectric (*German*) 2-19115

IC capacitive press. transducer with high sensitivity 2-33506

inductive sensor for the detection of low velocities 2-33510

industrial water analysis using electrochemical on-line sensors 2-22691

integrated optical force and stress sensor 2-6843

integrated semiconductor sensors (*Japanese*) 2-15160

ion-controlled diodes for down-borehole operation, temp. depend. of gate-controlled portion 2-37986

level regulator, automatic, for liq.  $\text{N}_2$  2-43025

liquid crystal devices appl. 2-38638

liquid level inspection of bottles performed by photoelectric switches 2-6873



**electric sensing devices continued**

- magnetic displacement follower for moving part in high-pressure fluid 2-48733  
 magnetic sensor using amorphous Wiegand-type ribbons 2-28867  
 MOS gas detectors using transition metal-gate 2-33508  
 mosaic staring sensor, balloon-borne, appl. to Earth-atmosphere IR background meas. 2-48055  
 multiplexed sensor pairs bridge cct. arrangement with differential amplifier 2-48685  
 piezoelectric impact sensor design, for tidal flow sand suspensions meas. 2-42494  
 piezoresistive semiconductor press. sensor, nonlinear characts. anal. (Japanese) 2-28849  
 polarographic detector for high performance liquid chromatography 2-14019  
 position detection, photoelectric switch appls. 2-6872  
 pressure sensor, absolute using  $ZrO_2$  electrochemical cells 2-19123  
 proximity detectors, types, industrial appls. (Italian) 2-38637  
 resonance high frequency level sensor for cryogenic media mass measurement (Russian) 2-23649  
 soil surface props. sensing using vibrator probe with piezoceramic transducer 2-14634  
 solid-state dew-point sensors 2-15179  
 temperature probes for low pressure condensable vapour meas. 2-38652  
 thermistor multi-functional temp. sensors, appls. and future developments 2-6871  
 thermoanemometer sensor for low flow speed meas., using Si crystal whisker 2-25462  
 transducers types, for temp., humidity, level and pressure meas. (Dutch) 2-19094  
 vibration measurement, electronic arrangement for meas. of internal friction of free damping vibrs. (Polish) 2-25340  
 $Ba_0.5Sr_{0.5}TiO_3$  multifunctional ceramic temp.-humidity sensors 2-33557  
 $CaF_2$  solid electrolyte, galvanic cell investigs., 500-900°C 2-13976  
 Fe rich amorphous alloys, stress-mag. effects and shock-stress sensors with no power 2-31259  
 $MgCr_2O_4-TiO_2$  multifunctional ceramic humidity-gas sensor 2-33557  
 O nonisothermal probe for continuous O meas. in steel 2-10799  
 O probe for electrochem. meas. of free O content in liq. steel 2-10797  
 $O_2$  immersion sensor for dissolved  $O_2$  electrochem. determ. in metallic melts 2-10798  
 $O_2$  partial press. control and meas. using stabilized  $ZrO_2$  cell 2-10800  
 $O_2$  sensor, oscillatory mode 2-33509  
 $O_2$  sensor for oxidation control of ferritic stainless steel melt 2-13943  
 Si capacitive pressure transducer with low temp. sensitivity, batch fabricated 2-33505  
 $SnO_2$  ultrafine particle films, elec. props., gas sensing props. 2-13203  
 $ZrO_2$  galvanic cell  $O_2$  sensor, non-ideal EMF behaviour 2-10795  
 $ZrO_2$ ,  $Y_2O_3$  stabilized, complex impedance anal. for development of  $O_2$  sensor 2-10796

**electric shielding, nuclear** *see nuclear screening***electric shocks**

- see also electrical faults; protection; safety*  
 biomedical equipment international standards and safety status, trends and evaluation 2-47748  
 electrical hazards and monitoring during biomedical diagnosis 2-47743  
 hospitals, the risk of elec. shocks, review 2-6274  
 nature of physiological effects of electric current 2-47622  
 risk of electrical danger in medicine, conf. RELMED 1981 2-47742  
 surgical diathermy, principles, hazards and safety counter measures 2-47749

**electric sparks** *see sparks***electric strain gauges** *see strain gauges***electric strength**

- see also electric breakdown*  
 bushings, low temperature, for high AC voltage 2-6857  
 electrostatic machine insulating gases dielectric strength, problems in using small scale meas. 2-11316  
 fluorocarbon polymer films, prep. by RF sputtering and plasma polymerisation of freons, elec. and optical props. 2-21705  
 gases, relative electric strengths and the molecular weights of gases, correl. for 82 gases 2-44823  
 hexafluoropropylene, dielec. strength under breakdown and prebreakdown conditions 2-25486  
 polyolefine-elastomer blends, elec. strength and struct., ionising radiation effects (Russian) 2-21946  
 polyolefines, elec. strength and struct., ionising radiation effects (Russian) 2-21946  
 PTFE in liquid  $N_2$  in strong electric field, durability study 2-47202  
 solid materials electric breakdown, influence of probability distribution bimodality (Slovak) 2-40191  
 synchronous generator laminar insulation system phenomena preceding breakdown under action of strong electric field (Polish) 2-35335  
 GaAs, anodic oxide film, comp. and dielec. strength, SIMS study 2-47214  
 He, liq., breakdown, electrode surface influence 2-2186  
 He, liq., first voltage breakdown, electrode behaviour 2-2185  
 InSb, anodic oxide film, comp. and dielec. strength, SIMS study 2-47214  
 $PbO-SiO_2-Al_2O_3$  fritted glass, dielec. breakdown and device evaluation 2-21945  
 $SF_6$ , dielectric strength, 500 to 1800K 2-30271

**electric susceptance** *see electric admittance***electric susceptibility** *see optical susceptibility***electric switchgear** *see switchgear***electric transformers** *see transformers***electric utilities** *see electricity supply industry***electric variables measurement**

- see also attenuation measurement; capacitance measurement; charge measurement; dielectric measurement; electric admittance measurement; electric current measurement; electric field measurement; electric impedance measurement; electric noise measurement; electric reactance measurement; electric resistance measurement; electrical conductivity measurement; frequency measurement; gain measurement; high-frequency transmission line measurement; inductance measurement; phase measurement; power factor measurement; power measurement; Q-factor measurement; voltage measurement*  
 carrier concentration in n-GaAs, methodic meas. error based on far IR absorpt. 2-5414  
 cryostat, production and meas. of temps. to 0.9K 2-10811

**electric variables measurement continued**

- electrolyte solns., differential capacity-pot. curves meas. 2-23663  
 human electrostatic discharge waveforms measurement 2-47595  
 measuring transducers, for electric variables measurement (Slovenian) 2-10794  
 polymer, comparative tracking index deviation 2-37031  
 semiconductors, impact ionisation coeffs. determ. 2-17083
- electric vehicles**  
*see also electric drives; electric locomotives; electric propulsion*  
 colloquium, review of traction batteries for road vehicles, IEE, London, England (1982) 2-48383  
 effects of constant current/constant voltage charge parameters on lead acid traction cell performance 2-22576  
 electric vehicle appls. 2-27603  
 Maglev system, superconducting, with sheet guideways, magnetic damping and stiffness coefficient 2-49622  
 magnetic levitation, theory, results and further practical problems 2-44167  
 military-vehicles using  $H_2$  fuel cells 2-32132  
 molten salt electrolyte cell for propulsion and load levelling (German) 2-22566  
 solar-electric cars using storage batteries, feasibility in the near future 2-42005  
 status of new electrochemical storage and conversion technologies for vehicle applications 2-22581  
 Fe-air battery vehicle mission anal. 2-22572  
 Li-Al/FeS batteries, quick-charge feasibility 2-22582  
 Na/S batteries, state of development and prospects 2-14065  
 Na-S battery thermal insulation and appl. in elec. vehicles (German) 2-52318  
 NaS battery for electric vehicles 2-52327  
 Ni-Fe batteries, alternative to Pb-acid elec. vehicle propulsion, tests 2-22571  
 Ni-iron batteries for electric vehicle appls. 2-27603  
 Ni-Zn batteries for electric traction, Lucas R&D activities 2-52328  
 Ni-Zn battery for electric vehicles 2-22559  
 NiO-Fe battery performance in elec. vehicle appl. 2-52329  
 Pb-acid batteries for electric vehicle appls. 2-27603

**electric welding**

- see also arc welding; electron beam welding; resistance welding*  
 No entries

**electrical conduction in condensed matter**

- see also carrier density; carrier lifetime; carrier mean free path; carrier mobility; carrier relaxation time; dislocation scattering; electrical conductivity of liquids; electrical conductivity of solids; electrical conductivity transitions; electron density (metals); electron mean free path (metals); electron mobility (metals); electron-phonon interactions; electron relaxation time (metals); high field effects; hopping conduction; impurity scattering; Lorenz number; minimum metallic conductivity; minority carriers; mixed conductivity; negative resistance effects; one-dimensional conductivity; photoconductivity; point defect scattering; size effect; skin effect; small polaron conduction; space-charge-limited conduction; spin disorder resistivity; surface conductivity; surface scattering; thermally stimulated currents; tunnelling*  
 bond energy calc. and elec. cond. 2-11374  
 bond-disordered resistor network, multi-bond expansions for effective cond. 2-17041  
 ceramics, inhomogeneous structures capacitance-voltage characts. (Russian) 2-21554  
 composite material, two-component, transport and optical props., bounds 2-9120  
 conductivity of two-dimensional electrons in a strong magnetic field (Russian) 2-21550  
 disordered 2-dimensional systems, electronic props., numerical calc. 2-40843  
 disordered electronic systems, dynamical cond. and Hall cond., scaling theory 2-30855  
 disordered system, resistivity distribution, influence of discreteness (Russian) 2-13034  
 electrical conductivity in moving base approach 2-26351  
 electron localization, self-consistent current relax. theory 2-45894  
 erythrocyte cytoplasm, elec. conductivity obs. 2-14213  
 incommensurate lattice pots., band struct., exotic elec. cond. 2-26352  
 inhomogeneous media, effective cond. tensor general props. from variational principles 2-5375  
 one-dimensional Anderson model with disorder, resistance scaling studies 2-40867  
 random linear networks, effective medium theory, conductance distrib. 2-15124  
 random resistive-reactive medium, effective medium theory 2-1876  
 semiconductors, ballistic transport limitations 2-1900  
 semiconductors, n-type, quantum transport theory of impurity and electron-electron scatt. resistivity 2-26350  
 spatially and energetically disordered systems, hopping Hall mobility, temp. depend. percolation theory 2-40895  
 two-dimensional random system, elec. cond., impurity scatt. 2-30854  
 two-dimensional systems, strongly disordered, elec. cond., conductor-nonconductor transition 2-13032  
 cubic lattice, variable range hopping at Fermi level, Monte Carlo simulation 2-40863

**electrical conductivity**

- see also electrical conduction in condensed matter; electrical conductivity of gases; electron mobility; ion mobility; space-charge-limited conduction*  
 nonlinear charge transport, higher order Einstein relations 2-142  
 percolation, anisotropic, network simulation 2-19035  
 randomly diluted network, percolation and conduction 2-120

**electrical conductivity measurement**

- Bridgman anvil assembly for resistivity meas. to 100 Kbar 2-23672  
 charged membrane, conductance meas., DC method 2-41932  
 contactless resist. meas., appl. to specific resist. of Cu and Al (German) 2-38663  
 diodes, computer-assisted system using phase sensitive technique 2-38666  
 EM inspection method 2-27378  
 ferroelectric crystal, dielec. susceptibility, polarisation and cond., meas. method 2-28861  
 high-resistance materials, apparatus for meas. thermolec. power and elec. cond. 2-19136  
 insulators, method for surface cond. meas. 2-51363  
 ionic soln. and melts (Japanese) 2-10823



**electrical conductivity measurement continued**

- measuring system on basis of bridges, determ. of cond. of electrolytic solution 2-6868  
 metals, conductivity measurement, eddy current method (*Chinese*) 2-15181  
 metals and alloys, thermal and electrical conductivity measuring unit 2-6850  
 non ferrous conductivity standards, eddy current meas. 2-10779  
 nonferrous metals, eddy current testing standards 2-13920  
 nonstationary plasmas, automatic recording of RF conductivity variations 2-19134  
 organic semiconductors 2-48724  
 oxides, nonstoichiometric, elec. cond. meas. in domain of homogeneity 2-43047  
 polyethylene, molten state, elec. conductivity, dielec. const. and viscosity meas. in high field 2-8803  
 polystyrene, molten state, elec. conductivity, dielec. const. and viscosity meas. in high field 2-8803  
 polyvinylidene fluoride, molten state, elec. conductivity, dielec. const. and viscosity meas. in high field 2-8803  
 probe dynamic response meas., salt-stratified tank design 2-6454  
 propylene carbonate, DC conductivity, permittivity and dielec. relaxation of supercooled liquid, 5 mHz to 5 MHz 2-5411  
 rock studies, laboratory instrumentation 2-48022  
 sediment conductivity determ. using sea current electric field 2-23116  
 semiconductor wafer, resist. variation meas. using photovoltaic method (*Japanese*) 2-33568  
 semiconductors, specific resist. meas. with capacity probe (*Russian*) 2-43041  
 simultaneous measurements of thermopower, thermal conductivity, and electrical resistivity between 1.2 and 350K 2-23628  
 solid cylindrical parts, mag. permeab. and elec. cond. meas., ferrometer appl. 2-3594  
 specific conductivity meter type Z-938 for meas. of impregnating electrolytes (*Polish*) 2-23670  
 thermally stimulated conduction meas. apparatus, local centres depth determ. to 0.001 eV 2-193  
 Al alloy AK4-1, heat treatment quality inspection by EM method 2-6012  
 Al sheet, resistivity meas., appl. of Thompson-Lampard theorem 2-28862  
 GaAs multilayer struct., carrier conc. and mobility, rapid determ. method 2-8815  
 Si polycrystalline wafer, bulk resistivity determ. by meas. of microwave reflectance modulation and wafer thickness 2-33574  
 Te, at high temps. and pressures. 2-15149

**electrical conductivity of amorphous metals and alloys**

- see also dislocation scattering; electron density (metals); electron mean free path (metals); electron mobility (metals); electron relaxation time (metals); electronic conduction in metallic thin films; impurity scattering; point defect scattering; surface scattering  
 amorphous alloys, recent studies (*Japanese*) 2-26354  
 electrical elastoresistivity at 77.4K 2-5380  
 metallic glass, phys. props., research developments, correl. of technological parameters and mag. props. 2-8437  
 metallic glasses, two level system interaction with electrons 2-40769  
 metals, amorphous, low energy excitations, sp. ht., conduct., US props. 2-35988  
 metglas 2826 MB, crystallisation charact. 2-21034  
 resonant electron scattering in amorphous metals, theory 2-26380  
 spin glass, low temp. resistivity, collective excitations influence 2-30858  
 transition metal alloys, ferromagnetic, disordered, low temp. resistivity, collective excitations influence 2-30858  
 AuSn, amorphous, elec. resist. Faber-Ziman theory calc. 2-45932  
 Be-Mo-Zr, amorphous, NMR, elec. resist. and supercond. props. 2-36460  
 Be-Nb-Zr, amorphous, NMR, elec. resist. and supercond. props. 2-36460  
 Ce-Al alloys, quenched, metastable phases, resistivity and struct. during heating 2-13040  
 Co<sub>8</sub>Si<sub>1-x</sub>, sputtered film, transport props. and magneto-optic Kerr effect 2-21556  
 Co<sub>84</sub>Si<sub>16</sub>Fe<sub>3</sub>B<sub>2.5</sub> amorphous alloy, electron irradi. effects (*Ukrainian*) 2-25929  
 CuSn, amorphous, elec. resist. Faber-Ziman theory calc. 2-45932  
 CuZr, amorphous, crystn., X-ray diff. and elec. resist. studies 2-12502  
 Cu<sub>100-x</sub>Zr<sub>x</sub> glasses, thermopower meas., 80 to 300K 2-26365  
 Fe based metallic glasses, test of electronic stability criterion 2-35401  
 Fe-B amorphous and crystallised alloys, phase diagram magnetisation, elec. resist. and thermal expansion meas. 2-17664  
 Fe<sub>100-x</sub>B<sub>x</sub> series, amorphous, elec. resist., 80 to 300K 2-45933  
 Fe<sub>80</sub>B<sub>20</sub>, amorphous, annealing behaviour on continuous heating 2-17690  
 Fe<sub>80</sub>B<sub>20</sub>, amorphous, electron scatt. mechanisms, resist. temp. depend. meas. 2-13059  
 Fe<sub>80</sub>B<sub>20</sub>, metallic glass, thermomagnetic and transport props. 2-26362  
 Fe<sub>80</sub>B<sub>13</sub>Si<sub>13</sub>C<sub>2</sub>, metallic glass, thermomagnetic and transport props. 2-26362  
 (Fe<sub>0.9</sub>Ni<sub>0.1</sub>)<sub>80</sub>B<sub>10</sub>, amorphous alloys, magnetoresistance in magnetic fields up to 14.5 T 2-1894  
 Fe<sub>73</sub>Ni<sub>13</sub>Cr<sub>14</sub>P<sub>12</sub>B<sub>6</sub>, glassy, electrical elastoresistivity at 77.4K 2-5380  
 Fe<sub>73</sub>Ni<sub>10</sub>P<sub>14</sub>B<sub>6</sub>, glassy, electrical elastoresistivity at 77.4K 2-5380  
 Gd-Co, amorphous film, low temp. resistivity and Hall effect 2-35986  
 Gd-Co amorphous films, mag. orientation transitions 2-46284  
 Gd-Co amorphous films, transport props. 2-21690  
 Ho-Co film, annealing effect on elec. resist. temp. depend., mag. compensation pt. and Hall parameters 2-9008  
 La-Ga, amorphous, elec. transport props. 2-26355  
 La<sub>70</sub>Cu<sub>30</sub>, amorphous, heat treatment effects below crystn. temp., supercond. props. and normal state resist. 2-36195  
 Mg<sub>70</sub>Zn<sub>30</sub> glass, thermopower meas., 80 to 300K 2-26365  
 Mo<sub>1-x</sub>Si<sub>x</sub>, supercond. and normal state props. 2-36203  
 Mo<sub>2</sub>Si disordered thin films, superconductivity and elec. cond. 2-41050  
 Pd-Si, disordered, elec. resist. calc., t-matrix formulation of Ziman theory 2-8783  
 Pd-Zr glasses, pure and hydrogenated, elec. resist. study 2-30859  
 Pd<sub>80</sub>Si<sub>20</sub>, amorphous, electron radiation damage, elec. cond. 2-40439  
 Pd<sub>80</sub>Si<sub>20</sub> glass, thermopower meas., 80 to 300K 2-26365  
 Si:H,B amorphous film, elec. props., optical props. 2-46176  
 Si:H,P amorphous, transport props. 2-45984  
 Si:H,P films, elec. props., transition to amorphous phase, solar cell props. 2-46167  
 Sn-Ag(Au), amorphous films, transport props. and phase stab., electron conc. effect 2-35987

**electrical conductivity of amorphous metals and alloys continued**

- Tb-Fe amorphous thin films, low temp. resistivity anomalies 2-8891  
 Y<sub>0.6</sub>Fe<sub>0.34</sub>, metallic glass, crystn. process, microscopic changes 2-21035  
 Y<sub>66</sub>(Fe<sub>1-x</sub>M<sub>x</sub>)<sub>34</sub>, M=B,C,Si,Ge, metallic glasses, struct. and elec. props. 2-21031  
 Zr-transition metal alloys, amorphous, electron-phonon coupling const. rel. to elec. resist. 2-13037  
 Zr<sub>x</sub>Cu<sub>1-x</sub> glasses, electronic props. and supercond. 2-36196
- electrical conductivity of amorphous semiconductors and insulators**  
 see also carrier density; carrier lifetime; carrier mean free path; carrier mobility; carrier relaxation time; dislocation scattering; electrical conductivity transitions; electronic conduction in insulating thin films; high field effects; hopping conduction; impurity scattering; minority carriers; negative resistance effects; photoconductivity; point defect scattering; small polaron conduction; surface scattering  
 amorphous semiconductors, electronic props., appl. to solar photovoltaic cells (*Dutch*) 2-13074  
 amorphous semiconductors aspects of basic physics researches 2-45042  
 amorphous solids exhibiting semicond-insulator transition, freq. depend. 2-40894  
 anisotropic poly(paraphenylene-benzobisthiazole) elec. conductivity 2-17073  
 n-benzoquinone and styrene copolymers; conductivity (*Russian*) 2-36035  
 chalcogenide glasses, defects, dispersive transport, valence alternation model, review 2-40837  
 chalcogenide glasses, quasimolecular defects, rel. to elec. and optical props. 2-13016  
 chalcogenide glasses, review of studies at Ioffe Physical-Technical Institute, USSR 2-45050  
 chalcogenide glasses, switching, low-resistivity state, electron-thermal nature 2-8841  
 chalcogenide thin films, amorphous, high field short pulse behaviour, band model 2-13084  
 DC hopping cond., Mott T<sup>-1/4</sup> law from rate eqn. formalism 2-13071  
 film, electronic transport, review 2-8906  
 hopping and AC cond., Hall mobility, master eqn. 2-40878  
 hopping anomalous carrier pulse propagation, theory 2-5410  
 hopping transport, dielec. polarisation 2-5407  
 II-V compounds, amorphous and cryst., thin films, prep., struct., elec. and optical props. 2-26262  
 one-dimensional disordered system, excited states lifetime 2-21600  
 organic solid, disordered, electronic transport, degree of disorder determ. 2-36043  
 organic solids with diagonal disorder, localised states and electronic transport, review 2-8774  
 organotin films, amorphous, semiconductive and conductive, form. and props. 2-41532  
 (phthalocyanine-AlF)<sub>2</sub>I<sub>2</sub>, conductivity, thermogravimetric anal., IR and Raman obs. 2-26896  
 (phthalocyanine-GaF)<sub>2</sub>I<sub>2</sub>, conductivity, thermogravimetric anal., IR and Raman obs. 2-26896  
 PMMA, static compression to 100 GPa 2-8571  
 polyacetylene:I, morphology, rel. to elec. cond., SEM study 2-16605  
 polyacetylene, anomalous freq. depend. cond. 2-30890  
 polyacetylene, doped and undoped, SEM and Castaing microprobe studies 2-16671  
 trans-polyacetylene, intersoliton electron hopping transport, cond. and thermopower meas. 2-30894  
 polyacrylonitrile fibre, oxidatively stabilized, elec. cond. and ESR at high temp. 2-21584  
 polyethylene, doped, elec. cond. 2-30893  
 polyethylene, gamma irradiated, viscoelastic and elec. props. meas. 2-45273  
 polyethylene, influence of elec. field and press. on cond. 2-8804  
 polystyrene: Cu phthalocyanine films, dielec. props. 2-21939  
 polyvinylidene fluoride, oriented and unoriented thick films, resistivity and piezoelec. meas. 2-21948  
 properties and research topics, review 2-45048  
 PTFE, irradiation effects on charge storage and cond. 2-8544  
 PVC, rigid and soft, γ-irrad., elec. behaviour 2-45962  
 pyrrole and its copolymers, elec. props. 2-41024  
 semiconducting glasses, AC conductivity below 10<sup>11</sup> Hz 2-40899  
 semiconductor, pressure-induced effects and phase transitions 2-45044  
 semiconductors, amorphous, dispersive transport theory 2-40900  
 semiconductors, amorphous, transport properties, coherent pt. and random walk methods 2-40898  
 transition metal oxides, amorphous, elec. cond. and electrochromic props., review 2-45973  
 Ag-Te, amorphous semicond. film, prep. by diffusion and elec. cond. 2-45772  
 Al-Se<sub>3</sub>Te<sub>2</sub>As<sub>4</sub>Ge<sub>3</sub>-Au structure, elec. characts. of amorphous semicond. layer 2-26525  
 Al<sub>2</sub>O<sub>3</sub> film, anodised, DC cond. and dielec. polarisation, thickness depend. and defects role 2-30987  
 As amorphous film, UHV sublimed, elec. and optical props. 2-46172  
 As-Ge-Se, glasses and melts, thermal and elec. cond. 2-8683  
 As-Ge-Se system, elec. cond. in glassy and liq. states across GeSe<sub>2</sub>-As<sub>2</sub>Se<sub>3</sub> and GeSe<sub>2</sub>-As<sub>2</sub>Se sections and with excess Se conc. 2-26393  
 As-Ge-Te glasses, pure and doped, elec. and dielec. props. 2-17075  
 As-Se, glassy, hole drift mobility, composition and struct. depend. 2-46021  
 As-Se-Ag, amorphous, AC cond. 2-45972  
 As<sub>2</sub>S<sub>3</sub> glasses, elec. props. 2-21612  
 As<sub>2</sub>S<sub>3</sub>Sb<sub>2</sub>S<sub>3</sub>, negative transient conductivity effects 2-45963  
 As<sub>2</sub>S<sub>3</sub>Sb<sub>2</sub>S<sub>3</sub> and As<sub>2</sub>S<sub>3</sub>Sn, glassy, hole drift mobility, composition and struct. depend. 2-46021  
 As<sub>2</sub>Se<sub>3</sub>, amorphous film, transport props. 2-41035  
 As<sub>2</sub>Se<sub>3</sub> glass, AC transport and struct. relax. 2-40904  
 As<sub>2</sub>Se<sub>3</sub>, photothermoplastic recording material, image contrast, inhomogeneity effects 2-48818  
 As<sub>2</sub>Se<sub>3</sub>-As<sub>2</sub>S<sub>3</sub>, photothermoplastic recording material, image contrast, inhomogeneity effects 2-48818  
 As<sub>2</sub>Se<sub>3</sub>-As<sub>2</sub>Te<sub>3</sub>, glassy semicond. elec. cond. in high elec. fields 2-51195  
 B<sub>2</sub>O<sub>3</sub>-CaO-V<sub>2</sub>O<sub>5</sub>-V<sub>2</sub>O<sub>4</sub>, based MIM struct., elec. props. 2-36151  
 B<sub>2</sub>O<sub>3</sub>-CaO-V<sub>2</sub>O<sub>5</sub>-V<sub>2</sub>O<sub>4</sub>, DC and AC elec. props. 2-36504  
 B<sub>2</sub>O<sub>3</sub>-PbO Fe<sub>2</sub>O<sub>3</sub> glasses, struct., elec., and mag. props. 2-45054  
 BaO-V<sub>2</sub>O<sub>5</sub>/Mn(Fe)(Co)(Cr)(Cu) glass, elec. cond. and EPR spectra 2-46365  
 Ba(PO<sub>3</sub>)<sub>2</sub>-MgF<sub>2</sub>, glass, effect of MgF<sub>2</sub> additions on physicochemical props. 2-26391



**electrical conductivity of amorphous semiconductors and insulators continued**

- C:H, amorphous, elec. and optical props. 2-40912  
 C:H,B(P), amorphous films, thermopower, elec. cond. 2-46178  
 Cd<sub>3</sub>As<sub>2</sub>, amorphous films, structural, electrical and thermoelectric props. 2-26399  
 Cd<sub>3</sub>As<sub>2</sub>, amorphous films, elec. transport props. 2-40911  
 CdO-ZnO-P<sub>2</sub>O<sub>5</sub> (5.60 mol.%) glass, band gap determ. 2-40763  
 Cu<sub>25</sub>Au<sub>75</sub>Te<sub>70</sub>, amorphous, elec. resist. at high press., time depend. 2-30888  
 Fe<sub>2</sub>O<sub>3</sub>-P<sub>2</sub>O<sub>5</sub> glasses, high field DC cond. 2-46006  
 GaAs amorphous films, EXAFS, optical and cond. meas. (French) 2-46826  
 GaAs:Cr amorphous film, hopping conduction 2-41032  
 GaP amorphous films, EXAFS, optical and cond. meas. (French) 2-46826  
 GaSb amorphous film, flash evaporated, electronic props. 2-46174  
 GaSb amorphous films, EXAFS, optical and cond. meas. (French) 2-46826  
 Ge, amorphous, elec. props. 2-17084  
 Ge, amorphous, press. induced metal-semiconductor transitions 2-40790  
 Ge, amorphous UHV deposited films, struct., elec. and optical props. 2-40732  
 Ge:H, amorphous, AC loss at audio freq., electron tunnelling model 2-40897  
 Ge-Bi(Sb), amorphous, elec. props. 2-17084  
 Ge-Sa-As(Sb)(Bi) vitreous, influence of bond metallisation- on elec. cond. 2-5402  
 Ge-Se, glass, doped, elec. transport props. 2-45971  
 Ge-Se evaporated film, amorphous, non-dispersive and dispersive transport 2-46019  
 Ge-Se system, elec. cond. in glassy and liq. states 2-26392  
 Ge-Se-Ga thin film, amorphous, trap distrib., SCLC obs. 2-30908  
 Ge-Se-Te system glasses, elec. cond. over wide temp. range, struct. component 2-5403  
 Ge-Te, glass, doped, elec. transport props. 2-45971  
 GeO<sub>2</sub>-Na<sub>2</sub>O glasses, transport props., impurity OH effect 2-8668  
 Ge<sub>2</sub>S<sub>3</sub>As<sub>8</sub>, glasses, DC electrical cond. at high hydrostatic pressure 2-1902  
 Ge<sub>2</sub>Se<sub>11</sub>-In(Cu)(Fe) glasses, photocond. and elec. cond., dopant effects 2-36089  
 GeTe amorphous thin films, elec. cond. mechanisms 2-13083  
 Ge<sub>15</sub>Te<sub>85</sub>Sb<sub>2</sub> amorphous films, elec. props. (Chinese) 2-5408  
 InAs:N<sub>2</sub><sup>+</sup> ion-implanted amorphous film prep., electrical conductivity and Hall mobility 2-8533  
 InSb:N<sub>2</sub><sup>+</sup> ion-implanted amorphous film prep., electrical conductivity and Hall mobility 2-8533  
 InSe, cryst. and amorphous, elec. and photoelectrical props. 2-51225  
 InSe film, short-range order, elec. cond. and opt. absorpt. edge 2-40712  
 In<sub>20</sub>Te<sub>80</sub>, amorphous, elec. resist. at high press., time depend. 2-30888  
 Mo<sub>2</sub>Ge<sub>1-x</sub>, amorphous film, elec. transport and struct. 2-40913  
 P<sub>2</sub>O<sub>5</sub>-FeO-V<sub>2</sub>O<sub>5</sub> glass, internal friction and elec. cond. 2-1907  
 PrO<sub>x</sub>-P<sub>2</sub>O<sub>5</sub> glasses, elec. props. rel. to oxidation and red. treatments, glass form. range 2-13072  
 Sb-Ge-Se system, elec. cond. glassy and liq. states 2-26394  
 Se, amorphous films, crystn., elec. cond. study 2-45038  
 Se<sub>93.5</sub>As<sub>6.5</sub>, amorphous film, carrier mobility, thermal annealing and light irradi. effects 2-13199  
 Se<sub>94.3</sub>Ge<sub>5.7</sub>, amorphous film, carrier mobility, thermal annealing and light irradi. effects 2-13199  
 Si, amorphous, electron bombardment induced conductivity 2-13062  
 Si, amorphous, plasma CVD (Japanese) 2-13654  
 Si, amorphous, plasma deposited and CVD coatings, ion implantation, elec. cond. and photoluminesc. 2-40905  
 Si, amorphous, press. induced metal-semiconductor transitions 2-40790  
 Si amorphous film, prep. by CVD, elec. props. 2-2446  
 Si amorphous films, evaporated and sputtered, annealing and hydrogenation 2-45771  
 Si amorphous p-i-n junction, drift type photovoltaic effect 2-46107  
 Si, amorphous thick film, conductivity as a function of spin conc. 2-40902  
 Si, CVD growth, struct., optical, and elec. props. 2-40274  
 Si, electrical cond. and thermoelec. power 2-40917  
 Si films, CVD, amorphous and polycryst., cond. mechanism 2-46171  
 a-Si films, heavily doped, glow discharge, AC conduction 2-45989  
 a-Si, SiH<sub>4</sub> gas discharge deposited layers for solar cells, effect of F 2-37312  
 a-Si:Ar RF sputtered films, elec. and optical props., effect of Ar 2-40736  
 Si:B, H CVD film, hydrogenation effect, elec. cond. and ESR meas. 2-40906  
 Si:F, H CVD film, hydrogenation effect, elec. cond. and ESR meas. 2-40906  
 Si:F,H,P films, optical study of intermediate order, elec. cond. 2-46797  
 Si:F amorphous film, glow discharge plasma deposition from SiF<sub>2</sub> gas 2-40725  
 a-Si:F,H, electrical, spectral and doping properties 2-45790  
 Si:H, amorphous, AC field and freq. depend. of elec. cond. 2-40901  
 Si:H, amorphous, electron irradi. effect on dark and photocond. and defect removal 2-45279  
 Si:H, amorphous, H<sub>2</sub> exodiffusion, comparison with elec. cond. meas. 2-45623  
 Si:H, amorphous, modulated photocurrent meas. 2-1946  
 Si:H, amorphous, multiphase description, photoluminesc., TSC, optical absorpt. and elec. cond. meas. 2-41412  
 Si:H, amorphous, non-dispersive and dispersive transport 2-46019  
 Si:H, amorphous, plasma deposited, photocond., temp. depend. 2-1943  
 Si:H, amorphous, prep. from higher silanes with high growth rate 2-2462  
 Si:H, amorphous, RF sputtered, transport props. 2-1913  
 Si:H, amorphous film, AC conductivity and optical props. 2-41040  
 Si:H, amorphous film, elec. cond., thermopower temp. depend. 2-40896  
 Si:H, amorphous film, electron drift mobility meas 2-41036  
 Si:H, amorphous hydrogenated, reactive laser evaporation, elec. resist. meas. 2-2456  
 Si:H, amorphous ion beam deposited coating, prep. and props. 2-40723  
 Si:H, amorphous plasma deposited coating, field effect cond., illumination and annealing effects 2-45969  
 α-Si:H, large-area low-freq. discharge-produced 2-51019  
 Si:H, Li amorphous film, DC glow discharge deposited, photovoltaic effect 2-46170  
 Si:H, O sputtered films, amorphous, optoelectronic props., effect of O 2-41443  
 Si:H, transport props., CPA calc. 2-40907

**electrical conductivity of amorphous semiconductors and insulators continued**

- Si:H,B, Li-diffused, amorphous compensated, dark and photocond. 2-46065  
 Si:H,N(O), amorphous glow discharge film, elec. cond. and photocond., N<sub>2</sub>(O<sub>2</sub>) doping effect 2-40733  
 Si:H,P(B), amorphous, temp. depend. of ESR spectra, elec. - cond. 2-5575  
 Si:H amorphous films for electrophotographic appl., photoelec. props. 2-46168  
 Si:H amorphous n-i-p solar cell, minority carrier transport in depletion layers 2-47489  
 Si:H amorphous p-n junctions, elec. transport, doping effects 2-46115  
 Si:H amorphous plasma deposited coating, elec. and optical props., RF power and growth temp. depend. 2-40729  
 Si:H amorphous Schottky barrier diode charact., mathematical model 2-46102  
 Si:H amorphous Schottky diode, electron transport and deep localized state kinetics 2-46101  
 Si:H amorphous solar cell, carrier collection, image force effects 2-2785  
 a-Si:H films, impurity doping, morphological study, electrical and optical properties 2-45789  
 Si:H(B)(P), amorphous DC sputtered coating, doping and elec. props. 2-40726  
 Si:N amorphous film, elec. and optical props. 2-17074  
 Si(O)(H)(F) evaporated amorphous films, DC cond., impurities effect 2-13070  
 Si:P amorphous film, crystn. from glow discharge, cond. determ. 2-50550  
 Si-Ge-As-Te-(Mn), glassy semicond. elec. cond. in high index. fields 2-51195  
 SiC based resistance material 2-31672  
 SiGe:H amorphous film solar cell, Tandem type 2-47488  
 a-Si<sub>1-x</sub>Ge<sub>x</sub> films for high performance solar cells 2-37227  
 SiO<sub>2</sub>, amorphous RF sputtered films, elec. cond., EPR and optical absorpt. 2-45975  
 SiO<sub>2</sub> RF sputtered films, DC current transport, 77 to 357K 2-30902  
 SiO<sub>2</sub>, vitreous, surface cond. in moist atm., effect of preliminary heat treatment 2-8857  
 SnO<sub>2</sub> films, amorphous and crystalline, prep. by reactive deposition and phys. props. 2-51050  
 SnOx, amorphous spray coating, elec. and optical props. 2-40908  
 Ta<sub>2</sub>O<sub>5</sub>, amorphous, hopping cond. freq. depend., dielec. loss-angle tangent study 2-36048  
 Te<sub>80</sub>Si<sub>20-x</sub>Pb<sub>x</sub> glass, thermal and elec. props. 2-21588  
 V<sub>2</sub>O<sub>5</sub>, amorphous CVD coating, prep., elec. cond. and EPR spectra 2-40739  
 V<sub>2</sub>O<sub>5</sub>-P<sub>2</sub>O<sub>5</sub>-Sb<sub>2</sub>O<sub>3</sub>-As<sub>2</sub>O<sub>3</sub> glass, elec. props. 2-45968  
 V<sub>2</sub>O<sub>5</sub>-TeO<sub>2</sub> semiconducting glass, elec. cond., thermopower and optical absorpt. 2-45974  
 Zn<sub>3</sub>P<sub>2</sub>, elec. cond. and thermoluminescence studies 2-27005  
 ZnTe amorphous vacuum deposited films, reproducibility, el- ec. cond. 2-5473
- electrical conductivity of crystalline metals and alloys**  
*see also* dislocation scattering; electron density (metals); electron mean free path (metals); electron mobility (metals); electron relaxation time (metals); electronic conduction in metallic thin films; impurity scattering; point defect scattering; surface scattering  
 alkali metals, elec. resist. at low temp., electron-electron Umklapp scatt. contrib. 2-26357  
 alkali metals, phonon-dislocation scatt. and phonon drag contrib. 2-21577  
 BCC metal, (112) twin boundaries, resist., theoretical determ. (French) 2-1890  
 binary alloys, elec. resist. mech. during clustering 2-1889  
 damage variable role in elec. resist. (French) 2-5381  
 diffusion coefficients, determ. by elec. resist. meas. 2-35729  
 dilute alloys, coupled mag. impurities, electron scatt., resistivity min. 2-30881  
 electrodes, conduction by tunnelling across energy bands of amorphous substrate (French) 2-26480  
 electron-phonon scatt. effect at high temp. 2-45950  
 EM field behaviour of dielectrics and metals 2-45928  
 ferromagnets, elec. resist., temp. depend., domain struct. effects 2-35989  
 grain boundaries, relaxed periodic, theoretical determ. of resist. (French) 2-1890  
 inhomogeneous, negative magnetoresist. and Hall coeff. at low temp. (Russian) 2-51148  
 Joule heating, temp.-elec. domain struct. and formation 2-36023  
 layer metallic crystals, N-type transverse current-voltage characteristics 2-45936  
 metal-H systems, isotope effect on electronic struct. of H, review 2-41224  
 metals, electrical conductivity, mixing of electron and impurity states (Russian) 2-45938  
 metals, Ioffe-Regel criterion and resistivity 2-51146  
 metals, transport phenomena depend. on quasilocal electron states 2-1891  
 metals, transport phenomena depend. on quasilocal electron states 2-5387  
 noble and polyvalent metals, electron-dislocation scatt. relax. time anisotropy 2-45943  
 PdMn, spin glass phase, AC susceptibility and elec. cond. 2-21780  
 Permalloy, <sup>105</sup>Sn Mossbauer obs. of ordering process, mag. hyperfine field, annealing influence, elec. resist. 2-9058  
 polyacetylene-d<sub>0</sub> (-d<sub>1</sub>), n-type doping, conduct. transitions, thermal isomerisation, ESR and IR study 2-5514  
 pure metal, low temp. elec. cond. 2-51147  
 rare earth alloys, RNi<sub>2</sub>Sn<sub>2</sub>, R=La, Ce, Pr, Nd, Sm, cryst. struct., elec. and mag. props. (Russian) 2-50585  
 rare-earth metals, elec. resist. near ferromagnetic-antiferromagnetic phase transition 2-36004  
 Recalloy, props. (Japanese) 2-51400  
 steel, high-speed, struct. and props. after cold treatment 2-27196  
 steel, low C, study of mag. ageing kinetics 2-26659  
 steel, Ni maraging, low temp. ageing and repeated strain ageing 2-41620  
 steel, stainless, structural stability, rel. to physicochem. props. 2-17719  
 steel, structural, hot-rolled, elec. and mag. props. after quenching and tempering 2-21560  
 transition metals, resistivity anomaly at high temperatures 2-30879  
 two-dimensional metal systems, elec. cond., electron-phonon relax. mechanism 2-26379  
 Ag, electrical resist., 40 mK to 1.5K 2-26358  
 Ag, electrical resistivity, low temp., cold work effect 2-36001  
 Ag, pseudopotential study of energy gaps and resistivities 2-26282



## electrical conductivity of crystalline metals and alloys continued

- Ag-Cu, directionally solidified and deformed eutectic alloys with fibre structure, Hall effect and elec. cond. meas. 2-1893  
 Ag-Cu (10 wt.%), elec., thermal, and mech. props. use as construction material in low temp. expts. 2-35995  
 Ag-Cu(Ni), dil. alloys, electron irradiated, free migration of interstitials 2-35544  
 Ag-Mn dil. alloys, press. depend. of elec. resist. in dil. limit and spin glass regime 2-5398  
 Ag<sub>1-x</sub>Pd<sub>x</sub>, mass and lifetime enhancement due to disorder, residual resist., KKR-CPA calc. 2-30880  
 Al alloys, quenching in polyethylene oxide solution, effect on struct. and props. 2-27197  
 Al, electrical conductivity measurement by eddy current method (*Chinese*) 2-15181  
 Al, electrical resist., 40 mK to 1.5K 2-26358  
 Al, electron irradiated, interstitial trapping by Ga or Si atoms, elec. resist. meas. and isochronal anneals. 2-35543  
 Al, electron-phonon scatt. resist., phonon drag effects 2-36030  
 Al, Matthiessen rule deviation at low temp. due to surface scatt. 2-26378  
 Al sheet, resistivity meas., appl. of Thompson-Lampard theorem 2-28862  
 Al, specific resistivity meas. in temp. range 20-150°C, temp. depend. (*German*) 2-38663  
 Al-Au dilute alloy for moderate-strength, high cond. appls. 2-5489  
 Al-B fibre composite, elec. cond. depend. on fibre composition and struct. (*Russian*) 2-1886  
 Al-Co dilute alloy for moderate-strength, high cond. appls. 2-5489  
 Al-Cu bimetal wire conductor, elec. resistivity stability, operating conditions effect 2-51145  
 Al-Ni<sub>3</sub>Sb dilute alloy for moderate-strength, high cond. appls. 2-5489  
 Al-Si-Cu-Zn-Mg-Ti, cryst. and struct., effect of cooling rate and Zn, Mg and Ti additions 2-1549  
 Al-steel, fibre composite, elec. cond. depend. on fibre composition and struct. (*Russian*) 2-1886  
 Al-Zn elec. resist. mech. during clustering 2-1889  
 Al-Zn-Mg (6 at.% Zn, 0.81, 1.73 at.% Mg), early decomp. behaviour, isothermal resist. curves analytical description 2-17681  
 Al-Zn-Mg-Cu, alloy 7075-T651, effects of warm working 2-47064  
 Au foil, annealed under reduced Cl<sub>2</sub> press., elec. cond. increase, 4.2K 2-35994  
 Au, pseudopotential study of energy gaps and resistivities 2-26282  
 Au-Ag (15 at.%), short-range order form. and annihilation of vacancies 2-36985  
 Au-Cd, martensitic transformation in  $\beta_1$ -phase, quenching effect 2-13719  
 Au-Co solid soln., elec. resist. and mag. susceptibility 2-30861  
 Au-Cu-Fe(Mn) alloys, low temp. elec. cond., scatt. mechanisms 2-35997  
 Au-Fe, Kondo system, thermoelec. transport parameters 2-36021  
 Be wire, high-strength, mech. props. and elec. cond. 2-2567  
 Cd, electrical cond. anisotropy, 1.2 to 8K 2-26359  
 Cd electron irradiated, diffuse X-ray scatt. and elec. resist. meas. 2-21179  
 Cd, Matthiessen rule deviation at low temp. due to surface scatt. 2-26378  
 Ce-Al alloys, quenched, metastable phases, resistivity and struct. during heating 2-13040  
 CeFe<sub>2</sub>, electric and mag. resist., 1.5 to 300K 2-5385  
 CeFe<sub>2</sub>, electric and mag. resist., 1.5 to 300K 2-8786  
 Ce<sub>1-x</sub>Gd<sub>x</sub>Pd<sub>1-x</sub>, dil. alloy, elec. and thermal cond. 2-21559  
 CePd<sub>3</sub>, intermediate valence cpd., elec. and thermal cond. 2-21559  
 Ce<sub>1-x</sub>Y<sub>x</sub>Pd<sub>1-x</sub>, elec. and thermal cond. 2-21559  
 Co, ferromagnetic, domain dragging by elec. current at 4K 2-17047  
 Co<sub>2</sub>Ga<sub>100-x</sub>, electronic band struct. and localised states, rel. to elec. props. 2-40813  
 Cu alloys, strength and elec. props. optimisation by alloying additions (*Polish*) 2-27180  
 Cu crystal, bent, elec. resistivity, annealing effect 2-13827  
 Cu, dislocation induced elec. resistivity during bending 2-5386  
 Cu, electrical resist., 40 mK to 1.5K 2-26358  
 Cu, high purity, Matthiessen's rule deviations 2-17045  
 Cu, plastically deformed, unsuitability of Wiedemann-Franz law 2-36003  
 Cu, pseudopotential study of energy gaps and resistivities 2-26282  
 Cu, specific resistivity meas. in temp. range 20-150°C, temp. depend. (*German*) 2-38663  
 Cu-Au, short-range order hardening 2-36868  
 Cu-Cd(Mg)(Zr)(Cr), Cu-Cr-Zr(Mg) and Cu-Zr-Mg, heat resistance, elec. cond. and strength 2-27244  
 Cu-Co solid soln., elec. resist. and mag. susceptibility 2-30861  
 Cu-Co solid solns., elec. resist. at low temp., annealing effect 2-45934  
 Cu-Mn, resistivity anomaly, influence of addition of third metal (*German*) 2-36005  
 Cu-Ni, elec. resist., coexisting at. and mag. clustering effects 2-1887  
 Cu<sub>2</sub>Au ordered alloy, ion irradi., atomic replacement, resistivity meas. 2-8547  
 Cu<sub>2</sub>S, Mo<sub>2</sub>S<sub>4</sub>, Se, Te, Chevrel phase, struct. and props. 2-16638  
 ErB<sub>2</sub>, anisotropy and mag. transitions 2-41131  
 $\alpha$ -ErH<sub>2</sub>(D<sub>8</sub>) solid solns., quenching behaviour at low temp., resist. increase, solubility limit 2-40555  
 Eu, elec. cond. at high press. and low temp. 2-36002  
 Eu, high press. search for superconductivity, elec. resistance meas. 2-2025  
 EuMo<sub>2</sub>S<sub>8</sub>, high press. search for superconductivity, elec. resistance meas. 2-2025  
 EuMoSe<sub>3</sub>, high press. search for superconductivity, elec. resistance meas. 2-2025  
 Fe alloys, electrical resistivity, residual sub-band 2-30878  
 Fe, high-porosity, props. 2-17646  
 Fe, reactive sputtering in mixed Ar-O<sub>2</sub> atmosphere (*Japanese*) 2-30765  
 Fe-Co, neutron irradiated, accelerated diffusion (*French*) 2-35546  
 Fe-Co-M(V)(Ti) alloys, neutron irradiated, accelerated diffusion (*French*) 2-35546  
 Fe-Nb-Co-W system, Recalloy, props. (*Japanese*) 2-51400  
 $\gamma$ -Fe-Ni alloys, diffusion and electrotransport of C 2-16908  
 Fe-Ni-Al, ageing in region of reverse martensitic transform., phys. props. change (*Russian*) 2-51942  
 Fe-V-C, elec. resistivity and length changes during precipitation 2-5882  
 Fe<sub>1-x</sub>Ni<sub>x</sub> binary alloys, Fe-rich, at. ordering, elec. resist. and mag. moment meas. 2-35992  
 Fe<sub>51</sub>Rh<sub>49</sub>S<sub>5</sub>, ferromagnetic, press. induced antiferromagnetism 2-46282  
 Gd<sub>1-x</sub>Er<sub>x</sub>Al<sub>2</sub>, Curie temp., spin-disorder resist. and residual resist. 2-35991  
 GdPd<sub>3</sub>, elec. and thermal cond. 2-21559

## electrical conductivity of crystalline metals and alloys continued

- Hg, Matthiessen rule deviation at low temp. due to surface scatt. 2-26378  
 Ho-Er, elec. cond., thermoelectric power, mag. struct. effects (*Russian*) 2-51144  
 HoB<sub>4</sub>, anisotropy and mag. transitions 2-41131  
 HoRh<sub>4</sub>B<sub>4</sub>, mean-field ferromag., sp. ht., magnetisation, elec. resist., and thermal expansion meas. 2-51408  
 In, Matthiessen rule deviation at low temp. due to surface scatt. 2-26378  
 In<sub>2</sub>Bi, resistivity saturation, superconducting T<sub>c</sub> 2-35993  
 K, elec. cond., 0.5 to 4K, high precision meas. 2-35998  
 K, strained, elec. resist., electron-phonon scatt. 2-36000  
 Li, electrical cond., 1.2 to 10K, quadratic temp. depend. 2-35999  
 Li, electrical transport props. 2-40869  
 $\alpha$ -Lu(H, D)<sub>8</sub>, elec. resist. due to H, 4.4 to 170K, Manninen-Jena effect 2-17046  
 $\alpha$ -LuH<sub>2</sub>(D<sub>8</sub>) solid solns., quenching behaviour at low temp., resist. increase, solubility limit 2-40555  
 Mg, phonon resistivity 2-13039  
 Mg-Yb alloy, phonon resistivity 2-13039  
 $\alpha$ -MnS, electrical and mag. props., cryst. struct. 2-9032  
 Mo bicrystal interface, galvanomag. phenomena 2-40873  
 Mo<sub>2</sub>Ge(Si), ion irradi., superconducting T<sub>c</sub>, specific heat, elec. cond. 2-36180  
 Mo<sub>2</sub>S<sub>8-y-z</sub>Se<sub>z</sub>Te<sub>z</sub>, Chevrel phase, struct. and props. 2-16638  
 Nb, conduction electron scatt. rel. to type of impurity, residual resist. meas. at 20.4K (*Russian*) 2-17057  
 Nb<sub>2</sub>Al<sub>0.75</sub>Ge<sub>0.25</sub>, elec. cond., lattice consts. (*Russian*) 2-45939  
 Nb<sub>2</sub>Sn(Ge), laser annealing effect on transition temp. 2-36179  
 Nb<sub>1-x</sub>Ta<sub>x</sub>C<sub>y</sub>, supercond., mag., and normal state elec. props., conc. depend. 2-51368  
 Nb<sub>1-x</sub>Ta<sub>x</sub>Se<sub>3</sub>, superconductivity and charge density waves 2-2042  
 Nb<sub>1-x</sub>Ti<sub>x</sub>Se<sub>3</sub>, superconductivity and charge density waves 2-2042  
 Nd, phase transition, high temp., elec. cond., sp. ht., thermal cond. and light absorpt. study 2-26046  
 Ni, electrical resistance near T<sub>c</sub>, critical parameters 2-21561  
 Ni, high-porosity, props. 2-17646  
 Ni paramagnetic, electronic struct. and kinetic props. peculiarities 2-35990  
 Ni polycrystalline, push-pull deformed, vacancy behaviour during loading cycle, elec. resist. meas. 2-36930  
 Ni-Cr (20 wt.%), high-porosity, props. 2-17646  
 Ni-Cr(Fe)(Co)(Cu), subband resist. and spontaneous resist. anisotropy, two-current model 2-1888  
 Ni-S single cryst., segregation during electron bombardment, temp. depend. (*Russian*) 2-5229  
 Ni-Ti, equiatomic, macroscopic length changes during B2 $\rightarrow$ R and M $\rightarrow$ B2 transitions 2-47028  
 Ni<sub>3</sub>(Fe,Ti), conductivity, mag. moment per atom 2-40872  
 Ni<sub>3</sub>(Mn,Ti), conductivity, mag. moment per atom 2-40872  
 Ni<sub>3</sub>MnSn Heusler alloy, elec. resist., galvanomag. effects, and magnetisation meas., scatt. processes 2-5389  
 NiTi, equiatomic, martensitic transform., stress-induced shape changes and shape memory effect 2-47029  
 O<sub>3</sub>, electrical resist. and size effect anisotropies, 4.2 to 300K (*Russian*) 2-5383  
 Pb bicrystal interface, galvanomag. phenomena 2-40873  
 Pb-Au, dil. alloy, electron irradi., dipion formation, resistivity annealing spectra study 2-36880  
 Pb-Bi(Cu)(Sn), elec. resistance and mag. susceptibility (*Russian*) 2-1885  
 Pb<sub>1-x</sub>Eu<sub>x</sub>Mo<sub>2</sub>S<sub>8</sub>, Chevrel phase supercond., resist. and Mossbauer studies 2-17381  
 Pd-D alloy, location of low-temp. resistivity anomaly 2-21639  
 (Pd<sub>0.9965</sub>Fe<sub>0.0035</sub>)<sub>0.95</sub>Mo<sub>0.05</sub>, spin glass transition, resist. anomaly 2-30862  
 Pd<sub>1-x</sub>Ni<sub>x</sub>H<sub>2</sub>, electron-phonon interaction from elec. resist. meas. 2-26360  
 (Pd<sub>95</sub>Rh<sub>5</sub>)<sub>1-x</sub>Ni<sub>x</sub>, spin fluctuation and paramag.-ferromag. transition, magnetisation and resist. meas. 2-21797  
 Pr, phase transition, high temp., elec. cond., sp. ht., thermal cond. and light absorpt. study 2-26046  
 Pr<sub>2</sub>(Co<sub>1-x</sub>Ni<sub>x</sub>)<sub>17</sub>, elec. resist. singularities and spin reorientation transistors 2-41133  
 PrCu<sub>6</sub>, critical phenomena at nucl. mag. ordering transition 2-36367  
 PrNi<sub>5</sub>, elec. resist., longit. magnetoresist. and thermal cond., temp. depend., cryst. field effect 2-8785  
 Pt, Matthiessen rule deviation at low temp. due to surface scatt. 2-26378  
 Pt wire, resistance at low temp., localization effects 2-30860  
 Sb-GaSb, metallic, crystallisation speed influence on elec. props. and struct. (*Russian*) 2-5382  
 $\beta$ -Sn, electrical conductivity, thermal cond. and thermo EMF, 3.7-16K (*Russian*) 2-45937  
 TbB<sub>4</sub>, anisotropy and mag. phase transitions, mag. struct., neutron diff. obs. 2-41131  
 TiBe<sub>2</sub>, weak itinerant antiferromag., anomalous sp. ht. and resist. study 2-31198  
 TiNi, elec. cond., mag. susceptibility, CDW formation 2-45935  
 Tm<sub>2</sub>Fe<sub>2</sub>Si<sub>2</sub>, reentrant superconductivity 2-5484  
 $\alpha$ -TmH<sub>2</sub>(D<sub>8</sub>) solid solns., quenching behaviour at low temp., resist. increase, solubility limit 2-40555  
 UFe<sub>2</sub>-UCO<sub>2</sub> system, elec. and mag. props., model of strong scatt., temp. and field depend. 2-8784  
 UFe<sub>2</sub>-UNi<sub>2</sub> system, temp. depend., elec. resist., 4.2 to 300K, Kondo-like system behaviour 2-8789  
 V alloys, superconducting transition temp., elec. cond., density of states 2-36178  
 V, conduction electron scatt. rel. to type of impurity, residual resist. meas. at 20.4K (*Russian*) 2-17057  
 V-Ga-Ce (16, 1 wt.%), irradi. conditions on mechanical props. 2-13757  
 V<sub>3</sub>Si, laser annealing effect on transition temp. 2-36179  
 V<sub>3</sub>Si, uniaxial press. effect on struct. and supercond. transitions 2-46183  
 W, electrical conductivity measurement by eddy current method (*Chinese*) 2-15181  
 WC-Co hard alloys, hot-pressed, thermophys. props. 2-30671  
 Y<sub>2</sub>Co<sub>3</sub>, elec., mag. and supercond. props. 2-46182  
 YPd<sub>3</sub>, elec. and thermal cond. 2-21559  
 YbCuAl, intermediate valent, thermal expansion, sp. ht. and resist. 2-16823  
 Zr<sub>1-x</sub>Ta<sub>x</sub>V<sub>3</sub>, C-15 cpds., elec. resist. 2-40870  
 ZrZn<sub>2</sub>, triplet supercond., elec. cond. and mag. study 2-36187



**electrical conductivity of crystalline semiconductors and insulators**

see also carrier density; carrier lifetime; carrier mean free path; carrier mobility; carrier relaxation time; dislocation scattering; electronic conduction in crystalline semiconductor thin films; electronic conduction in insulating thin films; high field effects; hopping conduction; impurity scattering; minority carriers; negative resistance effects; photoconductivity; point defect scattering; small polaron conduction; surface scattering 1/f mobility fluctuations in elemental semiconds., model 2-51259  
ceramic powders, dielec. and cond. meas. using two-phase mixture system (Japanese) 2-36499  
charge-ordered cryst., elec. cond. temp. depend. 2-17065  
corundum, polycryst., intermediate energy ion bombardment, effect on props. 2-25947  
crystalline, photocond. 2-51229  
diamond:As(B), synthetic, luminescence wave obs. (Russian) 2-22095  
diamond:B, heavily doped, elec. cond. mechanisms, 2 to 700K 2-45986  
diamond, deformed, elec. props. 2-27303  
diamond, semiconducting, polycryst. synthetic, negative N-type resist. 2-21590  
dicalcium lead propionate, monocryst., electrical cond., stimulated thermocurrent 2-30891  
dielectrics, behaviour in EM fields 2-45928  
fermi glass, cond. activation energy and Seebeck coeff. in nearest-neighbour hopping regime, effective medium theory 2-8829  
ferroelectric ceramics, transparent, semicond. props., electron-hole processes, hologram forming 2-46013  
ferroelectrics, carrier mobility anomaly, near phase transition, soft TO phonon and defect scatt. 2-45958  
graphite, pyrolytic, highly oriented, C-axis elec. resist. 2-1912  
hot carriers in semiconductors, conf., Montpellier, France (July '81) 2-42780  
II-V compounds, phase diagrams, transport props., pressure investigations 2-27161  
II-V compounds, physical and chemical props., and applications 2-25852  
II-V compounds, properties, structure, appls. and prep., review 2-25851  
impurity states, spontaneous disloc. of neutral states 2-30828  
inhomogeneous semicond., elec. cond. and permittivity near - percolation threshold 2-8795  
intrinsic semiconductor, electron localisation test, itinerant and localised charge transport 2-40914  
inversion layers, inhomogeneous, elec. cond., Hall effect, 2D resistor network computer simulation 2-51322  
iodoform, crystalline, photocond. induced by two-photon absorption 2-51230  
many-valley semiconductors, hot electron elec. cond., nodal point calc. 2-40925  
metal-GaAs junctions, transition region, diffusion profile 2-2004  
naphthalene, electron mobilities, density of states phonon scatt. 2-13067  
9-nitroanthracene, electrical cond., effect of adsorp. of vapours 2-26381  
nonlinear galvanomagnetic effects, phonon heating and drag 2-30912  
nonsteady state carrier transport, appl. to submicron modelling 2-45995  
organic crystals, influence of Coulombic attraction and of external elec. field on charge carrier separation 2-1920  
organic molecular solid, dark cond., photocond. and photovoltaic conversion, linear and rectification regimes 2-36094  
organic polycrystalline substances, elec. cond. 2-21585  
pb<sub>1-x</sub>Sn<sub>x</sub>Se heterostructure for injection lasers 2-41522  
photoinjection and cond. in insulators, theory 2-1952  
plane-parallel insulator, electron irradiation result at at-m. press. 2-5158  
polyacetylene, doped, cryst. and mol. struct. and elec. cond. 2-45072  
polyacetylene, doped, elec. cond. freq. depend., soliton model 2-45978  
polyacetylene, elec. transport, mag. and struct. props., review 2-45976  
polyacetylene, electron hopping cond., soliton model 2-45977  
polyacetylene epitaxial layers, optical and elec. anisotropy 2-46598  
polyacetylene-d<sub>0</sub> (-d<sub>1</sub>), n-type doping, conduct. transitions, thermal isomerisation, ESR and IR study 2-5574  
polycrystalline, grain boundary scatt., charge scatt. model 2-51159  
polycrystalline semiconductor, effective mobility, approx. soln. of Boltzmann eqn. w.r.t. crystallite polarisation 2-30883  
quartz, fused, resistivity under shock compression 2-5405  
rare earth carbides, mag. susceptibilities, electrical resistivities 2-31181  
rare earth dicarbides and solid solns., mag. and elec. props. 2-8973  
rare-earth silicates (germanates), synthesis, structural characts. and elec. cond. 2-50948  
refractory oxides, elec. props. in rel. to conversion, storage and conservation of energy 2-1904  
S, crystal, photoinjection and cond., theory 2-1952  
semiconductor, nondegenerate, galvanomagnetic props., size effect 2-51215  
semiconductor plate with disc electrode, electric resistance calc. using effective radius method (Czech) 2-45953  
semiconductor plates in cross-magnetic field, Van der Pauw's relation's validity for electrical resistivity determ. (Rumanian) 2-40881  
semiconductor polar heterolayers, electron transport, 2-D scatt. process 2-51163  
semiconductor wafer, resist. variation meas. using photovoltaic method (Japanese) 2-33568  
semiconductors, disordered, band struct. and transport props. 2-45799  
semiconductors, tunnel current depend. on impurities 2-36052  
TaN, super, superconductivity and elec. resist. (Russian) 2-8793  
TCNQ salt, N-alkyl-isquinolinium-TCNQ complexes, elec. and mag. props. 2-17055  
tetracyanoplatinates, elec. cond. and permittivity 2-45985  
TGS ferroelectric cryst., elec. cond., temp. depend. 2-36036  
transition metal complexes, bis(1,2-dioximate)metal(II), elec. resist. at high press. and IR spectra 2-40892  
transition metal dioxides, electronic struct. and XPS, discrete-variation  $\chi$ -cluster method 2-30796  
TTT film, influence of struct. on elec. cond. (Russian) 2-21704  
wide gap semiconductors, density of localised states determ. from field effect 2-35918  
Ag<sub>3</sub>AsS<sub>3</sub>, acoustic and elec. props., US meas. 2-45405  
Ag<sub>3</sub>AsS<sub>3</sub>, ferroelec.-pyroelec. semicond., nonlinear acoustic and photoacoustic props., 4.2-300K 2-35605  
AgCl(Hg), point defects behaviour at 20-400°C 2-50626  
AgGaTe<sub>2</sub>, monocrystals, residual cond. (Russian) 2-13066  
AgNbO<sub>3</sub>, hot pressing prep., elec. and photoelec. props. 2-13689  
Ag<sub>3</sub>S-Ag<sub>3</sub>SbS<sub>3</sub>, polycrystalline system, anomalous electrophysical props. 2-30899  
 $\alpha$ -AgSbS<sub>3</sub>, ionic thermocurrents, 180 to 700K 2-30900  
AgSbTe<sub>2</sub>, thermoelec. hole spectrum model of transport props. 2-26424

**electrical conductivity of crystalline semiconductors and insulators continued**

n-Ag<sub>2</sub>Se, elec. props. 2-1926  
 $\beta$ -Ag<sub>2</sub>Se, electronic and electrogalvanic props., homogeneity range (French) 2-40890  
AgTaO<sub>3</sub>, hot pressing prep., elec. and photoelec. props. 2-13689  
Al<sub>1-x</sub>Ga<sub>x</sub>As solid solution, elec. cond. slow relax. 2-45987  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>, form. by electrophoresis (Polish) 2-27127  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>, solid electrolyte, degradation mechanism 2-27591  
Am<sub>1-x</sub>Mo<sub>x</sub>Se<sub>8</sub>, cryst. struct., mag. and elec. props. 2-21087  
 $\alpha$ -B, rhombohedral, elec. cond., thermoelec. power and Hall coeff. 2-40889  
n-B, semicond., CVD prep. and elec. props. 2-40885  
B-C compounds, thermoelectric props. 2-17103  
n-B-Si, semicond., CVD prep. and elec. props. 2-40885  
Bi<sub>2</sub>C<sub>3</sub>, electronic struct. and semicond. behaviour 2-45826  
Bi<sub>2</sub>C, metal-insulator transition, elec. cond., thermoelec. power and Hall effect meas. 2-40975  
BaAs<sub>3</sub>, cryst. struct., elec., optical, and mag. props. 2-8494  
Ba<sub>0.9</sub>Ca<sub>0.1</sub>TiO<sub>3</sub>, single crystals and ceramic, elec.- cond. variation with dopant conc. 2-5404  
BaO-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> celsian ceramic, DC cond., dielec. loss 2-5890  
BaS-Cu, Bi phosphors, elec. cond. 2-51166  
BaTiO<sub>3</sub>, porous ceramic, stoichiometry effect on positive TCR 2-51172  
BaTiO<sub>3</sub>, undoped, nonstoichiometry 2-17064  
BaTiO<sub>3</sub>Co, optical absorpt., elec. cond., electronic struct. 2-46640  
BaTiO<sub>3</sub>Fe<sup>3+</sup>, effect of Fe content on resistivity anomaly (Czech) 2-30898  
BaTiO<sub>3</sub>Mn, EPR study of Mn oxidation states, elec. cond. 2-45880  
BaTiO<sub>3</sub>Nb, elec. and optical props. 2-45961  
BaTiO<sub>3</sub>Sb, PTC effect as function of 3d element doping, elec. resist., grain sizes, carrier density 2-30887  
BaTiO<sub>3</sub>Sb<sub>2</sub>O<sub>3</sub>, semiconducting ceramics, positive temp. coeff. of resist., microstruct. effect 2-36040  
Bi, Esaki effect, nonlinear equilibrium response 2-33462  
Bi, thermomagnetic wave damping (Russian) 2-46045  
Bi thin film, elec. resist. and magnetoresist. at low temp., electron localisation (Russian) 2-17172  
Bi<sub>2</sub>GeO<sub>20</sub>, defect states, elec. cond. and photoconductivity 2-1863  
Bi<sub>2</sub>Te<sub>2.85</sub>Se<sub>0.15</sub>, extruded, elec. props. and struct. 2-40979  
Bi<sub>2</sub>Te<sub>2.85</sub>Se<sub>0.15</sub> solid soln., halide doping effect on elec. and thermoelec. props. 2-13110  
Bi<sub>2</sub>Te<sub>3-x</sub>Se<sub>x</sub>S<sub>2</sub>, effect of intrinsic cond. on thermoelectric props. 2-8830  
Bi<sub>2</sub>Ti<sub>2</sub>O<sub>7</sub> ceramics, grain oriented, fabrication and elec. props. 2-31662  
C resistance thermometer, electron tunnelling 2-33528  
C stripper foils made by DC glow discharge process, physical props. and structure 2-11334  
CaAs<sub>3</sub>, cryst. struct., elec., optical, and mag. props. 2-8494  
Ca<sub>2</sub>MnFe<sub>2-x</sub>O<sub>8</sub>, nonstoichiometric, elec. and mag. props. 2-17745  
Ca<sub>2</sub>(VO<sub>4</sub>)<sub>2</sub>, electrophys. props., struct. transitions influence 2-41250  
Cd-As system, solid solution form., solubility boundaries, homogeneity range, physico-chemical investigations 2-26067  
Cd<sub>3</sub>As<sub>2</sub>, resistivity, Hall effect, effects of low temp. phase transition 2-26398  
Cd<sub>3</sub>As<sub>2</sub>Ge(Cu)(Ag), transport props. study 2-40943  
CdBiNbZrO<sub>7</sub>, mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
CdBiTiNbO<sub>7</sub>, mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
CdBiTiNbO<sub>7</sub>, mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
Cd<sub>2</sub>Hg<sub>1-x</sub>Te, elec. props. study 2-40942  
Cd<sub>2</sub>Hg<sub>1-x</sub>Te, resist. and Hall coeff., 4.2 to 30K 2-30897  
Cd<sub>1-x</sub>In<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub> single cryst., elec. cond. characts. 2-51176  
Cd<sub>3</sub>P<sub>2</sub>, resist., Hall coeff., thermoelec. power, band gap, pressure effects 2-26401  
Cd<sub>3</sub>P<sub>2</sub>, prep. technology, cryst. struct. and semicond. props., optical absorption spectra meas. 2-25854  
Cd<sub>3</sub>P<sub>10</sub>, prep. technology, crystal struct. and semicond. props., optical absorption spectra meas. 2-25854  
CdS, anisotropic cond. after plastic deform. and cond. along dislocations 2-45980  
CdS, conductivity near screw dislocation core 2-26396  
CdS, microstructural changes in high electric fields 2-26066  
CdS, single cryst., two-phase annealing, elec. resist. meas. 2-8792  
CdS:In, anisotropic cond. after plastic deform., cond. along dislocations 2-45982  
CdSe single crystals, specific cond. meas. by capacitance probe (Russian) 2-43041  
CdSmTiNbO<sub>7</sub>, mixed pyrochlore, cryst. struct. and elec. cond. 2-21079  
Cd<sub>3-x</sub>Zn<sub>x</sub>As<sub>2</sub>, conduction and valence band struct., Hall effect, resistivity and magnetoresistance meas. 2-26421  
CeO<sub>2</sub>-ZrO<sub>2</sub> solid solns., doping by CaO, Y<sub>2</sub>O<sub>3</sub>, Sm<sub>2</sub>O<sub>3</sub>, Ta<sub>2</sub>O<sub>5</sub> and Nb<sub>2</sub>O<sub>5</sub>, elec. cond. 2-5964  
(CeO<sub>2</sub>)<sub>0.7</sub>(ZrO<sub>2</sub>)<sub>0.3</sub> solid solns., thermodynamics, electronic conductivity 2-1906  
Co<sub>2</sub>Cr<sub>1-x</sub>S<sub>x</sub>, high-temp. metal-semicond. transition, elec. cond., DTA and X-ray diffr. study 2-36111  
Co<sub>2</sub>O<sub>3</sub>Li<sub>2</sub>O, pure and doped, elec. cond. and thermoelec. power meas. 2-36041  
CsCuCl<sub>3</sub>, Jahn-Teller phase transitions, <sup>133</sup>Cs quadrupole perturbed NMR study 2-21897  
Cu<sub>2</sub>Co<sub>1-x</sub>Cr<sub>2</sub>S<sub>4</sub> chalcogen spinel system, elec. and mag. props., temp. depend. 2-31135  
Cu<sub>2</sub>Cr<sub>2</sub>Se<sub>4</sub>Br<sub>2</sub>, elec. props., anion substitution effect, cond. max. near Curie temp. 2-36044  
CuInSe<sub>2</sub>, thin films, ion-beam sputtered, characterisation 2-8737  
CuInTe<sub>2</sub> single crystals, as-grown elec. props. 2-46011  
Cu<sub>2</sub>Mo<sub>2</sub>S<sub>4</sub>, single cryst., supercond., Hall coeff. and resist. meas. 2-17099  
Cu<sub>2</sub>O, elec. cond. at high temp. and thermodynamic study- of point defects 2-5406  
CuTiSe<sub>2</sub>, solid and liquid states, elec. cond., thermoelectric power, thermal cond. 2-13075  
EuAs<sub>3</sub>, cryst. struct., elec., optical, and mag. props. 2-8494  
EuMo<sub>2</sub>S<sub>8</sub>, phase transition, specific heat, elec. cond. 2-26042  
Fe complexes, Fe(III) high spin mixed chelate complexes-, mag., elec., and spectral props. 2-9164  
n-FeB<sub>29.5</sub>, prep., electronic transport props., cryst. struct. 2-40886  
FeCr<sub>2-x</sub>In<sub>x</sub>S<sub>4</sub>, electrical props. 100 to 650K (Russian) 2-13098  
Fe<sub>1-x</sub>Cr<sub>x</sub>NbO<sub>4</sub>, prep., cryst. struct., mag. and electronic props. 2-26440  
Fe<sub>1-x</sub>Eu<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, synthesis and physicochem. props., semicond. behaviour 2-9256  
FeFe<sub>0.95</sub>In<sub>0.05</sub>Se<sub>4</sub>, elec. props. 100 to 600K (Russian) 2-1967



## electrical conductivity of crystalline semiconductors and insulators continued

- Fe<sub>1-x</sub>O, wüstite, elec. props. 2-51220  
 $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, hematite, energy spectrum, photoemission, opt. spectra and elec. cond. obs. 2-5790  
 Fe<sub>2</sub>O<sub>4</sub>, elec. cond. temp. depend. below Verwey transition, tunnelling explanation 2-13068  
 Fe<sub>3</sub>O<sub>4</sub>, magnetite powder, electrical conductivity meas. (German) 2-21581  
 Fe<sub>3</sub>O<sub>4</sub>, resistance, Hall effect, magnetoresistance study 2-13101  
 Fe<sub>1-x</sub>V<sub>x</sub>NbO<sub>4</sub>, prep., crystallographic, elec., and mag. props. 2-21084  
 Fe<sub>2</sub>Zr(Ti)(Nb)Se<sub>2</sub>, layered intercalation compound, elec. and optical characts. 2-17072  
 Ga<sub>1-x</sub>Al<sub>x</sub>As:Se, donor energy levels, elec. cond. and electron conc. study 2-51106  
 GaAs, ion implanted, capless annealing, for microwave devices 2-2531  
 GaAs, Czochralski grown, liq. encapsulated technique, elec. compensation, melt stoichiometry effect 2-51164  
 GaAs, fast neutron irradiated, As<sub>Ga</sub><sup>4+</sup> antisite defect, ESR spectra 2-46376  
 GaAs large diameter bulk crystals for microwave device technology 2-17619  
 GaAs, model, ballistic transport with collisions 2-1917  
 n-GaAs, Monte Carlo modelling of hot electron behaviour 2-40926  
 n-GaAs near-ballistic electron transport device, AC impedance 2-51181  
 n-GaAs, transient transport phenomena 2-17092  
 n-GaAs unidimensional particle model of cond. at low temps., contacts influence 2-45955  
 GaAs:Mn, photoresistive detector, elec. and photoelec. props. 2-36101  
 GaAs:Se, electron beam annealing, multiply-scanned beam method 2-1526  
 GaAs:Se, electron beam annealing, multiply-scanned beam method 2-8542  
 GaAs<sub>1-x</sub>P<sub>x</sub>:Zn(N), ion implanted, optical and elec. props. (Chinese) 2-8800  
 (GaAs)<sub>1-x</sub>(ZnSe)<sub>x</sub>, solid solns., electrophys. props. 2-40927  
 GaIn<sub>1-x</sub>As, electron drift, electric field depend., Monte Carlo calc. 2-51196  
 GaP, lanthanide doping influence on elec. and photolum. props., LED material 2-41391  
 GaSb, electron transport and conduction band struct. 2-46012  
 GaSb:Te and GaSb:Te,Zn, charge transport characts., 80 to 700K 2-30895  
 Gd<sub>2</sub>B<sub>6</sub>, elec. props., hopping cond., thermoelec. power 2-40887  
 Gd<sub>2</sub>O<sub>3</sub>, elec. conductivity and heats of high-temp. phase transitions 2-1905  
 p-Ge, hot holes, noise, inelastic scatt., meas. at microwave freqs. 2-46088  
 n-Ge, impurity band cond. study 2-40919  
 n-Ge, impurity elec. resist. in quantising mag. fields 2-13104  
 n-Ge, impurity elec. resist. anisotropy in quantising mag. fields 2-13105  
 n-Ge, weak-field magnetoresistance coeffs., magnetoresistance skewness 2-51217  
 Ge:Li, Hall effect, cyclotron resonance study of converted regions 2-40941  
 Ge:Si, shallow traps and D<sup>-</sup> centre, photoconductivity 2-45888  
 Ge-Si alloys, n-type, heavily-doped, short term heat treatment effects on thermoelectric props. 2-36071  
 GeTe, low temp. elec. resist. and Debye temp. 2-13079  
 GeTe, thermoelec. hole spectrum model of transport props. 2-26424  
 GeTe-Bi<sub>2</sub>Te<sub>3</sub>-Cu<sub>2</sub>Te, quaternary system, electrophys. props. of GeTe-based solid solns., double doping effect 2-13089  
 H<sub>2</sub>Nb<sub>2</sub>O<sub>9</sub>, niobic acid, <sup>1</sup>H NMR, IR spectra, conductivity and ion exchange studies 2-2145  
 Hg<sub>0.5</sub>Cd<sub>0.5</sub>Te:Cu, pure and doped, defect struct., Hall effect study 2-46031  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, electron irradiated and annealed, carrier lifetime and recomb. props. 2-17090  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, two electron cond., Hall coeff., electron mobility and conc. 2-51216  
 Hg<sub>2</sub>In<sub>2</sub>Te<sub>6</sub>, electrophysical props. and optical absorpt., influence of heat treatment 2-8791  
 Hg<sub>1-x</sub>Mn<sub>x</sub>Te, zero gap, conduction-valance band overlap in mag. field Hall coeff. and cond. meas. 2-45827  
 $\alpha$ -HgS, electrical and mag. props. 2-21586  
 InAs(P)(Sb) inversion layer transport, insulator properties 2-2012  
 n-In<sub>0.5</sub>Ga<sub>0.47</sub>As, electron drift velocity meas. at 300K using microwave time-of-flight technique 2-30916  
 InP, growth and cryst. quality by liq. encapsulated Czochralski technique 2-5809  
 InP, ion implanted, pulse annealing 2-2383  
 InP, polycrystalline, low temp. growth, elec. props. meas. 2-22155  
 InP:Si, capless annealing, for microwave devices 2-2531  
 InSb, deep acceptors, M<sub>1</sub> defect accumulation kinetics after electron irradi. 2-40831  
 n-InSb, hot electrons, energy loss mechanisms 2-30901  
 InSb, microwave breakdown, nonlinear effects 2-41269  
 InSb-NiSb, semiconducting, crystallisation speed influence on elec. props. and struct. (Russian) 2-5382  
 InSe, cryst. and amorphous, elec. and photoelectrical props. 2-51225  
 $\alpha$ -In<sub>2</sub>Se<sub>3</sub>, intercalation compound with Li, layered, optical and transport meas. 2-26856  
 In<sub>2</sub>Se<sub>3</sub>, layered cryst., transport props. 2-36069  
 $\beta$ -In<sub>2</sub>Te<sub>3</sub>, X-ray and elec. props. study, 20 to 400°C (Russian) 2-13090  
 KH<sub>2</sub>PO<sub>4</sub>, dielectric props., conduct., multilayer capacitor, electrooptic study 2-13394  
 KIO<sub>4</sub>, dielec. props. and cond. 2-36501  
 K<sub>0.33</sub>Ta<sub>1-x</sub>W<sub>x</sub>O<sub>3</sub>, photoelectronic props. and synthesis 2-36098  
 La chromite, pure and alloyed, elec. cond. at high temps. 2-40884  
 La<sub>1-x</sub>Ca<sub>x</sub>FeO<sub>3-y</sub> (0 ≤ x ≤ 0.5), mixed valency ferrites with perovskite struct. 2-5609  
 LaNb<sub>1-x</sub>W<sub>x</sub>O<sub>4+x/2</sub>, scheelite based compounds, cryst. chem., struct. modulation, elec. cond. 2-50601  
 La<sub>1-x</sub>Th<sub>x</sub>NbO<sub>4+x/2</sub>, scheelite based compounds, cryst. chem., struct. modulation, elec. cond. 2-50601  
 La<sub>2</sub>Zr<sub>2</sub>O<sub>7</sub>, total and electronic cond. 2-51158  
 Li-Ti-Zn ferrite, effect of MnO<sub>2</sub> and Bi<sub>2</sub>O<sub>3</sub> additives on props. (Slovak) 2-2105  
 Li<sub>2</sub>Co<sub>1-x</sub><sup>2+</sup>Co<sub>x</sub>O<sub>4</sub>, spinels, cation distrib. and elec. props. 2-26423  
 LiF, microstructural changes in high electric fields 2-26066  
 LiFeO<sub>2</sub>, elec. props. and phase transform., complex admittance study 2-30935  
 LiNH<sub>4</sub>SO<sub>4</sub>, ferroelectric cryst., elec. cond., temp. depend. 2-36036  
 LiNbO<sub>3</sub>, ferroelec., composition and elec. props. 2-30886

## electrical conductivity of crystalline semiconductors and insulators continued

- Li<sub>2</sub>Zn<sub>1-x</sub><sup>2+</sup>Co<sub>x</sub>O<sub>4</sub>, spinels, cation distrib. and elec. props. 2-26423  
 Mg-Ni ferrites, struct., elec., and mag. props., cation distrib. effects, influence of heat treatment 2-46345  
 MgO insulation in heat resistant cables, elec. cond. meas. 2-29341  
 Mn-Zn ferrosilicates, elec. cond., comp. depend. 2-1909  
 MnO, undoped single cryst., elec. and thermoelec. props. 2-26386  
 $\beta$ -MnO<sub>2</sub>, pyrolysis, carrier mobility and conc. meas. 2-46029  
 MnO<sub>2</sub>, variation of cond. with Li insertion 2-9644  
 MnSiTe<sub>3</sub>, ferrimagnetic semiconductor, mag. props., cryst. struct. 2-26669  
 MnTe, antiferromagnetic, elec. resist. and mag. susceptibility 2-36046  
 MnTe, thermoelec. hole spectrum model of transport props. 2-26424  
 Mn<sub>0.5</sub>Zn<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub>, polycrystalline, permittivity, conductivity and dielectric relax. 2-5625  
 Mo<sub>1-x</sub>W<sub>x</sub>Se<sub>2</sub> solid solution, transport props. 2-21583  
 (ND<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, elec. cond., dielec. const., and phase transitions, -196 to 50°C 2-36570  
 (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, elec. cond., dielec. const., and phase transitions, -196 to 50°C 2-36570  
 NaIO<sub>4</sub>, dielec. props. and cond. 2-36501  
 NaNbO<sub>3</sub>, bladed crystals, growth and investigation 2-5805  
 Na<sub>2</sub>WO<sub>4</sub>·2H<sub>2</sub>O, elec. cond. and permittivity 2-21582  
 NdTiO<sub>3</sub>, elec. resist. and mag. props. 2-40893  
 Ni<sub>3</sub>B<sub>2</sub>O<sub>11</sub>, ferroelec.-ferromag.-ferroelastic phase, elec. and optical meas. 2-31392  
 (Ni<sub>0.5</sub>Cd<sub>0.5</sub>O)<sub>1-x</sub>(Fe<sub>2</sub>O<sub>3</sub>)<sub>1+x</sub>, mag. and elec. props. 2-46338  
 Ni<sub>1-x</sub>Cu<sub>x</sub>S<sub>2</sub>, elec. cond., Hall effect, thermoelectric power 2-26388  
 n-NiTiO<sub>3</sub>, photoelectric and photochem. response 2-51224  
 NiZn ferrite-V<sub>2</sub>O<sub>5</sub>, mag. permeability, loss and elec. cond. meas. 2-51438  
 Ni<sub>1-x</sub>Zn<sub>x</sub>Fe<sub>2</sub>O<sub>4</sub>, mag. and elec. props. 2-46338  
 Np<sub>1-x</sub>Mo<sub>x</sub>Se<sub>8</sub>, cryst. struct., mag. and elec. props., supercond. transition 2-21087  
 Pb<sub>2</sub>(Ge<sub>2</sub>Si)<sub>2</sub>O<sub>11</sub>, ferroelectric cryst., elec. cond., temp. depend. 2-36036  
 PbMoO<sub>4</sub>, struct. imperf. elec. and mass transfer mechanism 2-40591  
 (PbSe)<sub>1-x</sub>(SnTe)<sub>x</sub>In solid soln., elec. props. 2-8796  
 PbSnTe, phonon-induced anomalous elec. resist. in struct. phase transition 2-45954  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te, disorder scatt. 2-17059  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te, hole mobility and band struct. at 77K 2-1923  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Ga, elec. prop. press. depend. 2-17067  
 Pb(Zr, Ti)O<sub>3</sub>, ceramics, elec. resist., effect of voids 2-17063  
 Pb<sub>1.02</sub>(Zr<sub>0.76</sub>Fe<sub>0.10</sub>Nb<sub>0.10</sub>Ti<sub>0.04</sub>)<sub>1-x</sub>U<sub>2</sub>O<sub>3</sub>, elec. cond., pyroelectricity 2-45959  
 Pb(Zr,Ti<sub>1-x</sub>)O<sub>3</sub>, elec. props. study 2-45960  
 PrTiO<sub>3</sub>, elec. resist. and mag. props. 2-40893  
 PtSb<sub>2</sub>:Te, impurity conduction 2-1915  
 Rb<sub>2</sub>Cs<sub>2</sub>WO<sub>6</sub>, hexagonal tungsten bronze, elec. conc. and supercond. transition temp. 2-36045  
 S, electron transport, transient photoinjection and internal electron photoemission 2-1899  
 SMS, semiconducting phase, elec. props. 2-8799  
 (SN)<sub>x</sub>, interacting two-carrier system, elec. resistivity 2-30882  
 (SN)<sub>x</sub>, props. and appls., review 2-8794  
 (SNBr)<sub>x</sub>, interacting two-carrier system, elec. resistivity 2-30882  
 Se, single crystal, freq.-depend. of cond., noise and photoresponse 2-13080  
 Si (100) inversion layer, infrared conductivity of electrons, impurity effects 2-51315  
 Si bicrystals growth and characterisation for solar cells 2-17618  
 n-Si, cond. in strong alternating elec. fields 2-30903  
 n-Si, electrical behaviour of individual screw and 60° dislocations 2-26397  
 Si, gamma-ray irradi., uniaxial deform. influence on nonequilibrium carrier recombination 2-26410  
 n-Si, heavily doped, elec. resist., partial wave theory 2-13077  
 Si, heteroepitaxial, characterisation 2-45763  
 Si inversion layers, 2D electron gas, freq. depend. memory function elec. cond. meas. 2-51318  
 Si inversion layers, logarithmic corrections to two-dimensional transport 2-41018  
 Si, ion implanted, pulsed electron beam apparatus and annealing 2-12625  
 Si MOSFET inversion layers, AC cond. in gap regions between Landau levels 2-51317  
 Si, microstructural changes in high electric fields 2-26066  
 n-Si, multivalley semicond., transverse field stratification, elec. field distrib. and current meas. (Russian) 2-26416  
 Si, neutron irradi. dislocation-free crystals, annealing influence on elec. and struct. props. 2-40440  
 Si, neutron irradiated, carrier scatt. by defect clusters 2-21587  
 Si, polycrystalline, comparison of electrical conduction model with experiment 2-5400  
 Si, polycrystalline, laser recrystallised, cond. enhancement by H<sub>2</sub> annealing 2-52058  
 Si, polycrystalline, model for conduction using grain boundary mechanisms 2-5399  
 Si polycrystalline wafer, bulk resistivity determ. by meas. of microwave reflectance modulation and wafer thickness 2-33574  
 Si, self-annealing implantation, elec. and struct. characterisation 2-50681  
 Si solar cell, ion implanted, laser annealed, substrate heating and emitter dopant effects 2-2379  
 Si substrates, numerical anal. of minority carrier lifetime, contactless meas. technique (Japanese) 2-13094  
 Si surface (111), adsorbed In, elec. current effect, RHEED obs. (Japanese) 2-21653  
 Si wafer, n- and p-type, resist. variation, photovoltaic method meas. (Japanese) 2-33568  
 Si:As, dopant distrib., sheet resist., spreading resist, junction depth, SIMS, and IR spectra meas. 2-12624  
 Si:As, ion implanted, doping profiles and elec. activation, Rutherford backscatt. study 2-25916  
 Si:As(P), polycrystalline, heavily doped, comparison of thermal and CW laser annealing effect on resist. 2-51179  
 Si:Au, crystal-liquid interface vel. during pulsed laser annealing 2-31591  
 p-Si:B, heavily doped, defect profiles formed by light ion irradi., B distrib. effect 2-16691  
 p-Si:B, nonlinear piezoresistance study 2-1916  
 Si:B(P), ion implanted, elec. props., incident ion energy depend. 2-45227  
 Si:B(P), laser chemically doped, elec. props. 2-21579



**electrical conductivity of crystalline semiconductors and insulators** continued  
 n-Si:Gd,  $\gamma$ - and electron-irrad., defect formation; elec. and optical study 2-21175  
 n-Si:Mn, residual cond., degree of compensation and impurity conc. effects 2-8797  
 Si:P, doping using  $P_2O_5$ - $SiO_2$  glass as dopant source, validity of etch rate determ. 2-12615  
 n-Si:P, electrophysical props. thermal annealing and cooling condition effects 2-51175  
 Si:P, sp. ht. and elec. cond. near metal-insulator transition 2-30936  
 Si:(P,Kr) implanted layer annealing using laser beam 2-46838  
 n-Si:Pt, impurity levels, capture cross section, capacitance, hole lifetime and resistivity obs. 2-51125  
 Si:Sb, polycrystalline, ion implanted, doping profiles and elec. resist., annealing effects 2-50685  
 Si-Ge alloys for IR detection, Czochralski growth and crucible-free process prep. 2-22160  
 SmB<sub>6</sub>, elec. props., hopping cond., thermoelec. power 2-40887  
 SmS single cryst., carrier density, elastic deform. influence 2-51206  
 SnO<sub>2</sub>:Sb, thin film elec. and optical props. 2-41037  
 Sn<sub>2</sub>P<sub>3</sub>Se<sub>6</sub>, phase transitions, 100 to 300K, dielec., optical, elec., and acoustic props. 2-45573  
 SrAs<sub>3</sub>, cryst. struct., elec., optical, and mag. props. 2-8494  
 SrTiO<sub>3</sub>, nonstoichiometry study, equilib. elec. cond. me. as. 2-8510  
 SrTiO<sub>3</sub>, polycryst., elec. cond., 800 to 1050°C, O<sub>2</sub> partial press. depend. 2-26385  
 SrZrO<sub>3</sub>-based ceramics, mixed perovskite, elec. resist. and high temp. stability 2-26384  
 TaC, neutron and electron radiation defects, electrical resist. study 2-21181  
 TaS<sub>3</sub>, CDW semiconductor, high freq. cond. 2-5429  
 Te-GeTe(PbTe) doped eutectic alloys, electrophys. props. and struct., doping influence 2-40882  
 Th<sub>3</sub>N<sub>4</sub>, nonstoichiometric, elec. correl. and defect struct. 2-51171  
 Th<sub>3</sub>N<sub>2</sub>O, nonstoichiometric, elec. correl. and defect struct. 2-51171  
 Ti-Li-O superconductor, hot pressed, aging effects, elec. resistivity 2-2540  
 TiC, neutron and electron radiation defects, electrical resist. study 2-21181  
 n-TiO<sub>2</sub>:Nb, photoelectric and photochem. response 2-51224  
 TiO<sub>2</sub>-xPt ceramic, preparation, elec. props. 2-46987  
 TiS<sub>2</sub>, elec. resist., electron-soft mode coupling mechanism 2-1901  
 Ti<sub>1-x</sub>S<sub>2</sub>, transport and optical props. 2-1932  
 TiBiSe<sub>3</sub>-PbSe, phase diagram, electrophysical props. 2-9334  
 TiGaSSe, forbidden band width 2.2 eV (Russian) 2-13142  
 TlInTe, single cryst., elec. cond. in strong elec. field, 77 to 300K 2-40921  
 TiSbTe<sub>2</sub>-2PbTe cross section, phase diagram and elec. props. 2-12721  
 Tl<sub>1-x</sub>Te<sub>x</sub>(Se), electrophys. props. over solid and liq. range, added S and Se effect 2-40883  
 Tm<sub>1-x</sub>Eu<sub>x</sub>Se, mixed valence cpd., mag. order, elec. resist. and magnetisation study 2-30884  
 TmS, press. effects on resistivity 2-30892  
 Tm<sub>2</sub>Se, mixed valence cpd., mag. order, elec. resist. and magnetisation study 2-30884  
 TmSe<sub>1-x</sub>Te<sub>x</sub>, mixed valence cpd., mag. order, elec. resist. and magnetisation study 2-30884  
 UC, single cryst., defects due to fission damage 2-16683  
 UO<sub>2-x</sub>:Y<sub>2</sub>O<sub>3</sub>, pure and doped, elec. cond., hole conc. and mobility, 800 to 1400°C 2-36039  
 V<sub>2</sub>O<sub>5</sub>, inhomogeneous, elec. cond. and permittivity near-percolation threshold 2-8795  
 V<sub>1-x</sub>Te<sub>2</sub>, phase transition, elec. cond., mag. susceptibility 2-26043  
 WO<sub>3-x</sub>, elec. cond. near stoichiometric comp., prep. conditions and tempering effects, cryst. defects (French) 2-51173  
 Y chromite, pure and alloyed, elec. cond. at high temps. 2-40884  
 YIG, solid-phase synthesis and sintering, kinetics and mechanism, electrophys. props. 2-41516  
 Y<sub>1-x</sub>Mg<sub>x</sub>CrO<sub>3</sub>, cryst. struct. and electrophysical props. 2-13065  
 YbB<sub>6</sub>, elec. props., hopping cond., thermoelec. power 2-40887  
 Zn<sub>1-x</sub>Eu<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, synthesis and physicochem. props., semicond. behaviour 2-9256  
 ZnMnFe<sub>0.05</sub>O<sub>4</sub>:Cr(Al)(In), dielec. props., elec. cond., mag. props., lattice constants, dopant effects 2-51524  
 $\beta$ -ZnP<sub>2</sub>, monoclinic, anisotropy of electroconductivity and thermoelectromotive force 2-26402  
 Zn<sub>3</sub>P<sub>2</sub>, elec. cond. and thermoluminescence studies 2-27005  
 Zn<sub>3</sub>P<sub>2</sub>, single-crystal growth using closed-tube horizontal vapour transport system, bulk elec. props. 2-36770  
 p-ZnSb, carrier kinetics in mixed scatt. region, cond., thermoelec. power, and Hall effect tensors 2-21602  
 ZnSe crystals, as-grown from melt, growth and elec. props. 2-40891  
 ZnSe monocrystal, bulk I-V characts. with InGa contacts 2-26517  
 ZnSnAs<sub>2</sub>, p-type, theoretical evidence for impurity cond., explanation of Hall coeff. temp. depend. 2-1929  
 ZnTe, vol. reductions and resist. changes under press. 2-45555

#### electrical conductivity of electrolytic liquids

see also electrochemical analysis; electrolytic ion mobility; Wien effect  
 electrodialytic polymers, charge carrier exchange with dielec. liquids 2-6063  
 fluoranthene, in liquid n-pentane, photoionisation in liquids using laser two-photon ionisation cond. technique 2-1647  
 hexafluorobenzene, fast migrating negative species study using pulse radiolysis 2-1645  
 ionic soln. and melts, measuring methods (Japanese) 2-10823  
 measuring system on basis of bridges, determ. of cond. of electrolytic solution 2-6868  
 organic salts, solns. in N,N-dimethylthioformamide, conductimetric investigation 2-26092  
 propylene carbonate/1,2-dimethoxyethane mixed electrolytes, ion behaviour, high energy density battery appls. 2-47351  
 pyrene, in liquid n-pentane, photoionisation in liquids using laser two-photon ionisation cond. technique 2-1647  
 sodium perfluorooctanoate, micelle form. in aq. soln., high pressure study 2-12793  
 specific conductivity meter type Z-938 for meas. of impregnating electrolytes (Polish) 2-23670  
 tetramethyl-p-phenylenediamine, in liquid n-pentane, photoionisation in liquids using laser two-photon ionisation cond. technique 2-1647  
 water struct. and proton cond. at high press., review 2-1386

#### electrical conductivity of electrolytic liquids continued

Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, synthetic Bayer liquor, elec. cond., effect of Al content, temp., and impurities 2-8651  
 CsCl, dil. aq. soln., cond. meas. at low temp. 2-50895  
 K salt in diethylformamide, conductance and solvation studies 2-16830  
 KCl aqueous solns., resist. fluctuations and rel. flow 2-35725  
 KOH-K<sub>2</sub>Zn(OH)<sub>4</sub> supersaturated electrolyte, conductivity 2-21335  
 LiCl, dil. aq. soln., cond. meas. at low temp. 2-50895  
 LiClO<sub>4</sub> ionic clusters in low dielec. const. media, conductivity meas. 2-35723  
 Na salt in diethylformamide, conductance and solvation studies 2-16830  
 SO<sub>2</sub>, electrolytic cond., behaviour of singly charged spherical and planar ions, dissociation const. 2-13937  
 ThF<sub>4</sub>-LiF(NaF), fused, elec. cond. 2-21339  
 UF<sub>6</sub> liquid, density, conductivity, viscosity and ionic dissociation 2-8551  
 ZnCl<sub>2</sub> aqueous solutions, conductivity in electrolysis 2-52219

#### electrical conductivity of gases

see also space-charge-limited conduction  
 compressible nonpolar fluid, excess electron localisation, cavity model 2-25485  
 gas discharge ozonator, current pulse oscillograms 2-16418  
 insulator surfaces in gases, charging by ionization and transport in gas 2-12268  
 ionised gas, microwave conductivity measurements, for SREMP simulator 2-44822  
 nonelectronegative gases, non self-sustained vol. discharges, current-voltage charact. 2-50366  
 Ar, classical trajectory model of electron transfer 2-4915  
 Ar, hot electron thermalisation, effect of Ransquer min. 2-4916  
 D-T, dielec. const. elec. cond., 20 to 26K, density depend. 2-35265  
 Hg, arc discharge, nearly saturated vapour, pre-breakdown electrical conduct. 2-30354  
 N, non-self-sustaining discharge, current flow mechanism near cathodes 2-20959  
 Xe, photocond. evolution 2-1961

#### electrical conductivity of liquids

see also electrical conductivity of electrolytic liquids  
 alkali metals and alloys, elec. resist. and struct., electron-ion plasma model 2-26356  
 alkanes, positive charge transfer studied by pulse radiolysis 2-1646  
 alkyl resin fractions, elec. props. 2-46470  
 amorphous systems atomic and electronic struts. 2-40771  
 benzene, cond. currents and space charge formation in dielec. liquids 2-5642  
 benzoic acid in disulphuric and fluorosulphuric acids, cryoscopic and conductance study 2-6021  
 benzoin in disulphuric and fluorosulphuric acids, cryoscopic and conductance study 2-6021  
 binary mixture, crit. resist. and dielec. anomalies at phase separation point, effective medium theory 2-1876  
 carbon tetrachloride, positive charge transfer studied by pulse radiolysis 2-1646  
 charge transport in fluctuating systems, quasispercolation 2-40860  
 chlorophyll and its analogues, pulse photoconductivity 2-2846  
 commensurability effects for liq. in periodic medium 2-20981  
 compressible nonpolar fluid, excess electron localisation, cavity model 2-25485  
 4-cyanophenyl-3'-methyl-4-(4'-n-dodecylbenzoyloxy)benzoate reentrant nematogen, elec. cond. 2-17125  
 cyclohexane, electron mobilities and free ion yields 2-1975  
 dielectric, high field behaviour of moderately pure liquids, complexities 2-5412  
 dielectric breakdown in liquids, polarity effect for various molecular struts., breakdown mechanism rel. to electron transport processes 2-5638  
 dielectric liquid, electric current generation by laminar flow 2-12796  
 dielectric liquids, classical cond. model appl. 2-5413  
 dielectric liquids, conf., Berlin, West Germany (July 1981) 2-5628  
 dielectric liquids, optical response of excess electrons 2-2317  
 dielectric liquids, voltage-current charact. at high fields, electrochemical cond. explanation 2-1921  
 dilute suspensions of colloids, dielect. response and conductivity 2-46458  
 diphenic acid in disulphuric and fluorosulphuric acids, cryoscopic and conductance study 2-6021  
 disordered three dimensional electron gas, diffusion corrections to cond. 2-45926  
 ester liquid crystal mixtures for dynamic scattering at elevated temperatures 2-35387  
 ethane with SF<sub>6</sub>, effect of elec. field on electron attachment 2-1977  
 fluctuating liquid systems, quasi-percolation charge transport 2-5377  
 hexafluorobenzene dilute solns., bulk photocond. by photodetachment 2-1962  
 4'-n-hexyloxy-4-cyanobiphenyl-4'-n-octyloxy-4-cyanobiphenyl, reentrant-nematogen, elec. cond. 2-17125  
 localised and delocalised electron system, electrical conductivity 2-21553  
 metals, liquid, diffraction models, thermodynamics, electrical cond. changes (Dutch) 2-8414  
 metals, simple, finite mean free paths and elec. resist. 2-40868  
 nonpolar, photocond. meas. 2-8836  
 nonpolar liquid, hot electron scatt. 2-30941  
 nonpolar liquids, effect of some electron scavengers on photocond. 2-5440  
 nonpolar liquids, molecular dynamics and excess electron drift vel. 2-1882  
 polyethylene, molten state, elec. conductivity, dielec. const. and viscosity meas. in high field 2-8803  
 polystyrene, molten state, elec. conductivity, dielec. const. and viscosity meas. in high field 2-8803  
 polyvinylidene fluoride, molten state, elec. conductivity, dielec. const. and viscosity meas. in high field 2-8803  
 propane, dense fluid, cond. band energy 2-1964  
 propane with SF<sub>6</sub>, effect of elec. field on electron attachment 2-1977  
 propylene carbonate, DC conductivity, permittivity and dielec. relaxation of supercooled liquid, 5 mHz to 5 MHz 2-5411  
 rainfall in Hawaii pH, cond. and comp. 2-23061  
 silicone, high field cond. in dielec. liquid films in time range 10<sup>-5</sup> to 10<sup>-3</sup> s 2-1922  
 surfactant solution in hydrocarbon, electrical cond. (French) 2-50896  
 suspension, conc., elec. cond., geometrical parameters and dispersed phase resistivity effects (French) 2-41943



**electrical conductivity of liquids continued**

- thin metal conductors, current-carrying, thermal instability 2-51142  
two-phase stream, electrical conductivity 2-16387  
Ag-Pd, resist. and thermoelec. power, temp. and conc. depend. 2-21557  
Ar, free-carrier yields of radiation induced cond. in liquefied rare gases 2-1974  
As-Ge-Se, glasses and melts, thermal and elec. cond. 2-8683  
As-Ge-Se system, elec. cond. in glassy and liq. states across  $\text{GeSe}_2\text{-As}_2\text{Se}_3$  and  $\text{GeSe}_2\text{-AsSe}$  sections and with excess Se conc. 2-26393  
As-Se, liquid, elec. and thermoelec. props. 2-17120  
As-Se, liquid, elec. cond., thermoelec. power and semicond.-metal transition 2-26425  
 $\text{As}_2\text{Se}_3\text{:Ag}$ , fused, impurity cond., temp. depend. 2-17126  
Co, electrical resist., mean free path and multiple scatt. corrections 2-5379  
Co-Ge, elec. resist., temp. and conc. depends. (Russian) 2-21555  
CsCl, ionic diffusion in water-dioxan mixtures (French) 2-12794  
Cu, deoxidation, electrocond. increase by Mg and Ar injection, inclusion obs. (Rumanian) 2-47197  
Cu, electrical resist., mean free path and multiple scatt. corrections 2-5379  
 $\text{Cu}_2\text{Se}$ , molten, semicond.-metal transition 2-5444  
 $\text{Cu}_2\text{Te}$ , molten, semicond.-metal transition 2-5444  
 $\text{CuTiSe}_2$ , liquid, elec. cond. and thermoelec. power 2-13063  
 $\text{CuTiSe}_2$ , solid and liquid states, elec. cond., thermoelectric power, thermal cond. 2-13075  
Fe, electrical resist., mean free path and multiple scatt. corrections 2-5379  
Fe-Ge, elec. resist., temp. and conc. depends. (Russian) 2-21555  
Ga-Au (Ag)(Cu), liquid, elec. cond. and mag. susceptibility (Russian) 2-51143  
Ga-Te, liq. alloys, density and elec. cond. 2-45309  
Ge-Se system, elec. cond. in glassy and liq. states 2-26392  
 $\text{H}_2$ , excess electrons, photoionization and mobility 2-1976  
Hg-In metallic solns., thermodynamic and elec. props. near crit. points 2-1883  
I charge transfer complexes, conductometric meas. 2-5371  
In rare earth, liq. dilute alloy, elec. cond. and mag. susceptibility 2-26353  
In-Te, liq. alloys, density and elec. cond. 2-45309  
 $\text{LiClO}_4$  in solutions, dielect. relax. meas. 2-2181  
Na-K(Cs) liquid systems, elec. resist. and struct., electron-ion plasma model 2-26356  
 $\text{NaClO}_4$  in solutions, dielect. relax. meas. 2-2181  
Ne, excess electrons, photoionization and mobility 2-1976  
Ni, electrical resist., mean free path and multiple scatt. corrections 2-5379  
Ni-Ge, elec. resist., temp. and conc. depends. (Russian) 2-21555  
 $\text{O}_2$  dilute solns., bulk photocond. by photodetachment 2-1962  
Pb, electronic and lattice-mechanical properties, pseudopotential theory 2-16619  
 $\text{SF}_6$ , drift of radiation-induced charge carriers 2-1644  
 $\text{SF}_6$  in nonpolar hydrocarbon liquids, effect of elec. field on electron attachment 2-1977  
Sb-Ge-Se system, elec. cond. glassy and liq. states 2-26394  
Se:Ti,In, liq. elec. cond. and thermoelectric power 2-51165  
 $(\text{Se}_{0.5}\text{Te}_{0.5})_{1-x}\text{M}_x$  ( $\text{M}=\text{Cu,Tl,Ag,Na}$ ) liquid semiconductor, elec. cond., thermopower and mag. susceptibility 2-40909  
 $\text{Se}_{80}\text{Te}_{20}\text{-S}_x$ , liquid, elec. cond. and bond conc. 2-30942  
Si-Al(Cu)(Pt) saturated solns. in melt, temp. depend. 2-5378  
Ti, liquid, elec. cond. at melting point 2-21558  
Ti-Te, liq. alloys, density and elec. cond. 2-45309  
 $\text{Ti}_2\text{Te}_3\text{S}(\text{Se})$ , electrophys. props. over solid and liq. range, added S and Se effect 2-40883  
 $\text{V}_2\text{O}_5$ , liquid, elec. cond. relax. 2-40910  
Xe, photocond. evolution 2-1961

**electrical conductivity of one-dimensional systems** see one-dimensional conductivity

**electrical conductivity of plasmas** see plasma transport processes

**electrical conductivity of solids**

- see also electrical conductivity of amorphous metals and alloys; electrical conductivity of amorphous semiconductors and insulators; electrical conductivity of crystalline metals and alloys; electrical conductivity of crystalline semiconductors and insulators; electronic conduction in crystalline semiconductor thin films; electronic conduction in insulating thin films; electronic conduction in metallic thin films; ionic conduction in solids; recovery; superconductivity  
1/f diffusion noise 2-51256  
A-15 compounds, resistivity anomaly at high temperatures 2-30879  
Anderson model, one-dimensional, probability distrib. and scaling law for resist. 2-13035  
Anderson model, periodic, elec. cond. and longitudinal mag. susceptibility 2-30849  
carrollite,  $\text{CuCo}_2\text{S}_4$ , electronic struct., mol. orbital calcs. 2-40751  
charge storage and transport in dielectrics, corona method 2-8860  
chloral polymers, prep., thermal, mech. and elec. props., degradation 2-45079  
coal slag, temp. depend. of  $\text{Fe}^{2+}$  cone in air rel. to elec. cond. 2-36113  
composite materials, multicomponent, bounds on transport and mechanical props. 2-13147  
composite materials, multicomponent, generalised cond. (Russian) 2-30666  
composites, conductive, prep. of cost-effective materials 2-31677  
cryogenic struct. materials, mech. and phys. props. requirements (Japanese) 2-43026  
cyclohexane, electron mobilities and free ion yields 2-1975  
dielectrics, conductivity profile reconstruction in time domain, optimisation 2-33566  
dipole disorder containing crystals and highly doped mixed crystals, model systems for exciton and charge transport investig. 2-35944  
disordered linear chains in perfect conductor, Kubo formula for Landauer's results 2-1878  
disordered system, excitation transfer, book contrib. 2-12710  
disordered systems, one-parameter scaling of localisation length and conductance 2-30835  
disordered three dimensional electron gas, diffusion corrections to cond. 2-45926  
disordered two-dimensional system, effects of mutual interactions in weakly localized regime 2-17039

**electrical conductivity of solids continued**

- dynamic measurement technique, thermophys., props. at high temps. 2-23643  
epoxy, Ag filled, conductive paste, morphology and corrosion resist. 2-13832  
ferromagnetic thin films, mag. contrib. to elec. resistivity 2-46156  
ferrous, oxalate dihydrate, thermal decomp. study using DC elec. cond. meas. 2-13938  
finite disordered system, resistivity fluctuations 2-17043  
garnets, meas. in 20-1000°C Ar atmosphere 2-37852  
granular metals, elec. resist., temp. depend., percolation model 2-30857  
graphite fibre reinforced C, sp. ht. capacity and elec. resist., 1500 to 3000K, pulse heating method 2-12771  
graphite intercalation compound, synthetic metal, band length change and cond., review 2-26270  
graphite intercalation cpds., press. enhancement of elec. cond. 2-5394  
impurity bands, 2D, elec. cond., importance of Coulomb interaction 2-51122  
insulating materials, surface and volume conductivity, field calcs. (German) 2-17128  
intermediate valence compounds, transport props. studied within alloy analog approx. of periodic Anderson model 2-17038  
laminated heterogeneous media, kinetic coeffs. calc. (Russian) 2-45931  
linear electron transport theory, equivalence of different approx. 2-1879  
linnaeite,  $\text{Co}_3\text{S}_4$ , electronic struct., mol. orbital calcs. 2-40751  
lunar soil samples study by EPR and microwave meas. (Rumanian) 2-28362  
magnetic solids, conf., Hetzdorf, Germany (April 1980) 2-28595  
metal (II) complexes 1-phenyl-3-methyl-4-acetyl-pyrazolone-5, struct., IR and NMR spectra, cond. meas. 2-31503  
metal complexes of 1-phenyl-3-methyl-4-trifluoroacetyl-pyrazolone-5, synthesis, struct., IR and NMR spectra, cond. meas. 2-26909  
mica reinforced Al alloy, damping capacity, resistivity, thermal expansion and machinability 2-12785  
mixed valence compounds, elec. resist., band model, HF calc. 2-30851  
mixed valence compounds, periodic Anderson model, dynamic props. 2-30850  
molecular cryst., excitonic optical and transport props., test of Kenkre-Knox relation 2-45844  
one-dimensional disordered systems, of finite length, DC conductance 2-1877  
percolating metal-insulator mixture strips, two-dimens. to one-dimens. transition 2-51243  
phenolic-based insulating materials, elec. cond. and thermal decomp. 2-8790  
plastics, fillers props. influence 2-5057  
polyacetylene, doped by I or Na, swelling 2-40299  
polymer fibre reinforced metals, powder technology, mech. props. (German) 2-36815  
polymer-C composites, elec. props., effect of glass transition temp. (Japanese) 2-36984  
porous materials, impregnation with liquid dielec., elec. behaviour, relative permittivity determ. 2-5618  
pyrrole and its copolymers, elec. props. 2-41024  
randomly distributed elec. cond., renormalisation group approach 2-21546  
rocks, sedimentary, dielec. const. and DC cond. 2-14457  
segregated system of metallic and insulating materials, percolation model, thick film resistors 2-30852  
silicon-based insulating materials, elec. cond. and thermal decomp. 2-8790  
spin glasses, elec. resist. and local spin relax. time behaviour 2-13033  
thick films, elec. props. and cond. mechanism 2-13192  
thin metal conductors, current-carrying, thermal instability 2-51142  
three dimensional disordered systems, relax. time and cond., logarithmic temp. depend. 2-1875  
two-dimensional electron system, cond. derivation rel. to dielec. function 2-26313  
two-dimensional random system, crossing elec. and mag. field depend. of non-metallic cond. 2-35983  
two-phase materials, cellular effective medium approx. for cond. 2-45927  
Al-Tb- $\text{GeSe}_2$ -Fe structure, charge transport mechanism 2-21683  
Ar- $\text{O}_2$ ,  $\text{N}_2$ , solid, electronic transport 2-36114  
AsF<sub>6</sub> intercalated graphite, cond. and anisotropy of skin depth,  $^{19}\text{F}$  NMR spectra 2-45965  
B, borides and related compounds, conf., Uppsala, Sweden (June 1981) 2-38358  
C powders, pyrolytic, temp.-and atmosphere depend. of elec. resist. 2-51177  
C-PVC composites, fluctuation modulation of tunnel junctions by applied AC stress 2-40998  
 $\text{EuB}_6$  single cryst., elec. props. variation with temp. and press. 2-40888  
K-graphite intercalates, press. induced anomaly in c-axis resistivity 2-51141  
 $\text{K}_{0.9}\text{Mo}_0.17$ , quasi two dimensional metal, elec. and mag. props. meas. 2-40871  
 $\text{Li}_2\text{TiS}_2$ , elec. resist. and Hall coeff. at low temp. 2-35984  
 $\text{Li}_2\text{ZrSe}_2$ , elec. resist. and Hall coeff. at low temp., supercond. props. 2-35984  
 $\text{Li}_2\text{ZrSe}_2$ , semiconductor-metal transition upon intercalation 2-21504  
 $\text{Nb/Al}_2\text{O}_3$  cermet films, current cond. mechanism, energy depend. 2-46157  
 $\text{NbS}_2$  (2H), elec. transport props. 2-45944  
 $\text{NbSe}_2$  (2H), elec. transport props. 2-45944  
 $\text{PbO}_2$ , metallic electronic conductivity with various stoichiometric compositions 2-13036  
 $\text{Smb}_6$  single cryst., elec. props. variation with temp. and press. 2-40888  
 $\text{TaS}_2$  (1T) intercalation complexes with hydrazine, transport and optical props. 2-45966  
 $\text{TaS}_2$  (2H), elec. transport props. 2-45944  
 $\text{TiC-SiC}$ , sintered, elec. resist. 2-13691  
 $\text{Ti}_{1-x}\text{S}_2$ , transport props. and Raman scatt., stoichiometry depend 2-13043  
 $\text{VSe}_2(\text{N}_2\text{H}_{12})_{0.6}$  intercalation cpd., resistivity, temp. depend. 2-30873  
 $\text{WTe}_2\text{-WSe}_2$  powders, thermoelectric power, thermal and elec. cond. 2-21613  
 $\text{YB}_6$  single cryst., elec. props. variation with temp. and press. 2-40888  
 $\text{Zn}_3\text{P}_2$  pellets, effect of compacting pressure on elec. cond. 2-52060  
ZrC, thermal and electrical cond., effect of microstruct. defects 2-8681



**electrical conductivity transitions**

- see also *metal-insulator transition*  
 amorphous solids exhibiting semicond.-insulator transition, hopping cond., freq. depend. 2-40894  
 chalcogenide glasses, quasimolecular defects, rel. to elec. and optical props. 2-13016  
 chalcogenide glasses, review of studies at Ioffe Physical-Technical Institute, USSR 2-45050  
 chalcogenide glasses, switching, low-resistivity state, electron-thermal nature 2-8841  
 ethylene-vinylacetate copolymer, C loaded, resist. and positive temp. coeff. of resist., correl. with C black parameters 2-46084  
 n-InSb, metallic impurity cond. and metal-nonmetal transition at low temp. 2-40976  
 layered semiconductor structures and heterostruct., hot electron and phonon effects 2-26482  
 liquid semiconductors, semicond.-metal transition, review 2-1969  
 lithium iodide-based solid electrolytes 2-21643  
 minimum metallic cond. and conduction near a mobility edge 2-40789  
 percolating metal-insulator mixture strips, two-dimens. to one-dimens. transition 2-51243  
 polyacetylene- $d_0$  ( $-d_1$ ), n-type doping, conduct. transitions, thermal isomerisation, ESR an-d IR study 2-5574  
 relaxation case semiconductors, uniqueness of conduction 2-8842  
 semiconductor, current controlled negative resist. and generation-recomb. induced nonequilibrium phase transitions, impact ionisation model 2-45993  
 semiconductor pyropolymers, jump elec. cond., temp. depend. (Russian) 2-30939  
 superionic semicond., transition to high cond. state induced by elec. field, defect conc. 2-45618  
 TCNQ salt, (DMPP)(TCNQ) $_x$ (H $_2$ O) $_x$ , low temp. organic cond., struct. and elec. props. 2-26372  
 (TMTSF) $_2$ PF $_6$ , nonlinear cond. near metal-semicond. transition 2-30876  
 transition metal oxides, elec. cond. switching, review 2-45973  
 Al-Ge evaporated thin film, effect of crystallinity on morphology, resist. meas. and TEM 2-40721  
 As-Ge-Te glasses, pure and doped, elec. and dielec. props. 2-17075  
 As-Se, liquid, elec. and thermoelec. props. 2-17120  
 As-Se, liquid, elec. cond., thermoelec. power and semicond.-metal transition 2-26425  
 As $_2$ S $_3$ Sb $_2$ S $_3$ , negative transient conductivity effects 2-45963  
 As $_2$ Te, glassy semicond., memories, neutron radiation effects 2-51244  
 As $_{30}$ Te $_{48}$ Ge $_{10}$ Si $_{12}$ , amorphous, transient switching process, simple analytical explanation 2-8840  
 Au-SiO $_2$ -Au diodes, electroforming in organic gases, voltage controlled negative differential resist 2-51345  
 Ba $_3$ La $_2$ Cu $_4$ O $_{14+y}$ , electric transport and mag. props., progressive semicond.-semimetallic transition 2-40977  
 Ba $_3$ La $_2$ Cu $_4$ O $_{14+y}$ , progressive semiconductive-semimetallic transition, struct. aspects and energy levels 2-40359  
 BaPb $_{1-x}$ Bi $_x$ O $_3$ , superconductivity near metal-semiconductor transition 2-17187  
 Bi $_{1-x}$ Sb $_x$  alloys, semimetal-semicond. transition, carrier dispersion relation 2-5347  
 c-amorphous In $_{0.25}$ Te $_{0.75}$ -C struct. nanosecond switching parameters 2-13143  
 Cd $_{1-x}$ In $_x$ Cr $_2$ Se $_4$  single cryst., elec. cond. characts. 2-51176  
 CdS film, reversible switching of residual cond. by a gas-vapour pulse 2-21641  
 Co,Cr $_{1-x}$ S $_x$ , high temp. metal-semicond. transition, elec. cond., DTA and X-ray diffr. study 2-36111  
 Cs-Au amorphous mixture, metal-insulator transition 2-40795  
 Cs-Sb amorphous mixture, metal-insulator transition 2-40794  
 Cs-Xe mixture, metal-insulator transition 2-40793  
 CuI, ionic cond. and thermoelec. power 2-1657  
 Cu $_2$ Se, molten, semicond.-metal transition 2-5444  
 Cu $_2$ Se, phase transition to superionic phase, thermal expansion, electron diffr. and electronic cond. 2-26452  
 Cu $_2$ Te, molten, semicond.-metal transition 2-5444  
 FeFe $_{0.95}$ In $_{0.05}$ Se $_4$ , elec. props. 100 to 600K (Russian) 2-1967  
 GaAs FET, magnetoresistance oscils. and transition from 3-D to 2-D cond. low temps. 2-46129  
 GaAs:Cr S-type diodes, impedance under double injection conditions, switching mechanism 2-30962  
 Ge, amorphous, elec. props. 2-17084  
 Ge, cleared (111) surface, electrical conductivity (Russian) 2-13161  
 Ge-Bi(Sb), amorphous, elec. props. 2-17084  
 GeSe $_2$  amorphous thin films, laser-induced phase transition 2-5762  
 In-Ga-Cr-In struct. with S-type I-V characts., field distrib., switching mechanism 2-36153  
 InAs-GaSb superlattices in high magnetic fields, band struct., elec. and optical props. 2-21669  
 n-InSb, low conc., mag. freeze-out and high press. induced metal-nonmetal transition 2-21611  
 In $_2$ Te $_3$ , single crystals, switching effect 2-13144  
 LiAl, anomalous heat capacity and elec. resist. near crit. comp. 2-40565  
 MnSb alloy, mag. props. depend. on press. and temp. (Russian) 2-13298  
 Mo $_2$ Ge $_{1-x}$ , amorphous film, elec. transport and struct. 2-40913  
 Ni $_{1-x}$ V $_x$ S $_2$ , first order mag. and elec. transitions, substitution effect 2-17277  
 Pd-D alloy, location of low-temp. resistivity anomaly 2-21639  
 (SN) $_x$ Na, single cryst., elec. props. 2-30937  
 Sb $_2$ Te $_3$ , pressure induced phase transition, elec. resist. and X-ray diffr. study 2-30599  
 Se, amorphous film, monostable switching, microwave noise 2-13146  
 Si-rare earth oxide film MOS struct., negative resist., switching and signal generation 2-46149  
 SmS, collapsed, press. induced transition from intermediate valence to metallic behaviour 2-26453  
 SmS, quasihydrostatic press. resist. meas., quasiinsulating to metallic transition 2-36110  
 TaS $_2$ (IT) intercalation complexes with hydrazine, transport and optical props. 2-45966  
 Te $_{40}$ As $_{35}$ Ge $_2$ Si $_8$ , amorphous, threshold switching 2-51246  
 Te $_{48}$ As $_{30}$ Si $_{12}$ Ge $_{10}$ , chalcogenide glass threshold switching devices, thermal cond., temp. meas. using liquid crystals 2-36108  
 Te $_8$ Ge $_4$ Sb $_2$ S $_3$ , amorphous, memory switching 2-51246  
 TiO $_2$ , rutile, single cryst., switching effect 2-1968  
 TiGaSe, electrical props., forbidden band width 2.2 eV (Russian) 2-13142

**electrical conductivity transitions continued**

- TiInTe $_2$ -TiNdTe $_2$  system, substitutional solid solns. form. and characts., switching props. 2-40522  
 VO $_2$  films, time periodic dissipative structs., semiconductor-metal transition 2-36109  
 V $_2$ O $_3$  thin films, pyrolytically deposited, struct. and electronic cond. props. 2-1798  
 V $_2$ O $_3$  thin films, pyrolytically deposited, struct. and electronic cond. props. 2-5323  
 ZnTe, vol. reductions and resist. changes under press. 2-45555
- electrical contacts**  
 see also *contact potential; contact resistance; ohmic contacts; point contacts*  
 diffusion barriers in layered contact structures 2-8882  
 electrical contact assemblies, US exam. for bond integrity 2-17857  
 metal coating for electrical contacts, tribology 2-31800  
 silicide contacts to Si, shallow and parallel 2-5461  
 Al contact to NiSi using thin W layer as barrier, elec. characts. 2-21655  
 CdS-Al contacts, carrier transport, effects of interfacial ambients, time resolved charge injection technique 2-51299  
 InGa-ZnSe-InGa, contact I-V characts. 2-26517  
 InP:Fe, thermally stimulated cond. investigation 2-26407  
 Pt-Y $_2$ O $_3$  cermet contact for a-Si:H solar cells, material optimisation studies 2-37310  
 n-Si, electroless Ni plating, appl. to solar cells 2-46955  
 Si solar cells, n $^+$ p structure, 100 mm, reliable screen-printed contacts 2-18090  
 n-Si-TiN contact, elec. characts. 2-26504

**electrical double layers** see *electrochemistry; liquid theory***electrical engineering**

- see also *high-voltage engineering*  
 education conf. Rapid City, South Dakota, October 19-21, 1981 2-33259  
 electromagnetic field theory courses for electrical engineering students, teaching material (German) 2-42805  
 energy conversion technology—a three year technologist program 2-33260  
 US engineering schools research and teaching practices comparison with European equivalents (Italian) 2-48424  
 AI applications review (German) 2-32052

**electrical engineering applications of computing** see *electrical engineering computing***electrical engineering computing**

- see also *computerised control; computerised instrumentation; electric machine analysis computing; power system analysis computing*  
 alternating magnetic field distribution calc. method, computer program TDEDDY appl. (Korean) 2-49626  
 digital voltage meas. using microprocessor 2-48472  
 EM field computation by finite-element parallel processor 2-24917  
 hysteresis loop modelling for finite element mag. field calc. 2-51437  
 solar water heating system, hybrid model 2-52393

**electrical fault location** see *fault location***electrical faults**

- see also *accidents; discharges (electric); electric distortion; fault location; flashover; insulation; losses; protection; testing; transients*  
 cycling plant, electricity supply loss effect (German) 2-479

**electrical forming** see *electroforming***electrical insulation** see *insulation***electrical noise** see *noise***electrical power systems** see *power systems***electrical properties of substances**

- see also *dielectric properties of substances; discharges (electric); electrical conductivity; flexoelectricity; thermoelectricity*  
 organic solids, conf., Wdzydze Kiszewskie, Poland (June 1981) 2-33224  
 polyacetylene, advances in chem. and physics 2-36116

**electrical resistance measurement** see *electric resistance measurement***electrical transport processes** see *electrical conductivity***electricity**

- see also *atmospheric electricity; electric charge; electric current; electrical properties of substances; electromagnetism; terrestrial electricity*  
 agricultural sector, energy demand in US, report 2-17958

**electricity supply industry**

- 50 kW photovoltaic power plant coupled to the 15000 V electricity grid 2-18065  
 coal-based synthetic fuels for electric utilities 2-32016  
 consumption forecast, for 1980-2000 2-52278  
 decentralized solar energy and the electric utilities 2-27557  
 economic impact of state ordered avoided cost rates for photovoltaic generated electricity 2-27569  
 Electric Power Research Institute's Nondestructive Evaluation Center 2-29348  
 electrification key to nuclear and renewable energy resources 2-37142  
 environmental protection, need for objective legislation (German) 2-27741  
 Federal Germany's energy imports and balance of payments (German) 2-32007  
 fossil fuel demand forecasting, math. model. 2-2761  
 hydropower planning in USA, ecological aspects 2-27742  
 impact of residential photovoltaic power system on an electric utility 2-27567  
 industrial cogeneration and integration into public supply grid, economic, institutional, and environmental issues 2-37483  
 intermediate photovoltaic system/utility interface experience 2-42030  
 nuclear energy developments in electric power generation capacities for 1990s in Japan 2-24282  
 nuclear power plants, accidents, operators' liability for compensation, in France (French) 2-4057  
 nuclear reactors, higher fuel burnups, low leakage fuel management programme, USA 2-34136  
 Oberhasli undertaking (German) 2-37149  
 one hundred years of electricity supply 2-48477  
 photovoltaic power systems, scaled down, hardware simulation 2-18066  
 pollution, coal fired power stations and the environment in West Germany (German) 2-18151  
 rechargeable alkaline zinc/ferricyanide hybrid redox battery for utility load levelling and solar photovoltaic/wind appls. 2-22591  
 residential solar photovoltaic generating system connected to elec. utility distribution system in Arizona, USA 2-9658  
 solar heating and cooling simulation programs for electric utilities 2-18134



**electricity supply industry continued**

- solar heating and cooling simulation programs for electric utilities, assessment and evaluation project, five major activities 2-18135
- solar thermophotovoltaic conversion for electric utility appls., feasibility 2-41990
- steamplant alloy steel pitting and crevice corrosion meas. methods (*Dutch*) 2-52095
- USA current and historical development of energy consumption and production patterns, fuels used 2-31996
- wind power plants incorporation and impact in generation expansion planning 2-32018
- Li-FeS battery system for electric utility storage and load levelling 2-32059

**electro-optical devices**

- see also electrochromic devices; liquid crystal devices; optical modulation
- amplitude modulation, optically induced problems 2-25110
- band-pass light modulators (*Russian*) 2-34881
- bistability at an electro-optic interface 2-44378
- bistable device with delayed feedback, instability 2-7854
- bistable integrated directional coupler switch, remotely controlled, in optical fibre link 2-25146
- co-axial optical directional couplers using tube guide surrounding single-mode rod 2-7895
- commutator switch, three channel electrooptic waveguide 2-44486
- conference, optical systems and appls., Utrecht, The Netherlands (Sept. 1980) 2-14971
- display systems, visual perception of depth 2-27807
- electro-optical distance measuring instrument, two channel laser modulation (*German*) 2-28880
- electronic light shutter composed of high speed switching cct. and LiNbO<sub>3</sub> Pockels cell 2-49882
- electrowetting optical switch for multimode optical fibres 2-49939
- Fabry-Perots, nonlinear, ultrashort pulse detect. appls. 2-963
- fibres, single-mode, automatic electrooptic polarisation control system 2-16121
- filter for rotationally invariant objects detection (*Russian*) 2-4575
- guided-wave device for general polarisation transforms. 2-16100
- image subtraction, real time, electro-optic 2-34670
- integrated electro-optical light modulators (*Russian*) 2-4584
- integrated optics devices, fabrication technology 2-49948
- interference-polarisation filter, controllable stage 2-1010
- Kerr shutter, krypton triggered, for laser pulse selection 2-29837
- laser Doppler velocimeter based on electron-optical converter and photomultiplier 2-50337
- laser modulators, using phase change material with reflective, transmissive states 2-25111
- light modulator, electron-beam, spatial-temporal, with three-layer target 2-49895
- liquid displacement due to surface tension elec. modulation, passive display and optical switching appls. 2-7858
- microchannel spatial light modulator for image processing operations, performance limitations 2-11807
- modulator, ultra-broad-band, ridged waveguide, using CdTe electrooptic material 2-49889
- modulator for laser Doppler velocimeter for variable sign flow meas. 2-35242
- multicascade electro-optical light deflector control device 2-49881
- multimode fiber links, electrooptic switch 2-11838
- NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub> electrooptic light modulators construction, performance, and modulation possibility 2-49888
- oil-film modulator for projection TV system (*German*) 2-25097
- optical signal processing, architectures and algorithms with appl. 2-34668
- oscillator, high freq., using integrated interferometer 2-49940
- Pockels 2-34809
- Pockels cell, electro-optic control of mode-locked Nd:YAG lasers 2-4543
- Pockels cell, regular spike prod. from freq. doubled Nd YAG laser 2-25046
- Pockels readout modulator transparency, use in real time hologram recording system 2-20277
- ruby laser, double resonator coupled through electrooptic shutter, ultrashort pulse formation 2-49796
- spatial electron beam light modulator based on Bi<sub>12</sub>GeO<sub>20</sub> and Bi<sub>12</sub>SiO<sub>20</sub> crystals 2-20404
- submillimetre waves, tunable phase-matching and electro-optic modulation 2-11751
- surface topographic mapping, rapid, three-dimens., using laser electro-optic system 2-48674
- switching devices in integrated optics, using LiNbO<sub>3</sub>:Ti channel waveguides 2-11852
- switching network, NXM, in planar LiNbO<sub>3</sub> optical waveguide, for computer communications 2-11849
- travelling-wave electrooptic modulators, vel. mismatch meas. 2-44438
- Al-SiO<sub>2</sub>-GaAs-n<sup>+</sup>-GaP, MIS light modulators using Franz-Keldysh effect 2-4585
- As-S, amorphous film, optical waveguide, laser beam electrooptic modulation 2-34885
- Bi<sub>12</sub>SiO<sub>20</sub> based PROM controllable transparencies, energetic and spatial characts. (*Russian*) 2-4582
- Bi<sub>12</sub>SiO<sub>20</sub> Soviet PRIZ spatial light modulator 2-4583
- Bi<sub>12</sub>SiO<sub>20</sub> cryst., holography and speckle techniques for deformation and vibr. anal. 2-12115
- GaAs epitaxial layer photoelastic electro-optical directional couplers, 1.15  $\mu$ m, strain-induced waveguides 2-7889
- GaAs monolithic integration of electro-optic bistable device 2-49949
- KH<sub>2</sub>PO<sub>4</sub>, electrooptic light modulators, construction, performance, and modulation possibility 2-49888
- KH<sub>2</sub>PO<sub>4</sub> light shutters, piezoelec.-induced acoustic transients 2-11799
- LiNbO<sub>3</sub> 2X2 transverse type optical switch, wavelength meas. and demultiplexing appls. 2-16145
- LiNbO<sub>3</sub> Bragg modulator, relax. processes 2-4586
- LiNbO<sub>3</sub> channel waveguide interferometric modulator 2-49894
- LiNbO<sub>3</sub>, electro-optic directional coupler integrated with pyroelec. waveguide detector, optical bistability 2-7885
- LiNbO<sub>3</sub> electrooptic modulator control of Stokes component intensity in stimulated Raman scatt. in optical fibre 2-49933
- LiNbO<sub>3</sub> optical directional coupler, gating of Gbit rate diode laser pulse trains 2-7811
- LiNbO<sub>3</sub> single-crystal thin films grown by RF sputtering for electrooptic modulator 2-51800

**electro-optical devices continued**

- LiNbO<sub>3</sub>:Ti guided-wave devices for optical fibre communications appls. 2-11851
- LiNbO<sub>3</sub>:Ti guided-wave electro-optical devices for integrated optics, review 2-11864
- LiNbO<sub>3</sub>:Ti tunable electro-optic TE $\rightarrow$ TM mode convertor/wavelength filter 2-11865
- LiNbO<sub>3</sub>:Ti waveguide optical serrodyne freq. translator 2-7886
- LiTaO<sub>3</sub> Pockels cell, single-shot meas. of picosecond optical pulse waveform 2-11736
- Nd<sup>3+</sup>:YAG CW laser radiation static polarisation-modulation charact. control using intracavity electrooptic modulator 2-34766

**electro-optical effects**

- see also electroabsorption; electrochromism; electroluminescence; electroreflectance; Kerr electro-optical effect; photorefractive effect; Pockels effect; Stark effect
- 4-alkoxyphenyl-4-alkylbenzoate nematic mixtures, anisotropic and dynamic scatt. props. 2-21002
- acetylene (-d<sub>1</sub>)(-d<sub>2</sub>), IR intensities and electrooptical param. 2-34462
- 4-n-alkylphenyl-4-n-alkylbicyclo(2.2.2)octane-1-carboxylates, laterally substituted, liq. cryst. props. 2-21007
- amorphous semiconductors aspects of basic physics researches 2-45042
- bicyclo[2.2.2]octane esters, nematic liq. cryst. props. rel. to display appls. 2-12468
- 2-butyne, IR intensities and electrooptical param. 2-34462
- m-chloronitrobenzene crystals, Raman line intensity of phonon spectra and electrooptical parameters 2-9151
- cholesteric liquid crystals, electro-optical and thermo-optical appls. 2-16591
- cholesteric liquid crystals, optical props. under DC elec. field 2-31456
- colloids, rel. to theory of spheroidal particle polarisability 2-26864
- 4,4'-dimethylbenzophenone, exciton motion electric field effect, phosphoresc. study 2-17518
- ester liquid crystal mixtures for dynamic scattering at elevated temperatures 2-35387
- ferroelectric localised orthogonal domains, three-dimens. arrays, optical characts. 2-36572
- p-n-heptyloxybenzoic acid, smectic C and nematic phases, dynamic scatt. with storage 2-16572
- hologram superlattices in cryst. radiation defects kinetic parameters determ. 2-2219
- ionic surfactants, micellar solns., elec. birefringence meas. 2-39701
- linear, theoretical model for crystals 2-46543
- liquid crystal guest-host displays, dielec., electro-optical, and phase change props. 2-5043
- liquid crystal materials for field-effect electro-optical devices 2-12469
- liquid crystals, nematic and cholesteric, deformation mechanism under electric and mag. fields, light scatt. 2-35382
- liquid crystals, one- and two-dimens. ordered, conference, Garmisch-Partenkirchen, Germany (Jan. 1980) 2-10550
- liquid crystals, twisted, flexoelectric effect (*Russian*) 2-21027
- liquid crystals, Williams domains, light propag. perpendicular to characteristic axis, fringes appearance 2-16558
- MBBA-cholesteryl nonanoate mixture, cholesteric, electrooptical effects and EHD instabilities 2-1392
- MBBA-cholesteryl nonanoate mixture, cholesteric, rotatory dispersion under AC elec. field, appl. to colour display device 2-31457
- minimum secondary electrooptic effect, determ. of electrooptic modulators orientation 2-21986
- molecular crystals, calc. of local fields and susceptibilities 2-51555
- molecular crystals, optical spectra, effective-field method, Frenkel theory of excitons 2-51090
- nematic liquid cryst., twisted configuration, threshold voltage, improved temp. coeff. 2-9129
- nematic liquid cryst. cell, crit. angle calc. 2-8421
- nematic liquid cryst. mixtures containing different ring systems, elastic, dielec., and optical props. 2-12471
- nematic liquid crystals, development and trends rel. to display appls. 2-5041
- nematic Merck phases, electroconvective domains 2-45027
- meta-nitroaniline, electro-optic effect, contrbs. from electron-field interaction and lattice vibrs. 2-5660
- 4-nitrophenyl-4'-n-octyloxybenzoate, phase A<sub>1</sub> induced electrohydrodynamic instability 2-25734
- p-nonyloxybenzoic acid, doped, smectic C phase, electrooptical props. 2-9130
- organic photoconductor, electro-optical induction of recomb. luminesc. 2-13567
- 5-n-pentyl-2-(4-n-nonyloxyphenyl)-1,3-dioxane, nematic phase, dielec. and electrooptic behaviour 2-36515
- piezoelectric crystals, electrooptic coeffs. sign determ. from optical rectification 2-41331
- polariton effect, use in light modulators and deflectors 2-16096
- poly- $\gamma$ -benzyl-L-glutamate, rodlike textures, orientation in electric field, light scatt., birefringence 2-35381
- polyethylene, IR spectra, elec. field induced modifications 2-13471
- polyethylene, low density and cross-linked, light detection during the initiation of electrical treeing at room temperature 2-13408
- polystyrene, Raman polarisability, static elec. field depend. 2-51594
- propyne (-d<sub>1</sub>)(-d<sub>2</sub>), IR intensities and electrooptical param. 2-34462
- quartz, crystalline, gamma-neutron irradiated, electrooptical anharmonicity, defects effect 2-13454
- Raman coeff., first order, related to optical props. of zinc blende crystals 2-17460
- ring laser, travelling wave, subpicosecond pulse generation using synchronous double-modulation 2-4533
- semiconductor, electronic response to illumination, surface effects 2-17111
- semiconductor compounds as quantum electronic materials, physical characts. (*Russian*) 2-20385
- semiconductors, many-valley, Faraday effect in crossed elec. and mag. fields 2-17453
- smectic liquid crystals, C<sub>2</sub> phase in elec. field 2-1402
- smectic liquid crystals, electro-optical and thermo-optical appls. 2-16591
- smectic-cholesteric mixed liq. cryst., light transmission characts. in optic effects 2-17442
- thermotropic liquid crystals, physics and display appl. 2-45020
- thiourea, phase diagram in elec. field determ. from linear birefringence obs. (*French*) 2-8598



**electro-optical effects continued**

- twisted nematic liquid crystal cell, dynamic response to transiently pulsed fields 2-51554  
 twisted nematic liquid crystal displays, effects of optical anisotropy and cell thickness (*Japanese*) 2-1399  
 two-photon indirect transitions in crossed electric and magnetic fields 2-41330  
 AlGaAs constricted double-heterojunction diode lasers, structs. and electro-optical characts. 2-34789  
 $\text{Ba}_0.5\text{Sr}_{0.5}\text{Nb}_2\text{O}_6$ , ferroelec. thin film, electrooptical props. 2-31454  
 $\text{BeSO}_4 \cdot 4\text{H}_2\text{O}$ , electro-optical effect, Raman scatt. and SHG 2-2221  
 $\text{Bi}_{12}\text{SiO}_{20}$ , electrooptic crystal, anisotropic image recording 2-995  
 $\text{Bi}_{12}\text{SiO}_{20}$ , photorefractive electrooptic cryst. with vol. phase hologram, light diffr. 2-11664  
 $\text{Bi}_{12}\text{SiO}_{20}$ , photorefractive effect anisotropy 2-41323  
 $\text{Cd}_3\text{Nb}_2\text{O}_7$ , quadratic electrooptic effect 2-17446  
 $\text{CsI}:\text{Ti}$   $\gamma$  scintillation length and amplitude effects 2-43696  
 InSb, spin-flip Raman gain, effective  $g$ -value and radiation absorption under transient elec. field conditions 2-11746  
 $\text{KH}_2\text{PO}_4$ , dielectric props., conduct., multilayer capacitor, electrooptic study 2-13394  
 $\text{KNbO}_3:\text{Fe}^{2+}$ , volume phase hologram form., coherent light amplification and optical phase conjugation 2-34830  
 $\text{LiNbO}_3$  diffused waveguides, electro-optical props. 2-25114  
 $\text{LiNbO}_3$ , electrooptic crystal, laser beam wavefront inversion in anisotropic self-diffr. 2-982  
 $\text{LiNbO}_3$ , influence of elec. field on optical inhomogeneity 2-21985  
 $\text{LiNbO}_3:\text{Fe}$ , photorefractive electrooptic cryst. with vol. phase hologram, light diffr. 2-11664  
 $\text{LiNbO}_3:\text{Ti}$  waveguides, electrooptic-photorefr. modulation 2-25109  
 $\text{LiTaO}_3$ , light scatt. and its appl. 2-26865  
 $\text{NaNO}_2$ , Raman intensity calc., correl. with intensities of aqueous ion, valence force field and electro-optic parameters 2-13476  
 PLZT ceramic, electrostriction and strain-optic phenomena 2-46486  
 PLZT ceramic, linear electro-optical effect, domain struct. 2-46541  
 $\text{Pb}_2\text{Ge}_2\text{O}_{11}$ , electro- and magneto-optical phenomena 2-46542  
 $\text{Pb}_2\text{GeO}_4(\text{VO}_4)_2$ , centrosymmetric crystal, electrogyration study 2-13451  
 $\text{Pb}_2\text{MgNb}_2\text{O}_9$  crystals, optical and electrooptical props., growth layers effect 2-46545  
 $\text{Pb}_2\text{SiO}_4(\text{VO}_4)_2$ , centrosymmetric crystal, electrogyration study 2-13451  
 ZnO luminophores, low-temp. studies on grain-size effect on electro-optical effects 2-46540  
 ZnSe crystals, effect of heat treatment in Zn, Se, Cd vapour on optical and electro-optical props. 2-13450

**electroabsorption**

- anthracene-PMDA charge transfer complex, electroabsorption spectra, vibronic coupling in excited CT states 2-35975  
 chalcogenide glasses, review of studies at Ioffe Physical-Technical Institute, USSR 2-45050  
 Jahn-Teller impurity centre spectrum moments for parity-forbidden transition 2-45922  
 pentacene, solid, CT transition studied by electroabsorpt. 2-30837  
 polar semiconductor, exciton interband scatt. by optical phonons, Urbach rule derivation 2-40801  
 semiconductor, two photon optical edge absorption involving deep impurity levels, electroabsorpt. and magnetoabsorpt. 2-13527  
 semiconductors, amorphous, localised states, exciton effects on electroabsorption 2-41328  
 tetracene, solid, CT transition studied by electroabsorpt. 2-30837  
 $\text{As}_2\text{S}_3$ , glass, electron beam induced defects, elec. and optical props. 2-45280  
 $\text{As}_2\text{S}_3$ , vitreous, electroabsorpt., polarised light anisotropy 2-46544  
 $\text{As}_2\text{Se}_3$  (AsSe), vitreous, electroabsorpt., polarised light anisotropy 2-46544  
 $\text{As}_2\text{Se}_3$ , crystalline, excitonic gaps and Urbach tail, absorpt. and electroabsorpt. 2-35946  
 $\text{As}_2\text{Se}_3$ , glass, electron beam induced defects, elec. and optical props. 2-45280  
 $\text{CdGa}_2\text{S}_4$ , fundamental optical transitions study 2-46546  
 $\text{GaAs}_{1-x}\text{Sb}_x$  n-n heterojunctions on GaAs, internal electroabsorpt. obs. 2-17444  
 $\text{GaSe}:\text{Sn}$ , photocurrent interference oscills. 2-40970  
 $\text{GaSe}_{0.95}\text{Te}_{0.05}:\text{Sn}$ , photocurrent interference oscills. 2-40970  
 $\text{GeS}_2$ , electroabsorption and optical absorpt. spectra 2-21982  
 $\text{Ge}_2\text{S}_3$ , vitreous, electroabsorpt., polarised light anisotropy 2-46544  
 $\text{Ge}$ , amorphous, electroabsorpt., polarised light anisotropy 2-46544  
 $\text{Si}:\text{H}$ , amorphous, electroabsorpt., polarised light anisotropy 2-46544  
 $\text{Si}:\text{C}$  (6H), bound excitons, electroabsorpt. spectra 2-9132

**electroacoustic effects** *see acoustoelectric effects***electroacoustic generators** *see acoustic generators***electrocaloric effects** *see pyroelectricity***electrocardiogram** *see electrocardiography***electrocardiography**

- see also bioelectric potentials; biomagnetism; cardiology*  
 A-V conduction system measurements 2-6277  
 abnormalities, disposition in aviators 2-18308  
 adaptive filters appl., review 2-6276  
 aircrew, main ECG anomalies (*French*) 2-6269  
 arrhythmia monitoring system, computerised dynamic 3D joint interval histogram display 2-47736  
 beat rate variability signal, comparison of methods for obtaining 2-2968  
 biosignal visualization devices for equipment of cardiology units, CRT oscilloscope development 2-32349  
 cardiatachometer, microprocessor-based, heart rate meas. in rest or exercise stress testing 2-2970  
 cardiovascular signal recorder, dual microprocessor data handling system 2-52604  
 classification by signal expansion on orthogonal KL bases 2-52661  
 compression-reconstruction method 2-2967  
 data-reduction algorithm for real-time anal. 2-37700  
 dipoles, 2 independent, determ. of magnitudes, locations and directions 2-27802  
 electrodes, surface, movement-induced pots., ECG recording appl. 2-47737  
 fast Walsh transform ECG data compression algorithm 2-47747  
 foetal bradycardias automatic diagnosis, using autocorrelation function 2-18327  
 foetal ECG analysis, microprocessor-based signal averager 2-47741  
 Fourier analysis of isolated rat heart ECGs as a meas. of viability after cooling 2-6292

**electrocardiography continued**

- gate signal delays, determ. method, nuclear medicine appl. 2-6256  
 gated radioisotope images, amplitude anal. using macro programming 2-37666  
 ground-free recording with 2 electrodes 2-27917  
 heart-rate telemetry, short-distance, capacitive, sports and health care appl. 2-18282  
 HF QRS, peak-to-peak amplitude 2-9885  
 high fidelity ECG for non-invasive low cost heart disease detect. 2-22851  
 high speed QRS width detection, microprocessor system 2-6286  
 Holter monitoring, review 2-6278  
 instrumentation for resuscitation and intensive care departments in cardiological service 2-22852  
 interval detector for bioelectric signals 2-2960  
 magnetic tape storage, simplified method for physiological data retrieval and display (*German*) 2-32348  
 measurement sensitivity, computational assessment 2-14349  
 microcomputer based data acquisition systems, for body-surface potential mapping 2-18324  
 microcomputer-based measurement of beat-to-beat intervals and analysis of heart rate variability 2-32346  
 myocardial infarction estimation from unipolar epicardial QRS pots. 2-22846  
 noise filtering and data compression, simultaneous process, computer algorithm 2-47746  
 nuclear cardiac imaging, carotid and ECG pulses as indices 2-42200  
 P-wave recognition program, performance evaluation using adaptive correlating filter (*Japanese*) 2-52654  
 P-wave removal method, His bundle activity study appl. 2-47740  
 portable powerline-operated ECG recorder design, student-faculty project 2-42837  
 QRS complex, computerised meas. of first derivative 2-9886  
 QRS detector, optimal 2-32347  
 recorders of the Holter type, continuously worn machines, review (*French*) 2-6275  
 rhythm interpretation using statistical P and R wave anal. 2-22695  
 serial comparison using statistical signal analysis 2-6280  
 surface myoelectric signal, effects of tissue layers 2-18192

**electrocathoporesis** *see electrophoresis***electrochemical analysis**

- see also electrochemistry; polarography; voltammetry (chemical analysis)*  
 amperometric transducer, chromatography and flow-injection systems appl. thin-layer 2-6077  
 analytical chemistry, pulse voltammetric methods 2-22513  
 ceramics and glazes, F concentration, determ. with photosensitive electrode 2-31964  
 combustion analysis instrumentation for fuel cost control, microprocessor-based 2-31990  
 dissolved in aqueous cooling systems, in situ Pd resistance probe meas. 2-22509  
 industrial water analysis using electrochemical on-line sensors 2-22691  
 metals, coulometric analysis of C and S, automatic 2-9580  
 microprocessors appl. in laboratory instrumentation 2-172  
 NHK power station, experimental operation of  $\text{O}_2$  probe (*Czech*) 2-31963  
 on-line tritrimetry, with solid state and double junction electrodes 2-31992  
 parameter identification from impedance measurements on electrochemical reactions 2-37134  
 POLAROX electrochemical analyser for bleaching 2-37136  
 potentiostatic corrosion monitoring, water detection during aromatic hydrocarbon chlorination 2-31986  
 programmable integrator, digital instrument coulomb meas. in electrochemical anal. 2-22507  
 rotating disk cell for Raman spectroelectrochem. investigs. 2-23728  
 titrator with a digital display 2-27501  
 Cd, electrode, photoacoustic, photoconductive and electrochem. detect. of surface species 2-47385  
 Fe-Mn-Cr base amorphous alloys, corrosion behaviour, Mn content effects 2-31845  
 Mn-Cr base amorphous alloys, corrosion behaviour, Mn content effects 2-31845  
 $\text{NH}_3$ , determination as waste water and control using automatic anal. apparatus (*German*) 2-32149  
 O sensor, using non-metallic electrodes (*Chinese*) 2-37112  
 $\text{O}_2$  immersion sensor for dissolved  $\text{O}_2$  electrochem. determ. in metallic melts 2-10798  
 $\text{O}_2$  sensor, ternary phase equilibria in  $\text{ZrO}_2\text{-Al}_2\text{O}_3\text{-CaO}$  system 2-47013  
 Pu safeguards, controlled pot. coulometry anal. 2-19641

**electrochemical batteries** *see cells (electric)***electrochemical electrodes**

- see also electrochemistry*  
 adsorbed ions, interactions, Helmholtz layer props. effects 2-5306  
 anode process, during heating by a sprayer (*Russian*) 2-31927  
 biomedical miniature dry pH electrodes, construction and testing 2-47783  
 blood gases monitoring electrode, combined  $\text{pO}_2\text{-pCO}_2$  2-52651  
 ceramic electrode for photoelectrolytic decomposition of water 2-27707  
 dielectrophoretic levitation, electrode geometries 2-3590  
 electrochemical and morphological study of the effect of temperature on the restructuring and loss of capacity of alkaline battery electrodes 2-22574  
 electrochemical cycling of pasted antimonial lead electrodes (positives) 2-32043  
 electrode materials for high-temp. solid electrolyte fuel cells 2-14069  
 electrodialytic polymers, charge carrier exchange with dielec. liquids 2-6063  
 p-GaAs, semiconductor electrodes, laser induced photoelectrochemistry 2-13962  
 graphite, prod., energy considerations (*German*) 2-51851  
 graphite intercalation cpds., positive electrodes in galvanic cells 2-6039  
 impedance measurements during the cycling of a zinc electrode 2-32048  
 Li-Al/metal sulphide battery, BN felt separator 2-14060  
 n-type III-V semiconductor electrodes, kinetics of stabilisation, appl. to photoelectrochemistry 2-13964  
 oxide semiconductor electrodes, photovoltage response to temp. change 2-46056  
 pH electrode design for overcoming calibration problems 2-17897  
 pH measurement, electrodes and instrumentation (*German*) 2-22464



**electrochemical electrodes continued**

- photoemission during surface plasmon form., electrode roughness effect 2-31607
- photoelective, appl. to F conc. determ. in ceramics and glazes 2-31964
- plane vertical electrode, transient natural convection, momentum and mass transfer 2-44720
- polycrystalline, capacitance characts. anal. 2-31435
- potentiostat, design for optimum performance using soln. resistance compensation (*Japanese*) 2-27446
- Prussian-blue-modified electrodes: an application for a stable electrochromic display device 2-52218
- secondary cells,  $\text{Li}/(\text{MoO}_3\text{V}_{0.7})_2\text{O}_5$ , structural characts. 2-52323
- secondary cells,  $\text{Li}/\text{LiAsF}_6\text{-2-Me-THF}/\text{TiS}_2$ , electrodes morphological characts. anal. using electrochemical and surface studies, application in spacecraft 2-22604
- solid electrolyte, space charge distrib., interacting lattice gas model 2-21368
- solid-state electrochem. cells, electrode and interface reactions, review 2-13973
- surface, adsorbed species interactions, Friedel oscill. analog effects 2-51285
- thermodynamics of double-layer forces in open and closed electrolysis system 2-8858
- Ag, adsorbed diazines, Raman spectra enhancement, vibr. modes 2-5706
- Ag, adsorption of pyridine,  $\text{Cl}^-$ ,  $\text{CN}^-$ ,  $\text{SO}_4^{2-}$ , radiochem. and Raman spectra study 2-2249
- Ag, adsorption of pyridine, Raman intensity enhancement due to radicals form. 2-5711
- Ag, adsorption of pyridine, pot. modulation Raman spectra 2-5717
- Ag, adsorption of pyridine+ $\text{Cl}^-$ , surface enhanced Raman scatt., overtones and combination modes 2-5708
- Ag electrode surfaces, Raman spectra, background signals 2-51604
- Ag electrodes, metal-halide vibrs., surface enhanced Raman spectrosc. 2-36625
- Ag/AgPO<sub>4</sub>(AgAsO<sub>4</sub>) electrodes in formamide, standard electrode potentials, thermodynamic quantities 2-52212
- Ag<sub>1.55</sub>Cu<sub>0.45</sub>S, transport props. and cryst. struct. 2-30938
- (Ag<sub>2</sub>Se)<sub>0.925</sub>(Ag<sub>3</sub>PO<sub>4</sub>)<sub>0.75</sub>, transport props. and cryst. struct. 2-30938
- Cd, electrode, photoacoustic, photoconductive and electrochem. detect. of surface species 2-47385
- n-CdS, electrodes, surface-trapped holes, photo- and electroluminesc. 2-41428
- n-CdS:Te, semiconductor photoelectrodes, luminescence, photocurrent 2-14087
- CdS-Ag<sub>2</sub>S, transport props. and cryst. struct. 2-30938
- CdS(Se), photoelectrodes, in polysulphide electrolyte, surface crystallinity and morphology 2-8692
- CdSe, photoanodes, photoelectrochemical cells, energy storage 2-14088
- CdSe thin film electrodes for photoelectrochemical cells, props. 2-14092
- CdSe thin film electrodes for backwall photoelectrochemical cells 2-14093
- n-CdSe thin film photoelectrodes, Zn surface treatment effect, photoelectrochem. solar cell appl. 2-52373
- Co<sub>3</sub>O<sub>4</sub> sputtered electrodes, photoelectrochemistry 2-22465
- Cr<sub>0.5</sub>V<sub>0.5</sub>S<sub>2</sub>, cathodic behaviour in Na cell, Na intercalation du ring discharge 2-47470
- Cu electrodes, metal-halide vibrs., surface enhanced Raman spectrosc. 2-36625
- Cu:P, anodic dissolution, composition of black anodic film (*Russian*) 2-21454
- p-Cu<sub>2</sub>O semiconductor electrode in acetonitrile soln., photoelectrochem. behaviour 2-27442
- CuS, positive electrode for rechargeable Li cells 2-47468
- $\alpha\text{-Fe}_2\text{O}_3\text{:Ge}^{4+}(\text{Pb}^{4+})(\text{Sn}^{4+})$  electrodes, photoactivity, doping effect 2-26436
- FePS<sub>3</sub> cathode in Li battery, synthesis, struct. and phys. props. (*French*) 2-32057
- FeS, positive electrode for rechargeable Li cells 2-47468
- GaAs, photoanodes, photoelectrochemical cells, energy storage 2-14088
- n-GaAs, photoelectrochemical corrosion, effect of Au monolayer 2-13181
- GaAs, semiconductor electrodes in photoelectrochemical cells, surface state role 2-14086
- n-GaAs, semiconductor-electrolyte interface, surface modification, photoelectrochemical cells 2-14089
- p-GaP electrode, photoelectrochem. reaction mechanisms 2-22417
- n-GaP, electrodes, surface-trapped holes, photo- and electroluminesc. 2-41428
- p-GaP, semiconductor electrodes, laser induced photoelectrochemistry 2-13962
- In electrode, electrorefl. spectra, contrib. of photoemission 2-2218
- In electrode, photoemission quantum yield 2-2419
- Li battery systems, thermodynamic aspects of the reaction of lithium with ternary positive electrode systems 2-22588
- Li-organic electrolyte rechargeable batteries, TiO<sub>2</sub>, anatase, as cathode materials 2-14062
- Li-Si electrodes in molten salt cell, BN stability 2-14059
- Li-Si/FeS<sub>2</sub>, primary cell, reactive interface materials characterisation 2-14056
- LiAl composite electrodes in solid state battery 2-27583
- Li<sub>2</sub>CoO<sub>2</sub>, cathode material for batteries of high energy density 2-18043
- Li<sub>2</sub>FeS<sub>2</sub>, cathodic material for Li secondary battery 2-22562
- Li<sub>2</sub>V<sub>6</sub>O<sub>13</sub>, cathode material, X-ray diff. thermal anal. and mag. susceptibility 2-22183
- Mg-MnO<sub>2</sub>, cupric cells tests 2-32046
- MnO<sub>2</sub>-Zn cells requiring anodic limitation rechargeable, Zn powder electrodes 2-14063
- MnS<sub>2</sub>, positive electrode for rechargeable Li cells 2-47468
- MoS<sub>2</sub> electrodes, polycrystalline and thin film, for photoelectrochemical cells 2-22634
- n-MoSe<sub>2</sub> electrodes, photocurrents, kinetic model 2-36083
- MoSe<sub>2</sub>, photoanodes, photoelectrochemical cells, energy storage 2-14088
- (MoO<sub>3</sub>V<sub>0.7</sub>)<sub>2</sub>O<sub>5</sub> solid solution cathode, electrochemical behaviour in Li primary cells 2-52315
- Na-S cell, corrosion resistant current collector, tests 2-22596
- Na<sub>2</sub>CoO<sub>2</sub> bronzes, electrochem. intercalation of Na 2-18042
- NbS<sub>2</sub> intercalation electrodes in Ag solid state cells, kinetic, diffusion and thermodynamic studies 2-52326
- NbS<sub>2</sub>Cl<sub>2</sub> rechargeable cathode in molten NaAlCl<sub>4</sub> electrolyte, moderate temp. NaCl 2-47471
- Ni, anodic oxide form. in alkaline solns., pH depends and rate determ. step 2-6060

**electrochemical electrodes continued**

- Ni electrodes, polycryst., in alkaline soln., impedance meas. 2-51305
- Ni, porous, preparation, physical characts. and polarisation in strong alkali for water electrolysis 2-9550
- Ni, porous, use in multicell water electrolysis modules 2-9551
- Ni/Cd accumulators, plastic-bonded Cd electrodes O<sub>2</sub> recombination rate influenced by different metal screens 2-52321
- NiPS<sub>3</sub> cathode in Li battery, synthesis, struct. and phys. props. (*French*) 2-32057
- NiS, positive electrode for rechargeable Li cells 2-47468
- PbO<sub>2</sub> sputtered electrodes, photoelectrochemistry 2-22465
- PbS, void-free electrode, prep. and anodic behaviour, influence of O 2-6042
- PbS-Ag<sub>2</sub>S, transport props. and cryst. struct. 2-30938
- Pt, adsorpt. of phthalimide from thiocyanate melts 2-30753
- Pt oxide coated Ti anodes, durability in D-ribono-γ-lactone electroreduction process 2-9439
- Pt paste electrodes on (CeO<sub>2</sub>)<sub>0.9</sub>(Gd<sub>2</sub>O<sub>3</sub>)<sub>0.1</sub> solid electrolyte diffusion-limited charge transport 2-13972
- Ru oxide coated Ti anodes, durability in D-ribono-γ-lactone electroreduction process 2-9439
- RuO<sub>2</sub>-based electrochemical light switch 2-11806
- n-Si electrodes in aqueous soln. photoelectrochemical cells, techniques for stabilisation 2-14094
- Si, semiconductor electrodes in photoelectrochemical cells, surface state role 2-14086
- Si:Cu<sub>2</sub>Si semipermeable anode for Si electrorefining 2-41534
- Si:H, amorphous, photoelectrochem. cell, polypyrrole coated photoanodes, cell stability 2-52371
- n-Si/metal or metal-free phthalocyanine film/electrolyte, photovoltaic cell 2-13124
- SiS<sub>2</sub>, positive electrode for rechargeable Li cells 2-47468
- n-SnO<sub>2</sub>, semiconducting electrodes, sensitisation by Ru-based dyes 2-14091
- n-SrTiO<sub>3</sub>, semiconducting electrodes, anodic/cathodic photocurrent transition meas. 2-13115
- n-SrTiO<sub>3</sub>, semiconducting electrodes, sensitisation by Ru-based dyes 2-14091
- TaS<sub>2</sub>, intercalation electrodes in Ag solid state cells, kinetic, diffusion and thermodynamic studies 2-52326
- TiO<sub>2</sub> electrodes, semiconducting, polycrystalline thin films, prepared by reactive sputtering of metallic Ti target, for water electrolysis using solar energy 2-6043
- n-TiO<sub>2</sub>, electrodes, surface-trapped holes, photo- and electroluminesc. 2-41428
- n-TiO<sub>2</sub>, semiconducting electrodes, anodic/cathodic photocurrent transition meas. 2-13115
- n-TiO<sub>2</sub>, semiconducting electrodes, sensitisation by Ru-based dyes 2-14091
- n-TiO<sub>2</sub>, semiconductor electrodes, laser induced photoelectrochemistry 2-13962
- TiO<sub>2</sub> wafers, prep. and electrochem. sensitisation 2-2796
- TiO<sub>2</sub>:Ni<sup>2+</sup>(Nb<sup>4+</sup>) anodes, visible light response 2-1948
- TiS<sub>2</sub> intercalation electrodes in Ag solid state cells, kinetic, diffusion and thermodynamic studies 2-52326
- V<sub>2</sub>O<sub>3</sub>, cathode material, X-ray diff. thermal anal. and mag. susceptibility 2-22183
- V<sub>2</sub>O<sub>13</sub>, composite electrodes in solid state battery 2-27583
- V<sub>2</sub>, rechargeable cathode in molten NaAlCl<sub>4</sub> electrolyte, moderate temp. NaCl 2-47471
- VSe<sub>2</sub>-S<sub>8</sub>, struct., mag., and electrochem. props., battery cathode appls. 2-41905
- WC Co cemented, electrochemical behaviour 2-13969
- WC-Co, hard electrodes, strengthened layer formation by B electrosplark alloying (*Russian*) 2-31827
- n-WSe<sub>2</sub> electrodes, photocurrents, kinetic model 2-36083
- n-WSe<sub>2</sub>, semiconductor electrodes in photoelectrochemical cells, surface state role 2-14086
- n-WSe<sub>2</sub>, semiconductor photoanode, photoelectrochemical cell efficiency 2-14090
- n-ZnO, electrodes, surface-trapped holes, photo- and electroluminesc. 2-41428
- ZrO<sub>2</sub>, stabilised, cell, electrode processes studied by complex impedance method 2-13974
- electrochemical machining** *see electrolytic machining*
- electrochemical polishing** *see electrolytic polishing*
- electrochemistry**  
*see also Debye-Huckel theory; electrical conductivity of electrolytic liquids; electrochemical analysis; electrochemical electrodes; electrolysis; electrolytic devices; electrophoresis*  
 battery plate cycling, electrode kinetics methods appls. 2-47346  
 cell, gas evolving, ohmic interelectrode resistance, hydrodynamic model 2-27441  
 cytochrome c<sub>3</sub>, current-pot. curves, subtractive method appl., redox pot. 2-13961  
 dielectric liquids, voltage-current charact. at high fields, electrochemical cond. explanation 2-1921  
 digitally driven electrochemical experiments 2-47411  
 electrical double layer, ionic adsorption, primitive model electrolyte against charged surface 2-2716  
 electrochemical H-Cl energy storage system operating parameter optimisation for minimum capital investment 2-22461  
 electrochemical phase form., adsorpt.-nucleation based models 2-12718  
 electrochemical waste-acid treatment process, analogue versus microprocessor control 2-22456  
 electrodialytic polymers, charge carrier exchange with dielec. liquids 2-6063  
 electroless plating, meas. of instantaneous rate by electrochem. method 2-6041  
 electrolytic oxidation chromic sulphate to chromic acid, Pb anode preparation effects 2-22460  
 energy storage, solution redox couples 2-9688  
 p-GaAs, semiconductor electrodes, laser induced photoelectrochemistry 2-13962  
 galvanic cell measurements, with stabilised ZrO<sub>2</sub> and Pt probes 2-30648  
 galvanostatic crystal growth under diffusion control, powdered metal form. theory 2-46962  
 glasses, ionically conducting, electrochem. props. 2-26118  
 hydrocarbon electrocatalytic oxidation using stabilised zirconia electrolyte employing Au or Pt electrodes 2-22459



**electrochemistry continued**

- industrial water analysis using electrochemical on-line sensors 2-22691  
 insertion compounds, struct. and electrochem. reactions 2-22466  
 ionic crystal surfaces, dissolution mechanisms 2-8617  
 materials for advanced battery systems 2-22560  
 metals, H permeation, electrochem. meas. 2-21394  
 mixed conducting solid, kinetic studies, electrochem. method 2-17121  
 molten salt electrolyte cell for propulsion and load levelling (*German*) 2-22566  
 multistep reduction reaction, two-electron transfer mechanism comprising two successive one-electron steps 2-31898  
 n-type III-V semiconductor electrodes, kinetics of stabilisation, appl. to photoelectrochemistry 2-13964  
 organic acids, evaluation as fuel cell electrolytes, electrochem. props. 2-27443  
 PC electrodeless Cu bath, continuous regeneration by electromembrane cell 2-52220  
 polypyrrole films, photochemically generated, protection of semicond. photoanodes 2-47203  
 porous Ni plates, impregnation by cathodic polarisation 2-22458  
 radial thin layer cells, steady state mass transfer in reversible metal systems 2-27440  
 reaction products on electrode surface, pot. modulation Raman spectroscopy 2-5717  
 rotating disk cell for Raman spectroelectrochem. investigs. 2-23728  
 salinity power, salt recycle reverse vapour compression systems analysis 2-6188  
 salinity power production, concentration cell, economic potential 2-6187  
 semiconductor photoelectrodes, current doubling reactions study by temp. charge meas. 2-9557  
 solid electrolyte cells, impedance, freq. depend. 2-31931  
 solid electrolytes, impurity O transport, small-signal AC response theory 2-17901  
 solid fluorides as electrolytes, preliminary studies (*French*) 2-16896  
 solid-state electrochem. cells, electrode and interface reactions, review 2-13973  
 steel, crevice, pot. and pH meas. in NaCl soln. and artificial sea water 2-47222  
 steel, medium C, wear surfaces investigation by electrode potential method 2-41761  
 trans-stilbene derivatives, electrogenerated chemilum. 2-22104  
 TiS<sub>2</sub>, intercalation rate of Li<sup>+</sup>, electrochem. determ. 2-40606  
 transference numbers, moving boundary detect. NMR, appl. to electrochem. 2-167  
 undercooled melts and glasses, electrochem. behaviour, thermodynamic props., galvanic cells 2-13967  
 Ag(s)/AgX, Y(I) couples, thermoelectric coeff. determ. 2-22463  
 Al and alloys, corrosion, microbiological, in fuel/water systems, redox pot. 2-47226  
 Al, electrochemical properties, freshly formed surfaces in electrolyte solns. 2-41904  
 Al, wear surfaces investigation by electrode potential method 2-41761  
 Au, pulse plating processes, status and prospects (*German*) 2-52216  
 Bi, liq., O activity, electrochem. meas. 2-8643  
 Cd emission reduction importance, electroplating industry system study report (*German*) 2-52217  
 CdSe thin film anodes, photoelectrochem. characts. 2-8876  
 Co+CoO system, thermodynamic props. determ. by EMF method using solid electrolyte electrochem. sensors 2-12776  
 Co<sub>3</sub>O<sub>4</sub> sputtered electrodes, photoelectrochemistry 2-22465  
 Cr emission reduction importance, electroplating industry system study report (*German*) 2-52217  
 Cr+Cr<sub>2</sub>O<sub>3</sub> system, thermodynamic props. determ. by EMF method using solid electrolyte electrochem. sensors 2-12776  
 Cu, anodic dissolution and cathodic deposition, Fe (II) ions effect 2-13659  
 Cu, electrochemical properties, freshly formed surfaces in electrolyte solns. 2-41904  
 Cu, wear surfaces investigation by electrode potential method 2-41761  
 Cu:Mg, internally oxidised, diffusivity and solubility-diffusivity product 2-12816  
 p-Cu<sub>2</sub>O semiconductor electrode in acetonitrile soln., photoelectrochem. behaviour 2-27442  
 Fe, Armcro, wear surfaces investigation by electrode potential method 2-41761  
 Fe, corrosion in neutral soln., anode to cathode area ratio 2-52094  
 Fe, electrochem. in molten Na<sub>2</sub>SO<sub>4</sub> at 1173K, thermodynamic diagrams 2-5978  
 Fe, electrochemical properties, freshly formed surfaces in electrolyte solns. 2-41904  
 Fe, passive film on surface, photoelectrochem. charact. 2-8837  
 Fe sintered, friction in liq. corrosive medium, electrochem. phenomena effect 2-41763  
 Fe<sub>2</sub>O<sub>3</sub>, photoelectrochemical behaviour in presence of redox reagents 2-22475  
 Fe<sub>2</sub>O<sub>3</sub>, photoelectrochemical meas. kinetic eqn. for minority carrier flux 2-30931  
 n-GaAs, semiconductor-electrolyte interface, surface modification, photoelectrochemical cells 2-14089  
 n-GaAs-molten salt electrolyte interface, mech. of charge transfer 2-8874  
 p-GaP electrode, photoelectrochem. reaction mechanisms 2-22417  
 p-GaP, semiconductor electrodes, laser induced photoelectrochemistry 2-13962  
 H<sub>2</sub>SO<sub>4</sub> production by electrogenerative oxidation of SO<sub>2</sub> 2-22455  
 H<sub>2</sub>WO<sub>4</sub>·H<sub>2</sub>O, electrochem. reduction prep., cryst. struct., and proton diffusion rates 2-30650  
 n-In<sub>2</sub>O<sub>3</sub>-electrolyte system, photoelectrochemical props. 2-8873  
 Li solid electrolytes, synthesis and characterisation (*French*) 2-16895  
 Li/LiCl<sub>2</sub>O<sub>2</sub>F<sub>3</sub>-polyethylene oxide/Li<sub>2</sub>Na<sub>2</sub>Ti<sub>2</sub> (y=0, 0.16) electrochem. cell investig. 2-21369  
 Li/LiI/1-n-butylpyridinium polyiodide solid electrolyte cell, reaction mechanisms 2-17900  
 Li/SOCl<sub>2</sub>, cathode-limited cells, ambient temp. discharge characts. 2-47464  
 Li-Al/FeS cell performance prediction equations, development by multiple regression analysis 2-22457  
 Li-organic electrolyte rechargeable batteries, TiO<sub>2</sub>, anatase, as cathode materials 2-14062  
 LiAl composite electrodes in solid state battery 2-27583  
 LiBr(I), H<sub>2</sub>O, electrochem. behaviour, AC impedance spectra and ionic conduction 2-22468

**electrochemistry continued**

- Li<sub>2</sub>FeS<sub>4</sub> electrochemical system, thermodynamic model 2-17899  
 LiH<sub>2</sub>PO<sub>4</sub>, ionic cond. and electrochem. props. 2-40596  
 Li<sub>2</sub>Na<sub>2</sub>WO<sub>3</sub> bronze, thermodynamics and kinetics of electrochemical Li insertion 2-27434  
 Mn<sup>2+</sup>, electro-oxidation on Pt electrode 2-31926  
 MnO<sub>2</sub>-Zn cells requiring anodic limitation rechargeable, Zn powder electrodes 2-14063  
 MoO<sub>3</sub>/ZrO<sub>2</sub>-CaO/Mo system, O transfer kinetics at solid electrolyte-electrode interfaces 2-41994  
 MoS<sub>2</sub>(Se<sub>2</sub>) photoelectrodes, role of electron hole recomb. 2-26406  
 Na-S battery development, state-of-the-art 2-22558  
 Na<sub>1+x</sub>Si<sub>2</sub>ZrP<sub>3-x</sub>O<sub>12</sub>, Nasicon system, electrochem. and struct. parameters 2-16634  
 Ni, EMF-pH diagram, revised 2-52215  
 Ni, electrochem. and morphological study in mineral acids, influence of purity grade and anion type 2-47225  
 Ni, H permeation, electrochem. meas., in specimens undergoing plastic deform. 2-21393  
 Ni, H permeation, electrochem. meas. 2-21394  
 Ni, passive film on surface, photoelectrochem. charact. 2-8837  
 Ni-Fe, dissoln. and passivation, influence of S (*French*) 2-47246  
 Ni-Zn battery for electric vehicles 2-22559  
 Ni+NiO system, thermodynamic props. determ. by EMF method using solid electrolyte electrochem. sensors 2-12776  
 O probe for electrochem. meas. of free O content in liq. steel 2-10797  
 O<sub>2</sub>, electroreduction on n-TiO<sub>2</sub> electrodes, role of surface states 2-52214  
 Pb-acid battery, positive plates, deep cycling effects 2-47350  
 Pb<sub>1-x</sub>Bi<sub>x</sub>F<sub>2+x</sub> symmetrical cells, interfacial phenomena 2-14064  
 β-PbF<sub>2</sub>, small signal AC response 2-17902  
 β-PbF<sub>2</sub> symmetrical cells, interfacial phenomena 2-14064  
 PbO<sub>2</sub>, partially reduced, semicond. and electrochem. props. (*German*) 2-5457  
 PbO<sub>2</sub> sputtered electrodes, photoelectrochemistry 2-22465  
 Pd, electrodeposition on Fe and steel, electrochem. H<sub>2</sub> permeation 2-27105  
 Se<sub>2</sub>O<sub>3</sub> stabilized ZrO<sub>2</sub> electrocatalytic role in hydrocarbon fuel cell anodic current-overpotential behaviour 2-14071  
 Sn, liq., O activity, electrochem. meas. 2-8643  
 ThO<sub>2</sub> Z 2-13971  
 Ti, corrosion resistance improvement by Pd ion implantation 2-21164  
 Ti, electrochemical properties, freshly formed surfaces in electrolyte solns. 2-41904  
 TiO<sub>2</sub> anodes, photocurrent spectroscopy 2-13116  
 n-TiO<sub>2</sub>, semiconductor electrodes, laser induced photoelectrochemistry 2-13962  
 TiS<sub>2</sub>+Li<sup>+</sup> electrointercalation at solid soln. liq. soln. electrodes, mass transport and heterogeneous rate parameters 2-22467  
 V<sub>2</sub>O<sub>11</sub>, composite electrodes in solid state battery 2-27583  
 WC/Co cemented, electrochemical behaviour 2-13969  
 n-WSe<sub>2</sub>, semiconductor photoanode, photoelectrochemical cell efficiency 2-14090  
 Zn electroplating processes and electrolytes, selection criteria (*German*) 2-17635  
 Zn-air batteries, state-of-the-art review 2-14058  
 ZrO<sub>2</sub>, CaO stabilized solid electrolyte, O<sub>2</sub> release, electrochem. study 2-13970  
 ZrO<sub>2</sub> solid electrolyte, electrode reactions 2-13971
- electrochromic devices**  
 inorganic materials developments 2-17448  
 Prussian-blue-modified electrodes: an application for a stable electrochromic display device 2-52218  
 Li<sub>3</sub>N thin film solid electrolytes for electrochromic devices 2-17447  
 RuO<sub>2</sub>-based electrochemical light switch 2-11806
- electrochromism**  
 dipalmitoylphosphatidylcholine bilayer liposome, phase transition 2-16784  
 lutetium diphthalocyanine, electrochromism, IR, electronic, and ESR spectra 2-36603  
 lutetium diphthalocyanine film, cathodic electrochromism 2-9128  
 transition metal oxides, elec. and electrochromic props., review 2-45973  
 ytterbium diphthalocyanine, electrochromism, IR, electronic, and ESR spectra 2-36603  
 IrO<sub>3</sub>, electrochromic props., display device appls. 2-17448  
 IrO<sub>3</sub> film, electrochromic amorphous, cation insertion reactions 2-27435  
 IrO<sub>3</sub> sputtered films, phase transitions, DTA, evolved gas anal., and SEM studies 2-40742  
 Li<sub>3</sub>N thin film solid electrolytes for electrochromic devices 2-17447  
 WO<sub>3</sub>, electrochromic props., displays device appls. 2-17448  
 WO<sub>3</sub>, thin film electrochromic elements, light transmittance curves 2-46547  
 WO<sub>3</sub>-Li<sub>2</sub>O(Na<sub>2</sub>O)(K<sub>2</sub>O) glasses, rapid quenching technique prep., electrochromic props. 2-31674
- electrodeposited coatings** *see electrodeposits*  
**electrodeposited films** *see electrodeposits*  
**electrodeposited layers** *see electrodeposits*  
**electrodeposition**  
*see also electrodeposits; electroplating*  
 compositional coatings, deposition mechanism from electrolyte-suspensions (*Russian*) 2-31642  
 electrowinning circuits, current efficiency, metal ion conc. profiles effect 2-13660  
 electrowinning circuits metal ion conc., time and position depend. 2-13965  
 metal electrodeposition, from organic solns. 2-31647  
 metal fluidised-bed anodes investigation 2-31929  
 metals, electrodeposition, substrate electronic struct. effects 2-45782  
 polypyrrole film, electrochem. prep. and electroactive behaviour 2-31641  
 soar cell processing, electrodeposition by use of internal photovoltage 2-32067  
 sodium tungsten bronzes, electrodeposition, crystallisation overpotential 2-51837  
 Ag, electrodeposition in electrochemical system containing nematogenic cpd. 2-17898  
 Ag-Sn finely divided powder form. by electrodeposition 2-41812  
 Al, deposition from tetrahydrofuran soln., electrode reaction mechanism 2-27110  
 β-Al<sub>2</sub>O<sub>3</sub>, polycrystn., electro-mech. degradation 2-52071  
 CdS solar cell, polycrystalline thin film, liquid junction, performance eval. 2-9660  
 n-CdTe electrodeposited solar cells evaluation 2-37234



**electrodeposition continued**

- Co, finely divided, electrodeposition in presence of epoxy oligomers 2-13664
- Co-P amorphous multilayered films, prep., struct. and mag. props. 2-36800
- Cr-graphite composite coatings, electrodeposited, effect of plating variables 2-9291
- Cu, anodic dissolution and cathodic deposition, Fe (II) ions effect 2-13659
- Cu, electrocrystn. in presence of levelling and brightening additives, electrochem. dissolution of single crystals 2-31833
- Cu, electrodeposition in electrochemical system containing nematogenic cpd. 2-17898
- Cu-Cd, electrocrystallisation on Cu substrate, effect of electrolyte type 2-1797
- In alloys 2-27109
- LiTaO<sub>3</sub> thin film and devices grown by electrochemical reaction 2-22181
- Mn, electrodeposited, crystallisation, struct. and hydrogenation 2-1428
- MnO<sub>2</sub>, electrocrystallisation from Mn ore (*German*) 2-27101
- Mo, electrodeposition, solar absorber coatings, spectral reflectance meas., SEM obs. 2-22180
- Ni-Fe alloy films, deposition kinetics from sulphate-chloride soln. 2-17783
- Pd, on Fe and steel, electrochem. H<sub>2</sub> permeation 2-27105
- Rh electrodeposition, appls. 2-2470
- Si, amorphous, electrodeposition from SiHCl<sub>3</sub> solns. in aprotic solvents 2-27103
- Si electrodeposition at temps. above melting point 2-9296
- Si electrodeposition on graphite 2-9292
- Si, from solutions of SiO<sub>2</sub> in NaF/CaF<sub>2</sub> and other fluoride eutectics 2-9295
- Si, onto Ag, time of electrolysis effects 2-27354
- V<sub>2</sub>O<sub>5</sub>-P<sub>2</sub>O<sub>5</sub> glass melt, electrocrystn. of VO<sub>x</sub> cpds. used in threshold switches 2-17617
- Zn, electrowinning, effect of Cd impurities 2-27104
- Zn layers on Ag, adsorption and alloy formation 2-9290
- Zn, on Cu, Au, Cd, and Zn from zincate solns., substrate effects 2-26245
- Zn, on Pb, Ti, Sn, and In from zincate solns., substrate effects 2-26246
- Zn-Co, electrodeposition mechanism 2-22179

**electrodeposits**

- see also electroplated coatings*
- adhesive wear properties, of electrodeposited coatings for sliding contacts 2-9425
- electrocrystallisation in presence of levelling and brightening additives, electrochem. dissolution of single crystals 2-31833
- internal stresses measuring unit 2-2645
- metal coated metal parts, strength and reliability 2-2627
- metal coating for electrical contacts, tribology 2-31800
- Prussian-blue-modified electrodes: an application for a stable electrochromic display device 2-52218
- Ag film on Au, dielec. const., ellipsometry study (*French*) 2-46806
- Au electrodeposited coatings, for sliding contacts, adhesive wear props. 2-9425
- Au-alloys, electrodeposited coatings, for sliding contacts, adhesive wear props. 2-9425
- Co-P, amorphous multilayered, mag. domains 2-36380
- Co-P chemically deposited film, mag. props., effects of activation and acceleration 2-9009
- Co-P-(Ni) layers, cylindrical amorphous, domain struct. and strain anisotropy effects 2-9010
- Cr, electrodeposit, low contractile, cryst. struct. and internal stresses 2-21470
- Cr surface, black, solar collector surfaces, thermal degradation 2-22657
- Cu/Ni foil composites, electrodeposits, 2-phase metal layer, H-diffusion (*Japanese*) 2-8672
- Fe, electrodeposited, stress meas. using slip initiation 2-47173
- Fe foil, electrodeposited, mag. props. 2-26664
- KAg<sub>4</sub>I<sub>3</sub> superionic films, photolysis study 2-41912
- NH<sub>4</sub>Ag<sub>4</sub>I<sub>3</sub> superionic films, photolysis study 2-41912
- Ni coatings, with (211) texture, electrocrystn., TEM, X-ray anal. 2-30767
- Ni electrodeposited on Cu, microstruct., substrate surface conditions effect 2-26258
- Ni electrodeposits, growth twins and polycrystallinity development 2-8525
- Ni, prep. of vertically thin foils, fibre texture (*French*) 2-13663
- Ni shiny coatings, struct. investigation, defects (*Russian*) 2-1780
- Ni-black selective surfaces formation by conversion process for flat-plate collectors 2-16077
- Ni-Cr electrodeposit, Cr finished, corrosion on brass and steel substrates 2-47261
- Pb/acid secondary cells, Plante formation process for positive electrode 2-52325
- PbO<sub>2</sub> films, nucleation and growth on Ti substrate, SEM and TEM study 2-51029
- Pd electrodeposited coatings, for sliding contacts, adhesive wear props. 2-9425
- Pd/Ni foil composites, electrodeposits, 2-phase metal layer, H-diffusion (*Japanese*) 2-8672
- RbAg<sub>4</sub>I<sub>3</sub> superionic films, photolysis study 2-41912
- Si, electrorefining, semipermeable anode 2-41534
- Sn-(Pb) electrodeposited coatings, for sliding contacts, adhesive wear props. 2-9425
- Sn-Ni alloys, electrodeposited, struct. and props. 2-31646
- Ti film on Au, dielec. const., ellipsometry study (*French*) 2-46806
- Zn electrodeposited autoepitaxial layers, degree of perfection, overvoltage effect (*Russian*) 2-21453
- Zn immersion deposits, on Al-alloys, factors influencing growth 2-2630
- Zn surface, black, solar collector surfaces, thermal degradation 2-22657
- Zn-Co alloys, electrodeposited, Mossbauer study of chemical state of Co 2-31330

**electrodes**

- see also anodes; cathodes; electrochemical electrodes; microelectrodes*
- auditory evoked response, wave I identification using an atraumatic ear canal electrode 2-18319
- biomedical surface electrodes, movement-induced pots., ECG recording appl. 2-47737
- brainstem response audiometry, improved recording technique using a metal electrode 2-18318

**electrodes continued**

- dielectric breakdown of liquid He, influence of electrode materials, cryogenic equipment for spark gap cooling 2-5634
- discharged current characts., from needle electrode, applications to thunderclouds detection 2-10120
- Earth resistivity profiles, appl. of different electrode arrays over graphite deposits 2-9922
- electrode fabrication, electroforming process, use in TEA lasers 2-34781
- Faraday MHD channels, effect of electrode geometry on nonuniform flow 2-40000
- fixed electrode system, effects on high-temp. breakdown characts., of polyethylene film 2-13417
- graphite, oxidation of thin Ag layers electrolytically plated on surface investigated in presence of photographic sta-bilizers (*Hungarian*) 2-6064
- graphite electrode of electric arc, use as high temperature standard 2-23606
- graphite electrodes for CO<sub>2</sub> high-power CW TE laser 2-891
- heart-electrode combination pacing threshold estimation, graphical method 2-22855
- hydrocarbon electrocatalytic oxidation using stabilised zirconia electrolyte employing Au or Pt electrodes 2-22459
- metallic, conduction by tunnelling across energy bands of amorphous substrate (*French*) 2-26480
- modified asymptote superposition for electrochemical cell electrode polarization 2-32042
- negative point-to-plane corona, electrode degradation 2-12423
- non-metallic electrodes, in O sensor (*Chinese*) 2-37112
- normalised spherical electrodes, effect on AC dielec. strength of liquid N<sub>2</sub> during breakdown tests 2-5637
- photoelectrochemical solar cells, photocorrosion process on n-GaAs and corrosion prevention 2-22627
- plane-parallel circular rotating electric field generation, field equations and electrodes shape required 2-44163
- porous Ni plates, impregnation by cathodic polarisation 2-22458
- refractory carbides, emission-adsorpt. props. anisotropy 2-13601
- resistor ballasted PIN-PIN anode and cathode electrodes for CO<sub>2</sub> 16-μm bending-mode laser system 2-890
- on rotating disc, mass transfer and friction reduction, polymer additives effects (*French*) 2-25399
- semiconducting electrodes, stabilising by means of redox systems 2-21671
- semiconductor electrodes, illuminated, minority carrier transport and kinetics 2-8872
- semiconductor heterojunction electrode characterisation 2-30959
- semiconductor photoelectrodes, current doubling reactions study by temp. charge meas. 2-9557
- semiconductors, photodecomposition, thermodynamics, kinetics, appl. to photoelectrochemical cells 2-13963
- sintered nickel hydroxide, blistering effects 2-41993
- solar cell CC Ni and Cu screenable all-metal electrodes, fabrication and performance 2-18089
- solar cells, concentrator, thick narrow electrode fabrication, photolithography method 2-52346
- solid electrolytes and electrodes, trends in new materials, review 2-21359
- stationary disc electrode, in rotated fluid, convective diffusion study 2-8162
- thermoelectric converters, instability of thermal EMF 2-9665
- Ag, adsorption of developing solution components (*Russian*) 2-27481
- Ag, adsorption of N,N'-dimethyl 4,4'-bipyridinium ions, Raman spectrosc. obs. 2-39397
- Ag, chemisorption of mercaptobenzothiazole, surface enhanced Raman scatt. 2-22008
- Ag, colloid and electrodes, pyridine adsorbed on surface, surface-enhanced Raman effect pot. depend. comparison 2-34414
- Ag electrodes, antibacterial effects 2-22871
- γ-AgI-Ag<sub>2</sub>S solid electrolytes, ionic and electronic conductivities (*Russian*) 2-16894
- C electrodes for solar energy converters (*Russian*) 2-27547
- Cu electrodes, Ni coatings, for wear and corrosion resistance 2-22373
- Cu/CuSO<sub>4</sub>/Cu system, natural convection and steady state conc. polarisation by laser interferometry 2-20511
- GaSe electrodes photocurrents, crystallographic anisotropy effect 2-36082
- Hg electrode in ethylene glycol solns., electron photoemission 2-31606
- LaCrO<sub>3</sub>:Sr, O<sub>2</sub> sensitive electrode impedance 2-8859
- Li/SO<sub>2</sub> batteries, dependence 2-41999
- MnO<sub>2</sub> electrodes, Li insertion stoichiometry 2-27585
- Ni, on quartz thin plate, resonance freq. vibr. variation (*French*) 2-13326
- Ni-Cd sealed cells, with plastic bonded electrodes, reduction of oxygen, investigation 2-37203
- Pb<sup>2+</sup> ion selective electrode membrane, effect of bivalent metal ions, ESCA 2-37103
- Pb-Bi, Josephson junction counter electrodes, microstruct., thermal cycling effects, 298 to 42K 2-51945
- Pb-Bi film, Josephson junction electrodes, thermal stability 2-51944
- Pb-In-Au Josephson junction electrodes, microstruct. and strain, thermal stability 2-51943
- Pt, PtIr and Ir-AIROF electrodes used in electrophysiological expts., comparison of impedances 2-47776
- TiB<sub>2</sub> film electrode behaviour in Si vacuum deposited thin film solar cell 2-40716
- TiO<sub>2</sub> semiconducting thin film photoelectrodes for photoelectrochemical cells 2-27708
- WC-Co-B (GB<sub>2</sub>) electric-spark alloying of C steel, microalloying effect on cathode weight gain 2-17780
- WC-Co-B alloying electrodes, grain size effect on coating form. in elec.-spark alloying 2-13861
- ZnO film electrodes spectral sensitisation by J-aggregate of cyanine dyes 2-2016
- ZnO-liq. crystal electrode in photoelectrochemical cells 2-47499

**electrodynamics**

- see also electron beams; electron optics; electron tubes; ion beams; ion optics; ion sources; quantum electrodynamics*
- arbitrary spin particle, Galilei-invariant motion (*Russian*) 2-60
- book 2-3339
- bound charges, path depend. electrodynamics, lagrangian formulation 2-33309
- charge particle energy-momentum transfer subjected to laser pulse along const. mag. field direction 2-34642
- charged particle, energy change in slow EM wave field 2-24927
- charged particle dynamical motions, equilib. conditions 2-29768



**electrodynamics continued**

- charged particle in uniform mag. field, response to gravitational radiation, general relativistic approx. 2-10304  
 charged particle motion in elec. and magnetic fields, new velocity-dependent force law appls. 2-15947  
 charged particle motion in quadrupole elect. and uniform mag. fields (*Spanish*) 2-6723  
 charged particle trajectory determ. in two dims. electrostatic fields 2-44182  
 classical electrodynamics in a universe with two space dimensions 2-48446  
 classical stochastic electrodynamics, electron spin, rel. to quantum theory 2-38491  
 classical stochastic electrodynamics, relationship with stochastic mech. and quantum theory 2-3399  
 classical vector and tensor eqns. of motion of spin in orthogonal fields 2-18933  
 coaxial open cavity with reflective diffraction grating, electrodynamics 2-11618  
 cross-field runaway electrons 2-35276  
 dispersion characteristics with perturbations of general form 2-29772  
 dynamo theory and mean field MHD (book) 2-48415  
 electron, fluid struct. in five-dimens. space (*Chinese*) 2-23435  
 electron, photon emission in mag. and EM wave fields (*Russian*) 2-39550  
 electron cyclotron reson. hysteresis based on weak relativistic mass effect 2-39548  
 electron flow oscillations in nonuniform crossed fields 2-15949  
 EM wave propag. boundary value problem 2-44174  
 Fokker-Wheeler-Feynman electrodynamics, instantaneous form of two-body eqns. of motion 2-24924  
 free electron laser, magnetic diffusive wiggler pump 2-924  
 free-electron-laser in uniform magnetic field, soln. for arbitrarily strong EM radiation fields 2-44317  
 fundamental physics, conf., Bogota, Columbia (July-Aug., 1979) 2-10554  
 helicity operator for integral spin fields 2-28676  
 low-frequency radiation of a charge moving on an arc of a circle 2-34644  
 Maxwell's equations, initial boundary value problem, semi-discrete Galerkin approx. 2-63  
 metallic thin film surface, electrodynamics, reflectance and photoelectron yield 2-40981  
 mixed boundary-value problem 2-34643  
 moving media, electrodynamics, and force on current loop 2-49621  
 nonlinear electrodynamics in curved space-time 2-33397  
 nonlinear systems, stochastic electrodynamics and quantum theory 2-10628  
 nonrelativistic electron motion, electric field effects, Monte Carlo calcs., appl. to particle detection 2-11626  
 partial elliptical equation solution, appl. of dynamic programming method (*Russian*) 2-3357  
 particle scattering in random inhomogeneous mag. field (*Russian*) 2-24930  
 Periodic Comet Halley, magnetic tail and electrodynamic forces, solar wind effects 2-38115  
 radiating electron, equation of motion, nonlinear approx. (*German*) 2-49643  
 radiation belt electron dynamics after mag. storm 2-10254  
 radiation spectrum of charged particle accelerated along finite path segment 2-29771  
 refracting spatial phase lattice, light diff., electrodynamic perturbation theory 2-20250  
 relativistic electrons, fluctuations in energy losses by synchrotron radiation 2-44181  
 relativistic particles, in mag. or electric sector fields, quadrupoles, transfer matrices 2-19807  
 Shuttle Electrodynamic Tether System, electrical behaviour (*Japanese*) 2-32796  
 stability of the motion of uncharged dipoles 2-34641  
 stationary states appl. to stochastic electrodynamics 2-33434  
 stochastic, classical, oscillator spectral density and correl. 2-62  
 stochastic electrodynamics, nonlocal effects rel. to Bell inequalities 2-10627  
 superconducting strip, current coil interaction, electrodynamic force calc. (*Russian*) 2-5496  
 topside ionosphere, height variations in auroral zone electrodynamics 2-32720  
 transition radiation, alternating electric field effect 2-39551  
 unfocused cylindrical electron beam, space charge wave effects 2-29777

**electrodynamometers** *see* **dynamometers**

**electroencephalograms** *see* **electroencephalography**

**electroencephalography**

- see also* bioelectric potentials; biomagnetism; brain  
 alpha response to stress, rel. to trait anxiety 2-52469  
 alpha state, optimal detect. in human EEG model 2-52471  
 analysis, quantitative, evaluation of a syntactic pattern recognition approach 2-37696  
 analysis, use of coherence function 2-32345  
 auditory driving by complex stimuli, methods for finding single generators 2-42115  
 auditory evoked EEG response, maturational effects on middle components 2-2878  
 automated data processing in expt. electrophysiology (*Russian*) 2-47758  
 automatic adaptive segmentation of clinical EEGs 2-2963  
 brainstem auditory evoked responses, fast meas. method using maximum length sequences 2-22774  
 cerebral activity temporally defined code preceding speech, computer extraction 2-22776  
 classification strategy, hierarchical nonparametric, for discriminating patterns of higher cortical activity 2-6279  
 computer anal. system, graphics-based 2-37690  
 conference, London, England (Jan. 1981) 2-23359  
 conference on EEG and clinical neurophysiology, Kyoto, Japan (Sept. 1981) 2-33212  
 Czechoslovakian EEG and clinical neurophysiology, conf., Bratislava, Czechoslovakia (May 1980) 2-33211  
 data reduction by autoregressive representation and discriminant anal. procedures 2-18313  
 delta rhythms, topographical distrib. during sleep, evolution with age 2-18189  
 delta vertex rhythm, a peculiar and random EEG activity in the Macaca (*French*) 2-6220

**electroencephalography continued**

- developmental characteristics of normal and mentally retarded childrens EEGs 2-52470  
 epileptic EEG, decision-theoretic and syntactic pattern recognition techniques 2-22849  
 epileptic patients, computer evaluation system for EEGs 2-37691  
 equipment test device 2-52658  
 event related brain potential, improved classification using preprocessing 2-22759  
 evoked and EEG potential modelling, hierarchical approaches 2-22714  
 evoked potential discrimination, information, preliminary obs. 2-22757  
 evoked potential research, signal processing, averaging and modelling 2-22843  
 frequency analysis, multiprocessor architecture 2-37701  
 hypothalamas, lateral, regulation of electrocortical activity, normal and split-brain cats 2-18187  
 intervals, spectral decomposition using Walsh and Fourier transforms 2-27916  
 local field non-uniformities, investigation method (*Russian*) 2-47756  
 mental activity, EEG analysis using multiple time-domain parameters 2-22720  
 microcomputer based clinical evoked response system 2-6281  
 microprocessor based system for background EEG activity analysis 2-22848  
 monograph on EEG-brain dynamics 2-13  
 pattern processing and slow-wave activity in visual cortex of cat 2-52485  
 photic stimulation, relative asymmetry and conformation 2-52660  
 positive spikes, 14 and 6 s<sup>-1</sup>, review 2-42227  
 power spectrum, Walsh vs. Fourier estimators 2-14348  
 processing, parallel computer systems for processing rat's long-term locomotor activity, EEG, EOG, and EMG (*Japanese*) 2-52682  
 processing during photo stimulation 2-52659  
 recording artifacts, sources and solns. 2-42228  
 recording technique, practical guide 2-18309  
 regulation by lateral hypothalamus, math. model 2-52468  
 scalp electrode location in spherical coords., plexiglas helmet 2-27915  
 significance probability mapping, an aid in the topographic anal. of brain elec. activity 2-6270  
 sleep stages, human, effects of high and low ambient temps. 2-2849  
 source derivation, a new method and its importance for clinical-neurological diagnosis (*German*) 2-18326  
 source derivations in circumscribed brain lesions diagnosis 2-52662  
 spectral analysis, comparison of various spectral parameters 2-52649  
 spectral analysis, prediction and extrapolation, appls. to EEG and evoked response 2-32341  
 temporal EEG  $\alpha$  asymmetries, biofeedback regulation 2-18186  
 tumoural EEG focus, histographic representation by spectral anal. (*French*) 2-52647  
 visual evoked potentials, human, nonlinear anal. 2-22758
- electroendosmosis** *see* **electrophoresis**
- electrofluidynamics** *see* **electrohydrodynamics**
- electrofluorescence** *see* **electroluminescence**
- electroforming**  
 alloys, multicomponent, rates of solution during electrochem. forming, methods of calc. (*Russian*) 2-8619  
 electrode fabrication, electroforming process, use in TEA lasers 2-34781  
 metals, electrochem. shaping, possible causes of luminesc. (*Russian*) 2-9200  
 Au-SiO<sub>2</sub>-Au diodes, electroforming in organic gases, voltage controlled negative differential resist 2-51345
- electrofluidynamics** *see* **electrohydrodynamics**
- electrohydrodynamics**  
 axisymmetric turbulent EHD jet problems 2-39992  
 n-azoxyanisole, electroconvective flow threshold characts. (*Russian*) 2-16581  
 charging of disperse particles in two-phase media with unipolar charge 2-20761  
 dielectric fluid film, elec. forces influence on dynamics and stability 2-35870  
 dielectric fluid flowing along annular channel, influence of electric field of heat transfer 2-44791  
 dielectric liquid, elec. charge generation by laminar flow in tube, quantitative theory 2-31434  
 dielectric liquid subjected to AC elec. field, behaviour of gaseous bubble 2-12244  
 dielectric liquids, high field behaviour of moderately pure liquids, complexities 2-5412  
 dielectric liquids subjected to AC fields, EHD stability 2-12240  
 dispersive insulators, ponderomotive forces in normal dispersion region 2-35232  
 electric natural convection heat transfer phenomena in a heat exchanging system 2-20766  
 electrically conducting fluid, motion in plane linear induction machine duct, current load 2-39990  
 electrically conducting liquid motion in collector system, electrodynamic coupling anal. 2-12233  
 electrically stressed liquid dielectrics, bulk electroconvection 2-12242  
 electrohydrodynamic processing, table top rapid quenching metal powder generator 2-46983  
 electrolyte flow in magnetic electrolyser, electric current, MHD processes 2-40002  
 ellipsoids of revolution motion, crossed electric and mag. field effects 2-12230  
 field enhanced impurity motion in dielec. liquids, computer-aided identification of model parameters 2-4899  
 fluid, surface waves, stability, Schrodinger eqn. 2-4897  
 fluids, homogeneous, boundaries of existence of EHD currents (*Russian*) 2-30234  
 p-n-heptyloxybenzoic acid, electrohydrodynamic instability of smectic C phase 2-25729  
 incompressible liquid, bubble motion in an electric field 2-39976  
 inhomogeneous liquid interface self-oscills. in elec. field 2-20764  
 insulating liquids, EHD instabilities in breakdown of point-plane gaps 2-17403  
 jet in vacuum, density meas. 2-44797  
 liquid crystals, EHD instability in presence of external noise 2-3497  
 liquid dielectrics, EHD convection by laser light scattering 2-12241  
 liquid metal, regulating device, EM pump, flow rate meas. 2-40007  
 low-conductivity liquids, turbulent flow, correlation meas. 2-40008  
 MBBA, nematic, surface deform. and walls in cond. regime 2-8429



**electrohydrodynamics continued**

- MBBA, nematic liq. cryst., electrohydrodynamic agitation, induced periodic deformation (*French*) 2-50527
- MBBA-cholesterol nonanoate mixture, cholesteric, electrooptical effects and EHD instabilities 2-1392
- MHD flow, near electric current point source, vortex motion, numerical calcs. 2-12231
- MHD flow near an electric current point source, asymptotic expansion 2-39998
- mineral oil under external bubble injection, electrically induced pressure 2-12243
- nematic liquid crystals, transition to turbulence, EHD instabilities, and tumbling phenomenon 2-12125
- Newtonian fluid, EHD squeeze problem of two rotating cylinders 2-20760
- 4-nitrophenyl-4'-n-octyloxybenzoate, phase A, induced electrohydrodynamic instability 2-25734
- p-nonyloxybenzoic acid, doped, smectic C phase, electrooptical props. 2-9130
- screw induction pump, MHD processes, electrodynamic parameter calcs. 2-12235
- sonoluminescence pulse, electro-hydrodynamic 2-2351
- stability in presence of thermal gradient 2-8245
- stream, bipolarly charged disperse, propag. of perturbations 2-4898
- stream flow over conducting sphere 2-50326
- streaming liquids, electrokinetic processes 2-12239
- thermal EHD induction pumps for cooling oil, parametric studies 2-20765
- three-dimensional flow, motion of a sphere in crossed electric and mag. fields 2-12234
- two-dimensional aligned flow, rot. and irrotational flows, electron-MHD 2-20763
- two-phase media in electric field, diffusion and multiv. models 2-4894
- two-phase stream, electrical conductivity 2-16387
- weakly conducting particle suspension charging on collision with bounding surfaces 2-50327
- Mg electrolyzers, simulation of MHD flows 2-12236

**electrojets**

- see also ionosphere*
- afternoon counter-electrojet events at Trivandrum, lunar modulation of occurrence frequency 2-14674
- auroral effects on power transmission lines 2-42534
- auroral electrojet during magnetospheric substorms, computed vars. of ionospheric conds. 2-23158
- auroral electrojet index and correl. with IMF 2-53012
- auroral electrojet modulation, ELF and VLF wave generation 2-32722
- auroral electrojets, three-dimensional current flow in morning sector during substorm recovery phase 2-32742
- auroras, connecting arcs type, occurrence with electrojet and mag. storms 2-28263
- conduction, electron precipitation as dominant cause of responsible ionisation, AL index effect 2-32404
- current density at geomagnetic equator, models 2-42536
- equatorial, magnetic storm time elec. field changes, VHF backscatter from plasma irregularities 2-6504
- equatorial, Type 1 irregularities, two stream plasma instability simulation 2-23169
- equatorial afternoon counter-electrojet rel. to IMF azimuthal component 2-6496
- equatorial counter electrojet, 5-50 m wavelength plasma instabilities 2-28278
- equatorial counter electrojet events, assoc. changes in low-latit. E-region drifts 2-23167
- equatorial Cowling conductivity, longitudinal depend. 2-32705
- equatorial electrojet, local wind effects on electric fields and currents 2-14663
- equatorial electrojet, review 2-18627
- equatorial electrojet E-region, Joule heating, rel. to electron and neutral gas temps. 2-32732
- equatorial electrojet enhancement during severe auroral disturbances 2-52992
- equatorial electrojet plasma instabilities, cross-field conditions 2-10235
- equatorial electrojet plasma instabilities, two-stream conditions 2-10236
- geomagnetic equatorial field during morning counter electro jet, solar flare effect 2-42258
- induced magnetic field at Earth surface, equatorial electrojet effect 2-22882
- ionisation irregularities of electrojets, due to plasma instabilities 2-14679
- ionospheric westward travelling surges during substorms 2-28283
- polar electrojet, mechanism for thermally excited oscillations 2-32712
- Ps6 micropulsations excited by auroral electrojet instability 2-14731
- ring current electron anisotropy during mag. storm affecting VLF whistlers 2-10262
- ring current  $H^+$  wave-particle interactions and charge exchange 2-3153
- ring current ion composition 2-3160

**electrokinetic effects**

- see also electrodynamics; electrophoresis*
- Brownian particles adsorption in presence of pot. barriers, different double-layer interaction modes effect 2-37107
- double layer on disperse particles, polarisation and dipolephoresis in steady DC field, electroosmosis effect 2-31954
- streaming liquids, electrokinetic processes 2-12239

**electroluminescence**

- see also phosphors*
- alkali halide thin single-crystal layers, prebreakdown electrolum. mechanism 2-46770
- amorphous semiconductors aspects of basic physics researches 2-45042
- anthracene:perylene steady state electrolum. 2-41430
- anthracene-trinitrobenzene system, electrolum. obs. 2-17550
- devices, high-field thin-film, physical concepts, review 2-51711
- diamond:As(B), synthetic, luminescence wave obs. (*Russian*) 2-22095
- diamond, synthetic, relaxation phenomena in N-type negative resistance region 2-26994
- gas electroluminescent detectors for nuclear radiation, review 2-15673
- gas electroluminescent detectors for nuclear radiation, review 2-19860
- high field, impact excitation and ionization 2-9201
- high field, review 2-13570
- hot electron phenomena and electroluminescence 2-13571
- II-VI semiconductors, excited states at deep centres, nonradiative recomb. processes 2-8770

**electroluminescence continued**

- LED physics, book contrib. 2-51713
- liquid phase electrochemiluminesc., diffusion kinetics 2-51710
- metal-semiconductor junction, spatial distrib. of excited luminesc. centres 2-9202
- organic crystal, review 2-36706
- organic molecular crystal, charge carrier recombination dynamics, mag. field effect 2-36054
- p-n heterojunctions, reabsorption influence on electroluminescence kinetics 2-17551
- panel electroluminescence, book contrib. 2-51714
- phosphors, CuS phases 2-41433
- polyethylene terephthalate electrolum. with impulse voltage 2-9203
- polymers, light detection as prebreakdown phenomena 2-17402
- semiconductors, photoelectric effect in semiinfinite surface-barrier struct., luminescence 2-17114
- semiconductors at IBM: physics, novel devices, and materials science, review 2-36031
- surface plasmon light emitter, electrically tunable, proposal 2-5754
- TGS, switching induced electrolum., X-ray irradiat. effect 2-36704
- Ag island film, luminesc. obs. during elec. current passage 2-36707
- Al-Al<sub>2</sub>O<sub>3</sub>-Ag tunnel junctions on gratings, light emission 2-41431
- AlGaAs, DH IR source, luminesc., external quantum efficiency, rough and smooth emitting surfaces 2-51712
- AlGaAs DH wavelength multiplexing injection laser source with graded comp. along active layer 2-919
- Au-oxide-n-GaAs struct., forward biased, electroluminesc. 2-17553
- BaTiO<sub>3</sub>, ferroelectric, electroluminescence phase rot., elec. field amplitude effect 2-31560
- Bi, galvanomagnetic instability, electroluminescence 2-46043
- C fibre microchip emitter, electrolum. effects associated with electron field emission 2-27057
- CC ZnO, phosphor, self-activated, electroluminescence 2-46760
- (Ca,Ba)S:Cu,Nd phosphor, electrolum. behaviour 2-22093
- CaS:Ag phosphors, luminesc. kinetics, phosphoresc. decay, thermoluminesc., and electrolum. meas. 2-13539
- CaS:Hd, Cu, electroluminesc., temp. depend. 2-31558
- CaS:R (R=rare earth), DC electrolum. 2-46767
- CdF<sub>2</sub>/Mn metal-semiconductor junction, luminesc. impact excitation, spatial profiling 2-46761
- n-CdS, electrodes, surface-trapped holes, photo- and electroluminesc. 2-41428
- CdS single crystals, semicond., line emission 2-51708
- CdTe p-n junctions, electrolytically prepared, emission props. 2-2347
- CdTe, p-n junctions, LPE grown, injection electroluminescence 2-13569
- Cu<sub>2</sub>-S-ZnS heterostruct., electroluminescence 2-17552
- GaAlAs:Sn, thin layer emitters, luminescence and Sn-X centres 2-46772
- Ga<sub>1-x</sub>Al<sub>x</sub>As-GaAs heterojunction lasers, reliability forecasting 2-44301
- GaAs, hot electron nonMaxwellian distrib. function in mag. field, cyclotron emission study 2-46038
- GaAs Schottky contacts, light emission behaviour, exptl. data 2-41429
- GaAs solar cells with distributed parameters, I-V characts. effect of ohmic losses 2-18055
- p-GaAs, Z 2-17114
- GaAs:Cr, symmetric struct., impurity carrier traps, electroluminescence study 2-26995
- GaAs:Fe p- $\pi$ -n struct., current-voltage characts. and electrolum. study 2-13178
- GaAs:Si epitaxial p-n junctions, injection luminesc. 2-46773
- GaAs-GaAlAs, DH laser grown by metalorganic CVD process 2-937
- GaN:Zn, photoluminesc. and electroluminesc., light polarisation 2-26980
- GaP, deep levels in light-emitting devices, electron trap and hole/trap discharge rates temp. dependence (*Japanese*) 2-30818
- n-GaP, electrodes, surface-trapped holes, photo- and electroluminesc. 2-41428
- GaP:Bi p-n struct., electrolum. and photoresponse spectra 2-36709
- Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub> crystals, electroluminescence with nonequilib. domain struct. 2-13574
- p-Ge, far IR emission from population-inverted hot-carrier system 2-46771
- InGaAsP DH, electroluminescence, efficiency and kinetics 2-13573
- InP-InGaAsP heterostructure, electrolum. polarization due to internal strain 2-41432
- InSb, photoexcited hot carriers, far IR cyclotron reson. and emission 2-46384
- InSn<sub>0.9</sub>O<sub>2</sub>-Ta<sub>2</sub>O<sub>5</sub>-ZnS:Mn-Ta<sub>2</sub>O<sub>5</sub>-Al thin film struct., DC electrolum. 2-46764
- Mn complex, Mn(Ph<sub>3</sub>PO)<sub>2</sub>Cl<sub>2</sub>, mechanoluminesc. and electrolum. 2-46792
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Bi; photo- and electroluminescence spectra 2-13549
- Si, amorphous, p<sup>+</sup>-i-n<sup>+</sup> junction, injection electroluminesc. and photoluminesc. 2-46769
- Si, excited states at deep centres, nonradiative recomb. processes 2-8770
- a-Si:H, a-Si:F:H, Schottky-barrier diodes, elec. props. using new techniques 2-46104
- Si:H, amorphous, luminesc. and recomb., review 2-5733
- Si-F-H amorphous film, Schottky-barrier and MIS solar cell appls. 2-37344
- SiC:Al<sup>+</sup> implanted epitaxial diodes, cathodoluminescence characts. 2-17557
- $\alpha$ -SiC:Al<sup>+</sup> LED, electroluminesc. spectra fine struct. 2-46774
- SiO<sub>2</sub> glass, luminesc. autoradiography after  $\alpha$ ,  $\beta$  or  $\gamma$  irradiat. 2-5743
- Si<sub>18</sub>Te<sub>45</sub>As<sub>28</sub>Ge<sub>29</sub>, amorphous chalcogenide IR emitting diode, optical props. 2-36705
- SnO<sub>2</sub>-AnS-Cu<sub>2</sub>S-ZnS:Mn(Cu)-AP thin film cell, shortwave electrolum. 2-26996
- SrS:Cu,Gd, phosphors, photo- and electro-luminescence 2-51709
- SrS:R (R=rare earth), DC electrolum. 2-46767
- n-TiO<sub>2</sub>, electrodes, surface-trapped holes, photo- and electroluminesc. 2-41428
- (Zn,Cd)S:Ag,Cl DC electrolum. powder cell, donor-acceptor recombination luminesc. 2-46768
- n-ZnO, electrodes, surface-trapped holes, photo- and electroluminesc. 2-41428
- ZnO luminophores, low-temp. studies on grain-size effect on electro-optical effects 2-46540
- ZnO:DyAg, phosphors, electrolum. and photolum. obs. 2-5744
- ZnS phosphor powder for electrolum. panels, UV light induced ageing, photoacoustic spectroscopy study 2-5775
- ZnS thin electroluminescent epitaxial films, X-ray structural study 2-21466



# electroluminescence continued

- ZnS:Ag, Ce phosphors, photoelectroluminesc. 2-13564  
ZnS:Ag, Cu, Cl phosphor powders, prep. and blue electroluminesc. 2-26992  
ZnS:Al, single cryst., polarisation of electrolum. 2-22094  
ZnS:Cu, Ce phosphors, photoelectroluminesc. 2-13564  
ZnS:Cu,Mn, mechanism of Cu-induced hexagonal-cubic transformation 2-12725  
ZnS:Cu,Nd,Cl film, laser phenomena in direct current electrolum. and cathodolum. 2-13572  
ZnS:Cu phosphor, relation between lattice parameter and particle size 2-22092  
ZnS:Er thin film, DC electrolum., spectral intensity 2-46766  
ZnS:Gd (Cu,Gd)(Mn,Gd), electroluminescent, optical props. 2-36708  
ZnS:Mn,Er thin film, electrolum., mutual interaction between Mn and Er centres 2-46765  
ZnS:Mn thin film electrolum. device, electrolum. characts. depend. on device parameters 2-31559  
ZnS:Mn-Al contact as part of multilayer electrolum. element, elec. props. 2-36139  
ZnS:Mn(TbF<sub>3</sub>) AC thin film device, electrolum. mechanism 2-46763  
ZnS:YEuO<sub>2</sub>S thin film, electrolum. complex centre characts., fluoresc. and time resolved spectra 2-46672  
ZnS(F<sub>2</sub>):Mn, collision excitation cross-sections and energy levels of deep and very deep centers in electroluminescence 2-46762  
ZnS(Se):Mn, high field electrolum., impact excitation and ionization 2-9201  
ZnSe:ErF<sub>3</sub> thin films, electrolum. 2-26993

# electrolysis

- see also anodisation; electrical conductivity of electrolytic liquids; electrodeposition; electroforming; electrolytic dissociation; electrolytic ion mobility; electrolytic machining; electrolytic polishing  
cluster compounds, electrochem. prep. 2-5840  
cluster compounds, electrochem. prep. 2-9302  
dicarboxylic acids, nonrigid, anodic oxidation, lactone form. 2-47347  
electrochemical treatment, precision increasing (Russian) 2-31808  
EPRLs H<sub>2</sub> program, status 2-32131  
fluidised-bed electrolytic cells, diaphragmless, for metal deposition 2-37081  
forced convection, heat transfer coeff. meas., electrolytic method 2-30117  
high temp. water vapour electrolysis for H<sub>2</sub> production, concepts and design for scaling up 2-47529  
ionic melt, nucleation in galvanostatic regime, mathematical modelling 2-40308  
liquid phase electrochemiluminesc., diffusion kinetics 2-51710  
molten salt electrolysis with liquid electrodes, spontaneous surface convection 2-2718  
molten salts, problems of corrosion and electrometallurgy in the nuclear field (French) 2-27330  
oxidation of thin Ag layers in presence of photographic stabilizers (Hungarian) 2-6064  
ozone production by acidic soln. electrolysis using PbO<sub>2</sub> anode, electrolyte an ion adsorption effects 2-47352  
peryleneimyl salts, one-dimens. metals, electrochem. synthesis and characts. 2-27068  
photoelectrolysis cell, current-voltage characteristics 2-22632  
solid polymer electrolyte water electrolysis 2-9693  
stationary electrode temperature, influence on diffusion 2-31925  
synthetic fuel production using HYFIRE commercial fusion Tokamak reactor high-temp. electrolysis system 2-7365  
thermodynamics of double-layer forces in open and closed electrolysis system 2-8858  
tumour treatment by surgery or electrolysis, rat expts. 2-27941  
water, for hydrogen production using reactively sputtered polycrystalline thin film TiO<sub>2</sub> electrodes 2-6043  
water, photoelectrolysis, materials with cationic valence and conduction bands 2-6154  
water electrolysis by high pressure and medium temp. technique 2-17903  
Al production, energy considerations 2-22528  
Al<sub>2</sub>O<sub>3</sub> anodized film, on line colour meas. during electrolytic colouring 2-43065  
β-Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O solid electrolyte, failure modes 2-26133  
Au surfaces, steam condensation, use of electroplating bath and vacuum vapour deposition 2-50071  
<sup>36</sup>ClO<sub>2</sub><sup>-</sup>, rapid method for prep. from <sup>36</sup>Cl<sup>-</sup> by electrolysis 2-47348  
Cu electrorefining and electrowinning using Cu (I) solns., energy considerations 2-22469  
Fe, Armo, corrosion in molten LiCl-KCl eutectic salt, effect of O (Korean) 2-41790  
Fe-(Ni), galvanic coatings on steel (Russian) 2-9392  
GdCl cluster compounds, electrochem. prep. 2-5840  
GdCl cluster compounds, electrochem. prep. 2-9302  
Gd<sub>2</sub>Cl<sub>3</sub> cluster compounds, electrochem. prep. 2-5840  
Gd<sub>2</sub>Cl<sub>3</sub> cluster compounds, electrochem. prep. 2-9302  
Gd<sub>2</sub>Cl<sub>3</sub> cluster compounds, electrochem. prep. 2-5840  
Gd<sub>2</sub>Cl<sub>3</sub> cluster compounds, electrochem. prep. 2-9302  
H<sub>2</sub>, adsorbed on LaNi<sub>5</sub>, electrochem. oxidation kinetics 2-30754  
H<sub>2</sub> from biomass depolarised water electrolysis 2-27739  
H<sub>2</sub> production by H<sub>2</sub>O electrolysis 2-32123  
H<sub>2</sub> production by photoelectrolysis with powder semiconductor anode 2-32124  
H<sub>2</sub> production by water electrolysis with photovoltaic solar energy conversion 2-47528  
H<sub>2</sub>O, use of porous Ni electrodes in multicell module 2-9551  
H<sub>2</sub>O electrolysis using polyethylene-based solid polymer electrolyte membranes 2-42049  
H<sub>2</sub>O photoelectrolysis in NaOH and NaCl electrolytes with Si photoelectrodes 2-47500  
H<sub>2</sub>O, photoelectrolytic decomposition using ceramic electrodes 2-27707  
H<sub>2</sub>O, porous Ni electrodes preparation, physical characts. and polarisation in strong alkali 2-9550  
H<sub>2</sub>SO<sub>4</sub> hybrid cycle electrolytic cell separators resistivity and chemical stability 2-47349  
K<sub>2</sub>MnO<sub>4</sub> with α-MnO<sub>2</sub> struct., needle-shaped cryst. growth by molten salt electrolysis 2-46899  
p-Ni<sub>0.99</sub>Li<sub>0.02</sub>O as photoelectrolysis cathode, flatband pot. and band gap 2-36088  
n-NiTiO<sub>3</sub>, photoelectric and photochem. response 2-51224  
PbS, void-free electrode, prep. and anodic behaviour, influence of O 2-6042

# electrolysis continued

- Rb<sub>2</sub>MnO<sub>2</sub> with α-MnO<sub>2</sub> struct., needle-shaped cryst. growth by molten salt electrolysis 2-46899  
SO<sub>2</sub> oxidation in H<sub>2</sub>SO<sub>4</sub> solutions for H<sub>2</sub> production (French) 2-47535  
SO<sub>2</sub> solutions in N,N-dimethylformamide, electroreduction, Raman evidence for dithionite ion 2-14042  
SrCeO<sub>3</sub>-based sintered oxides, proton cond., appl. to steam electrolysis for H<sub>2</sub> prod. 2-12830  
ZnCl<sub>2</sub> aqueous solutions, conductivity in electrolysis 2-52219  
ZrO<sub>2</sub> solid electrolyte electrochem. cell, energy conversion at high temp. 2-14068
- electrolytes**  
for solid electrolytes see superionic conducting materials  
see also electrolysis; superionic conducting materials  
alkaline battery systems, concentrated alkali electrolytes, thermodynamic properties 2-22573  
amphiphilic electrolyte props. in nonpolar solvents 2-9576  
anodes, electrolytic plasma heating, temp. distrib. control (Russian) 2-30313  
aqueous electrolyte solns., excess thermodynamic props., solvent isotope effects 2-1636  
aqueous solutions, compressibility, structural aspects, electrostriction 2-40459  
aqueous solutions, liq. struct., X-ray diffr. study 2-45012  
charged fluids, solvation forces, expression for free energy 2-37094  
charged fluids, solvation forces, nonlinear theory 2-50501  
charged particles, Monte Carlo simulation, boundary conditions 2-22462  
coal/air fuel cell, electrolyte management 2-22609  
concentrated electrolyte solns., ion distrib. 2-27444  
crystal growth theory, parabolic rate law 2-45094  
current-induced composition gradients in molten LiCl-KCl battery electrolytes 2-22585  
dielectric permittivity, elec. saturation effects 2-51517  
dilute soln., heat of transport, linear response theory 2-22454  
dilute solutions props. from calorimetric meas. 2-9567  
dipole hard sphere model, binary distrib. function and screening pot. calc. (Russian) 2-45001  
electrical double layer, ionic adsorption, primitive model electrolyte against charged surface 2-2716  
electrical double layers, finite ion size effects, Monte Carlo methods 2-20986  
electrochemical coatings, compositional, deposition mechanism from electrolyte-suspensions (Russian) 2-31642  
electrochemical H-Cl energy storage system, electrolyte concentration optimisation for minimum capital investment 2-22461  
electrolyte flow in magnetic electrolyser, electric current, MHD processes 2-40002  
electrolytes, aq. solns., activity and osmotic coeffs., data tables 2-33246  
electrolytes in acetonitrile at 25°C, isentropic compressibilities, sound vel. meas. 2-12655  
forces between surfaces in electrolyte solutions 2-52241  
hard sphere, charged, model, binary distrib. function calc. (Russian) 2-25708  
in aq. soln., <sup>17</sup>O mag. relax. 2-51494  
inhomogeneous electrolyte sum rule 2-37080  
ionic solution near an uncharged surface with image forces 2-16548  
ionic solutions, concentration fluctuations in small volumes 2-52252  
jet flow of supercritical aqueous solns. of electrolytes with Joule heating in thin capillary tubes 2-35194  
metal aq. electrolyte interface, electroreflectance spectra 2-2220  
2-methyltetrahydrofuran/LiAsF<sub>6</sub> electrolyte in Li/VO<sub>2</sub> rechargeable cells 2-47467  
mixed solns., compressibility, temp. depend. (Russian) 2-12658  
molten salt electrolyte cell for propulsion and load levelling (German) 2-22566  
molten salt electrolytes for photoelectrochemical applications, overview of laboratory work 2-22636  
NASICON, ceramic solid electrolyte (Polish) 2-30652  
non-aqueous solutions 2-6705  
nonaqueous electrolyte solns., props. in microwave and far IR region 2-9219  
nonaqueous electrolyte solutions for ambient-temperature lithium batteries 2-22556  
organic acids, evaluation as fuel cell electrolytes, electrochem. props. 2-27443  
permeability in polyvinyl alcohol membranes 2-12807  
poly(acrylic acid) in aq. soln., <sup>17</sup>O mag. relax. 2-51494  
polyelectrolyte chain below six dimensions, relevance of swelling corrections 2-1385  
polyelectrolyte solns., enthalpy of dilution, temp. effect 2-13993  
polyelectrolyte solutions, expression for osmotic coeff. 2-9552  
polyelectrolyte solutions, limiting laws and counterion condensation, electrophoretic mobility and conductance 2-13966  
propylene carbonate/1,2-dimethoxyethane mixed electrolytes, ion behaviour, high energy density battery appls. 2-47351  
Raman spectra of glassy aq. solns. and glassy state 2-2288  
sodium polystyrenesulphonate soln., <sup>23</sup>Na nuclear mag. relax 2-51490  
sodium tetraphenylborate, aq. solns., ionic B-coeffs., viscosity meas. 2-40586  
solid polymer electrolyte water electrolysis 2-9693  
solutions, differential capacity-pot. curves meas. 2-23663  
solutions, high dilution, equilib. and transport excess props., ion pairs limit 2-9546  
solutions, partial modal volumes, Tammann-Tait-Gibson model 2-13968  
solutions, spontaneous precipitation theory 2-47371  
solutions, subMM absorpt. coeffs. meas. 2-4277  
solvation forces in asymmetrically charged electrolytes 2-52213  
structure, neutron scatt. isotope difference method (German) 2-8411  
tetraabutylammonium bromide, aq. solns., ionic B-coeffs., viscosity meas. 2-40586  
tetraphenylphosphonium bromide, aq. solns., ionic B-coeffs., viscosity meas. 2-40586  
thermophysical characteristics, method for determ. 2-43010  
tri-isomethylbutylammonium iodide, aq. solns., ionic B-coeffs., viscosity meas. 2-40586  
Al materials electrolytic polishing, electrolyte anal. (German) 2-31830  
β-Al<sub>2</sub>O<sub>3</sub>, solid electrolyte, degradation mechanism 2-27591  
Au plating electrolytes, distrib. of deposits 2-9554  
Ca-Al/Si/FeS<sub>2</sub> cell employing LiCl-NaCl-CaCl<sub>2</sub>-BaCl<sub>2</sub> electrolyte 2-22587



**electrolytes continued**

- CsCl aqueous solutions, isopiestic molality obs. at elevated temps. 2-37091  
 Cu acid plating, for electronics 2-2719  
 H<sub>2</sub>O photoelectrolysis in NaOH and NaCl electrolytes with Si photoelectrodes 2-47500  
 Li batteries, dependence 2-42000  
 Li batteries, intermediate temperature, LiNO<sub>3</sub>-KNO<sub>3</sub> molten salt as electrolyte, investigation 2-22589  
 Li batteries, TiS<sub>2</sub> cathode chars. 2-41996  
 Li/SOCl<sub>2</sub> primary cells, super-high-rate, performance and safety 2-52314  
 Li/TiS<sub>2</sub> cells role of tetrabutylammonium bromide in LiSCN-1:3 dioxolane organic electrolytes 2-2717  
 Li-organic electrolyte rechargeable batteries, TiO<sub>2</sub>, anatase, as cathode materials 2-14062  
 LiAsF<sub>6</sub>/tetrahydrofuran, electrolyte for rechargeable Li cell, use of insoluble sulphide positive electrodes 2-47468  
 LiCl aqueous solutions, isopiestic molality obs. at elevated temps. 2-37091  
 Na-AlCl<sub>3</sub> cells using solid electrolytes with molten Na anodes and cathodes composed of S compounds and AlCl<sub>3</sub> 2-22597  
 Na-S cells, performance of sodium-beta alumina solid electrolyte 2-22593  
 NaAlCl<sub>4</sub> molten electrolyte in moderate temp. Na cell, VS<sub>2</sub> and NbS<sub>2</sub> Cl<sub>2</sub> rechargeable cathodes 2-47471  
 NaBr, aq. solns., ionic B-coeffs., viscosity meas. 2-40586  
 NaCl, aq. solns., ionic B-coeffs., viscosity meas. 2-40586  
 NaI, aq. solns., ionic B-coeffs., viscosity meas. 2-40586  
 NaS batteries, beta-alumina electrolyte manufacture and use 2-37202  
 NiSO<sub>4</sub>·7H<sub>2</sub>O-MgSO<sub>4</sub>-H<sub>3</sub>BO<sub>4</sub> electrolyte, stable operation conditions for Ni plating Fe powder 2-41807  
 O<sub>2</sub> reduction in fuel cells with H<sub>3</sub>PO<sub>4</sub> electrolyte, Pt catalyst performance optimisation 2-52332  
 Pb-acid positive batteries, discharge capacity calc. 2-41997  
 Zn electroplating processes and electrolytes, selection criteria (German) 2-17635

**electrolytes, solid see superionic conducting materials****electrolytic capacitors**

No entries

**electrolytic conductivity of liquids see electrical conductivity of electrolytic liquids****electrolytic deposition see electrodeposition****electrolytic devices**

- cell gases analysis, O<sub>2</sub> estimation by combustion method 2-27500  
 electrolysis cell, gas flow through porous medium, math. model 2-44782  
 electrolyte flow in magnetic electrolyser, electric current, MHD processes 2-40002  
 Mg electrolyzers, simulation of MHD flows 2-12236

**electrolytic dissociation**

see also electrolytic ions

- bipolar ion-exchange membranes, H<sub>2</sub>O mols. electrolytic dissociation 2-31932  
 cathodic H<sub>2</sub> evolution on surface Ni catalyst in KOH solutions 2-37463  
 glasses, ionically conducting, electrochem. props. 2-26118  
 thermodynamics of double-layer forces, surface dissociation effect 2-8858  
 three-compartment electrolytic cell for anodic oxidation of sulfur dioxide and cathodic production of hydrogen 2-37462  
 H<sub>2</sub> production by CC HCl/HBr electrolysis in solid polymer electrolyte cells 2-32127  
 H<sub>2</sub>O advanced unipolar electrolysis for H<sub>2</sub> production 2-32128  
 H<sub>2</sub>O electrolysis, gas evolution, bubble behaviour, gas fracture and electrolyte resist. 2-27737  
 H<sub>2</sub>O photoelectrolysis using composite semiconductor photoanode 2-47353  
 H<sub>2</sub>O vapour electrolysis, improved cell using Ir<sub>2</sub>O<sub>3</sub> catalytic anodic coating 2-9553

**electrolytic ion mobility**

see also electrophoresis

- ion mobility near conducting boundary 2-37079  
 polyelectrolyte solutions, limiting laws and counterion condensation, electrophoretic mobility and conductance 2-13966  
 propylene carbonate/1,2-dimethoxyethane mixed electrolytes, ion behaviour, high energy density battery appls. 2-47351  
 Pt paste electrodes on (CeO<sub>2</sub>)<sub>0.9</sub>(Gd<sub>2</sub>O<sub>3</sub>)<sub>0.1</sub> solid electrolyte diffusion-limited charge transport 2-13972  
 ThO<sub>2</sub>·Y<sub>2</sub>O<sub>3</sub> solid electrolyte, O<sup>2-</sup> transport no., vapour press. technique 2-12841  
 ZrO<sub>2</sub>·Y<sub>2</sub>O<sub>3</sub> solid electrolyte, O<sup>2-</sup> transport no., vapour press. technique 2-12841

**electrolytic ions**

see also electrical conductivity of electrolytic liquids; electrolytic dissociation; electrolytic ion mobility  
 Li/TiS<sub>2</sub> cells role of tetrabutylammonium bromide in LiSCN-1:3 dioxolane organic electrolytes 2-2717

**electrolytic machining**

see also electrolytic polishing

- electro-erosive polishing, optimum condition determ. (Russian) 2-52097  
 metallographic sample prep., electrolytic machining, and polishing using miniature electrocups (German, English) 2-52155  
 parameters controlling metal removal rate, surface finish 2-22361

**electrolytic polishing**

see also electrolytic machining

- alloys, electro-erosive polishing, optimum condition determ. (Russian) 2-52097  
 bronze, single-phase, electropolishing in o-H<sub>3</sub>PO<sub>4</sub> 2-27353  
 fission reactor control rod drive, decontamination by electrochemical polishing 2-7181  
 fission reactor control rod drive, decontamination by electrochemical polishing 2-19624  
 metallographic sample prep., electrolytic machining, and polishing using miniature electrocups (German, English) 2-52155  
 nuclear reactor materials, prepriolishing of surfaces for exposure control and increased plant availability 2-7180  
 nuclear reactor materials, prepriolishing of surfaces for exposure control and increased plant availability 2-19623  
 specimen prep., in situ for metallography, electrolytic polishing and etching devices 2-17807  
 steel, alloy, stress corrosion cracking, influence of surface props. under electrolytic cleaning 2-17773

**electrolytic polishing continued**

- Al, electropolishing, icing defects 2-2629  
 Al materials, electrolyte anal. (German) 2-31830  
 Au-transition metal alloys, electromech. polishing 2-47285  
 Cu:P, in H<sub>3</sub>PO<sub>4</sub> solutions (Russian) 2-22371  
 Cu-transition metal alloys, electromech. polishing 2-47285  
 Mn-Cu alloys, metallographic method 2-41846  
 Nb, electropolishing, new technique for TEM exam. 2-41847  
 Ta, electropolishing, new technique for TEM exam. 2-41847  
 Ti, electropolishing, new technique for TEM exam. 2-41847  
 Ti for metallography (Japanese) 2-52088  
 W thin wire, sample prep. for TEM 2-2639  
 Zr, electropolishing, new technique for TEM exam. 2-41847

**electromagnetic absorption see electromagnetic wave absorption****electromagnetic compatibility**

- dampers and ferrite isolated data link for SGMP testing 2-32804  
 deep source region EMP, simulation, coupling to cylinder 2-44189  
 HEMP field penetration into an ideal shelter without a floor through lossy earth 2-44190  
 monopole antenna, response to EM pulse with corona, transmission line model 2-44191  
 satellite power system X-ray response, anal. and test methodology 2-32800  
 satellite system-generated EM pulse simulation fidelity criteria 2-32802  
 satellites, nuclear weapon vulnerability assessment using NHEP-S, classification, categorisation and screening 2-32798  
 satellites, survivability to nuclear weapon explosion effects estimates 2-32799  
 STARSAT, anal. and research satellite, SGEMP test, high-level current injection testing 2-32801  
 triaxial satellite response and separate body testing within SGEMP simulator 2-32803

**electromagnetic corrections**

"electromagnetic corrections" is distinguished in use from "radiative corrections" by application to elementary particle and nuclear interactions

see also radiative corrections

- baryons, containing colour-bearing scalar quanta, dynamic effects 2-23929  
 baryons semileptonic decays, radiative corrections 2-43341  
 electromagnetic corrections, higher order effects due to charged lepton scatt. 2-23993  
 heavy quarks, semileptonic decay, quark fragmentation 2-3780  
 hyperon semileptonic decays, asymmetry coeffs., radiative correction independent form 2-7029  
 quarkonium, QCD radiative corrections to hyperfine splitting 2-23994  
 radiative corrections to neutral-current interactions in Weinberg-Salam model 2-3788  
 radiative quark mass generation and a fourth quark family 2-23996  
 SU(5) theory and toy model, effective pot., gauge hierarchy problem, radiative corrections 2-43234  
 supersymmetric theory, R<sub>f</sub> gauge fixing, radiative symm. breaking 2-48913  
 weak low-energy Hamiltonian, leading log. corrections in Weinberg model 2-6978  
 Z boson mass, EM correction, hadronic contrib. in standard model 2-23995  
 B<sup>0</sup>-B<sup>0</sup> system, mass mixing and CP violation in six-quark model, radiative corrections 2-43303  
 ed scatt., electroweak EM corrections, sin<sup>2</sup>θ<sub>w</sub> 2-3789  
 e<sup>+</sup>e<sup>-</sup>→e<sup>+</sup>e<sup>-</sup>η<sup>+</sup>η<sup>-</sup> 2 to 4 GeV, cross-section 2-24061  
 e<sup>+</sup>e<sup>-</sup>→hadrons, O(α<sub>s</sub><sup>2</sup>) QCD radiative corrections for shape variable distributions 2-49003  
 e<sup>+</sup>e<sup>-</sup>→μ<sup>+</sup>μ<sup>-</sup>, CM energy 33.5 GeV, charge asymmetry obs. 2-43321  
 e<sup>+</sup>e<sup>-</sup>→μ<sup>+</sup>μ<sup>-</sup> P- and C-symmetry violations near narrow r eson. (Russian) 2-48971  
 γγ→γγ, EM corrections 2-29164  
 γγ→X from e<sup>+</sup>e<sup>-</sup>, e<sup>+</sup>e<sup>-</sup>, e<sup>+</sup>e<sup>+</sup> collision rings, radiative corrections 2-24066  
 K resonant time-like form factor, radiative corrections, charge radius 2-29109  
 νe→νe, hard photon bremsstrahlung, in Weinberg model 2-48972  
 νN, EM and weak corrections to sin<sup>2</sup>θ<sub>w</sub> 2-43324  
 νN→X, bremsstrahlung, γ-rays, neutral currents, EM corrections 2-38874  
 ν<sub>N</sub>→μ<sup>+</sup>X, radiative corrections and their effect on p<sup>2</sup> and sin<sup>2</sup>θ<sub>w</sub> determ. 2-11041  
 πN scattering, Coulomb correction to phase shift in P<sub>33</sub> resonance region 2-3805  
 τ→Mν, M=pseudoscalar meson, radiative corrections 2-11047  
 W boson mass, EM correction, hadronic contrib. in standard model 2-23995
- electromagnetic decays**  
 charmonium M1 transitions and charm quark anomalous mag. moment 2-33844  
 ENDF/B-V actinide and fission product decay power 2-15449  
 massive neutrino radiative decay lifetime, Universe evolution after recombination era 2-28588  
 massive neutrinos, decay rel. to photoionisation of intergalactic medium 2-48333  
 meson radiative decays, review 2-323  
 P wave quarkonium hadronic and photonic decays, QCD corrections 2-23972  
 supernova outbursts, internuclear mechanism for gamma-ray emission 2-28487  
 top meson and quarkonium pot. 2-23930  
 two-photon decay, space-time description 2-15341  
 vector mesons, radiative decay, Weinberg's spectral function sum rule study 2-29111  
 B<sup>0</sup>→γX, heavy quark photonic decays, m<sub>t</sub> and b<sub>t</sub> coupling bounds 2-23988  
 χ→γγ(γψ), charmonium studies with Crystal Ball detector in e<sup>+</sup>e<sup>-</sup> annihilation 2-15342  
 χ→ψγπ<sup>0</sup> decay mode in inclusive hadronic interactions from ππ→ψγX 2-33828  
 Δ→Nγ, quadrupole transition in quark model (Russian) 2-33845  
 E decay, glueballs and identification by flavour symmetry 2-19343  
 η→π<sup>0</sup>γγ, branching ratio meas. 2-3787  
 η→π<sup>+</sup>π<sup>-</sup>π<sup>0</sup> (3π<sup>0</sup>) EM decays and ρππ coupling constant 2-3779



**electromagnetic decays continued**

- $\eta'$ ,  $f_1$ ,  $A_2$ ,  $f'$  mesons radiative widths determ. in  $e^+e^-$  annihilation at SPEAR energies 2-15349  
 $\eta'$  candidate state at 3592 MeV, from  $\psi'$  (3684) decay 2-38877  
 $\eta' \rightarrow \gamma\gamma$ , radiative width study in  $e^+e^-$  annihilation expt. 2-15315  
 $\gamma \rightarrow \gamma\eta_c$ , heavy vector mesons radiative decays into paraquarkonia 2-23989  
 $\gamma\gamma \rightarrow \pi^+\pi^-\pi^0$ , cross section,  $f(1270)$  radiative width 2-15354  
 $\gamma\pi \rightarrow \pi^+\pi^0$ , pion prod. in reson. region, phenomenological anal. using fixed-t dispersion relations 2-43362  
 $\gamma\rho \rightarrow \pi^+\pi^0\rho$ , pion prod. in reson. region, phenomenological anal. using fixed-t dispersion relations 2-43362  
 $K \rightarrow \pi\pi\gamma$ ,  $\Delta=1-1/2$  rule, Weinberg+QCD model 2-23990  
 $K^+ \rightarrow \gamma e^+\nu$ , photon radiative weak decays in quark model 2-48981  
 $K_L \rightarrow \gamma\gamma$ , one-loop contrib., pole-dominance model 2-23991  
 $P \rightarrow \gamma q\bar{q}(\gamma e\nu)$ ,  $P$ =charmed or bottom mesons, photon and gluon radiative weak decays 2-48981  
 $\phi \rightarrow \eta'\gamma$ , vector decay branching ratio calc. in QCD 2-48980  
 $\pi^+ \rightarrow \gamma e^+\nu$ , photon radiative weak decays in quark model 2-48981  
 $\pi^+ \rightarrow e^+\mu^+\nu_e$ , charged lepton spectra 2-19381  
 $\psi \rightarrow \gamma$  radiative decays 2-15343  
 $\psi \rightarrow E(1440)\gamma$ , pseudoscalar glueball QCD sum rules 2-15338  
 $\psi \rightarrow G(1440)$ , candidate glueball, axial vector anomaly, rel. to  $\eta'$  2-23992  
 $\psi \rightarrow \eta'\gamma(\gamma\eta)$ , heavy vector mesons radiative decays into paraquarkonia 2-23989  
 $\psi \rightarrow \eta'\gamma(0\gamma)$ , branching ratio study 2-48996  
 $\psi$  radiative decays inclusive and exclusive meas. in  $e^+e^-$  annihilation 2-19382  
 $\psi \rightarrow \eta'(\eta)\gamma$ , vector decay branching ratio calc. in QCD 2-48980  
 $\psi \rightarrow \chi(\chi\gamma\psi)$ , charmonium studies with Crystal Ball detector in  $e^+e^-$  annihilation 2-15342  
 $\Sigma^+ \rightarrow p\gamma$ , decay amplitude, baryon reson. contrib. calc. in bag model framework (Russian) 2-23979  
 $T \rightarrow \eta'\gamma$ , vector decay branching ratio calc. in QCD 2-48980  
 $T \rightarrow \gamma\eta_c$ , evaluation in quarkonium model 2-15337

**electromagnetic energy** *see electromagnetic waves***electromagnetic field theory**

- see also electromagnetism waves; electromagnetism*  
 absorbing boundary conditions for finite-difference approx. of time-domain electromagnetic field eqns. 2-20232  
 Aharonov-Bohm, effect, mag. flux quantisation 2-38757  
 (B,H) stationary fields without source and null boundary conditions in non-linear media, existence, uniqueness and stability theorems 2-34623  
 Casimir force on circular boundary, Green's function calc. 2-44166  
 charge distributions, non-stationary, condition to be non-radiating (French) 2-39529  
 courses for electrical engineering students, teaching material (German) 2-42805  
 eddy currents, in conducting circular disc and thin plate in homogeneous magnetic field (German) 2-24915  
 electromagnetic-current eqns., quaternion form 2-61  
 electromagnetism and space-time holomorphic props. 2-18931  
 EM screen, plane-parallel rectangular, analysis (German) 2-44169  
 external EM field, electric and mag. response 2-29757  
 gauge of the electromagnetic orientation in the general theory of relativity 2-18990  
 generalised field theory, linearised field equations, 2-28732  
 gradient vector and Bohm quantum pots. of EM field (Chinese) 2-18930  
 Green's functions, eigenfunction expansions, equiv. layers of surface charge, current sheet and polarisation 2-816  
 group theory application, employing symm. (German) 2-48520  
 Huggins term in general relativity 2-6771  
 inhomogeneous medium, homogeneous multilayer approx. method, difficulties and their remedy 2-34625  
 integral representation of EM field vectors 2-34620  
 invariant symmetric second rank spinors and EM tensors 2-33715  
 laser electronics and systems, book 2-48413  
 light reflection from non-ideal interface boundary 2-24943  
 London equations, classical derivation 2-38454  
 magnetic levitation, theory, results and further practical problems 2-44167  
 Maxwell's poles, relationship to spinors (Russian) 2-23471  
 Maxwell-Hertz theory, observations regarding integral and local forms (Rumanian) 2-42879  
 Maxwell-Langevin eqns. and Kubo formulae 2-23500  
 object with radially dependent refr. index, unique determ. by its natural frequencies 2-34632  
 observation system, EM fields as functionals 2-38457  
 photon theory of the electron 2-3447  
 planar sources that generate identical intensity distribns. in Fraunhofer zone, characterisation and reconstruction 2-34614  
 ponderomotive force, anomalous 2-44168  
 problems for undergraduates, book 2-24911  
 resonant EM field, sources synthesis 2-4441  
 singularities modelling in finite-difference approx. of time domain EM field eqns. 2-4440  
 stationary fields without sources in nonlinear media, existence and stability theorems 2-34636  
 stationary waves in nonlinear, periodically modulated media with large group retardation 2-39545  
 straight-cylindrical conductor carrying rectangular periodic current, skin effect 2-36077  
 superrandom fields, entropy props. 2-49717  
 symmetrical wave excitation, using two linked logarithmic spirals on dielectric substrate (Russian) 2-44176  
 transient gratings in a nonlinear medium 2-39592  
 wave propagation below anisotropic ionosphere with arbitrary geomagnetic field 2-6490  
 Yang-Mills classical fields, stochastic oscills. white light stability (Russian) 2-6965  
 H, relativistic atom, Dirac and EM fields interaction 2-48519

**electromagnetic fields**

- axisymmetrical problem concerning diff. of EM field by solid of revolution (Russian) 2-29767  
 coil moving over ferromag. layers, EM field, Fourier transform calc. 2-29753  
 computation by finite-element parallel processor 2-24917  
 conducting earth, image approximations extensions 2-7701

**electromagnetic fields continued**

- cyclotron maser instability, as resonant limit of space charge wave interaction with EM structure 2-20285  
 cylindrical shell, field distribution due to axial currents 2-34622  
 design of three- and two-dimensional quasi-stationary and static electromagnetic fields in anisotropic multilayer cylindrical media (Russian) 2-2070  
 dipole configuration system, appl. of multidimensional minimisation method (Russian) 2-818  
 Dirac eqn., method of solving 2-3740  
 elastic dielectric with dispersion, stress and EM field near crack 2-4752  
 ELF EM fields and health risks from HV transmission lines 2-32259  
 Feynman paradox concerning ang. momentum of static EM field 2-38393  
 flux and eddy-current distribution solution by network method, expt. verification 2-7702  
 free EM field Landau gauge, Fock realisation 2-3703  
 gas cooling by reson. EM field under saturation conditions 2-20808  
 general relativity, EM fields and viscous fluids equivalence 2-28734  
 high-frequency EM source located on perfectly conducting cylindrical surface, EM field excitation 2-49629  
 induction pump, linear, boundary integral eqn. soln. 2-29752  
 inhomogeneously dielectrically loaded waveguide for ultra-broad-band light modulators 2-49889  
 iris cavities, circularly symmetric EM fields theory 2-24453  
 magnetic vector pot., depend. on history of EM field 2-38392  
 matrix equation system solns., survey of numerical methods for EM field problems 2-15939  
 Maxwell's equation solution for axisymmetric invariance case (French) 2-34619  
 microwave field distrib. probing, amplitude, phase and polarisation in real time 2-15185  
 minimal EM couplings, invariant fields and pot. 2-11009  
 numerical solns., singularity/integral eqn. method 2-29750  
 pacemakers, risks of electrical danger in electromagnetic fields 2-47752  
 particles carrying electric and magnetic charge, second quantisation, field interaction 2-43260  
 potentials utilisation for easy calc. 2-44164  
 reduction of four-vector field in terms of standard helicity representation of inhomogeneous Lorentz group for imaginary mass system 2-28650  
 Schrodinger eqn. for charged particle in EM field 2-10639  
 sea waves in electrically stratified seas, EM field 2-10169  
 semiconductor, nonlinear intraband absorpt. of EM field 2-51162  
 separation surface between nonlinear media, forces in EM field (Rumanian) 2-45678  
 single-phase line with separate shielding of conductors, electromagnetic field anal. 2-34624  
 spin-massless particle, carrying elec. and mag. charge, generalised EM fields 2-43259  
 spin-zero structureless point charge in EM field, Schrodinger eqn. dynamical symmetries 2-18950  
 strip conductor in stratified dielectrics, complete orthogonal functions 2-39530  
 superconducting materials electromagnetic fields equations derivation from non-local macroscopic theory (Russian) 2-51388  
 surface impedance tensor of lower boundary of ionosphere for arbitrary geomagnetic field (German) 2-28267  
 time depend. charged particle in crystal, transformation modified singular spherical integrals 2-29769  
 wave field near nonsingular caustic, short-wavelength asymptotic behaviour 2-29758  
 $\mu$ - $c\nu\bar{\nu}$ , decay probability in plane EM wave field 2-7032  
 SF<sub>6</sub> gas in EM standing-wave field, reson. coherent transients 2-16071

**electromagnetic induction**

- see also inductance*  
 conducting cylinder within alternating series of AC fed ring windings, centring force (German) 2-7700  
 conducting disk and thin plate, EM behaviour in alternating magnetic field (German) 2-24914  
 Earth, E-polarisation boundary conditions above laterally non-uniform conductors for simple induction mechanism 2-9921  
 Earth, EM induction sounding in Zydodaira area of Azumasen Volcano, Japan 2-32393  
 Earth, geomag. vars. meas. in E United States and implications for continental tectonics 2-14382  
 Earth, method of reducing terrain relief effects from VLF-EM data 2-37754  
 Earth, physical principles of high-frequency induction log isoparametric sounding 2-48048  
 Earth, transient response of induction logging tool in borehole 2-28218  
 Earth EM induction, discovery of Detour Zn-Cu-Ag deposit of NW Quebec by airborne survey 2-28071  
 Earth EM induction, multifrequency Turam meas. over sulphide deposit 2-27976  
 Earth EM induction, numerical methods for establishing solns. to inverse problem 2-32403  
 ferromagnetic plate in transverse magnetic field, quasi-static magnetoelastic vibr. 2-29756  
 inspection by inductive method simultaneous magnetization of test and reference samples 2-2676  
 linear induction pump, boundary integral eqn. soln. 2-29752  
 magnetic media, with arbitrary mag. permeability mag. induction depend., EM wave propag. 2-7705  
 ocean, anal. of EM technique for investigation of currents (Russian) 2-10071  
 resistive half plane illuminated by E-polarised plane wave 2-39531  
 ribbed high permeable body in the field of massive cylindrical conductor running normal to the ribs, three-dimens. boundary-value problem (German) 2-7699  
 wind wave crests, magnetic induction 2-14387

**electromagnetic interference**

- see also radiofrequency interference*  
 by relativistic electron beam 2-44180  
 damper and ferrite isolated data link for SGMP testing 2-32804  
 DC torquer-tachometer, integrally-wound, electromagnetic coupling problems and application 2-23624  
 deep source region EMP, simulation, coupling to cylinder 2-44189  
 HEMP field penetration into an ideal shelter without a floor through a lossy earth 2-44190



- electromagnetic interference** continued  
nuclear and space radiation effect, conf., Seattle, WA, USA (July 1981) 2-33215  
nuclear electromagnetic pulse, conf., London (Nov. 1981) 2-23383  
nuclear electromagnetic pulse simulation 2-24431  
nuclear electromagnetic pulse threat, engineering countermeasures 2-24428  
nuclear electromagnetic pulses, generation mechanisms and characs. 2-24427  
nuclear electromagnetic pulses, interaction with extensive systems 2-24429  
nuclear electromagnetic pulses, nuclear hardening of cables 2-24430  
satellite power system X-ray response, anal. and test methodology 2-32800  
satellite response and separate body testing within an SGEMP simulator 2-32803  
satellite system-generated EM pulse simulation fidelity criteria 2-32802  
satellites, nuclear weapon vulnerability assessment using NHEP-S, classification, categorisation and screening 2-32798  
satellites survivability to nuclear weapon explosion effects estimates 2-32799  
STARSAT, anal. and research satellite, SGEMP test, high-level current injection testing 2-32801
- electromagnetic lenses** *see magnetic lenses*
- electromagnetic oscillations**  
*see also cavity resonators; lasers; masers; ring lasers*  
electric current absolute determination, using electromagnetic oscillations (Slovenian) 2-43042  
LF EM oscillations generation by field of powerful radiowave in ionosphere 2-42540
- electromagnetic radiation** *see electromagnetic waves*
- electromagnetic theory of light**  
No entries
- electromagnetic wave absorption**  
*see also electromagnetic wave propagation in plasma; gamma-ray absorption; light absorption; spectra; X-ray absorption*  
atmosphere, calc. of microwaves absorpt. by cloud and rain 2-3058  
humans, absorption calculation under near-field exposure conditions, plane-wave spectrum approach 2-18244  
IR, determ. of absorption coeffs. of biological tissues, technique and theory 2-14365  
IR 5-17 cm<sup>-1</sup> regions, absorpt. by water vapour 2-47972  
man, empirical relationship for near-field exposure conditions 2-18246  
metal-dielectric interface, phonon and photon reson. absorpt. 2-30737  
MM wave O<sub>2</sub> absorption spectra calc. on small microcomputer 2-42459  
pyramidal absorber with good refl. characs., design and expts. 2-34639  
radio sources, compact, free-free absorpt. rel. to detectability of H radio recomb. lines 2-42757  
rain-induced attenuation at 36 GHz and 55 GHz 2-42460  
RF and microwave absorpt. by spherical multilayer biological systems 2-52637  
semiconductor, interband absorpt. of long-wave radiation, impurity influence 2-2378  
semiconductor, nonlinear intraband absorpt. of EM field 2-51162  
semiconductor, quasienergy spectrum, EM wave influence 2-9118  
semiconductor superlattice, EM wave many-photon absorpt. 2-9119  
solar energy materials, spectrally-selective, performance limitations and restraints 2-6171  
tissue, multilayer slab model, absorpt. under near-field exposure conditions 2-18245  
water vapour, structure and EM absorption 2-39524  
YIG, Faraday effect in mm region of spectrum 2-26870
- electromagnetic wave attenuation** *see electromagnetic wave absorption; electromagnetic wave scattering*
- electromagnetic wave diffraction**  
*see also electromagnetic wave propagation in plasma; gamma-ray diffraction; light diffraction; X-ray diffraction*  
axisymmetrical problem concerning diffr. of EM field by solid of revolution (Russian) 2-29767  
bounded body wave diffraction, nonlinear problem (Russian) 2-7710  
coaxial open cavity with reflective diffraction grating, electrodynamics 2-11618  
curvilinear screen array, diffraction of plane E-polarised waves (Russian) 2-34634  
dipole field diffraction by perfectly conducting spheroid 2-11623  
edge discontinuity diffraction, mode matching and geometrical theory 2-49632  
Focal shifts in diffracted converging spherical waves 2-824  
focused fields, Debye integral representation validity conditions 2-823  
focusing at small ang. apertures in Debye and Kirchhoff approxs. 2-29761  
gratings, classical and crossed, microwave range of diffr., expt. investigation 2-825  
parallel plate grating with dielec. loading, diffr. of plane wave 2-34640  
perfectly conducting screen, stationary model of EM wave diffraction (Russian) 2-34633  
periodic screen scattering of EM signals limited in space and time (Ukrainian) 2-34628  
plane wave scattering, diffr. by wedge with different face impedance 2-34626  
spherical waves diffraction by opaque disk with randomly rough edge 2-29764
- electromagnetic wave diffusion** *see electromagnetic wave scattering*
- electromagnetic wave interference**  
*see also atmospheric; electromagnetic wave interferometers; electromagnetic wave interferometry; electromagnetic wave propagation in plasma; light interference; Moire fringes*  
energy dispersive X-ray spectrometry, in SEM, artifacts 2-28973  
suppression, solid state expts. in pulsed high mag. field (Japanese) 2-33503
- electromagnetic wave interferometers**  
*see also electromagnetic wave interferometry; light interferometers*  
1 mm wavelength electron density interferometer for Princeton Tokamak Fusion Test Reactor 2-40180  
electron density and plasma current distrib. meas. in Tokamak plasma using sub-MM waves 2-40182  
Fabry-Perot, spectrosc. instrumental function (Japanese) 2-48757  
microwave, dielectric slabs effective thickness meas. 2-23665
- electromagnetic wave interferometers** continued  
microwave, for small displacement meas. in electromagnetically semi-transparent medium 2-10788  
polarisation interferometer for absolute dilatometry 2-28834  
waveguide interferometer, for dielec. permeability meas. 2-23667
- electromagnetic wave interferometry**  
*see also light interferometry; Moire fringes*  
ambiguity resolution 2-33617  
astronomy, relativistic effects in radar, optical and radio-interferometric meas. 2-10335  
convection, forced and free, in horizontal tube, interferometric obs. 2-8146  
electron cyclotron emission meas. design/evaluation of antennae for interferometers in large Tokamak plasmas 2-35326  
Fabry-Perot etalon, capacitance stabilised, piezoelectric scanned 2-6893  
high-sensitivity microwave optics 2-28626  
ionosphere, interferometer studies of equatorial F-region irregularities and drifts 2-28270  
BL Lacertae, VLBI obs. of millisecond second struct. during outburst 2-33153  
lightning VHF sources, two-dimensional interferometric positions 2-18540  
line width measurement model using IC (Slovak) 2-15214  
 $\alpha$  Lyrae, stellar polarisation study with CERGA interferometer 2-6592  
metal vapour in heat pipe, interferometric meas. of large number density 2-4910  
molecular films, structure and props. 2-5315  
operative position finding, artificial satellite appls. in navigation, geophysics and surveying, dist. meas., radio interferometry (German) 2-28238  
radio sources, core-dominated, Jodrell Bank MTRLI obs. at 408 MHz 2-48344  
strain measurement, diffraction interferometric method 2-38643  
very-long-baseline interferometry, geodetic appl., coherence limits 2-28227  
VLBI delay and delay rate accuracy 2-14787  
VLBI of radio sources, appl. to geodynamics research 2-10209  
X-ray interferometry, review of characs., appls. 2-28957
- electromagnetic wave propagation**  
*see also atmospheric electromagnetic wave propagation; atmospheric light propagation; backscatter; electromagnetic wave absorption; electromagnetic wave diffraction; electromagnetic wave interference; electromagnetic wave propagation in plasma; electromagnetic wave reflection; electromagnetic wave refraction; electromagnetic wave scattering; guided electromagnetic wave propagation; light propagation; radiowave propagation*  
approximate boundary conditions in EM scatt. and propag. problems 2-820  
conference, Aug. 1980, Munich, Germany 2-48397  
cylindrical magnetodielectric excited by step EM field wave propag. mechanism (Russian) 2-49639  
dielectric doubly periodic struct., transverse electric wave propagation 2-821  
dispersive media propagation, application of Laplace transform numerical inversion 2-49672  
electrodynamics of media with spatial dispersion, boundary value problem 2-44174  
ergodicity hypothesis in random propag. 2-15109  
Green's tensor function for EM wave radiation in dispersive gyrotropic medium 2-15956  
gyrotropic media near dipole transition freq. 2-34635  
high-frequency EM source located on perfectly conducting cylindrical surface, EM field excitation 2-49629  
inhomogeneity synthesis approximating to given form with low perturbations 2-29763  
interstellar medium, galactic distrib. of radiowave scatt. material 2-3296  
line source radiation pattern, interface extinction and subsurface peaking 2-24919  
linear wave propag. in homogeneous and inhomogeneous media, dispersion relations 2-18911  
magnetic media, with arbitrary mag. permeability mag. induction depend., EM wave propag. 2-7705  
Maxwell's eqns. solns. in cylindrical coords. for axially travelling waves 2-34638  
metallic cylinder, surface EM wave propag. (French) 2-7708  
non-uniform plane wave propagation in lossy media, equivalent 4-port (French) 2-34631  
nonlinear media, nonlinear integro-differential equation (Russian) 2-20379  
nonlinear skin effect, plane and circular polarised electromagnetic fields penetrating a ferromagnetic conducting semispace 2-24918  
optically active and magnetoelc. media of arbitrary geometry 2-44173  
plane-stratified anisotropic, gyrotropic and bianisotropic media, symmetries and scatt. relations 2-7707  
pulsar radiation, interstellar scintillation rel. to plasma irregularities parameters 2-3297  
radio sources, astronomical, observability of gravitational scintillation 2-28333  
radio waves propagation in ice, rel. to detailed study of glacier beds using radio-echo techniques 2-10085  
scintillation phenomena, refractive scatt. theory 2-29759  
solar corona, new interpretation of radar echoes involving lower-hybrid waves 2-10366  
superconductor, circular, EM wave propag. (French) 2-7708  
superluminal propagation velocity 2-23511  
surface EM waves, excitation by diffr. grating 2-16095  
surface waves, on solids, vibr. and EM, review 2-26203  
surface waves on nonlinear dispersive medium 2-39535  
symmetrical wave excitation, using two linked logarithmic spirals on dielectric substrate (Russian) 2-44176  
transparent dispersive medium, stress tensor EM wave propag. 2-49640  
turbulent atmosphere, EM beam wave propag., systematic perturbation approach 2-15942  
wave field near nonsingular caustic, short-wavelength asymptotic behaviour 2-29758  
waves in randomly inhomogeneous annular systems, statistical anal. 2-827



# electromagnetic wave propagation in plasma

see also *ionospheric electromagnetic wave propagation; light propagation in plasma; magnetospheric electromagnetic wave propagation*  
absorption and emission of extraordinary-mode EM, waves near cyclotron freq. in noneq. uilib. plasmas 2-40095  
absorption and reflection at electron cyclotron freq. harmonics 2-12317  
ACT-1 toroidal device, plasma heating by wide  $k_{\perp}$  spectrum waveguide system 2-25583  
action of intense electromagnetic wave on a nonuniform plasma 2-30299  
active molecular plasma, EM oscillations propag. in const. external mag. field 2-40111  
air plasma, microwave absorption 2-16453  
charged particle collisions, intense EM radiation absorpt. 2-50374  
collisionless plasma, first and second order current responses, three-wave interaction 2-35283  
collisionless plasma, nonlinear phenomena study in HF heating expt. 2-16459  
convective Brillouin amplification in drifting plasmas 2-44863  
cylindrical waveguide, containing magnetoactive plasma, EM wave propag. 2-12318  
dipole field scattering by moving plasma column 2-35295  
dipole resonance of a plasma elliptical cylinder in a dielectric shell 2-16456  
electron cyclotron heating of a dense Tokamak plasma 2-50420  
electron cyclotron resonance heating of high temperature plasma 2-25561  
electron cyclotron wave propag. obs. in high density magnetoplasma 2-16444  
electron-positron plasma, EM eigenwave absorpt. and dispersion in mag. field 2-40117  
EM wave absorption in upper hybrid reson., region, nonlinear effects influence (Russian) 2-8287  
EM wave momentum transfer in inhomogeneous plasma 2-12314  
energy and pulse balance eqns. of wave amplitude change in nonequilibrium plasma (Russian) 2-20870  
excited atom contrib. to refractive index 2-30288  
fast wave heating of Tokamaks near LH freq. 2-4963  
frequency mismatch and stochastic heating in the cyclotron frequency range 2-44873  
Gaussian EM beam nonlinear interaction with electrostatic ion cyclotron wave, Brillouin scatt. 2-35296  
glow discharge, millimeter wave interaction, current-voltage variations, bremsstrahlung emission 2-50471  
glow discharge mm-wave interaction 2-50415  
hot electrons produced by resonance absorption in a microwave-plasma interaction 2-50390  
inhomogeneous plasma, resonant absorpt. of EM waves 2-50413  
inverse Faraday effect in a relativistic electron plasma (Russian) 2-12398  
ion-cyclotron wave, parametric excitation by pump mag. field, ion heating 2-12316  
ionosphere, axial magnetic field influence on radiowave scatt. (Russian) 2-23184  
ionosphere radiowave, scattering by equatorial and high latitude waves and irregularities 2-28277  
laser beam propagation, self trapping; appl. to EM waves in plasma 2-39702  
laser irr. gas-jet target, absence of fast electrons 2-44908  
laser-induced plasma, striated jets due to nonlinear force and spontaneous mag. field 2-20868  
laser-plasma interactions, backscattered radiation at subharmonic frequency  $\omega_0/2$  2-25560  
laser-plasma systems, critical surface struct., resonant absorpt., three-fluid model 2-40047  
laser-produced plasma, Brillouin backscattering calcs. 2-40137  
linear wave conversion in warm, unmagnetised, collisionless plasma 2-30307  
lower hybrid wave nonlinear coupling 2-25581  
lower hybrid wave penetration and effects on electron population 2-25582  
magnetic field generation in the underdense plasma due to nonlinear interaction of EM waves 2-40098  
magnetised plasma, EM wave propag. precessional rotation and freq. shift 2-30308  
magnetoacoustic wave and resonance excitation method 2-16446  
magnetoplasma, EM electron cyclotron harmonic waves 2-50414  
magnetoplasma waveguide, radiated EM modes, wavefronts 2-20871  
metallic targets, plasma prod. by lasers, absorpt. in a spark 2-44936  
microwave propagation in magnetised plasmas by high-density 2-12300  
microwave-plasma interaction, stimulated Brillouin scatt. studies using microwave source 2-16452  
mirror plasma, whistler mode electron cyclotron emission 2-40048  
nonlinear interaction of EM radiation in nonuniform weakly magnetised plasma 2-12302  
nonlinear interaction of volume and surface waves in semilimited plasma (Russian) 2-8292  
nonlinear interaction plasma waveguide system 2-20876  
nonlinear refraction of EM wave beam in thin plasma layer (Russian) 2-25557  
nonlinear skin effect in dense plasma 2-4945  
parametric transmission of dense plasma (Russian) 2-30309  
parametric wave penetration through overdense plasma layer; current generation (Russian) 2-16436  
photon propagation in magnetised plasma, relativistic effects 2-25559  
plasma flow, EM scattering, effect of struct. of a disturbance near a metallic body 2-20841  
ponderomotive force, press. tensor and stress tensor in collisionless plasma 2-44862  
pulsar magnetosphere microwave propagation in plasma 2-33053  
radar echoes from solar corona, new interpretation involving lower-hybrid waves 2-10366  
radiation characteristics of an uniformly moving distribution of electric charge in a compressible magnetoplasma 2-35277  
radiative transfer in strongly magnetised plasma, effects of anisotropy 2-32827  
radiative transfer is strongly magnetised plasma, effects of Comptonisation 2-32828  
radiowave scattering by radially diffuse plasma cylinder (Russian) 2-25504  
ray trajectories of EM modes radiation from inhomogeneous magnetoplasma, theory 2-12303  
relativistic plasma, whistler mode waves interaction, modulational instability 2-35313

# electromagnetic wave propagation in plasma continued

scattering by surface of plasma in presence of charged particle beams 2-4944  
second harmonic electrostatic pulse generation by EM pulse 2-40109  
semi-bounded plasma, penetration of circular-polarised EM wave, non-linear theory (Russian) 2-40119  
semi-infinite plasma, EM decay into two surface plasma waves 2-50398  
SHIVA plasma liner implosion, X-ray meas. 2-28959  
specular reflection of electromagnetic waves from a plasma flowing in a magnetic field 2-35291  
stationary plasma, first and second order current responses in collisionless plasma 2-35282  
steady current generation in cylinder using  $m=0$  RF waves 2-1310  
stimulated Brillouin scatt., absolute instability in drifting plasmas 2-44835  
striction self-focusing of electromagnetic pulses in plasma 2-12315  
three-wave decay interaction intensity (Russian) 2-40121  
Tokamak plasma, EM wave absorpt. around electron cyclotron harmonics 2-40049  
Tokamak with noncircular cross section; lower hybrid wave propag. 2-50432  
Tokamaks, polarimetric meas. of electron density, poloidal mag. field 2-50455  
toroidal plasma, propag. and heating by electron cyclotron waves 2-25620  
turbulence and dissipation of intense EM wave in vicinity of  $n_c/4$  resonance (Russian) 2-50448  
wave amplification in a plasma with a spatially periodic magnetic field 2-35297  
wave propagation below anisotropic ionosphere with arbitrary geomagnetic field 2-6490  
weakly ionised plasma, light-induced current 2-8320  
whistler wave propagation expts. using magnetized plasma device (Japanese) 2-30306  
whistlers, nonlinear ducting in plasma 2-40122  
WT-Tokamak, plasma density fluctuations by subMM wave scatt. 2-40034  
Au plasma, laser produced, radiation conversion and transport, X-ray emission 2-30287  
CO<sub>2</sub> laser radiation absorpt. effects in low density He plasma 2-12361  
H, laser radiation, stimulated Brillouin scatt. f number, target material and impurity effects 2-40120  
He, electron collisions, EM wave propagation, high-power cross-modulation diagnostics 2-12404  
N, laser radiation, stimulated Brillouin scatt. f number, target material and impurity effects 2-40120

## electromagnetic wave reflection

see also *electromagnetic wave propagation in plasma; light reflection; X-ray reflection*  
amplification, frustrated total reflectance from invertible medium 2-29804  
biaxial crystal boundary, threshold peculiarities in waves reflected and refracted 2-44175  
boundary between two absorbing materials, relationship between EM energy refl. and transmission coeffs. 2-826  
cholesteric liquid cryst., radiation transmission through gradual interface 2-1400  
coordinate-free approach to wave reflection from an anisotropic medium 2-39538  
dielectric slab, linearly accelerated, EM wave reflection and transmission 2-44172  
EM wave propagation in gyrotropic media near dipole transition freq. 2-34635  
glacier beds, radio waves refl. rel. to detailed study using radio-echo techniques 2-10085  
inhomogeneous slab, reflection and transmission functions 2-11622  
inverted media 2-44171  
ionosphere, D-region partial reflections, amplitude statistics 2-42538  
ionosphere, model of partially scattered field with completely displaced spectrum 2-3132  
ionosphere, quasi-transverse approx. for collision freq. function rel. to power refl. coeffs 2-52978  
ionosphere, reflected wave from 130 MW equiv. transmitter, plasma instability effects 2-14662  
low anisotropy medium boundary, EM refl. and refraction 2-49666  
rough ocean, appl. of refr. scintillation theory to refl. of radio and optical waves 2-38022  
plane unbounded EM wave refl. and transmission at absorbing-nonabsorbing interface, ocean-air interface calcs. 2-44170  
propagation of an electromagnetic wave along the surface of the sea (German) 2-28119  
quasimonochromatic outgoing radiation pulse reflection by random surface, diffractal echoes 2-15040  
radar echoes from pre-monsoon squalls over Dum Dum, India, 1975 to 1979 2-3066  
radiowave propagation in ionosphere, freq. dispersion during transmission and refl. review of theoretical studies 2-18618  
Rayleigh methods in reflection by grating, power balance and integrated-square errors 2-11617  
sea ice VHF anisotropic reflectivity due to brine layers 2-18452  
spherical wave refl. from perfectly conducting surface of revolution 2-15941  
statistically rough surface, width of wave reflection pattern 2-28673  
subharmonic Bragg effects in almost periodic media 2-29762  
thunderstorms radar echoes, relation of radar-estimated rainfall to satellite-based intensity 2-14555  
transmission and reflection for materials with arbitrarily graded parameters 2-39534  
turbulent atmosphere with discrete scatterers, refl. wave coherence function saturation effect 2-39544  
water, broadband reflectance from specular and rough surfaces 2-3013

## electromagnetic wave refraction

see also *electromagnetic wave propagation in plasma; light refraction*  
atmosphere, appl. of Monte Carlo technique for propag. error anal. 2-52917  
atmosphere, Doppler radar meas. of clear air turbulence at 1290 MHz 2-14552  
atmosphere, radio refractivity over equator and S. Arabian Sea from Monex-1979 data 2-3059



**electromagnetic wave refraction continued**

- atmosphere refraction effects on geodetic meas., computation using meteorological meas. 2-6305
- atmospheric effects, range-height-angle charts with lookdown capability 2-47975
- biaxial crystal boundary, threshold peculiarities in waves reflected and refracted 2-44175
- curved dielectric interface, geometrical optics soln. 2-39533
- EM wave propagation in gyrotropic media near dipole transition freq. 2-34635
- low anisotropy medium boundary, EM refl. and refraction 2-49666
- rough ocean, appl. of refr. scintillation theory to refl. of radio and optical waves 2-38022
- radio transmission through ionosphere and solar wind, appl. of refr. scintillation theory 2-38022
- scintillation phenomena, refractive scatt. theory 2-29759
- troposphere, microwave refraction changes rel. to spacecraft path length vars. 2-10153
- troposphere, refr. correction for appl. of NAVSTAR Global Positioning System to geodesy 2-6518

**electromagnetic wave scattering**

- see also backscatter; electromagnetic wave propagation in plasma; gamma-ray scattering; light scattering; X-ray scattering*
- approximate boundary conditions in EM scatt. and propag. problems 2-820
- augmented elec. and mag. field integral eqns. for scatt. from object 2-49633
- axisymmetric dielectric objects, resonant scatt. 2-49628
- bistatic wave scatt. from layer of Rayleigh scatterers with irregular interface 2-15940
- centimetre and millimetre wave scattering due to rain and hail, summary of studies 2-14510
- composite random surfaces, full wave scatt. anal. 2-39542
- conducting cylinders having different radii 2-49641
- conference, Aug. 1980, Munich, Germany 2-48397
- D-region incoherent scattering, thermally induced chemical fluctuation effects 2-14666
- dielectric solids, space-time integral eqn. approach 2-34629
- EM wave scatt. from freq. selective surfaces, periodically perforated screens, spectral-iteration 2-49631
- exact inverse scattering theory 2-49635
- finitely conducting rough surface, anal. using specular point theory 2-819
- generalized Kirchhoff law in the case of quadratic and cubic nonlinearity 2-24922
- half-space of dielec. mixture, strong fluctuation random medium theory, effective permitt., backscatt. 2-49630
- high-frequency signal propagation and scattering in guiding channels 2-18366
- hydrometeor scattering of microwaves and MM waves 2-14581
- ice, correlation function studies 2-3042
- induced current on resistive half plane 2-39531
- inhomogeneity synthesis approximating to given form with low perturbations 2-29763
- inhomogeneous media, Bojarski exact inverse scatt. theory 2-49636
- integral equation for EM wave scattering from dielectric cylinder 2-29766
- interstellar scintillation of radio sources, galactic distrib. of scatt. matter 2-3296
- inverse scattering theory of ionospheric radiowave propag. 2-18630
- ionosphere, artificial discontinuity excitation of HF radiation with oblique beam radiowave scatt. (*Russian*) 2-48087
- ionosphere, auroral, radar waves incoherent scatt. 2-10243
- ionosphere, axial magnetic field influence on radiowave scatt. (*Russian*) 2-23184
- ionosphere, model of partially scattered field with completely displaced spectrum 2-3132
- IR differential absorption lidar, aerosol backscatter implications 2-28197
- matrix equation system solns., survey of numerical methods for EM scatt. problems 2-15939
- microwave scatterometer for terrain surface meas. (*Japanese*) 2-6439
- monostatic backscatter from dielectric objects, theory 2-49638
- multiple scattering of solar resonance radiation 2-38272
- open cylinder scatt., electric field integral equation, numerical solution 2-49642
- optimal polarization concept in radar imaging, remote sensing 2-28251
- periodic screen scattering of EM signals limited in space and time (*Ukrainian*) 2-34628
- phase retrieval using two intensity measurements in the complex plane 2-15965
- plane EM wave scattering by thick lossy dielectric slab 2-15945
- plane EM wave scattering from eccentrically coated metallic sphere 2-7709
- plane wave scattering from reflecting sinusoidal surface 2-39541
- plane-stratified anisotropic, gyrotropic and bianisotropic media, symmetries and scatt. relations 2-7707
- polarisation in inverse scattering problems and theories 2-49637
- probabilistic theory, horizontal polarisation 2-11620
- probabilistic theory, vertical polarisation 2-11621
- pulsars interstellar scintillation, characts. of saturated scintillations in space and time 2-42705
- radar, imaging and target identification, physical optics inverse scatt. Radon projection 2-15946
- radar scattering from rough surfaces, vegetated areas, conf., Alpbach, Austria, 1981, Mar. 2-33236
- radar surveillance of sea-state, surface current and surface wind 2-42498
- random phase screen, non-Gaussian scatt. 2-7706
- ray scattering indicatrix in plane layered anisomerically inhomogeneous medium 2-38024
- Rayleigh layer with irregular interface 2-39543
- rough interface, soln. of coord.-space integral eqn. 2-49634
- rough surface, perfectly conducting, EM scatt., facet model 2-24921
- rough surface scattering layer, spatial polarisation characts. of object field (*Russian*) 2-39546
- SAR imaging of moving surfaces, ocean appl. 2-28250
- scalar wave scattering from random rough surfaces, multiple scatt. theory 2-24920
- scintillation phenomena, refractive scatt. theory 2-29759
- semiconductor, SHF waves, light controlled, anisotropy (*Russian*) 2-5774
- SHF wave structure, scattering by semiconductor (*Russian*) 2-822
- singularity expansion method, physical content 2-4442

**electromagnetic wave scattering continued**

- snow, correlation function studies 2-3042
- solar corona, new interpretation of radar echoes involving lower-hybrid waves 2-10366
- spheres, two, depend. light scatt., microwave analogue expt. results 2-15943
- spherical scatterers, degrees of freedom, Born approx. 2-4443
- spheroidal objects, spin-weighted spheroidal harmonics method 2-39540
- by surface of plasma in presence of charged particle beams 2-4944
- three-dimensional relativistic scatt. by object in uniform translational motion 2-29760
- time domain scattering from open thin conducting surfaces 2-39539
- time-domain inverse scattering from inhomogeneous slab, theory 2-52955
- transform theory of propagation, diffraction in deterministic environments, computer solutions 2-44178
- two-dimensional multiple scattering theory appl. to diffraction by polygonal cylinder 2-29765
- underground tunnels, EM wave scatt., Green's function approach 2-34630
- VHF radar, specular echoes, Fresnel scattering model 2-42450

**electromagnetic wave transmission***see also light transmission*

- atmosphere, long-range transmission meas. in coastal environment 2-32632
- boundary between two absorbing materials, relationship between EM energy refl. and transmission coeffs. 2-826
- cholesteric liquid cryst., radiation transmission through gradual interface 2-1400
- dielectric slab, linearly accelerated, EM wave reflection and transmission 2-44172
- plane unbounded EM wave refl. and transmission at absorbing, nonabsorbing interface, ocean-air interface calcs. 2-44170
- reflection and transmission for materials with arbitrarily graded parameters 2-39534
- two-layer media, moving interface, EM wave transmission 2-15944

**electromagnetic waves**

- see also bremsstrahlung; channelling radiation; Cherenkov radiation; electromagnetic field theory; electromagnetism; gamma-rays; heat radiation; light; microwaves; solar radiofrequency radiation; sunlight; synchrotron radiation; transition radiation; undulator radiation; whistlers; X-rays*
- by relativistic electron beam 2-44180
- charge formation from travelling EM wave, retardation to zero velocity 2-34652
- crystal, electromagnetic surface wave propagation 2-26463
- deep source region EMP, simulation, coupling to cylinder 2-44189
- electromagnetic coupling between apertures and biological structures 2-42137
- ferroelectric semiconductor, phase transition, EM field intraband absorpt. effect 2-51532
- Josephson junctions, weakly interacting, vortex chain movement and monochromatic radiation 2-36236
- localised wave pulses in dispersive media, controlled nonlinear nonstationary evolution 2-39537
- low-frequency radiation of a charge moving on a arc of a circle 2-34644
- materials testing, eddy current inspection, EM square wave oscills. 2-17800
- parabolic wedge, retarded edge modes 2-39536
- phase velocity, effect of matter, interference 2-10569
- precursors of EM wave propag., geodetic appls. 2-3080
- radiation spectrum of charged particle accelerated along finite path segment 2-29771
- relativistic electron beams, EM waves steady-state parametric excitation 2-829
- relativistic electron beams, oppositely directed system, oscillations excitation at semicyclotron freq. 2-29773
- relativistic electron beams of gyrating electrons, oppositely directed, semicyclotron oscillations excitation 2-29774
- spherical interfaces, point dipole sources, EM wave eqns. solns. 2-20235
- time harmonic waves, pulse dynamics in Lorentz media in terms of energy vel. and attenuation 2-11619

**electromagnetism**

- see also electric fields; electrodynamics; electromagnetic field theory; electromagnetic induction; electromagnetic oscillations; electromagnetic waves; magnetic fields; magnetism*
- anisotropic media, appl. of Bergeron's method 2-49627
- charged particle motion in elec. and magnetic fields, new velocity-dependent force law appls. 2-15947
- dielectric sphere, Casimir effect, electrostrictive contrib. 2-39528
- ferromagnetic conducting plates, EM field diffusion, nonlinearity and saturation (*Spanish*) 2-11615
- inverse scattering method, time-domain electromagnetics 2-34627
- Maxwell's eqns. solns. in cylindrical coords. for axially travelling waves 2-34638
- momentum expression for mag. media 2-34613
- Naples University physics course including Maxwellian equations and 1st and 2nd principles of thermodynamics (*Italian*) 2-4437
- plasma flow, Maxwell's eqns., inverse soln. 2-20835
- potentials, symmetry group, compensating gauge transform. 2-10938
- projective unified field theory 2-38540
- superluminal imaginary Lorentz transform of Maxwell's eqns. and elec. charge 2-38
- theory rel. to standards 2-13928
- time depend. charged particle in crystal, transformation modified singular spherical integrals 2-29769
- two-dimensional Korteweg de Vries and Kadomtsev-Petviashvili equations 2-18913

**electromagnets***see also coils; superconducting magnets*

- actuator for left ventricular assist device 2-14360
- air-cored electromagnetic coils, optimisation for application to whole-body NMR imaging 2-10828
- Antiproton Accumulator, magnet fabrication and structural design 2-7421
- Antiproton Accumulator magnets, automatic measuring system 2-7422
- Bitter-type toroidal field magnet for ZEPHYR 2-11172
- conference, Hakone, Japan (Sept. 1980) 2-18813
- Daresbury Synchrotron Radiation Source, multipole magnet design and testing 2-7420
- design, automated optimisation using boundary integral method 2-48728



**electromagnets continued**

- FT U Tokamak, LN<sub>2</sub> cooled magnet, stress anal., reliability problems 2-11175  
 large acceptance spectrometer magnet 2-7433  
 large aperture analysis magnet with Al coils 2-11345  
 MAMI microtron, beam optics and magnet technology 2-4152  
 NMR imaging magnet 2-6882  
 poloidal coils and transformer core for JET—design and manufacture 2-11173  
 proton target 'frozen' polarisation electromagnets 2-43654  
 pulse magnet, design using wire of known cross-section (*Chinese*) 2-15197  
 pulsed high mag. field generation and application 2-19145  
 sectorial electromagnet, mag. field inhomogeneity 2-24466  
 shimming, computer-aided design techniques 2-38669  
 strong and ultrastrong mag. field generation 2-19144  
 TEXTOR magnet system 2-7333  
 transmitter construction for small EPR radio spectrometer 2-48736  
 ZEPHYR Bitter type toroidal field mag. stress anal. 2-24414  
 Al anodised strip excitation coils for LEP magnets 2-7423

**electromechanical effects**

- dielectrics, deformable, thermodynamics and stability 2-30627  
 polar glass ceramics, pyroelec., piezoelec., dielec. and electromechanical props. 2-31381  
 PTFE insulating material, mech. and elec. lifetime-under-load at cryogenic temps. 2-36525  
 spheroidal drops, stability in homogeneous electric fields 2-25408  
 CdS, anisotropic cond. after plastic deform. and cond. along dislocations 2-45980  
 KCl(Br), deformation resist., elec. field effect 2-35577  
 KH<sub>2</sub>PO<sub>4</sub>, ferroelec., dielectric props., plastic deform. and radiation defect influence 2-36502  
 LiF, deformation resist., elec. field effect 2-35577  
 NaCl, deformation resist., elec. field effect 2-35577  
 NaCl single crystals, elec. pulses influence on distance travelled by dislocations 2-1491  
 PbZrO<sub>3</sub>-PbTiO<sub>3</sub>-MnO<sub>2</sub> solid solns., piezoelec. props. rel. to chem. comp. near morphotropic phase transition 2-9092  
 Pb(Zr<sub>1-x</sub>Ti<sub>x</sub>)O<sub>3</sub>:Nb<sup>5+</sup> (Sb<sup>5+</sup>) ceramics, wet or dry method prep., struct. and piezoelec. props., effect of initial Pb content 2-9091  
 (Sr,Ba)Nb<sub>2</sub>O<sub>6</sub> ceramics, hot-pressed, props. 2-26806  
 Zn, electron-plastic effect, elec. current parameters effect 2-21949  
 ZnSe, dislocation mobility and microcrack formation, elec. field effects 2-45182

**electrometers**

see also *charge measurement*

- absolute electrometer for measuring voltages from 50 to 150 kV (*French*) 2-19133  
 integrating electrometer for current meas. in range 10<sup>-16</sup> to 10<sup>-10</sup> A 2-15187  
 low ionisation current meas., dosimetric problem 2-19890  
 preamplifier for measurement of voltage, current and resistance on high resistivity materials 2-3592

**electrometry** see *electrometers***electromigration**

- alloys, binary, phase growth interdiffusion zone during interdiffusion in external elec. field (*Russian*) 2-21405  
 disordered metals, one- and two-dimens. 2-30663  
 field enhanced impurity motion in dielec. liquids, computer-aided identification of model parameters 2-4899  
 metallic bicrystal model, equilib. density matrix of conduction electron gas 2-17028  
 metallic thin film, electromigration induced damage, diffusive creep model 2-26150  
 metals, interstitial electrotransport, numerical simulation 2-35748  
 Al metallisation, electromigration meas. techniques for grain boundary diffusion activation energy 2-30662  
 Al poly-Si composites, electromigration 2-21404  
 Al:Cu thin films diffusion coeff., influence of noise driving force 2-1652  
 Al/Cu conductor stripes with polyamide passivation, electromigration 2-26149  
 Bi, crystallisation, influence of electric current on impurity distrib. 2-8455  
 Bi<sub>2</sub>Se<sub>3</sub>, electromigration of Cu, effective ion charge, temp. and elec. cond. depend. 2-35749  
 Bi<sub>2</sub>Te<sub>3</sub>-Sb<sub>2</sub>Te<sub>3</sub>, electromigration of Cu, effective ion charge; temp. and elec. cond. depend. 2-35749  
 CdS, ionic processes occurring under combined action of illum. and elec. field 2-30927  
 CdS:Li crystal, interstitial electromigration, exciton luminescence study 2-5279  
 γ-Fe-Ni alloys, diffusion and electrotransport of C 2-16908

**electromotive force** see *electric potential***electron absorption**

see also *beta-ray absorption*

- impurity deep levels, optical transitions in elec. field, δ-pot. model calc. 2-51637  
 KAl(Al,Si)<sub>2</sub>O<sub>8</sub>, determ. of mean and anomalous absorpt. parameters 2-40234

**electron accelerators**

see also *betatrons*; *electron ring accelerators*; *microtrons*

- beam, ang. velocity, RMS spread, meas. from synchrotron radiation 2-15658  
 beam noise characteristics in linear accel. 2-43660  
 Canadian high energy electron ring to study the microcosm at 10<sup>-18</sup> m 2-24458  
 CHEER, synchrotron radiation possibilities 2-24459  
 CHEER, Weinberg-Salam model current limits 2-23878  
 CHEER injection system 2-24449  
 CHEER RF system 2-24470  
 CW, appl. to medium energy nuclear physics 2-3904  
 electron beam device for extracting particles into longitudinal inhomogeneous plasma 2-15268  
 electron beam device for extracting particles into longitudinal inhomogeneous plasma 2-19210  
 ETA gun characts. 2-564  
 forward Raman instability and electron acceleration 2-12295  
 GELINA, pulsed neutron source improvement 2-4165  
 high beam-current accelerators, research program in US, review 2-563

**electron accelerators continued**

- high current relativistic electron accelerators, vacuum diodes, stability of operation 2-39259  
 HV pulse generator, high-power 2-24471  
 LELA undulator design 2-19814  
 LEP, polarised electron/positron beam prospect survey 2-43640  
 linear, 500 MeV MEA accelerator, pion and muon studies (*Dutch*) 2-400  
 linear, 500 MeV MEA accelerator of section K of NIKHEV (*Dutch*) 2-562  
 linear, picosecond single pulse, injector development 2-4149  
 linear accelerator, single bunch electron beam radiation loss expt. obs. 2-7411  
 linear accelerator-based cold neutron source 2-49206  
 medical accelerators, unwanted radiation prod. by leakage neutrons, Monte Carlo calcs. 2-47695  
 optical cavity modes, relativistic electron acceleration 2-561  
 ORELA, neutron cross section meas. 2-4167  
 QCD scale param. meas. at CHEER 2-23916  
 relativistic, digital codes for current and voltage pulses 2-15682  
 relativistic, digital codes for current and voltage pulses 2-19897  
 relativistic electron bunch acceleration, problems of energy extraction 2-29474  
 secondary-electron emission in the accelerating cavity of a microtron 2-29465  
 SLAC linear collider for e<sup>+</sup>e<sup>-</sup> physics 2-19798  
 sterilisation of graft tissues, accelerator appl. 2-14292  
 storage ring, low-freq. transverse charge oscils. (*Russian*) 2-19826  
 storage ring machines props. and limitations, e<sup>+</sup>e<sup>-</sup> annihilation expt. 2-6991  
 synchrotron, thermal neutron production 2-19799  
 Tonus-Vera electron accelerator for protons collective accel. study 2-4151  
 two-magnet doubly achromatic beam deflection system for electron linac beam 2-4154  
 UHF injector for linear electron accelerator 2-49201  
 VEPP-4 storage ring absolute energy calibration and ψ, ψ' meson mass meas. (*Russian*) 2-43349  
 e<sup>+</sup>e<sup>-</sup> colliding ring, beam-beam luminosity limits 2-24461

**electron affinity**

- aldehydes, α, β-unsaturated, acrolein derivatives, gas-phase protonated, photodissoc. spectroscopy 2-11556  
 cobaltocene, electronic struct., LCAO HFS calc., UV photoelectron and optical absorpt. spectra 2-29510  
 d-2-646  
 freon gaseous dielectric, breakdown strength, electron attachment role 2-12267  
 furan, electron affinity, ionisation pot. and photoionisation cross sections calc. using CNDO approx. 2-43804  
 isooxalazine, ionisation pot., electronic transitions, moments, MINDO/3 MO calcs. 2-39322  
 ketones, α, β-unsaturated, acrolein derivatives, gas-phase protonated, photodissoc. spectroscopy 2-11556  
 oxidation of thin Ag layers in presence of photographic stabilizers (*Hungarian*) 2-6064  
 perfluorocarbon gaseous dielectric, breakdown strength, electron attachment role 2-12267  
 pinacyanol, adsorbed monolayers, electron affinity calc. 2-49600  
 selenophene, electron affinity, ionisation pot. and photoionisation cross sections calc. using CNDO approx. 2-43804  
 tellurophene, electron affinity, ionisation pot. and photoionisation cross sections calc. using CNDO approx. 2-43804  
 thiophene, electron affinity, ionisation pot. and photoionisation cross sections calc. using CNDO approx. 2-43804  
 As<sub>4</sub>S<sub>6</sub>, molecular electronic struct., local struct. model for amorphous As<sub>2</sub>S<sub>3</sub> film 2-24611  
 Au-InP Schottky diode, elec. characts. 2-26472  
 CdZnS-Cu<sub>2</sub>S thin film solar cells, 10% conversion efficiency 2-37322  
 GaAs photocathode with neg. electron affinity, photoelectron spectra 2-13630  
 GaAs, surface potential, Kelvin probe method, photoemission (*French*) 2-5449  
 Ga<sub>9</sub>In<sub>9</sub>As photocathode with neg. electron affinity, photoelectron spectra 2-13630  
 Ge, electron affinity, calcs. from dissociative electron attachment meas. on GeS (*French*) 2-34584  
 HX (X=F, Cl, Br, I), dissoci. energy, overlap integral rel. to atomic ionisation pots. 2-11582  
 NO<sub>2</sub>, photodetachment, vibr., UV and visible obs. 2-20144  
 p-Ni<sub>0.9</sub>Li<sub>0.1</sub>O as photoelectrolysis cathode, flatband pot. and band gap 2-36088  
 Pb, electron affinity, calcs. from dissociative electron attachment meas. on PbS (*French*) 2-34584  
 SF<sub>4</sub> + Cl<sub>2</sub>(NO<sub>2</sub>), reactions charge exchange, electron affinity 2-31913  
 SF<sub>6</sub> and SF<sub>6</sub><sup>-</sup>, pot. curves as function of symmetric stretch, electron affinity and photodetachment 2-39345  
 Si<sub>3</sub>N<sub>4</sub>, insulating film, electronic struct. and total-current spectra 2-13208  
 SiO<sub>2</sub>, insulating film, electronic struct. and total-current spectra 2-13208  
 Sn, electron affinity, calcs. from dissociative electron attachment meas. on SnS (*French*) 2-34584

**electron annihilation** see *electron-positron interactions***electron attachment**

- 1-butene, two-photon ionization coeffs. 2-49530  
 dimethyl sulphide, electron attachment and solvation, absorpt. spectrosc. obs. 2-39414  
 freon gaseous dielectric, breakdown strength, electron attachment role 2-12267  
 methylamines, two-photon ionization coeffs. 2-49530  
 perfluorocarbon gaseous dielectric, breakdown strength, electron attachment role 2-12267  
 propane, two-photon ionization coeffs. 2-49530  
 tetrachloroethane, RF low pressure discharge, decomposition, gas chromatography, time resolved spectra (*German*) 2-16521  
 Br<sub>2</sub>, thermal electron attachment, negative ion pot. energy curves 2-790  
 CO, electron impact dissoci., C<sup>-</sup> form., resonant states, predissociation 2-796  
 Cl<sub>2</sub>, thermal electron attachment, negative ion pot. energy curves 2-790  
 GeS, electron impact, dissociative ionisation, Ge electron affinity calcs. (*French*) 2-34584  
 H<sub>2</sub>+Cs, form. of H<sup>-</sup>, dissoci. and dissociative attachment 2-34528  
 HCl electron attachment rate rel. to XeCl laser kinetics 2-789



**electron attachment continued**

- HCl electron attachment rate rel. to XeCl laser kinetics 2-7640  
 HgBr<sub>2</sub>, electron impact attachment and ionisation, low energy cross section meas. 2-49583  
 I<sub>2</sub>, thermal electron attachment, negative ion pot. energy curves 2-790  
 N<sub>2</sub>, molecule, dissociative electron attachment, Faddeev equations calc. 2-4402  
 N<sub>2</sub>O, breakdown field strength 2-1359  
 O<sub>2</sub>, electron attachment density dependence statistical model 2-29706  
 O<sub>2</sub>, resonance attachment of thermal electrons velocity distrib., hole burning 2-44413  
 PbS<sub>2</sub>, electron impact, dissociative ionisation, Pb electron affinity calcs. (French) 2-34584  
 SF<sub>6</sub> in nonpolar hydrocarbon liquids, effect of elec. field on electron attachment 2-1977  
 SF<sub>6</sub>-(N<sub>2</sub>)(N<sub>2</sub>O), breakdown field strength 2-1359  
 SO<sub>2</sub>, ion-molecule reactions, attachment and detachment coeffs. 2-27429  
 SO<sub>2</sub>-O<sub>2</sub> mixtures, ion-molecule reactions, attachment and detachment coeffs. 2-27429  
 SnS, electron impact, dissociative ionisation, Sn electron affinity calcs. (French) 2-34584

**electron avalanches**

- optical material destruction in crossed Nd<sup>3+</sup>:YAG laser beams of various frequencies 2-40431  
 streamer propagation, laser mechanism 2-44943  
 HgBr<sub>2</sub>/HgBr dissociation laser, elec. beam preionised 2-7755  
 PbO-SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> fritted glass, dielec. breakdown and device evaluation 2-21945  
 SF<sub>6</sub>, point-plane corona pulses 2-20954

**electron beam absorption** *see electron absorption***electron beam applications**

- see also electron beam deposition; electron beam lithography; electron beam machining; electron beam welding; radiation therapy*  
 absorbed current electron spin polarization detector 2-15272  
 Advanced Test Accelerator, generating intense electron beams for military appls. 2-24450  
 discharge lasers, pulsed electron beam control, review (Rumanian) 2-20324  
 high-power electron beam commutator, using centrifugal electrostatic beam-shaping, design 2-4445  
 laser, broad band, electron beam pumped 2-34727  
 low-energy electron magnetometer for terrestrial and aerial mag. field meas. 2-3595  
 materials processing, conf., Boston, USA (Nov. 1980) 2-42788  
 materials processing, electron beam generation systems 2-43131  
 medicine, chest wall irradi., use of variable thickness bolus to control beam penetration 2-42205  
 Mylar electrets, high-resolution probing of space-charge densities using electron beam 2-9090  
 optimal pumping conditions allowing for ang. divergence of radiation 2-4495  
 phase grating fabrication using deep UV lithography 2-39730  
 radiotherapy, beam degradation by low density scatt. materials 2-2933  
 relativistic electron beam, source region EMP prod. 2-44180  
 semiconductor materials, SEM-EBIC minority-carrier diffusion-length measurement technique 2-51201  
 semiconductor processing, fund. mechanisms, review 2-45258  
 semiconductors, ion implantation radiation damage annealing by light and electron beam irradi. (German) 2-25923  
 therapeutic electron beams, mean energy, Monte Carlo calcs. 2-2953  
 therapeutic electron beams from a Saturne linear accelerator, radiation parameters 2-47725  
 therapy, beam output factors prediction 2-47697  
 therapy, intra-operative: dosimetry, field shaping and other considerations 2-42220  
 therapy, scatt. component rel. to virtual source and beam quality 2-42207  
 vinyl chloride, electron-beam initiated destruction in carrier gas 2-22474  
 AuGe/Pt pulsed electron beam alloyed ohmic contacts on GaAs reliability 2-5458  
 CO electron-beam-controlled discharge laser, kinetics and energy characts. 2-34730  
 CO pulsed high-pressure laser, electron-beam-controlled 2-34794  
 CO pulsed laser, electron-beam-controlled, active medium heating influence 2-44264  
 CO<sub>2</sub> amplifiers, electron-beam-controlled, inversion recovery following saturated extraction 2-892  
 CO<sub>2</sub> electron-beam-controlled discharge lasers, review 2-34719  
 CO<sub>2</sub> electron-beam-controlled discharge laser, kinetics and energy characts. 2-34730  
 CO<sub>2</sub> laser, electron beam controlled, small signal gain and uniformity meas. 2-4523  
 CO<sub>2</sub> laser, electron beam ionisation, efficiency reflected electrons effect 2-44343  
 CO<sub>2</sub> laser, electron-beam ionisation, electron beam economy, pump pulse shape effect 2-15981  
 CO<sub>2</sub> laser amplifiers, electron-beam controlled, gain meas. 2-49800  
 CO<sub>2</sub> pulsed laser, electron-beam-controlled, operating regime optimisation 2-34720  
 CO<sub>2</sub> pulsed laser oscillators, electron-beam-controlled, theory and expt. comparison, four-temp. model 2-39615  
 Cu vapour laser, electron beam controlled discharge 2-44342  
 Ga<sub>0.68</sub>Al<sub>0.32</sub>As:Te(Zn) laser pumped by electron beam, cathodolum. and threshold current density, doping influence 2-7766  
 Ga<sub>0.7</sub>Al<sub>0.3</sub>As-GaAs heterostructure laser, electron-beam-pumped, operating at low accel. voltages 2-34760  
 Ga<sub>1-x</sub>Al<sub>x</sub>As electron-beam-pumped laser, oxide film influence on threshold current density 2-34822  
 H<sub>2</sub> electron-beam-controlled discharge laser, kinetics and energy characts. 2-34730  
 HD VV 2-34730  
 HF-DF chemical laser, pulsed, magnetically confined electron beam initiation 2-49770  
 KrF laser, electron beam excited, output performance, computer simulation 2-44337  
 KrF laser, electron-beam-excited, 1.6 GW litre<sup>-1</sup> atm<sup>-1</sup> pump power density 2-44340  
 Si film, polycryst., on SiO<sub>2</sub>, grain growth by CW scanning electron beam annealing 2-12925

**electron beam applications continued**

- Si, ion implanted, pulsed electron beam apparatus and annealing 2-12625  
 Si polycryst. on SiO<sub>2</sub>, recrystallisation by dual electron beam processing, lateral seeding technique 2-46912  
 Si solar cells, ion-implanted, effects of laser and electron beam annealing 2-27624  
 V, preparation by carbothermic reduction of V<sub>2</sub>O<sub>5</sub> and electron beam melting 2-9310  
 XeBr\* excimer laser with electron beam and discharge excitation, radiation characts. 2-29808  
 XeCl laser, electron beam ionisation, efficiency reflected electrons effect 2-44343  
 XeCl long-pulse electron-beam excited laser performance, kinetic model 2-34728  
 XeCl laser, broad band, electron beam pumped 2-34727  
 XeCl\* excimer laser with electron beam and discharge excitation, radiation characts. 2-29808  
 XeF laser, broad band, electron beam pumped 2-34727  
 XeF\* excimer laser with electron beam and discharge excitation, radiation characts. 2-29808  
 XeF\*·XeBr\* laser, pumped by electron-beam-stabilized discharge 2-20326  
 ZnSe single-crystal film laser screens on sapphire, stimulated emission 2-44312  
 ZnTe single-crystal film laser screens on sapphire, stimulated emission 2-44312
- electron beam deposition**  
 refractory oxide achromatic antireflection coatings, electron-beam deposition method 2-1006  
 Fe-Cu multilayer condensate, high temp. creep study 2-13785  
 Ga<sub>2</sub>Te<sub>3</sub> thin films, prep. and elec. props. 2-5475  
 Nb electron beam evaporated conducting thin films, current-induced physical props. 2-13194  
 Nb-Ge film, prep. and anal. by electron beam co-evaporation (Chinese) 2-41521  
 Ni-Cu multilayer condensate, high temp. creep study 2-13785  
 Si<sub>3</sub> heteroepitaxial growth on MoSi<sub>2</sub> by electron beam evaporation 2-1781  
 Ti film, evaporated on Mo substrate, interdiffusion processes (Japanese) 2-21402  
 WO<sub>2.9</sub> needles grown in electron microscope, domain obs. 2-46893
- electron beam effects**  
*see also beta-ray effects; cathodochromism; cathodoluminescence; electron impact; plasma-beam interactions*  
 alkali halide crystal, fundamental luminesc. following dense electron-beam nanosecond irradiation 2-5755  
 alkali halides, F-colouring, role of impurities on primary process 2-12591  
 alloys, electron-thermal treatment, surface struct. (Russian) 2-31828  
 biological specimens, prep. for SEM 2-27966  
 bladder, mouse, repair during fractionated electron irradi. 2-2902  
 charge trapping in dielectrics, bulk trapping phenomena, review 2-8818  
 creep under irradiation, microstructure developments 2-30485  
 crotonin complex, thin cryst. at 4K, electron radiation damage 2-27856  
 cyclic nucleotides in brain, synthesis and degradation after a high dose of ionising radiation 2-18267  
 cyclohexanone, electron beam current penetration in semi-infinite slab 2-30492  
 diamond, crystal growth-sector boundary luminesc. 2-41434  
 diamond, electron channelling, planar, γ-emission spectrum 2-46450  
 diamond, electron irradi., TR12 vibronic band, uniaxial stress effects 2-13519  
 diamond, type IIb, electron irradiated, luminesc. excitation 2-41409  
 electron trajectory simulation, by Monte Carlo method, conf., Toulouse, France (May 1981) (French) 2-48396  
 energy dispersive X-ray microanalysis, detectability limit 2-31978  
 epidermis, rat, induction and repair of DNA breaks 2-32275  
 ferroelectric nonequilibrium modulated structs. in strong external field 2-41290  
 graphite, homogeneous and porous, low-energy electron transport, Monte Carlo simulation (French) 2-50727  
 insulators, plane parallel, charge accumulation after electron irradi. 2-30495  
 intermediate state, magnetic struct. and inhomogeneities, high resolution imaging using SEM 2-41077  
 ionic crystal, extended defects produced by irradi. and TEM obs. (French) 2-30500  
 materials processing, conf., Boston, USA (Nov. 1980) 2-42788  
 metal oxides and O adsorpt. layers, electron stimulated desorption 2-26231  
 metal surface pore-free zone formation during electron irradi. in high voltage electron microscopy 2-45282  
 metal-metal (semiconductor), thin film structures, laser, electron and ion beam induced reactions 2-51011  
 metals, melting channel nonuniformity during irradi. by electron beam (Russian) 2-1589  
 metals, self-oscillations during action of electron beam 2-25935  
 metals, vacancy type defects 2-25872  
 methylcyclohexane-methane system, pulse and gamma-radiolysis, ion decay nonhomogeneous kinetics 2-13989  
 mineral, extended defects produced by irradi. and TEM obs. (French) 2-30500  
 Mylar electrets, high-resolution probing of space-charge densities using electron beam 2-9090  
 Mylar thin film, surface flashover arc orientation 2-36518  
 organic specimens, electron probe microanalysis quantisation, electron irradiation effects 2-32380  
 organotin films, amorphous, semiconductive and conductive, form. and props. 2-41532  
 oxide, extended defects produced by irradi. and TEM obs. (French) 2-30500  
 oxide film deposition, electron and ion irradi., local surface temp. fluctuations (Russian) 2-5810  
 plane-parallel insulator, electron irradiation result at atm. press. 2-5158  
 plasma apolipoproteins, rabbit, changes following whole-body electron irradi. 2-47647  
 point defects produced by HVEM irradi., review (French) 2-30493  
 polyatomic solids, displacement oxides (French) 2-1536  
 polycarbonate thin film, micromechanics and kinetics of deformation zones at track tips 2-13800



## electron beam effects continued

- polyimide PMDA-p,p'-ODA simulated space radiation effects, IR spectroscopic anal. 2-30491
- polymers, electron irradiated in TEM, spectroscopic study 2-35542
- PTFE, irradiation effects on charge storage and cond. 2-8544
- quartz grains, natural, electron irradi. damage obs. 2-25934
- range in various absorbers 2-30504
- self-oscillations under the action of concentrated energy sources on a material 2-12642
- semiconductor, ion-implantation-induced defect annealing using electron and laser beams (*German*) 2-35534
- semiconductor layer, disrupted, pulsed annealing by electron beams 2-39260
- semiconductor thin film, minority carrier bulk diffusion length determ. by SEM-EBIC 2-30980
- semiconductors, conference, Oxford, England (April 1981) 2-23364
- semiconductors, direct gap, minority carrier lifetime; electron beam induced current study 2-46014
- semiconductors, electron-beam-induced currents 2-48851
- semiconductors, irradiated, optical props. (*Japanese*) 2-41384
- Si, electron bombarded, nuclei optical polarisation and excited triplet states 2-2162
- solar cell fabrication, pulsed electron beam annealing, apparatus and technique 2-37356
- sound generation in liquids by ionizing particle beams 2-45383
- spacecraft charging induced discharges, voltage gradients in solar array cavities as breakdown sites 2-38037
- spacecraft charging tests using multiple electron guns, NASCAP simulation 2-38038
- spacecraft model testing in combined environmental simulator 2-38036
- spatial resolution of electron microscopy energy-loss meas. 2-2390
- stainless steel void swelling by electron irradiation (*Japanese*) 2-50708
- steel, C, surface modification by electron beam glazing 2-47265
- steel, irradi. effects study using HVEM and energy dispersive X-ray analysis of films (*French*) 2-30497
- steel, Kh18N9T, effect of electron irradiation (*Russian*) 2-31700
- steel, stainless, point defect trapping effect on void growth during neutron or electron irradi. 2-50692
- steel, type 316 Ti, Si and Ti conc. effect on swelling following electron irradi. (*French*) 2-39120
- steel, type ST3, nonstationary vaporisation regime on electron beam irradi. (*Russian*) 2-1605
- steel austenitic stainless type OOKh16N15MB, radiation damage anisotropy by high-voltage electron microscopy 2-16680
- steels, electron-thermal treatment, surface struct. (*Russian*) 2-31828
- superconducting intermediate state, mag. structures, high resolution obs. 2-21734
- superconductors, spatially separated, electron beam excitation of nonequilibrium effects 2-21717
- superplasticity, interpretation of in-situ HVEM studies 2-12439
- Teflon, dielectric charging, straggling and soft X-ray irradiation effects 2-36519
- Teflon in MIM structure, charge storage and transport in electron-irradiated and corona-charged dielectrics 2-36167
- thick anodes, high power relativistic electron beam interaction dynamics 2-1560
- thick plate irradi. with electron beam, temp. distrib. 2-44645
- thick targets, shock wave excitation by high current relativistic electron beam 2-5186
- time dependence of the radiation-induced conductivity 2-8905
- transition metal oxide, erosion during electron beam treatment, depend. on bond characts. 2-40438
- uridine, single cryst., radiation damage, EPR obs. 2-26750
- Ag, electron irradi., dislocation-point defect complexes stability, Bordoni effect study 2-45186
- Ag, electron irradiated, free migration of interstitials 2-35544
- Ag-Al, electron irradiated, extended jog motion on dissociated dislocations, weak beam electron microscopy obs. 2-25886
- Ag-Cu, point defect mobility, high-voltage electron microscopy study 2-21398
- Ag-Cu(Ni), dil. alloys, electron irradiated, free migration of interstitials 2-35544
- Al, anodization in aqueous borate and borate-glycol solns., anodic barrier film form. 2-41814
- Al, electron irradiated, interstitial trapping by Ga or Si atoms 2-35543
- Al-Cu-Mg-Mn-Si-Fe, type D16T, nonstationary vaporisation regime on electron beam irradi. (*Russian*) 2-1605
- AlGaAs/GaAs solar cells, high efficiency with high resist. to radiation damage by 1 MeV electrons 2-27696
- AlMgSi alloy collimator, of 30 MeV electron LINAC, radiation damage study by positron annihilation 2-45277
- $\alpha$ -Al<sub>2</sub>O<sub>3</sub>, irradi., thermolum. curves, influence of impurities and heat treatment atm., trap parameters 2-41436
- As<sub>2</sub>S<sub>3</sub>, glass, electron beam induced defects, elec. and optical props. 2-45280
- As<sub>2</sub>S<sub>3</sub>(Se<sub>3</sub>), chalcogenides, electron stimulated ESR 2-5582
- As<sub>2</sub>Se<sub>3</sub>, glass, electron beam induced defects, elec. and optical props. 2-45280
- Au, electron irradiated, cathodoluminescence study 2-46786
- Au film, localisation in surface electron bombardment 2-40706
- Au<sub>4</sub>Mn, ordering under electron irradi. 2-30494
- C, low-energy electron transport, Monte Carlo simulation (*French*) 2-50727
- CaF<sub>2</sub>, ion bombarded, surface decomposition, electron beam induced, AES, EELS and XPS study 2-25931
- Ca, electron irradiated, diffuse X-ray scatt. and elec. resist. meas. 2-21179
- CdTe, irradiation induced intrinsic excitonic luminesc. 2-2337
- Co-Fe-Cr films, mag. props. variation during electron bombard., surface comp. (*Russian*) 2-21844
- Co<sub>84</sub>Si<sub>9</sub>Fe<sub>7</sub>B<sub>2.5</sub> amorphous alloy, electron irradi. effects (*Ukrainian*) 2-25929
- CsI:Na, electron pulse irradiation, kinetics of luminesc. and relaxation (*Russian*) 2-5740
- Cu, electron bombard., Bordoni relax. processes, dislocation classes 2-41657
- Cu, electron irradi., dislocation-point defect complexes stability, Bordoni effect study 2-45186
- Cu, electron irradi., internal friction background and peaking effect 2-45339

## electron beam effects continued

- Cu, electron irradiated, atom displacement threshold energy, nucleation and growth of dislocation loops, electron microscopy obs. 2-25933
- Cu, electron irradiated, cathodoluminescence study 2-46786
- Cu, electron irradiated, internal friction, oxidising and reducing anneals effect 2-47078
- Cu film, magnetron sputtered, electron beam ionisation effects 2-51804
- Cu, nonstationary vaporisation regime on electron beam irradi. (*Russian*) 2-1605
- $\alpha$ -Cu-Zn (30 at.%), short-range ordering kinetics, vacancy parameters, quench and irradi. study 2-5111
- $\alpha$ -Cu-Zn (30 at.%), short-range ordering kinetics, vacancy parameters, quench and irradi. study 2-8512
- Cu<sub>2</sub>Pd, ordering under electron irradi. 2-30494
- Cu<sub>50</sub>Ti<sub>50</sub>, amorphous, electron irradiation damage, positron lifetime meas. 2-50709
- $\alpha$ -Fe, electron irradiated, positron annihilation, self-interstitial migration in stage III 2-21183
- Fe-base materials, hard, microstruct. refinement by laser and electron beam surface melting 2-41794
- Fe-Ni based metallic glasses, crystn., effect of electron irradi., in-situ HVEM study 2-21040
- GaAs, electron energy deposition profile, calc. by Monte Carlo method (*French*) 2-50726
- GaAs electron irradiated, anisotropic defect introduction 2-12641
- GaAs, minority carrier lifetime, electron beam induced current study 2-46014
- GaAs solar cells, electron and proton damage coefficients and thermal annealing 2-37284
- n-GaAs tunnel diode, excess current behaviour, electron irradi. effects 2-36062
- n-GaAs:S, electron irradi., As anti-site defects, EPR study 2-36429
- GaAs:Se, electron beam annealing, multiply-scanned beam method 2-1526
- GaAs:Se, electron beam annealing, multiply-scanned beam method 2-8542
- GaAs:Si, implanted, multiply scanned electron beam annealing 2-45211
- GAP, IR absorption induced by impurities and radiation damage 2-46644
- GaSe,  $\gamma$ -neutron and electron irradi., photosensitivity 2-21633
- Ge, electron energy deposition profile, calc. by Monte Carlo method (*French*) 2-50726
- Ge, electron irradiated, defects study by electron microscopy 2-45274
- Ge, electron irradiated, form. probability of separated. Frenkel pairs 2-35541
- Ge:Pd, Sb,  $\gamma$ - and electron-irradi., complex formation, primary defects charge state effect 2-40436
- Ge<sub>2</sub>S<sub>3</sub>(Se<sub>3</sub>), chalcogenides, electron stimulated ESR 2-5582
- p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, electron irradi. and annealed, carrier lifetime and recomb. props. 2-17090
- In<sub>2</sub>O<sub>3</sub> coated mirrors to eliminate spacecraft surface charging 2-37178
- InP crystals, electron irradi., near-edge absorption 2-17483
- InP:Si, ion implanted, electron pulse annealing with minimal P loss 2-30475
- InSb, deep acceptors, M<sub>1</sub> defect accumulation kinetics after electron irradi. 2-40831
- KBr, behaviour of defects introduced by intense electron pulse 2-25868
- KBr, F-centre growth in zone II as a function of electron injection 2-12588
- KBr, X<sub>3</sub><sup>-</sup> centre generation by pulsed electron irradi., absorpt. spectra study 2-25936
- KBr:Sr, electron irradi., interstitial trapping by divalent impurities (*French*) 2-16646
- KCl, F-centre growth in zone II as a function of electron injection 2-12588
- KCl:TL, irradi., pairs of V<sub>K</sub>-Ti<sup>0</sup> centres, tunnelling radius value definition (*Russian*) 2-17013
- LiF, annealing of radiation defects, chemiluminesc. and thermostimulated luminesc. (*Russian*) 2-9205
- LiF, F<sub>2</sub><sup>+</sup>-centre form. and destruction by pulsed high-density electron beam irradi. 2-45157
- LiF, F<sub>2</sub>-centre form. upon pulsed dense electron beam irradi. 2-50635
- LiF, radiolysis processes, temp. depend. (*Russian*) 2-6047
- Mo, electron irradiated, paraelectric interstitials 2-8513
- Mo, paraelastic interstitial defect (*French*) 2-21139
- NH<sub>3</sub>, radiolytic decomposition by electron irradi., effects of NO and O<sub>2</sub> 2-31936
- NaCl, behaviour of defects introduced by intense electron pulse 2-25868
- NaCl crystal etching at 2 nm size scale, in situ meas. of contrast curves for electron beam vaporisable resists 2-36993
- NaCl, rocksalt, surface struct. changes on electron irradi. (*Japanese*) 2-21433
- NaI:TL, thermally activated motion of charge carriers, kinetics (*Russian*) 2-8810
- Na<sub>2</sub>O-MgO-Al<sub>2</sub>O<sub>3</sub>,  $\beta''$  and  $\beta'''$  phases, electron irradi. induced defects, TEM study 2-16681
- Nb, electron irradi. hardening of single crystals 2-45276
- Nb, plastic deformation, slip, effects of electron beam produced interstitials 2-27248
- Ne, condensed, relax. processes from higher excited states of self-trapped excitons 2-26959
- Ni surface, O<sub>2</sub> and C coadsorpt., residual gases electron beam bombard. effects 2-40670
- Ni-B-Si-Cr brazing alloy, rapidly solidified surface melts 2-16935
- Ni-Cu, electron irradi., short-range clustering and long-range periodic decomp. 2-45278
- Ni-S single cryst., segregation during electron bombardment, temp. depend. (*Russian*) 2-5229
- Ni<sub>45</sub>Fe<sub>35</sub>Co<sub>20</sub>Cr<sub>10</sub>Mo<sub>6</sub>B<sub>16</sub>, metallic glass, crystn., effect of electron irradi. 2-35402
- Ni<sub>4</sub>Mo, ordering under electron irradi. 2-30494
- Pb alloy Josephson junctions, electron irradiation effects 2-51375
- Pb-Au, dil. alloy, electron irradi., dipole formation, resistivity annealing spectra study 2-36880
- PbS, phonon spectra and static defects, surface changes effects (*Russian*) 2-12904
- Pd-GaAs Schottky diodes, current-voltage and capacitance-voltage characts., electron irradi. effects 2-13165
- Pd-Si, electron bombardment and post-thermal annealing, cpd. form. 2-8543
- Pd<sub>80</sub>Si<sub>20</sub>, amorphous, electron radiation damage, elec. cond. 2-40439



**electron beam effects continued**

- Pd<sub>90</sub>Si<sub>10</sub>, amorphous, electron irradiation damage, positron lifetime meas. 2-50709
- Pt-Si, electron bombardment and post-thermal annealing, cpd. form. 2-8543
- Sb thin film, amorphous, impulse stimulated crystallisation 2-45039
- Si, amorphous, electron bombardment induced conductivity 2-13062
- Si, amorphous implanted, phase transitions produced by pulsed laser or electron irradi. 2-45283
- Si avalanche photodetectors, crystal defects, electron channelling imaging with SEM 2-12605
- Si crystal, electron backscattering, anisotropy formation depth 2-35545
- n-Si, DLTS spectrum charges due to electron irradi. 2-17012
- Si, defect creation and recomb. lifetime due to high energy and  $\gamma$ -irradiation 2-50715
- Si, electron energy deposition profile, calc. by Monte Carlo method (French) 2-50726
- p-Si, electron irradi., defect state photoionisation cross-section photocapacitance study 2-17026
- p-Si, electron irradi., Hall mobility, pot. relief analysis 2-5420
- Si, electron irradi., minority carrier lifetime meas. 2-46024
- Si, electron irradiated, defects study by electron microscopy 2-45274
- Si, electron irradiated, drift mobility, temp. depend. 2-8798
- Si, electron irradiated, form. probability of separated Frenkel pairs 2-35541
- Si, electron irradiated, TEM and channelling anal. of defects 2-25937
- Si, electron pulse, super dense, irradi., positron annihilation study 2-17569
- n-Si, electron pulse irradi., transient process kinetics 2-36060
- Si epitaxial layer solar cell performance under electron irradi. 2-37280
- Si film, crystn. front periodic motion during beam annealing 2-5313
- Si, heavily doped, electron irradiated, defect formation 2-21180
- Si high-resistivity n<sup>+</sup>pp<sup>+</sup> solar cells, performance under 1 MeV electron irradi. 2-37281
- Si, ion implanted, laser and electron beam annealed, deep levels, DLTS study 2-51105
- Si, p<sup>+</sup>-n diode, neutron and electron irradiation effects on defect energy levels (Korean) 2-13002
- Si, self-implanted amorphous layers, swept-line electron beam annealing 2-50713
- Si sheet materials, fabrication of solar cells using 1 MeV electron irradiation 2-37299
- Si, solar cell, n<sup>+</sup>-p, electron irradi. and annealing effects 2-2786
- Si solar cells, advanced design, electron irradi. test for space production units 2-37279
- Si solar cells, electron and proton damage coefficients and thermal annealing 2-37284
- Si solar cells, thin high-efficiency implementation, processing yields, electron, proton and neutron irradi. testing 2-27669
- Si solar cells, vertical junction, electron radiation tests 2-27693
- Si, surface temp. evaluation of multi-scan electron beam irradi. samples, TEM obs. and optical pyrometry meas. 2-50712
- Si wafer, low power electron irradi. with conventional electron gun, heating effect numerical simulation 2-25932
- Si wafers, electron beam annealed, crystallographic damage anal. 2-50714
- Si:As, CW laser and electron beam annealed, Rutherford backscatt. and SIMS anal. 2-46847
- Si:As, implanted, laser or electron beam annealed, defect form., electron beam induced current study 2-45271
- Si:As, ion implanted, pulsed electron beam annealing 2-50710
- Si:As<sup>+</sup>, implanted, CW laser annealing and electron beam annealing 2-12640
- Si:As<sup>2+</sup>, ion implantation, scanned electron beam annealing 2-1527
- Si:C, O, role of C in precipitation of O, IR and DLTS studies 2-21315
- n-Si:Gd,  $\gamma$ - and electron-irradi., defect formation; elec. and optical study 2-21175
- Si:H, amorphous, electron irradi. effect on dark and photocond. and defect removal 2-45279
- Si:H, amorphous, electron irradi., effect on photoconductivity 2-51233
- Si:H amorphous, electron and laser beam induced centres, photoluminescence study 2-36682
- Si:P implanted wafer, multiscanning electron beam annealing, solar cells appl. 2-21177
- Si:P ion-implanted solar cells, pulsed electron beam annealing 2-37362
- Si/metal film interface, silicide formation using laser and electron beams 2-51008
- Si-Pd, silicide formation by scanned electron beam, Raman spectra study 2-51607
- Si-SiO<sub>2</sub> MOS structs., donor conc. in Si surface layer, electron irradi. temp. effect 2-17168
- SiC, phonon spectra and static defects, surface changes effects (Russian) 2-12904
- n-SiC(6H), electron bombarded, subthreshold defect form., cathodoluminescence obs. 2-51718
- SiO<sub>2</sub>, electron energy loss and mean free path 2-31592
- SiO<sub>2</sub>, irradiated with electrons and  $\gamma$ -rays, defect form. dose depend. 2-21176
- SiO<sub>2</sub>, thermal, oxide charges induced by scanning electron and laser beam annealing 2-50711
- SiO<sub>2</sub>/N dielectric films, Mrad electron irradi. tolerance, for IGFETs 2-45275
- SnO<sub>2</sub> film, electron beam induced dissociation and conductivity 2-25930
- TaC, neutron and electron radiation defects, electrical resist. study 2-21181
- Ti-Al-V, type VT6, nonstationary vaporisation regime on electron beam irradi. (Russian) 2-1605
- TiC, electron irradi. damage. 2-21178
- TiC, neutron and electron radiation defects, electrical resist. study 2-21181
- V-Ga-Ce (16, 1 wt.%) irradi. conditions on mechanical props. 2-13757
- W-C, decarbonisation reactions, electron stimulated and flash desorption study 2-47374
- YIG, ferromagnetic relaxation, influence of low temp. electron and neutron irradiation (Russian) 2-26762
- ZnO, intrinsic defects, ESR study (German) 2-25867
- ZnO-K<sub>2</sub>SiO<sub>3</sub>, colouring kinetics during electron irradi. (Russian) 2-5652
- Zn<sub>3</sub>P<sub>2</sub>-Mg, p-n junction form., carrier diffusion lengths, collection efficiency spectral response, EBIC meas. 2-26494
- ZnSe, electron damage study in TEM 2-21182

**electron beam effects continued**

- ZnSe, electron irradi., anisotropic Zn displacement Frenkel defect production 2-45281
- ZnTe-CdSe heterojunction, electron-voltaic effect 2-30963
- electron beam impact** *see electron impact*
- electron beam lithography**  
*see also electron resists*
- electron mean free path in multiple layers, Monte Carlo simulation 2-2387
- electronic devices, microstruct. fabrication, review 2-51828
- lens, variable axis, for electron beams 2-15951
- magnetic deflector field computation 2-49652
- metal particles, 0.25  $\mu$ m, electron beam lithography fabrication 2-31655
- micro lens fabrication using electron-beam lithography 2-34947
- micro-Fresnel lens fabrication 2-34875
- microelectronics, lithography appls. and limitations 2-3349
- microgratings, electron-beam directly written, for integrated optical circuits 2-4618
- PMMA thin film masks, for use in electron beam lithography, thickness profile determ. 2-23784
- point electron and ion source optics, numerical anal. method 2-51774
- positioning stage driven by hydraulic cylinder for exposure system 2-28930
- resolution limits, secondary electron interaction mechanisms 2-23790
- SAW filters, 0.5  $\mu$ m finger period electrodes, electron beam lithography fabrication 2-50030
- shaped electron beam current distrib., Monte Carlo modelling 2-49650
- W films, pattern definition, high resolution 2-41776
- electron beam machining**  
No entries
- electron beam welding**  
Al alloys fatigue strengths and welded joints 2-52122
- electron beams**  
*see also electron impact; electron optics; Schwarz-Hora effect*
- angular velocity, RMS spread, meas. from synchrotron radiation 2-15658
- cathode systems, geometric aberration coeff., expansion parameters 2-39557
- cyclotron harmonic wave instability on costreaming electron beams 2-7432
- cyclotron waves, half-frequency, generation in colliding relativistic electron beams 2-20237
- diocotron instability in asymmetric beams 2-39556
- electron flow oscillations in nonuniform crossed fields 2-15949
- energy broadening, anomalous, of 300 eV beam, meas. and calc. 2-44184
- energy broadening in field emitted electron and ion beams 2-7713
- energy resolution of the RPD method 2-28934
- energy-analyzing properties of an electrostatic field, electron beam appls. 2-39526
- extended, space-charge forces in trajectory anal. 2-44187
- fast beam bending and transport by means of macrochannelling 2-39558
- focusing effects on contamination in STEM 2-23792
- free electron laser hamiltonian model, cooperative and chaotic transition 2-44320
- free electron laser instability for relativistic annular electron beam propag. through helical wiggler field 2-39660
- free-electron laser amplifier, numerical two-dimens. model 2-16006
- free-electron lasers, classical electron generator advancement into short-wavelength bands, review 2-29824
- guided wave system filled with electron beam, orthogonality relation for the modes 2-44188
- half-radius, influence of spherical and chromatic aberrations 2-7712
- high-current relativistic charge-neutralised electron beam, pinching in mag. fields 2-10918
- intense relativistic electron beams in uniform and rippled magnetic fields, producing MM wave emission 2-20236
- in ionosphere, guiding centre diffusion theory rel. to artificial auroral streak widths 2-6489
- magnetoelectric properties 2-44186
- magnetosphere, JIKIKEN beam-plasma interaction expt. 2-18664
- momentum modulation of electron beam by laser fields, coherent optical radiation obs. 2-16055
- multiple foil bremsstrahlung sources, theoretical and expt. studies 2-29471
- negative-ion injectors, recuperator, expt. simulation using electron beam 2-14121
- neutralized electron beams with a given current distribution 2-15953
- noise characteristics in linear accel. 2-43660
- nonparaxial intense ribbonlike electron beam, elec. and mag. field effects on shape 2-4446
- passage through optically active molecules, electron optic dichroism 2-15952
- point source, multiple scatt. distrib. 2-49654
- pulsed electron source for energies 1 to 6 MeV, based on betatron 2-19821
- quantum modulation by EM wave in undulator 2-831
- relativistic, charge-neutralised, in mag. quadrupole system, self consistent steady states 2-29779
- relativistic, cyclotron wave generation and phase velocity control 2-20242
- relativistic, explosive instability in field of transverse EM waves 2-24928
- relativistic, free electron laser, magnetic diffusive wiggler pump 2-924
- relativistic, in storage ring with coherent synchrotron oscils., microwave radiation 2-24462
- relativistic, stable bunched struct. formation 2-11627
- relativistic, stimulated synchrotron radiation, quantum theory 2-34649
- relativistic beams of gyrating electrons, oppositely directed, semicyclotron oscillations excitation 2-29774
- relativistic electron beam, current transmission through thin target 2-34252
- relativistic electron beam in corrugated waveguide, Cherenkov radiation 2-828
- relativistic electron beam in nonself sustaining discharge, effect of self mag. field of plasma current 2-1363
- relativistic electron beam transport in external mag. field, physical and mathematical modelling 2-20920
- relativistic electron beams, EM waves steady-state parametric excitation 2-829
- relativistic electron beams, limiting current calcs. 2-10919
- relativistic electron beams, oppositely directed system, oscillations excitation at semicyclotron freq. 2-29773



**electron beams continued**

- relativistic electron bunch acceleration, problems of energy extraction 2-29474  
 relativistic hollow electron beam, diocotron instability in plasma background 2-44869  
 relativistic, transport in irregular waveguide, transient phenomena 2-29473  
 self focusing relativistic beam, radiation emission in phase correlation regime 2-11625  
 slow cyclotron waves in tubular electron beams 2-29464  
 SPAC-VI toroidal device, plasma confinement expt. by intense relativistic electron beam ring 2-25608  
 space charge waves, in rotating electron beams with magnetic interaction 2-34650  
 STEM, field-emitted electrons, energy spread influence on resolu. 2-23786  
 unfocused cylindrical electron beam, space charge wave effects 2-29777

**electron capture**

- see also *charge exchange; electron attachment*  
 asymmetric atom-ion collisions, electron capture, impulse approx. 2-15892  
 atom-ion collisions, charge transfer, electron capture, cross sections impact parameter method 2-4381  
 calibration constants for Mossbauer isomer shift, electron capture (*Russian*) 2-15832  
 capture-cross-section determination by transient-current trap-filling experiments 2-21525  
 ethanol glasses, electron scavenging, gamma-ray irradi. at 77 and 4.2K 2-13987  
 fission fragments effective charge on stopping in CO<sub>2</sub>, CF<sub>2</sub>Cl<sub>2</sub>, CF<sub>4</sub> and SF<sub>6</sub> 2-15891  
 glasses, low temp., electron scavenging, multi-step tunnelling model 2-12504  
 heavy ions, multicharged, charge-changing collision in gaseous media (*Japanese*) 2-49569  
 internal electron capture probabilities, influence of exchange effect on chemical changes 2-44087  
 multielectron atom+bare projectile, electron capture, eikonal approx. 2-34561  
 nonpolar molecular liqs., electron scavenging reactions, solvent effects, depend. on electron energy 2-52192  
 Stark effect on electron capture into fully stripped ions 2-20180  
 Al-SiO<sub>2</sub>-Si structure with plasmochemical insulator, elec. props. 2-21684  
 Ar<sup>18+</sup>, electron capture cross-sections from He-atoms and H<sub>2</sub> molecules (*Russian*) 2-7639  
 Ar+H<sup>+</sup>, K-shell electron capture calcs. 2-24847  
 Ar<sup>24+</sup>+Ne, single electron capture functions meas., energy loss spectra 2-44052  
 Ar<sup>4+</sup>+He(Ne)(Ar) 2-11569  
 BeF<sub>3</sub>, electron capture to form anion, pot. energy surface, force const. 2-646  
 C<sup>6+</sup>, electron capture cross-sections from He-atoms and H<sub>2</sub> molecules (*Russian*) 2-7639  
 C+H<sup>+</sup>, K-shell electron capture calcs. 2-24847  
 C<sup>8+</sup>+H<sub>2</sub>, X-ray emission during electron capture (*Russian*) 2-11430  
 Cr (100) surfaces, mag. structure study using electron capture spectroscopy 2-46244  
 Fe<sup>15+</sup>, electron impact ionisation, electron capture, resonant state, Auger emission 2-20195  
 H-like atom+bare charge, electron capture to continuum states, distrib. anisotropies 2-786  
 H+A<sup>2+</sup> electron capture collisions, nl distrib. 2-20178  
 H+atoms, collisions, charge transfer and ionisation, review 2-24851  
 H+H<sup>+</sup>(C<sup>2+</sup>)(O<sup>2+</sup>)(Fe<sup>24+</sup>), electron capture, cross sections, eikonal calcs. 2-34560  
 H+H<sup>+</sup>(He<sup>2+</sup>), electron capture into excited s and p states 2-24846  
 H+He<sup>2+</sup>, electron capture, close-coupling calcs. 2-20175  
 H+highly charged ions, single electron capture, cross section,  $\sigma(H_2)/\sigma H$  ratio 2-20183  
 H+Li<sup>+</sup>(Ni<sup>+</sup>)(Ne<sup>+</sup>), electron capture cross section meas. 2-787  
 H<sup>+</sup>+H, ls-ls electron capture, exact second Born calcs. 2-15893  
 H<sup>+</sup>+H(ls), evaluation of second Born amplitude as two dimensional integral 2-49546  
 H<sup>+</sup>+He, resolution dependence and asymmetry of electron capture to the continuum spectra 2-20182  
 H<sub>2</sub>+highly charged ions, single electron capture, cross section,  $\sigma(H_2)/\sigma H$  ratio 2-20183  
 He+C(N)(O)(F) ions, one-electron ions ionisation and capture 2-7636  
 He<sup>+</sup>+Ar<sub>2</sub>(O<sub>2</sub>), vibr. excitation, electron capture, energy-loss meas. 2-24833  
<sup>163</sup>Ho internal bremsstrahlung electron capture, neutrino mass 2-4383  
 Li+He<sup>2+</sup>(He<sup>+</sup>), electron capture cross sections 2-34559  
 Li<sup>2+</sup>+H<sub>2</sub>(He), electron capture cross-sections 2-20176  
 Li<sup>3+</sup>+H<sub>2</sub>(He), electron capture cross-sections 2-20176  
 N<sup>7+</sup>, electron capture cross-sections from He-atoms and H<sub>2</sub> molecules (*Russian*) 2-7639  
 N+H<sup>+</sup>, K-shell electron capture calcs. 2-24847  
 Ne<sup>10+</sup>, electron capture cross-sections from He-atoms and H<sub>2</sub> molecules (*Russian*) 2-7639  
 Ne+Ar<sup>+</sup>, low energy collisions, charge transfer, ionisation, cross section meas. 2-34562  
 Ne+H<sup>+</sup>, K-shell electron capture calcs. 2-24847  
 Ni (100) surfaces, mag. structure study using electron capture spectroscopy 2-46244  
 O<sup>8+</sup>, electron capture cross-sections from He-atoms and H<sub>2</sub> molecules (*Russian*) 2-7639  
 O+H<sup>+</sup>, K-shell electron capture calcs. 2-24847  
 O<sup>6+</sup>+H<sub>2</sub>, X-ray emission during electron capture (*Russian*) 2-11430  
 O<sub>2</sub>, electron attachment density dependence statistical model 2-29706  
 OH<sup>-</sup> production from N<sub>2</sub>O and H<sub>2</sub>/hydrocarbon mixture, dissociative electron capture 2-17874  
<sup>193</sup>Pt internal bremsstrahlung electron capture, neutrino mass 2-4383  
 Si, A-centres, field depend. of thermal activation energy, electron capture cross sections and relax. time, using capacitance transient spectroscopy 2-45887

**electron capture, nuclear** see *nuclear electron capture***electron density**

- see also *carrier density; current density; electron density (metals); plasma density*  
 atoms and ions, charge distrib., classical Coulomb energy 2-7488

**electron density continued**

- aurorae, plasma meas. in pulsating events 2-3125  
 auroral ionosphere, electron density max., height anomalies 2-14653  
 D-region, electron density profile from VLF meas. 2-53003  
 dense ionised gas, electron and negative ion density determ. 2-50372  
 E and F-regions, thermal electron behaviour near Sq current focus (*Japanese*) 2-32704  
 E-region, electron conc., influence of NO rel. to solar zenith angle (*French*) 2-14650  
 E-region, electron density var. during solar eclipse, 1980 February 16, rel. to geomag. effect (*Chinese*) 2-3142  
 electron cyclotron resonance plasma, discharge cleaning (*Japanese*) 2-30342  
 elements, bulk electron concentration, and average valence band strength 2-5074  
 elements, bulk electron concentration, and average valence band strength 2-21060  
 F<sub>2</sub> layer, behaviour above Ruili, China, during solar eclipse (1980 February 16) (*Chinese*) 2-3122  
 interstellar cloud, implications of studies of isotope exchange in ion-neutral reactions 2-53350  
 interstellar medium, electron density fluctuations from radio sources scintillation 2-3296  
 interstellar medium, parameters of plasma irregularities rel. to pulsar scintillation 2-3297  
 ionosphere, auroral, spectral form of small-scale plasma turbulence 2-10248  
 ionosphere, auroral ionisation profiles rel. to energy spectra of incident electrons 2-32730  
 ionosphere, electron density effect on conjugate relationship of Pi 2 mag. pulsations 2-32769  
 ionosphere, electron and ion distrib. in near wake of Explorer 31 and AE-C satellites 2-10298  
 ionosphere, electron content during Waterhole expt. 2-3126  
 ionosphere, electron density and temp. rel. to var. of electron collision freq. 2-23166  
 ionosphere, electron density obs., 200-1500 km altitude 2-3129  
 ionosphere, F<sub>2</sub>-layer nighttime electron density max., winter increase 2-14652  
 ionosphere, nighttime mid-latitude vertical structure, model 2-14651  
 ionosphere, obs. made by reson. scatt. sounding method 2-32663  
 ionosphere, obs. of total electron content during solar eclipse, 1980 February 16 (*Chinese*) 2-3121  
 ionosphere, polar region electron distrib. in dark sector 2-48070  
 ionosphere, storm-time slab thickness at low latitudes 2-23157  
 ionosphere, topside, latit. patterns in plasma scale heights and ion transition altitudes at low latit. 2-23163  
 ionosphere, vertical distrib. during low-latitude disturbances 2-32710  
 ionospheric electron content, pulsating aurora effects 2-3116  
 IR plasma diagnostics, continuous far-forward scattering at 10 microns in a Tokamak 2-40181  
 metal surface spectra, CT and totally symm. mode activity 2-22017  
 nebulae, effect of small-scale electron density and temp. fluctuations on forbidden-line intensity ratios 2-28540  
 plasma generation by solid target-laser pulse interaction in mag. field 2-1322  
 positive column, electron diffusion length, electron production and loss rates effect 2-20955  
 solar corona, electron density meas. in active regions via K-coronameter with reflex monitor 2-6538  
 solar flares, Gaussian model rel. to X-ray photometric data from Interkosmos 11 satellite 2-14835  
 Venus, dayside ionosphere, electron density peak from radio occultation 2-42627  
 Al, plasma backlighted extreme UV absorption spectroscopy 2-4992  
 H<sub>2</sub><sup>+</sup>, 1s $\sigma_g$  and 2p $\sigma_u$  states, diatomic interactions in momentum space 2-24604  
 HX (X=F, Cl, Br, I), dissoc. energy, overlap integral rel. to atomic ionisation pots. 2-11582  
 He hot cathode discharge, positive column, response to current perturbation, elec. field, electron density and drift vel. relax. 2-16527  
 K, Knight shift vol. depend. 2-9046  
 Li, Knight shift vol. depend. 2-9046  
 Na, Knight shift vol. depend. 2-9046
- electron density (crystallography)** see *crystallography*
- electron density (metals)**  
 metal, cubic, electron density change near impurities, tight-binding method, phase-shift approach 2-21533  
 noble metal based alloys, prediction of solid solubility 2-35692  
 FeSn, FeSn<sub>3</sub> and FeSn<sub>2</sub>, electron struct., invest. using X-ray and X-ray electron spectra (*Russian*) 2-35434  
 Sn-Ag(Au), amorphous films, transport props. and phase stab., electron conc. effect 2-35987
- electron density of states** see *electronic density of states*
- electron density of states (condensed matter)** see *electronic density of states*
- electron detachment**  
 molecules, low energy electron scattering bound and virtual states, resonances, pot. energy curves 2-24875  
 H<sup>-</sup>+H (H<sub>2</sub>)(He)(Ne)(Ar)(N<sub>2</sub>), electron detachment, cross sections, form. of excited H atoms 2-24841  
 He (<sup>4</sup>P<sub>o</sub>), metastable state, photodetachment cross section, CI wave functions 2-20016  
 NO<sub>2</sub><sup>-</sup>, photodetachment, vibr., UV and visible obs. 2-20144  
 SF<sub>6</sub><sup>-</sup>, IR multiphoton induced electron detachment 2-20140  
 SO<sub>2</sub>, ion-molecule reactions, attachment and detachment coeffs. 2-27429  
 SO<sub>2</sub>-O<sub>2</sub> mixtures, ion-molecule reactions, attachment and detachment coeffs. 2-27429
- electron detection and measurement**  
 Cherenkov light produced by 500 MeV electrons in water, expt. results 2-24485  
 dose measurements in water and polystyrene, comparative studies using various dosimeters 2-49192  
 electrostatic spectrometer for internal conversion electrons meas. in 0.1-20 keV region 2-49213  
 energy meas. in presence of hadron background, with Cherenkov gamma spectrometer 2-24502  
 high-energy electrons, dose estimation using ionisation chambers (*Czech*) 2-19914  
 ionisation chamber, recombination correction for pulsed, swept radiation, theory 2-49246



**electron detection and measurement continued**

- ionisation chamber, recombination correction for pulsed, swept radiation, expt. 2-49247
- JEN electron ray scanning and measuring equipment (ERASME) (*Spanish*) 2-19912
- lifetime meas. of positrons and positronium in condensed media 2-24516
- n-octane liquid scintillator, low energy proton and electron responses 2-7437
- plasma diagnostics, analyser for electron distribution and angular distribution meas. 2-1342
- scintillator glass SCGIC shower detector, longit. response 2-24486
- SEM, conducting mode, quantitative detection system 2-28944
- SEM detection systems for cathodoluminesc. and cond. modes 2-28941
- $\text{Bi}_4\text{Ge}_3\text{O}_{12}$  crystal scintillator, 35-175 MeV positron total absorpt. shower detection 2-24484
- Ge detectors, response to monoenergetic electron, positron and gamma ray beams 2-39267

**electron device manufacture**

- see also *integrated circuit manufacture; semiconductor device manufacture*
- Si solar cells, amorphous, low cost, Fuji Electric research and development work 2-52336

**electron device noise**

- 1/f noise, LF catastrophic events 2-51255
- 1/f noise and burst noise, common mech. 2-51260
- avalanche photodiodes, triggered avalanche detection of IR photons 2-23724
- C-CD, gamma-induced noise anal. and meas. 2-29435
- diode lasers, electronic phase-noise suppressions 2-29813
- diode lasers, single-mode, in interferometer systems, phase noise 2-3612
- FET, ballistic transport obs. by noise meas. 2-51249
- Fourier transform NMR spectra, accumulation, signal-to-noise ratio 2-6880
- Josephson junction, current driven, microwave induced steps, thermal fluctuations and transition rates 2-31093
- Josephson junction, radiation linewidth anomalies 2-31094
- Josephson junction, RF biased, chaotic states 2-17229
- Josephson junction, ultrasmall, scaling characteristics 2-51373
- Josephson junction, voltage fluctuations, microscopic theory 2-31092
- Josephson junction noise thermometer, elec. impedance, math. model 2-43016
- Josephson superconducting point contact, current noise 2-46204
- Josephson tunnel junction amplifier low noise self-pumped, parametric amplification props. 2-13239
- MIM tunnel junctions; low freq. noise model 2-46154
- pulse height analyser, pile-up error compensation method 2-34249
- SEM, secondary electron collection 2-23791
- semiconductor, hot electron noise props. in nonzero collision duration regime 2-51248
- tunnel junction, nonhysteretic, microwave direct and heterodyne detect. 2-17228
- AlGaAs injection-locked semiconductor laser, optical FM signal amplification and FM noise reduction 2-16039
- $\text{Al}_{1-x}\text{Ga}_x\text{As-GaAs}$ , superlattice avalanche photodiode, large ionisation rate ratio 2-51289
- $\text{Al}_x\text{Ga}_{1-x}\text{As-GaAs}$  quantum-well heterostructure laser, transient and noise characts. 2-7767
- Pb/In-oxide-Pb(Bi) quasiparticle tunnel junctions for MM-wave detection 2-41075
- Si, 1/f noise of thermal and hot charge carriers 2-26456
- Si, p-n junction, current fluctuations, during secondary breakdown 2-36133
- Te, photoconducting for subMM wave detectors 2-48777

**electron device testing**

- see also *integrated circuit testing; semiconductor device testing*
- nuclear and space radiation effect, conf., Seattle, WA, USA (July 1981) 2-33215

**electron diffraction**

- see also *electron diffraction crystallography; electron diffraction examination of materials; gas phase electron diffraction; high energy electron diffraction; low energy electron diffraction*
- absorption coeffs. in dynamic theory 2-25693
- EM wave diffr. of electrons in undulator 2-28719
- Fifty Years of Electron Diffraction, book 2-28616
- molecules, vibrational amplitude torsion depend., electron diffr. study 2-29710
- observer motion, de Broglie and Schrodinger explanation 2-33320
- reflection coefficient of slow electrons, effect of macroscopic field near boundary (*Russian*) 2-20979

**electron diffraction crystallography**

- see also *crystal atomic structure; Debye-Waller factors; electron diffraction examination of materials*
- amorphous material, multiple electronic scatt. (*French*) 2-40229
- beam-rocking electron diffr. expts., inelastic scattering contrast 2-50488
- convergent beam electron microdiffraction, from small crystals 2-50487
- convergent-beam electron diffr. patterns, 3D strain-field information 2-44984
- crossed bend contours, fine struct. appearing in electron microscope images of bent crystals 2-25697
- crystal polarity, and struct.-factor phase rels. using electron diffr. 2-44985
- diffusion scattering, dynamic theory, for crystals with chaotic distributed effects (*Russian*) 2-9213
- films, thermal expansion determination electron diffr. pattern method 2-3562
- inelastic scattering constant, in beam-rocking electron diffr. expts. 2-50488
- Kikuchi patterns, accurate determ. of crystallographic orientation 2-40230
- metals, comparison of inelastic electron and X-ray scatt. 2-44982
- molecular replacement method, phasing electron diffr. amplitudes 2-47759
- patterns, theoretical, computer calc. and plotting 2-35356
- phase transitions, studied by electron microscopy and electron diffr. 2-2506
- polytypism study, new exptl. techniques 2-5071
- satellite spots spacing in electron diffr. pattern, determ. of period of lattice parameter modulation 2-20977
- single cryst. electron diffr. data, stereo anal. 2-25694
- small crystals, convergent beam electron microdiffraction 2-50487

**electron diffraction crystallography continued**

- structural analysis 2-5028
  - structural electron diffraction, precision, state of the art and development prospects 2-40227
  - superposition of electron diffraction patterns of two crystals with a simple lattice-correspondence relationship 2-40228
- electron diffraction examination of materials**
- see also *gas phase electron diffraction; high energy electron diffraction; low energy electron diffraction; reflection high energy electron diffraction*
  - aircraft component fatigue crack growth rates, electron fractography 2-52129
  - cotton celluloses II and III, struct., electron diffr. obs. 2-45071
  - diamond films, deposition from beams of C ions 2-31629
  - trans-1,2-dichloroethene, mol. struct., electron diffr. determ. 2-49573
  - ethylene propylene copolymer-methylvinylpyridene metal halide complexes, phase struct. and equilb. (*Russian*) 2-45533
  - glass surfaces, bombarded by noble gas ions at 30...50 keV, electron microscopic investigations 2-5785
  - graphite-halogen intercalation compounds, enthalpy changes of phase transitions 2-16778
  - magnetic-nonmagnetic metal sandwich films, use of electron diffr. for contact struct. 2-26239
  - microtron beam electron diffr. obs. 2-21113
  - Pb chalcogenides, epitaxial bicrystals, elastic deform. and stress. 2-51007
  - PMMA thin film masts, for use in electron beam lithography, thickness profile determ. 2-23784
  - poly(p-phenylene terephthalamide) fibre, struct. and mechanical props. 2-50556
  - poly(p-phenylene benzobisthiazole), as-extruded and heat treated ribbons, microstruct. study 2-22193
  - poly(p-phenylene benzobisthiazole) films, struct. study 2-21462
  - polyacetylene film, epitaxial synthesis, shear flow method 2-45074
  - polyacetylene films, prep. by Luttinger's catalyst, morphology and isomerisation 2-45076
  - polyacetylenes prepared by different methods, struct., morphology and electronic props. 2-30413
  - polyethylene single cryst., electron diffr. pattern., optical transform appl. 2-12510
  - polytetrafluoroethylene, cryst. struct. of low temp. phase (II) 2-40370
  - purple membrane protein, bacteriorhodopsin, phasing electron diffr. amplitudes with mol. replacement method 2-47759
  - pyrite crystals, in coal, electron microscopy 2-1373
  - steel, austenitic stainless, structural temperature-strain diagrams 2-51990
  - steel, Cr-Mo, anal. of carbides formed during accel. ageing 2-51958
  - steel, CrNiMoV, medium-C, forgings, lamellar fracture characts. (*Chinese*) 2-22300
  - steel, martensitic, precipitated particles at third stage of tempering, high resolution electron microscope obs. 2-13731
  - Ag crystalline film, transmission electron diffr. pattern contrast, amorphous material effect 2-44986
  - Ag-Au alloy in  $\text{HNO}_3$ , selective dissolution of Ag, oxide form. 2-47255
  - AgI solid electrolyte in Ag/ $\beta$ -AgI/2LiPy cell, microstruct. 2-16806
  - Al crystalline film, transmission electron diffr. pattern contrast, amorphous material effect 2-44986
  - Al, polycrystn., convergent-beam electron diffr. patterns, 3D strain-field information 2-44984
  - Al-Au films, amorphous, short range order, electron diffr. study 2-5330
  - Al-Cu (3 wt.%), pre-precipitate microstruct., obs. by lattice imaging technique (*Japanese*) 2-1448
  - Al-Fe intermetallic phase, formed during controlled solidification 2-36848
  - Al-Ni, parallel Moire effect in electron micrographs 2-44987
  - Al-Ni-Sn, parallel Moire effect in electron micrographs 2-44987
  - Al-Zn (40 wt.%), aged, cellular dissoln., mechanism and kinetics 2-36858
  - AlN ceramic with added  $\text{Y}_2\text{O}_3$  or Ni, structural characteristics 2-46989
  - $\text{Al}_2\text{O}_3$ , ultradisperse particles, phase comp. 2-50831
  - Au film, (001) top and bottom surface struct., high resolution TEM 2-40660
  - Au-Mg system, electron microscopic and electron diffr. study 2-50588
  - Au-Mn system, 2D antiphase structs. based on  $\text{DO}_{22}$  struct. high-voltage-high resoln. microscopy 2-40233
  - $\text{Au}_4\text{Mg}$ , 2D antiphase struct. studied by high-voltage-high-resoln. electron microscopy 2-44992
  - B filament surface layer struct., heat treatment effects, internal friction meas. 2-40655
  - B, fine grained, internal friction, temp. depend. 2-41649
  - $\text{Ba}_2\text{NaNb}_2\text{O}_{15}$ , commensurate-incommensurate transition, ferroelectric transition 2-45567
  - Bi evaporated films, early stages of growth, substrate effects (*French*) 2-5325
  - C film,  $\text{C}_{60}$ , electron diffr. study of crystn. phase struct. 2-50583
  - C stripper foils made by DC glow discharge process, physical props. and structure 2-11334
  - C thin films, amorphous and cryst., RF plasma decomposition and ion beam deposit ion growth, structure, TEM and electron diffr. obs. 2-12931
  - $\text{Ca}_4\text{YFe}_2\text{O}_{13}$ , cryst. struct. anal., 1 MeV high resoln. electron microscopy and convergent-beam electron diffr. 2-1449
  - $\text{Cd}_3\text{As}_2$ , amorphous films, local atomic structure, radial distrib. function, electron diffr. obs. 2-25745
  - $\text{Cd}_3\text{As}_2$ , amorphous films, structural, electrical and thermoelectric props. 2-26399
  - $\text{CdS}(\text{Se})$ , photoelectrodes, in polysulphide electrolyte, surface crystallinity and morphology 2-8692
  - $\text{CdTe}$ , thin films, struct. and elec. props. stoichiometry and prep. condition depend. 2-51353
  - Co-P chemically deposited film, mag. props., effects of activation and acceleration 2-9009
  - Cr thin films, crystallographic structure and anal. 2-1789
  - Cr-Ni thin films, micromechanisms of crystn. 2-45041
  - $\text{Cr}_{100-x}\text{Al}_x$ , struct. and microstruct. study 2-21065
  - $\text{Cr}_{100-x}\text{Al}_x$ , struct. and microstructure study 2-21066
  - $\text{Cr}_2\text{O}_3\text{-TiO}_2$  system, electron microscopic obs. for high-index crystallographic shear phase 2-25699
  - $\text{Cr}_2\text{S}_3$ , cryst. struct. and domain struct. 2-8490
  - Cu surface, (100), adsorbed ethene vibr. excitation and struct. 2-49362
  - Cu, wear, mechanicochem., surface layers struct. and comp. 2-17741
  - Cu-Al-Ti-Hf, precipitation of particles during internal oxidation (*Russian*) 2-22218



## electron diffraction examination of materials continued

- Cu-Ni-Al-Mn, quasi-periodic struct. form. sequence (*Russian*) 2-5876  
 Cu<sub>1-x</sub>Fe<sub>x</sub>Cr<sub>2</sub>(SeO<sub>3</sub>)<sub>4</sub>, thiospinels, Mossbauer spectra, lattice constants, seebeck coeff. 2-51508  
 CuInSe<sub>2</sub>, thin films, ion-beam sputtered, characterisation 2-8737  
 Eu<sub>2</sub>O<sub>3</sub> films formed by oxidation of Eu, struct. and props., temp. and substrate influence 2-6016  
 α-Fe crystalline film, transmission electron diff. pattern contrast, amorphous material effect 2-44986  
 Fe, oxidation, (001) and (112) crystals, growth and struct. of oxide films, 200-300°C 2-2622  
 Fe, oxidation, growth and struct. of oxide films on polycrystal., 240-320°C 2-2623  
 Fe, reactive sputtering, in mixed Ar-O<sub>2</sub> atmosphere (*Japanese*) 2-30765  
 Fe-C, amorphous alloys, crystn., study of struct. defects in metastable Fe<sub>7</sub>C<sub>3</sub> (*French*) 2-12489  
 Fe-C martensite, modulated struct. studied by electron microscopy and diff. 2-12538  
 Fe-Mn-C, carbide form. upon tempering at low temps. 2-17697  
 FeCo, ordering, electron diff. study 2-45047  
 FeCr<sub>2</sub>O<sub>6</sub>, with tetrahedral vacancies, synthesis and struct. (*French*) 2-40327  
 Fe<sub>2</sub>Ga, ordering, electron diff. study 2-45047  
 Fe<sub>2</sub>Ni<sub>40</sub>P<sub>16</sub>B<sub>4</sub>, ordering, electron diff. study 2-45047  
 Fe<sub>2</sub>Si, ordering, electron diff. study 2-45047  
 Fe<sub>2</sub>TiO<sub>3</sub>, monoclinic, defect struct., electron microscopy and diff. studies 2-25907  
 GaAs, laser oxidation, expt. study 2-17751  
 GaAs, struct.-factor phase relationships and cryst. polarity determ. using electron diff. 2-44985  
 GaN epitaxial film on sapphire, SEM and electron diff. obs. 2-45753  
 GaN, high pressure vapour growth 2-27098  
 Gd, cubic ferromag. phase, space group obs. by X-ray, electron diff. (*German*) 2-31142  
 Ge, amorphous UHV deposited films, struct., elec. and optical props. 2-40732  
 GeO<sub>2</sub> deposition, on SiO<sub>2</sub> (I), struct. and morphology 2-12926  
 HC(SO<sub>2</sub>F)<sub>3</sub>, mol. struct., electron diff. obs. 2-49572  
 H<sub>2</sub>NSO<sub>2</sub>F, mol. struct., electron diff. obs. 2-49572  
 In-Pb(Cd)(Ti)(Sn) solid solns., mechanism of phase transformation (*Japanese*) 2-9351  
 InSb, epitaxial growth by laser evaporation, pulsed heating of substrate effect 2-46945  
 InSe film, amorphous, short-range order, elec. cond. and opt. absorpt. edge 2-40712  
 (LaO)Ag<sub>2</sub>S, Ag migration, electron microscope obs. (*French*) 2-35736  
 La<sub>2-x</sub>Sr<sub>x</sub>CuO<sub>4-x/2+δ</sub>, cryst. struct., rel. to Cu oxidation state and O vacancy disordering 2-30444  
 Li<sub>3</sub>N thin film solid electrolytes for electrochromic devices 2-17447  
 MgO, flux distrib. of incident electron waves 2-20978  
 MgO:Fe, EPR, FMR and electron diff. study 2-46371  
 Mo, moderate energy electron diff. 2-41463  
 Mo-Zr, nitriding, electron microscope obs. (*Japanese*) 2-13854  
 Mo<sub>1-x</sub>Si<sub>x</sub>, amorphous, supercond. and normal state props. 2-36203  
 NaIn film prep. by sandwich-type evaporation method 2-12944  
 Ni surface, adsorbed Se, photoelectron diff. data for surface-struct. determ., Fourier transform anal. 2-51767  
 Ni-Cr films, segregation, AES, electron diff. and elec. cond. study 2-45786  
 PbS-Bi<sub>2</sub>S<sub>3</sub> system, struct., phase diagram, twinning 2-45135  
 PbSe films, evaporated, structural defects and photosensitivity 2-51018  
 PbTe, epitaxial film, electrometer determ. of electron scatt. intensities 2-40708  
 PbTe films, magnetoresistance, Hall mobility 2-51360  
 PbTe, thin films, struct. and elec. props. stoichiometry and prep. condition depend. 2-51353  
 PdH, with primitive cubic lattice, cryst. struct. 2-25835  
 PdH<sub>1.33</sub>, tetragonal, electron diff. study 2-35476  
 γ-poly(vinylidene fluoride), crystalline, conformational defects and associated mol. motions 2-16603  
 Sb<sub>2</sub>S<sub>3</sub>, epitaxial growth on PbTe with diffusion interaction at phase boundary 2-51040  
 Sc, vacuum condensed film, struct. and elec. resist., FCC lattice phase obs. 2-16962  
 Si, amorphous, HF plasma-ion sputtered, struct. parameters 2-40709  
 Si, Czochralski-grown, high temp. annealed, octahedral precipitates 2-2514  
 Si film, polycryst., on SiO<sub>2</sub>, grain growth by CW scanning electron beam annealing 2-12925  
 Si, hot-pressed, tilt boundary, TEM and electron diff. study 2-30470  
 Si, laser-annealed polysilicon, on insulating layers, characterisation techniques 2-50699  
 Si ribbon crystals, deposited from gas phase, growth and struct. 2-22154  
 Si, self-annealing implantation, elec. and struct. characterisation 2-50681  
 Si, single crystal, convergent-beam electron diff. patterns, 3D strain-field information 2-44984  
 Si wafer, reactive sputter etching characteristics of wafer with CF<sub>4</sub> and O<sub>2</sub> mixed gas 2-31807  
 Si-Al-(111)Si structures, redistrib. of Si at low annealing temps 2-13183  
 SiC thin layers formed by C ion implantation in Si, struct. and annealing props. 2-8733  
 SiO<sub>2</sub> films, amorphous, DC reactive sputtering prep., anomalous phys. props. 2-30764  
 SnO<sub>2</sub> deposition, on SiO<sub>2</sub> (I), struct. and morphology 2-12926  
 SnTe, epitaxial film, electrometer determ. of electron scatt. intensities 2-40708  
 SnTe-SnTe sandwiches, parallel Moire effect in electron micrographs 2-44987  
 Sr<sub>2</sub>KNb<sub>2</sub>O<sub>10</sub>, commensurate-incommensurate transition, ferroelastic transition 2-45567  
 Ti alloys, decomposition of metastable β phase during continuous heating (*Russian*) 2-22219  
 Ti-Al-Mo-V, H embrittlement and stress corrosion cracking 2-17736  
 Ti-Al-(N) films, cosputtering prep., struct. modifications 2-5324  
 Ti-Ba thin film system, unoriented and oriented, struct. and phase transitions study 2-40705  
 Ti-BaCO<sub>3</sub> thin film system, unoriented and oriented, struct. and phase transitions study 2-40705  
 Ti-Si-(N) films, cosputtering prep., struct. modifications 2-5324  
 TiC<sub>x</sub>Ny film, physical vapour deposited, struct. and mech. props. (*Japanese*) 2-26253

## electron diffraction examination of materials continued

- TiNi martensite phase, cryst. struct., electron and powder X-ray diff. data 2-12536  
 TiNi, premartensitic, characterisation of lattice displacement waves 2-36855  
 Ti<sub>1-x</sub>Ni<sub>x</sub>V<sub>9</sub>, long-period struct., electron diff. and electron microscopy study (*Russian*) 2-35442  
 TiO<sub>2</sub> deposition, on SiO<sub>2</sub> (I), struct. and morphology 2-12926  
 TiSe<sub>2</sub>, origin of structural transition, thermoelectric power and electron diff. meas. 2-1612  
 ZnO(Se)(S), RF sputtered film struct., TEM, X-ray and electron diff. obs. 2-40746  
 ZrO<sub>2</sub>, ultradisperse particles, phase comp. 2-50831
- electron-electron double resonance** see ELDOR
- electron-electron interactions**  
 see also electron-electron scattering  
 ee→eeX, luminosity function for two-photon processes in the single tagging mode, γ\*γ\*→X comparison 2-3823
- electron-electron scattering**  
 see also electron-electron interactions  
 laser field effect, nonrelativistic treatment 2-38872
- electron emission**  
 see also cathodes; electron field emission; exoelectron emission; photoemission; secondary electron emission; spin polarised electron emission; thermionic electron emission; work function  
 fracture of materials, emission of electrons and positive ions 2-9398  
 ionic crystal, mechanochem. decomposition and fast-electron emission 2-27059  
 metal particles, micron size, collision with solid surface at vel. of 1 to 5 km/s 2-46886  
 superstatistical emission noise 2-28780  
 vacuum and surface science, conf., Cannes, France (Sept. 1980) 2-33231  
 C<sup>n+</sup>, gas excited ions, prompt and time delayed electron decay-in-flight spectra 2-4353  
 MgO powder, O<sub>2</sub> adsorpt., emitted electron energy distrib. study 2-17592
- electron energy bands** see band structure
- electron energy loss spectra**  
 2-22128  
 acetaldehyde, oscillator strengths, electron energy-loss spectra 2-29709  
 acetone (—d<sub>6</sub>), electron impact energy loss spectra meas., isotope shifts 2-44119  
 adsorbate, vibrational spectroscopy, book 2-38375  
 adsorbates, dipole electron scatt., book contrib. 2-41469  
 adsorbates, electron impact vibr. excitation, angle and energy depend., book contrib. 2-41470  
 adsorbed species on metal surfaces, EELS study 2-22127  
 AES, EELS, thermal desorption, and work function meas. 2-12918  
 benzene adsorbed on Ag(111) surface, electronic excitation, EELS and Raman spectra 2-30945  
 benzene adsorbed on Ag (111), electron scatt. study of vibr. overtones 2-34377  
 α-brass, surface (110), adsorbed O, vibr. spectra, EELS study 2-51753  
 bremsstrahlung transport, simulation, 50 keV to 80 MeV (*French*) 2-51733  
 calibration and scanning, technique 2-23787  
 CC, Au polycryst., backscatt. of fast electrons, 0.3 to 1.2 MeV calcs. (*French*) 2-5781  
 cylindrical mirror analyzer artifact obs. 2-28936  
 diamond, platelet defects., high resolution electron microscopy, SEM and electron energy loss spectra 2-25908  
 elastic peak electron spectroscopy for AES and EELS, eval. procedure 2-27506  
 electron trajectory simulation, by Monte Carlo method, conf., Toulouse, France (May 1981) (*French*) 2-48396  
 formic acid, oscillator strengths, electron energy-loss spectra 2-29709  
 graphite, homogeneous and porous, low-energy electron transport, Monte Carlo simulation (*French*) 2-50727  
 high resolving spectrometer for energy anal. of electrons backscatt. from solid surface (*German*) 2-3657  
 interaction after heating, surface phase form., LEED, EELS, AES, TEM, and photoelectron spectra 2-35747  
 K-shell partial cross-section, for electron energy-loss spectrometry 2-29720  
 line shape study 2-27035  
 line shapes, exptl., determ. of Gaussian and Lorentzian content 2-17580  
 metal surface, vibr. interaction between adsorbed CO mols., dipole-dipole interaction 2-45709  
 metallic surface, impurity detect. by EELS 2-13602  
 methyl ethyl ketone, 3-p Rydberg transitions, electron impact energy loss spectra 2-44119  
 microanalysis formulae, range of validity 2-27511  
 normalisation method for EELS 2-9231  
 parallel recording, of electron energy loss spectra 2-6933  
 physical electronics conf., Bozeman, MT, USA (June/July 1981) 2-10547  
 piezocrystal surface, inelastic slow electron scatt. (*Russian*) 2-13604  
 pyrazine adsorbed on Ag(111) surface, electronic excitation, EELS and Raman spectra 2-30945  
 pyridine adsorbed on Ag(111) surface, electronic excitation, EELS and Raman spectra 2-30945  
 pyridine intercalated NbS<sub>2</sub>, optical props., EELS study 2-2391  
 pyridine on Ag (111), electron scatt. study of vibr. overtones 2-34377  
 quantitation for microanal., computer program 2-37122  
 SEM, UHV, image contrasts 2-28940  
 semiconductor surface, high resolution EELS, review 2-27040  
 semiconductors, microscopic exam. by transmission EELS technique 2-31596  
 Si-Ge interfaces, low energy EELS study 2-9232  
 spatial resolution and detection sensitivity in microanalysis by electron energy loss selected imag-ing 2-6927  
 spatial resolution of electron microscopy energy-loss meas. 2-2390  
 surface studies, electron spectroscopy techniques, review (*Rumanian*) 2-17944  
 surfaces, electron spectroscopy, symmetry arguments, book contrib. 2-36738  
 Ag,m adsorbed H<sub>2</sub>, rotational excitation obs. 2-40687  
 Ag (110) surface, clean and O-covered, adsorption and reaction of water 2-16950  
 Ag, inelastic electron scatt. from adsorbed N<sub>2</sub>, CO, O<sub>2</sub>, and H<sub>2</sub> 2-2389



## electron energy loss spectra continued

- Ag, polycryst., backscatt. of fast electrons, 0.3 to 1.2 MeV calcs. (French) 2-5781
- Al (111) oriented cryst., EELS study 2-2392
- Al films, oxide thickness evolution, EELS study 2-46846
- Al foils, energy loss straggling for electrons 2-31593
- Al, polycryst., backscatt. of fast electrons, 0.3 to 1.2 MeV calcs. (French) 2-5781
- Al surface, H<sub>2</sub> physisorpt., EELS study 2-27039
- Al surface and bulk plasmon losses, relative intensity variation due to cryst. orientations, low energy EELS study 2-17582
- AlN film prep. by ion implantation, AES and low-energy EELS studies 2-12613
- Al<sub>2</sub>O<sub>3</sub> surface, H<sub>2</sub> physisorpt., EELS study 2-27039
- Ar<sup>2+</sup>+Ne, single electron capture functions meas., energy loss spectra 2-44052
- As<sub>2</sub>S<sub>3</sub> glass, electron beam induced defects, elec. and optical props. and EELS 2-45280
- As<sub>2</sub>Se<sub>3</sub> glass, electron beam induced defects, elec. and optical props. 2-45280
- Au disordered film, inelastically reflected electron energy spectra 2-5784
- Ba disordered film, inelastically reflected electron energy spectra 2-5784
- Ba, EELS, dynamic effects, localised states 2-27036
- Be, surface, slowly oxidised, electron spectroscopic studies 2-9230
- C, low-energy electron transport, Monte Carlo simulation (French) 2-50727
- CaF<sub>2</sub>, ion bombarded, surface decomposition, electron beam induced, AES, EELS and XPS study 2-25931
- Cd, oxidation initial stages, low-energy EELS and AES study 2-13603
- Cd<sub>3</sub>As<sub>2</sub>, band structure, UPS and EELS meas. 2-26294
- Ce, EELS, dynamic effects, localised states 2-27036
- Cr, protective oxide layer form. on air exposure, STEM and EELS study 2-2626
- Cr thin films, crystallographic structure and anal. 2-1789
- Cr<sub>1.1</sub>Fe<sub>0.7</sub>Al<sub>0.7</sub>Mg<sub>0.5</sub>O<sub>4</sub>, mixed valence spinel, specific site valence, EELS determ. 2-46844
- Cu (100), adsorbed CO, S, and methanol, surface vibr. modes, EELS study 2-17581
- Cu, adsorption of ethylene and acetylene, AES study 2-51002
- Cu, extended ELS fine structures above M<sub>2,3</sub> edges 2-27038
- Cu, polycryst., backscatt. of fast electrons, 0.3 to 1.2 MeV calcs. (French) 2-5781
- Cu surface, (100), adsorbed H<sub>2</sub>, D<sub>2</sub>, HD, rot. transitions, EELS study 2-46843
- Cu surface, (100), adsorbed ethene vibr. excitation and struct. 2-49362
- D<sub>2</sub>+CO, rot. excitation, differential cross sections and time of flight distrib. meas., energy loss spectra 2-44090
- D<sub>2</sub>O vapour, photodissoc., electron energy loss spectra 2-13981
- F<sub>2</sub>, electron impact K-shell excitation, energy loss spectra 2-15909
- Fe, EELS study, interband transitions 2-5780
- Fe, EELS study, interband transitions 2-9233
- GaAs, electron energy deposition profile, calc. by Monte Carlo method (French) 2-50726
- GaAs surface, high resolution EELS, review 2-27040
- GaN epitaxial layers, refl., 5 to 30 eV, dielec. function and electron energy loss function 2-22045
- Ge (111), adsorption of O<sub>2</sub>, AES, thermal desorption, work function, and EELS study 2-12917
- Ge, electron energy deposition profile, calc. by Monte Carlo method (French) 2-50726
- GeS (001), density of empty states meas. in cond. band 2-8746
- GeSe (001), density of empty states meas. in cond. band 2-8746
- HF, electron impact K-shell excitation, energy loss spectra 2-15909
- HF, electrons forward inelastic scatt., electron energy loss spectrum, Rydberg struct. 2-15905
- He<sup>+</sup>+N<sub>2</sub>(O<sub>2</sub>), vibr. excitation, electron capture, energy-loss meas. 2-24833
- In, widths of plasmon peaks in low energy EELS 2-17580
- KC<sub>8</sub>, graphite intercalation cpd., back-folded graphite band excitations, EELS study 2-41467
- La, EELS, dynamic effects, localised states 2-27036
- LiNbO<sub>3</sub>(TaO<sub>3</sub>), electron and ion bombard., electron spectra 2-41462
- Mg, oxidation, early stages, LEED, EELS, work function, and ellipsometry meas. 2-27344
- Mg, surface, slowly oxidised, electron spectroscopic studies 2-9230
- MgO crystallites, extended fine struct. in electron energy loss spectra 2-2393
- Nb, reflection electron energy loss spectra, plasmons 2-31594
- Nb-Ti, reflection electron energy loss spectra, plasmons 2-31594
- Nb<sub>2</sub>Ge, reflection electron energy loss spectra, plasmons 2-31594
- NbNx, electronic density of states, reflection EELS and UPS study 2-46874
- Ni, 3p EELS spectra, incident energy depend. 2-31595
- Ni (100) surface, adsorbed CO, EELS 2-22130
- Ni (110), clean and O covered, adsorption and reaction of water 2-16952
- Ni (111)-C and Ni (111), chemisorption of methyl cyanide (isocyanide), vibr. study, EELS spectra 2-46842
- Ni, extended ELS fine structures above M<sub>2,3</sub> edges 2-27038
- Ni surface (111), adsorbed O, EELS, force const. calc. 2-50988
- O, spatial aspects of electron energy degradation 2-6499
- O<sub>2</sub> multilayer films, disordered, resonance-enhanced vibr. excitation in electron scatt. 2-5782
- OCS, vibr. and Rydberg series anal., electronic states, energy loss spectra 2-24852
- Pd surface (111), ethylene adsorpt. and reaction, angle-depend. EELS anal. 2-52250
- pt, adsorption of ethylene and acetylene, AES study 2-51002
- Pt surface, (111), adsorbed NO and CO interactions 2-26227
- Ru supported catalysts, STEM study, X-ray spectra, EELS, and microdiff. patterns 2-37102
- Si (111), oxidation, catalytic action of Au, AES, EELS, and ion depth profiling 2-13836
- Si (111)/Au interface, AES, EELS, LEED and depth profiling study, UHV conditions 2-21446
- Si, electron energy deposition profile, calc. by Monte Carlo method (French) 2-50726
- Si surface, (001)-2X1, surface plasmon dispersion, inelastic LEED study 2-17006
- Si surface, high resolution EELS, review 2-27040
- Si surface, positron and electron energy loss spectra 2-41465

## electron energy loss spectra continued

- Si-Au-Ag interface, AES and EELS meas. 2-40698
- Si-SiO<sub>2</sub> interface, polar-angle depend of XPS and EELS 2-26234
- SIC ceramic, inclusions of grain boundaries, EELS (TEM study) 2-35511
- Si<sub>3</sub>N<sub>4</sub> formation by N ion implantation of Si, AES and EELS studies 2-40422
- Si<sub>3</sub>N<sub>4</sub>, hot-pressed, intergranular phase, phase separation and crystn. evidence 2-31679
- Si<sub>3</sub>N<sub>4</sub>, hot-pressed, intergranular phase elemental comp. 2-31969
- SiO<sub>2</sub>, electron energy loss and mean free path 2-31592
- Si(111)7X7 surface, two-dimens. metallic state, EELS study 2-27037
- SrTiO<sub>3</sub>(100), surface optical phonons 2-26204
- TiO<sub>2</sub> and Ti<sub>2</sub>O<sub>3</sub>, electronic struct., EELS and optical reflectivity data 2-5783
- VO<sub>2</sub> and V<sub>2</sub>O<sub>3</sub>, electronic struct., EELS and optical reflectivity data 2-5783
- W surface, positron and electron energy loss spectra 2-41465
- W surface (001), EELS angular depend., clean and adsorbate covered surfaces 2-51754
- W(100), adsorbed H, EELS, impact scatt. calc. 2-2388
- ZnO surface, high resolution EELS, review 2-27040
- ZnSiP<sub>2</sub>, optical props. from electron energy loss meas., 3-40 eV 2-51542
- ZrN<sub>x</sub>, electronic density of states, reflection EELS and UPS study 2-46874

## electron energy states (condensed matter)

- see also band structure; band theory models and calculation methods; deep levels; defect electron energy states; dopplerons; electron energy states of amorphous solids; electron energy states of liquid metals; electron energy states of liquid semiconductors; electron gas; electron traps; electronic density of states; exchange interactions (electron); excitons; Fermi level; Fermi surface; field interactions (condensed matter); helicons; hole traps; impurity electron states; Landau levels; localised electron states; magnetic breakdown; magnons; metal-insulator transition; metal theory; plasmons; polar semiconductors; polarons; positron states; ripplons; spin-orbit interactions; spin-phonon interactions; surface electron states; triplet state
- Bloch oscillations, comment on existence 2-8743
- bremsstrahlung isochromat spectroscopy, in solids 2-46835
- core level photoelectron spectroscopy, binding energy 2-46879
- emission and scattering techniques, cong., Alghero, Italy (Sept. 1980) 2-42795
- hydrides, NMR studies, review 2-31301
- layered crystals, electron polarisation props. near Lifshits transition 2-30787
- macroscopic current states in crystals (Russian) 2-5339
- magnetic systems, electronic struct., density functional calc. 2-30786
- molecular liquid, electronic excitations detection in inelastic neutron scatt. 2-39486
- transition metal carbide-boride, quasibinary systems, laws of interaction 2-13706
- X-ray emission spectroscopy, review 2-46834

## electron energy states of amorphous solids

- see also Anderson model
- A-15 compounds, disordered, supercond. transition temp. 2-46184
- alkali phosphate glasses, electron struct., MO LCAO method 2-26280
- alloys, random, with short-range order, electronic props., self-consistent theory 2-1810
- amorphous, molecular orbital selfconsistent field calc. 2-45814
- amorphous semiconductors aspects of basic physics researches 2-45042
- analytic approx., unitarity preserving 2-26279
- Anderson localisation 2-30832
- atomic and electronic structures of amorphous systems 2-40771
- chalcogenide glass film, defect struct. 2-45056
- chalcogenide glasses, review of studies at Ioffe Physical-Technical Institute, USSR 2-45050
- chalcogenide glasses, time resolved optical spectroscopy, review 2-46732
- covalent, atomic tunnelling states 2-25755
- disordered solids, energy depend. of density of band tail states 2-40851
- disordered systems, electronic states 2-40770
- ferromagnetic polymers with conjugated bonds, electronic struct. 2-45831
- glass, electron pairs self-localisation in tunnelling states 2-17031
- group V amorphous semiconductors, review 2-45037
- homopolymers amorphous surface, struct. and electronic props. 2-1982
- impurity system, hole burning, effect on selectively excited spectra 2-36702
- metal, electronic props., tight binding single s-band model, Ishida-Yonezawa approx. 2-5342
- metallic glasses, two level system interaction with electrons 2-40769
- metals, amorphous, low energy excitations, sp. ht., conduct., US props. 2-35988
- organic solids with diagonal disorder, localised states and electronic transport, review 2-8774
- partially ordered alloys, elec. struct. 2-45800
- poly(p-xylylene) film, electronic struct. 2-9240
- polyacetylene, doped, cis-trans isomerisation mechanism 2-31907
- polyenes, linear substituted, electronic band struct. and props. 2-5343
- polyethylene, ab initio calcs. of electronic props. 2-12960
- polyethylene, stereo-irregular, electronic density of states 2-12954
- semiconductor, electronic density of states calc., liq. metal model approx., theory (Russian) 2-1816
- semiconductor, electronic density of states calc., liq. metal model approx., results (Russian) 2-8749
- semiconductor alloys, binary, liq. and amorphous, bonding 2-8436
- semiconductors, amorphous, density of localised states, linear specific heat, Anderson model 2-40836
- Summer School on electronic struct. of crystal defects and disordered systems, Aussois, France (Sept. 1980) 2-38354
- tetrahedral amorphous semiconductors, disorder types and electronic structures 2-45045
- two-level systems, relax. time 2-40847
- As, amorphous and cryst., comparative UPS and XPS study 2-17601
- As amorphous film, UHV sublimed, elec. and optical props. 2-46172
- CdO-ZnO-P<sub>2</sub>O<sub>5</sub> (5.60 mol.%) glass, band gap determ. 2-40763
- Cu-Zr, amorphous, bulk and surface electron struct., positron annihilation study 2-51743
- Cu-Zr, amorphous film, electronic struct., optical spectra study (French) 2-22044
- Fe-Si-B substituted metallic glasses, electronic struct., saturation magnetisation 2-1817



**electron energy states of amorphous solids continued**

- Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, positron annihilation study 2-2365  
 xFe<sub>2</sub>O<sub>3</sub>(1-x)(3B<sub>2</sub>O<sub>3</sub>-PbO), Fe valence states, matrix composition influence, Mossbauer effect study 2-46443  
 20Fe<sub>2</sub>O<sub>3</sub>.80(3B<sub>2</sub>O<sub>3</sub>GeO<sub>2</sub>(1-y)PbO), Fe valence states, matrix composition influence, Mossbauer effect study 2-46443  
 Ge, amorphous, electronic struct., CPA study 2-12959  
 Ge, amorphous, props. 2-40772  
 Ge, electronic struct., quantitative disorder effect 2-21495  
 GeS(Se)(Te), amorphous, electronic states calcs. 2-40764  
 xPbO<sub>2</sub>(1-x)SiO<sub>2</sub>, glass model of effective coordination states 2-8750  
 Se, amorphous, localised electron states, xerographic spectroscopy 2-45896  
 Si, amorphous, ESR studies, review 2-31284  
 Si, amorphous, electronic density of states, correlation effects influence 2-45815  
 Si, amorphous, electronic struct., CPA study 2-12959  
 Si, amorphous, optical gap and refractive index (*French*) 2-9211  
 Si, amorphous, props. 2-40772  
 Si, amorphous, time resolved optical spectroscopy, review 2-46732  
 Si, electronic struct., quantitative disorder effect 2-21495  
 Si, energy gap determ. from optical meas. 2-13437  
 Si, glow discharge film, density of states, MOS struct. capacitance determ. 2-51076  
 Si:F, amorphous, core level and valence band UPS and XPS spectra 2-2414  
 Si:H, amorphous, dangling bond state within mobility gap, identification by ESR spectroscopy 2-41196  
 Si:H, amorphous, light induced changes, field effect meas. 2-45813  
 Si:H, amorphous, midgap density of states, space charge limited cond. study 2-45897  
 Si:H, amorphous, plasma deposited, photocond., temp. depend. 2-1943  
 Si:H, amorphous, solar cells, electronic props., review 2-45970  
 Si:H, amorphous film, electronic struct. study 2-40768  
 Si:H, density of states, dangling bond state, tight binding calc. 2-40750  
 Si:H, electronic struct., electrorefl. study 2-41329  
 a-Si:H, gap states study, appl. of isothermal capacitance transient spectroscopy 2-45901  
 a-Si:H, optical absorption edge, electronic struct., thermal and struct. disorder effects 2-36719  
 Si:H, P, amorphous, dispersive transport and electronic struct. 2-26408  
 Si:H, struct. and electronic states, review 2-25744  
 Si:H amorphous film, field effect studies, density of localized gap states 2-46169  
 Si-Sn, amorphous sputtered coating, electronic struct. and optical props. 2-41379  
 SiO<sub>x</sub>, amorphous, electronic and atomic struct. 2-40765  
 SiO<sub>x</sub>, amorphous, electronic struct. calcs. 2-40767  
 SiO<sub>x</sub>, amorphous glow discharge film, band gap, photoluminesc. study 2-40766  
 Si:H, amorphous, sputtered coating, density of states, impurity effects 2-45898

**electron energy states of glassy solids** *see electron energy states of amorphous solids***electron energy states of liquid metals**

- metal-metal carbide melts in contact with solid C, C vaporisation 2-21286  
 tight binding single s-band model, Ishida-Yonezawa approx. 2-5342  
 variational prop. of effective medium approx. 2-1815  
 Ga-Te, liq., reflectance and density of states, metal-semicond. transition 2-9162  
 In-Te, liq., reflectance and density of states, metal-semicond. transition 2-9162  
 Tl-Te, liq., reflectance and density of states, metal-semicond. transition 2-9162

**electron energy states of liquid semiconductors**

- (Se<sub>0.5</sub>Te<sub>0.5</sub>)<sub>1-x</sub>Cu<sub>x</sub>(As<sub>2</sub>), liquid, metal-nonmetal transition, mag. susceptibility study 2-40791

**electron field emission**

- point electron and ion source optics, numerical anal. method 2-51774  
 semiconductor-vacuum interface, electrostatic energy of charge, field electron emission barrier 2-41501  
 STEM, field-emitted electrons, energy spread influence on resoln. 2-23786  
 superconducting cathodes, energy distrib. of field emission electron beams (*Japanese*) 2-5800  
 C fibre micropoint emitter, electrolum. effects associated with electron field emission 2-27057  
 EuS mag. semiconductor film, electron polarisation by reson. tunnelling 2-22150  
 H, adsorbed on W (110) plane, field emission current-fluctuation method obs., surface diffusion and phase transition 2-1769  
 W cathodes, with alkali metal additives, field emission props. 2-46882  
 Zr-O-W(100) emitter, coadsorpt. of Zr and CO 2-22139

**electron gas**

*see also cathode ray tubes; electron optics*

- alkali metals and alloys, structure determ., electron-ion plasma 2-30383  
 alkaline earth metals, equation of state and bulk modulus, partial press. contribs. 2-35639  
 Anderson lattice, effective fourth-order Hamiltonian, RKKY interaction 2-26572  
 atoms embedded in electron gas, immersion energies 2-24576  
 covalent crystals, lattice energy, electron-gas functional theory 2-1446  
 disordered three dimensional electron gas, diffusion corrections to cond. 2-45926  
 electron-phonon interaction in the vicinity of a Van-Hove singularity 2-21509  
 EXAFS, many-body effects 2-17573  
 Fermi-Dirac integral  $F_{3/2}(\eta)$ , analytical approx. 2-8765  
 free-electron gas, inhomogeneous diamagnetism at impurity 2-46233  
 independent Landau electrons, thermodynamics pot. calc. 2-3475  
 inhomogeneous, linear response functions 2-40810  
 inhomogeneous, spin polarised, relativistic theory 2-6790  
 Jastrow ground state, CBF perturbation corrections 2-28771  
 Landau transitions of two-dimensional electron gases, spectroscopy 2-31580  
 local field factor, freq. depend. 2-21518  
 localisation and quantised Hall resistance 2-17003  
 Luther-Emery model, generalised, Bethe Ansatz diagonalisation at OK 2-28756

**electron gas continued**

- metal surface, exchange energy density of inhomogeneous electron gas 2-17139  
 metallic bicrystal model, equilib. density matrix of conduction electron gas 2-17028  
 metallic densities, coupled cluster formalism 2-35958  
 metals, Bloch electron dielectric matrix, exchange-correlation effects (*Russian*) 2-45873  
 metals, electron gas, de Haas-van Alphen effect 2-35922  
 metals, RKKY indirect exchange interaction in arbitrary continuous dimension 2-8968  
 multilayer superlattices, two-dimensional plasma waves, 2-26426  
 Peierls-Frohlich problem and pot. with finite number of gaps 2-3529  
 plasmon clouds, multiple Compton scatt. study 2-44834  
 polar semiconductor, hot photoelectron density estimation 2-13130  
 quasi-moment description of the evolution of an electron gas towards a state dominated by a reduced transport equation 2-25491  
 random potential, path integration of a related Lagrangian 2-42934  
 relativistic e<sup>-</sup>e<sup>+</sup> gas, quantum electrodynamics, two point Green's functions 2-11007  
 relativistic electron gas, correl. pot. 2-19011  
 stopping power of solids for low vel. ions, materials depend. 2-25952  
 superlattice semiconductors, nonequilibrium electrons natural oscills. spectrum 2-46052  
 temperature-dependent nonlinear screening of a proton in an electron gas 2-42938  
 three dimensional disordered systems, relax. time and cond., logarithmic temp. depend. 2-1875  
 transition to anharmonic CDW of two-dimensional electron gas 2-1847  
 two dimensional, CDW patterns in high mag. field, HF approx. 2-45858  
 two dimensional, oscillatory behaviour of velocity autocorrelation function 2-17005  
 two-dimensional, disordered thermoelectric power, electron-electron interactions 2-51098  
 two-dimensional, momentum distrib. function, impurity scatt. effect 2-12984  
 two-dimensional, oscillating susceptibility and g-factor 2-17004  
 two-dimensional, quantised Hall effect, determ. of fine struct. const., review 2-23608  
 two-dimensional electron fluid, ground state energy 2-17001  
 two-dimensional electron system, cond. derivation rel. to dielec. function 2-26313  
 two-dimensional systems, strongly disordered, elec. cond., conductor-nonconductor transition 2-13032  
 Van-Hove singularity 2-21255  
 Wigner transition temperature of a two-dimensional electron gas in a strong magnetic field 2-17002  
 Al, lattice dynamics, phonon dispersion 2-21253  
 AlGaAs-GaAs-AlGaAs struct., phonon scatt. of electron gas 2-36131  
 Co, ferromagnetic, domain dragging by elec. current at 4K 2-17047  
 Fe magnetic film, resonance optical absorpt. 2-21996  
 GaAs-AlGaAs interface, hot electron effects in 2D electron gas 2-51291  
 GaAs-GaAlAs heterojunction, localisation and interaction effects in electron gas 2-21664  
 GaAs-GaAlAs interface, cyclotron emission, two-dimens. character of electron gas 2-5586  
 GaAs-n-AlGaAs heterostructure grown by MBE, growth temp. effect on two-dimens. electron gas mobility 2-8867  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te-oxide interface, carrier transport props. 2-51337  
 InSb dielectric response function for sub-MM radiation interacting with quasi-free carrier gas, high mag. field 2-36070  
 K, wave-vector-dependent plasmon linewidth 2-26315  
 Li, wave-vector-dependent plasmon linewidth 2-26315  
 Li-Na, liquid, structure determ., electron-ion plasma 2-30383  
 Na, wave-vector-dependent plasmon linewidth 2-26315  
 Pb, lattice dynamics, phonon dispersion 2-21253  
 Si inversion layers, 2D electron gas, freq. depend. memory function elec. cond. meas. 2-51318  
 Si MOSFET, inversion layer, ballistic phonon absorption by 2D electron gas 2-51323

**electron guns**

- discharge lasers, pulsed electron beam control, review (*Rumanian*) 2-20324  
 ETA gun characts. 2-564  
 field emission gun EM-400T, performance 2-23779  
 hollow cathode, for excitation of CW lasers 2-44325  
 pulsed annealing of disrupted semiconductor layers 2-39260

**electron-hole avalanches** *see impact ionisation***electron-hole drops**

- metal surface, adsorbed molecule, electron-hole excitation role 2-40983  
 semiconductors, conference, Hakone, Japan (Sept. 1980) 2-18813  
 CdS<sub>1-x</sub>Se<sub>x</sub>, characts. of emitted recombination radiation 2-41425  
 Ge, direct absorpt. in electron-hole liquid, warping effects, final state interactions 2-26301  
 Ge, electron-hole droplet cloud, phonon-wind-induced anisotropy 2-12976  
 Ge, electron-hole droplet drag velocity quantum oscills. 2-1841  
 Ge, electron-hole droplets, momentum damping time and phonon wind force 2-12977  
 Ge, electron-hole drops, far IR magneto-plasma absorptions 2-26875  
 Ge, electron-hole liq., phonon absorpt. spectra 2-45843  
 Ge, electron-hole liquid in high mag. field, luminesc. meas. 2-26989  
 Ge, magnetoresonance, electron-hole droplet, quantum transport theory 2-5426  
 Ge:Sb(As)(Ga), electron-hole liq., photoluminesc. polarisation in mag. field study 2-35952  
 Pb<sub>1-x</sub>, electron-hole liquid, thermodynamic props., luminescence study 2-8759  
 Si, electron-hole droplet nucleation, role of shallow impurities and defects, photolum. study 2-2339  
 Si, electron-hole liq. props., stress depend., photoluminesc. study 2-40799  
 Si, evaluation, photoluminescence (*Japanese*) 2-51696  
 Si, two-component electron hole liquid, phase separation under tensile stress 2-26302  
 Si:B, electron-hole drops, luminescence 2-45845  
 SiC, cubic, electron-hole liq., ground state props., valence band masses, exciton and acceptor energies 2-35947  
 SmS, possibility of inducing transition from normal to mixed valence state by laser beam, electron-hole droplet formation 2-45909  
 ZnO, electron-hole condensate, high exciton binding energy, luminesc. spectra 2-35950



**electron-hole drops continued**

ZnO, polar semicond., excitons collective properties (*Russian*) 2-40804  
ZnSe, cryst., luminesc. at high excitation levels 2-31547

**electron-hole plasma** *see solid-state plasma***electron-hole recombination**

*see also carrier mobility*

alkali halides, activated, recombination photostimulated luminesc. kinetics (*Russian*) 2-5741  
amorphous semiconductor, photogenerated carrier thermalisation and recomb. 2-5416  
amorphous semiconductor, transport theory, spin-lattice relax. times 2-40878  
amorphous semiconductors, hot carrier thermalization, deep trapping and recombination 2-46016  
amorphous semiconductors, photoelectronic geminate and nongeminate recombination 2-46057  
anthracene, photoionisation and mag. field modulated recomb., time resolved fluoresc. 2-46680  
charged acceptor-donor complex, recombination luminescence 2-17539  
disordered solid, carrier recombination 2-46017  
elemental semiconductors, laser cyclotron resonance, Zeeman absorpt. 2-41205  
GaP:ZnO, defect reactions, photolum. studies 2-2333  
group V amorphous semiconductors, review 2-45037  
heterojunction, nonideal, photoelec. props., photodiode appls. 2-40967  
III-V semiconductors, laser cyclotron resonance, Zeeman absorpt. 2-41205  
insulators, photoinjection and cond., theory 2-1952  
lattice relaxation and multiphonon transitions in optical spectra 2-31438  
LED physics, book contrib. 2-51713  
metal-semiconductor contacts, V-I characteristics, generation-recombination in space charge region, diffusion theory (*Russian*) 2-2003  
MOS capacitor, generation lifetime determ. from I-V and I-t meas. 2-46146  
narrow-gap semiconductors, Auger recomb. and ionisation rates, Lax band struct. 2-8813  
one-dimensional disordered system, excited states lifetime 2-21600  
organic crystals, influence of Coulombic attraction and of external elec. field on charge carrier separation 2-1920  
organic molecular crystal, charge carrier recombination dynamics, mag. field effect 2-36054  
organic photoconductor, electro-optical induction of recomb. luminesc. 2-13567  
panel electroluminescence, book contrib. 2-51714  
photoelectrochemical solar cells with layer-type semiconductor anodes, chem. surface treatment 2-22633  
quartz, cryst. and glassy, hot carrier ambipolar diffusion length, ultrafast X-ray range 2-9198  
S, crystal, photoinjection and cond., theory 2-1952  
semiconductor, current controlled negative resist. and generation-recomb. induced nonequib. phase transitions, impact ionisation model 2-45993  
semiconductor, direct band gap, effect of electroabsorption on ionisation coeff. determ. 2-21597  
semiconductor, intermediate exciton state, Coulomb attraction effect on impurity absorption and optical recomb. 2-17511  
semiconductor, multiphonon nonradiative recomb., successive electron and hole capture by deep level defect 2-13548  
semiconductor, non-equilibrium, limit cycle in bound exciton recomb. model 2-5350  
semiconductor containing impurity recomb. centres, strong applied EM wave, carrier distrib. functions 2-13011  
semiconductor surface potential barrier effect on surface recombination velocity 2-13163  
semiconductor thin layers, dislocation imaging in electron beam induced current mode of SEM and STEM 2-1481  
semiconductors, Auger recombination with deep impurities 2-40929  
semiconductors, direct gap, interband Auger recombination lifetimes (*Russian*) 2-13096  
semiconductors, intrinsic deform., tricontinuum theory 2-50083  
semiconductors, narrow band gap, Auger recombination rate 2-40930  
Shokley-Haynes expt., theory, contact effects 2-51202  
small-polaron hopping between inequivalent sites, chemical rate treatment, pair recomb. appl. 2-1910  
solar cell, efficiency calcs. for cell with inhomogeneous areal distrib. but constant number of recomb. centres 2-47495  
solar cells, carrier redistribution anal. within junction using kinetic method 2-42014  
solar cells, MIS, p-type, electron capture by surface states, adverse and beneficial effects 2-37228  
time-dependent geminate recomb. 2-4376  
trap-limited dispersive transport, recomb. effects, Monte Carlo simulation 2-26409  
Ag halide:Cu photochromic glasses, effects of electron-hole separation on recomb. probability 2-5415  
AlAs-GaAs MBE superlattice, photolum., 0.7 to 0.08  $\mu\text{m}$  2-2329  
AlGaAs-GaAs solar cells, deep-level defects, low temp. periodic annealing effects 2-32066  
AlGaAs-GaAs solar cells, proton irradi., radiation-induced deep-level defects, annealing, DLTS, SEM 2-32084  
Al<sub>0.5</sub>Ga<sub>0.5</sub>As solid solns., epitaxial, variable composition, surface recombination (*Russian*) 2-1925  
As<sub>2</sub>Se<sub>3</sub>, amorphous, geminate and non-geminate recomb. 2-13097  
Bi<sub>1-x</sub>Sb<sub>x</sub>, dil. alloys, magnetoacoustic attenuation, large dip and hump type quantum oscills. 2-16981  
Bi<sub>1-x</sub>Sb<sub>x</sub>, semiconducting, hot carriers, interband recombination time 2-21605  
Bi<sub>2</sub>SiO<sub>20</sub> optical image convertor, effect of electron-hole recomb. on performance 2-39732  
Cd<sub>0.9</sub>Hg<sub>0.1</sub>-Te, magnetophonon reson. of nonequib. carrier density 2-8825  
Cd<sub>0.9</sub>Hg<sub>0.1</sub>-Te photodiodes, 8-14  $\mu\text{m}$  range, doping influence 2-19178  
CdS, biexciton states, real and virtual, Raman, fluoresc. and radiative recomb. spectroscopy 2-45841  
CdS:Cu,Cl, activated phosphors, radiative and nonradiative recomb. centre struct. photoluminescence obs. 2-35966  
CdS:In layer and whisker, vapor reaction growth, luminesc. spectrum 2-46674  
CdS<sub>1-x</sub>Se<sub>x</sub>, characts. of emitted recombination radiation 2-41425  
CdSe, generation-recombination noise and defect levels 2-26455  
CdTe, cold semicond., hot electrons, luminesc. expts. 2-51676  
CdTe, p-n junctions, LPE grown, injection electroluminescence 2-13569

**electron-hole recombination continued**

CsI:Na(Tl<sup>+</sup>)(Eu<sup>2+</sup>)(Sr<sup>2+</sup>), V<sub>2</sub> centre migration, thermolum. and TSC meas. 2-8675  
GaAs, cold semicond., hot electrons, luminesc. expts. 2-51676  
GaAs, electron-hole plasmas and excitons, picosecond luminesc. spectroscopy 2-51677  
GaAs, hot carrier photoluminescence, picosecond correlation effects 2-46713  
GaAs, hot photoexcited electrons, effect of electron-electron scatt. 2-46066  
GaAs, phonons, near zone-edge non-thermal, ballistic transport and decay 2-45448  
GaAs:Cr, compensated, nonequib. carrier recomb., Cr impurity centre role, photoelec. props. and luminesc. 2-30928  
GaAs-Ga<sub>1-x</sub>Al<sub>x</sub>As multilayer epitaxial heterocomps., elec. active defects, combined SEM and TEM obs. 2-50620  
Ga<sub>1-x</sub>In<sub>x</sub>-P-GaAs MBE DH, interface recombination vel. and misfit strain, photoluminescence study 2-22073  
GaSb, interband Auger recombination lifetimes (*Russian*) 2-13096  
p-GaSb:Zn, Auger recombination nonradiative lifetimes 2-46840  
Ge, donor-bound multi-exciton complexes, theory, recomb. spectra calc. 2-1840  
Ge, energy spectrum of surface recombination centres, effect of sorption processes 2-1980  
Ge, surface recombination and bulk lifetime contactless PME investig. 2-17116  
Ge-Se evaporated film, amorphous, non-dispersive and dispersive transport 2-46019  
HgCdTe, luminescence 2-26957  
p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, deep levels, correlation with photodiode performance 2-1856  
p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, electron irradi. and annealed, carrier lifetime and recomb. props. 2-17090  
p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, narrow gap semicond., recomb. effects. temp. depend. photoreponse meas. 2-36055  
p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, nonequib. carrier recomb., Auger recomb., carrier lifetime 2-51204  
In<sub>1-x</sub>Ga<sub>x</sub>As<sub>y</sub>P<sub>1-y</sub>, laser transitions, Auger recombination mechanisms 2-44295  
InP, cold semicond., hot electrons, luminesc. expts. 2-51676  
n-InP LPE layer, donor-acceptor pair recomb. from donor ground and first excited states 2-5752  
InP, phonons, near zone-edge non-thermal, ballistic transport and decay 2-45448  
InSb, Auger recombination rate 2-40930  
InSb, conductivity fluctuations in crossed elec. and mag. fields 2-5445  
n-InSb, IR emission under crossed elec. and mag. fields 2-916  
KBr:Ag crystal, ESR of electron and hole centres, tunnel recomb. afterglow 2-9035  
KCl:Ag crystal, ESR of electron and hole centres, tunnel recomb. afterglow 2-9035  
LiF, F, H, V<sub>2</sub> centres, electronic struct., optical absorption energy, INDO calc. 2-45886  
MoS<sub>2</sub>(Se<sub>2</sub>) photoelectrodes, role of electron hole recomb. 2-26406  
P, amorphous, obs. of bound exciton and distant pair resonances 2-17370  
Pb chalcogenides, photovoltaic detectors, R<sub>0</sub>A product temp. depend. 2-19177  
PbO film, photoconductivity in space charge and recombination regime 2-21622  
PbS, PbSe abrupt p-n junctions, R<sub>0</sub>A product, dopant conc. effect 2-21665  
RbI, recombination luminescence of H-centres (*Russian*) 2-5742  
Se, hexagonal single crystal, rest photocond. (*Russian*) 2-13121  
Si, amorphous, ESR studies, review 2-31284  
Si, Auger recombination at low temp. 2-40931  
Si, carrier recombination at grain boundaries 2-1924  
Si, defect creation and recomb. lifetime due to high energy and  $\gamma$ -irradiation 2-50715  
n-Si, electron pulse irradi., transient process kinetics 2-36060  
Si, gamma-ray irradi., uniaxial deform. influence on nonequilibrium carrier recombination 2-26410  
Si, heavily doped, nondegenerate minority-carrier concentration and recombination current 2-8805  
Si n<sup>+</sup>-p diffused solar cell, effect of junction depth on performance 2-32070  
Si p-i-n diode thermophotovoltaic cells recent developments in theory, fabrication and testing, high conversion efficiency design 2-32081  
Si, photoelectric effects, lux depends. under surface and bulk Auger recomb. conditions 2-13133  
Si, polycrystalline, carrier transport and recombination processes at grain boundaries under optical illumination 2-36105  
Si polycrystalline, n and p-type, photocurrents and diffusion length near grain boundaries, interfacial recomb. vel. 2-51209  
Si polycrystalline solar cell performance, effect of grain boundaries, energy-gap narrowing, trap-assisted recombination 2-37270  
Si, solar cell, n<sup>+</sup>-p, electron irradi. and annealing effects 2-2786  
Si, solar cell, single cryst. and polycryst., minority carrier diffusion length 2-27611  
Si solar cell, surface recombination velocity meas., SEM appl., textured front surface field and tandem function cells 2-37386  
Si solar cell; metal-insulator-n-p junction struct., 678 mV open circuit voltage 2-6137  
Si solar cells, high efficiency, lifetime and effective surface recomb. velocity meas. 2-52367  
Si, surface recombination and bulk lifetime contactless PME investig. 2-17116  
Si wafers large-diameter, grown by Czochralski method, recombination props. (*Russian*) 2-21601  
Si:Au, Auger recombination with deep impurities 2-40929  
Si:B(Al), junction solar cell, emitter layer minority carrier lifetime photoalt. obs. 2-52339  
Si:H, amorphous, luminesc. and recomb., review 2-5733  
Si:H, amorphous, modulated photocurrent meas. 2-1946  
Si:H, amorphous, p-i-n junctions, photoacoustic emission 2-46113  
Si:H, amorphous, photoconductivity, spectral and temp. depend. 2-1958  
Si:H, amorphous, plasma deposited, photocond., temp. depend. 2-1943  
Si:H, amorphous, reactively sputtered, solar cell, electron-hole recombination 2-42002  
Si:H, amorphous, time resolved luminesc. and fatigue effects 2-9179  
Si:H, intrinsic, amorphous, dual light beam modulation of photocarrier lifetime 2-46063



**electron-hole recombination continued**

- a-Si:H, optically detected mag. resonance 2-36481
- Si:H, P, amorphous, dispersive transport and electronic struct. 2-26408
- a-Si:H, recomb. processes and gap states, time-resolved luminesc. meas. 2-46736
- a-Si:H, Schottky barrier structures, capture cross-section and density of deep gap states 2-41013
- Si:H, B, Li-diffused, amorphous compensated, dark and photocond. 2-46065
- Si:H, P, amorphous, photogenerated carrier recombination 2-46018
- Si:H amorphous Schottky barrier diode characts., mathematical model 2-46102
- Si:H amorphous Schottky barrier and PIN diodes, I-V characts., density of localised states 2-51281
- a-Si:H solar cells, N-I-P and P-I-N, photogenerated carrier collection and loss mechanism anal. 2-37311
- Si:Li polycrystalline solar cells, effect of diffusion on grain boundary transport and minority carrier recombination 2-37399
- SiH<sub>4</sub> amorphous Schottky barrier solar cell, carrier collection efficiency, recombination effects 2-9652
- SiO<sub>2</sub>, irradiated, electron-hole recombination from microdosimetry viewpoint 2-30905
- Y<sub>2</sub>O<sub>3</sub>:S:Eu phosphors, excitation mode into charge transfer band 2-36711
- ZnS:Cu, Cl crystal phosphor, localised surface state spectroscopy 2-17131
- Zn<sub>3</sub>SiO<sub>8</sub>:Mn phosphors, electron trapping and luminesc. mechanisms, tunnelling model 2-5739

**electron impact**

- see also atomic electron impact excitation; atomic electron impact ionisation; molecular electron impact dissociation; molecular electron impact excitation; molecular electron impact ionisation; secondary electron emission*
- AES, electron backscatt. effect, Monte Carlo calc. 2-47410
- amorphous and polycrystalline targets, electron interaction, X-ray emission (French) 2-22121
- CC, Au polycryst., backscatt. of fast electrons, 0.3 to 1.2 MeV calcs. (French) 2-5781
- electron-ion collision effects on formation of ionospheric striations 2-14661
- emission and scattering techniques, cong., Alghero, Italy (Sept. 1980) 2-42795
- ionosphere, effects of electron-neutral collisions on plasma lines intensity 2-6501
- ionosphere, var. of electron collision freq. 2-23166
- Kapton, irradiated dielectrics, material parameters effect on charging characts. 2-40997
- multiple layers, electron mean free path, Monte Carlo simulation 2-2387
- one-photon free-free absorpt., off-shell effects 2-34566
- plasma-chemical etching, rate increase through radiative stimulation of descript. 2-31816
- polymer films, two-dimensional electron beam charging model 2-36127
- range energy relations, rel. to cross section, for amorphous and polycrystalline targets (French) 2-35552
- satellite model testing in combined environmental simulator 2-38036
- solids, electron impact X-ray sources, spectral calc. 2-31584
- Teflon, dielectric charging, straggling and soft X-ray irradiation effects 2-36519
- Teflon, irradiated dielectrics, material parameters effect on charging characts. 2-40997
- Ag, polycryst., backscatt. of fast electrons, 0.3 to 1.2 MeV calcs. (French) 2-5781
- Ag, polycrystalline, surface optical emission polarization under electron bombardment 2-46787
- Al, electron scattering, 1 to 10 keV, Monte Carlo simulation 2-41466
- Al, polycryst., backscatt. of fast electrons, 0.3 to 1.2 MeV calcs. (French) 2-5781
- Al-Cu-Al system, backscattering of 4 to 30 keV electrons 2-41468
- Bi<sub>1-x</sub>Sb<sub>x</sub>, chem. comp. determ. by polarography, electron probe, density and electron backscatt. meas. 2-27494
- CsI monocryst., electron irradi., surface dissoc. and secondary emission investig. 2-21184
- Cu, polycryst., backscatt. of fast electrons, 0.3 to 1.2 MeV calcs. (French) 2-5781
- GaAs surface, (111), Ga adsorpt., total-current spectra fine struct. 2-17583
- n-GaAs, surface (100) exposed to O<sub>2</sub> and electron irradiated, energy band bend shifts, UPS 2-40984
- He, liquid surface, electron beam excitation 2-30685
- In<sub>2</sub>O<sub>3</sub> coated mirrors to eliminate spacecraft surface charging 2-37178
- Mo, moderate energy electron diff. 2-41463
- MoS<sub>2</sub> crystal, interpretation of total current spectroscopy spectra 2-22129
- Ni (111), adsorption of NO, electron stimulated desorption and LEED study 2-12912
- Pt, adsorption of O<sub>2</sub>, thermal desorption and electron stimulated desorption study 2-5305
- Ru surface, (001), H<sub>2</sub>O and NH<sub>3</sub> electron stimulated desorpt. ion angular distrib. 2-45725
- SiO<sub>2</sub>, fused, irradiated dielectrics, material parameters effect on charging characts. 2-40997

**electron interactions** *see elastic scattering of electrons by atoms and molecules; electron attachment; electron beam effects; electron beams; electron-electron interactions; electron-electron scattering; electron impact; electron-nucleon interactions; electron-nucleon scattering; electron-nucleus reactions; electron-nucleus scattering; electron-positron interactions; electron-positron scattering; electron spectra; hadron electroproduction; neutrino-electron interactions; neutrino-electron scattering; secondary emission*

**electron ionisation** *see electron impact*

**electron lenses**

- see also aberrations; electron microscopes; electron optics; electrostatic lenses; magnetic lenses*
- axial aperture aberration correction system for electron lenses 2-39553
- axial flux density distribution properties of magnetic electron lenses with single pole-piece 2-28933
- cathode lens, mirror mode, estimation of contrast (French) 2-10923
- computer appls., lens and system design 2-29776
- corrected electron microscope, improvement test (German) 2-48846
- correction using improved multiple system, technological requirements (German) 2-39555

**electron lenses continued**

- electron beam optical focussing and deflection systems with superimposed fields, field expansion and trajectory equations (German) 2-49655
- electron microscope, high voltage, astigmatism correction method using optical diff. 2-38724
- electron microscope, vibr. stability of lens 2-38721
- magnetic, large dimension, electron optical props., for reduction projection system (Japanese) 2-24932
- magnetic electron lenses for HV microscopes 2-248
- moving quadrupole lens concept 2-39554
- stigmator circuit for independ. control of convertor amplitude and orientation 2-6929
- variable axis lens for electron beams 2-15951
- electron lifetime (metals)** *see electron relaxation time (metals)*
- electron lithography** *see electron beam lithography*
- electron mean free path (metals)**
  - contamination layer growth rate and reduced thickness determ. in XPS 2-13838
  - liquid metals, simple, finite mean free paths and elec. resist. 2-40868
  - metallic thin films, elec. cond. size effect, mean free path, specularly parameter, surface roughness 2-51350
  - metals, Ioffe-Regel criterion and resistivity 2-51146
  - thin film surface, electrodynamics, reflectance and photoelectron yield 2-40981
  - thin metal films with energy depend. relaxation, transport props. 2-13195
  - Au-Cu-Fe(Mn) spin glass, RKKY interaction, conduction electron mean free path depend. 2-46271
  - Cd, RF surface impedance, low-field anomaly 2-13162
  - Co, liquid, electrical resist., mean free path and multiple scatt. corrections 2-5379
  - Cu, liquid, electrical resist., mean free path and multiple scatt. corrections 2-5379
  - Cu-araldite-Cu struct., current generation by phonon drag (Russian) 2-17170
  - Eu, 4f surface binding energy shift, synchrotron radiation excited photoemission spectra 2-51769
  - Fe, liquid, electrical resist., mean free path and multiple scatt. corrections 2-5379
  - Fe, modulation temp. spectroscopy of elementary excitations 2-31462
  - Gd, 4f surface binding energy shift, synchrotron radiation excited photoemission spectra 2-51769
  - Nb-Ti composite high-field supercond., current-carrying, stability, elec. charge effect 2-51385
  - Ni, liquid, electrical resist., mean free path and multiple scatt. corrections 2-5379
  - Ni, modulation temp. spectroscopy of elementary excitations 2-31462
  - Ni<sub>2</sub>Cu<sub>1-x</sub>, modulation temp. spectroscopy of elementary excitations 2-31462
  - Sc, ScH<sub>3</sub> films, specific elec. resist., thickness depend. carrier scatt. mechanisms 2-13193
  - V superconducting thin films, resist. transition broadening due to He ion implantation 2-17222
- electron micrographs** *see electron microscope examination of materials; electron microscopy*
- electron microprobe analysers** *see electron probe analysis*
- electron microprobes** *see electron probes*
- electron microscope applications**
  - see also electron microscope examination of materials; scanning electron microscope applications*
  - biology, low temp. microscopy, review, book contrib. 2-27960
  - interferometry, amplitude division 2-3662
  - mitochondria, dims. during ion flow, electron microscopic obs. 2-33690
  - WO<sub>2.9</sub> needles grown in electron microscope, domain obs. 2-46893
- electron microscope examination of materials**
  - see also electron microscope applications; electron microscopy; scanning electron microscope examination of materials; scanning-transmission electron microscope examination of materials; transmission electron microscope examination of materials*
  - aircraft component fatigue crack growth rates, electron fractography 2-52129
  - biological materials, phys., biochemical and physiological effects of low temp., review 2-32169
  - block copolymers, cryst. chain refolding, freeze-fracture electron microscopy obs. 2-12514
  - boride powders, magnetic, surface props. 2-41165
  - catalysts, heterogeneous, parameter anal., research techniques, overview 2-15233
  - cellular organelles, 3D reconstruction by electron microscopy, instrumentation 2-27958
  - collagen fibril cross sections, periodic struct., electron microscopy rel. to X-ray diffraction 2-32177
  - creep under irradiation, microstructure developments 2-30485
  - crotonin complex, thin cryst. at 4K, electron radiation damage 2-27856
  - diamond films, deposition from beams of C ions 2-31629
  - dislocation clumps, computer simulation of electron micrograph contrast 2-40388
  - dislocation images due to impurity atmos., electron micrographs 2-45172
  - dislocation-point obstacle interactions, interaction parameter distrib. 2-50691
  - electron microscopic images, computer simulation and interpretation amorphous state, ZZ 2-50489
  - electron microscopy obs. 2-51046
  - epitaxial growth, electron microscopy obs. 2-51046
  - ethylene propylene copolymer-methylvinylpyridine metal halide complexes, phase struct. and equilib. (Russian) 2-45533
  - ferroelectric crystal substrates, boundary layers of water rel. to elec. props. of substrate ellipsometry study 2-45752
  - freeze-fractured model membranes, ice crystals, specifically decorate hydrophilic sites 2-27959
  - glass-surface dispersal products from abrasive working, electron-microscopy investigation 2-13837
  - interface structure, high resolution electron microscopy techniques, review 2-20980
  - membrane protein monolayer, hydrophobic, IR spectra and electron microscopy study 2-27785
  - metal, damaged surface, appl. of scanning type exoelectron microscope to study (Japanese) 2-48843
  - multilayer porcelain, mineralisers influence on sintering, struct. and props. 2-17651



**electron microscope examination of materials continued**

- p-n junctions, reversed-biased, electron interf. image interpretation 2-35358
- Pb chalcogenides, epitaxial bictysts., elastic deform. and stress. 2-51007
- Permalloy film, electromigration, electron microscopy study 2-45639
- phospholipid bilayers, isolated, defect struct. and texture 2-27782
- point defects produced by HVEM irradi., review (*French*) 2-30493
- poly(p-phenylene benzobisthiazole), as-extruded and heat treated ribbons, microstruct. study 2-22193
- polyacetylene films, prep. by Luttinger's catalyst, morphology and isomerisation 2-45076
- polyacetylenes prepared by different methods, struct., morphology and electronic props. 2-30413
- polydiacetylene, single crystals. 2-8402
- PVC filled compositions, struct. by electron microscopy (*Russian*) 2-21046
- retinal microvilli, Astatoc, ultrastruct. changes rel. to light adaptation state (*German*) 2-2869
- stacking faults, contrast asymmetry exhibited by intrinsic and extrinsic faults 2-45207
- stainless steel films, in situ strained, tensile cracks, HVEM study 2-22328
- stainless steel void swelling by electron irradiation (*Japanese*) 2-50708
- steel, alloy, Ni-Co, Charpy impact props., role of oxide and sulphide particles 2-13820
- steel, austenitic stainless, dislocation emission, strain-induced, from grain boundaries 2-25882
- steel, austenitic stainless, intergranular corrosion, dislocation struct. influence 2-17779
- steel, austenitic stainless, structural temperature-strain diagrams 2-51990
- steel, Cr-Mo (2.25, wt.%), stress relief cracking, multicomponent segregation effects 2-52005
- steel, electron-fractographic method for measuring stress level caused by fatigue fracture 2-37019
- steel, irradi. effects study using HVEM and energy dispersive X-ray analysis of films (*French*) 2-30497
- steel, low strength, H embrittlement, fracture topographical feature 2-52012
- steel, low-alloy, austenitising processes, direct electron microscopy study 2-51937
- steel, low-alloy, ferritic-pearlitic, fracture toughness energy content, VC precipitates influence 2-5960
- steel, martensitic, precipitated particles at third stage of tempering, high resolution electron microscope obs. 2-13731
- steel, Nb microalloyed, dynamic recovery and recrystallisation on Nb(CN) coarsening 2-51912
- steel, stainless, 18/10, precipitation and dissolution of Ti (C,N) (*Polish*) 2-27176
- steel, stainless, service life determination under low-cycle loading, fractographic and ultrasonic methods comparison 2-2667
- steel, stainless, Ti, 316, microstruct. after ageing and after neutron irradi. (*French*) 2-51947
- steel austenitic stainless type OOKh16N15MB, radiation damage anisotropy by high-voltage electron microscopy 2-16680
- styrene polymers, OsO<sub>4</sub> stained, crazes 2-31812
- superplasticity, interpretation of in-situ HVEM studies 2-12439
- surfactants, aq. micellar solns., electron microsc. investig. (*German*) 2-31952
- thin biological samples, ultra-rapid freezing 2-32382
- wedge dislocation loops and dipole determ. by bright-field image halos 2-1484
- Zircaloy-2, phase involved during corrosion in hot water at 350°C 2-31837
- Ag deposits, surface roughness using microdensitometer analysis of replica electron micrographs, autocovariance functions 2-10783
- Ag single crystals, electron microscope contrast of atomic steps 2-5030
- Ag, small particles, dislocations, direct lattice imaging 2-5122
- Ag, stacking faults of dissociated glide dislocations 2-45205
- Ag-Al, electron irradiated, extended jog motion on dissociated dislocations, weak beam electron microscopy obs. 2-25886
- Ag-As<sub>2</sub>S<sub>3</sub> based photographic system, use of vacuum evaporated inorganic sublayers 2-28917
- AgCl, photoactive phase form. in glassforming systems, model investig. (*Russian*) 2-30607
- AgCl/AgI epitaxial photographic emulsion, photographic props. 2-10895
- Al alloys, dil., quenched in H<sub>2</sub> and He atmosphere, void formation, electron microscopy exam. 2-16644
- Al cryst. foils, bent, crossed bend contours, fine struct. appearing in electron microscope images 2-25697
- Al, laser pulse irradiated, slip deform. and melt threshold 2-1485
- Al, quenched in H<sub>2</sub> atmosphere, void form., electron microscopy exam. 2-16643
- Al-Cu (3 wt.%), pre-precipitate microstruct., obs. by lattice imaging technique (*Japanese*) 2-1448
- Al-Ge, morphology of eutectics with metastable phases 2-17662
- Al-Li alloys, thin-foil prep. ion-beam thinning, precipitation 2-31698
- Al-Mg, service life determination under low-cycle loading, fractographic and ultrasonic methods comparison 2-2667
- Al-Mg and Al-Li(Zn)-Mg, corrosion cracking, role of defects near boundary 2-17772
- Al-Zn (10 wt.%), solute conc. fluctuation effect on ageing at low temp. 2-47042
- Al-Zn-Mg-Li, oxidation behaviour, influence of Li 2-9465
- AlN ultrafine powders, produced by reactive gas evaporation technique with electron beam heating 2-46990
- Na<sup>+</sup>β-Al<sub>2</sub>O<sub>3</sub>, elec. degradation 2-51868
- β-Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, elec. degradation characts., surface form. of Na 2-12833
- 3Al<sub>2</sub>O<sub>3</sub>·2SiO<sub>2</sub>, fusion, in centrifugal furnace, grain growth (*Japanese*) 2-36804
- Au particles grown on MoS<sub>2</sub> vacuum-cleaved surfaces, double positioning, obs. by electron microscopy 2-8727
- Au, small particles, dislocations, direct lattice imaging 2-5122
- Au surface (111), reconstructed, UHV transmission electron microscopy 2-50970
- Au-Mg system, electron microscopic and electron diffr. study 2-50588
- Au<sub>3</sub>Mg, 2D antiphase struct. studied by high-voltage-high-resoln. electron microscopy 2-44992
- Au<sub>3</sub>Mn, ordering under electron irradi. 2-30494
- Au<sub>3</sub>Zn 2d, incommensurate, cryst. struct. determ. 2-12539
- B<sub>2</sub>O<sub>3</sub>-PbO Fe<sub>2</sub>O<sub>3</sub> glasses, struct., elec., and mag. props. 2-45054

**electron microscope examination of materials continued**

- Ba<sub>2</sub>NaNb<sub>3</sub>O<sub>10</sub>, commensurate-incommensurate transition, ferroelastic transition 2-45567
- Ba<sub>2</sub>NaNb<sub>3</sub>O<sub>10</sub>, ferroelec. and ferroelastic domains, electron microscopic study 2-9115
- Be, superplasticity and built-in zones 2-17717
- Bi evaporated films, early stages of growth, substrate effects (*French*) 2-5325
- C, amorphous, thick specimen, contrast and resolution in electron spectroscopy 0.1 to 3 MeV (*French*) 2-12436
- C film, C<sub>60</sub>, electron diffr. study of crystn. phase struct. 2-50583
- (C,S) surface compounds, prep. and characterisation 2-2471
- CaSO<sub>4</sub>·H<sub>2</sub>O, solid phases, dehydration and hydration of hemihydrates and soluble anhydrites 2-2496
- CdTe:Cu high-resolution electron microscopy obs. of defects, coherent precip. and faulted loops 2-5120
- Co, FCC, stacking faults, electron microscope images, diffr. contrast, column approx. breakdown 2-45206
- CoFe<sub>2</sub>O<sub>4</sub>, epitaxial growth on acicular γ-Fe<sub>2</sub>O<sub>3</sub> particles, coercivity, temp. depend. 2-36388
- Cr<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> system, electron microscopic obs. for high-index crystallographic shear phase 2-25699
- CsVF<sub>4</sub>, structural phase transitions, polarizing and electron microscope studies 2-40533
- Cu, diffusion of Al along dislocations 2-8674
- Cu, electron bombard., Bordoni relax. processes, dislocation classes 2-41657
- Cu, electron irradiated, atom displacement threshold energy, nucleation and growth of dislocation loops, electron microscopy obs. 2-25933
- Cu, rapidly cooled crystals, etch peak form. on (111) surface, optical and electron obs. (*Japanese*) 2-12604
- Cu, wear, mechanicochem., surface layers struct. and comp. 2-17741
- Cu-Ag alloys, discontinuous precip. reaction, invest. using electron microscopy and X-ray diffr. 2-2511
- Cu-Al, linear dislocation multipole structures, weak beam electron microscopy obs. 2-25895
- Cu-Al, stacking faults of dissociated glide dislocations 2-45205
- Cu-Al alloys, ordered linear dislocation multipoles struct. 2-8524
- Cu-Al low stacking fault energy alloy, dislocation multipoles, diffraction contrast electron micrograph obs. 2-25885
- Cu-Al-Ti-Hf, precipitation of particles during internal oxidation (*Russian*) 2-22218
- Cu-Ge (8 at.%) single crystals, in situ obs. of deform. twinning 2-40412
- Cu-Ni-Al-Mn, quasi-periodic struct. form. sequence (*Russian*) 2-5876
- Cu-Zn (37.65 at.%), reverse martensitic transform., resulting dislocation structs. 2-51896
- Cu-Zn low stacking fault energy alloy, dislocation multiples, diffraction contrast electron micrograph obs. 2-25885
- Cu<sub>2</sub>NiZn, order-strengthening mechanism, electron microscopy study 2-51891
- Cu<sub>2</sub>Pd, ordering under electron irradi. 2-30494
- CuPt, crystallographic orientation effects in energy dispersive X-ray analysis 2-40236
- CuZn 30 sheets, struct. and texture study on cold rolling (*German*) 2-2530
- ErAl<sub>3</sub>, thin film, occurrence of modulated phases 2-8734
- Er<sub>1-x</sub>Gd<sub>x</sub>Al<sub>3</sub> thin film, occurrence of modulated phases 2-8734
- Fe, cast, amorphous phase form. by laser treatment 2-41792
- Fe, cast, grey, Mg modified, struct. state effect on failure 2-41755
- Fe fine particles, polyhedral, mag. struct. obs. by Lorentz microscopy and electron holography 2-36313
- α-Fe, pure, lattice vacancies mobility, determ. by high voltage electron microscopy 2-40378
- Fe-Al (30.5 at.%), ordered alloy, plastically deformed, antiphase domain boundary tubes obs. 2-41691
- Fe-B amorphous metals, electron optical study 2-16598
- Fe-C, amorphous alloys, crystn., study of struct. defects in metastable Fe<sub>2</sub>C, (*French*) 2-12489
- Fe-C martensite, modulated struct. studied by electron microscopy and diffr. 2-12538
- Fe-Mn-C, carbide form. upon tempering at low temps. 2-17697
- Fe-Ni based metallic glasses, crystn., effect of electron irradi., in-situ HVEM study 2-21040
- Fe-Se (3.25 wt.%), subboundary dislocations incorporated in, deformation twin 2-50665
- Fe-Si (3.2 wt.%) single cryst., struct. changes during necking (*Russian*) 2-5871
- Fe-Ti (3.85 wt.%), carbide dispersion carburizing (*Japanese*) 2-27182
- Fe-Zn (9-32 wt.%), grain boundary migration, diffusion-induced, metallographic study 2-12609
- Fe<sub>2</sub>TiO<sub>3</sub>, monoclinic, defect struct., electron microscopy and diffr. studies 2-25907
- GaAs-metal ohmic contacts, microstructure, correl. with elec. characts., electron microscopy obs. 2-40700
- GaAsP, composition modulated, electron microscopy images 2-44983
- GaAs(111)-In<sub>0.5</sub>Ga<sub>0.5</sub>As<sub>1-x</sub>P<sub>x</sub>, heteroepitaxial system; formation of discrepancy dislocations 2-45754
- GaN, high pressure vapour growth 2-27098
- GAP, cryst. defects, correlation between light and electron microscopy images 2-25880
- Ge, electron irradiated, defects study by electron microscopy 2-45274
- GeO<sub>2</sub> deposition, on SiO<sub>2</sub> (1), struct. and morphology 2-12926
- In, granular films, electron plasma oscills. 2-13197
- InAs, anisotropy effects in vapour epitaxy, growth rate and surface microrelief 2-1795
- InP epitaxial layer, defect obs. and correl. with device performance 2-5333
- InP-metal ohmic contacts, microstructure, correl. with elec. characts., electron microscopy obs. 2-40700
- KBr:Ti epitaxial films, struct. depend. on deposition parameters (*Russian*) 2-16968
- (LaO)AgS, Ag migration, electron microscope obs. (*French*) 2-35736
- LiFeSnO<sub>4</sub>, polymorphism and polymorphic transition, X-ray diffr. and electron microscopy obs. 2-50575
- Mg deposits, surface roughness using microdensitometer analysis of replica electron micrographs, autocovariance functions 2-10783
- MgO-ZrO<sub>2</sub>, solid solutions, thermomech. and thermophys. props. 2-5083
- Mg<sub>2</sub>SiO<sub>4</sub> single crystals., studies of helical dislocations, polygonisation and dislocation pile-ups 2-12596
- Mo film on cleaved CaF<sub>2</sub>, electron microscopy of oriented crystallisation 2-45755



**electron microscope examination of materials continued**

- Mo-Au bilayer epitaxial films, phase boundaries form. in high condensation temp. ranges 2-45741  
 Mo-Zr, nitriding, electron microscope obs. (*Japanese*) 2-13854  
 Mo-Zr alloy, TsM-6, heat treated, He ion blistering 2-12648  
 NaCl crystal surface, point defect study using Au and Sn as decorating materials for electron microscopy 2-45690  
 NaCl crystals with Au vacuum decoration,  $\text{Ar}^+$  ion bombard., surface topology electron microscope obs. 2-45286  
 NaCl single cryst., effects of surface impurities on elementary step motion in evaporation 2-45691  
 $\text{Na}_2\text{O-B}_2\text{O}_3\text{-SiO}_2$  glass, containing 1 mol.% Mo oxide, oxidation state effect on phase separation 2-26063  
 Nb, dislocation behaviour of single crystals with [110] and [100] tensile axis at low temp. 2-1483  
 Nb-Zr-C, deformation mechanism, singularities (*Russian*) 2-22266  
 Nb<sub>3</sub>Sn-Cu, microstructure study (*Chinese*) 2-17661  
 Ni, dislocation mobility, enhanced, due to H, direct obs. of HVEM 2-12607  
 Ni/Al powders, plasma sputtered on monocrystalline Si, oxide film behaviour (*Russian*) 2-31809  
 Ni-Cr-Co-Mo-Al-W-Ti-C, heat-resist., cryst. and dislocation struct., var. during cutting 2-51989  
 Ni-P-Cr coatings heated in air, struct. and props. (*Russian*) 2-13858  
 $\text{Ni}_{14}\text{Fe}_{10}\text{Co}_{20}\text{Cr}_{10}\text{Mo}_2\text{B}_{16}$ , metallic glass, crystn., effect of electron irradi. 2-35402  
 $\text{Ni}_3\text{Mo}$ , ordering under electron irradi. 2-30494  
 NiO, single cryst., HVEM high-temp. in situ expts. 2-50648  
 Pb-acid battery, positive plates, deep cycling effects 2-47350  
 PbSe films, evaporated, structural defects and photosensitivity 2-51018  
 PbTe films, magnetoresistance, Hall mobility 2-51360  
 PbTiO<sub>3</sub>, amorphous, crystallisation process 2-40524  
 Pb(Zr,Ti)O<sub>3</sub>, structural defect study 2-40372  
 $\alpha$ -Pd-Ce, short range order and evidence for Pd/Ce, electron microscopy 2-16620  
 Pt-Au(Pd) bilayer epitaxial films, phase boundaries form. in high condensation temp. ranges 2-45741  
 Sb<sub>2</sub>S<sub>3</sub>, epitaxial growth on PbTe with diffusion interaction at phase boundary 2-51040  
 Se thin film, bend-contour arrangement and bend geometry, electron microscope study 2-50491  
 Se thin film crystals, extinction contours indicating bending 2-40707  
 Si, electron irradiated, defects study by electron microscopy 2-45274  
 Si, ion implanted atomic defect chain configuration identification 2-25890  
 Si, lattice images of 30° partial dislocation cores 2-25889  
 Si, MBE films, dislocation density, growth conditions depend. 2-1785  
 Si:B, ion implanted, electron microscopy of surface defects 2-40420  
 Si-Te, glasses, struct. investigated by Mossbauer effect 2-9062  
 SiC thin layers formed by C ion implantation in Si, struct. and annealing props. 2-8733  
 SiC whiskers, formation mechanism in high-temp. flow of reagents 2-30780  
 SiN, prep. by sol-gel processing 2-9323  
 SiO filler for rubber, prep. 2-47005  
 Sn based antiferroalloy, struct. obs. in contact areas (*Rumanian*) 2-16805  
 SnO<sub>2</sub> deposition, on SiO<sub>2</sub> (I), struct. and morphology 2-12926  
 SnSe condensed film, dislocation struct. of twin boundaries, electron microscopic obs. 2-45199  
 Sr<sub>2</sub>KNb<sub>3</sub>O<sub>13</sub>, commensurate-incommensurate transition, ferroelastic transition 2-45567  
 TeO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-GeO<sub>2</sub>(Fe<sub>2</sub>O<sub>3</sub>)(MnO)(CoO)(NiO)(CdO), phase separation, electron microscope obs. 2-13707  
 Te<sub>2</sub>O<sub>3</sub>-GeO<sub>2</sub>-MnO, phase separation, electron microscope obs. 2-13707  
 Ti alloys, decomposition of metastable  $\beta$  phase during continuous heating (*Russian*) 2-22219  
 $\alpha$ -Ti, crack nucleation and propagation under tensile loading, in situ HVEM obs. (*Chinese*) 2-5921  
 Ti, technical purity, intergranular precipitation (*Russian*) 2-22220  
 Ti-Al-Zr-Mo-Si alloy, Ti 685,  $\alpha/\beta$  interface phase (*French*) 2-5855  
 Ti-Nb (35 wt.%), isothermal  $\omega$  phase form., electron microscopy and small-angle X-ray scatt. study (*French*) 2-9352  
 TiC coating on WC-Co, atom probe microanal. 2-13859  
 TiN ultrafine powders, produced by reactive gas evaporation technique with electron beam heating 2-46990  
 TiNb<sub>4</sub>O<sub>12</sub>, reduction path, phase equilib. and cryst. struct. of phases 2-41889  
 Ti<sub>48</sub>Ni<sub>13</sub>V<sub>9</sub>, long-period struct., electron diffr. and electron microscopy study (*Russian*) 2-35442  
 TiO<sub>2</sub> deposition, on SiO<sub>2</sub> (I), struct. and morphology 2-12926  
 V, H embrittlement, electron microscopy study 2-13815  
 V<sub>4</sub>O<sub>13</sub>, defect struct., HREM invest. 2-16658  
 W:ThO<sub>2</sub>, anal. by SIMS and electron probe microanalyser, chathodoluminesc. 2-41953  
 W-Mo-O ternary system, phase relations 2-27156  
 WSe<sub>2</sub>, stacking fault energy, electron microscopy weak beam method 2-1495  
 YIG, surface activation and deactivation, electron microscopic decoration, AES and SIMS obs. 2-45710  
 Y<sub>2</sub>O<sub>3</sub>, high temp. creep, phenomenological anal. 2-5181  
 Zr,  $\alpha$  to  $\beta$  phase transition, early stages 2-27173  
 Zn-Al (0.4 wt.%), fine grain, creep characts. (*Russian*) 2-9383  
 ZnS, natural minerals, high resolution electron, spectroscopy obs. of phase transitions 2-35663  
 Zr-Nb-Ru (2.5, 0.3wt.%), quenched, microstruct. and mech. props. 2-41646  
 ZrO<sub>2</sub>-SiO<sub>2</sub>, fusion, in centrifugal furnace, grain growth (*Japanese*) 2-36804

**electron microscopes**

- see also *electron microscopy*; *field emission electron microscopes*; *scanning electron microscopes*; *scanning-transmission electron microscopes*; *transmission electron microscopes*  
 analytical, vacuum system (*Japanese*) 2-19220  
 cathode lens, mirror mode, estimation of contrast (*French*) 2-10923  
 corrected electron microscope, improvement test (*German*) 2-48846  
 CRT video monitor, colour-coded, for electron microscope 2-43137  
 differentially pumped environmental chamber, for HVEM, design and operation 2-23785  
 EM lens, cooled winding 2-38718

**electron microscopes continued**

- exoelectron, scanning type, design and construction (*Japanese*) 2-48843  
 exoelectron emission microscope, photostimulated, and its appl. (*Japanese*) 2-48842  
 Field laboratory camera, appl. to TEM rapid micrography 2-23754  
 high voltage, astigmatism correction method using optical diffr. 2-38724  
 HVEM, differentially pumped environmental chamber, design and operation 2-23785  
 lens correction using improved multipole system, technological requirements (*German*) 2-39555  
 microcomputer-controlled, capabilities extension 2-3659  
 specimen contamination induced by micro electron probe in analytical electron microscope (*Japanese*) 2-19221  
 stigmator circuit for independ. control of corrector amplitude and orientation 2-6929  
 tilted specimen holder, tilt angle calc. for cryst. specimens 2-25695  
 vibrational stability of an electron microscope 2-38721  
 Y<sub>2</sub>O<sub>3</sub>-Ir, long life, high brightness cathode for electron microscopes (*Chinese*) 2-33682
- electron microscopy**  
 see also *electron microscope applications*; *electron microscope examination of materials*; *electron microscopes*; *field emission electron microscopy*; *metallography*; *scanning electron microscopy*; *scanning-transmission electron microscopy*; *specimen preparation*; *transmission electron microscopy*  
 3D image reconstruction, electron noise influence 2-4462  
 Annual Review of Materials Science, book 2-48405  
 beam coherence, spatial and temporal, from astigmatic image of amorphous C film 2-39552  
 beam-sensitive materials, multiple-image dark-field electron microscopy 2-23778  
 bend-contour arrangement and bend geometry, electron microscope study 2-50491  
 bibliography of equipment, methods, appls. and related topics 2-6720  
 bibliography on microscopic equipment, methods and appls. 2-23396  
 biological applications, conf., Detroit, MI, USA (May 1981) 2-33222  
 biological macromolecules, multivariate statistics use in electron micrograph image anal. 2-9771  
 biological specimens, irradiation damage to negatively stained helical struct., low dose method obs. 2-27945  
 biological specimens, use of propane/isopentane mixtures for rapid freezing 2-32374  
 cellular organelles, 3D reconstruction by electron microscopy, instrumentation 2-27958  
 computer image processing of electron micrographs, using flat-bed scanning microdensitometer 2-249  
 conference, Johannesburg, South Africa (Dec. 1980) 2-23373  
 conference, Tallin, USSR (Oct. 1979) 2-38355  
 corrected mag. prism spectrometer for electron microscopy 2-19216  
 crossed bend contours, fine struct. appearing in electron microscope images of bent crystals 2-25697  
 crystal, sandwiches, parallel moire patterns in electron micrographs, anomalous absorption effects 2-35357  
 crystal lattice obs. using electron microscope, interpretation of single atom effects (*German*) 2-33683  
 defocus effect on spherical aberration coeff. determ. from micrograph of amorphous phase object 2-33687  
 diffraction structural analysis 2-5028  
 diffractograms of electron micrographs, scatt. factor phase and spherical, astigmatic aberration const. meas. 2-830  
 digital-images, bilinear interpolation 2-7729  
 dislocation contrast electron microscope and X-ray images 2-40387  
 displacement vector of defects, determ. of sign, theoretical electron micrograph study 2-35516  
 electron microscope auto-radiograph resolution depend. on nuclear emulsion parameters (*Russian*) 2-24507  
 electron penetration, in carbonaceous material, Monte Carlo computation (*French*) 2-12436  
 fast Fourier processing, and anal. of atomic resoln. microscopic images, on-line system construction 2-50492  
 fixation, staining and embedding procedures, effects on periodic struct. of collagen fibril cross sections 2-32177  
 freeze-drying electron microscope specimens 2-48690  
 heavy atom holography in electron microscopy 2-34688  
 holography, Dennis Gabor memorial symposium, Haifa, Israel (Mar. 1980) 2-33216  
 Howie-Whelan differential eqns. explicit solutions 2-1375  
 HV, in situ experiments, recording images of rapid structural changes (*French*) 2-12438  
 HVEM, recent progress, appls. to study of props. of metallic materials (*Chinese*) 2-19214  
 image contrast, quantitative approach (*French*) 2-1374  
 image recording on charged liq. insulator 2-38720  
 imaging of strongly scatt. objects, partially coherent illum., chromatic defocus spread, transmission cross-coeff. (*German*) 2-23781  
 interferometry, amplitude division 2-3662  
 ion beam sputtering, improved method of metal coating SEM samples and shadowing TEM samples 2-15269  
 ion-beam thinning, precipitation in thin foils 2-31698  
 linear image processing, and anomalous scattering 2-7728  
 magnetic electron lenses for HV microscopes 2-248  
 microfocal radiography using the electron microscope 2-13871  
 mirror electron microscope, two-channel meas. of surface electric field, Si surface p-n junction 2-23782  
 mirror electron microscopy, mag. contrast, instrument const. 2-6930  
 multiple-image dark-field electron microscopy, of beam-sensitive materials 2-23778  
 p-n junctions, reversed-biased, electron interf. image interpretation 2-35358  
 packing defect vectors, sign determ. in thin weakly absorbing crystals 2-44989  
 phase changes under irradiation, CTM and HVEM studies, review (*French*) 2-30486  
 phase transitions, studied by electron microscopy and electron diffr. 2-2506  
 photoelectron microscopy, contrast effects, UV dose-depend. quantum yields of biological surface components 2-9837  
 photoemission electron microscopy, dielec. coating contrast 2-46866  
 PIC system, digital image processing of electron micrographs 2-50495  
 pipetting device, for staining electron microscopic grids 2-32376



**electron microscopy continued**

- probe current-density distribution and probe-system optimization 2-43133  
 propane-jet freezing, ultra rapid freezing method for temp. dependent lipid phases preservation 2-32373  
 quantitative X-ray microanal., thin film method using K-, L- and M-lines 2-52264  
 resolution, determ. by correlation diffr. patterns 2-43141  
 spatial resolution of electron microscopy energy-loss meas. 2-2390  
 specimen contamination induced by micro electron probe in analytical electron microscope (*Japanese*) 2-19221  
 SPIDER, modular software systems for electron image processing 2-50494  
 stereological data collection and processing, BASIC microcomputer program 2-48688  
 stereoscopic video-control device for electron microscopes 2-33680  
 subsampling methods for electron microscopic morphometry, comparison 2-15270  
 support film contrast transfer function, accumulated dose depend. 2-50493  
 surface morphology recording, casting technique 2-15143  
 surface-roughness study validity using microdensitometer anal. of electron micrographs of surface replicas 2-38723  
 surveying optical diffractometer, diffr. patterns, from electron micrographs 2-29866  
 thin film formation, conf., Fonyod, Hungary (Sept.-Oct. 1980) 2-48399  
 tilt angle calc. for cryst. specimens, simple tilted specimen holder 2-25695  
 tissue sections, embedded in glycol methacrylate, Quetol 523, and methyl methacrylate, light and electron microscopy 2-27947  
 water, vitrification for electron microscope obs. 2-48691  
 weak-beam electron microscopy, review 2-48850  
 whole-cell preparation, in electron microscopy, simple method 2-52688  
 X-ray analysis, energy dispersive crystallographic orientation effects 2-40236  
 $\text{UO}_2\text{SO}_4 \cdot 3\text{H}_2\text{O}$ , negative stain for electron microscopy 2-48845

**electron mobility**

- see also *carrier mobility; electron mobility (metals)*  
 compressible nonpolar fluid, excess electron localisation, cavity model 2-25485  
 diffusion-mobility relation, Einstein's contrib. 2-15131  
 electron diffusion under influence of electric field near absorbing boundaries 2-50364  
 electron diffusion under influence of electric field near absorbing boundaries, Monte Carlo results 2-50365  
 ethane dense gas, electron mobility, multiple scatt. model 2-8261  
 inert gas mixtures, electrically excited, electron energy distrib. and transport coeffs., Boltzmann stability eqn. calc. (*Chinese*) 2-25665  
 liquids and dense gases, electron mobility 2-20811  
 pulsed radiolysis drift tube experiment, diffusion effects 2-40026  
 Ar, electron swarm parameters 2-25487  
 $\text{CO}_2$ , high-pressure, electron mobility, density and temp. depend. 2-1288  
 $\text{H}_2\text{O}$ , subcritical vapour, excess electron mobilities and photoinjection meas. 2-50360  
 He gas, positron mobility edge study 2-16417  
 He, liquid, photoresonance and mobility of localized electrons (*Russian*) 2-21419  
 Kr, electron swarm parameters 2-25487

**electron mobility (metals)**

- TSeT<sub>1</sub>, quasi-one-dimens. cond., proton relax. rate behaviour interpret. 2-21904  
 TTT<sub>1,3,4,5</sub>, quasi-one-dimens. cond., proton relax. rate behaviour interpret. 2-21904  
 Ag-Cu, directionally solidified and deformed eutectic alloys with fibre structure, Hall effect and elec. cond. meas. 2-1893

**electron multipliers**

- chevron microchannel plate, response to 2.5 and 14 MeV neutrons 2-11354  
 ion detection efficiencies of Johnston electron multipliers 2-29480  
 Venetian blind type electron multipliers (*Japanese*) 2-15265  
 VEU-6 channel electron multiplier for recording ion currents in the MKh1304 mass spectrometer 2-28927

**electron nuclear double resonance** see *ENDOR***electron-nucleon interactions**

- see also *electron-nucleon scattering; electron-proton interactions*  
 gauge theories in particle physics, book 2-42802  
 inelastic scattering, QCD test 2-24002  
 stellar interiors, neutrino energy emission in  $\beta$ -interactions in presence of quantising mag. field 2-6534  
 eN deep inelastic scatt., flavour-diagonal horizontal interactions,  $\text{SU}(2) \times \text{U}(1) \times \text{U}(1)_H$  model phenomenological consequences 2-43246  
 eN-eX, Fermi weak theory and parton anal. review (*Spanish*) 2-303  
 eN in nuclei, P-odd asymmetries in cross sections (*Russian*) 2-43355  
 eN deep inelastic scatt., leptonproduction jet cross section, parton transverse momentum corrections 2-43358  
 $^3\text{He}(e,X)$  inelastic scatt., QCD test 2-24002

**electron-nucleon scattering**

- see also *electron-nucleon interactions; electron-proton scattering*  
 parity-violating amplitudes in  $\text{SU}(2) \times \text{U}(1) \times \text{U}(1)$  model 2-48998

**electron-nucleus reactions**

- for inelastic electron-nucleus scattering, see "electron-nucleus scattering"  
 see also *electron-nucleon interactions; nuclear electron capture*  
 $^4\text{He}(e,p)^3\text{H}$ , cross section meas. 2-43481  
 coincidence measurements with high energy electrons 2-3912  
 electromagnetic cascades in heavy absorber, Monte Carlo simulation 2-4183  
 medium energy physics with CW electron accelerators 2-3904  
 Saclay activities in electro- and photonuclear physics at intermediate energies and future prospects 2-3902  
 (e,e'), current expt. status on intermediate nuclei 2-3911  
 (e,e'), future expts. at IKO 2-7092  
 (e,f), induced by radioactive decay 2-43509  
 $^{209}\text{Bi}(e,p)$ , 17-23 MeV,  $g_{9/2}$  and  $i_{11/2}$  isobaric analogue resonances, decay modes 2-24210  
 $^{12}\text{C}(e,e')$ , 500 MeV, 1p momentum distrib., bound state and optical pot. influence, DWIA 2-49070  
 $^{59}\text{Co}(e,\alpha)$ , cross-section, DWBA anal. 2-34018  
 $^{59}\text{Co}(e,p)$ , cross-section, DWBA anal. 2-34018  
 $^{56}\text{Fe}(e,\alpha)$ , cross-section, DWBA anal. 2-34018  
 $^{56}\text{Fe}(e,p)$ , cross-section, DWBA anal. 2-34018  
 $^2\text{H}(e,e')\text{np}$ , electrodisintegration in few body systems 2-3910

**electron-nucleus reactions continued**

- $^2\text{H}(e,n)$ , chiral invariance role 2-38807  
 $^2\text{H}(e,n)^3\text{H}$ , exchange current role in disintegration 2-3898  
 $^3\text{H}(e,X)$ , inelastic scatt., QCD test 2-24002  
 $^3\text{He}(e,e')$ , ang. distrib. and energy spectra 2-3906  
 $^{237}\text{Np}(e,f)$ , 100-275 MeV, electro-fission cross section meas. (*Russian*) 2-43516  
 $^{16}\text{O}(e,e')$ , 500 MeV, 1p momentum distrib., bound state and optical pot. influence, DWIA 2-49070  
 $^{239}\text{Pu}(e,f)$ , 100-275 MeV, electro-fission cross section meas. (*Russian*) 2-43516  
 $^{45}\text{Sc}(e,n)^{44\text{m}}\text{Sc}$ , 165, 195, 225, 260 MeV, study using induced activity meas. (*Russian*) 2-43478  
 $^{232}\text{Th}(e,f)$ , 100-275 MeV, electro-fission cross section meas. (*Russian*) 2-43516  
 $^A\text{U}(e,f)$ ,  $A=233,235,236,238$ , 100-275 MeV, electro-fission cross section meas. (*Russian*) 2-43516  
 $^{235}\text{U}(e,e')$ , 10 to 34 MeV, electrofission cross section meas. 2-29299  
 $^{64}\text{Zn}(e,\alpha)$ , cross-section, DWBA anal. 2-34018  
 $^{64}\text{Zn}(e,p)$ , cross-section, DWBA anal. 2-34018

**electron-nucleus scattering**see also *electron-nucleon scattering*

- $^2\text{H}(e,e)$ , low  $Q^2$ , neutron charge form factor slope (*Russian*) 2-11130  
 $^2\text{H}(e,e)$ , deuteron form factor, relativistic effects in impulse approx. 2-29256  
 atomic nucleus structure and nuclear spectroscopy, conf., Leningrad, USSR (March, 1980) 2-33209  
 charge and mag. scatt. by deformed nuclei, joint eikonal description 2-34013  
 elastic scatt. by isotopes and isotones, in distorted-wave high-energy approx. 2-34015  
 elastic scatt. cross section, correction in second Born approx. 2-24228  
 elastic scatt. with allowance for second Born approximation 2-19535  
 energy weighted electromagnetic sum rules, rel. to collective aspects 2-3909  
 Helm model, nuclear charge and current distrib. 2-3838  
 inelastic electron scatt., nuclear transition density determ., book contrib. 2-29259  
 inelastic scatt. by complex nuclei and giant multipole reson. 2-34014  
 many body aspects at intermediate energy 2-3908  
 medium and heavy even-even nuclei, charge density distrib. from electron scatt. form factors 2-38940  
 parton model high momentum transfer scatt., scaling laws 2-3880  
 pion-like excited states, (e,e') and (p,p') studies 2-3849  
 spectroscopic factors, mag. electron scatt. impact 2-49032  
 spherical nuclei, M1 and M2 resonance electroexcitation (*Russian*) 2-11088  
 (e,e), electric, magnetic, and interference correction in Born approx. 2-43463  
 (e,e), quasi-free scatt., scaling violation, wave function correlation effects 2-34017  
 (e,e), spin  $3/2$  nuclei, differential cross section, Rarita-Schwinger formalism 2-34012  
 (e,e'), dipole and multipole resonance region, diagram method appl. 2-34007  
 (e,e'), resonance region, spectroscopic information incorporated in cross sections 2-33945  
 $^{27}\text{Al}(e,e)$ , charge radius, low lying level determ. 2-43480  
 $^{10}\text{B}(e,e)$ , form factors, second Born approx. corrections (*Russian*) 2-11131  
 $^9\text{Be}(e,e)$ , form factors, second Born approx. corrections (*Russian*) 2-11131  
 $^{209}\text{Bi}(e,e)$ , transverse elastic form factor, relativistic calc., nuclear current operator 2-33894  
 $^A\text{C}(e,e)$ ,  $A=12, 13$ , M1 form factors, core polarisation effects 2-24109  
 $^{12}\text{C}(e,e)$ , elastic scatt. in  $\alpha$ -particle model 2-34016  
 $^A\text{Ca}(e,e)$ ,  $A=42, 44$ , 124-250 MeV, giant resonance excitation, collective model anal. 2-33988  
 $^{140}\text{Ce}(e,e)$ , M1 and M2 giant reson. search 2-19525  
 $^2\text{H}(e,e')$ , parity violation, Weinberg model test, breakup channels 2-33847  
 $^2\text{H}(e,e)$ , deuteron mag. structure function, relativistic effects 2-33899  
 $^3\text{He}(e,e')$ , ang. distrib. and energy spectra 2-3906  
 $^3\text{He}(e,e)$ , sum rules without energy weighting 2-11129  
 $^{14}\text{N}(e,e)$ , form factors, second Born approx. corrections (*Russian*) 2-11131  
 $^{16}\text{O}(e,e)$ , moment method calc. of scatt. cross section 2-29239  
 $^{20}\text{Pb}(e,e')$ , 500 MeV, E5 transition charge density 2-43447  
 $^{208}\text{Pb}(e,e')$ , multipole giant resonances, intermediate struct. from microscopic shell model 2-33983

**electron optics**

- see also *beta-ray spectrometers; electron beams; electrostatic lenses; ion optics; magnetic lenses; particle optics*  
 $\Omega$  three magnet energy filter, chromatic plane aberration effects 2-49653  
 achromatic systems, electrostatic mirrors design 2-11629  
 analytical field calculation in electron optical devices 2-49651  
 beam coherence, spatial and temporal, from astigmatic image of amorphous C film 2-39552  
 cascade cylindrical mirror analyser, design 2-3655  
 cathode lens, mirror mode, estimation of contrast (*French*) 2-10923  
 cathode systems, geometric aberration coeff., expansion parameters 2-39557  
 centrifugal electrostatic beam-shaping for high-power electron beam commutator, design 2-4445  
 circular scanning in dissector, parameters meas. using CRT 2-23771  
 computer appls., lens and system design 2-29776  
 conical exponential mirror analyser, design 2-3656  
 corrected mag. prism spectrometer for electron microscopy 2-19216  
 CTEM, bright-field, low-contrast objects, point-spread and transfer functions 2-23780  
 diffractograms of electron micrographs, scatt. factor phase and spherical, astigmatic aberration const. meas. 2-830  
 electric field distrib. within field emission systems, numerical and expt. study 2-48841  
 electron beam lithography systems, numerical anal., mag. deflector field computation 2-49652  
 electron beam optical focussing and deflection systems with superimposed fields, field expansion and trajectory equations (*German*) 2-49655  
 electrostatic electron optical system with two symmetry planes, construction 2-20244



**electron optics continued**

- electrostatic mirrors, spherical and cylindrical, angular dispersion and transit time props. 2-29778
- fifth-order deflection aberrations, computational and expt. anal. 2-49649
- focusing properties of the electron optics of emission systems with electron mirrors 2-832
- image converter, high voltage magnetically focused, aberrations and transverse field effects 2-34648
- lens, variable axis, for electron beams 2-15951
- linear transformations for Gaussian trajectory parameters (*Chinese*) 2-34646
- Liouville theorem appl. to electron and ion optical systems possessing primary aberrations 2-24931
- magnetic deflector systems for electron beam instruments, variety and classification (*Russian*) 2-247
- magnetic lenses, large dimension, electron optical props., for reduction projection system (*Japanese*) 2-24932
- MAMI microtron, beam optics and magnet technology 2-4152
- micrograph computer image processing using flat-bed scanning microdensitometer 2-249
- moire contouring, high resolution, by light and electron optics hybrid technique 2-3563
- optically active molecules, passage of electron beam, electron optic dichroism 2-15952
- p-n junctions, reversed-biased, electron interf. image interpretation 2-35358
- point electron and ion source optics, numerical anal. method 2-51774
- primary aberrations, optical transfer matrix, Liouville's theorem appl. (*Chinese*) 2-29775
- probe current-density distribution and probe-system optimization 2-43133
- relativistic electron beam focusing in high-voltage diode, mag. fields observation 2-15657
- rotationally symmetric systems, analytical pot. calc. strategy 2-44185
- scanning electron-optical systems, optimisation of parameters (*Russian*) 2-34647
- SEM, local field effects on voltage contrast 2-23777
- SEM images, raster methods for displaying defocus and astigmatism 2-48849
- shaped electron beam current distrib., Monte Carlo modelling 2-49650
- TEM, atoms in solid as phase object 2-40232
- transaxial electrostatic cathode lens 2-20243
- two-magnet doubly achromatic beam deflection system for electron linear beam 2-4154

**electron pair annihilation** *see electron-positron interactions***electron pair production**

- cosmic ray photons, pair prod. in Earth's mag. field 2-28304
- electron-positron pair photoproduction is atomic electron field, cross section calcs. 2-43874
- Furry-Sommerfeld-Maue wave functions in pair prod. at medium and high energies 2-11128
- internal electron-positron pair prod. from elec. monopole transitions 2-24176
- pulsars,  $\gamma$ -quanta capture by mag. field rel. to pair creation suppression 2-38227
- pulsars,  $e^+e^-$  pairs and EM cascades prod. 2-53304
- pulsars, pair creation above polar caps rel. to polar cap X-ray emission 2-10463
- water, pair production probability and LPM bremsstrahlung 2-24526
- $(\gamma, e^+e^-)$ , resonance pair prod. enhancement 2-24226
- $\gamma \rightarrow e^+e^-$ , prod. by massive photon in mag. field 2-33874
- $\gamma$ -ray absorpt. coeffs., semiempirical formulae 2-46809
- $\gamma e \rightarrow e^+e^-X$ , resonance two photon prod. enhancement 2-24226
- $\gamma N \rightarrow e^+e^-$ , 1.064 MeV, prod. cross sections 2-33846
- pN, 13 GeV/c, direct  $e^+e^-$  pairs prod. 2-29149
- $\pi^+p \rightarrow e^+e^-X$ , 17 GeV, low mass electron pair anomaly 2-29145
- $\pi^+p$ , 18 GeV/c, direct  $e^+e^-$  pair prod. from hadronic bremsstrahlung 2-43390
- $\alpha$ -decay, internal pair production 2-19511
- $^{209}\text{Bi}(\gamma, e^+e^-)$ , electron pair prod. cross sections, meas. Coulomb corr. 2-7091
- Pb, pair production probability and LPM bremsstrahlung 2-24526
- $^{181}\text{Ta}(\gamma, e^+e^-)$ , electron pair prod. cross sections, meas. Coulomb corr. 2-7091

**electron pairs**

- see also electron pair production; positronium*
- polarizing medium, impurity centres of negative Hubbard energy, electron pairing 2-40832

**electron paramagnetic resonance** *see paramagnetic resonance***electron-phonon interactions**

- see also phonon drag; strong-coupling superconductors; tunnelling spectra; tunnelling spectroscopy; Umklapp process*
- A-15 compounds, martensitic transition, lattice dynamics 2-30595
- A-15 compounds, resistivity anomaly at high temperatures 2-30879
- alkali halide optical spectra, F-centre absorpt., vibr. props. 2-9170
- alkali metals, elec. resist., phonon-dislocation scatt. and phonon drag contrib. 2-21577
- amorphous solids, two-level systems, relax. time 2-40847
- anisotropic superconductors, charge imbalance relaxation by elastic scattering 2-36206
- 1-bromobutane-1-iodonaphthalene, phosphorescence spectrum 2-46704
- CDW state, electron-phonon coupling, strong coupling approx. 2-21512
- Chevreil phase supercond. cpds., electron-phonon interactions, isotope effect and tunnelling spectroscopy expts. 2-8917
- conductivity of two-dimensional electrons in a strong magnetic field (*Russian*) 2-21550
- crystals, generalised pseudoatom theory 2-45415
- diamond, electron irradi., TR12 vibronic band, uniaxial stress effects 2-13519
- diamond, natural, vibronic bands, luminesc. and absorpt. spectra 2-51653
- dilute alloys, electron-phonon interaction and deviations from Matthiessen's rule at high temperatures 2-13057
- 2,6-dimethyl-p-benzoquinone, photodimerisation, solid state reaction, Raman phonon spectra 2-41869
- electrical conductivity in moving base approach 2-26351
- electron-avalanche breakdown in solids 2-13409
- ferroelectric semiconductor, phase transition, EM field intraband absorpt. effect 2-51532
- ferroelectric semiconductor, tricritical point in strong EM wave field 2-9103

**electron-phonon interactions continued**

- ferroelectrics, carrier mobility anomaly, near phase transition, soft TO phonon and defect scatt. 2-45958
- ferromagnetism, itinerant electron, phonon effect on magnetisation 2-13270
- glass, laser excited fluorescence spectroscopy, book contrib. 2-17549
- graphite intercalation compound, synthetic metal, band length change and cond., review 2-26270
- graphite intercalation compounds, effect of electron-phonon interaction on Raman spectra 2-51585
- graphite intercalation compounds with alkali metals, mech. of supercond. 2-46181
- heat conductivity of solids, model 2-16913
- hopping model, kinetic coeff. matrix, effect of Hubbard-type repulsion 2-45957
- IV-VI semiconductors, ferroelectric lattice instabilities 2-31388
- Jahn-Teller centre, zero-phonon lines, homogeneous broadening, electron-phonon interactions effect 2-45917
- Jahn-Teller impurity centre spectrum moments for parity-forbidden transition 2-45922
- Jahn-Teller local and pseudolocal states of crystals with T-level impurity 2-45921
- kinetic equations, free boson fields 2-42941
- layered semiconductor structures and heterostruct., hot electron and phonon effects 2-26482
- linear response theory 2-12708
- metal, effective electron mass, phonon attenuation effect (*Russian*) 2-5341
- metal, itinerant electron ferromagnet, electron-phonon coupling 2-21761
- metal surface, long-range electron-phonon scatt. 2-12902
- metals, elec. resist., electron-phonon scatt. effect at high temp. 2-45950
- metals, electron-phonon coupling with small electron MFP, point contact spectra study (*Russian*) 2-40505
- metals, noble and polyvalent, electron-dislocation scatt. relax. time anisotropy 2-45943
- metals, simple, electron-phonon interaction, non-rigid muffin-tin calc. 2-12709
- metals, sound absorption and propagation above Debye temp. (*Russian*) 2-45408
- metals and alloys, phase stability and martensitic transform 2-5218
- metals and alloys, phase stability and martensitic transform 2-8608
- MIS struct., cyclotron-phonon reson. 2-36438
- molecular crystal., intermediate polaron and bound states with phonons at strong coupling 2-45856
- molecular crystal, exciton or charge carrier diffusion coeff., band and hopping limits 2-40798
- naphthalene:  $\beta\beta$ -dinaphthylethylene, generation spectrum, effect of excitation nonresonance freq. (*Russian*) 2-13556
- naphthalene, electron mobilities, density of states phonon scatt. 2-13067
- naphthalene, X trap system, electron-phonon coupling, phosphoresc. line-shape anal. 2-22069
- naphthalene with d( $\beta$ -naphthyl)-1,2-ethylene, pure electronic transition band in absorpt. and fluorescence spectra (*Russian*) 2-13562
- narrow and wide gap materials, optical and electronic props., model based studies 2-31441
- narrow-gap semiconductors, Auger recomb. and ionisation rates, Lax band struct. 2-8813
- non-transition metals, supercond. parameters and press. effects calc. 2-26534
- normal metals, multiple phonon generation and its impact on point contact spectra 2-35618
- normal metals, point-contact spectroscopy of phonons 2-35620
- one dimensional many electron system, coupled with acoustical phonons, one-electron Green function 2-50811
- one-dimensional conductor, org., irradi. induced disorder and effects on transport props. 2-30870
- one-dimensional conductors with interchain interaction, structural energy and phonon dynamics 2-25999
- one-dimensional metal, competition between supercond. and insulating phases 2-21574
- one-dimensional molecular lattice, excess electron interacting with optical phonons, motion 2-1577
- one-electron formulation of electron-phonon coupling by density functional method 2-30807
- optical polaron bound in Coulomb potential, phase diagram 2-8762
- organic quasi-one dimensional conductors, nonlinear conductivity 2-51155
- particle-like excitations in systems described by the Hubbard model without the chirality condition 2-30782
- perfect dielectric crystal, low-mobility transport, review 2-8801
- perylene in n-heptane crystal., fluoresc. selectively laser excited in phonon sideband 2-46711
- phosphate glass for lasers, rare-earth ion luminesc. quenching by OH impurity groups 2-51705
- photoemission, electron scatt. 2-5799
- piezoresist. differences, electron scatt. mechanisms 2-17069
- polar crystals, electron-phonon interaction in luminescence and light scatt. 2-46690
- polar semiconductor, multiphoton free carrier absorpt. in intense radiation field 2-41318
- polar substances, inhomogeneous electron-hole plasma, density functional method 2-35955
- polaron, acoustic deformation, strong coupled, in one dimens., adiabatic perturbation theory calc. 2-45850
- polareons linearised in elec. field, at weak electron-phonon coupling, distrib. function 2-1846
- polyacetylene, doped, elec. cond. freq. depend., soliton model 2-45978
- polyacetylene, doped, IR absorpt., vibr. modes 2-46599
- polyacetylene, dynamical solns. to one-dimens. coupled electron-phonon model 2-45497
- polyacetylene, electron hopping cond., soliton model 2-45977
- polyacetylene, electron-phonon scatt. 2-45472
- polyacetylene, electronic excitations, soliton model 2-45851
- polyacetylene, solitons and relativistic field theory models 2-26309
- pure metal, low temp. elec. cond. 2-51147
- quasi one-dimensional metal, lattice scatt. mobility at low temps. 2-17054
- quasi-one-dimens. electron-phonon system, commensurate-incommensurate phase transition 2-35645
- quasi-one-dimensional CDW distorted solid, charge density fluctuations 2-30812



## electron-phonon interactions continued

- rare earth compounds, phase separation, superconducting phase diagram 2-30990
- rare earth systems, magnetoelastic interaction, corrections to sp. ht., thermal expansions and elastic consts. 2-8630
- real space electron pairing, transition to k-space pairing 2-31036
- renormalised response theory of phonon anomalies 2-45478
- resonance Raman scatt. separation into orders in time correlation theory 2-26897
- ruby, phonon trapping due to reson. Raman spin-flip phonon scatt., mag. field depend. 2-45425
- ruby, phonon-impurity levels and phonon-phonon interactions 2-45424
- SDW and CDW states, transition temp., influence of electron-phonon coupling 2-5357
- semiconductor, electron energy relax. in quantising mag. field 2-30907
- semiconductor, electron-phonon coupling determ. from warm carrier coeff. 2-40879
- semiconductor, electronic transport properties, phonon contrib. 2-45473
- semiconductor, hot electrons and phonons, mutual drag in elec. and temp. fields 2-17082
- semiconductor, inhomogeneous, hot electron-phonon transport, quantum theory 2-51188
- semiconductor, interband absorpt. of long-wave radiation, impurity influence 2-2378
- semiconductor, transit reson., subharmonic 2-21593
- semiconductor heterolayer, two-dimensional electron transport, screening 2-13172
- semiconductor superlattices and interfaces, deform. pot. electron-phonon scatt., theory 2-13061
- semiconductor with superlattice, galvanomagnetic phenomena in case of inelastic electron scatt. 2-13103
- semiconductors, bulk, deform. pot. 2-35622
- semiconductors, carrier energy distrib. function quasidrift asymptotics 2-40880
- semiconductors, deformation pot., optical mode, calc. 2-45477
- semiconductors, deformation pots., one- and two-phonon, LCAO calc. 2-45481
- semiconductors, EM wave propag., inhomogeneous high freq. current effect 2-21618
- semiconductors, hot carrier relax., picosecond laser pulse studies, review 2-46528
- semiconductors, hot carriers, conf., Montpellier, France (July '81) 2-42780
- semiconductors, hot electron-phonon interactions, phonon transport and decay 2-45480
- semiconductors, LO phonon instability in free carrier absorpt. 2-16736
- semiconductors, magnetoabsorption, free carrier, in quantising mag. field, phonon scatt. effects 2-51559
- semiconductors, phonon optics 2-30544
- semiconductors, polar, magnetoresist. 2-17098
- semiconductors, spin-magnetophonon reson. and sound absorpt. 2-13141
- semiconductors, tetrahedral, optical phonon deform. pots. 2-1576
- Sms, electron-phonon mechanism of semiconductor phase instability under press. 2-30801
- superconducting loop, elec. field and heat flux (*Russian*) 2-41056
- superconducting transition temp., math. series soln., convergence, high freq. phonons effect (*Chinese*) 2-26529
- superconducting tunneling junctions, nonequilibrium, phonons 2-36274
- superconductive films, props. enhancement by phonons 2-31057
- superconductivity in non-transition metals, press. depend. 2-2024
- superconductor, anisotropic, with repulsive average interaction, impurity effects 2-21714
- superconductor, strong coupling, density of states struct. below  $2\times$  energy gap 2-5491
- superconductor-normal metal tunnel junction, charge imbalance fluctuations 2-17221
- superconductors, nonequilibrium superconductors, kinetic eqns. 2-31030
- superconductors, point-contact spectroscopy of phonons 2-35620
- TCNQ salt, TMB-TCNQ, electron-phonon interaction and temp. depend. of IR absorption 2-13489
- TCNQ salts, HMTSF-TCNQ and TMTSF-DMTCNQ, quasi-one-dimens. cond., metallic cond. at liq. He temp. 2-21572
- tetracyanoplatinates, exciton and polaron aspects 2-45839
- theory of phonon drag in strong mag. field 2-21549
- three level system, phonon enhancement and saturation in EM field 2-45479
- (TMTSF) $_2$ PF $_6$ , quasi-one-dimens. cond., electron-phonon coupling const., resist. mechanism 2-21573
- (TMTSF) $_2$ PF $_6$ , quasi-one-dimens. cond., metallic cond. at liq. He temp. 2-21572
- (TMTSF) $_2$ PF $_6$  and TMTSF-DMTCNQ, quasi-one-dimens. cond., electronic transport, temp. depend. 2-26368
- transition metals, disordered, electron-phonon matrix element calcs., superconductivity 2-31006
- transition metals, electron-phonon coupling, use of deform. transform. 2-45474
- transition metals, phonon anomalies 2-50803
- transition metals, resistivity anomaly at high temperatures 2-30879
- transition metals and compounds, two-phonon Raman scatt., theory 2-36638
- transport theory, macroscopic, two-time Green's function calc. 2-45476
- TTF-TCNQ, elec. resist., polarisation energy fluctuations as important scatt. mechanism 2-5396
- TTF-TCNQ, quasi-one-dimens. cond., electron-phonon coupling const., resist. mechanism 2-21573
- two-dimensional electron-phonon system, transverse static magnetoconductivity 2-45930
- two-dimensional metal systems, elec. cond., electron-phonon relax. mechanism 2-26379
- V $_2$ O $_5$ , amorphous, electron spin-lattice relax., spin-phonon interactions 2-46378
- Van-Hove singularity 2-21255
- Van-Hove singularity 2-21509
- Ag, cyclotron mass anisotropy and electron-phonon interaction 2-45810
- Ag $_2$ -Pd $_2$ , mass and lifetime enhancement due to disorder, residual resist., KKR-CPA calc. 2-30880
- Ag $_2$ -Sn $_{1-x}$ Se $_2$ , supercond. props., hydrostatic press. effects 2-5486
- Al, Eliashberg function and force consts., linear response theory 2-12708
- Al-SiO $_2$ -Si structure, hole mobility and density of states at Si-SiO $_2$  interface 2-5469
- AlGaAs-GaAs-AlGaAs struct., phonon scatt. of electron gas 2-36131

## electron-phonon interactions continued

- Al $_x$ Ga $_{1-x}$ As-GaAs heterostructure, modulation doped, MBE grown, electron mobility study 2-8865
- As $_2$ S $_3$ , amorphous, hot carrier relax., optical picosecond study 2-46529
- Au, Fermi surface electron-phonon interaction anisotropy 2-40759
- Au-Cu-Fe(Mn) alloys, low temp. elec. cond., scatt. mechanisms 2-35997
- BaF $_2$ , deform. pot., one-phonon Raman scatt. 2-51586
- BaPb $_{1-x}$ Bi $_x$ O $_3$ , real space electron pairing, transition to k-space pairing 2-31036
- Bi, electron interactions, subband transitions study 2-26307
- CaF $_2$ , deform. pot., one-phonon Raman scatt. 2-51586
- CaO(S)(Se):Pb $^{2+}$  phosphors, luminesc. spectra, mag. field effect (*French*) 2-41417
- CdIn $_2$ S $_4$ , interaction of free carriers with optical phonons (*Russian*) 2-13466
- CdIn $_2$ Se $_4$ , free current carrier interaction with LO phonons, plasmon-phonon modes, IR spectra 2-36635
- Cd $_3$ P $_2$ , electron mobility, thermoelectric power, Nernst-Ettingshausen effect 2-26400
- CdS, acoustic domains, shock excitation and nonlinear process suppression, Brillouin scatt. meas. 2-17117
- CdS, neutron irradi., electron-phonon interaction, luminescence study (*Russian*) 2-13559
- CdS, phonon-electron spin interactions, Raman scatt. study 2-46583
- n-CdS, piezoelectric semicond., acoustic wave propag., electron mass and collision freq. changes 2-46079
- Ce, electronic aspects of electron-phonon interaction 2-30808
- Co $_2$  thin film, polarised IR absorpt. spectrum 2-2356
- CrBr $_3$ , ferromag. and paramag., thermoreflectance spectra, magneto-optical effects, electron-phonon modulation 2-31459
- Cs $_2$ [Pt(CN) $_4$ ](N $_3$ ) $_{0.25}$ 0.5H $_2$ O, quasi-one-dimensional cond., phys. props. rel. to chem. composition 2-13045
- Cu, dislocation resonance damping, temp. depend. 2-45192
- Cu, high purity, Matthiessen's rule deviations 2-17045
- Cu, US attenuation temp. depend., plastic deformation effects 2-45409
- Cu-Au-Ge (Ni-Ge), Hall coeff. for isotropic electron scatt. 2-36019
- Cu $_2$ Mo $_6$ S $_8$ , supercond., electron-phonon interaction studies 2-36273
- DyVO $_4$  type crystal, Jahn-Teller ferrodistorion antiferroelec., elementary excitations in elec. field 2-13026
- Fe, modulation temp. spectroscopy of elementary excitations 2-31462
- GaAs, bulk, deform. pots. 2-35622
- n-GaAs, epilayers, phonon generation and electron-phonon scattering 2-21257
- GaAs, hot carrier relax., picosecond laser pulse studies, review 2-46528
- GaAs, hot photoexcited electrons, effect of electron-electron scatt. 2-46066
- p-GaAs, linear photogalvanic effect (*Russian*) 2-40972
- GaAs:Cr, phonon scatt. by impurities, thermal cond. meas. 2-8584
- GaAs-(AlGa)As heterostructure, coupled electron-LO phonon excitation 2-50808
- Ga $_x$ In $_{1-x}$ As $_y$ P $_{1-y}$ , electron Hall mobility calc. with two longitudinal optic phonon model 2-17094
- GaP, deform. pot., one-phonon Raman scatt. 2-51586
- n-GaP, deformation pots., far IR spectra study (*Ukrainian*) 2-13463
- GdS, point contact spectroscopy 2-30554
- Ge, electron-hole droplet cloud, phonon-wind-induced anisotropy 2-12976
- Ge, electron-hole droplets, momentum damping time and phonon wind force 2-12977
- Ge, electron-hole liq., phonon absorpt. spectra 2-45843
- Ge, laser-induced metastable states 2-45895
- p-Ge, light-hole band overpopulation in strong crossed elec. and mag. fields 2-40924
- n-Ge, piezoresist. differences, electron scatt. mechanisms 2-17069
- $^3$ He, superfluid, surface electron lattice mobility, ripplons effect, weak coupling theory 2-35781
- In, anisotropic helicon damping during localised electron-phonon U process (*Russian*) 2-13112
- In, enhanced electron mass anisotropy 2-1814
- n-InAs, magnetoresist. hysteresis in elec. field 2-21610
- In $_{1-x}$ Ga $_x$ As $_y$ P $_{1-y}$ , laser transitions, Auger recombination mechanisms 2-44295
- InSb, deformation pots. pseudopot. calc. 2-21256
- InSb, hot electron energy relaxation, screening by shallow donor impurities 2-40950
- n-InSb, hot electrons, energy loss mechanisms 2-30901
- InSb, photoexcited hot carrier lifetime, magnetophonon oscillations 2-46068
- InSb type narrow band gap semicond., free and bound magneto-polarons 2-40807
- K, elec. cond., 0.5 to 4K, high precision meas. 2-35998
- K, electron-phonon interaction, point-contact spectra 2-8763
- K, electron-phonon interaction, point-contact spectroscopy 2-35619
- K, point contact spectra calc. 2-35621
- K, strained, elec. resist., electron-phonon scatt. 2-36000
- KCl, R-centres, optical absorpt. R $_2$  band, lineshape calc. 2-2320
- KCl:Li, optically excited colour centres, ultrafast configurational relax. 2-31552
- La, electronic aspects of electron-phonon interaction 2-30808
- La $_2$ Fe $_2$ Er $^{3+}$ , phonons, tunable high freq., stimulated emission 2-45475
- LaS $_2$ , point contact spectroscopy 2-30554
- Li, electrical transport props. 2-40869
- Li, electron-phonon interaction, point-contact spectra 2-8763
- Mg, phonon resistivity 2-13039
- Mg-Yb alloy, phonon resistivity 2-13039
- MgS:Pb $^{2+}$  phosphor, luminesc. spectra, mag. field effect (*French*) 2-41417
- Mo, Se, supercond., electron-phonon interaction studies 2-36273
- MoN and MoC, superconducting transition temp. prediction 2-31004
- (Mo $_6$ Ru $_{10}$ )B $_{14}$  metallic glass, supercond. transition temp., press. depend. 2-36200
- Na, electron-phonon interaction, point-contact spectra 2-8763
- Na, electron-phonon interaction, point-contact spectroscopy 2-35619
- Na, point contact spectra calc. 2-35621
- Na $_2$ WO $_3$ , polar metal, supercond. transition temp. 2-36186
- Nb, superconducting films, energy gap relax. time 2-36188
- Nb-Mo alloys, electron-phonon interaction calc. 2-40806
- Nb $_2$ Al $_{10}$ Ge $_{25}$ , elec. cond., lattice consts. (*Russian*) 2-45939
- Nb $_2$ Si, bulk Al $_5$ , supercond. transition temp., press. depend. 2-36169
- Nb $_2$ Sn, enhanced spin susceptibility calcs. 2-31139
- Nb $_2$ Sn, upper bound estimate of paramagnon effects from tunnelling 2-2038



**electron-phonon interactions continued**

- Nb<sub>1-x</sub>Ta<sub>x</sub>C<sub>0.5</sub> supercond., mag., and normal state elec. props., conc. depend. 2-51368  
 Ni, modulation temp. spectroscopy of elementary excitations 2-31462  
 Ni<sub>1-x</sub>Cu<sub>x</sub>S<sub>2</sub>, modulation temp. spectroscopy of elementary excitations 2-31462  
 Ni<sub>1-x</sub>Cu<sub>x</sub>S<sub>2</sub>, elec. cond., Hall effect, thermoelectric power 2-26388  
 O<sub>2</sub>, electrical resist. and size effect anisotropies, 4.2 to 300K (*Russian*) 2-5383  
 Pb small particles, supercond. transition temp., size depend., surface phonon softening contrib. 2-26544  
 Pb superconducting film, quench-condensed, electron tunnelling and resist. meas. 2-36244  
 Pb:H(D), localised modes, tunnelling study 2-35625  
 Pb:H(D) ion implanted, supercond. transition temp. 2-31000  
 Pb-Bi-In, effect of impurities and press. on electron-phonon interaction 2-21718  
 Pb-Sn alloys, mag. and thermomag. props. 2-17049  
 PbMo<sub>0.8</sub>S<sub>0.2</sub> supercond., electron-phonon interaction studies electron-phonon interactions 2-36273  
 PbSnTe, phonon-induced anomalous elec. resist. in struct. phase transition 2-45954  
 Pd, phonon limited electron lifetimes 2-36024  
 Pd<sub>1-x</sub>Ni<sub>x</sub>H<sub>0.5</sub>, electron-phonon interaction from elec. resist. meas. 2-26360  
 Pt atom chain compounds, anion-deficient, chem. and phys. interrelationship, one-dimens. metal 2-30439  
 Re, galvanomagnetic props., 4.2 to 273K, anisotropic intersheet electron scatt. and Fermi surface anisotropy effect (*Russian*) 2-1892  
 Ru, electron-phonon interaction, Raman scatt. study 2-36650  
 (SN)<sub>x</sub>, interacting two-carrier system, elec. resistivity 2-30882  
 (SNBr)<sub>x</sub>, interacting two-carrier system, elec. resistivity 2-30882  
 Sb, electron-phonon scatt. rates, RF size effect 2-36032  
 Si, 1/f noise of thermal and hot charge carriers 2-26456  
 Si, amorphous, hot carrier relax., optical picosecond study 2-46529  
 Si, amorphous, laser-induced metastable states 2-45895  
 n-Si, elec. cond., effect of effective mass change due to uniaxial strain 2-21589  
 Si, electric carriers and heat at high electronic temp. 2-8809  
 Si,  $\Gamma$ - $\Delta$  electron-phonon and hole-phonon scatt. matrix elements, rigid pseudoion model 2-50812  
 Si inversion layers, remote polar phonon scatt. for hot electrons 2-30972  
 Si inversion layers, two-dimens. electron system, mag. field induced Wigner glass 2-40988  
 Si MOSFET, absorption of ballistic phonons by 2D electron gas 2-50809  
 Si MOSFET, inversion layer, ballistic phonon absorption by 2D electron gas 2-51323  
 n-Si MOSFET inversion layer, electron mobility, oxide charge, phonon and surface scatt. 2-51320  
 Si, phonon-free carrier interactions, phonon self energy, neutron diff. study 2-50810  
 Si, plasma, inhibited electron-phonon coupling, pulsed Raman study 2-46582  
 Si:H, amorphous, hot carrier relax., optical picosecond study 2-46529  
 Si-Ge-P, thermal cond. change by precip. of dopant 2-45967  
 SiC, cubic, electron-hole liq., ground state props., valence band masses, exciton and acceptor energies 2-35947  
 Si<sub>0.8</sub>C<sub>0.2</sub>, amorphous, Stokes shift photoluminesc., comp. depend. 2-46668  
 Si(100) inversion layer, hot electrons at low lattice temps. 2-46137  
 $\beta$ -Sn, electrical conductivity, thermal cond. and thermo EMF, 3.7-16K (*Russian*) 2-45937  
 $\beta$ -Sn, microcontact spectroscopy of electron-phonon interaction 2-46213  
 Sn:H(D), ion implanted, supercond. transition temp. 2-31000  
 SnMo<sub>0.8</sub>S<sub>0.2</sub> supercond., electron-phonon interaction studies 2-36273  
 SrF<sub>2</sub>, deform. pot., one-phonon Raman scatt. 2-51586  
 Ta-Cu-Ta sandwiches, elec. field penetration near normal-supercond. interface 2-36237  
 Te, galvanomagnetic phenomena, effect of  $\bar{a}$ -edge dislocations (*Russian*) 2-40946  
 Th, electronic aspects of electron-phonon interaction 2-30808  
 TiS<sub>2</sub>, elec. resist., electron-soft mode coupling mechanism 2-1901  
 Ti<sub>1-x</sub>S<sub>2</sub>, transport props. and Raman scatt., stoichiometry depend. 2-13043  
 TiSe<sub>2</sub> (1T), lattice dynamics and lattice instability, role of electron-lattice interaction 2-30549  
 TmSe, intermediate valence, Raman scatt. study 2-22030  
 TmSe, point contact spectroscopy 2-30554  
 V, superconductivity and upper crit. field anisotropy 2-46217  
 V<sub>1-x</sub>Ga<sub>x</sub>H<sub>0.5</sub>, sp. ht., 1.2 to 20K 2-30618  
 V<sub>1-x</sub>Ga<sub>x</sub>H<sub>0.5</sub>, sp. ht., lattice parameters, and supercond. props., 1.2 to 20K, comp. depend. 2-26552  
 V<sub>0.2x-1</sub> (x=2, 4), metal-insulator transition, struct. disordering effect (*Russian*) 2-21501  
 V<sub>0.2x-1</sub>, thermal cond., 0.1 to 300K 2-41062  
 W, electronic attenuation of longitudinal acoustic phonons 2-30553  
 ZnS, deform. pot., one-phonon Raman scatt. 2-51586  
 p-ZnSb, carrier kinetics in mixed scatt. region, cond., thermoelec. power, and Hall effect tensors 2-21602  
 ZnSe, deform. pot., one-phonon Raman scatt. 2-51586  
 ZnTe, deform. pot., one-phonon Raman scatt. 2-51586  
 ZnTe, phonon-electron spin interactions, Raman scatt. study 2-46583  
 Zr, laser pulse interaction, picosecond duration, photoelec. emission 2-51764  
 Zr-transition metal alloys, amorphous, electron-phonon coupling const. rel. to elec. resist. 2-13037  
 Zr<sub>1-x</sub>Cu<sub>x</sub>-x glasses, electronic props. and supercond. 2-36196

**electron-positron inclusive interactions**

- annihilation,  $\gamma\gamma$  short-distance processes 2-29174  
 annihilation, charmed meson production 2-24009  
 annihilation, energy-energy correl., structure function importance 2-24008  
 annihilation, parton showers, hadron prod. in QCD 2-339  
 annihilation, positivity as source of asymptotic bounds 2-19360  
 baryon production, quark (antiquark) behaviour 2-19337  
 conference on high energy physics, Akasloppolo, Finland (July-Aug. 1980) 2-42782  
 elementary constituents and hadronic struct., conf., Les Arcs, Savoie, France (March 19-80) 2-3331  
 hadron production, MARK J results 2-24012  
 hadronic strings in theory with integer-charge quarks and gluons (*Russian*) 2-23897

**electron-positron inclusive interactions continued**

- jet fragmentation, average transverse momentum, QCD anal. 2-48942  
 jet phenomena, review 2-29123  
 jet production, hard gluon bremsstrahlung, strong coupling const. 2-340  
 jet structure, QCD tests 2-7040  
 jet structure of hadrons, book 2-3343  
 pair annihilation, 3 jet cross section, higher order perturbative QCD calc. 2-29122  
 perturbative QCD tests, problems for struct. function and coupling const. determ. 2-3802  
 quarks and leptons low-lying excited states prod. cross section 2-43313  
 three-jet production, gluon and Higgs scalar contrib. in QCD 2-3799  
 $e^+e^- \rightarrow hX$ , inclusive annihilation, higher order QCD effects 2-29113  
 $ee \rightarrow eeX$ , luminosity function for two-photon processes in the single tagging mode,  $\gamma^*\gamma^* \rightarrow X$  comparison 2-3823  
 $e^+e^- \rightarrow$  hadrons, mass splittings and leptonic width ratios meas. for T, T' and T'' states 2-15347  
 $e^+e^- \rightarrow hh$ , h=baryon resonance with spin 5/2, differential cross section calc. 2-3800  
 $e^+e^- \rightarrow \psi$  or  $\psi'$ ,  $\eta$ , study by measuring low energy photons from  $\psi$  and  $\psi'$  radiative decays 2-15343  
 $e^+e^- \rightarrow V \rightarrow \gamma X$ , X=Higgs particle or pseudo-Goldstone boson, ang. distrib. and polarisation effects 2-43322  
 $e^+e^- \rightarrow V \rightarrow l^+l^- X$ , X=Higgs particle or pseudo-Goldstone boson, ang. distrib. and polarisation effects 2-43322  
 $e^+e^-$ , 29 GeV, prod. cross section upper limit for highly ionising particles 2-38890  
 $e^+e^-$ , 33 GeV,  $\Lambda$ ,  $\bar{\Lambda}$ ,  $K^0$ ,  $\bar{K}^0$  prod., differential and scaling cross sections 2-7039  
 $e^+e^-$ , electron structure functions from electron-photon scatt. 2-48992  
 $e^+e^-$ ,  $\tau$ , T and charm physics,  $\gamma\gamma$  interactions, quarks and gluons 2-43369  
 $e^+e^- \rightarrow$  charged hadrons,  $\pi^\pm$ ,  $K^\pm$ ,  $p\bar{p}$  prod. energy depend. study 2-15317  
 $e^+e^- \rightarrow ABX$ , back-to-back jets in QCD 2-38889  
 $e^+e^- \rightarrow AX$ , (A= $\pi, \rho$ ),  $\tau$  production and anomalous mag. moment (*Ukrainian*) 2-11059  
 $e^+e^-$  annihilation, 9.4, 12.0, 30 GeV, inclusive  $K^0$  prod. 2-3798  
 $e^+e^-$  annihilation, charged hyperpion prod., hypercolour scenario 2-19387  
 $e^+e^-$  annihilation, hadronic events comparison with pp collisions at  $s^{1/2}=62$  GeV 2-29158  
 $e^+e^-$  annihilation, neutral Higgs bosons prod. in Weinberg-Salam model 2-19359  
 $e^+e^-$  annihilation,  $\psi$  radiative decays inclusive and exclusive meas. 2-19382  
 $e^+e^-$  annihilation, QCD jets, hadron distrib., transverse momentum moments 2-19320  
 $e^+e^-$  annihilation, QCD jets, colour singlet clusters, quantitative props. 2-38858  
 $e^+e^-$  annihilation, QED tests,  $2\gamma$  interactions study, search for new flavours and leptons 2-15315  
 $e^+e^-$  annihilation, scalar-quark reson. phenomenology study 2-43365  
 $e^+e^-$  annihilation, three-jet ang. distrib., QCD test 2-19389  
 $e^+e^-$  annihilation, thrust distrib., perturbative QCD calcs. 2-24006  
 $e^+e^-$  annihilation 2-6991  
 $e^+e^-$  annihilations, inclusive  $J/\psi$  prod. cross section calc. in perturbative QCD 2-29121  
 $e^+e^- \rightarrow BX$ , B-meson trigger method 2-19390  
 $e^+e^-$  collisions, neutrino counting method, radiative  $Z^0$  prod. 2-29099  
 $e^+e^-$  collisions, Stermann-Weinberg jet cross sections, gluon cut vertices QCD coupling calcs. 2-29120  
 $e^+e^-$  data at  $s^{1/2}=3.7$  GeV comparison with pp interaction inclusive momentum distrib. 2-33864  
 $e^+e^-$  deep inelastic scatt., jets azimuthal asymmetries, QCD calc. 2-3785  
 $e^+e^- \rightarrow e^+e^-X$ ,  $\gamma\gamma$  scatt. interpretation, photon struct. function 2-29166  
 $e^+e^- \rightarrow qq\bar{q}$ , enhanced baryon prod., B/M ratio 2-29104  
 $e^+e^- \rightarrow \gamma, Z, \phi, \omega, \mu^+\mu^-$  two jets, long. pot. beams,  $SU(2)_L \times U(1) \times U(1)$ ,  $SU(2)_L \times SU(2)_R \times U(1)$  predictions 2-3797  
 $e^+e^- \rightarrow \gamma+2$  gluons  $\rightarrow \gamma$  hadrons, jet prod. at PETRA or PEP energies 2-48969  
 $e^+e^- \rightarrow \gamma hX$ , QCD prediction for direct photon prod. 2-7008  
 $e^+e^- \rightarrow hX$ , 30 GeV, three-jet events, gluon bremsstrahlung 2-3801  
 $e^+e^- \rightarrow hX$ , hadronic final states, elongated q-q struct. 2-337  
 $e^+e^- \rightarrow HZ^0$  (Hff), polarisation effects, Weinberg model calc. 2-24004  
 $e^+e^- \rightarrow$  hadrons, 33-36.7 GeV, three-jet events, rel. to QCD model 2-38891  
 $e^+e^- \rightarrow$  hadrons, evidence of four colour quarks 2-38847  
 $e^+e^- \rightarrow$  hadrons, hadronic vacuum polarisation correction in muonic atoms using cross-section parametrisation 2-11594  
 $e^+e^- \rightarrow$  hadrons, jet prod., hard gluon bremsstrahlung in QCD 2-24011  
 $e^+e^- \rightarrow$  hadrons,  $O(\alpha_s^2)$  QCD radiative corrections for shape variable distributions 2-49003  
 $e^+e^- \rightarrow$  hadrons/ $e^+e^- \rightarrow \mu^+\mu^-$  cross section ratio study, search for quark flavour 2-15317  
 $e^+e^- \rightarrow$  jet,  $O(\alpha_s^2)$  corrections magnitude 2-19358  
 $e^+e^- \rightarrow$  jets, transverse momentum distrib., perturbative QCD tests 2-11058  
 $e^+e^- \rightarrow \mu^+\mu^-X$ , evidence of four colour quarks 2-38847  
 $e^+e^- \rightarrow \mu^+ +$  hadrons, inclusive muon prod. study in hadronic final states 2-15316  
 $e^+e^-$  physics, lepton and hadron prod.,  $\tau, \psi, T$  and  $Z^0$  2-43368  
 $e^+e^- \rightarrow \pi^+X$ , 14-34 GeV, scaling violation 2-38892  
 $e^+e^- \rightarrow \pi X$ , many-particle exclusive semi-inclusive processes, renormalisation group approach 2-7007  
 $e^+e^- \rightarrow \pi(\rho)X$ , lepton hadronic decays and P-odd effects 2-19392  
 $e^+e^- \rightarrow \psi X$ , charmonium studies with Cry stal Ball detector at SPEAR 2-15342  
 $e^+e^- \rightarrow q\bar{q}$  hadrons, effective quark mass calc. 2-43366  
 $e^+e^- \rightarrow q\bar{q}$  hadrons, total cross section, QED and electroweak theories tests at PETRA 2-19314  
 $e^+e^- \rightarrow q\bar{q}g$ , gluon bremsstrahlung and neutral current induced polarisation 2-24005  
 $e^+e^- \rightarrow q\bar{q}g$ , inclusive prod. of baryons in quark jets 2-19350  
 $e^+e^- \rightarrow q\bar{q}\pi$ , one-photon mech. (*Russian*) 2-38893  
 $e^+e^- \rightarrow q\bar{q}q$ , three-jet processes, chromomagnetic quark moment (*Russian*) 2-338  
 $e^+e^-$  stimulated annihilation, photon anticorrel. effect, second-order soln. 2-48970



**electron-positron inclusive interactions continued**

- $e^+e^-$ —three jets, transversely polarised, lowest order calcs. in broken colour gauge theory 2—49000
- $e^+e^-$ — $\gamma X$ , 10–30 GeV, three gluon decay model, QCD prediction, strong coupling const. 2—3781
- $e^+e^-$  annihilation, electroweak asymmetries measurability in hadronic jets 2—43367
- $e^+e^-$  annihilation, hard process jets similarity to low  $p_T$  hadron jets 2—29119
- $e^+e^-$  annihilation results from CLEO detector, narrow  $\Upsilon$  resonances obs. 2—15346
- $e^+e^-$  annihilations, fast baryon prod., combinatorial rules 2—49001
- $e^+e^-$  annihilations, inclusive  $J/\psi$  prod. cross section, perturbative QCD calc. 2—33850
- $\eta$ ,  $f(1270)$ ,  $A_2(1310)$ ,  $f'(1515)$  mesons, two-photon prod. in  $e^+e^-$  annihilation 2—15349
- $\Upsilon(9.46)$  and  $\Upsilon(10.01)$  resonances obs. in electron-positron annihilation 2—15348

**electron-positron interactions**

- see also *electron-positron inclusive interactions; electron-positron scattering; positron annihilation in liquids and solids*
- annihilation, contrib. to cosmic ray EM air shower 2—28304
- annihilation in active galaxies,  $\gamma$ -ray constraints 2—14935
- annihilation QCD event simulation, Monte Carlo program 2—15345
- atmospheric positron annihilation line at 511 keV, HEAO 3 meas. 2—48057
- early experiments on photon-photon collisions in  $e^+e^-$  colliding rings 2—24059
- electroweak interactions and unified theories, Rencontre de Moriond, Les Arcs, Savoie, France (March, 1980) 2—14977
- exclusive QCD processes, helicity selection rules and gluon spin tests 2—43298
- Friedmann Universe, expanding matter annihilation 2—6694
- gamma radiation from hot  $e^+e^-$  plasma 2—28331
- lepton + hadron processes beyond leading order in QCD 2—29080
- positron annihilation and pulse radiolysis, data correl. 2—52239
- QCD, instanton effects on physical processes 2—48945
- resonance production, asymptotic cross-sections, duality ideas 2—3764
- review 2—24010
- SU(2) colour gauge theory, short-distance structure of instantons 2—3688
- $e^+e^-$ ,  $\tau$ ,  $\Upsilon$  and charm physics,  $\gamma\gamma$  interactions, quarks and gluons 2—43369
- $e^+e^- \rightarrow 2\pi^+2\pi^-(K^+K^-\pi^+\pi^-)(2\pi^+2\pi^-\pi^0)$   
( $pp(K^+K^-)(K_S^0K_L^0)(K_S^0K^+\pi^+$ , 1.4–2.2 GeV, exclusive channel results 2—15350
- $e^+e^- \rightarrow 2\pi(N\pi)$ , many-particle exclusive processes, renormalisation group approach 2—7007
- $e^+e^- \rightarrow 3\pi^++3\pi^-$ , 1.4 to 2.18 GeV, cross section meas. 2—19391
- $e^+e^- \rightarrow 4\gamma$ , helicity amplitudes for massless QED 2—7019
- $e^+e^-$  annihilation 2—6991
- $e^+e^- \rightarrow e^+e^-\pi_1^0$ , 2 to 4 GeV, cross-section 2—24061
- $e^+e^- \rightarrow e^+e^-\mu^+\mu^-$ ,  $2\gamma$  processes, QED tests with MARK J PETRA detector 2—23966
- $e^+e^- \rightarrow e^+e^-\mu^+\mu^-$ ,  $2\gamma$  uses  $1\gamma$  physics 2—23965
- $e^+e^- \rightarrow e^+e^-\mu^+\mu^-$ ,  $\gamma\gamma$  physics status at JADE 2—23967
- $e^+e^- \rightarrow \gamma\gamma$ , two photon annihilation, QED and electroweak theories tests at PETRA 2—19314
- $e^+e^-$ —heavy quarks, string model calc. 2—23953
- $e^+e^-$  initiated  $\gamma\gamma$  processes, (bc) and (bc) meson prod. 2—33876
- $e^+e^- \rightarrow K^+K^-$ , charged kaon form factor for 1.0–1.4 GeV 2—33842
- $e^+e^- \rightarrow l^+l^-$ , QED and electroweak tests, cut-off factors, coupling const., gauge field theory test 2—24000
- $e^+e^- \rightarrow l^+l^-$ , possible visible  $l^0$  tracks in cosmic ray events 2—33823
- $e^+e^- \rightarrow M^0M^0$ , heavy lepton decay from muon signatures 2—23964
- $e^+e^- \rightarrow \mu^+\mu^-$ , CM energy 33.5 GeV, charge asymmetry obs. 2—43321
- $e^+e^- \rightarrow \mu^+\mu^-$ , flavour-diagonal horizontal interactions, SU(2) $\times$ U(1) $\times$ U(1)<sub>H</sub> model phenomenological consequences 2—43246
- $e^+e^- \rightarrow \mu^+\mu^-$ , P- and C-symmetry violations near narrow  $\tau$  reson. (*Russian*) 2—48971
- $e^+e^- \rightarrow \mu^+\mu^-$  cross section at PETRA energies, comparison with Salam-Weinberg theory 2—19361
- $e^+e^- \rightarrow \mu^+\mu^-(\tau^+\tau^-)$ , QED tests at PETRA 2—19315
- $e^+e^- \rightarrow \mu^+\mu^-(\tau^+\tau^-)$ , lepton pair prod. study, QED tests 2—15316
- $e^+e^- \rightarrow \mu^+\mu^-(\tau^+\tau^-)$ , lepton pair prod. study, QED tests 2—15317
- $e^+e^- \rightarrow \mu^+\mu^-(\tau^+\tau^-)$ , lepton pair prod., QED and electroweak theories tests at PETRA 2—19314
- $e^+e^- \rightarrow \nu\bar{\nu}$ , annihilation in external field, Weinberg-Salam model 2—302
- $e^+e^- \rightarrow \omega\pi^+\pi^-$ , 1.65 GeV, observation of isoscalar vector meson  $\omega'$  or  $\phi'$  2—19388
- $e^+e^-$  physics, lepton and hadron prod.,  $\tau$ ,  $\psi$ ,  $\Upsilon$  and  $Z^0$  2—43368
- $e^+e^- \rightarrow \pi^+\pi^+\pi^-\pi^-$ , charge asymmetry EM origin, neutral currents, Z boson 2—24007
- $e^+e^- \rightarrow \pi^+\pi^-\pi^+\pi^-$ , 1.4–2.18 GeV, cross section meas. 2—49002
- $e^+e^- \rightarrow \tau^+\tau^-$ , heavy lepton decay from muon signatures 2—23964

**electron-positron scattering**

- see also *electron-positron interactions*
- QED and electroweak tests 2—24000
- QED tests at PETRA 2—19315
- $e^+e^- \rightarrow e^+e^-$ , Bhabha scatt., QED tests 2—15316
- $e^+e^- \rightarrow e^+e^-$ , Bhabha scatt., QED tests 2—15317
- $e^+e^- \rightarrow e^+e^-$ , Bhabha scatt., QED and electroweak theories tests at PETRA 2—19314
- $e^+e^- \rightarrow e^+e^-$ , flavour-diagonal horizontal interactions, SU(2) $\times$ U(1) $\times$ U(1)<sub>H</sub> model phenomenological consequences 2—43246
- $e^+e^- \rightarrow e^+e^-$  cross section at PETRA energies, comparison with Salam-Weinberg 2—19361

**electron probe analyses** see *electron probe analysis***electron probe analysis**

- amorphous films, electron microanalysis, X-ray absorpt., corrections 2—27510
- brass, high-strength, GK-CuZn34A12, EPMA study of inhomogeneities (*German, English*) 2—52262
- diamond-Co system, sintering behaviour at high temp. and press. 2—51864
- electron microscopy, conf., Johannesburg, South Africa (Dec. 1980) 2—23373
- elemental distributions, image processing 2—27515
- energy dispersive detectors, bibliography (1981) 2—42810
- energy dispersive X-ray microanal., spectral processing techniques 2—47420

**electron probe analysis continued**

- energy dispersive X-ray microanalysis, detectability limit 2—31978
- energy dispersive X-ray spectrometry in electron beam instruments, spectral artifacts 2—43161
- energy-dispersive X-ray anal., conf., Gaithersburg, MD, USA (April 1979) 2—42792
- ethylene propylene copolymer-methylvinylpyridene metal halide complexes, phase struct. and equilib. (*Russian*) 2—45533
- glass, natural and synthetic, Na content 2—6072
- K-shell partial cross-section, for electron energy-loss spectrometry 2—29720
- lyophilised samples, microdroplets, electron probe anal., X-ray intensity and conc. proportionality 2—32375
- metal-GaAs junctions, transition region, diffusion profile 2—2004
- microanalysis, absorpt. corrections based on Gaussian ionisation distrib. model 2—17949
- microscopic equipment, methods and appls., bibliography 2—23396
- mineral semiquantitative analysis using TEM equipped with semicond. detector device 2—48017
- optical coatings, nonoptical characterisation 2—20394
- organic specimens, electron irradiation effects 2—32380
- polyacetylene, doped and undoped, SEM and Castaing microprobe studies 2—16671
- quantitative analysis, effects of sample surface 2—31994
- quantitative analysis, instrument parameter, X-ray line interference 2—27514
- quantitative microanalysis, electron incidence angle effect 2—47421
- review, appl. to materials science 2—46888
- semiconductor characterisation problems, chem. analysis techniques, capabilities and limitations 2—17943
- specimen contamination induced by micro electron probe in analytical electron microscope (*Japanese*) 2—19221
- steel,  $\gamma/\alpha$  phase transform., Cr and Ni redistribution, STEM X-ray microanal. 2—36857
- steel, chromised, surface Cr determ. by EPMA 2—17787
- steel, Cr-Al, corrosion, high temp. effect of Al content (*Korean*) 2—22377
- steel, Cr-Mo-V, alloying elements redistrib. after ageing under stress 2—41642
- steel, CrNiMoV, medium-C, forgings, lamellar fracture characts. (*Chinese*) 2—22300
- steel, irradi. effects study using HVEM and energy dispersive X-ray analysis of films (*French*) 2—30497
- surface microanalysis, trace detection, optimal operation conditions 2—22518
- thin films, quantitative STEM X-ray microanal. 2—37121
- wavelength dispersive electron microprobe anal., background correction calcs. 2—41966
- X-ray dispersive crystal spectrometer design and fitting to SEM (*Chinese*) 2—23795
- X-ray energy dispersive spectrometry, uncollimated fluoresc. radiation in analytical electron microscope 2—43163
- X-ray intensity dependence on electron incidence angle, measuring instrument 2—23798
- Al-Mg(Cu)(Si), cryst. under nonequilib. conditions, phase diagrams 2—27146
- AlN ceramic with added  $Y_2O_3$  or  $Ni$ , structural characteristics 2—46989
- Au-Ni (18 wt.%), braze alloy spreading high temp. obs. by oxide penetration on stainless steel 2—5984
- B-C system, phase analysis 2—41593
- BN, protective film prep. in silica tubes by thermal characterisation 2—41768
- Bi<sub>2</sub>Sb<sub>3</sub>, chem. comp. determ. by polarography, electron probe, density and electron backscatt. meas. 2—27494
- Cr<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>, solid solutions, inter- and intra-crystalline ion exchange equilib. 2—52201
- Cu, liq. deoxidation, electrocond. increase by Mg and Ar injection, inclusion obs. (*Rumanian*) 2—47197
- Fe, cast, white, duplex eutectic carbide form. in commercially important alloys 2—47017
- Fe crystal orientation determ. using back-refl. Kossel camera in electron probe microanalyser (*Japanese*) 2—1372
- Fe-base alloys,  $\gamma/\alpha$  phase transform., Cr and Ni redistribution, STEM X-ray microanal. 2—36857
- Fe-Zn (9–32 wt.%), grain boundary migration, diffusion-induced, metallographic study 2—12609
- FeCr<sub>2</sub>O<sub>4</sub>-FeAl<sub>2</sub>O<sub>4</sub> spinel solid solutions, inter- and intra-crystalline ion exchange equilib. 2—52201
- GaAs-Cu(Ag)(Zn)(Sn)(Al) contacts, metal diffusion, penetration depth, SEM and microprobe anal. 2—40701
- GaAs-metal contact interface, metallurgical and elec. props., heat treatment effects (*Chinese*) 2—21672
- InGaAsP-InP DH laser, degradation obs. by electron probe microanal. 2—44282
- KMnF<sub>3</sub>-KCoF<sub>3</sub>, mixed crystals, hydrothermal growth 2—51787
- MgO-Cr<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO-SiO<sub>2</sub> constitution changes due to O<sub>2</sub> press. at high temp. 2—31822
- NbB<sub>2</sub>, single crystals, grown from soln., characteris., hardness anisotropy prismatic slip 2—9417
- Nb<sub>3</sub>Sn-Cu, microstructure study (*Chinese*) 2—17661
- Ni-W-Zr (28, 0.4 wt.%) alloy plate, surface reaction with (Ba, Sr, Ca)CO<sub>3</sub> powder (*Japanese*) 2—13849
- Ni-Zn ferrite form. process mechanism 2—22189
- RbI-AgI system, kinetics of solid-phase reactions and interdiffusion, intermediate phases form. 2—5280
- Sc, solid solubility and heat capacity of Fe 2—8622
- SiC self-bonded, joining by Ge metal 2—9521
- SiC single crystal polytypes, deviations from stoichiometry 2—5236
- Si<sub>3</sub>C<sub>2</sub>F<sub>6</sub> amorphous films, reactive RF sputtering prep., optical and comp. props. 2—51727
- SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> system, reactions at subsolidus temps., electron microprobe anal. 2—51879
- Ti crystal orientation determ. using back-refl. Kossel camera in electron probe microanalyser (*Japanese*) 2—1372
- W:ThO<sub>2</sub> anal. by SIMS and electron probe microanalyser, chathodluminesc. 2—41953
- W-Ni-Fe binder phase, struct., heat treatment conditions effect 2—17696
- YVO<sub>4</sub>:Eu, phosphor, cryst. growth by chem. transport method 2—9257



electron probe microanalysis *see electron probe analysis*

electron probe microscopy *see electron probe analysis*

## electron probes

*see also electron probe analysis*

magnetic scattering field recording, three-dimensional electronic probe method 2-6926

thin film metallisation, relative density meas. using electron microprobe or SEM 2-23789

## electron-proton interactions

*see also electron-proton scattering*

collision kinematics 2-23997

HERA electron-proton collision accelerator, lepton-quark interaction study (*Dutch*) 2-569

ep, coloured pseudo-Goldstone bosons photoproduction cross-section at very high energy 2-48999

ep-eW<sup>+</sup>X, W bosons electroproduction cross section in Weizsacker-Williams approx. 2-43360

ep-e $\pi^0$ , 1.0 (GeV/c)<sup>2</sup>,  $\pi^0$  electroprod. in resonance region, differential cross sections 2-11054

ep-e $\pi^+$  $\pi^-$  p, 11.5 GeV, exclusive  $\rho^0$ ,  $\omega$  and  $\phi$  electroproduction meas. 2-43363

ep-heavy lepton+proton in SU(2) $\times$ U(1) model 2-23879

e p-e  $\gamma$ X, weak neutral current effects 2-19384

## electron-proton scattering

*see also electron-proton interactions*

antenna patterns in electron-proton scattering 2-23998

<sup>12</sup>C(p,p), 1 GeV, elastic scatt. in  $\alpha$ -particle model 2-34016

## electron radiation

bremsstrahlung transport, simulation, 50 keV to 80 MeV (*French*) 2-51733

cyclotron waves, half-frequency, generation in colliding relativistic electron beams 2-20237

cylinders, surface plasmon excitation by electrons, emitted radiation anal. 2-46812

equation of motion, radiating electron, nonlinear approx. (*German*) 2-49643

MM range diffraction radiation relativistic source 2-49646

photon emission in mag. and EM wave fields, quantum theory (*Russian*) 2-39550

relativistic electron beam, optically bunched, coherent Cerenkov radiation at 0.532  $\mu$ m 2-44179

relativistic electron beams, oppositely directed system, oscillations excitation at semicyclotron freq. 2-29773

relativistic electron beams of gyrating electrons, oppositely directed, semicyclotron oscillations excitation 2-29774

## electron relaxation time (metals)

amorphous metals, reson. electron scattering theory 2-26380

noble and polyvalent metals, electron-dislocation scatt. relax. time anisotropy 2-45943

surface characterisation by plasma reflectivity spectra, surface damage effects 2-22013

thin metal films with energy depend. relaxation, transport props. 2-13195

Ag, -Pd, mass and lifetime enhancement due to disorder, residual resist., KKR-CPA calc. 2-30880

Ga, RF size effect resonances, press. depend. 2-35925

Mg, quantum interference dominated transverse magnetoresist., two-lifetime model 2-36006

Pd, phonon limited electron lifetimes 2-36024

Zr, laser pulse interaction, picosecond duration, photoelec. emission 2-51764

## electron resists

ion beam exposures profiles in PMMA, computer simulation 2-45297

methyl methacrylate, vacuum lithography using plasma polymerization and plasma development 2-25663

PMMA thin film masts, for use in electron beam lithography, thickness profile determ. 2-23784

NaCl crystal etching at 2 nm size scale, in situ meas. of contrast curves for electron beam vaporisable resists 2-36993

## electron ring accelerators

No entries

**electron scattering** *see elastic scattering of electrons by atoms and molecules; electron beam effects; electron beams; electron-electron interactions; electron-electron scattering; electron impact; electron-nucleon interactions; electron-nucleon scattering; electron-nucleus reactions; electron-nucleus scattering; electron-positron interactions; electron-positron scattering; electron spectra; hadron electroproduction; neutrino-electron interactions; neutrino-electron scattering; secondary emission*

**electron solvation** *see solvation*

## electron spectra

*see also Auger effect; conversion electron spectra; electron energy loss spectra; electron impact; electron spectroscopy; photoelectron spectra*

alkali metal zirconosilicates, electronic struct., bonds, X-ray electron spectra, MO LCAO calcs. 2-39419

aluminosilicate interface, corrosion inhibiting an Al alloys, IR reflection and electron spectra 2-5988

atomic collisions, low-energy, ionisation processes 2-49566

auroral electrons, energy spectra determ. from auroral ionisation profiles 2-32730

auroral electrons, spectral hardening assoc. with westward travelling surge 2-10227

benzene, momentum distrib. and ionisation pot. for valence orbitals 2-29723

t-butyl, negative ion states, ETS study 2-49571

$\alpha,\alpha'$ -dichloro-p-xylene, pyrolysis, struct. and polymerisation, electronic and IR spectroscopy (*Russian*) 2-22443

$\alpha,\alpha'$ -dilromo-p-xylene, pyrolysis, struct. and polymerisation, electronic and IR spectroscopy (*Russian*) 2-22443

ferrocene, Penning ionisation and electron spectrum, steric effect on electronic interaction 2-20166

free radicals, laser magnetic resonance spectroscopy 2-20088

solvated electrons, molecular vibronic problems 2-11548

steel, stainless, orthopaedic implants in animals, corrosion and passivation behaviour 2-9893

trimethylsilyl derivatives of ethylene and benzene, negative ion states, ETS study 2-49571

FeSn, Fe<sub>2</sub>Sn<sub>3</sub> and FeSn<sub>2</sub>, electron struct., invest. using X-ray and X-ray electron spectra (*Russian*) 2-35434

He+He(1<sup>1</sup>S), excitation of autoionising states, electron spectra 2-24838

He<sup>+</sup>+He, ionisation, autoionising states, electron spectra 2-44077

## electron spectra continued

Kr<sup>+</sup>+Kr(Ar), collision broadening in MO-electron spectra 2-11568

O, electron energy distrib. and three-body adhesion rate with external ioniser 2-20812

Pb(I) and (II), electron impact excitation, autoionising levels, electron spectra 2-24866

Si:H, amorphous plasma deposited coating, IR and electron spectra and oxidation, polysilane analogue 2-41351

(SiH<sub>2</sub>)<sub>n</sub> and (SiH)<sub>n</sub>, polysilanes, IR and electron spectra, a-Si:H analogue 2-41351

Si<sub>3</sub>N<sub>4</sub>, insulating film, electronic struct. and total-current spectra 2-13208

SiO<sub>2</sub>, insulating film, electronic struct. and total-current spectra 2-13208

W surface, (110), surface pot. barrier, electron surface reson. spectra study 2-46845

## electron spectrometers

*see also beta-ray spectrometers*

angle resolved electron spectrometers, energy analyzer and goniometer attachment 2-48847

cascade cylindrical mirror analyser, design 2-3655

conical exponential mirror analyser, design 2-3656

corrected mag. prism spectrometer for electron microscopy 2-19216

cosmic ray electrons, low energy relativistic construction and calibration of spectrometer 2-28351

cylindrical electrostatic spectrometry, performance improvement 2-15273

cylindrical mirror analyzer artifact obs. 2-28936

data acquisition and control system 2-49214

electrostatic spectrometer for internal conversion electrons meas. in 0.1-20 keV region 2-49213

energetic electron flux meas. spectrometer for Spacelab I 2-32807

energy loss spectra, absolute calibration and scanning, technique 2-23787

field emission thermal desorption spectrometer, microcomputer-controlled 2-48848

high resolving spectrometer for energy anal. of electrons backscatt. from solid surface (*German*) 2-3657

magnetic spectrometer adjustment for 1 eV resolution 2-48737

three-cylinder mirror analyser with axis-axis focusing and with thin intermediate electrode, electron-optics characteristics 2-23783

## electron spectroscopy

*see also electron spectra; photoelectron spectroscopy*

$\Omega$  three magnet energy filter, chromatic plane aberration effects 2-49653

Auger, surface analysis technique selection 2-31966

Auger, theoretical fundamentals of high resolution 2-39365

Auger spectroscopy appl. in materials analysis, book contrib. 2-36742

Auger spectroscopy of solids and surfaces, high resolution, book contrib. 2-36743

catalysts, heterogeneous, parameter anal., research techniques, overview 2-15233

cryptand (2,2,2), complexes, core electron binding energies, ESCA obs. 2-12989

cryptand (2,2,2), complexes, core electron binding energies, ESCA obs. 2-12989

ESCA on X-radiated samples, charge effects, elimination 2-37117

ESCA spectra, liq. phase samples, temp. regulation, technique improvements 2-22510

inelastic electron tunnelling spectroscopy, detection of second derivative 2-48838

micro-area AES, modulation technique for discrimination against ion induced Auger electrons 2-33692

microanalysis formulae, range of validity 2-27511

parallel recording detectors, for EELS 2-6933

polymer, surface weathering phenomena, ESCA study 2-47208

secondary cells, Li/LiAsF<sub>6</sub>-2-Me-THF/TiS<sub>2</sub>, electrodes morphological characts. anal. using electrochemical and surface studies, application in spacecraft 2-22604

semiconductor devices, Auger sputter profiling technique, capabilities and limitations 2-51763

spatial resolution and detection sensitivity in microanalysis by electron energy loss selected imaging 2-6927

surface studies, electron spectroscopy techniques, review (*Rumanian*) 2-17944

surfaces, electron spectroscopy, symmetry arguments, book contrib. 2-36738

theory, techniques and appls. rel. to surfaces, book 2-33251

Fe<sub>2</sub>O<sub>3</sub> sputtered film, anal. by ESCA 2-27509

O<sub>2</sub>+He(2<sup>3</sup>S,2<sup>1</sup>S), Penning ioniz., electron spectrosc. obs. 2-49567

Pb<sup>+</sup> ion selective electrode membrane, effect of bivalent metal ions, ESCA 2-37103

TiS<sub>2</sub>(Se<sub>2</sub>)Te<sub>2</sub>(SeTe), crystal struct. and chem. bond characts. (*French*) 2-5091

## electron spin

anomalous mag. moment, effective field theories and higher-dimens. operators 2-6964

classical stochastic electrodynamics, electron spin, rel. to quantum theory 2-38491

H<sup>-</sup> polarised ions production by electron transfer from atoms 2-24469

## electron spin-lattice relaxation

alkali halides, spin-lattice relax. mechanisms of V<sub>k</sub> and related centres 2-41195

alkali metal-NH<sub>3</sub> solutions, ESR at -65°C 2-13330

alkaline earth halides, spin-lattice relax. mechanisms of V<sub>k</sub> and related centres 2-41195

amorphous semiconductor, transport theory, spin-lattice relax. times 2-40878

fine metallic particles, structure and props. 2-51069

intercalation reaction dynamics, electronic and struct. changes 2-41871

isolated molecules, intramol. electron-spin relax. 2-740

nitrosylhaemoglobin, EPR and chem. in single crysts. 2-14184

poly-acrylo-nitrile semiconductors, paramag. centres clusters (*Russian*) 2-36426

polyacetylene, saturation and linewidth of ESR signal, relax. behaviour, O and isomerisation influence 2-31261

potassium hydrogen malonate, radical pairs, microwave saturation, EPR, spin-lattice and spin-spin relax. 2-13341

quinone, triplet quenching by organometal donors, CIDEP and ESR study 2-15824

Rochelle salt, X-irradiated, critical anomaly of electron spin-lattice relax. 2-41178

semiconductors, deep centres spin relax. via singlet and triplet excitons 2-36410



**electron spin-lattice relaxation continued**

- semiquinones in DMSO and DMSO-ethanol frozen soln., mol. motions, ESR study 2-36409  
 sodium potassium ammonium tartrate, X-irradiated, critical anomaly of electron spin-lattice relax. 2-41178  
 spin-spin reservoir relax. theory (*Russian*) 2-46362  
 superconductor, Korringa relax. of exchange-interacting localised moments 2-26550  
 trissarcosine calcium chloride:  $Mn^{2+}$ , spectral diffusion, electron spin-echo meas. (*German*) 2-13329  
 $V_2O_5$ , amorphous, electron spin-lattice relax., spin-phonon interactions 2-46378  
 Ag, spin-orbit interaction pseudopot. parameters 2-1873  
 $Al_2O_3:Cr^{3+}$ , spin-spin reservoir relax. theory (*Russian*) 2-46362  
 $Al_2SiO_5:Fe^{3+}$ , inverted spin system, cross relax. 2-2129  
 $CaF_2:Eu^{2+}$ , acoustic phonon freq. depend. lifetimes 2-45437  
 CaO, spin dephasing, optically detected 2-44409  
 Cu, spin-orbit interaction pseudopot. parameters 2-1873  
 EuO, EPR lineshape, cond. electron influence 2-13335  
 GaAs, photogenerated degenerate electron distrib., spin relax. time 2-17528  
 H, atomic, spin polarised, mag. reson., longit. and transverse relax. 2-35862  
 $KMgF_2:Ni^{2+}$ , line profile influence on spin-lattice relax., phonon bottleneck 2-31273  
 $KZnF_2:Ni^{2+}$ , line profile influence on spin-lattice relax., phonon bottleneck 2-31273  
 $La_2Co_2(NO_3)_{12} \cdot 24H_2O:Mn^{2+}(Gd^{3+})$ , EPR study 2-21877  
 $Nd_2Co_2(NO_3)_{12} \cdot 24H_2O:Mn^{2+}$ ,  $Gd^{3+}$ , host spin-lattice relax. narrowing, EPR study 2-2120  
 Si, amorphous thick film, conductivity as a function of spin conc. 2-40902  
 Th-Dy, dil.,  $Dy^{3+}$  electronic spin relax. in supercond. state, Mossbauer study 2-36213  
 $V_2O_5(W)$ , amorphous, electron spin-lattice relax. of paramag. centres 2-46366  
 $ZnS:Co^{2+}$ , spin-lattice relax. and phonon bottleneck 2-2130  
 $ZnSe:Mn$ , spin-lattice relax. of  $Mn^{2+}$ , evidence for optical phonon contrib. (*French*) 2-51454

**electron spin polarisation**

- see also *CIDEPE*; *spin polarised electron emission*  
 absorbed current electron spin polarization detector 2-15272  
 anthracene-tetracyanobenzene, charge transfer triplet excitons, spin polarisation, EPR study 2-36408  
 cubic crystals, light induced spin polarised electrons at  $\Gamma$ -point 2-27050  
 Dirac electron in space-time, spinor. propag., spin precession and non-geodesic orbits 2-3693  
 electron gas, inhomogeneous, spin polarised, relativistic theory 2-6790  
 electron liquid, local spin-density approx., correlation corrections 2-35959  
 magnetism of nucleus-electron complex near threshold 2-13304  
 metals, Rydberg resonances in spin polarised LEED 2-8401  
 molybdenum ternary chalcogenides,  $MMoX_3$  ( $M=Sn, Eu, Gd$ ;  $X=S, Se$ ), supercond., spin polarisation and high crit. fields 2-17245  
 nonmagnetic crystals, electron spin polarisation in photoemission 2-2410  
 optically active molcs., electron scatt., polarisation components violating reflection symmetry 2-44121  
 optically active molcs., spin-depend. electron scatt., parity violation 2-44122  
 Si, electron bombarded, nuclei optical polarisation and excited triplet states 2-2162  
 Cr (100) antiferromagnetic thin film, electron band struct., local density of states, and spin polarisation 2-13148  
 Cr (100) surfaces, mag. structure study using electron capture spectroscopy 2-46244  
 Cr surface, electron spin polarisation determ. with electron capture spectroscopy 2-2114  
 Cs, three-photon ionisation, probability rate, spin-orbit coupling, electron spin polarisation 2-686  
 $CuFeS_2$ , band struct., self consistent discrete variational  $X\alpha$  calc. 2-12969  
 D, atomic spin polarised, ground state energy, correlated basis function calc. 2-45663  
 $ErRh_4B_4$ , magnetic superconductor, NMR study 2-17219  
 EuS mag. semiconductor film, electron polarisation by reson. tunnelling 2-22150  
 $Fe_{40}Ni_{40}P_{14}B_6$ , amorphous ferromagnet, mag. moment distrib., magnetisation study 2-46347  
 GaAs, optical detection of NMR under optical pumping, spin-exchange averaging between electronic states 2-17369  
 GaAs-type semicond., electron-nucleus spin system, optical orientation in inclined mag. field 2-35981  
 Ge, spin-dependent recomb. centres, photoinduced ESR study 2-46379  
 H, atomic, spin polarised, physisorbed on  $^4He$ , dynamic props., third sound study 2-30707  
 H, atomic, spin polarised, mag. reson., longit. and transverse relax. 2-35862  
 H, atomic, spin-polarised, static magnetisation, SQUID magnetometer meas. 2-34596  
 H, atomic, spin-polarised, adsorpt. isotherms and exchange interactions on  $^4He$  2-35835  
 H, atomic, spin-polarised, ground state props., Ursell-Meyer method 2-35861  
 H, condensed phase, open alignment in high mag. fields 2-30713  
 H, spin polarised, total and superfluid density profiles in an inhomogeneous mag. field 2-35860  
 $H^+$  polarised source, optically pumped, electron spin depolarisation 2-19813  
 $Hg, 5d^{10}$  subshell, angle and spin-resolved photoelectron spectroscopy 2-49351  
 Hg inelastic electron scatt., electron spin polarisation 2-44100  
 $HgCr_2Se_4$ , band struct., self consistent discrete variational  $X\alpha$  calc. 2-12970  
 K, Knight shift vol. depend. 2-9046  
 Li, Knight shift vol. depend. 2-9046  
 Na, Knight shift vol. depend. 2-9046  
 Na, laser-excited, superelastic electron scatt., spin polarisations 2-44093  
 Ni (100), surface magnetism near crit. region, spin-polarised electron scatt. study 2-31197  
 Ni (100) surfaces, mag. structure study using electron capture spectroscopy 2-46244

**electron spin polarisation continued**

- Ni surface, electron spin polarisation determ. with electron capture spectroscopy 2-2114  
 Ni-NiO-Ni(Co)(Fe), ferromag. films, spin pol. electron tunnelling obs. 2-51342  
 Ni(001), spin-orbit effects in LEED, expt. and theory 2-12894  
 PbTe, indirect exchange interaction between embedded mag. ions 2-51140  
 Pd, metamagnetism, self consistent spin polarised band struct. calc. 2-31186  
 Si, spin-dependent recomb. centres, photoinduced ESR study 2-46379  
 $SmRh_4B_4$ , magnetic superconductor, NMR study 2-17219  
 W (001), electron spin polarisation, effect of ordered O adsorption 2-1717  
 W surface, (001), electron reflection mechanism, polarised LEED study 2-36745  
 $Y_{1-x}Er_xRh_4B_4$ , conduction electron spin polarisation, mag. props., superconducting props. 2-17218  
 $Y_{1-x}Gd_xRh_4B_4$ , magnetic superconductor, NMR study 2-17219  
**electron spin relaxation** see *electron spin-lattice relaxation*  
**electron spin resonance** see *paramagnetic resonance*  
**electron states, impurity** see *impurity electron states*  
**electron states, surface** see *surface electron states*  
**electron streams** see *electron beams*  
**electron structure of solids (crystallography)** see *crystallography*  
**electron structure of solids and liquids (energy structure)** see *electron energy states (condensed matter)*  
**electron theory**  
 see also *Dirac equation; quantum electrodynamics*  
 Dirac's electron theory, 1932-1934 AD, 2-28623  
 Dirac electron, quantum mechanics generalisation, leading to electron theory 2-10568  
 Moyer, D.F. 2-18838  
**electron theory of metals** see *metal theory*  
**electron traps**  
 see also *colour centres; hole traps; impurity electron states*  
 alcohol clusters in  $\gamma$ -irrad. glass mixt., electron trapping study 2-44083  
 alcohol glasses, photocond. thresholds for trapped electrons from optical and photoconductivity studies 2-21623  
 alcohol glasses, trapped electrons, photocond. and optical spectra 2-40954  
 amine glasses, photocond. thresholds for trapped electrons from optical and photoconductivity studies 2-21623  
 amorphous semiconductor, photogenerated carrier thermalisation and recomb. 2-5416  
 amorphous semiconductors, hot carrier thermalization, deep trapping and recombination 2-46016  
 anthracene, doping influence on charge carrier transport 2-30885  
 anthracene-2-hydroxyanthracene, energy transfer and chemical reactivity, luminesc. obs. 2-46717  
 aromatic polycrystals+N reaction, delayed luminesc. emission and induced chemi-ionisation 2-9187  
 avalanche photodiodes, triggered avalanche detection of IR photons 2-23724  
 charge trapping in dielectrics, bulk trapping phenomena, review 2-8818  
 corundum:Cr, influence of impurity on defect struct. (*Russian*) 2-17029  
 disordered semiconductors, microscopic theory of dispersive transport 2-13078  
 ethanol-water glasses, electron trapping at ultra-low temps. 2-13525  
 ethylene glycol- $D_2O$  glass-electron trapping at 6 and 72K, accumulated radiolysis effect 2-13483  
 ethylene glycol-water glasses, visible absorpt. band of trapped electrons between 4 and 100K 2-13526  
 ferroelectric ceramics, transparent, semicond. props., electron-hole processes, hologram forming 2-46013  
 fluorinated ethylene-propylene, electron-induced surface cond. 2-17140  
 frozen ionic solutions, trapped electrons, theoretical model 2-13006  
 II-VI semiconductors, excited states at deep centres, nonradiative recomb. processes 2-8770  
 insulating polymers, carrier trapping, thermoluminesc. and TSC obs. (*Japanese*) 2-9076  
 insulator, short-circuit discharge, carrier retrapping effect 2-31379  
 insulator, trap filling by ionising radiation, kinetic eqns. 2-30824  
 insulators, photoinjection and cond., theory 2-1952  
 luminescence band profile, exciton capture probability depend. on trap depth and temp. 2-2343  
 lutetium diphthalocyanine, red and green forms, surface space charge layer differences 2-21652  
 macroscopic effects of carrier transport in ordered and disordered solids 2-45929  
 methanol-n-butanol glassy mixtures, trapped electron absorpt. spectrum, temp. effect 2-13524  
 2-methyl-2-nitrosopropane, aq. solns., spin trap studies 2-27454  
 3-methylpentane-1-propanol glass mixtures, electron transfer and solvation, gamma ray irradiat. at 77 and 4K 2-13523  
 minority carrier extraction and accumulation 2-21674  
 molecular crystals, excitation trapping dynamics 2-12995  
 MOS capacitor, physical characterisation of deep bulk levels by MOS conductance technique 2-46144  
 MOS structures, characts. of slow interface traps created during electron avalanche injection 2-46153  
 MOS structures, trap conc. determ. in bulk of dielec. from charge accumulation characts. 2-51327  
 MOS system, equilib. and non-equilib. C-V curves in time and freq. domain 2-46151  
 naphthalene, X trap system, electron-phonon coupling, phosphoresc. lineshape anal. 2-22069  
 one dimensional trapping problem, time decay of excitations 2-1862  
 organic molecular solid, dark cond., photocond. and photovoltaic conversion, linear and rectification regimes 2-36094  
 organic solids with diagonal disorder, localised states and electronic transport, review 2-8774  
 organics, irradiated compounds, field enhanced luminesc. due to electron tunnelling 2-13578  
 photosynthetic membranes, glow curves, electron trap parameters, thermoluminesc. and light emission meas. 2-2857  
 phthalocyanine Schottky barrier solar cell, In/x-metal free 2-9651  
 poly-p-xylylene thin films, carrier traps, TSC meas. 2-40928  
 polymer, conducting, Peierls state, polarons and domain walls 2-30805  
 polypropylene films, TSC studies 2-21935



## electron traps continued

- polystyrene, thermoluminescence, kinetic order with electron trap activation energy distrib. 2-36714  
 polystyrene, thermomagnetically treated, thermally stimulated discharge current 2-51518  
 polystyrene films, thermally stimulated discharge and dark current, electrode material effects 2-46025  
 polythene, high density, space charge and short-circuit discharge 2-31378  
 recombination effects on trap-limited dispersive transport, Monte Carlo simulation 2-26409  
 ruby, cryst., radioluminesc. and colour centre conc., temp. effects 2-13568  
 S, crystal, photoinjection and cond., theory 2-1952  
 screened Coulomb centres, electron capture, elec. field effect 2-21592  
 semiconductor, carrier mobility under controlled trap-filling conditions, transit time method 2-21591  
 semiconductor, electron state lifetime formed by small-radius pot. well and repulsive Coulomb pot. 2-35970  
 semiconductor, nonCoulombic traps, electric field enhanced emission of carriers 2-40922  
 semiconductor, polycrystalline, carrier mobility, grain boundary barrier model 2-21580  
 semiconductor dopant and trap conc. profiles meas. method junction capacitance techniques 2-50688  
 semiconductor junctions with deep impurity levels, admittance, space charge anal. 2-13169  
 semiconductor nuclear radiation detectors, carrier trapping, current transport 2-13095  
 semiconductors, compensated, localised charge carriers, particle statistics and transport 2-17085  
 semiconductors, controlled trap occupation, effective mobility, time-of-flight techniques 2-26327  
 semiconductors, dispersive electronic transport, multiple trapping, computer simulation 2-51198  
 semiconductors, inhomogeneous, photoconductivity theory 2-36096  
 small polaronic solid, photoluminescence decay rates, excitation energy and temp. depend. 2-46733  
 solar cells, carrier redistribution anal. within junction using kinetic method 2-42014  
 SOS, heteroepitaxial, electronic characterization by surface photovoltage spectroscopy 2-41030  
 surface electronic properties 2-46098  
 p-terphenyl-tetracene, energy transfer and chemical reactivity, luminesc. obs. 2-46717  
 thermally stimulated processes, kinetic eqn., mixed first and second order form. 2-27003  
 thermolum. dosimeters, response characts. nonlinearity mech., review 2-29440  
 AgGaSe, determ. of trap levels (*Russian*) 2-12993  
 AlGaAs-GaAs solar cells, deep-level defects, low temp. periodic annealing effects 2-32066  
 n-Al<sub>0.9</sub>Ga<sub>0.1</sub>As, Schottky barrier, MBE growth, deep levels, substrate growth temp. effects, DLTS study 2-17009  
 α-Al<sub>2</sub>O<sub>3</sub>, charge trapping, optical absorpt., photocond., and luminesc. meas. 2-40963  
 Al<sub>2</sub>O<sub>3</sub> thin films, electrical cond. meas., Poole Frenkel cond. mechanism 2-17178  
 Ar<sub>2</sub>O<sub>2</sub>, N<sub>2</sub>, solid, electronic transport 2-36114  
 β-B, rhombohedral, photocurrent instabilities, low freq., at low temp. 2-40957  
 Gb-B, rhombohedral, transient photocond. Gb-B, rhombohedral, transient photocond. 2-40956  
 β-B-C, rhombohedral, C centres, photoinduced ESR investig. 2-40819  
 Bi<sub>2</sub>O<sub>3</sub> film, elec. cond. mechanism (*Japanese*) 2-26527  
 CaS:B, thermolum. phosphor, phys. parameters, operation importance 2-22101  
 CaSO<sub>4</sub>:Dy, phosphorescence and thermoluminescence study 2-46746  
 CaSO<sub>4</sub>:Dy ribbon, TLD-900, kinetics and thermolum. parameters at low dose levels 2-22100  
 n-CdTe:Al, DLTS study of deep levels 2-35962  
 n-CdTe:Al, deep centres, charact. 2-51115  
 CuO film, exoelectron emission 2-9255  
 GaAs, 0.82 eV electron trap, origin and annihilation by shallow donors 2-51110  
 n-GaAs, D<sup>+</sup> irradiated, carrier removal 2-1533  
 GaAs, deep levels, electron trap and hole trap discharge ratio, temp. dependence (*Japanese*) 2-30818  
 GaAs, electron trap outdiffusion due to thermal treatment 2-51104  
 n-GaAs, high power far IR photocond. meas., photoreponse tail 2-5434  
 GaAs, MO-CVD grown under different Ga/As mol fractions, deep levels 2-5832  
 GaAs MOS structures, charge trapping in anodic native oxide under pulsed laser illum. 2-41016  
 GaAs, semi-insulating, deep donor, near IR optical absorpt. 2-17507  
 n-GaAs, spectroscopic line fitting to DLTS data 2-26326  
 GaAs, VPE layers, implanted and annealed, elec. and optical props. 2-46164  
 GaAs-Al<sub>2</sub>O<sub>3</sub> devices I-V characts., hopping cond., space-charge-limited currents 2-51329  
 GaAs-metal-semiconductor FET, transient radiation study 2-21658  
 GaAs-Si<sub>3</sub>N<sub>4</sub> interface, trap studies 2-26507  
 GaP, deep level defect, thermochem. model 2-51119  
 GaP, deep levels in light-emitting devices, electron trap and hole trap discharge rates temp. dependence (*Japanese*) 2-30818  
 GaSe, polarised luminescence in mag. field 2-9197  
 GaSe, single crystals, IR quenching of photoelectrical memory (*Russian*) 2-40953  
 GaSe<sub>1-x</sub>S<sub>x</sub>, polarised luminescence in mag. field 2-9197  
 Ge-Au, direct obs. of trap-charging waves 2-17088  
 Se-Ge thin film, amorphous, trap distrib., SCLC obs. 2-30908  
 Ge-Si, solid solutions, kinetics of photoconductivity (*Russian*) 2-13120  
 Ge<sub>3</sub>N<sub>2</sub>-GaAs MIS devices, elec. characts. and memory behaviour 2-46147  
 H<sub>2</sub>, solid surface, two-dimensional layer, localized electron mobility (*Russian*) 2-21426  
 He, liq., ordering of two-dimens. system of electrons 2-5293  
 Hg<sub>80</sub>Cd<sub>20</sub>Te-anodic oxide interface in MOS structure, charge trapping 2-17165  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, laser transitions, Auger recombination mechanisms 2-44295

## electron traps continued

- In<sub>2</sub>O<sub>3</sub>/BeO:SiO<sub>2</sub>/p-Si, heterojunction solar cell, effects of absorbed H<sub>2</sub>O, trap-assisted tunnelling model 2-52344  
 InP:Co, EPR study 2-2125  
 InP:Fe, thermally stimulated cond. investigation 2-26407  
 InP:Zn, p<sup>+</sup>n junction diodes and Schottky barriers, deep levels, Zn diffusion effects, DLTS study 2-12994  
 InSe, single crystal, IR quenching of photoelectrical memory (*Russian*) 2-40953  
 InSe, thin film, trap states in forbidden gap (*Russian*) 2-13091  
 β-In<sub>2</sub>Te<sub>3</sub>, X-ray and elec. props. study, 20 to 400°C (*Russian*) 2-13090  
 LiCl glasses, trapped electron photo-stimulated conversion kinetics into trapped H 2-13988  
 LiCl glasses, visible absorpt. band of trapped electrons between 4 and 100K 2-13526  
 LiNbO<sub>3</sub>, computation of O vacancy electron energy levels using a semi-continuum model 2-5364  
 MgAl<sub>2</sub>O<sub>4</sub> crystals exposed to γ-rays, optical spectra 2-51631  
 NiO film, exoelectron emission 2-9255  
 PbO film, photoconductivity in space charge and recombination regime 2-21622  
 Pd-SiO<sub>2</sub>-Si diodes, H<sub>2</sub> induced interfacial trapping states, I-V characts. and admittance response meas. 2-51310  
 Si, amorphous, trap-controlled dispersive transport and exponential band tails 2-40964  
 n-Si, DLTS spectrum charges due to electron irradi. 2-17012  
 n-Si, deep centres introduced by Ar ion bombardment 2-30826  
 Si, excited states at deep centres, nonradiative recomb. processes 2-8770  
 Si, gamma-ray irradi., uniaxial deform. influence on nonequilibrium carrier recombination 2-26410  
 Si, p<sup>+</sup>-n diode, neutron and electron irradiation effects on defect energy levels (*Korean*) 2-13002  
 Si, polycrystalline, conduction model, comparison between theory and expt. 2-5400  
 Si solar cells, thermal stability of impurities 2-37289  
 Si:Au, phase shift spectroscopy of modulated photocurrent 2-1947  
 Si:H, amorphous, dispersive electronic transport, multiple trapping, computer simulation 2-51198  
 Si:H, amorphous, glow discharge deposited, photoinduced absorpt., time resolved spectra 2-46801  
 Si:H, amorphous, modulated photocurrent meas. 2-1946  
 Si:H, amorphous plasma deposited coating, field effect cond., illumination and annealing effects 2-45969  
 a-Si:H, gap states study, appl. of isothermal capacitance transient spectroscopy 2-45901  
 a-Si:H, meas., and anal. of current transients, DLTS and TSC obs. 2-46020  
 Si:H, P, amorphous, dispersive transport and electronic struct. 2-26408  
 Si:In X-centre, trapping parameters, DLTS studies 2-5361  
 Si-Al<sub>2</sub>O<sub>3</sub>, charge carrier props. in p-type layers of SOS 2-8812  
 Si-SiO<sub>2</sub> MOS struct., electron capture at Na<sup>+</sup> sites, 77 to 296K 2-46134  
 Si<sub>3</sub>N<sub>4</sub> film, MNOS struct., electron traps, photoionisation cross-section 2-46135  
 SiO<sub>2</sub>, electron trapping, reduction by high temp. N<sub>2</sub> annealing 2-26405  
 SiO<sub>2</sub>, electron traps, processing parameters influence 2-21598  
 SiO<sub>2</sub> film, thermal, bulk and interface trapped charge generation, H<sub>2</sub>O diffusion effect 2-26526  
 SiO<sub>2</sub> films, reactive ion etching induced radiation damage 2-35549  
 SiO<sub>2</sub>, induced defects due to ion beam lithography (*Japanese*) 2-50717  
 SiO<sub>2</sub>, thermal, oxide charges induced by scanning electron and laser beam annealing 2-50711  
 SiO<sub>2</sub>-Si, avalanche electron injection, interface states generation 2-17162  
 Ta-Ta<sub>2</sub>O<sub>5</sub>-MnO<sub>2</sub> system, space-charge-limited cond., Poole-Frenkel effect 2-41022  
 TiO<sub>2</sub>, diffusion doped, elec. and optical props. 2-5369  
 TiO<sub>2</sub>, TSC and thermoluminescence curves 2-13398  
 (Zn,Cd)S:Ag,Cl DC electrolum. powder cell, donor-acceptor recombination luminesc. 2-46768  
 ZnS, thermoluminescence, kinetic order with electron trap activation energy distrib. 2-36714  
 ZnS:Gd (Cu,Gd)(Mn,Gd), electroluminescent, optical props. 2-36708  
 ZnSiO<sub>4</sub>:Mn<sup>2+</sup> (Mn<sup>2+</sup>,As), photoexcited and photostimulated luminesc. and cond. 2-51670  
 ZnSiO<sub>4</sub>:Mn<sup>2+</sup> (Mn<sup>2+</sup>,As), phosphorescence, electron traps effect 2-51671  
 Zn<sub>2</sub>SiO<sub>4</sub>:Mn phosphors, electron trapping and luminesc. mechanisms, tunnelling model 2-5739
- electron tube diodes** *see diodes*  
**electron tube rectifiers** *see rectifier tubes*  
**electron tubes**  
*see also cold-cathode tubes; diodes; electron emission; microwave tubes; relativistic electron beam tubes; thermionic tubes; triodes; ultra-high frequency tubes; X-ray tubes*  
 No entries
- electron tunnelling** *see tunnelling*  
**electron valves** *see electron tubes*  
**electron-wave tubes**  
*see also klystrons; magnetrons; travelling-wave-tubes*  
 No entries
- electronegativity**  
 alkali silicate glass, mixed-alkali, elec. cond. theory, electronegativity and internal ion exchange role 2-12822  
 atoms, electronegativities from a nonempirical electrostatic model 2-24889  
 bond energy calc. and elec. cond. 2-11374  
 bonding, character of MO from electronegativity of MO and AO 2-11381  
 3-bromopyridine, quadrupole coupling consts. and centrifugal distortion consts. from microwave spectrum 2-7548  
 density functional theory of the atomic electronegativity 2-24588  
 fractionally charged atoms, electronegativity, ionic crystal radius 2-39511  
 guanidine and substituted guanidines, proton affinities, geometries and atomic charges, ab initio SCF study 2-652  
 III-V semiconductors, native oxides, chem. bonding model 2-25805  
 liquid alloys, regular solution theory rel. to electron theory 2-40255  
 low-temp. plasmas, elementary processes investig. (*Russian*) 2-40192  
 molecules, ground-state charge transfer and electronegativity equalization 2-43790  
 noble metal based alloys, prediction of solid solubility 2-35692  
 simple metals, electronic props., electronegativity scales and alloy formation 2-26320



## electronegativity continued

- $\text{Fe}_{3-x}\text{M}_x\text{Si}$  (M=transition metal), spin echo NMR study 2-9056  
 $\text{Ga}_{1-x}\text{In}_x\text{Se}$ , layer compound, lattice instability, ionicity and phase diag. 2-50800  
 HABC mols. with 16 valence electrons, mol. configs., MO study 2-4202 (SN), props. and appls., review 2-8794  
 $\text{Si:H(F)}$ , amorphous, chem. bonding environment of Si and dopant 2-40275  
 $\text{SiC}$  (3C), ionicity and transverse charge, vol. and temp. depend. 2-50579  
 $\text{TiS}_2(\text{Se}_2)\text{Te}_2(\text{SeTe})$ , crystal struct. and chem. bond characts. (French) 2-5091

## electronic component manufacture see electron device manufacture

## electronic conduction in crystalline semiconductor thin films

- for electronic conduction in amorphous thin films, see "electrical conductivity of amorphous semiconductors and insulators"  
 see also electrical conductivity of amorphous semiconductors and insulators; electrical conductivity of crystalline semiconductors and insulators; electrical conductivity transitions  
 carrier drift mobility and density 2-13397  
 carrier mobility and resistivity, spreading magnetoresist. determ. 2-41041  
 II-V compounds, amorphous and cryst., thin films, prep., struct., elec. and optical props. 2-26262  
 influence of band bending on transport processes 2-17176  
 IV-VI epitaxial thin film IR detectors, device performance and basic material props. 2-15221  
 IV-VI semiconductor, magnetoresistance strong and weak-field effects 2-17096  
 semiconductor thin plates, elec. cond. under heating elec. fields, size effect, carrier cooling 2-51359  
 thin amorphous chalcogenide films, electrothermal model for breakdown, switching and memory effects 2-13206  
 ultrathin films of non-parabolic semicond., Einstein relation, size quantisation effect 2-13198  
 vacuum deposited on polydimethylsiloxane gel, rubbery and glassy states 2-51816  
 Bi, anomalous variation of resist., substrate temp. effect, narrow band gap semicond. behaviour 2-21702  
 Bi film, elec. resist. oscill. behaviour with thickness 2-5478  
 Bi, thin film, struct. and electrical conduct. meas. 2-51354  
 Bi thin films, elec. resist., defect contrib. as function of deposition rate, annealing effect 2-46175  
 Bi-Sb, semicond. behaviour, intercryst. barrier activation energy 2-2017  
 $\text{Bi}_{80}\text{Sb}_{20}$  alloy thin films, elec. props., vacuum-deposited at different substrate temps. 2-30979  
 $\text{Cd}_{1-x}\text{Pb}_x\text{S}$  ( $x=0.0625, 0.15625$ ) superstructural thin film, props. 2-13205  
 CdS, elec. props. rel. to struct. and comp. 2-46163  
 CdS film, chemically sprayed, struct. and electronic props., solar cell appl. 2-8732  
 CdS film, reversible switching of residual cond. by a gas-vapour pulse 2-21641  
 $\alpha$ -CdS preparation by thermal and plasma-conversion of Cd 2-51839  
 CdS thin films, elec. props., effects of  $\text{H}_2$  adsorption 2-30986  
 $\text{CdS:CuCl}_2$ , baked layers, effects on elec. and photoelectrical props. 2-30983  
 CdS-S coevaporated thin film prep. and cryst. props. 2-41531  
 CdSe, elec. props. rel. to struct. and comp. 2-46163  
 CdSe, epitaxial film, surface state charging during  $\text{NO}_2$  adsorption 2-36163  
 CdSe, polycrystalline layers, effect of annealing on elec. props. 2-30984  
 CdSe thin film, thermal desorption of chemisorbed  $\text{O}_2$  and CO, elec. resist. var. obs. 2-35890  
 CdSe:O films, reactive planar magnetron sputtering prep., expt. study 2-51026  
 $\text{CdSnO}_3$  films, spray deposited, elec. and optical props., solar cells appl. 2-52386  
 CdTe, thin films, struct. and elec. props. stoichiometry and prep. condition depend. 2-51353  
 n-CdTe:Pb films, vapour deposited, elec. anal. optical props. 2-30985  
 $\text{CuInSe}_2$  epitaxial layer growth on GaAs, struct. and elec. props., substrate surface polarity influence 2-35902  
 n- $\text{Ga}_{1-x}\text{Al}_x\text{As}$  epitaxial layers, electron mobility 2-13076  
 GaAs, epitaxial layer thickness, dependence of electrophysical parameters (Russian) 2-13200  
 GaAs epitaxial layers doping with O and Si 2-5141  
 GaAs, high purity, LPE growth conditions and elec. props. 2-46958  
 GaAs: Cd<sup>2+</sup>, ion-doped films, elec. props. 2-21701  
 GaAs: Si MBE layer, doping 2-12616  
 GaAs-GaAlAs modulation doped multilayer struct., optimum cond. - and effective mobility conditions, LPE grown struct. 2-5456  
 $\text{Ga}_{0.47}\text{In}_{0.53}\text{As}$  LPE, CVD and VPE layers, electron and hole mobilities of n- and p-type films 2-5480  
 $\text{Ga}_{1-x}\text{In}_x\text{As}$  uniform epitaxial layers, organometallic VPE growth, elec. characts. 2-31638  
 GaP:Ge and GaP:Ge, Cr epitaxial films, behaviour of Ge, elec. props. and photoluminesc. 2-13008  
 GaSb thin film, thermal treatment effect on elec. cond. and struct. 2-21697  
 $\text{Ga}_2\text{Se}_3$  thin films in MS/IS structure, elec. props., localised states influence 2-26479  
 $\text{Ga}_2\text{Se}_3\text{-In}_2\text{Se}_3$  thin films, elec. and optical props. 2-5477  
 Ge epitaxial layers on Si, CVD and vacuum deposited, phys. and elec. props. 2-51024  
 $(\text{Hg}_{1-x}\text{Cd}_x)_2\text{Te}$  RF sputtered thin films, effect of annealing in Hg vapour on props. 2-8896  
 $(\text{Hg}_{1-x}\text{Cd}_x)_2\text{Te}$  RF triode-sputtering film for IR detector arrays 2-17174  
 $\text{InAs:N}_2^+$  ion-implanted films, electrical conductivity and Hall mobility 2-8533  
 $\text{In}_{1-x}\text{Ga}_x\text{As}_2\text{P}_{1-y}$  lattice matched to InP, comp. depend. o-f mobility, peak vel. and threshold field 2-5479  
 $\text{In}_2\text{O}_3$  film, conductivity modulation by  $\text{O}_2$  press. variation 2-5474  
 $\text{In}_2\text{O}_3$  films, evaporation from  $\text{In}_2\text{O}_3/\text{In}$  source, chemical and elec. props. 2-12933  
 $\text{In}_2\text{O}_3(\text{SnO}_2)$  film, transparent conducting, transport and optical props. 2-8899  
 InP epitaxial film, metalorganic CVD, elec. props. 2-21698  
 InP, LPE-grown, effect of substrate orientation on electrical properties 2-26522  
 InP, VPE deposition on GaAs substrate in InP- $\text{PCl}_3\text{-H}_2$  system, layer quality and elec. props. 2-27091

## electronic conduction in crystalline semiconductor thin films continued

- p-InSb film, hydrogenated, elec. transport props. 2-8895  
 n-InSb, non-parabolic, ultrathin films, Einstein relation, size quantisation effect 2-13198  
 $\text{InSb:N}_2^+$  ion-implanted films, electrical conductivity and Hall mobility 2-8533  
 InSe, trap states in forbidden gap (Russian) 2-13091  
 $\text{In}_{2-x}\text{Sn}_x\text{O}_{3-y}$  films, sputter deposited, elec. and optical props., heat treatment effects 2-26523  
 $\text{In}_{2-x}\text{Sn}_x\text{O}_{3-y}$  sprayed films, rel. to efficiency optimisation of  $\text{Cu}_2\text{S-CdS}$  backwall solar cells 2-27633  
 Pb salt epitaxial film, photovoltaic diode IR detector, modified hot wall technique prep. 2-15222  
 p-Pb<sub>1-x</sub>Cd<sub>x</sub>Te epitaxial film, elec. transport props. 2-8894  
 PbO film, photoconductivity in space charge and recombination regime 2-21622  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}$  ( $0 \leq x \leq 1$ ) films, photothermoelectric effect 2-2020  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}$ , epitaxial layer, elec. cond. and Hall effect (Russian) 2-46179  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te: Cd}$  crystals and LPE layers, doping and elec. props. 2-45223  
 $\text{Pb}_3\text{Sn}_{1-x}\text{Te}$  IR photocond. polycrystalline thin films, 1/f noise behaviour 2-51264  
 PbTe (111) epitaxial thin films, elec. transport props., thermal-cycling induced changes 2-13201  
 p-PbTe epitaxial film, elec. props.,  $\text{H}_2$  effect 2-8900  
 PbTe film, magnetoresistance strong and weak-field effects 2-17096  
 n-PbTe films thermal treatment in air, effects on thermopower and electrical conductivity 2-21695  
 PbTe, thin films, struct. and elec. props. stoichiometry and prep. condition depend. 2-51353  
 p-PbTe:Ag epitaxial layers, elec. cond. and Hall coeff. 2-41039  
 PbTeSe, LPE growth lattice-matched to PbSnTe, phys. and elec. props. 2-5320  
 (SN), thin film exposed to various gases, elec. props. (Japanese) 2-2021  
 Si bicrystals growth and characterisation for solar cells 2-17618  
 Si CVD films, polycryst., elec. props., depend. on grain size and impurity doping conc. 2-30981  
 Si, film, CW laser-recrystallised material, for semiconductor device manufacture 2-51056  
 Si film, polycrystalline, made by amorphous film laser annealing (French) 2-16970  
 Si film, semi-insulating polycryst., elec. cond., O content depend. 2-5472  
 Si films, CVD, amorphous and polycryst., cond. mechanism 2-46171  
 Si, MBE, background and dopant impurities in film and film-substrate transition region, elec. transport 2-5145  
 Si polycryst. film, on  $\text{SiO}_2$  coated substrates, zone melting recrystallised, stress enhanced carrier mobility 2-46161  
 Si:As, ion implanted, polycryst. film, laser irradi., elec. props. grain size, annealing effect 2-17173  
 Si:F,H,P films, optical study of intermediate order, elec. cond. 2-46797  
 Si:H, amorphous, prep. by reactive sputtering, characteristic props. 2-17625  
 Si:H, microcryst. plasma deposited coating, elec. cond. and optical absorpt. 2-46165  
 Si:H,P films, elec. props., transition to amorphous phase, solar cell props. 2-46167  
 Si:P, ion implanted, I-V characts., temp. depend., elec. cond. model 2-51356  
 Si:P film, LPCVD, polycryst., grain size and resist. 2-13202  
 Si:P film, microstructure and sheet resistance 2-30480  
 Si:P films, elec. cond., Hall effect 2-46166  
 Si:P polycrystalline films, grain size and sheet resistivity meas. 2-51362  
 Si:Al<sub>2</sub>O<sub>3</sub>, charge carrier props. in p-type layers of SOS 2-8812  
 SnS thin films, electrical, optical and X-ray study 2-8898  
 $\text{SnO}_2$  films, amorphous and crystalline, prep. by reactive deposition and phys. props. 2-51050  
 $\text{SnO}_2\text{:Sb}$  film, prep. by activated reactive evaporation 2-51821  
 $\text{SnO}_2$  ultrafine particle films, elec. props. 2-13203  
 $\text{SnO}_2(\text{-In}_2\text{O}_3)$  film, transparent conducting, transport and optical props. 2-8899  
 p-SnTe epitaxial thin film, elec. transport, nonstoichiometry effect 2-8901  
 p-Te film, evaporated, thermoelec. power 2-8831  
 TiO<sub>2</sub> films, selective sputtering and electrophys. and absorpt. props. under 10-300 eV inert-gas ions bombardment 2-21696  
 VO<sub>2</sub> film, laser sintering prep. 2-51840  
 VO<sub>2</sub> films, time periodic dissipative structs., semiconductor-metal transition 2-36109  
 Zn-C chemical gas-phase deposited, Hall effect 2-5419  
 ZnO film prep. by metalorganic CVD from diethyl zinc 2-41525  
 ZnO films prep. by oxidation of diethyl zinc 2-21460  
 ZnO polycryst. films, selective sputtering and electrophys. and absorpt. props. under 10-300 eV inert-gas ions bombardment 2-21696  
 ZnO transparent and highly conductive films, prep. by RF reactive magnetron sputtering 2-12924  
 n-ZnSe organometallic CVD layer, cond. mechanism 2-51355  
 ZnSe:In, epitaxial thin films, doped and undoped, electron mobility and carrier conc., temp. depend. 2-51357  
 ZnSiAs<sub>2</sub>, VPE growth on Ge and GaAs substrates, struct. and elec. props. 2-9279

## electronic conduction in insulating thin films

- see also electrical conductivity of amorphous semiconductors and insulators; electrical conductivity of crystalline semiconductors and insulators  
 amorphous, electronic transport, review 2-8906  
 chlorophyll-a films, charge transport, temp. depend. and gas effects 2-51365  
 dielectric thin films, high conductivity mechanism, current carrier injection from metal to dielectric conduct-band 2-21703  
 dipalmitoyl phosphatidyl ethanolamine, charge transport in thin biological films grown by the Langmuir-Blodgett technique 2-9763  
 graphite film, ion bombardment to form solid high-resistivity form of C 2-16692  
 polyethylene terephthalate films, 'slow' electronic carrier motion 2-8904  
 polyethylene terephthalate foils, isothermal and TSC 2-9077  
 polyimide thin films, DC conduction mechanisms, current-voltage characts. over range 26°C to 100°C 2-17179  
 polymer films, electret props. anal. using two-component insulator model 2-5619  
 polysiloxane films, anomalous props., permittivity dependence on temp. and press, resistivity 2-36165



**electronic conduction in insulating thin films continued**

- polystyrene: Cu phthalocyanine films, dielec. props. 2-21939  
 polystyrene film, undoped and doped with acrylic acid, elec. cond. 2-8902  
 PTFE, TSC modelling 2-8817  
 SCL currents in dielec. thin films with Coulomb trapping centres 2-2022  
 time dependence of the radiation-induced conductivity 2-8905  
 transport mechanisms in MIM structs., tunnelling and Schottky thermionic emission 2-26528  
 Al/GaAs, plasma anodised layers, elec. cond. and breakdown strength 2-52075  
 Al<sub>2</sub>O<sub>3</sub>, anodised amorphous, DC cond. and dielec. polarisation, thickness depend. and defects role 2-30987  
 Al<sub>2</sub>O<sub>3</sub> thin films, electrical cond. meas., Poole Frenkel cond. mechanism 2-17178  
 Bi<sub>2</sub>O<sub>3</sub> film, elec. cond. mechanism (*Japanese*) 2-26527  
 NiH<sub>2</sub>, ion implanted, resistivity annealing and TDPAC study 2-46180  
 Si<sub>3</sub>N<sub>4</sub>-Ge interface in metal-dielectric-semiconductor structs., dielec. film conductivity, quasistationary accumulation of charge 2-51325  
 SiO<sub>2</sub>, RF sputtered films, DC current transport, 77 to 357K 2-30902  
 SiO<sub>2</sub> film, reactively evaporated, elec. cond. props. 2-8903  
 SnO<sub>2</sub> film, electron beam induced dissociation and conductivity 2-25930  
 TaC film, reactive ion beams sputtering (*Japanese*) 2-27086  
 Ta<sub>2</sub>O<sub>5</sub> thin films, elec. props. and XPS-AES anal. for thermal, reactive and anodic types 2-17177  
 TiN thin films deposited by reactive RF sputtering, elec. props. 2-36166

**electronic conduction in metallic thin films**

- see also discontinuous metallic thin films; electrical conductivity of amorphous metals and alloys; electrical conductivity of crystalline metals and alloys  
 1/f noise temp. depend. in metals 2-51257  
 annealing effect (*Spanish*) 2-46159  
 conducting films, impurities, topological struct., cond. 2-51349  
 discontinuous film, structure, elec. cond., statistical description structure, elec. cond. 2-26261  
 disordered system, electron localisation, critical behaviour and macroscopic manifestations, review 2-40852  
 Hall effect, transverse, theoretical anal. 2-13196  
 island-like structure, film resistance, modelling of elec. field effects on growth 2-8726  
 Ni, effect of annealing 2-51351  
 polycrystalline film, grain boundary orientation effects (*French*) 2-26521  
 polycrystalline metal film, elec. conductivity, grain boundary scatt. model 2-36154  
 polycrystalline metal films, three-dimens. analytical separation of grain boundary/surface scatt., non-cubic grains 2-36155  
 polycrystalline metallic films, lattice defects and DC-elec. cond. 2-8527  
 resistivity changes during vapour and gas adsorption, review (*Russian*) 2-30974  
 size effect, mean free path, specularly parameter, surface roughness 2-51350  
 size effects, elec. and mechanical props., review 2-51348  
 solar cells, MIS junction, low work function metals semitransparent films props. 2-37229  
 specularly parameter, statistical approach 2-26518  
 specularly parameter influence on classical size effect 2-8889  
 thermoelectric power, energy depend., graphical determ. 2-51153  
 thermoelectric power of supported thin films 2-45941  
 Ti-Cu film, elec. resist. and impedance 2-36160  
 transport property perturbations due to energy-depend. relax. time 2-46158  
 transport props. of films with energy depend. relaxation 2-13195  
 two-dimensional metal systems, elec. cond., electron-phonon relax. mechanism 2-26379  
 Al<sub>2</sub>O<sub>3</sub> thin film, RF impedance of superconducting and normal states 2-36185  
 Al-Ge evaporated thin film, effect of crystallinity on morphology, resist. meas. and TEM 2-40721  
 Au, discontinuous film, struct., elec. cond., statistical description 2-26261  
 Au-Co solid soln. thin films, elec. resist., annealing treatment depend. 2-21693  
 Au-Ge laser-annealed ohmic contacts on GaAs, microstruct. and resistivity 2-21675  
 AuIn, thin film, low temp. elec. resist. 2-41027  
 AuPd film, elec. props. at low temps., nonmetallic behaviour 2-30982  
 Bi thin film resistivity, air-exposure effect 2-41026  
 Cd film, evaporated, elec. resist. meas. 2-26519  
 Co film, optical absorpt. and props., elec. cond.,  $\alpha$ - $\beta$  transition 2-5763  
 CoTiB amorphous films, mag. props., effect of B and Ti 2-36399  
 Cu film, negative magnetoresistance 2-30977  
 Cu-O thin film, RF impedance of superconducting and normal states 2-36185  
 Cu-Co solid solns., elec. resist. at low temp., annealing effect 2-45934  
 FeTiB amorphous films, mag. props., effect of B and Ti 2-36399  
 Gd-Co, amorphous film, low temp. resistivity and Hall effect 2-35986  
 Gd-Co amorphous films, mag. orientation transitions 2-46284  
 HoCo, amorphous, annealing effect on elec. resist. temp. depend., mag. compensation pt. and Hall parameters 2-9008  
 In, adsorbed on Si (111), elec. current effect, RHEED obs. (*Japanese*) 2-21653  
 KCl, granular films, growth and resistance 2-17633  
 LaNi<sub>2</sub> films, elec. resist., effect of H<sub>2</sub> absorpt. 2-26520  
 Li films, skin depth meas. at X-band use of CESR (*French*) 2-36431  
 Mo film, silicidized, annealing effects 2-13748  
 Mo-Re alloy films, annealing behaviour, elec. resist. meas. 2-8890  
 Mo-Si films, elec. transport and microstruct. 2-51346  
 NaIn film prep. by sandwich-type evaporation method 2-12944  
 Nb film, ion implanted, supercond. crit. temp. and density of states 2-31014  
 Nb:N<sub>2</sub><sup>+</sup>, ion irradi. film, elec. cond., Hall effect (*Russian*) 2-2015  
 Nb/Cu multilayers, X-ray scatt., resist., and supercond. transition temp. 2-40741  
 Nb/Ti layered metal, supercond. transition temp. and elec. cond. 2-31013  
 Ni-Cr films, segregation, AES, electron diffr. and elec. cond. study 2-45786  
 Pb granular films, growth and resistance 2-17633  
 Pd film, magnetoresistance, temp. and mag. field depend. 2-30976  
 Pd thin film, min. metallic cond. and thermopower 2-36156  
 Pt film, elec. props. at low temps., nonmetallic behaviour 2-30982

**electronic conduction in metallic thin films continued**

- Pt-C sputtered films, struct. and elec. props., catalysis of CO oxidation reaction 2-8725  
 Sc, ScH<sub>3</sub> films, specific elec. resist., thickness depend. carrier scatt. mechanisms 2-13193  
 Sc, vacuum condensed film, struct. and elec. resist., FCC lattice phase obs. 2-16962  
 Sm thin films, elec. resist., effect of AC and DC electric fields 2-30975  
 Sm thin films, elec. resist., substrate temp. and grain boundary scatt. effects 2-36157  
 Sn thin films, superconductivity, fluctuation effects 2-46203  
 Sn-Ag(Au), amorphous films, transport props. and phase stab., electron conc. effect 2-35987  
 Sn-Pb (40 wt.%) thin film, elec. cond. meas. 2-21691  
 Ta, magnetron RF sputtering, high rate, in N<sub>2</sub> atmosphere (*Japanese*) 2-27085  
 Ta:N<sub>2</sub><sup>+</sup>, ion irradi. film, elec. cond., Hall effect (*Russian*) 2-2015  
 Tb-Fe amorphous thin films, low temp. resistivity anomalies 2-8891  
 Ti clean surface, adsorption of CO, O<sub>2</sub>, CO<sub>2</sub>, elec. resistance ionisation, binding state (*Japanese*) 2-5304  
 Ti film, work function and resist. changes meas. in H<sub>2</sub>, O<sub>2</sub>, and water vapour atm. 2-8892  
 Ti:N<sub>2</sub><sup>+</sup>, ion irradi. film, elec. cond., Hall effect (*Russian*) 2-2015  
 V film, vacuum deposited, annealing kinetics, elec. resist. study 2-45785  
 V<sub>2</sub>Si layers, supercond. transition temp. and normal resistivity, proximity and annealing effects 2-51367  
 Yb, vac. deposited, substrate temp. effect on elec. resist. 2-21694

**electronic density of states**

- alloys, muffin-tin, band calc., variational formulation of multiple scatt. 2-35920  
 alloys, random, with short-range order, electronic props., self-consistent theory 2-1810  
 alloys, short range order, density of states in locator CPA generalisation 2-8745  
 amorphous semicond., disorder induced density of states within the band gap, partition function 2-40749  
 amorphous semiconductor, electronic density of states calc., liq. metal model approx., theory (*Russian*) 2-1816  
 amorphous semiconductor, electronic density of states calc., liq. metal model approx., results (*Russian*) 2-8749  
 Anderson asymmetric model, local quasiparticle density of states 2-35917  
 Anderson model, intermediate valence case and Kondo limit 2-13000  
 Anderson model, periodic, elec. resist. and metal-insulator transition 2-16992  
 Anderson model, two-dimensional simple-square, density of states 2-40850  
 Auger spectroscopy, of solids and surfaces, high resolution, book contrib. 2-36743  
 Brillouin zone integration for calculating intra-band joint densities of states 2-45806  
 CCj Bi, diamagnetic susceptibility impurities effect 2-26582  
 crystals, construction from information entropy method 2-21483  
 cubic lattice, d-band, electronic density of states calc. in tight-binding approx. 2-1808  
 deformed linear mixed cryst., semi-infinite, surface electronic props. 2-1983  
 dilute alloys, impurity exciton band, density of states and absorpt. line profile 2-5353  
 disordered solids, energy depend. of density of band tail states 2-40851  
 disordered system, electron localisation, electron local density of states 2-40844  
 disordered systems, bounds on density of states, tight-binding model 2-16977  
 disordered systems, localised states, field theory formulation 2-8772  
 electron motion on a Poisson correlated discrete stochastic potential 2-30781  
 electron-phonon interaction in the vicinity of a Van-Hove singularity 2-21509  
 gap states energetic distrib. by phase-shift anal. of modulated photocurrent 2-21484  
 graphite, Auger line shape construction 2-27031  
 graphite intercalated spin susceptibility 2-31263  
 heavily doped semiconductors, strongly compensated, with correlated impurity distrib., density of states 2-1809  
 heavily doped strongly compensated semiconductors, density of states in mag. field, path integral calc. 2-21485  
 heterojunctions and MIS struct., local density of states, oscils. (*Russian*) 2-17146  
 homopolar amorphous surface, struct. and electronic props. 2-1982  
 Hubbard model, localised electron states, rel. to ferromagnetism theory 2-1865  
 impure anisotropic superconductor, T<sub>c</sub>, BCS theory 2-31005  
 intermediate valence compounds, transport props. studied within alloy analog approx. of periodic Anderson model 2-17038  
 intermediate valence model, self energy, comparison with three-site model 2-8776  
 intermetallic compounds, binary, recursion method, asymptotic behaviour, local densities of states 2-5360  
 2H layer compound, 3×3 CDW state, band struct., density of states and total band struct. energy 2-8764  
 layered ultrathin coherent struct., electronic struct., tight binding calc. 2-30789  
 liquid metal, theory, variational prop. of effective medium approx. 2-1815  
 metal, BCC, localized impurity, density of non-Bloch electron states 2-1855  
 metals, amorphous, low energy excitations, sp. ht., conduct., US props. 2-35988  
 metals, single energy band, density of states, substitutional impurity cluster effect, MTO calc. 2-30785  
 metals with flat region in band struct., tunnelling 2-17145  
 MIS inversion layer solar cells, surface recombination current 2-14078  
 MNOS structure, quasi-static and HF C(V) curves, insulator polarisation effect 2-46145  
 naphthalene, electron mobilities, density of states phonon scatt. 2-13067  
 organosilicon film, plasma-polymerised, carrier photoinjection, surface states 2-13207  
 poly(p-xylylene) film, electronic struct. 2-9240  
 polyacetylene, doped, spin susceptibility 2-31263  
 polyacetylene, electron-phonon scatt. 2-45472



## electronic density of states continued

- polyacetylene, impurities and interchain coupling effects on electronic density of states 2-45905  
 polyacetylene, soliton interaction and soliton lattice 2-45801  
 polyethylene, ab initio calcs. of electronic props. 2-12960  
 polyethylene, stereo-irregular, electronic density of states 2-12954  
 random network, 2-D, electron localisation, topological disorder effects 2-40842  
 Schottky barrier junction, energy distrib. of surface states 2-13182  
 semiconductor alloys, binary, liq. and amorphous, bonding 2-8436  
 semiconductor quantum well, hydrogenic impurity states, optical props., variational calc. 2-51121  
 semiconductor superlattice, hydrogenic impurity states in quantum well, luminescence spectra 2-21535  
 semiconductor-insulator nonlattice matched interface, U-shaped back-ground density of interface states 2-26508  
 semiconductors, disordered, band struct. and transport props. 2-45799  
 semiconductors, electronic struct., first principles calc. 2-30793  
 single energy band, density of states, substitutional impurity cluster effect, MTO calc. 2-30785  
 small metallic particles, electronic props. 2-30988  
 superconductive tunnelling, Eliashberg eqns., energy depend. electronic density of states 2-17238  
 superconductor, strong coupling, density of states struct. below  $2 \times$  energy gap 2-5491  
 transition elements binary alloys, with short-range order, electron density of state calc. 2-5340  
 transition metal diborides, electronic struct. 2-40778  
 transition metals, electronic structure, tight-binding approx. appl. 2-40756  
 TTF-TCNQ, elastic electron tunnelling study of metal-insulator transition 2-35941  
 $\text{TiTi}_{1-x}$ , low temp. transport props. 2-26376  
 $\text{TiTi}_{1-x}$ , quasi-one-dimens. cond., XPS obs. of electronic struct. 2-22144  
 type-II superconductors, NMR studies of supercond. props., review 2-31059  
 wide gap semiconductors, density of localised states determ. from field effect 2-35918  
 XPS valence band struct. 2-41492  
 Ag-Pd, local density of unoccupied states, X-ray L absorpt. edge meas. 2-13589  
 AgCl, APW-LCAO energy bands and fundamental absorpt. 2-26288  
 Al, self-consistent vacancy electron struct. 2-40825  
 Al-SiO<sub>2</sub>-Si structure, hole mobility and density of states at Si-SiO<sub>2</sub> interface 2-5469  
 AlAs, crystal binding and density of states, pseudopot. calc. 2-45874  
 As amorphous film, UHV sublimed, elec. and optical props. 2-46172  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, density of state in gap, dispersive photocurrent meas. 2-46059  
 As<sub>2</sub>Se<sub>3</sub> film, amorphous, localised states, optical DLTS meas. 2-45899  
 Au discontinuous film, density of states meas. 2-41028  
 Au-InP Schottky diode, elec. characts. 2-26472  
 B electronic structure and bonding in crystalline forms 2-45107  
 n-B, semicond., CVD prep. and elec. props. 2-40885  
 n-B-Si, semicond., CVD prep. and elec. props. 2-40885  
 B<sub>12</sub>C<sub>3</sub>, crystalline, electronic struct. and bonding 2-45107  
 B<sub>12</sub>C<sub>3</sub>, electronic struct. and semicond. behaviour 2-45826  
 BaTiO<sub>3</sub>, O 2P- valence band, electronic struct., DV-X $\alpha$  calcs., XPS 2-21498  
 Be, electronic structure calc. 2-51078  
 Be, surface, slowly oxidised, electron spectroscopic studies 2-9230  
 C<sub>6</sub>Cs, Auger line shape construction 2-27031  
 C<sub>6</sub>Li, Auger line shape construction 2-27031  
 CaTiO<sub>3</sub>, O 2P- valence band, electronic struct., DV-X $\alpha$  calcs., XPS 2-21498  
 Cd<sub>3</sub>As<sub>2</sub>, band structure, UPS and EELS meas. 2-26294  
 Cd<sub>3</sub>Hg<sub>1-x</sub>Te, density of states calcs. 2-21486  
 CdTe, electronic band struct. calcs. 2-40782  
 Co-Al, valence band density of states, XPS study 2-22147  
 Cr (100) antiferromagnetic thin film, electron band struct., local density of states, and spin polarisation 2-13148  
 Cr, X-ray appearance pot. spectra and electronic struct., conduction bands, density of states distrib. function 2-41456  
 CsPbCl<sub>3</sub>(Br<sub>3</sub>), electronic struct., optical and photoemission spectra 2-40783  
 Cu, electronic struct. of non-mag. impurities 2-35963  
 Cu, resonant photoemission model 2-46869  
 Cu-Ni, local density of unoccupied states, X-ray L absorpt. edge meas. 2-13589  
 Cu, Pd<sub>1-x</sub>, chemical-shift effects and valence-electron spectra 2-2411  
 CuZn, recursion method, asymptotic behaviour, local densities of states 2-5360  
 $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, haematite, energy spectrum, photoemission, opt. spectra and elec. cond. obs. 2-5790  
 Ga-Te, liq., reflectance and density of states, metal-semicond. transition 2-9162  
 GaAs, antisite defect 2-26321  
 GaAs, crystal binding and density of states, pseudopot. calc. 2-45874  
 GaAs, electronic band struct. calcs. 2-40782  
 GaAs surface, (110), chemisorption of Cl (Chinese) 2-26205  
 GaAs surface, (110), tight binding calc. (Chinese) 2-30943  
 GaAs-Al<sub>1-x</sub>Ga<sub>1-x</sub> superlattice, mag. quantisation and transport 2-26492  
 GaSbTe, pressure induced alteration of energy spectrum (Russian) 2-5368  
 Ge, amorphous, props. 2-40772  
 Ge-GaAs (111) and (111) interfaces, electronic struct., EHT calc. 2-8854  
 Ge<sub>3</sub>N<sub>4</sub>-GaAs MIS devices, elec. characts. and memory behaviour 2-46147  
 Ge<sub>3</sub>N<sub>4</sub>-n-GaAs MIS devices, interface characts. determ. 2-30970  
 Ge<sub>3</sub>N<sub>4</sub>O, electronic band struct. calcs. 2-40785  
 GeS (001), density of empty states meas. in cond. band 2-8746  
 GeS(Se)(Te), amorphous, electronic states calcs. 2-40764  
 GeSe (001), density of empty states meas. in cond. band 2-8746  
 In-Te, liq., reflectance and density of states, metal-semicond. transition 2-9162  
 InGaAsP n-channel inversion mode MISFET with low interface state density 2-13188  
 InP, electronic band struct. calcs. 2-40782  
 InSb (110) surfaces, ideal and relaxed, electronic struct. 2-30950  
 InSb, electronic struct. in zinc-blende and rocksalt phases 2-12968

## electronic density of states continued

- La, 4f states, electronic density role, bremsstrahlungsisochromats 2-21487  
 La, 4f states, electronic density role, characteristic isochromats 2-21488  
 La, 4f states, electronic density role self absorption difference spectra 2-21489  
 La, 4f states, electronic density role, energy conservation, isochromat spectroscopy 2-21490  
 LaSn<sub>3</sub>, band struct., self consistent APW calc. 2-16983  
 LiAl, electronic struct., self consistent calc. 2-12962  
 LiCd(Zn), self-consistent linear muffin-tin orbital calcs. 2-21496  
 Mg, surface, slowly oxidised, electron spectroscopic studies 2-9230  
 Mo, X-ray appearance pot. spectra and electronic struct., conduction bands, density of states distrib. function 2-41456  
 Na<sub>2</sub>WO<sub>4</sub>, (0.26 < x < 0.76), Fermi edge, density of states, mag. susceptibility, UPS 2-31599  
 Nb film, ion implanted, supercond. crit. temp. and density of states 2-31014  
 Nb<sub>3</sub>Al, neutron irradiat., sp. ht., 1.3 to 25K, supercond. transition temp. 2-17213  
 NbN, film, electronic struct., XPS study 2-35934  
 NbNx, electronic density of states, reflection EELS and UPS study 2-46874  
 Nb<sub>3</sub>Sn, A15 phase, normal-state sp. ht. in high mag. fields, 1.3 to 25K 2-16814  
 Nb<sub>3</sub>Sn, tetragonal, band struct. 2-45819  
 Ni-Ru, ferromagnetic, electronic struct., multi-band CPA calc. 2-5344  
 NiZr<sub>2</sub>, electronic struct., recursion method 2-45817  
 Os, ultrasoft X-ray emission interpretation (Ukrainian) 2-27026  
 PbMo<sub>6</sub>Se<sub>6</sub>(S<sub>8</sub>), Chevrel phase supercond., NMR study 2-41064  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te, density of states calcs. 2-21486  
 Pd (001) surface, Cl chemisorption, electronic struct., LCAO calc. 2-1987  
 Pd, metamagnetism, self consistent spin polarised band struct. calc. 2-31186  
 PdH, optical absorption, density of states and dielec. function calc. 2-51540  
 Pt-Ni sp. ht. coeff. and density of states, tight binding calc. 2-26072  
 Re, ultrasoft X-ray emission interpretation (Ukrainian) 2-27026  
 (SN)<sub>x</sub>, energy band struct. and Fermi surface 2-30795  
 Se film, amorphous, localised states, optical DLTS meas. 2-45899  
 Si, amorphous, ESR studies, review 2-31284  
 Si, amorphous, electronic density of states, correlation effects influence 2-45815  
 Si, amorphous, props. 2-40772  
 Si, density of states near bound edge, donor impurities effect 2-17008  
 Si, impurity levels, impurity pair effects, 2-D finite element analysis 2-51114  
 Si MOS structures, oxidation in Cl-containing media, effect on electron/hole mobilities in inversion channels 2-51326  
 Si<sub>2</sub>H, amorphous, density of states, dangling bond state, tight binding calc. 2-40750  
 Si<sub>2</sub>H, amorphous, light induced changes, computer modelling of admittance and DLTS 2-36090  
 Si<sub>2</sub>H, O sputtered films, amorphous, optoelectronic props., effect of O 2-41443  
 a-Si<sub>2</sub>H, photoresponse time and density of localised states in mobility gap 2-46064  
 Si<sub>2</sub>H amorphous film, field effect studies, density of localized gap states 2-46169  
 Si<sub>2</sub>H amorphous films, luminesc. spectra, defect induced red shift 2-17536  
 Si<sub>2</sub>H amorphous Schottky barrier diode characts., mathematical model 2-46102  
 Si<sub>2</sub>H amorphous Schottky barrier and PIN diodes, I-V characts., density of localised states 2-51281  
 Si<sub>2</sub>H amorphous solar cell, plasma deposited, impurity effects 2-14081  
 Si<sub>2</sub>H films, Raman and XPS study of transition from amorphous to crystalline phases 2-46796  
 Si<sub>2</sub>H(B)(P), amorphous DC sputtered coating, doping and elec. props. 2-40726  
 Si<sub>2</sub>P, sp. ht. and elec. cond. near metal-insulator transition 2-30936  
 Si-Au interface, electronic struct. 2-51302  
 Si-SiO<sub>2</sub> interface, electron scatt. at low temp., interface states role 2-51338  
 Si-SiO<sub>2</sub> interface in MOS structures, radiation-induced trivalent Si defect buildup 2-30969  
 Si-SiO<sub>2</sub> interface in MOS struct., surface state density distrib. 2-36118  
 Si-SiO<sub>2</sub> interface in MOS device, bias stress effect on interface state density 2-51333  
 Si<sub>3</sub>N<sub>4</sub>O, electronic band struct. calcs. 2-40785  
 SiO<sub>2</sub>-Si interface, local atomic order and electronic struct. theory (French) 2-17127  
 SiO<sub>x</sub>, electronic struct., self-consistent cluster-Bethe-lattice method 2-45828  
 Sn whiskers, strained, supercond. and Fermi surface parameters 2-31107  
 SnMo<sub>6</sub>Se<sub>6</sub>, Chevrel phase supercond., NMR study 2-41064  
 (SnTe)<sub>1-x</sub>(PbSe)<sub>x</sub> epitaxial layers, band struct. parameters (Russian) 2-21499  
 SrTiO<sub>3</sub>, O 2P- valence band, electronic struct., DV-X $\alpha$  calcs., XPS 2-21498  
 Ta, ultrasoft X-ray emission interpretation (Ukrainian) 2-27026  
 Ti compounds, electron struct. and chemical binding 2-1438  
 TiC, X-ray emission spectra, cluster calcs. 2-36735  
 TiC<sub>1-x</sub>N<sub>x</sub>, density of states and X-ray spectra 2-46829  
 TiFe, recursion method, asymptotic behaviour, local densities of states 2-5360  
 TiH<sub>2</sub>, band struct., NMR study 2-40777  
 TiN cluster electronic structure, underlayer chemisorption 2-36117  
 Ti<sub>1-x</sub>V<sub>x</sub>H<sub>1.95</sub>, proton NMR study of electronic struct. 2-2154  
 Ti-Te, liq., reflectance and density of states, metal-semicond. transition 2-9162  
 V alloys, superconducting transition temp., elec. cond., density of states 2-36178  
 V compounds, electron struct. and chemical binding 2-1438  
 V-O solutions, high temp. thermodynamics 2-5230  
 V<sub>2</sub>GaH<sub>3</sub>, sp. ht., 1.2 to 20K 2-30618  
 V<sub>2</sub>GaH<sub>3</sub>, sp. ht., lattice parameters, and supercond. props., 1.2 to 20K, comp. depend. 2-26552  
 W, ultrasoft X-ray emission interpretation (Ukrainian) 2-27026



**electronic density of states continued**

- W, X-ray appearance pot. spectra and electronic struct., conduction bands, density of states distrib. function 2-41456  
 p-Zn<sub>1-x</sub>P<sub>x</sub>/n-ZnO heterostructures, I-V and C-V characts., band diag., interface state density 2-51290  
 Zr<sub>2</sub>Cu<sub>1-x</sub>, glasses, electronic props. and supercond. 2-36196  
 ZrN<sub>x</sub>, electronic density of states, reflection EELS and UPS study 2-46874  
 ZrO<sub>2</sub>, electronic struct., DV X $\alpha$  cluster method 2-16990  
 ZrS<sub>2</sub>, permittivity, matrix elements effect 2-31365

**electronic density of states of amorphous solids** *see electron energy states of amorphous solids*

**electronic density of states of liquid semiconductors** *see electron energy states of liquid semiconductors*

**electronic engineering computing**

- see also circuit analysis computing; computerised instrumentation*  
 gas-filled spark gap triggered RLC cts. 2-25669  
 IC capacitive press. transducer with high sensitivity 2-33506  
 MIM cathode, modelling of electron emission 2-22143  
 Si n-i-p, computer model 2-37335

**electronic equipment testing**

- indicating instruments, input keys requirements, tests and selection (*German*) 2-15158  
 potentiometer testing errors determ., temperature meas. using thermoelectric thermometer 2-23633  
 PWB epoxy glass insulator surface, in air 2-50466  
 triazine insulator surface, voltage breakdown between closely spaced electrodes in air 2-50466

**electronic music**

- see also musical acoustics; musical instruments*  
 analogue cts. for sound animation 2-25191  
 miniature keyboard with octave shift mechanism, Wagnephone 2-1094  
 reverberators, theory and appl. to Hammond organ (*Italian*) 2-20488  
 sound processor design, VLSI appls. 2-11956  
 timbre and the perceptual effects of three types of data reduction 2-11955

**electronic structure, atomic** *see atomic structure*

**electronic structure, molecular** *see molecular electronic states*

**electronic switching systems**

- subscriber's line systems, appl. of optical fibres 2-49934

**electronics applications of computing** *see electronic engineering computing*

**electrons**

- see also beta-rays; cosmic ray electrons; positrons*  
 acceleration by interplanetary shocks 2-48128  
 anomalous mag. moment, muon effects calc. using algebraic rearrangement method 2-43216  
 composite structure, static pot. for q $\bar{q}$  interactions,  $\pi^0$  calcs. 2-19353  
 dimensions and physical constants 2-3766  
 Dirac electron, mag. moment operator 2-38883  
 Earth outer magnetosphere, energetic electron fluxes from Prognost 3 obs. 2-6505  
 eighth order anomalous mag. moment, QED contrib. 2-33787  
 fluid structure in five-dimens. space (*Chinese*) 2-23435  
 g-factor meas. 2-29108  
 Jupiter magnetosphere, auroral secondary electrons, effect on Io plasma torus 2-32901  
 kinetics of energetic electrons in magnetic traps of solar active regions 2-18752  
 magnetic moment, anomalous, classical model 2-3783  
 magnetosphere, charged particle obs. by JIKIKEN (EXOS-B) 2-18663  
 magnetosphere, exptl. determ. of lifetime of electrons in outer radiation belt 2-3146  
 magnetosphere, plasma sheet electrons in equatorial plane, convective transport 2-14683  
 magnetosphere, statistical anal. of electrons of low-energy geosynchronous plasma environment 2-14726  
 magnetosphere, VLF plasma waves rel. to energetic electrons, JIKIKEN obs. 2-18658  
 mass, from QED permutation symm. breaking 2-38838  
 mass in first approx. of finite QED electron propagator 2-48931  
 photon theory of the electron 2-3447  
 radiation belts and pulsations of quasicaptured electrons, Kosmos 721 meas. 2-53004  
 relativistic pot. models of electrons, muons and pions 2-43309  
 relativistic propagation in Earth's magnetosheath and upstream solar wind 2-14702  
 solar type III radio burst, obs. of assoc. energetic electrons and plasma waves 2-32964  
 structure from invariant freq. ratios in geonium spectra 2-19311  
 structure functions from electron-photon scatt. in e<sup>+</sup>e<sup>-</sup> collisions 2-48992  
 $\mu$ -e mass difference in QED framework 2-11048

**electrooptics** *see electro-optical effects*

**electroosmosis** *see osmosis*

**electrophoresis**

- see also electrophoretic coating techniques*  
 dielectrophoretic force on a sphere in an AC field 2-49657  
 dielectrophoretic levitation, electrode geometries 2-3590  
 double layer on disperse particles, polarisation and dipolephoresis in steady DC field, electroosmosis effect 2-31954  
 electrolyte dilute soln., heat of transport, linear response theory 2-22454  
 electrophoretograms of brain struct., proteins, automatic processing (*Russian*) 2-47757  
 erythrocytes, electrophoretic mobility changes after exposure to ionising radiations of various LET 2-42166  
 fibres, movement in alternating elec. field (*Russian*) 2-31928  
 isozymes in rice sprouts, changes produced by laser irr., electrophoretic analysis (*Chinese*) 2-18255  
 light beating spectroscopy developments 2-230  
 macroions, cylindrical, elect. and convective polarization 2-21933  
 membrane components, in situ electrophoresis, review, book contrib. 2-27798  
 polyelectrolyte solutions, limiting laws and counterion condensation, electrophoretic mobility and conductance 2-13966  
 solid particle in liquid media in nonuniform elec. fields, dielectrophoretic response 2-26095  
 transference numbers, moving boundary detect. NMR, appl. to electrochemistry 2-167

**electrophoresis continued**

- $\beta$ -Al<sub>2</sub>O<sub>3</sub>, form. by electrophoresis (*Polish*) 2-27127  
 Ne-O<sub>2</sub> glow discharge, cataphoretic segregation, light intensity study 2-50467

**electrophoretic coating techniques**

- Nichrome, oxidation resistant coating on Mo, electrophoretically deposited 2-41817

**electrophoretic coatings**

- glass-isopropanol slurries, electrophoretic deposition of coatings 2-9294

**electrophotography**

- amorphous semiconductors, appl. 2-43124  
 chloroaluminum phthalocyanine chloride, electrophotographic photoreceptor, new IR sensitivity 2-48807  
 $\beta$ -copper phthalocyanine, improved purification method using sublimation, electrophotographic appl. 2-36768  
 developing complex, charge induced at carrier during polarisation assoc. with elec. field of latent image (*Russian*) 2-10903  
 imaging process in electrophotographic printing 2-33668  
 magnetic toner for organic photoconductors 2-33670  
 nonimpact printers, geometrical flow model of development 2-33669  
 nonimpact printing technologies, conf., Venice, Italy (June 1981) 2-33234  
 optical density of electrophotographic copies, carrier powder grain size influence (*German*) 2-28918  
 poly-N-vinylcarbazole layers with added dicyanomethylene derivatives of indandione-1,3 and isatan, electrophotographic sensitivity (*Russian*) 2-10908  
 polyeoxypropylcarbazole layer sensitization by rhodamine 6G, photodischarge in electrophotographic system, fluoresc., photocurrent (*Russian*) 2-10910  
 printing, charge transfer across organic photoconductor/insulating liquid interfaces 2-33673  
 printing, signal/noise and resolution limitations 2-33667  
 reversal development basic equations of electrostatic fields 2-33672  
 single component magnetic toners, imaging and fusing aspects 2-33671  
 thermoplastic recording medium, electric field and potential during electrophotographic information transfer (*German*) 2-15255  
 toner image transmission models (*German*) 2-3645  
 xerographic recording, non-reversal, laser character generation methods (*Hungarian*) 2-16056  
 xerography, laser scanning system appls. 2-243  
 As-Se-Te, amorphous, photoconductor for electrographic printing 2-44421  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, geminate and non-geminate recomb. 2-13097  
 CdS:Cu,Cl, elec. props. and imaging characts. in xerographic mode 2-23752  
 Pb oxide electrophotographic layers, mono- and polyphase types, photosensitivity and photodischarge parameters (*Russian*) 2-10902  
 Se, amorphous, localised electron states, xerographic spectroscopy 2-45896  
 Se amorphous layers, electroradiographic, quantum yields (*German*) 2-43118  
 Se-As-Te, chalcogenide photocond. in near IR region 2-43114  
 Si:H amorphous films for electrophotographic appl., photoelec. props. 2-46168  
 ZnO, coadsorbed p- and n-dyes, spectral sensitivity 2-1945  
 ZnS:Cu, Cl crystal phosphor, localised surface state spectroscopy 2-17131

**electrophotoluminescence** *see electroluminescence; photoluminescence*

**electrophysiology** *see bioelectric phenomena*

**electroplated coatings**

- composite metal technology, joining processes and appls. 2-36814  
 corrosion tests, review 2-9509  
 Cu, on PrNi<sub>5</sub>, effect on thermal cond. 2-35996  
 metallic coating, plating and anodising 2-31813  
 optical instrument industry, joinability of parts with electroplated coatings 2-49958  
 Cr coating, on Zn, outdoor performance 2-2628  
 Cr, electrodeposited, low contraction, parameter optimization 2-12947  
 Cr-Co black alloy, electrodeposition from trivalent chromium baths 2-51834  
 Cu-Al<sub>2</sub>O<sub>3</sub> composite coatings, factors affecting entrapment of Al<sub>2</sub>O<sub>3</sub> particles 2-2608  
 Ni coatings deposited by low temp./low conc. plating process, corrosion resistance 2-22374  
 Ni electroplated Fe powder, electrolyte stable operation conditions 2-41807  
 Ni-Cu-Zn alloy, electrodeposition from sulphate bath, current efficiency 2-46960  
 Rh electrodeposition, appls. 2-2470  
 TiB<sub>2</sub> electrodeposited coating, wear props. 2-47195  
 Zn electrodeposition at high current densities, deposit characteristics 2-27445

**electroplating**

- graphite cloth electrode 2-31930  
 laser-enhanced electroplating mechanisms 2-46957  
 MIL-M-38510 finishes for microelectronic components 2-47210  
 on-line chemical analysis for cost effective process control 2-31987  
 powder, plating with Ni, electrolyte stable operation conditions 2-41807  
 semi-circular grooves in round shafts under torsion, stress conc. factors investig. 2-41674  
 Au, acid plating, theoretical considerations 2-41811  
 Au, fabrication of micro-Fresnel plate by reactive sputter etching 2-251  
 Au plating electrolytes, distrib. of deposits 2-9554  
 Au, pulse plating processes, status and prospects (*German*) 2-52216  
 Au transmission gratings with submicrometre spatial periods, fabrication, holographic lithog., X-ray lithog. and microplating 2-39728  
 Cr and Cd emission reduction importance, electroplating industry system study report (*German*) 2-52217  
 Cr-Co black alloy, electrodeposition from trivalent chromium baths 2-51834  
 Cr<sub>2</sub>O<sub>3</sub> conversion coatings on Zn plating 2-22376  
 Cu acid plating, for electronics 2-2719  
 Cu, electrocrystn. in presence of levelling and brightening additives, electrochem. dissolution of single crystals 2-31833  
 Ni, plating process, low temp./low conc. 2-22374  
 Ni-Cu-Zn alloy, electrodeposition from sulphate bath, current efficiency 2-46960  
 Ni-Fe, electrodeposition, effect of superposition of alternating current on direct current 2-17781



**electroplating continued**

- Rh electrodeposition, appls. 2-2470
- n-Si, electroless Ni plating, appl. to solar cells 2-46955
- Si solar cells, plated metal contacts to wafer, tensile pull-strength rel. to wafer surface roughness 2-37361
- Zn electroplating processes and electrolytes, selection criteria (*German*) 2-17635

**electropolishing** *see electrolytic polishing***electroreflectance**

- energy gap, electroreflectance determ. 2-17443
- measurement in vacuum UV region using digital detector systems and H discharge tube (*Japanese*) 2-21984
- metal aq. electrolyte interface, electroreflectance spectra 2-2220
- polydiacetylene single crystals of PTS and of DCHD, electroreflectance studies on excitons 2-31453
- semiconductor-electrolyte junction, flat band pot., electroreflectance study 2-17156
- Ag (100), surface state obs. by IR and visible electroreflectance spectroscopy 2-41355
- Au-aq. electrolyte interface, electroreflectance spectra 2-2220
- CdGa<sub>2</sub>S<sub>4</sub>, fundamental optical transitions study 2-46546
- Cd<sub>1-x</sub>Mn<sub>x</sub>Te solid soln., electroreflection and photocond. spectra 2-26866
- n-CdSe/electrolyte interface, electrorefl. spectra, photoelectrochem. solar cell appl. 2-9207
- GaSe, intercalated with Ba or anthracene, electroreflection spectra 2-13453
- Ge-Si, energy gap, electroreflectance determ. 2-17443
- Ge<sub>1-x</sub>Si<sub>x</sub> solid soln., valence band spin-orbit splitting, electroreflectance study 2-17445
- In electrode, electrorefl. spectra, contrib. of photoemission 2-2218
- InP:Se epitaxial layer, heavily doped, electroreflectance and photoluminescence 2-2353
- (InSb)<sub>1-x</sub>(CdTe)<sub>x</sub> solid soln., valence band spin-orbit splitting, electroreflectance study 2-17445
- Si:F,H,P films, optical study of intermediate order, elec. cond. 2-46797
- Si:H, amorphous, electronic struct., electrorefl. study 2-41329
- TiO<sub>2</sub>:Nb, electroreflection spectra obs. (*Russian*) 2-17441
- ZnSe single cryst., polished and etched, reflectivity and electroreflectance 2-36604

**electrostatic accelerators***see also Van de Graaff accelerators*

- ANL HVEM-tandem facility, in-situ implantation system 2-7413
- collective superaccelerator for high energy particles 2-43638
- high vacuum accelerator tubes, prebreakdown and breakdown processes, review 2-11310
- insulating gases dielectric strength, problems in using small scale meas. 2-11316
- ion accelerator facility for nuclear bombardment target prep. 2-7412
- ISOTRACE facility using Tandatron accelerator 2-14043
- mass spectrometer, all-electrostatic, with time-of-flight detector 2-43126
- metal-dielectric chain belt as elec. charge carrier (*Bulgarian*) 2-7409
- MISS-4, miniature sputter ion source for tandem accelerator 2-11344
- multiple beam electrostatic quadrupole focused linac, heavy ion fusion appls. 2-15642
- negative ion beams of rare and radioactive isotopes for tandem accelerators 2-11340
- NMR magnet regulator cct., search and lock regulation circuitry for accelerator bending magnets 2-11355
- nuclear science, future directions 2-11330
- polarised negative ion sources for accelerator injection 2-11339
- slit-stabilised electrostatic accelerators, automatic energy scanning system 2-43646
- tandem accelerator, determ. of energy resolution (*Rumanian*) 2-17996
- tandem beam bunching system, design consideration and present status 2-11319
- tandem Dynamitron, intense low energy heavy ion beams 2-11326
- C stripper foils, radiation lifetimes and failure mechanisms 2-11335
- C stripper foils made by DC glow discharge process, physical props. and structure 2-11334

**electrostatic coating techniques**

- powder coating process and equipment for rapid colour changes 2-22162
- Si polycrystalline sheet production by electrostatic spray process, solar cell fabrication 2-22631

**electrostatic coatings**

No entries

**electrostatic devices**

- see also capacitors; dielectric devices; electrostatic accelerators; electrostatic generators; electrostatic lenses; electrostatic precipitators*
- electron optical system with two symmetry planes, construction 2-20244
- ellipsoidal mirror, fast separator for recoiling and highly charged particle 2-15660
- fluidised bed, cross-flow type, dynamics 2-20750
- mirrors, spherical and cylindrical, angular dispersion and transit time props. 2-29778
- nonimpact printing technologies, conf., Venice, Italy (June 1981) 2-33234
- on-line collection system 2-20198
- thermal EHD induction pumps for cooling oil, parametric studies 2-20765

**electrostatic fields** *see electric fields***electrostatic generators***see also Van de Graaff generators*

- Marx generator, 720 keV coaxial, rectangular-like output waveforms study 2-39254

**electrostatic lenses***see also aberrations; focusing; particle beams*

- charge-density method of solving electrostatic problems with and without the inclusion of space-charge 2-49619
- chromatic aberration electron monochromator 2-43142
- corrected electrostatic lens systems for ion beams, microprobe formation 2-43138
- electron monochromator, low-energy 2-43143
- electron optical systems, linear transformations for Gaussian trajectory parameters (*Chinese*) 2-34646
- electrostatic ion optics and beam transport for ion implantation 2-834
- mass spectrometer with variable dispersion and simultaneous detection, ion optics 2-3649
- quadrupole lenses elec. rotation 2-4449
- ray tracing in electrostatic lenses, BASIC computer program 2-44183

**electrostatic lenses continued**

- Rehovot 14 UD Pelletron status report 2-11306
- transaxial electrostatic cathode lens 2-20243

**electrostatic microphones** *see microphones***electrostatic precipitation** *see electrostatic precipitators; precipitation (physical chemistry)***electrostatic precipitators**

- dynamics of charged dust particles in elec. field, laser Doppler velocimetry study 2-4908
- gas analysis measuring equipment, developing and testing (*German*) 2-31976
- industrial gases cleaning, cost-effectiveness 2-47383
- laminar flow, precipitation, AC and DC electrostatic and magnetic, efficiency calc. 2-20735
- monopolar ions production by travelling wave corona discharge 2-20814
- turbulent flow, precipitation, AC and DC electrostatic and magnetic, efficiency calc. 2-20735

**electrostatics**

- see also electrets; electric charge; electric fields; electrostatic devices; static electrification; triboelectricity*
- anti-static thermal blankets 2-34616
- bipolar charging of submicron aerosol, effect of external elec. field 2-22497
- boundary value problem, zero eigenvalue of integral, operator removal 2-20226
- boundary-value problems, variational method soln. 2-20228
- chorus-related electrostatic bursts in Earth's outer magnetosphere 2-38033
- comets, charged conducting spheroids, electrostatic disruption 2-6568
- dielectric sphere, Casimir effect, electrostrictive contrib. 2-39528
- electrophotography, toner image transmission models (*German*) 2-3645
- energy-analyzing properties of an electrostatic field 2-39526
- field pot. for charged particle system and dynamic membrane (*Ukrainian*) 2-11612
- heteromolecular nucleation in vapours, free energy change, electrostatic energy contrib. 2-20801
- insulator surfaces in gases, charging by ionization and transport in gas 2-12268
- interplanetary medium, effects of high frequency electrostatic turbulence on cometary plasma tails 2-42650
- magnetic and electric fields of rotating charge distributions 2-42824
- magnetosphere, electrostatic plasma resonance ( $f_{ce}$  resonance) expt. rel. to plasma flow (*Japanese*) 2-3144
- nonstationary charged drops in nonspherical configs., Rayleigh limit 2-20740
- potentials on surfaces in space, effects on spacecraft, review 2-42570
- semiconductor-vacuum interface, electrostatic energy of charge, field electron emission barrier 2-41501
- slope stability of electropacked beds 2-20229
- thin oblate body of revolution, electrostatic pot. field 2-11614
- three-cylinder mirror analyser with axis-axis focusing and with thin intermediate electrode, electron-optics characteristics 2-23783
- vector potential description of electrostatics gauge transformation or electrodynamics method 2-18845
- Vlasov plasma, wave-particle transport by weak electrostatic flow shear fluctuations 2-44839

**electrostriction***see also piezoelectric materials; piezoelectricity*

- centrosymmetric prototype phase, Landau-Devonshire theory with rotationally invariant expansion coefficients 2-46481
- cholesteric liquid crystal, dielec., high vel. amplitude struct. formation 2-35398
- dielectric fluids, electric field effects, statistical mechanics 2-2189
- dielectric sphere, Casimir effect, electrostrictive contrib. 2-39528
- dipolar fluid in elec. field, bulk dielec. props. 2-36583
- electrolytes, aq. solns., compressibility, structural aspects, electrostriction 2-40459
- ferroelectric domain wall, order parameter profile near first order transition, role of elastic forces 2-46518
- ferroelectrics, electrostriction in paraelec. phase, temp. depend., phenomenological theory 2-46482
- molecular crystals, excited-state interactions, laser-induced phonon spectroscopy study 2-12700
- polar fluids, nonlinear effects, molecular theory of electrostriction 2-9093
- striction self-focusing of electromagnetic pulses in plasma 2-12315
- TGS, ferroelec. transition, uniaxial stress effects 2-46495
- tungsten bronzes, ferroelec., higher order electrostriction 2-26822
- Ba<sub>0.35</sub>Sr<sub>0.65</sub>Nb<sub>2</sub>O<sub>6</sub>, ferroelec. tungsten bronzes, higher order electrostriction 2-26822
- BaTiO<sub>3</sub>, static shell model calcs. of electrostriction 2-46484
- KH<sub>2</sub>PO<sub>4</sub>, ferroelec. transition, uniaxial stress effects 2-46495
- KH<sub>2</sub>PO<sub>4</sub>, piezoelectric polarisation oscills. near phase transition 2-41259
- K(Ta<sub>0.55</sub>Nb<sub>0.45</sub>)O<sub>3</sub>, electrostrictive effects 2-31382
- KTaO<sub>3</sub>, static shell model calcs. of electrostriction 2-46484
- LiNH<sub>4</sub>SO<sub>4</sub> single crystals, piezoelec. props. 2-31384
- (NH<sub>4</sub>)<sub>2</sub>BeF<sub>4</sub>, ferroelec., electrostrictive consts. 2-30431
- PLZT ceramic, electrostriction and strain-optic phenomena 2-46486
- Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub> electrostrictor for deformable bimorphous mirror 2-998
- Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>, electrostrictive ceramic, low Q electromechanical resonator 2-17413
- SrTiO<sub>3</sub>, anharmonic perturbation calcs. of electrostriction 2-46483
- SrTiO<sub>3</sub>, electrostriction coeff., elec. field influence 2-41277
- SrTiO<sub>3</sub>, static shell model calcs. of electrostriction 2-46484
- YIG, electrostriction meas. 2-10820

**electrosynchronisation** *see synchronisation***electroviscous effect***see also colloids; viscosity*

- Brownian particles, strongly interacting, dynamic shear viscosity, secondary electroviscous effect 2-28802
- dielectric liquids, AC electric field effects 2-12806
- rod suspensions, primary electroviscous effect 2-17925

**element origin***see also cosmic ray origin; cosmology*

- big bang model, nucleosynthesis calculations primordial abundance of <sup>4</sup>He and <sup>2</sup>H 2-42762
- cosmic rays, ultraheavy (24 ≤ Z ≤ 59), abundances as indicators of nucleosynthesis and accel. processes 2-32786



## element origin continued

- He, primordial, form. in early Universe and predicted abundance 2-33193  
<sup>176</sup>Lu, stellar synthesis rel. to use as cosmic clock or stellar thermometer 2-42588  
 N, evidence for secondary nucleosynthesis from spectroscopic obs. of superthin galaxies 2-28545

## element relative abundance

see also isotope relative abundance

- Aleutian island arc magmas, <sup>143</sup>Nd/<sup>144</sup>Nd, <sup>87</sup>Sr/<sup>86</sup>Sr and trace element constraints on petrogenesis 2-42355  
 ALHA 76005, Antarctic achondrite, major and trace element comp. rel. to polymict eucrite nature 2-6573  
 Allende meteorite, distrib. of noble gases from differential oxidation study 2-38144  
 carbonaceous chondrites, Mo abundances 2-38139  
 chemically peculiar stars of upper main sequence, abundance patterns 2-3259  
 chemically peculiar stars of upper main sequence, abundance patterns rel. to origin of anomalies 2-23311  
 cosmic rays, charge and isotopic comp. of Z=6 to 14 nuclei at source 2-53030  
 cosmic rays, galactic, Sc to Mn element abundances 2-18665  
 cosmic rays, ultraheavy (24 ≤ Z ≤ 59), abundances as indicators of nucleosynthesis and accel. processes 2-32786  
 V1668 Cygni (Nova 1978), CNO abundances during nebular phase 2-3260  
 Earth crust, new interpretive procedure for whole rock U-Pb systems and appl. to Vredefort profile 2-42307  
 Earth crust, radioelement concs. in deep profile through Precambrian basement of Vredefort structure 2-42304  
 elliptical galaxies, dissipative processes rel. to correls. between luminosity, metallicity and vel. dispersion 2-14930  
 galactic cosmic ray B,C,N and O nuclei 2-23197  
 Grier(b), New Mexico, meteorite, monomict brecciated chondrite, petrography and comp. 2-14825  
 heavy element yield in galaxies rel. to metallicity, chemical evolution 2-48330  
 93 Herculis, candidate Ba star, differential curve of growth anal. 2-38214  
 interstellar C abundance toward δ Scorpii, determ. from obs. of interstellar C II line 2-42733  
 interstellar Ca II/Na I ratios, abnormal line ratios in spectrum of HD 72127A 2-42732  
 interstellar clouds, low and medium density, effects of element depletions on cloud chemistry 2-14910  
 irghizite tektites from Zhamanshin crater, USSR, element abundances rel. to origin 2-14464  
 KREEP basalt, from Moon, petrology, mineralogy and chemistry 2-42620  
 Lahrauli ureilite meteorite, mineralogy, comp. and cosmic ray track density 2-14829  
 lavas of Mt. Edgecumbe volcanic field, Alaska, comps. rel. to tholeiitic and calc-alkaline volcanism 2-32476  
 light elements in giant planet interiors 2-32937  
 lunar highland rocks, mineralogy, petrology and chemistry of anorthositic-noritic-troctolitic (ANT) suite 2-42619  
 lunar surface, orbital chemistry from X-ray and gamma-ray remote sensing expts. 2-42615  
 M3, M13, globular clusters, C and N abundances in giant stars 2-33015  
 Me 2-1 (CD-23<sup>12238</sup>), planetary nebula, element abundances, optical/UV obs. 2-33097  
 meteorites, element abundances in primitive ultrafine matrix of ordinary chondrites 2-38148  
 meteorites, L3 chondrites, chemical distinction from LL3 chondrites 2-14823  
 meteorites, L6 chondrites, major element var. 2-14824  
 meteorites, petrologic-chemical synthesis, book 2-48412  
 NGC 1365, Seyfert galaxy, mild radial abundance gradient of O and N 2-3303  
 NGC 6302, high excitation nebula, chemical comp. from spectroscopic obs. 2-3294  
 phonolitic lavas, herzolite-bearing, major and trace element comp. rel. to geochemistry and evolution 2-22978  
 planetary nebulae, high excitation, chemical comps. 2-53353  
 planetary nebulae Ne, S, Ar abundances, visible/IR obs. 2-14903  
 protogalactic gas, heavy elements abundance rel. to thermal evolution during gravit. contraction 2-3309  
 Qorqut granite complex (Late Archaean), SW Greenland, element abundances rel. to origin 2-42366  
 quasar emission line clouds, refractory element abundance, UV spectral obs. 2-14948  
 r-process abundances in solar system, comparison with thermal runaway r-process 2-53246  
 rare gases, spallogenic, in Fe meteorites, no correl. with <sup>107</sup>Ag excesses 2-38141  
 s-process nucleosynthesis, stellar abundances, and galactic evolution 2-3191  
 siderophile element abundances in upper mantle, evidence for sulphide signature and equilib. with core 2-9981  
 solar corona, element abundances from X-ray flare obs. 2-3228  
 solar Hf and W abundances, implications of fast neutron capture on <sup>180</sup>Hf and <sup>184</sup>W 2-48141  
 super-refractory elements depletion in meteorites Ca,Al-rich inclusions, rel. to interstellar dust precursor model 2-38143  
 supernova remnants in northern hemisphere, C abundances from near IR spectroscopy 2-28535  
 two-mica granites of NE Nevada, major element chemistry rel. to origin 2-42365  
 Ursa Minor dwarf galaxy, metal abundance range 2-28557  
 volcanic rocks, metamorphosed, and volcanic neck in Sierra Nevada, California, petrology and geochronology 2-42302  
 Wadi Shwas volcanics, Saudi Arabia, element comp. and island arc character 2-9977  
 white dwarfs, accreting, effects of CNO abundances on steady nuclear burning 2-38186  
 zhamanshinite impactites from Zhamanshin crater, USSR, element abundances rel. to origin 2-14464  
 Al/Fe in A-type field horizontal-branch stars 2-48228

## element relative abundance continued

- B abundance in Hg-Mn stars, mag. peculiar stars and nu Capricorns 2-28464  
 C in atmosphere of SU Tauri, abundance peculiarities (Russian) 2-33051  
 C in interstellar molecular clouds, abundance, obs. at 609 microns 2-38259  
 C in planetary nebula LMC P40, UV spectral obs. 2-53363  
 C in planetary nebulae from 4267 Å C II line 2-10496  
 C in planetary nebulae N2 and N5 in SMC, obs. 2-53363  
 C/N ion abundances in planetary nebulae, emission-line spectra 2-3299  
 CNO abundances in F- and G-type stars 2-28447  
 Eu in subducted sediments used to constrain their role in island arc magmatism 2-10013  
 F/Cl in hot spring water from San'in dist. Japan (Japanese) 2-28114  
 Fe/H in A-type field horizontal-branch stars 2-48228  
 Ge/Si in seawater, marine geochemistry 2-14496  
 He abundance radio meas., radioastronomy and elementary particle cosmology 2-3317  
 He in solar corona, expt. on Spacelab 2 (CHASE) 2-32849  
 He, primordial, form. in early Universe and predicted abundance 2-33193  
 He/heavy elements enrichment ratio in solar neighbourhood 2-48314  
 Kr, abundance in solar system from s-process systematics 2-3935  
 Li, interstellar depletion from Li I lines obs. towards σ Scorpii, β<sup>1</sup> Scorpii and 55 Cygni 2-28521  
<sup>7</sup>Li abundance in galactic halo stars, rel. to Galaxy form. (French) 2-38184  
 N abundances of planetary nebulae, determ. for (NGC 3242) 2-3292  
 N in superthin galaxies, abundances from spectroscopic obs. 2-28545  
 Na/Cl ratios, solute source tracing in semiarid zone 2-10098  
 Rn in S. California groundwater, seismicity correl. 2-22911  
 Si interstellar depletion, IUE obs. of reddened stars 2-48294  
 Sr-Y-Zr abundance peak in HR 6127, characts. rel. to spectral classification 2-33031  
 U-Pb systematics in fragments of single zircon grain, results from Pikes Peak batholith 2-52841

## elemental semiconductors

- 1/f mobility fluctuations, model 2-51259  
 amorphous elemental semiconductors, electronic props., appl. to solar photovoltaic cells (Dutch) 2-13074  
 C Si:H, amorphous, MOS solar cell, fundamental tunnelling process 2-46139  
 C Si:H, amorphous, photoluminesc. and photocond., fatigue and Staebler-Wronski effects, irreversibility 2-46731  
 CC Si, far IR absorption due to two-phonon difference process 2-26898  
 CCl Si:H, amorphous, struct. and electronic states, review 2-25744  
 covalent, chem. trends of deep impurity levels, review 2-26332  
 covalent solids, tight-binding parameters by Louie peripheral states 2-40754  
 deformation potentials of bulk semiconds. 2-35622  
 diamond:As(B), synthetic, luminescence wave obs. (Russian) 2-22095  
 diamond:B, heavily doped, elec. cond. mechanisms, 2 to 700K 2-45986  
 diamond:B, semicond., excited states of shallow acceptor from photocond. 2-51118  
 diamond, correlated ground state 2-45870  
 diamond, dynamic Jahn-Teller effect in B and T electronic states 2-8779  
 diamond, electron irradi., TR12 vibronic band, uniaxial stress effects 2-13519  
 diamond, ground state props., ab initio density functional pseudopot. method 2-40318  
 diamond, local field effects and dielectric response matrix 2-1850  
 diamond, natural, dislocation-rich, cathodoluminescence study 2-31565  
 diamond, nonlinear screening of positive point charges, spatial dielec. function 2-21524  
 diamond, resonant excitation of GR 1, luminescence and cathodoluminescence study 2-46685  
 diamond, semiconducting, polycryst. synthetic, negative N-type resist. 2-21590  
 diamond, synthetic, relaxation phenomena in N-type negative resistance region 2-26994  
 diamond {111}, surface struct., bulk-like characts., LEED determ. 2-35872  
 diamond (111), surface states form., UPS study 2-8848  
 layered semiconductor structures and heterostruct., hot electron and phonon effects 2-26482  
 MBE, review of European developments, 1979-80 2-22168  
 mobility fluctuation 1/f noise, elec. field depend. 2-1973  
 MOS-oxide charge induced junction solar cells 2-27620  
 plated metal contacts to wafer, tensile pull-strength rel. to wafer surface roughness 2-37361  
 polycrystalline MIS solar cell behaviour in H<sub>2</sub> passivation process 2-37397  
 Schottky contacts, struct. and elec. props. 2-21657  
 a-Si:H photovoltaic cells conversion efficiency limiting parameters anal. 2-27639  
 Si:Sn, amorphous, short range order; <sup>119</sup>Sn Mossbauer spectra study 2-46449  
 Si, electron bombarded, nuclei optical polarisation and excited triplet states 2-2162  
 poly-Si, nucleation and growth, in-situ obs. 2-45765  
 p-Si for nuclear emission detectors, deep-level investig. (Russian) 2-21532  
 Si n<sup>+</sup>-n<sup>-</sup>-p<sup>+</sup> rectifier junction, induced short circuit currents 2-21666  
 Si solar cells, review 2-27649  
 Si thin films, amorphous, ion beam profiling of gettered O 2-8538  
 Si-Ge interfaces, low energy EELS study 2-9232  
 solar cells, physics, book contrib. 2-52357  
 solar cells, Si-on-ceramic, evaluation for low-cost fabrication 2-18072  
 SOS, heteroepitaxial, electronic characterization by surface photovoltage spectroscopy 2-41030  
 SOS films with negative and positive interfacial charges 2-8886  
 tetrahedral amorphous semiconductors, disorder types and electronic structures 2-45045  
 V-MOS transistors thin gates fabrication in V-groove (Slovak) 2-46162  
 valence electron densities, Thomas-Fermi approx. 2-40811  
 n<sup>+</sup>-Si, surface plasmons, ATR spectra 2-2234  
 Al/n-Si, small area laser beam annealing, subsurface alloying and deep Al penetration 2-1517  
 Al-p-Si, polycrystalline Schottky barrier solar cell, elec. behaviour depend. on chem. prep. prior to metal evaporation 2-52347



## elemental semiconductors continued

- Al-SiO<sub>2</sub>-Si MIS inversion layer solar cells, surface recombination current 2-14078  
 Al-SiO<sub>2</sub>-Si MIS solar cell, elec. and photoelectric props. 2-22620  
 Al-SiO<sub>2</sub>-Si MOS struct., metallisation by secondary-ion mass spectrometry (*Russian*) 2-21680  
 Al-SiO<sub>2</sub>-Si structure, hole mobility and density of states at Si-SiO<sub>2</sub> interface 2-5469  
 Al-SiO<sub>2</sub>-Si structure with plasmochemical insulator, elec. props. 2-21684  
 Al-Tb<sub>2</sub>Ge<sub>2</sub>-Fe structure, charge transport mechanism 2-21683  
 As, amorphous, defects, theoretical study 2-1859  
 As, amorphous, electronic density of states calc., liq. metal model approx., theory (*Russian*) 2-1816  
 As, amorphous, electronic density of states calc., liq. metal model approx., results (*Russian*) 2-8749  
 As amorphous film, UHV sublimed, elec. and optical props. 2-46172  
 As, amorphous semiconductor, review 2-45037  
 Au-mica-p-Te:Cu film MIS struct., field effect studies 2-41017  
 Au-Si surface phases, LEED, AES, and sputter depth profiling 2-1714  
 B,  $\beta$ -rhombohedral, hopping cond. in strong elec. field 2-40923  
 B electronic structure and bonding in crystalline forms 2-45107  
 $\beta$ -B, rhombohedral, photocurrent instabilities, low freq., at low temp. 2-40957  
 Gb-B, rhombohedral, transient photocond. Gb-B, rhombohedral, transient photocond. 2-40956  
 $\beta$ -B, rhombohedral single cryst., optical props. in fundamental absorpt. range 2-41321  
 $\alpha$ -B, rhombohedral, elec. cond., thermoelec. power and Hall coeff. 2-40889  
 n-B, semicond., CVD prep. and elec. props. 2-40885  
 $\beta$ -B/C, rhombohedral, C centres, photoinduced ESR investig. 2-40819  
 C, amorphous, dangling bonds defects, g-values of ESR signal 2-2134  
 C, amorphous, electronic density of states calc., liq. metal model approx., theory (*Russian*) 2-1816  
 C, amorphous, electronic density of states calc., liq. metal model approx., results (*Russian*) 2-8749  
 C resistance thermometer, electron tunnelling 2-33528  
 C, surface (111) 1X1, atomic relaxation, tight binding Green's function approach 2-16936  
 C:H, amorphous, elec. and optical props. 2-40912  
 C:H(B/P), amorphous films, thermopower, elec. cond. 2-46178  
 GaAs, plasma anodisation kinetics using multipole plasma source 2-47218  
 Gd-Pt/Si Schottky contacts, struct. and elec. props. 2-21657  
 n-Ge, (001) plane, weak field magnetoresist. skewness, galvanomagnetic coeffs. 2-13099  
 Ge (111), adsorption of O<sub>2</sub>, AES, thermal desorption, work function, and EELS study 2-12917  
 Ge (111), alkali metal covered, adsorption of O<sub>2</sub>, AES, EELS, thermal desorption, and work function meas. 2-12918  
 Ge acoustooptic refractive IR chopper 2-11796  
 Ge amorphous, annealing effect, struct. modelling 2-45055  
 Ge, amorphous, DC hopping cond., Mott T<sup>1/4</sup> law from rate eqn. formalism 2-13071  
 Ge, amorphous, dangling bonds defects, g-values of ESR signal 2-2134  
 Ge, amorphous, elec. props. 2-17084  
 Ge, amorphous, electronic density of states calc., liq. metal model approx., theory (*Russian*) 2-1816  
 Ge, amorphous, electronic density of states calc., liq. metal model approx., results (*Russian*) 2-8749  
 Ge, amorphous, electronic struct., CPA study 2-12959  
 Ge, amorphous, hopping cond. mechanism in strong elec. field 2-26387  
 Ge, amorphous, laser-induced metastable states 2-45895  
 Ge, amorphous, press. induced metal-semiconductor transitions 2-40790  
 Ge, amorphous, props. 2-40772  
 Ge, amorphous, solid-phase epitaxial crystn. on Si (100) 2-12932  
 Ge, amorphous, transition temp. and heat of crystn., DSC determ. 2-8435  
 Ge, amorphous and cryst., EXAFS anal. 2-5772  
 Ge, amorphous and single crystal, scattered-ion yield enhancements near 180°, reversibility effects 2-46853  
 Ge amorphous film, laser induced crystallisation 2-16595  
 Ge, amorphous UHV deposited films, struct., elec. and optical props. 2-40732  
 n-Ge anisotropic semiconductor, electron scatt. in mag. field 2-51219  
 Ge, ballistic phonon flux modulation by the He gas film at solid/superfluid He interface 2-50981  
 Ge, band-gap narrowing, impurity conc. depend. 2-1821  
 Ge bicrystal, grain boundary levels, transient capacitance meas. 2-51117  
 n-Ge, carrier capture by slow surface states, effect of adsorbed hexane and carbon tetrachloride 2-8855  
 Ge, channelled electrons and channeling radiation, energy levels 2-25955  
 Ge, chem. vapour deposition on Si from GeH<sub>4</sub>-He gas mixtures 2-2454  
 Ge, chemical etching and cleaning procedures 2-2597  
 Ge, chemical etching and cleaning procedures 2-9437  
 Ge chemical transport, with H<sub>2</sub>O (*German*) 2-30428  
 Ge, cleared (111) surface, electrical conductivity (*Russian*) 2-13161  
 Ge containing Hg<sup>2+</sup>, Zn<sup>2+</sup> and Cd<sup>2+</sup> centres, impurity photoconductivity spectra, photoimpact ionization mechanism and oscils. 2-1953  
 Ge counters, laser-doped Li contacts 2-19851  
 Ge, covalent crystals, lattice energy, electron-gas functional theory 2-1446  
 Ge crystal, distorted, planar dechanneling of GeV particles 2-21191  
 Ge crystals, thermal props. by photoacoustic spectroscopy 2-21241  
 Ge crystals, with diamond struct., reorientation during growth of twins 2-21159  
 Ge, defect structure by high resolution electron microscopy 2-25888  
 p-Ge, deformation pot. consts. from piezoresist. temp. depend., 77 to 300K 2-17068  
 Ge, deformed, diamagnetic susceptibility of indirect excitons (*Russian*) 2-5525  
 Ge detector for precise beta endpoint energy determ. 2-43682  
 Ge detectors, response to monoenergetic electron, positron and gamma ray beams 2-39267  
 Ge, direct absorpt. in electron-hole liquid, warping effects, final state interactions 2-26301  
 Ge, dislocation mobility changes during slip direction inversion (*Russian*) 2-5128  
 Ge, dislocation nucleation process as point defect condensation 2-25878  
 Ge, dislocations, elec. and dynamic props. 2-40834  
 Ge, dispersive phonon focusing 2-45445

## elemental semiconductors continued

- Ge, donor local field corrections to binding energies 2-21536  
 Ge, donor-bound multi-exciton complexes, theory 2-1840  
 Ge, double crystal gamma ray diffractometry 2-30369  
 n-Ge, EM wave absorption in mag. field 2-17452  
 Ge, EPR of electrons at dislocations obs. 2-31282  
 Ge, electron energy deposition profile, calc. by Monte Carlo method (*French*) 2-50726  
 Ge, electron irradiated, defects study by electron microscopy 2-45274  
 Ge, electron irradiated, form. probability of separated Frenkel pairs 2-35541  
 Ge, electron-hole droplet cloud, phonon-wind-induced anisotropy 2-12976  
 Ge, electron-hole droplet drag velocity quantum oscils. 2-1841  
 Ge, electron-hole drops, far IR magneto-plasma absorptions 2-26875  
 Ge, electron-hole liq., phonon absorpt. spectra 2-45843  
 Ge, electron-hole liquid in high mag. field, luminesc. meas. 2-26989  
 Ge, electronic struct., first principles calc. 2-30793  
 Ge, electronic struct., quantitative disorder effect 2-21495  
 Ge, electronic struct. and total energy, self consistent local pseudopot. method 2-45823  
 Ge, energy gap, impurity depend. 2-12964  
 Ge, energy spectrum of surface recombination centres, effect of sorption processes 2-1980  
 Ge epitaxial films on GaAs (110), surface defect struct., LEED study 2-8694  
 Ge epitaxial layers on Si, CVD and vacuum deposited, phys. and elec. props. 2-51024  
 p-Ge, far IR emission from population-inverted hot-carrier system 2-46771  
 Ge, far IR photocond. spectra of quenched in acceptors 2-1956  
 Ge, field penetration effect on surface states 2-30947  
 Ge film, amorphous, laser processing, explosive crystn., liq. layer existence 2-45265  
 Ge film, amorphous, scanned laser crystn., phase boundary kinetics meas. 2-45264  
 Ge film, amorphous, vacuum deposited, internal stress and Young's modulus (*Japanese*) 2-26264  
 p-Ge film, picosecond photoconductive detector 2-1940  
 Ge film, polycryst., low temp. growth by UV laser photodissociation of GeH<sub>4</sub> 2-51823  
 Ge film on Au and Pb, far IR surface plasmon coupling and attenuation 2-36725  
 Ge films, vac. deposited, optical props. in IR region 2-51726  
 Ge, four-wave interaction at 10.6  $\mu$ , multirefl. signal refl. 2-34850  
 Ge, ground state manifold, off-diagonal Zeeman effects 2-21543  
 n-Ge, heavily doped, DC hopping cond., Mott T<sup>1/4</sup> law from rate eqn. formalism 2-13071  
 Ge, high-density electron-hole plasmas, thermomdiffusion 2-30918  
 Ge, hole response to static elec. and microwave elec. field, temp. depend., Monte Carlo method 2-13113  
 p-Ge, hopping transport at large uniaxial stress and high mag. field 2-36047  
 p-Ge, hot carrier population inversion, Hall effect study 2-46037  
 p-Ge, hot electron population inversion in mag. field., expt. and Monte Carlo simulation 2-46039  
 p-Ge, hot holes, noise, inelastic scatt., meas. at microwave freqs. 2-46088  
 Ge hot-electron bolometers for FTIR diagnostics,  $\gamma$ -ray and neutron effects 2-35329  
 p-Ge, IR absorpt. saturation, expt. study 2-49833  
 Ge, IR laser radiation scatt. study of local inhomogeneities 2-22033  
 n-Ge, impurity band cond. study 2-40919  
 n-Ge, impurity elec. resist. in quantising mag. fields 2-13104  
 n-Ge, impurity elec. resist. anisotropy in quantising mag. fields 2-13105  
 Ge, indirect exciton ground state Stark shift and splitting 2-21505  
 Ge, interband Faraday and Kerr effects anal. 2-26874  
 Ge, ionisation potentials and energy barriers estimation at hetero junctions (*German*) 2-12963  
 Ge laser cyclotron resonance, Zeeman absorpt. 2-41205  
 Ge, laser excited, enhanced direct-free-hole absorption 2-51222  
 Ge, laser thermal breakdown, hysteresis effects 2-16678  
 Ge, lattice dynamics, ab initio calc., local density functional formalism 2-50796  
 Ge, lattice thermal cond., contrib. of low freq. longitudinal phonons 2-45651  
 Ge, lattice thermal cond. and phonon-phonon scatt. relax. rate 2-12863  
 p-Ge, light-hole band overpopulation in strong crossed elec. and mag. fields 2-40924  
 Ge, liquid, structural modelling 2-40251  
 Ge, local field effects and zone centre phonons 2-26006  
 Ge, Lomer dislocation core struct. 2-45180  
 Ge MM-wave detector using hot carriers, performance 2-36081  
 Ge, magnetoresonance, electron-hole droplet, quantum transport theory 2-5426  
 n-Ge, many-valley semicond., Faraday effect in crossed elec. and mag. fields 2-17453  
 Ge, muonium depolarisation mechanisms 2-41242  
 Ge n<sup>+</sup>-n junction, carrier exclusion for low impurity carrier conc. 2-46117  
 Ge, neutron and  $\gamma$ -ray irradiat., point defects, positron capture 2-51741  
 n-Ge, neutron bombarded, minority carrier injection and extraction 2-46027  
 Ge, nonlinear screening of positive point charges, spatial dielec. function 2-21524  
 Ge optical element, Gaussian beam distortion by thermal lens 2-34859  
 Ge, optical props., calc. using first-principles electronic struct. 2-13442  
 Ge, optical waveguide field distrib. and harmonic generation 2-44387  
 Ge p-i-n and avalanche photodiode detectors for 1.1 to 1.6  $\mu$ m operation, state of the art 2-3622  
 Ge p-n junction, avalanche breakdown voltage, pressure depend. 2-30955  
 Ge p-n junction, hot carrier thermo-EMF under strong forward bias conditions 2-5454  
 Ge, p-n junctions, second breakdown patterns 2-13180  
 Ge, phonon conductivity due to nondiagonal energy-flux operator 2-45650  
 Ge, phonon focusing caustics, singular effects 2-45446  
 Ge, phonon freq. and mode Gruneisen parameters, volume depend. 2-1572  
 p-Ge, phonon thermal cond. in intermediate conc. region, 2 to 50K 2-26157  
 Ge, phonons, zone centre, ab initio calc., local field effects 2-50797



## elemental semiconductors continued

- Ge photoconverters, electrical characts. under high illumination intensities 2-6139  
 Ge, photodiode and photocond. effects, shallow impurities charge state changes effect 2-40965  
 Ge, photoelastic response 2-31449  
 Ge, photoexcited hot carriers, picosecond interband saturation and intraband relax. 2-46004  
 Ge, photovoltaic effects due to heating by stationary EM radiation effect (*Russian*) 2-21636  
 n-Ge, piezoresist. differences, electron scatt. mechanisms 2-17069  
 Ge, plastically deformed, magnetoresistance 2-36068  
 Ge, point defects and disordered regions due to irradiation, magnetoresist. meas. 2-8826  
 Ge polymorphs, phase-difference approach to EXAFS anal. 2-5771  
 Ge, self-interstitials and vacancies, absolute zero to melting temp., review 2-30461  
 Ge single crystals, grown in different directions, radial distrib. of dopant 2-1498  
 Ge single crystals, grown in batches by Stepanov method, impurity distrib. 2-1504  
 Ge, spin-dependent recomb. centres, photoinduced ESR study 2-46379  
 Ge, stressed, electron-hole liquid, exchange correlation energy and phase separation 2-1851  
 Ge, structural defects, dynamic characts., internal friction method 2-1555  
 p-Ge, submillimeter radiation amplification by cyclotron res. of light holes in intraband optical excitation 2-51469  
 Ge, superconductivity transition temp. rise with press. reduction 2-13215  
 Ge surface, (111), adsorbed In, surface superstruct., RHEED study 2-26196  
 Ge surface, (111), pulsed laser annealing, LEED study 2-45267  
 Ge surface, adsorbed K(Na), work function, field desorpt. and theoretical study 2-46103  
 Ge surface, vacuum cleaned (111), reconstruction and itinerant magnetism 2-17258  
 Ge, surface (111)  $1 \times 1$ , atomic relaxation, tight binding Green's function approach 2-16936  
 n-Ge, surface cond. meas. in transverse elec. fields, storage effect 2-21654  
 Ge, surface electron localisation and cond., effect of adsorbed impurity atoms (*Russian*) 2-13151  
 Ge, surface helical instability, nonlinear props. 2-40993  
 Ge, surface overlayers detection and minimisation using spectroscopic ellipsometry 2-15210  
 Ge, surface recombination and bulk lifetime contactless PME investig. 2-17116  
 Ge, thermal gradient drift domain rel. to sample shape change 2-36051  
 Ge, thermal gradient-drift domains in electron-hole plasma 2-17106  
 Ge, thermoluminescence rise in far IR spectrum (*Russian*) 2-31571  
 Ge thin film p-n junction ultra high efficiency solar cell performance for solar thermophotovoltaic energy conversion 2-37240  
 Ge, transient hot-carrier phenomena, method of moments for anal. 2-45998  
 Ge, tunnelling, band struct. 2-40999  
 n-Ge, uniaxially deformed, drag thermoelectric powers in quantising mag. field 2-1935  
 Ge, uniaxially deformed, excitons and excitonic molecules in mag. field (*Russian*) 2-5354  
 Ge, uniaxially stressed, luminescence of excitonic molecules 2-46692  
 Ge, vacancy diffusion, temp. depend., Morse pot. calc. (*Russian*) 2-45620  
 Ge, vibrational modes at vacancy site 2-50813  
 Ge wafers, refr. index variations, acoustic method meas. 2-4567  
 n-Ge, weak-field magnetoresistance coeffs., magnetoresistance skewness 2-51217  
 Ge window material optical absorpt. investigation using photoacoustic spectroscopy (*Chinese*) 2-20383  
 Ge, XPS, angle-resolved, for solid surface characterisation 2-5794  
 Ge:Al, ion implanted, annealing behaviour obs., Al conc. profiles determ. 2-5241  
 Ge:As, 1s and 2p states, quantitative piezospectroscopy 2-26863  
 Ge:As, luminescence study, exciton excited hole state 2-46691  
 Ge:As, precipitation-induced defects, X-ray diff. study, three-crystal spectrometry 2-45181  
 Ge:As(P), four-wave spectroscopy of shallow donors 2-22055  
 Ge:Au, direct obs. of trap-charging waves 2-17088  
 Ge:Au, gamma irradiation, radiation defects interaction with impurity 2-12633  
 Ge:Cu, defect levels, H passivation, DLTS study 2-51108  
 Ge:Cu, gamma-ray induced defect formation 2-40437  
 Ge:Ga, far IR and sub-MM detector, spectral response from blackbody meas. 2-19180  
 Ge:Ga, impurity band, antiferromag. ordering, photoluminescence study 2-2340  
 Ge:Ga, neutron transmutation doping, degree of compensation 2-50673  
 Ge:Ga heavily doped single crystals grown from melt, interface breakdown 2-25777  
 Ge:Ga(Sb), single crystal, high temp. dislocation mobility under applied stress 2-45183  
 Ge:H, amorphous film, interaction of US phonons with defects 2-26011  
 Ge:H, amorphous, AC loss at audio freq., electron tunnelling model 2-40897  
 Ge:H, P, amorphous, US phonon interaction with donor impurities 2-45482  
 Ge:Li, Hall effect, cyclotron resonance study of converted regions 2-40941  
 Ge:Li, photocond. IR detectors, low photon background appl. 2-19179  
 Ge:Li film, amorphous, electret effect 2-17395  
 Ge:P, photoconductivity spectrum of shallow donors, elec. field effect 2-26443  
 Ge:P epitaxial films, P doping during gas phase chem. precip. 2-12612  
 Ge:P(Bi),  $\gamma$ -ray irradiation, point defects, laser annealing 2-50696  
 Ge:Pd, Sb,  $\gamma$ - and electron-irrad., complex formation, primary defects charge state effect 2-40436  
 Ge:Sb, metal-insulator transition density, wave-function anisotropy effect 2-16993  
 Ge:Sb, shallow traps and  $D^-$  centre, photoconductivity 2-45888  
 Ge:Sb(Ga), electron-hole liq., photoluminesc. polarisation in mag. field study 2-35952  
 Ge:Si, impurity states, optical spectra and microhardness meas. 2-35971  
 Ge:Te, crystalline and amorphous, Mossbauer study of disorder 2-41238

## elemental semiconductors continued

- Ge:Zn, second impurity level, activation energy, random field effects 2-51124  
 Ge/Pd/Si/(111)Si system, kinetics of solid-phase heteroepitaxy 2-51036  
 Ge/Si(111) system, pseudomorphic struct. at interface, high energy ion scatt. study 2-12938  
 Ge-GaAs (100) interface, atomic and elec. struct. 2-12923  
 Ge-GaAs (111) and (111) interfaces, electronic struct., EHT calc. 2-8854  
 Ge-GaAs abrupt (110) interface, geometry 2-12920  
 Ge-GaAs eutectic alloy, thermo-EMF and thermal cond., temp. depend. thermal quality factor 2-13108  
 Ge-GaAs heterojunction, local density of states, oscills. (*Russian*) 2-17146  
 Ge-GaAs n-n heterojunction, electron transport 2-8864  
 Ge-GeO<sub>2</sub> system, photomemory, structure defect form. 2-30929  
 Ge-InP ohmic contacts, contact resistivity meas. 2-13173  
 Ge-SiO<sub>2</sub>, dislocation configurations and misfit dislocations, in heterostructures with continuous and island films 2-5121  
 Ge(Li) coaxial detectors, charge losses in sensitive film near-surface region (*Russian*) 2-19873  
 Ge(Li) detector, efficiency calibration at short source-to-detector distance 2-24490  
 Ge(111), Cl chemisorption config. study, cluster model and EHT method 2-8708  
 He, LEED study of clean high Miller index surfaces 2-50972  
 In, magnetic-dipole hyperfine struct. 2-7663  
 In<sub>2</sub>O<sub>3</sub>/BeO:SiO<sub>2</sub>/p-Si, heterojunction solar cell, effects of absorbed H<sub>2</sub>O, trap-assisted tunnelling model 2-52344  
 In<sub>2</sub>O<sub>3</sub>-SnO<sub>2</sub>/Si photovoltaic junction, current-voltage characts. 2-8899  
 In<sub>2</sub>SnO<sub>3</sub>-Si solar cells fabrication using ion beam milling/sputter deposition and low pressure oxide growth process 2-37230  
 In<sub>2</sub>-Sn<sub>2</sub>O<sub>3</sub>-n-Si solar cells, stability 2-37417  
 Mo-Si contacts, P ion implantation effects 2-8531  
 Mo, Ge<sub>1-x</sub>, amorphous film, elec. transport and struct. 2-40913  
 n-Ge:As(Sb), ballistic field pulse scatt., mag. field effects 2-50943  
 Ni-n-Si, Schottky barrier diodes, temp. anomalies 2-13185  
 P, amorphous, defects, theoretical study 2-1859  
 P, amorphous, obs. of bound exciton and distant pair resonances 2-17370  
 P, amorphous, time-resolved luminesc. meas. 2-46735  
 P, amorphous red, localised states, photolum. and ESR studies 2-46739  
 P, amorphous semicond., sputtered, optical absorption meas. 2-13581  
 P, amorphous semiconductor, review 2-45037  
 P, black, electronic struct., tight binding approach 2-16985  
 P, black, orthorhombic and rhombohedral structures, press. depend. of lattice vibr., Raman scatt. study 2-16730  
 P sputtered, amorphous, optical absorption and struct. order 2-46802  
 PtSi-Si shallow Schottky barrier contacts, multilayer metallisation technique 2-1990  
 S:As, through oxide As implanted, recoil O implants and O thermal redistribution. 2-5133  
 n-Si MOSFET-type struct., electronic response to illumination, surface effects 2-17111  
 Sb, amorphous, defects, theoretical study 2-1859  
 Sb, amorphous semiconductor, review 2-45037  
 a-Si:H/a-SiC:H heterojunction solar cell with conversion efficiency more than 7.5% 2-27699  
 Se, amorphous, deep traps, activation energy, TSC meas. 2-13014  
 Se, amorphous, EXAFS study 2-16594  
 Se, amorphous, electroabsorpt., polarised light anisotropy 2-46544  
 Se, amorphous, electronic density of states calc., liq. metal model approx., theory (*Russian*) 2-1816  
 Se, amorphous, electronic density of states calc., liq. metal model approx., results (*Russian*) 2-8749  
 Se, amorphous, localised electron states, xerographic spectroscopy 2-45896  
 Se, amorphous, single polaron hopping contrib. to AC cond. 2-40903  
 Se amorphous film, glass transition temp. depend. on heating rate and ageing 2-12756  
 Se, amorphous film, monostable switching, microwave noise 2-13146  
 Se, amorphous film, photostruct. fatigue 2-21624  
 Se amorphous film, Raman scatt. study 2-5683  
 Se amorphous film, spectral memory of electron work function 2-17143  
 Se amorphous film, vapour deposited, optical loss as meas. of crystallinity 2-36724  
 Se, amorphous films, crystn., elec. cond. study 2-45038  
 Se amorphous films, influence of history on spherulitic crystn. 2-51820  
 Se amorphous layers, electroradiographic, quantum yields (*German*) 2-43118  
 Se, band edges, press. depend., relativistic ab initio calc. 2-45824  
 Se, effect of struct. transform. on viscosity 2-8655  
 Se film, amorphous, localised states, optical DLTS meas. 2-45899  
 Se film, amorphous, vacuum-evaporated, X-ray radial distrib. function anal. 2-16972  
 Se film, amorphous to crystalline transition, thickness depend. 2-40720  
 Se film, discontinuous struct., mass transport effects 2-45781  
 Se glass, inelastic props. at very low freq. 2-45360  
 Se, glassy,  $\gamma$ -irrad., struct. relax. 2-21036  
 Se, glassy, transient hole transport meas. 2-26389  
 Se, hexagonal single crystal, photoconductivity anisotropy in polarised light, 0.53 to 0.72  $\mu$ m (*Russian*) 2-13118  
 Se, hexagonal single crystal, anomalous photoconductivity at 77K (*Russian*) 2-13119  
 Se, hexagonal single crystal, rest photocond. (*Russian*) 2-13121  
 Se, lattice thermal cond., contrib. of low freq. longitudinal phonons 2-45651  
 Se, liquid, photoconductivity 2-40960  
 Se, photoconductivity and relaxation, barrier model anal., temp. and light intensity depend. 2-36096  
 Se, relativistic ab initio valence band and conduction band levels 2-35930  
 Se, single crystal, freq. depend. of cond., noise and photoresponse 2-13080  
 Se thin film, bend-contour arrangement and bend geometry, electron microscope study 2-50491  
 Se, trigonal and monoclinic, phonon dispersion from single vibr. pot. 2-50792  
 Se:Ti, In, liq. elec. cond. and thermoelectric power 2-51165  
 Se-Te bilayer structural changes by laser writing 2-993  
 Si 2-36123  
 Si 2-37268  
 Si, 1/f noise of thermal and hot charge carriers 2-26456



## elemental semiconductors continued

- Si (001) MIS transistors, cyclotron resonance of inversion layers 2-51468  
 Si (001)2×1 surface, electronic struct., surface photovoltage spectroscopy 2-8845  
 Si (100), low energy Ar ion bombard. damage, Rutherford backscatt. study 2-36750  
 Si (100) inversion layer, metallic cond., temp. depend., above mobility edge 2-13190  
 Si (100) inversion layer, thermally activated cond. by electrons excited above mobility edge 2-13191  
 Si (100) inversion layer, infrared conductivity of electrons, impurity effects 2-51315  
 Si (100) inversion layers, determ. of valley splitting 2-30971  
 Si (100) MOS inversion layers, transverse and Hall conds., temp. depend. under strong mag. fields 2-21686  
 Si (100)-MOS, Anderson localisation in two-dimension, precursor effect 2-21548  
 Si (100)-SiO<sub>2</sub> interface, energy structure, density of states, tight binding anal. 2-21646  
 Si (100)-SiO<sub>2</sub> interface Auger LVV line shape, 2-22124  
 Si (111), nitridation by N atoms, LEED, AES, desorption, and mass spectra meas. 2-17757  
 Si (111), oxidation, catalytic action of Au, AES, EELS, and ion depth profiling 2-13836  
 Si (111), polished, diffuse X-ray scatt. 2-1713  
 Si (111) and (100) surfaces, diffusive mass transfer 2-50916  
 Si (111) surface, spin polarisation and atomic geometry 2-40657  
 Si (111) surface steps, electronic struct., finite cluster studies 2-40990  
 Si (111) thin film, vacancy electronic levels 2-30827  
 Si (111)/Au interface, AES, EELS, LEED and depth profiling study, UHV conditions 2-21446  
 Si (111)-Ag interface, struct. and electronic props., LEED, photoemission and Auger meas. 2-21448  
 Si (111)-In(Ge), interface form., surface reconstruction 2-46112  
 Si (111)-7×7 surface, atomic and electronic struct. 2-13157  
 Si (111)(1×1):As(B) surfaces, highly doped, laser annealing prep., electronic props., photoemission study 2-8847  
 Si (111)(2×1), surface states, angle-resolved photoemission study 2-1984  
 Si (111)(2×1)-(7×7) surface reconstruction transitions, thermodynamic theory 2-1719  
 Si, A-centres, field depend. of thermal activation energy, electron captive cross sections and relax. time, using capacitance transient spectroscopy 2-45887  
 Si, acoustic phonon-hole interactions, transition rates, deformation-potential scattering theory calc. 2-21578  
 Si, adsorption of Bi, sticking coeff., first adlayer struct. influence 2-45733  
 Si, amorphous, bibliographies 1965-1980 2-22625  
 Si, amorphous, bipolaronic ground-state and dangling-bond clusters 2-40846  
 Si, amorphous, CF<sub>4</sub> plasma etching 2-36798  
 Si, amorphous, CVD growth, struct., optical, and elec. props. 2-40274  
 Si, amorphous, DC hopping cond., Mott T<sup>-1/4</sup> law from rate eqn. formalism 2-13071  
 Si, amorphous, dangling bonds defects, g-values of ESR signal 2-2134  
 Si, amorphous, dangling bond site dehybridisation, light-induced metastable states 2-21497  
 Si, amorphous, defects, localised states, Staebler-Wronski effect, Meyer-Neldel rule 2-40837  
 Si, amorphous, dopant level depths 2-40845  
 Si, amorphous, ESR studies, review 2-31284  
 Si, amorphous, electrical cond. and thermoelec. power 2-40917  
 Si, amorphous, electrodeposition from SiHCl<sub>3</sub> solns. in aprotic solvents 2-27103  
 Si, amorphous, electron bombardment induced conductivity 2-13062  
 Si, amorphous, electronic density of states calc., liq. metal model approx., theory (*Russian*) 2-1816  
 Si, amorphous, electronic density of states calc., liq. metal model approx., results (*Russian*) 2-8749  
 Si, amorphous, electronic density of states, correlation effects influence 2-45815  
 Si, amorphous, electronic struct., CPA study 2-12959  
 Si, amorphous, energy gap determ. from optical meas. 2-13437  
 Si, amorphous, gap states and band tail absorption, direct meas. by const. photocurrent method 2-1954  
 Si, amorphous, glow discharge film, density of states, MOS struct. capacitance determ. 2-51076  
 Si, amorphous, HF plasma-ion sputtered, struct. parameters 2-40709  
 Si, amorphous, hopping cond. mechanism in strong elec. field 2-26387  
 Si, amorphous, hot carrier relax., optical picosecond study 2-46529  
 Si, amorphous, ion implanted, refractive index, thermal annealing effects 2-51537  
 Si, amorphous, K, Rb, and Cs atom diffusion 2-45624  
 Si, amorphous, laser-induced metastable states 2-45895  
 Si, amorphous, molecular orbital selfconsistent field calc. 2-45814  
 Si, amorphous, national photovoltaic program 2-37342  
 Si, amorphous, new fabrication technologies 2-46923  
 Si, amorphous, optical gap and refractive index (*French*) 2-9211  
 Si, amorphous, p<sup>+</sup>-i-n<sup>+</sup> junction, injection electroluminesc. and photoluminesc. 2-46769  
 Si, amorphous, p-type hydrogenated, for solar cells 2-37343  
 Si, amorphous, pattern laser annealing by pulsed laser 2-17578  
 Si, amorphous, photolum., influence of excitation density and n-type doping 2-46734  
 Si, amorphous, photovoltaic devices, device physics and optimum design 2-46076  
 Si, amorphous, plasma deposited and CVD coatings, ion implantation, elec. cond. and photoluminesc. 2-40905  
 Si, amorphous, prep. by ion implantation, optical reflectivity 2-17436  
 Si, amorphous, press. induced metal-semiconductor transitions 2-40790  
 Si, amorphous, props. 2-40772  
 Si, amorphous, rate of CW laser induced solid phase epitaxial regrowth 2-21451  
 Si, amorphous, solar cell, p-i-n struct., stability 2-42003  
 Si, amorphous, solar cells, materials, assessment, internal field, hole transport and lifetime 2-42010  
 Si, amorphous, solar cells, industrialisation 2-42011  
 Si, amorphous, time resolved optical spectroscopy, review 2-46732  
 Si, amorphous, transition temp. and heat of crystn., DSC determ. 2-8435  
 Si, amorphous, trap-controlled dispersive transport and exponential band tails 2-40964

## elemental semiconductors continued

- Si, amorphous, vacuum deposited coating, annealing, EPR and TEM study 2-26244  
 Si, amorphous and crystalline, positron annihilation studies using Doppler broadening techniques 2-51739  
 Si, amorphous film, crystallisation, atomistic model 2-50549  
 Si amorphous (film), laser crystallisation (*French*) 2-16970  
 Si, amorphous film, plasma CVD (*Japanese*) 2-13654  
 Si amorphous film, prep. by CVD, elec. props. 2-2446  
 Si amorphous film on Si<sub>3</sub>N<sub>4</sub>/glass substrate, crystallisation as function of CW laser scan speed 2-50707  
 Si amorphous film on SiO<sub>2</sub> crystn. by CW laser irradi. 2-51013  
 Si amorphous films, compositional and structural characterisation techniques 2-45043  
 Si amorphous films, evaporated and sputtered, annealing and hydrogenation 2-45771  
 Si, amorphous films, explosive crystn. in solid and liq. phases 2-40269  
 Si amorphous films deposited on substrates, using non-equilibrium plasma jet 2-51826  
 Si, amorphous implanted, phase transitions produced by pulsed laser or electron irradi. 2-45283  
 Si amorphous layer induced by UV laser pulse, laser induced oxidation via O trapping 2-5975  
 Si amorphous p-i-n junction, drift type photovoltaic effect 2-46107  
 Si amorphous RF sputtered coating, photocond., optical and EPR props. 2-40722  
 Si, amorphous solar cell, computer simulation 2-52342  
 Si, amorphous solar cells, state of the art review 2-42009  
 Si, amorphous thick film, conductivity as a function of spin conc. 2-40902  
 Si, amorphous thin-layers production and appls. (*German*) 2-46943  
 Si, amorphous-crystalline transition, thermodynamic criterion 2-45569  
 Si, angle resolved UV photoemission study of (111) 7×7 and 1×1 surfaces 2-22149  
 Si annealing, IR spectroscopy appls. 2-36641  
 Si, As<sup>+</sup> implanted, ion beam annealing 2-50719  
 Si, Auger recombination at low temp. 2-40931  
 Si avalanche photodetectors, crystal defects, electron channelling imaging with SEM 2-12605  
 Si avalanche photodiodes, triggered avalanche detection of IR photons 2-23724  
 Si, axially channelled MeV electrons, transitions between bound states 2-25954  
 Si,  $\alpha$ -particle damage, X-ray diff. study 2-40445  
 Si,  $\alpha$ -radiation defects in p<sup>-</sup>n diodes 2-40447  
 Si, B-defect form. and growth, thermodynamic model 2-50630  
 Si back surface field solar cells, theory 2-47493  
 Si, band struct. calc. using nonlocal density approx. to exchange and correl. 2-12965  
 Si, band structure and cryst. struct., LCAO SCF ab initio HF calc. 2-35929  
 n-Si, band-gap narrowing, impurity conc. depend. 2-1821  
 Si barrier hydrogenated amorphous, in photosensitive Josephson junction 2-31073  
 Si, bent crystal, dynamic diff. focusing of X-ray plane wave 2-1371  
 Si bicrystals growth and characterisation for solar cells 2-17618  
 Si, CVD, solar cell appl. 2-22177  
 Si CVD films, polycryst., elec. props., depend. on grain size and impurity doping conc. 2-30981  
 Si, CVD from SiCl<sub>4</sub>-H<sub>2</sub>-N<sub>2</sub> system, rate-determ. reactions and surface species 2-51824  
 Si, CVD from SiHCl<sub>3</sub>-H<sub>2</sub>-N<sub>2</sub> system, rate-determ. reactions and surface species 2-51824  
 Si, CVD under reduced pressure in hot-wall reactor, equilib. and kinetics 2-46942  
 Si candidate sheet materials for solar cells 2-37298  
 Si, carrier density, deformation potential constants, Hall effect anal. 2-21609  
 Si, carrier lifetime profile induced by ion implantation, determ. using MOS struct. 2-51210  
 Si, carrier recombination at grain boundaries 2-1924  
 Si, cathodoluminescence imaging 2-31564  
 Si, channelled electrons and channelling radiation, energy levels 2-25955  
 Si, channelling of As ions, roles of electronic and nuclear stopping 2-8549  
 Si, channelling of electrons, ang. distrib., quantum states preferential population effect 2-21196  
 Si, chemical etching and cleaning procedures 2-2597  
 Si, chemical etching and cleaning procedures 2-9437  
 Si chips, cell for chem. etching 2-27311  
 Si, climb of dissociated dislocations 2-25892  
 Si concentration solar cells operating temp. effects on electrical performance 2-42016  
 Si concentrator solar cells, process optimisation and production experience 2-27677  
 Si concentrator solar cells, behaviour between 50 and 500 suns 2-27680  
 n-Si, cond. in strong alternating elec. fields 2-30903  
 Si, conduction and valence bands, donor impurities effect, partial wave anal. 2-51081  
 n-Si, conventional and neutron doped, piezoresist. and Hall coeff. meas. 2-30896  
 Si counters, laser-doped Li contacts 2-19851  
 Si, covalent crystals, lattice energy, electron-gas functional theory 2-1446  
 Si covalent semiconductor, relevance of nonlinear screening 2-13031  
 Si crucible recharging method, used for solar cells 2-51796  
 Si, cryst., electron irradi., coherent bremsstrahlung, planar channelling radiation, band struct. 2-13584  
 Si crystal, channelling length of high energy positrons 2-35558  
 Si crystal, creep law 2-35578  
 Si, crystal, distorted, planar dechannelling of GeV particles 2-21191  
 Si crystal, electron backscattering, anisotropy formation depth 2-35545  
 Si crystal, positron transmission anomaly, model 2-12643  
 Si crystal growth, high-rate by low angle cryst. growth 2-27076  
 Si crystal growth, wide ribbon used for solar cell manufacture, crucible assembly 2-46906  
 Si crystal purity in melt growth maintained using refractory liners 2-46907  
 Si crystal whisker, thermooanemometer sensor for low flow speed meas. 2-25462  
 n-Si crystals, electron scatt. by clusters, Hall effect and magnetoresist. study 2-26415



**elemental semiconductors continued**

- Si crystals, thermal props. by photoacoustic spectroscopy 2-21241  
 Si crystals, Czochralski-grown, thermally induced microdefects 2-36778  
 Si, current research trends 2-14990  
 Si Czochralski crystal., elec. characterisation of cryst. defects and O<sub>2</sub> using gate controlled diode 2-26488  
 Si, Czochralski grown, heat treated, O precipitation, C-O nucleation centres, IR spectra study 2-50861  
 Si, Czochralski grown, internal gettering centres and SiO<sub>x</sub> precip. nucleation 2-40424  
 Si, Czochralski grown, O<sub>2</sub> precip. 2-51918  
 Si, Czochralski grown, stacking faults and oxide microdefects 2-16660  
 Si, Czochralski-grown, high temp. annealed, octahedral precipitates 2-2514  
 Si, Czochralski-grown, thermally induced luminesc. centres 2-46666  
 n-Si, DLTS spectrum charges due to electron irradi. 2-17012  
 Si, dechannelling from secondary defects, TEM and MeV He<sup>+</sup> channelling study 2-16695  
 n-Si, deep centres introduced by Ar ion bombardment 2-30826  
 Si, deep impurity levels, cluster model, EHT calc. 2-8767  
 Si, deep level luminesc. spectra and decay lifetime meas., scanning cathodoluminesc. microprobe system 2-28943  
 Si, defect accumulation due to ion irradi., influence of cryst. struct. state 2-16689  
 Si, defect creation and recomb. lifetime due to high energy and  $\gamma$ -irradiation 2-50715  
 Si, defect formation during high-temp. inert gas annealing 2-30460  
 Si, defect investigations, sensitivity of EBIC technique 2-1482  
 Si, defect structure by high resolution electron microscopy 2-25888  
 Si, deformed, dislocation relax. study 2-25891  
 Si dendritic web, wide ribbon growth, used for solar cell manufacture 2-46908  
 Si, density of states near bound edge, donor impurities effect 2-17008  
 Si, denudation zone and internal SiO<sub>2</sub> nucleation control, role of stabilised back-surface damage 2-12760  
 Si, deposition from melt (*French*) 2-13665  
 Si detector for <sup>210</sup>Pb chronology 2-17936  
 Si, diffusivity of O during steam oxidation 2-45621  
 Si diode, cryogenic thermometry 2-3583  
 Si diode neutron dosimeters, annealing effect on response 2-49249  
 Si, directional Compton profiles in impulse approx., exact exchange Hartree-Fock calcs. 2-2364  
 Si, dislocated, diffusion of Au, kick-out mechanism 2-50924  
 Si, dislocation core struct. calcs. 2-26330  
 Si, dislocation free in surface barrier detectors, cluster nonuniform distrib. effects (*Russian*) 2-21144  
 Si, dislocation mobility changes during slip direction inversion (*Russian*) 2-5128  
 Si, dislocation nucleation process as point defect condensation 2-25878  
 Si, dislocation states, optical excitations, photocond. meas. 2-51232  
 Si, dislocation-free Czochralski and float-zone crystals., yield strength 2-1548  
 Si, dislocation-free single crystal, neutron irradi. and heat treatment effect on microdefects 2-5159  
 Si, dislocations, EBIC contrast and resolution 2-30467  
 Si, dislocations, elec. and dynamic props. 2-40834  
 Si, dislocations, generation and multiplication, in situ X-ray topographic studies at elevated temps. 2-40391  
 Si disordered surface, O<sub>2</sub> adsorp. 2-26215  
 Si, donor local field corrections to binding energies 2-21536  
 Si, doped poly, composite metallisation of Al, electromigration 2-21404  
 Si, double crystal gamma ray diffractometry 2-30369  
 Si, effect of heavy doping on elastic consts. and device implications 2-45315  
 Si, elastically bent, multiple diffr. lines in synchrotron X-ray topographs 2-40223  
 Si, elastically bent crystals, with uniformly distributed defects, anomalous transmission of X-rays (*Russian*) 2-40224  
 n-Si, elec. cond., effect of effective mass change due to uniaxial strain 2-21589  
 Si, electric carriers and heat at high electronic temp. 2-8809  
 n-Si, electrical behaviour of individual screw and 60° dislocations 2-26397  
 Si electrodeposition at temps. above melting point 2-9296  
 Si electrodeposition on graphite 2-9292  
 n-Si electrodes in aqueous soln. photoelectrochemical cells, techniques for stabilisation 2-14094  
 n-Si, electroless Ni plating, appl. to solar cells 2-46955  
 Si, electron and hole mobilities as function of dopant conc. and temp. 2-51168  
 Si, electron diffusion coeff. 2-21599  
 Si, electron energy deposition profile, calc. by Monte Carlo method (*French*) 2-50726  
 p-Si, electron irradi., defect state photoionisation cross-section photocapacitance study 2-17026  
 p-Si, electron irradi., Hall mobility, pot. relief analysis 2-5420  
 Si, electron irradi., minority carrier lifetime meas. 2-46024  
 Si, electron irradiated, defects study by electron microscopy 2-45274  
 Si, electron irradiated, drift mobility, temp. depend. 2-8798  
 Si, electron irradiated, form. probability of separated Frenkel pairs 2-35541  
 Si, electron irradiated, TEM and channelling anal. of defects 2-25937  
 n-Si, electron mobility, 5 to 80K, phase shift calc. 2-1914  
 Si, electron pulse, super dense, irradi., positron annihilation study 2-17569  
 n-Si, electron pulse irradi., transient process kinetics 2-36060  
 Si, electron-hole droplet nucleation, role of shallow impurities and defects, photolum. study 2-2339  
 Si, electron-hole liq. props., stress depend., photoluminesc. study 2-40799  
 Si, electron-hole plasma, non-equilib., dynamical props. 2-51675  
 Si, electronic struct., first principles calc. 2-30793  
 Si, electronic struct., quantitative disorder effect 2-21495  
 Si, electronic struct. and total energy, self consistent local pseudopot. method 2-45823  
 Si, electronic struct. of bulk and surface vacancies, short- and long-range-order effects 2-13005  
 Si, electrons in planar channel, band struct. and level populations 2-25962  
 Si, electrons undergoing channelling, band struct. 2-21199  
 Si, electrorefining, semipermeable anode 2-41534

**elemental semiconductors continued**

- Si, electrowinning from solutions of SiO<sub>2</sub> in NaF/CaF<sub>2</sub> and other fluoride eutectics 2-9295  
 Si, energy gap, impurity depend. 2-12964  
 Si epitaxial film deposition in CVD reactor, transients 2-22172  
 Si epitaxial growth, on BP-Si substrates, REED 2-35907  
 Si, epitaxial layer, impurities, photoluminescence study 2-17521  
 Si epitaxial layer solar cell performance under electron irradi. 2-37280  
 Si epitaxial layers, effect of defects on voltage breakdown of p-n junctions (*Russian*) 2-2019  
 Si epitaxial layers, IR reflectance spectra for layer thickness meas. 2-22106  
 Si epitaxial layers, screw and circular structures 2-8521  
 Si epitaxial layers on Si substrate, elec. props. 2-41029  
 Si, evaluation using electron-hole drops (*Japanese*) 2-51696  
 Si, excited states at deep centres, nonradiative recomb. processes 2-8770  
 Si, extrinsic, elec. parameter calc. using FORTRAN program, Hall effect, dopant states and carrier mobility 2-1903  
 Si extrinsic focal plane arrays, influence of material props. 2-15227  
 Si Fabry-Perot interferometer appl. as variable coupler, uniform transmission of FIR lasers 2-3613  
 Si Fabry-Perot interferometer, optical tuning by pulsed Nd:YAG 1.06  $\mu$ m laser 2-33618  
 a-Si, field effect and substitutional doping 2-45226  
 Si filamentary cryst., microplasticity, cyclic deform. 2-50746  
 Si film, 2D grating graphoeptaxy from Si-Au supersaturated soln. 2-41535  
 Si film, amorphous doped, deposition mechanism in SiH<sub>4</sub> plasma 2-31639  
 Si, film, CW laser-recrystallised material, for semiconductor device manufacture 2-51056  
 Si film, chemical thinning by etching 2-17763  
 Si film, crystn. front periodic motion during beam annealing 2-5313  
 Si film, encapsulated, zone-melting recrystn. on SiO<sub>2</sub>, morphology and crystallography 2-51012  
 Si film, grain boundaries, TEM and EBIC obs. 2-30472  
 Si film, implanted, CW laser-induced solid phase epitaxy dynamics, time-resolved reflectivity meas. 2-45791  
 Si film, on SiO<sub>2</sub> substrate, laser-induced melt dynamics, blackbody emission obs. 2-1595  
 Si film, polycryst., low temp. growth by UV laser photodissociation of SiH<sub>4</sub> 2-51823  
 Si film, polycryst., on SiO<sub>2</sub>, grain growth by CW scanning electron beam annealing 2-12925  
 Si film, polycryst., recrystn. using laser beam profiling technique 2-39686  
 Si film, semi-insulating polycryst., elec. cond., O content depend. 2-5472  
 Si film, sputtered, Ar determ. by energy dispersive X-ray fluoresc. spectrosc. 2-31956  
 Si film deposition by pyrolytic decomposition of SiF<sub>2</sub> gas 2-41524  
 Si film deposition parameters from Si-H discharge plasmas 2-46944  
 Si film on sapphire, implanted, laser annealed, dislocations, twins 2-25893  
 Si film on sapphire, thermally assisted pulsed laser annealing, residual strain 2-51060  
 Si film prep. by plasma and low press. CVD in horizontal reactor 2-22175  
 Si films, CVD, amorphous and polycryst., cond. mechanism 2-46171  
 a-Si films, heavily doped, glow discharge, AC conduction 2-45989  
 Si films, polycrystn., continuous growth by CVD 2-46933  
 Si fine line shadow masks for deposition of solar cell grids 2-37288  
 p-Si, float zone, in CCD imagers, deep levels study 2-12996  
 Si, float zone, oxidation, strong orientation depend. of formation of surface stacking faults 2-50668  
 Si, float-zone cryst. growth, under mag. field bias, high resistivity 2-9269  
 Si for low cost solar arrays, SiH<sub>4</sub> pyrolysis in free-space reactor 2-36805  
 Si, frequency and wavevector dependent diffusion coefficient of electrons from Monte Carlo calculations 2-46000  
 Si from SiH<sub>4</sub> through plasma deposition 2-36796  
 Si, funneling, alpha-particle-induced field and enhanced collection of carriers 2-50720  
 Si, gamma-ray irradi., uniaxial deform. influence on nonequilibrium carrier recombination 2-26410  
 Si, gettering and redistrib. of O, 300 to 500°C 2-8536  
 a-Si, glow discharge, fatigue effect in luminesc. at low temp. 2-46755  
 Si grating-type solar cell design and anal. 2-37339  
 Si, growth from SiH<sub>4</sub> in cold wall CVD systems 2-9288  
 Si,  $\Gamma$ -A electron-phonon and hole-phonon scatt. matrix elements, rigid pseudopotential model 2-50812  
 Si,  $\gamma$ -irrad., defect levels, electron thermal emission rate, TSC study 2-21603  
 poly-Si, H<sub>2</sub> heat treatment for enhancement of minority carrier diffusion length for low-cost solar cells 2-27704  
 Si, harmonic and anharmonic props. 2-45421  
 Si, heat pulse propagation in long crystals 2-5288  
 Si, heat-exchanger method of crystal growth, using no moving parts 2-51794  
 n-Si, heavily doped, elec. resist., partial wave theory 2-13077  
 Si, heavily doped, electron irradiated, defect formation 2-21180  
 Si, heavily doped, nondegenerate minority-carrier concentration and recombination current 2-8805  
 p-Si, heavily doped, thermal breakdown 2-36524  
 Si, heavily implanted layers, pulsed thermal annealing 2-50682  
 Si, heteroepitaxial, characterisation 2-45763  
 Si, heteroepitaxial growth on MoSi<sub>2</sub> by electron beam evaporation 2-1781  
 Si, high-density electron-hole plasmas, thermodiffusion 2-30918  
 Si high-resistivity n<sup>++</sup> solar cells, performance under 1 MeV electron irradi. 2-37281  
 Si, hole mobility and Hall coeff. factor, temp. depend. 2-46034  
 Si, hot carrier ballistic transport, displaced Maxwellian formulation 2-46002  
 p-Si, hot carrier cond., transient regime, Monte Carlo and Boltzmann eqn. iterative solns. 2-46003  
 Si hot carrier p-n junction, current oscils. 2-17154  
 Si, hot electron emission under pulsed laser excitation 2-46873  
 Si, hot-electron noise calc. at 77K, Monte Carlo method 2-46089  
 Si, hot-pressed, tilt boundary, TEM and electron diffr. study 2-30470  
 Si, hydrodynamics of a dense plasma created during laser annealing pulses 2-2382  
 Si ICs, blood compatibility of components and materials 2-9890



## elemental semiconductors continued

- p-Si, IR absorpt. saturation, expt. study 2-49833  
 Si, IR detector materials, conf., Washington, DC, USA (April 1981) 2-14973  
 Si, IR laser radiation scatt. study of local inhomogeneities 2-22033  
 Si, imaginary part of dielec. absorption, direct calc. 2-21523  
 Si, immersion ellipsometry for refr. index and extinction coeff. meas. on oxidizable substrates 2-19155  
 Si, impact ionisation, band struct. depend. 2-45994  
 Si, implanted, macroscopic electron channelling pattern for laser induced recrystallisation monitoring 2-5164  
 Si, impurities and defects, effect on semicond. technology, book 2-15  
 Si, impurity contents analysis using neutron activation (*Rumanian*) 2-27504  
 Si, impurity diffusion, kick-out mechanism, analytical soln. 2-26138  
 Si, impurity levels, impurity pair effects, 2-D finite element analysis 2-5114  
 Si, incoherent (211) twin boundary struct., TEM obs. 2-30471  
 Si, independent control of dopant profiles in As-B structures by pulsed laser processing 2-50689  
 Si indirect exciton ground state Stark shift and splitting 2-21505  
 Si, influence of O<sub>2</sub> on wear 2-9433  
 Si ingot slicing with internal diameter saw, low-cost solar cell technology, economics 2-37363  
 Si ingot-casting process, Heat Exchanger Method, solar cell fabrication appl. 2-37352  
 Si integrated p<sup>+</sup>-n junctions under forward bias, leakage current degradation obs. 2-26487  
 Si, interband Faraday and Kerr effects anal. 2-26874  
 Si, intervalley diffusion of hot-electrons 2-45999  
 Si, intrinsic carrier conc., temp. depend. energy gap, Fermi level 2-16986  
 Si, inversion layer, 2-D electron localisation, electron-electron interaction, review 2-40987  
 Si, inversion layer, velocity overshoot, hot electron submm wave cond. study 2-46141  
 Si inversion layer in strong mag. field, temp. depend. Hall cond., mobility edge model 2-40933  
 Si inversion layer MIS solar cells, electrostatic effects 2-37418  
 Si inversion layers, 2-D Thomas-Fermi screening and level broadening 2-51099  
 Si inversion layers, 2D electron gas, freq. depend. memory function elec. cond. meas. 2-51318  
 Si inversion layers, electron transport in high mag. fields 2-21685  
 Si inversion layers, logarithmic corrections to two-dimensional transport 2-41018  
 Si, inversion layers, magnetoconductance and weak localisation 2-21608  
 Si inversion layers, remote polar phonon scatt. for hot electrons 2-30972  
 Si inversion layers, small-signal velocity overshoot obs. by broadband sub-MM wave spectroscopy 2-36148  
 Si inversion layers, two-dimens. electron system, mag. field induced Wigner glass 2-40988  
 Si, ion implantation, amorphisation, lattice displacement criterion 2-45221  
 Si, ion implantation by N ions, Si<sub>3</sub>N<sub>4</sub> form., AES and EELS studies 2-40422  
 Si, ion implantation damage, isothermal annealing using thermal radiation source 2-16663  
 Si, ion implanted, amorphous, ultrashort pulse laser annealing 2-45266  
 Si, ion implanted, annealing in plasma of pulsed gas discharge 2-40918  
 Si, ion implanted, directional distrib. of Burgers vectors of dislocation loops 2-16648  
 p<sup>+</sup>-Si, ion implanted, isothermally annealed, carrier mobility and conc. profiles 2-51170  
 Si, ion implanted, laser annealing, time-resolved Raman scatt. and transmission meas. 2-46616  
 Si, ion implanted, laser annealing, thermally enhanced 2-50695  
 Si, ion implanted, laser and electron beam annealed, deep levels, DLTS study 2-51105  
 Si, ion implanted, materials alterations possible with laser annealing 2-5142  
 Si, ion implanted, pulsed electron beam apparatus and annealing 2-12625  
 Si, ion implanted, residual defects after pulsed laser annealing obs. 2-50683  
 Si, ion implanted, solute trapping after laser annealing 2-45262  
 Si, ion implanted, supersaturated alloy form. during epitaxial regrowth, substitution solubility limitations 2-45261  
 Si, ion implanted, threshold energy density for epitaxial recrystn. 2-45260  
 Si, ion implanted atomic defect chain configuration identification 2-25890  
 Si, ion implanted laser annealed, defect photoluminesc. 2-46667  
 Si ion implanted layers, interference of As and O<sub>2</sub> diffusion 2-50928  
 Si, ion implanted wafer, impurity and local damage distrib. using channelled He microbeam 2-45299  
 Si, ion scatt., 0.1 to 2 MeV, struct. sensitive surface peak, Monte Carlo simulation 2-13614  
 Si, ion-implanted, surface state effects on laser annealing mechanism (*Russian*) 2-1981  
 Si, ionisation potentials and energy barriers estimation at hetero junctions (*German*) 2-12963  
 Si island growth on bulk fused SiO<sub>2</sub> by CO<sub>2</sub> laser annealing 2-45751  
 Si islands, laser crystallised on fused SiO<sub>2</sub>, microstrain, Raman scatt. study 2-45750  
 Si, islands, laser induced crystal growth, on amorphous substrates 2-51058  
 Si, Jahn-Teller distortion of A- and E-centres 2-1872  
 Si, LEED study of clean high Miller index surfaces 2-50971  
 Si, laser annealed, structural study 2-25925  
 Si, laser annealing, computer model of lattice temp., carrier conc. and temp. 2-45259  
 Si, laser annealing, metastable honeycomb model 2-40432  
 Si, laser annealing, rel. to LPE (*Japanese*) 2-5777  
 Si, laser annealing and crystallisation 2-1503  
 Si, laser annealing dynamics, transient Raman and optical transmission studies 2-2250  
 Si laser cyclotron resonance, Zeeman absorpt. 2-41205  
 Si, laser damage gettering and lifetime improvement appl. 2-12637  
 Si, laser enhanced etching in KOH 2-52068  
 Si, laser heated, nonlinear dynamic heat transport, carrier diffusion effect 2-2380

## elemental semiconductors continued

- Si, laser induced oxidation 2-22359  
 Si, laser-annealed polysilicon, on insulating layers, characterisation techniques 2-50699  
 Si, laser-induced amorphous, adsorpt. of O, expt. study 2-45268  
 Si, laser-induced solid-phase crystal growth investigation by time-resolved optical reflectivity 2-1800  
 Si, lateral epitaxy by seeded solidification on SiO<sub>2</sub> 2-5314  
 Si, lattice images of 30° partial dislocation cores 2-25889  
 Si, lattice temperature during pulsed laser annealing, Raman studies 2-31590  
 Si, lattice temperature meas. during pulsed laser annealing by time-depend. reflectivity 2-38650  
 Si, layer growth by CVD on liquid Sn coated graphite substrate 2-13657  
 Si layers, CW laser annealed, EBIC contrast rel. to residual defects, X-ray, TEM, and SEM obs. 2-30465  
 Si layers, grown in vac. stacking fault generation 2-50669  
 Si, liquid, structural modelling 2-40251  
 Si, liquid and solid, reflectance, temp. depend. 2-2210  
 Si liquid-solid interface, laser-induced crystn. study 2-45742  
 Si, live X-ray topography 2-1478  
 Si, local field effects and zone centre phonons 2-26006  
 Si, Lomer dislocation core struct. 2-45180  
 Si, low energy ranges, Z<sub>i</sub>-depend. 2-50728  
 p-Si, low resist., minority carrier diffusion length, heat treatment effect 2-46022  
 Si low-bandgap solar cell for 10-unit dichroic filter spectral splitter module 2-27571  
 Si, MBE, background and dopant impurities in film and film-substrate transition region, elec. transport 2-5145  
 Si, MBE films, dislocation density, growth conditions depend. 2-1785  
 Si MIS solar cell, AES study of stability 2-9654  
 Si MIS solar cells, potential advantages 2-37307  
 p-Si MISIM and induced back surface field solar cells 2-37416  
 Si MOS, two-dimens. system, weakly localised, mutual interactions, intervalley impurity scatt. effect 2-26382  
 Si, MOS inversion layers, Anderson localisation, Hall mobility study 2-51316  
 Si MOS struct., pre-breakdown field treatment effect on elec. props. (*Russian*) 2-2007  
 Si, MOS structures, oxidation in Cl-containing media, effect on electron/hole mobilities in inversion channels 2-51326  
 Si MOSFET, absorption of ballistic phonons by 2D electron gas 2-50809  
 Si MOSFET, energy loss of warm electrons at interface 2-46140  
 Si MOSFET, inversion layers, ballistic phonon absorption by 2D electron gas 2-51323  
 Si MOSFET, nonmetallic cond. in electron inversion layers at low temp. 2-17169  
 Si MOSFET, quantised Hall resist. meas. at liq. <sup>3</sup>He temps. 2-46136  
 Si MOSFET inversion layers, AC cond. in gap regions between Landau levels 2-51317  
 Si, MOSFET inversion layers, electron mobility, temp. and carrier conc. effects 2-51319  
 n-Si, MOSFET inversion layer, electron mobility, oxide charge, phonon and surface scatt. 2-51320  
 Si, mag. perception, influence of thermal neutron irradiation (*Russian*) 2-40441  
 Si magnetic-field-sensitive multicollector n-p-n transistors 2-33582  
 n-Si, many-valley semicond., Faraday effect in crossed elec. and mag. fields 2-17453  
 Si, masking oxide effect on diffusion 2-1670  
 Si, melting phenomenon and laser annealing 2-1522  
 Si, mono- and polycrystalline, As doping using laser-induced diffusion 2-16669  
 Si metal-oxide-semicond.-oxide-metal photodetector, high speed 2-48775  
 Si, metallurgical grade, semicrystalline material production solar cells 2-37296  
 Si, metallurgical grade, sheet growth using edge-supported pulling, for solar cells 2-36779  
 Si, metallurgical grade, substrate for epitaxial thin film solar cells, by heat exchanger method 2-42025  
 Si, microstructural changes in high electric fields 2-26066  
 p-Si, minority carrier diffusion length meas., evaluation of surface photovoltage method 2-30906  
 n-Si, multivalley semiconductors, transverse field stratifications (*Russian*) 2-26416  
 n-Si, multivalued distribution of electrons between equivalent valleys 2-51190  
 Si, N<sub>2</sub><sup>+</sup> ion implantation for self-aligned contact MOS technology 2-50676  
 Si n<sup>+</sup>-p diffused solar cell, effect of junction depth on performance 2-32070  
 Si n<sup>+</sup>-p-p<sup>+</sup> and p<sup>+</sup>-n-n<sup>+</sup> back-surface field solar cells, effect of high level conditions 2-37336  
 Si n<sup>+</sup>pp<sup>+</sup> solar cells, high-efficiency, fabrication and characts. 2-18052  
 Si n-i-p solar cells, computer model 2-37335  
 Si, n-type doping increase after Cl<sup>-</sup> and F<sup>-</sup> implantation 2-50684  
 Si, neutron activation anal. of metal contamination 2-50690  
 n-Si, neutron and 2 MeV electron damage, comparison by DLTS 2-8545  
 Si, neutron irradi., 1.0186 eV luminesc. centre symm. and nature 2-41418  
 Si, neutron irradi., deep level defect, ODMR study 2-31326  
 Si, neutron irradi. dislocation-free crysts., annealing influence on elec. and struct. props. 2-40440  
 n-Si, neutron irradiated, A-centre build up kinetics and recharge at defect clusters 2-35495  
 Si, neutron irradiated, carrier scatt. by defect clusters 2-21587  
 Si, neutron scattering struct. amplitude, meas. of 'rocking bands' at short wavelengths 2-35355  
 a-Si, new photovoltaic devices, review 2-46077  
 n-Si, non-equilib., hot-carrier diffusion phenomenon, theoretical non-Markovian approach 2-45996  
 n-Si, non-equilib. hot-carrier diffusion phenomenon, Monte Carlo approach 2-45997  
 Si, nonlinear screening of positive point charges, spatial dielec. function 2-21524  
 Si, nuclear optical pol., mag. impurities effect (*Russian*) 2-41230  
 Si on LiNbO<sub>3</sub>, SAW parametric oscill. 2-5297  
 Si on metallurgical grade Si, heat treatment effects 2-27548  
 Si on sapphire, low-density defect 2-45764  
 Si on sapphire, nonlinear transmission of intense laser pulse 2-5776



## elemental semiconductors continued

- Si, on sapphire substrate, laser annealing, electron-hole plasma theory 2-30917
- Si, open-tube diffusion of Al 2-12848
- Si, optical absorption meas. for pure and heavily-doped materials, 1.24 to 4.63 eV, polarization modulation ellipsometry solar cell performance 2-37385
- Si, optical props., calc. using first-principles electronic struct. 2-13442
- Si, out-diffusion of O, diffusion coeffs., O profiles, heat treatment effects 2-35740
- Si, oxidation, optically enhanced with visible laser light 2-27316
- Si, oxidation by ion implantation and laser irradiation 2-16675
- Si, oxidation by O<sub>2</sub>, model 2-22354
- Si, oxidation in plasma 2-47219
- Si, oxidation in RF generated O<sub>2</sub> plasma in press. range below 10 mTorr, SiO<sub>2</sub> form. 2-36989
- Si, oxidation in RF generated O<sub>2</sub> plasma at press. greater than 10 mTorr, SiO<sub>2</sub> form. 2-36990
- Si, oxidation kinetics in high press. pyrogenic steam 2-17749
- Si, oxidation of (111) surface, high resolution AES, SiO<sub>2</sub> spectrum shape 2-5973
- Si, P doping using P<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub> glass as dopant source, validity of etch rate determ. 2-12615
- a-Si P-I-N solar cells, effect of F on performance 2-37312
- a-Si P-I-N solar cells, field and light depend. effects, model 2-42018
- Si p<sup>+</sup>-n and n<sup>+</sup>-p diodes, dopant and trap conc. profiles meas. method junction capacitance techniques 2-50688
- Si, p<sup>+</sup>-n diode, neutron and electron irradiation effects on defect energy levels (*Korean*) 2-13002
- Si p<sup>+</sup>-n-n<sup>+</sup> concentrator solar cells, characterisation 2-27676
- Si, p<sup>+</sup>-n and n<sup>+</sup>-p junctions, breakdown voltage comparison (*Rumanian*) 2-8863
- Si p<sup>+</sup>-nn<sup>+</sup> structure, open circuit voltage, influence of surface conditions 2-18087
- Si p-i-n diode thermophotovoltaic cells recent developments in theory, fabrication and testing, high conversion efficiency design 2-32081
- Si p-i-n structure, homogeneously heated, injection effects 2-13177
- Si p-n junction, alpha particle irradiation, radiation defects 2-12647
- Si p-n junction, avalanche breakdown voltage, pressure depend. 2-30955
- Si, p-n junction, current fluctuations, during secondary breakdown 2-36133
- Si p-n junction, cut-off freq. meas. using chopped photon beam 2-41001
- Si, p-n junction, fabrication by laser irradiation, pulses 2-21668
- Si, p-n junction depths, impurity profiles, XFA 2-47414
- Si p-n junction solar cell, effective elec. field in n-type heavily doped emitter region 2-37213
- Si p-type multicomponent telescope for charged particle spectrometry and identification (*Russian*) 2-19872
- Si particle detectors, background noise caused by sea level cosmic rays 2-43672
- Si, periodic struct., elec. props. 2-17153
- Si, phonon freq. and lattice energy, first principles LCAO calc. 2-50794
- Si, phonon freq. and mode Gruneisen parameters, volume depend. 2-1572
- Si, phonon spectra, first principles calc., dielec. screening method 2-50793
- Si, phonon transmission, high freq., thermalisation and isotope scatt. 2-50944
- Si, phonon-free carrier interactions, phonon self energy, neutron diffraction study 2-50810
- Si, phonons, zone centre, ab initio calc., local field effects 2-50797
- n-Si photoanode, grain boundary and surface damage effects on stabilisation, rotating ring disc electrode studies 2-16932
- Si photoanodes, protection with photoelectrochemically generated polypyrrole films 2-47203
- n-Si photoanodes, stabilisation to surface corrosion in aqueous electrolyte with polypyrrole thin film 2-5971
- Si, photoelectric effects, lux depends. under surface and bulk Auger recomb. conditions 2-13133
- p-Si, photoelectric effects, anomalous decrease at short wavelengths 2-13135
- Si, photoelectrons, mean free path, kinetic energy depend. 2-36759
- Si, photoluminescence analysis, review 2-22089
- Si, picosecond laser annealing 2-25926
- n-Si, piezoresist. differences, electron scatt. mechanisms 2-17069
- Si, piezoresistance coefficients, graphical representation 2-36037
- p-Si, piezoresistance effect nonlinearity of diffused layers 2-36038
- Si piezoresistive fluid pressure transducers, Honeywell 200 PC Series, 0-1700 kPa in two ranges 2-23656
- Si planar transistor mag. induction transducers 2-28844
- Si plane-parallel plate, V-shaped pendellosung fringes associated with inhomogeneous bending 2-50480
- Si, plasma, inhibited electron-phonon coupling, pulsed Raman study 2-46582
- Si, plasma anodisation kinetics using multipole plasma source 2-47218
- Si, plasma deposited amorphous films, props. governed by plasma parameters 2-51041
- Si, plastic deformation, 300-600°C 2-40472
- Si, plastically deformed, dislocation-point defect interaction, rel. to elec. props. 2-45178
- Si, plastically deformed, radiative recomb. on dislocations, energy state in band gap 2-9186
- Si, point defects and disordered regions due to irradiation, magnetoresist. meas. 2-8826
- Si Polka Dot concentrator cell, high efficiency 2-52366
- Si, polycryst., deform. and recryst. 2-17709
- Si, polycryst., modification of grain boundaries by exposure to F<sub>2</sub> and O<sub>2</sub> 2-16656
- Si, polycryst., recrystallisation by CO<sub>2</sub> laser heating of SiO<sub>2</sub> 2-2441
- Si polycryst. film, on SiO<sub>2</sub> coated substrates, zone melting recrystallised, stress enhanced carrier mobility 2-46161
- Si polycryst. on SiO<sub>2</sub>, recrystallisation by dual electron beam processing, lateral seeding technique 2-46912
- Si, polycrystalline, carrier transport and recombination processes at grain boundaries under optical illumination 2-36105
- Si, polycrystalline, comparison of electrical conduction model with experiment 2-5400
- Si, polycrystalline, laser recrystallised, cond. enhancement by H<sub>2</sub> annealing 2-52058
- Si, polycrystalline, model for conduction using grain boundary mechanisms 2-5399

## elemental semiconductors continued

- Si polycrystalline, n and p-type, photocurrents and diffusion length new grain boundaries, interfacial recomb. vel. 2-51209
- Si, polycrystalline, potential barrier form. at grain boundaries following anneal 2-35514
- Si, polycrystalline, solar cells, grain size dependence of photovoltaic props. 2-22622
- Si, polycrystalline, solar cell, effect of grain boundaries, review 2-37414
- Si, polycrystalline, X-ray topography and photoresponse of grain boundaries, solar cell appls. 2-37402
- Si polycrystalline CVD layers, characterisation by X-ray diffraction 2-30772
- Si polycrystalline diffused p-n junction solar cells, grain boundaries effect in I-V characts. 2-52337
- Si polycrystalline film, Ge ion implantation effect on amorphization and recryst. 2-21474
- Si, polycrystalline film, on amorphous substrates, CW laser recryst. 2-2442
- Si polycrystalline film, surface stabilisation during laser recryst. 2-8722
- Si polycrystalline film production in H<sub>2</sub> medium, chemical process, appls. (*Bulgarian*) 2-46930
- Si, polycrystalline films, diffusion length meas. method based on photovoltaic conversion 2-5476
- Si polycrystalline films, ion implanted, laser beam annealed, Raman study 2-36726
- Si polycrystalline in MIS devices, grain boundary effects, capacitance, cond. 2-21679
- Si, polycrystalline RAD polysilicon sheets characterisation using SEM in EBIC mode 2-17091
- Si polycrystalline ribbon, high press. plasma deposition 2-41529
- Si, polycrystalline ribbons elaboration for solar energy conversion 2-22624
- Si polycrystalline sheet production by electrostatic spray process, solar cell fabrication 2-22631
- Si polycrystalline solar cell performance, effect of grain boundaries, energy-gap narrowing, trap-assisted recombination 2-37270
- Si polycrystalline solar cells, elec. and structural characts., effect of metallurgical grade Si additions 2-37351
- Si, polycrystalline solar grade, directional solidification technique 2-36849
- Si, polycrystalline thin film, pulsed laser recrystallisation, SEM technique 2-51057
- Si polycrystalline thin-film solar cells, progress and problems 2-37390
- Si polycrystalline wafer, bulk resistivity determ. by meas. of microwave reflectance modulation and wafer thickness 2-33574
- Si, polysilicon film growth on C substrates with pyrocarbon coatings, interface props. 2-51835
- p-Si, positronium states, fast neutron irradiation 2-1868
- Si powder, plasma sprayed, preparation and characterisation, for application as base material in solar cell fabrication 2-18074
- Si precipitation and nucleation of O 2-8621
- Si, proton bombarded, annealing IR spectroscopy and X-ray topography study 2-1531
- Si, proton interaction, heavy fragments energy spectra 2-25944
- Si, pulsed laser annealing, ambipolar excess carrier diffusion effects 2-5418
- Si, pulsed laser recrystallised on amorphous insulators, annular grain structures 2-1778
- Si, pulsed UV laser photochemical doping, solar cell prod. 2-12620
- n-Si, pulsed-laser irradiation, time-resolved optical transmission and refl. meas. 2-46636
- Si radiation counters, Au contact adhesion 2-49215
- Si, radiation damage simulation 2-30499
- Si radiative defect formation rate, charge depend., numerical estimate 2-16673
- Si, reactive ion beam etch rate and yield with Ar<sup>+</sup>-Cl<sub>2</sub> system 2-40443
- Si, recrystallisation of amorphous and small grained polycrystalline material 2-13756
- Si, refined metallurgical, single crystal and polycrystalline solar cells, AM1 efficiency study 2-14075
- Si reordered surfaces, struct., backscatt./channeling anal. 2-50965
- Si ribbon, edge defined film growth, twin boundaries, etching and TEM study 2-50662
- Si ribbon and sheet growth processes for low-cost solar cells 2-37306
- Si ribbon crystals, deposited from gas phase, growth and struct. 2-22154
- Si ribbon defects removal process, used for solar cells 2-52083
- Si ribbon growth, controlled by gravity feed 2-51793
- Si ribbon solar cells, conversion efficiency rel. to growth conditions and processing variables 2-37348
- Si, S-type diode, negative photocond. 2-41004
- p-Si, SCL current flow, hot holes and noise 2-51183
- p-Si, saturable absorption of high intensity CO<sub>2</sub> laser light 2-975
- Si Schottky barrier struts., reactively sputtered amorphous, effect of H on diode props. 2-17158
- Si Schottky barriers, image force effects on short wavelength photoresponse 2-220
- Si Schottky diodes, ion implanted, deep level distribution profiling system 2-51113
- Si, secondary electron emission, elastic and inelastic reflection 2-13600
- Si, secondary electron emission for ultrarelativistic electrons (*Russian*) 2-27034
- Si, seeds for growing single crystals by zone melting without crucible, dislocation density 2-41513
- Si, self-annealing implantation, elec. and struct. characterisation 2-50681
- Si, self-implanted amorphous layers, swept-line electron beam annealing 2-50713
- Si, self-interstitials and vacancies, absolute zero to melting temp., review 2-30461
- Si, semi-insulating polycryst., deposition in low pressure CVD reactor, growth kinetics 2-31632
- Si, semi-insulating polycryst., deposition in low pressure CVD reactor, O content 2-31633
- Si, semiconductor electrodes in photoelectrochemical cells, surface state role 2-14086
- Si, semicryst. solar cells 2-2789
- Si semicrystalline solar cell, fabrication, 17% AM1 efficiency 2-37273
- Si shallow junction solar cells, dependence of efficiency on substrate doping 2-18053
- Si sheet, ion implanted thin film solar cells 2-37297
- Si sheet growth by ribbon-to-ribbon process, scanned CO<sub>2</sub> laser beam appl., solar cell fabrication 2-37350



## elemental semiconductors continued

- Si sheet materials, fabrication of solar cells using 1 MeV electron irradiation 2-37299
- Si sheets, forming process, solar cell appl. 2-18051
- Si sheets, large area, using EFG tube growth, for solar cells 2-36780
- Si single cryst. film, lateral epitaxy by seeded solidification, using stationary graphite heater 2-2464
- Si, single cryst. on oxide, CW laser induced lateral seeding process 2-12934
- Si single crystal with O<sub>2</sub>, spectrochemical analysis, standard samples preparation 2-47406
- Si single crystals, grown from melt, appearance of dislocations 2-1418
- Si, single crystals., neutron diff. study of defects 2-50659
- Si, single step doping technique, pulsed ion implantation 2-35520
- Si solar arrays employing advanced structures, high performance 2-27642
- Si solar cell, ion implanted; laser annealed, substrate heating and emitter dopant effects 2-2379
- Si solar cell, junction formation by ion implantation using high-current ion beam 2-37357
- Si solar cell, low temp. solid-phase epitaxy 2-18049
- Si solar cell, metal-insulator-semiconductor p-n, ion implantation doping 2-47477
- Si, solar cell, n<sup>+</sup>-p, electron irradi. and annealing effects 2-2786
- Si, solar cell, single cryst. and polycryst., minority carrier diffusion length 2-27611
- Si solar cell, surface recombination velocity meas., SEM appl., textured front surface field and tandem function cells 2-37386
- Si solar cell arrays, flat-plate collector technology, overview 2-37262
- Si solar cell chemical convertor for use in Texas Instruments Solar Energy System 2-52363
- Si solar cell efficiency enhancement by junction etching and conductive antiref. coating processes 2-37274
- Si solar cell fabrication, carrier lifetime rel. to doping density, importance of low-temp. processing 2-27674
- Si solar cell fabrication, p-n junction prep., one-step photochem. doping process using ArF excimer laser 2-37271
- Si solar cell fabrication, p-n junction form., laser annealing of ion-implanted substrates 2-37272
- Si solar cell processing, TiO<sub>2</sub>:B antiref. coating, spray deposition, p<sup>+</sup>-n-n<sup>+</sup> struct. 2-37275
- Si solar cell processing technology, possible advances during 1980s 2-37264
- Si solar cell production, casting replaces conventional pulling process 2-52364
- Si solar cell short-circuit current prediction at reference irradiance conditions 2-37387
- Si, solar cell type, contact resistivities of transition metal nitride metallisations 2-36126
- Si solar cell; metal-insulator-n-p junction struct., 678 mV open circuit voltage 2-6137
- Si solar cells, advanced design, electron irradi. test for space production units 2-37279
- Si solar cells, BSF, conventional and bifacial, n<sup>+</sup>pp<sup>+</sup>, Al-alloyed high-low junctions formation 2-18086
- Si solar cells, characts. and performance between low and high level injection 2-37267
- Si solar cells, coplanar back contacts, wraparound junction design 2-27670
- Si solar cells, electron and proton damage coefficients and thermal annealing 2-37284
- Si solar cells, fabricated by planar technology, characts. 2-6138
- Si solar cells, fabrication by orientation-dependent slicing 2-27673
- Si solar cells, flat spot phenomena observation 2-27694
- Si solar cells, HV high efficiency, MINP structure 2-37415
- Si solar cells, heavily doped regions, modelling techniques, transport eqns. formulation 2-37269
- Si solar cells, high efficiency, computer modelling on diffused Si cells (Korean) 2-27615
- Si solar cells, high efficiency, lifetime and effective surface recomb. velocity meas. 2-52367
- Si solar cells, high- and low-resistivity 2-27647
- Si solar cells, high-efficiency 50- $\mu$ m thickness, screen-printed Al paste back surface field technology 2-27671
- Si solar cells, ion implanted, effects of junction depth and impurity conc. 2-27619
- Si solar cells, ion-implanted, effects of laser and electron beam annealing 2-27624
- Si solar cells, laser-annealed, comparison between ion-beam and glow discharge implantation 2-27623
- Si solar cells, laser-processed, effect of emitter dopant concentrations on open circuit voltage and fill factor 2-27621
- Si solar cells, minority carrier lifetime, laser-transient photovoltaic effect study 2-47482
- Si solar cells, monocrystalline, n<sup>+</sup>pp<sup>+</sup> structure, junction formation and metallisation sintering using direct coupled microwave heating process 2-18082
- Si solar cells, Ni/solder metallisation as inexpensive method of making electrical contact 2-18091
- Si solar cells, p-n and n-p junction, effect of back surface field on open-circuit voltages 2-37218
- Si solar cells, polycrystalline, p<sup>+</sup>-n-n<sup>+</sup> structure, low cost development 2-18079
- Si solar cells, reduced annealing temps. 2-37282
- Si solar cells, screen printed Al paste back-surface-fields, quality monitoring 2-37286
- Si solar cells, thermal stability of impurities 2-37289
- Si solar cells, thin high-efficiency implementation, processing yields, electron, proton and neutron irradi. testing 2-27669
- Si solar cells, thin-film, polycryst., comparison between MIS and p-n junction cells 2-37401
- Si solar cells, vertical junction, electron radiation tests 2-27693
- Si solar cells 2-18083
- Si solar cells bicrystalline, scanning spectral response measurements for process optimisation 2-18085
- Si solar cells columnar, diffusion parameters optimisation using two-step diffusion of phosphorus 2-18081
- Si solar cells crystalline, non-single, grain boundaries electrical props. 2-18088
- Si solar cells fabricated with Al back surface field, gridded back contacts, Ti-Pd-Ag metallization 2-27672

## elemental semiconductors continued

- Si solar cells for high concentration levels 2-27675
- Si solar cells polycrystalline effects of special processing on diffusion lengths 2-18084
- Si solar cells prep., molecular ion implantation system appl. 2-6918
- p-Si solar cells with high output voltage, Cr-Au-Ag contact metallization, 654 mV open-cct. voltage 2-27668
- Si solar cells with plated Ni-Cu metallisation system, reliability 2-37287
- Si solar cells with reduced temp. sensitivity 2-47478
- Si, solid phase epitaxial growth, effect of surface struct. and surface absorbates 2-16971
- Si solid-phase epitaxy p-n junction formation, low-temp. technique for efficient solar cells 2-32086
- Si, source, ultra-high vacuum deposition appl., use of two independent filaments 2-2449
- Si, spin-dependent recomb. centres, photoinduced ESR study 2-46379
- Si, spontaneous oscills. under impurity centre breakdown conditions 2-51223
- Si, stacking faults, intrinsic and extrinsic, energy levels calc. 2-21531
- Si, steam oxidation, oxidant transport 2-22348
- Si, stopping power of 40 to 300 keV protons using transmission and backscattering meas. 2-1535
- Si, stopping power of H and He in ions 20 to 150 keV region, backscattering study 2-1534
- Si strip production, by Stepanov method with wetted shaper 2-2434
- Si, struct.-energy calcs. using pseudopot. and localised Gaussian orbitals 2-30815
- Si, structural defects, dynamic characts., internal friction method 2-1555
- Si substrates, numerical anal. of minority carrier lifetime, contactless meas. technique (Japanese) 2-13094
- Si surface, (001)-2 $\times$ 1, surface plasmon dispersion, inelastic LEED study 2-17006
- Si surface, (100), solid-phase epitaxial crystn. of amorphous Ge 2-12932
- Si surface, (100), struct. induced by Ga evaporation, RHEED study 2-26195
- Si surface, (111), Ag growth and surface struct., expt. study 2-45727
- Si surface, (111), correlation in surface state bands 2-26467
- Si surface, (111), lattice dynamics and reconstruction, microscopic theory 2-50989
- Si surface, (111), point defects, electronic struct., tight binding calc. 2-46094
- Si surface, (111), pulsed laser annealing, LEED study 2-45267
- Si surface, (111), thermally cleaned, electron states and H chemisorpt., defect model 2-1986
- Si surface, (111), vicinal, laser and thermal annealed, LEED study 2-12892
- Si surface, condensation of bombarding Ga<sup>+</sup> ions 2-17584
- Si surface, ellipsometric meas. (Japanese) 2-19157
- Si surface, high resolution EELS, review 2-27040
- Si surface, nonequilib. depletion relax. acceleration in strong elec. fields 2-30952
- Si surface, oxidation in presence of catalyst, SiO<sub>2</sub> film struct. and morphology, substrate contaminations influence 2-40710
- Si, surface, physico-chemical nature, EPR spectroscopy, review (Polish) 2-46359
- Si surface, positron and electron energy loss spectra 2-41465
- Si surface, quenched clean (111), disordered  $\sqrt{(19)\times\sqrt{(19)}}$  struct. obs. by LEED and UPS 2-1723
- Si surface, reactive ion etched, effect of cathode coating on props. (Japanese) 2-52069
- Si surface, vacuum cleaned (111), reconstruction and itinerant magnetism 2-17258
- Si surface (001), surface atomic geometry 2-1715
- Si surface (111), adsorbed In, elec. current effect, RHEED obs. (Japanese) 2-21653
- Si surface (111), Ag deposited, ( $\sqrt{3}\times\sqrt{3}$ ) surface phase form., impurity effect 2-40656
- Si surface (111), melting, resolidification and charged particle emission induced by laser pulses 2-16676
- Si surface (111), O chemisorpt. configurations 2-26214
- Si, surface (111) 1 $\times$ 1, atomic relaxation, tight binding Green's function approach 2-16936
- Si surface adsorption, optical memory centres 2-21649
- Si surface barrier detector for time-of-flight spectrometer 2-15259
- Si surface barrier detector, <sup>244</sup>Cm and <sup>252</sup>Cf spontaneous fission fragments pulse height spectra 2-15670
- Si, surface composition, pulsed laser irradi. effects, AES 2-50968
- Si surface inversion layer, uniaxially stressed, electron cyclotron reson. 2-13155
- Si surface layers, picosecond layer pulse induced phase transitions, space-time resolved reflectivity meas. 2-50835
- Si, surface overlayers detection and minimisation using spectroscopic ellipsometry 2-15210
- Si, surface oxidation, O and O<sub>2</sub> chemisorpt. 2-27474
- Si surface p-n junction, surface electric field two-channel meas. using mirror electron microscope 2-23782
- Si, surface potential distrib., freq. depend. (Russian) 2-5450
- Si, surface recombination and bulk lifetime contactless PME investig. 2-17116
- Si, surface roughness characterisation using light scatt. 2-15206
- Si, surface state distrib. influenced by HF etching 2-13150
- Si, surface stresses, X-ray scatt. diagnostic technique (Russian) 2-44974
- Si, surface temp. evaluation of multi-scan electron beam irradi. samples, TEM obs. and optical pyrometry meas. 2-50712
- Si surface-barrier detectors, proton-induced nuclear reactions 2-24500
- Si surfaces, selective etching 2-22352
- Si, swirl A-defect struct. and form., elastic energy calc. 2-45166
- Si textured (100) oriented surfaces, optical characts., appls. to solar cells 2-37278
- Si, thermally annealed Czochralski wafers, ambient effects on defect formation 2-50627
- Si thick elastically bent crystals, containing localised structural defects, X-ray scattering (Russian) 2-8394
- Si thin crystals., microtron beam electron diff. obs. 2-21113
- Si thin film, applicability of vacuum deposited silicon 2-18073
- Si, thin film, laser growth, in patterned structures 2-51059
- Si, thin film, Monte Carlo technique in X-ray microanalysis 2-30357
- Si thin solar cells, optical confinement by diffuse back reflectors 2-37337
- Si, tow-quantum photoemission yield spectrum 2-2416
- Si, transient hot-carrier phenomena, method of moments for anal. 2-45998



## elemental semiconductors continued

- p-Si, transient regimes of hot carriers 2-51197  
 Si, transition in glide mechanisms 2-25901  
 Si, twins, grain boundaries, atomic struct. 2-50661  
 Si, two dimensional diffusion of self interstitials during oxidation, analytical soln. 2-45616  
 Si, two-component electron hole liquid, phase separation under tensile stress 2-26302  
 Si unconventional materials for solar cells, review 2-37300  
 Si, unreconstructed 30° partial dislocations, electronic struct., pseudo-potential and minimum basis set calc. 2-21534  
 Si, vacancy electronic structure, tight binding study 2-40833  
 Si vacuum deposited thin film solar cell, TiB<sub>2</sub> thin film electrode behaviour 2-40716  
 Si, vapour phase epitaxy 2-46932  
 Si, vibrational modes at vacancy site 2-50813  
 Si wafer, Au gettering by P diffusion and Ar implementation, mech. and limitations 2-1671  
 Si wafer, Czochralski grown, photolum. characteris. of thermally-induced defects 2-17535  
 Si wafer, ion implantation dose uniformity improvement by compensated scan pattern generator 2-7379  
 Si wafer, low power electron irradiation, with conventional electron gun, heating effect numerical simulation 2-25932  
 Si wafer, mechanical damage gettering effect 2-25917  
 Si wafer, n- and p-type, resist. variation, photovoltaic method meas. (Japanese) 2-33568  
 Si wafer, reactive sputter etching characteristics of wafer with CF<sub>4</sub> and O<sub>2</sub> mixed gas 2-31807  
 Si wafer, thermally induced defect behaviour and effective intrinsic gettering sink 2-35505  
 Si wafer processing, defect and contamination control 2-25866  
 Si wafer processing, temp. gradient zone melting appl. 2-22161  
 Si wafer rim, chemical etching procedure for elimination of slip lines 2-2601  
 Si wafers, electron beam annealed, crystallographic damage anal. 2-50714  
 Si wafers large-diameter, grown by Czochralski method, recombination props. (Russian) 2-21601  
 Si, wet thermal oxidation, charact. by SIMS 2-17746  
 Si whiskers, creep 2-12951  
 p-Si, whiskers, internal friction peak 2-8569  
 Si whiskers, low temp. internal friction 2-26266  
 Si, X-ray K-absorption edge 2-2373  
 Si, Z 2-52341  
 Si, ZX 2-12999  
 n-Si:Al, p<sup>+</sup>n reversed biased junction, deep centre admittance (Spanish) 2-30956  
 Si:Ar implant damage gettering of generation impurity, backscatt., PIXE study 2-45288  
 a-Si:Ar RF sputtered films, elec. and optical props., effect of Ar 2-40736  
 Si:As, atom and carrier depth distrib. for channelled 300 keV As ions, SIMS study 2-5163  
 Si:As, B wafer reactive-ion etch end-point detect. using spectrophotometer and photodetector 2-5969  
 Si:As, CW laser and electron beam annealed, Rutherford backscatt. and SIMS anal. 2-46847  
 Si:As, dopant distrib., sheet resist., spreading resist, junction depth, SIMS, and IR spectra meas. 2-12624  
 Si:As, implanted, CW Ar laser annealing, in situ temp. meas. using opt. pyrometer 2-45270  
 Si:As, implanted, CW laser annealed, real-time monitoring of opt. props. 2-46617  
 Si:As, implanted, laser or electron beam annealed, defect form., electron beam induced current study 2-45271  
 Si:As, ion implanted, doping profiles and elec. activation, Rutherford backscatt. study 2-25916  
 Si:As, ion implanted, ellipsometric spectrum (Chinese) 2-31519  
 Si:As, ion implanted, laser annealed, Si MBE growth, doping profile, Rutherford backscatt. study 2-51813  
 Si:As, ion implanted, polycrystn. film, laser irradiation, elec. props. grain size, annealing effect 2-17173  
 Si:As, ion implanted, pulsed electron beam annealing 2-50710  
 Si:As, ion implanted, radiation damage, in situ ion beam annealing 2-25911  
 Si:As, ion implanted, radiation defects annealing, Mossbauer and surface cond. study 2-35523  
 Si:As, ion implanted, radiation damage determ. by profiling oxide growth rate 2-40448  
 Si:As implanted film, pulsed proton beam annealing 2-50718  
 Si:As<sup>+</sup> implanted, CW laser annealing and electron beam annealing 2-12640  
 Si:As<sup>+</sup> ion implant, depth profile, stopping power, backscatt. meas. 2-45234  
 Si:As<sup>+</sup>(P<sup>+</sup>), extended defect depth profiling, channelling, Rutherford backscattering meas. 2-12628  
 Si:As<sup>+</sup>(P<sup>+</sup>) ion implanted, laser annealing effects, refl. study 2-16677  
 Si:As<sup>2+</sup>, ion implantation, scanned electron beam annealing 2-1527  
 Si:As(B) (111)(1×1) surfaces, electronic props., photoemission study 2-17136  
 Si:As(P), polycryst. film, CW laser annealing, SiO<sub>2</sub>, Si<sub>3</sub>N<sub>4</sub> substrate material effect 2-8534  
 Si:As(P), polycryst. film, pulsed and CW laser annealing 2-25912  
 Si:As(P), polycrystalline, heavily doped, comparison of thermal and CW laser annealing effect on resist. 2-51179  
 Si:Au, Auger recombination with deep impurities 2-40929  
 Si:Au, crystal-liquid interface vel. during pulsed laser annealing 2-31591  
 Si:Au, Fe, hyperfine interactions of Au-Fe complex, electronic struct., EPR obs. 2-45920  
 Si:Au, implantation gettering of Au, neutron activation study 2-35519  
 Si:Au, intrinsic carrier conc., temp. depend. energy gap, Fermi level 2-16986  
 Si:Au, photoluminescence, impurity states 2-36692  
 Si:Au, surface, nonequilibrium depletion layer, relax. vel. meas. (Russian) 2-46096  
 Si:Au,Fr, EPR study, hyperfine interactions 2-41187  
 Si:Au n-n<sup>+</sup> diode struct., magnetosensitivity, effect of strong carrier accumulation 2-46119  
 Si:Au, phase shift spectroscopy of modulated photocurrent 2-1947  
 Si:Au(Pt), deep levels, effect on device performance (Japanese) 2-30818  
 Si:B, amorphous, gas phase and ion implant doping, H content 2-45214

## elemental semiconductors continued

- Si:B, amorphous, profile distortions and at. mixing in SIMS anal. 2-45236  
 Si:B, As, P, amorphous, ion implanted, epitaxial regrowth, compensating impurity effect 2-51014  
 Si:B, B profiling using neutron induced reaction <sup>10</sup>B(n, α)<sup>7</sup>Li 2-2751  
 Si:B, doping profile, SIMS layer-by-layer anal., matrix effects 2-51762  
 Si:B, electron-hole drops, luminescence 2-45845  
 p-Si:B, γ-irrad., impurity-point radiation defects interactions 2-25928  
 Si:B, H amorphous CVD film, hydrogenation effect, elec. cond. and ESR meas. 2-40906  
 p-Si:B, heavily doped, defect profiles formed by light ion irradiation, B distrib. effect 2-16691  
 Si:B, implanted, free-running ruby laser annealing 2-21171  
 Si:B, impurity bound localised holes antiferromag. ordering, polarised luminesc. in mag. field 2-36701  
 Si:B, impurity diffusion and distrib. in surface layer during sublimation 2-26142  
 Si:B, impurity redistribution under proton irradiation 2-1506  
 Si:B, ion implanted, annealed, rod defects, TEM obs. 2-25883  
 Si:B, ion implanted, Auger study 2-45224  
 Si:B, ion implanted, defect formation during annealing 2-45179  
 Si:B, ion implanted, electron microscopy of surface defects 2-40420  
 Si:B, ion implanted, point defect generation during oxidation, loop annealing technique 2-25869  
 Si:B, luminescence study of excited states in impurity band 2-5367  
 p-Si:B, nonlinear piezoresistance study 2-1916  
 Si:B, P, ion implanted, doping profiles, implantation sequence effect 2-45228  
 Si:B, particle track etch method for B anal. using <sup>10</sup>B(n, α)<sup>7</sup>Li reaction 2-12630  
 p-Si:B, positron capture by radiation defects 2-40853  
 Si:B, pure and doped, pulsed-laser annealing, synchrotron X-ray diffraction study 2-51749  
 Si:B, radiation-stimulated diffusion influence on sputtering 2-36785  
 Si:B, recombination radiation of exciton-impurity band 2-2345  
 Si:B,As, ion implantation, alternate technique during MBE growth 2-50670  
 Si:B,(Al), junction solar cell, emitter layer minority carrier lifetime photo-voltaic obs. 2-52339  
 Si:B IR charge-injection-device array performance, space-based astronomical obs. appl. 2-3193  
 Si:B implantation, lattice deformation, post-laser irradiation, backscatt., channelling study 2-45213  
 Si:B layers, secondary ion emission anomalies, depth profiling (Ukrainian) 2-27041  
 Si:B p-n junction solar cells simplified ion implantation system 2-18093  
 Si:B wafers, implantation dose accuracy and uniformity international survey 2-8528  
 Si:B<sup>+</sup>, single crystal, TEM and AES study of ion bombardment 2-25913  
 Si:B<sup>+</sup>(P<sup>+</sup>)(As<sup>+</sup>), solar cells, prep. by ion implantation and pulsed laser annealing, optical and elec. characterisation 2-14080  
 Si:BF<sub>3</sub><sup>+</sup>, amorphous, elec. activation and impurity redistribution during pulsed laser annealing 2-45254  
 n-Si:BF<sub>3</sub><sup>+</sup>, ion implanted, plasma annealing 2-16664  
 Si:B(As)(In), pulsed laser annealing, melting phenomena 2-46837  
 Si:B(In), acceptor ground state, thermal transport expts. 2-45646  
 Si:B(P), ion implanted, elec. props., incident ion energy depend. 2-45227  
 Si:B(P), laser chemically doped, elec. props. 2-21579  
 Si:B(P), neutron irradiation, optical props. of defects 2-13521  
 Si:B(P)(As), thermally evaporated, near-surface layer impurities, luminescence anal. 2-17526  
 Si:Bi, furnace and laser annealed, backscatt. and channelling anal., depth distrib. 2-45253  
 Si:Bi, ions backscattering yield enhancement near 180°, expt. study 2-46855  
 Si:Bi, SIMS profile distortions, Rutherford backscatt. study 2-51755  
 Si:C, implanted, photoluminescence study 2-41419  
 Si:C, O, role of C in precipitation of O, IR and DLTS studies 2-21315  
 Si:C<sup>+</sup>(N<sup>+</sup>)(O<sup>+</sup>), formation of SiC, Si<sub>3</sub>N<sub>4</sub> and SiO<sub>2</sub> by laser annealing 2-50675  
 Si:Co, implanted, laser and thermal annealing studied by Mossbauer spectroscopy 2-31346  
 Si:Cr, energy levels and degeneracy ratios determ. from Hall coeffs. 2-30825  
 Si:Cr, energy levels and solubility, EPR and Hall effect study 2-40817  
 Si:Cr, ion-implanted, depth distrib., range-energy data and shape factors 2-1500  
 Si:Cr, Jahn-Teller centre, ER spectrum, isotopic vibronic struct. 2-36419  
 Si:Cs, ion implanted, dopant retention, backscatt. study 2-45217  
 Si:Cu, deep levels, quasi-band-struct. representation 2-40828  
 Si:Cu, Si semipermeable anode for Si electrorefining 2-41534  
 Si:Cu(Ni) epitaxial layer, precipitation, STEM microanalysis study 2-30610  
 Si:F, amorphous, core level and valence band UPS and XPS spectra 2-2414  
 Si:F, amorphous, structural model 2-45030  
 Si:F, H, amorphous, annealing effects, NMR and ESR studies 2-41214  
 Si:F, H, amorphous, vibr. excitations 2-45495  
 Si:F, H amorphous CVD film, hydrogenation effect, elec. cond. and ESR meas. 2-40906  
 Si:F, sputtered amorphous coating, struct. model, expt. study 2-16593  
 Si:F,H,P films, optical study of intermediate order, elec. cond. 2-46797  
 Si:F amorphous film, glow discharge plasma deposition from SiF<sub>2</sub> gas 2-40725  
 a-Si:F,H, electrical, spectral and doping properties 2-45790  
 Si:Fe, deep levels, capacitance transient spectroscopy 2-17018  
 Si:Fe, deep levels, photocapacitance study 2-12998  
 n-Si:Fe, deep trap conc., in-depth profile 2-1858  
 n-Si:Fe, solid soln. precip., capacitance study 2-16804  
 Si:Fe implanted layer, lattice damage, compressive stress, TEM study 2-45291  
 Si:Ga, float zone growth, improved uniformity 2-17620  
 Si:Ga, high dose implanted, thermal annealing and elec. activation 2-5147  
 Si:Ga(Sb), MBE grown, sharp profiles with high and low doping levels 2-16670  
 n-Si:Gd, γ- and electron-irradiation, defect formation; elec. and optical study 2-21175  
 Si:Gd, heavily doped, optical nuclear polarisation 2-36453  
 Si:Gd, photoconductivity, induced, with exchange impurity levels 2-21634



## elemental semiconductors continued

- Si:Ge, high fluence implantation, radiation damage annealing, backscatt. and channelling, anal. 2-45289  
 Si:Ge, ion irradiation, damage, complex-refr. index profiles 2-5654  
 a-Si:H, a-Si:F:H, Schottky-barrier diodes, elec. props. using new techniques 2-46104  
 Si:H, amorphous,  $^1\text{H}$  NMR spin-lattice relaxation time, temp. and freq. depend. 2-46412  
 Si:H, amorphous,  $^{29}\text{Si}$  NMR 2-46402  
 Si:H, amorphous, AC field and freq. depend. of elec. cond. 2-40901  
 Si:H, amorphous, absorpt. and excitation spectra 2-22053  
 Si:H, amorphous, annealing effects, NMR and ESR studies 2-41214  
 Si:H, amorphous, bonding struct. and H distrib. IR absorpt. and NMR meas. 2-40276  
 Si:H, amorphous, chem. bonding and H diffusion,  $^1\text{H}$  NMR study, 20 to  $530^\circ\text{C}$  2-41221  
 Si:H, amorphous, dangling bond state within mobility gap, identification by ESR spectroscopy 2-41196  
 Si:H, amorphous, density of states, dangling bond state, tight binding calc. 2-40750  
 Si:H, amorphous, disorder and optical absorption edge 2-13440  
 Si:H, amorphous, dispersive electronic transport, multiple trapping, computer simulation 2-51198  
 Si:H, amorphous, dopant level depths 2-40845  
 Si:H, amorphous, effect of annealing on optical gap 2-2211  
 Si:H, amorphous, electroabsorpt., polarised light anisotropy 2-46544  
 Si:H, amorphous, electron irradiation, effect on dark and photocond. and defect removal 2-45279  
 Si:H, amorphous, electron irradiation, effect on photoconductivity 2-51233  
 Si:H, amorphous, electronic struct. of model defect 2-40820  
 Si:H, amorphous, electronic struct., electrorefl. study 2-41329  
 Si:H, amorphous, glow discharge deposited, photoinduced absorpt., time resolved spectra 2-46801  
 Si:H, amorphous,  $\text{H}_2$  exodiffusion, comparison with elec. cond. meas. 2-45623  
 Si:H, amorphous, Hall mobility in presence of long range pot. fluctuations 2-1930  
 Si:H, amorphous, homogenous CVD 2-41526  
 Si:H, amorphous, hot carrier relax., optical picosecond study 2-46529  
 Si:H, amorphous, ion microprobe mass anal., ultrahigh vacuum, appl. to H detection 2-15263  
 Si:H, amorphous, laser beam defect creation, luminesc. and ODMR study 2-35533  
 Si:H, amorphous, light induced changes, computer modelling of admittance and DLTS 2-36090  
 Si:H, amorphous, light induced changes, field effect meas. 2-45813  
 Si:H, amorphous, luminesc. and recomb., review 2-5733  
 Si:H, amorphous, luminescence props. 2-46730  
 Si:H, amorphous, MIS solar cell, interface state of oxidation effects 2-47487  
 Si:H, amorphous, midgap density of states, space charge limited cond. study 2-45897  
 Si:H, amorphous, modulated photocurrent meas. 2-1946  
 Si:H, amorphous, molecular  $\text{H}_2$  as proton spin-lattice relaxation centres 2-2157  
 Si:H, amorphous, multiphase description, photoluminesc., TSC, optical absorpt. and elec. cond. meas. 2-41412  
 Si:H, amorphous, non-dispersive and dispersive transport 2-46019  
 Si:H, amorphous, optically detected mag. resonance study of recombination processes 2-21919  
 Si:H, amorphous, p-i-n junctions, photoacoustic emission 2-46113  
 Si:H, amorphous, photoconductivity, spectral and temp. depend. 2-1958  
 Si:H, amorphous, photoconductivity and negatively correlated defect effects 2-40962  
 Si:H, amorphous, photoelectrochem. cell, polypyrrole coated photoanodes, cell stability 2-52371  
 Si:H, amorphous, photoluminescence, no-Stokes shift model 2-36683  
 Si:H, amorphous, plasma deposited, photocond., temp. depend. 2-1943  
 Si:H, amorphous, plasma deposition, impurity doping, substrate pot. effect 2-40724  
 Si:H, amorphous, positron annihilation studies using Doppler broadening techniques 2-51739  
 Si:H, amorphous, prep. by reactive sputtering, characteristic props. 2-17625  
 Si:H, amorphous, prep. from higher silanes with high growth rate 2-2462  
 Si:H, amorphous, proton NMR spin-lattice relax. time charact. 2-31319  
 Si:H, amorphous, RF sputtered, transport props. 2-1913  
 Si:H, amorphous, RF sputtered, H distrib. PMR study 2-17346  
 Si:H, amorphous, reactively sputtered, solar cell, electron-hole recombination 2-42002  
 Si:H, amorphous, role of dangling bond as radiative center, ODMR 2-41233  
 Si:H, amorphous, solar cell, transparent conducting coating 2-14077  
 Si:H, amorphous, solar cell appl., spectral response and capacitance meas. 2-37346  
 Si:H, amorphous, solar cells, p-i-n and Schottky-barrier structs., comparison 2-52350  
 Si:H, amorphous, solar cells, p-i-n struct. field nonuniformity rel. to photogenerated carriers 2-52351  
 Si:H, amorphous, spin-lattice relaxation and spin diffusion 2-31307  
 Si:H, amorphous, sputtering conditions effect on H content and Si-H bonding 2-2444  
 Si:H, amorphous, time resolved luminesc. and fatigue effects 2-9179  
 Si:H, amorphous, transport props., CPA calc. 2-40907  
 Si:H, amorphous, ultrashort laser pulse annealing, expt. study 2-21170  
 Si:H, amorphous, vibr. excitations 2-45495  
 Si:H, amorphous film, AC conductivity and optical props. 2-41040  
 Si:H, amorphous film, electronic struct. study 2-40768  
 Si:H, amorphous film, elec. cond., thermopower temp. depend. 2-40896  
 Si:H, amorphous film, electron drift mobility meas. 2-41036  
 Si:H, amorphous film, large area plasma deposition and elec. props. 2-40728  
 Si:H, amorphous film, plasma deposited, microstruct., PMR study 2-13358  
 Si:H, amorphous film, struct. evolution during annealing 2-45035  
 Si:H, amorphous film, X-ray study of atomic struct. 2-45034  
 Si:H, amorphous film growth, plasma diagnostics 2-45770  
 Si:H, amorphous films, optical props. 2-36727  
 Si:H, amorphous hydrogenated, reactive laser evaporation 2-2456  
 Si:H, amorphous ion beam deposited coating, prep. and props. 2-40723

## elemental semiconductors continued

- Si:H, amorphous plasma deposited coating, IR and electron spectra and oxidation, polysilane analogue 2-41351  
 Si:H, amorphous plasma deposited coating, field effect cond., illumination and annealing effects 2-45969  
 Si:H, amorphous plasma deposited film, PMR 2-46398  
 Si:H, amorphous RF magnetron sputtered coating, elec. and optical props. 2-40727  
 Si:H, amorphous RF sputtered coating, IR  $2000\text{ cm}^{-1}$  absorpt. band and photoelectronic props. 2-41353  
 Si:H, amorphous Schottky barrier solar cells, prep. by plasma decomp. and sputtering, carrier generation efficiency 2-14079  
 Si:H, amorphous vacuum deposited films, theta pinch hydrogenation 2-40421  
 Si:H, amorphous-microcryst. mixed phase film, photoluminesc. 2-26960  
 a-Si:H, Ar sputtered films, interaction between Ar and dopants 2-40738  
 p-Si:H, B amorphous film, high cond., prep. by Penning discharge 2-41530  
 Si:H, Cl amorphous films, IR vibr. spectra 2-36630  
 Si:H, Cl glow discharge films, amorphous, optical characts. and photoluminesc. 2-31546  
 Si:H, crystalline, reactive sputtering fabrication, struct. study by X-ray diffraction and optical spectra 2-1792  
 a-Si:H, defect creation by optical excitation, ODMR study 2-45255  
 a-Si:H, gap states study, appl. of isothermal capacitance transient spectroscopy 2-45901  
 Si:H, implanted, vibrational spectra 2-41354  
 Si:H, intrinsic, amorphous, dual light beam modulation of photocarrier lifetime 2-46063  
 $\alpha$ -Si:H, large-area low-freq. discharge-produced 2-51019  
 Si:H, Li amorphous film, DC glow discharge deposited, photovoltaic effect 2-46170  
 a-Si:H, meas., and anal. of current transients, DLTS and TSC obs. 2-46020  
 Si:H, microcryst. plasma deposited coating, elec. cond. and optical absorpt. 2-46165  
 Si:H, microcrystalline and amorphous films, Raman scatt. 2-46564  
 a-Si:H, Ne, chemical sites of Ne, XPS study 2-40277  
 Si:H, O sputtered films, amorphous, optoelectronic props., effect of O 2-41443  
 a-Si:H, optical absorption edge, electronic struct., thermal and struct. disorder effects 2-36719  
 a-Si:H, optically detected mag. resonance 2-36481  
 Si:H, P, amorphous, dispersive transport and electronic struct. 2-26408  
 a-Si:H, photoresponse time and density of localised states in mobility gap 2-46064  
 Si:H, plasma deposited amorphous film, density 2-35912  
 a-Si:H, recomb. processes and gap states, time-resolved luminesc. meas. 2-46736  
 Si:H, sputtered, amorphous, time resolved photolum. spectra 2-46737  
 Si:H, sputtered coating, H effusion, ion beam nuclear analysis (French) 2-1799  
 Si:H, sputtered coatings, nuclear microanalysis and Rutherford backscattering (French) 2-5331  
 a-Si:H, thermal and optical space charge spectroscopy of gap states 2-45900  
 Si:H,B, Li-diffused, amorphous compensated, dark and photocond. 2-46065  
 Si:H,B amorphous film, elec. props., optical props. 2-46176  
 Si:H,B amorphous films, boron impurity conc. determ. 2-35527  
 Si:H,B(P), amorphous, IR and far IR absorpt., annealing effect 2-36628  
 a-Si:H,B(P), luminesc. spectrum, effect of dangling bond states 2-46670  
 Si:H,Cl amorphous film, photolum. studies 2-46738  
 Si:H,N(O), amorphous glow discharge film, elec. cond. and photocond.,  $\text{N}_2(\text{O}_2)$  doping effect 2-40733  
 $\alpha$ -Si:H,O, RF sputtered,  $^{15}\text{N}$  ion irradiation, H effusion 2-5161  
 Si:H,P, amorphous, photogenerated carrier recombination 2-46018  
 Si:H,P, amorphous Schottky barrier, two-channel cond. obs. 2-51280  
 Si:H,P amorphous, transport props. 2-45984  
 Si:H,P films, elec. props., transition to amorphous phase, solar cell props. 2-46167  
 Si:H,P(B), amorphous, temp. depend. of ESR spectra, elec. cond. 2-5575  
 Si:H,P(B) amorphous film, photoconductivity mag. field depend. 2-41033  
 Si:H amorphous, electron and laser beam induced centres, photoluminescence study 2-36682  
 Si:H amorphous, interface with noble metals, struct. and elec. props. 2-41012  
 Si:H amorphous film, electron drift mobility study 2-41034  
 Si:H amorphous film, field effect studies, density of localized gap states 2-46169  
 Si:H amorphous film, light absorption 2-40838  
 Si:H amorphous film, photoacoustic spectroscopy, optical consts. determ. 2-2355  
 Si:H amorphous film, photoconductivity threshold and optical gap 2-36097  
 Si:H amorphous film deposition from  $\text{SiH}_4$ -Ar plasma 2-35274  
 Si:H amorphous film deposition by Penning glow discharge of  $\text{SiH}_4$  2-41528  
 Si:H amorphous film solar cell, Tandem type 2-47488  
 Si:H amorphous films, gas phase doped or ion implanted 2-40735  
 Si:H amorphous films, luminesc. spectra, defect induced red shift 2-17536  
 Si:H amorphous films, NMR study 2-41213  
 Si:H amorphous films, photocreation of defects, light-induced cond. changes, doping depend. 2-36091  
 Si:H amorphous films, photocond. and photolum. 2-40959  
 Si:H amorphous films for electrophotographic appl., photoelec. props. 2-46168  
 Si:H amorphous multijunction solar cells, conversion efficiency and interference effects in spectral response 2-37224  
 Si:H amorphous n-i-p solar cell, minority carrier transport in depletion layers 2-47489  
 Si:H amorphous p-n junctions, elec. transport, doping effects 2-46115  
 Si:H amorphous plasma deposited coating, elec. and optical props., RF power and growth temp. depend. 2-40729  
 Si:H amorphous plasma deposited coating, IR spectra, temp. depend. 2-41352  
 Si:H amorphous Schottky barrier diode characts., mathematical model 2-46102  
 Si:H amorphous Schottky barrier and PIN diodes, I-V characts., density of localised states 2-51281



## elemental semiconductors continued

Si:H amorphous Schottky diode, electron transport and deep localized state kinetics 2-46101  
 Si:H amorphous solar cell, carrier collection, image force effects 2-2785  
 Si:H amorphous solar cell, plasma deposited, impurity effects 2-14081  
 Si:H amorphous solar cell, large area, conversion efficiency under AM1 illumination 2-37347  
 Si:H amorphous solar cells, n-i-p and p-i-n structs., Dember effects 2-52365  
 Si:H amorphous thin film solar cells electrical and optical props. optimisation using RF bias-sputtering 2-37226  
 a-Si:H and a-Si:F:H P-I-N solar cells, photovoltaic behaviour 2-37313  
 Si:H and Si:H,B, amorphous, photoluminesc. spectrum, B doping and prep. conditions effect 2-36684  
 Si:H film, amorphous, optical emission spectroscopy during growth (Japanese) 2-22174  
 Si:H film, amorphous plasma deposited, RF power and reactant gas press. effect 2-21458  
 a-Si:H film, low optical absorption, annealing studies, photoacoustic spectroscopy meas. 2-36718  
 a-Si:H film, optical absorption spectra, photocurrent signal, waveguiding technique 2-36720  
 a-Si:H film, photocond. anal. luminesc. meas. of cond. band tail 2-46062  
 Si:H films, amorphous n-type and p-type, primary and secondary photocurrents 2-46061  
 a-Si:H films, impurity doping, morphological study, electrical and optical properties 2-45789  
 Si:H films, Raman and XPS study of transition from amorphous to crystalline phases 2-46796  
 a-Si:H films, reversible field-induced doping effect 2-51192  
 a-Si:H films, sub-gap and band edge optical absorption, photothermal deflection spectroscopy 2-36717  
 Si:H films, vibr. props. study 2-46798  
 a-Si:H glow-discharge films, evolution of H<sub>2</sub> 2-40682  
 a-Si:H multilayer structs., comp. profiles, nucl. scatt. and Rutherford backscatt. meas. 2-40737  
 $\alpha$ -Si:H preparation by CVD 2-22170  
 Si:H Schottky barrier diodes, amorphous, electrical characterisation 2-37225  
 a-Si:H solar cells, impurity effects 2-42019  
 a-Si:H solar cells, material optimisation studies 2-37310  
 a-Si:H solar cells, N-I-P and P-I-N, photogenerated carrier collection and loss mechanism anal. 2-37311  
 Si:H/Si:C:H amorphous solar cell 2-46058  
 Si:H-Pd interface, interference enhanced Raman scatt. study of interfacial reaction 2-9147  
 Si:H-Pd(Pt), amorphous Si:H, interface phonons, interference enhanced Raman scatt. study 2-51592  
 Si:H<sup>+</sup>(He<sup>+</sup>), ion implanted, range distrib. characts., Monte Carlo calc. 2-45302  
 Si:H(B), review of use of EPR for material props. and processes study 2-31262  
 Si:H(B)(P), amorphous DC sputtered coating, doping and elec. props. 2-40726  
 Si:H(F), amorphous, chem. bonding environment of Si and dopant 2-40275  
 Si:H(F), amorphous, phonon densities of states and eigenvectors 2-35627  
 Si:H(F) amorphous films, surface props., photoelectron spectra study 2-41491  
 Si:H(H,F), amorphous, plasma deposition kinetics model 2-40731  
 Si:He(Ne)(Ar), ion implanted, radiative recomb. centres, photoluminesc. study 2-9194  
 Si:Ho,P, grown from melt, second phase inclusion impurity conc. 2-5150  
 Si:In, excitation spectroscopy of P, Q, R isoelectronic lines 2-2338  
 Si:In, IR absorpt. calibration using neutron transmutation 2-26939  
 Si:In, low energy implant simulation using target tilt 2-5135  
 Si:In, shallow acceptor X-levels, development as IR detector material 2-17015  
 Si:In,Sb (100), ion implanted, solid phase epitaxy, solid solubility, channelling study 2-50862  
 Si:In (Sb) implanted amorphous layers, defect and solubility limit study 2-30477  
 Si:In X-centre, trapping parameters, DLTS studies 2-5361  
 Si:In(Ga), shallow acceptor population and free hole conc. with IR-photoexcitation 2-51213  
 Si:In(Ga), trap population and free hole conc. with IR photoexcitation 2-51211  
 Si:Li polycrystalline solar cells, effect of diffusion on grain boundary transport and minority carrier recombination 2-37399  
 p-Si:Mn, field stimulated residual cond. 2-26441  
 n-Si:Mn, residual cond., degree of compensation and impurity conc. effects 2-8797  
 Si:N amorphous film, elec. and optical props. 2-17074  
 Si:O, C, luminescence, thermally-induced defects 2-46748  
 Si:O, Czochralski grown, precipitated O redissolution, expt. study 2-50860  
 Si:O, ion implanted, complex refractive index, light wave propagation 2-46532  
 Si:O, ion implanted p-n junction detectors study 2-49217  
 Si:O, obs. of impurities by internal friction 2-12681  
 Si:O, p-n junction characts., O conc. influence 2-36129  
 Si:O(H)(F) evaporated amorphous films, DC cond., impurities effect 2-13070  
 Si:P, amorphous, gas phase and ion implant doping, H content 2-45214  
 Si:P, donor impurity atoms, ionisation in elec. field, line spectrum extrinsic photocond. (Russian) 2-45892  
 n-Si:P, electrophysical props. thermal annealing and cooling condition effects 2-51175  
 Si:P, implanted, MeV He<sup>+</sup> dechannelling from secondary defects 2-30505  
 Si:P, impurity effect in stacking fault energy 2-45209  
 Si:P, influence of oxygen on radiation-stimulated diffusion 2-26140  
 p-Si:P, ion bombarded, doping by radiation accelerated diffusion 2-30476  
 Si:P, ion implanted, I-V characts., temp. depend., elec. cond. model 2-51356  
 Si:P, magnetisation meas. down to 1.5K 2-26578  
 Si:P, nuclear doped, neutron irradi., behaviour characts. of P 2-16668  
 Si:P, phase formation process influence on diffusion 2-40603  
 Si:P, photocond. IR detectors, low photon background appl. 2-19179  
 Si:P, polycrystalline, plasma etching, P doping effect, electron microscopy study 2-13831

## elemental semiconductors continued

Si:P, sp. ht. and elec. cond. near metal-insulator transition 2-30936  
 Si:P,H, deformed, hydrogen passivation of defects 2-13004  
 Si:P amorphous film, crystn. from glow discharge, cond. determ. 2-50550  
 Si:P CVD layers, refr. index, absorption coeff., free carrier model 2-31577  
 Si:P film, LPCVD, polycryst., grain size and resist. 2-13202  
 Si:P film, microstructure and sheet resistance 2-30480  
 Si:P films, elec. cond., Hall effect 2-46166  
 Si:P implanted wafer, multicannelling electron beam annealing, solar cells appl. 2-21177  
 Si:P in-situ polycryst. films, influence of laser power and scan rate on CW laser annealing 2-50706  
 Si:P ion-implanted solar cells, pulsed electron beam annealing 2-37362  
 Si:P neutron transmutation doping, slow neutron distrib. 2-3917  
 Si:P polycrystalline films, grain size and sheet resistivity meas. 2-51362  
 Si:P-Nb Josephson struct., high resistance 2-41073  
 Si:P(B), diffusant influence on O<sub>2</sub> distrib. 2-35528  
 Si:P(B)(Li), ionized impurity diffusion, influence of an internal electric field 2-21396  
 Si:P(Kr) implanted layer annealing using laser beam 2-46838  
 Si:P(Li), bound excitons, photoluminesc., temp. depend. Zeeman study 2-51644  
 Si:Pb, ion implanted, dopant range, damage depth, backscatt. and channelling anal. 2-45216  
 p-Si:Pd, natural and doped surfaces, IR photosensitivity, external elec. field effect 2-5438  
 n-Si:Pt, impurity levels, capture cross section, capacitance, hole lifetime and resistivity obs. 2-51125  
 Si:Rh, photoconductivity at 4.2K 2-40969  
 Si:S, sharp line photocond. 2-17113  
 Si:Se (Se) IR detector, spectral response, dopant diffusion vapour press. effect 2-219  
 Si:Sb, polycrystalline, ion implanted, doping profiles and elec. resist., annealing effects 2-50685  
 n-Si:Sb, positron capture by radiation defects 2-40853  
 Si:Sb(In) depth distrib., from laser irradi. evaporated layers 2-45252  
 Si:Se, diffused and mass transported, IR absorpt. spectra 2-1854  
 Si:Sn, ion implanted, radiation defects annealing, Mossbauer and surface cond. study 2-35523  
 Si:Sn(Fe), laser implantation, impurity distrib. 2-35518  
 Si:Te, donor levels, excited states, junction space-charge, IR absorption and ESR meas. 2-26323  
 Si:Tl, isoelectronic band exciton luminesc. lines, role of deep acceptors 2-17529  
 Si:Tl, solution growth for 3 to 5  $\mu$ m photocond. detectors 2-17614  
 Si:V<sup>+</sup>(Mn<sup>+</sup>)(S<sup>-</sup>)(Zn<sup>-</sup>), properties of repulsive centres, DLTS steady (German) 2-1860  
 Si:W, doped surface, XPS study 2-9252  
 Si:Xe, ion implanted, dopant retention, backscatt. study 2-45217  
 Si:Yb,P, grown from melt, second phase inclusion impurity conc. 2-5150  
 p-Si/aqueous electrolyte interface in solar cells, oxide optimisation 2-22613  
 Si/GaP interface, impurity deep traps 2-51267  
 Si/metal film interface, silicide formation using laser and electron beams 2-51008  
 n-Si/metal or metal-free phthalocyanine film/electrolyte, photovoltaic cell 2-13124  
 p-Si/n-(Ga<sub>2</sub>Se<sub>3</sub>-In<sub>2</sub>Se<sub>3</sub>) heterojunction, I-V characts. and prep. 2-51295  
 Si/Ni(Pd) systems, local chemical struct., XPS study 2-9246  
 n-Si-Al diodes, CW laser processed, elec. props., laser power depend 2-46127  
 Si-Al<sub>2</sub>O<sub>3</sub>, charge carrier props. in p-type layers of SOS 2-8812  
 Si-Al(111)Si structures, redistrib. of Si at low annealing temps 2-13183  
 Si-Al(Au) interface acoustic phonons, Brillouin scatt. study 2-51615  
 Si-As<sub>2</sub>Sr<sub>2</sub>Cu, p-n heterojunction, current-voltage characts. 2-46114  
 Si-Au interface, electronic struct. 2-51302  
 Si-CaF<sub>2</sub> heteroepitaxial struct., Si and CaF<sub>2</sub> vacuum deposition, channelling and backscatt. study 2-51814  
 Si-CoSi<sub>2</sub>-Si (111), laser annealing, epitaxial growth of amorphous Si film 2-51009  
 Si-Cr interface, evidence of room temp. intermixing, photoemission study 2-9247  
 Si-Cr point contacts, I-V characts., effects of Cr hydrogenation 2-51300  
 Si-crystal rocking curves, under X-ray acoustic resonance conditions 2-30361  
 Si-F-H amorphous film, Schottky-barrier and MIS solar cell appls. 2-37344  
 Si-GaP heterojunction, elec. and photoelec. props. 2-46123  
 Si-Ga(Sb) interface Schottky barrier formation 2-41011  
 Si-Ge two junction tandem solar cells for thermophotovoltaic appls. 2-37338  
 Si-insulator triple struct. fabrication by O<sub>2</sub> implantation and epitaxial growth 2-40719  
 p-Si-n<sup>+</sup>-GaP heterojunctions, elec. and photoelec. props. 2-41005  
 Si-Ni, Schottky barrier heights and silicide formation 2-13184  
 Si-Ni interface, formation of Si oxides at Ni/Ni<sub>2</sub>Si interface 2-30968  
 Si-Ni<sub>2</sub>Si, crystal interface, ion beam studies 2-45742  
 Si-on-ceramic substrate fabrication using Si-coating-by-inverted meniscus process, solar cell appl. 2-37349  
 Si-Pd, Schottky barrier heights and silicide formation 2-13184  
 Si-Pd, silicide formation by scanned electron beam, Raman spectra study 2-51607  
 Si-Pd interface, PdSi and Pd<sub>2</sub>Si films and bulk phases, thermal stability, X-ray diffr. study 2-51005  
 Si-Pd Schottky barrier solar cell, characts. 2-27610  
 Si-Pd<sub>2</sub>Si interface, thermally induced Si accumulation, Si-Pd bonds, photoemission study 2-26505  
 Si-Pt, Schottky barrier heights and silicide formation 2-13184  
 Si-rare earth oxide film MOS struct., negative resist., switching and signal generation 2-46149  
 Si-sapphire epitaxial layer structs., high resolution TEM study 2-30771  
 Si-Si interface electronic props. 2-51288  
 Si-Si thin film interface, buried Ag layers quantitative anal. 2-45743  
 Si-SiO<sub>2</sub>, amorphous-crystal interface, ion beam studies 2-45742  
 Si-SiO<sub>2</sub>, avalanche electron injection, interface states generation 2-17162  
 Si-SiO<sub>2</sub>, interface, Na<sup>+</sup>-bound electrons, IR absorption study 2-51273  
 Si-SiO<sub>2</sub>, interface struct., high resolution TEM study 2-30473  
 Si-SiO<sub>2</sub>, MOS struct., inversion layer, Si surface states, surface roughness effects 2-51275



## elemental semiconductors continued

- Si-SiO<sub>2</sub>, n-type inversion layers, impurity-shifted intersubband transitions 2-51274  
 Si-SiO<sub>2</sub>, nature of electrical active centres (*Russian*) 2-36146  
 Si-SiO<sub>2</sub>, physico-chemical nature, EPR spectroscopy, review (*Polish*) 2-46359  
 Si-SiO<sub>2</sub>, thermal oxide, pulsed laser irradiation effect 2-50698  
 Si-SiO<sub>2</sub> interface, electrically active paramagnetic centres, spin-depend. resonance meas. 2-13336  
 Si-SiO<sub>2</sub> interface, electron scatt. at low temp., interface states role 2-51338  
 Si-SiO<sub>2</sub> interface, ellipsometric investig. with continuous and discontinuous etching methods, transition layer (*Russian*) 2-17577  
 Si-SiO<sub>2</sub> interface, inversion layers, surface roughness induced scattering and band tailing 2-51321  
 Si-SiO<sub>2</sub> interface, local atomic order and electronic struct. study (*French*) 2-17127  
 Si-SiO<sub>2</sub> interface, neutral scatt. centres in MOSFET devices prep. by oxidation of trichloroethylene 2-51339  
 Si-SiO<sub>2</sub> interface, parallel path oxidation mechanism, expt. study 2-52066  
 Si-SiO<sub>2</sub> interface, phys. struct. of interface states, correl. to technology anal. (*German*) 2-26512  
 Si-SiO<sub>2</sub> interface, polar-angle depend of XPS and EELS 2-26234  
 Si-SiO<sub>2</sub> interface, transition region, XPS study (*Chinese*) 2-31598  
 Si-SiO<sub>2</sub> interface, UV bleaching and regeneration of Si≡Si<sub>3</sub> centres, ESR study 2-51460  
 Si-SiO<sub>2</sub> interface defects, low temp. annealing and hydrogenation 2-8885  
 Si-SiO<sub>2</sub> interface in MOS structures, radiation-induced trivalent Si defect buildup 2-30969  
 Si-SiO<sub>2</sub> interface study using XPS 2-45745  
 Si-SiO<sub>2</sub> interfaces, electronic struct. of defects, extended muffin-tin orbital calc. 2-8853  
 Si-SiO<sub>2</sub> inversion layer, excitonic effects on optical absorption, shielded potential approx. 2-51314  
 Si-SiO<sub>2</sub> MIS struct., Ar ion implanted, deep levels, C-V characs. meas. 2-13010  
 p-Si-SiO<sub>2</sub> MIS structure, photocapacitive study 2-36144  
 Si-SiO<sub>2</sub> MOS struct., electron capture at Na<sup>+</sup> sites, 77 to 296K 2-46134  
 Si-SiO<sub>2</sub> MOS struct., donor conc. in Si surface layer, electron irradiation effect 2-17168  
 Si-SiO<sub>2</sub> MOS system, As implants through SiO<sub>2</sub> layer, TEM, Rutherford backscatt. and device characs. study 2-40450  
 Si-SiO<sub>2</sub> structure, photosensitivity investigation 2-41021  
 Si-SiO<sub>2</sub> system, internal stresses, effect on void formation 2-45328  
 Si-SiO<sub>2</sub> system obtained by Si oxidation in water vapour, electrophys. props. (*Russian*) 2-21682  
 Si-SiO<sub>2</sub> systems, physico-chemical processes, behaviour of H and H-containing struct. (*Russian*) 2-2008  
 Si-SiO<sub>2</sub>-Al structure, Al-SiO<sub>2</sub> and Si-SiO<sub>2</sub> interlayer characs., ellipsometry, C-V meas., and AES - study 2-5470  
 Si-SiO<sub>2</sub>-Al structure, Fowler-Nordheim electron tunnelling 2-26503  
 Si-SiO<sub>2</sub>-Al structures, electron tunnelling 2-21677  
 Si-SiO<sub>2</sub>-Si implanted epitaxial struct., interfacial struct., channelling study 2-30758  
 Si-SiO<sub>2</sub>-Ta sputtered coating, interface stresses and elec. props. 2-21475  
 Si-SiO<sub>2</sub> electrolyte structures, interface state props. depend. on pH 2-36140  
 Si-SiO<sub>2</sub>-n-InAs(n-InSb)(p-ZnTe) hybrid struct., elec. cond. and capacitance 2-26478  
 Si-SiO<sub>2</sub> in MOS structure, charge properties, influence of Si etching in RF Ar plasma (*Russian*) 2-5468  
 Si-superconductor system, photoelec. effect, spectral depend. 2-26559  
 n-Si-TiN contact, elec. characs. 2-26504  
 Si-V<sub>2</sub>O<sub>5</sub> photovoltaic cell, preparation techniques effect on oxide conductivity and open circuit voltage 2-6149  
 Si-ZnO induced junction monolithic SAW storage correlator 2-50006  
 Si+Au, precipitation and formation of impurity clusters 2-26065  
 Si+H, amorphous, transient photocond. and Schottky barrier profile determ. 2-46060  
 a-SiH<sub>3</sub> solar cells, AM1 short cct. current optical limitations 2-37309  
 Si(Li) detector response function appl. for W library standard anal. 2-22119  
 Si(Li)-Ge(Li) coincidence cct. adjustment, radioactive sources 2-19816  
 Si<sub>3</sub>N<sub>4</sub>-Si, ion beam synthesised passivating layers, XPS study 2-45218  
 Si<sub>3</sub>N<sub>4</sub>-SiO<sub>2</sub>-Si structure, Auger depth profiling, relative thickness of oxide layers 2-8717  
 Si<sub>3</sub>N<sub>4</sub>-SiO<sub>2</sub>-Si structure, spectroscopic ellipsometry, nondestructive anal. 2-21447  
 SiO<sub>2</sub>/Si, induced defects, due to ion beam lithography (*Japanese*) 2-50717  
 SiO<sub>2</sub>-Si film-substrate system, polarised light refl. characs. 2-21962  
 SiO<sub>2</sub>-Si interface states generation at low temp. with ionising radiation 2-30944  
 SiO<sub>2</sub>-SiB, ion implanted layers, equivalent circuit 2-46143  
 Si(100) (2×1), dangling- and dimer-bond related surface electron bands, 2-21647  
 Si(100) inversion layer, hot electrons at low lattice temps. 2-46137  
 Si(111), Cl chemisorption config. study, cluster model and EHT method 2-8708  
 Si(111) surfaces, laser- and thermally-annealed, electronic struct. similarities, photoemission study 2-31603  
 Si(111) surfaces, step form. energies and domain orientations 2-30727  
 Si(111)-(2×1) surface, π bonded chain model 2-40658  
 Si(111)-Cu interface photoemission study 2-9244  
 Si(111)-Pd interface, synchrotron radiation photoemission results 2-9245  
 Si(111)(2×1)-Ge heterojunction, localised interface states, photoemission spectra and tight-binding calc. 2-40991  
 Si(111)7×7 surface, two-dimens. metallic state, EELS study 2-27037  
 Si<sub>2</sub>H, amorphous, sputtered coating, density of states, impurity effects 2-45898  
 α-Sn, covalent crystals, lattice energy, electron-gas functional theory 2-1446  
 α-Sn, electronic struct. and total energy, self consistent local pseudopot. method 2-45823  
 α-Sn, semicond., electronic struct. of bulk and (111) surface, self-consistent pseudopot. calcs. 2-46091  
 SnO<sub>2</sub>/n-Si solar cells, stability 2-37417  
 SnO<sub>2</sub>-SiO<sub>2</sub>-n-type Si MIS solar cells fabrication and performance 2-37231  
 Su, elastically bent, Borrmann effect 2-44970

## elemental semiconductors continued

- Te, amorphous, electronic density of states calc., liq. metal model approx., theory (*Russian*) 2-1816  
 Te, amorphous, electronic density of states calc., liq. metal model approx., results (*Russian*) 2-8749  
 Te, band edges, press. depend., relativistic ab initio calc. 2-45824  
 p-Te film, evaporated, thermoelec. power 2-8831  
 Te, galvanomagnetic phenomena, effect of a-edge dislocations (*Russian*) 2-40946  
 Te, impurity lines, anomalous stress shift under high press. 2-36103  
 Te, impurity states in high mag. fields 2-26331  
 Te large refractive index nonlinearities and optically bistable devices 2-11745  
 Te, photocond. meas. at 77K in 1.4 to 4.4 μm range 2-26434  
 Te, photoconducting for subMM wave detectors 2-48777  
 Te, relativistic ab initio valence band and conduction band levels 2-35930  
 Te, Y-cut, total saturation of current 2-46080  
 Ti-p-Si MIS type Schottky barriers 2-46100  
 WSi<sub>2</sub>-Si-P annealing behaviour, effect on MOSFET IC device fabrication 2-8720  
 Y-Si Schottky barrier diode, barrier height and Auger depth profile 2-21656  
 YSi<sub>2</sub>-Si Schottky barrier diode, barrier height and Auger depth profile 2-21656  
 ZnTe-Si heterostructure, epitaxial growth model of ZnTe, film comp. and interface struct. 2-40711

## elementary particle coupling constants

- 5U(5) supercooled phase transform., coupling const. temp. depend. 2-6974  
 baryon coupling constants, in chiral bag model (*Russian*) 2-11023  
 Bogulubov's spontaneous symmetry-breaking mechanism and the Higgs phenomenon 2-10988  
 Dirac neutrinos in early cosmology, V+A interaction coupling const. 2-14960  
 E<sub>8</sub> gauge theory, scalar quartic and Yukawa coupling renormalisation in unified theories 2-6985  
 effective coupling constant in QCD 2-29068  
 eikonal formulation for the scattering by a monopole and by a dyon 2-19357  
 fermionic three dims. QED, coupling const. logarithms summation 2-38839  
 fermions, quartic self-interaction in four dims., Cooper pair formation 2-6960  
 g<sub>NK</sub><sup>+</sup> determination from K<sup>0</sup> regeneration data 2-10996  
 g<sub>φ</sub><sup>+</sup> field theory, renormalized effective pot., strong coupling expansion, high-order terms 2-29010  
 gauge theories, massive neutrinos and proton decay, Orbis Scientiae, Coral Gables, FL, USA (Jan. 1981) 2-42794  
 grand unification with strong gauge coupling of weak interactions and composite Higgs fields 2-3734  
 heavy quark systems, hyperfine splittings 2-33839  
 intermediate boson masses, order α<sub>s</sub> corrections 2-48944  
 lattice σ models, topological susceptibility, scaling 2-38767  
 leptogluons, cosmological constraints on masses and couplings in GUT's 2-7015  
 massless QCD, lattice and continuum Λ scale parameters, comparison 2-11015  
 massless quarks, vacuum polarisation, QCD massive quark contrib. 2-23934  
 mesic atoms and the sigma-terms 2-20210  
 neutral current-like interactions, EM coupling const. universality 2-11006  
 QCD, gauge independent renormalisation group function with flavour thresholds 2-3692  
 QCD chiral currents, vacuum polarisation, massive quarks effect 2-29013  
 QCD running couple constant and measuring gluon density 2-43288  
 QED, continuum strong coupling expansion 2-29012  
 QED, effective Lagrangian, with asymptotic coupling const. 2-3736  
 rishon model, fermion mass generations 2-7013  
 Stevenson optimised perturbation theory appl. to factorisation and mass scheme depend. 2-43294  
 strong coupling expansion, continuum regulation 2-29011  
 supersymmetry and scale of unification 2-6973  
 three-dimensional U(1) lattice gauge theory, static quark confinement 2-48949  
 universality of lepton interactions 2-19309  
 weak coupling constant, from e<sup>+</sup>e<sup>-</sup> → l<sup>+</sup>l<sup>-</sup> 2-24000  
 Weinberg-Salam model and QED, minimal subtraction scheme, W and Z masses 2-29050  
 Yang-Mills theory, quarks and lepton interactions in anisotropic spacetime 2-48937  
 Δ(1500), F<sub>π</sub>, resonance, coupling const. and Breit-Wigner parameter from γp → π<sup>+</sup>p 2-33849  
 e<sup>+</sup>e<sup>-</sup> → hadron production, MARK results, strong coupling const. 2-24012  
 e<sup>+</sup>e<sup>-</sup> → hadron jet, strong coupling const. 2-7040  
 e<sup>+</sup>e<sup>-</sup> → hadrons, jet production, hard gluon bremsstrahlung, strong coupling const. 2-340  
 e<sup>+</sup>e<sup>-</sup> → X, perturbative QCD tests, problems for struct. function and coupling const. d-term. 2-3802  
 eN scattering, parity-violating amplitudes in SU(2)×U(1)×U'(1) model 2-48998  
 η → π<sup>+</sup>π<sup>-</sup>π<sup>0</sup> (3π<sup>0</sup>) EM decays and ρηπ coupling constant 2-3779  
 γn → π<sup>+</sup>p, pion prod. in reson. region, phenomenological anal. using fixed-t dispersion relations 2-43362  
 γp → π<sup>+</sup>n(π<sup>0</sup>p), pion prod. in reson. region, phenomenological anal. using fixed-t dispersion relations 2-43362  
 KN, coupling const., analytic continuation and correlations 2-19401  
 KN, use of zeros in dispersion relation and coupling crust. calc. 2-10998  
 KN μK term, chiral symmetry breaking 2-19354  
 μN → μCCX, charm muonproduction, intrinsic charm and photon-gluon fusion contrib. 2-19386  
 ν<sub>μ</sub> → ντ oscillation and ν<sub>μ</sub>-π coupling upper limits 2-29041  
 νN → νNX, 200 GeV, struct. functions, scaling violation, coupling const. 2-308  
 πΔ → πΔ, coupling const. determ. from Adler conditions 2-19396  
 πN coupling constant, in 1/N expansion 2-49006  
 πΣ → πΣ, coupling const. determ. from Adler conditions 2-19396  
 (ρπ/ρ) coupling constant ratio, rel. to pion charge radius 2-23999  
 Y → ggg from e<sup>+</sup>e<sup>-</sup>, QCD calc., strong coupling const. 2-3781



**elementary particle decay**

see also *electromagnetic decays; elementary particle coupling constants; hadron decay; leptonic decay; leptonic decays; nonelectronic decays; semileptonic decays*  
 flavourdynamics and heavy quark weak decays, gauge framework and electroweak interactions 2-43267  
 heavy quark two body mesic decays, gluon radiative effect, QCD, B appl. 2-23919  
 superheavy bosons, nonequilibrium decay, rel. to Universe baryogenesis 2-53402  
 $2 \rightarrow W^+ \pi^-$ , decay width, test of electroweak Lagrangian 2-23902  
 $\bar{p}p$ , pol. p,  $W^+$  and  $Z^0$  leptonic decay polarisation effects 2-11077  
 $\bar{p}p \rightarrow W^+ X$ , W identification from decay lepton distrib. 2-19407

**elementary particle electromagnetic interactions**

see also *Weinberg model*  
 EM probes in the nucleus, collective states to quarks, conference, Bologna, Italy (Nov. 1980) 2-3330  
 lepton-hadron scatt., two photon exchange, low momentum transfer theorem 2-19383  
 neutral current-like interactions, EM coupling const. universality 2-11006  
 VDM, photon-vector meson coupling strength, photon momentum depend. 2-43319  
 $e^+e^- \rightarrow e^+e^-\mu^+\mu^-$ ,  $2\gamma$  uses  $1\gamma$  physics 2-23965  
 $\psi$  two body hadronic decay, deviation from exact SU(3), EM interaction contri. b. 2-3776

**elementary particle gravitational interactions**

see also *supergravity*  
 Goldstone bosons gravitational interaction (Russian) 2-48934  
 $\Omega^- \rightarrow \Xi^- \pi^0 (\Xi^- \pi^0) (AK^-)$ , branching ratios calc. from gravitational model of baryons 2-43340

**elementary particle inclusive interactions**

see also *electron-positron inclusive interactions; elementary particle large momentum transfer interactions; pion-proton inclusive interactions; proton-proton inclusive interactions*  
 baryon production, polarisation asymm., parton recomb. with SU(6) symm. 2-24056  
 Centauro hadron-hadron event,  $10^{12}$ - $10^{15}$  eV, high mass particle prod. cross section, parton model 2-24035  
 deep inelastic scatt., fourth-order QCD corrections to longit. structure functions 2-43353  
 Drell-Yan processes, effects of quark sea in nuclei 2-43394  
 eikonal scatt. amplitudes estimate via multiplicity distrib. and multiperipheral formula 2-33820  
 electron structure functions from electron-photon scatt. in  $e^+e^-$  collisions 2-48992  
 gauge theories in particle physics, book 2-42802  
 gluon hadronisation in quark and gluon jets, QCD colour content 2-23927  
 hadron multiplicity distributions in a dual model 2-19356  
 hadron-hadron collisions, hadron jet emergence (Russian) 2-24047  
 hadron-hadron interactions, inclusive and exclusive processes at high energies, hyperon polarisation 2-7041  
 hadron-hadron interactions and leading particle effect in dual-parton model 2-3821  
 hadronic cross-sections, topological supersymmetric struct. 2-24045  
 hadronic inclusive processes, small and large p, behaviour 2-38907  
 hadronic interactions, neutral particle prod., scaling in the mean hypothesis test 2-49017  
 hadrons structure functions in deep inelastic scatt., quantum field theory single-time formulation 2-11050  
 hard jet charge measurement, IR singularities 2-19321  
 heavy QQ bound states hadronic prod. 2-49015  
 high energy hadron-nucleus reactions, recoil proton distrib., Monte Carlo simulation 2-19410  
 high-energy physics techniques, NATO Advanced Study, St. Croix, US Virgin Islands (July, 1980) 2-28591  
 jet phenomena, review 2-29123  
 jet states and a parametrization of hadronic exclusive amplitudes 2-300  
 jet structure of hadrons, book 2-3343  
 jets, degree of coherence in Kopylov-Podgoretsky-Cocconi formulae 2-43389  
 lepton-hadron deep inelastic scatt., soft gluon radiation and parton model 2-11027  
 lepton-nucleon deep inelastic scatt. 2-29117  
 multiparticle production processes in quark model, review 2-19340  
 $\bar{p}N(pN) \rightarrow GX$ , glueball prod. 2-3811  
 parity violating asymmetry through the interference of strong and weak interactions in the production of two jets by collisions of polarized protons (German) 2-11076  
 perturbative QCD, charm prod., central and diffractive components 2-43299  
 polarisation phenomena quark dynamics (Russian) 2-33814  
 QCD, perturbative, Drell-Yan and deep-inelastic processes, virtual corrections regularisation scheme depend. 2-29079  
 QCD, quark and gluon jets, asymptotic features and comparisons 2-43285  
 QCD and electroweak gauge model, gauge bosons, spin asymmetries in large- $p_T$  prod. 2-29144  
 QCD and hard scatt. processes 2-48946  
 QCD jets, hadron and gluon multiplicities, three loop Yang-Mills calc. 2-6992  
 semi-inclusive reactions, produced hadrons polarisation as measure of triple gluon coupling 2-29078  
 spin depend. processes involving real pol. photon, quark and gluon distrib., jets 2-3790  
 Stevenson optimised perturbation theory appl. to factorisation and mass scheme depend. 2-43294  
 super high energy cosmic ray nuclear interactions  $10^{12}$ - $10^{14}$  eV 2-23199  
 valon-parton recombination for low  $p_T$  hadron prod. 2-23948  
 $ab \rightarrow C(n,1)X$ , correlations between neutral and charged particles in multicomponent approach (Russian) 2-349  
 CN, deeply inelastic scatt., quark jets, structure functions, currents 2-43361  
 $ee \rightarrow eeX$ , luminosity function for two-photon processes in the single tagging mode,  $\gamma^*\gamma^* \rightarrow X$  comparison 2-3823  
 $e^-h \rightarrow e^-X$ , deep inelastic scatt., higher order QCD effects 2-29113  
 eN deep-inelastic scatt., flavour-diagonal horizontal interactions, SU(2) $\times$ U(1) $\times$ U(1) $_H$  model phenomenological consequences 2-43246  
 eN  $\rightarrow eX$ , Fermi weak theory and parton anal. review (Spanish) 2-303

**elementary particle inclusive interactions continued**

ep, coloured pseudo-Goldstone bosons photoproduction cross-section at very high energy 2-48999  
 ep  $\rightarrow eW^+X$ , W bosons electroproduction cross section in Weizsacker-Williams approx. 2-43360  
 $\gamma^*\gamma^* \rightarrow X$ , luminosity function for two-photon processes in the single tagging mode,  $ee \rightarrow eeX$  comparison 2-3823  
 $\gamma\gamma \rightarrow 2$  jets, cross sections from PLUTO, symmetry of light (Russian) 2-43397  
 $\gamma\gamma \rightarrow 2$  jets, high  $p_T$  hadron prod., lowest order cross section 2-33875  
 $\gamma N$ , charmed mesons and baryons inclusive photoproduction cross section 2-29116  
 $\gamma N \rightarrow D^{*+}X$ , 75-200 GeV, inclusive prod. cross-section 2-326  
 $\gamma N \rightarrow FX$ , 75-200 GeV, inclusive prod. cross-section 2-326  
 $\gamma N \rightarrow \mu^+\mu^-X$ , Drell-Yan photoprod., cross section,  $\gamma$  structure function 2-24001  
 $\gamma N \rightarrow Z^0X$ , quark-parton mechanism (Russian) 2-3791  
 $\gamma p \rightarrow h^+X$ , perturbative QCD test 2-7037  
 $\gamma p \rightarrow HX$ , Higgs-boson photoproduction at very high energy 2-43359  
 $\gamma p \rightarrow mX$ ,  $\pi^+K^+$  inclusive meson spectra, large  $p_T$  jets target jet remnants process depend. 2-29115  
 $\gamma p \rightarrow p^0X(P^0X)$ , coloured pseudo-Goldstone bosons prod. at very high energy 2-48999  
 $\gamma p \rightarrow pX$ , 20-140 GeV, diffractive photon disoc. 2-329  
 $\gamma p \rightarrow \pi^+hX$ , pol.  $\gamma$ , jet polarisation, gluon spin, in QCD 2-327  
 h(h)p,  $h = \pi, K, p$ , high  $p_T$  jet prod., antiparticle-particle total cross section differences 2-24042  
 $h_1 h_2 \rightarrow \mu^+\mu^-X$ , massive lepton pair prod., field theory approach to large momentum transfer process 2-7054  
 $hh \rightarrow l^+l^-X$ , review 2-3818  
 $hh \rightarrow \mu^+\mu^-X$ , production simulation 2-7049  
 $hh \rightarrow \mu^+\mu^-X$ , Sudakov effects, initial state interactions 2-38913  
 $hh \rightarrow \pi X$ , large  $p_T$  scatt., naive QCD parton model, gluon distrib. 2-7050  
 hN  $\rightarrow hX$ , in nuclei, high energy, projectile fragmentation, quark model predictions 2-38910  
 $K^-p$ , 110 GeV/c, charge transfer distrib. study 2-38909  
 $K^-p$ , 110 GeV/c, forward and backward multiplicities study 2-29156  
 $K^-p$ , 110 GeV/c,  $\gamma$ ,  $K^0$ ,  $\Lambda^0$  and  $\bar{\Lambda}^0$  inclusive prod. 2-11074  
 $K^-p$ , 14.3, 70 GeV/c,  $\pi$  and  $K^0$   $p_T$  invariant distrib., energy depend. 2-24040  
 $K^-p$ , 32 GeV/c, multiple hadron prod. processes, quark statistics rules test (Russian) 2-33813  
 $K^-p$ , 6.5 GeV/c,  $S = -2$  and  $-3$  baryon states prod. 2-11061  
 $K^-p$ , 8.25 GeV/c, inclusive  $\Xi^-$ ,  $\Xi(1530)$ ,  $\Omega^-$  prod., triple Regge anal. 2-24025  
 $K^-p$ , secondary particles average multiplicities, quark combinatorics predictions expt. test (Russian) 2-48956  
 $K^+p$ , 70 GeV/c, inclusive  $\Lambda$  and  $\bar{\Lambda}$  prod. cross-section and single particle distrib. 2-3820  
 $K^+p$ , 70 GeV/c, multiparticle systems, jet-like props. 2-29143  
 $K^+p \rightarrow K^0X$ , 70 GeV/c, inclusive and semi-inclusive cross sections 2-19406  
 lb  $\rightarrow X$ , leading baryon effect 2-19405  
 lN inelastic scatt., quarks and leptons low-lying excited states prod. cross section n 2-43313  
 $l^+N \rightarrow l^+X$ , P-odd asymmetries and possible method to test Weinberg-Salam theory (Russian) 2-33780  
 lp  $\rightarrow l^*X$ , possible visible  $l^*$  tracks in cosmic ray events 2-33823  
 $\mu N$ , muonlepton prod. results review 2-15344  
 $\mu N \rightarrow \mu^+\mu^-X(\mu^+\mu^-X)$ , 280 GeV/c, multimoon prod. results from EMC expt. 2-3792  
 $\mu N \rightarrow \mu C\bar{C}X$ , charm muoproduction, intrinsic charm and photon-gluon fusion contrib. 2-19386  
 $\mu^+N \rightarrow \mu^+\mu^+\mu^-X(\mu^+\mu^+\mu^-X)$ , 250 GeV, tri-muon events obs. 2-29114  
 $\mu p$ , 219 GeV,  $K$ ,  $\pi$  and p prod. ratios 2-33848  
 $\mu p$ , azimuthal depend. in semi-inclusive leptonproduction, QCD prediction 2-43296  
 NN, 2-1000 GeV/N, charged particle multiplicity distrib., scaling 2-33871  
 NN, high energy, pion prod., inclusive single-particle cross section 2-29138  
 NN in  $\alpha\alpha$  and  $\alpha p$ , large  $p_T$   $\pi^0$  inclusive prod., differential cross sections 2-3815  
 NN inelastic interactions, dual parton model anal. 2-39060  
 $\nu(\bar{\nu})N$ , deep-inelastic scatt. cross sections (Russian) 2-33780  
 $\nu(\bar{\nu})N \rightarrow \mu^+\mu^-X$ , high statistics neutrino dimuon prod. 2-312  
 $\nu_\mu(\bar{\nu}_\mu)N \rightarrow \mu X$ , 30-200 GeV, charged-current interactions, differential cross section expt. study 2-48974  
 $\nu N$ , charmed baryon  $\Lambda_c^+$  decay obs. 2-48984  
 $\nu N$ , strange-particle prod. in BNL 7-foot bubble chamber 2-43327  
 $\bar{\nu}N \rightarrow \mu^+e^+X$ , charged current event observation 2-19364  
 $\nu N \rightarrow \nu X$ , Fermi weak theory and parton anal. review (Spanish) 2-303  
 $\bar{\nu}_\mu N$ , 5-150 GeV, charged hadron multiplicities, quark parton model 2-29102  
 $\nu_\mu N \rightarrow \mu X$ , radiative corrections and their effect on  $p^2$  and  $\sin^2\theta_w$  determ. 2-11041  
 $\nu_\mu N \rightarrow \mu^+X$ , J/ $\psi$  meson diffractive prod. via neutral currents 2-48973  
 $\nu_\mu N \rightarrow \bar{\mu}X$ , 5-150 GeV, neutrino oscill. study at Fermilab 2-43330  
 $\nu_\mu n(p) \rightarrow \mu^+hX$ , cross-section ratio  $\sigma(\nu n)/\sigma(\nu p)$  for charged-current and neutral-current interactions below 10 GeV 2-3768  
 $\nu p$ , 43 GeV, inclusive neutral strange particle prod.,  $K^0$ ,  $\Lambda$ ,  $\bar{\Lambda}$ ,  $K^*$  and  $\Sigma$  2-38873  
 $\bar{\nu}p \rightarrow \mu^+h^+X$ , hadron prod. mechanism in charged-current interactions 2-3769  
 $\bar{\nu}p \rightarrow \mu^+X^0$ , 5 to 150 GeV, quark momentum distrib. meas. in proton 2-43328  
 $\nu_\mu p$ , 5-150 GeV, charged hadron multiplicities, quark parton model 2-29102  
 $\nu_\mu p \rightarrow \mu^+(\pi^+\pi^-)X$ , inclusive  $\rho^0$  prod. in charged current interactions 2-43325  
 pd  $\rightarrow X$ , prod. at rest 2-24033  
 pd  $\rightarrow X$ , 0.8 GeV, analysing power 2-29126  
 pN, 13 GeV/c, direct  $e^+e^-$  pairs prod. 2-29149  
 pN, 13 GeV/c, direct single electron prod. 2-29148  
 pN, 19 GeV/c, nucleon fragmentation compared to quark counting rules, structure functions 2-33861  
 pN, 400 GeV, neutrino produced in hadronic collision vicinity 2-355  
 pN, 400 GeV, rapidity intervals 2-38906  
 pN, 70 GeV,  $\gamma$  quanta produced at  $90^\circ$  CMS angle, azimuthal corrl. (Russian) 2-29153  
 pN (pN), 20 to 150 GeV/c, particle prod. from nuclei 2-29137



**elementary particle inclusive interactions continued**

- $pN$  annihilation in nucleus, parton model description 2-33869  
 $pN$  annihilation in nucleus energy degradation effect, Glauber's multiple collision model 2-29161  
 $pN \rightarrow \pi^0 X$ , 12 GeV, in Be,  $\pi^0/\eta^0$  prod. ratio 2-39021  
 $pN \rightarrow \pi^+ X$  (pX), 100 GeV/c, inclusive hadron prod., additive quark model predictions (*Russian*) 2-7056  
 $pN \rightarrow X$ , 300 GeV, in emulsions, multiparticle prod., rapidity space distrib. anal. 2-49016  
 $pN \rightarrow X$ , 70 GeV/c, multiparticle prod., impact parameter study 2-346  
 $pN \rightarrow \pi^0 X$ , 400 GeV, inclusive  $\pi^0$  prod. and quark fragmentation functions 2-29140  
 $\pi N$ , 2-1000 GeV/N, charged particle multiplicity distrib., scaling 2-33871  
 $\pi N$ , 20 to 150 GeV/c, particle prod. from nuclei 2-29137  
 $\pi N \rightarrow X$ , large  $p_T$  jets, direct pion coupling, QCD sub-processes 2-24043  
 $\pi N$ , 150 GeV/c, dimuon hadronic prod., ang. distrib. 2-29157  
 $\pi N$ , 40 GeV/c,  $\rho^0$ ,  $\omega$  and  $f$  reson. inclusive prod. cross sections (*Russian*) 2-29152  
 $\pi N$  in emulsion nuclei, 50 GeV/c, large transverse momentum distrib. 2-43386  
 $\pi^- N \rightarrow \mu^+ \mu^- X$ , 150-280 GeV,  $O(\alpha_s)$  QCD calc., perturbative Drell-Yan model 2-24044  
 $\pi^- N \rightarrow \mu^+ \mu^- X$ , ang. distrib., Drell-Yan and lowest order QCD comparison 2-7052  
 $\pi^+ N \rightarrow \pi^+ X(K^+ X)(pX)$ , 100 GeV/c, inclusive hadron prod., additive quark model predictions (*Russian*) 2-7056  
 $\pi^+ N$ , large  $P_T$  inclusive processes, isospin violations in perturbative QCD 2-33800  
 $\pi^+ p$ , 18 GeV/c, direct  $e^+e^-$  pair prod. from hadronic bremsstrahlung 2-43390  
 $\pi^+ \nu^-$ , 15 GeV/c, inclusive  $\rho^0$  and  $\Delta^{++}$  prod. study in off-mass-shell interactions 2-348  
 $eN$  deep inelastic scatt., leptonproduction jet cross section, parton transverse momentum corrections 2-43358  
 $e^- p \rightarrow e^- \gamma X$ , weak neutral current effects 2-19384  
 $K^- p$ , 32 GeV/c, interference correl. study between pions (*Russian*) 2-3810  
 $K^+ p$ , average charged multiplicity and KNO scaling, diffractive component 2-33862

**elementary particle interaction models**

- see also bootstrapping; composite models of hadrons; diffraction model; duality and dual models; peripheral models; statistical models; vector meson dominance model; Weinberg model  
 baryon spectroscopy in potential model 2-19319  
 baryon-meson interaction model (*Russian*) 2-49004  
 eikonal formulation for the scattering by a monopole and by a dyon 2-19357  
 elastic scattering and hadron dynamics at short distances 2-33817  
 fiber bundles and quantum theory 2-3705  
 four- $\Delta$  bound state, from Heitler-London  $\pi\pi NN$  dibaryon model 2-48968  
 hadron+hadron scatt. geometrical model, operator theory (*Chinese*) 2-33751  
 independent collision model, cosmic-ray related aspects of NN and nucleus-nucleus high energy interacts. 2-356  
 leading particle effect in hadron physics 2-43370  
 logarithmic perturbation theory for screened Coulomb potential and charmonium potential (*Russian*) 2-23958  
 quarkonia, potential models 2-23960  
 strangeonium potential model with complete  $O(\mu^2/c^2)$  hyperfine splittings 2-23959  
 toponium, top meson and props. 2-48948  
 $e^+e^-$ , resonance production, asymptotic cross-sections, duality ideas, rel. to potential models 2-3764  
 $KN$ , coupling consts., analytic continuation and correlations 2-19401  
 $KN$  interaction at low energies, CDD pole,  $\Delta(1405)$  prod. 2-11068  
 $KN$  resonances, phase shift anal., review 2-10993  
 $KN$  sigma term, chiral symmetry breaking 2-19354  
 $NN$  interaction amplitudes in phase shift analysis 2-29089  
 $NN$  scatt., ladder approx., operator Pade approx. for perturbative expansions 2-33852  
 $pd$ , high energy elastic scatt., diffr. cross section, dip struct., Chou-Yang model 2-24027  
 $pN$  annihilation in nucleus energy degradation effect, Glauber's multiple collision model 2-29161  
 $pp$ , 540 GeV, large  $p_T$  reactions, recombination model 2-24041  
 $pp$  elastic scatt., 52.8 GeV, total cross section, optical theorem anal. 2-11071  
 $\pi N$  data, dispersion relations, partial wave anal., resonances 2-10991  
 $\pi N$  phase shift anal., current status 2-10990

**elementary particle interactions**

- see also cosmic ray effects and interactions; elementary particle coupling constants; elementary particle electromagnetic interactions; elementary particle gravitational interactions; elementary particle inclusive interactions; elementary particle large momentum transfer interactions; elementary particle scattering; elementary particle strong interactions; elementary particle weak interactions; hadron-deuteron interactions; hadron-hadron interactions; high-energy cosmic ray interactions; lepton-deuteron interactions; lepton-hadron interactions; lepton-lepton interactions; photon-deuteron interactions; photon-hadron interactions; photon-lepton interactions; photon-photon interactions; polarisation in elementary particle interactions; quantum field theory of interactions; unified field theories; vertex functions  
 recent developments in particle physics 2-289

**elementary particle large momentum transfer interactions**

- see also elementary particle inclusive interactions  
 Drell-Yan process, large  $P_T$ , 2nd order gluon radiative corrections to parton processes 2-3755  
 exclusive QCD processes, helicity selection rules and gluon spin tests 2-43298  
 gauge field theory approach, QCD and parton model 2-265  
 hadron-hadron collisions, hadron jet emergence (*Russian*) 2-24047  
 hadronic inclusive processes, small and large  $p_T$  behaviour 2-38907  
 jet phenomena, review 2-29123  
 jet structure of hadrons, book 2-3343  
 large transverse momentum particle production, thermodynamical model 2-11035  
 perturbative QCD study of hadronic jets produced in hard processes 2-33801

**elementary particle large momentum transfer interactions continued**

- QCD and electroweak gauge model, gauge bosons, spin asymmetries in large- $p_T$  prod. 2-29144  
 QCD interpretation of charmed meson decay, rel. to large momentum transfer (*Russian*) 2-11046  
 soft gluon corrections to large- $p_T$  direct photon and dilepton production 2-3749  
 $e^+e^-$  annihilation, high  $P_T$  jet production in  $2\gamma$  interactions 2-15315  
 $e^+e^- \rightarrow e^+e^- (\mu^+\mu^-, \tau^+\tau^-, \gamma\gamma)$ , QED tests at PETRA 2-19315  
 $\gamma d \rightarrow \pi^0 d$ , dibaryon resonance effects on differential cross section (*Russian*) 2-3794  
 $\gamma\gamma \rightarrow 2$  jets, high  $p_T$  hadron prod., lowest order cross section 2-33875  
 $\gamma\gamma \rightarrow MM$ ,  $M$ =meson, large angle exclusive channels in QCD, Regge singularity 2-24057  
 $\gamma\gamma \rightarrow$  two jet topology events at high  $p_T$  2-19411  
 $\gamma p \rightarrow mX$ ,  $\pi^+ K^+$  inclusive meson spectra, large  $p_T$  jets target jet remnants process depend. 2-29115  
 $h(hp)$ ,  $h=\pi, k, p$ , high  $p_T$  jet prod., antiparticle-particle total cross section differences 2-24042  
 $h, h_2 \rightarrow \mu^+ \mu^- X$ , massive lepton pair prod., field theory approach to large momentum transfer process 2-7054  
 $hh \rightarrow \pi X$ , large  $p_T$  scatt., naive QCD parton model, gluon distrib. 2-7050  
 $NN$  in  $\alpha\alpha$  and  $\alpha p$ , large  $p_T$   $\pi^0$  inclusive prod., differential cross sections 2-3815  
 $pN$ , 70 GeV,  $\gamma$  quanta produced at  $90^\circ$  CMS angle, azimuthal correl. (*Russian*) 2-29153  
 $pp$ , 540 GeV, large  $p_T$  reactions, recombination model 2-24041  
 $pp$ ,  $S^{1/2}=62.2$  GeV, prompt  $e^+$  prod. cross-section meas. 2-29141  
 $pp$ ,  $s^{1/2}=63$  GeV, accompanied vs. unaccompanied prompt photons, QCD anal. 2-43391  
 $pp \rightarrow$  dijet, high  $P_T$ , parton transverse momentum meas. 2-3814  
 $pp(pp)$ ,  $p_T$  distrib. fourth moment in QCD, triple gluon coupling 2-43387  
 $pp \rightarrow \pi^+(K^+, p, p)X$ , 200 and 300 GeV large transverse momentum prod. cross sections 2-29146  
 $pp \rightarrow X$ , inclusive transverse momentum distrib. in hadronic systems 2-19404  
 $\pi^- N$  in emulsion nuclei, 50 GeV/c, large transverse momentum distrib. 2-43386  
 $\pi^+ N$ , large  $P_T$  inclusive processes, isospin violations in perturbative QCD 2-33800  
 $\pi^+ p$  elastic scatt., 200 GeV, large momentum transfer, struct. obs. 2-29134  
 $\pi^+ p \rightarrow \pi^+(K^+, p, pp)X$ , 200 and 300 GeV large transverse momentum prod. cross sections 2-29146

**elementary particle mass**

- see also baryon mass; lepton mass; mass differences; mass formulae; meson mass  
 $b$ -quark hadrons, mass in quark model 2-23949  
 charmed hadrons, mass in quark model 2-23949  
 confined quarks, mass, charge and mag. moment meas. 2-15322  
 cosmological and quantum constraints, teaching 2-48462  
 electroweak gauge theory, chiral symm. breaking, fermion mass generation 2-15302  
 extended technicolour interactions, pseudo-Goldstone boson masses from broken gauge interactions 2-43279  
 fermion mass hierarchies in theories of technicolor 2-29097  
 glueball masses in  $(2+1)$  dims. periodic QED, strong coupling series 2-43262  
 grand unified theories based on  $SU(N)$ ,  $SO(10)$ ,  $SO(4N+10)$ ,  $E_6$ , radiative quark mass 2-38826  
 heavy particle effects on mass magnitudes 2-29096  
 heavy quark, mass limits from  $K_L^0$ -light neutrals 2-38876  
 Higgs boson mass, in Weinberg-Salam model 2-23914  
 Lemaitre cosmological model, cosmological constraints on elementary particle mass 2-38349  
 leptiquarks, cosmological constraints on masses and couplings in GUT's 2-7015  
 light current quarks, mass ratios from generalised hadron identifications (*Russian*) 2-43268  
 light quark vacuum condensate, QCD sum rules, PCAC, spontaneous masses 2-11021  
 light quarks masses in QCD 2-38857  
 mass hierarchies in supersymmetric theories, gauge hierarchies 2-15294  
 massless Higgs and Yang-Mills fields conformal supersymmetry breaking, mass generation 2-43223  
 minimal flavor unification via multigenerational Peccei-Quinn Symmetry 2-29043  
 quark mass in unified field theories 2-23901  
 quark masses, from renormalisation group eqn., rel. to  $hh$  scatt. 2-38866  
 quarks, mass. in nonrelativistic pot. model, rel. to  $SU(5)'$  prediction 2-48965  
 quarks  $u$  and  $d$  bare mass, in  $SU(2)$  lattice gauge theory 2-28999  
 radiative quark mass generation and a fourth quark family 2-23996  
 radiative structure of fermion masses 2-29053  
 real gauge hierarchy problem, mass scales from spontaneous symmetry breaking 2-6944  
 scalar fields, conserved currents, mass spectra, Killing eqns., Goldstone theorem, classification scheme 2-19317  
 $SO(10)$  grand unification, quark and lepton mass hierarchy 2-23891  
 $SU(2)_C \otimes U(1)$  model with horizontal symmetry, Cabibbo angle and  $t$ -quark mass 2-29049  
 $SU(5)$  GUT embedded in  $N=8$  extended supergravity, mass scale 2-6786  
 $t$ -quark mass from up-down symmetry breaking in technicolour 2-293  
 technicolour and the three-fermion composite model 2-7016  
 two relativistic fermions, bound state, leptonic widths, spectra, quark models 2-19348  
 unification mass matrix 2-15308  
 weak-boson mass from available neutrino data 2-3742  
 Weinberg-Salam model and QED, minimal subtraction scheme,  $W$  and  $Z$  masses 2-29050  
 Weyl fermion mass matrix, diagonal form in real or pseudoreal gauge group representations 2-19248  
 $a_0$ , axion mass lower limit and search in  $^{137}\text{Ba}^*$  monochromatic  $\gamma$ -transition 2-11112  
 $P^+$  pseudo-Goldstone boson mass, chiral dynamics in technicolour 2-3747  
 $pN$  scatt., high energy, axion prod. and mass, direct axion-quark coupling calc. 2-7047  
 $q_9$  mass in GUT, flavour numbers 2-38829



**elementary particle mass continued**

- t quark mass, from naturalness arguments 2-29094  
 $Z^0$ , mass bounds in multi- $Z^0$  unified model 2-19297

**elementary particle scattering**

- see also bootstrapping; elementary particle interactions; hadron-deuteron scattering; hadron-hadron scattering; lepton-deuteron scattering; lepton-hadron scattering; lepton-lepton scattering; Mandelstam representation; photon-deuteron scattering; photon-hadron scattering; photon-lepton scattering; photon-photon scattering; polarisation in elementary particle scattering; Pomeronhuk poles and trajectories; quantum field theory of elastic scattering; Regge poles and trajectories; relativistic scattering theory; S-matrix theory  
 eikonal formulation for the scattering by a monopole and by a dyon 2-19357  
 kink model, 't Hooft-Polyakov monopoles, spin 2-261

**elementary particle strong interactions**

- see also composite models of hadrons; duality and dual models; hadron classification schemes; peripheral models; quantum field theory of strong interactions  
 critical phenomena in strong interaction physics 2-48941  
 high-energy strong interaction, rel. to asymptotic freedom 2-11034  
 neutral current-like interactions, EM coupling const. universality 2-11006  
 particle acceleration to faster than speed of light by strong interactions 2-42854  
 relativistic quantum mechanics, Schrodinger's eqn. and Lie-isotopic generalisation, field unification, neutron struct. model 2-29032  
 KN sigma term, chiral symmetry breaking 2-19354  
 $\pi$ N scatt., possible evidence for strong Van der Waals forces 2-7046

**elementary particle symmetry**

- see also chiral symmetries; conservation laws; discrete symmetries; dynamical symmetry; helicity (elementary particles); isotopic spin (elementary particles); nonlinear symmetries; spontaneous symmetry breaking;  $SU_n$  theory; supersymmetry  
 bifurcation symmetries 2-38814  
 composite fermions mag. moments 2-43315  
 E(2) like little group, translation, photon spin 2-48894  
 Gross-Neveu model symmetry restoration in conformally flat metrics 2-3737  
 horizontal symmetry quantum numbers, generation mixing and mass ratios 2-43252  
 massless scalar QED, symmetry restoration in conformally flat metrics 2-3737  
 non-Euclidean and non-Desarguesian geometries, models for hadron structure 2-48495  
 quantum field theory, symmetries, review (Russian) 2-38809  
 solitons quantisation in models with global internal symmetry (Russian) 2-33749

**elementary particle theory**

- see also Bethe-Salpeter equation; complex angular momentum plane; current algebra; dispersion relations; electron theory; elementary particle interaction models; elementary particle symmetry; Feynman diagrams; form factors (elementary particles); group theoretical schemes; helicity (elementary particles); isotopic spin (elementary particles); Lee model; mass formulae; quantum field theory; S-matrix theory; scaling phenomena; structure functions; sum rules; vertex functions  
 antibaryon-baryon pair prod., baryon configurations of arbitrarily small mass 2-3767  
 axions and second class currents, common basis in chiral U1 symmetry 2-38819  
 classical and quantal, relativistic and nonrelativistic elementary particles, state spaces 2-33759  
 covariant chronogeometry and extreme distances 2-48967  
 high energy theoretical physics, computer symbolic algebra appl. 2-33698  
 high momentum collective motion in the vacuum, anomalies 2-268  
 inverse dielectric and response function, perturbative expressions, coherent renormalisation (Chinese) 2-19233  
 mathematical physics developments, conf. Schladming, Austria (Feb. 1981) 2-38356  
 mesic atoms and the sigma-terms 2-20210  
 neutrino, photon and monopole field, composite particle structure theory 2-7014  
 old and new directions 2-15332  
 particle physics and field theory, book 2-6718  
 particles carrying electric and magnetic charge, second quantisation, field interaction 2-43260  
 review of expt. proofs of theories of 1980's (Dutch) 2-301  
 spin- massless particle, carrying elec. and mag. charge, generalised EM fields 2-43259  
 structure of three-twistor particles 2-29098  
 trends in particle physics 2-23963  
 $\gamma \rightarrow e^+e^-$ , prod. by massive photon in mag. field 2-33874  
 nd, Efimov effect anal. (Russian) 2-49062

**elementary particle weak interactions**

- see also neutral currents; quantum field theory of weak interactions; Weinberg model  
 conference on high energy physics, Akaslompola, Finland (July-Aug. 1980) 2-42782  
 fundamental interactions theory developments, Winter School, Karpeaz, Poland (Feb.-March, 1980) 2-48384  
 gauge theories in particle physics, book 2-42802  
 hadronic weak interaction processes, QCD effects 2-48947  
 massive neutrino gas, vol. viscosity 2-48609  
 medium energy, overview 2-38900  
 neutral current-like interactions, EM coupling const. universality 2-11006  
 relativistic quantum mechanics, Schrodinger's eqn. and Lie-isotopic generalisation, field unification, neutron struct. model 2-29032  
 $SU(2) \times U(1) \times SU(2)'$  gauge model with heavy weak bosons and small additional neutral current interaction 2-48935  
 universality of lepton interactions 2-19309  
 V+A interaction term, effect in lepton era 2-14960  
 $eN \rightarrow eX$ , Fermi weak theory and parton anal. review (Spanish) 2-303  
 NN, 15 to 50 MeV, QCD corrections to weak interaction Hamiltonian and parity violation (Russian) 2-7043  
 $\bar{\nu}_e e \rightarrow \mu^- \bar{\nu}_\mu$ , expt. study using wide-band antineutrino beam 2-311  
 $\bar{\nu}_e e \rightarrow \mu^- \bar{\nu}_\mu$ , inverse muon decay expt. study 2-311  
 $\nu N \rightarrow \nu X$ , Fermi weak theory and parton anal. review (Spanish) 2-303  
 $^3H$  decay, heavy neutrinos, limits on emission 2-33965

**elementary particles**

- see also bosons; charm particles; composite particles; cosmic rays; fermions; gamma-rays; hadrons; hypothetical particles; leptons; quantum field theory; strange particles  
 superheavy elementary particles, chemical signatures 2-15306

**elements (chemical)**

- for specific metals and non-metals see appropriate chemical names  
 see also element origin; element relative abundance; periodic system of elements  
 atomic sensitivity factors for ESCA, empirical set 2-27508  
 bulk electron concentration, and average valence band strength 2-5074  
 bulk electron concentration, and average valence band strength 2-21060  
 melting point relations for post-transition elements 2-16756  
 secondary electron emission regularities 2-51752  
 superheavy, search using deep inelastic reactions 2-29304  
 superheavy elements, chemical signatures for superheavy elements particles 2-15306  
 superheavy elements in early Solar system, abundance 2-38074  
 transplutonium elements, sorption and extraction on TVEX 2-37098  
 $Z=113$  dimer, ab initio relativistic calc. 2-29742  
 $^{238}U + ^{238}U$ , damped collision, search for superheavy elements 2-29303

**elevators see lifts****Eliasberg strong-coupling model see strong-coupling superconductors****Elinvar**

- $\gamma$ -phase form. mech., kinetics and singularities (Russian) 2-22212  
 inspection of heats using Curie temperature, alloy 44 NKHMT 2-9487

**ellipsometers**

- see also ellipsometry  
 adjustment technique for eliminating compensator optical activity influence 2-19160  
 automatic ellipsometer for electric field measurement near liquid/solid dielectric interfaces 2-10847  
 laser, transient processes obs. appl. 2-210  
 manually operated, for student use 2-10572  
 photometric, with phase and amplitude modulation, luminous flux intensity calcs. (French) 2-10844  
 photometric ellipsometer for film growth study in very early stages (Japanese) 2-33613  
 spectral, for testing semicond. structs. with dielec. coatings 2-10843

**ellipsometry**

- see also ellipsometers; polarimetry  
 Annual Review of Materials Science, book 2-48405  
 contour maps, const.-psi const.-delta, ellipsometry and refl.-type optical device appls. 2-48667  
 crystal substrates, boundary layer of water rel. to elec. props of substrate ellipsometry study 2-45752  
 dielectric film refractive index determ. using immersion liqs., ellipsometry and multiple-beam interferometry methods 2-10848  
 electrode processes in gas discharges, model 2-19161  
 film, inhomogeneous, ellipsometric eval. of thickness, anomalous refr. index 2-31581  
 film growth study in very early stages using photometric ellipsometer (Japanese) 2-33613  
 film optical constants and thickness spatial distrib. determ. by nondestructive optical technique 2-19154  
 immersion ellipsometry for refr. index and extinction coeff. meas. on oxidizable substrates 2-19155  
 IR ellipsometry using photometric ellipsometric and Fourier spectrometer 2-28887  
 multiple-angle-of-incidence ellipsometry, parameter correlation and precision 2-209  
 optical material damaged layer after mech. working, ellipsometric study 2-15212  
 optomechanical multiplier of rot. vel. of the light polarisation plane 2-48749  
 perpendicular incidence photometric ellipsometry of anisotropic surfaces 2-10846  
 Reusch's piles with rectilinear birefringence, nonorthogonal eigen vibr. meas. (French) 2-11638  
 review of ellipsometric configurations and techniques in semicond. characts. 2-19158  
 rotating analyser ellipsometers, one-wavelength in situ alignment method 2-43068  
 semiconductor, surface overlayers detection and minimisation using spectroscopic ellipsometry 2-15210  
 semiconductor technology, optical characterisation techniques, conf., San Jose, USA (Apr. 1981) 2-14972  
 semiconductor technology, process control using ellipsometry 2-19159  
 semiconductors and oxides,  $H_2$  plasma etching, expt. study 2-52078  
 poly-Si, nucleation and growth, in-situ obs. 2-45765  
 thin film characterisation (German) 2-28886  
 three-parameter ellipsometry, reflectivities, component optical activity effects 2-38675  
 uniaxial crystals, refraction indices and absorpt. coeff. determ. by ellipsometry 2-38677  
 Ag film on Au, dielec. const., ellipsometry study (French) 2-46806  
 (Al, Ga)As-GaAs heterostructures, growth monitoring and characterisation, ellipsometry 2-6890  
 Au thin films, optical anal. by combined refl. and transmission ellipsometry 2-51729  
 $Au_2Al$ , diffusion-formed, optical props., ellipsometric study 2-17432  
 Be, vacuum deposited coatings, oxidation, ellipsometric study (German) 2-9468  
 CdTe real surfaces, optical and elec. props. 2-51278  
 Co, passivating film form. in neutral soln., two-layer struct. 2-47231  
 Cr film on glass substrate, optical const., in visible spectral range, ellipsometric meas. 2-27007  
 Cr layer, optical const. meas. in visible spectral range, substrate temp. influence 2-36722  
 Cu mirrors, optical effects of energetic Cu-ion irradi. 2-25942  
 Fe, in acidic  $PO_4$  solns., passive films, comp. struct. and thickness (Japanese) 2-9466  
 GaAs-(Al,Ga)As heterostructure growth, qualitative and quantitative assessments by fast ellipsometers 2-8730  
 GaAs-Si $_3$ N $_4$ , RF sputtered, characterization of intermediate layer 2-51062  
 GaP amorphous thin films, struct. and optical props. 2-5329  
 Ge, chemical etching and cleaning procedures 2-2597  
 Ge, chemical etching and cleaning procedures 2-9437  
 III-V semiconductors, chemical etching and cleaning procedures 2-2597



**ellipsometry continued**

- III-V semiconductors, chemical etching and cleaning procedures 2-9437  
 InP:Se<sup>+</sup>, ion implanted, Rutherford backscatt. and ellipsometry 2-12617  
 Mg, oxidation, early stages, LEED, EELS, work function, and ellipsometry meas. 2-27344  
 Mg, surface oxidation, spectroscopic ellipsometry study 2-47256  
 Pb, optical props., optimised Beattie-Conn method investig. 2-10845  
 Pb, anodic passivation, initial steps, ellipsometric method meas. 2-31847  
 Si, chemical etching and cleaning procedures 2-2597  
 Si, chemical etching and cleaning procedures 2-9437  
 Si optical absorption meas. for pure and heavily-doped materials, 1.24 to 4.63 eV, polarization modulation ellipsometry, solar cell performance 2-37385  
 Si surface, ellipsometric meas. (*Japanese*) 2-19157  
 Si:As, ion implanted, ellipsometric spectrum (*Chinese*) 2-31519  
 Si:Ga, high dose implanted, thermal annealing and elec. activation 2-5147  
 Si-SiO<sub>2</sub> interface, ellipsometric investig. with continuous and discontinuous etching methods, transition layer (*Russian*) 2-17577  
 Si-SiO<sub>2</sub>-Al structure, Al-SiO<sub>2</sub> and Si-SiO<sub>2</sub> interlayer characts., ellipsometry, C-V meas., and AES study 2-5470  
 Si<sub>3</sub>N<sub>4</sub> amorphous layers, oxidation kinetics, ellipsometric obs. on Si-Si<sub>3</sub>N<sub>4</sub>-SiO<sub>2</sub> struct. 2-5970  
 Si<sub>3</sub>N<sub>4</sub> film, CVD or thermally grown, Rutherford backscatt., AES and ellipsometric study 2-51021  
 Si<sub>3</sub>N<sub>4</sub>-SiO<sub>2</sub>-Si structure, spectroscopic ellipsometry; nondestructive anal. 2-21447  
 SiO<sub>2</sub> film on Si, inhomogeneous, ellipsometric eval. of thickness, anomalous refr. index 2-31581  
 SiO<sub>2</sub>-Si substrate system, parameter correlation and precision in multiple-angle ellipsometry 2-209  
 Ti-TiO<sub>2</sub>, optical props., spectroscopic ellipsometry (*French*) 2-41319  
 Ti film on Au, dielec. const., ellipsometry study (*French*) 2-46806  
 YIG:Ga<sup>3+</sup>(Al<sup>3+</sup>), nonmag. ion doped, optical consts., ellipsometric parameters 2-46531  
 Yb<sub>2</sub>O<sub>3</sub> film on Cr, refractive index thickness depend., reflection ellipsometry study 2-46807

**elliptical polarisation** *see polarisation***elongation***see also deformation; thermal expansion*

- brass, plastic anisotropy, estimation, effect of tension texture (*Polish*) 2-9365  
 butadiene-styrene block copolymer with elastomer blocks, coating struct. and physicomech. props. 2-30414  
 ethylene-propylene copolymers, strain birefringence 2-26861  
 flow of liquid with an anisotropic viscosity tensor, elongation flow 2-20796  
 glass fibre reinforced polystyrene, molecular orientation effect on mech. props. 2-13782  
 Mark C fuel irradiation tests (*German*) 2-11201  
 metals, ductile, fracture toughness calc. 2-2589  
 polyacrylamide soln., nonlinear viscoelastic behaviour, constitutive eqns., appl. to shear flow 2-20623  
 polyamides, constructional, natural ageing, effect on mech. props. 2-17758  
 polydimethylaminophosphazine, relax. and mech. props. (*Russian*) 2-51966  
 polydimethylsiloxane, elastic props., stress-strain isotherms in elongation 2-13764  
 polyester fibres, modification of struct. by stretching and thermal treatment (*German*) 2-22287  
 polyethylene, chalk filled, creep under complex loading with elongation and torsion 2-22277  
 polyethylene, crosslinked, static mech. props. 2-36911  
 polyethylene blends, tensile props., mixture compatibility degree of crystallinity role 2-47145  
 polyethylene melt rheology, Seth generalised strain function appl. 2-30085  
 polyethylene melts, elongational viscosity and mol. struct. 2-30084  
 polyethylene/polystyrene blends, emulsifying effect of poly(hydrogenated butadiene-*b*-styrene) 2-27232  
 polyimide matrices, bulk and films, elastic, strength, and relax. props. 2-36926  
 polyisobutylene soln. in decaline, nonlinear viscoelastic behaviour, constitutive eqns., appl. to shear flow 2-20623  
 polymers, cross-linked, UV cured, mech. props., effect of comp. and polymerisation 2-13766  
 polypropylene, crosslinked, phys. and mech. props. 2-47144  
 polypropylene, crosslinked, static mech. props. 2-36911  
 polypropylene filled ethylene-propylene-ethylidene norbornene rubber, props. 2-47149  
 polystyrene, large elastic deforms. in shear and extensional flows 2-27226  
 polyvinyl fluoride, modified, structural sensitivity coeff. and activation energy of breakdown (*Russian*) 2-41669  
 prime candidate alloy, optimisation of struct. and props. by rapid solidification 2-31692  
 PVC, and chlorinated, weakly plasticised, temp. time variations of physical and mech. props. (*Russian*) 2-41668  
 rubber-colloid particle reinforced effect 2-17660  
 spodumene ceramics, with apatite additions 2-22225  
 steel, Al-killed, strain-rate sensitivity, new description 2-22286  
 steel, austenitic stainless, creep, Bailey-Orowan eqn. 2-47122  
 steel, austenitic stainless, creep curves, intergranular microcavities 2-31731  
 steel, austenitic stainless, interaction with Li, effect on struct. and mech. props. 2-47198  
 steel, austenitic stainless, residual strength and microstruct., effect of shock deform. 2-47139  
 steel, C, absorption of H in acid pickling, inhibitors influence 2-27349  
 steel, C, hydrogen embrittlement, high temp. 2-13799  
 steel, cost stainless, low temp. mech. props., appl. in Isabelle magnet tubes 2-19832  
 steel, Cr-Ni, deform. history effect on creep (*Czech*) 2-47137  
 steel, Cr-Ni-Al, precipitation hardened by NiAl intermetallic cmpd., twinning 2-51928  
 steel, Cr-Ni-Co-Mo-Mn, corrosion-resist., heat treatment and mech. props. 2-41640  
 steel, dual-phase, commercially produced, mech. props. and microstruct. 2-17707  
 steel, dual-phase, H embrittlement phenomena, SEM study 2-9407

**elongation continued**

- steel, ferritic stainless,  $\chi$ -phase precip. hardened, fracture props. and ductility improvement 2-17725  
 steel, low-C, mech. props. and strain hardening, temp. effect 2-2528  
 steel, Mo(V), dual-phase, props. and struct., effect of heat treatment 2-9376  
 steel, Ni-Mo-C (10.1,0.2 wt.%), mech. props., cryogenic appl. 2-22295  
 steel, stainless, hydrogenated, struct. and resist. to deform. 2-27239  
 steel fibre reinforced steel composite, reinforcement effect on struct. and mech. props. 2-41557  
 superplasticity and creep, significance of grain boundary sliding 2-40469  
 vinyl chloride-vinyl acetate copolymer, weakly plasticised, temp. time variations of physical and mech. props. (*Russian*) 2-41668  
 Al-Mg (3 wt.%), stress sensitivity parameter in high temp. creep 2-41693  
 Al-Mg-Sc(Y)(La)(R), mech. props., effect of Sc, Y, La and rare earth metal additions 2-27242  
 Al-Si eutectic alloy, cast and heat treated, microstruct. and mech. props. (*German*) 2-47068  
 Al-Si-Cu-Zn-Mg-Ti, cryst. and struct., effect of cooling rate and Zn, Mg and Ti additions 2-1549  
 Al-Zn-Mg, environmental embrittlement (*Japanese*) 2-27331  
 Al-Zn-Mg (10.8, 0.85 wt.%), quantitative metallography of superplastic deform. (*Japanese*) 2-9369  
 Be wire, high-strength, mech. props. and elec. cond. 2-2567  
 Co-Cr-Al-Y coating, low press. plasma applied, mech. props. 2-45794  
 Cu, prolonged extension, creep contrib. (*Polish*) 2-27215  
 Cu-Nb ultrafine multifilamentary composites, Young's modulus enhancement 2-17698  
 Cu-Nb-Sn(Ge), dil. alloy, superconductor, glass coated melt spinning, mech. props. 2-22185  
 Fe, Armco, absorption of H in acid pickling, inhibitors influence 2-27349  
 Fe compacts, sintered, based on atomised powder from tinplate scrap 2-36809  
 Fe-C alloys, ductility deterioration due to nonuniform distrib. (*Japanese*) 2-9370  
 Ni-Fe, high permeability, sheet permability (*Japanese*) 2-36909  
 Ni-Mo-Cr, Hastelloy, long-term ageing characts. 2-9361  
 Pb, creep, work-hardening rates derived from instantaneous elongation upon sudden load increments 2-9382  
 Pb-Sn, eutectic alloy, high temp. deform., expt. constitutive eqns. 2-22270  
 Pb-Sn eutectic alloy, superplastic flow, uniqueness of stress-strain rate relations 2-36915  
 Ta, strength and plasticity characts., temp. and strain rate effect 2-51999  
 Ti alloys VT3-1 and VT22, cycling influence on mech. props. 2-51997  
 TiNi, cast, synthesis by combustion processes, mech. and shape memory props. 2-41547  
 V<sub>3</sub>Si, superconductor, glass coated melt spinning, mech. props. 2-22185  
 Zn-Al eutectoid alloys, superplastic roles of interphase and intercryst. boundary sliding 2-41667

**e.m. waves** *see electromagnetic waves***embrittlement***see also ductile-brittle transition; hydrogen embrittlement; liquid metal embrittlement*

- ABS terpolymer, impact strength, effect of thermal ageing 2-31784  
 crack growth, in detrimental gaseous environments 2-41740  
 generator end bells made from non-magnetic steel, resistance to H embrittlement (*German*) 2-5976  
 LWR press. vessel surveillance dosimetry improvement program 2-7267  
 polycarbonate, impact strength, effects of internal stress, ageing and thickness 2-52024  
 polycarbonate film, plane stress deformation zone at crack tip 2-13777  
 rubber-colloid particle reinforced effect 2-17660  
 steel, C (0.9 wt.%), crack propagation resistance, nonmonotonic variation during low temp. tempering (*Russian*) 2-5938  
 steel, Cr-Mo-V cast, quenching, tempering and ageing rel. to mech. props. 2-13750  
 steel, low alloy, grain boundary melting and hot embrittlement on over-heating (*Japanese*) 2-25980  
 steel, low alloy, P segregation, effect of Ni, Cr and Mn 2-13730  
 steel, Mn-Ni-Mo, A533 gr. B, upper nose temper embrittlement mechanism 2-5899  
 steel, structural, fatigue strength and embrittlement, Pb addition effect 2-36957  
 steel control rods, He embrittlement reduction using correct movement strategy (*German*) 2-486  
 steels, Mn-Mo-Ni, temper embrittlement, ductile-brittle transition temp. 2-15502  
 temper embrittlement, impurity-induced, simplified model 2-50753  
 TMI-2 core/vessel/shield configuration, neutron spectral shift effects evaluation 2-29400  
 Al-Zn-Mg, environmental embrittlement (*Japanese*) 2-27331  
 Co-base superalloy, cast, MM509, air embrittlement 2-36955  
 Fe, ion implanted, trapping of Sb by TaC and Cu precipitates 2-2513  
 Fe-base superalloy, IN903A, grain boundary embrittlement 2-9408  
 Fe-Cr-Si, deform., embrittling  $\sigma$ -phase precipitate effects 2-47046  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, atom probe FIM study of microstruct. after annealing 2-36874  
 Mo, AES anal. of embrittlement in oxidizing atmosphere 2-47232  
 Mo, neutron irradi., deform. behaviour in tensile and hardness tests 2-31745  
 Ni, role of interfaces in H embrittlement 2-41741  
 Ti-Zr-Mo alloy, AES anal. of embrittlement in oxidizing atmosphere 2-47232

**e.m.c.** *see electromagnetic compatibility***emergency power supply**

- 20kW photovoltaic flat-panel power systems 2-42028  
 hospital installations power supplies and back-up sources in case of failure 2-47472  
 standby power generation unit internal combustion engine co-utilisation to drive heat pump plant 2-18122  
 stationary flywheel energy storage, appls. study (*German*) 2-14122



**e.m.f.** *see electric potential*  
**emission nebulae** *see nebulae*  
**emission spectra** *see spectra*  
**emissivity**

*see also brightness*  
 absorption coefficients in crystalline materials, meas. techniques comparison 2-3629  
 blackbody cavity evaluation, at Au freezing point 2-15170  
 composite particles micron-sized, surface waves and radiative props. 2-1115  
 cones, diffuse, effective emissivities, numerical calc. with series technique 2-147  
 CuS spectrally selective coating, chemically deposited, optical props. and emissivity 2-9680  
 determination method for objects at normal temp. 2-19101  
 graphite, polycrystalline and pyrolytic, emissive props. 2-40578  
 hot body emissivity determ. from spectral energy brightness distrib. 2-50894  
 Innisfree meteorite, luminous efficiency during fall from photographic anal. 2-14828  
 plane nonisothermal nonscattering media, effective emissivity, boundary surface props. 2-12014  
 solar absorber converters with graded metal-C selective absorbing surfaces, sputtered, effect of metal base layer on solar absorptance and thermal emittance 2-9682  
 solar absorbing films, in-line sputter coating plant fabricated, props. 2-2807  
 Ta, integral emittance during non-stationary high-temp. oxidation (*Russian*) 2-27333  
 Al<sub>2</sub>O<sub>3</sub> particles in rocket plume, IR radiance 2-26089  
 CO<sub>2</sub>, standard emissivity, grey gas approx. 2-12269  
 Cu, surface, magnetron co-sputter etching, solar selective absorbing appl. 2-2617  
 PbS/CdS multilayer stacks as selective absorbers, designed and fabricated using solution growth techniques 2-9684  
 Si film, on SiO<sub>2</sub> substrate, laser-induced melt dynamics, blackbody emission obs. 2-1595  
 TiC, emissivity at high temp. 2-40577  
 UO<sub>2</sub>, thermophysical props., review 2-50880  
 W, total hemispherical emissivity, sensitivity to first layers of oxide (*French*) 2-50893  
 ZrC, emissivity at high temp. 2-40577

**emitters** *see television camera tubes*

**emitter-coupled logic**

*see also logic circuits*  
 dilepton triggers, fast ECL-CAMAC processor 2-19904  
 particle detector, ARGUS, fast secondary trigger processor 2-19905  
 recoil missing mass trigger, ECL-CAMAC processor system 2-19903

**employees** *see personnel*

**employment**

*see also personnel*

No entries

**emulsions**

*see also nuclear track emulsions; photographic emulsions*  
 amphiphilic electrolyte props. in nonpolar solvents 2-9576  
 benzene-water-2-propanol, densities and heat capacities per unit vol. meas. 2-12768  
 dielectric relaxation profiles, interfacial polarisation theory 2-2180  
 liquid, coalescence and mass transfer, inhomogeneity effects 2-14010  
 microemulsion, single-phase system, crit. behaviour 2-14013  
 microemulsions, investig. with pyridinium N-phenolbetaine E<sub>7</sub>(30) polarity probes for aq. interfaces 2-22493  
 microemulsions, modification of interfacial film during structure inversion (*French*) 2-22492  
 microemulsions, water-in-oil, light scatt. photon correl. and neutron scatt. obs. 2-41945  
 oil-external microemulsions, dielectric relax. over freq. range from 0.5 to 100 MHz, surface cond. 2-13406  
 oil-in-water microemulsions, crit. behaviour 2-14012  
 photographic emulsions, chem. chemical development, math. modelling 2-48816  
 polymer mixture, binary, anomalous behaviour in region of layer separation 2-30575  
 polymerisation kinetics, Smith-Ewart eqn. 2-47340  
 surfactant-hydrocarbon-water microemulsion systems, Fourier transform NMR self-diffusion obs. 2-37108

**emulsions (nuclear track)** *see nuclear track emulsions*

**emulsoids** *see emulsions*

**encapsulation**

*see also packaging*

flat plate photovoltaic modules encapsulation systems, thermal and optical performance 2-37319  
 solar photovoltaic arrays, arrays, low-cost, glass encapsulation 2-37223  
 terrestrial photovoltaic modules, encapsulation system design 2-37277  
 GaAs, ion implanted, Raman scatt. characteris. of changes induced by encapsulation and thermal annealing 2-17477  
 GaAs, ion implanted and laser annealed, residual damage, TEM study 2-30502  
 GaAs substrates, Cr, Si, Mn, and Fe distrib. after annealing with and without SiO<sub>2</sub> encapsulant 2-30478  
 GaAs:Se, electron beam annealing, multiply-scanned beam method 2-1526  
 GaAs:Se, electron beam annealing, multiply-scanned beam method 2-8542  
 InP, growth and cryst. quality by liq. encapsulated Czochralski technique 2-5809  
 Si film, encapsulated, zone-melting recrystn. on SiO<sub>2</sub>, morphology and crystallography 2-51012

**encoding**

*see also codes; decoding*

angular encoder, axisymm., short pulse generation for laser fusion 2-4540  
 balloon-borne ion mass spectrometer, control and data transmission system 2-15267  
 Fresnel zone plate coded images, optical scanning reconstruction 2-24954  
 grey level pseudocolouring using Young's fringes modulated speckle 2-857  
 holographic interferometric fringe patterns, colour encoding with white-light processing 2-863  
 image subtraction, real time, electro-optic 2-34670

**encoding continued**

image subtraction with an encoded extended incoherent source 2-24956  
 inverse optical problems, information encoding 2-34674  
 microchannel plate read-out using graded-density electrodes 2-43684  
 multichannel recorder tape code-marking system 2-48687  
 multicolor holographic readout systems 2-34691  
 nuclear medicine pictures, coding and decoding 2-37673  
 optical images, linear encoder for imaging grating strip, spherical mirror 2-49684  
 resistive anode position encoders, distortion, noise and resolution performance 2-24513  
 source encoding for partially coherent optical processing 2-44203  
 three-dimensional contour line order meas. for arbitrary object, time sequentially coded gratings, implementation 2-19084  
 voice synthesizing ccts. using linear predictive coding techniques (*Italian*) 2-11953

**ENDOR**

N-acetyl methionine, sulphur-centred radical, ESR and ENDOR spectra 2-13340  
 L-alanine:Cu(II), nuclear quadrupole coupling tensor and hyperfine coupling tensor, ENDOR spectra 2-36476  
 bacteriopheophytin a anion radical, soln. ENDOR, ESR and TRIPLE reson. obs. 2-15822  
 $\alpha$ -calcium formate, X-irrad., displacement of HCO<sub>2</sub><sup>-</sup> groups in secondary radical form., ENDOR study 2-36477  
 chlorophyll a anion, liq. soln., hyperfine coupling consts, ESR, ENDOR and TRIPLE resonance study 2-37497  
 K-cysteine hydrochloride monohydrate, irradiated cryst., radical form., ESR and ENDOR study 2-36433  
 2,2-dimethyl-d<sub>6</sub>-5-methyl-1,3-dioxane-4,6-dione X-irrad. cryst., deuteration effect on tunnelling rot., ENDOR study 2-36475  
 1,8-diphenylanthracene radical anion, transannular electron, ENDOR study 2-51499  
 9,10-dipropylanthracene dimer cation, ENDOR spectrum, heat of dissoc. 2-15829  
 flavin and thiaflavin radical cations in liq. soln., <sup>14</sup>N and <sup>1</sup>H ENDOR and TRIPLE reson. expt. 2-20092  
 fluorites:O<sub>3</sub> coloration, struct. and dynamical aspects, EPR and ENDOR study 2-36427  
 galvinoxyl radicals, sterically hindered, <sup>1</sup>H and <sup>13</sup>C ENDOR investig. 2-46425  
 metmyoglobin dilute paramag. systems, distant H<sup>+</sup> ENDOR 2-15932  
 naphthalene-tetracyanobenzene, triplet states, ESR and ENDOR spectra 2-46357  
 nitrobenzene radical anion, <sup>14</sup>N ENDOR in soln. 2-11527  
 nuclear spin polarisation, distant ENDOR 2-48734  
 phenacyl chloride, X-ray irrad., ENDOR and ELDOR spectra 2-9057  
 phenalenyl trapped in polycrystalline durene and in liq. crystals ENDOR spectra, hyperfine components and g-tensors 2-20091  
 spectrometer, X-band, with circularly polarised RF fields 2-10835  
 triglycine salts, ferroelec. crystals, mol. dynamics, mag. reson. obs. 2-12699  
 \*  $\alpha$ -Al<sub>2</sub>O<sub>3</sub>, neutron irrad., F<sup>+</sup> centre, ENDOR study 2-17366  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O(K<sub>2</sub>O)(Li<sub>2</sub>O), F<sup>+</sup>-centre in cond. planes, EPR and ENDOR study 2-26744  
 Br-containing free radicals, high-freq. ENDOR meas. 2-24760  
 (Cu,Zn)Cs<sub>2</sub>(SO<sub>4</sub>)<sub>2</sub>·6H<sub>2</sub>O Tutton salt, diluted, pulsed ENDOR experiments 2-5604  
<sup>57</sup>Fe<sup>3+</sup> in trigonal symmetry, EPR and ENDOR spectra, generalised spin Hamiltonian calcs. 2-5576

**energies, molecular dissociation** *see molecular dissociation energies*

**energy, binding** *see binding energy*

**energy, lattice** *see lattice energy*

**energy, surface** *see surface energy*

**energy bands** *see band structure*

**energy bands, electron** *see band structure*

**energy control** *see power control*

**energy conversion, direct** *see direct energy conversion*

**energy gap**

*see also superconducting energy gap*

(100) superlattice, vacancy induced band gap levels 2-45883  
 A<sub>3</sub>B<sub>2</sub> II-V semiconductors, band spectra features 2-40787  
 amorphous, molecular orbital selfconsistent field calc. 2-45814  
 amorphous and cryst. solids, photoelastic response 2-31449  
 amorphous semicond., disorder induced density of states within the band gap, partition function 2-40749  
 chalcogenides and pnictides, cond. band gap, chemical bond approach 2-35936  
 composition dependence of energy gap of (CdTe)<sub>1-x</sub>(In<sub>2</sub>Te<sub>3</sub>)<sub>x</sub> with x<0.02 2-40780  
 crystals, uniaxial deformation, piezospectroscopy, spectral line shift, appl. to impurity study 2-9127  
 electoreflectance determ. of energy gap 2-17443  
 exchange interaction, indirect, Bloembergen-Rowland approx., third order corrections and finite cond. band effects 2-40859  
 gap states energetic distrib. by phase-shift anal. of modulated photocurrent 2-21484  
 glass, rare earth ion activated, nonradiative transitions, inductive-resonance theory 2-26948  
 heavily-doped semiconductors, bandgap reduction mechanism, bandtailing and rigid band models 2-35932  
 Heisenberg ferromagnet, anisotropic, energy gap calc. 2-17257  
 III-V quaternary alloys, energy band gap calc. using dielec. theory of electronegativity 2-8755  
 magnetic orbitals, natural or orthogonalised, descriptions of exchange interactions 2-2069  
 metal-halide chain, mixed valence cpd., Raman excitation profile, size effect 2-2262  
 narrow and wide gap materials, optical and electronic props., model based studies 2-31441  
 narrow band gap semiconductors, A<sub>4</sub>B<sub>6</sub> type, mag. susceptibility (*Russian*) 2-41106  
 narrow gap semicond., quasienergy spectrum, high power laser irrad. 2-51084  
 one-dimensional conductor, organic, low temp. cond., Kondo effect in presence of gap-precursor 2-26369  
 Peierls-Frohlich problem and pot. with finite number of gaps 2-3529  
 trans-polyacetylene, struct. determ. of symmetry-breaking parameter, X-ray scatt. study 2-40292



## energy gap continued

- polymers, exact-exchange asymptotics in Hartree-Fock calcs. 2-26287  
 polyphenyls,  $\pi$  electron delocalisation, XPS study, rel. to acenes and polystyrene 2-41498  
 quartz, Faraday rot., energy gap determ. 2-26868  
 quartz glass, Faraday rot., energy gap determ. 2-26868  
 rare earth complex, crystals, ligand induced nonradiative relax. 2-31537  
 rare earth ion nonradiative and radiative decay rates, energy gap and selection rules 2-46715  
 semiconductor, dielectric function, transverse 2-26316  
 semiconductor, diffusion of high density electrons and holes, and many-body effects 2-45866  
 semiconductor, photoelasticity, nonlinear 2-2217  
 semiconductor, point-defect energy levels, impurity environment effect 2-26322  
 semiconductor, quasienergy spectrum, EM wave influence 2-9118  
 semiconductor-insulator nonlattice matched interface, U-shaped back-ground density of interface states 2-26508  
 semiconductors, disordered, band struct. and transport props. 2-45799  
 semiconductors, electronic struct., first principles calc. 2-30793  
 semiconductors, energy gap-refractive index relation, temp. and press. depend. 2-26849  
 semiconductors, optical props., calc. using first-principles electronic struct. 2-13442  
 semiconductors, photoeffect, spectral sensitisation, by dyes (Russian) 2-36093  
 semiconductors, statistical mechanics of band states and impurity states 2-12967  
 SmS, electron-phonon mechanism of semiconductor phase instability under press. 2-30801  
 solar cell, band gap narrowing evaluation methodology based on measurements of emitter and base lifetimes and relaxation time 2-42012  
 SOS, heteroepitaxial, electronic characterization by surface photovoltage spectroscopy 2-41030  
 ternary semiconductors, chalcopyrites, electronic props. 2-35431  
 ternary semiconductors, review 2-26292  
 transition metal dioxides, electronic struct. and XPS, discrete-variation  $X\alpha$  cluster method 2-30796  
 TTT<sub>13</sub>, disorder and ground state, sp. ht. and IR spectra study 2-31508  
 XY claim in transverse field, finite size scaling and crossover phenomena 2-3516  
 Ag, pseudopotential study of energy gaps and resistivities 2-26282  
 GaSe, determ. of trap levels (Russian) 2-12993  
 n-As<sub>2</sub>Se, elec. props. 2-1926  
 (Al,Ga)As heterostruct. fabricated by isothermal diffusion of Al, props. 2-12941  
 Al<sub>1-x</sub>Ga<sub>x</sub>As, photoluminesc. with graded forbidden band under pulsed excitation 2-13545  
 Al<sub>1-x</sub>Ga<sub>x</sub>As:Si graded-band-gap p-n structs., photoluminescence spectra 2-13528  
 Al<sub>1-x</sub>Ga<sub>x</sub>In<sub>1-x-y</sub>Sb, lattice const. and optical energy gap, comp. depend. 2-25818  
 $\alpha$ -Al<sub>2</sub>O<sub>3</sub>, optical, thermal, and polaron energy levels 2-17000  
 As amorphous film, UHV sublimed, elec. and optical props. 2-46172  
 As<sub>2</sub>S<sub>3</sub> amorphous film, photoinduced elastic changes 2-40747  
 As<sub>2</sub>Se<sub>3</sub> amorphous, density of state in gap, dispersive photocurrent meas. 2-46059  
 As<sub>2</sub>Se<sub>3</sub> amorphous, Faraday rot. 2-46549  
 Au, pseudopotential study of energy gaps and resistivities 2-26282  
 Au-n-Ga<sub>1-x</sub>Al<sub>x</sub>P surface barrier struct., photoelectric effect 2-26500  
 $\beta$ -B, rhombohedral single cryst., optical props. in fundamental absorpt. range 2-41321  
 $\alpha$ -B, rhombohedral, elec. cond., thermoelec. power and Hall coeff. 2-40889  
 Bi<sub>2</sub>C<sub>3</sub>, electronic struct. and semicond. behaviour 2-45826  
 BaTiO<sub>3</sub>, sputtered films, temp. effect on props. 2-46918  
 BeF<sub>2</sub> glasses, vacuum UV props. 2-17502  
 BeO crystal, luminesc. excitation in fundamental absorpt. region 2-51706  
 Bi, Fermi surface and band parameters, press. depend. magnetorefl. studies 2-13457  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, Fermi surface and band parameters, press. depend. magnetorefl. studies 2-13457  
 CaTiO<sub>3</sub>, absorption edge 2-2314  
 Cd<sub>3</sub>As<sub>2</sub>, band gap, Fermi level, electron tunnelling study 2-26561  
 CdCr<sub>2</sub>Se<sub>4</sub>(S<sub>4</sub>), photoluminescence and elec. struct. 2-46687  
 Cd<sub>1-x</sub>Hg<sub>x</sub>Te epitaxial films, optical props., absorption and reflection spectra study 2-13583  
 CdO-ZnO-P<sub>2</sub>O<sub>5</sub> (5.60 mol.%) glass, band gap determ. 2-40763  
 Cd<sub>3</sub>P<sub>2</sub>, resist., Hall coeff., thermoelec. power, band gap, pressure effects 2-26401  
 Cd<sub>3</sub>P<sub>2</sub>, prep. technology, cryst. struct. and semicond. props., optical absorption spectra meas. 2-25854  
 Cd<sub>3</sub>P<sub>2</sub>, prep. technology, crystal struct. and semicond. props. optical absorption spectra meas. 2-25854  
 Cd<sub>1-x</sub>Pb<sub>x</sub>S (x=0.0625, 0.15625) superstructural thin film, props. 2-13205  
 CdS, dislocation energy states, piezo-optical investigation, photoluminescence and absorption spectra obs. 2-51123  
 CdS, small particles deposited on transparent substrate luminesc. and Raman spectra, size effects 2-51691  
 n-CdSAs<sub>2</sub>, Shubnikov-de Haas effect, band struct., spin-orbit and cryst. field splitting 2-40934  
 CdTe detector characteristics for  $\gamma$  dosimetry 2-43625  
 CdTe vacuum deposited films, optical band gap, thickness depend. 2-51731  
 n-CdTe:Pb films, vapour deposited, elec. anal. optical props. 2-30985  
 Cd<sub>1-x</sub>Zn<sub>x</sub>S/Cu<sub>2</sub>S photovoltaic cells heterojunction energy band lineups anal. 2-27637  
 Co film, optical absorpt. and props., elec. cond.,  $\alpha$ - $\beta$  transition 2-5763  
 CsI, high press. effect on optical absorpt. spectra 2-36665  
 Cu, pseudopotential study of energy gaps and resistivities 2-26282  
 Cu<sub>2</sub>Au, ordered, Fermi surface and electronic struct. 2-40761  
 CuFeS<sub>2</sub>, band struct., self consistent discrete variational  $X\alpha$  calc. 2-12969  
 CuGa<sub>1-x</sub>In<sub>1-x</sub>Se<sub>2</sub> solid solns., band gap, comp. depend., transmission spectra 2-46603  
 n-CuInSe<sub>2</sub> crystals, optical absorpt., 0.9 to 1.0 eV 2-22024  
 p-Cu<sub>2</sub>O semiconductor electrode in acetonitrile soln., photoelectrochem. behaviour 2-27442  
 Cu<sub>2</sub>S thin films, struct. and optical props. 2-51034  
 CuTiSe<sub>2</sub>, liquid, elec. cond. and thermoelec. power 2-13063

## energy gap continued

- FeBr<sub>2</sub>, magnon energies, temp. renormalisation 2-36337  
 Fe<sub>1-x</sub>Cr<sub>x</sub>NbO<sub>4</sub> prep., cryst. struct., mag. and electronic props. 2-26440  
 Fe<sub>2</sub>PO<sub>4</sub>, mixed valence cpd., electron localisation, Mossbauer expts. 2-1870  
 Ga chalcogenides, electronic props. 2-40316  
 Ga<sub>1-x</sub>Al<sub>x</sub>As structs., varying band gap, for solar cells, liquid phase epitaxy 2-21467  
 GaAs superlattice, obs. of tunable band gap and 2-D subbands, luminesc. and Raman meas. 2-2232  
 GaAs superlattice, simultaneous modulation of electron and hole conductivity 2-51297  
 GaAs:Cr, intrinsic density, band gap and effective mass parameters, Cr acceptor capture coeff. 2-51203  
 GaAs:H, amorphous, RF sputtering and optical props., H<sub>2</sub> partial press. effect 2-40730  
 GaAs-AlAs (100) superlattice, vacancy induced band gap levels 2-45883  
 GaAs<sub>1-x</sub>Sb<sub>x</sub>, n-n heterojunctions on GaAs, internal electroabsorpt. obs. 2-17444  
 GaP, As<sub>1-x</sub>Sb<sub>x</sub>, band gaps, direct and indirect, conc. depend. 2-51082  
 GaS(Se)(Te), opto-electronic props. 2-36587  
 GaSb, electron transport and conduction band struct. 2-46012  
 GaSb:Te, pressure induced alteration of energy spectrum (Russian) 2-5368  
 Ga<sub>2</sub>Se<sub>3</sub>-In<sub>2</sub>Se<sub>3</sub> thin films, elec. and optical props. 2-5477  
 GdSe<sub>1-x</sub> (0<x<0.17), opt. props. in fundamental and IR absorpt. regions 2-17484  
 Ge, band-gap narrowing, impurity conc. depend. 2-1821  
 Ge, energy gap, impurity depend. 2-12964  
 Ge:Si, impurity states, optical spectra and microhardness meas. 2-35971  
 Ge-Sb-Se glasses, optical props., dispersion energy and struct. (Russian) 2-26857  
 Ge-Si, energy gap, electroreflectance determ. 2-17443  
 Ge-Si, solid solutions, kinetics of photoconductivity (Russian) 2-13120  
 Ge<sub>2</sub>N<sub>2</sub>O, electronic band struct. calcs. 2-40785  
 GeO<sub>2</sub>-(BaO) amorphous thin films, optical absorpt. edge, optical band gap 2-46804  
<sup>3</sup>He, superfluid, nuclear susceptibility and energy gap, mag. field depend. 2-45660  
 HgCr<sub>2</sub>Se<sub>4</sub>, band struct., self consistent discrete variational  $X\alpha$  calc. 2-12970  
 InGaAsP epitaxial layers, near-band-gap absorpt. at 1.3  $\mu$ m wavelength 2-46803  
 InGaAsP lattice, matched to InP, growth and charact. review 2-13662  
 InP:Fe, optical and capacitance spectroscopy 2-30925  
 InP:Se epitaxial layer, heavily doped, electroreflectance and photoluminescence 2-2353  
 InSe, thin film, trap states in forbidden gap (Russian) 2-13091  
 KNbO<sub>3</sub>, tetragonal, band struct. and spontaneous polarisation 2-8753  
 K<sub>0.33</sub>Ta<sub>1-x</sub>W<sub>x</sub>O<sub>3</sub>, photoelectronic props. and synthesis 2-36098  
 LiGaSe<sub>2</sub> single cryst. growth and characterization 2-13637  
 Li<sub>1-x</sub>Zn<sub>x</sub>(Sn<sub>1-x</sub>Ti<sub>x</sub>)<sub>2</sub>O<sub>8</sub>, luminescence 2-2330  
 n-Mg<sub>1-x</sub>Cd<sub>x</sub>Te, degenerate, carrier conc. depend. of Auger lifetime 2-36059  
 MgH<sub>2</sub> crystal, covalent bonding, iteration-perturbation theory 2-21062  
 Mg<sub>3</sub>N<sub>2</sub>, forbidden band width, refl., luminesc. and excitation spectra, thermochromic transitions 2-8754  
 MoO<sub>3</sub> and suboxides, diffuse reflectance meas. 2-2311  
 Na<sub>2</sub>WO<sub>3</sub>, bronze applicability of the rigid band model 2-30790  
 NbS<sub>2</sub>(Se<sub>2</sub>) (2H), magnetic breakdown, magnetoresist. and Hall effect meas. 2-21567  
 Ni<sub>1-x</sub>Cu<sub>x</sub>S<sub>2</sub>, elec. cond., Hall effect, thermoelectric power 2-26388  
 p-Ni<sub>0.6</sub>Li<sub>0.02</sub>O as photoelectrolysis cathode, flatband pot. and band gap 2-36088  
 P, black, electronic struct., tight binding approach 2-16985  
 p-Pb<sub>1-x</sub>Cd<sub>x</sub>Te epitaxial film, elec. transport props. 2-8894  
 Pb<sub>1-x</sub>Ge<sub>x</sub>Te, optical props. in rhombohedral and cubic phases 2-31481  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te, epitaxial layer, elec. cond. and Hall effect (Russian) 2-46179  
 PbTe, indirect exchange interaction between embedded mag. ions 2-51140  
 PbTeSe, LPE growth lattice-matched to PbSnTe, phys. and elec. props. 2-5320  
 SbSI, thermoabsorption near ferroelec.-paraelec. phase transition 2-9136  
 Se film, amorphous to crystalline transition, thickness depend. 2-40720  
 a-Se-Ge alloys, Raman spectra and average band gap meas. 2-45058  
 Si, amorphous, dangling bond site dehybridisation, light-induced metastable states 2-21497  
 Si, amorphous, energy gap determ. from optical meas. 2-13437  
 Si, amorphous, gap states and band tail absorption, direct meas. by const. photocurrent method 2-1954  
 Si, amorphous, optical gap and refractive index (French) 2-9211  
 Si, band struct. calc. using nonlocal density approx. to exchange and correl. 2-12965  
 n-Si, band-gap narrowing, impurity conc. depend. 2-1821  
 Si, density of states near bound edge, donor impurities effect 2-17008  
 Si, energy gap, impurity depend. 2-12964  
 Si, intrinsic carrier conc., temp. depend. energy gap, Fermi level 2-16986  
 Si, plastically deformed, radiative recomb. on dislocations, energy state in band gap 2-9186  
 Si polycrystalline solar cell performance, effect of grain boundaries, energy gap narrowing, trap-assisted recombination 2-37270  
 Si:Au, intrinsic carrier conc., temp. depend. energy gap, Fermi level 2-16986  
 Si:H, amorphous ion beam deposited coating, optical gap 2-40723  
 Si:H, amorphous Schottky barrier solar cells, prep. by plasma decomp. and sputtering, carrier generation efficiency 2-14079  
 a-Si:H, gap states study, appl. of isothermal capacitance transient spectroscopy 2-45901  
 a-Si:H, optical absorption edge, electronic struct., thermal and struct. disorder effects 2-36719  
 a-Si:H, photoresponse time and density of localised states in mobility gap 2-46064  
 a-Si:H, recomb. processes and gap states, time-resolved luminesc. meas. 2-46736  
 a-Si:H, thermal and optical space charge spectroscopy of gap states 2-45900  
 Si:H amorphous film, field effect studies, density of localized gap states 2-46169  
 Si:H amorphous solar cell, plasma deposited, impurity effects 2-14081



**energy gap continued**

- Si:H film, amorphous plasma deposited, RF power and reactant gas press. effect 2-21458  
 Si-Sn, amorphous sputtered coating, electronic struct. and optical props. 2-41379  
 SiC, cubic, electron-hole liq., ground state props., valence band masses, exciton and acceptor energies 2-35947  
 SiC:H, amorphous, plasma deposited coating, photocond. and optical gap, valence electron control 2-46058  
 Si<sub>3</sub>C<sub>2</sub>F<sub>2</sub>, amorphous films, reactive RF sputtering prep., optical and comp. props. 2-51727  
 Si<sub>3</sub>N<sub>4</sub>O, electronic band struct. calcs. 2-40785  
 SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>, glass, Faraday rot., energy gap determ. 2-26868  
 SiO<sub>2</sub>-Na<sub>2</sub>O-CaO-MgO-Al<sub>2</sub>O<sub>3</sub>, soda lime glass, Faraday rot., energy gap determ. 2-26868  
 SiO<sub>x</sub>, amorphous, electronic and atomic struct. 2-40765  
 SiO<sub>x</sub>, amorphous glow discharge film, band gap, photoluminesc. study 2-40766  
 Si<sub>3</sub>H, amorphous, sputtered coating, density of states, impurity effects 2-45898  
 TaS<sub>2</sub>(Se<sub>2</sub>) (2H), magnetic breakdown, magnetoresist. and Hall effect meas. 2-21567  
 TiGaSSe, electrical props., forbidden band width 2.2 eV (*Russian*) 2-13142  
 TiSe, energy band struct. 2-40788  
 Zn, free electron-like bulk and surface states for (0001) 2-1818  
 Zn<sub>3</sub>As<sub>2</sub>, band structure at Brillouin zone centre 2-45830  
 Zn<sub>3</sub>As<sub>2</sub>, thin film and single cryst., band gap, absorpt. spectra and refl. meas. 2-26926  
 ZnGa<sub>2</sub>S<sub>4</sub>, band struct. 2-5346  
 ZnGa<sub>2</sub>Se<sub>4</sub>, band struct. 2-5346  
 Zn<sub>2</sub>Hg<sub>1-x</sub>Se, Shubnikov-de Haas oscills., band struct. parameters 2-5421  
 Zn<sub>3</sub>P<sub>2</sub>, absorption edge, Kane three band model anal. 2-26858  
 Zn<sub>3</sub>P<sub>2</sub>, band structure at Brillouin zone centre 2-45830  
 ZnS(F<sub>2</sub>):Mn, collision excitation cross-sections and energy levels of deep and very deep centers in electroluminescence 2-46762  
 ZnSe single cryst., polished and etched, reflectivity and electroreflectance 2-36604  
 Zn<sub>2</sub>Sn<sub>1-x</sub>Ti<sub>x</sub>O<sub>3</sub>, luminescence 2-2330  
 ZrO<sub>2</sub>, electronic struct., DV X $\alpha$  cluster method 2-16990

**energy gap, superconducting** see *superconducting energy gap*

**energy level crossing**

- see also *Hanle effect*  
 detection methods, computer simulation 2-4246  
 dibromo-1,2-bis(diphenylphosphinoethane)Ni(II), intersystem crossing, solvent substitution, picosecond and nanosecond laser studies 2-52225  
 heavy symmetric atom-ion collisions, 2p<sub>x</sub>-2p<sub>y</sub> crossing, level struct. 2-49345  
 nonadiabatic transitions, rotationally induced, semiclassical theory 2-34538  
 optical pumping, velocity selective, rel. to atomic props. 2-49343  
 pyrene in cyclohexane at 296K, quantum yield of intersystem crossing 2-49527  
 pyridine and methyl derivatives, excitation energy depend. of vapour phase nonradiative transitions 2-24770  
 two-level systems, degenerate, nonadiabatic excitation by laser radiation with continuously variable freq. 2-49528  
 ArB, from Ar+B collisions, interatomic pots., ab initio CI calcs. 2-24825  
 BO, multiconfigurational Hartree-Fock studies of avoided curve crossing using the Newton-Raphson technique 2-39451  
 H<sub>2</sub>, excited states, prolate-spheroidal wave functions 2-11415  
 He<sub>2</sub><sup>2+</sup>, excited states, prolate-spheroidal wave functions 2-11415  
<sup>3</sup>He, n=6,7<sup>1,3</sup>D states, anticrossing spectroscopy 2-49357  
 IF<sub>3</sub>, excited vibr. states, microwave spectrum, accidental degeneracy and avoided crossing, struct. 2-4268  
 NaNe, Rydberg states, quantum defects model pot. calcs. 2-4236  
 Ni complex, NaNi(acac)<sub>3</sub>, benzene, excited state level crossing 2-36343  
 O<sub>2</sub>, multiconfigurational Hartree-Fock studies of avoided curve crossing using the Newton-Raphson technique 2-39451  
 Zr I, level-crossing effects in optogalvanic spectroscopy 2-15752

**energy level transitions, atomic** see *atomic spectra*

**energy level transitions, molecular** see *molecular spectra*

**energy level transitions, nuclear** see *nuclear energy level transitions*

**energy levels** see *energy states*

**energy levels, atomic** see *atomic structure*

**energy levels, molecular** see *molecular energy levels*

**energy levels, nuclear** see *nuclear energy levels*

**energy levels in solids and liquids** see *electron energy states (condensed matter)*

**energy loss of particles**

see also *channelling; electron energy loss spectra; radiation effects*

- alpha particle thickness gauge by air. equivalent method (*Chinese*) 2-34251  
 alpha particles, range in uranium oxides 2-43749  
 alpha-particles, range in matter, calc. and meas. 2-11357  
 cellulose nitrate, Kodak LR film, ang. sensitivity to  $\alpha$ -particles 2-24497  
 coherent radiation by fast charged particles in excited matter, review (*Russian*) 2-616  
 crystal lattice, fast electron scatt., atomic dynamics, transport eqn. 2-21200  
 depolarisation of negative muons in H (*Russian*) 2-49611  
 dielectric detectors,  $\alpha$ -particle track autoradiography appls. (*Russian*) 2-9506  
 dielectric nuclear track detectors, range meas. and track kinetics 2-11356  
 electromagnetic cascades in heavy absorber, Monte Carlo simulation 2-4183  
 electron energy degradation in O, spatial aspects 2-6499  
 electronic stopping power formula for intermediate energies 2-45306  
 electronic stopping power of charged particles in Ar and Kr 2-21193  
 electrons, range in various absorbers 2-30504  
 EM radiation from electrons and positrons scattered by crystal strings 2-27013  
 ethylene+He<sup>+</sup>(N<sup>+</sup>), ion stopping powers at 40-200 keV 2-34536  
 fission fragments effective charge on stopping in CO<sub>2</sub>, CF<sub>2</sub>Cl<sub>2</sub>, CF<sub>4</sub> and SF<sub>6</sub> 2-15891  
 graphite, stopping power of H and He in ions 20 to 150 keV region, backscattering study 2-1534  
 heavy ion fragments, track detector anal. 2-24529

**energy loss of particles continued**

- heavy ions, energy loss in matter, semiempirical expression 2-4192  
 heavy-ion identification, real-time digital preanalysis, hardware algorithms 2-19917  
 homogeneous media, similarity props. of scatt.-electron fields 2-4182  
 ICF target, ion driven, ion energy deposition, finite material temp. model 2-19763  
 implanted ions, projected ranges and standard deviations in inorganic materials (*Japanese*) 2-12653  
 inert gas ion+atom collisions, stopping power in 40 to 200 keV range 2-24820  
 ion backscattering from solid targets, empirical formulas 2-17587  
 ion beam range shortening and the possibility of thermal instability 2-25949  
 ion impact spectrometer (*Japanese*) 2-19215  
 ion stopping distrib. profile calc. in a planar target 2-16698  
 ionisation chamber meas., stopping power influence 2-19891  
 ionisation chambers, particle position meas. 2-15669  
 ionization loss of fast charged particles in detectors of different thickness 2-24530  
 low-velocity stopping powers, review 2-43732  
 magnetic bubble materials, ion implanted, strain distrib. modelling 2-2111  
 material interfaces, energy deposition, semi-empirical electrontransport model 2-30503  
 metals, ionisation loss of charged particles, density effect 2-45303  
 methane-CO<sub>2</sub>-N<sub>2</sub>, tissue-equivalent gas mixture, W<sub>n</sub> values computation 2-19783  
 molecules, energy-loss cross sections, adiabatic-nuclei approx. 2-44124  
 monodifinic hydrocarbons, energy loss spectra, ion impact spectrometer (*Japanese*) 2-19215  
 multilayer calorimeter, hadron shower development at 300 GeV 2-19908  
 nuclear and space radiation effect, conf., Seattle, WA, USA (July 1981) 2-33215  
 nuclear emulsions, X-ray mass attenuation factor at 10-200 KeV (*Russian*) 2-24508  
 one-slit EM trap, diffusion loss of energy and particles (*Russian*) 2-12392  
 phosphate glass track detectors, etch pit cone angle, energy and Z-depend. 2-24483  
 photon, energy change on passage through Al (*Chinese*) 2-34253  
 planar channelling, energy loss spectra 2-21198  
 PMMA, (Lucite), stopping power of solid and gas 2-50729  
 PMMA, ion beam exposure profiles, computer simulation 2-45297  
 polarisation wake by fast charged particles, density effect 2-40452  
 polyatomic solids, displacement oxides (*French*) 2-1536  
 polystyrene, energy straggling of H<sup>+</sup>, He<sup>+</sup> ions, 70 to 1200 keV 2-40454  
 proton stopping cross-sections, 0.05-5 MeV (*Japanese*) 2-45304  
 protons and deuterons energy loss in C foils at 50-150 keV per nucleon 2-615  
 range distribution for energetic ion in matter 2-45300  
 range energy relations, rel. to cross section, for amorphous and polycrystalline targets (*French*) 2-35552  
 recoil-proton neutron counter telescope using Si detector and plastic scintillator 2-43752  
 relativistic electron beam, current transmission through thin target 2-34252  
 relativistic nuclei, electrodisintegration by cryst. periodic field upon channelling 2-35560  
 semiconductor, variable-gap, nucl. radiation detection, energy and range determ. 2-43708  
 single bunch electron beam radiation loss expt. obs. in linear accelerator 2-7411  
 solid state track detectors, methods and appls., review 2-19871  
 sputtering, nonlinear yield, hydrodynamical anal. 2-51761  
 stopping power, streaming of radiation through absorber, optimal expt. conditions 2-7447  
 stopping power of solids for low vel. ions, materials depend. 2-25952  
 straggling of swift H and He ions in gases 2-29487  
 synchrotron, proton spectra and ang. distrib. beyond shielding 2-4129  
 thin foil, thickness measurement by  $\alpha$ -absorption method (*German*) 2-10786  
 two-dimensional position sensitive  $\Delta E$ -E counter for energetic light charged particles 2-594  
 W-values relevant for neutron dosimetry 2-19782  
 water, pair production probability and LPM bremsstrahlung 2-24526  
 Al, electron scattering, 1 to 10 keV, Monte Carlo simulation 2-41466  
 Al, energy straggling of H<sup>+</sup>, He<sup>+</sup> ions, 70 to 1200 keV 2-40454  
 Al, gamma-ray attenuation coeff., Mossbauer spectrometer meas. (*Chinese*) 2-19907  
 Al ion energy loss passing through plasma (*Russian*) 2-40030  
 Al targets, partially stripped ions energy loss straggling, charge exchange role 2-43733  
 Ar gas, electrons injection, classical trajectory Monte Carlo model 2-40027  
 Ar, solid, stopping power meas. for 0.5-3 MeV He ions using backscattering method 2-15684  
 Au foil, <sup>4</sup>He<sup>+</sup> energy straggling meas. by backscattering technique, foil nonuniformity correction 2-4181  
 Au, stopping power in Bethe region 2-43735  
 Au, stopping power of H and He in ions 20 to 150 keV region, backscattering study 2-1534  
 C, energy straggling of H<sup>+</sup>, He<sup>+</sup> ions, 70 to 1200 keV 2-40454  
 C foil, p, d and  $\alpha$ -particles energy-loss straggling in energy range 0.2-2.4 MeV 2-49239  
 CO, energy-loss cross sections, adiabatic-nuclei approx. 2-44124  
 CaF<sub>2</sub>, proton stopping cross-sections, 0.05-5 MeV (*Japanese*) 2-45304  
 Ce, nuclear Coulomb, energy-loss and relativistic effects in H<sup>+</sup> and proton-induced K-shell ionisation 2-44081  
 Cu, energy-loss straggling of protons, deuterons and  $\alpha$ -particles 2-43736  
 Fe:N<sup>+</sup> ion implant, depth profile, stopping power, backscatt. meas. 2-45234  
 GaAs:Cr, ion-implanted, depth distrib., range-energy data and shape factors 2-1500  
 Ge, dechannelling of H and He ions 2-45307  
 Ge foil, p, d and  $\alpha$ -particles energy-loss straggling in energy range 0.2-2.4 MeV 2-49239  
 H<sup>+</sup> ions in Ni, Ag, Au, 20-140 keV, stopping power meas. 2-43734  
 H<sup>+</sup>, stopping power, test of Brandt theory 2-25490  
 H<sub>2</sub>+He<sup>+</sup>(N<sup>+</sup>), ion stopping powers at 40-200 keV 2-34536



**energy loss of particles continued**

- $^{19}\text{F}, ^{40}\text{Ar}$ , projectile inner-shell vacancies, influences on stopping power 2-19563  
 $\text{He}^+$  ions in Ni, Ag, Au, 20-140 keV, stopping power meas. 2-43734  
 In, nuclear Coulomb, energy-loss and relativistic effects in  $\text{H}^+$  and proton-induced K-shell ionisation 2-44081  
 InP, proton implanted, range determ. by SIMS analysis 2-5166  
 $\eta$ -InSb, hot electrons, energy loss mechanisms 2-30901  
 $^7\text{Li}$  projectiles in liquid organic substances, electronic stopping cross section, intermol. interactions effect 2-21197  
 Mo, dechannelling of H and He ions 2-45307  
 $\text{N}_2$ , electron swarm props. at moderate electric field to gas density ratio 2-44806  
 $^{14}\text{N}$  abundances from (p,p') resonance scatt., stopping power corrections 2-14035  
 NaI:Tl response to relativistic Ne, Ar, and Fe ions, scintillation efficiency curves 2-26997  
 Ne, positron annihilation and slowing down in gas, time spectra (*Russian*) 2-39496  
 $\text{O}_2 + \text{He}^+(\text{N}^+)$ , ion stopping powers at 40-200 keV 2-34536  
 Pb, pair production probability and LPM bremsstrahlung 2-24526  
 $^{208}\text{Pb}$  ions, 4 MeV/amu, average energy to create ion pair in air 2-44820  
 Pu waste monitor, microprocessor-based, internal matrix attenuation correction 2-19793  
 Sb, nuclear Coulomb, energy-loss and relativistic effects in  $\text{H}^+$  and proton-induced K-shell ionisation 2-44081  
 Si, channelling of As ions, roles of electronic and nuclear stopping 2-8549  
 Si, dechannelling of H and He ions 2-45307  
 Si, low energy ranges,  $Z_1$ -depend. 2-50728  
 Si MOSFET, energy loss of warm electrons at interface 2-46140  
 Si, stopping power of 40 to 300 keV protons using transmission and backscattering meas. 2-1535  
 Si, stopping power of H and He in ions 20 to 150 keV region, backscattering study 2-1534  
 Si surface-barrier detectors, proton-induced nuclear reactions 2-24500  
 Si:As $^+$  ion implant, depth profile, stopping power, backscatt. meas. 2-45234  
 Si:Cr, ion-implanted, depth distrib., range-energy data and shape factors 2-1500  
 Si: $\text{H}^+(\text{He}^{2+})$ , ion implanted, range distrib. characts., Monte Carlo calc. 2-45302  
 $\text{SiO}_2$ , energy-loss function model, mean free paths and stopping power calcs. 2-21192  
 $\text{SiO}_2$ , irradiated, electron-hole recombination from microdosimetry viewpoint 2-30905  
 $^{30}\text{Si}(n,\gamma)^{31}\text{S}$ , slow neutron distrib., transmutation doping appl. 2-3917  
 $^{238}\text{U}$  ions, 4 MeV/amu, average energy to create ion pair in air 2-44820  
 W, dechannelling of H and He ions 2-45307

**energy measurement** *see* power measurement

**energy-range relations** *see* energy loss of particles

**energy resources**

- see also* fuel; geothermal power; hydrogen economy; solar energy concentrators; solar power; wind power  
 agricultural sector, energy demand in US, report 2-17958  
 alternate, surface treatments for enhancement of nucleate boiling heat transfer 2-8157  
 alternate policy and energy source economics 2-2759  
 alternative energy sources, conf. Kuwait, Feb. 1980 2-52270  
 alternative sources and their development 2-47425  
 Annual Review of Energy, book 2-41969  
 aquifer thermal energy storage system 2-32028  
 Australia's energy policy 2-32011  
 Australian mining industry, conf., July 1981, Sydney, Australia 2-33237  
 benefits and risks associated with energy sources 2-6089  
 biomass resources and conversion technologies (*Spanish*) 2-41973  
 California energy futures, alternative societal scenarios 2-6093  
 Canadian tar sands potential and technology overview 2-52284  
 Canadian utilities growth to meet demand for electricity produced from native resources 2-22521  
 CEC programme 2-31998  
 coal areas, land use characterisation 2-47433  
 coal liquefaction process 2-47431  
 Colorado oil shale retorting projects, process details and rationale 2-22532  
 conference, Atlanta USA, 1981 Aug. 2-18816  
 demand, consumption to 2000, in US 2-41971  
 demand study report, EC energy modelling for UK 2-9604  
 desalination process, use of renewable energies (*French*) 2-14045  
 development systems, dynamic linear programming models 2-22553  
 economic, environmental and political aspects 2-6091  
 economics, science and society test 2-42819  
 economy in energy through alternative sources of energy in mass-housing of developing countries 2-22524  
 education program, model 2-42812  
 energy models for planning and policy assessment, review 2-27519  
 energy planning in New Zealand 2-32097  
 energy policy and planning in India 2-32012  
 energy/environment models for regional planning and management, overview 2-22522  
 SW England thermal anomaly zone 2-6349  
 enhanced oil recovery techniques and their practical and experimental applications, economic anal. 2-52283  
 environmental planning and geothermal resource exploitation in Texas and Louisiana, in USA 2-37170  
 environmental studies on methane production by anaerobic digestion of municipal wastes 2-2836  
 ethical aspects of World energy prod. 2-6088  
 Finnish agriculture, utilisation of alternative energy source (*Hungarian*) 2-41975  
 forest biomass inventory, productivity and availability 2-22530  
 geopressed resources energy conversion plants system thermodynamics 2-32027  
 geothermal energy, heat extraction by water penetration into hot rock boundaries of magma at Grimsvoth 2-52781  
 geothermal heat flushing from moderately permeable sediments 2-32026  
 Geysers steam field, N. California, depletion of reserve (1974-7 period) 2-14049  
 Great Plains coal gasification project and historical overview 2-47430

**energy resources continued**

- Gulf of Tonkin and vicinity geology and Bouguer gravity anomalies 2-47828  
 heavy oil development project, Orinoco Oil Belt, Venezuela 2-6113  
 imperative of renewable energy sources planning in a new economic and social order 2-22526  
 Jemez Mountains, New Mexico, USA, geothermal energy extraction by hydraulic fracture 2-32025  
 legal reforms to adjust to developments in energy, biological and information sciences 2-6726  
 MARKAL, linear programming model for energy systems analysis, BNL version technical features 2-52269  
 MARKAL linear programming model for energy supply forecasting (*German*) 2-14046  
 methane gas production by anaerobic digestion of industrial waste, process enhancement 2-17981  
 methane gas production by anaerobic digestion of industrial wastes 2-17982  
 Mexican, energy conservation and its effects on energy costs (*Spanish*) 2-41972  
 multisectoral stochastic optimal control model for the UK to derive future energy policies 2-17954  
 municipal solid waste anaerobically digested gas characterisation and anal. 2-17980  
 national energy planning in Indonesia 2-31999  
 national energy plans, 1990-2000, economic and environmental impacts forecasting 2-6092  
 natural gas distribution and allocation forecasting using generalised networks 2-37145  
 natural gas international co-operation importance in industrialised society (*Hungarian*) 2-52271  
 Nepal hydroelectric programme 2-32021  
 nuclear and solar energies, conditions and justification of new energy sources (*Croatian*) 2-41989  
 oil based, Korean programme 2-32009  
 oil import premium, optimal growth model 2-52279  
 oil shale deposits and resources in USA and rest of the world 2-17973  
 oil shale development in Timahdit, Morocco, technological and economic anal. using Occidental in-situ process 2-17976  
 oil shale exploitation using modified in-situ and surface retorting in Colorado, USA 2-17974  
 oil shale quality upgrading by washing in dense media (*Rumanian*) 2-17964  
 OPEC oil price increases, world wide economic effects (*German*) 2-37146  
 opportunities in water power development 2-6122  
 Orinoco Oil Belt pilot production plant setting up guidelines 2-17968  
 OTEC programme in the Micronesian islands 2-32098  
 peat for US energy development program, overview of program goals and accomplishments 2-22534  
 petroleum, hydrothermal, discovery in mineralised mounds in Guaymas Basin, Gulf of California 2-37848  
 Philippines 1981-5 programme 2-32003  
 Pompano Beach Florida prototype demonstration plant for production of methane from municipal solid waste 2-17979  
 power plant cooling, once-through potential of Mississippi River 2-22658  
 primary, energy balance, conversion and use efficiency (*Rumanian*) 2-37139  
 problem and lack of industrial innovation in N.America 2-17953  
 rational planning, Pacific region 2-22525  
 recovery from solid waste using modular incinerators, US experience 2-52310  
 renewable and non-renewable energy sources, Canada 2-22523  
 renewable energy sources (*French*) 2-14051  
 renewable energy sources and storage systems combinations 2-31997  
 Rio Blanco Project for oil extraction from oil shale 2-17975  
 sanitary landfill gas production and influencing factors, potential as alternate energy source 2-17977  
 Singapore energy consumption and conservation 2-32010  
 soft/decentralised technologies based on renewable resources for meeting future energy demand in developing countries 2-27520  
 solar energy, consumer incentives, game theory approach 2-52306  
 solar hydrogen plantations for hydrogen production, feasibility and economics for replacing fossil fuels 2-42048  
 solar power satellites, world energy needs over next fifty years, role (*French*) 2-52293  
 space reflector technology for farming, weather manipulation and energy supply 2-52297  
 state energy policy development, Wisconsin experience 2-6094  
 survey of potential and commercial exploitation possibilities (*Hungarian*) 2-52268  
 Swiss energy research, total expenditure (*German*) 2-52267  
 synthetic crude oil from tar sands, commercial plants 2-6112  
 synthetic fuels, chemistry and technology 2-27518  
 synthetic fuels, life science research at Oak Ridge 2-47458  
 technological forecasting, Chinese programme 2-32000  
 technological forecasting, discovery, invention and innovation cycles 2-6090  
 technological forecasting, Japanese programme 2-32001  
 Thailand's national energy plan 2-32002  
 US energy future, potential renewable resources and how long they would last 2-37140  
 USA current and historical development of energy consumption and production patterns, fuels used 2-31996  
 USA Synthetic Fuel Corporation, project selection criteria 2-47457  
 USSR energy resources current status and future development 2-47426  
 utilisation/ and conversion/ of coal/ (*Dutch*) 2-37144  
 Volgograd area, oil and gas deposits rel. to gravimetric data (*Russian*) 2-47830  
 waste materials recycling and energy (*Croatian*) 2-41970  
 waste oil as energy source in Australia 2-9606  
 water-power in South America (*German*) 2-17987  
 wood, energy resource potential and effects of increased combustion on air quality 2-17983  
 world energy resources including coal, oil, gas, U, and renewable sources (*Dutch*) 2-31995  
 World energy strategy, rel. to North-South relations 2-6087  
 world energy supplies in near future and stability possibilities 2-52266  
 world oil market models, comparison of assumptions 2-52280  
 AI production, energy considerations 2-22528



**energy states**

see also atomic structure; electron energy states (condensed matter); energy level crossing; molecular energy levels; nuclear energy levels; population inversion  
bound quantum systems, approx. energy levels and sizes 2-42825

**energy states in solids and liquids** see electron energy states (condensed matter)**energy storage**

see also capacitor storage; direct energy conversion; energy storage devices

absorption heating transformer process 2-18125  
air-rockbed thermal storage system, pressure drop and heat transfer charac-  
ters. 2-47523  
alternative H<sub>2</sub> storage methods costs estimation for large storage facilities  
2-42051  
annual storage solar heating systems performance and economics  
2-47522  
aquifer compressed air, digital simulation 2-17995  
aquifer field test for compressed air energy storage 2-17996  
aquifer thermal energy storage: a numerical simulation of Auburn Univer-  
sity field experiments 2-9687  
aquifer thermal energy storage, feasibility study for large scale demonstra-  
tion 2-22669  
aquifer thermal energy storage system 2-32028  
Battery Energy Storage Test Facility development 2-18149  
battery requirements for photovoltaic energy storage 2-22578  
CAES load regulation 2-17991  
CAES system champagne effect mechanism and control 2-17997  
CAES system economics 2-17998  
CAES technology 2-18001  
central receiver system utilising molten nitrate salts for heat transfer and  
energy storage, materials requirements 2-6128  
charging a water energy store from a flat explosive magneto-generator  
(Russian) 2-22670  
communal heating systems, thermal energy storage from energy savings  
view point (Dutch) 2-42044  
composite materials for flywheel energy storage system, creep charac-  
ters. 2-22662  
compressed air storage against water power, economic considerations for  
Netherlands (Dutch) 2-42041  
concentration difference energy engine development and appls. (Japanese)  
2-2800  
conference, Atlanta USA, 1981 Aug. 2-18816  
conversion and storage in polycrystalline materials 2-6191  
decentralized solar energy and the electric utilities 2-27557  
direct coupled CAES evaluation 2-18000  
electrochemical, solution redox couples 2-9688  
energy conservation through utilization of mechanical energy storage  
2-27732  
flywheel storage for solar photovoltaic systems, performance charac-  
ters. 2-37304  
flywheels, applications, up to date and traditional 2-2814  
fuel cells, regenerative systems state-of-the-art and developments for orbi-  
tal energy storage applications 2-22603  
ground-mounted thermal storage for the parabolic dish solar  
collector/Stirling engine system 2-32036  
heat exchanger storage tank for heat storage in solar brooding system  
2-14126  
heat storage in phase transitions of solid electrolytes 2-18124  
high temp. heat production by solar energy use to investigate energy stor-  
age in reversible thermochemical cycles, development and testing of  
experimental facility (German) 2-18136  
hot water storage systems, thermally stratified, optimisation anal.  
2-42043  
hybrid advanced compressed air energy storage plant 2-17999  
in-space inertial energy storage design for photovoltaic energy storage,  
application in space shuttle programme 2-22661  
insertion compounds, struct. and electrochem. reactions 2-22466  
large-power solar system using molten nitrate salt mixture for heat trans-  
fer and as thermal energy storage fluid 2-6189  
latent heat storage unit, transient thermal response 2-37457  
latent heat storage via refrigerator type device for solar space heating  
systems 2-42042  
latest heat energy storage in paraffin-filled cylindrical capsule, phase  
change at constant wall temp. (Japanese) 2-42046  
long-term storage of solar heat 2-18146  
low maintenance lead-acid batteries for energy storage 2-32055  
multi-dimensional modelling of gas/water flow in the multi-layer Dunajov-  
ice underground store (German) 2-37466  
packed-bed thermal storage unit, transient temp. response to general varia-  
tion in rate of through flow 2-14127  
passive energy storage systems using earth-air heat exchanges 2-14111  
passive latent heat storage units, log-mean temp. difference correction fac-  
tors 2-37458  
peak shifting potential of thermal energy storage systems for residential  
applications 2-18148  
process heat storage in aquifers 2-18126  
refractory oxides, elec. props. in rel. to conversion, storage and conserva-  
tion of energy 2-1904  
renewable energy sources and storage systems combinations 2-31997  
residential space and water heating using off-peak electricity supplied heat  
pumps 2-37423  
review of electrochemical energy conversion and storage for ocean thermal  
and wind energy systems 2-27720  
rock bed solar collector cum storage system operational charac- and  
economic anal. 2-32116  
saltwater ponds, operation and research 2-14125  
short-term thermal energy storage in solar heating systems 2-18145  
slag-packed-bed thermal energy storage, high temp. for industrial applica-  
tions 2-14129  
solar, as latent heat of fusion of paraffin wax and solution of CaCl<sub>2</sub> and  
water 2-14128  
solar, molten salt advantages 2-18014  
solar energy earth storage system, one-tenth scale model tests 2-22667  
solar energy storage problems (Dutch) 2-37175  
solar pond with three zones, thermal analysis 2-52394  
solar potential energy conversion for synthetic fuel production 2-6190  
solar storage walls, with conducting cover plates and connecting fins,  
performance 2-37456  
solar thermal energy storage, materials science (book) 2-6717

**energy storage continued**

Soyland Power Cooperative, Illinois, compressed air energy storage facility  
planning and operation for economic peaking and reserve capacity  
2-14123  
stand-alone photovoltaic systems, effects of controls and controllable and  
storage loads on performance 2-37302  
Sun porch solar heating, design and performance 2-14115  
synthesis gas for chemicals, production using nuclear process heat  
2-27582  
Texas Instruments Solar Energy System, solar cell chem. convertor,  
energy storage, fuel cell convertor 2-52363  
thermal, for use with solar conversion 2-42045  
thermal, latent heat-of-fusion energy storage, expts. on heat transfer dur-  
ing solid-liquid phase change 2-2815  
thermal, pelletisation and solar encapsulation 2-18123  
thermal energy storage, solar energy research and appl. in Israel 2-18128  
thermal energy storage in confined aquifer, second cycle 2-9686  
thermal energy storage in saturated solutions of inorganic salts, viability  
study 2-18147  
thermal energy storage materials using latent heat, screening of eutectic  
mixtures over temp. range 80 to 500°C (Japanese) 2-14124  
thermocline-type cylindrical enclosure for heat storage in solar power  
plants, effects of walls on axisymmetric natural convection flows  
2-47526  
thermocline-type cylindrical enclosure for heat storage in solar power  
plants, numerical model of effects of walls on axisymmetric natural  
convection flows 2-47527  
water body for solar energy storage, decay of thermal stratification  
2-47525  
water heater with phase-change storage test results 2-22646  
water storage tank, solar heating system, temperature and energy meas.  
(French) 2-22650  
wayside energy storage for recuperation of potential energy from freight  
trains 2-22663  
Al/Nb-Ti composite supercond., boundary resist. 2-13167  
Al/Nb-Ti composite supercond., strengthened, fabrication, energy storage  
appl. 2-13687  
CaCl<sub>2</sub>.6H<sub>2</sub>O latent heat storage material in heat storage container  
(Japanese) 2-27733  
FeTi-(Mn) alloys, H storage props. 2-22409  
H energy storage systems, electrolytic production, appls., ecological and  
climatic effects (Italian) 2-42047  
H<sub>2</sub> rechargeable metallic hydrides prospects 2-52395  
H<sub>2</sub> storage, biomass, solar energy system for agriculture, drinking water  
and hydroelectric power 2-27736  
H<sub>2</sub>SO<sub>4</sub> chemical heat pumps for industry 2-22674  
Li-FeS battery system for electric utility storage and load levelling  
2-32059  
Mg-Ni hydrides effective thermal conductivity measurements under condi-  
tions of 200°C and 40 atm. press. 2-42050  
Na<sub>2</sub>SO<sub>4</sub>.10H<sub>2</sub>O multifreeze-cycle life testing in a rolling cylinder heat store  
2-47524  
SO<sub>3</sub> dissociation as mechanism for converting and transporting solar  
energy 2-9678

**energy storage devices**

1 kW preprototype redox storage system for 5 kW photovoltaic array,  
characterisation tests, NASA 2-22671  
alkaline regenerative fuel cell systems for energy storage, application in  
low earth orbit space missions 2-22602  
assessment of flywheel system benefits in selected vehicle applications  
2-22666  
composite flywheel balance experience 2-22665  
electrochemical, use of coatings in high temp. battery systems 2-22563  
experimental evaluation of a prototype hybrid redox halogen energy stor-  
age device for storing solar and geothermal energy 2-22672  
flywheel, high energy density, incorporating fibres, design and fabrication  
2-22664  
flywheel-speed reducer unit for energy storage 2-18144  
power system superconductive magnetic system charac- 2-18143  
stationary flywheel energy storage, industrial appls. study (German)  
2-14122  
superconducting devices, conf., Chicago, USA (Nov. 1980) 2-14984  
superconducting magnetic for electric power stabilisation, charac-  
ters. 2-18142  
transient state changes in heat accumulators and compensating tanks (Ger-  
man) 2-37455  
zeolite heat pump and zeolite heat transformer for load management  
2-22668  
Pb accumulators for storage of electricity derived from solar energy  
(French) 2-37459  
Pb-acid batteries for photovoltaic systems, operational experience  
2-37305

**energy transfer collisions, molecular** see molecular inelastic collisions**engineering applications of computing** see engineering computing**engineering computing**

see also aerospace computing; chemical engineering computing; civil  
engineering computing; communications computing; electrical engineering  
computing; electronic engineering computing; mechanical engineering  
computing; nuclear engineering computing  
acoustic space parameter simulation (German) 2-34996  
far-field noise levels for source in a rectangular enclosure 2-16187  
industrial plants, computer-aided noise modelling 2-16186  
solar energy system CAD (Dutch) 2-41983

**engineering societies** see societies**engines**

see also aerospace engines; heat engines; internal combustion engines; ion  
engines; propulsion  
concentration difference energy engine development and appls. (Japanese)  
2-2800  
diagnostics using noise and vibration meas. 2-16206  
technical and economic factors in the possible use of gas-engine driven  
heat pumps for space heating (German) 2-37424

**entertainment** see sports and entertainment**enthalpy**

see also heat of .....  
acetaldehyde aqueous solns., struct. and dielect. props. 2-5622  
n-alkanes, vapourisation props., free energy, enthalpy and entropy 2-12780  
n-alkanone-n-alkane (-n-alkanone) mixtures, thermodynamic props.,  
quasi-chemical group contribution model 2-21326



## enthalpy continued

- benzene, thermodynamic props. and struct., appl. to polymer solns. 2-8641  
 binary solid solutions, self-diffusion theory 2-1654  
 bone, heat capacity, 30-240K 2-32181  
 cyclohexane, PVT data for solid and liquid under press. 2-35673  
 cyclohexanone, PVT data for solid and liquid under press. 2-35673  
 cyclopentanol, PVT data for solid and liquid under press. 2-35673  
 2-cyclopropylpropene, conformational enthalpy difference, Raman spectra obs. 2-29612  
 differential heat flow calorimetry 2-8704  
 2,3-dihydroxynaphthalene- $Mn^{2+}(Fe^{2+})(VO^{2+})$  chelates, stability consts. and thermodynamic functions 2-9562  
 1,2-dimethoxyethane aq. soln., thermodynamics of autoionisation, structuredness of solvents 2-45595  
 NN-dimethylformamide- $H_2O$ , enthalpic pair-interaction coeff. 2-8640  
 electrolyte dilute solutions props. from calorimetric meas. 2-9567  
 ethane, solubility in  $H_2O$ , Henry's constants, hydrophobic interaction 2-45587  
 exergy computation using new thermodynamic function called fugery 2-19069  
 fibre reinforced epoxy composites, laser induced ablation 2-30490  
 formaldehyde aqueous solns., struct. and dielect. props. 2-5622  
 geothermal well choke-meter for enthalpy and flow meas. 2-27541  
 glass-liquid transition, nature of internal changes, review 2-8616  
 heat and mass coupled momentum transport, thermodynamics with finite wave speed 2-1113  
 4-n-heptyloxybenzylideneamino-4'-cyanobiphenyl 2-12748  
 2-isopropenol soln., O-H stretching bands cis-trans free energy differences, spin-spin coupling study 2-49456  
 isopropanol-heptane mixtures, excess enthalpy, press. depend. 2-35716  
 isopropanol-isooctane mixtures, excess enthalpy, press. depend. 2-35716  
 isothermal calorimeter for the direct measurement of enthalpy of vaporization at high pressure and high temperature 2-43020  
 isothermal seed generation, kinetic and thermodynamic parameters, student research project 2-48442  
 lipid bilayer properties, effects of active mols., cholesterol problem 2-22699  
 MBBA, enthalpies of solute transfer into nematic 2-8420  
 methane, solubility in  $H_2O$ , Henry's constants, hydrophobic interaction 2-45587  
 methanol- $H_2O$  mixtures, thermal cond. anal. MO calcs., enthalpy, entropy of association, H-bonds 2-35258  
 methyl cyclopentane, US dispersion and thermodynamic prop. studies 2-12684  
 methyl vinyl ketone, liq. solid and gaseous states internal rot., vibr., IR and Raman study 2-9142  
 3-methylcyclohexanone, energy parameters, US dispersion studies 2-50774  
 4-n-octyloxybenzylideneamino-4'-cyanobiphenyl, new low temp. phase, enthalpy, dielectric relax. 2-12748  
 pentachlorophenol, pure and mixed crystals, NMR study of phase transitions 2-46414  
 phenol complexes, intermol. H bond enthalpy, spectrosc. determ. 2-37096  
 polyelectrolyte solns., enthalpy of dilution, temp. effect 2-13993  
 polylactone blends, miscibility, melting pts., enthalpies of fusion and morphologies 2-26019  
 polymers, anelasticity, physical ageing and the constant enthalpy change hypothesis 2-45356  
 PWR homogenised channels, transport coeff. for enthalpy exchange 2-15435  
 rare earth perovskites, stability and thermodynamic props. 2-26078  
 slags and metal oxides, vaporisation in reactive atmos., MHD and coal gasifier systems 2-26029  
 superheated steam adiabatic equations 2-44815  
 tetrahydrofuran aq. soln., thermodynamics of autoionisation, structuredness of solvents 2-45595  
 transition metal complexes with protic solvents, cooperative effects of  $d\pi$  electron delocalisation 2-13998  
 Ag/AgPO<sub>4</sub>(AgAsO<sub>4</sub>) electrodes in formamide, standard electrode potentials, thermodynamic quantities 2-52212  
 Al-Zn, eutectoid transform., determ. of activation energy using DSC 2-13714  
 Al<sub>2</sub>S<sub>3</sub>, high temp. enthalpy and X-ray powder diff. data 2-50887  
 Al<sub>2</sub>S<sub>3</sub>, thermodynamic props. 2-30629  
 Ar+He, excess enthalpy, direct determ. 2-16415  
 BaF<sub>2</sub> crystals, ionic conductivity 2-45612  
 C, adsorption of benzene, cyclohexane, n-heptane, enthalpy and entropy effects 2-45715  
 C materials, charact. temps., computer calc. from enthalpy data 2-5245  
 CO<sub>2</sub>, liquid, thermodynamic props., stat. mech. theory 2-40246  
 CO<sub>2</sub>-He, mixing temp. meas. and excess enthalpy 2-35259  
 Cd+PbO<sub>2</sub>-Pb+CdO reduction equl., calorimetry and equil. meas., enthalpy of reaction and form. of CdO 2-17912  
 CdAs, high pressure phase, thermodynamic props. 2-26083  
 CdCl<sub>2</sub>-KCl, molten, partial molar excess enthalpies, comp. depend., excess heat capacity 2-26081  
 $\beta$ -Co-Ga, ordered, enthalpy of form. anal. defect struct. 2-51877  
 CoTi, mixing enthalpy, expt. and theoretical, CsCl type phases 2-12765  
 $\beta$ -Cs<sub>2</sub>U<sub>2</sub>O<sub>7</sub>, heat capacity and thermodynamic functions, standard enthalpy of form., (Cs+U+O) thermodynamics 2-37093  
 Cu crystals, vacancy effects from enthalpy and heat capacity. data 2-35487  
 Cu-Bi alloys at 700 to 1100°C, thermodynamics and liquidus equilibrium 2-41582  
 Cu-Bi liq. alloys, viscosity (German) 2-1648  
 CuFeS<sub>2</sub>, chalcopyrite, standard energy of combustion in F, bomb calorimetry, standard enthalpy of form. 2-27468  
 Cu<sub>2</sub>O, elec. cond. at high temp. and thermodynamic study of point defects 2-5406  
 CuS, thermodynamic props. 2-26079  
 Cu<sub>2</sub>S, thermodynamic props. 2-26079  
 Fe alloy melt, ternary and multicomponent, alloying element effect on conc. and temp. depend. of  $H_2$  solubility (German) 2-27138  
 Fe alloys, alloying addition equivalent effect on conc. and temp. depend. of  $N_2$  solubility (German) 2-13695  
 Fe, ion implanted, trapping of Sb by TaC and Cu precipitates 2-2513  
 Fe<sub>2</sub>O<sub>4</sub>, stoichiometric, cation distrib., thermopower meas. 2-17101  
 FeTi, mixing enthalpy, expt. and theoretical, CsCl type phases 2-12765  
 Ga-Ag-S solvent, dil. soln. of S, thermodynamic study 2-51878  
 GeO<sub>2</sub>,  $\alpha$ -quartz to rutile transform. kinetics under high press. 2-50840

## enthalpy continued

- He-He, mixture in liq.-gas phase equil. region, enthalpy calc. and Joule-Thomson coeff. 2-20806  
<sup>4</sup>He, superfluid, thermodynamic props., 0K to lambda transitions 2-5292  
 HgTe-CdTe-Te system, thermodynamic anal. using regular associated soln. model 2-35717  
 In-Bi liq. alloys, thermodynamic props. 2-5249  
 K<sub>2</sub>S, standard energy of combustion in F, bomb calorimetry, standard enthalpy of form. 2-27467  
 LaF<sub>4</sub>, above lanthanum trifluoride, ion-molecular equilibria, enthalpy of form. 2-41913  
 LaNi<sub>5</sub>, absorption-desorption of H<sub>2</sub>, thermodynamics for single-phase regions, differential heat flow calorimetry 2-8705  
 LiCl:Ca<sup>2+</sup>(Sr<sup>2+</sup>), ionic cond. of pure and doped single crystals 2-26115  
 Mo-B system, thermodynamic modelling, liq. phase behaviour 2-13698  
 N<sub>2</sub>-He, mixing temp. meas. and excess enthalpy 2-35259  
 Na<sub>2</sub>SO<sub>4</sub>, heat capacity, molal enthalpy, osmotic and mean activity coeff. 2-50878  
 NbB<sub>2</sub>, high temp. enthalpy, heat capacity, entropy and reduced Gibbs energy determ. 2-16808  
 NiTi, mixing enthalpy, expt. and theoretical, CsCl type phases 2-12765  
 Pb-Ag, liq., thermodynamic behaviour of dil. soln. of S 2-40562  
 Pb-based solid solutions, containing H and noble metal substitutional component, thermodynamic behaviour 2-40548  
 Pd-Cu system, mixing enthalpies, expt. determ. using high temp. calorimetry (German) 2-35702  
 Pd-Si alloys, mixing enthalpy, determ. by high temp. calorimetry at 1600K (German) 2-30609  
 Pt, vacancy effects from enthalpy and heat capacity data 2-35487  
 RbCu<sub>2</sub>Cl<sub>3</sub>(I<sub>2-x</sub>Cl<sub>x</sub>) (0≤x≤0.40) solid electrolyte system, elec. cond. 2-40593  
 Se<sub>2</sub>Te<sub>2-x</sub>, amorphous system, kinematical transform. and struct. ageing, glass transition, enthalpy, thermal anal. 2-50551  
 Si-Cu system, mixing enthalpies, expt. determ. using high temp. calorimetry (German) 2-35702  
 SiO<sub>2</sub>-Na<sub>2</sub>Si<sub>2</sub>O<sub>5</sub>, melt, enthalpy and thermal capacity 2-30633  
 Sn-Te, liq., thermodynamic props., high temp., EMF meas. 2-12782  
 SrWO<sub>4</sub> crystallisation from Na<sub>2</sub>WO<sub>4</sub> melt, DTA, thermodynamic and kinetic parameters 2-35415  
 TbCo<sub>3</sub> hydrides, H desorption isotherms, isopaths in press. plateaus 2-26060  
 ThO<sub>2</sub>, enthalpy up to 3400K 2-49116  
 Ti, vacancy effects from enthalpy and heat capacity data 2-35487  
 Ti-Co-Fe, absorption-desorption characts. of H<sub>2</sub> 2-8703  
 TiO, solid solns., high temp. vaporisation and thermodynamics 2-27151  
 TiCl<sub>3</sub>-TiBr, mass spectrum, excess enthalpies and entropies, excess thermodynamic pot. 2-17940  
 U-O system, thermodynamic study at 1050°C (French) 2-26080  
 UO<sub>2</sub>, thermophysical props., review 2-50880  
 W, enthalpy and heat capacity in temp. range 400-3600K 2-16810  
 W, Z 2-5244  
 YCo<sub>3</sub> hydrides, H desorption isotherms, isopaths in press. plateaus 2-26060  
 Y<sub>2</sub>WO<sub>6</sub>, Y<sub>10</sub>W<sub>2</sub>O<sub>3</sub>, and Y<sub>14</sub>W<sub>4</sub>O<sub>33</sub>, high-temp. enthalpy and sp. ht. 2-40569  
 $\alpha$ -Zr, dislocation relaxation in a random array of solutes 2-45189

## entropy

- see also entropy of substances  
 alkali metals, melting thermodynamics under high press., Simon eqn. 2-5208  
 alloy, binary, vibrational entropy change due to disordering, 1D and 2D cases 2-45529  
 anisotropic liquid with rotational degrees of freedom, chain version of the molecular field approx. 2-25720  
 anisotropic liquids, thermodynamic props., mol. field approx. 2-25721  
 benzene-hexa-n-heptanoate, mesogenic disc like mols., heat capacity, 13-393 3K 2-12769  
 Besov spaces, embedding maps, entropy numbers, eigenvalue problems appl. 2-42895  
 Boltzmann principle, kinetic analogue 2-42978  
 calculation from phase-space trajectory 2-38615  
 Clausius-Duhem inequality, continuum mechanics, second law of thermodynamics 2-3378  
 cracked crystals, entropy, cell cluster calcs. 2-8638  
 crystal melting, thermal and elastic props. change 2-21274  
 2,3-dihydroxynaphthalene- $Mn^{2+}(Fe^{2+})(VO^{2+})$  chelates, stability consts. and thermodynamic functions 2-9562  
 1,2-dimethoxyethane aq. soln., thermodynamics of autoionisation, structuredness of solvents 2-45595  
 disordered solid, entropy at low temp., hydrodynamic theory 2-30632  
 disordered solids, third law of thermodynamics, low temp. props. 2-45596  
 elemental solids, entropy-compressibility/correl. 2-1638  
 entropy-producing processes at phase boundaries (German) 2-28806  
 equivalent linearisation of nonlinear stochastic differential eqn., entropy-minimum aspect 2-3537  
 fluid with microstructure, entropy flux formulation (French) 2-6816  
 Friedmann Universe, expanding matter annihilation 2-6694  
 fundamental entropy change in transitions from liquid state 2-40572  
 gases, nonlinear transport processes, third order cumulant approx., modified moment method and theory 2-20800  
 Gibbs paradox and extensivity property of entropy 2-38619  
 glass second-order transition, thermodynamics Landau theory appl. 2-26054  
 gravitational entropy in self-consistent thermodynamic cosmological soln. 2-42925  
 heat and mass coupled momentum transport, thermodynamics with finite wave speed 2-1113  
 identical noninteracting particle systems, indistinguishability, symmetrisation, maximum entropy 2-10706  
 incommensurate structures, melting 2-40514  
 Ising antiferromagnetic, I(1) model, FCC lattice, crit. and thermodynamic props., series expansion calc. (Chinese) 2-41146  
 Ising chains, frustrated, ground state props. 2-13305  
 Ising model, inhomogeneous, with diagonal struct. on square lattice 2-15115  
 Ising model, rigorous entropy-energy arguments 2-23584  
 Ising spin glass model with long-range interaction, entropy 2-8991  
 isochoric entropies of melting and sublimation 2-28818  
 kinetic equations, two point, obeying the entropy principle 2-19061



## entropy continued

- laser system, three-energy level, non-equilib. steady state (*Chinese*) 2-44228  
 limit of ratio of entropy over energy for weak solution of Navier-Stokes equations (*French*) 2-42976  
 liquid crystal, scaled particle theory of a system of hard right circular cylinders 2-16570  
 Markov processes, Onsager-Machlup function derivation by Kullback-Leibler entropy minimisation 2-3484  
 melting, vibr. dislocations 2-16761  
 melting and liq. and glassy states 2-26023  
 microscopic surface tension, microthermodynamic surface areas, molecules, clusters and droplets 2-8689  
 Morse oscillator, thermodynamic functions 2-765  
 nonequilibrium entropy, definition 2-28808  
 nonequilibrium particle-photon system, entropy change studies 2-38618  
 nonequilibrium statistical thermodynamics expression 2-42979  
 nonequilibrium steady states, entropy balance, irreversibility 2-151  
 phthalocyanines, heat capacity from 4 to 45K 2-30613  
 polyethylene, liq., conformational entropy excluding gauche state transitions 2-8408  
 polymer solutions, entropy, scaling props. 2-33479  
 prestressed crystals, Rayleigh waves, lattice dynamics and elastic wave theory 2-45704  
 quantum mechanics, statistical inference 2-3423  
 relativistic multicomponent gas, entropy production 2-35253  
 rubber membranes, thermodynamics, kinetic theory, rel. to mech. props. 2-12020  
 shock wave propag. in stressed isotropic nonlinear 2-8067  
 solvent structs. and interfacial excess entropies 2-16818  
 spin glass, Sherrington-Kirkpatrick model, entropy for averages over solns. of TAP eqns. 2-5552  
 superrandom fields, entropy props. 2-49717  
 synergetics, nonequilibria, phase transitions and self organisation (*German*) 2-3542  
 tetrahydrofuran aq. soln., thermodynamics of autoionisation, structuredness of solvents 2-45595  
 third law of thermodynamics, statistical foundations 2-28750  
 type-II superconductors, thermodynamic description 2-17211  
 unique entropy function, completion of Callen postulate system 2-19058  
 Cu complex, Cu(II) phthalocyanine, heat capacity from 4 to 45K 2-30613  
 CuS, thermodynamic props. 2-26079  
 Cu<sub>2</sub>S, thermodynamic props. 2-26079  
 Ni complex, Ni(II) phthalocyanine, heat capacity from 4 to 45K 2-30613

## entropy of substances

- acetaldehyde aqueous solns., struct. and dielect. props. 2-5622  
 adsorbate-induced emission noise, representation of temp.-depend. spectral props. by Lorentz functions (*German*) 2-13145  
 alkali metals, melting curve eqn. under high press., Simon's eqn. 2-45537  
 n-alkanes, vaporisation props., free energy, enthalpy and entropy 2-12780  
 anisotropic materials, spin density waves and supercond., phase transitions. 2-13211  
 binary alloys, two-dimensional, disordering, vibr. entropy change 2-45528  
 biocompounds, solid phase, entropy 2-42069  
 bone, heat capacity, 30-240K 2-32181  
 chemical potential in solids 2-40473  
 cyclohexane, PVT data for solid and liquid under press. 2-35673  
 cyclohexanone, PVT data for solid and liquid under press. 2-35673  
 cyclopentanol, PVT data for solid and liquid under press. 2-35673  
 cyclopentylamine, thermodynamic props. 2-5248  
 cyclopropylamine, thermodynamic props. 2-5248  
 degenerate semiconductor, cooling by adiabatic magnetisation in ultra-quantum region 2-28856  
 di(methylammonium)hexachlorostannate, crit. phase transition, calorimetric and IR study 2-1608  
 differential heat flow calorimetry 2-8704  
 dimethyl tin difluoride, molecular rotation, comparison of NMR, sp. ht. and neutron scatt. meas. 2-30423  
 ethane, solubility in H<sub>2</sub>O, Henry's constants, hydrophobic interaction 2-45587  
 exergy computation using new thermodynamic function called fugergy 2-19069  
 ferroecene crystal, thermodynamic props. 2-21332  
 ferroelectric materials, switching, irreversible thermodynamic theory 2-46496  
 ferromagnetic refrigerants, 4.2 to 300K, materials selection criteria 2-33536  
 ferromagnetic refrigerants, fundamental working efficiency in mag. refrigeration 2-33553  
 formaldehyde aqueous solns., struct. and dielect. props. 2-5622  
 glass, residual entropy and glass transition 2-26055  
 glass-liquid transition, nature of internal changes, review 2-8616  
 hexamethylbenzene, solid, entropy calc., intermol. contrib., internal rot. 2-12777  
 interstitial solutions with short range repulsive interactions, configurational entropy calc. 2-5246  
 isothermal seed generation, kinetic and thermodynamic parameters, student research project 2-48442  
 isotropic solids, irreversible thermodynamics of overdriven shocks 2-40486  
 liquid metal, thermodynamic properties using one-component plasma reference system 2-45013  
 liquid noble metals, effective pair potential and thermodynamic props. 2-45015  
 metals, overdriven shocks, processes, thermodynamics 2-40487  
 methane, solubility in H<sub>2</sub>O, Henry's constants, hydrophobic interaction 2-45587  
 methanol-H<sub>2</sub>O mixtures, thermal cond. anal MO calcs., enthalpy, entropy of association, H-bonds 2-35258  
 methyl cyclopentane, US dispersion and thermodynamic prop. studies 2-12684  
 mono-methyl pyridines, cryst. methyl group rotation 2-35411  
 methylammonium cadmium tetrachloride, layer cpd., heat capacity meas. 2-5242  
 3-methylcyclohexanone, energy parameters, US dispersion studies 2-50774  
 methylenecyclobutane, thermodynamic props. 2-5248

## entropy of substances continued

- nematic and cholesteric thermotropic azoxy polyesters azoxy polyesters, nematic and cholesteric thermotropic, with moderately low transition temps., synthesis and props 2-35390  
 nematic-isotropic phase transition, thermodynamical behaviour, influence of smectic phase 2-16793  
 plastics, reinforced, damage accumulation, thermodynamic quantities transfer processes 2-41703  
 polyethylene, integral eqn. method for entropy calc. of confined chain 2-16819  
 polymer solutions, intrinsic viscosity in nonpolar solvents, effect of solvent steric hindrance 2-1539  
 porous material structure characterisation, adsorption isotherm 2-50996  
 solid solutions, interstitial 2-40551  
 TCNQ salt, MEM(TCNQ)<sub>2</sub>, mol. motion induced order-disorder transition, proton NMR study 2-26040  
 tellurate glasses, O anomalies, rel. to props. 2-5055  
 ternary system, partial thermodynamic functions and liquidus surface calc. from congruently melting binary cpd. liquidus curve 2-40512  
 (TMTSF)<sub>2</sub>PF<sub>6</sub>, spin density waves and supercond., phase transitions 2-13211  
 toluene, solid, entropy calc., intermol. contrib., internal rot. 2-12777  
 transition metal complexes with protic solvents, cooperative effects of d $\pi$  electron delocalisation 2-13998  
 trimethylborane, IR and Raman spectra, vibr. anal. 2-804  
 van der Waals liquid-vapour coexistence curve, parametric soln., student calc. 2-48448  
 water-steam mixture, eqn. of state, sound velocity 2-40511  
 zirconium hydrogen phosphate n-alkyl phosphate, layer struct., phase transitions, X-ray diff. 2-16757  
 Ag, liq., O activity, electrochem. meas. 2-8647  
 Ag/AgPO<sub>4</sub>(AgAsO<sub>4</sub>) electrodes in formamide, standard electrode potentials, thermodynamic quantities 2-52212  
 $\alpha$ -AgI, DC cond. and disorder entropy 2-21367  
 $\alpha$ -AgI, diffusing ion pair correl. function, lattice-gas model with Coulomb interactions 2-35737  
 Al, overdriven shocks, processes, thermodynamics 2-40487  
 Ar, solid, melting curve eqn. under high press., Simon's eqn. 2-45537  
 $\beta$ -B, rhombohedral, isothermal changes of entropy at high press. 2-40571  
 C, adsorption of benzene, cyclohexane, n-heptane, enthalpy and entropy effects 2-45715  
 CO, quasi-ideal chemisorpt. in oxides, entropy microcalorimetric determ. 2-40681  
 CO<sub>2</sub>, liquid, thermodynamic props., stat. mech. theory 2-40246  
 CaF<sub>2</sub>, Frenkel defect form. entropies in quasiharmonic approx. 2-45506  
 CaO-Cr<sub>2</sub>O<sub>3</sub>-CrO<sub>3</sub>, calc. of thermodynamic consts. 2-6053  
 CdAs, high pressure phase, thermodynamic props. 2-26083  
 (Ce,La<sub>1-x</sub>)<sub>2</sub>Mg<sub>3</sub>(NO<sub>3</sub>)<sub>12</sub>·24H<sub>2</sub>O, mag. entropy, adiabatic de magnetisation calc. 2-36349  
 CePt, ferromagnetic, specific heat, 1.5 to 16K 2-46303  
 Cr, spin waves and thermodynamic props. (*Russian*) 2-21784  
 Cs, structural and thermodynamic props. using local transition metal pseudopot. 2-8472  
 Cs<sub>2</sub>CrO<sub>4</sub>, thermodynamic props. 2-2727  
 CsHSO<sub>4</sub>, phase transition, dielec. const. and sp. ht. study 2-13388  
 $\beta$ -Cs<sub>2</sub>U<sub>2</sub>O<sub>7</sub>, heat capacity and thermodynamic functions, standard enthalpy of form., (Cs+U+O) thermodynamics 2-37093  
 Cu, liq., O activity, electrochem. meas. 2-8647  
 Cu-Bi alloys at 700 to 1100°C, thermodynamics and liquidus equilibrium 2-41582  
 Cu-Zn(Al)(Sn), liq., free energy and other thermodynamic props., conc. depend. 2-12779  
 Fe alloy melt, ternary and multicomponent, alloying element effect on conc. and temp. depend. of H<sub>2</sub> solubility (*German*) 2-27138  
 Fe alloys, alloying addition equivalent effect on conc. and temp. depend. of N<sub>2</sub> solubility (*German*) 2-13695  
 Fe-C, liq., thermodynamic props. 2-21333  
 Fe-Mo system, phase equilib. and thermodynamics 2-27140  
 Fe-Mo-O system, phase equilib. and thermodynamics 2-27140  
 Fe-Sb-transition metal alloys, segregation, influence of chem. interaction between Sb and transition metal 2-47039  
 Fe<sub>3</sub>O<sub>4</sub>-FeAl<sub>2</sub>O<sub>4</sub> spinel solid solns., thermodynamic props. 2-35695  
 Ga- $\alpha$ -S solvent, dil. soln. of S, thermodynamic study 2-51878  
 GeO<sub>2</sub>,  $\alpha$ -quartz to rutile transform. kinetics under high press. 2-50840  
 H<sub>2</sub>, solid, melting curve eqn. under high press., Simon's eqn. 2-45537  
 H<sub>2</sub>, solid, quadrupolar glass, meas. of ( $\partial P/\partial T$ ), 2-35843  
<sup>3</sup>He, zero sound and melting curve, entropy contribs. 2-35823  
<sup>3</sup>He, superfluid, thermodynamic props., OK to lambda transitions 2-5292  
 HgTe-CdTe-Te system, thermodynamic anal. using regular associated soln. model 2-35717  
 In(OH)<sub>3</sub> crystal, mag. thermal and optical absorpt. props. 2-8963  
 In-Bi liq. alloys, thermodynamic props. 2-5249  
 K, structural and thermodynamic props. using local transition metal pseudopot. 2-8472  
 KCl-CuCl, molten salt systems, mass spectrometric study, enthalpies and entropies of form. 2-9589  
 LiBr-CuBr, molten salt systems, mass spectrometric study, enthalpies and entropies of form. 2-9589  
 LiCl-CuCl, molten salt systems, mass spectrometric study, enthalpies and entropies of form. 2-9589  
 MgO-Cr<sub>2</sub>O<sub>3</sub>-CrO<sub>3</sub>, calc. of thermodynamic consts. 2-6053  
 Mn complex, phosphocyantrane, order-disorder transition, calorimetric, X-ray and Raman diff. study (*French*) 2-50847  
 Mn, dil. solns. of H<sub>2</sub> and D<sub>2</sub>, thermodynamics, 555 to 700K 2-1637  
 MnO, thermodynamic activity in melts containing SiO<sub>2</sub>, B<sub>2</sub>O<sub>3</sub> and TiO<sub>2</sub> 2-8645  
 MnTe, thermal expansion meas. 2-16824  
 Mo-B system, thermodynamic modelling, liq. phase behaviour 2-13698  
 N<sub>2</sub>, liquid, thermodynamic props. from perturbation theory for ISM fluids 2-30628  
 Na-NH<sub>3</sub> solution, phase coexistence above consolute point 2-21287  
 NaCl-AlCl<sub>3</sub>, thermodynamics 2-45591  
 NaI-CuI, molten salt systems, mass spectrometric study, enthalpies and entropies of form. 2-9589  
 NbB<sub>2</sub>, high temp. enthalpy, heat capacity, entropy and reduced Gibbs energy determ. 2-16808  
 NbSe<sub>3</sub>, quasi-one-dimens. cond., calorimetric obs. of phase transitions 2-30611  
 Ni, sp. ht., physical contribs. 2-2075  
 $\beta$ -Ni(NO<sub>3</sub>)<sub>2</sub>·4H<sub>2</sub>O, field induced spin ordered states, low dimensionality 2-41147



**entropy of substances continued**

- Pb-Ag, liq., thermodynamic behaviour of dil. soln. of S 2-40562  
 Pd<sub>2</sub>Mn-H<sub>2</sub>(D<sub>2</sub>) solns., thermodynamic props. 2-21328  
 Pt, overdriven shocks, processes, thermodynamics 2-40487  
 Rb, structural and thermodynamic props. using local transition metal pseudopot. 2-8472  
 Sb<sub>2</sub>S<sub>3</sub>, enthalpy of formation and high temp. thermodynamic functions 2-6058  
 $\alpha$ -SiC, self-diffusion of <sup>30</sup>Si in high purity and N-doped single crystals. 2-12821  
 SrF<sub>2</sub>, Frenkel defect form. entropies in quasiharmonic approx. 2-45506  
 SrWO<sub>4</sub>, crystallisation from Na<sub>2</sub>WO<sub>4</sub> melt, DTA, thermodynamic and kinetic parameters 2-35415  
 ThO<sub>2</sub>-ThC<sub>2</sub>-C equilib., 1328-1976K 2-2709  
 TiO, solid solns., high temp. vapourisation and thermodynamics 2-27151  
 TiCl-TiBr, mass spectrum, excess enthalpies and entropies, excess thermodynamic pot. 2-17940  
 UO<sub>2</sub>, diffusion of O<sub>2</sub> 2-50913  
 V-O solutions, high temp. thermodynamics 2-5230  
 W halides and oxyhalides, heterogeneous reactions and chemical transport, in incandescent lamps 2-2728  
 WO<sub>3-x</sub>, thermodynamic props., 700 to 900°C EMF meas. 2-41917  
 Y<sub>1-x</sub>Er<sub>x</sub>Rh<sub>2</sub>B<sub>4</sub>, magnetic heat capacity, superconductivity 2-17300  
 YbCuAl, intermediate valent, thermal expansion, sp. ht. and resist. 2-16823  
 ZnCr<sub>2</sub>O<sub>4</sub>, single cryst. growth by chem. transport 2-17611  
 ZrP, amorphous, ion exchange mechanism, enthalpy and entropy changes 2-14000  
 $\alpha$ -ZrP, thermodynamics of alkali metal ion exchange 2-14001

**environmental engineering**

- see also air conditioning; cooling; ergonomics; lighting; safety; space heating; temperature control; ventilation*  
 electric power plant environmental noise guide 2-20472  
 Gelderland 600 MW dual coal/oil-firing power station, technical details and environment protection measures (German) 2-47537  
 hydroelectric power projects environmental effects assessment 2-42053  
 LMFBR, cc Na-cooled, operating experiences and environmental risk anal. (German) 2-7315  
 Louisiana Frio Formation geopressure studies program, integration of environmental planning 2-32024  
 medium current ion implant systems, manufacturing advantages for remote control 2-7375  
 power overhead lines construction, planning and authorisation guidelines for nature and countryside protection (German) 2-52418  
 vehicle maintenance on German State Railways regulations and standards for noise control and environment protection (German) 2-52409

**environmental requirements** *see environmental engineering***environmental testing**

- see also corrosion testing*  
 anechoic chamber for environmental acoustics measurement 2-11963  
 automatic control system for climatic tests 2-48695  
 power station stack emission control, evaluation of Australian coal 2-52416  
 radioisotope thermoelectric generator convertor, engineering development testing 2-27717  
 solar collector durability/reliability determination, test procedures evaluation 2-18131  
 steel, austenitic stainless, liq., metal embrittlement by Te-Cs mixture 2-36966  
 Al-Zn-(Sn)-(In), sacrificial anodes, sea water testing 2-52093

**epitaxial growth**

- see also liquid phase epitaxial growth; vapour phase epitaxial growth*  
 (111) FCC overlayers, ideal epitaxial configurations on (110) BCC substrates 2-51032  
 (111) FCC thin films, epitaxy on (110) BCC substrates by coherence, ideal epitaxial configurations 2-51033  
 chemoeptitaxial nucleation of new phase, influence of ratio of heterodiffusion coeffs. and interface energies (Russian) 2-40744  
 diamond, C<sup>+</sup> ion implantation, crystal growth, proton channelling 2-45212  
 electron microscopy obs. 2-51046  
 interface problems, review 2-51047  
 laser epitaxy technology, recent advances 2-29844  
 metal silicide films, epitaxial growth, pulsed proton beam annealing 2-50718  
 rectangular interfacial atomic meshes, ideal epitaxial configurations 2-51031  
 semiconductor, laser-induced solid phase epitaxial growth, monitoring using time-resolved opt. reflectivity 2-15238  
 Ag, adsorbed on Si(111), growth and surface struct., expt. study 2-45727  
 Ag single crystals, electron microscopic contrast of atomic steps 2-5030  
 Au/Ag(111) epitaxy, first stage, backscatt./channelling anal. 2-50965  
 GaAs films, epitaxial growth simulation 2-5322  
 GaAs, ion implantation and low temp. epitaxial regrowth 2-8532  
 GaAs, As<sup>+</sup>, ion implanted layers, solid phase epitaxial regrowth 2-16960  
 Ge, amorphous, solid-phase epitaxial crystn. on Si(100) 2-12932  
 Ge<sub>2</sub>Si<sub>100-x</sub> amorphous layers, heterostruct. fabrication by solid phase growth 2-8736  
 KBr:Ti, struct. depend. on deposition parameters (Russian) 2-16968  
 Mg, oxidation, early stages, LEED, EELS, work function, and ellipsometry meas. 2-27344  
 Ni electrodeposited on Cu, microstruct., substrate surface conditions effect 2-26258  
 Ni<sub>3</sub>Si, formation on Si, TEM obs. 2-51030  
 Si, amorphous, rate of CW laser induced solid phase epitaxial regrowth 2-21451  
 Si film, implanted, CW laser-induced solid phase epitaxy dynamics, time-resolved reflectivity meas. 2-45791  
 Si, islands, laser induced crystal growth, on amorphous substrates 2-51058  
 Si, laser annealing, metastable honeycomb model 2-40432  
 Si, laser-induced solid-phase crystal growth investigation by time-resolved optical reflectivity 2-1800  
 Si layers, CW laser annealed, EBIC contrast rel. to residual defects, X-ray, TEM, and SEM obs. 2-30465  
 Si solar cell, low temp. solid-phase epitaxy 2-18049  
 Si, solid phase epitaxial growth, effect of surface struct. and surface absorbates 2-16971  
 Si solid-phase epitaxy p-n junction formation, low-temp. technique for efficient solar cells 2-32086

**epitaxial growth continued**

- Si, thin film, laser growth, in patterned structures 2-51059  
 Si:As<sup>+</sup>, ion implantation, scanned electron beam annealing 2-1527  
 Si:B, As, P, amorphous, ion implanted, epitaxial regrowth, compensating impurity effect 2-51014  
 Si:H, sputtered coating, H effusion, ion beam nuclear analysis (French) 2-1799  
 Si:In,Sb (100), ion implanted, solid phase epitaxy, solid solubility, channelling study 2-50862  
 Si-insulator triple struct. fabrication by O<sub>2</sub> implantation and epitaxial growth 2-40719  
 ZnO epitaxial growth on oxidation of Zn(0001) 2-41786

**epitaxial layers**

- see also magnetic epitaxial layers; metallic epitaxial layers; semiconductor epitaxial layers*  
 electron microscopy obs. 2-51046  
 films, formation by laser produced plasma component condensation, props. 2-21468  
 polyacetylene epitaxial layers, optical and elec. anisotropy 2-46598  
 polyacetylene film, epitaxial synthesis, shear flow method 2-45074  
 TGS thin film, ferroelec. props. 2-36580  
 X-ray topographic cameras for substructural analysis 2-35350  
 AgCl/AgI epitaxial photographic emulsion, photographic props. 2-10895  
 BaF<sub>2</sub> film, MBE grown dielectric 2-26820  
 BaTiO<sub>3</sub>, heteroepitaxial layers, ferroelectric transition 2-46477  
 Bi film, Shubnikov-de Haas effect obs. (Russian) 2-8819  
 CaF<sub>2</sub> film, MBE grown dielectric 2-26820  
 GeO<sub>2</sub>, deposited on quartz crystal surface, RHEED struct. obs., epitaxy relations 2-16961  
 In,Ga<sub>1-x</sub>As<sub>x</sub>-P, epitaxial layers, optical props., IR obs. 2-27008  
 KBr:Ti, struct. depend. on deposition parameters (Russian) 2-16968  
 LiNbO<sub>3</sub> layer growth in LiVO<sub>3</sub> high temp. soln. 2-12928  
 Pd<sub>2</sub>Si-Si(111) epitaxial interface struct. and propag., TEM obs. 2-45747  
 Si-Al<sub>2</sub>O<sub>3</sub>, charge carrier props. in p-type layers of SOS 2-8812  
 SnO<sub>2</sub>, deposited on quartz crystal surface, RHEED struct. obs., epitaxy relations 2-16961  
 SrTiO<sub>3</sub>, heteroepitaxial films, ferroelectric transition 2-46477  
 TiO<sub>2</sub>, deposited on quartz crystal surface, RHEED struct. obs., epitaxy relations 2-16961  
 Zn electrodeposited autoepitaxial layers, degree of perfection, overvoltage effect (Russian) 2-21453

**epitaxy** *see epitaxial growth***EPR** *see paramagnetic resonance***EPR line breadth**

- alkali metal-NH<sub>3</sub> solns., conc., CESR obs. 2-26745  
 anisotropic spectra, approx. calcs. 2-7580  
 Bloch equations, for inhomogeneously broadened lines, transient solns. 2-4336  
 CESR spectroscopy in presence of mag. impurities 2-26746  
 dimer mol. aggregate in disordered matrices, ESR line shape calcs. 2-39522  
 dimethylammonium manganese tetrachloride, mag. reson. obs. in antiferromag. and spin-flop regimes 2-5587  
 2,5-diphenylloxazole in cyclohexane soln., pulse radiolysis, radical ion kinetics, EPR study 2-15823  
 ferroelectrics, EPR line electric-dipole broadening 2-41197  
 ferroelectrics, ESR lines, elec. dipole broadening, nonlinear effects near phase transition temperature 2-46381  
 free radicals, ESR spectra in presence of paramag. ions, dipole-dipole broadening 2-34455  
 Ising antiferromagnet, one-dimens., ESR due to domain wall propag. 2-13331  
 lineshape meas. of ESR signals 2-38670  
 liquid crystalline polymer, oriented, spin probe ESR study 2-30396  
 manganese formate dihydrate, quasi-two-dimens. magnet, half-field and normal ESR study 2-5578  
 membranes, EPR spectra of nitroxide spin label probes, O effect 2-15825  
 metals, transmission electron spin resonance, g-factor, Fermi liquid effects 2-46361  
 bis[1,2-bis(2-methoxyethoxy)ethane]Na biphenylide mag. system, spin diffusion effect on ESR linewidth 2-26725  
 naphthalene, triplet exciton annihilation and triplet spin relax. 2-1837  
 nickel acetate, EPR of Mn<sup>2+</sup> 2-41191  
 nickel acetate tetrahydrate:Mn<sup>2+</sup>, EPR studies 2-36417  
 nitrosyl cytochrome c oxidase, frozen soln. EPR, Fourier transform resolution enhancement 2-29635  
 one-dimensional paramagnets, anomalous relaxation, EPR line shape satellite structure 2-51450  
 paramagnetic ion clusters, strongly exchange-coupled, fine struct. EPR spectra 2-17328  
 poly(chromium phosphinate) one-dimensional Heisenberg antiferromag., static and dynamic susceptibility 2-13279  
 poly-acrylo-nitrile semiconductors, paramag. centres clusters (Russian) 2-36426  
 polyacetylene, isomerisation and spin generation, Raman and EPR study 2-47333  
 polyacetylene, saturation and linewidth of ESR signal, relax. behaviour, O and isomerisation influence 2-31261  
 trans-polyacetylene, spin dynamics, dynamic nucl. pol., nucl. relax. and EPR study 2-46427  
 polyacetylene, undoped, ESR line narrowing mechanisms 2-2118  
 polyacetylene-d<sub>0</sub> (-d<sub>1</sub>), n-type doping, conduct. transitions, thermal isomerisation, ESR and IR study 2-5574  
 polycrystalline samples, EPR spectra, lineshapes, Monte Carlo simulation 2-26724  
 powder, Jahn-Teller coupling determ. from ESR line-shape 2-13027  
 ruby, dilute, spin-packet width angular dependence 2-46358  
 semiquinones in DMSO and DMSO-ethanol frozen solns., mol. motions, ESR study 2-36409  
 solvated electrons geom. struct. 2-11525  
 spectra, alternating linewidths, simulation method 2-28877  
 TCNQ salt, quinolinium(TCNQ)<sub>2</sub>, mag. props. below 20 mK, effect of neutron irradi. induced disorder 2-26603  
 (TMTSEF)<sub>2</sub>ClO<sub>4</sub>, elec. cond. and ESR (French) 2-41044  
 (TMTSF)<sub>2</sub>-PF<sub>6</sub>, transport and EPR study 2-30877  
 (TMTSF)<sub>2</sub>PF<sub>6</sub>(AsF<sub>6</sub>)(SbF<sub>6</sub>)(NO<sub>3</sub>)(BF<sub>4</sub>), ESR linewidth, g-tensor, and susceptibility 2-26728  
 (TMTSF)<sub>2</sub>X, quasi-one-dimens. cond., X=PF<sub>6</sub>, AsF<sub>6</sub>, NO<sub>3</sub>, ClO<sub>4</sub> and BF<sub>4</sub>, mag. and ESR obs. 2-21869  
 trans-polyacetylene, undoped, spin dynamics at low temp. 2-13375



**EPR line breadth continued**

- tris-sarcosine calcium chloride;  $\text{Mn}^{2+}$ , ferroelec., press. and temp. depend. of local order parameter 2-9106
- two-layer system, EPR spectra changes by inhomogeneous plane stress distrib. 2-41177
- type II superconductor, zero gap, CESR line shape 2-26549
- 5, glassy, photo-induced ESR 2-46377
- $\text{AgCl}:\text{Pd}$ , ESR line narrowing 2-5579
- Al complex,  $\text{Al}(\text{urea})_2(\text{ClO}_4)_3$ , antiferrodistortive, two-dimensional critical behaviour 2-12738
- Al, low-temp. CESR and electron-electron interactions 2-36432
- $\text{AlN}:\text{O}$ , EPR study of O centres 2-51457
- $\text{Al}_2\text{O}_3:\text{Cr}^{3+}$  precipitated struct., SIMS and EPR spectra line broadening, spin matrix param. 2-9031
- $\text{As}_2\text{S}_3(\text{Se}_3)$ , chalcogenides, electron stimulated ESR 2-5582
- Au-ER, dil. alloy, effects of near surface layer on EPR lineshapes, low temp. study 2-36421
- $\text{B}_2\text{O}_3\text{-Na}_2\text{O-CuO}$  glasses, effect of melting temp., EPR and NMR studies 2-14111
- $\text{Co}_3\text{O}_4$ , polycrystalline, dispersity, struct. and mag. props. 2-21872
- $\text{Cr}(\text{NO}_3)_3$ , aq. solns., EPR line width 2-43950
- $\text{Cr}_2\text{O}_3:\text{Ga}_2\text{O}_3(\text{Al}_2\text{O}_3)$ , EPR line width, nonmag. dopant effects (*German*) 2-21875
- $\text{CsSrCl}_3:\text{Gd}^{3+}$ , displacive phase transitions, ESR spectra obs. 2-36424
- Cu, conduction electron spin flip scatt. by impurities 2-51462
- $\text{EuO}$ , EPR lineshape, cond. electron influence 2-13335
- $\text{Eu}_0.4\text{Sr}_{0.6}\text{S}$ , insulating spin glass, EPR study 2-26738
- $\text{Eu}_0.4\text{Sr}_{0.6}\text{S}$ , insulating spin glass, EPR temp. depend. study 2-31279
- Ga complex,  $\text{Ga}(\text{urea})_2(\text{ClO}_4)_3$ , antiferrodistortive, two-dimensional critical behaviour 2-12738
- $\text{GaP}:\text{S}, \text{Zn}$ , donor-acceptor spin-spin interaction, optically detected EPR study 2-5605
- $\text{Gd}_{0.96}\text{La}_{0.04}\text{Al}_2$  spin glass, freq. depend. ESR 2-31271
- $\text{Ge}_2\text{S}_3(\text{Se}_3)$ , chalcogenides, electron stimulated ESR 2-5582
- $\text{KLiSO}_4$ , phase transitions, EPR study 2-31281
- $\text{KMgF}_2:\text{Ni}^{2+}$ , line profile influence on spin-lattice relax., phonon bottleneck 2-31273
- $\text{K}_2\text{Mn}_2\text{F}_7$ , EPR crit. line broadening near Neel temp. 2-26736
- $\text{K}_2\text{Ni}(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$ , EPR of  $\text{Mn}^{2+}$  2-41191
- $\text{K}_2\text{SeO}_4:\text{VO}^{2+}$ , incommensurate phase, ESR line shape study 2-41179
- $\text{KZnF}_3:\text{Ni}^{2+}$ , line profile influence on spin-lattice relax., phonon bottleneck 2-31273
- Li-3d metal double layers, cond. electron spin resonance 2-31288
- $\text{MnCl}_2$ , in aq. polyethylene glycol soln., intermol. relax., ESR and paramag. relax. obs. 2-15827
- $\text{NH}_4\text{AlF}_6:\text{Fe}^{3+}(\text{Cr}^{3+})$ , order-disorder transition, ESR investig. 2-40528
- NO spin labels/probes slow tumbling motions from second derivative ESR powder spectra 2-41201
- $\beta\text{Na}_{0.33}\text{V}_2\text{O}_5$ , quasi-one-dimensional conductor, EPR evidences of  $\text{V}^{4+}$  pair formation 2-2128
- $\text{Nd}_2\text{Co}_2(\text{NO}_3)_{12} \cdot 24\text{H}_2\text{O}:\text{Mn}^{2+}$ ,  $\text{Gd}^{3+}$ , host spin-lattice relax. narrowing, EPR study 2-2120
- Ni hexammines, ESR line temp. broadening, cryst. field and exchange consts. (*Russian*) 2-17329
- $\text{NiK}_2(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}:\text{Mn}^{2+}$ , EPR studies 2-36417
- $\text{Pb}(\text{Fe}_{0.5}\text{Nb}_{0.5})_2\text{O}_3$ , EPR linewidth, crit. point anomalies 2-46368
- $\text{Pb}_3(\text{PO}_4)_2:\text{Mn}^{2+}(\text{Gd}^{3+})$ , ferroelec. transition, EPR study 2-21874
- $\text{PbTiO}_3:\text{Fe}$ , critical behaviour in ferroelectric transition region (*Russian*) 2-26835
- $\text{RbCaF}_3:\text{Gd}^{3+}$ , order parameter fluctuations near ferroelastic phase transition, EPR study 2-31277
- $\text{RbH}_2(\text{SeO}_4)_2:\text{Cr}^{3+}$ , incommensurate phase, ESR line shape study 2-41179
- $\text{Si}$ , amorphous thick film, conductivity as a function of spin conc. 2-40902
- $\text{VO}_2$ , metal-insulator transition, EPR linewidth and g-factor meas. 2-36416
- $\text{Yb}_x\text{Y}_{1-x}\text{Cl}_3 \cdot 6\text{H}_2\text{O}:\text{Gd}^{3+}$ , EPR line width,  $\text{Yb}^{3+}$  spin-lattice relax. 2-46372
- $\text{ZrIr}_2$ , ESR and supercond. of  $\text{Nd}^{3+}$  and  $\text{Gd}^{3+}$  2-2026

**epsilon meson resonances** see *eta meson resonances*

**equations**

- for equations used in specific subjects, see the specific indexing heading
- see also *Bethe-Salpeter equation*; *differential equations*; *equations of state*; *functional equations*; *integral equations*; *nonlinear equations*
- astrometry, magnitude eqns. between fundamental coordinate systems N30, FK4 anal. (FK4) 2-32863
- partial elliptical equation solution, appl. of dynamic programming method (*Russian*) 2-3357
- Thornthwaite-Holzman eqns. for sensible and latent heat fluxes over crop and forest canopies, error anal. 2-14550

**equations of state**

- see also *equations of state of gases*; *equations of state of liquids*; *equations of state of solids*; *phase transformations*; *thermodynamics*
- condensed matter, equation of state in intermediate press. region, 0.5 to 10 TPa 2-1583
- cosmological selfgravitating fluid influenced by turbulent/thermal motion and primordial background radiation- 2-10533
- critical data estimation, cubic eqn. of state calcs. 2-28807
- excess Gibbs energy models, equations of state, local composition concept 2-19062
- fluid phase equilibria, molecular theory, empirical equations of state 2-19063
- free boson gas in weak external pot. 2-6789
- general relativity, slowly rotating fluid sphere with and without radiation 2-10672
- graphite, adsorpt. of Ar, second surface virial coeff. calc. 2-14002
- hard rods one dimens. binary mixt. thermodynamics 2-33481
- hard disc dipoles, surface film, virial coeffs. 2-48656
- heavy ion reactions products, density isomers detection 2-24271
- hydrocarbon+organic compound binary systems, vapour-liquid equilibrium, eqns. of state, activity coeffs. 2-21283
- interaction second virial coeff. meas. using quartz spiral gauge 2-43039
- Joule and Joule-Thomson coeffs., virial treatment 2-14998
- neutron stars, nuclear matter saturation density uncertainty 2-38230
- planetary modelling and eqns. of state expts. 2-38084
- Robertson-Walker flat background with relativistic eqn. of state 2-38344
- simple fluids, hard and soft-core eqns. of state, charact. curves and loci of C, 2-12715
- soft disk fluid, second and fourth virial coefficients 2-5202

**equations of state continued**

- stable quark stars and pion-condensate stars, conditions for appearance 2-14867
- supernova matter, eqn. of state, mean field calc. 2-38970
- thermophysical props. computation 2-35634
- ultrarelativistic matter with Van der Waals eqn. of state, phase transitions and fluctuations 2-19471
- Wigner model, two-dimens., Monte Carlo simulation of eqn. of state 2-1849
- Yvon-Born-Green equation of state, criticality obs. 2-48660
- Al plasma, partially ionised, eqn. of state models comparison 2-16425
- HF, intermol. pot. energy functions, second virial props. and H-bond energies calc. 2-15865
- $\text{Ne}_2$ , pair polarisability calc. at SCF and CI level, second dielectric virial coeff. 2-29528
- equations of state of gases**
- acetic acid, gas phase in chem. equilib., comp. Raman spectra study 2-29609
- binary gas mixture, unlike-pair potential parameters 2-20798
- binary gaseous system, excess and interaction second virial coeff. 2-30263
- Burnett apparatus, improved, for eqns. of state determ. of real gases 2-50349
- compressed gas mixtures, thermodynamic props. calc. 2-16414
- determination from detonation vel. meas. 2-1279
- gas, thermodynamic props. at high press. and temps. 2-35249
- hard disc dipoles, surface film, virial coeffs. 2-48656
- hard disc fluid, dil., equilib. props., virial coeff., quantum corrections 2-35251
- ideal gas partition function and momentum distrib. function, mol. dynamics method, pot. energy fluctuations 2-23546
- inert gases solubility in  $\text{H}_2\text{O}$  and  $\text{D}_2\text{O}$  in range 300 to 600K 2-40553
- local antisymmetries of isothermal behaviour of the Lennard-Jones and real fluids 2-50498
- methane solubility in  $\text{H}_2\text{O}$  and  $\text{D}_2\text{O}$  in temp. range 300 to 600K 2-40553
- methane-ethane-propane system, K-value predictions at low temps. and high press. 2-1601
- pure fluid in one-phase region development from expt. data 2-40509
- quinone derivatives gas monolayers, virial coeff. 2-50348
- real fluid, eqn. of state, pair correlation function 2-21267
- supercooled vapours, homogeneous nucleation thresholds, corresponding states correl. 2-25483
- water-steam mixture, eqn. of state, sound velocity 2-40511
- Ar, refractivity virial coeff. determ., visible spectrum 2-30272
- Ar- $\text{SF}_6$ , excess and interaction second virial coeff. 2-30263
- Cs gas, thermodynamic props. at high press. and temps. 2-35249
- He- $\text{N}_2(\text{CO}_2)(\text{N}_2\text{O})(\text{methane})(\text{SF}_6)(\text{carbon tetrafluoride})$ , excess and interaction second virial coeff. 2-30263
- Kr, thermodynamic props., density determ. 2-40022
- Kr- $\text{CO}_2$  binary systems, diffusion coeff. temp. depend. 2-35256
- $\text{N}_2$ , compressibility and viscosity equations 2-20799
- Na, revised eqn. of state 2-16750
- Ne- $\text{CO}_2$  binary systems, diffusion coeff. temp. depend. 2-35256
- Xe- $\text{CO}_2$  binary systems, diffusion coeff. temp. depend. 2-35256
- equations of state of liquids**
- 4-trans-4-alkyl-cyclohexylbenzonitriles, pVT data and Tait eqn. in nematic and isotropic phases 2-35638
- n-alkane liq. mixtures, excess props., van der Waals eqn. of state calcs. 2-5203
- D-dimensional hard sphere systems, modified cell theory 2-25705
- ethylene, liquids, PVT relations 2-35636
- Freon-113, scaled equation of state near phase separation boundary 2-35637
- generalised Cauchy relation, elastic const. (*Russian*) 2-45311
- hard sphere fluid, chemical pot., scaled particle theory, Monte Carlo methods 2-44995
- heptyl alcohol, density determ. at various temp. and press., equation of state 2-35563
- n-hexane-perfluoro-n-hexane, excess volumes, in crit. soln. region 2-45547
- hydrocarbon liquids, PVT relations 2-35636
- isoamyl alcohol, density determ. at various temp. and press., equation of state 2-35563
- linear hard interaction site model fluids, equation of state 2-35635
- lipid/water interface, interfacial tension, comparison of equation of state predictions with experiment 2-26184
- liquefied natural gas densities, four mathematical models for prediction 2-1541
- liquid theory, integral eqns. for radial distrib. function 2-8406
- liquid-vapour critical phenomena, asymm. Landau-Ginzburg-Wilson model 2-8603
- local antisymmetries of isothermal behaviour of the Lennard-Jones and real fluids 2-50498
- MBBA, nematic phase, eqn. of state, mean field approx. 2-1585
- methane, dense fluid, Van der Waals partition function, empirical corrections 2-44994
- methane, liquids, PVT relations 2-35636
- methane, orthobaric liq. densities and second virial coeffs. correl. 2-21268
- methane-methanol fluid binary system, phase equilib. and PVT data, 2-45522
- nematics, equation of state with cylindrical hard core 2-8594
- PAA, nematic phase, eqn. of state, mean field approx. 2-1585
- n-paraffin liqs., theoretical eqn. of state 2-35633
- polyethylene, molten, thermal press. meas. 2-45523
- polymer A-polymer B-solvent ternary systems, apparent second virial coeff., thermodynamic interaction parameters determ. 2-12714
- polymers, melt, cryst. and glass phase, statistical thermodynamics 2-5037
- polystyrene, in *tert*-butylacetate solns., osmotic virial coeff., light scatt. meas. 2-5204
- polystyrene, soln., extremely high mol. wt., props. 2-12452
- polystyrene solutions, second virial coeffs. with low angle laser light scatt. 2-16749
- pure fluid in one-phase region development from expt. data 2-40509
- pure fluid substances, thermodynamic props. calc. using semiempirical equation of state 2-8636
- quadrupolar fluids, padé approximants, the second virial coefficient and perturbation theory 2-30373
- r-mer fluids, equilib. theory 2-1582
- real fluid, eqn. of state, pair correlation function 2-21267



**equations of state of liquids continued**

- seawater, international one-atmosphere equation of state 2-6372  
 site interaction fluids, equation of state from site-site correl. function 2-21266  
 static configuration with an ultrarelativistic equation of state at the center, Einstein eqn. soln. 2-38534  
 statistical thermodynamics of liquids 2-21265  
 surface tension, Eotvos const., compressibility, press. coeff., expansivity and Gruneisen parameter 2-30718  
 triangular well fluid, eqn. of state 2-30562  
 water, computer simulation study using 2D model, mol. distrib. functions, equations of state 2-35360  
 water, homogeneous nucleation and the spinodal line 2-5235  
 water, pure and saline, plume flows at density extremum 2-35113  
 water-steam mixture, eqn. of state, sound velocity 2-40511  
 weakly polar and nonpolar, semiempirical equation of state 2-8593  
 Ar-methane mixture, liq., eqn. of state and press. effect an excess thermodynamic functions 2-5205  
 Ar-N<sub>2</sub> mol. fluids, thermodynamic functions, perturbation theory 2-20993  
 Ar-O<sub>2</sub> mol. fluids, thermodynamic functions, perturbation theory 2-20993  
 D<sub>2</sub>O, eqn. of state determ. from sound speeds 2-1584  
<sup>4</sup>He, equation of state, approx. of P-ρ-T data near crit. point (*Russian*) 2-40615  
<sup>4</sup>He, equation of state and melting curve to very high press. 2-26176  
<sup>4</sup>He, liquid, ground state energy, new constructive calc. 2-45655  
<sup>4</sup>He, superfluid, thermodynamic props., OK to lambda transitions 2-5292  
 Hg-In metallic solns., thermodynamic and elec. props. near crit. points 2-1883  
 Na, revised eqn. of state 2-16750  
 NaCl, Gruneisen parameter and (∂T/∂P)<sub>P</sub> and lower mantle conditions 2-32505

**equations of state of solids**

- alkaline earth metals, equation of state and bulk modulus, partial press. contribs. 2-35639  
 deformation and fracture under impulsive loading 2-30512  
 D-dimensional hard sphere systems, modified cell theory 2-25705  
 forsterite (Mg<sub>2</sub>SiO<sub>4</sub>), single-crystal, Hugoniot eqn. of state from shock compression meas. 2-22974  
 high press. eqn. of state 2-50824  
 ionic solids, phase transformations, first-principles theory 2-30564  
 metals, monovalent, refined eqn. of state, cell model 2-45521  
 noble metals, eqn. of state and elastic const. under press. 2-30563  
 polyethylene crystals, equation of state 2-8595  
 polymer glasses, eqn. of state to interpret time depend. free vol. 2-16244  
 polymers, melt, cryst. and glass phase, statistical thermodynamics 2-5037  
 pressure-induced changed in mode Gruneisen parameters and general eqns. of state 2-50817  
 AgCl, UV illuminated, γ-irrad. Cd<sup>2+</sup> doped, load relax. studies 2-41647  
 Al, equation of state in intermediate press. region, 0.5 to 10 TPa 2-1583  
 Ar anharmonic cryst., thermodynamic props. 2-35719  
 Ar, crystalline, struct. and compression at high press. and room temp. 2-21063  
 CaF<sub>2</sub>, origin of superionicity 2-21388  
 D<sub>2</sub>, molecular, low temp. eqns. of state to 0.37 Mbar 2-40510  
 H, crystalline atomic phase, eqn. of state 2-1705  
 H<sub>2</sub>, molecular, low temp. eqns. of state to 0.37 Mbar, implications for metallic atomic state 2-40510  
 H, solid, quadrupolar glass, meas. of (∂P/∂T), 2-35843  
<sup>4</sup>He, equation of state and melting curve to very high press. 2-26176  
 Kr, adsorbed on graphite, pair pot. 2-1768  
 Kr anharmonic cryst., thermodynamic props. 2-35719  
 MgO, thermal press. at high compression and high temp. 2-32493  
 Mo, equation of state in intermediate press. region, 0.5 to 10 TPa 2-1583  
 NaCl, Gruneisen parameter and (∂T/∂P)<sub>P</sub> and lower mantle conditions 2-32505  
 Ne, crystalline, struct. and compression at high press. and room temp. 2-21063  
 Pb, electronic and lattice-mechanical properties, pseudopotential theory 2-16619  
 Rn anharmonic cryst., thermodynamic props. 2-35719  
 SrF<sub>2</sub>, origin of superionicity 2-21388  
 Xe anharmonic cryst., thermodynamic props. 2-35719  
 Xe, crystalline, lattice parameters, thermal expansion, thermal vacancies and eqn. of state 2-25831

**equilibrium, chemical** *see chemical equilibrium***equilibrium, phase** *see phase equilibrium***equilibrium constants** *see chemical equilibrium***equilibrium diagrams** *see phase diagrams***equivalent circuits***see also network synthesis*

- biological model, glucose kinetics 2-18168  
 drift-dominated unipolar cond., small-signal impedance and stability 2-8782  
 ferrites polycrystalline, dielec. relax., equivalent circuit 2-5625  
 ionic conductors, imittance data, three dimens. perspective plotting and fitting 2-26109  
 Marx generator, 720 keV coaxial, rectangular-like output waveforms study 2-39254  
 MOS capacitor, physical characterisation of deep bulk levels by MOS conductance technique 2-46144  
 non-uniform plane wave propagation in lossy media, equivalent 4-port (*French*) 2-34631  
 optical fibre propagation mode evaluation using equiv. cts. in Fourier space 2-44479  
 semiconductor lasers, nonlinear circuit model 2-16000  
 solar cells, HV multijunction concentrator, fabrication by IC technology 2-27685  
 solid electrolytes, impurity O transport, small-signal AC response theory 2-17901  
 trans-polyacetylene, elec. impedance spectra 2-17175  
 trilaminar flexural disc transducer, electromechanical circuit, experimental determ. (*French*) 2-25209  
 CdS based photosensitive sandwich structs., series equivalent circuit parameters (*Russian*) 2-21700  
 CdSe based photosensitive sandwich structs., series equivalent circuit parameters (*Russian*) 2-21700  
 CdSe thin film anodes, photoelectrochem. characts. 2-8876

**equivalent circuits continued**

- GaAs solar cells with distributed parameters, I-V characts. effect of ohmic losses 2-18055  
 β-PbF<sub>2</sub>, small signal AC response 2-17902  
 SiO<sub>2</sub>-Si:B, ion implanted layers, equivalent circuit 2-46143
- erbium**  
*see also nuclei with .....*  
 magnetic struct., mag. hysteresis effect Mossbauer study 2-36328  
 metal hydrides:Er, microscopic study using ESR 2-31280  
 BaGa<sub>2</sub>S<sub>4</sub>:Er<sup>3+</sup>, luminesc. props., energy transfer 2-46721  
 CaGa<sub>2</sub>S<sub>4</sub>:Er<sup>3+</sup>, luminesc. props., energy transfer 2-46721  
 CaLaGa<sub>2</sub>S<sub>4</sub>:Er<sup>3+</sup>, luminesc. props., energy transfer 2-46721  
 Er (III)-induced mag. susceptibilities, use for biological material isolation 2-18348  
 Er I, oscill. strength and excited level lifetimes 2-43855  
 Er II, oscill. strength and excited level lifetimes 2-43855  
 Er<sup>3+</sup>, ESR in YPd<sub>3</sub>, cryst. field effects 2-36422  
 Er<sup>3+</sup>: glass laser, electron excitation energy dissipation and sensitisation processes 2-49759  
 Er<sup>3+</sup>:YAG crystals, stimulated emission spectrum due to self-saturating transitions 2-25020  
 LaF<sub>3</sub>:Er<sup>3+</sup>, phonons, tunable high freq., stimulated emission 2-45475  
 La<sub>2</sub>Ga<sub>2</sub>S<sub>4</sub>:Er<sup>3+</sup>, luminesc. props., energy transfer 2-46721  
 LuH<sub>2</sub>:Er<sup>3+</sup>, EPR study 2-46373  
 PYd<sub>3</sub>:Er, cryst. field effects on ESR 2-36423  
 SrGa<sub>2</sub>S<sub>4</sub>:Er<sup>3+</sup>, luminesc. props., energy transfer 2-46721  
 SrLaGa<sub>2</sub>S<sub>4</sub>:Er<sup>3+</sup>, luminesc. props., energy transfer 2-46721  
 ThGeO<sub>4</sub>:Er<sup>3+</sup>, crystal field, EPR and optical absorption spectra study 2-26943  
 YAG:Er<sup>3+</sup>, adiabatic demagnets., low-temp. prod. device appl. 2-21795  
 Yb<sup>3+</sup>, Er<sup>3+</sup>:glass, volume and surface optical strength meas. at 1.54 μm 2-34866  
 Yb<sup>3+</sup>, Er<sup>3+</sup>:glass laser, self-focusing prevention by active medium length reduction 2-44314  
 Yb-Er glasses, laser-pumped, max. attainable gains 2-7775  
 ZnS:Er thin film, DC electrolum., spectral intensity 2-46766  
 ZnS:Mn,Er thin film, electrolum., mutual interaction between Mn and Er centres 2-46765
- erbium alloys**  
 CCV Au-Er, dil., muon diffusion detection by paramag. impurity introduction 2-31360  
 Ag-Er, dil., muon diffusion detection by paramag. impurity introduction 2-31360  
 Au-Er, dil. alloy, effects of near surface layer on EPR lineshapes, low temp. study 2-36421  
 CePd<sub>3</sub>-Er, impurity magnetization study 2-31241  
 ErAl<sub>3</sub>, thin film, occurrence of modulated phases 2-8734  
 ErCo<sub>3</sub>, cryst. struct. distortion and magnetostriction 2-45119  
 ErCo<sub>2</sub>-ErAl<sub>3</sub>, cryst. struct. and mag. props. 2-8476  
 ErCu<sub>2</sub>Si<sub>3</sub>, mag. disorder resist. 2-17058  
 ErCu<sub>2</sub>Si<sub>3</sub>, magnetisation and mag. susceptibility meas. 2-46259  
 ErFe<sub>2</sub>, heat capacity, crystal-field effects, mag. props. 2-8985  
 ErFe<sub>2</sub>, magnetisation meas. of magnetostriction, mag. moments and anisotropy (*Russian*) 2-21835  
 ErFe<sub>2</sub>, NMR study of hyperfine field parameters and mag. moments 2-31324  
 Er<sub>2</sub>Fe<sub>23</sub>, influence of H on struct. and mag. props. 2-2063  
 Er<sub>1-x</sub>Gd<sub>x</sub>Al<sub>3</sub> thin film, occurrence of modulated phases 2-8734  
 α-ErH<sub>2</sub>(D<sub>2</sub>) solid solns., quenching behaviour at low temp., resist. increase, solubility limit 2-40555  
 ErNi<sub>2</sub>, thermal expansion and magnetostriction, 5 to 290K 2-26086  
 ErPd<sub>3</sub>, heat capacity and magnetisation meas. 2-50881  
 Er<sub>1-x</sub>Pr<sub>x</sub>Co<sub>3</sub>, mag. props., Mossbauer effect 2-36385  
 ErRh<sub>1-x</sub>Sn<sub>1+x</sub>, reentrant supercond., upper crit. field and sp. ht. meas. 2-13250  
 ErRh<sub>1-x</sub>Sn<sub>1+x</sub>, supercond. and mag. props., reentrance 2-13225  
 Gd<sub>1-x</sub>Er<sub>x</sub>Al<sub>3</sub>, cryst. struct., X-ray diffr. study 2-8475  
 Gd<sub>1-x</sub>Er<sub>x</sub>Al<sub>3</sub>, Curie temp., spin-disorder resist. and residual resist. 2-35991  
 Gd<sub>1-x</sub>Re<sub>x</sub>Al<sub>3</sub> (Re=Dy, Ho, Er), Curie temp., theoretical calc. 2-21793  
 Ho-Er, elec. cond., thermoelectric power, mag. struct. effects (*Russian*) 2-51144  
 (Ho<sub>1-x</sub>Er<sub>x</sub>)Rh<sub>2</sub>B<sub>4</sub>, mag. transitions 2-51406  
 Tb<sub>0.5</sub>Er<sub>0.5</sub>, magnetic structure, neutron diffr. study 2-8955  
 YPd<sub>3</sub>-Er, impurity magnetization study 2-31241

**erbium compounds***see also erbium alloys*

- synthesis and characterisation 2-41515  
 Bi<sub>2</sub>O<sub>3</sub>-Er<sub>2</sub>O<sub>3</sub> solid soln., fluorite type, cond. and struct. 2-45619  
 CdEr<sub>2</sub>S<sub>4</sub>, magnetic and Mossbauer meas. 2-5519  
 Er<sub>3</sub>Al<sub>2</sub>O<sub>12</sub>:Ho<sup>3+</sup> (Tm<sup>3+</sup>), cross-cascade stimulated ion emission 2-25019  
 ErB<sub>4</sub>, anisotropy and mag. transitions 2-41131  
 ErB<sub>4</sub>, neutron diffr. studies of cryst. and mag. struct. 2-40345  
 ErB<sub>2</sub>C<sub>2</sub>, mag. props., 3-300K 2-41116  
 Er<sub>2</sub>Ce<sub>1-x</sub>Na(SO<sub>4</sub>)<sub>2</sub>H<sub>2</sub>O, excitation, and emission spectra, decay kinetics, and energy transfer 2-26963  
 ErCu<sub>2</sub>Ge<sub>2</sub>, mag. susceptibility meas., 4.2 to 200K (*French*) 2-31150  
 ErFe<sub>2</sub>H<sub>2</sub>, Mossbauer spectroscopy and bulk magnetisation meas. 2-31345  
 Er(Fe<sup>3+</sup>M<sup>2+</sup>)O<sub>4</sub> (M=Mg, Mn, Co, Cu and Zn), layer struct., synthesis and cryst. struct. 2-25827  
 ErFeO<sub>3</sub>, spin flip induced by mag. field near ion ordering temp. (*Russian*) 2-5544  
 Er<sub>2</sub>Fe<sub>2</sub>O<sub>12</sub>, field-induced noncollinear mag. struct., Faraday effect obs. 2-46252  
 ErGa<sub>2</sub>O<sub>12</sub>, IR and Raman study (*French*) 2-41361  
 Er<sub>2</sub>Ga<sub>2</sub>O<sub>12</sub>-Er<sub>2</sub>Al<sub>2</sub>O<sub>12</sub>, IR and Raman study (*French*) 2-41361  
 ErH<sub>2</sub>, crystal growth, Er metal hydride at 950°C 2-9272  
 Er<sub>0.43</sub>Ho<sub>0.57</sub>Rh<sub>2</sub>B<sub>4</sub>, supercond. and mag. transition temp., α-particle effect 2-31026  
 Er<sub>0.58</sub>Ho<sub>0.42</sub>Rh<sub>2</sub>B<sub>4</sub>-Nb oxide-Nb point contact junction, temp. depend. of Josephson current 2-2037  
 Er<sub>1-x</sub>Ho<sub>x</sub>Rh<sub>2</sub>B<sub>4</sub>, neutron scatt. study of mag. transitions 2-17285  
 Er<sub>1-x</sub>Ho<sub>x</sub>Rh<sub>2</sub>B<sub>4</sub>, reentrant ferromagnetic superconductor, magnetisation 2-17210  
 Er<sub>1-x</sub>Ho<sub>x</sub>Rh<sub>2</sub>B<sub>4</sub>, solitons and supercond. phase occurrence 2-31025  
 ErIG, mag. props. in high mag. fields up to 150 kOe 2-17272  
 ErIG, sp. ht. meas., rel. to mag. props. 2-17287  
 Er<sub>6</sub>Mn<sub>21</sub>H<sub>21</sub>, mag. order obs. using Mossbauer effect 2-21772  
 Er<sub>2</sub>O<sub>3</sub>, cathodoluminescence spectra 2-46759  
 ErO<sub>3</sub>Sn<sub>2-7</sub>, superconducting and mag. props. 2-46191



**erbium compounds continued**

- ErRh<sub>2</sub>B<sub>4</sub>, crystal, mag. supercond., tunnelling study 2-36256  
 ErRh<sub>2</sub>B<sub>4</sub>, induced mag. order, ultrasonic study 2-17284  
 ErRh<sub>2</sub>B<sub>4</sub>, mag. Landau parameter determ. 2-36304  
 ErRh<sub>2</sub>B<sub>4</sub>, mag. supercond., hyperfine mag. field, Mossbauer study 2-36216  
 ErRh<sub>2</sub>B<sub>4</sub>, mag. supercond., lower crit. field, US attenuation study 2-36225  
 ErRh<sub>2</sub>B<sub>4</sub>, mag. supercond., electron tunnelling study 2-36255  
 ErRh<sub>2</sub>B<sub>4</sub>, magnetic superconductor, NMR study 2-17219  
 ErRh<sub>2</sub>B<sub>4</sub>, magnetisation, susceptibility, superconducting transition 2-17209  
 ErRh<sub>2</sub>B<sub>4</sub>, Mossbauer study of ground state 2-17382  
 ErRh<sub>2</sub>B<sub>4</sub>, supercond. and mag. transition temp.,  $\alpha$ -particle effect 2-31026  
 ErRh<sub>2</sub>B<sub>4</sub>, superconducting crit. fields at 1.5K, US attenuation determ. 2-5498  
 ErRh<sub>2</sub>B<sub>4</sub>, thermal cond., 0.05 to 15K 2-36223  
 Er(Rh<sub>1-x</sub>Ru<sub>x</sub>)<sub>2</sub>B<sub>4</sub>, supercond. and long-range mag. order, comp. depend. 2-13222  
 Er(Rh<sub>1-x</sub>Ru<sub>x</sub>)<sub>2</sub>B<sub>4</sub>, superconductivity study 2-17202  
 ErRh<sub>2</sub>Si<sub>2</sub>, new ternary silicides, cryst. struct. and mag. props. 2-16625  
 Er(Ru<sub>1-x</sub>Rh<sub>x</sub>)<sub>2</sub>B<sub>4</sub>, mag. order, superconductivity 2-31187  
 Er<sub>2</sub>S<sub>3</sub>-CaS system, phase relationships 2-17666  
 ErT<sub>2</sub> films, He release rate, temp. depend. 2-5300  
 Er<sub>2</sub>Y<sub>0.8</sub>Fe<sub>0.2</sub>O<sub>12</sub>, garnet, Faraday rotation 2-21990  
 HfO<sub>2</sub>-Er<sub>2</sub>O<sub>3</sub> system, high temp. solid solns., ordering 2-25797  
 KEr(MOO<sub>4</sub>)<sub>2</sub>, crystal field, sp. ht. and absorpt. spectra study 2-45593  
 KEr(MoO<sub>4</sub>)<sub>2</sub>, orthorhombic crystals, polarised IR and Raman spectra 2-41362  
 LiErF<sub>4</sub>, oxidation products, X-ray diffr. and differential thermal anal. study 2-16609  
 Nb-Er<sub>2</sub>O<sub>3</sub>-Pb superconducting tunnel junction, leakage and thermal stability 2-51374  
 Sm<sub>1-x</sub>Er<sub>x</sub>Rh<sub>2</sub>B<sub>4</sub>, antiferromagnetic-ferromagnetic transition 2-17286  
 SmTbEr orthoferrite, domain struct. in (001), (110), (100) cryst. planes at spin reorientation 2-13311  
 TiEr<sub>3</sub>F<sub>10</sub>, crystal chem. study (French) 2-16622  
 Y<sub>1-x</sub>Er<sub>x</sub>Rh<sub>2</sub>B<sub>4</sub>, conduction electron spin polarisation, mag. props., superconducting props. 2-17218  
 Y<sub>1-x</sub>Er<sub>x</sub>Rh<sub>2</sub>B<sub>4</sub>, magnetic heat capacity, superconductivity 2-17300  
 ZnSe:ErF<sub>3</sub> thin films, electrolum. 2-26993  
 ZrO<sub>2</sub>-Er<sub>2</sub>O<sub>3</sub>, phase equilibria and ordering 2-13708

**erection**

- LMFBR power plant experience, published Phenix data summary 2-39208  
 satellite solar power stations, control and erection, need for high accuracy 2-27565  
 satellite solar power stations, environmental factors associated with construction and operation 2-27561

**ergodic theorem** *see statistical mechanics***ergonomics**

- see also human factors; man machine systems*  
 two-legged walker, vertical oscills. role, simple integrable model (Russian) 2-2891

**erosion**

- Australasia, coastal regimes tropical cyclone activity and sedimentation, erosion and flooding 2-14526  
 Bolivian Andes, variation in type and annual distrib. of precipitations (French) 2-14511  
 British Columbia, early Cenozoic resetting of K-Ar dates and erosional stripping in N Okanogan area 2-14417  
 coastal sediment processes and movement 2-32489  
 Coon Creek Basin, Wisconsin, sediment storage as upland erosion rate indicator 2-32549  
 Gippsland Lakes, tidal scour, erosion mechanisms 2-18422  
 Hess Rise, N Pacific Ocean, bottom currents rel. to erosion and environments of sediment deposition 2-42349  
 limestone solutional erosion, prediction from rainfall and runoff data 2-52878  
 Long Island coast, shoreface erosion by wave orbital currents and mean flow 2-28062  
 lunar rocks, exposure ages and erosion rates 2-42616  
 Messinian sediments and Tyrrhenian Sea erosional surfaces, geodynamics 2-28064  
 river bank erosion rel. to stream curvature, model based on momentum eqn. 2-14505  
 river drainage network structure, erosional history rel. to diameter-magnitude relation 2-23035  
 weathering processes from Ge marine geochemistry 2-14496

**error analysis**

- see also error correction*  
 acoustic intensity meas. by two microphone technique, error anal. 2-35019  
 airglow, error anal. for  $\gamma$ -band measurement with self-absorpt. gas cell (Japanese) 2-3114  
 C-space dynamic error theory 2-38627  
 crack tip stress intensity factors, error anal. for determ. from isochromatic fringe patterns 2-12092  
 diffusion problems, fitting error functions to data 2-8738  
 experimental errors in spectroradiometry (Russian) 2-6889  
 fission track dating, track age uncertainty evaluation 2-6461  
 fission track dating method, standard error estimation of age 2-48035  
 fission-track dating, track age Poissonian errors 2-4187  
 geometric acoustics truncation error in computing reverberation 2-20442  
 optimal Petrov-Galerkin methods through approximate symmetrization 2-48646  
 safeguards, measurement random error variance precision in Grubbs' technique 2-43543  
 seismic waves interval velocity estimates, max. uncertainty 2-32423  
 stress intensity factors evaluation by reflected caustics, error analysis 2-25334  
 Thornthwaite-Holzman eqns. for sensible and latent heat fluxes over crop and forest canopies, error anal. 2-14550  
 total reflection time domain spectroscopy, on-line computer-based system 2-28901  
 transient critical heat flux following nuclear reactor design basis accident, study results summary 2-4062  
 U fission track counting statistics 2-4188

**error compensation**

- see also error correction*  
 atmosphere laser beam propag., modal compensation of turbulence induced wavefront aberrations 2-48001  
 Michelson stellar interferometers, active compensation of wavefront distortions and path length differences 2-53087  
 strain analysis of deflected plate using holographic modulated diffraction gratings (Japanese) 2-4778

**error correction**

- astronomical holograms, wavefront errors correction via rotation-shearing interferometry 2-53111  
 coherent adaptive optical techniques (COAT) system, phase errors correction in pursuit regime (French) 2-29865  
 coordinate, computerised photogrammetric complex with CRT scanner (Russian) 2-3638  
 geophysical prospecting, method of reducing terrain relief effects from VLF-EM data 2-37754  
 geophysical techniques remote sensing, correction for irradiance changes during surface reflectance meas. 2-18602  
 interferometers, quadrature fringe meas. error determ. and correction 2-10853  
 interpolating time interval meter based on Elektronika B3-21 calculator 2-48680  
 iterative algorithms for errors correction, for digital meas. instruments 2-28820  
 micrometer screws, digital error correction (Polish) 2-6821  
 remote sensing, analytic correction method for satellite multispectral scanner geometric distortions 2-18581  
 remote sensing, statistical scale-up estimators for surveys where detect. and classification errors exist 2-18603

**error correction codes**

- number theory appl. in physics, communication engineering and artistic designs 2-33379

**error statistics**

- coherent light detection, after nonlinear amplification 2-4460

**errors**

- see also measurement errors*  
 atmospheric laser systems, error reduction 2-52928  
 cartography computer assisted mapping, digitizing and automatic output errors 2-37740  
 fibre-optic differential interferometry, sensitivity to systematic alignment errors 2-19163  
 granular refractory materials, errors associated with bulk density determ. 2-28841  
 ionospheric residual errors in spatial dual-freq. radio location 2-10228  
 laser Doppler anemometer measurements using nonorthogonal vel. components, error estimates 2-50333  
 plate tectonic reconstructions, determ. of uncertainties of finite rotations 2-32484  
 seismic prospecting, error estimates for inverse modelling schemes using travel times meas. 2-28028  
 solar concentrator tracking mode, probabilistic eval. of conc. errors (Rumanian) 2-18009  
 speckle photography of lateral sinusoidal vibrs., error due to varying halo intensity 2-10885  
 star charts projections, scale errors for polar and equatorial projections (Russian) 2-53055  
 X-ray single crystal analysis, systematic errors 2-8395

**Esaki diodes** *see tunnel diodes***Esaki effect** *see tunnelling***ESCA** *see electron spectroscopy; spectrochemical analysis; X-ray photoelectron spectra***ESR** *see paramagnetic resonance***estimation theory**

- see also information theory*  
 activation volumes of methods, alkali halides and olivine, critical assessment of estimation methods 2-42352  
 adaptive signal detection in fluctuating noise, general detection and estimation theory 2-44590  
 evoked potential processing, linear estimation and detection theory appls. 2-18195  
 evoked potential processing, linear estimation and detection theory appls. 2-14238  
 geodetic observations, variance and covariance estimation 2-37726  
 linear problems in pth order and stable processes 2-10721  
 measurement problems solving by mathematical methods utilisation (Slovak) 2-15132  
 optical beam, sequential estimation of position 2-6834  
 SO<sub>2</sub> concentration prediction, construction of diffusion model (Japanese) 2-22689

**eta meson resonances**

- E(1440)→ $\delta$ (980) $\pi$ , pseudoscalar glueball decay widths,  $\eta, \eta'$  mixing 2-23973  
 $e^+e^- \rightarrow e^+e^- \eta, 2$  to 4 GeV, cross-section 2-24061  
 $\eta, \eta'$  gluonic matrix element, strong anomaly, chiral symmetry breaking 2-6971  
 $\eta'$  decay const. and mass in perturbation QCD 2-19331  
 $\eta \rightarrow \eta' \pi^0 \mu^+ \mu^-$ , rare decay branching ratios, light Higgs particle search 2-7023  
 $\eta'$  meson, two-photon prod. in  $e^+e^-$  annihilation at SPEAR energies 2-15349  
 $\eta_c$  candidate state at 3592 MeV, from  $\psi'$  (3684) decay 2-38877

**eta mesons**

- E(1440)→ $\delta$ (980) $\pi$ , pseudoscalar glueball decay widths,  $\eta, \eta'$  mixing 2-23973  
 $E \rightarrow \eta \pi \pi$ , pseudoscalar glueball QCD sum rules 2-15338  
 $\eta, \eta'$  gluonic matrix element, strong anomaly, chiral symmetry breaking 2-6971  
 $\eta \rightarrow \pi^0 \gamma \gamma$ , branching ratio meas. 2-3787  
 $\eta \rightarrow \pi^0 \mu^+ \mu^- (\pi^0 \mu^+ \mu^- \gamma)$ , rare decay branching ratios, light Higgs particle search 2-7023  
 $\eta \rightarrow \pi^+ \pi^- \pi^0 (3\pi^0)$  EM decays and  $\rho \eta \pi$  coupling constant 2-3779  
 $\eta \rightarrow \pi \pi$ , decay amplitude, in chiral  $\sigma$  model 2-48866  
 $\eta \rightarrow q \bar{q}$ , decay width, rel. to  $\psi$  decay, OZI violation 2-48977  
 $\eta'$  structure and vectors decays into  $\eta' \gamma$  2-48980  
 $\eta_c \rightarrow \gamma (J/\psi)$ , charmonium M1 transitions and charm quark anomalous mag. moment 2-33844  
 $\eta'$ , relationship with pseudoscalar glueball G(1440) 2-23992



## eta mesons continued

- hh- $\pi_0(\eta')$ , OZI violation, rel. to  $\psi$  prod. 2-48977  
 $\pi^-p \rightarrow \eta n$ , 15-40 GeV, fit to Regge pole+cut model 2-24028

## etalons see interferometers

## etchants see etching

## etching

see also crystal defects; dislocation etching; sputter etching

- biotite mica, track registration props.,  $\alpha$ -recoil dating method prospect 2-6465  
 cascade solar cell, etched groove and metallization interconnect scheme, modelling 2-52368  
 ceramic materials, laser enhanced etching in KOH 2-52068  
 contact materials, coated with noble metals, ion etching (*German, English*) 2-41797  
 CR-39 carbonate plastic as neutron albedo and threshold dosimeter 2-43628  
 CR-39 plastic detectors, ion tracks etch-induction time and registration props. 2-43704  
 CR-39 plastic track detectors, response rel. to etching soln. 2-24498  
 deep etching of specimens, assessing changes in shape of structural components (*German, English*) 2-52154  
 dielectric nuclear track detectors, range meas. and track kinetics 2-11356  
 electronic devices, microstruct. fabrication, review 2-51828  
 fatigue crack tip, metallographic method for determ. of plastic strains 2-22395  
 fission track dating methods 2-6459  
 fission-track ages and their geological interpretation 2-6344  
 gas pumps, oil lubricants and sealants 2-19092  
 $Gd_2(MoO_4)_3$ , ferroelec. surface, ion beam refl. and chemical etching study 2-30722  
 ion implantation in semiconductor processing 2-5140  
 LR-115 cellulose nitrate, fast neutron tracks 2-43702  
 metal surfaces, channelling contrast after ion beam etching, SEM specimen prep. appl. 2-17810  
 methyl methacrylate, vacuum lithography using plasma polymerization and plasma development 2-25663  
 microlens formation on vapour phase axial deposition single-mode fibre ends 2-49952  
 MIL-M-38510 finishes for microelectronic components 2-47210  
 minerals and glasses, thermally-lowered fission-track age correction 2-19915  
 MOS structure, charge properties, influence of Si etching in RF Ar plasma (*Russian*) 2-5468  
 muscovite mica solid-state track detectors, etch-pits, electron microscopy 2-19850  
 Mylar thin film, surface flashover arc orientation 2-36518  
 PAN fibre reinforced phenolic resin, struct. study using chromic acid as etchant, SEM 2-2598  
 phosphate glass track detectors, etch pit cone angle, energy and Z-depend. 2-24483  
 plasma etching, end-point detection, opt. methods 2-17755  
 plasma etching, end-point detection with laser interferometry 2-19173  
 plasma etching, mechanisms, review 2-27309  
 plasma etching for semiconductor masking 2-41819  
 plastic nuclear track detector electrochemical etching, HV amplifiers 2-43729  
 polycarbonate films, nuclear tracks chem. etching, pore formation study 2-45146  
 polymer thick layers, O plasma etching for microelectronic appl. 2-9445  
 quartz, etch pit obs. by SEM 2-16650  
 quartz, ion beam etching techniques to overcome nonuniformity 2-36988  
 quartz crystals, grown hydrothermally in NaCl and KCl solns., growth patterns on rhombohedral faces 2-9258  
 selective plating and etching using resistive heating for metal lines on chips 2-2600  
 SEM, ang. depend. sputtering yield, Ar<sup>+</sup> ion irradiation (*Japanese*) 2-41476  
 semiconductor, surface overlayers detection and minimisation using spectroscopic ellipsometry 2-15210  
 solid state nuclear track detectors, charged particle detection thresholds through range meas. in air 2-34247  
 specimen prep., in situ for metallography, electrolytic polishing and etching devices 2-17807  
 SSNTD for neutron dosimetry, comparison of various types 2-11281  
 steel, cc NiCr (3.5, 1.7 wt.%), grain boundary etching to detect P segregation (*Japanese*) 2-13887  
 steel, colour metallography of oxide scales, new dye adsorpt. technique 2-41845  
 steel, dual-phase, quantitative microanal. 2-41848  
 steel, low alloy CrMo, grain boundary etching method appl. (*Japanese*) 2-25903  
 steel, stainless, type 430, etching technique development for intergranular corrosion resist. determ. 2-27323  
 steel, stainless AISI 304, annealed etched by aq. FeCl<sub>3</sub>-HCl-H<sub>2</sub>O solns., surface texture 2-2631  
 steel, stainless type 304, intergranular corrosion and end-grain pitting by various test methods 2-27365  
 tetrafluoroethane, electrical discharges, etching and plasma characts. 2-20956  
 V-MOS transistors thin gates fabrication in V-groove (*Slovak*) 2-46162  
 Zircaloy-2, 1 stress corrosion cracking susceptibility, texture and surface condition effects 2-31843  
 Zircaloy-2 tubings, I-induced stress corrosion cracking, surface condition influence on crack initiation 2-31844  
 AGaAs-GaAs heterojunction, selective dry etching 2-26486  
 Ag, film, removed from substrate, interpretation of stress in crystalline grains (*Japanese*) 2-26265  
 Al, chem. polishing in NH<sub>4</sub>HF<sub>2</sub>-HNO<sub>3</sub> acid 2-9472  
 Al film, plasma etching 2-41785  
 Al-alloys, potentiostatic differential etching (*German, English*) 2-52112  
 Al-Si film, plasma etching 2-41785  
 As-Se-Ge, amorphous film, anal. of relief-type gratings (*Japanese*) 2-39589  
 Au, plasma chemical transport etching in Cl<sub>2</sub> plasma 2-41813  
 BaF<sub>2</sub>, single crystals, selective etching and solution in salts and acids 2-13828  
 BaTiO<sub>3</sub>, ferroelec. surface, ion beam refl. and chemical etching study 2-30722  
 CaCO<sub>3</sub>, calcite cleavages, thermal etch pit obs. 2-25879  
 CaCO<sub>3</sub>, cleavage surface, chem. and thermal etching 2-50644

## etching continued

- CaCO<sub>3</sub> crystals, twin boundaries 2-45200  
 CaF<sub>2</sub>, surface (001), etchpit morphology 2-21431  
 CdSe/Si<sub>3</sub>N<sub>4</sub> photoelectrochemical cells, surface etching and morphology effect on stability 2-27711  
 CdTe real surfaces, optical and elec. props. 2-51278  
 Co-Cr-Al coatings containing active element additions, oxidation behaviour vel. to struct. 2-31851  
 F-Si(111), plasma etching, quantum chem. calcs. (*German*) 2-47220  
 Fe-Ni(Si), grain boundary etching method appl. (*Japanese*) 2-25903  
 Ga<sub>1-x</sub>Al<sub>x</sub>As electron-beam-pumped laser, oxide film influence on threshold current density 2-34822  
 GaAs (100) planes, grating corrugation form (*Chinese*) 2-20400  
 GaAs, depth profiling by O ion bombardment, SIMS study (*Japanese*) 2-48833  
 GaAs film, chemical thinning by etching 2-17763  
 GaAs multilayer struct., carrier conc. and mobility, rapid determ. method 2-8815  
 GaAs, shallow diffusion of Zn for optical waveguide modulators 2-49896  
 GaAs single-mode DH lasers using three-mirror active-passive cavity, longit-mode control 2-11700  
 GaAs-AlGaAs DH system, monolithic integration of optical sources and detectors, processing techniques 2-4611  
 Ga<sub>1-x</sub>In<sub>x</sub>As, Sb<sub>1-y</sub>, epitaxial layers, defect formation characts. 2-51039  
 Ga<sub>1-x</sub>In<sub>x</sub>As, P<sub>1-y</sub>/InP stripe lasers with chemically etched-mirrors, review 2-44332  
 GaN film, RF reactively sputtered, dielec. props. 2-13422  
 GaSb, undoped single crystals, obs. of growth striations 2-35421  
 GaSb:Te, Czochralski grown, impurity distrib., cathodoluminesc. study 2-51715  
 Ge, chemical etching and cleaning procedures 2-2597  
 Ge, chemical etching and cleaning procedures 2-9437  
 III-V semiconductors, chemical etching and cleaning procedures 2-2597  
 III-V semiconductors, chemical etching and cleaning procedures 2-9437  
 InGaAsP-InP buried DH lasers with chemically etched mirrors 2-11714  
 InGaAsP-InP DH laser, degradation obs. by electron probe microanal. 2-44282  
 InP, surface oxide film, composition and thermal stability 2-26252  
 K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>-H<sub>2</sub>SO<sub>4</sub>-HCl, new etchant system for GaAs and InP 2-13833  
 KH<sub>2</sub>PO<sub>4</sub>, KD<sub>2</sub>PO<sub>4</sub>, electro-optic crystals, defect polished surface layer, etching of damaged layer 2-1052  
 LiH, polycrystn., surface features resulting from oxidation and thermal etching, 350°C high vac. bake 2-47206  
 LiNbO<sub>3</sub>, c-plane orientation, diffused optical waveguides on +c and -c faces, integrated optics appls., chemical etching 2-11853  
 NF<sub>3</sub>, electrical discharges, etching and plasma characts. 2-20956  
 NaCl crystal etching at 2 nm size scale, in situ meas. of contrast curves for electron beam vaporisable resists 2-36993  
 Na<sub>2</sub>O-CaO glass track detectors, etch pit cone angle, energy and Z-depend. 2-24483  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glass nuclear track detectors, pre-irradiation annealing effect on bulk etch rate 2-29478  
 Nb electron beam evaporated conducting thin films, current-induced physical props. 2-13194  
 NbB<sub>2</sub> single cryst., defect struct. 2-40389  
 NbB<sub>2</sub> single crystals, grown from soln., characteris., hardness anisotropy prismatic slip 2-9417  
 Ni based oxide dispersion strengthened alloys, struct. interdiffusional degradation of aluminide coatings 2-30768  
 PbTe, LPE growth on PbSnTe substrate through stripe openings on CaF<sub>2</sub> coating 2-2465  
 Si, chemical etching and cleaning procedures 2-2597  
 Si, chemical etching and cleaning procedures 2-9437  
 Si chips, cell for chem. etching 2-27311  
 Si, depth profiling by O ion bombardment, SIMS study (*Japanese*) 2-48833  
 Si, dislocation free in surface barrier detectors, cluster nonuniform distrib. effects (*Russian*) 2-21144  
 Si film, chemical thinning by etching 2-17763  
 Si, laser enhanced etching in KOH 2-52068  
 Si, laser-annealed polysilicon, on insulating layers, characterisation techniques 2-50699  
 Si ribbon, edge defined film growth, twin boundaries, etching and TEM study 2-50662  
 Si solar cell 2-37274  
 Si, surface state distrib. influenced by HF etching 2-13150  
 Si surfaces, selective etching 2-22352  
 Si wafer rim, chemical etching procedure for elimination of slip lines 2-2601  
 Si:F, sputtered amorphous coating, struct. model, expt. study 2-16593  
 Si:P, doping using P<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub> glass as dopant source, validity of etch rate determ. 2-12615  
 Si:P, polycrystalline, plasma etching, P doping effect, electron microscopy study 2-13831  
 SiC, etching behaviour, microstruct. study 2-52080  
 SiO<sub>2</sub> film deposition by RF sputtering of sintered P<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub>, P conc., etching rate, ionic charge getting effect (*Japanese*) 2-22166  
 SiO<sub>2</sub>, plasma-deposited, charact. 2-9278  
 SiO<sub>2</sub>-InSb interface form., XPS study 2-26235  
 SnI<sub>2</sub> crystals grown in silica gels, {100} face microtopography, striation obs. 2-35416  
 SrTiO<sub>3</sub> boundary layer capacitor material, microstruct. 2-50874  
 Te, grown by Czochralski method, basal plane etch pit orientation 2-25881  
 VB<sub>3</sub> single cryst., defect struct. 2-40389  
 ZnO, dissolution, effect of impurities on surface topography 2-52081

## ether drift see special relativity

## Ettingshausen effect see thermomagnetic effects

## europium

see also nuclei with .....

- 4f surface binding energy shift, synchrotron radiation excited photoemission spectra 2-51769  
 alkali halides, Eu<sup>2+</sup> luminesc., temp. depend. 2-46662  
 alkali halides, thermally stimulated depolarisation of Eu<sup>2+</sup>-cation vacancy dipoles 2-36511  
 atom, UV transitions obs. using freq. doubled CW ring dye laser 2-673  
 atomic states involving f electrons 2-15692  
 electrical conductivity at high press. and low temp. 2-36002  
 film, oxidation kinetics, struct. and props. of Eu<sub>2</sub>O<sub>3</sub>, temp. and substrate influence 2-6016



**europium continued**

- high press. search for superconductivity, elec. resistance meas. 2-2095  
liquid, interionic pot. from struct. data 2-20996  
mid-ocean submarine hot springs enriched with Eu 2-47834  
rare earth compounds, Eu<sup>3+</sup> doped, photoluminescence, synchrotron radiation excitation 2-51664  
rare earth oxychlorides:Eu<sup>3+</sup>, free ion and cryst. field parameters, Stark levels, fluores. 2-9178  
shake-up excitations and core-hole screening, XPS study 2-27053  
subducted sediments role in island arc volcanics, Eu pattern constraints 2-10013  
BaFCl(Br)(I):Eu<sup>2+</sup>, EPR study of Eu<sup>2+</sup> ground state splitting 2-36420  
Bi<sub>2</sub>Ge<sub>2</sub>O<sub>9</sub>:Eu<sup>3+</sup>, emission and excitation spectra, Stark levels and cryst. field parameters 2-13537  
CaF<sub>2</sub>:Eu scintillator, appl. to assessment of escape peak formalism and fundamental parameter method 2-41962  
CaF<sub>2</sub>:Eu single crystal, used for scintillation detector 2-49228  
CaF<sub>2</sub>:Eu<sup>2+</sup>, acoustic phonon freq. depend. lifetimes 2-45437  
CaFCl:Eu<sup>2+</sup>, EPR study of Eu<sup>2+</sup> ground state splitting 2-36420  
Ca(PO<sub>3</sub>)<sub>2</sub>:Eu<sup>3+</sup>, excitation energy transfer, temporal and temp. depend., reson. fluoresc. 2-51650  
CaS:Eu<sup>3+</sup>, single crystals, luminesc. and excitation spectra (*Japanese*) 2-9271  
CdF<sub>2</sub>:Eu<sup>3+</sup>, optical study of Eu<sup>3+</sup> centres 2-9185  
CsI:Eu<sup>2+</sup>, V<sub>1</sub> centre migration, thermolum. and TSC meas. 2-8675  
151,153Eu II hyperfine struct. meas. by collinear laser ion beam technique 2-24880  
Eu I, 4f<sup>7</sup>5d<sub>6</sub>s, <sup>10</sup>D-term isotope shift 2-34597  
Eu I, 4f<sup>7</sup>5d<sub>6</sub>s-4f<sup>7</sup>5d<sub>6</sub>p transitions, laser atomic beam spectroscopy 2-24637  
Eu<sup>2+</sup> in cubic elpasolites, absorption mag. circular dichroism and emission spectra 2-36608  
Eu<sup>3+</sup> in amorphous hosts at high temp., <sup>5</sup>Do-<sup>7</sup>F<sub>0</sub> transition, homogeneous linewidth, temp. depend. 2-24631  
Eu<sup>3+</sup>, in glasses, <sup>5</sup>Do-<sup>7</sup>F<sub>0</sub> transition, homogeneous and inhomogeneous linewidths 2-13534  
Eu<sup>3+</sup> in heavy water soln., anion effect on fluorescence intensity 2-15739  
Eu<sup>3+</sup>+HCl, laser induced 2-4377  
Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>:Eu<sup>3+</sup>, ferroelec.-ferroelastic, luminescence spectra near phase transition 2-31538  
LaCl<sub>3</sub>:Eu<sup>3+</sup>, f<sup>n</sup> systems, forced electric dipole transition probabilities, electron correl. effects, hypersensitive transitions 2-21519  
LaCl<sub>3</sub>:Eu<sup>3+</sup>, Ho<sup>3+</sup>(Pr<sup>3+</sup>), energy transfer from <sup>5</sup>D<sub>1</sub> and <sup>5</sup>D<sub>0</sub> levels, temp. depend. 2-26978  
LaF<sub>3</sub>:Eu<sup>3+</sup>, hypersensitive 4f-4f transitions, rel. to pseudo-multipolar field (*Portuguese*) 2-26344  
LaMgB<sub>6</sub>O<sub>10</sub>:Eu<sup>3+</sup>, self-quenching of luminesc., one-dimens. interactions 2-26965  
LiNbO<sub>3</sub>:Eu, X-ray induced luminesc. 2-26977  
NaBr:Eu<sup>2+</sup>, precipitated phase, optical absorpt. and luminesc. spectra 2-41408  
NaF:Eu<sup>2+</sup>, precipitated phase, optical absorpt. and luminesc. spectra 2-41408  
Pb<sub>2</sub>Ge<sub>2</sub>O<sub>11</sub>:Eu, magnetogyration symm. anal. and Faraday effect (*Russian*) 2-22000  
RbBr:Eu<sup>2+</sup>, thermoluminesc., fluoresc., and optical absorpt. meas., luminesc. mechanism 2-27002  
RbLu<sub>2</sub>F<sub>10</sub>:Eu<sup>2+</sup>, α and β phases, luminescence, cryst. struct. effects (*French*) 2-51690  
SrFCl:Eu<sup>2+</sup>, EPR study of Eu<sup>2+</sup> ground state splitting 2-36420  
ThO<sub>2</sub>:Eu<sup>3+</sup>, luminescence by photonic and chem. excitations 2-41407  
WO<sub>3</sub>-Na<sub>2</sub>O-P<sub>2</sub>O<sub>5</sub>:Eu<sup>3+</sup> glasses, phase separation and crystn., luminesc. study 2-46682  
YAlO<sub>3</sub>:Eu<sup>3+</sup>, anisotropic mag. shielding and quadrupole coupling consts. of <sup>151</sup>Eu<sup>3+</sup> and <sup>153</sup>Eu<sup>3+</sup>, NQR study 2-17364  
YAlO<sub>3</sub>:Eu<sup>3+</sup>, nuclear mag. moment anomaly of Eu<sup>3+</sup>, optical hole burning and optically detected NQR expts. 2-2163  
Y<sub>2</sub>O<sub>3</sub>:Eu<sup>3+</sup>, cryst. field anal., appl. of electrostatic and ang. overlap models 2-13024  
Y<sub>2</sub>O<sub>3</sub>:Eu<sup>3+</sup>, optical linewidths of <sup>7</sup>F<sub>0</sub>=<sup>5</sup>D<sub>0</sub> transition, delayed heterodyne photon echo obs. 2-979  
Y<sub>2</sub>O<sub>3</sub>S:Eu phosphors, excitation mode into charge transfer band 2-36711  
Y<sub>2</sub>O<sub>3</sub>S:Eu<sup>3+</sup>, Tb<sup>3+</sup> phosphor, photoluminesc. and cathodoluminesc., Tb<sup>3+</sup> enhancement mechanism 2-51666  
YVO<sub>4</sub>:Eu, phosphor, cryst. growth by chem. transport method 2-9257  
ZnS:Eu crystals, struct. changes following plastic deform. 2-16662

**europium alloys**

- shake-up excitations and core-hole screening, XPS study 2-27053  
Al-Mg-Eu, mech. props., Eu effect 2-27242  
Eu-Au, surface core level binding energy, chem. shift, surface segregation 2-51272  
Eu-Pt system, phase diagram and cryst. struct. of phases 2-9331  
Eu-Yb-Pt, anomalous valency behaviour 2-9331  
Eu-Tb<sub>3</sub>, valence instability effect on mag. hyperfine interaction at very high press., Mossbauer study 2-2166

**europium compounds**

- see also *europium alloys*  
chalcogenides, mixed-valence, modified sf model 2-45912  
chalcogenides, Raman scatt. rel. to spin-flip and electronic excitations 2-36646  
chelates, activation of liq. cryst. phase transitions, luminesc. 2-26051  
oxydiacetate, optical activity, circular dichroism spectra 2-26859  
shake-up excitations and core-hole screening, XPS study 2-27053  
BaO-Eu<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> system, investigation of compounds 2-50592  
Ca<sub>2</sub>Eu, graphite intercalation cpd., high field magnetisation 2-17319  
Ca<sub>2</sub>Eu<sub>1-x</sub>CrO<sub>3</sub>, solid soln., distorted perovskite struct. (*French*) 2-50590  
CsEu(NH<sub>2</sub>)<sub>2</sub>, cryst. struct. and IR spectra (*German*) 2-8493  
Cs<sub>2</sub>NaEuCl<sub>6</sub>, adsorption mag. circular dichroism and emission spectra of Eu<sup>2+</sup> 2-36608  
(Eu,Gd)<sub>2</sub>O<sub>3</sub>, compatibility with type 316 stainless steel in out-of-pile heating studies 2-39115  
(Eu, Tm, Y, Ca)<sub>3</sub>(Fe, Ge)<sub>2</sub>O<sub>12</sub> film, mag. bubble domain lattice pulsations 2-2112  
Eu complex, dimethyl sulphoxide europium nitrate, cryst. struct., X-ray study (*Chinese*) 2-40325  
Eu complex, Eu(oxydiacetate)<sub>3</sub><sup>3-</sup>, f-f transition, optical props. calcs. 2-51545  
Eu complex, europium benzoyltrifluoroacetone chelate, luminescence lifetime, optical environment effects 2-51686

**europium compounds continued**

- Eu complex, piperidinium tetrakis (benzoyltrifluoroacetone)europium (III), solvent and temp. effects, fluoresc. 2-43964  
Eu salt adducts with N,N-dimethyl-diphenyl phosphinamide, absorpt. and emission spectra 2-17464  
EuAs<sub>3</sub>, cryst. struct., elec., optical, and mag. props. 2-8494  
EuB<sub>6</sub>, anomalous anisotropies, behaviour under high mag. field 2-26338  
EuB<sub>6</sub>, prep. by hot pressing 2-5844  
EuB<sub>6</sub> single cryst., elec. props. variation with temp. and press. 2-40888  
EuB<sub>6</sub> single cryst., optical consts., and electronic structure 2-41320  
EuB<sub>6-x</sub>C<sub>x</sub>, electron localization and transport props., ESR study 2-41199  
EuC<sub>6</sub>, intercalate, Raman spectra 2-36647  
Eu<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub> ferrite, domain boundary dynamics (*Russian*) 2-31235  
Eu<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub> garnet, optical anisotropy study (*Russian*) 2-13459  
EuGaG:Cr<sup>3+</sup>, site selective fluoresc. spectrum 2-22066  
Eu(II) (complex, (1,4,7,10-tetraazacyclododecane-N,N',N'',N''')-tetracetate) europium(II), soln., luminesc. study 2-34468  
EuMgAl<sub>10</sub>O<sub>19</sub>, crystal growth and physical props. 2-22159  
Eu<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub> ((WO<sub>4</sub>)<sub>3</sub>), mag. susceptibility study 2-26601  
EuMo<sub>2</sub>S<sub>8</sub> (Se<sub>8</sub>), supercond., spin polarisation and high crit. fields 2-17245  
EuMo<sub>2</sub>S<sub>8</sub>, high press. search for superconductivity, elec. resistance meas. 2-2025  
EuMo<sub>2</sub>S<sub>8</sub>, phase transition, specific heat, elec. cond. 2-26042  
Eu<sub>2</sub>Mo<sub>2</sub>S<sub>8</sub>, supercond. props. under press. 2-17198  
EuMoSe<sub>8</sub>, high press. search for superconductivity, elec. resistance meas. 2-2025  
EuO, EPR lineshape, cond. electron influence 2-13335  
EuO, Eu-rich, IR absorpt. spectra, bound mag. polaron excitations 2-46602  
EuO, ferromagnetic, electron and magnon heating, magnetisation 2-46010  
EuO films, mag. heterogeneity, Curie temp. elevation, mag. susceptibility meas., 77 to 300K 2-26695  
EuO:Gd, ferromag. semicond., magnon spectrum and Curie temp. 2-13299  
Eu<sub>2</sub>O<sub>3</sub>, C to B transformation 2-47022  
Eu<sub>2</sub>O<sub>3</sub>, compatibility with type 316 stainless steel in out-of-pile heating studies 2-39115  
Eu<sub>2</sub>O<sub>3</sub> films formed by oxidation of Eu, struct. and props., temp. and substrate influence 2-6016  
α-EuP<sub>3</sub>, IR study of phonons and free carriers 2-36627  
Eu(PO<sub>3</sub>)<sub>3</sub>, photoluminescence of cooling liq. 2-51695  
EuP<sub>6</sub>O<sub>7</sub>, time resolved laser induced fluoresc. 2-46678  
EuS:Gd, ferromag. semicond., magnon spectrum and Curie temp. 2-13299  
EuS-H<sub>2</sub>S-H<sub>2</sub>-CO<sub>2</sub>, chem. equilib. study 2-41919  
Eu<sub>2</sub>S<sub>4</sub>, electron hopping and optic phonons 2-2245  
Eu<sub>1-x</sub>Sm<sub>x</sub>O<sub>2</sub>, mag. quasimolecules, mag. props. 2-17275  
(Eu,Sm)<sub>1-x</sub>Mo<sub>2</sub>S<sub>8</sub>, Eu rich Chevrel phase, elec. resist. and supercond. props. in high mag. field 2-17196  
Eu<sub>0.4</sub>Sr<sub>0.6</sub>S, insulating spin glass, EPR study 2-26738  
Eu<sub>0.4</sub>Sr<sub>0.6</sub>S, insulating spin glass, EPR temp. depend. study 2-31279  
Eu<sub>0.4</sub>Sr<sub>0.6</sub>S, insulating spin glass, complex permeability at UHF freq. 2-31212  
Eu<sub>1-x</sub>Sr<sub>x</sub> single crystals, and solid solns., excitation and refl. spectra (*Japanese*) 2-9271  
Eu<sub>2</sub>Sr<sub>1-x</sub>S, dil. ferromag., sp. ht. meas. 2-17291  
Eu<sub>2</sub>Sr<sub>1-x</sub>S, dil. Heisenberg ferromag. and spin-glasses, NMR and Mossbauer effect studies 2-31357  
Eu<sub>2</sub>Sr<sub>1-x</sub>S, distribution of spin glass freezing from superparamag. blocking 2-17290  
Eu<sub>2</sub>Sr<sub>1-x</sub>S,Se<sub>1-y</sub>, mag. ordering 2-17292  
Eu<sub>2</sub>Sr<sub>1-x</sub>S,Se<sub>1-y</sub>, model system for studying competing mag. interactions 2-4142  
Eu<sub>0.6</sub>Y<sub>0.4</sub>Ga<sub>1.26</sub>Fe<sub>3.74</sub>O<sub>12</sub> film, nondestructive sensing of wall-state transition 2-2109  
Eu<sub>0.6</sub>Y<sub>0.4</sub>Ga<sub>1.26</sub>Fe<sub>3.74</sub>O<sub>12</sub> film, bubble wall radial motion mech., chirality switching and collapse 2-26700  
Eu<sub>2</sub>Yb<sub>1-x</sub>Mo<sub>2</sub>S<sub>8</sub>, Eu Mossbauer effect and supercond. 2-17197  
Fe<sub>1-x</sub>Eu<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, synthesis and physicochem. props., semicond. behaviour 2-9256  
Gd(Eu)Al<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, cryst. struct., f-f transition probabilities, anisotropic ligand polarisability 2-45134  
KCl-EuCl<sub>2</sub> precipitated phases, optical absorpt. and luminesc. 2-26934  
La<sub>1.2-x</sub>Eu<sub>x</sub>Mo<sub>2</sub>S<sub>8</sub> pseudoternary system, superconductivity 2-31018  
La<sub>1.2-x</sub>Eu<sub>x</sub>Mo<sub>2</sub>S<sub>8</sub>, upper crit. mag. field enhancement 2-5507  
Pb<sub>1-x</sub>Eu<sub>x</sub>Mo<sub>2</sub>S<sub>8</sub>, Chevrel phase supercond., resist. and Mossbauer studies 2-17381  
Sm<sub>1-x</sub>Eu<sub>x</sub>B<sub>6</sub>, solid solutions, valence state of Sm ions, cryst. struct. 2-30841  
Sn<sub>0.12</sub>Eu<sub>0.08</sub>Mo<sub>2</sub>S<sub>8</sub>, Hall coeff. and resistivity, low temp. and high press. 2-30910  
SrMoO<sub>4</sub>-Eu<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, valence state of Eu and Mo ions in solid solns., ESR obs. 2-41192  
SrWO<sub>4</sub>-Eu<sub>2</sub>(WO<sub>4</sub>)<sub>3</sub>, valence state of Eu and W ions in solid solns., ESR obs. 2-41192  
Tb<sub>0.5</sub>Eu<sub>0.5</sub>P<sub>2</sub>O<sub>14</sub>, struct. characts., IR and Raman obs. 2-41341  
Tm<sub>1-x</sub>Eu<sub>x</sub>Se, mixed valence cpd., mag. order, elec. resist. and magnetisation study 2-30884  
UO<sub>2</sub>-Eu<sub>2</sub>O<sub>3</sub> solid soln., relation between lattice parameter and O/M ratio 2-50597  
(Y,Eu,Tm,Sm,Ca)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub> magnetic epitaxial film, bubble domain lattice high freq. vibrs. 2-46353  
(Y,Eu,Tm,Sm,Ca)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub>, epitaxial ferrite garnet film, domain wall mobility 2-9014  
Y<sub>1-x</sub>Eu<sub>x</sub>Fe<sub>5</sub>Ga<sub>4</sub>O<sub>12</sub> epitaxial layers, laser annealed in O<sub>2</sub>, mag. props., FMR study 2-31589  
Zn<sub>1-x</sub>Eu<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, synthesis and physicochem. props., semicond. behaviour 2-9256  
ZnS:YEuO<sub>2</sub>S thin film, electrolum. complex centre characts., fluoresc. and time resolved spectra 2-46672

**eutectic alloys**

- amorphous alloys, atomic struct., mag. meas., review 2-30399  
binary alloys, effect of second-phase vol. fraction on grain size stability and flow stress during superplastic flow 2-22268  
direct crystallisation with laminar struct. formation 2-47018  
fibrous composite with elastic-plastic matrix, fracture mechanics under compression 2-35090



- exchange interactions (electron) continued  
 perovskites, mag. struct. and mag. phase transitions, role of exchange multiplets 2-26620  
 polymers, exact-exchange asymptotics in Hartree-Fock calcs. 2-26287  
 pressure induced decrease 2-35979  
 random exchange Heisenberg antiferromag. chains 2-13267  
 random spin system, oscillatory interactions, Bogolyubov method 2-21810  
 rare earth garnets,  $R_2Fe_2O_{12}$ , ferrimag., exchange constants 2-51402  
 rare earth impurities in ferromag. host metals, nucl. orientation 2-46397  
 rare earth mixed valence opds., 4f electron dynamics 2-30842  
 rare earth orthoferrites (orthochromites), f-d-f exchange and orientational phase transitions 2-46272  
 rare earth-manganese alloys,  $R_6Mn_{23}$ , mag. interactions and struct., anal. 2-51395  
 segnetoantiferromagnets, segnetons and magnons, interactions with paramag. impurities 2-31257  
 semiconductor, diffusion of high density electrons and holes, and many-body effects 2-45866  
 semiconductor, direct gap, with zinc-blende struct., neutral acceptor bound exciton ground state, electron-hole exchange interaction effect 2-26304  
 semiconductor, exchange scattering of photocarriers, involving localised mag. moments, influence of effective exchange field (Russian) 2-26348  
 semiconductors, deep centres spin relax. via singlet and triplet excitons 2-36410  
 spin fluctuation effective energies, calc. and meaning 2-31166  
 spin glasses, Stoner and Kondo, mean field description 2-31219  
 spin glasses with random anisotropic exchange, gapless mode (Russian) 2-26638  
 spin system, alternating strong and weak exchange coupling, mag. props. 2-26571  
 spin- $1/2$  BCC Ising ferromagnet, Curie temp., three-spin interactions effects 2-2090  
 superconductor, Korringa relax. of exchange-interacting localised moments 2-26550  
 superconductors, ferromagnetic, effective exchange interaction near surface 2-13285  
 superconductors with helical mag. ordering, role of exchange and mag. dipole interactions 2-26592  
 TCNQ salt, DMM (TCNQ) $_2$ , spin susceptibility 2-2061  
 thin film, amorphous, spin wave reson., decoupling and linewidths 2-26757  
 transition metals, ferromagnetism, many-body effect 2-31130  
 trimeric clusters, Dzyaloshinskii antisymm. exchange interactions 2-36339  
 Ag-Mn, dilute alloy, Korringa relax. rate of Mn ion 2-26619  
 Ag-Mn dil. alloys, press. depend. of elec. resist. in dil. limit and spin glass-regime 2-5398  
 AlCrO $_2$ , mag. props. and struct. 2-51398  
 AgM $_{1-x}$ Fe $_x$ O $_2$  (M=Al, Ga), mag. interactions between Fe(III) ions 2-41121  
 AlF $_3$  film, absorption spectrum, Al L $_{2,3}$  excitation 2-2310  
 CaO:Cu, Cu $^{2+}$  ion pairs, EPR study 2-46369  
 CdCl $_2$ :Co $^{2+}$  single cryst., spin exchange interaction optical spectra 2-46653  
 (Cd $_{1-x}$ Mn $_x$ ) $_2$ As $_2$ , semimagnetic semiconductor, Shubnikov-de Haas study 2-26419  
 Cd $_{1-x}$ Mn $_x$ Te, mag. props. at low temps. 2-36358  
 Cd $_{1-x}$ Mn $_x$ Te(Se), elec. and mag. props. in mag. fields 2-30799  
 CdTe surface, (110), LEED intensities, dynamical anal. 2-12893  
 Ce $_3$ Al $_2$ :Fe $_3$ O $_8$ , beryl, exchange-coupled pairs of Fe $^{3+}$  ions, EPR study 2-36418  
 $^{248}$ CmP, mag. transition temps., mag. susceptibility study 2-41115  
 $^{248}$ CmSb, mag. transition temps., mag. susceptibility study 2-41115  
 Co adsorbed on Cu surface, reconstruction, CDW, surface mag. and O $_2$  adsorption 2-12911  
 Co ordered layers on Cu (111), mag. exchange splitting, photoemission spectra study 2-51403  
 Cr, spin waves and thermodynamic props. (Russian) 2-21784  
 Cr-Al, Neel temp., random distrib. of antiferromag. clusters model 2-31184  
 CrBr $_3$ , ferromag. and paramag., thermoreflectance spectra, magneto-optical effects, exchange interaction modulation 2-31459  
 Cr $_2$ O $_3$ : $^{119}$ Sn $^{2+}$ , Mossbauer study of mag. hyperfine interactions (Russian) 2-13382  
 Cr $_2$ Te $_3$ , mag. props., thermal expansion effect 2-13301  
 CsCuCl $_3$ , magnetic susceptibility study 2-41114  
 CsFeCl $_3$ ·2H $_2$ O, mag. ordering, Mossbauer study 2-26796  
 CsH $_3$ (SeO $_3$ ) $_2$ , magnetic screening of  $^{77}$ Se nuclei, weak indirect interaction, anisotropy 2-46394  
 CsMnCl $_2$ ·2H $_2$ O, exciton-magnon light absorpt. 2-31523  
 Cu complex,  $\gamma$ -bis(N-methyl salicylaldimine) copper(II), EPR and mag. props., 1.5 to 300K 2-41188  
 Cu complex (isopropylammonium) $_2$  CuCl $_4$ , chain system mag. susceptibility calc. 2-21776  
 Cu nuclei, transition temp. to mag. ordered state 2-36345  
 Cu-Mn-Al (20.6, 34.7 at.%), displaced hysteresis loop upon mag. annealing 2-26687  
 CuBr, interacting biexciton ground state, invariant expansion and transmission spectra 2-12975  
 Cu $_0.5$ Fe $0.5$ Cr $_2$ S $_4$ , ferromagnetic semicond., hyperfine interactions and mag. props. 2-26346  
 Cu $_2$ Fe $_3$ O $_8$ , effect of Cu conc., Mossbauer study 2-5607  
 Cu(II) carboxylates adducted with triphenylphosphine oxide, electronic, IR, EPR and mag. susceptibility 2-46270  
 CuM $_{1-x}$ Fe $_x$ S $_2$  (M=Al, Ga, In), mag. interactions between Fe(III) ions 2-41121  
 Dy-Fe/Gd-Fe double layer film, amorphous, thermomag. writing 2-31188  
 DyFe $_2$ H $_4$ , Mossbauer spectroscopy and bulk magnetisation meas. 2-31345  
 ErFe $_2$ H $_4$ , Mossbauer spectroscopy and bulk magnetisation meas. 2-31345  
 ErRh $_2$ B $_4$ , magnetic superconductor, NMR study 2-17219  
 Er chalcogenides, Raman scatt. rel. to spin-flip and electronic excitations 2-36646  
 Eu $_2$ (MoO $_4$ ) $_3$  ((WO $_4$ ) $_3$ ), mag. susceptibility study 2-26601  
 EuO, EPR lineshape, cond. electron influence 2-13335  
 EuO, Eu-rich, IR absorpt. spectra, bound mag. polaron excitations 2-46602  
 Eu $_{1-x}$ Sm $_x$ O, mag. quasimolecules, mag. props. 2-17275  
 Eu $_0.4$ Sr $0.6$ O, insulating spin glass, EPR study 2-26738  
 EuSr $_{1-x}$ S, dil. Heisenberg ferromag. and spin-glasses, NMR and Mossbauer effect studies 2-31357
- exchange interactions (electron) continued  
 EuSr $_{1-x}$ S, Se $_{1-y}$ , model system for studying competing mag. interactions 2-41142  
 Fe, BCC, mag. props. and local moments above Curie temp. 2-31121  
 Fe-Mn quenched Heisenberg material with random sites, spin-glass state (Russian) 2-51427  
 FeBO $_3$ , parametric spin wave excitation (Russian) 2-46268  
 FeI $_2$ , mag. ordering and phase transitions, high field  $^{57}$ Fe Mossbauer spectrosc. obs. 2-41108  
 (Fe $_{1-x}$ Mn $_x$ ) $_{80}$ B $_{20}$ , amorphous, mag. props., magnetisation and Mossbauer effect study 2-26666  
 $\gamma$ -FeNiMn, mixed exchange interaction, mag. phase diagram 2-36325  
 Fe $_{40}$ Ni $_{40}$ P $_{14}$ B $_6$ , amorphous ferromagnet, magnetisation study 2-46347  
 Gd-Fe/Tb-Fe double layer film, amorphous, thermomag. writing 2-31188  
 GdAg $_{1-x}$ Zn $_x$ , magnetic phase diagram 2-46281  
 Gd $_{1-x}$ Re $_x$ Al $_2$  (Re=Dy, Ho, Er), Curie temp., theoretical calc. 2-21793  
 Gd $_2$ Y $_{1-x}$ Co $_x$ , magnetic behaviour and exchange interactions 2-46262  
 Gd $_2$ Y $_{1-x}$ Fe $_x$ , magnetic behaviour, 4.2 to 1300K, temp. and comp. depend. 2-5530  
 Gd $_2$ Y $_{1-x}$ Fe $_x$ , magnetic behaviour, 4.2 to 1300K, temp. and comp. depend. 2-8965  
 Ge, stressed, electron-hole liquid, exchange correlation energy and phase separation 2-1851  
 $^3$ He, solid, paramag., model formalism 2-26173  
 $^3$ He, solid, ring exchange Hamiltonians, exact crit. field 2-35853  
 Hg inelastic electron scatt., electron spin polarisation 2-44100  
 Hg $_{1-x}$ Mn $_x$ Te, semimagnetic semicond., interband IR magnetoabsorpt. study 2-21998  
 Hg $_{1-x}$ Mn $_x$ Te, galvanomag. effects, influence of exchange interaction 2-30911  
 Hg $_{1-x}$ Mn $_x$ Te(Se), elec. and mag. props. in mag. fields 2-30799  
 Ho-Er, elec. cond., thermoelectric power, mag. struct. effects (Russian) 2-51144  
 Ho-Pr, HCP alloys, mag. struct. transitions 2-2055  
 InMo $_5$ S $_8$ , superconductor, exchange interactions, CESR and spin waves study 2-36211  
 K $_2$ CuF $_4$ , two-dimensional ferromag., magneto-optical props. 2-2222  
 K $_2$ ReCl $_6$ (Br $_6$ ), mag. susceptibility calcs. 2-21778  
 LaCl $_3$ :Pr $^{3+}$ (Eu $^{3+}$ ), f $^n$  systems, forced electric dipole transition probabilities, electron correl. effects, hypersensitive transitions 2-21519  
 La $_{1.2-x}$ Eu $_x$ Mo $_2$ S $_8$ , upper crit. mag. field enhancement 2-5507  
 (La $_{1-x}$ Sr $_x$ )CoO $_3$ , cubic perovskite struct., mag. props. meas. 2-26618  
 LiGa $_5$ O $_8$ :Cr $^{3+}$ , luminesc. of exchange coupled Cr $^{3+}$  pairs 2-51660  
 MgF $_2$  film, absorption spectrum, Mg L $_{2,3}$  excitation 2-2310  
 MgTiF $_6$ ·6H $_2$ O:Ni $^{2+}$ , pair and isolated ion spectra, EPR meas. 2-17331  
 MnSb alloy, mag. props. depend. on press. and temp. (Russian) 2-13298  
 MnSi, electronic band struct. and helical spin density wave 2-30792  
 MnTe, antiferromagnetic, elec. resist. and mag. susceptibility 2-36046  
 Na $_2$ Fe $_2$ O $_7$ , magnetic interactions in [Fe $_2$ O $_7$ ] $^{8-}$  struct. units, susceptibility and Mossbauer meas. (French) 2-2052  
 NaMnCl $_3$ , mag. behaviour studies 2-5543  
 Nb $_2$ Si, superconductor, exchange interactions, CESR and spin waves study 2-36211  
 Ni hexammines, ESR line temp. broadening, cryst. field and exchange consts. (Russian) 2-17329  
 Ni-Mn quenched Heisenberg material with random sites, spin-glass state (Russian) 2-51427  
 NiFe $_2$ O $_4$ , polycryst., magnetoelastic anisotropy due to exchange striction 2-46274  
 Ni $_2$ Mg $_{1-x}$ O single crystals, mag. props. and exchange parameters, 77 to 1100K (Russian) 2-17269  
 NiS $_2$ , FCC spin lattice, four-spin exchange interactions 2-13286  
 NiS $_2$ -Se $_x$ , phase diagram, doubly degenerate Hubbard model 2-41128  
 O $_2$ , solid, mag. props. of  $\alpha$ -,  $\beta$ - and  $\gamma$ -forms 2-31148  
 Pb $_{1-x}$ Eu $_x$ Mo $_2$ S $_8$ , Chevrel phase supercond., resist. and Mossbauer studies 2-17381  
 Pb $_{1-x}$ Mn $_x$ Te, indirect exchange interaction 2-51140  
 PbTe, indirect exchange interaction between embedded mag. ions 2-51140  
 Pr, excitonic mass enhancement 2-30791  
 Rb $_2$ Cr $_2$ Mn $_{1-x}$  mixed crystals, mag. excitations study by mag. resonance 2-36446  
 RbFeCl $_3$ ·2H $_2$ O, mag. ordering, Mossbauer study 2-26796  
 RbMnCl $_3$ , magnetisation of system with alternating strong and weak exchange coupling 2-26667  
 Si (100) inversion layers, determ. of valley splitting 2-30971  
 Si, band struct. calc. using nonlocal density approx. to exchange and correl. 2-12965  
 SmCu $_4$ , Knight shift and mag. susceptibility, temp. depend. 2-2152  
 SmCu $_4$ , Knight shift and mag. susceptibility, temp. depend. 2-2152  
 Sm $_2$ (MoO $_4$ ) $_3$  ((WO $_4$ ) $_3$ ), mag. susceptibility study 2-26601  
 SmRh $_2$ B $_4$ , magnetic superconductor, NMR study 2-17219  
 Sr (Co $_{1-x}$ Mn $_x$ )O $_3$ , cubic perovskite struct., mag. props. meas. 2-26618  
 SrCoO $_3$ -x, cubic perovskite struct., mag. props. meas. 2-26618  
 Tb, de Haas-van Alphen effect and exchange-split Fermi surfaces 2-45807  
 Ti-Cr-S(Se)(Te) system cpds., mag. props. and struct. 2-51398  
 (Tm $_{1-x}$ La $_x$ ) $_2$ B $_{13}$  susceptibility and magnetisation, cryst. field and exchange effects (French) 2-5521  
 U $_0.15$ Ho $0.85$ Ga $_2$ , mag. behaviour and dominant interactions 2-8962  
 U(SO $_4$ ) $_2$ , crystalline, anomaly in mag. susceptibility 2-8964  
 V $_2$ Si, superconductor, exchange interactions, CESR and spin waves study 2-36211  
 Y $_{1-x}$ Fe $_x$ , amorphous, mag. props., spin glass behaviour 2-21798  
 YFe $_2$ H $_4$ , Mossbauer spectroscopy and bulk magnetisation meas. 2-31345  
 Y $_3$ Fe $_2$ O $_{12}$ , changes in Curie temp. induced by neutron irradi. 2-41139  
 Y $_3$ Fe $_2$ O $_{12}$ , exchange interaction influence on NMR freq. 2-36454  
 Y $_{1-x}$ Gd $_x$ Rh $_2$ B $_4$ , magnetic superconductor, NMR study 2-17219  
 YIG, polycryst., magnetoelastic anisotropy due to exchange striction 2-46274  
 Y $_{1-x}$ Nd $_x$ Co $_5$ , exchange interactions and mag. anisotropy 2-31169  
 YRh $_2$ B $_4$  supercond., exchange interaction 2-17186  
 YRh $_2$ B $_4$ , Laves phase cpds., Mossbauer study of mag. props. 2-31355  
 ZnO single crystals, photoluminescence of free A-exciton, exchange interactions effect 2-2334  
 ZrIr $_2$ , ESR and supercond. of Nd $^{3+}$  and Gd $^{3+}$  2-2026  
 ZrMnH $_2$ , nonstoichiometric, stability, mag. props. 2-41126  
 ZrZn $_2$ , Fermi surface de Haas-van Alphen study 2-35923



exchange models *see peripheral models*exchanges (chemical) *see chemical exchanges***excimer lasers**

computerised optical diagnostic system for UV and visible supersonic flow pulsed lasers 2-10876  
 inert gas halide excimer lasers, stimulated Raman emission generation in gases 2-11765  
 inert gas halide fusion amplifiers, bidirectional amplification with nonsaturable absorption and amplified spontaneous emission 2-881  
 inert gas halide laser media, axisymmetric angular encoder for laser fusion 2-4540  
 inert gas halide lasers, UV-visible laser development review 2-904  
 inert gas halide pulse compressors for inertial fusion appls. 2-11723  
 metal halide lasers, UV-visible laser development review 2-904  
 optically pumped dimer lasers, UV-visible laser development review 2-904  
 technology review 2-49763  
 transient glow discharges in laser excitation and breakdown effects 2-11708  
 X-ray preionisation source for discharge-excited lasers 2-19228  
 Ar-Kr-F<sub>2</sub> gas mixture, plasma props. under steady discharge condition (Chinese) 2-8367  
 Ar-N<sub>2</sub> with pumping by high-current charged particles beam, numerical model 2-4493  
 ArF excimer laser source, tunable ultrahigh spectral brightness 2-11724  
 ArF, UV preionised, characts. 2-4358  
 ArF, UV preionised, pulse energy and laser performance (Chinese) 2-7781  
 ArF UV preionised discharged excimer laser, spectral tuning in 1926 to 1944 Å range (Chinese) 2-25024  
 ArF\* molecules excited by fast discharge, stimulated emission 2-4494  
 ArF\* ultrahigh-spectral-brightness excimer lasers as pump sources for coherent soft X-ray generation 2-28971  
 ArF\* ultrahigh-spectral-brightness source, third harmonic generation in gaseous media 2-49824  
 CO(A<sup>1</sup>Π), laser induced fluoresc., appl. in CO(A-X) electronic laser 2-4341  
 CdBr photodissociation laser at 811 nm 2-44265  
 CdI photodissociation laser at 655 nm spectrum identification 2-44265  
 H<sub>2</sub> fluorescence excitation by excimer lasers 2-43841  
 H<sub>2</sub> electron-beam-controlled discharge laser, kinetics and energy characts. 2-34730  
 HBr, electric discharge laser, kinetic model 2-29810  
 He/Cl<sub>2</sub> laser, electron beam pumped, 258 nm 2-44254  
 HgBr dissociation laser, high-power blue-green lasers for Naval systems 2-7792  
 HgBr high power blue-green laser, physical principles 2-903  
 HgBr laser, injection locking 2-902  
 HgBr laser, line narrowing and enhanced efficiency by injection locking 2-20317  
 HgBr short pulse discharge laser 2-933  
 HgBr X-ray preionised electric-discharge laser, scaling studies 2-4497  
 HgBr<sub>2</sub>/HgBr dissociation lasers, performance status and underwater communication system appl. 2-25003  
 I<sub>2</sub> laser, B state, stimulated emission and absorpt. losses 2-15987  
 IF as visible oscillators or amplifiers 2-11683  
 KrCl\* molecules excited by fast discharge, stimulated emission 2-4494  
 KrF angular multiplexed 50-kJ laser module for inertial confinement fusion, conceptual design 2-931  
 KrF angular multiplexed 50 kJ laser amplifier for inertial confinement fusion, conceptual design 2-7786  
 KrF electron-beam-excited laser with 1.6 GW litre<sup>-1</sup> atm<sup>-1</sup> pump power density 2-44340  
 KrF laser, backward wave Raman pulse compression in methane, laser fusion appls. 2-7797  
 KrF laser, electron beam pumped, steady state model 2-11682  
 KrF laser, electron beam excited, output performance, computer simulation 2-44337  
 KrF laser, pulse compressors for inertial fusion appls. 2-11723  
 KrF laser intensification for laser fusion appl., backward-wave Raman pulse compression 2-16024  
 KrF laser radiation, amplified phase conjugate refl. 2-25070  
 KrF laser radiation freq. up-conversion by four-wave mixing in Mg vapour 2-11748  
 KrF laser radiation phase conjugation using degenerate four-wave mixing in CS<sub>2</sub> 2-25074  
 KrF short-pulse laser operation, kinetic issues 2-895  
 KrF, UV preionised, pulse energy and laser performance (Chinese) 2-7781  
 KrF broad-band electron beam pumped laser 2-34727  
 KrF\* discharge e-beam controlled laser, ionisation instability (Chinese) 2-24996  
 KrF\* molecules excited by fast discharge, stimulated emission 2-4494  
 Li<sub>2</sub> laser transitions assignment, Ar<sup>+</sup> and Kr<sup>+</sup> laser pumping 2-7750  
 N<sub>2</sub> atmospheric laser, travelling-wave model (Chinese) 2-16012  
 N<sub>2</sub> excitation of two-dimensional HALO laser (Hungarian) 2-34713  
 N<sub>2</sub>, He-N<sub>2</sub> lasers, UV preionisation, laser discharge homogeneity improvement (Chinese) 2-44252  
 N<sub>2</sub> laser, fabrication and spectral behaviour 2-34792  
 N<sub>2</sub> laser, intense output at 3577 Å, SF<sub>6</sub> addition effects (Chinese) 2-24994  
 N<sub>2</sub> laser, simple small open air TEA, effective glow form. 2-16022  
 N<sub>2</sub> laser-pumped dye lasers at atmospheric pressure, use in subnanosec. time-correlated photon counting spectroscopy 2-10877  
 N<sub>2</sub> pulsed laser, power requirements for triggered and untriggered spark gap mode 2-11715  
 N<sub>2</sub> UV laser, O<sub>2</sub> quenching effect on param. 2-15992  
 Na<sub>2</sub> optically pumped laser lines, fluorescence spectra obs. 2-15843  
 PO chemiluminescence flame, UV light amplification 2-44266  
 S<sub>2</sub> laser, XeCl pumped, heat pipe config., elec. discharge effects 2-49771  
 S<sub>2</sub>, N<sub>2</sub> laser pumped, superfluorescence obs. from <sup>32</sup>Su-<sup>32</sup>Sg transition 2-15990  
 Tl-Hg photodissociatively pumped excimer system 2-4499  
 XeBr\* laser with electron beam and discharge excitation, radiation characts. 2-29808  
 XeCl 308 nm laser, microwave pumping technique 2-4531  
 XeCl closed loop laser, high PRF performance, acoustic damping and flow control 2-4530  
 XeCl discharge laser, discharge circuit characts., gain 2-25001

**excimer lasers continued**

XeCl discharge pumped TEA laser, high repetition rate capability 2-49735  
 XeCl, electron beam pumped, lasing performance and efficiency meas. 2-896  
 XeCl excimer laser, UV pumping source for tunable dye lasers 2-7821  
 XeCl excimer oscillator-ring amplifier system, laser tuning 2-49767  
 XeCl high energy laser pulse pumping of p-terphenyl dye laser 2-29811  
 XeCl high power blue-green laser, physical principles 2-903  
 XeCl laser, 61.6 nm coherent radiation generation by fifth harmonic conversion in Ar and Kr 2-20366  
 XeCl laser, avalanche/self-sustained discharge pumped, long pulse behaviour 2-945  
 XeCl laser, avalanche/self-sustained discharge pumped, long pulse behaviour 2-7805  
 XeCl laser, chemical-related degradation control 2-34795  
 XeCl laser, electron beam ionisation, efficiency reflected electrons effect 2-44343  
 XeCl laser, injection-locked, unstable resonator based, picosecond high power extraction 2-44345  
 XeCl laser kinetics rel. to HCl electron attachment rate 2-789  
 XeCl laser kinetics rel. to HCl electron attachment rate 2-7640  
 XeCl laser operation with liquid Cl donors, output energy for CCl<sub>4</sub>, SiCl<sub>4</sub> 2-927  
 XeCl laser output, Raman down-conversion for blue-green appls. 2-25069  
 XeCl laser radiation freq. up-conversion by four-wave mixing in Mg vapour 2-11748  
 XeCl laser Raman freq. downconversion, high-power blue-green lasers for Naval systems 2-7792  
 XeCl, long-pulse electron-beam pumped laser, improved efficiency rel. to buffer choice 2-11687  
 XeCl long-pulse electron-beam excited laser performance, kinetic model 2-34728  
 XeCl technology review 2-49763  
 XeCl broad-band electron beam pumped laser 2-34727  
 XeCl\* laser electron with electron beam and discharge excitation, radiation characts. 2-29808  
 XeCl\* molecules excited by fast discharge, stimulated emission 2-4494  
 XeF broad-band electron beam pumped laser 2-34727  
 XeF C→A laser, scaling expts. 2-11686  
 XeF laser, mol. recombination in laser media, theoretical study of NF<sub>2</sub>+F+Ne→NF<sub>3</sub>+Ne 2-47312  
 XeF laser, transform-limited-bandwidth injection locking with Ar-ion laser at 3511 Å 2-39625  
 XeF UV laser, mol. recombination in laser media, expt. study of NF<sub>2</sub>+F+Ne→NF<sub>3</sub>+Ne 2-47313  
 XeF UV laser beam, phase conjugation by stimulated Brillouin scatt. in hexane, isopropanol 2-49830  
 XeF\* laser with electron beam and discharge excitation, radiation characts. 2-29808  
 XeF\*-XeBr\* laser, pumped by electron-beam-stabilized discharge 2-20326  
 ZnI, gain at 602 nm on the B to X band 2-901  
 ZnI photodissociation laser, quenching kinetics, and small signal gain spectrum 2-44267

**excimers**  
*see also excimer lasers*  
 ω-/phenyl-α-(N,N-dimethylamino)alkanes, intramol. charge transfer in polar solns., kinetics 2-39488  
 anthracene exciplexes, delayed fluoresc., mag. field effects 2-49504  
 quinoline, phosphoresc. and delayed excimer fluoresc. 2-31533  
 9-cyanonaphthalene crystals, 9-methoxynaphthalene or 9,10-dimethylnaphthalene doped, electronic energy trapping 2-51673  
 1-cyanonaphthalene-triethylamine mixtures, vapour phase, exciplex fluoresc. 2-15838  
 cyclophosphazenes, aryloxy-substituted, intramolecular excimers, fluoresc. obs. 2-20109  
 1-(9,10-dicyano-2-anthryl)-3-(2-naphthyl)propane, intramolecular exciplex form., lifetimes, fluoresc. obs. 2-24778  
 1-N,N-dimethylamino-2-phenylethane, exciplex formation, influence of primary excited states 2-49501  
 electron-donor-acceptor complex, excited charge-transfer state, feedback (A<sup>-</sup>D<sup>+</sup>)→A<sup>\*</sup>+D dissociation 2-52195  
 ethylene, dimer, excimers and dimer ions, intermol. pots. 2-34523  
 exciplex dipole moments, external elec. field influence on fluorescence 2-49502  
 fluoresceine in H<sub>3</sub>BO<sub>3</sub> glass, conc. changes of emission spectra and phosphorescence decay 2-744  
 inert gas oxides, excimers in matrices 2-49482  
 intramolecular exciplex formation, lattice model, Monte Carlo simulation 2-6803  
 molecular exciplex formation in gas phase, model 2-52194  
 perylene, excimer form., time resolved fluoresc. spectroscopy 2-46656  
 α-perylene, nonlinear fluoresc. reabsorpt. by electronically excited mols. 2-15699  
 poly(N-vinylcarbazole), excimer form. and dissoc., fluoresc. spectrosc. obs. 2-39441  
 poly-α-methylstyrene, intramol. excimer form. 2-4423  
 poly-N-vinylcarbazole film, electron acceptor doped, carrier photogeneration, fluoresc. quenching 2-13533  
 polybutadiene-b-styrene, intramol. excimer form. 2-4423  
 polymer-bond excimers and exciplexes, dynamics 2-49614  
 polymers, excimer formation and energy migration 2-13544  
 polystyrene, excimers, dibromomethane and I<sub>2</sub> quenching, soln. fluoresc. 2-15716  
 polystyrene, head-to-head, intramol. excimer form. 2-4423  
 polystyrene, solns., excimer formation and energy migration 2-13544  
 polystyrene films, excimer formation and energy migration 2-13544  
 pyrene, excimer form., diffusion parameters, relax. kinetics 2-39472  
 pyrene, nonlinear fluoresc. reabsorpt. by electronically excited mols. 2-51699  
 sodium dodecyl sulphate micelles, microviscosity, aggregation number, excimer fluoresc., effects of additives 2-7587  
 trans-stilbene derivatives, electrogenerated chemilum. 2-22104  
 Ar crystal stimulated emission around 10 eV 2-51629  
 He<sub>2</sub>\*, metastable excimers, electron impact ionisation, cross sections 2-4400  
 Kr<sub>2</sub>\*, metastable excimers, electron impact ionisation, cross sections 2-4400



## excimers continued

- NaNe excimer band system, global anal. for Hund's case 2-771  
 NeO in solid matrix, photoluminesc. spectra, blue shift and spin forbidden band obs. 2-29642  
 XeCl\* exciplex form. and luminesc. in hollow cathode pulsed discharge 2-43987  
 XeF\* exciplex form. and luminesc. in hollow cathode pulsed glow discharge 2-43987  
 XeI, excimer form. and ( $^3\Pi_{1/2} \rightarrow ^2\Sigma_{1/2}$ ) emission at 1.3  $\mu$ m 2-39405  
 Xe<sub>2</sub>\*, metastable excimers, electron impact ionisation, cross sections 2-4400

## exciplexes see excimers

## excitonic molecules

- acenaphthylene trans dimer level splitting, one and two-photon spectra 2-7621  
 coherent states and Davydov splitting 2-1836  
 dielectrics, nonlinear energy transport of radiation, due to virtual biexciton formation 2-41317  
 molecular glass, localised molecular-ion and exciton states, photoemission, UV absorpt. and transport 2-35974  
 polymer, localised molecular-ion and exciton states, photoemission, UV absorpt. and transport 2-35974  
 semiconductor, biexcitons, M-luminesc. band region, self-induced transparency 2-44411  
 semiconductor, optical nonlinearity and bistability due to biexciton form. 2-44375  
 semiconductors, biexciton excitation profile for intermediately bound exciton 2-35945  
 transverse relaxation constants, two-photon echo and excited state photon echo method 2-25080  
 CdS, dielectric function, renormalization with increasing excitation 2-45867  
 CdS, excitonic polariton dispersion, excitation induced renormalisation effects 2-1835  
 CdS(Se), luminescence, time-resolved picosecond, at high excitation 2-46707  
 CuBr, interacting biexciton ground state, invariant expansion and transmission spectra 2-12975  
 CuBr, Raman study of excitonic molecule excited states 2-46568  
 CuCl, dynamical relax. processes of excitonic polaritons, picosecond induced absorption study 2-46633  
 CuCl, exciton and excitonic mol. diffusion const. determ. using tunable picosec. grating method 2-1839  
 CuCl, excitonic polariton superbroadened distrib. 2-40805  
 CuCl, excitonic polariton dynamics 2-45838  
 CuCl, polariton renormalisation due to excitonic molecule formation 2-30804  
 CuCl, reson. Raman scatt. and luminescence from highly excited states 2-22025  
 CuCl, resonant photon-photon scattering and approx. spherical symm. 2-1833  
 GaP:N, model calcs. for excitons and biexcitons 2-45840  
 Ge, uniaxially deformed, excitons and excitonic molecules in mag. field (*Russian*) 2-5354  
 Ge, uniaxially stressed, luminescence of excitonic molecules 2-46692  
 PbI<sub>2</sub>, luminescence and hyper-Raman emission 2-46697  
 ZnO, biexciton radiative recombination, mechanism and band profile 2-46753

## excitons

see also excitonic molecules; phonon-exciton interactions

- alkali halides, activated, recombination photostimulated luminesc. kinetics (*Russian*) 2-5741  
 alkali metal halides, self-trapped exciton,  $^1\Sigma_u^+$  state lifetime, temp. depend. 2-17554  
 annihilation, bilinear rate eqn. and annihilation const. 2-5355  
 anthracene, charge transfer excitons, optical absorpt. and thermal dissoc. 2-35943  
 anthracene, cryst., lattice defect influence on exciton states, luminesc. study 2-26971  
 anthracene, crystals, reson. secondary emission 2-26879  
 anthracene, low-temp. fluorescence excitation spectra (*Russian*) 2-13560  
 anthracene, photoionisation and mag. field modulated recomb., time resolved fluoresc. 2-46680  
 anthracene, R-centre luminescence spectrum (*Russian*) 2-17544  
 anthracene, singlet system, exciton energy shifts, piezoreflection spectra 2-5658  
 anthracene crystal, stimulated resonant Raman scatt. 2-2233  
 anthracene-metal boundary, exciton luminesc. props. 2-26951  
 anthracene-pyromellitic anhydride, isotopically mixed, charge-transfer exciton bandwidth, refl. and luminesc. spectra 2-17537  
 anthracene-tetrachlorophthalic anhydride, charge transfer cryst., triplet excitation energy migration and annihilation 2-26972  
 anthracene-tetracyanobenzene, charge transfer triplet excitons, spin polarisation, EPR study 2-36408  
 anthracene-tetracyanobenzene charge transfer crystals, optical nuclear polarisation via hyperfine relax. 2-51500  
 anthracene-tetracyanobenzene mixed crystals, optical nuclear polarisation, excitons 2-46426  
 a-As<sub>2</sub>S<sub>3</sub>, luminesc. and optically detected ESR 2-46756  
 benzene, vibr. relax., excitons, CARS study 2-26881  
 benzophenone,  $\alpha$ -modified, phosphorescence spectra, impurity states (*Russian*) 2-13558  
 benzophenone single crystals, doped, delayed exciton phosphoresc. (*Ukrainian*) 2-36675  
 1,5-bis(dimethylamino)pentamethinium perchlorate, singlet system, polariton energy shifts, piezoreflection spectra 2-9126  
 coherent nonlinear light prop. in exciton range of spectrum 2-11768  
 coronene:perylene, thin crystalline films, fluorescence spectra, energy transfer diagram 2-17514  
 cubic semiconductors, indirect exciton ground state Stark shift and splitting 2-21505  
 9-cyanooanthracene, mol. crystals, excimer formation and trapping processes 2-50778  
 1,4-dibromonaphthalene, quasi-1D mol. system, exciton dynamics 2-13056  
 dilute alloys, impurity exciton band, density of states and absorpt. line profile 2-5353  
 4,4'-dimethylbenzophenone, exciton motion electric field effect, phosphoresc. study 2-17518

## excitons continued

- dipole disorder containing crystals, and highly doped mixed crystals, models for exciton and charge transport investig. 2-35944  
 dipole plasma oscillations interacting with acoustic phonons, lifetime 2-45872  
 disordered system, excitation transfer, book contrib. 2-12710  
 dynamics in deformable lattice 2-45836  
 ferromagnetism, itinerant, complex order parameter at excitonic phase transition 2-36302  
 Frenkel exciton, self-trapping, phonon interaction, adiabatic approach 2-40797  
 Frenkel excitons interactions, absorpt. and emission spectra 2-16995  
 frozen three-level atomic system, resonant Raman scatt., multipoles v. excitons 2-4253  
 group V amorphous semiconductors, review 2-45037  
 III-V semiconductors, surface core excitons, binding energies and oscillator strengths 2-8852  
 inert gases, solid and liquid, exciton self-trapping, defect prod. 2-41381  
 iodoform, crystalline, photocond. induced by two-photon absorption 2-51230  
 luminescence, conference, Berlin, Germany (July 1981) 2-42779  
 luminescence band profile, exciton capture probability depend. on trap depth and temp. 2-2343  
 magnetic susceptibility near phase transition point to current state (*Russian*) 2-46234  
 molecular and crystalline luminesc., conference proceedings, Samarkand, Oct. 1979 2-33208  
 molecular cryst., excitonic optical and transport props., test of Kenkre-Knox relation 2-45844  
 molecular crystals, effect of spin relax. on fluorescence 2-46705  
 molecular crystals, exciton luminesc. at high excitation levels 2-22061  
 molecular crystals, exciton-exciton annihilation kinetics 2-2344  
 molecular crystals, excitons, reflectivity spectra, piezomodulation 2-5656  
 molecular crystals, interaction between excitons and free charge carriers, hot and complex charge carriers generation 2-8806  
 molecular crystals, optical spectra, effective-field method, Frenkel theory of excitons 2-51090  
 molecular crystals, Raman scatt. of light by polaritons, active spectroscopy (*Russian*) 2-5679  
 molecular crystals, spectroscopy, bibliography for 1979 2-10563  
 molecular crystals, theory of impurity centres, effects of interband coupling 2-30831  
 naphthalene, 2-photon absorpt. and SHG, temp. depend. polariton behaviour 2-34834  
 naphthalene, phosphorescence study of critical exciton annihilation 2-46700  
 naphthalene, triplet exciton annihilation, spin relaxation effects 2-22086  
 naphthalene, triplet exciton annihilation and triplet spin relax. 2-1837  
 naphthalene crystal, impurity centres, effects of interband coupling 2-30831  
 naphthalene N-H<sub>2</sub> and N-D<sub>2</sub>, triplet T<sub>1</sub> Davydov components, high resolution excitation spectra 2-46655  
 naphthalene-chrysene, mixed cryst., impurities and defects, delayed luminesc. obs. 2-5738  
 naphthalene-d<sub>8</sub>, phosphoresc., direct excitation spectra, Davydov components 2-46660  
 negative ion formation by surface exciton 2-35948  
 organic molecular crystal, charge carrier recombination dynamics, magnetic field effect 2-36054  
 organic molecular crystals, coherent and incoherent transfer of excitons and charge carriers (*Russian*) 2-36042  
 organic molecular crystals, dislocation excitons and manifestations in optical spectra 2-22063  
 organic solid, disordered, electronic transport, degree of disorder determined 2-36043  
 organic solids with diagonal disorder, localised states and electronic transport, review 2-8774  
 pentacene, cryst., optical charge carrier generation, charge transfer excitation 2-46632  
 pentacene, solid, CT transition studied by electroabsorpt. 2-30837  
 periodic molecular systems, excitons and solitons, review 2-12973  
 $\alpha$ -perylene, nonlinear fluoresc. reabsorpt. by electronically excited molecules 2-51699  
 photoexcitation intensity and kinetics (*Russian*) 2-12974  
 polar crystals, electron-phonon interaction in luminescence and light scattering 2-46690  
 polar semiconductors, luminescence from bound multiexciton complexes 2-46696  
 polar semiconductors, multiphonon resonance Raman scatt. involving hot excitons 2-41367  
 polariton microscopic model, exciton-photon interactions 2-1842  
 polaron crystals, optical absorption tail and Urbach rule (*Russian*) 2-26846  
 polaron properties of exciton complexes 2-5349  
 poly-N-vinylcarbazole film, electron acceptor doped, carrier photogeneration, fluoresc. quenching 2-13533  
 polydiacetylene single crystals of PTS and of DCHD, electroreflectance studies on excitons 2-31453  
 polyvinylcarbazole films, fluoresc. excitation spectra, mobility threshold for singlet exciton transport 2-51646  
 pyrene, luminescence and excitons 2-46698  
 pyrene, mol. crystals, excimer formation and trapping processes 2-50778  
 pyromellitic dianhydride anthracene, charge transfer transition, piezomodulated reflection spectra 2-5657  
 pyromellitic N,N'-dimethylidide-anthracene, triplet exciton annihilation rate enhancement 2-51697  
 quasi-one-dimensional CDW distorted solid, charge density fluctuations 2-30812  
 quasi-particles in steady state packet representation, nonuniform kinetics (*Russian*) 2-40803  
 rare earth Kramers ferromagnets, spin dynamics in paramag. phase, density matrix approach 2-2051  
 resonant Brillouin scattering intensities from multicomponent exciton polaritons 2-2302  
 resonant Raman scattering and luminescence of excitonic polaritons 2-5684  
 semiconducting crystals, excitonic absorption bands, at finite temp. and weak mag. fields (*Russian*) 2-2223  
 semiconductor, direct gap, with zinc-blende struct., neutral acceptor bound exciton ground state, electron-hole exchange interaction effect 2-26304



cations continued  
semiconductor, exciton and shallow impurity states in arbitrary mag. field 2-26306  
semiconductor, exciton-plasma transition, band struct. effects 2-35951  
semiconductor, excitons bound to neutral donors, props. 2-1838  
semiconductor, high-resolution optical spectroscopy characteris., review 2-17534  
semiconductor, intermediate exciton state, Coulomb attraction effect on impurity absorption and optical recomb. 2-17511  
semiconductor, non-equilibrium, limit cycle in bound exciton recomb. model 2-5350  
semiconductor, photolum. and photolum. excitation spectroscopy characteris., review 2-17533  
semiconductor single crystals, conduction electron-exciton complexes 2-40802  
semiconductor surfaces, point-defect electronic states, core excitons, and intrinsic electronic states 2-8851  
semiconductor thin films, exciton binding energy, metal-dielec. transition 2-26524  
semiconductor thin films, exciton energy levels 2-45835  
semiconductor ultrathin layers, exciton luminescence and exciton-polaritons 2-46689  
semiconductor with one conduction and one valence band, model of exciton weakly bound to isoelectronic impurity (*German*) 2-12972  
semiconductor-electrolyte junction, flat band pot., electroreflectance study 2-17156  
semiconductors, amorphous, localised states, exciton effects on electroabsorption 2-41328  
semiconductors, coherent light propag. theory (*Chinese*) 2-26843  
semiconductors, coherent light propag. theory (*Chinese*) 2-26844  
semiconductors, conference, Hakone, Japan (Sept. 1980) 2-18813  
semiconductors, deep centres spin relax. via singlet and triplet excitons 2-36410  
semiconductors, exciton luminescence and exciton-polaritons 2-46689  
semiconductors, laser radiation, submicron, from exciton transitions excited by external source 2-44306  
semiconductors, refractive index, birefringence and permittivity calcs. 2-26853  
semiconductors, zinc-blende, core exciton binding energies 2-40800  
small polaronic solid, photoluminescence decay rates, excitation energy and temp. depend. 2-46733  
spectroscopy, polariton, thin prism refraction method 2-2209  
surface-enhanced Raman scattering in attenuated total reflection arrangement 2-48805  
TCNQ, singlet system, polariton energy shifts, piezoreflection spectra 2-9126  
TCNQ dimer salt, N-ethylphenazinium TCNQ, triplet spin excitons, ESR study 2-1831  
p-terphenyl, cryst., laser-excited delayed fluoresc. 2-22079  
tetracene, solid, CT transition studied by electroabsorp. 2-30837  
1,2,4,5-tetrachlorobenzene, linear chain triplet excitons, spin-lattice relax. and interchain hopping 2-51089  
tetracyanoplatinate, exciton and polaron aspects 2-45839  
thin crystal, radiative decay of excitons, crystal size depend. on optical spectra 2-8758  
two-dimensional finite chain, optical spectra and excitonic motion 2-26303  
vacuum-crystal interface, light reflection and transmission near exciton transition 2-46523  
violanthrene metal interface, photo-EMF, exciton dissoc. theory 2-30967  
Wheeler complex quasiparticle states 2-51130  
zincblende semiconductors, nonparabolicity and exciton effects in two-photon absorption 2-13443  
AgCl, two-phonon resonant Raman scatt. at indirect exciton 2-46567  
AgCl<sub>1-x</sub>Br<sub>x</sub> crystals, ODMR studies 2-46429  
Ag<sub>2</sub>O, mag. field enhanced exciton luminescence, polarisation and intensity 2-46754  
AlF<sub>3</sub> film, absorption spectrum, Al L<sub>2,3</sub> excitation 2-2310  
Al<sub>0.5</sub>Ga<sub>0.5</sub>As grown by MBE, photoluminescence studies 2-13532  
Ar, solid, excitons, hot luminescence and self trapping 2-17527  
As<sub>2</sub>S<sub>3</sub>, amorphous, intimate valence alternation pairs, exciton and pair recombination, ODMR study 2-46432  
As<sub>2</sub>S<sub>3</sub>, amorphous and cryst., radiative recomb. of localised excitons 2-36685  
As<sub>2</sub>Se<sub>3</sub>, crystalline, excitonic gaps and Urbach tail, absorpt. and electroabsorp. 2-35946  
BN, hexagonal, core excitons at B K-edge, soft X-ray absorpt. meas. 2-13590  
BaMnF<sub>4</sub>, antiferromag., pure exciton and magnon sideband optical transitions 2-2332  
BaNiF<sub>4</sub>, two-dimensional antiferromag., linear mag. birefringence and double-excitonic transitions 2-5661  
BeF<sub>2</sub> glasses, vacuum UV props. 2-17502  
BeO crystal, luminesc. excitation in fundamental absorpt. region 2-51706  
BiI<sub>3</sub>, indirect exciton secondary emission, resonant Raman and hot luminesc. studies 2-45842  
CdGa<sub>2</sub>S<sub>4</sub>, fundamental optical transitions study 2-46546  
CdI<sub>2</sub>, photoluminescence, stimulated, and optical gain spectrum 2-46708  
Cd<sub>1-x</sub>Mn<sub>x</sub>Te solid soln., electroreflection and photocond. spectra 2-26866  
Cd<sub>1-x</sub>Mn<sub>x</sub>(Te/Se), elec. and mag. props. in mag. fields 2-30799  
CdP<sub>2</sub>, structured luminescence spectrum excited by electron beam 2-26998  
CdS, Brillouin scatt. via surface exciton polaritons, theory 2-46622  
CdS, comparative optical studies of high density exciton gas 2-51625  
CdS crystals, emitted radiation spectral and time dependences 2-51719  
CdS epitaxial film on InP(111), excitonic luminesc. 2-26986  
CdS epitaxial layers, exciton spectrum, purity influence 2-41441  
CdS, evidence of quadrupole transitions to excited states of I<sub>2</sub>-bound exciton 2-2335  
CdS, excitation mechanisms, excited states of I<sub>1</sub> bound exciton 2-26975  
CdS, excitonic polariton dispersion, excitation induced renormalisation effects 2-1835  
CdS, highly excited, light scatt. by density fluctuations 2-51612  
CdS laminar crystals, exciton luminesc., spectral and temporal props. 2-17543  
CdS, luminescence study of free exciton lifetime and diffusion length 2-5756  
CdS, polariton spectroscopy, exciton study by thin prism refraction method 2-2209  
CdS, previously laser irradiated crystals, recomb. radiation spectra (*Russian*) 2-41427

## excitons continued

CdS:Li crystal, interstitial electromigration, exciton luminescence study 2-5279  
CdS-anthracene interface, exciton reflection and luminesc. spectra 2-51091  
CdS(Se), luminescence, time-resolved picosecond, at high excitation 2-46707  
CdS<sub>1-x</sub>Se<sub>x</sub>, characts. of emitted recombination radiation 2-41425  
CdS<sub>1-x</sub>Se<sub>x</sub>, localised exciton resonant secondary emission 2-46695  
CdSe film, deposited from heteroorganic cpds., exciton absorpt. 2-5761  
CdTe, bound multiple exciton complex, in luminesc. spectra, Zeeman splitting 2-13553  
CdTe, irradiation induced intrinsic excitonic luminesc. 2-2337  
CdTe, mag. field induced LT mixing of multicomponent polaritons 2-26872  
Cs<sub>3</sub>Bi<sub>2</sub>Br<sub>9</sub>, luminescence and photocond. 2-46676  
CsBr, tunnelling charge transfer to Frenkel defects, luminesc. obs. 2-45153  
CsBr, vacancy and interstitial formation under optical exciton generation conditions 2-31572  
CsI:Na, self-trapped exciton luminescence 2-41414  
CsMnCl<sub>3</sub>, excited electronic state gigantic splitting during exciton self-localisation, luminesc. study (*Russian*) 2-26954  
CsMnCl<sub>2</sub>·2H<sub>2</sub>O, exciton-magnon light absorpt. 2-31523  
CsMnF<sub>3</sub>, absorpt. spectrum, uniaxial stress and high mag. field effects 2-51550  
CsPbCl<sub>3</sub>(Br<sub>3</sub>), ferroelec., exciton absorpt., luminesc. and reson. Raman scatt. 2-46638  
Cu-CdS Schottky barriers, exciton refl., absorpt., and photoluminesc. spectra 2-36668  
CuBr, light refraction in exciton part of spectrum (*Russian*) 2-13441  
CuCl, dynamical relax. processes of excitonic polaritons, picosecond induced absorption study 2-46633  
CuCl, exciton and excitonic mol. diffusion const. determ. using tunable picosec. grating method 2-1839  
CuCl, exciton-polaritons by two-photon absorpt. 2-8761  
CuCl I<sup>-</sup>-excitonic molecules, two-photon transition, polarisation rot. effects 2-44024  
CuCl, quantum size effect in excitonic absorpt. spectrum (*Russian*) 2-13577  
CuCl, two-photon transitions to exciton states 2-5352  
CuGaS<sub>2</sub>, angular phonon dispersion in bound exciton spectra 2-5747  
Cu<sub>2</sub>O crystal, exciton spectrum determ. by double optical reson. method 2-41232  
Cu<sub>2</sub>O, exciton luminescence 2-46709  
Cu<sub>2</sub>O, mag. field enhanced exciton luminescence, polarisation and intensity 2-46754  
Cu<sub>2</sub>O, picosecond spectroscopy, exciton dynamics, two-photon absorpt. 2-9165  
Cu<sub>2</sub>O, reson. Brillouin scatt., expt. 2-2298  
Cu<sub>2</sub>O, reson. Brillouin scatt., theory 2-5723  
Cu<sub>2</sub>O, study of non-thermalised luminesc. spectra 2-31553  
Fe<sub>51</sub>Rh<sub>48.5</sub>, ferromagnetic, press. induced antiferromagnetism 2-46282  
GaAs (110) surface core excitations, ab initio calc. 2-8850  
GaAs, core excitons, energy calc. 2-1832  
GaAs, electron-hole plasmas and excitons, picosecond luminesc. spectroscopy 2-51677  
GaAs, exciton energy spectra, uniaxial press. effect, photo EMF meas. 2-35949  
GaAs laser cyclotron resonance, Zeeman absorpt. 2-41205  
n-GaAs, photocurrent noise caused by impact ionization of neutral donors and free/bound excitons 2-46078  
GaAs, photoluminescence of UHV cleaved crystals 2-51642  
GaAs, spatial expansion of electron-hole plasma, luminesc. meas. 2-51680  
GaAs:C, ion implanted, photolum. study 2-17512  
GaAs-Al<sub>0.25</sub>Ga<sub>0.75</sub>As multiquantum well struct., resonant degenerate four-wave mixing 2-44401  
GaAs-Al<sub>0.25</sub>Ga<sub>0.75</sub>As heterojunctions, exciton excited levels 2-13551  
GaAs-Al<sub>0.25</sub>Ga<sub>0.75</sub>As multiquantum well structures, opt. props. and interface disorder, growth-temp. optimisation 2-8869  
GaAs<sub>1-x</sub>F<sub>x</sub>N, photoluminescence spectra 2-41421  
GaIn<sub>1-x</sub>P<sub>x</sub>N, luminescence study of exciton radiation transitions 2-46693  
GaN epitaxial layers, photoluminescence 2-46663  
GaP, core excitons, energy calc. 2-1832  
GaP:Cu, triplet exciton recombination at 1.91 eV, ODMR study 2-46433  
GaP:N, luminescence study of exciton radiation transitions 2-46693  
GaP:N, model calcs. for excitons and biexcitons 2-45840  
GaP(As)(Sb), core exciton binding energies 2-40800  
GaSb, core excitons, energy calc. 2-1832  
GaSe, excitonic spectra, phase transitions (*Russian*) 2-31557  
GaSe, excitons, magneto-optical effects 2-26873  
GaSe, intercalated, exciton photoluminescence and reflection spectra 2-17540  
GaSe:Cu, defect level analysis, photoluminescence spectra 2-9184  
GaSeO, edge luminesc. spectrum, 4.2K, isoelectronic impurity effect 2-9196  
GaSe<sub>1-x</sub>S<sub>x</sub>, edge luminesc. spectra, optical and microwave study 2-46751  
Ge, deformed, diamagnetic susceptibility of indirect excitons (*Russian*) 2-5525  
Ge, direct absorpt. in electron-hole liquid, warping effects, final state interactions 2-26301  
Ge, donor-bound multi-exciton complexes, theory 2-1840  
Ge, indirect exciton ground state Stark shift and splitting 2-21505  
Ge laser cyclotron resonance, Zeeman absorpt. 2-41205  
Ge, uniaxially deformed, excitons and excitonic molecules in mag. field (*Russian*) 2-5354  
Ge:As, luminescence study, exciton excited hole state 2-46691  
Ge:Sb(As)(Ga), electron-hole liq., photoluminesc. polarisation in mag. field study 2-35952  
HgCdTe, luminescence 2-26957  
HgI<sub>2</sub>, red, low temp. reflectivity and optical props. 2-2313  
Hg<sub>1-x</sub>Mn<sub>x</sub>Te(Se), elec. and mag. props. in mag. fields 2-30799  
In<sub>0.5</sub>Ga<sub>0.5</sub>As, near-band-gap absorpt. and photolum. 2-41394  
InSb laser cyclotron resonance, Zeeman absorpt. 2-41205  
InSe, excitons, magneto-optical effects 2-26873  
KBr, X-ray irradi., defect formation, temp. depend. and activation energy 2-1524  
KCl:Br, doped and undoped, exciton decay into Frenkel pairs, optical absorption study 2-45846



## excimers continued

- NaNe excimer band system, global anal. for Hund's case 2-771  
 NeO in solid matrix, photoluminesc. spectra, blue shift and spin forbidden band obs. 2-29642  
 XeCl\* exciplex form. and luminesc. in hollow cathode pulsed discharge 2-43987  
 XeF\* exciplex form. and luminesc. in hollow cathode pulsed glow discharge 2-43987  
 XeI, excimer form. and ( $^2\Pi_{1/2}$ - $^2\Sigma_{1/2}$ ) emission at 1.3  $\mu\text{m}$  2-39405  
 Xe<sub>2</sub>\*, metastable excimers, electron impact ionisation, cross sections 2-4400

exciplexes *see excimers*

## excitonic molecules

- acenaphthylene trans dimer level splitting, one and two-photon spectra 2-7621  
 coherent states and Davydov splitting 2-1836  
 dielectrics, nonlinear energy transport of radiation, due to virtual biexciton formation 2-41317  
 molecular glass, localised molecular-ion and exciton states, photoemission, UV absorpt. and transport 2-35974  
 polymer, localised molecular-ion and exciton states, photoemission, UV absorpt. and transport 2-35974  
 semiconductor, biexcitons, M-luminesc. band region, self-induced transparency 2-44411  
 semiconductor, optical nonlinearity and bistability due to biexciton form. 2-44375  
 semiconductors, biexciton excitation profile for intermediately bound exciton 2-35945  
 transverse relaxation constants, two-photon echo and excited state photon echo method 2-25080  
 CdS, dielectric function, renormalization with increasing excitation 2-45867  
 CdS, excitonic polariton dispersion, excitation induced renormalisation effects 2-1835  
 CdS(Se), luminescence, time-resolved picosecond, at high excitation 2-46707  
 CuBr, interacting biexciton ground state, invariant expansion and transmission spectra 2-12975  
 CuBr, Raman study of excitonic molecule excited states 2-46568  
 CuCl, dynamical relax. processes of excitonic polaritons, picosecond induced absorption study 2-46633  
 CuCl, exciton and excitonic mol. diffusion const. determ. using tunable picosec. grating method 2-1839  
 CuCl, excitonic polariton superbroadened distrib. 2-40805  
 CuCl, excitonic polariton dynamics 2-45838  
 CuCl, polariton renormalisation due. to excitonic molecule formation 2-30804  
 CuCl, reson. Raman scatt. and luminescence from highly excited states 2-22025  
 CuCl, resonant photon-photon scattering and approx. spherical symm. 2-1833  
 GaP:N, model calcs. for excitons and biexcitons 2-45840  
 Ge, uniaxially deformed, excitons and excitonic molecules in mag. field (*Russian*) 2-5354  
 Ge, uniaxially stressed, luminescence of excitonic molecules 2-46692  
 PbI<sub>2</sub>, luminescence and hyper-Raman emission 2-46697  
 ZnO, biexciton radiative recombination, mechanism and band profile 2-46753

## excitons

*see also excitonic molecules; phonon-exciton interactions*

- alkali halides, activated, recombination photostimulated luminesc. kinetics (*Russian*) 2-5741  
 alkali metal halides, self-trapped exciton,  $^1\Sigma_u^+$  state lifetime, temp. depend. 2-17554  
 annihilation, bilinear rate eqn. and annihilation const. 2-5355  
 anthracene, charge transfer excitons, optical absorpt. and thermal dissoc. 2-35943  
 anthracene, cryst., lattice defect influence on exciton states, luminesc. study 2-26971  
 anthracene, crystals, reson. secondary emission 2-26879  
 anthracene, low-temp. fluorescence excitation spectra (*Russian*) 2-13560  
 anthracene, photoionisation and mag. field modulated recomb., time resolved fluoresc. 2-46680  
 anthracene, R-centre luminescence spectrum (*Russian*) 2-17544  
 anthracene, singlet system, exciton energy shifts, piezoreflection spectra 2-5658  
 anthracene crystal, stimulated resonant Raman scatt. 2-2233  
 anthracene-metal boundary, exciton luminesc. props. 2-26951  
 anthracene-pyromellitic anhydride, isotopically mixed, charge-transfer exciton bandwidth, refl. and luminesc. spectra 2-17537  
 anthracene-tetrachlorophthalic anhydride, charge transfer cryst., triplet excitation energy migration and annihilation 2-26972  
 anthracene-tetracyanobenzene, charge transfer triplet excitons, spin polarisation, EPR study 2-36408  
 anthracene-tetracyanobenzene charge transfer crystals, optical nuclear polarisation via hyperfine relax. 2-51500  
 anthracene-tetracyanobenzene mixed crystals, optical nuclear polarisation, excitons 2-46426  
 a-As<sub>2</sub>S<sub>3</sub>, luminesc. and optically detected ESR 2-46756  
 benzene, vibr. relax., excitons, CARS study 2-26881  
 benzophenone,  $\alpha$ -modified, phosphorescence spectra, impurity states (*Russian*) 2-13558  
 benzophenone single crystals, doped, delayed exciton phosphoresc. (*Ukrainian*) 2-36675  
 1,5-bis(dimethylamino)pentamethinium perchlorate, singlet system, polariton energy shifts, piezoreflection spectra 2-9126  
 coherent nonlinear light propag. in excitation range of spectrum 2-11768  
 coronene:perylene, thin crystalline films, fluorescence spectra, energy transfer diagram 2-17514  
 cubic semiconductors, indirect exciton ground state Stark shift and splitting 2-21505  
 9-cyanoanthracene, mol. crystals, excimer formation and trapping processes 2-50778  
 1,4-dibromonaphthalene, quasi-1D mol. system, exciton dynamics 2-13056  
 dilute alloys, impurity exciton band, density of states and absorpt. line profile 2-5353  
 4,4'-dimethylbenzophenone, exciton motion electric field effect, phosphoresc. study 2-17518

## excitons continued

- dipole disorder containing crystals, and highly doped mixed crystals, model systems for exciton and charge transport investig. 2-35944  
 dipole plasma oscillations interacting with acoustic phonons, lifetime 2-45872  
 disordered system, excitation transfer, book contrib. 2-12710  
 dynamics in deformable lattice 2-45836  
 ferromagnetism, itinerant, complex order parameter at excitonic phase transition 2-36302  
 Frenkel exciton, self-trapping, phonon interaction, adiabatic approx. 2-40797  
 Frenkel excitons interactions, absorpt. and emission spectra 2-16995  
 frozen three-level atomic system, resonant Raman scatt., multipoles vs. excitons 2-4253  
 group V amorphous semiconductors, review 2-45037  
 III-V semiconductors, surface core excitons, binding energies and oscill. strengths 2-8852  
 inert gases, solid and liquid, exciton self-trapping, defect prod. 2-41388  
 iodoform, crystalline, photocond. induced by two-photon absorption 2-51230  
 luminescence, conference, Berlin, Germany (July 1981) 2-42779  
 luminescence band profile, exciton capture probability depend. on trap depth and temp. 2-2343  
 magnetic susceptibility near phase transition point to current state (*Russian*) 2-46234  
 molecular and crystalline luminesc., conference proceedings, Samarkand, Oct. 1979 2-33208  
 molecular cryst., excitonic optical and transport props., test of Kenkre-Knox relation 2-45844  
 molecular crystals, effect of spin relax. on fluorescence 2-46705  
 molecular crystals, exciton luminesc. at high excitation levels 2-22061  
 molecular crystals, exciton-exciton annihilation kinetics 2-2344  
 molecular crystals, excitons, reflectivity spectra, piezomodulation 2-5656  
 molecular crystals, interaction between excitons and free charge carriers, hot and complex charge carriers generation 2-8806  
 molecular crystals, optical spectra, effective-field method, Frenkel theory of excitons 2-51090  
 molecular crystals, Raman scatt. of light by polaritons, active spectroscopy (*Russian*) 2-5679  
 molecular crystals, spectroscopy, bibliography for 1979 2-10563  
 molecular crystals, theory of impurity centres, effects of interband coupling 2-30831  
 naphthalene, 2-photon absorpt. and SHG, temp. depend. polariton behaviour 2-34834  
 naphthalene, phosphorescence study of critical exciton annihilation 2-46700  
 naphthalene, triplet exciton annihilation, spin relaxation effects 2-22086  
 naphthalene, triplet exciton annihilation and triplet spin relax. 2-1837  
 naphthalene crystal, impurity centres, effects of interband coupling 2-30831  
 naphthalene N-h<sub>8</sub> and N-d<sub>8</sub>, triplet T<sub>1</sub> Davydov components, high resolution excitation spectra 2-46655  
 naphthalene-chrysene, mixed cryst., impurities and defects, delayed luminesc. obs. 2-5738  
 naphthalene-d<sub>8</sub>, phosphoresc., direct excitation spectra, Davydov components 2-46660  
 negative ion formation by surface exciton 2-35948  
 organic molecular crystal, charge carrier recombination dynamics, mag. field effect 2-36054  
 organic molecular crystals, coherent and incoherent transfer of excitons and charge carriers (*Russian*) 2-36042  
 organic molecular crystals, dislocation excitons and manifestations in optical spectra 2-22063  
 organic solid, disordered, electronic transport, degree of disorder determ. 2-36043  
 organic solids with diagonal disorder, localised states and electronic transport, review 2-8774  
 pentacene, cryst., optical charge carrier generation, charge transfer excitation 2-46632  
 pentacene, solid, CT transition studied by electroabsorpt. 2-30837  
 periodic molecular systems, excitons and solitons, review 2-12973  
 $\alpha$ -perylene, nonlinear fluoresc. reabsorpt. by electronically excited mols. 2-51699  
 photoexcitation intensity and kinetics (*Russian*) 2-12974  
 polar crystals, electron-phonon interaction in luminescence and light scatt. 2-46690  
 polar semiconductors, luminescence from bound multiexciton complexes 2-46696  
 polar semiconductors, multiphonon resonance Raman scatt. involving hot excitons 2-41367  
 polariton microscopic model, exciton-photon interactions 2-1842  
 polaron crystals, optical absorption tail and Urbach rule (*Russian*) 2-26846  
 polaron properties of exciton complexes 2-5349  
 poly-N-vinylcarbazole film, electron acceptor doped, carrier photogeneration, fluoresc. quenching 2-13533  
 polydiacetylene single crystals of PTS and of DCHD, electroreflectance studies on excitons 2-31453  
 polyvinylcarbazole films, fluoresc. excitation spectra, mobility threshold for singlet exciton transport 2-51646  
 pyrene, luminescence and excitons 2-46698  
 pyrene, mol. crystals, excimer formation and trapping processes 2-50778  
 pyromellitic dianhydride anthracene, charge transfer transition, piezomodulated reflection spectra 2-5657  
 pyromellitic N,N'-dimethylidimide-anthracene, triplet exciton annihilation rate enhancement 2-51697  
 quasi-one-dimensional CDW distorted solid, charge density fluctuations 2-30812  
 quasi-particles in steady state packet representation, nonuniform kinetics (*Russian*) 2-40803  
 rare earth Kramers ferromagnets, spin dynamics in paramag. phase, density matrix approach 2-2051  
 resonant Brillouin scattering intensities from multicomponent exciton-polaritons 2-2302  
 resonant Raman scattering and luminescence of excitonic polaritons 2-5684  
 semiconducting crystals, excitonic absorption bonds, at finite temp. and weak mag. fields (*Russian*) 2-2223  
 semiconductor, direct gap, with zinc-blende struct., neutral acceptor bound exciton ground state, electron-hole exchange interaction effect 2-26304



## excitons continued

- semiconductor, exciton and shallow impurity states in arbitrary mag. field 2-26306
- semiconductor, exciton-plasma transition, band struct. effects 2-35951
- semiconductor, excitons bound to neutral donors, props. 2-1838
- semiconductor, high-resolution optical spectroscopy characteris., review 2-17534
- semiconductor, intermediate exciton state, Coulomb attraction effect on impurity absorption and optical recomb. 2-17511
- semiconductor, non-equilibrium, limit cycle in bound exciton recomb. model 2-5350
- semiconductor, photolum. and photolum. excitation spectroscopy characteris., review 2-17533
- semiconductor single crystals, conduction electron-exciton complexes 2-40802
- semiconductor surfaces, point-defect electronic states, core excitons, and intrinsic electronic states 2-8851
- semiconductor thin films, exciton binding energy, metal-dielec. transition 2-26524
- semiconductor thin films, exciton energy levels 2-45835
- semiconductor ultrathin layers, exciton luminescence and exciton-polaritons 2-46689
- semiconductor with one conduction and one valence band, model of exciton weakly bound to isoelectronic impurity (*German*) 2-12972
- semiconductor-electrolyte junction, flat band pot., electroreflectance study 2-17156
- semiconductors, amorphous, localised states, exciton effects on electroabsorption 2-41328
- semiconductors, coherent light propag. theory (*Chinese*) 2-26843
- semiconductors, coherent light propag. theory (*Chinese*) 2-26844
- semiconductors, conference, Hakone, Japan (Sept. 1980) 2-18813
- semiconductors, deep centres spin relax. via singlet and triplet excitons 2-36410
- semiconductors, exciton luminescence and exciton-polaritons 2-46689
- semiconductors, laser radiation, submicron, from exciton transitions excited by external source 2-44306
- semiconductors, refractive index, birefringence and permittivity calcs. 2-26853
- semiconductors, zinc-blende, core exciton binding energies 2-40800
- small polaronic solid, photoluminescence decay rates, excitation energy and temp. depend. 2-46733
- spectroscopy, polariton, thin prism refraction method 2-2209
- surface-enhanced Raman scattering in attenuated total reflection arrangement 2-48805
- TCNQ, singlet system, polariton energy shifts, piezoreflection spectra 2-9126
- TCNQ dimer salt, N-ethylphenazinium TCNQ, triplet spin excitons, ESR study 2-1831
- p-terphenyl, cryst., laser-excited delayed fluoresc. 2-22079
- tetracene, solid, CT transition studied by electroabsorpt. 2-30837
- 1,2,4,5-tetrachlorobenzene, linear chain triplet excitons, spin-lattice relax. and interchain hopping 2-51089
- tetracyanoplatinate, exciton and polaron aspects 2-45839
- thin crystal, radiative decay of excitons, crystal size depend. on optical spectra 2-8758
- two-dimensional finite chain, optical spectra and excitonic motion 2-26303
- vacuum-crystal interface, light reflection and transmission near exciton transition 2-46523
- violanthrene metal interface, photo-EMF, exciton dissociation theory 2-30967
- Wheeler complex quasiparticle states 2-51130
- zincblende semiconductors, nonparabolicity and exciton effects in two-photon absorption 2-13443
- AgCl, two-phonon resonant Raman scatt. at indirect exciton 2-46567
- AgCl<sub>1-x</sub>Br<sub>x</sub> crystals, ODMR studies 2-46429
- Ag<sub>2</sub>O, mag. field enhanced exciton luminescence, polarisation and intensity 2-46754
- AlF<sub>3</sub> film, absorption spectrum, Al L<sub>2,3</sub> excitation 2-2310
- AlGa<sub>1-x</sub>As grown by MBE, photoluminescence studies 2-13532
- Ar, solid, excitons, hot luminescence and self trapping 2-17527
- As<sub>2</sub>S<sub>3</sub>, amorphous, intimate valence alternation pairs, exciton and pair recombination, ODMR study 2-46432
- As<sub>2</sub>S<sub>3</sub>, amorphous and cryst., radiative recomb. of localised excitons 2-36685
- As<sub>2</sub>Se<sub>3</sub>, crystalline, excitonic gaps and Urbach tail, absorpt. and electroabsorpt. 2-35946
- BN, hexagonal, core excitons at B K-edge, soft X-ray absorpt. meas. 2-13590
- BaMnF<sub>4</sub>, antiferromag., pure exciton and magnon sideband optical transitions 2-2332
- BaNiF<sub>4</sub>, two-dimensional antiferromag., linear mag. birefringence and double-excitonic transitions 2-5661
- BeF<sub>2</sub> glasses, vacuum UV props. 2-17502
- BeO crystal, luminesc. excitation in fundamental absorpt. region 2-51706
- Bil<sub>3</sub>, indirect exciton secondary emission, resonant Raman and hot luminesc. studies 2-45842
- CdGa<sub>2</sub>S<sub>4</sub>, fundamental optical transitions study 2-46546
- CdI<sub>2</sub>, photoluminescence, stimulated, and optical gain spectrum 2-46708
- Cd<sub>1-x</sub>Mn<sub>x</sub>Te solid soln., electroreflection and photocond. spectra 2-26866
- Cd<sub>1-x</sub>Mn<sub>x</sub>(Te,Se), elec. and mag. props. in mag. fields 2-30799
- CdF<sub>2</sub>, structured luminescence spectrum excited by electron beam 2-26998
- CdS, Brillouin scatt. via surface exciton polaritons, theory 2-46622
- CdS, comparative optical studies of high density exciton gas 2-51625
- CdS crystals, emitted radiation spectral and time dependences 2-51719
- CdS epitaxial film on InP(111), excitonic luminesc. 2-26986
- CdS epitaxial layers, exciton spectrum, purity influence 2-41441
- CdS, evidence of quadrupole transitions to excited states of I<sub>2</sub>-bound exciton 2-2335
- CdS, excitation mechanisms, excited states of I, bound exciton 2-26975
- CdS, excitonic polariton dispersion, excitation induced renormalisation effects 2-1835
- CdS, highly excited, light scatt. by density fluctuations 2-51612
- CdS laminar crystals, exciton luminesc., spectral and temporal props. 2-17543
- CdS, luminescence study of free exciton lifetime and diffusion length 2-3756
- CdS, polariton spectroscopy, exciton study by thin prism refraction method 2-2209
- CdS, previously laser irradiated crystals, recomb. radiation spectra (*Russian*) 2-41427

## excitons continued

- CdS:Li crystal, interstitial electromigration, exciton luminescence study 2-5279
- CdS-anthracene interface, exciton reflection and luminesc. spectra 2-51091
- CdS(Se), luminescence, time-resolved picosecond, at high excitation 2-46707
- CdS<sub>1-x</sub>Se<sub>x</sub>, charact. of emitted recombination radiation 2-41425
- CdS<sub>1-x</sub>Se<sub>x</sub>, localised exciton resonant secondary emission 2-46695
- CdSe film, deposited from heteroorganic cpds., exciton absorpt. 2-5761
- CdTe, bound multiple exciton complex, in luminesc. spectra, Zeeman splitting 2-13553
- CdTe, irradiation induced intrinsic excitonic luminesc. 2-2337
- CdTe, mag. field induced LT mixing of multicomponent polaritons 2-26872
- Cs<sub>3</sub>Bi<sub>2</sub>Br<sub>9</sub>, luminescence and photocond. 2-46676
- CsBr, tunnelling charge transfer to Frenkel defects, luminesc. obs. 2-45153
- CsBr, vacancy and interstitial formation under optical exciton generation conditions 2-31572
- CsI:Na, self-trapped exciton luminescence 2-41414
- CsMnCl<sub>3</sub>, excited electronic state gigantic splitting during exciton self-localisation, luminesc. study (*Russian*) 2-26954
- CsMnCl<sub>2</sub>·2H<sub>2</sub>O, exciton-magnon light absorpt. 2-31523
- CsMnF<sub>3</sub>, absorpt. spectrum, uniaxial stress and high mag. field effects 2-51550
- CsPbCl<sub>3</sub>(Br<sub>3</sub>), ferroelec., exciton absorpt., luminesc. and reson. Raman scatt. 2-46638
- Cu-CdS Schottky barriers, exciton refl., absorpt., and photoluminesc. spectra 2-36668
- CuBr, light refraction in exciton part of spectrum (*Russian*) 2-13441
- CuCl, dynamical relax. processes of excitonic polaritons, picosecond induced absorption study 2-46633
- CuCl, exciton and excitonic mol. diffusion const. determ. using tunable picosec. grating method 2-1839
- CuCl, exciton-polaritons by two-photon absorpt. 2-8761
- CuCl [I<sub>2</sub>]-excitonic molecules, two-photon transition, polarisation rot. effects 2-44024
- CuCl, quantum size effect in excitonic absorpt. spectrum (*Russian*) 2-13577
- CuCl, two-photon transitions to exciton states 2-5352
- CuGaS<sub>2</sub>, angular phonon dispersion in bound exciton spectra 2-5747
- Cu<sub>2</sub>O crystal, exciton spectrum determ. by double optical reson. method 2-41232
- Cu<sub>2</sub>O, exciton luminescence 2-46709
- Cu<sub>2</sub>O, mag. field enhanced exciton luminescence, polarisation and intensity 2-46754
- Cu<sub>2</sub>O, picosecond spectroscopy, exciton dynamics, two-photon absorpt. 2-9165
- Cu<sub>2</sub>O, reson. Brillouin scatt., expt. 2-2298
- Cu<sub>2</sub>O, reson. Brillouin scatt., theory 2-5723
- Cu<sub>2</sub>O, study of non-thermalised luminesc. spectra 2-31553
- Fe<sub>3</sub>/Rh<sub>48</sub>, ferromagnetic, press. induced antiferromagnetism 2-46282
- GaAs (110) surface core excitations, ab initio calc. 2-8850
- GaAs, core excitons, energy calc. 2-1832
- GaAs, electron-hole plasmas and excitons, picosecond luminesc. spectroscopy 2-51677
- GaAs, exciton energy spectra, uniaxial press. effect, photo EMF meas. 2-35949
- GaAs laser cyclotron resonance, Zeeman absorpt. 2-41205
- n-GaAs, photocurrent noise caused by impact ionization of neutral donors and free/bound excitons 2-46078
- GaAs, photoluminescence of UHV cleaved crystals 2-51642
- GaAs, spatial expansion of electron-hole plasma, luminesc. meas. 2-51680
- GaAs:C, ion implanted, photolum. study 2-17512
- GaAs-Al<sub>0.25</sub>Ga<sub>0.75</sub>As multiquantum well struct., resonant degenerate four-wave mixing 2-44401
- GaAs-AlGa<sub>1-x</sub>As heterojunctions, exciton excited levels 2-13551
- GaAs-AlGa<sub>1-x</sub>As multiquantum well structures, opt. props. and interface disorder, growth-temp. optimisation 2-8869
- GaAs<sub>1-x</sub>P<sub>x</sub>N, photoluminescence spectra 2-41421
- Ga<sub>1-x</sub>In<sub>x</sub>P<sub>1-y</sub>N<sub>y</sub>, luminescence study of exciton radiation transitions 2-46693
- GaN epitaxial layers, photoluminescence 2-46663
- GaP, core excitons, energy calc. 2-1832
- GaP:Cu, triplet exciton recombination at 1.91 eV, ODMR study 2-46433
- GaP:N, luminescence study of exciton radiation transitions 2-46693
- GaP:N, model calcs. for excitons and biexcitons 2-45840
- GaP(As)(Sb), core exciton binding energies 2-40800
- GaSb, core excitons, energy calc. 2-1832
- GaSe, excitonic spectra, phase transitions (*Russian*) 2-31557
- GaSe, excitons, magneto-optical effects 2-26873
- GaSe, intercalated, exciton photoluminescence and reflection spectra 2-17540
- GaSe:Cu, defect level analysis, photoluminescence spectra 2-9184
- GaSe:O, edge luminesc. spectrum, 4.2K, isoelectronic impurity effect 2-9196
- GaSe<sub>1-x</sub>S<sub>x</sub>, edge luminesc. spectra, optical and microwave study 2-46751
- Ge, deformed, diamagnetic susceptibility of indirect excitons (*Russian*) 2-5525
- Ge, direct absorpt. in electron-hole liquid, warping effects, final state interactions 2-26301
- Ge, donor-bound multi-exciton complexes, theory 2-1840
- Ge, indirect exciton ground state Stark shift and splitting 2-21505
- Ge laser cyclotron resonance, Zeeman absorpt. 2-41205
- Ge, uniaxially deformed, excitons and excitonic molecules in mag. field (*Russian*) 2-5354
- Ge:As, luminescence study, exciton excited hole state 2-46691
- Ge: Sb(As)(Ga), electron-hole liq., photoluminesc. polarisation in mag. field study 2-35952
- HgCdTe, luminescence 2-26957
- HgI<sub>2</sub>, red, low temp. reflectivity and optical props. 2-2313
- Hg<sub>1-x</sub>Mn<sub>x</sub>(Te,Se), elec. and mag. props. in mag. fields 2-30799
- In<sub>0.53</sub>Ga<sub>0.47</sub>As, near-band-gap absorpt. and photolum. 2-41394
- InSb laser cyclotron resonance, Zeeman absorpt. 2-41205
- InSe, excitons, magneto-optical effects 2-26873
- KBr, X-ray irradiat., defect formation, temp. depend. and activation energy 2-1524
- KCl:Br, doped and undoped, exciton decay into Frenkel pairs, optical absorption study 2-45846



## excitons continued

- KCl(Br), F-H recomb. and intrinsic light emission 2-26967  
 KCl(Br), vacancy and interstitial formation under optical exciton generation conditions 2-31572  
 KI, F-centre and self trapped exciton formation, time resolved spectra study 2-25873  
 KI, hot luminesc. of self-trapped excitons 2-41415  
 KI:Na<sup>+</sup>, photoluminescence 3 eV emission band, excitons state annihilation by impurity 2-17531  
 KI:Ti, colour centre production, by excitons (*Russian*) 2-35494  
 KI-Tl, activator centre ionisation by excitons (*Russian*) 2-5363  
 KMgF<sub>3</sub>, rare earth doped, X-ray induced luminescence 2-51663  
 LiD, exciton parameters and exciton-phonon interaction const., luminesc. and Raman spectroscopy study 2-16997  
 LiF, Frenkel pairs separation, self-trapped exciton annihilation mechanism, INDO simulation 2-25870  
 LiH crystals, reson. secondary luminesc. with self-localising excitons of mol. type 2-22062  
 MgF<sub>2</sub> film, absorption spectrum, Mg L<sub>2,3</sub> excitation 2-2310  
 Mg<sub>2</sub>N<sub>2</sub>, forbidden band width, refl., luminesc. and excitation spectra, thermochromic transitions 2-8754  
 MgO, edge cathodoluminescence and reflectivity in edge vacuum 2-2349  
 MgO, excitons and edge luminescence 2-46781  
 MgO:Al, edge cathodoluminescence and reflectivity in edge vacuum 2-2349  
 MgO:Al, excitons and edge luminescence 2-46781  
 NaCl, hopping motion of self-trapped exciton, decay kinetics and  $\pi$  luminesc. 2-5351  
 NaCl, optical breakdown, laser-induced primary defect form. role 2-8539  
 NaCl, triplet self-trapped exciton, Frenkel defect form. and intersystem crossing 2-41401  
 NaI crystals, reson. secondary luminesc. with self-localising excitons of mol. type 2-22062  
 NaI, hot luminesc. of self-trapped excitons 2-41415  
 NaMgF<sub>3</sub>, rare earth doped, X-ray induced luminescence 2-51663  
 Ne, condensed, relax. processes from higher excited states of self-trapped excitons 2-26959  
 P, amorphous, obs. of bound exciton and distant pair resonances 2-17370  
 PbI<sub>2</sub>, Bi<sup>3+</sup> films, exciton-impurity interaction, Verdet const. and absorpt. spectra study 2-26305  
 PbI<sub>2</sub>(2H), reson. Brillouin scatt. of exciton polaritons 2-46621  
 Pr, excitonic mass enhancement 2-30791  
 RBMgF<sub>3</sub>, rare earth doped, X-ray induced luminescence 2-51663  
 RbBr, vacancy and interstitial formation under optical exciton generation conditions 2-31572  
 RbI, recombination luminescence of H-centres (*Russian*) 2-5742  
 Si indirect exciton ground state Stark shift and splitting 2-21505  
 Si laser cyclotron resonance, Zeeman absorpt. 2-41205  
 Si:B, recombination radiation of exciton-impurity band 2-2345  
 Si:B(P)(As), thermally evaporated, near-surface layer impurities, luminescence anal. 2-17526  
 Si:P(Li), bound excitons, photoluminesc., temp. depend. Zeeman study 2-51644  
 Si:Ti, isoelectronic bound exciton luminesc. lines, role of deep acceptors 2-17529  
 Si-SiO<sub>2</sub>, inversion layer, excitonic effects on optical absorption, shielded potential approx. 2-51314  
 SiC, cubic, electron-hole liq., ground state props., valence band masses, exciton and acceptor energies 2-35947  
 SiC:B (6H), bound excitons, electroabsorpt. spectra 2-9132  
 SiO<sub>2</sub> film, thermal, bulk and interface trapped charge generation, H<sub>2</sub>O diffusion effect 2-26526  
 SnI<sub>2</sub>, thin film, optical consts. in exciton absorption region (*Russian*) 2-31445  
 SnS<sub>2</sub>-4H and 6Hb, exciton luminescence, exciton-phonon interaction 2-22088  
 TiSe<sub>2</sub>, excitonic-insulator phase transition mechanism 2-45833  
 TiGaS<sub>2</sub>, Se<sub>2(1-x)</sub>, exciton states, absorpt. spectra study 2-36666  
 Xe monocrystals, surface excitons and surface polaritons in luminesc. spectrum (*Russian*) 2-26953  
 Xe, solid, excitons, hot luminescence and self trapping 2-17527  
 Y<sub>2</sub>O<sub>3</sub>Sr<sup>3+</sup>, Tb<sup>3+</sup> phosphor, photoluminesc. and cathodoluminesc., Tb<sup>3+</sup> enhancement mechanism 2-51666  
 ZnO, electron-hole condensate, high exciton binding energy, luminesc. spectra 2-35950  
 ZnO epitaxial film, exciton luminesc. rel. to deposition conditions 2-51698  
 ZnO, exciton complexes, luminescence and absorpt. spectra, mag. field effect 2-1834  
 ZnO, exciton reflection and transmission spectra 2-45837  
 ZnO single crystals, photoluminescence of free A-exciton, exchange interactions effect 2-2334  
 ZnSe, bound exciton emission, near-bandgap luminescence spectra 2-17520  
 ZnSe, cryst., luminesc. at high excitation levels 2-31547  
 ZnSe film, MBE grown, photoluminescence spectra 2-17522  
 ZnSe, resonant exciton photoluminescence and cathodoluminescence 2-2341  
 ZnSe single cryst., polished and etched, reflectivity and electroreflectance 2-36604  
 ZnSe single crystals subjected to one- and two-photon excitation, luminesc. and lasing 2-34770  
 ZnSe:Li, Na, luminesc. spectra, exciton emission and donor-acceptor pair recomb. 2-46671  
 ZnSe:N<sup>+</sup> ion implanted, shallow N acceptor, bond exciton line and phonon replicas obs. 2-51630  
 (ZnSe)<sub>1-x</sub>(CdTe)<sub>x</sub>, luminesc. under one-photon laser pumping, exciton behaviour 2-36697  
 ZnTe, pulse photoexcited, excitons and electron-hole plasma 2-51681  
 ZrS<sub>3</sub> layer compound, IR, Raman, reson. Raman spectra and valence force field 2-31472

executive programs *see supervisory and executive programs*

## exhibitions

No entries

exobiology *see extraterrestrial life*

## exoelectron emission

- alkali halides, X-irradiated at low temps., thermally stimulated exoelectron emission and thermolum. (*Japanese*) 2-51777  
 alloys, plastically deformed, structural defect role during exoelectron emission (*Russian*) 2-2422

## exoelectron emission continued

- alpha particle dosimetry by exoelectron emission (*Czech*) 2-49190  
 glass, K8 and GLS1, exoelectron emission parameters rel. to laser radiation strength 2-49850  
 metals, plastically deformed, structural defect role during exoelectron emission (*Russian*) 2-2422  
 microscope, scanning type exoelectron, design and construction (*Japanese*) 2-48843  
 photostimulated exoelectron emission microscope and its appl. (*Japanese*) 2-48842  
 solids, physico-chemical processes, activation, defects in solid, surface, props. 2-27058  
 Al, effect of atmosphere on exoelectron emission (*Japanese*) 2-51776  
 Au film, point defects, exoelectron emission, photostimulated emission and oriented growth on NaCl 2-45757  
 BeO photostimulated exoelectron emission, external factors effect 2-46884  
 BeO, photostimulated exoelectrons, energy distrib. at low temps., after electron bombardment 2-46885  
 CuO film, exoelectron emission 2-9255  
 LiNbO<sub>3</sub>, exoelectron emission accompanying piezoelec. effect 2-22151  
 NaCl, pure and Cu doped, exoelectron emission during thermal annihilation of V<sub>K</sub> centres 2-17610  
 NiO film, exoelectron emission 2-9255

## exosphere

- density variations in 900-1200 km range 2-10213  
 geocorona, Lyman  $\alpha$  absorpt. obs. rel. to solar Lyman  $\alpha$  flux determ. 2-32969  
 particle action on LAGEOS movement (*French*) 2-10296  
 H, theoretical distrib. of conc. based on kinetic theory (*Rumanian*) 2-23151  
 H velocity and temperature distrib., effect of charge exchange source 2-23150

## exotic atoms

- see also hadronic atoms; muonic atoms*  
 fractionally charged atoms, electronegativity, ionic crystal radius 2-39511  
 review (*Russian*) 2-39510  
 superheavy elements, chemical signatures for superheavy elements particles 2-15306  
 $\Sigma^+$  p atom, resonance states of light nuclei, atomic level breadth (*Russian*) 2-4420

expanding universe *see cosmology*

expansion, thermal *see thermal expansion*

expansion chambers *see cloud chambers*

exploding foils *see exploding wires and foils*

## exploding wires and foils

- see also discharges (electric); plasma production*  
 anode explosion in plasma channel 2-12419  
 conductivity disappearance of metal on electric explosion and macroscopic inhomogeneities development 2-40202  
 imploding wire arrays, dynamics meas. 2-20888  
 impulsive shock waves generated by electric discharges in air, schlieren photographs, obs. (*Japanese*) 2-25173  
 laser accelerated foils, rear-side density struct., dark field study 2-20883  
 underwater electroacoustic generator construction 2-4676  
 X-ray emission, sub-kV, from imploding wire plasmas 2-30341  
 Al foil, elect. explosion, numerical modelling of laminar pulsed discharge 2-44939  
 Cu wire, rupture by MHD instability, luminesc. 2-26999

explosion bubbles *see bubbles*

## explosions

- see also accidents; detonation; nuclear explosions; safety; shock waves*  
 airgun firing data acquisition system (*Japanese*) 2-32650  
 blast pressure meas., near-field 2-16407  
 free gas cloud, explosion propagation, pressure increase effects (*German*) 2-1227  
 gas dynamics, large particle method calcs., accuracy (*Russian*) 2-8184  
 gas explosions, hazard assessment (*Japanese*) 2-52208  
 heat transfer during shock-induced ignition of an explosive gas 2-35142  
 ideal gas, unsteady flow, shock wave motion, integral inequalities 2-16341  
 ignition, explosive, high vaporisation flux effect 2-13953  
 imploding systems, stability of converging shock waves 2-39949  
 industrial explosions, appl. to seismic exploration 2-52745  
 industrial explosions, seismograms processing using reverse filtering 2-52744  
 interaction of explosive charges on the surface of a barrier in a hydrodynamic jet model 2-20696  
 isothermal explosion model (*French*) 2-50285  
 LWR accidents, consequences and effects (*Dutch*) 2-4071  
 magnetogasdynamics, axially symm. explosion model, Eulerian coord. system anal. method 2-8241  
 magnetogasdynamics axially symm. explosion model, flow variables behind shock front 2-8240  
 meteorite explosions, energy calcs. using infrasound data 2-32960  
 Mount St. Helens eruption, 1980 May 18, air waves and explosive' yield 2-28053  
 nuclear power station explosive dismantling practicality (*German*) 2-11291  
 nuclear reactor demolition, contaminated tubes and tube bundles explosive separation (*German*) 2-11289  
 overtaking disturbances effect on shock wave motion due to intense explosion 2-44762  
 pipes, metal, collapse caused by explosion 2-12054  
 plasma, varying density, violent explosions, anal. soln. 2-12313  
 reactor pressure vessels explosive demolition method (*German*) 2-11290  
 red-ox reaction, possible explosions in reprocessing plants (*German*) 2-480  
 seismic prospecting, appl. of new distributed charge as seismic source 2-28027  
 shape of shock wave produced by a concentrated impact on a surface 2-39950  
 shock wave motion in explosive shock tube 2-16342  
 shock waves, unsteady, reflection and relevant numerical tests 2-3387  
 solid explosives, compressive wave-induced reactions, microscopic theory 2-41879  
 spherical charge layer explosion in weak-compressible fluid (*Russian*) 2-30183  
 standards for combustible gas detection instruments 2-31993



**explosions continued**

- steel, austenitic, Mn, explosion processing effect on phase transition temp. ranges and vol. effects 2-22215  
 stress meas. due to detonation, using carbon and quartz gages in tandem arrangement 2-38639  
 thermal, blowup anal. for spatially nonhomogeneous phase 2-17895  
 thermal explosion confined by const. temp. boundary, rapid transient phase 2-52210  
 thermal explosion in reactive viscous flows, crit. conditions 2-1273  
 theta pinch, implosions, reversed-field flux-trapping, mag. probe meas. 2-50439  
 thin explosive layers, ignition by impact, effect of polymer particles 2-41902  
 thin film plasma, excitation temp., degree of ionisation of added Fe species and electron density 2-40176  
 time development calc. of explosions on a gas-vacuum interface 2-39936  
 treatment plant for coal conversion, electrical equipment protection from explosions 2-52274  
 trinitrotoluene based explosives, brittle behaviour during high acceleration 2-2572  
 Tunguska meteorite, shock wave characts., simulation 2-14809  
 underwater explosive source spectrum scaling 2-48054  
 welding, explosive, gas plug shock compression 2-12180  
 Yumenoshima events 7-9, Tokyo base rock seismic study 2-32420  
 Al foils in artificial quartz atmosphere, electrical explosion 2-1361  
 FeO<sub>12</sub>, molten drops, steam explosion, LWR core meltdown appl. 2-7284  
 O<sub>3</sub>, heterogeneous thermal explosive dissociation 2-27478

**exposure meters** *see* **photometers****extended Huckel theory calculations** *see* **EHT calculations****extended X-ray absorption fine structure** *see* **EXAFS****extensive air showers** *see* **cosmic ray showers and bursts****extensometers**

- interferometric dilatometer and specimen holders for thermal expansion coeffs. meas. (*Japanese*) 2-19081  
 load line extensometer eval. for elastic-plastic fracture toughness eval. 2-22394  
 polarisation interferometer for absolute dilatometry 2-28834

**external flows**

- airfoils, upper surface blown, incompressible and transonic flows 2-50288  
 arbitrary profile, movement in fluid bounded by rectilinear porous wall (*French*) 2-4883  
 axial jet, flow outside wall boundary layer (*French*) 2-35186  
 axisymmetric flow, distorted turbulence 2-50245  
 circular jet, external flow velocity influence on inviscid instability 2-39964  
 creeping viscous flow around a heat-generating solid sphere 2-12153  
 disc, rotation in fluid-filled circular cylinder 2-39920  
 finite disc, rotating compressible flow over edge 2-12173  
 flow about a deformable body with axial symmetry (*French*) 2-44736  
 flow past a circular cylinder, comparisons and comments on recent calcs. 2-35127  
 flow past two dimens. obstacles 2-35112  
 incompressible boundary layers, interaction with strong viscous-inviscid interaction, calc. 2-1167  
 incompressible flow, radial flow between two parallel discs 2-35167  
 incompressible irrotational flow around multiphase in bounded region, flow calc. 2-15035  
 inviscid steady transonic flow problems 2-39939  
 lifting-line theory of swept wings based on the full potential theory 2-44755  
 microdeformable fluids, flow past rotating cylinder 2-16351  
 multi-solid particle system transport phenomenon anal. at higher Reynolds numbers by Karman-Pohlhausen method 2-25347  
 Newtonian flow, plane creeping, contour integral formulation 2-50232  
 non-linear free-surface flows about blunt bodies 2-30154  
 oscillating asymmetric cylinders, secondary external flows 2-20692  
 plunging airfoil, unsteady wake 2-44704  
 polar fluids, fundamental steady flows, theory 2-44787  
 rectilinear profile, movement through fluid parallel to porous wall (*French*) 2-4884  
 separated flow round cylinder, heat transfer characteristics (*Japanese*) 2-44733  
 sphere moving in viscous fluid, unstable motion, Stokes approx. (*Russian*) 2-16276  
 Stokes flow past a sphere coated with a thin fluid film 2-4780  
 streamwise corners with curvature independent of streamwise distance 2-50227  
 string, elastic, in non-viscous fluid, planar non-stationary motion (*Russian*) 2-16277  
 supersonic cascade flow over turbine blades (*German*) 2-44760  
 transient convective heat transfer to turbulent flow from flat plate 2-39899  
 turbulent flow past circular cylinder, tunnel blockage effects 2-39895  
 unsteady flow past a sphere at low Reynolds number 2-30102  
 viscous fluid steady flow due to rot. sphere 2-20686

**extraordinary ray** *see* **birefringence****extrapolation**

- |x|<sup>n</sup> potential, ground-state energy, strong coupling expansion 2-28712  
 wind speed height extrapolation, similarity model and modified power law model compared 2-28126

**extraterrestrial atmospheres** *see* **planetary satellite atmospheres****extraterrestrial life**

- Mars, sterility from UV-IR reflectance spectrum 2-38095  
 post Copernican views of life, assumptions 2-32868

**extraterrestrial radiofrequency radiation** *see* **radiofrequency cosmic radiation****extremum control** *see* **optimal control****extrusion**

- bisphenol A polycarbonate extruded at high shear stresses, degradation effects 2-13737  
 ceramic microstructure orientation by hot-forming methods 2-46988  
 Newtonian liquids, heat transfer in die swell 2-16223  
 nylons, (6) and (6,6), cryst. state extrusion of melt crystallised and soln. grown crystals 2-13763  
 plastic sheet coextrusion for bipolar electrodes of Zn-Br<sub>2</sub> battery 2-42001  
 poly(p-phenylene benzobisthiazole), as-extruded and heat treated ribbons, microstruct. study 2-22193  
 polymer melt spinning, interactive computer simulation program 2-46996  
 polymers, amorphous, hydrostatic extrusion, extrudate props. 2-47135  
 polymers, solid state extrusion, new developments 2-47133

**extrusion continued**

- polypropylene, stearate microadditions effect on extrudability and rheological props. (*Russian*) 2-46993  
 polystyrene, extruded, heat treatment above T<sub>g</sub> in dry and aq. environments 2-13752  
 polystyrene and HIPS melts, determ. of capillary entrance press. losses and first normal stress difference 2-25343  
 porous materials, sintered, cold extrusion forging 2-13670  
 steel, high-speed, prod. by atomisation and hot extrusion, heat treatment and props. 2-22252  
 steel, Mn, austenitic, strengthening by deform. and ageing 2-36891  
 steel, stainless, ferritic, oxide dispersion strengthened, prep. and mech. props. 2-41548  
 Al-Al<sub>2</sub>O<sub>3</sub> powder composites, wear-resistant, produced by cold extrusion 2-36813  
 Al-Al<sub>3</sub>Ni, eutectic, prep. of dispersion hardening materials (*French*) 2-41554  
 Bi<sub>2</sub>Te<sub>8</sub>Se<sub>10</sub>12, extruded, elec. props. and struct. 2-40979  
 Cu-Sn (12 and 15 wt.%), deformability improvement by hot extrusion and boride grain refining additions (*German*) 2-13755  
 Si<sub>3</sub>N<sub>4</sub>, reaction sintered, pore struct. determ. 2-36821  
 ZrO<sub>2</sub> fibres, from extrusion of solns., cryst. struct. form. 2-41574

**eye***see also* **contact lenses; vision**

- accommodative response evaluation in amblyopic eyes 2-37539  
 adaptation, mechanisms in rat retina 2-42099  
 amacrine cells, importance in processing pattern-induced flicker colours 2-22744  
 amacrine cells of the cat retina 2-22742  
 ametropia, effect on peripheral refr. 2-42088  
 astigmatic visual deprivation in cats; behavioural, optical and retinophysiological effects 2-37540  
 blood vessel patterns in colour ocular fundus images, computerised extraction and labelling methods 2-22815  
 blue sensitive cone mechanism characts., primate retinal ganglion cells 2-22738  
 blue sensitive cone system responses, visual cortex and arterially perfused eye, cat and monkey expts. 2-22739  
 blue-blindness in central fovea, psychological testing brightness of colour figures (*Japanese*) 2-14250  
 Broca-Sulzer flash duration exponent as function of retinal eccentricity 2-47597  
 cataract, effect of long term visual deprivation in a human 2-37536  
 chromatic aberration correcting lense 2-37706  
 chromatic neural mechanisms, post-receptor, revelation by flickering vs. fused adaptation 2-37565  
 cichlid fish retina, chromatic organisation 2-14248  
 colour and metals, teaching (*Spanish*) 2-3351  
 colour rivalry between eyes, min. light intensity required 2-2873  
 cones in the eye of the deep-sea teleost *Dirtemus argenteus* 2-37555  
 cornea and contact lens instrumentation, symposium, Anaheim, CA, USA (Dec. 1979) 2-33207  
 cornea swelling under extended wear soft contact lenses, osmotic and hypoxic components 2-22721  
 corneal endothelial observation techniques using biomicroscope and specular microscope 2-32296  
 corneal endothelium, rabbit, elec. props. determ. from impedance meas. 2-37535  
 corneal scattering characts., saline soln. immersion effect 2-22722  
 corneosceral coagulator based on Yb-Er:glass laser 2-47670  
 DC ocular rheography, microprocessor-controlled differentiator for signal processing 2-14346  
 deuteranopic eye, deuteranomalous colour matching 2-14247  
 diplopia thresholds and the initiation of vergence eye-movements 2-14242  
 ERG, slow PIII, math. model, stimulus duration variation 2-22755  
 ERG in grasshopper, *Romalea microptera*, adaptation props. 2-32202  
 ERG off-effects produced by short duration stimuli 2-52482  
 ERG waves, origins in terms of retinal cell function 2-22753  
 focal accuracy measurement, heuristic approach 2-18197  
 foetal movement patterns, development in humans 2-18202  
 fundus images, coloured, method of detecting and analysing peculiar regions 2-37647  
 fundus oculi, laser coagulation 2-14311  
 ganglion cell thresholds and discharge patterns, determ. by latencies; frog retina expts. 2-22750  
 ganglion cells in cat's retina, difference between X-and Y-type responses 2-22749  
 ganglion cells of frog retina, disinhibitory action of strychnine 2-22746  
 gonioscopy, indications for and assessment of gonioscopic signs in optometric practice 2-42182  
 grating patches summation, indication of many detector types at 1 retinal location 2-37559  
 horizontal cell membrane, ionic mechanisms underlying nonlinearity 2-22732  
 horizontal eye movements in man, composition of central programs 2-52484  
 instrument for monitoring eye fixation and pupil size during visual field exam. 2-47674  
 intraocular foreign Cu bodies, extraction using pulsed mag. fields 2-2914  
 intraocular pressure, instrument for self-meas. using optoelectronic probe 2-42192  
 IR detection by the naked human eye, mechanism of recording 2-2870  
 L-type horizontal cell response in retina, spatial decay props. 2-37549  
 laser microsurgery trends, wet-field CO<sub>2</sub> laser technique 2-22812  
 lasers in ophthalmic surgery 2-9854  
 lens accommodation, human, nonlinear anal. 2-52481  
 lenses, crystalline, animal, focal length determ. using Ronchi interferograms 2-2864  
 magnetic field generator, amplitude and phase regulating, for an eye movement monitor 2-42181  
 mammalian retina, functional architecture of cone bipolar cells 2-22730  
 melanoprotein granules of animal eye pigmented epithelium, photoinduced structural changes 2-52545  
 microspectrophotometric and electrophysiological meas. of visual pigment reaction in *Astacus* 2-52487  
 microwave radiation effects on crayfish compound eye 2-47635  
 monocular deprivation, long-term, functional restoration of vision in cats 2-22723  
 monocular rivalry rel. to eye movements 2-37557  
 movements recording, remote oculometer technique 2-37648



## eye continued

- muscular apparatus of human eye, math. modelling of work 2-6223  
 myopia, anomalous, theory of accommodative resting state (*Italian*) 2-18199  
 myopia, development in expt. animals 2-52480  
 myopia development in primates 2-37538  
 neural activity rel. to  $K^+$  and glial responses, spatio-temporal variables 2-22754  
 neuronal organisation in rat visual structs., review 2-22748  
 neurophysiological tracing, temporal retina projection to contralateral visual cortex, cat 2-22747  
 nystagmus, oculomotor dysfunction and accommodative disorders, emergent textural contours as visual monitoring technique 2-22762  
 oculomotor control system, dynamic characteristics estimation using band-limited pseudo random signals (*Korean*) 2-27805  
 oculomotor reaction time in dementia rel. to degree of cerebral dysfunction 2-37546  
 oculomotor system saccadic and smooth pursuit movements, stochastic sampled data model simulation using MIMIC (*Korean*) 2-32203  
 ophthalmoscope, Stereo 110, of Jena optical works, simultaneous stereo photography 2-9846  
 ophthalmoscope, Stereo 110 and RETINOPHOT 211, use of colour filters 2-9847  
 pencil eye shields for  $^{60}\text{Co}$  radiation, dosimetric evaluation 2-27906  
 perifoveal visual field, spatial grain 2-37560  
 photoreceptor biophysics, review 2-47598  
 photoreceptor cell static and dynamic props., light scatt. as sensitive probe 2-52675  
 photoreceptor cells, fluoresc., in vivo fly eye obs. 2-18204  
 photoreceptors of gastropod mollusc, *Hermissenda crassicornis*, discrete pot. waves 2-42102  
 photoreceptors of honey bee drone, diffuse and local effects of light adaptation 2-42103  
 photorefractive study of dark focus and refraction 2-14240  
 primate retina, colour coding 2-22737  
 protective goggles, parameters determ. using stereophotogrammetric apparatus 2-32304  
 psychophysiological changes of sight in Na vapour lamp illuminated room, recommendations (*Polish*) 2-42087  
 pupillary micro movements apparently related to pulse frequency 2-37554  
 receptor potential and slow  $P_{111}$  component to light and dark flashes, rabbit retina expts. 2-22760  
 refractive data, clinical evaluation of American Optical SR III Subjective Refractor 2-37689  
 resolution limit with slitfilm 2-28633  
 retina, Boops boops, morphological characterisation 2-22729  
 retina, cat, neural circuitry, cone pathways to ganglion cells 2-22726  
 retina, catfish, direct elec. connections between transient amacrine cells 2-37547  
 retina, dace, characts. of 2nd order neurons 2-22728  
 retina, dark-adapted, spatial and temporal summation 2-42092  
 retina, frog, alternating mag. field effects, special ref. to ganglion cell activity 2-14282  
 retina, small field L-horizontal cells, peripheral antagonism, turtle expts. 2-22733  
 retina, turtle, physiological and morphological study of inner plexiform layer 2-22743  
 retinal bipolar cells with double colour-opponent receptive fields 2-9800  
 retinal cells made syncytial after electrode penetration, morphological obs. 2-42094  
 retinal ganglion cell classes in Old World monkeys, morphology and central projections 2-22724  
 retinal ganglion cells, axonal transport of proteins 2-32205  
 retinal ganglion cells, dynamic aspects of centre and surround mechanisms, white noise anal. 2-22751  
 retinal ganglion cells, freq. response to moving monochromatic spots under photopic conditions 2-22740  
 retinal ganglion cells, goldfish, growth-related changes in receptive field props. 2-2867  
 retinal ganglion cells, goldfish, growth-related changes in size of receptive field centres 2-2868  
 retinal ganglion cells, monkey, luminance and response range to white light 2-42097  
 retinal ganglion cells, mudpuppy, light-evoked sustained inhibition 2-42096  
 retinal ganglion cells, rabbit, effect of synaptic transmitter drugs 2-22745  
 retinal horizontal cells, cat, freq. transfer props. 2-22731  
 retinal horizontal cells in visual streak, anatomy and physiology, turtle expts. 2-22735  
 retinal microvilli, *Astacus*, ultrastruct. changes rel. to light adaptation state, electron microscopic obs. (*German*) 2-2869  
 retinal nerve fibre layer, sensitivity to elevated intraocular press. and graded hypoxia, cat expts. 2-22752  
 retinal neuron modelling and  $\tau$  effect 2-37569  
 retinal neurons, catfish, spatio-temporal cross-correlation analysis 2-14241  
 retinal neurons, non-spike signals propagation, carp expts. 2-22736  
 retinal position and visual thresholds, visual system noise theory 2-18198  
 retinal protection from solar photic injury, protective filter performance 2-37686  
 retinal rod outer segments, flash-bleached, birefr. and forward light-scatt. meas. 2-42090  
 retinal rod outer segments, frog, light-induced changes of cyclic GMP content 2-32206  
 retinal S-potentials, control in dark adapted and leached fish retinae 2-22734  
 retinal signal pathways, carp, physiological and morphological studies 2-22725  
 retinitis pigmentosa patients, long wavelength sensitivity losses 2-37567  
 rhodopsin systems of the *Astacus* retina, absorpt. spectroscopic anal. (*German*) 2-27776  
 rod outer segment disk membranes, bovine,  $^1\text{H}$  NMR relax. study of bound water 2-52434  
 rod outer segment membrane, Gekko gekko, fluidity and ordering, temp. effect 2-9786  
 rod photoreceptors, involvement in dark adaptation 2-14244  
 saccadic eye movement disorders, quantitative evaluation, computerized system 2-42235  
 scene description generation from images 2-9801

## eye continued

- scleral creep in vitro resulting from cyclic pressure pulses, appls. to myopia 2-37537  
 servo controlled eye, human and primate, response to confined visual environment 2-47596  
 spatial information capacity of human eyes 2-42095  
 stellate cataracts in lenses of rats, latent period determ. rel. to irradiation conditions (*Russian*) 2-42139  
 strabismus, interocular transfer of motion aftereffect 2-37552  
 strabismus surgery, spatial localisation afterwards using proprioceptive information 2-18228  
 thin tissue layer exam. in human eye, US A-scan analysis 2-32288  
 TV applications in ophthalmic instruments (*Japanese*) 2-22810  
 US, pulsed, effects on ocular tissue 2-2894  
 US diagnostic instrument types for use in different medical fields 2-22805  
 veiling glare reduction methods compared for ophthalmic applications 2-18196  
 vertebrate cone retina, cybernetic model 2-22727  
 vestibular ocular response, directional changes after adaptation to optical tilt 2-37551  
 vestibulo-ocular reflex and visual-vestibular interaction, quantification for clinical diagnosis 2-47616  
 vitreous humour, math. model of diffusion 2-42091

## F-centres

- see also A-centres; M-centres; R-centres; Z-centres  
 alkali halide optical spectra, F-centre absorpt., vibr. props. 2-9170  
 alkali halides, activated, recombination photostimulated luminesc. kinetics (*Russian*) 2-5741  
 alkali halides, F-centres, spin-mixing parameter, light absorpt. effect 2-51632  
 alkali halides, F-colouring, role of impurities on primary process 2-12591  
 alkali halides, irradiated, colloidal centres growth (*Russian*) 2-2740  
 alkali halides, surface, quantum chem. models (*German*) 2-46654  
 alkali metal halides, F band thermal shift, model based on cryst. thermal expansion (*Spanish*) 2-41387  
 alkali metal halides, F centre luminesc. uniaxial stress induced polarisation, exptl. studies 2-17519  
 alkali metal halides, surface F centre, F band, absorpt. spectra position 2-40380  
 Cs halides, additively doped, Cs colloids, precip. and growth kinetics 2-25874  
 frozen ionic solutions, trapped electrons, theoretical model 2-13006  
 laser development and potential appls. (*Chinese*) 2-7772  
 lasers using  $\text{F}_A(\text{II})$ ,  $\text{F}_B(\text{II})$  centers, flashlamp excitation 2-7777  
 radiationless transition of F-centre, conservation of spin memory 2-9181  
 radiationless transitions, conservation of spin memory 2-9180  
 $\alpha\text{-Al}_2\text{O}_3$ , charge trapping, optical absorpt., photocond., and luminesc. meas. 2-40963  
 $\alpha\text{-Al}_2\text{O}_3$ , neutron irradi.,  $\text{F}^+$  centre, ENDOR study 2-17366  
 $\beta\text{-Al}_2\text{O}_3\text{-Na}_2\text{O}(\text{K}_2\text{O})(\text{Li}_2\text{O})$ ,  $\text{F}^+$  centre in cond. planes, EPR and ENDOR study 2-26744  
 $\text{BaF}_2$ , undoped and U doped, neutron irradiated, F-aggregate centres 2-35548  
 $\text{CaO}$ , spin dephasing, optically detected 2-44409  
 $\text{CaO:Mg}$ , neutron irradi., ODMR study of electron transfer from excited F centres 2-46430  
 $\text{Ca}_{10-y-z}(\text{PO}_4)_6-y(\text{CO}_3)_x(\text{CO}_3)_x\text{X}_{2-y-z}$  ( $\text{X}=\text{F}^-$ ,  $\text{OH}^-$ ),  $\text{F}^+$  centre ESR spectra, charge compensation mechanisms 2-36428  
 Cr halides, lattice static calc. of F-centre absorption energy 2-46642  
 $\text{Cs-Au}$  liquid alloy, metal-insulator transition 2-1828  
 $\text{CsBr}$ , tunnelling charge transfer to Frenkel defects, luminesc. obs. 2-45153  
 $\text{CsI:Na}$ , self-trapped exciton luminescence 2-41414  
 $\text{EuO}$ , Eu-rich, IR absorpt. spectra, bound mag. polaron excitations 2-46602  
 $\text{KBr}$ , F-centre excited state spectroscopy and picosecond relax. (*Russian*) 2-22051  
 $\text{KBr}$ , F-centre growth in zone II as a function of electron injection 2-12588  
 $\text{KBr}$ , optically pumped F centre, spin-memory loss, luminesc. obs. 2-46716  
 $\text{KCl}$ , F-centre growth in zone II as a function of electron injection 2-12588  
 $\text{KCl}$ , F-centres, optically excited, gain and fast nonradiative relax. meas. 2-5730  
 $\text{KCl}$ , holograms recorded through  $\text{F}\rightarrow\text{X}$  conversion, diff. efficiency, X-centre anisotropy effect 2-39596  
 $\text{KCl}$ , luminescence, F-centre pair electron transfer 2-26974  
 $\text{KCl:Ba}$ , thermoluminescence and  $\text{D}_3$  and F-centre stability 2-9204  
 $\text{KCl:KH}$ , ground, excited state absorption, emission and Raman props. of  $\text{F}_2(\text{H}^-)$  centre 2-36643  
 $\text{KCl:Na}$ ,  $\text{F}_B$  centre, ground state and optical props. 2-21530  
 $\text{KCl:KBr}$  mixed crystals, gamma-ray induced F-bands study 2-40379  
 $\text{KCl(Br)}$ , F-H recomb. and intrinsic light emission 2-26967  
 $\text{KF}$ , magneto-optical props. of excited state of F-centres 2-51558  
 $\text{KI}$ , F-centre and self trapped exciton formation, time resolved spectra study 2-25873  
 $\text{KI:TI}$ , colour centre production, by excitons (*Russian*) 2-35494  
 $\text{KBr}$ , F-centre absorpt. bands 2-26941  
 $\text{LiF}$ , annealing of radiation defects, chemiluminesc. and thermostimulated luminesc. (*Russian*) 2-9205  
 $\text{LiF}$ , electronic structure, hole centres (*Russian*) 2-21527  
 $\text{LiF}$ , F, H,  $\text{V}_k$  centres, electronic struct., optical absorption energy, INDO calc. 2-45886  
 $\text{LiF F}^+$  tunable colour centre laser and holographic selector 2-4529  
 $\text{LiF:Mg}$ , colour centres at 3.5 and 5 eV, optical absorpt. and thermoluminesc. studies 2-46649  
 $\text{Li}_2\text{O}$ , neutron and ion irradi. damage, ESR study 2-17338  
 $\text{MgO}$ , defects form. due to disintegrated breaking, EPR study (*Russian*) 2-51459  
 $\text{MgO}$  powder, defects mechanically activated by compressive, shear stress,  $\gamma$ -irrad. effect 2-35540  
 $\text{MgO}$ , proton irradi.,  $\text{F}^+$  centre form. 2-35551  
 $\text{NaBr}$  crystal, additively coloured, positron capture centres 2-13586  
 $\text{NaBr}$ , F-centres, optically excited, gain and fast nonradiative relax. meas. 2-5730  
 $\text{NaBr}$ , F-centres, radiative and non-radiative processes 2-9193  
 $\text{NaCl}$ , dislocation photodamping with F-centres, internal function study 2-45188



**F-centres** continued

- NaCl, optical breakdown, laser-induced primary defect form. role 2-8539
- NaCl, triplet self-trapped exciton, Frenkel defect form. and intersystem crossing 2-41401
- NaF, electronic struct. of F-centre 2-17010
- NaF:Li, additively coloured, F-centre decay props. 2-12590
- NaI, F-centres, radiative and non-radiative processes 2-9193
- RbBr:Eu<sup>2+</sup>, thermoluminesc., fluoresc., and optical absorpt. meas., luminesc. mechanism 2-27002
- RbBr(Cl), magneto-optical props. of excited state of F-centres 2-51558
- RbCl:Na, F<sub>B</sub> centre, ground state and optical props. 2-21530
- ZnS, ODMR obs. of quenching centre 2-13376

**F<sub>2</sub>-centres** see *M-centres***F<sub>3</sub>-centres** see *R-centres***F<sub>A</sub>-centres** see *A-centres***F-layer** see *F-region***F-region**

- airglow line intensity ratios used to determine F-region parameters 2-6441
- auroral electron beams at 200-250 km altitude, stability and accel. 2-23176
- auroral F-region, radar waves incoherent scatt. 2-10243
- auroral zone electron density irregularities, HF radar obs. 2-38019
- critical freq. and peak height, comparison of CCIR predictions and obs. over Brazil 2-18629
- critical frequencies, effect of sunspots numbers and solar faculae 2-28280
- decametric radiation propagation, contrib. to modulations in Jovian decametric spectra 2-38103
- disturbances due to upward propag. gravity wave 2-48077
- drift speed at low latitudes, interplanetary mag. field effects 2-42518
- electric field over Millstone Hill, model 2-14667
- electric field rel. to Pc 3 ground pulsations 2-28276
- electron density max., height anomalies in auroral ionosphere 2-14653
- electron density obs., 200-1500 km altitude 2-3129
- electron density response to ionospheric storm 2-38016
- electron precipitation auroral equatorward boundary rel. to solar wind and IMF 2-42521
- electron temperature global distrib., based on satellite obs. 2-32741
- equatorial descending spread-F, local collisional Rayleigh-Taylor instability 2-14665
- equatorial dynamo electric field development and spread-F 2-42532
- equatorial F-region irregularities and drifts, interferometer studies 2-28270
- equatorial region, plasma motion, vel. shear at post subset rise 2-23162
- equatorial spread-F, assoc. turbulent plasma obs. 2-23161
- equatorial spread-F, early phase obs. by HF ionosonde and VHF backscatter radar 2-23164
- equatorial spread-F, gravity wave initiation, case study, backscattering maps 2-32723
- equatorial spread-F decay phase, diffusion of small scale density irregularities 2-32725
- expansion of atmos. due to solar heating, effects on ionosphere 2-3135
- F<sub>1</sub>-layer model, appl. to thermosphere comp. yearly variations 2-48058
- F<sub>2</sub> layer, behaviour above Ruili, China, during solar eclipse (1980 February 16) (*Chinese*) 2-3122
- F<sub>2</sub>-layer, annual variations of f<sub>o</sub> and N and S hemisphere 2-48067
- F<sub>2</sub>-layer, daily variation of ionisation during magnetical quiet periods 2-32708
- F<sub>2</sub>-layer, interplanetary magnetic field polarity effect 2-48078
- F<sub>2</sub>-layer, nighttime electron density max., winter increase 2-14652
- F<sub>2</sub>-layer, partially scattered field model with completely displaced spectrum for EM wave refl. 2-3132
- F<sub>2</sub>-layer, photochemical effects of strong radiowave action 2-14657
- F<sub>2</sub>-layer of post-midnight sector, substorm disturbances at mid-latitude 2-48068
- F<sub>2</sub>-layer variations due to interplanetary mag. field influences 2-32709
- Farley-Buneman instability, two-layer model 2-48069
- infrasonic waves causing weak-large-scale inhomogeneities 2-48071
- ion composition at high-latitude, 140-300 km altitude 2-23179
- ionisation irregularities drift vel., interplanetary mag. field effects 2-42519
- irregularities at high-latitude during mag. storms 2-42520
- irregularities of kilometeric size, formal during midnight collapse 2-23178
- magnetospheric signature of F-layer positive storms 2-10240
- main trough region, subauroral zone study 2-14654
- nightglow emission from neutral atomic oxygen rel. to ionosphere parameters 2-10222
- nighttime irregularities, VHF scintillation meas. 2-42539
- nocturnal intermediate layer with E-region, characts. 2-28279
- nonlinear evaluation of plasma enhancements in the auroral ionosphere 2-52979
- Perkins mid latitude spread-F instability theory, equilib. predictions test 2-32727
- plasma cloud striations, scale sizes and lifetimes 2-14664
- plasma densities, comparison of AEROS-B and S3-1 satellite techniques 2-28282
- polar region structure changes due to interplanetary mag. field Y-component var. 2-38015
- polarised electric field up to latitude 56°, drifts radar obs. 2-14668
- radio transmission through ionosphere and solar wind, appl. of refr. scintillation theory 2-38022
- radiowave scintillation effects 2-48076
- response to solar EUV flares 2-14671
- scintillations associated with geomagnetic storm (22 March 1979) (*Japanese*) 2-48084
- seasonal variations for ion composition, convection model 2-52982
- severe auroral disturbances effect on equatorial ionosphere 2-52992
- short-period fluctuations of ionisation obs. at Arecoibo 2-52984
- solar eclipse disturbance of electron density, 16 Feb. 1980 over China (*Chinese*) 2-48064
- South America, comparison of foF<sub>2</sub> characts. at similar latitude/different longitudes 2-48075
- spread F in equatorial region, neutral wind and Pedersen cond. effects 2-52980
- spread-F, relation to vibrationally excited nitrogen 2-32735
- spread-F at mag. equatorial station Fortaleza 2-18621
- spread-F irregularities at mid-latitudes, occurrence rel. to spread-E<sub>s</sub> 2-32739
- spread-F irregularities deduced from OI nightglow obs. 2-3139

**F-region** continued

- stimulated ionisation of the upper ionosphere by powerful radiowaves (*Russian*) 2-28284
- thermal electron behaviour near Sq current focus (*Japanese*) 2-32704
- VHF transionospheric equatorial scintillation rel. to spread F occurrence 2-10241
- wave structure leading to backscatter plumes in bottomside F-layer 2-10239
- wind and temperature from auroral O I lines tracer 2-48062
- winter high latitude region, strong convection and assoc. plasma density features 2-23170
- F<sub>2</sub>-layer critical penetration freq. rel. to storm-time slab thickness at low latitudes 2-23157

**f-values** see *oscillator strengths***faces (crystal)** see *crystal faces***facsimile document reproduction** see *photocopying***facsimile signals** see *video signals***faculae** see *Sun***fading**

- see also *radiowave propagation*
- decametric oblique sounding signal fading in ionosphere 2-14656
- ionospheric EM wave propagation, rocket effluent effects assessment 2-10244
- microwave COMSTAR beacon, 28.56 GHz, slant path fade and rain-rate statistics, 3-yr. period 2-52900
- microwave COMSTAR beacon, ice depolarization at 28.56 GHz during low fades, radar backscatter correl. 2-52899
- microwave line-of-sight path propag. multipath fading and ducts 2-10155
- microwave line-of-sight propag., fading due to effect of meteorological mechanisms 2-10154
- radiowave propagation, rain fade duration statistics, anal. of presentation 2-37965

**failure, electrical** see *electrical faults***failure (mechanical)**

- see also *fracture; mechanical strength; plastic deformation*
- boundary value problems, variational formulations 2-12093
- fibrous composites, reliability calcs. for strength under multiaxial loading 2-2559
- plasma sprayed oxide coatings, thermally cycled, failure, acoustic testing 2-22400
- polymer-containing composite material under ablative failure, math. model (*Ukrainian*) 2-36938
- reinforced shells, thermoelastic, design based on failure conditions 2-25248
- thermoplastics, energy related failure criteria 2-22320

**failure analysis**

- see also *electrical faults; wear*
- aircraft component fatigue crack growth rates, electron fractography 2-52129
- effect of partial shadowing, thermal hot-spot and electrical second breakdown, failure mechanism 2-18061
- fusion reactor supercond. magnet system, pot. failures and hazards 2-550
- LMFBR sub-assembly grids, local blockages formation, modelling 2-15479
- LWR, steam explosion following postulated core meltdown accident, containment failure anal. 2-15592
- online hazard detection, anticipator system approach 2-15601
- photovoltaic module failure anal. using Solar Cell Laser Scanner, design, expt. results 2-37381
- photovoltaic modules, field failure mechanisms 2-37376
- PWR plant availability-limiting factors analysed 2-29423
- solar cell array failure modes for reverse voltages, reliability anal. 2-37380
- steel liner membrane under constraint load, failure anal. 2-11243
- terrestrial photovoltaic modules, field test sites, array reliability, failure mechanisms 2-37378
- WAMCOM computer code for common cause methodologies using large fault trees 2-15600

**fallout**

- see also *air pollution*
- N Atlantic waters, vars. in concs. of long-lived radioactive admixture (*Russian*) 2-10082
- atmospheric dispersion modelling, UK review 2-29445
- Chinese 21st nuclear explosion, detect. in eastern Canada 2-9758
- dry deposition of particles and gases, analytic model 2-42456
- Gaussian plume model, inaccuracies during real appl. 2-29443
- Hudson river sediment pollution by Pu, Cs, Co radionuclides 2-37468
- interhemispheric transport by E. African low-level jet 2-42428
- Laurentian Great Lakes, comparison of concs. of <sup>239,240</sup>Pu, <sup>137</sup>Cs and <sup>90</sup>Sr in 1973 and (1974) 2-9698
- nuclear weapons testing, fallout of <sup>58</sup>Co, <sup>60</sup>Co and <sup>54</sup>Mn in eastern Canada 2-9699
- reactor aerosol emissions, particle diameter dependence of deposition velocity, washout coeff., inhalation dose factor 2-29454
- reactor core-melt accident, radioactivity releases, residual risk 2-29404
- TMI-2, fallout, infant mortality 2-19771
- water-courses near Cadarache nuclear centre, 20 year monitoring 2-29456
- Wyre estuary, England, Pu occurrence and phase distrib. in sediments 2-22679
- Am, in marine sediments of Peru coastline 2-52819
- <sup>137</sup>Cs, body burdens in selected adult male Japanese 2-52644
- I vapour, deposition velocity, rel. to atmospheric variables 2-42062
- Pu, in marine sediments of Peru coastline 2-52819
- <sup>238</sup>Pu, <sup>239+240</sup>Pu, activity ratios in fall-out samples collected in the period 1961-8 2-27760
- <sup>241</sup>Pu, <sup>239+240</sup>Pu, activity ratios in fall-out samples collected in the period 1961-8 2-27760
- <sup>90</sup>Sr deposition collection, regional representativeness in USA 2-37482

**Faraday effect**

- atomic magneto-optical rot. spectroscopy and Zeeman splittings of various elements 2-39356
- crystals, forced optical anisotropy, Faraday effect 2-51561
- crystals and glasses, Faraday effect and optical recording of EPR, laser polarimetry method 2-36411
- dispersion of magnetooptic effects, special features 2-17451
- fibre-optic current meas. sensor, using Sagnac interferometer (*French*) 2-43001
- fibre-optic magnetooptic grating switch 2-20412



**Faraday effect continued**

- galaxies, intracuster Faraday rotation, statistical analysis 2-38289  
 garnets, small-bubble, nonvisual meas. of collapse field 2-26703  
 HF magnetic field effect on Faraday effect in EPR saturation conditions 2-9133  
 ISX-B Tokamak, line electron density and Faraday rotation simultaneous meas. 2-40170  
 magnetic films, submicron domains, Faraday effect 2-46551  
 magnetoplasma, null Faraday rotation 2-21999  
 measurement techniques (*Japanese*) 2-19149  
 multimode twisted fibres, light propagation, Verdet const. (*Russian*) 2-20427  
 multiple reflections in the theory of the Faraday effect 2-24942  
 optical fibre isolator, single mode, toroidal config. 2-25118  
 plasma, Alcator Tokamak, current density profiles, Faraday rot. study 2-20931  
 quartz, Faraday rot., energy gap determ. 2-26868  
 quartz glass, Faraday rot., energy gap determ. 2-26868  
 rare earth iron garnet magneto-optic isolator for optical fibre transmission (*Chinese*) 2-44482  
 relativistic electron plasma (*Russian*) 2-12398  
 semiconductors, many-valley, Faraday effect in crossed elec. and mag. fields 2-17453  
 solar coronal transient, Faraday rot. of spacecraft signal rel. to cross sectional mag. field 2-3241  
 Tokamak, TFR 600, Faraday rotation meas., exptl. test of far IR polarimetry 2-25652  
 Tokamak plasma, subMM-wave formic acid laser system for simultaneous electron density and Faraday rot. meas. 2-1350  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, Faraday rot. 2-46549  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te, Heisenberg spin glass, high field Faraday rotation, mag. phases 2-46548  
 CdTe, mag. field induced LT mixing of multicomponent polaritons 2-26872  
 CeF<sub>3</sub>, paramagnet, optic phonons, reststrahlen spectra mag. field depend. study 2-46550  
 CoF<sub>2</sub>, canted struct. induced by longitudinal mag. field, magneto-optical study 2-36321  
 Co<sub>2</sub>Mg<sub>1-x</sub>O, single cryst., mag. susceptibility (*Russian*) 2-2059  
 DyFeO<sub>3</sub> orthoferrite, magneto-optical study of mag. phase coexistence near Morin temp. 2-31179  
 Er<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub>, field-induced noncollinear mag. struct., Faraday effect obs. 2-46252  
 Er<sub>2</sub>Y<sub>0.5</sub>Fe<sub>2</sub>O<sub>12</sub>, garnet, Faraday rotation 2-21990  
 GaAs<sub>1-x</sub>Sb<sub>x</sub>, electron effective mass values 2-5345  
 GaSe, excitons, magneto-optical effects 2-26873  
 GdI<sub>3</sub>, studies using megagauss fields 2-31290  
 Gd<sub>3-x</sub>Pb<sub>x</sub>Fe<sub>3-y</sub>Ge<sub>5</sub>O<sub>12</sub>, Faraday rotation conc. and temp. depend. 2-21988  
 Ge, electron-hole drops, far IR magneto-plasma absorptions 2-26875  
 Ge, interband Faraday and Kerr effects anal. 2-26874  
 H plasma, mag. field determ. by reson. Faraday rotation 2-30338  
 InSb, laser induced interband Faraday rotation 2-11773  
 n-InSb, surface magnetoplasma waves, non-existence in Faraday geometry 2-26428  
 InSe, excitons, magneto-optical effects 2-26873  
 K<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub> system glasses, Fe<sub>2</sub>O<sub>3</sub> additions influence on Faraday rot. 2-41336  
 LiIO<sub>3</sub>, magnetotagration symm. anal. and Faraday effect (*Russian*) 2-22000  
 Nb<sub>3</sub>Sn neutron irradiat., diffusion layers, pinning forces 2-13253  
 Ni<sub>3</sub>B<sub>2</sub>O<sub>13</sub>(Br), ferromag., ferroelec. and ferroelastic domains, birefringence and Faraday effect study 2-31430  
 Ni<sub>3</sub>B<sub>2</sub>O<sub>13</sub>, ferroelec.-ferromag.-ferroelastic phase, elec. and optical meas. 2-31392  
 Pb<sub>2</sub>Ge<sub>2</sub>O<sub>11</sub>, electro- and magneto-optical phenomena 2-46542  
 Pb<sub>2</sub>Ge<sub>2</sub>O<sub>11</sub>:Eu, magnetotagration symm. anal. and Faraday effect (*Russian*) 2-22000  
 Pbl:Bi<sup>3+</sup> films, exciton-impurity interaction, Verdet const. and absorpt. spectra study 2-26305  
 Pd complexes, Pd II thioether peptides, circular dichroism, MCD and HPLC obs. 2-39428  
 Si, interband Faraday and Kerr effects anal. 2-26874  
 SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>, glass, Faraday rot., energy gap determ. 2-26868  
 SiO<sub>2</sub>-Na<sub>2</sub>O-CaO-MgO-Al<sub>2</sub>O<sub>3</sub>, soda lime glass, Faraday rot., energy gap determ. 2-26868  
 TbFe amorphous film, Faraday rotation 2-21989  
 TbFeSn amorphous film, Faraday rotation 2-21989  
 TbIG, studies using megagauss fields 2-31290  
 UO<sub>2</sub>, magneto-optical band struct. study 2-35937  
 Y<sub>1-x</sub>Fe<sub>x</sub>Al<sub>2</sub>O<sub>12</sub>, Faraday rotation study 2-21994  
 YFeO<sub>3</sub> orthoferrite, antiferromagnetic and ferromagnetic Faraday effect (*Russian*) 2-13456  
 YIG epitaxial layers, Xe<sup>+</sup> irradiat., magnetisation, Faraday rot. and FMR linewidth 2-21847  
 YIG, Faraday effect in mm region of spectrum 2-26870

**farming**

- space reflector technology for farming, weather manipulation and energy supply 2-52297  
 wind turbines feasibility study 2-32019

**fast amplifiers see pulse amplifiers****fast Fourier transforms**

- AC polarographic model 2-37135  
 brainstem response audiometry, waveform variation anal., FFT and inverse FFT appl. 2-18320  
 digital storage and analysis of speech 2-16195  
 DLTS, exponential and nonexponential transients, computer anal. 2-19089  
 electron microscope images, high-resoln., fast Fourier processing, on-line system construction 2-50492  
 gravity effect of axially symmetric bodies, 1-D FFT 2-22877  
 Hilbert transform evaluation by FFT technique 2-23130  
 microwave characteristics of soils, wideband meas. 2-52848  
 n-dimensional convolution integrals computation 2-18864  
 n-dimensional FFT tomography, inverse scatt. theory appl. 2-15090  
 noise source identification by FFT anal., at converter substations 2-14137  
 phonocardiography, first and second heart sound freq. spectra temporal variation 2-27858

**fast Fourier transforms continued**

- reciprocating machines, noise and vibration analysis using triggered FFT method 2-11889  
 respiratory sound, digital spectrum anal. 2-14303  
 transient acoustic response of submerged shells, DAA2 and IDCA models 2-20575  
 two-dimensional system, configurations generated by computer simulation, orientational order analysis method 2-5338

**fastening see joining processes****fatigue**

- for corrosion fatigue see stress corrosion cracking; for thermal fatigue see thermal stress cracking  
 see also fatigue cracks; fatigue testing  
 acoustic emission mechanisms, during high cycle fatigue 2-5935  
 beam, rectangular, bending, damping and fatigue 2-30033  
 $\alpha$ -brass, cold worked, low cycle fatigue strength 2-17723  
 brass waveguides, rectangular, vibr. strength, improvement by metal treatment (*Russian*) 2-31773  
 brittle materials, fatigue analysis using indentation flaws 2-8562  
 carbon fibre reinforced plastics, nondestructive testing 2-17796  
 ceramic materials, static and dynamic expts., statistical reproducibility 2-31766  
 cortical bone, human, uniaxial fatigue rel. to tissue phys. characts. 2-32241  
 creep cavity growth, fatigue failure at high temps. 2-50752  
 Cu-Al (9 wt.%) alloy, microcalorimetric eval. of disordering under different mech. solicitations 2-41602  
 cyclic and other loading, stress-strain relations 2-50133  
 cyclic fatigue, same aspects rel. to cyclic yield stress 2-39861  
 decomposition approach to statistical aspects of fracture 2-30061  
 elastomers, relax. characts. of strength and rupture (*German*) 2-22280  
 engineering tools and components, ion implantation techniques for non-semiconductor appl. 2-5134  
 epoxy resin, cross-linked, dynamic props. at large cyclic and static deform. 2-31783  
 F-7 photocell, working characteristics 2-23723  
 fatigue process reconstruction based on fracture surface morphology 2-21222  
 FCC crystals, secondary slip systems, glide and climb stresses due to isolated primary edge and screw dislocations 2-25899  
 flange connections, fatigue strength under simultaneous cyclic bending and tension (*Russian*) 2-30063  
 fretting fatigue considerations in engineering design 2-27287  
 glass fibre reinforced polyester, fatigue and failure mechanisms under complex stresses 2-17740  
 glass fibre reinforced polyester, SMC R-50, interlaminar shear fatigue 2-13811  
 graphite fibre reinforced epoxy laminate, fatigue damage monitoring by US mapping 2-9500  
 hysteresis loop, effects analysis and obs. 2-1147  
 laminates, fatigue damage mechanisms and fatigue-life diagram 2-4767  
 life and strength distributions, statistical method of evaluating fatigue data (*Japanese*) 2-8565  
 machine part design, creep eqn. coeffs. rel. to damage accumulation 2-41752  
 metal, fatigue, surface roughness profiles, SEM obs. 2-47183  
 metal ribbon, amorphous, fatigue behaviour 2-17729  
 metallic materials, cyclic hardening behaviour, endochronic description 2-31706  
 metals, fatigue, high temp., form. of boundary serrations and cavities 2-41733  
 metals, fatigue, props. of surface microcrack propag. (*Japanese*) 2-35584  
 metals, fatigue limit prediction, correl. with static strength characts. 2-41748  
 metals, FCC, pure fatigued, persistent slip bands, cyclic slip irreversibility 2-45168  
 metals, laminated inhomogeneous, stress-strain curve, effect of initial residual stress (*Japanese*) 2-5909  
 metals, low-cycle fatigue and cyclic creep 2-2580  
 Monel 400 steam generator tubes, low cycle fatigue 2-15503  
 NDT, fracture mechanics implications 2-9511  
 optical fibre, dynamic fatigue under repeated stress 2-49923  
 organic plastics, fatigue limit and breakdown 2-36963  
 polyamide 6, accelerated method of ageing rel. to fatigue resistance (*German*) 2-31715  
 polyamide 6, reinforced, influence of water uptake on fatigue limit (*German*) 2-9411  
 probability of fatigue failure as statistic 2-8561  
 PWR steam generators materials performance 2-4005  
 reactor plant welding technology, pipe line weld beads treatment (*German*) 2-4032  
 rolling contact, crit. stresses 2-45335  
 rubber fatigue data, statistical distrib. anal. 2-16713  
 stainless steel, type 304, high temp. low-cycle fatigue testing, environmental effects 2-41828  
 static and dynamic expts., statistical reproducibility 2-31766  
 statistical failure anal., size effect 2-52034  
 steel, alloy, Cr, Mo or V, boride layers, wear behaviour 2-22336  
 steel, alloy, heat resisting, precip. hardening, fatigue props., low cycle, temp. and strain depend. (*Japanese*) 2-36950  
 steel, alloy, metastable austenite, fatigue failure 2-41725  
 steel, alloy, nitriding in vac. 2-22381  
 steel, alloy, wear resistance and fatigue strength, low-temp. carbonitriding effect 2-52052  
 steel, austenitic Cr-Ni-Mn type, martensite transform. effect on cyclic strength and damping during deform. 2-52048  
 steel, austenitic stainless, crack propagation, in high-temp. low-cycle fatigue 2-22324  
 steel, austenitic stainless, fatigue life, high temp., effect of strain wave shape, appl. of strain range partitioning method 2-13821  
 steel, austenitic stainless, fatigue life, low-cycle, notch sensitivity, effect of hold-time at elevated temps. (*Japanese*) 2-36949  
 steel, austenitic stainless type 304, creep and fatigue fracture 2-51977  
 steel, C, contact fatigue life, effect of elemental S addition in lubricant 2-27288  
 steel, C, cyclic creep behaviour, max. stress and stress ratio effects 2-5926  
 steel, C, laminated, fatigue fracture 2-5924  
 steel, C, universal joints, bulk-surface hardening 2-22380



## fatigue continued

- steel, C, wear resistance and fatigue strength, low-temp. carbonitriding effect 2-52052
- steel, Cr-Mo, fission reactor steam generator components, creep, ductility, fatigue 2-15489
- steel, Cr-Mo, LMFBF steam generator materials experience 2-4020
- steel, Cr-Mo-(Ni), effect of alloying on struct. and props. of nitrated case 2-22382
- steel, Cr-Mo-V, crack propagation, in high-temp. low-cycle fatigue 2-22324
- steel, Cr-Mo-V cast, quenching, tempering and ageing rel. to mech. props. 2-13750
- steel, crack propagation, in high-temp. low-cycle fatigue 2-22324
- steel, dual-phase, martensite C-content influence, on cyclic props. 2-41719
- steel, electron-fractographic method for measuring stress level caused by fatigue fracture 2-37019
- steel, fatigue thresholds, influence of non-metallic inclusions 2-27266
- steel, heat-resistant, low-alloy and austenitic, endurance, effects of loading freq., temp. and cycle asymmetry 2-41754
- steel, high C, struct., alloying principles 2-2586
- steel, high Mn, wrought, phase comp. and props., effect of C, Mn, Ni and N concs. 2-51938
- steel, high tension HT55, corrosion fatigue crack growth, mech. effects of corrosion products 2-41777
- steel, low alloy, fatigue strength, effect of modified ausforming 2-22303
- steel, low alloy, fatigue strength, under combined superposed stress waves (Japanese) 2-21224
- steel, low alloy, high strength, rehardening by surface plastic deform. 2-36876
- steel, low alloy cylindrical specimens, rolling contact fatigue, effect of Tufftriding 2-27286
- steel, low C, fatigue life distrib., effect of cyclic strain ageing (Japanese) 2-5947
- steel, low C, impact loading, initial microstruct. effect (Czech) 2-31781
- steel, low C, low cycle fatigue, grain size effects 2-47152
- steel, low C, plate, fatigue strength with a sharp notch and precrack under plane bending 2-5925
- steel, low C, tufftrided, fatigue strength under axial load (Japanese) 2-5948
- steel, low-alloy, fracture and low-cycle deform. at low temps. 2-41746
- steel, low-alloy, full-scale welded I-beams, fatigue life calc. and testing 2-27370
- steel, low-alloy, induction hardening 2-27198
- steel, martensitic, strengthening mechanism in tempering, after surface plastic deform. 2-41637
- steel, medium C, press-fitted specimens, fatigue strength, influence of varying stress amplitude (Japanese) 2-9401
- steel, medium-C, fatigue and corrosion fatigue, Ni-Al and Ni-Ti plasma coatings influence 2-17776
- steel, merchant, room temp. creep 2-31741
- steel, microalloyed with Se and Ca, effect on machinability 2-36958
- steel, mild, fatigue failure prediction using US surface waves, corner reflector method 2-9512
- steel, mild 1015, acoustic emission mechanisms, during high cycle fatigue 2-5935
- steel, mixed structures resulting from quenching, mech. props. 2-51954
- steel, nonmetallic inclusions, role in metallurgical quality 2-5951
- steel, porous, sintered, strength rel. to design relevant data (German) 2-41724
- steel, stainless, weld overlay, H-induced cracking in heat-affected zone of steam generator forging 2-4015
- steel, stainless 316, metallographic assessment of structural degradation during creep-fatigue 2-5995
- steel, structural, fatigue strength and embrittlement, Pb addition effect 2-36957
- steel, tool D6, acoustic emission mechanisms, during high cycle fatigue 2-5935
- steel, welded joints, fatigue strength, effect of programmed mean stress 2-13822
- steel ball bearings, C-diffusion during rolling contact fatigue, high resol. autoradiography determ. 2-2636
- steel fibre reinforced Ag, high-cycle fatigue, failure mechanisms 2-52027
- steel fibre reinforced Ag, low-cycle fatigue 2-52026
- steels, for machine structural use, low- and high-cycle fatigue props. 2-27267
- stress coining technique, theory, improvement of fatigue performance at hole 2-12085
- stress gradients, around notches 2-5943
- stress intensity factors and fatigue limit, effect of grain size and yield stress 2-30521
- superconductors, fatigue and friction behaviour rel. to supercond. state 2-13824
- welds, fatigue resist. prediction, review 2-52049
- Al alloy, selective reinforcement by adhesive bonding with uniaxially aligned C fibre reinforced epoxy 2-27221
- Al alloy, stress corrosion cracking and corrosion fatigue, specimen thickness effects 2-41711
- Al alloys, fatigue fractures microrelief, in high-freq. loading 2-22326
- Al film, plasma vapour deposited, adhesion failure by repeated bending of substrate 2-2689
- Al, pure, role of substitutional solute atmospheres during cyclic deform. 2-5950
- Al-Ag alloys, role of substitutional solute atmospheres during cyclic deform. 2-5950
- Al-alloy sheet material, shear lips on fatigue fractures 2-5931
- Al-Cu alloys, role of substitutional solute atmospheres during cyclic deform. 2-5950
- Al-Cu-Mg alloy 2024-T3, low cycle fatigue life prediction by acoustic emission 2-52020
- Al-Mg, butt-welded joints, fatigue fractographs (Japanese) 2-22311
- Al-Mg alloys, role of substitutional solute atmospheres during cyclic deform. 2-5950
- Al-Mg-Zn, fretting fatigue, environmental and cyclic stress effect, statistically-based study 2-31791
- Al-Mg-Zn, fretting fatigue, effect of periodic high loads 2-31792
- Al-Zn alloys, role of substitutional solute atmospheres during cyclic deform. 2-5950
- Al-Zn-Mg-Cu alloy 7075-T6, low cycle fatigue prediction by acoustic emission 2-52021

## fatigue continued

- Al-Zn-Mg (4.9, 1.2 wt.%), peak aged, fatigued, persistent slip bands, dislocation struct. and precip. 2-36935
- Al-Zn-Mg-Cu, 7000 series, low cycle fatigue behaviour, effect of alloy chem. and heat treatment 2-17735
- Al-Zn-Mg-Cu (6, 2, 0.01-2.1 wt.%), high strength, low cycle fatigue behaviour in T7351 condition 2-27276
- Al4Zn1.6Mg, aged, low-cycle fatigue, plastic strain change effects (Serbian) 2-9389
- Al4Zn1.6Mg, overaged, deform. microstruct. and crack form. in low-cycle fatigue (Serbian) 2-9388
- Bi film, plasma vapour deposited, adhesion failure by repeated bending of substrate 2-2689
- Cu, cold worked, low cycle fatigue strength 2-17723
- Cu, cyclic damage mechanism, interactions at elevated temps. 2-47176
- Cu, fatigue at low amplitudes, inelastic study 2-47169
- Cu, fatigue hardening, mechanisms in single crystals, effect of strain amplitude and orientation 2-27186
- Cu, fatigue hardening and nucleation of persistent slip bands 2-51933
- Cu, fatigue life, high cycle, single crystals, tested under plastic-strain controlled conditions 2-27277
- Cu, fatigued, positron lifetimes meas. in isochronal annealing 2-51738
- Cu, fatigued single crystal, void formation, positron annihilation meas. 2-35485
- Cu single crystals, dislocation behaviour in fatigue, strain localisation in persistent slip bands 2-5126
- Cu, slip and fatigue, single crystals, in air and in vacuum 2-9396
- Cu:N(Ne), ion implanted, fatigue and internal friction 2-47182
- Cu-Ni alloy, config. of {100} dislocation walls formed during fatigue 2-40392
- Fe, Armco, nitriding in vac. 2-22381
- Fe, cast, microscopic distrib. of local strains under static load 2-41708
- Fe, cast, spheroidal graphite, surface fatigue improvements by mech. and heat treatments (French) 2-47056
- Fe, deform. fatigue, structural changes (Russian) 2-9386
- Fe, electrodeposited, stress meas. using slip initiation 2-47173
- Fe-based single crystals, shear band form., fatigue-induced 2-47170
- Fe-Ni (22 wt.%), strengthening mechanism in tempering, after surface plastic deform. 2-41637
- Fe-Ni-Cr, alloy 800H, low-cycle fatigue, high temp., effect of ageing and cold working 2-36951
- Fe-Si (3 wt.%), single crystals, containing preintroduced twins, cyclic deform. 2-22316
- Mo, multicryst., deform. fatigue, structural changes (Russian) 2-9386
- Ni alloys, heat resistant, estimation and prediction of fatigue strength rel. to struct. 2-27284
- Ni, fatigue, bending, surface hardening 2-41738
- Ni-Al-Mo, aligned eutectics, fatigue at elevated temps. 2-36952
- Ni-base superalloy, asymm. fatigue hardening model for single crystals. 2-51929
- Ni-base superalloy, Nimonic 115, 22 2-52039
- Ni-Co, fatigued FCC material, eigenstresses determ. from X-ray diffr. profiles 2-27258
- Ni-Cr-Al-Co, anisotropic fatigue hardening of single cryst. at elevated temps. 2-13814
- Ni-Cr-Co alloys, Waspalloy, fatigue life, low cycle, high temp., effect of time-depend. processes 2-31768
- Ni-Fe, fatigued FCC material, eigenstresses determ. from X-ray diffr. profiles 2-27258
- Ni<sub>3</sub>Al-Mo, eutectic, directionally solidified, low cycle fatigue behaviour 2-36953
- NiTi fatigue behavior 2-41722
- a-Si, glow discharge, fatigue effect in luminesc. at low temp. 2-46755
- Si:H, amorphous, time resolved luminesc. and fatigue effects 2-9179
- SIN, reaction-bonded, mech. behaviour under various thermal and mech. conditions 2-9414
- SiO film, plasma vapour deposited, adhesion failure by repeated bending of substrate 2-2689
- Ti  $\alpha$ -alloy, surface plastic strain effect on surface quality and fatigue strength 2-13747
- Ti, fatigue failure prediction using US surface waves, corner reflector method 2-9512
- Ti, oxide coated, fatigue strength 2-27279
- Ti-Al, oxide coated, fatigue strength 2-27279
- Ti-Al-Mo-V, rehardening by surface plastic deform. 2-36876
- Ti-Al-Zr-Sn-Nb, IMI 829, fatigue behaviour 2-31770
- Ti-Mo-Al-V alloy, BT-16, thermal cycling simulating diffusion welding, strength and fracture toughness 2-41721
- $\alpha$ -Zr, fatigue, cold work effect at elev. temp. 2-31772

## fatigue cracks

- acoustic emission mechanisms, during high cycle fatigue 2-5935
- aircraft component fatigue crack growth rates, electron fractography 2-52129
- Al alloys fatigue strengths and welded joints 2-52122
- alloys, fatigue crack growth, high temp., design approach for correl. over wide range of parameters 2-31794
- $\alpha$ -brass, ductile, significance of initiation, propagation and closure of microcracks in high cycle fatigue 2-52019
- C-shaped specimen, fatigue crack growth behaviour, through and part-through cracks (Japanese) 2-9493
- crack formation and subcritical growth, from small defects, elec. potential monitoring 2-27369
- crack growth, under mixed mode loading 2-25302
- crack growth data, static and fatigue, anal. 2-27265
- crack tip morphology, influence on crack propag. rates, in corrosive environments 2-8084
- creep-fatigue crack propag. data, displaying method 2-30062
- diamond, synthetic single cryst., fatigue crack propag. 2-22322
- elastoplasticity, fatigue crack propag. (French) 2-50124
- fatigue process reconstruction based on fracture surface morphology 2-21222
- graphite, nucl. grade, NDT eval. of fatigue damage using US meas., phys. and mech. props. correl. 2-41832
- growth characteristics, cracks embedded in fastener hole walls 2-12671
- growth rate data acquisition system for linear and nonlinear fracture mechanics appl. 2-22314
- growth rate measurement, ultrasonic method 2-47281
- growth threshold of small cracks 2-8560
- Inconel 706 Base material and gas W arc weldments, cryogenic mech. props. meas. 2-22330



**fatigue cracks continued**

- initiation, assessment by acoustic emission 2-17826  
 initiation detection method from crack growth studies 2-6000  
 LMFBR welded components, thermally stressed, linear elastic fracture mech. appl. 2-39111  
 metal, fatigue crack distribution irregularities analysis, review 2-52041  
 metal composites, fatigue crack propag. along interface 2-47153  
 metals, fatigue, props. of surface microcrack propag. (*Japanese*) 2-35584  
 metals, fatigue crack propagation mechanisms 2-30520  
 mode II crack advance mechanisms 2-5956  
 notches, fatigue crack initiation 2-27259  
 nylon-6,6, semicryst., fatigue damage and fracture mechanism 2-21225  
 panels, reinforced, with initial cracks, fatigue crack growth 2-5928  
 plate, semi-infinite with a step, crack origination from an angular corner 2-4753  
 PMMA, crack propag. kinetics under cyclic tensile loading 2-52018  
 poly(vinylidene fluoride), semicryst., fatigue damage and fracture mechanism 2-21225  
 polycarbonate, biaxial impact fatigue 2-52023  
 polyacetal, semicryst., fatigue damage and fracture mechanism 2-21225  
 polymers, thermoplastic, fatigue crack propagation, normal and anomalous 2-9399  
 polystyrene, glassy, craze and fatigue resist., surface treatments, protective coatings, light refl. obs. 2-47168  
 polystyrene, high impact, fatigue endurance and surface treatments influence 2-17724  
 propagation, review of new developments 2-13805  
 propagation rate obs., in stainless steel and rock, stress ratio influence 2-1148  
 PVC, fatigue crack propag., mol. wt. and specimen history effects, glass transition temp. 2-47162  
 PWR feedwater pipes, fatigue cracking, metallurgical anal. 2-15505  
 round bars, fatigue cracking, stress intensity factors 2-8091  
 steel, alloy type, fracture toughness characs., loading cycle influence 2-52040  
 steel, austenitic stainless, fatigue, biaxial low-cycle, crack propag. behaviour at elevated temp. (*Japanese*) 2-22312  
 steel, austenitic stainless, fracture and strength props. at cryogenic temps. 2-9390  
 steel, austenitic stainless, N strengthened, props., for cryogenic magnet structs. 2-22331  
 steel, austenitic stainless, neutron irradiated, creep-fatigue crack propagation, cavity form. and linkage 2-31771  
 steel, austenitic weldment, US inspection of fatigue cracks using shear wave probe 2-52125  
 steel, C, type S10C and S45C, fatigue life under rot. bending and reversed torsion, understress effect 2-5923  
 steel, constructional, fast local stress meas. using annular proportional counter 2-27361  
 steel, Cr-Mo, cyclic crack growth at low stress intensities, influence of fatigue underloads 2-27278  
 steel, fatigue crack propagation of SNCM8 in rotating bending, effect of environment (*Japanese*) 2-9402  
 steel, fatigue cracks in reactor structural materials 2-15512  
 steel, high strength impact, hydrogen induced crack propagation (*Chinese*) 2-52035  
 steel, low alloy, high strength, fatigue crack propag., effect of low temp. and grain size 2-47174  
 steel, low alloy, plate, surface fatigue crack growth 2-9395  
 steel, low C, fatigue cracks, early stage, optical and SEM study (*Japanese*) 2-22310  
 steel, low C, fracture toughness characs., load cyclicality effect 2-41745  
 steel, low C, near threshold fatigue crack propag., stress ratio and grain size effects 2-52015  
 steel, low-alloy sintered, density effect on fracture behaviour, model investigation 2-41735  
 steel, low-alloy sintered, density effect on tensile strength, fracture toughness and fatigue crack propag. 2-41734  
 steel, low-C, water vapour effect on fatigue crack tip stress and strain distrib., crack propag. energy 2-2581  
 steel, marine, heat treatment influence on low freq. fatigue crack growth rates 2-41717  
 steel, mild, ductile, significance of initiation, propagation and closure of microcracks in high cycle fatigue 2-52019  
 steel, mild 1015, acoustic emission mechanisms, during high cycle fatigue 2-5935  
 steel, stainless, type AISI 316, fatigue crack arrest threshold, influence of various parameters 2-27264  
 steel, stainless type 316, crack initiation in corrosion fatigue, current transient method 2-17769  
 steel, tool D6, acoustic emission mechanisms, during high cycle fatigue 2-5935  
 steel, Torbar, reinforcing for concrete, formation and growth of fatigue cracks 2-5942  
 steel, type 316, neutron irradiated, low. temp. fatigue crack propag. 2-47159  
 steel, welded joints, fatigue strength, effect of programmed mean stress 2-13822  
 steel, X-70, fatigue crack closure 2-5944  
 steel crack deformation analysis, using moire fringe multiplication (*German*) 2-22402  
 steels, martensitic, HY80, HY130, 4140, fatigue macrocrack growth, threshold and mid- $\Delta K$  range 2-9394  
 stochastic model for damage accumulation (*Japanese*) 2-8564  
 stress intensity factors and fatigue limit, effect of grain size and yield stress 2-30521  
 thermal fatigue behaviour, of brittle structural materials 2-2583  
 tip, metallographic method for determ. of plastic strains 2-22395  
 US fatigue testing, reson. freq. changes due to plastic deform. and crack initiation 2-41821  
 welds, fatigue resist. prediction, review 2-52049  
 Al, 99.99% and 1100, fatigue crack propagation 2-36954  
 Al alloy, 7075-T651, compact tension specimens,  $K_{IC}$  values, effect of crack length and crack front geometry 2-12670  
 Al alloy, 7075-T651, fatigue crack growth, effect of irregular crack front 2-13793  
 Al alloy AK4-IT1, fatigue crack growth rate, rel. to stress intensity factor, correl. anal. 2-22325  
 Al alloys, ductile, significance of initiation, propagation and closure of microcracks in high cycle fatigue 2-52019  
 Al alloys, fracture toughness characs., loading cycle influence 2-52040

**fatigue cracks continued**

- Al alloys, growth rate data acquisition system for linear and nonlinear fracture mechanics appl. 2-22314  
 Al-alloy sheet material, shear lips on fatigue fractures 2-5931  
 Al-alloys, high-strength, 2024-T4, 6061-T6, 7075-T6, fatigue crack tip plastic strain 2-5941  
 Al-Mg-Fe-Ni, alloy type 2168-T651, fatigue crack arrest threshold, influence of various parameters 2-27264  
 Al-Zn-Mg (5, 1 wt.%), peak aged, fatigued, persistent slip bands in front of Stage I cracks 2-36936  
 Al-Zn-Mg-Cu (5.9, 2.6, 1.7 wt.%), fatigue crack propag., effect of microstructure 2-9405  
 Al-Zn-Mg-Cu (6.2, 2.5, 1.7 wt.%), type 7010, fatigue crack initiation at notches 2-27259  
 Fe, Armco, fracture toughness characs., loading cycle influence 2-52040  
 Fe, fatigue crack propag. under cyclic loads (*Russian*) 2-22304  
 Mg-Al(Y)(Nd), Mg-Zn-Ca and Mg-Li-Al-Ca, fatigue crack growth rate at 20 and -135°C 2-41747  
 Mg-base alloy sheet, fatigue crack growth, parameters and micromechanisms 2-9397  
 Ni based superalloys, influence of Pt-Al coatings and hot corrosion on fatigue behaviour 2-31850  
 Ni-Al-Mo, aligned eutectics, fatigue at elevated temps. 2-36952  
 Ni-base alloy, Nimonic 115, fatigue crack growth at elevated temps. in carburising environments 2-36956  
 Ni-base superalloy, fatigue crack growth behaviour, effect of product form 2-31793  
 Ti alloy VT-16, fatigue crack growth, transition point threshold rate determ. 2-22399  
 Ti alloys, fracture toughness characs., loading cycle influence 2-52040  
 Ti, oxidation effect on surface crack form. and mech. props. (*German*) 2-13866  
 Ti-Al-Sn(V)(Mo)(V-Sn), oxidation effect on surface crack form. and mech. props. (*German*) 2-13866  
 Ti-Al-V (6.4 wt.%), isostatically hot pressed, powder purity problems 2-13677
- fatigue failure** *see* **fatigue**  
**fatigue fracture** *see* **fatigue**  
**fatigue life** *see* **fatigue**  
**fatigue testing**  
*for corrosion fatigue testing, see corrosion testing*  
 accelerated fatigue testing method 2-41833  
 advanced high temp. reactor materials (*German*) 2-468  
 aircraft component fatigue crack growth rates, electron fractography 2-52129  
 Al alloys fatigue strengths and welded joints 2-52122  
 carbon fibre reinforced plastics, nondestructive testing and fatigue behaviour 2-17796  
 ceramics, thermal fatigue, ring test (*Japanese*) 2-9495  
 composites, fatigue test method for mild loading conditions 2-13881  
 crack growth rate measurement, ultrasonic method 2-47281  
 crank-operated drive for dynamic displacements with a constant phase angle 2-37014  
 damage transducer, material selection, design and fabrication 2-47283  
 flat electrically conducting samples, transducer operation anal. with contact excitation in fatigue tests 2-6010  
 graphite, nucl. grade, NDT eval. of fatigue damage using US meas., phys. and mech. props. correl. 2-41832  
 high-frequency, quick method for fatigue characs. determ. 2-31889  
 low-cycle endurance evaluation, under isothermal and nonisothermal loading 2-13909  
 low-cycle fatigue evaluation with strain criteria for fracture 2-13910  
 magnetoscopy appl. to testing of ferromagnetic objects (*French*) 2-31886  
 mean stress diagram modification (*German*) 2-27359  
 metal, fatigue crack distribution irregularities analysis, review 2-52041  
 metal ribbon, amorphous, fatigue behaviour 2-17729  
 metals, failure resistance evaluation under fatigue and creep conditions 2-47279  
 metals, fatigue life determination, by testing for thermal fatigue 2-37020  
 metals, fatigue life prediction under high-cycle loading 2-31888  
 mild steel, fatigue testing, US method 2-47272  
 overhead electric conductor, service life determ. under wind vibrations, laboratory tests (*German*) 2-47274  
 panels, reinforced, with initial cracks, fatigue crack growth 2-5928  
 polycarbonate, biaxial impact fatigue 2-52023  
 power overhead lines fatigue stability research and development (*German*) 2-47275  
 random and programmed loading equivalence 2-13911  
 rotating structures, low-cycle test device 2-13914  
 service life determination under low-cycle loading, fractographic and ultrasonic methods comparison 2-2667  
 statistical methods of eval. (*German*) 2-13902  
 steel, alloy type, fracture toughness characs., loading cycle influence 2-52040  
 steel, austenitic stainless, 1.4948 and 1.4919, hold time influence on load-creep-fatigue at 550°C (*German*) 2-469  
 steel, austenitic stainless, multispecimen fatigue crack propagation testing 2-31893  
 steel, C, contact fatigue life, effect of elemental S addition in lubricant 2-27288  
 steel, Cr-Mo, with different grain sizes, test temp. influence on impact fatigue crack growth 2-5996  
 steel, forging, low-cycle fatigue evaluation with strain criteria for fracture 2-13910  
 steel, heat-resistant, low-alloy and austenitic, endurance, effects of loading freq., temp. and cycle asymmetry 2-41754  
 steel, low-alloy, full-scale welded I-beams, fatigue life calc. and testing 2-27370  
 steel, low-alloy, powder forged, preforming treatments influence on mech. props., inclusion content 2-41736  
 steel, low-alloy, sintered, density effect on tensile strength, fracture toughness and fatigue crack propag. 2-41734  
 steel, low-alloy sintered, density effect on fracture behaviour, model investigation 2-41735  
 steel, maraging, random and programmed loading equivalence 2-13911  
 steel, maraging Cr-Ni type, strength characs. at elevated operating temps. 2-52047  
 steel, stainless, fatigue testing within reactor 2-47282  
 steel, stainless, service life determination under low-cycle loading, fractographic and ultrasonic methods comparison 2-2667



**fatigue testing continued**

- steel, stainless AISI type 304L, straight pipe for LWR, fatigue and fracture behaviour 2-11184  
 steel castings, containing shrinkage, tests to determ. fatigue strength 2-9490  
 strain gauges, foil, reliability in repeated cyclic deform. 2-13913  
 US resonance testing machine, computer controlled, lifetime and crack growth meas. 2-37038  
 vibration tests by sweeping method, fatigue assessment (*Polish*) 2-27374  
 welds, fatigue resist. prediction, review 2-52049  
 wind power system 2-17867  
 Al alloy D16T, welded joints, acoustic fatigue under var. amplitude load- ing 2-13817  
 Al alloys, failure resistance evaluation under fatigue and creep conditions 2-47279  
 Al-Mg, random and programmed loading equivalence 2-13911  
 Al-Mg, service life determination under low-cycle loading, fractographic and ultrasonic methods comparison 2-2667  
 Cu, HF testing, reson. freq. changes due to plastic deform. and crack initiation 2-41821  
 Fe, Armo, fracture toughness characts., loading cycle influence 2-52040  
 Ti alloy OT-4-1, welded joints, acoustic fatigue under var. amplitude load- ing 2-13817  
 Ti alloy VT-16, fatigue crack growth, transition point threshold rate determ. 2-22399  
 Ti alloys, fracture toughness characts., loading cycle influence 2-52040  
 Ti-Al-Cr-Mo alloy VTZ-1, fatigue testing and strength, statistical regu- larities 2-37010

**fault location**

- calibration and standards 2-33487  
 machinery vibration problems, identification and correction, fault location aspects 2-8102  
 optical single mode fibre cable, fault location using InGaAsP-InP BH laser 2-4516  
 optical time domain reflectometry, using YAG laser, increase in detectable fault location length 2-3609  
 partial discharges measurement and location on gas pipe cables or enclosed switchgear (*German*) 2-44922  
 single mode optical fibre, 52 km long, fault location using stimulated Raman scatt. effect 2-44453

**fault-tolerant computing**

- North America Datum, redesign of software 2-52711  
 nuclear power plants, data handling system redundancy, availability analy- sis 2-29374

**faults, electrical see electrical faults****f.d.m. see frequency division multiplexing****feature extraction see pattern recognition****feedback**

- atmosphere models, linear and nonlinear aspects of snow albedo feedback 2-11539  
 blood pump motor controller for artificial heart 2-52667  
 double strange attractors in rigid body motion with linear feedback control 2-18878  
 fission reactors, seismic response, active control appl. 2-24438  
 global low frequency active noise attenuation using feedback loop of microphone, loudspeaker and associated electronics 2-4654  
 integrated-optic Mach-Zender amplitude modulator with optoelectronic feedback loop, response linearization 2-11866  
 nonlinear distortions correction of light beams by optical system with feed- back 2-981  
 power supply, feedback controlled current stabilised, for CO<sub>2</sub> waveguide laser (*Chinese*) 2-7783  
 semiconductor laser spectrum-narrowing ratio determ. by optical feedback 2-39647  
 unstable resonator with cancelling edge waves 2-49784  
 water pool boiling process stabilisation at atmospheric pressure around Pt heating wire using electronic feedback system (*French*) 2-44719  
 He-Ne frequency stabilised laser, optical feedback effects 2-16031

**feeds, antenna see antenna feeders****Fermi-Dirac statistics see quantum statistical mechanics****Fermi gas see fermion systems****Fermi level**

- Anderson asymmetric model, local quasiparticle density of states 2-35917  
 Anderson model, periodic, with Falicov-Kimball type interaction, valence transition 2-51131  
 chalcogenide glass film, defect struct. 2-45056  
 electron gas, two-dimensional, localisation and quantised Hall resistance 2-17003  
 expressions for Fermi function 2-45798  
 group V amorphous semiconductors, review 2-45037  
 II-VI semiconductors, zincblende struct., surface vacancies 2-26461  
 III-V semiconductor Schottky barriers, Fermi level pinning by surface antisite defects 2-8851  
 III-V semiconductors, zincblende struct., surface vacancies 2-26461  
 metal-semiconductor interface, metal thickness effects on electronic props. 2-26498  
 metal-semiconductor Schottky barrier height 2-26473  
 metals, X-ray K-absorption edge shifts due to chem. combination 2-2369  
 noble metals and their alloys, direct meas. of relative Fermi energies 2-1819  
 Schottky barriers, work function model 2-41009  
 semiconducting electrodes, stabilising by means of redox systems 2-21671  
 semiconductor, dielectric function, transverse 2-26316  
 semiconductors, amorphous, density of localised states, linear specific heat, Anderson model 2-40836  
 semiconductors, degenerate narrow-gap, Fermi-Dirac integrals and Fermi energy 2-45979  
 semiconductors, heavily doped, screened impurity band theory 2-30821  
 semiconductors, photons at non-zero chemical potential 2-22077  
 semiconductors, ultrasonic absorpt. oscils. in crystals with inverted band struct. 2-16726  
 transition elements binary alloys, with short-range order, electron density of state calc. 2-5340  
 transition metal diborides, electronic struct. 2-40778  
 4d transition metals, X-ray L<sub>1</sub>, L<sub>2</sub> and L<sub>3</sub> absorpt. limits 2-51744  
 TTF-TCNQ, elastic electron tunnelling study of metal-insulator transition 2-35941  
 type-II superconductors, NMR studies of supercond. props., review 2-31059

**Fermi level continued**

- Ag halide:Cu photochromic glasses, effects of electron-hole separation on recomb. probability 2-5415  
 αAg<sub>2</sub>Se, oriented thick films, Fermi level position, Hall effect 2-46040  
 Al (100), photoexcitation enhancement due to surface photoeffect, photoelectron spectra 2-13627  
 Al<sub>0.4</sub>Ga<sub>0.6</sub>As-GaAs heterojunction FET, magnetoconductance, g-factor, gate voltage 2-41003  
 As amorphous film, UHV sublimed, elec. and optical props. 2-46172  
 B, β-rhombohedral, hopping cond. in strong elec. field 2-40923  
 B<sub>12</sub>C<sub>2</sub>, electronic struct. and semicond. behaviour 2-45826  
 C:H,B(P), amorphous films, thermopower, elec. cond. 2-46178  
 Cd, magnetic props. and energy spectrum, homovalent impurities and press. effects (*Russian*) 2-5523  
 Cd<sub>3</sub>As<sub>2</sub>, band gap, Fermi level, electron tunnelling study 2-26561  
 CdS:CuCl<sub>2</sub>, baked layers, effects on elec. and photoelectrical props. 2-30983  
 p-CdTe:Ag, impurity acceptor photocond. centres, equilib. and nonequilib. 2-26444  
 Co-Al, valence band density of states, XPS study 2-22147  
 Cu-Ga alloys, Fermi level shift study by X-ray absorpt. spectroscopy 2-1812  
 Cu-Ge alloys, Fermi level shift study by X-ray absorpt. spectroscopy 2-1812  
 Cu<sub>2</sub>Pd<sub>1-x</sub>, chemical-shift effects and valence-electron spectra 2-2411  
 cubic lattice, variable range hopping at Fermi level, Monte Carlo simula- tion 2-40863  
 Fe, positron annihilation, band struct. and Fermi surface 2-46814  
 FeAl(Ti), positron annihilation, band struct. and Fermi surface 2-46814  
 α-Fe<sub>2</sub>O<sub>3</sub>, hematite, energy spectrum, photoemission, opt. spectra and elec. cond. obs. 2-5790  
 n-GaAs, photoelectrochemical corrosion, effect of Au monolayer 2-13181  
 GaAs, surface chemistry and interface Fermi level position, single defect model 2-26460  
 GaAs, surface potential, Kelvin probe method, photoemission (*French*) 2-5449  
 n-GaAs-Au Schottky barrier height increase, Fermi energy pinning behav- iour 2-5451  
 Ge, laser-induced metastable states 2-45895  
 Ge:Sb(As)(Ga), electron-hole liq., photoluminesc. polarisation in mag. field study 2-35952  
 Ge:Zn, second impurity level, activation energy, random field effects 2-51124  
 Hg<sub>1-x</sub>Mn<sub>x</sub>Te, zero gap, conduction-valence band overlap in mag. field Hall coeff. and cond. meas. 2-45827  
 p-InP-liq. electrolyte interface, Fermi level pinning rel. to photoelectro- chem. energy conversion 2-8871  
 n-InSb, Landau levels nonthermal broadening, transverse magnetoresist. and photomag. effect 2-8822  
 LiAl, electronic struct., self consistent calc. 2-12962  
 LiCd(Zn), self-consistent linear muffin-tin orbital calcs. 2-21496  
 Mo, valence band studied by photoelectron spectra 2-2407  
 Na<sub>2</sub>WO<sub>4</sub>, (0.26<x<0.76), Fermi edge, density of states, mag. susceptibil- ity, UPS 2-31599  
 NbS<sub>3</sub>, valence band struct., XPS study 2-9249  
 Nb<sub>3</sub>Sn, tetragonal, band struct. 2-45819  
 Ni, electronic struct., self-energy contribs. 2-45820  
 PbMo<sub>6</sub>Se<sub>6</sub>(S<sub>6</sub>), Chevrel phase supercond., NMR study 2-41064  
 (PbSe)<sub>1-x</sub>(SnTe)<sub>x</sub> in solid soln., elec. props. 2-8796  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te, epitaxial layer, elec. cond. and Hall effect (*Russian*) 2-46179  
 Pd-SiO<sub>2</sub>-Si diodes, DC response, small signal admittance, Fermi level, theoretical modelling 2-51311  
 Pt surfaces, direct optical interband transitions in bremsstrahlung isochro- mat spectra 2-46810  
 Se, amorphous, localised electron states, xerographic spectroscopy 2-45896  
 Si (111)-Ga(Sb) interface Schottky barrier formation study 2-41011  
 Si (111)(1×1):As(B) surfaces, highly doped, laser annealing prep., elec- tronic props., photoemission study 2-8847  
 Si, amorphous, laser-induced metastable states 2-45895  
 n-Si, DLTS spectrum charges due to electron irradi. 2-17012  
 Si, intrinsic carrier conc., temp. depend. energy gap, Fermi level 2-16986  
 Si:Au, intrinsic carrier conc., temp. depend. energy gap, Fermi level 2-16986  
 Si:B, electron-hole drops, luminescence 2-45845  
 Si:H, amorphous, light induced changes, computer modelling of admit- tance and DLTS 2-36090  
 Si:H, amorphous, plasma deposited, photocond., temp. depend. 2-1943  
 Si:H, amorphous plasma deposited coating, field effect cond., illumination and annealing effects 2-45969  
 a-Si:H,B(P), luminesc. spectrum, effect of dangling bond states 2-46670  
 Si:H,P amorphous, transport props. 2-45984  
 Si:H,P(B) amorphous film, photoconductivity mag. field depend. 2-41033  
 Si:P(B)(P), amorphous DC sputtered coating, doping and elec. props. 2-40726  
 Si-Al<sub>2</sub>O<sub>3</sub>, charge carrier props. in p-type layers of SOS 2-8812  
 SiC, impurity photosensitivity, recomb. centres 2-36099  
 Si<sub>3</sub>N<sub>4</sub>, insulating film, electronic struct. and total-current spectra 2-13208  
 SiO<sub>2</sub>, insulating film, electronic struct. and total-current spectra 2-13208  
 SiO<sub>2</sub>-Si interface, local atomic order and electronic struct. theory (*French*) 2-17127  
 SnMo<sub>6</sub>Se<sub>6</sub>, Chevrel phase supercond., NMR study 2-41064  
 (SnTe)<sub>1-x</sub>(PbSe)<sub>x</sub> epitaxial layers, band struct. parameters (*Russian*) 2-21499  
 SrTiO<sub>3</sub>:Nb, superconducting mechanism 2-31022  
 TaS<sub>2</sub>, valence band struct., XPS study 2-9249  
 p-Te film, evaporated, thermoelec. power 2-8831  
 TiC,N<sub>1-x</sub>, density of states and X-ray spectra 2-46829  
 TiH<sub>x</sub>, band struct., NMR study 2-40777  
 TiS<sub>2</sub>, valence band struct., XPS study 2-9249  
 Tm, X-ray absorpt. near edge structures 2-13588  
 TmSe intermediate valence cryst., X-ray, absorpt. near edge structures 2-13588  
 V<sub>2</sub>O<sub>5</sub>-P<sub>2</sub>O<sub>5</sub>-Sb<sub>2</sub>O<sub>3</sub>-As<sub>2</sub>O<sub>3</sub> glass, elec. props. 2-45968  
 V<sub>2</sub>Si, electronic struct. and quadrupole interactions, cluster model 2-26349  
 W surface (001), EELS angular depend., clean and adsorbate covered surfaces 2-51754



**Fermi liquid** *see fermion systems***Fermi resonance**

- acetylene, Raman spectrum, anharmonicity const. and polarizability components 2-4294  
 allene, Fermi resonance, Coriolis interaction, IR obs. 2-49405  
 3,4-dichlorobenzoylchlorides, IR vibr. spectra in liq. and soln. phase 2-29585  
 dihalomethanes, IR overtone spectra, symm. effects 2-20058  
 formic acid ( $-d_2$ ), gaseous, Raman spectra 2-39412  
 liquids, hydrogen stretching IR bands with strong H bonds, stochastic theory 2-34398  
 methyl chloride, rovibrational anal., IR obs. 2-717  
 methyl halides, Raman intensities in  $\nu_1$  region, Fermi resonance 2-4299  
 methyl iodide, collision induced vibr. relax. rates, relax. pathways in 3000  $cm^{-1}$  energy regime 2-34393  
 methyldimethylphosphinate ( $-d_3$ ), Raman conformational anal. 2-4290  
 propionitrile, isotopic species, IR and Raman vibr. spectra 2-39401  
 water vapour, absorption spectrum, vibr.-rot. levels, rot. and centrifugal const. 2-11502  
 $CaCO_3$ , calcite crystal, polariton Fermi reson. in hyper-Raman spectra 2-17481  
 GaP, Raman scatt. by bound two-phonon states, polariton Fermi resonance (Russian) 2-13492  
 $(NH_4)_2SO_4$ , ferroelectric, internal vibr., polarised Raman spectrum 2-36653  
 OCS, vibr. states, rot. and centrifugal const., microwave obs. 2-699

**Fermi surface**

- Brillouin zone integration for calculating intra-band joint densities of states 2-45806  
 conducting ferromagnet, magnon relaxation (Russian) 2-5532  
 Friedel sum rule and consequences for periodic Kondo and mixed valence systems 2-51075  
 graphite, neutron irradi., de Haas-van Alphen freqs. 2-35924  
 graphite intercalation compound, synthetic metal, band length change and cond., review 2-26270  
 graphite intercalation compounds, single-staged, magnetorefl. and Shubnikov-de Haas expts. 2-22002  
 graphite intercalation cpds., electronic dispersion relations, energy bands 2-12956  
 graphite- $AlCl_3$ , intercalate, Shubnikov-de Haas effect (Russian) 2-8820  
 graphite-ICl intercalate, Shubnikov-de Haas effect (Russian) 2-8820  
 layered crystals, electron polarisation props. near Lifshits transition 2-30787  
 metal, disordered two-dimens., electron quasiparticle lifetime due to electron-electron scatt. 2-45951  
 metal, doppleron excitation, origin orbits effect 2-51470  
 metal, sound absorpt., crit. directions, rel. to zero-slope lines on Fermi surface 2-45403  
 metallic thin wires, one-dimens. type IR divergences 2-16982  
 metals, dopplerons and Gantmakher-Kaner effect (Russian) 2-46054  
 metals, films and wires, quantum magnetodimensional phenomena 2-36159  
 metals, mag. oscillations, discovery and early history 2-21492  
 metals, nonlinear acoustic effects near electron topological transition point (Russian) 2-26276  
 metals, normally BCC, (112) twin boundaries, appl. of resist. of relaxed periodic grain boundaries calc. method (French) 2-1890  
 Peierls one-dimensional conductor, Frohlich conductivity, commensurate charge density waves (Russian) 2-45948  
 rare earth chalcogenides, computer-aided prediction of cryst. struct. rel. to electron struct. 2-5080  
 screw dislocations influence on de Haas-van Alphen signals 2-21493  
 superconductors with dielec. gap on Fermi surface, EM props. 2-31055  
 thin metal films, energy depend. of thermoelectric power, graphical determ. 2-51153  
 uncompensated solids, influence of drag effects on thermal cond. 2-21562  
 Ag, cyclotron mass anisotropy and electron-phonon interaction 2-45810  
 Ag, IR absorption coeff., pseudopot. calc. (Russian) 2-22012  
 Ag $_{1-x}Pd_x$ , mass and lifetime enhancement due to disorder, residual resist., KKR-CPA calc. 2-30880  
 AgSbTe $_2$ , thermoelec. hole spectrum model of transport props. 2-26424  
 Al, low field Hall effect, size effects 2-36012  
 Al-Ti(Cr)(Mn)(Fe)(Ni)(Cu), low-field Hall effect, impurity effects 2-36011  
 Al-Ti(V), giant low field magnetoresistance and Hall effect 2-36014  
 Au, Fermi surface electron-phonon interaction anisotropy 2-40759  
 Au, Fermi surface radii, RF size effect 2-40760  
 Au, IR absorption coeff., pseudopot. calc. (Russian) 2-22012  
 Au-Ag, conc. alloy, de Haas-van Alphen effect 2-35921  
 AuTe $_2$ , Br, Fermi surface determ. by Shubnikov-de Haas effect 2-1811  
 Be, electronic structure calc. 2-51078  
 Be, galvanomagnetic coefficients by path integration 2-51150  
 Bi epitaxial film, Shubnikov-de Haas effect obs. (Russian) 2-8819  
 Bi, Fermi surface and band parameters, press. depend. magnetorefl. studies 2-13457  
 Bi, microwave quantum magnetoabsorpt. modulation 2-26275  
 BiSb, relax. time and effective mass of charge carriers 2-8811  
 Bi $_{1-x}Sb_x$ , Fermi surface and band parameters, press. depend. magnetorefl. studies 2-13457  
 Cd $_3$ As $_2$ , Fermi surface anisotropy, Shubnikov-de Haas meas. 2-26277  
 Cd $_3$ P $_2$ , Fermi surface, Shubnikov-de Haas study 2-26278  
 CeSb(Bi), anomalous mag. props., anisotropic p-f mixing mechanism 2-8952  
 Cu, IR absorption coeff., pseudopot. calc. (Russian) 2-22012  
 Cu, low field Hall effect, size effects 2-36012  
 Cu-Al, dil., electronic impurity scatt. anisotropy, mag. field induced surface-state resons. meas. 2-13058  
 Cu-Au, short-range order and Fermi surface, X-ray diffr. study 2-50587  
 $\alpha$ -Cu-Ag alloys, Fermi surface dimensions, nonlinear composition depend. 2-40758  
 Cu-Pd(Pt)(Rh), dilute, Fermi surface and impurity scatt., de Haas-van Alphen meas. 2-12958  
 Cu $_3$ Au, ordered, Fermi surface and electronic struct. 2-40761  
 Cu $_3$ MoS $_8$ , magnetoresistance anisotropy, Fermi surface (Russian) 2-26413  
 Cu $_3$ MoS $_8$  film, normal and supercond. state, electronic spectrum parameters and interaction const. calc. (Russian) 2-41059  
 ErAl $_3$ , thin film, occurrence of modulated phases 2-8734  
 Er $_{1-x}$ Gd $_x$ Al $_3$  thin film, occurrence of modulated phases 2-8734  
 Fe, positron annihilation, band struct. and Fermi surface 2-46814

**Fermi surface continued**

- Fe-Rh, pressure-temp. mag. phase diagram 2-36347  
 FeAl(Ti), positron annihilation, band struct. and Fermi surface 2-46814  
 Fe $_{51}$ Rh $_{49}$ , ferromagnetic, press. induced antiferromagnetism 2-46282  
 Ga, RF size effect resonances, press. depend. 2-35925  
 GeTe, thermoelec. hole spectrum model of transport props. 2-26424  
 Hg $_{1-x}$ AsF $_6$ , Fermi surface press. depend. 2-35926  
 In, enhanced electron mass anisotropy 2-1814  
 InSb, electronic struct. in zinc-blende and rocksalt phases 2-12968  
 K, Knight shift vol. depend. 2-9046  
 K $_{0.9}$ Mo $_6$ O $_{17}$ , quasi two dimensional metal, elec. and mag. props. meas. 2-40871  
 LaSn $_3$ , band struct., self consistent APW calc. 2-16983  
 LaSn $_3$ , de Haas-van Alphen effect and linear muffin-tin orbital band struct. 2-40757  
 Li, electrical transport props. 2-40869  
 Li, Knight shift vol. depend. 2-9046  
 MnSi, electronic band struct. and helical spin density wave 2-30792  
 MnTe, thermoelec. hole spectrum model of transport props. 2-26424  
 Na, Knight shift vol. depend. 2-9046  
 Nb, Fermi surface, press. effect, de Haas-van Alphen meas. 2-45811  
 Nb-Mo alloys, electron-phonon interaction calc. 2-40806  
 NbSe $_3$ , Fermi surfaces, rel. to CDW transitions and Hall const. behaviour 2-45805  
 Nb $_{1-x}$ Ta $_x$ Se $_3$ , superconductivity and charge density waves 2-2042  
 Nb $_{1-x}$ Ti $_x$ Se $_3$ , superconductivity and charge density waves 2-2042  
 Pb $_2$ Mo $_6$ S $_7$ , magnetoresistance anisotropy, Fermi surface (Russian) 2-26413  
 Re, galvanomagnetic props., 4.2 to 273K, anisotropic intersheet electron scatt. and Fermi surface anisotropy effect (Russian) 2-1892  
 (Sn) $_x$ , energy band struct. and Fermi surface 2-30795  
 (Sn) $_x$ , interacting two-carrier system, elec. resistivity 2-30882  
 (SbBr $_3$ ) $_x$ , energy band struct. and Fermi surface 2-30795  
 (SbBr $_3$ ) $_x$ , interacting two-carrier system, elec. resistivity 2-30882  
 Sb, electron-phonon scatt. rates, RF size effect 2-36032  
 Sn, Fermi surface, dispersion of transverse and longitudinal sound velocities in mag. field (Russian) 2-45812  
 Sn whiskers, strained, supercond. and Fermi surface parameters 2-31107  
 Sn $_2$ Mo $_6$ S $_7$ , magnetoresistance anisotropy, Fermi surface (Russian) 2-26413  
 Ta-W, elastic constants 2-50737  
 Ta $_2$ , charge density wave metal-insulator transition study 2-51088  
 Tb, de Haas-van Alphen effect and exchange-split Fermi surfaces 2-45807  
 TiNi, electronic struct. calcs. 2-45821  
 Ti, helicon resonance, carrier conc., magnetoresistivity, Fermi surface model 2-8748  
 V, superconductivity and upper crit. field anisotropy 2-46217  
 W, dopplerons and Gantmakher-Kaner effect (Russian) 2-46054  
 Y, Fermi surface cross-sections under press., mag. struct. (Russian) 2-26274  
 Zn, galvanomagnetic effects, rel. to Fermi surface topology 2-13042  
 Zn $_2$ N $_2$ , Fermi surface de Haas-van Alphen study 2-35923

**Fermi-Thomas model** *see Thomas-Fermi model***fermion systems**

*see also electron gas; liquid helium-3*

- Anderson impurity clusters, sp.-ht. and susceptibility Fermi liq. relations 2-26325  
 antiferromagnet, one-dimensional, itinerant magnetism approach 2-31131  
 asymptotically Abelian quantum systems of fermions 2-10708  
 backward scattering, collective excitations, RPA calcs. 2-45863  
 Born-Green-Yvon theory of fermion quantum fluids 2-28773  
 boson expansion from functional representation method 2-11102  
 correlated BCS theory for strongly interacting fermion system 2-28759  
 correlated Fermi liquids, pairing phenomena 2-42940  
 correlation functions of one-dimensional systems (Russian) 2-42942  
 coupled boson-fermion systems, field theories Monte Carlo calc. 2-18973  
 crystals, quantum field theory, two-band model in one-dimensional fermion systems 2-50785  
 d-dimensional Landsberg gas 2-15104  
 degenerate Fermi gas theory, multiparticle scatt. 2-6793  
 electron liquid, strongly coupled, ground-state energy 2-45868  
 electron liquid form. in molten metals 2-40517  
 electron liquids, strongly coupled, metallic density, CDW instability 2-12981  
 electron liquids, strongly coupled, static props. in low density domain and Wigner crystn. 2-12980  
 Fermi points, Tomonaga-Luttinger model, many body approach 2-107  
 Fermi-Dirac functions to 2-D and 3-D systems, quantitative appl. 2-10707  
 fermion-vortex system, index calcs. 2-29009  
 Friedel sum rule and consequences for periodic Kondo and mixed valence systems 2-51075  
 functional representation in boson expansion theory 2-11101  
 functional WKB method 2-10654  
 Green's function Monte Carlo and the many-fermion problem 2-28767  
 impurity quasiparticle as a weak inhomogeneity 2-28765  
 infinite fermion system, ground state energy, perturbation theory approach 2-28761  
 interacting fermion Hamiltonian, real-space scaling methods 2-19045  
 itinerant newly magnetic Fermi liquid, two-dimens. mag., confined geom. effects 2-16921  
 linear systems, Fermi-Dirac quantisation 2-28751  
 liquids, optimal Jastrow correlations 2-28770  
 localised vibrational modes 2-106  
 many-body Schrodinger eqn. for fermions, stochastic soln. 2-28768  
 many-fermion system, boson expansion, canonical theory, particle-hole corrls. 2-49041  
 many-fermion system, boson expansion, canonical theory with constraints 2-49040  
 many-photon absorpt. with pulsed and const. pumping (Russian) 2-24982  
 massive neutrino gas, vol. viscosity 2-48609  
 metals, transmission electron spin resonance, g-factor, Fermi liquid effects 2-46361  
 moment expansion of Fermi distrib. power 2-28753  
 Monte Carlo approach applicable to systems with fermion and boson degrees of freedom 2-33421  
 n-fermion problem, consistent second-order approximate soln. 2-15366  
 N-fermion system, relation between Hellmann energy functional and ground state energy 2-10709



**fermion systems continued**

- normal phase, longwave surface oscils. (*Russian*) 2-12874  
 nuclear level densities with pairing are self-consistent ground-state shell effects 2-19450  
 nuclear matter, Fermi-liquid props. in relativistic mean-field theory 2-19466  
 number operator  $CC^*$  in statistics of bosons and fermions 2-38560  
 one-dimensional, lock-in transitions and charge transfer 2-45946  
 parafermions, hidden, in  $Z(N)$  field theory 2-3696  
 perturbation series Brueckner-Bethe and coupled cluster many-body methods 2-38564  
 planar model, classical double Coulomb gas, crit. props. 2-23591  
 polyacetylene, metallic, spin-Peierls system, attracting solitons and first order lock-in transition 2-13049  
 quadratic Hamiltonians, canonical forms 2-3476  
 Rowe's renormalised RPA, derivation from Bethe-Salpeter eqn. 2-3478  
 single nuclear  $j$ -shell with 4 nucleons, boson-fermion hybrid representation 2-11104  
 spin  $1/2$   $N$  body completely integrable systems 2-28752  
 spinless interacting fermions, decimation approach appl. 2-38599  
 superfluid Fermi liquid, general theory of  $p$ -pairing states in weak coupling approx. 2-8687  
 two-dimensional, RPA collective excitations 2-19010  
 X-ray absorption, freq. depend. response functions, localized perturbations 2-27024

**fermions**

- see also baryons; fermion systems; leptons*  
 boson model, interacting formulation appl., extension and interpretation 2-3860  
 boson-fermion coupled system, Monte Carlo calc. 2-33365  
 cosmological singularity, fermion pair creation 2-48373  
 $e_8$  generators as bilinear fermions and its maximal subgroups 2-29046  
 Einstein-Podolsky-Rosen correlations, fermion hidden variables 2-3418  
 flavour-changing neutral currents, mirror fermion effect 2-38828  
 four-fermion interaction in four dimens., Cooper pair formation 2-6960  
 Friedman cosmological models, fermions creation (*Russian*) 2-38352  
 gauge theories with spinor fields, dimensional reduction schemes, fermions parity violation 2-38761  
 generalised Dirac eqn. for constant EM fields, Green's function 2-3739  
 highly negative ions, discrete spectrum absence 2-48524  
 lattice chiral fermion regularisation, no-go theorem 2-6972  
 lattice field theories, fermions, gauge fields and supersymmetry 2-23817  
 lattice gauge systems with fermions, mean field theory 2-33731  
 lattice QCD,  $A_{\text{lattice}}$  fermionic contrib. 2-29014  
 mass relations, chiral symm., naturalness,  $t$  mass 2-29094  
 mass spectrum, from Dyson eqn. solns. 2-48966  
 massless Fermi fields, gauge-invariant states, covariant representations 2-3678  
 motion in axial mag. field, anomalous moments effect 2-38845  
 relativistic bound states of fermions and antifermions, baryons 2-33809  
 relativistic bound states of fermions and antifermions, mesons 2-33810  
 SO(14) grand unified theory, fermion generation problems (*Chinese*) 2-33778  
 spin-1/2 systems, vector lattice description 2-42880  
 SU(2) gauge theory, dynamical symmetry breaking 2-3714  
 SU(3)XSU(6)XSU(6) metacolor theory for light composite fermions, anomaly matching 2-43312  
 SU(5) model with hierarchical fermion masses and phantom axion 2-19291  
 two-dimensional massless QED, ground state structure 2-15313  
 Weyl fermion mass matrix, diagonal form in real or pseudoreal gauge group representations 2-19248

**fermium**

- see also nuclei with .....*  
 No entries

**fermium compounds**

- No entries

**ferrimagnetic properties of substances**

- see also ferrimagnetism; ferrites; garnets; magnetic semiconductors*  
 ferrite-semiconductor struct., azimuthal resonance galvanomag. effect 2-1933  
 ferrite-semiconductor struct., azimuthal resonance galvanomag. effect 2-8827  
 garnet sphere ferrimagnetic resonance freq. meas. for remote temperature sensing in organic tissue 2-47680  
 rare earth alloys,  $RM_2Al_6$ , ( $M = Cr, Mn, Cu$ ), magnetism, spin relax. and hyperfine interactions 2-36484  
 rare earth garnets,  $R_3Fe_2O_{12}$ , ferrimag., exchange constants 2-51402  
 sodium nickel triacetylacetonate, antiferromag. triangular Ising lattice, mag. phase transition 2-41130  
 $BaCo_2Ti_2Fe_{12-2}O_{19}$ , type  $M$ , hexagonal, splitting of mag. helix 2-46250  
 $BaNi_2Fe_{12}O_{22}$ , hexagonal ferrite, cycloidal spin ordering 2-46251  
 $Ce_2(WO_4)_3$ , ferrimagnetic, mag. props. 2-46278  
 $CsMnF_3$ , weak ferrimagnetism, polarisation spectroscopic study (*Russian*) 2-26931  
 Cu-Mn-Al (20.6, 34.7 at.%), displaced hysteresis loop upon mag. annealing 2-26687  
 $xCuCr_2S_4 - (1-x)Cu_{0.5}Ga_{0.5}Cr_2S_4$ , nonuniform mag. state, crystallography (*Russian*) 2-5079  
 $CuFe_2O_4$ , spin-reorientation transition and mag. anisotropy 2-8970  
 Dy-Fe/Gd-Fe double layer film, amorphous, thermomag. writing 2-31188  
 DyFe<sub>2</sub>, magnetisation meas. of magnetostriction, mag. moments and anisotropy (*Russian*) 2-21835  
 ErFe<sub>2</sub>, magnetisation meas. of magnetostriction, mag. moments and anisotropy (*Russian*) 2-21835  
 Er<sub>2</sub>Fe<sub>2</sub>O<sub>12</sub>, field-induced noncollinear mag. struct., Faraday effect obs. 2-46252  
 Er<sub>2</sub>Mn<sub>2</sub>H<sub>2</sub>, mag. order obs. using Mossbauer effect 2-21772  
 Fe-Ni ferritic alloys, mag. and mech. props., telephone receiver appl. 2-26662  
 $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, ferrimagnetic phase form. during milling 2-27193  
 Fe<sub>2</sub>O<sub>4</sub>, magnetite powder, electrical conductivity meas. (*German*) 2-21581  
 Fe<sub>2</sub>O<sub>4</sub>, magnetoelectric effects at 4.2K 2-5571  
 Fe<sub>2</sub>O<sub>4</sub>, multi-domain and milled, magnetisation processes, neutron diff. study 2-36386  
 Fe<sub>2</sub>SiO<sub>4</sub>, natural pyrrhotites, hexagonal, mag. transition obs. 2-41124  
 Fe<sub>0.86</sub>Se single crystals, metamagnetic behaviour 2-46276  
 Gd-Co amorphous film, XPS study 2-17597

**ferrimagnetic properties of substances continued**

- Gd-Co amorphous films, domain structure and mag. props., comp. depend. 2-17323  
 Gd-Co amorphous films, transport props. 2-21690  
 Gd-Co(Fe), amorphous film, effect of annealing on compensation temp. 2-26627  
 Gd-Fe amorphous film, RF magnetron sputtering and mag. props. 2-36782  
 Gd-Fe amorphous film, XPS study 2-17597  
 Gd-Fe/Tb-Fe, exchange coupled ferrimag. double layered films, magnetisation curves 2-26692  
 Gd-Fe/Tb-Fe double layer film, amorphous, thermomag. writing 2-31188  
 GdCoAu, amorphous bubble film, domain drag propag. vel., bias field depend. 2-13323  
 $(Gd_{0.26}Fe_{0.74})_{0.96}Bi_{0.04}$ , metallic glass, film, laser annealed, mag. props. 2-21853  
 Gd<sub>2</sub>Ni<sub>17-x</sub>Al<sub>x</sub>, mag. behaviour in ferrimag. and paramag. regions 2-51399  
 Gd<sub>2</sub>(WO<sub>4</sub>)<sub>3</sub>, ferrimagnetic, mag. props. 2-46278  
 Gd<sub>2</sub>Y<sub>1-x</sub>Co<sub>x</sub>, magnetic behaviour and exchange interactions 2-46262  
 Gd<sub>2</sub>Y<sub>1-x</sub>Fe<sub>x</sub>, magnetic behaviour, 4.2 to 1300K, temp. and comp. depend. 2-5530  
 Gd<sub>2</sub>Y<sub>1-x</sub>Fe<sub>x</sub>, magnetic behaviour, 4.2 to 1300K, temp. and comp. depend. 2-8965  
 Ho-Co sputtered thin films, bubble and stripe domains, wall structures, electron microscopy obs. 2-26701  
 HoFe<sub>2</sub>, magnetisation meas. of magnetostriction, mag. moments and anisotropy (*Russian*) 2-21835  
 MnSiTe<sub>3</sub>, ferrimagnetic semiconductor, mag. props., cryst. struct. 2-26669  
 Nd<sub>2</sub>(WO<sub>4</sub>)<sub>3</sub>, ferrimagnetic, mag. props. 2-46278  
 Ni complex, NaNi(acac)<sub>3</sub>, benzene, triangular Ising lattice, mag. phase transitions 2-36343  
 Ni<sub>1-x</sub>Cu<sub>x</sub>Fe<sub>2</sub>O<sub>4</sub> ( $0 \leq x \leq 1$ ) ferrites, structural and magnetic properties 2-2060  
 NiMn ferrite, doped, piezomag., magnetomech. internal friction (*Polish*) 2-36407  
 Pr<sub>2</sub>(WO<sub>4</sub>)<sub>3</sub>, ferrimagnetic, mag. props. 2-46278  
 Rb<sub>0.5</sub>Co<sub>0.5</sub>CoF<sub>3</sub>, ferrimag. 6H hexagonal perovskite, neutron diff. obs. of mag. struct. (*French*) 2-36312  
 Sr ferrite, magnetization, milling treatment effect 2-31238  
 SrFe<sub>2</sub>O<sub>10</sub>/Al<sub>2</sub>O<sub>3</sub>, mag. meas., Al<sup>3+</sup> substituent effect, Mossbauer study 2-2170  
 Tb-Fe amorphous film, RF magnetron sputtering and mag. props. 2-36782  
 Tb-Fe/Gd-Fe double layer film, amorphous, thermomag. writing 2-31188  
 TbCo<sub>3</sub>, magnetic ordering processes (*Russian*) 2-5528  
 (Y,Eu,Tm,Sm,Ca)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub> magnetic epitaxial film, bubble domain lattice high freq. vibrs. 2-46353  
 (Y,Sm)<sub>2</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub> magnetic epitaxial film, bubble domain lattice high freq. vibrs. 2-46353  
 YAG:Co<sup>2+</sup>, ESR, Co<sup>2+</sup> spin sites 2-41183  
 (YGdYbBi)<sub>3</sub>(FeAlGa)<sub>2</sub>O<sub>12</sub> epitaxial film, mag. domain wall displacement in weak field 2-46354

**ferrimagnetic resonance**

- garnet bubble films, ion irradi., anisotropy change, ferrimag. and stripe lattice reson. study 2-21861  
 garnet sphere ferrimagnetic resonance freq. meas. for remote temperature sensing in organic tissue 2-47680  
 $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>, ferrimag. reson. using photoacoustic effect as probe 2-36440  
 MgO:Fe, EPR, FMR and electron diff. study 2-46371

**ferrimagnetism**

- see also ferrimagnetic properties of substances*  
 anti-parallel aligning ferrimagnets, critical behaviour 2-17288  
 Curie-Weiss Neel model 2-5540  
 EM ordered media, elastic-EM reson. coupling 2-17415  
 film, guided mag. waves, coupling for normal magnetization, quasi-optics 2-13322  
 film, uniaxial, magnetisation in case of inclined compensation surface (*Russian*) 2-21845  
 Ising ferrimagnet, disordered, Neel and compensation temps. 2-17301  
 multilayered struct., magnetostatic bulk waves excitation 2-21785  
 plate, anisotropic, magnetostatic wave propag., field strength and orientation effect 2-41167  
 semiconductors, magnetic, magnetic and structural phase transitions, HP mag. props. (*Russian*) 2-46290

**ferrite applications**

- see also ferrite devices*

- No entries

**ferrite devices**

- see also ferrite applications; magnetostatic wave devices*

- No entries

**ferrites**

- see also ferrimagnetic properties of substances; ferrimagnetism; ferrite applications; ferrite devices*  
 conference, Kharkov, USSR (Sept. 1979) 2-28593  
 dielectric constants, meas. by MW dielectric resonator 2-6876  
 diffusion bonding process for joining of ferrite to BaTiO<sub>3</sub> ceramic 2-31895  
 EM parameters meas. at UHF, by comparison method 2-23618  
 ferrite-garnet epitaxial layer, anisotropic, domain struct. in mag. field (*Russian*) 2-26705  
 ferrite-garnet film, pulsed remagnetisation, appearance of domains with new magnetisation direction 2-51444  
 ferrite-semiconductor struct., azimuthal, resonance galvanomag. effect 2-1933  
 ferrite-semiconductor struct., azimuthal resonance galvanomag. effect 2-8827  
 ferrites, effects of substituted atoms on C interaction energy with dislocations (*Russian*) 2-8523  
 ferrites, nonequilibrium spin wave system kinetic instability and tunable radiation (*Russian*) 2-13283  
 ferromagnetic reson. line width calc. in medium with inhomogeneous saturation magnetisation 2-5588  
 ferromagnetic resonance linewidth measurement, rectangular waveguide appl. 2-51471  
 fission reactor fuel claddings, ferrite content meas. eddy current method 2-24328  
 hard magnetic ferrite, economic importance, development of comminution (*German*) 2-47198



## ferrites continued

- hexagonal, Sr substituted, magnetic configurations and transitions 2-8957  
 hexagonal, uniaxial ferromagnets, review 2-26621  
 hexagonal (*German*) 2-51436  
 hyperfine magnetic fields at  $^{57}\text{Fe}$  nuclei, press. depend. regularities 2-51485  
 hysteresis-loop parameters meas., automatic ferrometer design 2-43056  
 loss tangent, permittivity, measurable values for waveguide microwave methods 2-46453  
 magnetic ceramics, in 1980, adaptation of hard ferrites to evolution of market requirements (*French*) 2-31609  
 magnetisation jumps, distrib. of amplitudes (*Russian*) 2-26672  
 magnetisation measurement, mag. balance (*Russian*) 2-10827  
 microwave tensor susceptibility and effective linewidth of polycryst. ferrite, meas. with rotating DC mag. field 2-15199  
 parametric spin-wave excitation, high anisotropy effects 2-13281  
 polycrystalline, ferromag. reson. line eqn. 2-36443  
 powder, replacement of electrolytic Fe powder in mag. separation of grains (*Rumanian*) 2-26683  
 powder particles, packing density depend. on coercive field strength (*German*) 2-51435  
 powder preparation by coprecip. of 8-hydroxyquinolates followed by roasting 2-51842  
 powder-water system, rheological and technological props., effect of finely divided additions 2-41573  
 rare earth ferrite-garnets, high freq. and thermodynamic props., rare earth sublattice role (*Russian*) 2-2064  
 rare earth orthoferrites, magnetic vacancy effects 2-31172  
 soft, press. effect on magnetisation mechanisms 2-26714  
 surface, periodically uneven, refl. of surface magnetostatic waves 2-26721  
 synthesis, oxide ionic struct. charact. rel. to initial mixture density and vol. changes 2-41564  
 thermal conductivity over wide temp. range, model and nomogram, cond. increase prospects 2-40614  
 Ba ferrite, anisotropic permanent magnets, force anal. 2-21829  
 Ba ferrite films with perpendicular mag. anisotropy, DC sputtering prep. 2-27083  
 BaCoFe<sub>10</sub>O<sub>27</sub>, hexagonal ferrite, magneto-optical spectra 2-31458  
 BaFe<sub>12</sub>-In<sub>2</sub>O<sub>19</sub>, cryst. and mag. struct., Mossbauer study 2-21920  
 BaFe<sub>12</sub>-M<sub>2</sub>O<sub>19</sub> (M=In, Sc), hexagonal ferrites, mag. struct., Mossbauer study 2-21768  
 BaFe<sub>12</sub>O<sub>19</sub>, ferrite particles, microwave absorpt. along hysteresis loops 2-21837  
 BaFe<sub>12</sub>O<sub>19</sub>, hexagonal ferrite, magneto-optical spectra 2-31458  
 BaFe<sub>12</sub>O<sub>19</sub>, hexagonal ferrite, mag. moments, magnetisation, and mag. struct., neutron irradiation effects, neutron diff. obs. 2-36317  
 BaFe<sub>12</sub>O<sub>19</sub>-SiO<sub>2</sub>, coprecipitated, uniaxially hot pressed, coercivity and texture 2-21838  
 BaFe<sub>12</sub>-Ru<sub>2</sub>O<sub>19</sub>, single crystal mag. anisotropy 2-13288  
 BaFe<sub>12</sub>-Sc<sub>2</sub>O<sub>19</sub>, cryst. and mag. struct., Mossbauer study 2-21920  
 BaNi<sub>2</sub>Fe<sub>12</sub>O<sub>27</sub>, hexagonal ferrite, cycloidal spin ordering 2-46251  
 Ba(Zn<sub>1-x</sub>M<sub>x</sub>)<sub>2</sub>Fe<sub>16</sub>O<sub>27</sub> (M=Ni, Cu), hexagonal ferrite, mag. and Mossbauer study 2-21767  
 CaFe<sub>2-x</sub>O<sub>4+n</sub>, new ferrites, prep. and characterisation, existence in Fe-Cu-O phase diagram 2-16627  
 CdCoFeO, ferrite, specific heat, thermal diffusivity 2-26069  
 CoFe<sub>2</sub>O<sub>4</sub>, epitaxial growth on acicular  $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> particles, coercivity, temp. depend. 2-36388  
 CuFe<sub>2</sub>O<sub>4</sub> cubic ferrite, magnetocrystalline anisotropy, FMR study 2-13289  
 CuFe<sub>2</sub>O<sub>4</sub>, spin-reorientation transition and mag. anisotropy 2-8970  
 Cu<sub>1-x</sub>Fe<sub>2+x</sub>O<sub>4</sub>, XPS study of Cu<sup>+</sup> and Cu<sup>2+</sup> ion distrib. (*French*) 2-5792  
 Cu<sub>1-x</sub>Fe<sub>2+x</sub>O<sub>4+y</sub>, ferrite, cation vacancy distrib. calc. 2-50873  
 Cu<sub>2</sub>Zn<sub>1-x</sub>Fe<sub>2</sub>O<sub>4</sub> system, slow cooled and quenched, mag. hysteresis studies 2-36387  
 DyFeO<sub>3</sub> orthoferrite, magneto-optical study of mag. phase coexistence near Morin temp. 2-31179  
 Eu<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub> ferrite, domain boundary dynamics (*Russian*) 2-31235  
 $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>, ferrimag. reson. using photoacoustic effect as probe 2-36440  
 $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> thin film recording media preparation method 2-22164  
 Fe<sub>2</sub>O<sub>3</sub>, magnetite, mag. aftereffects, nonlinear approx. 2-36391  
 n-GaAs-YIG thin film struct., electron drag by surface spin waves 2-46350  
 La<sub>1-x</sub>Ca<sub>x</sub>FeO<sub>3-y</sub> (0≤x≤0.5), mixed valency ferrites with perovskite struct. 2-5609  
 Li-Ti-Zn ferrite, effect of MnO<sub>2</sub> and Bi<sub>2</sub>O<sub>3</sub> additives on props. (*Slovak*) 2-2105  
 Li-Zn-Co ferrites, mag. anisotropy anomaly due to Co, permeability meas. 2-26622  
 Li<sub>0.5</sub>Fe<sub>2.5-x</sub>M<sub>x</sub>O<sub>4</sub> (M=Co, Mn, Ti, Al), microwave relax. props. 2-26760  
 LiFeO<sub>2</sub>, elec. props. and phase transform., complex admittance study 2-30935  
 Li<sub>0.5</sub>Fe<sub>2.5</sub>O<sub>4</sub> matrix, ferrite form., Se<sub>2</sub>O<sub>3</sub>-CeO<sub>2</sub>-CoC<sub>2</sub>O<sub>4</sub> activator effect 2-22441  
 Li<sub>0.5</sub>Fe<sub>2.5</sub>O<sub>4</sub>, substruct. and partial dislocations, duration of grinding influence 2-50645  
 LiFeSnO<sub>4</sub>, polymorphism and polymorphous transition, X-ray diff. and electron microscopy obs. 2-50575  
 Li<sub>2</sub>O-MnO-Fe<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, mag. props., Mossbauer effect 2-21842  
 Mg-Ni ferrites, struct., elec., and mag. props., cation distrib. effects, influence of heat treatment 2-46345  
 MgMn-ferrite/BaTiO<sub>3</sub>, ferroelectric ferromagnetics 2-51863  
 Mg<sub>2</sub>Mn<sub>1-x</sub>Fe<sub>2</sub>O<sub>4</sub>, epitaxial ferrite-spinel layer form. mechanism on MgO substrate 2-12927  
 MgO-CdO-Fe<sub>2</sub>O<sub>3</sub> system, phase comp., X-ray and mag. analysis 2-5864  
 Mn-Zn ferrite, disaccommodation after temp. cycling 2-31713  
 Mn-Zn ferrites, high permeability, magnetic spectra, effect of eddy currents 2-13314  
 Mn-Zn ferrites, low loss, prep. with complex oxalates, mag. props. 2-27116  
 Mn-Zn ferrosinels, elec. cond., comp. depend. 2-1909  
 MnZn ferrites, phys. props., pressing press. effect 2-17654  
 MnZn ferrites, X-ray fluorec. anal. appl. of adapted copex technique 2-6070  
 Mn<sub>0.7</sub>Zn<sub>0.3</sub>Cr<sub>1-x</sub>Fe<sub>2-x</sub>O<sub>4</sub>, ferrite, Mossbauer study of Cr conc. effect (*French*) 2-13381  
 Mn<sub>0.48</sub>Zn<sub>0.48</sub>Fe<sub>2.04</sub>O<sub>4</sub>, prod. by high-temp. treatment method, density and mag. props. (*Russian*) 2-31663  
 Mn<sub>0.5</sub>Zn<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub>, polycrystalline, permittivity, conductivity and dielectric relax. 2-5625

## ferrites continued

- Ni-Zn ferrite form. process mechanism 2-22189  
 Ni-Zn ferrites, effect of transition elements on dielectric props. 2-13391  
 Ni-Zn polycryst. ferrites mag. permeability, rot. contrib. 2-9004  
 (Ni<sub>0.5</sub>Cd<sub>0.5</sub>O)<sub>1-x</sub>(Fe<sub>2</sub>O<sub>3</sub>)<sub>1+x</sub>, mag. and elec. props. 2-46338  
 Ni<sub>2</sub>Cu<sub>1-x</sub>Fe<sub>2</sub>O<sub>4</sub> (0≤x≤1) ferrites, structural and magnetic properties 2-2060  
 NiFe<sub>2</sub>O<sub>4</sub>, polycryst., magnetoelastic anisotropy due to exchange striction 2-46274  
 NiFe<sub>2</sub>O<sub>4</sub>, substruct. and partial dislocations, duration of grinding influence 2-50645  
 NiMn, doped, piezomag., magnetomech. internal friction (*Polish*) 2-36407  
 NiZn ferrite-V<sub>2</sub>O<sub>5</sub>, mag. permeability, loss and elec. cond. meas. 2-51438  
 Ni<sub>1-x</sub>Zn<sub>x</sub>Fe<sub>2</sub>O<sub>4</sub>, mag. and elec. props. 2-46338  
 PbO-Fe<sub>2</sub>O<sub>3</sub>-Sm<sub>2</sub>O<sub>3</sub> single crystal comp., lattice parameters and struct. defects, Sm<sup>3+</sup> solubility 2-12553  
 SmTbEr orthoferrite, domain struct. in (001), (110), (100) cryst. planes at spin reorientation 2-13311  
 SmTbTm orthoferrite, domain struct. in (001), (110), (100) cryst. planes at spin reorientation 2-13311  
 Sr ferrite, magnetization, milling treatment effect 2-31238  
 SrFe<sub>12</sub>O<sub>19</sub>, hexagonal ferrite, magneto-optical spectra 2-31458  
 SrFe<sub>12</sub>O<sub>19</sub> powder, anisotropic ferrite, mag. field free processed, texture and mag. props. 2-21839  
 SrFe<sub>12</sub>O<sub>19</sub>:Al<sub>2</sub>O<sub>3</sub>, mag. meas., Al<sup>3+</sup> substituent effect, Mossbauer study 2-2170  
 SrO-Fe<sub>2</sub>O<sub>3</sub> system, comminution, effect on grain size, mag. props. and X-ray line breadth (*German*) 2-52061  
 TmFeO<sub>3</sub>, domain struct., temp. depend. (*Russian*) 2-26650  
 TmFeO<sub>3</sub>, domain wall motion (*Russian*) 2-46336  
 TmFeO<sub>3</sub>, effective anharmonicity of elastic subsystem near spin reorientation 2-26707  
 (Y,Bi)<sub>2</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub>, ferrite-garnet film, 360° dynamic domain wall (*Russian*) 2-46351  
 (Y,Eu,Tm,Sm,Ca)<sub>2</sub>(Fe,Gc)<sub>2</sub>O<sub>12</sub>, epitaxial ferrite garnet film, domain wall mobility 2-9014  
 (Y,Sm,Lu,Ca)<sub>2</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub>, ferrite-garnet film, 360° dynamic domain wall (*Russian*) 2-46351  
 (Y,Sm)<sub>2</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub>, ferrite-garnet film, 360° dynamic domain wall (*Russian*) 2-46351  
 (Y,Sm)<sub>2</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub>, epitaxial ferrite garnet film, domain wall mobility 2-9014  
 (Y,Bi)<sub>2</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub> ferrite garnet epitaxial film, domain wall reson. obs. 2-36404  
 Y<sub>3</sub>Fe<sub>5-x</sub>Ga<sub>x</sub>O<sub>12</sub>, superhigh-freq. EM radiation at pumping freq. (*Russian*) 2-21891  
 YFe<sub>1-x</sub>Ni<sub>x</sub>Ti<sub>2</sub>/O<sub>3</sub>, orthoferrite, mag. props. 2-13319  
 YFeO<sub>3</sub>, domain wall motion (*Russian*) 2-46336  
 YFeO<sub>3</sub>, nonlinear domain wall dynamics study (*Russian*) 2-46335  
 YFeO<sub>3</sub> orthoferrite, antiferromagnetic and ferromagnetic Faraday effect (*Russian*) 2-13456  
 YFeO<sub>3</sub> surface with colloid deposit, Bitter patterns, magneto-optical props. 2-36606  
 YIG, nonequilibrium spin wave system kinetic instability and tunable radiation (*Russian*) 2-13283  
 YIG, superhigh-freq. EM radiation at pumping freq. (*Russian*) 2-21891  
 YbY<sub>2</sub>FeO<sub>4</sub>, ferrite, specific heat, thermal diffusivity 2-26069  
 ZnAlFeO<sub>4</sub>, ferrite, specific heat, thermal diffusivity 2-26069  
 Zn<sub>0.4</sub>Cu<sub>0.6</sub>Fe<sub>2-x</sub>O<sub>4</sub> (x=0.3, 0.4, 0.5) initial permeab. and var. of magnetisation with Zn content 2-13317  
 ZnMnFe<sub>2.05</sub>O<sub>4</sub>:Cr(Al)(In), dielec. props., elec. cond., mag. props., lattice constants, dopant effects 2-51524

## ferroacoustic resonance

No entries

## ferroelasticity

see also shape memory effects

- ammonium hydrogen oxalate, domain struct., microscopic obs. 2-2208  
 aniline hydrobromide, light scatt. study of ferroelastic transitions 2-35668  
 benzil, struct. phase transition 2-40531  
 bis(methylammonium)tetrachlorozincate, struct. phase transitions, X-ray diff., thermal, dielec. and optical meas. 2-45566  
 bis-propyl ammonium tetrachloro zincate, ferro-paraelectric phase transitions 2-41292  
 centrosymmetric prototype phase, Landau-Devonshire theory with rotationally invariant expansion coefficients 2-46481  
 dicalcium strontium propionate, paraelec. phase, struct. and optical activity 2-30454  
 domain struct. and phase transitions, microscopic obs. method 2-2208  
 ferroelastic, critical behaviour and elastic props. 2-1586  
 ferroelastic, critical behaviour and elastic props. 2-5206  
 ferroelastic, EPR study of twin struct. RbHS:VO<sup>2+</sup> ZZ 2-41180  
 ferroelectric two dimensional model, ferroelastic effect 2-36554  
 ferroelectrics, Jahn-Teller, coupled dielec. and elastic anomalies 2-31421  
 incommensurate phase transition, Landau theory 2-31400  
 p-polyphenyls, phase transitions, Brillouin scatt. study 2-51614  
 quadrupole moments, anomalous temp. depend. near struct. phase transitions 2-46498  
 quartz, ferrobielastic switching, effect on piezoelec. elements, stress distrib. anal. 2-36531  
 quartz, secondary ferroic, twin wall orientation and switching dynamics 2-31410  
 squaric acid, ferroelastic phase transition, theory 2-35572  
 switching processes, ferroelectric viscosity effect 2-31428  
 Tanane, ferroelastic and ferroelec., planar domain wall motion 2-36574  
 tanane, ferroelectric and ferroelastic transition 2-36560  
 tetramethylammonium tetrachlorocuprate, ferroelastic-incommensurate, phase transitions 2-30581  
 tetramethylammonium tetrachlorocuprate, ferroelastic-incommensurate transition, acoustic softening 2-30582  
 s-triazine, mol. cryst., ferroelasticity, phase transitions, eqn. of motion approach 2-50846  
 Ba<sub>2</sub>Nb<sub>2</sub>O<sub>15</sub>, commensurate-incommensurate transition, ferroelastic transition 2-45567  
 Ba<sub>2</sub>Nb<sub>2</sub>O<sub>15</sub>, ferroelec. and ferroelastic domains, electron microscopic study 2-9115  
 BiVO<sub>4</sub>, Brillouin and Raman scatt. study of phase transition, soft acoustic mode 2-17474



**ferroelasticity continued**

- BiVO<sub>4</sub>, temp. depend. of spontaneous birefringence 2-2216  
 (CaWO<sub>4</sub>)<sub>1-x</sub>(LaNbO<sub>4</sub>)<sub>x</sub> solid solns., fergusonite-scheelite phase transition and Raman spectra 2-26044  
 CsHSO<sub>4</sub>, ferroelasticity below 128°C transition 2-45554  
 Cs<sub>2</sub>HgBr<sub>4</sub>, pseudohexagonal, successive phase transitions 2-40529  
 CsLiSO<sub>4</sub>, structural and physical props. 2-1613  
 Cu-Zn-Al high-damping coil spring, pseudoelastic behaviour 2-47100  
 Dy<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec.-ferroelastic, phase transition, cathodo- and photolum. study 2-36550  
 Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec. ferroelastic, orthogonal domain wall interactions 2-30469  
 Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec.-ferroelastic transition, cathodo- and photolum. study 2-36550  
 Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec.-ferroelastic, phase transition, Raman and Brillouin scatt. study 2-36617  
 Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>:Tb<sup>3+</sup>(Eu<sup>3+</sup>), ferroelec.-ferroelastic, luminescence spectra near phase transition 2-31538  
 H<sub>2</sub>(UO<sub>2</sub>)<sub>2</sub>(AsO<sub>4</sub>)<sub>2</sub>·8H<sub>2</sub>O, phase II, ferroelastic character, point groups 2-35571  
 Hg<sub>2</sub>Br<sub>2</sub>, nonintrinsic ferroelasticities, X-ray struct. study of phase transition 2-21112  
 Hg<sub>2</sub>Cl<sub>2</sub>, nonintrinsic ferroelasticities, X-ray struct. study of phase transition 2-21112  
 KH<sub>2</sub>(SeO<sub>3</sub>)<sub>2</sub>, ferroelastic, internal friction, domain struct. dynamics 2-40481  
 KH<sub>2</sub>(SeO<sub>3</sub>)<sub>2</sub> and KD<sub>3</sub>(SeO<sub>3</sub>)<sub>2</sub>, ferroelastic phase transition, mech. shear stress component effect 2-40537  
 K<sub>1-x</sub>Rb<sub>x</sub>SC(MoO<sub>4</sub>)<sub>2</sub>, ferroelastic phase transitions, permittivity study 2-45577  
 LaNbO<sub>4</sub>, fergusonite-scheelite phase transition and Raman spectra 2-26044  
 LaP<sub>3</sub>O<sub>14</sub>, Brillouin-Rayleigh scattering central peaks near ferroelastic transition 2-31517  
 LaP<sub>3</sub>O<sub>14</sub>, coupled optic and acoustic modes, press. depend. near ferroelastic transitions 2-45511  
 LaP<sub>3</sub>O<sub>14</sub>, ferroelastic transition, under high hydrostatic press., Raman and Brillouin scatt. study 2-30585  
 LaP<sub>3</sub>O<sub>14</sub>, ferroelastic phase transition, EPR and DTA meas. 2-31278  
 LiKSO<sub>4</sub>, pyroelectric, piezoelectric, dielectric and structural props. 2-46487  
 (NH<sub>4</sub>)<sub>2</sub>HS<sub>2</sub>VO<sub>3</sub><sup>2+</sup> ferroelastic, EPR study of twin struct. 2-41180  
 NH<sub>4</sub>HSO<sub>4</sub>, domain struct., microscopic obs. 2-2208  
 NH<sub>4</sub>HSO<sub>4</sub>, ferroelectric props. near phase transition temp. 2-9098  
 (NH<sub>4</sub>)<sub>2</sub>In(SO<sub>4</sub>)<sub>3</sub>, high temp. form, monoclinic-trigonal transition 2-25799  
 β-NaH<sub>2</sub>(SeO<sub>3</sub>)<sub>2</sub> crystal, ferroelec. and ferroelastic domain struct. dynamics 2-36573  
 Na<sub>5-x</sub>K<sub>x</sub>W<sub>3</sub>O<sub>9</sub>K<sub>5</sub>, crystallographic and dielectric props., new materials having chiolite related struct. 2-17423  
 Na<sub>5-x</sub>Li<sub>x</sub>W<sub>3</sub>O<sub>9</sub>F<sub>5</sub>, crystallographic and dielectric props., new materials having chiolite related struct. 2-17423  
 Na<sub>2</sub>W<sub>3</sub>O<sub>9</sub>F<sub>3</sub> family, ferroelec.-ferroelastic props. 2-31415  
 NdP<sub>3</sub>O<sub>14</sub>, elastic nonlinearity and ferroelastic domain wall motion 2-30523  
 NdP<sub>3</sub>O<sub>14</sub>, ferroelastic phase transition, EPR and DTA meas. 2-31278  
 Ni<sub>3</sub>B<sub>2</sub>O<sub>13</sub>(Br), ferromag., ferroelec. and ferroelastic domains, birefringence and Faraday effect study 2-31430  
 Ni<sub>3</sub>B<sub>2</sub>O<sub>13</sub>l, ferroelec.-ferromag.-ferroelastic phase, elec. and optical meas. 2-31392  
 PbGe<sub>2</sub>O<sub>9</sub>, ferroelec., cryst. struct. and props. 2-46492  
 Pb<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, ferroelastic phase transition dynamics 2-1611  
 Pb<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, Potts model and ferroelastic phase transition 2-30590  
 Pb<sub>3</sub>(VO<sub>4</sub>)<sub>2</sub>, internal friction and modulus effects at phase transitions 2-45375  
 RNbO<sub>4</sub>, ferroelastic phase, mechanical twins, rubber like behaviour 2-45324  
 RbAlF<sub>4</sub>, ferroelastic, struct. phase transition, cryst. struct. 2-50844  
 RbAlF<sub>4</sub>, ferroelastic, phase transitions, birefringence study 2-50845  
 RbAlF<sub>4</sub>, ferroelastic phase transition and struct. 2-30584  
 RbCaF<sub>3</sub>:Gd<sup>3+</sup>, order parameter fluctuations near ferroelastic phase transition, EPR study 2-31277  
 RbMnCl<sub>3</sub>, ferroelastic, critical behaviour and elastic props. 2-1586  
 RbMnCl<sub>3</sub>, ferroelastic, critical behaviour and elastic props. 2-5206  
 RbMnCl<sub>3</sub>, ferroelastic domain struct. rel. to antiferromag., optical study 2-26869  
 Sb<sub>2</sub>O<sub>3</sub>I (2MA), ferroelastic, photoswitching 2-25976  
 Sr<sub>2</sub>KNb<sub>2</sub>O<sub>15</sub>, commensurate-incommensurate transition, ferroelastic transition 2-45567  
 Tb<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec.-ferroelastic, phase transition, Raman and Brillouin scatt. study 2-36617

**ferroelectric Curie temperature**

- carrier mobility temp. depend., interaction of carriers with soft ferroelec. mode 2-17071  
 dilution effect on transition temp. and sp. ht. of simple ferroelects. with second order displacive transform. 2-46511  
 doped displacive ferroelectrics, elec. field depend. of neutron scatt. cross section 2-44977  
 electrostriction in paraelec. phase, temp. depend., phenomenological theory 2-46482  
 ESR lines, elec. dipole broadening, nonlinear effects near phase transition temperature 2-46381  
 polarization fluctuations, mean field coupled Ising spins, Monte Carlo simulation 2-36506  
 Rochelle salt, Curie temp., permanent mag. field effect 2-9099  
 tanane, ferroelectric and ferroelastic transition 2-36560  
 TGS-L-α alanine, ferroelectric domain struct. 2-36577  
 TGS, deuterated, complex permittivity dispersion 2-36495  
 TGS, ultrasonic props. near phase transition 2-45406  
 TGS crystal growth from soln. with ethyl alcohol additions 2-36773  
 TGS thin film, ferroelec. props. 2-36580  
 tris-sarcosine calcium chloride, brominated, ferroelectric transition, Raman study 2-36558  
 tris-sarcosine calcium chloride, specific heat critical behaviour 2-35706  
 tris-sarcosine calcium chloride bromide, dielectric studies 2-36556  
 tris-sarcosine calcium chloride bromide, Raman and IR spectra, T<sub>c</sub> 2-36555  
 vinylidene fluoride/trifluoroethylene copolymer, ferroelectric props. 2-31423  
 BaO-SrO-Na<sub>2</sub>O-Nb<sub>2</sub>O<sub>5</sub>, solid solution, phase equilib. study, Curie point and lattice consts. 2-17667

**ferroelectric Curie temperature continued**

- BaTiO<sub>3</sub>, Curie temp., external mag. field effect, thermographic study 2-9101  
 BaTiO<sub>3</sub>, mag. field influence on paraelectric-ferroelectric transition 2-46506  
 BaTiO<sub>3</sub>, refractive index above T<sub>c</sub> 2-46526  
 BaTiO<sub>3</sub>, sintered with Bi<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub> glass, Curie temp. 2-46992  
 Bi<sup>3+</sup>(B<sub>1-x</sub>B<sub>11</sub>)O<sub>4</sub>, ceramic prep. and characteris. 2-51530  
 KD<sub>2</sub>PO<sub>4</sub> with ADP impurities, lattice polarisation, proton ordering 2-41258  
 KD<sub>2</sub>PO<sub>4</sub>:SeO<sub>3</sub><sup>3-</sup>, EPR detection of dynamic clusters 2-41194  
 KH<sub>2</sub>AsO<sub>4</sub>, dielec. meas. and discontinuity at paraelectric-ferroelec. phase transition 2-2202  
 KH<sub>2</sub>(1-x)D<sub>2x</sub>PO<sub>4</sub>, polarisation relax., light scatt. study 2-41261  
 KH<sub>2</sub>PO<sub>4</sub>, quantum ferroelectric, dielec., US and pyroelec. meas. 2-31395  
 KH<sub>2</sub>PO<sub>4</sub> type cryst., first order ferroelec. phase transition theory 2-36553  
 KTA<sub>1-x</sub>Nb<sub>x</sub>O<sub>3</sub> quantum ferroelectric, dielec., US and pyroelec. meas. 2-31395  
 Li<sub>2</sub>O-Ta<sub>2</sub>O<sub>5</sub>(TiO<sub>2</sub>)<sub>2</sub>, new non-stoichiometric ferroelectric phases close to LiTaO<sub>3</sub> 2-17422  
 LiTaO<sub>3</sub>, variation of ferroelec. Curie temp. with non-stoichiometry 2-31416  
 Na<sub>5-x</sub>K<sub>x</sub>W<sub>3</sub>O<sub>9</sub>K<sub>5</sub>, crystallographic and dielectric props., new materials having chiolite related struct. 2-17423  
 Na<sub>5-x</sub>Li<sub>x</sub>W<sub>3</sub>O<sub>9</sub>F<sub>5</sub>, crystallographic and dielectric props., new materials having chiolite related struct. 2-17423  
 Na<sub>2</sub>W<sub>3</sub>O<sub>9</sub>F<sub>3</sub>, chiolite type ferroelectric substitution effect on transition temp. (French) 2-21952  
 Na<sub>2</sub>W<sub>3</sub>O<sub>9</sub>F<sub>3</sub> family, ferroelec.-ferroelastic props. 2-31415  
 PLZT ceramic, dielectric eqn. of state in Curie range 2-46494  
 Pb<sub>1-x</sub>La<sub>x</sub>Zr<sub>1-y</sub>Ti<sub>y</sub>O<sub>3</sub> ceramic, dielectric props. 2-46455  
 Pb<sub>2</sub>(MgW)O<sub>6</sub>:La<sub>1/3</sub>(MgW)O<sub>6</sub>, solid solns. 2-16628  
 Pb(Sc<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>-Pb(Sc<sub>0.5</sub>Ta<sub>0.5</sub>)O<sub>3</sub>, diffuse ferroelectric transition 2-41303  
 Pb<sub>2</sub>SiO<sub>4</sub>, ferroelectric Curie temp., const. mag. field effect 2-13428  
 PbTiO<sub>3</sub>-La(Mg<sub>2/3</sub>O<sub>3</sub>), piezoelectric ceramic, piezoelectric props. 2-41271  
 PbTiO<sub>3</sub>-La(Zn<sub>2/3</sub>Nb<sub>1/3</sub>)O<sub>3</sub>, piezoelectric ceramic, piezoelectric props. 2-41271  
 PbV<sub>2</sub>O<sub>8</sub>, ferroelectric Curie temp., const. mag. field effect 2-13428  
 Pb(Zr<sub>0.5</sub>Sn<sub>0.5</sub>)TiO<sub>3</sub> ceramic, microstructure effect on electrocaloric props. 2-41278  
 PbZrO<sub>3</sub>, cryst. and domain struct. study, ferroelectric transitions 2-41306  
 PbZrO<sub>3</sub>, Curie temp., external mag. field effect, thermographic study 2-9101  
 Pb(Zr<sub>0.53</sub>Ti<sub>0.47</sub>)O<sub>3</sub> solid soln., synthesis by cryoprecip., prep. and dielec. characts. 2-41563  
 Pb(Zr<sub>1-x</sub>Ti<sub>x</sub>)O<sub>3</sub>, transition entropy, Curie-Weiss behaviour 2-41304  
 RbCdF<sub>3</sub>:Gd<sup>3+</sup>, ESR study of phase transition 2-46507  
 RbD<sub>2</sub>H<sub>2</sub>PO<sub>4</sub>, polarisation meas., Landau free energy expansion coeffs. 2-41260  
 Rb<sub>2</sub>ZnBe<sub>4</sub>, ferroelec., dielec. props. 2-26833  
 (Sr,Ba)Nb<sub>2</sub>O<sub>6</sub> ceramics, hot-pressed, props. 2-26806  
 Sr<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub> and other A<sub>2</sub>B<sub>2</sub>O<sub>7</sub> type layer struct. crystals, ferroelectricity 2-26827  
 TiCdF<sub>3</sub>:Gd<sup>3+</sup>, ESR study of phase transition 2-46507

**ferroelectric devices**

- LiNbO<sub>3</sub> used in SAW devices, effects of ferroelec. domains on surface struct. 2-26188  
 PbTiO<sub>3</sub> ferroelectric thin film, prep. by sputtering and laser annealing, device apps. 2-2199  
 Sr<sub>0.61</sub>Ba<sub>0.39</sub>Nb<sub>2</sub>O<sub>6</sub>, ferroelec., SAW transduction and poling 2-25210  
 Sr<sub>0.61</sub>Ba<sub>0.39</sub>Nb<sub>2</sub>O<sub>6</sub>, ferroelec. single cryst., piezoelec., HF dielec. and SAW props. 2-26821

**ferroelectric domains see electric domains****ferroelectric materials**

- see also *antiferroelectric materials*; *electric domain walls*; *ferroelectric semiconductors*; *ferroelectric thin films*; *ferroelectric transitions*; *lattice dynamics of ferroelectric crystals*  
 antimonates, R<sub>3</sub>Sb<sub>2</sub>O<sub>12</sub>(R=In, Sc, La, Pr, Tb, Yb) struct., ferroelec. and piezoelec. characts. 2-30441  
 azoxybenzene, switching transients, polarisation 2-36507  
 bis tetramethyl ammonium tetrabromocuprate, phase transition, dielec. meas., ferroelectricity obs. 2-45558  
 boracites, dielec. anomalies 2-9110  
 ceramics, counterpoled, polarisation and elastic vibr. distrib. laser probe meas. 2-36505  
 ceramics, domain struct., crack growth conditions 2-50759  
 ceramics, research in China 2-46490  
 chiral smectic C phase, ferroelectric, monodomain cells, prep. and evaluation using optical microscopy 2-16557  
 cholesteryl laurate-cholesteryl caprylate mixture, smectic-C, ferroelec. and pyroelec. props. (Rumanian) 2-26826  
 comparison between gel and solution grown crystals. 2-27069  
 conference, University Park, PA, USA (Aug. 1981) 2-33213  
 copper formate tetrahydrate, H bonded ferroelec., neutron scatt. studies 2-31389  
 crystal, dielec. susceptibility, polarisation and cond., meas. method 2-28861  
 crystal growth techniques in search for new materials 2-36772  
 crystals, acoustoelectric phenomena, novel apps. 2-30933  
 crystals with antiparallel layer domains, dielec., piezoelec. and elastic props. 2-46521  
 dicalcium barium propionate:Mn<sup>2+</sup>, ESR study of phase transition 2-36559  
 dicalcium lead propionate:Mn<sup>2+</sup>, ESR study of phase transition 2-36559  
 dicalcium lead propionate, monocryst., electrical cond., stimulated thermocurrent 2-30891  
 dicalcium strontium propionate:Mn<sup>2+</sup>, ESR study of phase transition 2-36559  
 dicalcium strontium propionate, switching transients, polarisation 2-36507  
 dielectric properties in incommensurate phase region 2-41286  
 diglycine nitrate, transition temp. isotope shift 2-41299  
 dipole-ordered crystals., modulation spectroscopy in VUV region 2-36663  
 DOBAMBC, ferroelectric phase transition, X-ray scatt. study 2-13426  
 DOBAMBC ferroelectric liq. cryst., optical activity 2-36602  
 DOBAMBC ferroelectric smectic C phase optical SHG, temp. and elec. field depend. 2-16061  
 domain structure, formation by internal biasing field 2-31433



**ferroelectric materials continued**

- ESR lines, elec. dipole broadening, nonlinear effects near phase transition temperature 2-46381  
 Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec. surface, ion beam refl. and chemical etching study 2-30722  
 guanidine aluminium sulphate hexahydrate, coating influence on ferroelec. domains, SEM study 2-36579  
 guanidium aluminium sulphate hexahydrate, domain dynamics 2-36576  
 ice Ih, ferroelec. phase transition and dielec. const. anisotropy 2-26832  
 incommensurate, mag. resonance and relaxation 2-31260  
 liquid crystals, pyroelec. props. 2-9095  
 liquid ferroelectric crystal, DOBAMBC, second optical harmonic generation 2-49826  
 lithium ammonium tartrate cryst., dielec. and elastic props. 2-36494  
 2-methylbutyl p-(p-n-hexyloxybenzylideneamino) cinnamate, smectic, helical pitch, elec. field depend. near C\*-A transition 2-40263  
 nonequilibrium modulated structs. in strong external field 2-41290  
 photovoltaic effect, bulk 2-30923  
 piezoelectric relaxation in ferroelectric AgNa(NO<sub>2</sub>)<sub>2</sub> 2-41276  
 PLZT, additional max. on dielec. const. temp. depend., hydrostatic press. depend. 2-5645  
 polarisation properties, modulation spectroscopy characteris., review 2-15243  
 polymer-ceramic composites for hydrophones, fabrication and interphase connectivity 2-36834  
 powder EPR lineshapes for KDP type crystals 2-41181  
 quartz, secondary ferroic, twin wall orientation and switching dynamics 2-31410  
 relaxation currents, theory 2-36508  
 Rochelle salt, Curie temp., permanent mag. field effect 2-9099  
 Rochelle salt, domain wall dynamics, acoustic emission study 2-45386  
 Rochelle salt, dynamical study including proton-optical phonon interaction 2-36547  
 Rochelle salt, ferroelectric phase transitions, electroacoustic interaction, polarisation echo study (Russian) 2-41310  
 Rochelle salt single crystal, ferroelectric phase transition, microhardness study 2-9111  
 Schiff's bases, ferroelec. liq. crystals, tilt, pitch, and polarisation, temp. depend. 2-21014  
 self-oscillatory heating with thermal stabilisation 2-31393  
 semicarbazide-nitric acid molecular complex, cryst. and mol. struct. 2-8505  
 smectic layer, A-C\* phase transition, boundary condition effects 2-16782  
 sodium potassium ammonium tartrate, X-irradiated, critical anomaly of electron spin-lattice relax. 2-41178  
 squaric acid, ferroelastic phase transition, theory 2-35572  
 squaric acid, microscopic model based on 3-D coupling of 1-D Ising chains 2-2203  
 squaric acid, phase transition, neutron study 2-41298  
 squaric acid, thermal expansion, specific heat 2-40574  
 synthesis, oxide ionic struct. characts. rel. to initial mixture density and vol. changes 2-41564  
 Tanane, ferroelastic and ferroelec., planar domain wall motion 2-36574  
 tanane, ferroelectric and ferroelastic transition 2-36560  
 tetragonal tungsten bronzes, incommensurate phases, X-ray scatt. 2-41280  
 TGS:  $\alpha$ -alanine near phase transition, thermal capacity and dielectric props., hydrostatic press. effect (Russian) 2-16811  
 TGS: Fe<sup>3+</sup>(Cu<sup>2+</sup>)(Pd<sup>2+</sup>), ferroelec. transition, US velocity and absorption, doping effects 2-16727  
 TGS: L- $\alpha$  alanine, ferroelectric domain struct. 2-36577  
 TGS, Brillouin scatt. in pure and  $\gamma$ -irrad. crystals 2-36656  
 TGS, coating influence on ferroelec. domains, SEM study 2-36579  
 TGS, deuterated, complex permittivity dispersion 2-36495  
 TGS, dielectric and pyroelectric studies 2-36496  
 TGS, domain wall dynamics, acoustic emission study 2-45386  
 TGS, doped with metal ions, pyroelec. props. 2-2191  
 TGS, ferroelec., domain struct., alignment of nematic MBBA on cleavage surface 2-41312  
 TGS, ferroelec. transition, uniaxial stress effects 2-46495  
 TGS, ferroelectric, photovoltaic effect, intrinsic, X-ray induced 2-36100  
 TGS, ferroelectric, relaxation currents 2-36509  
 TGS, intrinsic photovoltaic effect caused by polarised X-ray irrad. 2-36085  
 TGS, pure and doped, domain struct. study 2-36578  
 TGS, pyroelectricity, primary and secondary components 2-31386  
 TGS, single cryst., pyroelec. props. at elec. bias field 2-21950  
 TGS, sp. ht. and permittivity, effect of impurities 2-8633  
 TGS, specific heat under applied elec. field 2-35707  
 TGS, switching characts. and phase transition, gamma irrad. effects, thermal noise study 2-31422  
 TGS, switching induced electrolum., X-ray irrad. effect 2-36704  
 TGS, switching transient shape 2-36562  
 TGS, ultrasonic props. near phase transition 2-45406  
 TGS(Se), crit. fluctuations, mean-field soln. of Ising model 2-46497  
 TGS cleavage plane, anchoring of MBBA liq. cryst. 2-16555  
 TGS crystals, ferroelec. domain boundaries, X-ray topographic images 2-36581  
 TGS ferroelec. crystal substrates, boundary layers of water rel. to elec. props. of substrate ellipsometry study 2-45752  
 TGS ferroelectric cryst., elec. cond., temp. depend. 2-36036  
 TGS ferroelectric cryst., radiation damaged, polarization switching 2-36564  
 TGS-TGFB system, dielectric and pyroelectric studies 2-36496  
 thiourea, phase diagram in elec. field determ. from linear birefringence obs. (French) 2-8598  
 thiourea-d<sub>4</sub>, field-induced commensurate phase 2-51531  
 THS, quasilongitudinal US wave propag. in ferroelec. plane 2-25991  
 triglycine fluoroberylate, dielectric and pyroelectric studies 2-36496  
 triglycine salts, ferroelec. crystals., mol. dynamics, mag. reson. obs. 2-12699  
 triglycine sulfate crystals, influence of X-rays on refractive indices changes 2-25927  
 triglycine sulphate, domain struct. formation by internal biasing field 2-31433  
 tris-sarcosine calcium chloride: Mn<sup>2+</sup>, ferroelec., press. and temp. depend. of local order parameter 2-9106  
 tris-sarcosine calcium chloride, brominated, ferroelectric transition, Raman study 2-36558  
 tris-sarcosine calcium chloride, ferroelectric transition, soft modes 2-36557

**ferroelectric materials continued**

- tris-sarcosine calcium chloride bromide, dielectric studies 2-36556  
 tris-sarcosine calcium chloride bromide, ferroelectric props. 2-36561  
 tris-sarcosine calcium chloride bromide, Raman and IR spectra, T<sub>c</sub> 2-36555  
 trissarcosine calcium chloride, switching parameters, temp., elec. field and press. depend. 2-26811  
 tungsten bronzes, ferroelec., higher order electrostriction 2-26822  
 vinylidene fluoride/trifluoroethylene copolymer, ferroelectric props. 2-31423  
 AgNbO<sub>3</sub>-LiNbO<sub>3</sub> system, phase equil. and transforms., ferroelec. props. 2-50833  
 BaMnF<sub>4</sub>, incommensurate phase, permittivity, 3 to 30 cm<sup>-1</sup> 2-31362  
 Ba<sub>2</sub>NaNb<sub>5</sub>O<sub>15</sub>, ferroelectric, surface photoluminesc. 2-26982  
 Ba<sub>2</sub>NaNb<sub>5</sub>O<sub>15</sub>, ferroelectric, photoluminescence 2-2342  
 Ba<sub>2</sub>NaNb<sub>5</sub>O<sub>15</sub>, ferroelec. and ferroelastic domains, electron microscopic study 2-9115  
 Ba<sub>2</sub>NaNb<sub>5</sub>O<sub>15</sub>, ferroelectric, photorefractive (Russian) 2-21974  
 Ba<sub>2</sub>NaNb<sub>5</sub>O<sub>15</sub>, ferroelec. insulator, incommensurate phases (French) 2-27172  
 Ba<sub>2</sub>NaNb<sub>5</sub>O<sub>15</sub>, ferroelectric 2-41280  
 Ba<sub>2</sub>NaNb<sub>5</sub>O<sub>15</sub>, Raman scatt. study of low freq. phonon polaritons 2-46559  
 Ba<sub>2</sub>NaNb<sub>5</sub>O<sub>15</sub>:Fe(Mo), photoelec. and photorefractive props. 2-36102  
 BaO-SrO-Na<sub>2</sub>O-Nb<sub>2</sub>O<sub>5</sub>, solid solution, phase equilb. study, Curie point and lattice consts. 2-17667  
 Ba<sub>0.35</sub>Sr<sub>0.65</sub>Nb<sub>2</sub>O<sub>6</sub>, ferroelec. tungsten bronzes, higher order electrostriction 2-26822  
 Ba<sub>0.4</sub>Sr<sub>0.6</sub>Nb<sub>2</sub>O<sub>6</sub>, dielec. anomalies 2-26813  
 Ba<sub>0.4</sub>Sr<sub>0.6</sub>Nb<sub>2</sub>O<sub>6</sub>:Pr<sup>3+</sup>, fluorescence lifetime study 2-17524  
 Ba<sub>0.5</sub>Sr<sub>0.5</sub>Nb<sub>2</sub>O<sub>6</sub>, ferroelec. thin film, electrophysical props. 2-31454  
 Ba<sub>0.9</sub>Sr<sub>0.1</sub>TiO<sub>3</sub>, phonon dispersion curves 2-45433  
 Ba<sub>0.9</sub>Sr<sub>0.1</sub>TiO<sub>3</sub> films, microwave dielec. props., broad phase transition 2-46460  
 BaTiO<sub>3</sub>, angular depend. of Raman scatt. spectra 2-46561  
 BaTiO<sub>3</sub>, Curie temp., external mag. field effect, thermographic study 2-9101  
 BaTiO<sub>3</sub>, Debye-Waller factors, temp. depend. 2-45503  
 BaTiO<sub>3</sub>, dielectric dispersion, Brillouin spectra study 2-46456  
 BaTiO<sub>3</sub>, domain wall dynamics, acoustic emission study 2-45386  
 BaTiO<sub>3</sub>, ferroelec., lattice strain at 180° domain wall, X-ray topographic study 2-17427  
 BaTiO<sub>3</sub>, ferroelec. meas., digital computation methods 2-31431  
 BaTiO<sub>3</sub>, ferroelec. phase transitions, Devonshire theory 2-31401  
 BaTiO<sub>3</sub>, ferroelec. surface, ion beam refl. and chemical etching study 2-30722  
 BaTiO<sub>3</sub>, ferroelec. transition, hyper Raman scatt. study 2-46581  
 BaTiO<sub>3</sub>, ferroelectric, electroluminescence phase rot., elec. field amplitude effect 2-31560  
 BaTiO<sub>3</sub>, ferroelectric semiconductor, fluctuonic electron states, photoferroelectric phenomena 2-45825  
 BaTiO<sub>3</sub> film, dielectric props. depend. on coherent scatt. region 2-5648  
 BaTiO<sub>3</sub> films, preparation and struct. 2-46917  
 BaTiO<sub>3</sub>, mag. field influence on paraelectric-ferroelectric transition 2-46506  
 BaTiO<sub>3</sub>, opalescence at tetragonal-orthorhombic phase transition 2-9116  
 BaTiO<sub>3</sub>, perovskites, SHG study of paraelectric transitions 2-31424  
 BaTiO<sub>3</sub>, phase transition calcs. 2-46499  
 BaTiO<sub>3</sub>, phonon dispersion curves 2-45433  
 BaTiO<sub>3</sub>, photovoltaic, pyroelec., and piezoelec. outputs under pulsed laser illum. 2-36084  
 BaTiO<sub>3</sub> pyrolysed, ultrafine particle size depend. on quenching and reaction temp. 2-46963  
 BaTiO<sub>3</sub>, Raman scatt. study of low freq. phonon polaritons 2-46559  
 BaTiO<sub>3</sub>, refractive index above T<sub>c</sub> 2-46526  
 BaTiO<sub>3</sub>, single crystals, growth, by travelling solvent zone technique 2-27077  
 BaTiO<sub>3</sub> sintered with Bi<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub> glass, Curie temp. 2-46992  
 BaTiO<sub>3</sub> sputtered films, temp. effect on props. 2-46918  
 BaTiO<sub>3</sub>, static shell model calcs. of electrostriction 2-46484  
 BaTiO<sub>3</sub>, T-E phase diagram 2-46509  
 BaTiO<sub>3</sub>, tetragonal-cubic phase transition, Raman study 2-46505  
 BaTiO<sub>3</sub>(Cr to Ni), reversible wt. change after annealing, 700 to 1300°C 2-31712  
 BaTiO<sub>3</sub>:Co, diffuse phase transition, dielec. meas. 2-9104  
 BaTiO<sub>3</sub>:Co, optical absorpt., elec. cond., electronic struct. 2-46640  
 BaTiO<sub>3</sub>:Cr(Sn), contact voltammetry investig., acceptor defects form., dielec. nonlinearity rel. to synthesis conditions 2-41283  
 BaTiO<sub>3</sub>:Fe, dielectric and optical props. 2-46457  
 BaTiO<sub>3</sub>:H(D), impurity IR-absorpt. study 2-46639  
 BaTiO<sub>3</sub>:Mn, EPR study of Mn oxidation states, elec. cond. 2-45880  
 BaTiO<sub>3</sub>:Nb, elec. and optical props. 2-45961  
 BaTiO<sub>3</sub>:Sb, PTC effect as function of 3d element doping, elec. resist., grain sizes, carrier density 2-30887  
 BaTiO<sub>3</sub>-based ferroelec. solid solns., Vegard's law validity, X-ray diffr. meas. 2-16631  
 BaTi<sub>1-x</sub>Sn<sub>x</sub>O<sub>3</sub>, phase transitions, dielectric props. 2-46510  
 BaTi<sub>1-x</sub>Zr<sub>x</sub>O<sub>3</sub>, phase transitions, dielectric props. 2-46510  
 Bi layer structure oxides, La modified, grain oriented ferroelectric ceramics, elec. props. 2-31380  
 BiFeO<sub>3</sub>-BaTiO<sub>3</sub>(PbTiO<sub>3</sub>) solid solns., magnetoelec. effect, ferroelec. props. 2-36406  
 Bi<sub>4</sub>Ti<sub>3</sub>O<sub>12</sub> ceramics, grain oriented, fabrication and elec. props. 2-31662  
 Ca(NO<sub>3</sub>)<sub>2</sub>, phase transition study (French) 2-46515  
 cc KTa<sub>0.988</sub>Nb<sub>0.012</sub>O<sub>3</sub>, ferroelec., thermal and elastic props. at low temps. 2-30664  
 Cd langbeinites, CdMe<sub>2</sub>(SO<sub>4</sub>)<sub>2</sub> (Me=NH<sub>4</sub>, ND<sub>4</sub>, Tl, Rb), ferroelec. phase transition, Raman spectra study 2-31477  
 Cd<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, glasslike thermal and dielectric props. 2-40613  
 Cd<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, photolum., rel. to structural phase transitions 2-36672  
 Cd<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, quadratic electrooptic effect 2-17446  
 Co<sub>3</sub>B<sub>2</sub>O<sub>13</sub>, magnetic and magnetoelec. props. 2-13327  
 Cr<sub>2</sub>B<sub>2</sub>O<sub>13</sub>, improper ferroelec. transition, disorder-order parameters, Raman scatt. study 2-31411  
 Cs(D<sub>0.64</sub>H<sub>0.36</sub>)<sub>2</sub>AsO<sub>4</sub>, cryst. struct. and transition temp. 2-40329  
 Cs<sub>2</sub>HAsO<sub>4</sub> and Cs<sub>2</sub>DAsO<sub>4</sub>, dielectric response meas., polarisation fluctuations 2-41282  
 Cs(H<sub>1-x</sub>D<sub>x</sub>)<sub>2</sub>PO<sub>4</sub>, RF complex dielectric const., sound velocity 2-41247  
 CsH<sub>2</sub>PO<sub>4</sub>, H bonded ferroelec., neutron scatt. studies 2-31389  
 CsH<sub>2</sub>PO<sub>4</sub>, spontaneous strain anomaly in ferroelec. phase, dilatometric meas. 2-1640



## ferroelectric materials continued

- $\text{Ca}_2\text{H}_2\text{PO}_4$ , X-ray and  $\gamma$ -ray irradiated, polarisation props. charact., domain struct. 2-51534  
 $\text{CaHSO}_4$ , phase transition, dielec. const. and sp. ht. study 2-13388  
 $\text{CaLiMoO}_4$ , ferroelectric phase transitions, optical, dielec. and X-ray obs. 2-36568  
 $\text{CaLiMoO}_4(\text{WO}_4)$ , ferroelectric transitions, dielec. and elastic study 2-31408  
 $\text{CaPbCl}_2(\text{Br}_3)$ , ferroelec., exciton absorpt., luminesc. and reson. Raman scatt. 2-46638  
 $\text{Cu}_3\text{B}_2\text{O}_7\text{Cl}$ , ferroelectric phase transition, pyroelectric and dielec. meas., thermodynamic model 2-31412  
 $\text{Cu}_3\text{B}_2\text{O}_7\text{Cl}$ , improper ferroelec., pyroelec. response, effects of defects 2-36541  
 $\text{Fe}_2\text{B}_2\text{O}_7$ , ferroelectric phase transition, pyroelectric and dielec. meas., thermodynamic model 2-31412  
 $\text{Fe}_2\text{B}_2\text{O}_7$ , ferroelectric phase transition, Raman scatt. study 2-31475  
 $\text{Fe}_2\text{B}_2\text{O}_7$ , improper ferroelec., pyroelec. response, effects of defects 2-36541  
 $\text{Gd}_2(\text{MoO}_4)_3$ , ferroelec., low freq. phonon polaritons, Raman scatt. study 2-51092  
 $\text{Gd}_2(\text{MoO}_4)_3$  crystals, electroluminescence with nonequilib. domain struct. 2-13574  
 $\text{Gd}_2(\text{MoO}_4)_3$ , domain wall dynamics, acoustic emission study 2-45386  
 $\text{Gd}_2(\text{MoO}_4)_3$ , ferroelec. ferroelastic, orthogonal domain wall interactions 2-30469  
 $\text{Gd}_2(\text{MoO}_4)_3$ , ferroelec. transition, low freq.  $A_1$  modes, Raman spectra study 2-31413  
 $\text{Gd}_2(\text{MoO}_4)_3$ , ferroelectric, surface polarisation states, ATR spectra 2-30734  
 $\text{Gd}_2(\text{MoO}_4)_3$ , thermally stimulated radiation emitted by surface polaritons near phase transition 2-5647  
 $\text{Gd}_2(\text{MoO}_4)_3:\text{Tb}^{3+}(\text{Eu}^{3+})$ , ferroelec.-ferroelastic, luminescence spectra near phase transition 2-31538  
H bonded, dynamical modes 2-36544  
HCl and HCl-DCl, pretranslational clusters and heterophase fluctuations at ferroelec. transition,  $^{35}\text{Cl}$  NQR study 2-26836  
 $\text{K}(\text{D}_{0.95}\text{H}_{0.05})_2\text{PO}_4$ , cryst. struct. and transition temp. 2-40329  
 $\text{K}(\text{D}_{1-x}\text{H}_x)_2\text{PO}_4$  crystals, high-temp. phase transition 2-21298  
 $\text{KD}_2\text{PO}_4$ , cryst. struct., temp. and press. depend. 2-50595  
 $\text{KD}_2\text{PO}_4$ , cryst. struct. of tetragonal phase, temp. depend. 2-50596  
 $\text{KD}_2\text{PO}_4$ , ferroelectric, light scatt. spectra, wave vector direction depend., effects of electrostatic and elastic long range forces 2-9158  
 $\text{KD}_2\text{PO}_4$ , ferroelectric domain walls, neutron scatt. props. 2-31432  
 $\text{KD}_2\text{PO}_4$ , wave vector dependent susceptibility, four cluster approx. 2-36543  
 $\text{KD}_2\text{PO}_4$  with ADP impurities, lattice polarisation, proton ordering 2-41258  
 $\text{KD}_2\text{PO}_4:\text{SeO}_4^{3-}$ , EPR detection of dynamic clusters 2-41194  
 $\text{KD}_2\text{PO}_4:\text{SeO}_4^{3-}$ , coexistence of paraelec. and ferroelec. phases, ESR obs. 2-46375  
 $\text{KD}_2\text{PO}_4\cdot\text{KH}_2\text{AsO}_4$ , X-irrad., ferroelec. polarisation reversal,  $\text{AsO}_4^{4-}$  ESR study 2-51533  
 $\text{K}_2\text{Fe}(\text{CN})_6\cdot 3\text{H}_2\text{O}$  cryst., ferroelec.,  $\text{H}_2\text{O}$  stretching vibrs., spectrosc. obs. 2-51572  
 $\text{K}_2\text{Fe}(\text{CN})_6\cdot 3\text{H}_2\text{O}$ , ferroelec.,  $\text{H}_2\text{O}$  vibr., IR and Raman spectra study 2-21249  
 $\text{K}_2\text{Fe}(\text{CN})_6\cdot 3\text{H}_2\text{O}$ , pseudo-spin formalism and ferroelec. transition temp. 2-9105  
 $\text{KH}_2\text{AsO}_4$  and  $\text{KD}_2\text{AsO}_4$ , dielectric response meas., polarisation fluctuations 2-41282  
 $\text{KH}_2\text{AsO}_4$ , dielec. meas. and discontinuity at paraelectric-ferroelec. phase transition 2-2202  
 $\text{KH}_2(\text{1-x})\text{D}_x\text{PO}_4$ , polarisation relax., light scatt. study 2-41261  
 $\text{KH}_2\text{PO}_4$ , constitutive eqns., group theoretic methods 2-26830  
 $\text{KH}_2\text{PO}_4$ , critical X-ray scatt. at phase transition (Russian) 2-13427  
 $\text{KH}_2\text{PO}_4$ , cryst. struct. and transition temp. 2-40329  
 $\text{KH}_2\text{PO}_4$ , cryst. struct., temp. and press. depend. 2-50595  
 $\text{KH}_2\text{PO}_4$ , cryst. struct. of tetragonal phase, temp. depend. 2-50596  
 $\text{KH}_2\text{PO}_4$ , dielectric const. and order parameter temp. and elec. field depend. 2-41246  
 $\text{KH}_2\text{PO}_4$ , dielectric response meas., polarisation fluctuations 2-41282  
 $\text{KH}_2\text{PO}_4$ , dipole and quadrupole piezoelectric effect components 2-41270  
 $\text{KH}_2\text{PO}_4$ , ferroelec., dielectric props., plastic deform. and radiation defect influence 2-36502  
 $\text{KH}_2\text{PO}_4$ , ferroelec. transition, uniaxial stress effects 2-46495  
 $\text{KH}_2\text{PO}_4$ , ferroelectric dynamics 2-41281  
 $\text{KH}_2\text{PO}_4$ , ferroelectric phase transitions, electroacoustic interaction, polarisation echo study (Russian) 2-41310  
 $\text{KH}_2\text{PO}_4$ , paraelectric, low-lying  $\text{B}_2(\text{LO})$  Raman spectra 2-41343  
 $\text{KH}_2\text{PO}_4$ , phase transition in elastic media 2-9113  
 $\text{KH}_2\text{PO}_4$ , piezoelectric polarisation oscils. near phase transition 2-41259  
 $\text{KH}_2\text{PO}_4$ , proton pot. estimation from IR and crystallographic data 2-9139  
 $\text{KH}_2\text{PO}_4$ , proton potential from spectroscopic and crystallographic data 2-36618  
 $\text{KH}_2\text{PO}_4$ , proton tunnelling anal. using realistic proton pot. 2-13166  
 $\text{KH}_2\text{PO}_4$ , quantum ferroelectric, dielec., US and pyroelec. meas. 2-31395  
 $\text{KH}_2\text{PO}_4$ , quasielastic light scatt., nonequilib. thermodynamic approach 2-31515  
 $\text{KH}_2\text{PO}_4$ , Raman spectra and lattice dynamics 2-41338  
 $\text{KH}_2\text{PO}_4$ , spontaneous polarisation mechanism 2-36513  
 $\text{KH}_2\text{PO}_4$ , temp. depend. of refractive indices 2-26851  
 $\text{KH}_2\text{PO}_4$ , transverse polarisation dynamics near phase transition 2-41257  
 $\text{KH}_2\text{PO}_4$ -type ferroelectrics and antiferroelectrics, cationic dynamics, paramag. probes 2-36490  
 $\text{KH}_2\text{PO}_4$ -type ferroelectrics, anharmonic Debye-Waller factors and struct. phase transitions 2-50818  
 $\text{KIO}_3\cdot\text{H}_2\text{O}$ , NQR study of impurity effects on phase transition (Russian) 2-21914  
 $\text{KLiSO}_4$ , phase transitions, EPR study 2-31281  
 $\text{K}_2\text{LiTa}_{1-x}\text{Nb}_x\text{O}_3$ , ferroelec. phase transition, symm. breaking impurity effect, Raman scatt. study 2-26837  
 $\text{K}_2\text{LiTa}_{1-x}\text{Nb}_x\text{O}_3$ , ferroelec. transitions, Raman scatt. studies 2-26888  
 $\text{K}(\text{M}, \text{W})_2\text{O}_6$  ( $\text{M}=\text{Li}, \text{Al}, \text{Ti}$  or  $\text{Nb}$ ) cryst. chem., polymorphism and dielec. props. 2-5237  
 $\text{KNbO}_3$ , cubic-tetragonal phase transition, lattice dynamics 2-45516  
 $\text{KNbO}_3$ , ferroelectric phase transition, thermodynamic description 2-2204  
 $\text{KNbO}_3$ , perovskites, SHG study of paraelectric transitions 2-31424  
 $\text{KNbO}_3$ , soft ferroelec. mode, IR reflectivity meas. 2-31417  
 $\text{KNbO}_3$ , spontaneous polarisation calcs. 2-46462  
 $\text{KNbO}_3$ , tetragonal, band struct. and spontaneous polarisation 2-8753

## ferroelectric materials continued

- $\text{K}_2\text{SeO}_4$ , birefringence and lattice strain 2-26860  
 $\text{K}_2\text{SeO}_4$ , calc. props. of incommensurate phase 2-2205  
 $\text{K}_2\text{SeO}_4$ , ferroelec., phase transitions, Brillouin spectra study 2-31516  
 $\text{K}_2\text{SeO}_4$ , ferroelec., transitions and struct., birefringence study 2-30580  
 $\text{K}_2\text{SeO}_4$  ferroelectric, amplitude mode, uniaxial stress depend., Raman scatt. 2-2252  
 $\text{K}_2\text{SeO}_4$ , nonlinear lattice dynamics, phonon-periodon modes 2-45467  
 $\text{K}_2\text{SeO}_4$ , O sublattice disorder, Raman spectra study 2-31474  
 $\text{K}(\text{Ta}_{0.55}\text{Nb}_{0.45})\text{O}_3$ , electrostrictive effects 2-31382  
 $\text{KTa}_{1-x}\text{Nb}_x\text{O}_3$ , ferroelec., deviation from Curie-Weiss law at high temp., IR refl. spectra 2-31479  
 $\text{KTa}_{1-x}\text{Nb}_x\text{O}_3$  quantum ferroelectric, dielec., US and pyroelec. meas. 2-31395  
 $\text{KTa}_{1-x}\text{Nb}_x\text{O}_3$ , surface layer, acoustic reson. and dielec. susceptibility meas. 2-2175  
 $\text{KTaO}_3$ , incipient ferroelectrics, temp. depend. of OH stretching mode 2-31478  
 $\text{KTaO}_3$ , static shell model calcs. of electrostriction 2-46484  
 $\text{KTaO}_3:\text{Gd}^{3+}$ , elec. field induced ESR line shift, polarisation nonlinearity effect, spin Hamiltonian calc. 2-26739  
 $\text{KTaO}_3:\text{Li}$ , defect induced fluctuations, dielec. and optical props. meas. 2-26889  
 $\text{K}_2\text{Zn}(\text{SO}_4)_2$ , langbeinite type, pyroelec. props. 2-5644  
 $\text{LiNH}_2\text{SO}_4$  ferroelectric cryst., elec. cond., temp. depend. 2-36036  
 $\text{LiNH}_2\text{SO}_4$  single crystals., piezoelec. props. 2-31384  
 $\text{LiNbO}_3$ , bicrystal, thermal bonding, influence of planar diffusion bonded boundaries on props. 2-26840  
 $\text{LiNbO}_3$ , dielectric spontaneous pol. below 50K 2-46467  
 $\text{LiNbO}_3$ , elastic wave propag. anisotropy, group velocities 2-30536  
 $\text{LiNbO}_3$ , ferroelec., composition and elec. props. 2-30886  
 $\text{LiNbO}_3$ , influence of elec. field on optical inhomogeneity 2-21985  
 $\text{LiNbO}_3$ , influence of domain structure on generation and propagation of elastic waves (Polish) 2-26199  
 $\text{LiNbO}_3$ , optical nonlinearity and hologram recording (Russian) 2-11742  
 $\text{LiNbO}_3$ , photorefractive effect, nonphotovoltaic contrib. 2-46525  
 $\text{LiNbO}_3$ , photovoltaic, pyroelec., and piezoelec. outputs under pulsed laser illum. 2-36084  
 $\text{LiNbO}_3$ , Raman scatt. study of low freq. phonon polaritons 2-46559  
 $\text{LiNbO}_3$ , topotactic to cubic perovskite structural transform. due to ion exchange 2-30587  
 $\text{LiNbO}_3$  used in SAW devices, effects of ferroelec. domains on surface struct. 2-26188  
 $\text{LiNbO}_3$ , work function, polarisation effect, temp. depend., contact pot. difference method 2-17144  
 $\text{LiNbO}_3:\text{Fe}$ , ferroelec., photorefractive processes 2-9131  
 $\text{LiNbO}_3:\text{Fe}$ , Hall photocurrents 2-21630  
 $\text{LiNbO}_3:\text{Fe}$ , one- and two-photon holograms, optical erasure 2-7730  
 $\text{LiNbO}_3:\text{Fe}$ , white light image processing 2-11654  
 $\text{LiTaO}_3$ , ferroelec., low freq. phonon polaritons, Raman scatt. study 2-51092  
 $\text{LiTaO}_3$ , light scatt. and its appl. 2-26865  
 $\text{LiTaO}_3$ , Mossbauer spectroscopy study 2-31328  
 $\text{LiTaO}_3$ , Raman scatt. study of low freq. phonon polaritons 2-46559  
 $\text{LiTaO}_3$ , single cryst., dielec. and pyroelec. props. 2-31385  
 $\text{LiTaO}_3$ , spark radiation 2-51535  
 $\text{LiTaO}_3$  thin film and devices grown by electrochemical reaction 2-22181  
 $\text{LiTaO}_3$ , topotactic to cubic perovskite structural transform. due to ion exchange 2-30587  
 $\text{LiTaO}_3$ , variation of ferroelec. Curie temp. with non-stoichiometry 2-31416  
 $\text{MgMn-ferrite/BaTiO}_3$ , ferroelectric ferromagnetics 2-51863  
 $\text{Mn}_3\text{B}_2\text{O}_7\text{Cl}(\text{Br})(\text{I})$ , orthorhombic ferroelec., phase transitions, expt. study 2-31409  
 $\text{Mn}_3\text{B}_2\text{O}_7\text{Cl}$ , ferroelectric phase transition, pyroelectric and dielec. meas., thermodynamic model 2-31412  
 $(\text{ND}_4)\text{SO}_4$ , elec. cond., dielec. const., and phase transitions, -196 to 50°C 2-36570  
 $(\text{NH}_4)_2$  ferroelec., commensurate-incommensurate transition, X-ray study 2-30431  
 $(\text{NH}_4)_2\text{ZnCl}_4$ , phase transitions, Raman and Brillouin scatt. study 2-31473  
 $(\text{NH}_4)_2\text{BeF}_4$ , ferroelectric phase transitions, X-ray dilatometric study 2-21954  
 $(\text{NH}_4)_2\text{BeF}_4$ , ferroelec., optical activity and birefringence 2-31446  
 $\text{NH}_4\text{Cl}(\text{Br})$ , light scatt. study of dynamic critical phenomena 2-41377  
 $\text{NH}_4\text{H}_2\text{PO}_4$ , comparison between gel and solution grown crystals. 2-27069  
 $(\text{NH}_4)_2\text{H}(\text{SO}_4)_2$ -type crystals, phase transitions and ferroelectricity (Japanese) 2-5222  
 $\text{NH}_4\text{HSeO}_4$ , domain struct., microscopic obs. 2-2208  
 $\text{NH}_4\text{HSeO}_4$ , ferroelectric props. near phase transition temp. 2-9098  
 $\text{NH}_4\text{HSeO}_4$ , influence of hydrostatic press. on phase transition 2-36571  
 $\text{NH}_4\text{HSeO}_4$ , partly deuterated, ferroelectric props. 2-31425  
 $\text{NH}_4\text{HSeO}_4$ , phase transition at 261K, US study, permittivity and polarisation meas. 2-36569  
 $\text{NH}_4\text{LiSO}_4$ , ferroelec. phase transition, Brillouin scatt. study 2-17421  
 $(\text{NH}_4)_2\text{SO}_4$ , elec. cond., dielec. const., and phase transitions, -196 to 50°C 2-36570  
 $(\text{NH}_4)_2\text{SO}_4$ , ferroelectric, internal vibr., polarised Raman spectrum 2-36653  
 $(\text{NH}_4)_2\text{SO}_4$ , ferroelectric transition, EPR study 2-46513  
 $(\text{NH}_4)_2\text{ZnCl}_4$ , ferroelec. phase transitions, dielec., thermal, and X-ray diff. meas. 2-2201  
 $\text{NaD}_3(\text{SeO}_3)_2$ , cryst. and mol. struct. of paraelectric and ferroelectric phases 2-40330  
 $\text{NaH}_2(\text{SeO}_3)_2$ , single cryst., pyroelec. props. at elec. bias field 2-21950  
 $\text{NaK}_{1-w}(\text{NH}_4)_w$  tartrates,  $0.18 < w < 0.92$ , dielec. props., piezoelec. props., birefringence 2-36596  
 $\text{Na}_{3-x}\text{K}_x\text{W}_2\text{O}_6\text{K}_3$ , crystallographic and dielectric props., new materials having chiolite related struct. 2-17423  
 $\text{Na}_{3-x}\text{Li}_x\text{W}_2\text{O}_6\text{F}_3$ , crystallographic and dielectric props., new materials having chiolite related struct. 2-17423  
 $\text{NaNd}_2\text{SeO}_4\cdot 2\text{D}_2\text{O}$ ,  $\gamma$ -irrad., ferroelec. transition, ESR obs. 2-2119  
 $\text{NaNH}_2\text{SeO}_4\cdot 2\text{H}_2\text{O}$ ,  $\gamma$ -irrad., ferroelec. transition, ESR obs. 2-2119  
 $\text{NaNO}_3$ , commensurate and incommensurate phases,  $^{23}\text{Na}$  NMR study 2-36452  
 $\text{NaNO}_3$ , ferroelectric cryst., radiation damaged, polarization switching 2-36564  
 $\text{NaNO}_3$ , ferroelectric phase transition, X-ray powder diff. study 2-41307  
 $\text{NaNO}_3$ , incommensurate phase transition, lattice instability 2-9114



## ferroelectric materials continued

- NaNO<sub>2</sub>, incommensurate phase, X-ray and neutron study (French) 2-40532  
 NaNO<sub>2</sub>, incommensurate phase transition, statics and dynamics 2-41289  
 NaNO<sub>2</sub>, incommensurate (antiferroelectric) phase transition, Brillouin scatt. study 2-46512  
 NaNO<sub>2</sub>, polycrystalline, ferroelec., dielec. const. 2-31406  
 NaNO<sub>2</sub>, pyroelec. behaviour, 2-85K 2-5643  
 NaNO<sub>2</sub> single cryst. and powder, <sup>14</sup>N NQR and <sup>23</sup>Na NMR 2-41225  
 NaNO<sub>2</sub>, switching characts. and phase transition, gamma irr. effects, thermal noise study 2-31422  
 NaNO<sub>2</sub>, thermal expansion along ferroelectric b-axis 2-45599  
 NaNbO<sub>3</sub>, bladed crystals, growth and investigation 2-5805  
 Na<sub>2</sub>W<sub>2</sub>O<sub>7</sub>F<sub>3</sub>, chiolite type ferroelectric substitution effect on transition temp. (French) 2-21952  
 Na<sub>2</sub>W<sub>2</sub>O<sub>7</sub>F<sub>3</sub> family, ferroelec.-ferroelastic props. 2-31415  
 Ni<sub>3</sub>B<sub>2</sub>O<sub>7</sub>(Br), ferromag., ferroelec. and ferroelastic domains, birefringence and Faraday effect study 2-31430  
 Ni<sub>3</sub>B<sub>2</sub>O<sub>7</sub>Br, improper ferroelec., pyroelec. response, effects of defects 2-36541  
 Ni<sub>3</sub>B<sub>2</sub>O<sub>7</sub>I, ferroelec.-ferromag.-ferroelastic phase, elec. and optical meas. 2-31392  
 PLZT, amorphous behaviour, demonstrated by thermal cond. meas. 2-12864  
 PLZT ceramic, dielectric eqn. of state in Curie range 2-46494  
 PLZT ceramic, electrostriction and strain-optic phenomena 2-46486  
 PLZT ceramic, linear electro-optical effect, domain struct. 2-46541  
 PLZT ceramic, shape memory effect study 2-40468  
 PLZT ceramics, photoferroelec. props., ion implantation effects 2-36086  
 PLZT, influence of press. on phase transitions 2-2206  
 PLZT X/65/35, transparent ferroelec. ceramics, phase transitions 2-9102  
 (Pb,Ba)Ge<sub>2</sub>O<sub>7</sub>, ferroelec., cryst. struct. and props. 2-46492  
 (Pb,Sr)Ge<sub>2</sub>O<sub>7</sub>, ferroelec., cryst. struct. and props. 2-46492  
 Pb<sub>5</sub>-Ba<sub>2</sub>Ge<sub>2</sub>O<sub>11</sub>, domain wall dynamics, acoustic emission study 2-45386  
 Pb(Fe<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>, EPR linewidth, crit. point anomalies 2-46368  
 Pb(Fe<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>, ferroelectric domain study 2-46519  
 Pb(Fe<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>, ferroelec. crystal, high-temp. soln. growth, single domain obs. 2-46897  
 Pb(Fe<sub>1/2</sub>Nb<sub>1/2</sub>)O<sub>3</sub>-Pb(Mg<sub>1/2</sub>W<sub>1/2</sub>)O<sub>3</sub> solid soln., phase anal. 2-26831  
 Pb<sub>2</sub>(Ge<sub>2</sub>Si<sub>2</sub>)O<sub>11</sub>, ferroelectric cryst., elec. cond., temp. depend. 2-36036  
 PbGe<sub>2</sub>O<sub>7</sub>, ferroelec., cryst. struct. and props. 2-46492  
 Pb<sub>2</sub>Ge<sub>2</sub>O<sub>11</sub>, circular photogalvanic effect (Russian) 2-13128  
 Pb<sub>2</sub>Ge<sub>2</sub>O<sub>11</sub>, domain wall dynamics, acoustic emission study 2-45386  
 Pb<sub>2</sub>Ge<sub>2</sub>O<sub>11</sub>, electro- and magneto-optical phenomena 2-46542  
 Pb<sub>2</sub>(Ge<sub>1-x</sub>Si<sub>x</sub>)O<sub>11</sub>, ferroelec. crystals, X-ray spectroscopic and dielec. studies 2-21109  
 PbHPO<sub>4</sub>, ferroelectric, order onset, struct. study 2-35667  
 PbHfO<sub>3</sub>, temperature-elec. field phase diagram 2-46517  
 Pb<sub>1-x</sub>La<sub>x</sub>Zr<sub>1-x</sub>Ti<sub>1-x</sub>O<sub>3</sub> ceramic, dielectric props. 2-46455  
 PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, ferroelectric, induced diffuse phase transitions 2-17426  
 PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, ferroelectric phase transitions 2-41308  
 Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>, ferroelectric domain struct. optical study 2-46520  
 PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, reflection spectra in fundamental absorpt. band 2-5729  
 PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub> single cryst., additional max. on dielec. const. temp. depend., hydrostatic press. depend. 2-5645  
 PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, sp. ht., 140 to 790K, anomalies at ferroelec. transition and 673K 2-8629  
 Pb<sub>3</sub>MgNb<sub>2</sub>O<sub>7</sub>, photoluminescence rel. to ferroelec. phase transition, domain struct. effect 2-9176  
 Pb<sub>3</sub>MgNb<sub>2</sub>O<sub>7</sub>, ferroelec., luminesc. props. 2-31539  
 Pb(Mn<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>, ferroelec. crystal, high-temp. soln. growth 2-46897  
 Pb<sub>1/2</sub>Mn<sub>1/2</sub>O<sub>3</sub>, perovskites, SHG study of paraelectric transitions 2-31424  
 Pb<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, perovskites, SHG study of paraelectric transitions 2-31424  
 PbO-Nb<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> system, precipitation of ferroelec. PbNb<sub>2</sub>O<sub>6</sub> and dielec. props. of crystallised glasses (Japanese) 2-51917  
 5PbO.2P<sub>2</sub>O<sub>5</sub>, improper ferroelectricity, dielec., pyroelectric charge and thermal expansion meas. 2-9112  
 Pb<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>.Mn<sup>2+</sup>(Gd<sup>3+</sup>), ferroelec. transition, EPR study 2-21874  
 Pb(Sc<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>, ferroelectric domain struct. optical study 2-46520  
 PbSc<sub>0.5</sub>Nb<sub>0.5</sub>O<sub>3</sub>, perovskites, SHG study of paraelectric transitions 2-31424  
 Pb(Sc<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>-Pb(Sc<sub>0.5</sub>Ta<sub>0.5</sub>)O<sub>3</sub>, diffuse ferroelectric transition 2-41303  
 PbSc<sub>1/2</sub>Nb<sub>1/2</sub>O<sub>3</sub> transparent ferroelec. ceramics, phase transitions 2-9102  
 Pb(Sc<sub>0.5</sub>Ta<sub>0.5</sub>)O<sub>3</sub>, ferroelectric domain struct. optical study 2-46520  
 PbTiO<sub>3</sub>, amorphous, crystallisation, Raman study 2-41340  
 PbTiO<sub>3</sub>, amorphous, phase transition, dielectric anomalies 2-41301  
 PbTiO<sub>3</sub>, amorphous, struct. determ. by EXAFS 2-40270  
 PbTiO<sub>3</sub>, low temp. phase transitions 2-45552  
 PbTiO<sub>3</sub>, perovskites, SHG study of paraelectric transitions 2-31424  
 PbTiO<sub>3</sub>, photolum., rel. to structural phase transitions 2-36672  
 PbTiO<sub>3</sub> sintering, Raman scatt. study 2-41339  
 PbTiO<sub>3</sub>:Fe, critical behaviour in ferroelectric transition region (Russian) 2-26835  
 PbTiO<sub>3</sub>-PbZrO<sub>3</sub>-PbNb<sub>2/3</sub>Mn<sub>2/3</sub>O<sub>3</sub>-PbW<sub>1/2</sub>Mn<sub>1/2</sub>O<sub>3</sub> systems, temp. stability of reson. freq., comp. depend. 2-41313  
 (PbTiO<sub>3</sub>)<sub>x</sub>-(PbCeO<sub>3</sub>)<sub>1-x</sub>-(PbNb<sub>2</sub>O<sub>6</sub>)<sub>2</sub>-(MnO<sub>2</sub>)<sub>m</sub> system, piezoelectric, dielectric props. 2-41273  
 Pb(Zn<sub>1/2</sub>Nb<sub>1/2</sub>)O<sub>3</sub>-PbTiO<sub>3</sub>, phase transition study 2-41300  
 Pb(Zr,Sr,Ti)O<sub>3</sub> ceramic, microstructure effect on electrocaloric props. 2-41278  
 Pb(Zr,Ti)O<sub>3</sub>, 4 and 8 type ceramics, high field props. 2-41249  
 Pb(Zr,Ti)O<sub>3</sub> ceramic, domain phase distrib. meas. 2-41311  
 Pb(Zr,Ti)O<sub>3</sub>, concentration-press.-temp. phase diagram 2-41302  
 Pb(Zr,Ti)O<sub>3</sub>, densification and sintering 2-41540  
 Pb(Zr,Ti)O<sub>3</sub>, high press. dielectric props. 2-41262  
 Pb(Zr,Ti)O<sub>3</sub>, resonant freq. temp. depend., permittivity 2-41248  
 Pb(Zr,Ti)O<sub>3</sub>, solid solutions, pyroelectric and dielectric props. 2-13424  
 Pb(Zr,Ti)O<sub>3</sub>, structural defect study 2-40372  
 Pb(Zr,Ti)O<sub>3</sub>, thermoelec. conversion feasibility, piezoelec. and pyroelec. phenomena 2-37420  
 Pb(Zr,Ti)O<sub>3</sub>-type piezoceramics theory 2-46504  
 Pb<sub>1.02</sub>(Zr<sub>0.76</sub>Fe<sub>0.10</sub>Nb<sub>0.10</sub>Ti<sub>0.04</sub>)<sub>1-x</sub>U<sub>x</sub>O<sub>3</sub>, elec. cond., pyroelectricity 2-45959  
 PbZrO<sub>3</sub>, cryst. and domain struct. study, ferroelectric transitions 2-41306  
 PbZrO<sub>3</sub>, single cryst. and ceramic, pyroelec. effect 2-2192  
 PbZrO<sub>3</sub>, temperature-elec. field phase diagram 2-46517  
 Pb<sub>1-x</sub>ZrO<sub>3-x</sub>, Gibbs energy of formation 2-30630

## ferroelectric materials continued

- Pb(Zr<sub>0.5</sub>Ti<sub>0.48</sub>)O<sub>3</sub>, influence of microcracking and slow crack growth on planar coupling coeff. 2-31777  
 Pb(Zr<sub>0.53</sub>Ti<sub>0.47</sub>)O<sub>3</sub> solid soln., synthesis by cryoprecip., prep. and dielec. characts. 2-41563  
 Pb(Zr,Ti<sub>1-x</sub>)O<sub>3</sub>, elec. props. study 2-45960  
 Pb(Zr,Ti<sub>1-x</sub>)O<sub>3</sub>, ferroelec., nature of morphotropic transition region 2-31426  
 Pb(Zr,Ti<sub>1-x</sub>)O<sub>3</sub>, morphotropic phase boundary 2-41305  
 Pb(Zr,Ti<sub>1-x</sub>)O<sub>3</sub>, transition entropy, Curie-Weiss behaviour 2-41304  
 RbD<sub>2</sub>H<sub>2-x</sub>PO<sub>4</sub>, polarisation meas., Landau free energy expansion coeffs. 2-41260  
 RbD<sub>2</sub>PO<sub>4</sub>, phase transitions and superlattice formation 2-41297  
 Rb<sub>2</sub>D(SeO<sub>4</sub>)<sub>2</sub>, dielec. const. and phase transition 2-13387  
 RbH<sub>2</sub>AsO<sub>4</sub>, dielectric response meas., polarisation fluctuations 2-41282  
 RbH<sub>2</sub>PO<sub>4</sub>, cryst. struct. and transition temp. 2-40329  
 RbH<sub>2</sub>PO<sub>4</sub>, dielectric const. and order parameter temp. and elec. field depend. 2-41246  
 RbH<sub>2</sub>PO<sub>4</sub>, dipole and quadrupole piezoelectric effect components 2-41270  
 RbH<sub>2</sub>(SeO<sub>4</sub>)<sub>2</sub>, elec. props. near phase transition 2-41309  
 RbH<sub>2</sub>(SeO<sub>4</sub>)<sub>2</sub>, ferroelec. phase transition, Raman scatt. study in internal vibr. freq. region 2-9143  
 Rb<sub>2</sub>H(SeO<sub>4</sub>)<sub>2</sub>, dielec. const. and phase transition 2-13387  
 RbLiMoO<sub>4</sub>, ferroelectric transitions, dielec. and elastic study 2-31408  
 Rb<sub>2</sub>ZnBe<sub>4</sub>, ferroelec., dielec. props. 2-26833  
 Rb<sub>2</sub>ZnBr<sub>4</sub>, ferroelec., phase transitions, <sup>81</sup>Br NQR study 2-31322  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, ferroelec., low temp. phase 2-17425  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, ferroelec., transitions and struct. 2-30580  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, ferroelec., phase transitions 2-31407  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, incommensurate ferroelectric, <sup>87</sup>Rb spin-lattice relax. via phases 2-31305  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, phase transitions, optical, dielec. and elastic study 2-30583  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, spin-lattice relaxation via phasons in a multisoliton lattice 2-31309  
 Rb<sub>2</sub>ZnCl<sub>4</sub>:Mn<sup>2+</sup>, commensurate-incommensurate transitions, EPR study 2-31266  
 SbNbO<sub>4</sub> crystals, struct. and lattice dynamics at 300 to 1000K 2-21108  
 SbSI, ferroelectric transition, low temp. phase symmetry 2-8465  
 SbSI, thermoabsorption near ferroelec.-paraelec. phase transition 2-9136  
 Sb<sub>2</sub>O<sub>3</sub>-I, ferroelectric props., phenomenological model 2-31418  
 Sc(NH<sub>2</sub>)<sub>2</sub>, incommensurate phase, permittivity, 3 to 30 cm<sup>-1</sup> 2-31362  
 SnCl<sub>2</sub>.2H<sub>2</sub>O, H bonded ferroelec., neutron scatt. studies 2-31389  
 Sn<sub>2</sub>P<sub>2</sub>Se<sub>6</sub>, phase transitions, 100 to 300K, dielec., optical, elec., and acoustic props. 2-45573  
 (Sr,Ba)Nb<sub>2</sub>O<sub>6</sub> ceramics, hot-pressed, props. 2-26806  
 SrAlF<sub>3</sub> family, ferroelec. behaviour and phase transitions 2-31414  
 Sr<sub>0.5</sub>Ba<sub>0.5</sub>Nb<sub>2</sub>O<sub>6</sub> ferroelec. ceramics, Cu doped, spectral photovoltaic response 2-26431  
 Sr<sub>0.5</sub>Ba<sub>0.5</sub>Nb<sub>2</sub>O<sub>6</sub>:Cu ceramics, ageing study through photovoltaic effect 2-26432  
 Sr<sub>0.5</sub>Ba<sub>0.5</sub>Nb<sub>2</sub>O<sub>6</sub>:Pr<sup>3+</sup>, photoinduced elec. props. 2-1944  
 Sr<sub>0.6</sub>Ba<sub>0.4</sub>Nb<sub>2</sub>O<sub>6</sub>, high freq. elastic waves 2-5184  
 Sr<sub>0.6</sub>Ba<sub>0.4</sub>Nb<sub>2</sub>O<sub>6</sub>:Pr<sup>3+</sup>, diffuse ferroelec. transition, X-ray diff. study 2-9100  
 Sr<sub>0.6</sub>Ba<sub>0.39</sub>Nb<sub>2</sub>O<sub>6</sub>, ferroelec., SAW transduction and HF dielec. 2-25210  
 Sr<sub>0.6</sub>Ba<sub>0.39</sub>Nb<sub>2</sub>O<sub>6</sub>, ferroelec. single cryst., piezoelec., H dielec. and SAW props. 2-26821  
 Sr<sub>0.6</sub>Ba<sub>0.39</sub>Nb<sub>2</sub>O<sub>6</sub> single cryst., microwave dielec. props. at 35 and 58 GHz 2-26841  
 (Sr,Ba<sub>1-x</sub>)<sub>1-y</sub>(Nb<sub>2</sub>O<sub>6</sub>)<sub>y</sub>:Ce, holographic sensitivity depend. on Ce conc. 2-4469  
 Sr<sub>2</sub>Ba<sub>1-x</sub>Nb<sub>2</sub>O<sub>6</sub>, inhomogeneous cryst., polarisation reversal 2-26810  
 Sr<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub> and other A<sub>2</sub>B<sub>2</sub>O<sub>7</sub> type layer struct. crystals, ferroelectricity 2-26827  
 Sr<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, ferroelec., low freq. phonon polaritons, Raman scatt. study 2-51092  
 Sr<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, ferroelec. normal phase, ESR study, 250°C 2-41184  
 Sr<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, ferroelec. soft mode, polarised Raman scatt. meas. 2-26828  
 Sr<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, polariton dispersion and IR active soft modes, Raman scatt. study 2-2229  
 Sr<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, single crystals, optical props. 2-26887  
 SrTiO<sub>3</sub>, anharmonic perturbation calcs. of electrostriction 2-46483  
 SrTiO<sub>3</sub>, dielectric dispersion hyper-Raman scatt. study 2-46560  
 SrTiO<sub>3</sub>, dielectric nonlinearity study 2-2177  
 SrTiO<sub>3</sub>, far IR dispersion determ. by hyper-Raman spectroscopy 2-13481  
 SrTiO<sub>3</sub>, ferroelec. transition, hyper Raman scatt. study 2-46581  
 SrTiO<sub>3</sub>, ferroelectrics, ABO<sub>3</sub> type, luminesc. props. 2-31539  
 SrTiO<sub>3</sub>, highly perfect cryst., extinction corrections 2-25817  
 SrTiO<sub>3</sub>, incipient ferroelectrics, temp. depend. of OH stretching mode 2-31478  
 SrTiO<sub>3</sub>, point defect scatt. near displacive transform. 2-36034  
 SrTiO<sub>3</sub>, static shell model calcs. of electrostriction 2-46484  
 SrTiO<sub>3</sub>, US attenuation at struct. transitions 2-45384  
 SrTiO<sub>3</sub>:La, self-compensation 2-25909  
 SrTiO<sub>3</sub>:Zr(Nb)(Ta), ferroelectric soft modes, influence of doping 2-2200  
 SrTiO<sub>3</sub>-based ferroelec. solid solns., Vegard's law validity, X-ray diff. meas. 2-16631  
 TGS, phase transition studied by thermally induced elec. oscils. 2-9109  
 Tb<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, domain wall dynamics, acoustic emission study 2-45386

## ferroelectric phenomena see ferroelectricity

## ferroelectric semiconductor materials see ferroelectric semiconductors

## ferroelectric semiconductors

- ceramics, transparent, semicond. props., electron-hole processes, hologram forming 2-46013  
 fluctuonic electron states, photoferroelectric phenomena 2-45825  
 IV-VI semiconductors, ferroelectric lattice instabilities 2-31388  
 large-gap ferroelectric, vibronically renormalised electronic states, photovoltaic current 2-40952  
 phase transition, EM field intraband absorpt. effect 2-51532  
 tricritical point in strong EM wave field 2-9103  
 Ag<sub>3</sub>AsS<sub>3</sub>, ferroelec.-pyroelec. semicond., nonlinear acoustic and photoacoustic props., 4.2-300K 2-35605  
 AgTaO<sub>3</sub>, hot pressing prep., elec. and photoelec. props. 2-13689  
 Ba<sub>0.8</sub>Ca<sub>0.2</sub>TiO<sub>3</sub>, single crystals, and ceramic, elec. cond. variation with dopant conc. 2-5404  
 BaTiO<sub>3</sub>:Fe<sup>3+</sup>, effect of Fe content on resistivity anomaly (Czech) 2-30898  
 BaTiO<sub>3</sub>Sb<sub>2</sub>O<sub>3</sub> semiconducting ceramics, positive temp. coeff. of resist., microstruct. effect 2-36040



**ferroelectric semiconductors continued**

- Bi<sub>2</sub>Sb<sub>2</sub>—SI solid-solution ferroelectric semiconds., free energy and singularity 2—5649  
 Pb<sub>1-x</sub>Ge<sub>x</sub>Te, optical props. in rhombohedral and cubic phases 2—31481  
 SbSbBr, Raman spectra and soft modes 2—31480  
 SbSI and SbS<sub>0.5</sub>Se<sub>0.5</sub>I, soft phonon modes near phase transition, microwave dielec. spectroscopy 2—31363  
 SbSI, intrinsic optical bistability near phase transition temp. 2—29845  
 SbSI, soft mode, temp. depend. in paraelec. phase, IR refl. study 2—31419  
 SbSI, sp. ht., 83 to 330K, Landau-type anomaly 2—30612  
 Sn<sub>2</sub>P<sub>2</sub>S<sub>6</sub>, lattice dynamics (*Russian*) 2—20384  
 SnTe, nonlinear lattice dynamics, phonon-periodon modes 2—45467  
 SnTe, tricritical point in strong EM wave field 2—9103  
 SrTiO<sub>3</sub> electrode, photovoltaic response to temp. change 2—46056  
 SrTiO<sub>3</sub>, polycryst., elec. cond., 800 to 1050°C, O<sub>2</sub> partial press. depend. 2—26385  
 SrTiO<sub>3</sub>Nb, Raman study of phase transition 2—46508

**ferroelectric switching**

- azobenzene, switching transients, polarisation 2—36507  
 dicalcium strontium propionate, switching transients, polarisation 2—36507  
 domain study, pyroelec. probe technique study 2—2193  
 irreversible thermodynamic theory 2—46496  
 $\beta$ -polyvinylidene fluoride, ferroelec. switching 2—36565  
 quartz, secondary ferroic, twin wall orientation and switching dynamics 2—31410  
 TGS, switching characts. and phase transition, gamma irradi. effects, thermal noise study 2—31422  
 TGS, switching induced electrolum., X-ray irradi. effect 2—36704  
 TGS, switching transient shape 2—36562  
 TGS and its deuterated form, optical activity 2—36592  
 TGS ferroelectric cryst., radiation damaged, polarization switching 2—36564  
 trissarcosine calcium chloride, switching parameters, temp., elec. field and press. depend. 2—26811  
 Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, crystals, electroluminescence with nonequilib. domain struct. 2—13574  
 NaNO<sub>2</sub>, ferroelectric cryst., radiation damaged, polarization switching 2—36564  
 NaNO<sub>2</sub>, switching characts. and phase transition, gamma irradi. effects, thermal noise study 2—31422  
 Sr<sub>1-x</sub>Ba<sub>x</sub>Nb<sub>2</sub>O<sub>6</sub>, inhomogeneous cryst., polarisation reversal 2—26810

**ferroelectric thin films**

- oxide film form. from laser plasma, operating mode 2—46913  
 TGS thin film, ferroelec. props. 2—36580  
 UHF dielectric props. 2—41284  
 (Ba,Sr)TiO<sub>3</sub> complex ferroelectric thin films, growth by plasma-ion sputtering 2—27099  
 Ba<sub>0.9</sub>Sr<sub>0.1</sub>Nb<sub>2</sub>O<sub>6</sub>, ferroelec. thin film, electrooptical props. 2—31454  
 BaTiO<sub>3</sub> film, dielectric props. depend. on coherent scatt. region 2—5648  
 BaTiO<sub>3</sub> films, preparation and struct. 2—46917  
 BaTiO<sub>3</sub>, heteroepitaxial films, ferroelectric transition 2—46477  
 BaTiO<sub>3</sub>, sputtered films, temp. effect on props. 2—46918  
 LiNbO<sub>3</sub> single cryst. films, LPE growth for SAW devices 2—2467  
 PbTiO<sub>3</sub>, ferroelectric thin film, prep. by sputtering and laser annealing 2—2199  
 SrTiO<sub>3</sub>, heteroepitaxial films, ferroelectric transition 2—46477

**ferroelectric transitions**

- see also critical fluctuations; displacive transformations; ferroelectric Curie temperature; order-disorder transformations  
 antimonates, R<sub>3</sub>Sb<sub>2</sub>O<sub>12</sub> (R=In, Sc, La, Pr, Tb, Yb) struct., ferroelec. and piezoelec. characts. 2—30441  
 binary ferroelectric, with morphotropic region, phase transform., thermodynamic theory 2—26838  
 bis tetramethyl ammonium tetrabromocuprate, phase transition, dielec. meas., ferroelectricity obs. 2—45558  
 bis-propyl ammonium tetrachloro zincate, ferro-paraelectric phase transitions 2—41292  
 boracites, dielec. anomalies 2—9110  
 boracites, phase transitions theory with multicomponent transition parameters 2—26016  
 carrier mobility anomaly, soft TO phonon and defect scatt. 2—45958  
 ceramics, research in China 2—46490  
 crystal in nonpolar incommensurate phase, spontaneous polarisation 2—36512  
 crystals, H bonded, ferroelectric transitions 2—36551  
 cubic anisotropy influence in dipole-dipole interactions 2—21956  
 defect dynamics at struct. phase transitions 2—30482  
 defects role, sp. ht., US absorpt. and soft mode linewidth study 2—31405  
 dicalcium barium propionate: Mn<sup>2+</sup>, ESR study of phase transition 2—36559  
 dicalcium lead propionate: Mn<sup>2+</sup>, ESR study of phase transition 2—36559  
 dicalcium lead propionate, monocryst., electrical cond., stimulated thermocurrent 2—30891  
 dicalcium strontium propionate: Mn<sup>2+</sup>, ESR study of phase transition 2—36559  
 dielectric polarisation, nonvarying and decreasing with cooling from T<sub>c</sub> 2—17420  
 diglycine nitrate, transition temp. isotope shift 2—41299  
 dipole-ordered crystals, modulation spectroscopy in VUV region 2—36663  
 DOBAMBC, ferroelectric phase transition, X-ray scatt. study 2—13426  
 domain wall, order parameter profile near first order transition, role of elastic forces 2—46518  
 ferroelectric smectic layer, A-C\* phase transition, boundary condition effects 2—16782  
 heat capacity, AC calorimetry technique 2—23639  
 ice Ih, ferroelec. phase transition and dielec. const. anisotropy 2—26832  
 incommensurate phase transition, Landau theory 2—31400  
 incommensurate phases (*French*) 2—27172  
 incommensurate superstruct. form. in presence of Lifshitz invariants 2—46516  
 ionic solids, phase transformations, first-principles theory 2—30564  
 Ising model, transverse, randomly diluted, second order phase transition 2—36371  
 Ising model, transverse, with substitutional disorder, static props. 2—26834  
 Ising universality class model, struct. phase transition, crit. behaviour 2—30565  
 Jahn-Teller, coupled dielec. and elastic anomalies 2—31421

**ferroelectric transitions continued**

- low-dimensional tunnelling model, phase transition 2—9107  
 luminescence properties of ABO<sub>3</sub> ferroelectrics 2—31539  
 magnetic field effects, thermodynamic approach 2—31404  
 microscopic observational method for domain struct. and phase transitions 2—2208  
 mode coupling phenomena, light scatt. studies 2—31396  
 model descriptions of ferroelectric phase transitions 2—26839  
 model with intermediate incommensurate phase 2—41288  
 multiplicity of phase transitions, new theoretical approach 2—31403  
 nonequilibrium modulated structs. in strong external field 2—41290  
 nonlinear dielec. props., mag. field effects 2—31420  
 perovskite ferroelectrics, martensitic transform. theory and mechanism 2—46500  
 perovskite type ferroelectrics, SHG study in paraelec. phase 2—31424  
 perovskites, dynamic correlations below anti-ferrodistortive transition 2—46502  
 phase transitions in BaTiO<sub>3</sub>-type ferroelectrics 2—46503  
 PLZT, additional max. on dielec. const. temp. depend., hydrostatic press. depend. 2—5645  
 powder EPR lineshapes for KDP type crystals 2—41181  
 quadrupole moments, anomalous temp. depend. near struct. phase transitions 2—46498  
 quartz, light scattering studies, historical review 2—28638  
 review of work on phase transitions at IBM 2—35671  
 Rochelle salt, ferroelectric phase transitions, electroacoustic interaction, polarisation echo study (*Russian*) 2—41310  
 Rochelle salt, X-irradiated, critical anomaly of electron spin-lattice relax. 2—41178  
 Rochelle salt single crystal, ferroelectric phase transition, microhardness study 2—9111  
 semiconductor, EM field intraband absorpt. effect 2—51532  
 semiconductor, tricritical point in strong EM wave field 2—9103  
 sodium potassium ammonium tartrate, X-irradiated, critical anomaly of electron spin-lattice relax. 2—41178  
 soft mode spectroscopy, Curie-Weiss law 2—46501  
 specific heat calc., free energy expansion high order terms effect 2—31402  
 squaric acid, antiferroelectric phase transition, thermodynamic props., statistical model calc. 2—17424  
 squaric acid, layered antiferroelectric, phase transition 2—31398  
 squaric acid, microscopic model based on 3-D coupling of 1-D Ising chains 2—2203  
 squaric acid, phase transition, neutron study 2—41298  
 squaric acid, thermal expansion, specific heat 2—40574  
 surface effects, review 2—31399  
 symmetry aspects, review 2—30430  
 symmetry aspects in ferroelectric, antiferroelectric, improper and incommensurate phase transitions 2—41291  
 tanane, ferroelectric and ferroelastic transition 2—36560  
 tetramethylammonium tetrachlorocobaltate, ferroelec. phase transitions 2—41294  
 TGS: Fe<sup>3+</sup>(Cu<sup>2+</sup>)(Pd<sup>2+</sup>), ferroelec. transition, US velocity and absorption, doping effects 2—16727  
 TGS, Brillouin scatt. in pure and  $\gamma$ -irrad. crystals 2—36656  
 TGS, deuterated, complex permittivity dispersion 2—36495  
 TGS, ferroelec. transition, uniaxial stress effects 2—46495  
 TGS, single cryst., pyroelec. props. at elec. bias field 2—21950  
 TGS, sp. ht. and permittivity, effect of impurities 2—8633  
 TGS, switching characts. and phase transition, gamma irradi. effects, thermal noise study 2—31422  
 TGS, ultrasonic props. near phase transition 2—45406  
 TGSe(Se), crit. fluctuations, mean-field soln. of Ising model 2—46497  
 TGSe, ferroelectric transition, tricritical point, topological aspect 2—36563  
 thermal diffusivity studies of ferroelectric phase transitions 2—26829  
 thiourea, phase diagram in elec. field determ. from linear birefringence obs. (*French*) 2—8598  
 thiourea, sinusoidal antiferroelectricity theory 2—21953  
 thiourea-d<sub>4</sub>, field-induced commensurate phase 2—51531  
 tris-sarcosine calcium chloride, ferroelec., phase transition, Raman and Brillouin scatt. study 2—36617  
 tris-sarcosine calcium chloride: Mn<sup>2+</sup>, ferroelec., press. and temp. depend. of local order parameter 2—9106  
 tris-sarcosine calcium chloride, brominated, ferroelectric transition, Raman study 2—36558  
 tris-sarcosine calcium chloride, ferroelectric transition, soft modes 2—36557  
 tris-sarcosine calcium chloride, specific heat critical behaviour 2—35706  
 tris-sarcosine calcium chloride bromide, dielectric studies 2—36556  
 tris-sarcosine calcium chloride bromide, ferroelectric props. 2—36561  
 two dimensional model, ferroelastic effect 2—36554  
 universal phenomena near structural phase transitions 2—30579  
 vinylidene fluoride-trifluoroethylene random copolymers, ferroelectric phase transition 2—21955  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>:Ag<sup>+</sup>, antiferroelec. transitions, three-state two-dimens. Potts model 2—2207  
 Ba<sub>0.4</sub>Sr<sub>0.6</sub>Nb<sub>2</sub>O<sub>6</sub>:Pr<sup>3+</sup>, fluorescence lifetime study 2—17524  
 Ba<sub>0.9</sub>Sr<sub>0.1</sub>Nb<sub>2</sub>O<sub>6</sub>, ferroelec. thin film, electrooptical props. 2—31454  
 BaTiO<sub>3</sub>, ferroelec. phase transitions, Devonshire theory 2—31401  
 BaTiO<sub>3</sub>, ferroelec. transition, hyper Raman scatt. study 2—46581  
 BaTiO<sub>3</sub> film, dielectric props. depend. on coherent scatt. region 2—5648  
 BaTiO<sub>3</sub>, heteroepitaxial films, ferroelectric transition 2—46477  
 BaTiO<sub>3</sub>, mag. field influence on paraelectric-ferroelectric transition 2—46506  
 BaTiO<sub>3</sub>, opalescence at tetragonal-orthorhombic phase transition 2—9116  
 BaTiO<sub>3</sub>, phase transition calcs. 2—46499  
 BaTiO<sub>3</sub>, sputtered films, temp. effect on props. 2—46918  
 BaTiO<sub>3</sub>, T-E phase diagram 2—46509  
 BaTiO<sub>3</sub>, tetragonal-cubic phase transition, Raman study 2—46505  
 BaTiO<sub>3</sub>:Co, diffuse phase transition, dielec. meas. 2—9104  
 BaTiO<sub>3</sub>:Fe, dielectric and optical props. 2—46457  
 BaTi<sub>1-x</sub>Sn<sub>x</sub>O<sub>3</sub>, phase transitions, dielectric props. 2—46510  
 BaTi<sub>1-x</sub>Zr<sub>x</sub>O<sub>3</sub>, phase transitions, dielectric props. 2—46510  
 Bi<sub>2</sub>Sb<sub>2</sub>—SI solid-solution ferroelectric semiconds., free energy and singularity 2—5649  
 Ca(NO<sub>3</sub>)<sub>2</sub>, phase transition study (*French*) 2—46515  
 cc KTa<sub>0.988</sub>Nb<sub>0.012</sub>O<sub>3</sub>, ferroelec., thermal and elastic props. at low temps. 2—30664  
 Cd langbeinites, Cd<sub>2</sub>Me<sub>2</sub>(SO<sub>4</sub>)<sub>2</sub> (Me=NH<sub>4</sub>, ND<sub>4</sub>, Tl, Rb), ferroelec. phase transition, Raman spectra study 2—31477  
 Cd<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, glasslike thermal and dielectric props. 2—40613



## ferroelectric transitions continued

- $\text{Cd}_2\text{Nb}_2\text{O}_7$ , photolum., rel. to structural phase transitions 2-36672  
 $\text{Cr}_2\text{B}_2\text{O}_7$ , improper ferroelec. transition, disorder-order parameters, Raman scatt. study 2-31411  
 $\text{Cs}(\text{D}_{0.64}\text{F}_{0.36})_2\text{AsO}_4$ , cryst. struct. and transition temp. 2-40329  
 $\text{CsH}_2\text{AsO}_4$  and  $\text{CsD}_2\text{AsO}_4$ , dielectric response meas., polarisation fluctuations 2-41282  
 $\text{CsHSO}_4$ , phase transition, dielec. const. and sp. ht. study 2-13388  
 $\text{CsH}_2(\text{SeO}_3)_2$ , hydrogen bond network, antiferroelectric phase transition  $^2\text{D}$  and  $^{133}\text{Cs}$  NMR study 2-51481  
 $\text{CsLiMoO}_4$ , ferroelectric phase transitions, optical, dielec. and X-ray obs. 2-36568  
 $\text{CsLiMoO}_4(\text{WO}_4)$ , ferroelectric transitions, dielec. and elastic study 2-31408  
 $\text{Cu}_2\text{B}_2\text{O}_7$ , ferroelectric phase transition, pyroelectric and dielec. meas., thermodynamic model 2-31412  
 $\text{Dy}_2(\text{MoO}_4)_3$ , ferroelec.-ferroelastic, phase transition, cathodo- and photolum. study 2-36550  
 $\text{Fe}_2\text{B}_2\text{O}_7$ , ferroelectric phase transition, pyroelectric and dielec. meas., thermodynamic model 2-31412  
 $\text{Fe}_2\text{B}_2\text{O}_7$ , ferroelectric phase transition, Raman scatt. study 2-31475  
 $\text{Gd}_2(\text{MoO}_4)_3$ , ferroelec., low freq. phonon polaritons, Raman scatt. study 2-51092  
 $\text{Gd}_2(\text{MoO}_4)_3$ , ferroelec. transition, low freq.  $A_1$  modes, Raman spectra study 2-31413  
 $\text{Gd}_2(\text{MoO}_4)_3$ , ferroelec.-ferroelastic transition, cathodo- and photolum. study 2-36550  
 $\text{Gd}_2(\text{MoO}_4)_3$ , ferroelec.-ferroelastic, phase transition, Raman and Brillouin scatt. study 2-36617  
 $\text{Gd}_2(\text{MoO}_4)_3$ , thermally stimulated radiation emitted by surface polaritons near phase transition 2-5647  
 $\text{Gd}_2(\text{MoO}_4)_3:\text{Tb}^{3+}(\text{Eu}^{3+})$ , ferroelec.-ferroelastic, luminescence spectra near phase transition 2-31538  
 $\text{HCl}$  and  $\text{HCl}\cdot\text{DCl}$ , pretransitional clusters and heterophase fluctuations at ferroelec. transition,  $^{35}\text{Cl}$  NQR study 2-26836  
 $\text{H}_2(\text{UO}_2)_2(\text{AsO}_4)_2\cdot 8\text{H}_2\text{O}$ , phase II, ferroelastic character, point groups 2-35571  
 $\text{K}(\text{D}_{0.95}\text{H}_{0.05})_2\text{PO}_4$ , cryst. struct. and transition temp. 2-40329  
 $\text{KD}_2\text{PO}_4$ , cryst. struct., temp. and press. depend. 2-50595  
 $\text{KD}_2\text{PO}_4$ , ferroelectric, light scatt. spectra, wave vector direction depend., effects of electrostatic and elastic long range forces 2-9158  
 $\text{KD}_2\text{PO}_4$  with ADP impurities, lattice polarisation, proton ordering 2-41258  
 $\text{KD}_2\text{PO}_4\cdot\text{SeO}_4^{3-}$ , coexistence of paraelec. and ferroelec. phases, ESR obs. 2-46375  
 $\text{K}_4\text{Fe}(\text{CN})_6\cdot 3\text{H}_2\text{O}$  cryst., ferroelec.,  $\text{H}_2\text{O}$  stretching vibrs., spectrosc. obs. 2-51572  
 $\text{K}_4\text{Fe}(\text{CN})_6\cdot 3\text{H}_2\text{O}$ , pseudo-spin formalism and ferroelec. transition temp. 2-9105  
 $\text{KH}_2\text{AsO}_4$  and  $\text{KD}_2\text{AsO}_4$ , dielectric response meas., polarisation fluctuations 2-41282  
 $\text{KH}_2\text{AsO}_4$ , dielec. meas. and discontinuity at paraelectric-ferroelec. phase transition 2-2202  
 $\text{KH}_2\text{PO}_4$ , constitutive eqns., group theoretic methods 2-26830  
 $\text{KH}_2\text{PO}_4$ , critical X-ray scatt. at phase transition (Russian) 2-13427  
 $\text{KH}_2\text{PO}_4$ , cryst. struct. and transition temp. 2-40329  
 $\text{KH}_2\text{PO}_4$ , cryst. struct., temp. and press. depend. 2-50595  
 $\text{KH}_2\text{PO}_4$ , dielectric const. and order parameter temp. and elec. field depend. 2-41246  
 $\text{KH}_2\text{PO}_4$ , dielectric response meas., polarisation fluctuations 2-41282  
 $\text{KH}_2\text{PO}_4$ , dipole and quadrupole piezoelectric effect components 2-41270  
 $\text{KH}_2\text{PO}_4$ , ferroelec. transition, uniaxial stress effects 2-46495  
 $\text{KH}_2\text{PO}_4$ , ferroelectric dynamics 2-41281  
 $\text{KH}_2\text{PO}_4$ , ferroelectric phase transitions, electroacoustic interaction, polarisation echo study (Russian) 2-41310  
 $\text{KH}_2\text{PO}_4$ , phase transition in elastic media 2-9113  
 $\text{KH}_2\text{PO}_4$ , piezoelectric polarisation oscils. near phase transition 2-41259  
 $\text{KH}_2\text{PO}_4$ , Raman spectra and lattice dynamics 2-41338  
 $\text{KH}_2\text{PO}_4$ , transverse polarisation dynamics near phase transition 2-41257  
 $\text{KH}_2\text{PO}_4$  type cryst., first order ferroelec. phase transition theory 2-36553  
 $\text{KH}_2\text{PO}_4$ -type ferroelectrics, anharmonic Debye-Waller factors and struct. phase transitions 2-50818  
 $\text{KIO}_3\cdot\text{H}_2\text{O}$ , NQR study of impurity effects on phase transition (Russian) 2-21914  
 $\text{KLiSO}_4$ , phase transitions, EPR study 2-31281  
 $\text{K}_{1-x}\text{Li}_x\text{Ta}_{1-x}\text{Nb}_x\text{O}_3$ , ferroelec. phase transition, symm. breaking impurity effect, Raman scatt. study 2-26837  
 $\text{K}_{1-x}\text{Li}_x\text{Ta}_{1-x}\text{Nb}_x\text{O}_3$ , ferroelec. transitions, Raman scatt. studies 2-26888  
 $\text{K}(\text{M}_2\text{W}_{1-x}\text{O}_8)$  ( $\text{M}=\text{Li}, \text{Al}, \text{Ti}$  or  $\text{Nb}$ ) cryst. chem., polymorphism and dielec. props. 2-5237  
 $\text{KNbO}_3$ , ferroelectric phase transition, thermodynamic description 2-2204  
 $\text{KNbO}_3$ , soft ferroelec. mode, IR reflectivity meas. 2-31417  
 $\text{K}_2\text{SeO}_4$ , birefringence and lattice strain 2-26860  
 $\text{K}_2\text{SeO}_4$ , dielectric critical slowing-down near incommensurate-ferroelec. transition point 2-41296  
 $\text{K}_2\text{SeO}_4$ , ferroelec., phase transitions, Brillouin spectra study 2-31516  
 $\text{K}_2\text{SeO}_4$ , ferroelec., transitions and struct., birefringence study 2-30580  
 $\text{K}_2\text{SeO}_4$ , ferroelectric transitions and quantum effects, high press. effect 2-41293  
 $\text{K}_2\text{SeO}_4$ , nonlinear lattice dynamics, phonon-periodon modes 2-45467  
 $\text{K}_2\text{SeO}_4$ , softmode-periodon coupling in ferroelec. phase transitions 2-41285  
 $\text{KTa}_{1-x}\text{Nb}_x\text{O}_3$ , ferroelec., deviation from Curie-Weiss law at high temp., IR refl. spectra 2-31479  
 $\text{KTaO}_3$ , incipient ferroelectrics, temp. depend. of OH stretching mode 2-31478  
 $\text{KTaO}_3\cdot\text{Li}$ , defect induced fluctuations, dielec. and optical props. meas. 2-26889  
 $\text{K}_2\text{ZnCl}_4$ , incommensurate-commensurate transition, impurity effects 2-41295  
 $\text{K}_2\text{Zn}_2(\text{SO}_4)_3$ , langbeinite type, pyroelec. props. 2-5644  
 $\text{LiNH}_4\text{SO}_4$ , ferroelec. transitions detect. by DC conductivity studies 2-5646  
 $\text{LiTaO}_3$ , ferroelec., low freq. phonon polaritons, Raman scatt. study 2-51092  
 $\text{Mn}_2\text{B}_2\text{O}_7\text{Cl}(\text{Br})(\text{I})$ , orthorhombic ferroelec., phase transitions, expt. study 2-31409  
 $\text{Mn}_2\text{B}_2\text{O}_7$ , ferroelectric phase transition, pyroelectric and dielec. meas., thermodynamic model 2-31412

## ferroelectric transitions continued

- $(\text{ND}_4)_2\text{SO}_4$ , elec. cond., dielec. const., and phase transitions, -196 to  $50^\circ\text{C}$  2-36570  
 $(\text{NH}_4)_2$ , ferroelec., commensurate-incommensurate transition, X-ray study 2-30431  
 $(\text{NH}_4)_2\text{ZnCl}_4$ , phase transitions, Raman and Brillouin scatt. study 2-31473  
 $(\text{NH}_4)_2\text{BeF}_4$ , ferroelectric phase transitions, X-ray dilatometric study 2-21954  
 $(\text{NH}_4)_2\text{BeF}_4$ , ferroelec., optical activity and birefringence 2-31446  
 $\text{NH}_4\text{Cl}(\text{Br})$ , light scatt. study of dynamic critical phenomena 2-41377  
 $\text{NH}_4\text{H}_2\text{AsO}_4$ , antiferroelectric, behaviour of free radicals in phase transition (French) 2-36566  
 $\text{NH}_4\text{H}_2\text{PO}_4(\text{AsO}_4)$  and  $\text{ND}_4\text{D}_2\text{PO}_4$ , antiferroelec. transitions, pseudospin model, Green's function theory 2-46514  
 $(\text{NH}_4)_2\text{H}(\text{SO}_4)_2$ -type crystals, phase transitions and ferroelectricity (Japanese) 2-5222  
 $\text{NH}_4\text{HSeO}_4$ , ferroelectric props. near phase transition temp. 2-9098  
 $\text{NH}_4\text{HSeO}_4$ , influence of hydrostatic press. on phase transition 2-36571  
 $\text{NH}_4\text{HSeO}_4$ , partly deuterated, ferroelectric props. 2-31425  
 $\text{NH}_4\text{HSeO}_4$ , phase transition at 261K, US study, permittivity and polarisation meas. 2-36569  
 $\text{NH}_4\text{LiSO}_4$ , ferroelec. phase transition, Brillouin scatt. study 2-17421  
 $(\text{NH}_4)_2\text{SO}_4$ , elec. cond., dielec. const., and phase transitions, -196 to  $50^\circ\text{C}$  2-36570  
 $(\text{NH}_4)_2\text{SO}_4$ , ferroelectric transition, EPR study 2-46513  
 $(\text{NH}_4)_2\text{ZnCl}_4$ , ferroelec. phase transitions, dielec., thermal, and X-ray diff. meas. 2-2201  
 $\text{NaD}_2(\text{SeO}_3)_2$ , cryst. and mol. struct. of paraelectric and ferroelectric phases 2-40330  
 $\text{NaH}_2(\text{SeO}_3)_2$ , single cryst., pyroelec. props. at elec. bias field 2-21950  
 $\text{NaNd}_2\text{SeO}_4\cdot 2\text{D}_2\text{O}$ ,  $\gamma$ -irrad., ferroelec. transition, ESR obs. 2-2119  
 $\text{NaNH}_2\text{SeO}_4\cdot 2\text{H}_2\text{O}$ ,  $\gamma$ -irrad., ferroelec. transition, ESR obs. 2-2119  
 $\text{NaNH}_2$ ,  $^{23}\text{Na}$  nuclear spin-lattice relaxation near phase transition 2-41220  
 $\text{NaNO}_2$ , commensurate and incommensurate phases,  $^{23}\text{Na}$  NMR study 2-36452  
 $\text{NaNO}_2$ , ferroelectric phase transition, X-ray powder diff. study 2-41307  
 $\text{NaNO}_2$ , incommensurate phase transition, lattice instability 2-9114  
 $\text{NaNO}_2$ , incommensurate phase transition, statics and dynamics 2-41289  
 $\text{NaNO}_2$ , incommensurate (antiferroelec.) phase transition, Brillouin scatt. study 2-46512  
 $\text{NaNO}_2$ , nonequilibrium state, dynamical struct. anal. 2-31397  
 $\text{NaNO}_2$ , polycrystalline, ferroelec., dielec. const. 2-31406  
 $\text{NaNO}_2$ , switching characs. and phase transition, gamma irradi. effects, thermal noise study 2-31422  
 $\text{Na}_2\text{W}_2\text{O}_7$ , chiolite type ferroelectric substitution effect on transition temp. (French) 2-21952  
 $\text{PLZT}$ , amorphous behaviour, demonstrated by thermal cond. meas. 2-12864  
 $\text{PLZT}$  ceramic, shape memory effect study 2-40468  
 $\text{PLZT}$ , influence of press. on phase transitions 2-2206  
 $\text{PLZT X}/65/35$ , transparent ferroelec. ceramics, phase transitions 2-9102  
 $\text{Pb}(\text{Fe}_{0.5}\text{Nb}_{0.5}\text{O}_3)$ , EPR linewidth, crit. point anomalies 2-46368  
 $\text{Pb}(\text{Fe}_{0.5}\text{Nb}_{0.5}\text{O}_3)$ , ferroelectric domain study 2-46519  
 $\text{Pb}(\text{Fe}_{1/2}\text{Nb}_{1/2}\text{O}_3)\cdot\text{Pb}(\text{Mg}_{1/2}\text{W}_{1/2}\text{O}_3)$  solid soln., phase anal. 2-26831  
 $\text{Pb}_2\text{GeO}_6$ , electro- and magneto-optical phenomena 2-46542  
 $\text{Pb}_{1-x}\text{Ge}_x\text{Te}$ , optical props. in rhombohedral and cubic phases 2-31481  
 $\text{PbHfO}_3$ , antiferroelec., phase transition temp., influence of permanent mag. field 2-9108  
 $\text{PbMg}_{1/3}\text{Nb}_{2/3}\text{O}_3$ , ferroelectric, induced diffuse phase transitions 2-17426  
 $\text{PbMg}_{1/3}\text{Nb}_{2/3}\text{O}_3$ , ferroelectric phase transitions 2-41308  
 $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3}\text{O}_3)$ , ferroelectric domain struct. optical study 2-46520  
 $\text{PbMg}_{1/3}\text{Nb}_{2/3}\text{O}_3$ , reflection spectra in fundamental absorpt. band 2-5729  
 $\text{PbMg}_{1/3}\text{Nb}_{2/3}\text{O}_3$  single cryst., additional max. on dielec. const. temp. depend., hydrostatic press. depend. 2-5645  
 $\text{PbMg}_{1/3}\text{Nb}_{2/3}\text{O}_3$ , sp. ht., 140 to 790K, anomalies at ferroelec. transition and 673K 2-8629  
 $\text{Pb}_2\text{MgNb}_2\text{O}_8$ , photoluminescence rel. to ferroelec. phase transition, domain struct. effect 2-9176  
 $\text{SbPO}_2\cdot 2\text{P}_2\text{O}_5$ , improper ferroelectricity, dielec., pyroelectric charge and thermal expansion meas. 2-9112  
 $\text{Pb}(\text{PO}_3)_2\cdot\text{Mn}^{2+}(\text{Gd}^{3+})$ , ferroelec. transition, EPR study 2-21874  
 $\text{Pb}(\text{Sc}_{0.5}\text{Nb}_{0.5}\text{O}_3)$ , ferroelectric domain struct. optical study 2-46520  
 $\text{Pb}(\text{Sc}_{0.5}\text{Nb}_{0.5}\text{O}_3)\cdot\text{Pb}(\text{Sc}_{0.5}\text{Ta}_{0.5}\text{O}_3)$ , diffuse ferroelectric transition 2-41303  
 $\text{PbSc}_{1/2}\text{Nb}_{1/2}\text{O}_3$  transparent ferroelec. ceramics, phase transitions 2-9102  
 $\text{Pb}(\text{Sc}_{0.5}\text{Ta}_{0.5}\text{O}_3)$ , ferroelectric domain struct. optical study 2-46520  
 $\text{PbTiO}_3$ , ferroelectric thin film, prep. by sputtering and laser annealing 2-2199  
 $\text{PbTiO}_3$ , low temp. phase transitions 2-45552  
 $\text{PbTiO}_3$ , photolum., rel. to structural phase transitions 2-36672  
 $\text{PbTiO}_3\cdot\text{Fe}$ , critical behaviour in ferroelectric transition region (Russian) 2-26835  
 $\text{Pb}(\text{Zn}_{1/3}\text{Nb}_{2/3}\text{O}_3)\cdot\text{PbTiO}_3$ , phase transition study 2-41300  
 $\text{Pb}(\text{Zr},\text{Sn},\text{Ti})\text{O}_3$  ceramic, microstructure effect on electrocaloric props. 2-41278  
 $\text{Pb}(\text{Zr},\text{Ti})\text{O}_3$ , concentration-press.-temp. phase diagram 2-41302  
 $\text{Pb}(\text{Zr},\text{Ti})\text{O}_3$ , resonant freq. temp. depend., permittivity 2-41248  
 $\text{Pb}(\text{Zr},\text{Ti})\text{O}_3$ -type piezoceramics theory 2-46504  
 $\text{PbZrO}_3$ , cryst. and domain struct. study, ferroelectric transitions 2-41306  
 $\text{PbZrO}_3$ , single cryst. and ceramic, pyroelec. effect 2-2192  
 $\text{Pb}(\text{Zr},\text{Ti}_{1-x})\text{O}_3$ , ferroelec., nature of morphotropic transition region 2-31426  
 $\text{Pb}(\text{Zr},\text{Ti}_{1-x})\text{O}_3$ , morphotropic phase boundary 2-41305  
 $\text{Pb}(\text{Zr},\text{Ti}_{1-x})\text{O}_3$ , transition entropy, Curie-Weiss behaviour 2-41304  
 $\text{RbCdF}_3\cdot\text{Gd}^{3+}$ , ESR study of phase transition 2-46507  
 $\text{RbD}_2\text{H}_2\text{PO}_4$ , polarisation meas., Landau free energy expansion coeffs. 2-41260  
 $\text{RbD}_2\text{PO}_4$ , phase transitions and superlattice formation 2-41297  
 $\text{RbH}_2\text{AsO}_4$ , dielectric response meas., polarisation fluctuations 2-41282  
 $\text{RbH}_2\text{PO}_4$ , cryst. struct. and transition temp. 2-40329  
 $\text{RbH}_2\text{PO}_4$ , dielectric const. and order parameter temp. and elec. field depend. 2-41246  
 $\text{RbH}_2\text{PO}_4$ , dipole and quadrupole piezoelectric effect components 2-41270  
 $\text{RbH}_2(\text{SeO}_3)_2$ , elec. props. near phase transition 2-41309  
 $\text{RbH}_2(\text{SeO}_3)_2$ , ferroelec. phase transition, Raman scatt. study in internal vibr. freq. region 2-9143  
 $\text{RbLiMoO}_4$ , ferroelectric transitions, dielec. and elastic study 2-31408



**ferroelectric transitions continued**

- Rb<sub>2</sub>ZnBr<sub>4</sub>, ferroelec., phase transitions, <sup>81</sup>Br NQR study 2-31322  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, dielectric critical slowing-down near incommensurate-ferroelec. transition point 2-41296  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, ferroelec., low temp. phase 2-17425  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, ferroelec., transitions and struct. 2-30580  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, ferroelec., phase transitions 2-31407  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, incommensurate ferroelectric, <sup>87</sup>Rb spin-lattice relax. via phonons 2-31305  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, phase transitions, optical, dielec. and elastic study 2-30583  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, spin-lattice relaxation via phonons in a multisoliton lattice 2-31309  
 Rb<sub>2</sub>ZnCl<sub>4</sub>Mn<sup>2+</sup>, commensurate-incommensurate transitions, EPR study 2-31266  
 Rb<sub>2</sub>ZnCl<sub>4</sub>(Br<sub>4</sub>), incommensurate-commensurate transition, impurity effects 2-41295  
 SbNbO<sub>4</sub> crystals, struct. and lattice dynamics at 300 to 1000K 2-21108  
 SbSBr, Raman spectra and soft modes 2-31480  
 SbSI and SbS<sub>0.7</sub>Se<sub>0.3</sub>, soft phonon modes near phase transition, microwave dielec. spectroscopy 2-31363  
 SbSI, ferroelectric transition, low temp. phase symmetry 2-8465  
 SbSI, intrinsic optical bistability near phase transition temp. 2-29845  
 SbSI, soft mode, temp. depend. in paraelec. phase, IR refl. study 2-31419  
 SbSI, sp. ht., 83 to 330K, Landau-type anomaly 2-30612  
 SbSI, thermoabsorption near ferroelec.-paraelec. phase transition 2-9136  
 Sb<sub>2</sub>O<sub>3</sub>I, ferroelectric props., phenomenological model 2-31418  
 Sb(Sb<sub>1-x</sub>Nb<sub>x</sub>)O<sub>4</sub> single cryst., synthetic, dielec. props., crystn. parameter variation 2-51511  
 SnCl<sub>2</sub>(H<sub>2</sub>O)<sub>2-x</sub>(D<sub>2</sub>O)<sub>x</sub>, solid soln., critical temp. 2-36567  
 SnCl<sub>2</sub>·2H<sub>2</sub>O crystals, H bonded, ferroelec. transitions, pseudo-spin lattice coupled mode model 2-36552  
 Sn<sub>2</sub>P<sub>2</sub>Se<sub>6</sub>, phase transitions, 100 to 300K, dielec., optical, elec., and acoustic props. 2-45573  
 SnTe, nonlinear lattice dynamics, phonon-periodon modes 2-45467  
 SnTe, tricritical point in strong EM wave field 2-9103  
 SrAlF<sub>3</sub> family, ferroelec. behaviour and phase transitions 2-31414  
 Sr<sub>0.5</sub>Ba<sub>0.5</sub>Nb<sub>2</sub>O<sub>6</sub>Pr<sup>3+</sup>, photoinduced elec. props. 2-1944  
 Sr<sub>0.6</sub>Ba<sub>0.4</sub>Nb<sub>2</sub>O<sub>6</sub>Pr<sup>3+</sup>, diffuse ferroelec. transition, X-ray diffr. study 2-9100  
 Sr<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, ferroelec., low freq. phonon polaritons, Raman scatt. study 2-51092  
 Sr<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, ferroelec. soft mode, polarised Raman scatt. meas. 2-26828  
 Sr<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, polariton dispersion and IR active soft modes, Raman scatt. study 2-2229  
 SrTiO<sub>3</sub>, dielectric nonlinearity study 2-2177  
 SrTiO<sub>3</sub>, ferroelec. transition, hyper Raman scatt. study 2-46581  
 SrTiO<sub>3</sub>, heteroepitaxial films, ferroelectric transition 2-46477  
 SrTiO<sub>3</sub>, incipient ferroelectrics, temp. depend. of OH stretching mode 2-31478  
 SrTiO<sub>3</sub>, point defect scatt. near displacive transform. 2-36034  
 SrTiO<sub>3</sub>, US attenuation at struct. transitions 2-45384  
 SrTiO<sub>3</sub>:Nb, Raman study of phase transition 2-46508  
 TGS, phase transition studied by thermally induced elec. oscils. 2-9109  
 Tb<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec.-ferroelastic, phase transition, Raman and Brillouin scatt. study 2-36617  
 TiCdF<sub>3</sub>:Gd<sup>3+</sup>, ESR study of phase transition 2-46507

**ferroelectricity**

- see also antiferroelectricity; ferroelectric devices; ferroelectric materials; ferroelectric switching; ferroelectric transitions  
 centrosymmetric prototype phase, Landau-Devonshire theory with rotationally invariant expansion coefficients 2-46481  
 conference, University Park, PA, USA (Aug. 1981) 2-33213  
 crystallographic colour groups, Landau phase transitions, and possible species of ferroic crystals 2-45098  
 domain study, pyroelec. probe technique study 2-2193  
 doped displacive ferroelectrics, elec. field depend. of neutron scatt. cross section 2-44977  
 dynamical systems with nonlinear polarisability, nonlinear excitations 2-46461  
 electroacoustic echo, photovoltaic effect, electrogyration, and induced pyroelec. 2-46491  
 EM ordered media, elastic-EM reson. coupling 2-17415  
 EPR line electric-dipole broadening 2-41197  
 fracture mechanisms, dislocation model 2-31429  
 free energy minimality principle violation in SCF approx. 2-31394  
 incommensurate phases, dielectric and light scattering spectroscopy 2-46627  
 Ising model in transverse field coupled to acoustic phonons, longitudinal spin dynamics 2-36546  
 IV-VI semiconductors, ferroelectric lattice instabilities 2-31388  
 magnetic field effects on ferroelec. physical props., thermodynamic approach 2-31404  
 molecular crystals, acoustic instability 2-36548  
 paraelectric phase, electrostriction, temp. depend., phenomenological theory 2-46482  
 perovskite ferroelectrics, electrocrystalline anisotropy, permittivity 2-46493  
 perovskite ferroelectrics, martensitic transform. theory and mechanism 2-46500  
 perovskite type structures, distrib. rule and macroscopic props. prediction 2-17419  
 perovskites, dynamic correlations below anti-ferrodistortive transition 2-46502  
 perovskites ferroelectric, incommensurate superstructure transition theory (Russian) 2-12740  
 phase transitions in BaTiO<sub>3</sub>-type ferroelectrics 2-46503  
 polarisation echo theory, electric and elastic susceptibility (Russian) 2-13401  
 polarisation reversal, dielec. viscosity effects 2-31428  
 polaron effect with spatial dispersion of permittivity 2-51094  
 pyroelectricity, primary and secondary components, for proper and improper ferroelects. 2-31386  
 semicarbide hydrobromide, laser Raman study of ferroelectric props. 2-36619  
 smectic-C\* liq. crystals, ferroelec. state, molecular model 2-21024  
 soft mode spectroscopy, Curie-Weiss law 2-46501  
 solid solutions, correlated defect sites, ferroelec. props. calc. 2-31390  
 soliton formation in ferroelec. crystals 2-31391  
 TGS powder-silicone rubber composite, ferroelectricity 2-36549

**ferroelectricity continued**

- transverse Ising model, effective field theory 2-36370  
 two dimensional model, ferroelastic effect 2-36554  
 weakly coupled nonlinear chains, struct. phase transitions 2-35666  
 H bonded system, coupled phonon mode-damped proton tunnelling mode, dynamics 2-35610  
 KH<sub>2</sub>PO<sub>4</sub> type cryst., ferroelectric resonance and nonlinear effect 2-36545  
 NaNbO<sub>3</sub>, bladed crystals, growth and investigation 2-5805  
 SPbO<sub>2</sub>P<sub>2</sub>O<sub>5</sub>, improper ferroelectricity, dielec., pyroelectric charge and thermal expansion meas. 2-9112  
 Rb<sub>2</sub>ZnCl<sub>4</sub>, ferroelec., low temp. phase 2-17425  
 SbSI, ferroelec. phase, spatially oscillating photovoltaic current 2-13131

**ferrofluids** see magnetic fluids**ferromagnetic-antiferromagnetic transitions**

- see also metamagnetism; Morin temperature  
 antiferromagnets, rapidly oscillating mag. field effect of phase transition 2-31176  
 diammino ethane copper tetrachloride, spinflip transition, forbidden mag. resonance 2-17330  
 dimethylammonium copper bromochloride, mag. struct. and props. 2-36318  
 particles periodically distributed in space, mag. states, mol. field approx. (Russian) 2-2106  
 rare earth carbides, mag. susceptibilities, electrical resistivities 2-31181  
 rare earth metals, elec. resist. near ferromagnetic-antiferromagnetic phase transition 2-36004  
 semiconductors, magnetic, nuclear spin system phase transition (Russian) 2-46291  
 Cd<sub>1-x</sub>Zn<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>Ag, effect of impurity on mag. struct. 2-31141  
 Co<sub>2</sub>Ni<sub>1-x</sub>MnGe, mag. struct. and props. 2-36324  
 Dy AC sp. ht. rel. to mag. transitions 2-2082  
 DyFeO<sub>3</sub>, antiferromagnet-weak ferromagnet phase transition, antiferromag. boundary of nucleation line (Russian) 2-41125  
 DyFeO<sub>3</sub>, orthoferrite, magneto-optical study of mag. phase coexistence near Morin temp. 2-31179  
 Dy(Ru<sub>1-x</sub>Rh<sub>x</sub>)<sub>2</sub>B<sub>4</sub>, superconductivity, ferromagnetism and antiferromagnetism 2-31010  
 ErFeO<sub>3</sub> spin flip induced by mag. field near ion ordering temp. (Russian) 2-5544  
 Er(Ru<sub>1-x</sub>Rh<sub>x</sub>)<sub>2</sub>B<sub>4</sub>, mag. order, superconductivity 2-31187  
 Fe-Co, FCC particles in Cu matrix, ferromag.-antiferromag. transition 2-13294  
 Fe-Rh, pressure-temp. mag. phase diagram 2-36347  
 FeAuPd<sub>2</sub>, ferromagnetic-antiferromagnetic transition (Russian) 2-51404  
 Fe<sub>2</sub>O<sub>3</sub>, γ-α transition, temp. stability (Bulgarian) 2-21773  
 Fe<sub>51</sub>Rh<sub>49</sub>, ferromagnetic, press. induced antiferromagnetism 2-46282  
 GdAg<sub>1-x</sub>Zn<sub>x</sub>, magnetic phase diagram 2-46281  
<sup>3</sup>He, solid, ring exchange Hamiltonians, exact crit. field 2-35853  
 Ho(Ru<sub>1-x</sub>Rh<sub>x</sub>)<sub>2</sub>B<sub>4</sub>, mag. order, superconductivity 2-31187  
 Mn<sub>0.99</sub>Fe<sub>0.01</sub>As, lattice parameters at first-order mag. phase transition, temp. depend. 2-46288  
 (Pd,Pt<sub>1-x</sub>)<sub>2</sub>Fe, atomically ordered, transverse magnetoresist., ferromag.-antiferromag. transition 2-36020  
 RbMnF<sub>3</sub>, critical exponent β meas. by means of optical birefringence 2-8972  
 Sm<sub>1-x</sub>Er<sub>x</sub>Rh<sub>4</sub>B<sub>4</sub>, antiferromagnetic-ferromagnetic transition 2-17286  
 Tb, AC sp. ht. rel. to mag. transitions 2-2082  
 UCu<sub>2</sub>Ge<sub>2</sub>, antiferromagnetic-ferromagnetic phase transition, neutron diffr. study 2-36346  
 Zr(Fe<sub>1-x</sub>Mn<sub>x</sub>)<sub>2</sub>, ferromag., mag. transition, <sup>55</sup>Mn NMR spin echo study 2-26788

**ferromagnetic Curie temperature** see Curie temperature**ferromagnetic-paramagnetic transitions**

- see also Curie temperature  
 binary alloys, phase transitions, Griffiths singularity 2-26644  
 cubic lattice with ferromagnetic ordering, Ising model, Devil's staircase behaviour 2-2094  
 ferromagnetic plate, phase diagram near Curie point, Landau-Lifschitz eqns. 2-46287  
 heterophase systems, spaces of states 2-48618  
 Ising ferromagnet, two-dimens., crit. exponents, renormalisation group technique 2-46322  
 magnetisation fluctuations near phase transition from paramag. state to ferromag. state with domain struct. 2-46344  
 rare earth carbides, mag. susceptibilities, electrical resistivities 2-31181  
 rare earth Kramers ferromagnets, spin dynamics in paramag. phase, density matrix approach 2-2051  
 superconductors, phase transitions and mag. reson. line shifts 2-13228  
 surface states, heterogeneous, near Curie point (Russian) 2-13316  
 (CuCr<sub>2</sub>S<sub>4</sub>)<sub>x</sub>(Cu<sub>0.5</sub>In<sub>0.5</sub>Cr<sub>2</sub>S<sub>4</sub>)<sub>1-x</sub>, mag. elec. and thermoelectric props. 2-9005  
 EuAs<sub>3</sub>, cryst. struct., elec., optical, and mag. props. 2-8494  
 EuB<sub>6</sub>-C<sub>2</sub>, electron localization and transport props., ESR study 2-41199  
 Eu<sub>2</sub>Sr<sub>1-x</sub>S<sub>2</sub>, dil. Heisenberg ferromag. and spin-glasses, NMR and Mossbauer effect studies 2-31357  
 Fe-Ni Invar alloys, bulk modulus anomalies, X-ray diffr. study 2-9017  
 Fe-Pt Invar alloys, bulk modulus anomalies, X-ray diffr. study 2-9017  
 FeNiBSi amorphous alloys, thermoelec. power singularities 2-21568  
 γ-FeNiMn, mixed exchange interaction, mag. phase diagram 2-36325  
 (Fe<sub>1-x</sub>Ni<sub>x</sub>)<sub>2</sub>P<sub>2</sub>B<sub>2</sub>Al<sub>2</sub>, amorphous, ferromag. transition, struct. relax. effect on scaling law anal. 2-5542  
 Fe<sub>2</sub>Sn<sub>1-x</sub> amorphous, mag. phase diagram 2-36342  
 GdAg<sub>1-x</sub>Zn<sub>x</sub>, magnetic phase diagram 2-46281  
 HoRh<sub>4</sub>B<sub>4</sub>, mean-field ferromag., sp. ht., magnetisation, elec. resist., and thermal expansion meas. 2-51408  
 MnP, Lifshitz point, mean field and renormalisation group calcs. 2-26637  
 MnP, phase diagram, susceptibility, magnetostriction, Lifshitz point 2-2072  
 Ni, spin correl. function, crit. behaviour 2-46302  
 Pd, neutron polarisation anal. study of order and mag. transition 2-17264  
 (Pd<sub>3</sub>Rh<sub>2</sub>)<sub>1-x</sub>Ni<sub>x</sub>, spin fluctuation and paramag.-ferromag. transition, magnetisation and resist. meas. 2-21797  
 PrCu<sub>6</sub>, critical phenomena at nucl. mag. ordering transition 2-36367  
 Rb<sub>2</sub>Cr<sub>1-x</sub>Mn<sub>x</sub>Cl<sub>4</sub>, Cr-rich, struct. and mag. order 2-26590  
 Tb<sub>2</sub>Gd<sub>1-x</sub>, orientational phase transition near Curie point 2-31174  
 Tb<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>·8H<sub>2</sub>O, magnetic ordering at 150 mK, susceptibility and sp. ht. meas. 2-36344



**ferromagnetic-paramagnetic transitions continued**

- ( $\text{Ti}_{1-x}\text{Lu}_x$ ) $\text{RuB}_2$ , reentrant supercond., AC mag. susceptibility meas. 2-17190  
 $\text{Y}_2\text{Co}_3$ , superconducting transition and onset of mag., field depend. 2-36201  
 $\text{Zr}(\text{Fe}_{1-x}\text{Co}_x)_2$ , magnetic order range, magnetisation and Mossbauer study 2-46341  
 $\text{ZrMn}_2\text{H}$ , nonstoichiometric, stability, mag. props. 2-41126  
 $\text{Zr}_{1-x}\text{Ti}_x\text{Mn}_2\text{H}$ , mag., crystallographic and  $\text{H}_2$  storage characts. 2-41127

**ferromagnetic properties of substances**

see also *ferromagnetic relaxation; ferromagnetic resonance; ferromagnetism; magnetic semiconductors*

- alloys, ferromagnetic, nuclear spin-lattice relax. (*Russian*) 2-13368  
 Alnico 5 with Nb additions, columnar, permanent mag., mag. props. 2-17316  
 amorphous alloys, effect of random anisotropy on magnetoelastic props. 2-21865  
 amorphous alloys, Mossbauer spectra, Fourier anal. 2-26803  
 amorphous alloys, theory of coercive field 2-21832  
 amorphous ferromagnets, Curie temp., susceptibility, coordination number fluctuation effects 2-46258  
 amorphous magnetic materials, mag. props., applications in electronics 2-36383  
 bis-( $\beta$ -alaninium tetrachlorocuprate (II), cryst. struct., susceptibility and EPR 2-31272  
 CC, Fe, short range mag. order 2-31127  
 colloids, ferromag., highly conc., rheological props. in mag. field 2-1155  
 CsNiF<sub>3</sub>, one-dimens. ferromag., soliton instability in high mag. fields 2-51417  
 diammonium ethane copper tetrachloride, spinflip transition, forbidden mag. resonance 2-17330  
 dimethylammonium copper bromochloride, ferromag., hyperfine interactions, Br NMR study 2-2144  
 dimethylammonium copper bromochloride, mag. struct. and props. 2-36318  
 disperse system, struct. and mag. charact. relationship 2-31248  
 ferrocolloid, viscosity anisotropy in mag. field 2-16369  
 ferrofluid, translational diffusion in a mag. field, particle size determ. 2-14011  
 ferromagnetic, exchange splitting in local pot. approx. 2-21520  
 glass, ferromag. precipitation, ESR studies 2-31286  
 Invar, critical neutron scatt. temp. range, magnetisation 2-46248  
 local meas. metallic glasses, mag. anisotropy 2-17274  
 lunar soil samples study by EPR and microwave meas. (*Rumanian*) 2-28362  
 magnetic liquids, mag. props. and appls. 2-26660  
 magnetic properties of ( $\text{Co}_{1-x}\text{Mn}_x$ )<sub>2</sub>P compounds 2-41113  
 metallic glasses, structural relax., Curie temp., rel. to quenching conditions 2-26628  
 molybdenum ternary chalcogenides,  $\text{MMo}_2\text{X}_3$  (M=Sn, Eu, Gd; X=S, Se), supercond., spin polarisation and high crit. fields 2-17245  
 Permalloy film, electromigration, electron microscopy study 2-45639  
 Permalloy film, soft ferromagnetic configuration, domain wall clusters 2-31253  
 powder materials, mag. props., particle shape effect 2-13321  
 quartz, ferrous, changes in mag. props. under blast action (*Russian*) 2-21822  
 quinolinium nickel chloride, 2-13277  
 rare earth borides,  $\text{R}(\text{Os},\text{Ir})_2\text{B}_4$  (R=Nd, La, Pr), mag. behaviour and struct. chem. 2-41104  
 rare earth carbides, mag. susceptibilities, electrical resistivities 2-31181  
 rare earth compounds,  $\text{RRh}_2\text{B}_4$ , superconductivity and magnetism 2-17199  
 rare earth intermetallics,  $\text{RMn}_2\text{Si}_2$  and  $\text{RMn}_2\text{Ge}_2$ , mag. props. study 2-2073  
 rare earth ternary superconductors, neutron scatt. studies 2-17195  
 rare earth-transition metal alloys, uniaxial ferromagnets, review 2-26621  
 rare-earth-Rh-Si system, new ternary silicides, cryst. struct. and mag. props. 2-16625  
 semiconductors, oriented autolocalised electron states in mag. field, calc. (*Russian*) 2-45878  
 steel, 22 NiMoCr 3 7, microstruct. and Bloch wall arrangement 2-17310  
 steel, anisotropic, electrical, crystallographic texture in moving strip, inspection 2-2678  
 steel, austenitic stainless, magnetic character 2-21782  
 steel, C particles contained in type I supercond., effect on elec. resist. behaviour 2-21735  
 steel, Cr-Mn, austenitic, surface  $\gamma$ - $\alpha$  phase transition during oxidation (*Russian*) 2-50966  
 steel, elec., nondestructive meas. of mag. props., metrological certification of equipment 2-10826  
 steel, low C, magnetic props. for soft magnetic appl., heat treatment 2-21831  
 steel, low C, study of mag. ageing kinetics 2-26659  
 steel, magnetisation curves, computer synthesis of eqns. (*Russian*) 2-17318  
 steel, mild, mech. stress meas. by magnetic field strength rotation 2-2659  
 steel, Si-Al-(Co)-Mn, graphitised, with ferrite and ferrite-carbide matrix, damping props. 2-2566  
 steel, structural, hot-rolled, elec. and mag. props. after quenching and tempering 2-21560  
 steel, transformer, textured state ensuring high mag. props. (*Russian*) 2-22235  
 steel plates, ferromagnetic, Fe losses, hysteresis and eddy currents 2-51442  
 tetramethylammonium nickel chloride and bromide, one-dimensional ferromagnet, existence of superparamagnetism 2-31247  
 tetramethylammonium nickel tribromide, planar ferromagnet, ESR study 2-51453  
 TMNC, quasi-one-dimens. ferromag., energy absorption from oscillating mag. driving field by soliton motions 2-31234  
 transition metal alloys, ferromagnetic, disordered, low temp. resistivity, collective excitations influence 2-30858  
 transition metal-base amorphous alloys, mag. props., comp. depend. 2-31244  
 3d transition metal-Cr sputtered films, mag. props., effects of Cr 2-26688  
 transition metals, mag. at finite temp., one-electron-like Hartree-Fock-like model 2-36300

**ferromagnetic properties of substances continued**

- transition metals, magnetic props., method of localised fluctuations (*Russian*) 2-21759  
 transition metals and oxides, 3d, catalytic props. in mag. transition temp. region 2-31948  
 trimethyl ammonium cobalt chloride, ferromag. Ising chain, statistics in mag. field 2-31222  
 trimethyl ammonium nickel chloride, 2-13277  
 water-based ferric soln., spatial distrib. of quantum parameters 2-26676  
 Al-Co-Fe alloys, magnetomech. coupling, annealing effect 2-26713  
 Au-Co solid soln., elec. resist. and mag. susceptibility 2-30861  
 Au-Fe, dilute, crit. behaviour at onset of ferromag., dynamic response meas. 2-2076  
 Au-Fe(14.5 at.%), field induced ferromagnetism, close to percolation limit (*French*) 2-51411  
 $\text{B}_2\text{FeNbO}_6$ , mag. props., Mossbauer spectrosc. obs. 2-21927  
 $\text{Cd}_{1-x}\text{Ag}_x\text{Cr}_2\text{Se}_4$ , deviation from the Bloch law (*Russian*) 2-9003  
 $\text{CdCr}_2\text{In}_{2-x}\text{S}_4$ , dilute spinel, spin glass behaviour, mag. susceptibility study 2-31200  
 $\text{CdCr}_2\text{S}_4$ , ferromagnetic semicond., cathodolum. characts. of electron spectrum 2-46785  
 $\text{CdCr}_2\text{Se}_4$ , ferromagnetic semiconductor,  $\text{P}_{\text{Se}_2-\text{aCdSe}}$  phase diagram (*Japanese*) 2-45531  
 $\text{CdCr}_2\text{Se}_4$ , photoferromag. effect and photoinduced centres, relaxation 2-9021  
 $\text{CdCr}_2\text{Se}_4$ , spin wave self-relax. processes (*Russian*) 2-13282  
 $\text{CdCr}_2\text{Se}_4\text{Ga}$ , ferromagnetic semicond., susceptibility and photoinduced anisotropy disaccommodation 2-26606  
 $\text{CdCr}_2\text{Se}_4\text{Ga}$ , ferromagnetic semicond., complex mag. susceptibility, photo-induced anisotropy 2-36333  
 $\text{CdCr}_2\text{Se}_4(\text{S}_2)$ , photoluminescence and elec. struct. 2-46687  
 $\text{Cd}_{1-x}\text{In}_x\text{Cr}_2\text{Se}_4$ , deviation from the Bloch law (*Russian*) 2-9003  
 (Ce, La) $\text{Al}_2$ , high-field magnetisation, single ion Kondo effect and ferromag. short range order 2-36310  
 Ce-Au, amorphous, mag. susceptibility and sp. ht. 2-31201  
 Ce-Cu, amorphous, mag. susceptibility and sp. ht. 2-31201  
 CeAl<sub>2</sub>, high-field magnetisation, single ion Kondo effect and ferromag. short range order 2-36310  
 CePt, ferromagnetic, specific heat, 1.5 to 16 K 2-46303  
 CeSb(Bi), anomalous mag. props., anisotropic p-f mixing mechanism 2-8952  
<sup>248</sup>CmP, mag. transition temps., mag. susceptibility study 2-41115  
<sup>248</sup>CmSb, mag. transition temps., mag. susceptibility study 2-41115  
 Co adsorbed on Cu surface, reconstruction, CDW, surface mag. and O<sub>2</sub> adsorption 2-12911  
 Co complex, cobalt pyridene chloride, ground state, local excitations 2-21750  
 Co, ferromag., effect of Coulomb correlations on energy bands 2-51079  
 Co, ferromag. host metal nucl. orientation of rare earth impurities 2-46397  
 Co, ferromagnetic, domain dragging by elec. current at 4 K 2-17047  
 Co film, oblique incidence deposition, mag. props. 2-21850  
 Co film, vapour deposited, mag. props. (*Japanese*) 2-26693  
 Co, fine particle system, time depend. magnetisation 2-26679  
 Co ordered layers on Cu (111), mag. exchange splitting, photoemission spectra study 2-51403  
 Co polycrystals, FCC and HCP, thermal emission spectra, circular polarisation 2-13506  
 Co-Cr films for perpendicular recording, RF sputtering deposition 2-26691  
 Co-Cr films for perpendicular mag. recording, opposing targets sputtering deposition 2-27082  
 Co-Cr films with perpendicular magnetic anisotropy, RF sputtering prep., coercivity and X-ray orientation 2-26689  
 Co-Cr perpendicular recording medium by vacuum deposition, mag. and struct. props. 2-26690  
 Co-Cr sputtered layered media, optimisation for areal density 2-21836  
 Co-Fe-B amorphous films, induced anisotropy and permeability, annealing effects 2-46349  
 Co-Fe-B(-Si), metallic glass, crystn., Lorentz microscopy study 2-21033  
 Co-Fe-Cr films, mag. props. variation during electron bombard., surface comp. (*Russian*) 2-21844  
 Co-Ga,  $\beta$ -phase, slow cooled, mag. phase diag., AC susceptibility study 2-41137  
 Co-Ni-W sputtered film, recording performance and mag. props. 2-21849  
 Co-NiO-Ni, ferromag. films, spin pol. electron tunnelling obs. 2-51342  
 Co-P, amorphous multilayered, mag. domains 2-36380  
 Co-P (9 at.%) amorphous ferromag., NMR spectrum, discontinuous variation during heating (*Russian*) 2-5590  
 Co-P amorphous multilayered films, prep., struct. and mag. props. 2-36800  
 Co-P chemically deposited film, mag. props., effects of activation and acceleration 2-9009  
 Co-P(-Ni) layers, cylindrical amorphous, domain struct. and strain anisotropy effects 2-9010  
 Co-rare earth permanent magnets, materials and appl. (*German*) 2-33580  
 Co-S system close to  $\text{Co}_2\text{S}_3$ , prep. and magnetic props. 2-21093  
 Co-Si-B alloys, amorphous, magnetoelastic effects 2-26706  
 Co-Sm, magnetic domain and cryst. microstruct., Lorentz electron microscopy study 2-21817  
 $\text{Co}_2\text{Cr}_{1-x}\text{S}_x$ , high temp. metal-semicond. transition, elec. cond., DTA and X-ray diff. study 2-36111  
 $\text{Co}_2\text{Ga}_{1-x}\text{S}_x$ , mag. props. and spin glass-ferromag. transition 2-41132  
 $\text{Co}_{23-x}\text{M}_x\text{B}_6$ ,  $\tau$  borides, mag. moments, M=Zr, Nb, Mo, In, Sn or Sb 2-31152  
 $\text{Co}_2\text{Ni}_{1-x}\text{MnGe}$ , mag. struct. and props. 2-36324  
 $\text{Co}_{1-x}\text{P}_x$  films, amorphous to cryst. kinetic transitions, nucl. spin echo study 2-26789  
 CoPt alloy, disordered, diminution of high internal friction level due to magnetoelastic hysteresis (*Polish*) 2-27206  
 CoPt alloy (*Polish*) 2-26684  
 $\text{Co}_2\text{Si}_{1-x}$  sputtered film, transport props. and magneto-optic Kerr effect 2-21556  
 $\text{Co}_{100-x}\text{Ti}_x$  amorphous ferromagnetic thin films, mag. props. FMR and magnetisation meas. 2-36398  
 CoTiB amorphous films, mag. props., effect of B and Ti 2-36399  
 $\text{Co}_2\text{YAl}$ , Heusler alloys, mag. and magneto-optical props. 2-26671  
 $\text{Co}_2\text{YGa}$ , Heusler alloys, mag. and magneto-optical props. 2-26671  
 Cr (100) surfaces, mag. structure study using electron capture spectroscopy 2-46244



**ferromagnetic properties of substances continued**

- Cr surface, electron spin polarisation determ. with electron capture spectroscopy 2-2114
- CrBr<sub>3</sub>, ferromag. and paramag., thermoreflectance spectra, magneto-optical effects 2-31459
- Cr<sub>1-x</sub>Ir<sub>x</sub>O<sub>2</sub> solid soln., mag. props. (*French*) 2-26599
- CrTe, adiabatic magnetisation cooling, rel. to mag. refrigeration efficiency 2-33553
- CsCuCl<sub>3</sub>, magnetic susceptibility study 2-41114
- CsFeCl<sub>2</sub>·2H<sub>2</sub>O, mag. ordering, Mossbauer study 2-26796
- CsNiF<sub>3</sub>, ferromagnetic chain, equilb. dynamics, mol. dynamics study 2-42960
- CsNiF<sub>3</sub>, multimagnet states, inelastic neutron scatt. study 2-5535
- CsNiF<sub>3</sub>, one-dimensional ferromagnet, existence of superparamagnetism 2-31247
- Cu/Ni, composition modulated struct., interplanar mag. coupling, AC susceptibility study 2-36400
- Cu-Co solid soln., elec. resist. and mag. susceptibility 2-30861
- Cu-Fe multifilamentary composites, in situ formed, mag. hysteresis loops 2-13315
- Cu-Mn-Al (20.6, 34.7 at.%), displaced hysteresis loop upon mag. annealing 2-26687
- Cu-Ni alloys, sp. ht., spin fluctuation effects 2-30617
- Cu-Ni alloys, specific vol., variation with comp. 2-35445
- Cu-Ni-Co (50, 21, 29 wt.%), mech. and mag. hardening 2-17686
- Cu-Ni-Fe decomposed solid solns., plastic deform. effect on mag. props. (*Russian*) 2-21862
- (Cu<sub>1-x</sub>Co<sub>x</sub>)<sub>2</sub>MnSn Heusler alloy, mag. props. 2-46283
- CuCr<sub>2</sub>S<sub>4</sub>, deviation from the Bloch law (*Russian*) 2-9003
- (CuCr<sub>2</sub>S<sub>4</sub>)<sub>1-x</sub>(Cu<sub>0.5</sub>In<sub>0.5</sub>Cr<sub>2</sub>S<sub>4</sub>)<sub>1-x</sub>, mag. elec. and thermoelectric props. 2-9005
- Cu<sub>0.88</sub>Cr<sub>0.34</sub>Br<sub>0.64</sub>, magnetic anisotropy, determ. using FMR 2-26626
- Cu<sub>2</sub>Cr<sub>2</sub>Se<sub>4-x</sub>Br<sub>x</sub>, elec. props., anion substitution effect, cond. max. near Curie temp. 2-36044
- Cu<sub>0.5</sub>Fe<sub>0.5</sub>Cr<sub>2</sub>S<sub>4</sub>, ferromagnetic semicond., hyperfine interactions and mag. props. 2-26346
- Cu<sub>2</sub>MnAl, optical absorpt. spectrum within RPA 2-9163
- CuSO<sub>4</sub>·K<sub>2</sub>SO<sub>4</sub>·6H<sub>2</sub>O—liquid <sup>3</sup>He interface, thermal boundary resist., mag. coupling 2-30738
- Dy, texture and mag. props. after rolling and annealing (*Russian*) 2-22236
- DyAl<sub>3</sub>, narrow domain walls, pulsed NMR study 2-41229
- DyB<sub>2</sub>C<sub>2</sub>, mag. props., 3-300K 2-4116
- DyNi<sub>2</sub>, thermal expansion and magnetostriction, 5 to 290K 2-26086
- Dy(Ru<sub>1-x</sub>Rh<sub>x</sub>)<sub>2</sub>B<sub>4</sub>, superconductivity, ferromagnetism and antiferromagnetism 2-31010
- Er<sub>0.43</sub>Ho<sub>0.57</sub>Rh<sub>2</sub>B<sub>4</sub>, supercond. and mag. transition temp.,  $\alpha$ -particle effect 2-31026
- Er<sub>0.59</sub>Ho<sub>0.41</sub>Rh<sub>2</sub>B<sub>4</sub>-Nb oxide-Nb point contact junction, temp. depend. of Josephson current 2-2037
- Er<sub>1-x</sub>Ho<sub>x</sub>Rh<sub>2</sub>B<sub>4</sub>, reentrant ferromagnetic superconductor, magnetisation 2-17210
- ErNi<sub>2</sub>, thermal expansion and magnetostriction, 5 to 290K 2-26086
- Er<sub>2-x</sub>Pr<sub>x</sub>Co<sub>17</sub>, mag. props., Mossbauer effect 2-36385
- ErRh<sub>2</sub>B<sub>4</sub> crystal, mag. supercond., tunnelling study 2-36256
- ErRh<sub>2</sub>B<sub>4</sub>, induced mag. order, ultrasonic study 2-17284
- ErRh<sub>2</sub>B<sub>4</sub>, mag. supercond., hyperfine mag. field, Mossbauer study 2-36216
- ErRh<sub>2</sub>B<sub>4</sub>, mag. supercond., lower crit. field, US attenuation study 2-36225
- ErRh<sub>2</sub>B<sub>4</sub>, magnetisation, susceptibility, superconducting transition 2-17209
- ErRh<sub>1.5</sub>Sn<sub>1.5</sub>, reentrant supercond., upper crit. field and sp. ht. meas. 2-13250
- ErRh<sub>2</sub>Sn<sub>2</sub>, supercond. and mag. props., reentrance 2-13225
- EuAs<sub>3</sub>, cryst. struct., elec., optical, and mag. props. 2-8494
- EuO, ferromagnetic, electron and magnon heating, magnetisation 2-46010
- EuO films, mag. heterogeneity, Curie temp. elevation, mag. susceptibility meas., 77 to 300K 2-26695
- EuO·Gd, ferromag. semicond., magnon spectrum and Curie temp. 2-13299
- EuO(S)(Se), mixed-valence, modified sf model 2-45912
- Eu<sub>2</sub>Gd, ferromag. semicond., magnon spectrum and Curie temp. 2-13299
- Eu<sub>1-x</sub>Sm<sub>x</sub>O, mag. quasimolecules, mag. props. 2-17275
- Eu<sub>0.4</sub>Sr<sub>0.6</sub>S, insulating spin glass, EPR study 2-26738
- Eu<sub>2</sub>Sr<sub>1-x</sub>S, dil. ferromag., sp. ht. meas. 2-17291
- Eu<sub>2</sub>Sr<sub>1-x</sub>S, dil. Heisenberg ferromag. and spin-glasses, NMR and Mossbauer effect studies 2-31357
- Eu<sub>2</sub>Sr<sub>1-x</sub>S, distribution of spin glass freezing from superparamag. blocking 2-17290
- Eu<sub>2</sub>Sr<sub>1-x</sub>S<sub>2</sub>Se<sub>1-x</sub>, mag. ordering 2-17292
- (Fe<sub>2</sub>Co)<sub>100-x</sub>(Ta<sub>2</sub>W)<sub>x</sub>, RF sputtered amorphous films, mag. and thermal props. 2-36397
- Fe and its alloys, magnetocrystalline anisotropy, effect of hydrostatic press. 2-17273
- Fe, BCC, mag. props. and local moments above Curie temp. 2-31121
- Fe, cubic ferromagnet, pseudoquadrupole effect 2-36375
- Fe, deformed, dislocations obs. by high-field susceptibility meas. 2-1489
- Fe, domain wall thickness, neutron refraction study 2-26654
- Fe epitaxial (110) films, first order mag. phase transition in appl. field 2-31183
- Fe, ferromag., effect of Coulomb correlation on energy bands 2-51079
- Fe, ferromagnetic, itinerant-electron system, Ising model and Bethe approx. 2-26642
- Fe, ferromagnetism, fluctuating band picture 2-31126
- Fe, high-purity, defect investigs. using mag. aftereffect and internal friction (*Polish*) 2-27205
- $\alpha$ -Fe, interaction energy of Al-C pair from mag. permeability disaccommodation (*Polish*) 2-36396
- Fe, Mag. and mech. relax. due to C and N interstitials 2-26685
- Fe, magnetic and magnetomechanical props., influence of dislocation structs. 2-26712
- Fe, magnetic properties calc. by functional integral method, review 2-31124
- Fe, magnetic props. for soft magnetic appl., heat treatment 2-21831
- Fe, magnetoelastic damping theory (*Russian*) 2-51445
- Fe, magnetovolume effects, local-band theory 2-26719
- Fe, phase stability of  $\alpha/\gamma$  interface rel. to magnetic props. 2-51871

**ferromagnetic properties of substances continued**

- Fe, plastically deformed at 195 and 77K, mag. domain patterns and dislocation structs. 2-46333
- Fe, thermal emission spectra, circular polarisation 2-13506
- Fe, thermodynamic excitations, spin waves and Curie temp., d-band model 2-36301
- Fe whiskers, Landau struct., mag. stray fields meas. 2-21860
- $\alpha$ -Fe-Zn, Zn diffusion, mag. transitions effect 2-40602
- Fe-Al, cold worked, Mossbauer study of atomic reordering 2-17377
- Fe-Al, magnetisation and magnetostriction, magnetic annealing effects 2-17322
- Fe-Al (12.7 wt.%) alloy, doped, piezomag., magnetomech. internal friction (*Polish*) 2-36407
- Fe-Al (24.3 at.%) alloy, atomically ordering, mag. aftereffects related to C migration (*Polish*) 2-36394
- Fe-Al-Co alloy, piezomag., annealed, internal damping depend. on mag. polarisation (*Polish*) 2-36903
- Fe-B, amorphous, induced anisotropy and depend. on prep. parameters 2-8969
- Fe-B, amorphous, mag. behaviour under press., invar-like prop. 2-9016
- Fe-B, amorphous, magnetostriction props. and depend on prep. parameters 2-9015
- Fe-B, amorphous, permivar effect, domain struct. stabilisation 2-8995
- Fe-B, amorphous, with transition metal substituents, mag. props. and crystn., cluster form. 2-8997
- Fe-B, amorphous-cryst. transform., coercive force and TEM obs. 2-8438
- Fe-B amorphous and crystallised alloys, phase diagram magnetisation, elec. resist. and thermal expansion meas. 2-17664
- Fe-B amorphous films, induced anisotropy and permeability, annealing effects 2-46349
- Fe-B amorphous Invar alloys, effect of cold rolling on thermal expansion and mag. props. 2-26595
- Fe-B metallic glass, quenching conditions influence on mag. aftereffect 2-9006
- Fe-B-C-Si, amorphous low core loss materials, comp. and heat treatment 2-31242
- Fe-B-Si-C, amorphous, mag. props., surface inclusions effect 2-41159
- Fe-B-Si-C-Al, amorphous, crystn. temp., mag. props. 2-41160
- Fe-B-Si-C, metallic glass, ribbon, mag. domains, SEM study 2-21816
- Fe-B-(Ni) based metallic glass, amorphous ribbons and toroids, pulse magnetisation losses 2-31399
- Fe-Bi-Si, amorphous, mag. props., surface inclusions effect 2-41159
- $\alpha$ -Fe-C, dil., with substitutional atoms, mag. permeability disaccommodation, model (*Polish*) 2-36392
- Fe-Co, FCC particles in Cu matrix, ferromag.-antiferromag. transition 2-13294
- Fe-Co, order-disorder transitions, specific heat 2-21794
- Fe-Co film, oblique incidence deposition, mag. props. 2-21850
- Fe-Co-B amorphous hyperfine field <sup>11</sup>B NMR 2-46407
- Fe-Co-V, Vicalloy, cellular decomposition (*Russian*) 2-13726
- Fe-Co-V-Ni, Vicalloy, cellular decomposition (*Russian*) 2-13726
- Fe-Cr, mag. moments for different local at. configs. 2-46255
- Fe-Cr, spin waves, neutron diff. study 2-46266
- Fe-Cr-Co, permanent magnet, heat treated in miscibility gap, mag. props. 2-36983
- Fe-Cr-Co-C, permanent mag. props., C content effect, expt. study 2-52062
- Fe-Cr-Co-Si (27, 17.5, 1 wt.%), mag. and struct. transitions, mag. props. 2-26630
- Fe-Cr-Mn, unstable austenitic, deform. induced  $\gamma \rightarrow \epsilon \rightarrow \alpha$  transition and mech. props. (*Russian*) 2-51900
- Fe-Cr-Si-B amorphous ribbons, mag. props. 2-36384
- Fe-Mn, BCC alloys, metastable, produced by RF sputtering 2-13648
- Fe-Ni, dil., mag. aftereffect after low temp. neutron irradi. 2-51439
- Fe-Ni, ferromagnetic, work function (*Japanese*) 2-26477
- Fe-Ni (36 and 50 wt.%), mag. props. after deform. and annealing 2-26673
- Fe-Ni Invar alloy, spontaneous volume magnetostriction press. depend., X-ray diff. study 2-9018
- Fe-Ni Invar alloys, bulk modulus anomalies, X-ray diff. study 2-9017
- Fe-Ni-Al, ageing in region of reverse martensitic transform., phys. props. change (*Russian*) 2-51942
- Fe-Ni-Al alloy Y<sub>2</sub>ND<sub>4</sub> magnets, cooling rate rel. to mag. props. 2-26674
- Fe-Ni-B amorphous hyperfine field <sup>11</sup>B NMR 2-46407
- Fe-Ni-B-Si, amorphous, annealing effect on Barkhausen impulses 2-8999
- Fe-Ni-P-B-(Si) metallic glass, ferromag., absolute thermoelec. power 2-51154
- Fe-NiO-Ni, ferromag. films, spin pol. electron tunnelling obs. 2-51342
- Fe-Pb (50 to 80 at.%), superlattice alloys, vol. change on ordering (*Japanese*) 2-27174
- Fe-Pd,  $\gamma$ -phase, magnetisation and soft modes, neutron diff. study 2-50821
- Fe-Pd (18 to 52.5 at.%) alloy, mag. props., by mag. meas. and X-ray diff. 2-21833
- Fe-Pd-Ag, Ag effect on magnetic props. (*Japanese*) 2-27301
- Fe-Pt, Invar alloy, spontaneous volume magnetostriction press. depend., X-ray diff. study 2-9018
- Fe-Pt Invar alloys, bulk modulus anomalies, X-ray diff. study 2-9017
- Fe-Pt ordered alloys, magnetic and magnetovolume props. around  $\gamma$ - $\alpha$  phase boundary 2-17324
- Fe-Rh, pressure-temp. mag. phase diagram 2-36347
- Fe-Si, ferromagnetic domains, neutron diff. topography obs. 2-36377
- Fe-Si, single 180° Bloch wall displacement in monocrystalline medium (*French*) 2-8996
- Fe-Si (3 wt.%) sheets, grain oriented, remanence theory in presence of external stresses 2-26708
- Fe-Si (3 wt.%), energy loss anomaly study 2-21827
- Fe-Si (3 wt.%), grain oriented, effects of surface coatings on domain struct. 2-26652
- Fe-Si (3 wt.%), grain oriented, effect of tensile stress on domain wall motion and wall bowing 2-26710
- Fe-Si (3 wt.%), grain oriented, magnetised, effect of stress on mag. props. 2-26711
- Fe-Si (3 wt.%), grain-oriented, magnetostrictive props. of individual grains 2-26709
- Fe-Si (3 wt.%), with (110) surface, domain wall angles, stress effects 2-26651
- Fe-Si (3 wt.%) single crystals, Barkhausen noise and domain struct. dynamics 2-51433
- Fe-Si (6.5 wt.%), powder, prep. by spark erosion 2-41545



## ferromagnetic properties of substances continued

- Fe-Si (6.65 wt.%) ribbons, mag. props. and grain struct. after annealing 2-26655  
 Fe-Si alloys, high Si content, mech. and mag. props., recent studies 2-26648  
 Fe-Si alloys, rapidly quenched, mag. props. 2-17315  
 Fe-Si amorphous ribbon materials, causes of anomalous loss 2-26647  
 Fe-Si steel plate, non-oriented, Fe losses calc. 2-29751  
 Fe-Si-Al single crystals, mag. props. near Sendust comp. 2-26624  
 Fe-Si-B substituted metallic glasses, electronic struct., saturation magnetisation 2-1817  
 Fe-Ti-C alloy, dil., migrational mag. aftereffects, 200 to 500K (*Polish*) 2-36393  
 Fe-transition metal amorphous binary alloys, Curie temp., magnetisation 2-36341  
 Fe-V alloy, local mag. moments and atomic ordering, continued fraction technique calcs. 2-31147  
 $\alpha$ -Fe-V-C, magnetic permeability disaccommodation in alloys containing substitutional-interstitial pairs 2-2107  
 Fe-Zr-B, amorphous, form. range, mag. props. and thermal stability 2-31243  
 $\text{Fe}_3\text{AlSi}_{1-x}$ , mag. hyperfine field and isomer shift, Mossbauer study 2-17374  
 FeB, magnetic anisotropy 2-13290  
 Fe<sub>2</sub>B and FeB, bonding rel. to struct. and mag. props., photoemission meas. and ab initio calcs. 2-13628  
 Fe<sub>90</sub>B<sub>10</sub>, amorphous, electron scatt. mechanisms, resist. temp. depend. meas. 2-13059  
 Fe<sub>90</sub>B<sub>10</sub>, amorphous, mag. aftereffect due to relax. of atoms (*Polish*) 2-36395  
 Fe<sub>75.4</sub>B<sub>14.2</sub>Si<sub>10.4</sub>, amorphous, mag. props. and crystn. 2-46441  
 Fe<sub>81.5</sub>B<sub>14.5</sub>Si<sub>4</sub>, metallic glass, ribbon, mag. permeability relax. quenching rate effect 2-1823  
 Fe<sub>8</sub>B<sub>13.5</sub>Si<sub>3.5</sub>C<sub>2</sub>, amorphous alloy, evidence for C mobility from mag. anisotropy meas. 2-41123  
 Fe<sub>8</sub>B<sub>13.5</sub>Si<sub>3.5</sub>C<sub>2</sub>, metallic glass, thermomagnetic and transport props. 2-26362  
 Fe<sub>8</sub>B<sub>13.5</sub>Si<sub>3.5</sub>C<sub>2</sub>, Metglas 2605, magnetomech. coupling and permeability 2-31258  
 (Fe<sub>88</sub>B<sub>10</sub>)<sub>0.9</sub>Tb<sub>0.05</sub>La<sub>0.05</sub>, amorphous and crystallised, mag. props. 2-21820  
 FeBr<sub>2</sub>, magnon energies, temp. renormalisation 2-36337  
 Fe<sub>1-x</sub>B<sub>x</sub> amorphous film, Hall effect meas. 2-51149  
 FeCl<sub>2</sub>-MnCl<sub>2</sub>, metamagnetic, Mn and Fe spin excitations, AFMR study 2-21892  
 Fe<sub>70</sub>Co<sub>10</sub>B<sub>16</sub>, metallic glass, ferromag., absolute thermoelec. power 2-51154  
 Fe<sub>90</sub>Co<sub>10</sub>B<sub>10</sub>Si<sub>1</sub>, Metglas 2605, magnetomech. coupling and permeability 2-31258  
 (Fe<sub>1-x</sub>Co<sub>x</sub>)<sub>78</sub>Si<sub>8</sub>B<sub>14</sub>, amorphous, mag. aftereffect, nonlinear and hysteretic changes of permeability (*Polish*) 2-26686  
 FeCr<sub>2</sub>Se<sub>4</sub>, heat treatment effects on props. 2-13276  
 (Fe<sub>1-x</sub>Mn<sub>x</sub>)<sub>80</sub>B<sub>20</sub>, amorphous, mag. props., magnetisation and Mossbauer effect study 2-26666  
 FeNi foil, dynamic magnetisation powers, 3-DIM neutron polarisation anal. 2-26661  
 Fe<sub>70</sub>Ni<sub>30</sub>, coexistence of Fe mag. states, coherent and incoherent neutron scatt. study 2-2057  
 Fe<sub>1-x</sub>Ni<sub>x</sub>, binary alloys, Fe-rich, at. ordering, elec. resist. and mag. moment meas. 2-35992  
 Fe<sub>64</sub>Ni<sub>35</sub>, Invar alloy, magnetovolume effects, local-band theory 2-26719  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, amorphous, Lorentz electron microscopy study of domain struct. 2-5562  
 (Fe<sub>2</sub>Ni<sub>1-x</sub>)<sub>80</sub>B<sub>20</sub>, metallic glass, mag. and Mossbauer study 2-21921  
 FeNiBSi amorphous alloys, thermoelec. power singularities 2-21568  
 Fe<sub>91</sub>Ni<sub>7</sub>B<sub>10</sub>Si<sub>1</sub>, amorphous, second order mag. phase transition 2-2077  
 Fe<sub>92</sub>Ni<sub>7</sub>B<sub>10</sub>Si<sub>1</sub>, amorphous alloys, effects of neutron irradi. on mag. props. 2-2104  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, amorphous ferromag., transverse magnetostriction due to shearing stress 2-21864  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, amorphous ribbons, low field mag. props. 2-46346  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, amorphous ferromagnet, magnetisation study 2-46347  
 (Fe<sub>2</sub>Ni<sub>1-x</sub>)<sub>75</sub>P<sub>16</sub>B<sub>6</sub>Al<sub>3</sub>, amorphous, ferromag. transition, struct. relax. effect on scaling law anal. 2-5542  
 (Fe<sub>2</sub>Ni<sub>1-x</sub>)<sub>75</sub>P<sub>16</sub>B<sub>6</sub>Al<sub>3</sub>, amorphous, Mossbauer study 2-31356  
 (Fe<sub>1-x</sub>Ni<sub>x</sub>)<sub>75</sub>P<sub>10</sub>B<sub>13</sub>, amorphous, breakdown of magnetism, susceptibility and Mossbauer meas. 2-8976  
 Fe<sub>3</sub>Ni<sub>3</sub>B<sub>12</sub>Si<sub>2</sub>, amorphous, temp. depend. of mag. permeability 2-26656  
 Fe<sub>4</sub>Ni<sub>74</sub>Si<sub>6</sub>B<sub>13</sub>, amorphous spin glass, Mossbauer study 2-31331  
 Fe<sub>2</sub>O<sub>3</sub>,  $\gamma$ - $\alpha$  transition, temp. stability (*Bulgarian*) 2-21773  
 Fe<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> based glasses, crystn. in ferromag. phase, effect of chem. comp. 2-25753  
 Fe<sub>31.5</sub>Rh<sub>48.5</sub>, ferromagnetic, press. induced antiferromagnetism 2-46282  
 Fe(S<sub>2</sub>CN(C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>)<sub>2</sub>Cl, ferromagnetic, critical behaviour, mag. susceptibility and magnetisation study 2-46307  
 FeSi, internal strains of magnetostrictive origin, domain wall struct., X-ray diff. obs. 2-36378  
 Fe<sub>3</sub>Sn<sub>1-x</sub>, amorphous, mag. phase diagram 2-36342  
 FeTiB amorphous films, mag. props., effect of B and Ti 2-36399  
 FeTi<sub>2</sub>S<sub>4</sub>, mag. aftereffect and domain walls 2-36390  
 FeTi<sub>2</sub>S<sub>4</sub>, mag. props. 2-26657  
 G<sub>1</sub>Te<sub>4</sub>, magnetocaloric effects near room temp., exptl. and theoret. values comparison 2-33536  
 Gd, adiabatic magnetisation cooling, rel. to mag. refrigeration efficiency 2-33553  
 Gd, cubic ferromag. phase, space group obs. by X-ray, electron diff. (*German*) 2-31142  
 Gd, easy magnetization direction, temp. variation, domain phase theory 2-46342  
 Gd, ferromag., 4f-5d reson. scatt. in spin polarised photoemission 2-13622  
 Gd, magnetocaloric effects near room temp., exptl. and theoret. values comparison 2-33536  
 Gd, thermal expansion near Curie temp. 2-46305  
 Gd-Co, amorphous film, low temp. resistivity and Hall effect 2-35986  
 GdAl<sub>1-x</sub>Zn<sub>x</sub>, magnetic phase diagram 2-46281  
 GdAl<sub>2</sub>, cubic ferromagnet, pseudoquadrupole effect 2-36375  
 Gd<sub>1-x</sub>Er<sub>x</sub>Al<sub>2</sub>, Curie temp., spin-disorder resist. and residual resist. 2-35991  
 Gd<sub>1-x</sub>Re<sub>x</sub>Al<sub>2</sub> (Re=Dy, Ho, Er), Curie temp., theoretical calc. 2-21793

## ferromagnetic properties of substances continued

- Gd<sub>2</sub>Y<sub>1-x</sub>Fe<sub>3</sub>, magnetic behaviour, 4.2 to 1300K, temp. and comp. depend. 2-5530  
 Gd<sub>2</sub>Y<sub>1-x</sub>Fe<sub>3</sub>, magnetic behaviour, 4.2 to 1300K, temp. and comp. depend. 2-8965  
 Gd<sub>2</sub>Y<sub>1-x</sub>Rh<sub>4</sub>B<sub>4</sub>, magnetic supercond., magnetisation and phase diag. 2-31047  
 Ge-B-Ga, amorphous, crystn. temp., mag. props. 2-41160  
 H, crystalline atomic phase, eqn. of state 2-1705  
<sup>3</sup>He, adsorbed on exfoliated graphite, ferromag. ordering, susceptibility and NMR study 2-35837  
<sup>3</sup>He solid layers adsorbed on graphite, mag. coupling 2-16923  
<sup>3</sup>He, two-dimens. layers, mag. struct., vacancy interactions effect 2-40638  
 HgCr<sub>2</sub>Se<sub>4</sub>, band struct., self consistent discrete variational X $\alpha$  calc. 2-12970  
 HgCr<sub>2</sub>Se<sub>4</sub>, ferromagnetic semicond., cathodolum. characts. of electron spectrum 2-46785  
 HoB<sub>2</sub>C<sub>2</sub>, mag. props., 3-300K 2-41116  
 HoCo film, amorphous, annealing effect on elec. resist. temp. depend., mag. compensation pt. and Hall parameters 2-9008  
 HoCo<sub>0.5</sub>Ni<sub>1.5</sub>(Cu), magnetisation reorientation and anisotropy 2-26670  
 Ho<sub>3</sub>Fe<sub>5</sub>O<sub>12</sub>, ferrogarnet form. from metal hydroxides, prep. conditions and mechanism, characts. 2-41536  
 HoMo<sub>2</sub>S<sub>8</sub>, reentrant ferromag. supercond., mag. and supercond. phase transitions 2-17281  
 HoMo<sub>2</sub>S<sub>8</sub>, reentrant supercond. transition, oscillatory magnetisation, neutron diff. study 2-36215  
 HoNi<sub>2</sub>, thermal expansion and magnetostriction, 5 to 290K 2-26086  
 HoRh<sub>2</sub>B<sub>4</sub>, mean-field ferromag., sp. ht., magnetisation, elec. resist., and thermal expansion meas. 2-51408  
 K<sub>2</sub>CuF<sub>4</sub>, in-plane anisotropy of ferromagnetic reson. and spin-wave relax. 2-9040  
 K<sub>2</sub>CuF<sub>4</sub>, two-dimensional ferromag., magneto-optical props. 2-2222  
 La<sub>3-x</sub>Sm<sub>x</sub>Gd<sub>3</sub>, mag. and supercond. phase diagram 2-17191  
 (La<sub>1-x</sub>Sr<sub>x</sub>)CoO<sub>3</sub>, cubic perovskite struct., mag. props. meas. 2-26618  
 LiHoF<sub>4</sub>, uniaxial ferromag., transverse elec. susceptibility, dielec. study 2-31366  
 LiTbF<sub>4</sub>, uniaxial ferromag., transverse elec. susceptibility, dielec. study 2-31366  
 LiTb<sub>0.5</sub>Ho<sub>0.5</sub>F<sub>4</sub>, random Ising dipole coupled ferromag., mag. susceptibility 2-46261  
 LiTb<sub>2</sub>Y<sub>1-x</sub>F<sub>4</sub>, critical props., phase diagram 2-51407  
 MgMn-ferrite/BaTiO<sub>3</sub>, ferroelectric ferromagnetics 2-51863  
 MgO:Ni, Ni precipitates, mag. props. 2-31240  
 Mn-Al-C, permanent mag., magnetisation props., -50 to 150°C 2-21826  
 MnAs, ferromagnetic, optical. props. and band struct. (*Russian*) 2-13504  
 Mn<sub>1-x</sub>Cu<sub>x</sub>Sb thin films, magneto-optical props., Curie temp. 2-9212  
 MnP, band struct. and mag. props. 2-30797  
 MnP, Lifshitz point, mean field and renormalisation group calcs. 2-26637  
 MnP, phase diagram, susceptibility, magnetostriction, Lifshitz point 2-2072  
 MnSb alloy, mag. props. depend. on press. and temp. (*Russian*) 2-13298  
 Mn<sub>1-x</sub>Sb<sub>x</sub> thin films, spin reorientation phenomena from ferromag. reson. studies 2-26756  
 MnSb<sub>1-x</sub>Sn<sub>x</sub> thin films, magneto-optical props., Curie temp. 2-9212  
 (NH<sub>4</sub>)<sub>2</sub>CuBr<sub>4</sub>·2H<sub>2</sub>O, 3-D Heisenberg ferromag., direct expt. determ. of gap exponent 2-26646  
 NdAl<sub>2</sub>, ferromag., magnetisation density polarised neutron study 2-17317  
 Nd<sub>1-x</sub>Fe<sub>x</sub>, amorphous alloys, melt-spun, crystallisation and mag. props. 2-17314  
 Ni (100), surface magnetism near crit. region, spin-polarised electron scatt. study 2-31197  
 Ni (100) surfaces, mag. structure study using electron capture spectroscopy 2-46244  
 Ni (110) surface mag. state, polarized electron diff. study 2-2058  
 Ni alloys, FCC, disordered, ferromag., ground state, causes of instability 2-31218  
 Ni and its alloy, magnetocrystalline anisotropy, effect of hydrostatic press. 2-17273  
 Ni atomic clusters in alkane media, mag. and chem. props. 2-7693  
 Ni catalyst, SiO<sub>2</sub> supported, superparamag. effects in ferromag. reson. 2-36439  
 Ni complexes, bis(1,3-dithiol-2-thion-4,5-dithiolato)-nickelate and donor-acceptor cpd. with TTF, synthesis, elec. and mag. props. (*French*) 2-36025  
 Ni, cubic ferromagnet, pseudoquadrupole effect 2-36375  
 Ni, electrical resistance near T<sub>c</sub>, critical parameters 2-21561  
 Ni, electronic struct., self-energy contribs. 2-45820  
 Ni, ferromag., effect of Coulomb correlations on energy bands 2-51079  
 Ni, ferromagnetic, itinerant-electron system, Ising model and Bethe approx. 2-26642  
 Ni, ferromagnetism, fluctuating band picture 2-31126  
 Ni film coated surface wave delay line, magnetization-surface wave interaction mechanism 2-50977  
 Ni films, spin wave reson. meas., surface anisotropy and inhomogeneity effects 2-51472  
 Ni, heat capacity, 1.8 to 4.2K, spin wave contrib. 2-8978  
 Ni, mag. first order transition, Mossbauer study 2-17279  
 Ni, magnetic properties calc. by functional integral method, review 2-31124  
 Ni, magnetovolume effects, local-band theory 2-26719  
 Ni, short range mag. order 2-31127  
 Ni, spin correl. function, crit. behaviour 2-46302  
 Ni, spin waves, magnetisation study 2-21788  
 Ni, thermal emission spectra, circular polarisation 2-13506  
 Ni, transition metals, ferromagnetic, mag. susceptibility and spin waves, local density approx. 2-46260  
 Ni, Z 2-26653  
 Ni-Al (32 to 40 at.%), quenching effect on magnetic behaviour 2-21774  
 Ni-Co (0 to 70 wt.%), relation between damping capacity and magnetomechanical props. (*Japanese*) 2-26715  
 Ni-Co film, oblique incidence deposition, mag. props. 2-21850  
 Ni-Cr(Co) alloys, magnetic domain wall pinning by lattice defects 2-26653  
 Ni-Cr(Fe)(Co)(Cu), subband resist. and spontaneous resist. anisotropy, two-current model 2-1888  
 Ni-Cu(Mn) thin films, interdiffusion study by mag. methods 2-26146  
 Ni-Fe-B-Si, amorphous, Barkhausen noise, power spectrum 2-8998  
 Ni-Fe-Nb-Al, struct. effect on physical props. (*Chinese*) 2-2533



**ferromagnetic properties of substances continued**

- Ni-Mn, moment distrib., mag. environment model 2-21769  
 Ni-Mn (5 wt.%), effect of impurity content on magnetomech. interaction 2-26718  
 Ni-NiO-Ni(Co)(Fe), ferromag. films, spin pol. electron tunnelling obs. 2-51342  
 Ni-Pd alloys, ferromag., temp. and field depend. of mag. anisotropy (*Russian*) 2-46275  
 Ni-Rh(Ru)(Ir)(Os), dil., sp. ht. coeff., impurity conc. depend. 2-46297  
 Ni-Rh(Ru)(Os)(Ir), dil., magnetisation, impurity conc. depend. 2-46254  
 Ni-Ru, electronic struct., multi-band CPA calc. 2-5344  
 Ni-Ti (9.6 at.%), magnetic study on phase decomposition 2-17663  
 Ni<sub>3</sub>B<sub>2</sub>O<sub>13</sub>(Br), ferromag., ferroelec. and ferroelastic domains, birefringence and Faraday effect study 2-31430  
 NiFe chevron elements, 90° symmetrical, magnetisation processes and distrib. 2-26663  
 NiMn, theory of finite temp. magnetism, local environment effect and glass-like phase 2-46295  
 Ni<sub>2</sub>MnSn Heusler alloy, elec. resist., galvanomag. effects, and magnetisation meas., scatt. processes 2-5389  
 Ni<sub>1-x</sub>Mn<sub>x</sub>Sn, Heusler alloy, mag. props. 2-17268  
 Pd, metamagnetism, self consistent spin polarised band struct. calc. 2-31186  
 (Pd<sub>0.9965</sub>Fe<sub>0.0035</sub>)<sub>0.95</sub>Mn<sub>0.05</sub>, spin glass transition, resist. anomaly 2-30862  
 Pd<sub>2</sub>MnSn ferromag. Heusler alloy, magnetisation reduction by cold working 2-9001  
 Pd<sub>2</sub>MnSn, localised metallic ferromag. paramag. response 2-17260  
 (Pd<sub>1-x</sub>Pt<sub>x</sub>)<sub>3</sub>Fe, atomically ordered, transverse magnetoresist., ferromag.-antiferromag. transition 2-36020  
 (Pd<sub>3</sub>Rh<sub>5</sub>)<sub>2</sub>Ni<sub>2</sub>, spin fluctuation and paramag.-ferromag. transition, magnetisation and resist. meas. 2-21797  
 Pr alloys, amorphous, sp. ht., nonaxial cryst. field model 2-31199  
 PrCo<sub>2</sub>, magnetisation and susceptibility 2-46257  
 Pr<sub>2</sub>(Co<sub>1-x</sub>Fe<sub>x</sub>)<sub>17</sub>, elec. resist. singularities and spin reorientation transistors 2-41133  
 PrCo<sub>2</sub>H<sub>4</sub>, magnetisation and susceptibility 2-46257  
 PrCu<sub>5</sub>, enhanced nucl. ordering neutron diff. study 2-36322  
 PrCu<sub>6</sub>, critical phenomena at nucl. mag. ordering transition 2-36367  
 PrNi<sub>3</sub>, nuclear susceptibility and thermodynamic anal. of nucl. sp. ht. 2-36330  
 Rb<sub>2</sub>CrCl<sub>4</sub>, spin wave temp. depend. 2-26609  
 Rb<sub>2</sub>Cr<sub>1-x</sub>Mn<sub>x</sub>Cl<sub>4</sub>, Cr-rich, struct. and mag. order 2-26590  
 Rb<sub>2</sub>CuBr<sub>4</sub>·2H<sub>2</sub>O, 3-D Heisenberg ferromag., direct expt. determ. of gap exponent 2-26646  
 RbFeCl<sub>3</sub>, spin waves, neutron scatt. study 2-31161  
 RbFeCl<sub>3</sub>·2H<sub>2</sub>O, mag. ordering, Mossbauer study 2-26796  
 Rb<sub>2</sub>Mn<sub>1-x</sub>Cr<sub>x</sub>Cl<sub>4</sub>, spin glass behaviour 2-51414  
 Sm-Co alloy film, amorphous, mag. behaviour 2-51440  
 SmCo<sub>5</sub> magnet, for portable NMR spectrometer, props. 2-23683  
 SmCo<sub>5</sub>, magnetic hysteresis curve, symmetrical in high mag. field 2-21825  
 SmCo<sub>5</sub> permanent magnets, deform. sintered, struct. and mag. props. 2-31245  
 SmCo<sub>5</sub> sintered mag. alloys, domain wall pinning and nucl., thermal activation and coercive field 2-21818  
 SmCo<sub>5</sub> sintered mag. alloys, domain wall pinning and nucl., mag. viscosity obs. 2-21819  
 Sm(CoCu)<sub>5</sub>, structural transform. rel. to coercivity (*Czech*) 2-46343  
 Sm<sub>1-x</sub>Cr<sub>x</sub>Fe, mag. props., effect of isothermal annealing 2-41161  
 Sr(Co<sub>1-x</sub>Mn<sub>x</sub>)O<sub>3</sub>, cubic perovskite struct., mag. props. meas. 2-26618  
 SrCoO<sub>3-x</sub>, cubic perovskite struct., mag. props. meas. 2-26618  
 T-M amorphous alloys, T-Fe, Co, Ni and M=B, C, P, ferromagnetic glasses study 2-9000  
 Tb, anisotropic magnetisation time depend. in basal plane 2-26668  
 Tb, de Haas-van Alphen effect and exchange-split Fermi surfaces 2-45807  
 Tb film, transmission spectra, direct optical transitions, mag. ordering effects 2-17562  
 Tb, texture and mag. props. after rolling and annealing (*Russian*) 2-22236  
 Tb<sub>0.4</sub>Fe<sub>0.6</sub>, magnetic props. and struct. (*Chinese*) 2-31256  
 Tb<sub>2</sub>Gd<sub>1-x</sub>, orientational phase transition near Curie point 2-31174  
 Tb<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>·8H<sub>2</sub>O, magnetic ordering at 150 mK, susceptibility and sp. ht. meas. 2-36344  
 Tb<sub>2</sub>Y<sub>1-x</sub>Fe<sub>x</sub>, magnetic struct. 2-46243  
 Tb<sub>2</sub>Fe<sub>2</sub>H<sub>2</sub>, mag., struct., and surface props. 2-35701  
 TiBe<sub>2</sub>-Cu<sub>x</sub>, magnetisation curves for large x 2-41163  
 TiC-Ni-Mo, hot pressing, conditions effect on coercive force and grain size 2-17647  
 TiCu<sub>2</sub>Fe<sub>2</sub>Be<sub>2-x-y</sub>, itinerant magnetism, magnetisation and Mossbauer studies 2-31151  
 Ti-Cr-S(Se)(Te) system cpds., mag. props. and struct. 2-51398  
 α-TmHx solid solns., mag. transition temps., magnetisation meas. 2-13295  
 (Tm<sub>1-x</sub>Lu<sub>x</sub>)RuB<sub>2</sub>, reentrant supercond., AC mag. susceptibility meas. 2-17190  
 TmRh<sub>1.5</sub>Sn<sub>4</sub>, reentrant supercond., upper crit. field and sp. ht. meas. 2-13250  
 U-Co alloys, mag. props. temp. and field depend., 4.2 to 300K 2-8961  
 U-Fe film, amorphous, ferromag. reson. obs., anisotropy type 2-9038  
 U<sub>3</sub>As<sub>4</sub>, weak fields effect on transitions between states with different numbers of mag. phases 2-8971  
 UCu<sub>2</sub>Ge<sub>2</sub>, antiferromagnetic-ferromagnetic phase transition, neutron diff. study 2-36346  
 UFe<sub>2</sub>-UCO, system, elec. and mag. props., model of strong scatt., temp. and field depend. 2-8784  
 UFe<sub>2</sub>-UNi<sub>2</sub> system, temp. depend., elec. resist., 4.2 to 300K, Kondo-like system behaviour 2-8789  
 WC-Co hard alloys, thermomag. method for Co determ. 2-36348  
 (Y,Bi)<sub>3</sub>(Fe,Ga)<sub>5</sub>O<sub>12</sub>, ferrite-garnet film, 360° dynamic domain wall (*Russian*) 2-46351  
 (Y,Sm,Lu,Ca)<sub>3</sub>(Fe,Ga)<sub>5</sub>O<sub>12</sub>, ferrite-garnet film, 360° dynamic domain wall (*Russian*) 2-46351  
 (Y,Sm)<sub>3</sub>(Fe,Ga)<sub>5</sub>O<sub>12</sub>, ferrite-garnet film, 360° dynamic domain wall (*Russian*) 2-46351  
 Y<sub>2</sub>Co<sub>3</sub>, superconducting transition and onset of mag., field depend. 2-36201  
 Y<sub>1-x</sub>Er<sub>x</sub>Rh<sub>4</sub>B<sub>4</sub>, magnetic heat capacity, superconductivity 2-17300  
 Y<sub>1-x</sub>Fe<sub>x</sub>, amorphous, mag. props., spin glass behaviour 2-21798  
 Y<sub>1-x</sub>Fe<sub>x</sub>, amorphous, Mossbauer spectra, mag. struct., 1.5 to 300K 2-21924

**ferromagnetic properties of substances continued**

- YIG:Co films, (100) and (111), Co substitution influence on domain struct., anisotropy influence, ferromag. reson. obs. 2-9011  
 YIG:Co films, (111), ferromag. reson. parameters, anisotropy fields and domain struct. 2-9037  
 Zr(Fe<sub>1-x</sub>Co<sub>x</sub>)<sub>2</sub>, magnetic order range, magnetisation and Mossbauer study 2-46341  
 Zr(Fe<sub>1-x</sub>Mn<sub>x</sub>)<sub>2</sub>, ferromag., mag. transition, <sup>55</sup>Mn NMR spin echo study 2-26788  
 ZrMn<sub>2</sub>H, nonstoichiometric, stability, mag. props. 2-41126  
 Zr<sub>1-x</sub>Ti<sub>x</sub>Mn<sub>2</sub>H, mag., crystallographic and H<sub>2</sub> storage chars. 2-41127  
 ZrZn<sub>2</sub>, triplet supercond., elec. cond. and mag. study 2-36187

**ferromagnetic relaxation**

see also ferromagnetic resonance

- ferromagnetic resonance linewidths above Curie point 2-51473  
 CdCr<sub>2</sub>Se<sub>4</sub> single cryst., spin waves and uniform precession relaxation 2-13345  
 YIG, ferromagnetic relaxation, influence of low temp. electron and neutron irradiation (*Russian*) 2-26762

**ferromagnetic resonance**

see also ferromagnetic relaxation

- anisotropic specimens, nonlinear ferromag. reson., moment of pondermotive force effect 2-17343  
 bubble garnet epitaxial films, mag. anisotropy determ. using field orientation depend. in ferromag. resonances 2-5566  
 classical compressible Heisenberg chain, low temp. spin dynamics 2-5516  
 ferrites, polycryst., ferromag. reson. line eqn. 2-36443  
 film, ferromag., with domain struct. on antiferromag. substrate, magnetisation and mag. reson. 2-9013  
 film, nonlinear spin wave excitations at large pumping altitudes 2-26764  
 fine-grained precipitates in glass, particle size effects 2-26758  
 flaw detection, using eddy current detector 2-17808  
 garnet bubble film, ion implanted layer, mag. state, temp. depend. study 2-26759  
 limit cycles in transverse pumped magnetic systems 2-2139  
 linewidth measurement, rectangular waveguide appl. 2-51471  
 linewidths above Curie point 2-51473  
 magnetic bubbles, submicron diameter, characterisation techniques 2-51443  
 magnetic semiconductor, spin wave excitation, by high freq. elec. field (*Russian*) 2-13344  
 magnons, surface and interface mag. struct. near surface, review 2-21783  
 medium with inhomogeneous saturation magnetisation, line width calc. 2-5588  
 metallic ferromagnets, located in inclined mag. field, slowly decaying waves near cyclotron reson. (*Russian*) 2-46387  
 multilayer film, dynamical boundary conditions for spin wave reson. 2-2140  
 photoacoustic detection 2-26753  
 single domain particles, dil. suspension, ferromag. reson. condition and powder pattern anal. 2-26761  
 spin waves, standing, instability in ferromag. solids of revolution, FMR detection 2-2068  
 thin film, amorphous, spin wave reson., decoupling and linewidths 2-26757  
 uniaxial crystals with plane-parallel domain struct., FMR, domain boundary energy effect 2-13346  
 Bi<sub>2-x</sub>Ca<sub>2x</sub>Fe<sub>3-4x</sub>V<sub>2</sub>O<sub>12</sub> crystal, ferromag. reson. linewidth anisotropy, theory (*Chinese*) 2-26752  
 Cd chalcogenide spinels: Cr, mixed valence, ferromagnetic resonance 2-45914  
 CdCr<sub>2</sub>Se<sub>4</sub> (S<sub>4</sub>), ferromagnetic resonance, mag. anisotropy 2-31291  
 CdCr<sub>2</sub>Se<sub>4</sub> single cryst., spin waves and uniform precession relaxation 2-13345  
 Co-Ni-P-B-Al, amorphous, ferromag. reson. 2-31292  
 Co<sub>100-x</sub>Ti<sub>x</sub>, amorphous ferromagnetic thin films, mag. props. FMR and magnetisation meas. 2-36398  
 Cu<sub>0.88</sub>Cr<sub>2</sub>Se<sub>3.44</sub>Br<sub>0.64</sub>, magnetic anisotropy, determ. using FMR 2-26626  
 CuFe<sub>2</sub>O<sub>4</sub>, cubic ferrite, magnetocrystalline anisotropy, FMR study 2-13289  
 Fe thin plate, <sup>57</sup>Fe nuclei polarisation during superposition of FMR and NMR lines (*Russian*) 2-9044  
 Fe-Ni-P-B-Al, amorphous, ferromag. reson. 2-31292  
 Fe-Si (3 wt.%), g-factor determ. by FMR 2-21494  
 FeBO<sub>3</sub>, ferromag. reson., photoacoustic detection 2-26753  
 Gd<sub>40</sub>Co<sub>60</sub> amorphous film, spin wave resonance (*Russian*) 2-21886  
 K<sub>2</sub>CuF<sub>4</sub>, in-plane anisotropy of ferromagnetic reson. and spin-wave relax. 2-9040  
 Mn<sub>1+x</sub>Sb, thin films, spin reorientation phenomena from ferromag. reson. studies 2-26756  
 Ni catalyst, SiO<sub>2</sub> supported, superparamag. effects in ferromag. reson. 2-36439  
 Ni films, spin wave reson. meas., surface anisotropy and inhomogeneity effects 2-51472  
 Rb<sub>2</sub>Cr<sub>2</sub>Mn<sub>1-x</sub> mixed crystals, mag. excitations study by mag. resonance 2-36446  
 (Sm,Lu,Ca)<sub>3</sub>(Si,Lu,Fe)<sub>5</sub>O<sub>12</sub> film, domain wall motion, magnetisation and comp. depend. 2-26704  
 U-Fe film, amorphous, ferromag. reson. obs., anisotropy type 2-9038  
 (Y,U,Tm,Sm,Ca)<sub>3</sub>(Fe,Ga)<sub>5</sub>O<sub>12</sub>, epitaxial ferrite garnet film, domain wall mobility 2-9014  
 (Y,Sm,Ca)<sub>3</sub>(Ge,Fe)<sub>5</sub>O<sub>12</sub> film, domain wall motion, magnetisation and comp. depend. 2-26704  
 (Y,Sm)<sub>3</sub>(Fe,Ga)<sub>5</sub>O<sub>12</sub>, epitaxial ferrite garnet film, domain wall mobility 2-9014  
 (Y,Ca)<sub>3</sub>(Fe)<sub>5</sub>O<sub>12</sub> thin film, magnetostatic modes, temp. depend., FMR study 2-21887  
 YFe<sub>2-x</sub>Ga<sub>3</sub>O<sub>12</sub>, FMR linewidth, annealing effects 2-21888  
 Y<sub>3</sub>Fe<sub>5-x</sub>Ga<sub>3</sub>O<sub>12</sub>, superhigh-freq. EM radiation at pumping freq. (*Russian*) 2-21891  
 YIG crystal, ferromag. reson. linewidth anisotropy, theory (*Chinese*) 2-26752  
 YIG epitaxial layers, Xe<sup>+</sup> irr., magnetisation, Faraday rot. and FMR linewidth 2-21847  
 YIG, ferromag. reson., photoacoustic detection 2-26753  
 YIG films, magnetostatic waves, FMR study 2-26696  
 YIG, superhigh-freq. EM radiation at pumping freq. (*Russian*) 2-21891  
 YIG:Co films, (100) and (111), Co substitution influence on domain struct., anisotropy influence, ferromag. reson. obs. 2-9011



## ferromagnetic resonance continued

- YIG:Co films, (111), ferromag. reson. parameters, anisotropy fields and domain struct. 2-9037  
 YIG:Gd(Tm)(Ga) film, mag. profile determ. by ferromagnetic resonance 2-2138  
 (YSnTm)<sub>3</sub>(GaFe)<sub>2</sub>O<sub>7</sub> bubble thin film, ion implanted, mag. anisotropy, FMR study 2-31251

## ferromagnetism

see also *ferromagnetic properties of substances; ferromagnetic relaxation; ferromagnetic resonance; Ising model; spin waves*

- alloys, binary, ferromagnetic, order-disorder transitions, specific heat 2-21794  
 amorphous ferromagnet, dilution effects, dense randomly packed hard sphere model 2-31220  
 amorphous ferromagnet, stochastic mag. struct. and spin waves 2-31191  
 amorphous ferromagnets, crit. phenomena, effects of structurally induced mag. inhomogeneities 2-46294  
 amorphous itinerant electron ferromagnet model, magnon energy, scattering, stiffness constant and wavelength 2-26607  
 anisotropic ferromagnet, Landau-Lifshitz eqn. and Schrodinger nonlinear eqn. equivalence (Ukrainian) 2-48527  
 anisotropic ferromagnetic, two spins per site, mag. excitations 2-21752  
 antiferromagnet, itinerant-electron, short-range ferromag. order influence 2-46231  
 band model, stability with exchange interactions between localised and collective electrons (Russian) 2-13284  
 Barkhausen effect relationship with hysteresis loop parameters (Russian) 2-51434  
 binary alloys, phase transitions, Griffiths singularity 2-26644  
 Bloch wall motion in imperfect cryst., Barkhausen noise characts. 2-46334  
 bubble domains, vibr., Raman scatt. 2-13325  
 classical Ising-Heisenberg ferromagnetic chain, solitons and excitation spectrum 2-46228  
 conducting ferromagnet, magnon relaxation (Russian) 2-5532  
 conducting plates, EM field diffusion, nonlinearity and saturation (Spanish) 2-11615  
 conference, Kharkov, USSR (Sept. 1979) 2-28593  
 critical dynamic scaling of isotropic ferromag.,  $\epsilon$  expansion to two loop order 2-46306  
 critical dynamics above Curie temp. in a mag. field (Russian) 2-41145  
 cubic ferromagnet, spin-reorientation phase transition 2-41138  
 cubic lattice with ferromagnetic ordering, Ising model, Devil's staircase behaviour 2-2094  
 Curie-Weiss ferromagnet, spin-flip dynamics, metastable states with complex free energy 2-26643  
 degenerate semiconductor, ferromag., in paramag. phase, thermopower, contrib. of localized spins heat flux 2-36073  
 dilute, with short-range order, spin waves 2-26615  
 dilute alloys, annealed, ferromag. and antiferromag., spin waves, short range chem. order effect 2-31157  
 disordered anisotropic ferromag. with dipole interactions, phase transitions 2-2084  
 dissipative effects, quadratic 2-31306  
 domain formation, Brown's eqn., bifurcation solns. (Chinese) 2-41157  
 domain walls in ferromagnetic material and irreversible magnetization processes 2-51432  
 easy plane spin-one ferromagnet, series expansion 2-21801  
 easy-plane spin 1, quantum crit. phenomena, zero temp. series expansion 2-36366  
 edge dislocation vibrs., effect on magnetisation dynamics (Russian) 2-41171  
 elementary excitation spectrum in spin-flop phases (Russian) 2-26608  
 even systems with pair interaction, GHS inequality for large external field 2-41098  
 exciton dielectric, mag. props., ferromagnetism (Russian) 2-46232  
 FCC lattice, mag. ordering in Hubbard model with almost half-filled band 2-26576  
 Fermi liquid, itinerant nearly mag., two-dimens. mag., confined geom. effects 2-16921  
 ferromagnetic metals, hyperfine fields at impurities 2-51139  
 film, ferromag., with domain struct. on antiferromag. substrate, magnetisation and mag. reson. 2-9013  
 film, multilayer, dynamical boundary conditions for spin wave reson. 2-2140  
 Finislerian deformation theory, spin direction covariant differential 2-36294  
 glasses, structural relaxation 2-8982  
 Heisenberg chain, classical isotropic, dynamical response functions due to pulse solitons, in external mag. field 2-21751  
 Heisenberg ferromag., classical, soliton eqn., bilinearisation 2-42869  
 Heisenberg ferromag., classical, stochastic model, convergence to equilb. 2-2048  
 Heisenberg ferromag. classical continuum chain, soliton damping and energy loss 2-46332  
 Heisenberg ferromagnet, anisotropic, energy gap calc. 2-17257  
 Heisenberg ferromagnet, HCP lattice, spin wave spectrum and crit. temp. 2-41156  
 Heisenberg ferromagnet, quantum ground state and low temp. magnetisation (Russian) 2-26574  
 Heisenberg ferromagnet with anisotropic exchange forces and dipolar interactions, propagator crit. asymptote 2-17309  
 Heisenberg ferromagnetic chain, solitons and bound magnon states 2-21815  
 Heisenberg magnet, random, magnetic states with partial spin-glass ordering (Russian) 2-13309  
 Heisenberg magneto-order system, acoustic self-induced transparency 2-26720  
 Heisenberg model, amorphous, thermodynamic props., exchange integral fluctuations, crit. region behaviour 2-8993  
 Heisenberg model, anisotropic, bond disordered, magnon density 2-31162  
 Heisenberg model, classical ground state and bilinear spin-wave theory 2-26575  
 Heisenberg thin film, ellipticity effects in spin-wave spectrum 2-26694  
 helical spin density wave due to antisymmetric exchange interaction 2-41118  
 heterogeneous alloys, Curie, temp., press. depend. 2-8975  
 heterogeneous double layer, magnetostatic spin wave modes 2-31160  
 heterogeneous ferromagnet, mag. isotherms, Arrott plots, conc. fluctuations 2-36376

## ferromagnetism continued

- hexagonal two sublattice ferromagnet, magnetisation field depend., computer simulation 2-21830  
 high coercivity Fe alloys, hysteresis curve, math. model (Russian) 2-2099  
 Hubbard ferromagnet, surface spin waves, RPA calc. 2-46265  
 Hubbard model, localised electron states, rel. to ferromagnetism theory 2-1865  
 Hubbard model, strongly correlated, mag. susceptibility 2-31132  
 Hubbard model ground state, mag. structure 2-8949  
 hyperfine magnetic fields at <sup>57</sup>Fe nuclei, press. depend. regularities 2-51485  
 Invar, exchange interaction role between ferro- and antiferromagnetic components 2-31168  
 Ising ferromagnet, randomly diluted, percolation theory and annealed model 2-51422  
 Ising ferromagnet, specific heat, magnetisation, renormalisation group approach 2-46314  
 Ising ferromagnet, three dimensional bond-dilute, renormalisation group phase boundary 2-5557  
 Ising ferromagnet, two-dimens., crit. exponents, renormalisation group technique 2-46322  
 Ising ferromagnetic alloy mixed cryst., phase diagram 2-51426  
 Ising model, axial next-nearest neighbour mean field approx. anal. 2-36296  
 Ising model, surface phase transitions, renormalisation group calc. 2-51405  
 Ising model correl. at high temp., falloff rate 2-38596  
 Ising random-field instabilities, domain interface roughness effect, in three or less dims. 2-46328  
 Ising spin glass, ferromag. phase existence, Peierls-Griffiths argument 2-46319  
 itinerant, complex order parameter at excitonic phase transition 2-36302  
 itinerant electron ferromagnetism, phonon effect on magnetisation 2-13270  
 itinerant electron metamagnetism 2-41100  
 itinerant electron systems, spin fluctuation theory, single site approx. 2-31125  
 itinerant ferromagnet, low temp. props., functional integral approach 2-31128  
 Kosterlitz-Thouless phase transition, disorder effects 2-36363  
 Landau-Lifshitz eqn. for ferromag. nonlinear dynamics, linear pseudo-potentials 2-46313  
 long-range order absence in systems with random p-fold anisotropies 2-2045  
 magnetic phases of strongly correlated electrons in a nearly half-filled narrow band 2-41101  
 magnetic sine-Gordon system, dynamic damping 2-5561  
 magnetic superconductors, Josephson effect, formulation 2-17232  
 magnetisation measurement, mag. balance (Russian) 2-10827  
 magnetoacoustic phenomena (Russian) 2-46269  
 magnetoelastic damping theory (Russian) 2-51445  
 magnetometer, inductance variation, thin film, factors affecting performance 2-28866  
 magnon localisation, mobility edge position calcs. 2-46267  
 metal, ferromagnetic, elastic Rayleigh wave propag., polarizing mag. field effect 2-17325  
 metallic ferromagnets, located in inclined mag. field, slowly decaying waves near cyclotron reson. (Russian) 2-46387  
 metals, elec. resist., temp. depend., domain struct. effects 2-35989  
 metals, itinerant electron ferromagnet, electron-phonon coupling 2-21761  
 metals, thermal expansion due to magneto-volume effect 2-31189  
 multiaxial ferromag., abnormally wide domain boundaries (Russian) 2-5567  
 neutron matter, binding energy, mag. susceptibility ferromagnetic transition, variational calcs. 2-11107  
 nonlinear skin effect, plane and circular polarised electromagnetic fields penetrating a ferromagnetic conducting semispace 2-24918  
 nuclear spin wave relax. due to Suhl-Nakamura interaction 2-2067  
 particles, single-domain, uniaxially anisotropic, microwave absorpt. along hysteresis loops 2-21837  
 particles periodically distributed in space, mag. states, mol. field approx. (Russian) 2-2106  
 phase transition, ferromag., mean field theory with correlations in space and time 2-17280  
 planar ferromagnet, kink instability 2-51420  
 plate, Damon-Eshbach surface wave propag., effect of inhomogeneous exchange and dissipation 2-26616  
 plate in transverse magnetic field, quasi-static magnetoelastic vibr. 2-29756  
 polarised neutron crit. scatt. above T<sub>c</sub> in mag. field (Russian) 2-26640  
 polarised neutron crit. scatt. asymmetry and crit. dynamics above T<sub>c</sub> in mag. field (Russian) 2-26639  
 Potts  $\phi^3$  field theory, anisotropic, crossover, quadratic symm. breaking effect 2-42963  
 Potts ferromagnet, crit. frontiers 2-17302  
 Potts ferromagnet, q-state, renormalisation group appl. 2-2047  
 random dilute ferromagnet, paramag. susceptibility, relative magnetisation, mol. field approx. 2-8954  
 random magnetic atom distrib., Ising- and Heisenberg-like spins, critical temp. 2-31194  
 random spin system, second order phase transition, low temp. renormalisation group study 2-17295  
 random-bond Ising model and n-vector model., upper bonds to correl. functions 2-125  
 random-bond Ising model on square lattice, ferromag. phase existence 2-36372  
 randomly dilute Ising ferromagnets, spontaneous magnetisation 2-26597  
 randomly diluted anisotropy ferromagnet, para-spin-flop critical field, CPA calc. 2-5548  
 refrigerants, fundamental working efficiency in mag. refrigeration 2-33553  
 refrigeration, 4.2 to 300K, materials selection criteria 2-33536  
 saturating cylinder, magnetostatic energy 2-29746  
 semiconductor, mag. polaron, exact Green's function 2-30806  
 semiconductor, mixed valence phase transition 2-41134  
 semiconductors, ferromagnetic, electron and magnon heating, magnetisation 2-46010  
 semiconductors, I-V characts. in phase transition region (Russian) 2-21606  
 semiconductors, magnetic, magnetic and structural phase transitions, HP mag. props. (Russian) 2-46290



**ferromagnetism continued**

- semiconductors, magnetic polaron theory 2-21510
- sine-Gordon like magnetic chains, solitons and magnons 2-5537
- single-band Hubbard model, magnetism in strong correl. limit 2-21762
- site bond percolation in ferromagnetic and antiferromag. Ising model, renormalisation group approach 2-15119
- spin glass, ground state degeneracy and ferromagnetism 2-41150
- spin wave damping near phase transition points 2-21786
- spin wave interaction amplitudes structure 2-21787
- spin waves, standing, instability in solids of revolution 2-2068
- spin- $1/2$ , BCC Ising ferromagnet, Curie temp., three-spin interactions effects 2-2090
- standard basis operator Green's functions, self-consistent many-body theory 2-5560
- superconducting thin film, maximum lossless current 2-36293
- superconducting thin films, irradi., I-V chars. 2-36214
- superconductivity, disordered ferromagnetism influence 2-31037
- superconductor, coexistence of magnetic domain structure and superconductivity 2-13230
- superconductor, ferromagnetic, Vonsovsky-Zener type model, multicritical behaviour 2-31060
- superconductor, mag. and supercond. props., EM interaction between persistent current and mag. moments 2-13232
- superconductor, spin correls., applied field effect 2-36212
- superconductor, spiral mag. state and spontaneous vortex state 2-36319
- superconductor thin films, EM interaction between persistent current and mag. moments 2-36320
- superconductors, anomalous mag. field penetration 2-13236
- superconductors, ferromagnetic, effective exchange interaction near surface 2-13285
- superconductors, phase transition, influence of spin dynamics 2-13227
- superconductors, phase transitions and mag. reson. line shifts 2-13228
- superconductors, vortex phase stabilisation, generalised Ginzburg-Landau theory 2-13231
- surface magnetic transformations, magneto-optical study methods 2-31175
- surface states, heterogeneous, near Curie point (*Russian*) 2-13316
- thin films, mag. contrib. to elec. resistivity 2-46156
- transition metals, ferromagnetic, mag. susceptibility and spin waves, local density approx. 2-46260
- transition metals, ferromagnetism, many-body effect 2-31130
- transition metals, local mag. moments, itinerant model 2-21760
- tube, eddy current testing, magnetic props. effect 2-13872
- two-dimensional dynamic model, phase transition vs. disorder 2-8989
- uniaxial ferromagnet, domain struct., quasi-optical oscils. (*Russian*) 2-46337
- uniaxial, with mag. symm. axis, magnetisation, external mag. field depend. 2-13318
- uniaxial ferromag., Greens function for single ion anisotropy, canted spin phase 2-46227
- uniaxial plate, phase diagram near Curie point, Landau-Lifschitz eqns. 2-46287
- X-Y Lifshitz point model, biaxial, ferromag.-modulated transition, renormalisation group anal. 2-51419
- Fe-Si (3 wt.%) single crystals, Barkhausen noise and domain struct. dynamics 2-51433
- <sup>3</sup>He, solid-liquid boundary, mag. quantum props. (*Russian*) 2-26175

**ferromagnets** see *ferromagnetic properties of substances; ferromagnetism*

**ferrous alloys** see *iron alloys*

**Feshbach resonances** see *atomic resonant states; molecular resonant states*

**f.e.t.** see *field effect transistors*

**few-nucleon reactions** see *nuclear reactions involving few nucleon systems*

**few-nucleon scattering** see *nuclear scattering involving few nucleon systems*

**few-nucleon systems** see *nuclei with mass number 1 to 5*

**Feynman diagrams**

- $\phi^4$  5-loop diagram, 4-loop  $\beta$ -functions, integration by parts 2-23829
- acousto-optic scattering in near-Bragg region, Feynman diagram approach 2-11632
- cluster expansion in field theory 2-33718
- coefficient function IR and UV divergences as tempered distrib. 2-3708
- coefficient functions of Feynman diagrams as tempered distrib., IR and UV divergences 2-19269
- elementary identities from correlated direct products  $\gamma$  matrices 2-23962
- Feynman path integrals in large numbers of dimensions 2-38794
- free electron laser, SHG, Feynman diagram technique 2-25023
- gauge field at finite temps., thermo field dynamics and KMS condition 2-28975
- infinite-dimensional distributions, Fourier transforms, Feynman integrals 2-69
- inverse dielectric and response function, perturbative expressions, coherent renormalisation (*Chinese*) 2-19233
- maps without improper integrals 2-19236
- mass and IR regularisation in nonlightlike axial gauge 2-19260
- O(n) Skyrme model, path-integral quantisation 2-48876
- path integral over branching paths 2-10978
- QED, asymptotical calc. for Feynman graphs with fixed number of fermionic loops (*Russian*) 2-33789
- quantum statistical mechanics, automatic generation 2-23548
- relativistic adiabatic perturbation theory for degenerate levels 2-3717
- relativistic bound states of fermions and antifermions, mesons 2-33810
- singularities of Feynman diagrams in the coordinate space and the  $\alpha$  representation 2-29018
- $h_1, h_2 \rightarrow \mu^+ \mu^- X$ , massive lepton pair prod., field theory approach to large momentum transfer process 2-7054
- pd backward scatt., deuteron D-state and relativistic effects 2-34036

**fibre optics**

- Used for fibre optic instruments and their components e.g. fibre optic gyroscopes, endoscopes and fibre lasers. For optical fibre waveguides used in telecommunications, see *optical fibres*
- see also *optical fibres*
- accelerometer with hydrophone appls. 2-11823
- automatic-light screwdriver using fibre optics (*French*) 2-29881
- blood velocity measurement by fibre optic laser Doppler anemometry 2-42191
- communication systems in Japanese National Railways (*German*) 2-7875
- conference, optical systems and appls., Utrecht, The Netherlands (Sept. 1980) 2-14971
- cryogenic temperature gauge, using fibre optic light transmission, sensing crystal 2-48707

**fibre optics continued**

- current meas. sensor, using Sagnac interferometer (*French*) 2-43001
- DFB laser action in fibre surrounded by gain modulated dye soln., evanescent field coupling 2-20309
- Fabry-Perot fibre optic, interferometric sensor 2-7871
- Fabry-Perot interferometers, long fibre 2-23711
- flexible fibre-optic elements, resist. to mech. stimuli, ambient environment influence 2-11835
- geometrical parameters of fibre bundles subjected to deforming compression 2-49929
- gyro based on fibre ring interferometer, sensitivity limiting factors 2-49926
- gyroscope, all-single-mode, long-term stability 2-4601
- gyroscope, closed-loop, low-noise 2-4602
- gyroscope, laser, with easily introduced phase-difference bias. 2-34902
- gyroscope with nonreciprocally operated fibre-coupled LiNbO<sub>3</sub> phase shifter 2-25131
- holographic displacement analysis with multimode fibre optics 2-24972
- interferometer, accurate phase meas. system 2-4606
- interferometer, ring, phase shift fluctuations between opposite waves 2-34924
- interferometer, single mode, phase modulation induced by controlled vibr. 2-11834
- interferometer, single-mode, automated optical field mapping 2-34899
- interferometer sensor systems, diode laser source limitations 2-11837
- interferometer using digital phase tracker 2-10856
- interferometer using piezoelectric polyvinylidene fluoride compensator 2-49877
- interferometers with (3×3) directional couplers, analysis 2-7873
- interferometric sensors, research update 2-11825
- interferometry, differential, sensitivity to systematic alignment errors 2-19163
- isolator, single mode fibre, toroidal config. 2-25118
- laser Doppler velocimeter, optical fibre, high-resolution, for pulsatile blood flow meas. 2-9901
- laser probe for SAW meas., appl. to crack detection in NDT 2-44610
- laser velocimeter receiver system, fibre optics signal transmission 2-4591
- light pipe for enhanced illumination of typewriter page 2-34869
- magneto-optical grating fibre-optic switch 2-20412
- marine applications of fibre optic systems (*German*) 2-7874
- measurement appl. developments, review 2-34913
- measurement sensors, using fibre optics 2-44475
- medical optical fibre technique for He-Ne laser screening of the human body 2-47675
- microbending sensor design optimisation 2-1037
- microprocessor-based fibre optic iterative optical processor 2-39740
- multi/demultiplexers for single-mode fibre transmission 2-16120
- NDT appl., review 2-7876
- optical fibre communication, book 2-25144
- optical liquid level sensor 2-15141
- optical semiconductors and other fibre optic devices (*Japanese*) 2-16133
- optical sensors for displacement measurement 2-6831
- opto-isolator using interchangeable fibre-optic emitters and detectors 2-25120
- photomultipliers gain regulation system using LED and optical fibres 2-24488
- polarisation optical time domain reflectometry, physical field spatial distrib. meas. 2-16139
- RF sputtering, optical monitoring using LEDs and fibre optics 2-51802
- ring interferometer, nonreciprocity effect 2-48765
- rotation sensor, toward an integrated device, review 2-1036
- rotation-invariant recognition, incoherent method 2-49680
- sensor for metal surface gloss meas., development (*Japanese*) 2-20424
- sensor systems, applications and economic prospects 2-10793
- sensor systems, passive multiplexing techniques 2-11826
- sensor/transducer components, appls. (*Italian*) 2-39744
- sensors, acoustic sensing appl. 2-7877
- sensors based on single-mode technology, state-of-the-art 2-6846
- sensors for medical and electrotech. appls. using bifurcated fibre bundles 2-7878
- sensors for physical quantities 2-43002
- sensors for use in sonar systems 2-29913
- shock parameters meas. with noncontacting fibre optic lever vibration transducers 2-12111
- single fibre light scatt. matrix, expt. determ. 2-24933
- spun single-mode fibres, birefr. and polarisation mode-dispersion 2-1022
- temperature measurement instrument 2-11836
- temperature sensing in optical fibres using cladding and jacket loss effects 2-25117
- temperature sensitivity minimisation 2-1024
- temperature sensor based on internally generated thermal radiation 2-11817
- ultrasound sensing for solid material evaluation 2-50019
- velocimeter, laser Doppler, dual single-beam 2-25451
- Y-branch fabrication, appl. in optical time-domain reflectometer 2-15213

**fibre reinforced composites**

- see also *carbon fibre reinforced composites; glass fibre reinforced plastics*
- aligned fibres, compressive props., new theory 2-8557
- aligned short fibre-reinforced composite, with penny-shaped cracks, stiffness and strength 2-12100
- beams, three-dimens. reinforcement optimisation for stability and vibr. resist. 2-35074
- bending during pressing into Pb plastic medium (*Russian*) 2-9366
- cable reinforced membranes, CAD 2-20527
- cellulose fibre reinforced rubber, review of short fibre reinforced composites 2-47006
- conductive, prep. of cost-effective materials 2-31677
- cross-ply fibre reinforced cylinders, elastic-plastic deformations 2-16249
- cryogenic properties of filamentary-reinforced composites, review 2-2550
- disclination model of fibre peeling 2-36960
- effective thermal conductivities determ. 2-12866
- elastic fibre-reinforced composites, study of elastic wave propagation normal to fibres 2-16715
- elastic matrix, fibre stability at high-elastic deforms. (*Ukrainian*) 2-35072
- elastic-viscoplastic fibre-reinforced composites, continuum theory 2-50077
- epoxy matrix, laser induced ablation 2-30490
- fibre fracture, stress redistrib. dynamics 2-20610



**fibre reinforced composites continued**

- fibre reinforced composites, compression strength, effect of kinked, misaligned and poorly adhering fibres 2-9367  
 fracture, emission of electrons and positive ions 2-9398  
 glass fibre reinforced, diameter choice 2-17699  
 harmonic waves in layered and fibre-reinforced composites, finite element analysis 2-1134  
 inner struct. and mech. behaviour connection 2-31610  
 laminates, cross-reinforced, edge effects 2-20540  
 laminates, strength, design with reliability concept (*Japanese*) 2-36865  
 layered filamentary composite, interlaminar shear strength study at cryogenic temps. 2-22332  
 leads for Al distributor furnaces 2-41576  
 metallic, deform. characts. and fracture 2-36918  
 modelling of fracture micromechanisms (*Russian*) 2-2579  
 multifibre, stress redistribution due to brittle fibres fracture 2-36964  
 organic fibre reinforced polymers, tensile failure in reinforcement direction 2-36961  
 PAN fibre reinforced phenolic resin, struct. study using chromic acid as etchant, SEM 2-2598  
 plastic matrix, adhesive joint strength, effect of joint shape and lap length (*Japanese*) 2-5949  
 plate, bimodulus composite, free vibrs. 2-12075  
 plates, stress intensity around cracks, influence of finite stringers 2-12086  
 polyethylene, high mol. wt., fibre reinforced composites, powder compaction, sintering and rolling 2-47000  
 polyethylene terephthalate fibre reinforced polypropylene, fracture toughness 2-31786  
 polymer fibre reinforced metals, powder technology, mech. props. (*German*) 2-36815  
 polymer materials, fibre reinforced, mechanical and thermal props., test facilities, down to 4.2K 2-22405  
 polymeric, wound, simulation of conditions giving processing defects 2-36835  
 polystyrene reinforced polycarbonate, reinforcement mechanism (*Chinese*) 2-41715  
 rolling parameters, ductile fracture criterion 2-27184  
 rubber, short fibre reinforced, review 2-47006  
 shells, cylindrical, unfigured and stiffened, stability 2-20569  
 steel fibre reinforced Ag, high-cycle fatigue, failure mechanisms 2-52027  
 steel fibre reinforced Ag, low-cycle fatigue 2-52026  
 steel fibre reinforced concrete, stiffness calc. (*Chinese*) 2-41648  
 steel fibre reinforced steel composite, reinforcement effect on struct. and mech. props. 2-41557  
 stiff fibre reinforced sheets, deformation, finite plane stress 2-8052  
 strength predictions, reliability of fibrous composites under multiaxial loading 2-2559  
 strength probability distrib., convergent sequence of tight bounds 2-27228  
 stresses and deformations during thermal cycling and loading (*Russian*) 2-2554  
 synthetic fibre reinforced plastics, conical shells, longit. compressed, supporting power 2-35075  
 test instrument, high-speed, adhesive forces meas. 2-9485  
 two-level bounds, probability distributions for strength 2-1146  
 unidirectional, fibre content effect on simultaneous determ. of Young's and shear moduli 2-27366  
 vacuum test facility development using fibre reinforced plastics (*Japanese*) 2-19119  
 viscoelastic matrix material of brittle fibre reinforced unit cell, quasistatic thermal crack growth- 2-8094  
 woven plastic glasses, crack resistance depend. on stacking 2-36970  
 Al-Al<sub>3</sub>Ni eutectic composites, torsional characteristics 2-47131  
 Al-B fibre composite, damping props. (*Russian*) 2-1562  
 Al-B fibre composite, elec. cond. depend. on fibre composition and struct. (*Russian*) 2-1886  
 Al-B fibre composite, structural instability and damping props. (*Russian*) 2-2534  
 Al-steel, fibre composite, elec. cond. depend. on fibre composition and struct. (*Russian*) 2-1886  
 Al<sub>2</sub>O<sub>3</sub> fibre reinforced refractory oxides, composite strength 2-27269  
 B fibre reinforced Al, damage accumulation during low-cycle deform. 2-36921  
 B fibre reinforced Al, deform. characts. and fracture 2-36918  
 B fibre reinforced composites, strength, interface effect 2-36919  
 B fibre reinforced Mg-Al-Zn-Mn, corrosion resist. and electrochem. characts. 2-36995  
 B fibre reinforced refractory oxides, composite strength 2-27269  
 B fibre reinforced Ti, B solubility, matrix alloying effect 2-36867  
 Cu-Fe composites, cold worked in-situ, microstructural strengthening 2-41629  
 Mg-B composite material, fibre solubility, matrix alloying influence 2-5234  
 MgO-ZrO<sub>2</sub> fibre composite, microstructure and high temp. resistance (*Russian*) 2-2520  
 Ni alloy-C(B)(Fe) fibre composites, temp. resistance, strength (*Russian*) 2-2481  
 Ni fibre reinforced Ag, deep etched, assessing changes in structural components shape (*German, English*) 2-52154  
 Pb, fibre reinforced, anodic corrosion 2-22353  
 SiC discontinuous whisker reinforced Al, US charact. of elastic const. and moduli 2-17829  
 SiC fibre reinforced Al alloy, high-temp. strength 2-13779  
 SiC fibre reinforced refractory oxides, composite strength 2-27269  
 SiC fibre reinforced resin composites, mech. props., thermal expansion behaviour 2-47121  
 SiC fibre reinforced Ti, micro-area Auger anal. 2-16959  
 SiO<sub>2</sub> fibre reinforced refractory oxides, composite strength 2-27269  
 W fibre reinforced Ni alloy, recryst. tendency of W wire 2-36879

**fibres**

- see also carbon fibres; composite materials; fibre reinforced composites; glass fibres; optical fibres  
 aluminosilicate ceramic fibres, review of props. and appl. 2-41558  
 basalt fibres, chemical durability 2-22356  
 brittle surface layers, prediction of tensile strength 2-35587  
 bundles, statistics for static strength 2-9409  
 cellulose fibres, native, appl. of method of moments to X-ray diffraction line profiles 2-40215  
 ceramic fibres, insulating, at high temps., thermal conductivity 2-50947

**fibres continued**

- density determining method, fibrous materials 2-13907  
 electric field, alternating, orientation and movement of fibres (*Russian*) 2-31928  
 flywheel, high energy density, incorporating fibres, design and fabrication 2-22664  
 geometrical parameters of fibre bundles subjected to deforming compression 2-49929  
 mechanical testing, clamping devices, review 2-47284  
 metal fibre material, porous, sound absorbing props., geometric struct. parameters effect 2-13675  
 nylon 6/LiCl mixtures, spun fibres, production and props. 2-46999  
 organic fibres, thermal degradation and heat capacity 2-2323  
 Perlon, stretched, orientation condition study by <sup>13</sup>C-NMR in solid state (*German*) 2-21895  
 PET melt-spun fibres, struct., radial diversification (*Polish*) 2-36928  
 poly-pyromellitic amino-acid fibres, effect of heat treatment on orientation and mech. props. (*Russian*) 2-36883  
 polyacetylene, I and AsF<sub>5</sub> doped, morphology, SEM study 2-45077  
 polyacetylene, I doped, three dimensional orientation, doping and isomerisation effects 2-45075  
 polyacetylene epitaxial layers, optical and elec. anisotropy 2-46598  
 polyacetylene film, epitaxial synthesis, shear flow method 2-45074  
 polyacetylene films, I doping profile, dielec. and X-ray anal. study 2-45239  
 polyacrylonitrile fibre, oxidatively stabilized, elec. cond. and ESR at high temp. 2-21584  
 polybutene-1 fibres, isotactic, hexagonal, polarised laser Raman spectra 2-22027  
 polyester fibres, modification of struct. by stretching and thermal treatment (*German*) 2-22287  
 polyethylene, ultrahigh strength fibres, crosslinking by  $\gamma$ -irrad. 2-31758  
 polyethylene fibrillar films, high mol. wt., effect of nitric acid and  $\gamma$ -rays on melting behaviour (*Japanese*) 2-30417  
 polymer fibre, solid, anisotropic, plastic deform. under discharge wave (*Russian*) 2-41670  
 polymer fibre formation, electrostatic fibre spinning from melts 2-9326  
 polymer fibres, electrostatic fibre spinning from melts, electrostatic deform. of pendant drop of melt 2-9328  
 polymer fibres, electrostatic fibres spinning from polymer melts, flow field in electrically driven jet 2-9327  
 polymer fibrils, fracture kinetics 2-35585  
 polymer melt spinning, interactive computer simulation program 2-46996  
 polypropylene hard fibres, straining mechanisms by broad line NMR meas. 2-31297  
 quartz, Al coated, creeping wave radiation on micrometer size conducting fibres 2-4451  
 quartz fibres, netting, tensiometric study 2-12884  
 refractory ceramic fibres, fire resist. props. prod. (*Czech*) 2-2484  
 single fibre identification by X-ray powder diffr. for forensic anal. 2-40225  
 single fibre light scatt. matrix, expt. determ. 2-24933  
 thin fibres, Rayleigh and Raman scatt. 2-24938  
 $\alpha$ -Al<sub>2</sub>O<sub>3</sub>, prod. by anodising Al wire 2-27124  
 Cem-Fil fibres, chemical durability 2-22356  
 Mo-Zr-Nb-C, struct. and props. for reinforcing composite materials 2-36886  
 Ni-Cr(Mo) and Ni-Cr-Mo fibres, corrosion and oxidation resist., prod. and strength props. 2-41550  
 Pt fibres, netting, tensiometric study 2-12884  
 ZrO<sub>2</sub> fibres, from extrusion of solns., cryst. struct. form. 2-41574
- field, crystal internal** see crystal field interactions
- field effect devices**  
 see also field effect integrated circuits; field effect transistors; metal-insulator-semiconductor devices  
 ion-controlled diodes for down-borehole operation, temp. depend. of gate-controlled portion 2-37986  
 MOS-oxide charge induced junction solar cells 2-27620  
 Te<sub>39</sub>As<sub>30</sub>Si<sub>17</sub>Ge<sub>2</sub>P, glass, field effect meas. 2-40916
- field effect integrated circuits**  
 see also charge-coupled device circuits  
 CMOS, in photographic process timer using scale division and process cards 2-3639  
 ionising radiation detector fabricated using MOS processing techniques 2-49230  
 light intensity-to-frequency converter, for incorporation into MOS circuits 2-33638  
 MOS device for AC meas. of surface impedance for moisture meas. 2-33507  
 MOS ionisation dosimetry device fabrication and testing 2-29436  
 MOS self aligned contact technology using N<sub>2</sub><sup>+</sup> ion implantation 2-50676  
 NMOS linear photodiode arrays, for autofocus system for lens shutter cameras 2-33674  
 GaAs substrate with GaAlAs multi-layer slab waveguide growth for integrated optics appls. 2-11868  
 SiO<sub>2</sub>/N dielectric films, Mrad electron irradi. tolerance, for IGFETs 2-45275  
 WSi<sub>2</sub>-Si<sub>3</sub>P annealing behaviour, effect on MOSFET IC device fabrication 2-8720
- field effect transistor circuits**  
 Used for general papers and papers where the use of field effect transistors is significant  
 heavy nuclei fission expts. automation with TPA-i1001 minicomputer 2-7445  
 Robinson-type nuclear quadrupole resonance spectrometer adapted to field-effect transistors 2-48739  
 UHF ultra-low noise cryogenic FET preamplifier 2-33541  
 GaAs FET amplifier, for UHF SQUID magnetometer, at 4.2K 2-19140
- field effect transistors**  
 see also field effect integrated circuits; insulated gate field effect transistors; junction gate field effect transistors; Schottky gate field effect transistors  
 ballistic transport obs. by noise meas. 2-51249  
 charge centroid determination in field-effect experiments 2-43048  
 digital wrist-watches performance improvement by using 4.2 MHz quartz oscillator 2-48677  
 MBE technology, review 2-27090  
 GaAs FET, short-gate, ballistic transport 2-51185



**field effect transistors continued**

- GaAs, single step selective implantation technology using proximity annealing, 10 GHz FET fabrication 2-16666  
 $\text{In}_{0.53}\text{Ga}_{0.47}\text{As}$ -InP FET, short-gate, ballistic transport 2-51185  
 InP, low-noise capless annealing, 2-2531  
 $\text{PbTiO}_3$  ferroelectric thin film, prep. by sputtering and laser annealing, device appls. 2-2199  
 a-Si, field effect and substitutional doping 2-45226

**field emission, electron** *see electron field emission***field emission, ion** *see field ion emission***field emission electron microscopes**

- see also field emission electron microscopy*  
 electric field distrib. within field emission systems, numerical and expt. study 2-48841  
 gun EM-400T, performance 2-23779  
 mechanical scanning microscope 2-48839  
 scanning Auger electron microscope equipped with field emission gun, development 2-33686  
 SEM, field emission, optical parameters of accelerating gap 2-38719  
 STEM, field-emitted electrons, energy spread influence on resolu. 2-23786

**field emission electron microscopy**

- see also field emission electron microscopes*  
 STEM, field-emitted electrons, energy spread influence on resolu. 2-23786  
 BaO film, nucleation depend. on crystallographic orientation of substrate 2-51035  
 W, adsorbed Ba and BaO layers, field emission spectroscopy study 2-17609  
 W, adsorbed Be, field emission spectroscopy study 2-9254  
 W, surface diffusion of adsorbed Pb, field electron microscopy study 2-16954  
 W, surface diffusion of Pb adatoms, effect of coadsorbed C 2-16955

**field emission ion microscopes**

- see also field emission ion microscopy*  
 electric field distrib. within field emission systems, numerical and expt. study 2-48841  
 image brightness and ion neutralisation efficiency of field ion microscope with accelerated ion source 2-43140

**field emission ion microscopy**

- see also atom probe field ion microscopy; field emission ion microscopes*  
 adatom-adatom pair energy meas. on W(110) plane 2-12910  
 $\text{Fe}_{90}\text{B}_{10}$ , amorphous, annealing behaviour on continuous heating 2-17690  
 Mo, surface imaging by pulsed laser stimulated field desorption of field adsorbed atoms 2-2421  
 $\text{Ni}_4\text{Mo}$ , quenched and annealed, thermal faceting, FIM obs. 2-25798  
 Pt, surface imaging by pulsed laser stimulated field desorption of field adsorbed atoms 2-2421  
 Pt-Co,  $\text{L}_{10}$  struct., defects atomic struct., FIM study (*Russian*) 2-12583  
 Pt-Ir,  $\text{L}_{10}$  struct., defects atomic struct., FIM study (*Russian*) 2-12583  
 radiation damage due to  $^{252}\text{Cf}$  fission fragments, FEM study 2-8548  
 Ti/W interface, surface free energy, field ion microscopy study 2-45695  
 W (110), adsorbed overlayers of Pt, Pd, Ir and Si, FIM study 2-1742  
 W microcrystals, strength determ. 2-40480

**field evaporation**

- chemical thermodynamic derivation of crit. field strength 2-51773  
 Au liquid-metal ion sources, field evaporation and ionisation, optical emission probe of neutral atoms 2-51707  
 Ga liquid-metal ion sources, field evaporation and ionisation, optical emission probe of neutral atoms 2-51707  
 Ge surface, adsorbed K(Na), work function, field desorpt. and theoretical study 2-46103  
 Rh, field evaporation, post-field ionisation, expt. and WKB calc. 2-46883  
 Rh, surface distrib. of field adsorbed H, imaging atom-probe study 2-8711  
 W ions, field-evaporated, multiple post-ionisation 2-2420

**field intensity patterns (antenna)** *see antenna radiation patterns***field interactions (condensed matter)**

- see also crystal field interactions; hyperfine field interactions (condensed matter)*  
 Bloch electrons dynamics in external elec. field, bounds for interband transitions 2-1807  
 glass: $\text{Mn}^{2+}$ , 3d level struct., luminesc. excitation spectra obs. 2-9192  
 glasses, V contribution in view of ligand field theory 2-40856  
 oxide glasses, coordination of  $\text{Fe}^{3+}$  and  $\text{Mn}^{2+}$  ions, model calcs. 2-2127  
 $\text{PbO-SiO}_2$  (61.8 mol.%) glass, first row transition element impurities, optical and mag. props. 2-41383

**field ion emission**

- curvature of Nordheim lines 2-41502  
 high vacuum accelerator tubes, prebreakdown and breakdown processes, review 2-11310  
 liquid metal field-emission ion sources 2-578  
 point electron and ion source optics, numerical anal. method 2-51774  
 Au, liquid, rapidly frozen, ion sources, droplet emission, SEM obs. 2-36767  
 Ga, liquid, ion source, droplet emission, Rutherford backscatt. spectrometry 2-36767  
 $\text{Ga}^+$  liquid-metal ion source extraction region, trajectory calcs. 2-51775  
 In, liquid, ion sources, droplet emission, TEM 2-36767

**field ion microscopy, atom-probe** *see atom probe field ion microscopy***field ionisation**

- plasma sheath, glow transition 2-20952  
 wave mechanical theory, field ion energy distrib. 2-31608  
 Au liquid-metal ion sources, field evaporation and ionisation, optical emission probe of neutral atoms 2-51707  
 Cs, electric field ionisation, spin-orbit effect 2-34330  
 Ga liquid-metal ion sources, field evaporation and ionisation, optical emission probe of neutral atoms 2-51707  
 Rb, electric field ionisation, spin-orbit effect 2-34330  
 Rh, field evaporation, post-field ionisation, expt. and WKB calc. 2-46883  
 Rh, surface distrib. of field adsorbed H, imaging atom-probe study 2-8711  
 W ions, field-evaporated, multiple post-ionisation 2-2420

**field measurement, electric** *see electric field measurement***field measurement, magnetic** *see magnetic field measurement***field plotting**

- see also field strength measurement*  
 magnet computations, recent development, review 2-4438  
 particle spectrometer magnet, mag. field mapping, search coil method 2-19137

**field strength measurement**

- see also electric field measurement; magnetic field measurement*  
 No entries

**field theories, unified** *see unified field theories***field theory, classical** *see classical field theory***field theory, crystal** *see crystal field interactions***field theory, electromagnetic** *see electromagnetic field theory***field theory, meson** *see meson field theory***field theory, quantum** *see quantum field theory***fields, electric** *see electric fields***fields, magnetic** *see magnetic fields***filament lamps**

- W, heterogeneous reactions and chemical transport 2-2728

**file management** *see file organisation***file organisation**

- see also data handling; data structures; database management systems*  
 German Geodetic Research Inst. database 2-52712  
 microcomputer, CAVIAR, address space expansion by memory mapping 2-24559

**filled polymers**

- acrylic acid-polypropylene copolymer, mica and glass flake filled, tensile stress strain curves (*Japanese*) 2-31754  
 conductive, prep. of cost-effective materials 2-31677  
 elastomer, filled, in vac. environments, long-time stress relax. 2-41663  
 epoxy, Ag filled, conductive paste, morphology and corrosion resist. 2-13832  
 ethylene-vinylacetate copolymer, C loaded, resist. and positive temp. coeff. of resist., correl. with C black parameters 2-46084  
 fibre filled, heat transfer at low temps. 2-35755  
 fillers props. influence 2-5057  
 heteroorganoplast composites, prep., mech. and elec. props. 2-36836  
 highly-filled, method for describing deform. and strength props. 2-22276  
 linear, relax. spectra and mech. props. (*German*) 2-47110  
 Nylon 6, mica and glass flake filled, tensile stress strain curves (*Japanese*) 2-31754  
 nylon 6/LiCl mixtures, spun fibres, production and props. 2-46999  
 organic fibre reinforced polymers, tensile failure in reinforcement direction 2-36961  
 plastics, flake-filled, flexural modulus (*Japanese*) 2-5911  
 polyethylene, chalk filled, creep under complex loading with elongation and torsion 2-22277  
 polypropylene, flexibility without loss of dims. stability, heat distortion or tensile modulus 2-31756  
 polypropylene, mica, and glass flake filled, tensile stress strain curves (*Japanese*) 2-31754  
 polypropylene filled ethylene-propylene-ethylidene norbornene rubber, props. 2-47149  
 polystyrene, rubber filled, reinforcement mechanism 2-47001  
 polyvinyl butyral, filled, thermal cond. of interface (*Russian*) 2-21407  
 PVC, filled, thermal cond. of interface (*Russian*) 2-21407  
 PVC filled compositions, struct. by electron microscopy (*Russian*) 2-21046  
 PVC filled with ground glass and glass fibre powders, dynamic mech. props. (*Japanese*) 2-31721  
 PVC rubber modified melt, rheology 2-25342  
 quartz filled bisphenol epoxy HV DC insulation, effects of quartz fillers 2-8671  
 reinforced plastics, damage accumulation, thermodynamic quantities transfer processes 2-41703  
 reinforced plastics, deform. study, damage susceptibility 2-41702  
 rubber, aerosil filled, dielec. relax. mol. mobility, strain effects (*Russian*) 2-46474  
 rubber, clay-based reinforcing filler 2-47004  
 rubber, fillers choice 2-47003  
 rubber, polystyrene filled, reinforcement mechanism 2-47001  
 rubber, SiO filled, prep. and props. 2-47005  
 rubber-colloid particle reinforced effect 2-17660  
 stability of shells, struct. features effect 2-20567  
 styrene-acrylonitrile rubber modified melt, rheology 2-25342  
 Teflon impregnated with  $\text{Fe}_2\text{O}_3$  particles, obs. by TEM of particle size 2-36838  
 temperature stresses in thick-walled orthotropic cylinders on nonuniform cooling 2-20541  
 thermally active fillers, heat transfer, mathematical modeling 2-12007  
 viscoelasticity of polymeric composites containing dispersed and fibrous fillers 2-36896  
 wound, simulation of conditions giving processing defects 2-36835

**films**

- see also adsorbed layers; coatings; foils; helium films; Langmuir films; liquid films; monolayers; optical films; polymer films; replicas; thick films; thin films*  
 No entries

**filtering and prediction theory**

- see also information theory; Kalman filters; random processes; Walsh functions*  
 acoustic noise signals, adaptive cancellation technique in form of optimal filtering, machine condition monitoring, spectral analyses 2-11886  
 atmosphere pressure field, eigenvector filtering of three-dimensional data 2-14554  
 Bouguer gravity, anomaly, orientation independent filtering 2-32387  
 computer generated double phase holograms, image deblurring appl. 2-44223  
 defect charact., adaptive filtering appl. 2-17818  
 diffuser performance prediction, set of correlations 2-30258  
 evoked potential research, appls. of filtering and pattern recognition in signal processing 2-37719  
 evoked potentials, averaged, a posteriori time varying filtering 2-14179  
 evoked potentials, averaged, a posteriori time varying filtering 2-14180  
 hydrological records analysis 2-28118  
 linear prediction applied to medical signals 2-27921



**filtering and prediction theory continued**

- observer discrimination of images against a uniform background of noise (*Russian*) 2-2871
- seismology, appl. of reverse filtering for processing seismograms of industrial explosions 2-52744
- sonar, coherent frequency-bearing tracker based on Kalman filter theory 2-44538
- sonar data analysis, filtering techniques 2-29937
- visual prosthesis, image processing algorithms 2-22861

**filters**

- see also active filters; band-pass filters; crystal filters; digital filters; high-pass filters; Kalman filters; low-pass filters; microwave filters; notch filters; optical filters; passive filters; spatial filters*
- adaptive filters, appl. to cardiology, review 2-6276
- linear filters, Grassmann manifold-based theory 2-23503
- micropower filter for rejection of monophasic and biphasic artefact and noise 2-2965
- Sc filtered neutron beam using separated isotopes as secondary filter 2-15647

**filters, optical *see optical filters*****filtration**

- biospecific ultrafiltration for protein purification 2-41938
- cellulose acetate, ultrafiltration membrane, NMR and birefringence 2-47372
- cellulose nitrate-poly(vinyl pyrrolidone) blend membranes, ultrafiltration and dialysis charact. 2-14005
- channel with porous layer, heat transfer during liq. filtration 2-30135
- convective heat and mass transfer from objects immersed in filtering granular bed 2-35210
- gas flow through porous medium with turbulent filtration 2-8220
- glass membrane, finely porous, water filtration 2-17915
- groundwater, dissolved salts, convective diffusion during filtration into drainage (*Russian*) 2-32138
- industrial pollution control by ultrafiltration of wastewater 2-47538
- isothermal nonlinear anisotropic filtration, boundary-value problems 2-20749
- macromolecules, ultrafiltration through membrane, reflection coeffs., config. effects 2-17917
- magnetic filtration of reactor low-concentration-chelant decontamination solutions 2-7182
- magnetic filtration of reactor low-concentration-chelant decontamination solutions 2-19625
- membrane separation processes, descriptions appl. 2-17921
- membranes, ultrafiltration, surface pore characts. rel. to flux 2-41933
- metallic particle transport in plasma emission and atomic absorption spectrometry 2-9578
- nitrocellulose, ultrafiltration membrane, NMR and birefringence 2-47372
- polymer latex suspension, ultrafiltration, in unstirred batch cell 2-20736
- porous media, and partially saturated flow equations, filtration theory problems 2-12206
- Pozzi-Friedman problems, boundary variation method 2-20748
- spheres, piecewise similar, numerical soln. of problems of filtration and heat conductivity (*Russian*) 2-12210
- stationary fresh-water lens, boundary variation method 2-44783
- water, sat. vapour in disperse medium, nonsteady filtration 2-25437
- Fe, high-porosity, props. 2-17646
- Ni, high-porosity, props. 2-17646
- Ni-Cr (20 wt.%), high-porosity, props. 2-17646

**FIM, atom-probe *see atom probe field ion microscopy*****fine structure, atomic *see atomic fine structure*****fine structure, molecular *see molecular fine structure*****finite element analysis**

- acoustic wave duct transmission studies, finite element anal., utility of wave envelope approach 2-7936
- alternating magnetic field distribution calc. method, computer program TDEDDY appl. (*Korean*) 2-49626
- angle-ply laminate holes, stress analysis 2-50173
- application in radiation physics, seminar, London, England (April 1981) 2-48386
- asymptotic postbuckling stresses determ. 2-50138
- axisymmetric flow, rear sphere in spheric cavity (*French*) 2-39880
- beams, composite, vibration-damped 2-1137
- boundary layer flow, turbulent, finite element algorithm accuracy and convergence 2-12131
- BWR piping systems, residual stresses, weld parameter effects, evaluation by finite element analysis 2-24338
- cable reinforced membranes, CAD 2-20527
- cantilever plates, rotating, pre-twisted and tapered, low aspect ratio, vibration anal., finite element method 2-12067
- charged cloud emerging from vent stack, electrostatic field 2-20230
- coarse-mesh transport computations, finite element approach 2-49094
- code FENDER for diffusion eqn. soln. in shield design appl. 2-49186
- compact tension specimen, local stress intensity factor distrib., 3D finite element anal. 2-44683
- composite beams, elastic plastic anal. 2-39820
- composite laminates, stress anal., finite element method 2-42860
- composites, layered and fibre-reinforced, finite element analysis of harmonic waves 2-1134
- concrete structure, viscoelastic and thermal behaviour with reference to containment vessel 2-4730
- concrete structures stress, force method 2-50106
- continua, rigid-perfectly plastic, limit anal., mixed formulation and mixed finite elements 2-50081
- convective diffusion problems, boundary layer refinements 2-50259
- cord-rubber composites, mech. props. 2-47147
- crack problems, polynomial finite element accuracy 2-39860
- crack propagation, stress waves study by finite element method 2-1149
- crack tip elements, use of quadratic and cubic transition elements 2-1145
- cracks, stationary and extending, relationship between J-integral and crack opening displacement 2-30066
- creep analysis, nonlinear, using finite element equilib. anal. and mean value of equiv. shear modulus 2-4733
- curved finite elements, boundary value problems 2-18902
- cylinder, viscoplastic, thick-walled, quenching, coupled thermoviscoplastic problems, integrated finite-element anal. 2-30041
- cylindrical tank with tangential outlet, stressed state (*Russian*) 2-8038
- deformable arbitrary shaped body, resonant oscils. by finite element methods, considering imperfect elasticity 2-30057
- diffraction problems in unbounded domains, finite element soln. 2-25346
- discrete coordinates, orthogonalization method 2-3367

**finite element analysis continued**

- double chord RHS T joints modelling 2-50108
- drilling freedom problem finite element formulation 2-50110
- duct bends, acoustic characts. for higher order modes, geometry effect 2-16160
- ductile crack, in plain strain large-scale yielding, virtual initiation anal. 2-25299
- ductile materials, plane strain crack growth, viability of crack tip opening angle as characterising parameter 2-8087
- dynamic models of tidal estuaries 2-37155
- Earth long-term surface deformation, finite element modelling of pre-seismic fault slip process 2-32447
- earthquake fault displacement, finite element description 2-28011
- eddy-current problems in non-mag. non-moving conductors, numerical anal. 2-11616
- elastic porous media, diffusion process anal. using semi-analytical finite element scheme 2-20745
- elastic system under nonconservative loading, dynamic problems, nonlinear finite element analysis 2-35071
- elastic tubes, curved, simulating the aortic arch, clinical implications of press.-deform. anal. 2-47618
- elastic-plastic crack problems, three-dimensional finite element anal. 2-20611
- elastic-plastic problems solution, existence and uniqueness, convergence of approx. solutions (*Chinese*) 2-28653
- elastica-finite element computation, stability and equilib. 2-10615
- elasticity plane problem, finite element anal. via boundary conditions relax. (*Chinese*) 2-4714
- elasto-dynamic contact problem anal. by finite element methods 2-4774
- elasto-plastic analysis, finite element formulation based on Nadai's deform. theory 2-39827
- elastodynamics, time-harmonic, infinite domains, transmitting boundaries 2-23445
- elastoplasticity, large deformation finite element anal., perturbation approach 2-30017
- elastostatics, finite element, Loubignac's iterative method 2-42861
- electric field distrib. within field emission systems, numerical and expt. study 2-48841
- electron optics, rotationally symmetric systems, analytical pot. calc. strategy 2-44185
- EM field computation by finite-element parallel processor 2-24917
- engineering acoustics, finite element method applns. 2-29928
- engineering structures, effective finite element anal. in nonlinear range 2-16230
- fabrics, plain-weave, coated, deform. anal. by biaxial extension (*Japanese*) 2-21214
- far-field noise levels for source in a rectangular enclosure 2-16187
- fast power reactor, finite difference and finite element theories comparison 2-49099
- femoral head, mech. behaviour in Legg-Perthes disease, 3D finite element model 2-14268
- field-reversed axisymmetric plasma, equilibria and MHD stability calc. 2-20836
- finite element computer model of the hole pressure problem 2-30260
- flow over cylinder calc. 2-16282
- fluid dynamics, computational, finite element tensor product algorithm 2-48
- fluid-solid interaction and fluid acoustical effects, piping system dynamics 2-11244
- fluid-structure impact, two-dimens., computations with regularisation 2-8096
- fluid-structure interaction in three-dimensional space, finite element formulation 2-19749
- forced vibr. anal. with reduced impedance method, analytical procedure 2-3393
- forced vibrational response integral equations model 2-10619
- frame, two-dimens., geom. nonlinear analysis, mixed-hybrid finite element model (*German*) 2-50079
- free edge interlaminar stress model 2-10603
- free particle, randomly accelerated, Petrov-Galerkin finite element soln., first passage probability, moments of first passage time 2-10711
- freezing and melting with convection, numerical anal. 2-29989
- frictionless contact problems, direct automated procedure 2-50197
- graphite under multiaxial loadings, incremental stress-strain law 2-15478
- greenhouse-type solar stills, numerical calc. of heat and mass transfer 2-47455
- groundwater flow, Darcian vel. and mass balance, finite element modelling 2-37918
- heat conduction, nonlinear finite element problem, direct implicit time integration 2-29987
- heat equation with random initial condition, finite element scheme stability anal. 2-25221
- heat transfer with phase changes, efficient algorithm for analysis 2-44637
- Helmholtz-type equations in unbounded regions, numerical methods 2-15076
- human body model for biomedical appls. 2-18167
- hydrodynamic journal bearings with non-Newtonian lubricants, finite element anal. 2-35092
- hysteresis loop modelling for finite element mag. field calc. 2-51437
- ice, vertical wall, melting into fresh water by free convection, finite difference calc. 2-4706
- incompressible flow, primitive variable finite element formulations, mixed interpolation 2-25348
- interfacial finite element and boundary element discretizations 2-23414
- intestinal contraction induced flow 2-6238
- ion extraction optics, slot end effect, finite-element code 2-11630
- jets, free round, numerical soln. using finite element method (*Polish*) 2-8200
- jointed beam system, stress propag., finite element theory 2-16252
- laminated anisotropic curved beam and shell stiffening finite element 2-50112
- laminated composite shell structures 2-20564
- laser DH diode, self-consistent static model 2-912
- light beam thermal self-defocusing, amplitude compensation, numerical expt. 2-20377
- linear elasticity, unilateral problems, penalty/finite element anal. 2-45
- magnetic fields, stationary, cylindrically-symmetrical, determ. by reduction to 2-D Cartesian field problem 2-34617
- magnetic fusion reactor, eddy current induced in thin structures, finite element anal. 2-24415



**finite element analysis** continued  
 magnetostatic Poisson's eqn., two-dimens., hybrid finite element-boundary integral soln. 2-29744  
 membrane approximation of the behaviour of the drop shaped tank under symmetrical loading 2-39819  
 memory fluids, steady flow solns., finite element method 2-12182  
 metals, coupled thermal flow, general formulation using finite elements 2-22249  
 metals, FCC, mech. behaviour in plastic deform. 2-2558  
 monoenergetic diffusion eqn., finite element method appl. 2-49089  
 Monte Carlo code for generalised geometry problems by tracking in finite element mesh 2-49096  
 Mooney-Rivlin materials, finite incompressible elasticity problems, asymmetric simplicial finite element method solns. 2-10614  
 multi-span heat exchanger tubes, tube-support interaction, analytical and expt. studies 2-4003  
 multidimensional combustor flow, anal. algorithm 2-8247  
 multigroup diffusion-transport problems in two dimensions, finite element method 2-49095  
 multigroup neutron transport eqn., finite elements and discrete ordinate methods comparison 2-49097  
 Naghdi-Reissner model for bending plates (*French*) 2-18901  
 Navier equation, least squares finite element approximation 2-6745  
 Navier-Stokes equation solution finite element method solution 2-35106  
 neutron transport ang. depend. in finite element calcs. 2-49098  
 neutron transport eqn., phase-space finite element methods appl. to first-order form 2-49090  
 neutron transport theory, finite-difference method loops, internal materials problems (*German*) 2-445  
 Newtonian liquids, heat transfer in die swell 2-16223  
 non-prismatic three-dimensional beam elasticity model 2-12025  
 nonaxisymmetric vibrations, use of basic element matrices 2-20577  
 nonlinear multispecies Fokker-Planck calc. program, FPPAC, finite difference method 2-16427  
 nonlinear three dimensional magnetic vector potential finite element solution of field problems including experimental verification 2-29755  
 nonstationary thermal self-action 2-20378  
 nuclear power plant struct., dynamic characts. and seismic response, math. modelling 2-34172  
 nuclear power plants under seismic loads, dynamic anal. with finite elements 2-11247  
 on the stress trajectories of membrane forces in cracked reinforced concrete slabs 2-12084  
 one-dimensional convection-diffusion problems, finite element singular perturbation method 2-12154  
 one-dimensional phase change, heat transfer, finite element anal. 2-29991  
 optical fibres, single-mode, stress analysis finite element method 2-7870  
 optimal Petrov-Galerkin methods through approximate symmetrization 2-48646  
 particle transport, finite element method 2-49087  
 PDE solution 2-35107  
 perforated component acoustic systems, noise control analysis 2-44569  
 permanent magnet motor numerical magnetic field anal. using finite elements 2-39527  
 plane bodies with crack in elastic, elastic-plastic regions, finite element anal. 2-39862  
 plane elasticity problems, finite element method using complementary energy theorem 2-50093  
 plane problem of elasticity, soln. using one version of finite-element method 2-44654  
 plane specimens and cylindrical shells under large-scale yielding, finite element fracture analysis 2-39859  
 plastic continuum, collapse state computation, limit anal., mixed finite element approx. 2-18897  
 plate, circular equilibrium and stability, nonlinear finite element computation 2-1131  
 plate, finite, circular cavities, two-dimens. transient hygrothermal stresses, moisture and temp. coupling effects 2-30510  
 plate, rectangular, inelastic dynamic response, finite element anal. 2-12080  
 plate bending element 2-50109  
 plate bending finite element formulation 2-18891  
 plate finite elements based on Mindlin theory, four-node bilinear isoparametric element 2-50085  
 plate with through flaw, bending, hybrid stress finite element anal. 2-50118  
 plates, elastic-plastic anal. by hybrid-stress model and initial-stress approach 2-39804  
 plates, thin, nonlinear anal. by finite element method 2-4721  
 plates and shells, stress conc. at sites of axisymm. thinnings, numerical investigation 2-50097  
 point electron and ion source optics, numerical anal. method 2-51774  
 poroelastic dry body, fluid in filtration, rigid skeleton model 2-12217  
 proximal respiratory airways, finite element simulation of gas transport 2-37615  
 pulsatile flow in flexible tubes, indirect evaluation of system parameters 2-8233  
 PVC film, plasticized uniaxially stretched, deform. anal. during re-drawing (*Japanese*) 2-21213  
 quartz, ferroelastic switching, effect on piezoelec. elements, stress distrib. anal. 2-36531  
 radiation-shielding problems, finite element method appl. 2-49185  
 reactor calcs., stationary and transient neutron diffusion eqns. 2-49088  
 reduced Fokker-Planck eqn., finite element soln. 2-20889  
 ring stiffened shells of revolution, stability analysis 2-39821  
 ring-shaped elastic elements, load-cell-design developments by numerical and expt. methods 2-50090  
 rod, in steady state and under vibr., optimum three-dimens. reinforcement, finite elements of Timoshenko beam 2-20601  
 rod system with Coulomb friction at discontinuity surface, vibr. anal. (*Polish*) 2-8078  
 rolling contact finite element model 2-12103  
 round bars, fatigue cracking, stress intensity factors 2-8091  
 rubber parts, finite element stress anal. 2-47296  
 sandwich plate building by finite layer method 2-50137  
 saturable mag. field problems, eddy currents, finite element and permeability function anal. 2-49625  
 semielliptical cracks, along the bore of a hole, crack face pressure 2-4766  
 shafts, prismatic, inelastic torsion, boundary element and finite element method comparison 2-20554

**finite element analysis** continued  
 shell elastic cylindrical, with compartments partially filled with fluid, transverse oscils. 2-25293  
 shells, cylindrical, laminated, composite, thermoelasticity 2-30021  
 shells, finite element analysis, numerical integration effects 2-25239  
 shells, laminated anisotropic cylindrical, finite element model for through cracks anal. 2-4761  
 shells, thin, geometrically nonlinear behaviour, mixed finite elements based on Marguerre theory 2-30004  
 shells, two-dimens., nonlinear finite element anal. 2-4716  
 shells of revolution, nonlinear, finite element models 2-44648  
 shells of rotation, rigidity matrix, anal. by finite element method (*Russian*) 2-30018  
 shells with large displacements including material nonlinearities, finite element formulation 2-8053  
 Signorini problem in elastostatics, interior penalty methods for finite element approx. finite element analysis boundary-value problems elasticity 2-18892  
 skeletal frames, large displacement analysis 2-20521  
 skin-stringer structure, singly curved, finite strip vibr. anal. 2-25291  
 slot coating flow, finite element method 2-8252  
 solar absorber-convertors, laminar heat transfer characts. in triangular passages, Nusselt number determ. 2-2808  
 solar panels load losses, analogical study (*Italian*) 2-37222  
 solid, two-dimens., fast stiffness formulation for finite element analysis 2-1122  
 solids, high velocity deformation, micromechanical study 2-21220  
 stable crack extension, with nonlinear fracture criterion, finite element simulation 2-30069  
 stationary crack, bending stress distrib. at tip from Reissner's theory 2-25304  
 steel, low alloy, plate, surface fatigue crack growth 2-9395  
 steel plates, ferromagnetic, Fe losses, hysteresis and eddy currents 2-51442  
 steels, quenching and tempering, transform. kinetics, heat cond. and elastic-plastic stress 2-31711  
 stress analysis, in 2D, mapping finite element method 2-4720  
 stress analysis of adhesive joint by finite element methods (*Japanese*) 2-6014  
 stress elements, hybrid, plane isoparametric invariance and optimal sampling 2-20537  
 structural confinement and safety design of a fast reactor core 2-29316  
 structural continua, minimum weight design, finite element method 2-20520  
 structural dynamics matrix model 2-10613  
 structural materials, stress state kinetics near stress raisers under high-temp. creep conditions 2-41705  
 structures, thin, elastic postbuckling behaviour, asymptotic study, finite element method 2-30048  
 superalloys crystals, directional solidification, iterative nonlinear thermal anal. using fast elliptic solver 2-2505  
 surface-cracked plates and shells, elastic-plastic fracture mechanics parameters 2-20560  
 tetrahedral finite element matrix primitives, calc. program 2-23416  
 thick and thin sectorial plate, elasticity calc. model 2-10609  
 thin rim spur gears, stress analysis, finite element method 2-20604  
 thin shell stress anal. partial differential equations model 2-10605  
 thoracic spinal cord, human, finite element modelling of pois. due to elec. stimulation 2-18194  
 three-coil superconducting partial torus, finite element analysis of magnetoelastic buckling and expts. 2-15634  
 transport eqns. in slab geometry, unified formalism for spatial discretisation schemes 2-49093  
 TREAT Mk III coolant loop, thermoelastoplastic stress anal., finite-element calc. 2-7280  
 turbine generator rotors, heat flow, finite element anal. 2-25229  
 two-dimensional convection-diffusion problems, finite-element singular perturbation method 2-12155  
 two-dimensional transport calcs., Lagrangian mesh finite elements encoded in ZEPHYR 2-49092  
 two-dimensional wave eqn., dispersion analysis of finite element semidiscretizations 2-42867  
 unified numerical approach for thermal stress waves 2-50087  
 US transducers, piezoelectric circular rod, axisymmetric vibrations, finite element anal. (*Japanese*) 2-25220  
 viscous flow computations, convergence accel. 2-15037  
 viscous flow sintering kinetics, dynamic computer simulation 2-8057  
 waffle slab analysis, macroelement 2-50107  
 wave diffraction and radiation, two-dimens. problems, comparison of localised finite element methods 2-57  
 weather prediction, nonlinear computational instabilities (*Chinese*) 2-10109  
 wood plates loaded holes stress finite element anal. 2-12038  
 wound closing, determ. of forces and stresses 2-27820  
 Al/NbTi-Cu composite conductor, nonlinear stresses and relative displacements, finite element model 2-13789  
 H, confined atom, Stark effect, finite element anal. 2-24643  
 H+H<sup>+</sup>(C<sup>6+</sup>), charge transfer and ionisation cross sections, quantal study, finite-elemental 2-39485  
 Ni<sub>2</sub>Al<sub>3</sub>, multiphase layer growth, math. modelling of diffusion 2-8677  
 O<sub>2</sub> transport near tissue surface, effect of surface O<sub>2</sub> tension 2-32244  
 Si, impurity levels, impurity pair effects, 2-D finite element analysis 2-51114  
 UO<sub>2</sub>-PuO<sub>2</sub> mixed oxide fuels pellets, PuO<sub>2</sub> microheterogeneities limiting sizes specification 2-4004  
<sup>235</sup>U(n,f) ternary fission,  $\alpha$ -particle wavepacket description, finite element anal. 2-3968

**Finlay-Freundlich red-shift hypothesis** see *gravitational red shift*

**fireproofing** see *flameproofing*

**fires**

see also *accidents; combustion; flames; safety*  
 forest fires in California, optimum conditions 2-28162

**fission**

see also *fission of plutonium; fission of uranium; photofission; spontaneous fission*  
 asymmetric dinuclear systems with high ang. momentum, stability, decay, fission 2-3972  
 beta-delayed fission and beta strength function calc. 2-19495  
 book, nuclear fission and neutron induced cross sections 2-23393



## fission continued

- cryogenic ionization chamber for high-resolution fission cross-section measurements 2-19846  
 data guide for reactor neutron metrology, activation and fission reactions 2-14988  
 delayed fission review, K-capture  $\beta^-$ -decay, nucleosynthesis (Russian) 2-29300  
 delayed neutron yields from ENDF/B-V data 2-391  
 dissipative process, dynamics and equilibration description 2-7084  
 ENDF/B-V actinide and fission product decay power 2-15449  
 fissile elements, nucleon and pion collisions, particle prod., intranuclear cascade-evaporation model 2-7090  
 fission barriers, ground state masses, particle separation energies 2-29250  
 fissioning nuclei, intrinsic excitation, quantum mechanical description 2-49065  
 fragment relative muon capture probabilities in four-state basis after muon-induced fission 2-24182  
 heavy ion fission fragments mass distrib. within dynamical treatment 2-39079  
 heavy ion fusion-fission, adiabatic and sudden interaction pots., asymmetric target-projectile combinations 2-24255  
 liquid drop model deformation shape, singularity classification 2-43513  
 microscopic description, collective dynamics, scission process (French) 2-43473  
 microscopic description 2-24222  
 neutron spectra, determ. methods, neutron cross-section library, SAIPS (Russian) 2-34090  
 nuclear level density and mass distrib. of fission fragments 2-34096  
 primary fission yield estimation using the unchanged charge distribution concept 2-15401  
 prompt fission neutron spectra calc. 2-388  
 radioisotopes, energy releases during fission 2-24336  
 superheavy nuclei in neutron stars, fission as source of gamma-ray bursts 2-42706  
 yield meas. with combined GJRT-SISAK technique, continuous on-line method 2-477  
 (e,f), induced by radioactive decay 2-43509  
 (N,f), particle production spectra and multiplicities in intranuclear cascade evaporation model 2-385  
 (n, xn) and (n, xnf) cross sections on fissionable nuclei, 5-20 MeV, statistical theory (Russian) 2-3975  
<sup>241</sup>Am(n,f), A=241,243, fast integral cross sections 2-3927  
<sup>241</sup>Am(n,f), A=241,243, integral cross sections in fast critical assembly 2-3928  
<sup>241</sup>Am(n, X), thermal to 15 MeV, data evaluation 2-420  
<sup>241</sup>Am(n,f), Hauser-Feshbach first and second chance fission calcs. 2-386  
 Au(p,X), 1, 2.5, 24 GeV, <sup>38</sup>Ar and <sup>39</sup>Ar prod., cross section and thick target recoil props. 2-34037  
<sup>209</sup>Bi(<sup>14</sup>N,  $\alpha$ f), 115 MeV, preequil.  $\alpha$  emission, ang. momentum transfer and alignment 2-7117  
<sup>250</sup>Cf(n,f), fission product mass distributions 2-3967  
<sup>250</sup>Cf, fission, fragment mass and prompt n-emission as function of charge 2-3973  
<sup>252</sup>Cf(n,f), delayed neutron energy spectra, six-group representation 2-39012  
<sup>252</sup>Cf(n,f), fission study by a multiparam. system 2-19528  
<sup>252</sup>Cf(n,f),  $\bar{\nu}$  meas., parasitic absorption and leakage corrections for MnSO<sub>4</sub> bath 2-3982  
<sup>245</sup>Cm(n,f), 10<sup>-3</sup> eV to 10<sup>4</sup> eV cross sections 2-443  
<sup>248</sup>Cm(n,f), fission cross section meas. 2-15422  
<sup>170</sup>Er(<sup>30</sup>Si,X), evaporation residues from compound nucleus <sup>200</sup>Pb, fission-imposed limits to ang. momentum 2-43502  
 Fe(n,f), secondary neutron spectra in hybrid reactor 2-11163  
<sup>158</sup>Gd(<sup>12</sup>C,f), 192 MeV, fission at high ang. momentum, time scale, neutrons and fragments 2-11152  
<sup>150</sup>Nd(<sup>20</sup>Ne,f), 176, 239 MeV, fission at high ang. momentum, time scale, neutrons and fragments 2-11152  
<sup>237</sup>Np(e,f), 100-275 MeV, electro-fission cross section meas. (Russian) 2-43516  
<sup>237</sup>Np(n,f), 1-20 MeV, cross section meas. 2-3980  
<sup>237</sup>Np(n,f), 770 and 964 keV, absolute fast fission cross section 2-3981  
<sup>237</sup>Np(n,f), absolute cross sections, time correlated associated particle method 2-3983  
<sup>237</sup>Np(n,f), absolute cross sections time correlated associated particle method calcs. 2-3984  
<sup>237</sup>Np(n,f), delayed neutron energy spectra, six-group representation 2-39012  
<sup>237</sup>Np(n,f), integral cross sections in fast critical assembly 2-3928  
<sup>237</sup>Np(n,f), thermal neutron induced, fragments mass-energy correlation 2-3969  
<sup>238</sup>Np isobaric analogue resonance fission probability and width from <sup>238</sup>U(<sup>3</sup>He,tf) 2-7125  
<sup>231</sup>Pa(n,f), 0.1 to 12 MeV, cross section 2-442  
<sup>231</sup>Pa isobaric analogue resonance fission probability and width from <sup>232</sup>Th(<sup>4</sup>He,tf) 2-7125  
<sup>239</sup>Pu, effective multiplication factors and reaction rates calc. with fission spectra 2-3994  
<sup>187</sup>Ta(<sup>19</sup>F, X), evaporation residues from compound nucleus <sup>200</sup>Pb, fission-imposed limits to ang. momentum 2-43502  
<sup>230</sup>Th(n,f), A=230, 232, cross section relative to <sup>235</sup>U 2-440  
<sup>230</sup>Th(n,f), product mass distrib. 2-435  
<sup>230</sup>Th(n<sub>th</sub>,f), fission fragment energy correl. meas. 2-39077  
<sup>230</sup>Th(n,f), fission cross section near 715 keV 2-19583  
<sup>230</sup>Th, fission, fragment mass and prompt n-emission as function of charge 2-3973  
<sup>232</sup>Th, neutron cross section data evaluation 2-24317  
<sup>232</sup>Th(e,f), 100-275 MeV, electro-fission cross section meas. (Russian) 2-43516  
<sup>232</sup>Th(n,f), 14.8 MeV, target thickness effects 2-436  
<sup>232</sup>Th(n,f), cross section channel anal. 2-438  
<sup>232</sup>Th(n,f), effective neutron capture reson. integrals, multilevel effect 2-34092  
<sup>232</sup>Th(n,f), integral cross section meas. 2-439  
<sup>232</sup>Th(n,f), reactor induced, product mass distrib. 2-7123  
<sup>232</sup>Th(n,f) delayed neutron energy spectra, six-group representation 2-39012  
 Th(p,X), 1, 2.5, 24 GeV, <sup>38</sup>Ar and <sup>39</sup>Ar prod., cross section and thick target recoil props. 2-34037  
<sup>235</sup>U, A=235, 238, effective multiplication factors and reaction rates calc. with fission spectra 2-3994

## fission counters

- apatite, isothermal annealing, fission track retention in minerals 2-43706  
 BWR, neutron flux distrib. analyser, operational testing (German) 2-11235  
 fission track recorder techniques for fission rate measurements 2-613  
 gridded ionisation chamber, secondary scintillation study 2-39269  
 neutron multiplicity detector for spontaneous fission events 2-24491  
 parallel plate avalanche counter, fission fragments detection 2-19857  
 pebble-bed reactors, instrumentation to measure flux variations (German) 2-488  
 solid state track recorders, annealing phenomena 2-43701  
 spontaneously fissioning nuclides from heavy ion reactions, rotating wheel system for detection 2-599  
 thermal neutron fluence meter, glass microslide type 2-609  
 Si surface barrier detector, <sup>244</sup>Cm and <sup>252</sup>Cf spontaneous fission fragments pulse height spectra 2-15670  
<sup>235</sup>U mass meas. in large vol. multiplicated fission ionisation chamber 2-38938

## fission of plutonium

- neutron cross section data assessment using spectrum and reaction rate ratio meas. 2-39095  
<sup>239</sup>Pu(n,f), A=239, 242, absolute cross sections time correlated associated particle method calcs. 2-3984  
<sup>239</sup>Pu(n,f), A=239-241, delayed neutron energy spectra, six-group representation 2-39012  
<sup>239</sup>Pu(n,f) A=240, 241, cross section evaluation 2-437  
<sup>239</sup>Pu(n,f), integral cross sections in fast critical assembly 2-3928  
<sup>239</sup>Pu(n,f), thermal, fragment energy correlation meas., mass distrib. 2-34093  
<sup>239</sup>Pu, fission, fragment mass and prompt n-emission as function of charge 2-3973  
<sup>239</sup>Pu fission products beta-decay, antineutrino spectrum 2-38988  
<sup>239</sup>Pu(e,f), 100-275 MeV, electro-fission cross section meas. (Russian) 2-43516  
<sup>239</sup>Pu( $\gamma$ ,f), product yields 2-29302  
<sup>239</sup>Pu(n,f), absolute cross sections, time correlated associated particle method 2-3983  
<sup>239</sup>Pu(n,f), fractional independent yields of <sup>104.5</sup>Tc 2-3965  
<sup>239</sup>Pu(n,f), thermal neutron-induced fission, <sup>92</sup>Nb<sup>m</sup> independent yields 2-49086  
<sup>240</sup>Pu, microscopic description, scission process (French) 2-43473  
<sup>240</sup>Pu nuclear fission microscopic description 2-24222  
<sup>240</sup>Pu(n,f), 0.35-9.6 MeV, cross-section ratio to <sup>235</sup>U 2-7124  
<sup>240</sup>Pu(n,f), 10 keV to 10 MeV, fission cross section meas. 2-34091  
<sup>240</sup>Pu(n,f), thermal neutron induced, fragments mass-energy correlation 2-3970  
<sup>240</sup>Pu(n,f), fast integral cross sections 2-3927

## fission of uranium

- cold fission, pair breaking mech. 2-39075  
 intrinsic excitation of fissioning nuclei, quantum mechanical description 2-49065  
 neutron cross section data assessment using spectrum and reaction rate ratio meas. 2-39095  
<sup>235</sup>Pu(n,f), Hauser-Feshbach first and second chance fission calcs. 2-386  
<sup>235</sup>U, A=233, 235, 238, fission, fragment mass and prompt n-emission as function of charge 2-3973  
<sup>235</sup>U, A=235,238, natural, <sup>235</sup>U thermal neutron induced fission to <sup>238</sup>U spontaneous fission ratio 2-49110  
<sup>235</sup>U(e,f), A=233,235,236,238, 100-275 MeV, electro-fission cross section meas. (Russian) 2-43516  
<sup>235</sup>U(n,f), A=233, 235, thermal neutron-induced fission, <sup>92</sup>Nb<sup>m</sup> independent yields 2-49086  
<sup>235</sup>U(n,f), A=233-237, absolute cross sections time correlated associated particle method calcs. 2-3984  
<sup>235</sup>U(n,f), A=235, 238, absolute cross sections, time correlated associated particle method 2-3983  
<sup>235</sup>U(n,f), A=235, 238, independent yields of <sup>148</sup>Pm<sup>m-g</sup> and <sup>150</sup>Pm 2-3966  
<sup>235</sup>U(n,f), A=235-238, delayed neutron energy spectra, six-group representation 2-39012  
<sup>235</sup>U(n,f), thermal, A=232, 233, fragment energy correlations and mass distrib. 2-34094  
<sup>235</sup>U(n,f), fractional independent yields of <sup>141.2</sup>La 2-433  
<sup>235</sup>U(n<sub>th</sub>,f), <sup>234</sup>U cold fragmentation 2-19585  
<sup>235</sup>U, fission reactor fuel, control by nondestructive method using pulsed neutron source 2-15507  
<sup>235</sup>U(e,e,f), 10 to 34 MeV, electrofission cross section meas. 2-29299  
<sup>235</sup>U(n,f), 0.17-8.1 MeV, monoenergetic neutron-induced fission, mass distrib. study 2-34095  
<sup>235</sup>U(n,f), 0.2 to 1.2 MeV, absolute cross section meas. 2-3979  
<sup>235</sup>U(n,f), 14.1 MeV, fission cross section, time-correlated assoc.-particle technique 2-39076  
<sup>235</sup>U(n,f), chemical depend. of delayed neutron yield 2-3976  
<sup>235</sup>U(n,f), E>10 keV, implications for unified <sup>235</sup>U mass scale 2-441  
<sup>235</sup>U(n,f), fission study by a multiparam. system 2-19528  
<sup>235</sup>U(n,f), fractional independent yields of <sup>104.5</sup>Tc 2-3965  
<sup>235</sup>U(n,f), Hauser-Feshbach first and second chance fission calcs. 2-386  
<sup>235</sup>U(n,f), Rb, Sr, Cs, Ba fragment yields 2-43510  
<sup>235</sup>U(n,f), thermal neutrons, <sup>102</sup>Rh<sup>m</sup>, <sup>102</sup>Rh<sup>f</sup>, <sup>101</sup>Rh<sup>s</sup> yields 2-43512  
<sup>235</sup>U(n,f) 0.35-9.6 MeV, cross-section ratio to <sup>240</sup>Pu 2-7124  
<sup>235</sup>U(n,f) cross section measurements and normalization problems 2-3978  
<sup>235</sup>U(n,f) ternary fission,  $\alpha$ -particle wavepacket description 2-3968  
<sup>235</sup>U(n<sub>th</sub>,f), polar emission investigation 2-39078  
<sup>238</sup>U(<sup>16</sup>O,Nf), N=p or n, high energy noncompound p and n emission, coalescence model 2-11153  
<sup>238</sup>U(<sup>208</sup>Pb, f), fusion after instantaneous fission, superheavy elements prod. search 2-24272  
<sup>238</sup>U(<sup>4</sup>He, f), fission fragments ang. distrib., blocking effect (Russian) 2-3974  
<sup>238</sup>U( $\alpha$ , $\alpha$ f), 120 MeV, fission probab. in giant resonance region, recoil axis axial symmetry 2-43514  
<sup>238</sup>U( $\gamma$ ,f), fission product ang. distrib., anisotropy (Russian) 2-11154  
<sup>238</sup>U(n,f), effective neutron capture reson. integrals, multilevel effect 2-34092  
<sup>238</sup>U(n,f), secondary neutron spectra in hybrid reactor 2-11163  
<sup>238</sup>U(p,f), 15-600 MeV, <sup>24</sup>Na, <sup>28</sup>Mg prod. 2-43511  
 U(p,n), 0-1.5 GeV, incorporation in HETC transport code 2-7095

## fission products

- A=282-252, fission, fragment mass and prompt n-emission as function of charge 2-3973  
 abundances in breeder-reactor core 2-24342



**fission products continued**

- analytic impulse source functions, for reactor calcs. 2-39103  
 automated system for nuclear data measurements and optimization 2-4195  
 cold fission, pair breaking mech. 2-39075  
 continuous chem. separation methods for nuclei from beta-stability studies 2-19695  
 cumulative fast reactor fission yields 2-7325  
 data libraries for fast and light water reactors 2-15451  
 decay heat calcs. for  $\beta$  and  $\gamma$  energies 2-24288  
 detection,  $\text{SiO}_2$ , detector breakdown mechanism 2-19849  
 detection methods at CBNM 2-4178  
 ENDF/B fission product data 2-15450  
 ENDF/B-V actinide and fission product decay power 2-15449  
 FBR mixed oxide fuels, residue composition from decomposition (*German*) 2-11189  
 fragment relative muon capture probabilities in four-state basis after muon-induced fission 2-24182  
 fragments effective charge on stopping in  $\text{CO}_2$ ,  $\text{CF}_2\text{Cl}_2$ ,  $\text{CF}_4$  and  $\text{SF}_6$  2-15891  
 gas release model at high temps. 2-49117  
 heavy ion fission fragments mass distrib. within dynamical treatment 2-39079  
 heavy nuclei fission expts. automation with TPA-i1001 minicomputer 2-7445  
 HTGR fuel, thermally failed, fission product species release 2-7289  
 HTR with core heating, fission product return mechanism, safety study (*German*) 2-7318  
 insoluble, mag. susceptibility meas. 2-19688  
 irradiated nuclear fuel, safe storage of nuclear waste (*German*) 2-11196  
 isotope correlations, for reprocessing input verification 2-4050  
 kinetics, perturbation theory and sensitivity anal. 2-3999  
 liberation during long term wet storage of rad. waste (*German*) 2-34117  
 LMFBR, fission product release into primary system (*Japanese*) 2-39189  
 lumped fission product cross sections from ENDF/B-V for fast reactor analysis 2-15453  
 LWR beta-gamma ray decay heat from fission products, standards 2-4068  
 neutron cross sections, Japanese evaluation for fast reactors 2-15452  
 neutron spectrum regeneration from fission product formation 2-29307  
 neutron-rich rare-earth nuclei identification produced in spontaneous fission 2-15916  
 nuclear level density and mass distrib. of fission fragments 2-34096  
 parallel plate avalanche counter, fission fragments detection 2-19857  
 primary fission yield estimation using the unchanged charge distribution concept 2-15401  
 short-lived fission products, average beta-ray energies 2-38983  
 short-lived nuclei, nuclear data appl. 2-19586  
 spent fuel, fission gas meas., reactor-based technique 2-34150  
 transmutation with accelerator-produced protons, energetics 2-24295  
<sup>A</sup>Ag, A=116-121, fission product  $Q_\beta$  values 2-24103  
<sup>A</sup>Ba, A=143-149, yield meas. far from centre of isotopic yield distrib. from <sup>235</sup>U(n,t) 2-43510  
<sup>A</sup>Br, A=89, 90, fission product  $Q_\beta$  values 2-24103  
<sup>A</sup>Cd, A=119, 121, fission product  $Q_\beta$  values 2-24103  
<sup>144</sup>Ce, gamma ray emission probabilities 2-38979  
<sup>250</sup>Cf(n,f), fission product mass distributions 2-3967  
<sup>252</sup>Cf, fission fragments, radiation damage in W, FEM study 2-8548  
<sup>252</sup>Cf fission fragments, range determ. in solids and gases 2-24277  
<sup>252</sup>Cf, fission fragments velocities, masses and energies absolute meas. 2-24276  
<sup>252</sup>Cf spontaneous fission, prompt neutron meas. and anal. 2-11151  
<sup>252</sup>Cf spontaneous fission, polar emission investigation 2-39078  
<sup>252</sup>Cf, spontaneously fissioning nucleus symmetric division, post-scission dynamics 2-43515  
<sup>244</sup>Cm and <sup>232</sup>Cf fission fragments pulse height spectra of surface barrier detector 2-15670  
<sup>246</sup>Cm, spontaneous fission yields 2-434  
<sup>A</sup>Cs, A=142-148, yield meas. far from centre of isotopic yield distrib. from <sup>235</sup>U(n,t) 2-43510  
<sup>A</sup>Ga, A=79, 81, fission product  $Q_\beta$  values 2-24103  
<sup>158</sup>Gd(<sup>12</sup>C,f), 192 MeV, fission at high ang. momentum, time scale, neutrons and fragments 2-11152  
<sup>A</sup>Ge, A=79, 81, 82, fission product  $Q_\beta$  values 2-24103  
 I, sorption on low alloy steel in HTGR coolant circuit 2-7175  
<sup>131</sup>I release and handling at TMI-2 2-11251  
<sup>131</sup>I, fission product  $Q_\beta$  values 2-24103  
<sup>A</sup>La, A=141, 142, fractional independent yields from <sup>235</sup>U(n,f) 2-433  
<sup>150</sup>Nd(<sup>20</sup>Ne,f), 176, 239 MeV, fission at high ang. momentum, time scale, neutrons and fragments 2-11152  
<sup>237</sup>Np(n,f), thermal neutron induced, fragments mass-energy correlation 2-3969  
<sup>148</sup>Pm<sup>m</sup>, independent yields from <sup>235,238</sup>U(n,f) 2-3966  
<sup>150</sup>Pm, independent yields from <sup>235,238</sup>U(n,f) 2-3966  
<sup>144</sup>Pm, gamma ray emission probabilities 2-38979  
<sup>238</sup>Pu(n,f), thermal, fragment energy correlation meas., mass distrib. 2-34093  
<sup>239</sup>Pu fission products beta-decay, antineutrino spectrum 2-38988  
<sup>239</sup>Pu( $\gamma$ ,f), product yields 2-29302  
<sup>239</sup>Pu(n,f), thermal neutron-induced fission, <sup>92</sup>Nb<sup>m</sup> independent yields 2-49086  
<sup>241</sup>Pu(n,f), thermal neutron induced, fragments mass-energy correlation 2-3970  
<sup>A</sup>Rb, A=88, 94, 96, 98, beta ray and point energies for fission products 2-24104  
<sup>A</sup>Rb, A=92-99, yield meas. far from centre of isotopic yield distrib. from <sup>235</sup>U(n,t) 2-43510  
<sup>98</sup>Rb, beta-delayed two-neutron emission 2-376  
<sup>A</sup>Rh, A=101, 102, yield from <sup>235</sup>U(n,f), thermal neutrons 2-43512  
<sup>A</sup>Sr, A=94-100, yield meas. far from centre of isotopic yield distrib. from <sup>235</sup>U(n,t) 2-43510  
<sup>A</sup>Tc, A=104, 105, fractional independent yields from <sup>235</sup>U(n,f) and <sup>239</sup>Pu(n,f) 2-3965  
<sup>229</sup>Th(n,f), product mass distrib. 2-435  
<sup>229</sup>Th(n<sub>th</sub>,f), fission fragment energy correl. meas. 2-39077  
<sup>232</sup>Th(n,f), reactor induced, product mass distrib. 2-7123  
 ( $\text{UO}_{2.25}$ ,  $\text{Pu}_{0.25}$ ) $\text{O}_2$ , dynamically heated, fission product release 2-24311  
 $\text{UO}_2$ -fission product system for temps.  $\geq 1600^\circ\text{C}$ , simulation expts. for phase formation (*German*) 2-506  
 $\text{UO}_2$ - $\text{PuO}_2$  fuel assemblies, storage and handling study (*French*) 2-7211

**fission products continued**

- $\text{UO}_2$ -Zircaloy-2 interactions, defects location through fission product release 2-29325  
<sup>A</sup>U, A=235,238, natural, <sup>235</sup>U thermal neutron induced fission to <sup>238</sup>U spontaneous fission ratio 2-49110  
<sup>A</sup>U(n,f), A=233, 235, thermal neutron-induced fission, <sup>92</sup>Nb<sup>m</sup> independent yields 2-49086  
<sup>A</sup>U(n,f), thermal, A=232, 233, fragment energy correlations and mass distrib. 2-34094  
<sup>233</sup>U(n<sub>th</sub>,f), <sup>234</sup>U cold fragmentation 2-19585  
<sup>235</sup>U(n,f), 0.17-8.1 MeV, monoenergetic neutron-induced fission, mass distrib. study 2-34095  
<sup>238</sup>U(<sup>3</sup>He, f), fission fragments ang. distrib., blocking effect (*Russian*) 2-3974  
<sup>238</sup>U( $\gamma$ ,f), 20 MeV bremsstrahlung, fragment anal. 2-24278  
<sup>238</sup>U( $\gamma$ ,f), fission product ang. distrib., anisotropy (*Russian*) 2-11154  
<sup>238</sup>U( $\gamma$ ,f),  $\mu$ s isomeric states meas. in photofission products 2-43742  
<sup>133</sup>Xe, release and handling at TMI-2 2-11251  
<sup>95</sup>Zr, substoichiometric determ. in fission products (*Chinese*) 2-22503

**fission reactor cooling and heat recovery**

- see also cooling; fission reactor core control and monitoring  
 advanced PWR, neutron physics aspects (*German*) 2-19760  
 advanced simulator reactor coolant system model 2-15560  
 AGR boiler feedwater chemistry 2-39155  
 AGR coolant gas chemistry 2-39155  
 annular flow, droplet-to-liquid film exchange rates, neutron tagging meas. 2-24372  
 annular two-phase flow in nuclear heat transport systems, electro-optical instrumentation development 2-4881  
 aqueous primary cooling circuits, nitrate form. prevention using ethanol 2-43584  
 ATWS, loss of main feedwater initiated, in B and W PWR, computer calc. 2-34183  
 austenitic steel steam generator superheater for PFR, stress corrosion cracking 2-15500  
 boiler, denting corrosion, inhibition, model expts. 2-15495  
 boiling systems, thermal-hydraulic stability, microprocessor appls. 2-43526  
 bottom heated porous layer dry out heat flux 2-4058  
 breakup in multiphase flow, anal. for reactor safety 2-4089  
 breeder reactor development plant, integration of feedwater supply with steam generation 2-11225  
 Browns Ferry scram system malfunction, review 2-7243  
 BWR, corrosion product activation and transport, CRVD calc. code 2-29321  
 BWR, corrosion product deposition, activity transportation, parametric study 2-19676  
 BWR, critical heat flux data correlation 2-29369  
 BWR, density wave oscillations, state variable formulation 2-19714  
 BWR, dilute chemical decontamination process evaluation 2-29417  
 BWR, electrochemical pot. meas., rel. to water chemistry and stress corrosion 2-19657  
 BWR, feedwater nozzle, leakage flow rate meas. device 2-24374  
 BWR, in core flow vel. profile during Hatch 1 fuel cycle 2-39176  
 BWR, loss-of-coolant accident, CCF/refill system 2-49167  
 BWR, nuclide distrib. 2-29382  
 BWR, NUREG-0460 requirements implementation 2-7293  
 BWR, primary coolant system surface deposits, decontamination 2-29386  
 BWR, rod drop accident, press. and flow effect, computer analysis 2-34186  
 BWR, spray cooling following LOCA 2-39170  
 BWR, transient nonequilibrium vapour generation model, adaptation to MAYU4a code 2-4098  
 BWR, water chemistry, radiation levels, Sweden 2-29384  
 BWR blowdown emergency core cooling programme, 64 rod bundle blowdown heat transfer phase, test results 2-24393  
 BWR cobalt transport model 2-29381  
 BWR cooling system,  $\text{O}_2$  suppression by  $\text{H}_2$  addition 2-11227  
 BWR LOCA, bundle partial blockage effects on heat transfer, cladding temp. and quenching 2-39195  
 BWR LOCA, heat transfer study 2-24356  
 BWR operating thermal limits, fast transient anal. 2-24370  
 BWR pressure relief system, exhaust tube geometry (*German*) 2-493  
 BWR pressure suppression pools, air bubble radial oscillation freq. 2-39171  
 BWR primary system, corrosion product transport and radiation field build-up modeling 2-29380  
 BWR refill-reflood program 2-39182  
 BWR stress-associated pipe-crack generation counter measures 2-34148  
 BWR suppression pool dynamics simulation 2-29372  
 BWR under transient condition, manual depressurisation anal. 2-29401  
 CANDU nuclear reactors, heat transfer and fluid mechanics of water loop during breakdown and injection 2-24383  
 CANDU reactors, laminar falling film flow and heat transfer characteristics on horizontal tubes 2-24353  
 CANDU steam generator, corrosion studies under fault water conditions 2-19656  
 centrifugal pump start up transients, mathematical model and expt. verification 2-34159  
 circulation reversal in nuclear power plant superheating channels, boundary investigation 2-19723  
 Clinch River Breeder, sodium-water reaction, design basis failures 2-4094  
 coolant pumps for BWR, constructional features (*German*) 2-507  
 coolant system simulation in PWR, example of parallelism 2-15559  
 cooling loss simulation program (*German*) 2-503  
 core accident, transient fission-gas release, fuel microcracking 2-49163  
 core meltdown, downward heat transfer in sacrificial bed, model expts. 2-512  
 core uncovering boiloff transients in 3x3 rod bundle 2-43594  
 corrosion product extraction by EM filter 2-19678  
 countercurrent flow, in conduit, flooding, appl. to emergency core cooling system in nuclear reactors 2-11216  
 countercurrent steam condensation on subcooled liq. film, rel. to LOCA 2-8151  
 critical heat flux during blowdown transients, appl. to nuclear reactor loss of coolant accidents 2-12139  
 debris bed dryout heat flux, particle diameter depend. 2-7239  
 debris bed post-accident heat removal, fluidisation 2-7240



## fission reactor cooling and heat recovery continued

- decay heat removal systems, alternative options for improved safety 2-7244
- Diablo Canyon auxiliary feedwater system reliability analysis 2-19747
- Dounreay PFR, evaporator welds, cracking 2-15486
- drops, catastrophic breakup, two-stage Rayleigh-Taylor model 2-25429
- EBR-II, natural convection, steady-state temperature rise, flow rate 2-4092
- ELIN code, steady state and transient thermohydraulic calcs. (Bulgarian) 2-15431
- emergency core cooling system, test procedure periodicity 2-11221
- fast reactor fuel cycle, inventory and production rate estimates (Dutch) 2-15546
- FBR, steam generator, materials development 2-15484
- FBR cooling system, shock waves, elastic-plastic fluid-struct. code 2-24379
- FBR steam generator tubing, material development 2-15485
- FBR steam generators, water chemistry, cleaning 2-15490
- FFTF<sub>2</sub> core, thermal-hydraulic anal. using SUPERENERGY-2 2-19707
- FFTF, in-core coolant temp., rel. to code predictions 2-24375
- FFTF operating experience with sodium natural circulation 2-7252
- FFTF operating experience with sodium natural circulation 2-19702
- fibre mat insulation efficacy, press. gradient influence (German) 2-509
- FIBWR steady state BWR hydraulic computer code 2-29368
- fission products decay heat calcs. for  $\beta$  and  $\gamma$  energies 2-24288
- fission reactor steam generator tubes, flow-induced vibr. and wear 2-15488
- flat plate immersed in fluid with oscillating temp., thermal response 2-29362
- flow rate-limiting inserts characteristics in reactor loop emergency of integrity 2-15593
- flow rundown transient, 7-pin bundle two-phase simulation 2-24377
- FRB cooling system, deuterium behaviour in Na loop, expts. 2-484
- Freon-12 coolant, flow boiling burnout correlation 2-34139
- fuel element overheating 2-15550
- gamma thermometer for heat generation rate and fluid level meas. 2-7247
- gamma thermometer for heat generation rate and fluid level meas. 2-19697
- gas cooled fast reactors 2-39174
- gas-cooled fast reactor, fuel element efficiency (Russian) 2-15578
- GCFR, fuel disruption in loss-of-flow accident 2-4095
- Genkai power station, secondary water chemistry control 2-19725
- graphite, nuclear reactor appl. (Polish) 2-456
- graphite annealing, Wigner energy release 2-19736
- heat resistant materials for medium high temp. ranges, chem. and phys. props. (German) 2-472
- hot horizontal tube, refilling and rewetting, 2-fluid model struct. 2-8206
- hot horizontal tube, refilling and rewetting, rel. to LOCA 2-8205
- HTGR fuel blocks, coolant flow, cross flow effect 2-39173
- HTR core, heat transfer, pressure loss (German) 2-494
- HTR loop installation model using organic coolant 2-7234
- inadequate core cooling instrumentation 2-15576
- Inconel 600 steam generator, stress relief heat treatment, stress corrosion cracking 2-15496
- Indian Point-2, recirculation phase, probabilistic anal. 2-19746
- Indian Point-3, post-accident reactor coolant sampling system 2-4131
- induced neutronic fluctuation anal. of two-phase flow thermal-hydraulics 2-15448
- internally cooled fuel elements, heat transfer anal., conformal mapping approach 2-34143
- ion thermometers in reactor technology 2-11220
- irregular three-dimensional geometries, thermohydraulics, Navier-Stokes eqn., coord. transform. method 2-39100
- KANUPP, reactor protection and control systems 2-4077
- KNK reactor, Ar bubble transport in Na coolant (German) 2-492
- KNK-II fuel elements, gas fraction meas. in coolant flow (German) 2-11230
- KNK-II reactor, second fuel element damage localisation and detection (German) 2-11258
- liquid-cooled reactors, surface boiling effects, thermo-hydraulic anal. (German) 2-523
- liquids, nonequilibrium superheat-subcooling under sudden pressurisation 2-25428
- LMFBR, buoyancy-induced flow reversal, thermal stratification effect 2-19705
- LMFBR, core disruptive accident, molten fuel plugging, freezing, two-phase flow effects 2-4081
- LMFBR, decay heat removal, prediction 2-24361
- LMFBR, fission product release into primary system (Japanese) 2-39189
- LMFBR, free convection cooling in blocked fuel subassemblies 2-49152
- LMFBR, fuel element container meltdown, heat transfer modelling (German) 2-536
- LMFBR, fuel-coolant interaction, quasi transient heat cond. model 2-11218
- LMFBR, gas bubble cooling, effect of rod bundles with wire supports (German) 2-497
- LMFBR, long-life cores, thermohydraulic feasibility study 2-11170
- LMFBR, loss-of-coolant accident, simulation with spatial anal. (German) 2-519
- LMFBR, MHD phenomena in cooling system 2-43585
- LMFBR, Na-saturated fuel particle beds, heat transfer behaviour, one-dimensional computation method 2-15544
- LMFBR, sodium purification loop, computerised control system 2-19706
- LMFBR, variable flow allocation scheme optimisation 2-29363
- LMFBR accidents, coolant temp. fluctuations 2-7231
- LMFBR boiler, fretting and wear of steels 2-15499
- LMFBR boilers, maintenance and repair methods, demonstration test 2-11226
- LMFBR core disruptive accident, boiling inception in volume heated liquids 2-4083
- LMFBR core disruptive accident, fuel freezing expts. 2-4082
- LMFBR core disruptive accident, transition to dispersed drop flow 2-4085
- LMFBR fuel bunches, thermal-hydraulic/mechanical interaction 2-24335
- LMFBR fuel elements with spiral wire spacers, coolant blockage calc. (German) 2-505
- LMFBR heat exchanger, flow instabilities due to inlet thermal transient 2-19713
- LMFBR heat exchanger scale model, low flow thermal transient buoyancy effects 2-19710

## fission reactor cooling and heat recovery continued

- LMFBR loss of flow simulations in the sodium loop safety facility 2-39199
- LMFBR loss-of-flow accident simulation, microwave heating uniformity 2-4084
- LMFBR particle debris beds, dryout with adiabatic, cooled base (German) 2-498
- LMFBR plant dynamic simulation under natural circulation 2-11256
- LMFBR simulated fuel bundles, sodium boiling, computational modelling 2-24376
- LMFBR steam generators fabrication technology 2-15481
- LMFBRs, boiler piping and heat exchangers, material development 2-15483
- LOCA, coolant pump characts. (German) 2-522
- LOCA, downflow post-critical heat flux heat transfer to low press. H<sub>2</sub>O 2-39196
- LOCA, maximum mech. load calc., fracture area and pressure loss time-depend. (German) 2-540
- LOCA, pressure suppression system, dynamic response 2-49169
- LOCA, reactor meltdown, heat sources and sinks in fuel 2-39192
- LOCA, small break, two-phase phenomena, scaling studies 2-34190
- LOCA, small-break, natural circulation two-phase flow expts. 2-49166
- LOCA, two-phase flow dynamics (Japanese) 2-11241
- local blockage experiments with water, SABREZA code predictions 2-4093
- LOFT, cooled coaxial low flow velocimeter development 2-39184
- LOFT, flow calibration using drag disc/turbine transducer 2-34169
- LOFT, pulsed neutron activation results, mechanistic anal. 2-24373
- loop reactor unit, corrosion product precip. from N<sub>2</sub>O<sub>4</sub> coolant (Russian) 2-4022
- low flow-rate subcooled boiling, void fraction distrib. 2-24359
- LWR, coolant chemical decontamination reagent choice mass transfer implications 2-29385
- LWR, corrosion product release, effect on cooling system shutdown dose rate 2-29353
- LWR, factors affecting post-departure of nuclear boiling 2-49155
- LWR, low conc. decontamination reagent development 2-29387
- LWR, molten fuel-coolant interaction during reactivity initiated 'expt. 2-15545
- LWR, primary coolant system surface deposits, decontamination 2-29386
- LWR, spray flow from nozzles, analytic model development 2-25415
- LWR, stability analysis for nonuniformly heated boiling channel 2-19712
- LWR beta-gamma ray decay heat from fission products, standards 2-4068
- LWR core, thermal-hydraulic anal. code, THERMIT 2-39107
- LWR degraded nuclear reactor core coolability, effects of debris bed press. and particle size 2-39191
- main feedwater/condensate system, cost-benefit anal. 2-11222
- meltdown probability rel. to emergency cooling system factors (German) 2-539
- 2-mercaptobenzothiazole, corrosion inhibitor, radiation chemistry, nuclear reactor appl. 2-29388
- microprocessor-controlled nuclear steam supply system simulator for evaluation and training 2-29379
- modified pulse design expts., gap conductance, temp. transients 2-49146
- Monel 400 steam generator tubes, low cycle fatigue 2-15503
- nitrite, dissociating coolant, thermohydraulic characts. in rough annular channel (Russian) 2-4061
- North Anna Power Station Unit 2 natural circulation test report 2-15597
- NSSS, inferring population characteristics from sample data 2-15447
- NSSS accidental physical states analyses for operator assistance 2-7292
- nuclear safety cooling system pumping with forged housings (German) 2-542
- Oconee 2B once through steam generator tube vibr. response 2-29370
- Oconee PWR, steam generator debris anal. 2-39161
- outlet plenums, mixing study following reactor scram 2-19743
- Oyster Creek feed and condensate system reliability study 2-19745
- packing ring joint in He reactor coolant technology, leak tests (German) 2-508
- pebble-bed high-temperature reactor temp. transients during disturbed residual heat removal (German) 2-15542
- pebble-bed reactor, 2250 MW, emergency cooling, delayed heat removal (Russian) 2-501
- PGV reactor coolant, evaporation kinetics (Russian) 2-15523
- PHWR, press. control system in primary loops, energy consumption anal. 2-7232
- pipeline protection using vortex amps. 2-43589
- PNP-500, heat removal system, water and air ingress, graphite corrosion (German) 2-500
- pore distribution model for graphite gas transport properties 2-39153
- post-accident contaminated water, processing methods 2-11250
- post-accident heat removal, one-dimensional particle bed dryout model 2-485
- post-accident heat removal debris beds, molten steel behaviour 2-4059
- post-accident sampling system for Yankee Atomic Power Company 2-7392
- pressure drop and flow characts. during flow boiling, analytic soln. 2-19711
- pressure relief systems, bubble collapse, pressure transients (German) 2-504
- pressure tube failure, ductile fracture anal. 2-4025
- pressurisation transients in BWR, RAMONA computer code simulations 2-15599
- primary circuits, visualizing problems of sodium flow circuits 2-29358
- protection system setpoints, thermal-hydraulic anal. 2-24371
- PWR, bubble detection and level meas. in main coolant ccts. using ultrasonic transducers (German) 2-11260
- PWR, compressibility and added masses in blowdown anal. (German) 2-11236
- PWR, design consideration for main cooling system (German) 2-11233
- PWR, in-pile loop, radionuclide transport 2-19730
- PWR, LOCA, full length emergency cooling heat transfer, TRAC-PD2 model 2-34178
- PWR, LOCA, PKL reflood test K9, TRAC-PD2 model 2-34177
- PWR, LOCA, Standard Problem 10, RELAP/MOD7 model 2-4100
- PWR, LOCA, transients with auxiliary feedwater unavailability, bleed-and-feed recovery, simulation 2-34185
- PWR, LOCA, Yankee Rowe analysis, lower plenum phase separation, computer model 2-34179
- PWR, LOCA computer analysis for in-core injection system 2-34188



**fission reactor cooling and heat recovery continued**

PWR, loss-of-coolant-accident, primary cooling system effects 2-24391  
 PWR, Loviisa 1 NPP, primary circuit water chemistry 2-19732  
 PWR, natural circulation conditions, B injection transients, computer anal. 2-34189  
 PWR, primary cooling circuit leak, heat transport scale expt. (German) 2-502  
 PWR, risk reduction from safety-grade means of reaching and maintaining cold shutdown 2-7299  
 PWR, steam line break induced steam generator tube rupture, computer simulation 2-34184  
 PWR, tests for LOCAs, simulation 2-24390  
 PWR accident simulation, prototype nozzle to produce stationary two-phase flow (German) 2-524  
 PWR containment, overpressurisation, debris/water interaction effect 2-7282  
 PWR coolant loss effects, computer simulation (German) 2-520  
 PWR coolant-level instruments, using differential pressure transducers 2-34168  
 PWR core, one-dimens. model, fluid-struct. interaction 2-24290  
 PWR corrosion products in primary coolant circuit, radiation field 2-19731  
 PWR departure from nucleate boiling criteria, thermal-hydraulic methods 2-24367  
 PWR facility, REBEKA, emergency cooling expts. (German) 2-29391  
 PWR feedwater control valves, remote surveillance 2-15555  
 PWR feedwater pipes, fatigue cracking, metallurgical anal. 2-15505  
 PWR LOCA, determ. variation and sensitivity in computer models 2-43524  
 PWR LOCA, upper plenum dump during reflood 2-24386  
 PWR model steam generators, corrosion resistance 2-49153  
 PWR pressuriser instrumentation, bias identification, using generalised likelihood ratio technique 2-19729  
 PWR primary circulation leak, transient refilling, steam condensation (German) 2-495  
 PWR protection, thermal-hydraulic design 2-24369  
 PWR reflooding expt., simulation (German) 2-521  
 PWR secondary water chemistry study 2-19660  
 PWR simulated geometries, heat transfer and two-phase flow, computer program 2-4064  
 PWR single tube reflood expts., quench front heat transfer 2-4106  
 PWR steam generator, electrochemical thermodynamics 2-19673  
 PWR steam generator sludge anal. 2-34163  
 PWR steam generators, sludge pile boiler testing 2-29366  
 PWR subchannel simulation codes, experimental testing (German) 2-451  
 PWRs, two-phase flow, machine recognition of void fraction 2-16365  
 quasi-steady state two-dimensional rewetting cond. problem, method for soln. 2-11242  
 RBMK coolant circuit, oxalic acid decontamination soln. 2-7390  
 RBMK reactor fuel assembly clusters, hydraulic resistance with heat exchange lattice intensifiers 2-7235  
 RETRAN two-velocity two-phase flow model 2-29367  
 rod bundles, critical heat flux calc. 2-19708  
 rod bundles, critical heat flux prediction using BODYFIT-2PC code 2-19709  
 rod bundles, local vel., flow distrib. (German) 2-496  
 ROSA-III core inlet flow rate meas., press. guide tube design and construction 2-7272  
 secondary water chemistry of PWR nuclear power plant 2-19659  
 Semiscale Mod-3 core, transition boiling heat transfer during reflood 2-49145  
 SGHWR, coolant circuit surfaces, activity retention 2-29383  
 short term cavity transient following LOCA, BEACON/MOD3 code calcs. 2-7241  
 single tube steam generator, stress corrosion cracking 2-19652  
 slide valves, common-working-fluid-controlled, dynamic performance, computer simulation (German) 2-491  
 small break accident, heat removal, natural convection tests 2-49154  
 sodium boiling experiments in a 19-pin bundle under loss-of-flow conditions 2-24358  
 sodium water reactor, subchannel simulation codes, experimental testing (German) 2-451  
 Soviet nuclear power stations using VVER-1000 standard reactor, safety systems 2-19748  
 stainless steel clad rod bundles, thermal quenching by reflooding 2-7314  
 steam entrainment in the downcoming zone of a circulation loop 2-15547  
 steam generator, eddy current leak testing 2-15492  
 steam generator chemical cleaning 2-29389  
 steam generator components, creep, ductility, fatigue 2-15489  
 steam generator fuel failure anal. (Slovak) 2-43583  
 steam generator test facility, critical heat flux 2-4695  
 steam generator tubes, dent profilometry 2-49140  
 steam generators, chemical cleaning process 2-15491  
 steam generators, corrosion due to acid chloride in coolant 2-19654  
 steam generators, denting corrosion with water leaking in 2-15504  
 steam generators, recirculating, denting, lab. study 2-19655  
 steam generators, solute concentration in crevices 2-19653  
 steel, carbon, corrosion and chemistry study under steam blanketing 2-19650  
 steel, carbon, erosion-corrosion in nuclear steam generators 2-19645  
 steel, corrosion-erosion, chemistry effects in steam generators 2-19646  
 steel, Cr-Mo (12, 1 wt.%), optimisation for SNR boilers 2-15482  
 steel, Cr-Mo (2.25, 1 wt.%), I sorption in HTGR coolant circuit 2-7175  
 steel, Cr-Mo (9, 1%), deposition and corrosion studies in high press. boiler loop 2-19651  
 steel, mild, response to water chemistry changes, hysteresis effects 2-19647  
 structural confinement and safety design of a fast reactor core 2-29316  
 sudden pipe break, pressurised hot water, early response 2-19750  
 symptoms characterization as a basis for post-accident procedures 2-7291  
 TERHID code, steady state and transient thermohydraulic calcs. (Bulgarian) 2-15431  
 thermal-hydraulic methods, for transient thermal margin anal. 2-24368  
 Three Mile Island accident, assessment of H release into containment 2-34181  
 TMI-2, core temp. transient in early phase of core uncovering 2-4078  
 transient critical heat flux following nuclear reactor design basis accident, study re- sults summary 2-4062  
 transient critical heat flux following nuclear reactor design basis accident, study test result data packages 2-4063

**fission reactor cooling and heat recovery continued**

transient thermohydraulic processes following rupture of steam-generating channel in water cooled water moderated reactor (Russian) 2-24392  
 transition boiling heat transfer in fission reactor cores during reflooding after LOCA 2-49165  
 two phase mass flow rate meas. techniques 2-25457  
 two phase natural circulation expts. 2-39181  
 two-phase flow meas., liquid thin film thickness determ. by impedance probes 2-38634  
 two-phase flow thermal hydraulics, induced neutronic fluctuations anal. 2-15556  
 U-tube boilers, dynamic thermal-hydraulic behaviour 2-24378  
 VVER, flux parameters in vertically adjustable ring channel 2-15551  
 water chemistry in reactor systems, conference, Bournemouth, England (Oct. 1980) 2-18819  
 water-chemical cycle in RBMK type reactor 2-15508  
 water-cooled reactor, LOCA, reverse core steam flow, CREARE flashing transients, RELAP-4 model 2-4099  
 water-cooled reactor, LOCA, transient heated pipe, RELAP4/MOD6 vertical slip model 2-34176  
 water-cooled reactors, heat storage time rel. to flow-rate, pressure (German) 2-499  
 Westinghouse J-loop loss-of-coolant accident test facility 2-516  
 Winfrith SGHWR, water reactor chemistry technology development 2-34146  
 Winfrith SGHWR coolant circuit decontamination using LOMI reagents 2-34147  
 Winfrith SGHWR operating experiences 1968-1981 2-34144  
 Zircaloy rod bundles, thermal quenching by reflooding 2-7314  
 Co dissolved in coolant, behaviour in CANDU cones 2-19677  
 Fe<sub>2</sub>O<sub>4</sub> deposition on steam generator tube surface, steel corrosion 2-19649  
 Fe<sub>2</sub>O<sub>4</sub> solubility in coolant, hydrogen pressure influence 2-19648  
 H<sub>2</sub>O coolant, flow boiling burnout correlation 2-34139  
 N<sub>2</sub>O<sub>4</sub> liquid, thermal cond. (Russian) 2-16911  
 N<sub>2</sub>O<sub>4</sub> turbulent dissociating coolant flow, transient props. (Russian) 2-16391  
 Ni-Cr-Fe alloy 600, stress corrosion cracking in PWR steam generator 2-49137  
 Pu lattices, heavy-water moderated, local power peaking factor meas. 2-7157  
 UC-Na liquid interaction, vapour explosions 2-7278  
 UO<sub>2</sub> fuel pellet cracking, gap cond. effect, fuel stored energy 2-49122

**fission reactor core control and monitoring**

see also fission reactor safety; fission research reactors; nuclear engineering; nuclear reactor instrumentation  
 AGR, fuel temp. coeff. of reactivity inverse kinetics anal. 2-39130  
 axial core power distribution control experience at ANO-2 2-15574  
 boiling systems, thermal-hydraulic stability, microprocessor appls. 2-43526  
 Browns Ferry, control rod inert failure, WASH 1400 predictions 2-7296  
 Browns Ferry Unit-3 cavity neutron spectral analysis 2-39180  
 buckling method for calc. of large symmetric cores 2-3998  
 BUGEY PWRs, Pu recycling, cycle rate, control and safety studies (French) 2-34171  
 BWR, containment dynamic loadings, transient computer models, use in plant testing 2-34175  
 BWR, control and radiator level assessment 2-29414  
 BWR, density wave oscillations, state variable formulation 2-19714  
 BWR, incore power feedback effects deduced from neutron noise measurements 2-7224  
 BWR, nodal methods for three-dimensional simulator 2-34112  
 BWR, power distrib. change evaluation during daily load following operation (Japanese) 2-7229  
 BWR, power-flattening method 2-4055  
 BWR, rod drop accident, BNLTWIGL code anal. 2-39194  
 BWR, unanticipated incomplete control rod insertion, transient simulation 2-34180  
 BWR core, load follow simulation, using PACS-32 microcomputer system 2-49148  
 BWR core simulation using parallel computer PACS-32 (Japanese) 2-43579  
 BWR dynamics, coarse-mesh core calc., a posteriori evaluation 2-29360  
 BWR operating thermal limits, fast transient anal. 2-24370  
 BWR plant diagnosis system development 2-15446  
 BWR reactor management system 2-15554  
 BWR slow transients, multiregion neutronics model 2-7237  
 BWR spent fuel, post-irrad. anal., burnup and isotope buildup 2-7193  
 channel-type reactor, APS power slugs, control system anal. (Russian) 2-15577  
 coarse mesh calculations, a-posteriori evaluation 2-34115  
 coded aperture imaging fuel motion system, capability expts. 2-7238  
 control rods, materials and design and fabrication 2-49138  
 control room communications 2-39183  
 control system appls., review (German) 2-39168  
 Coordinated emergency procedures from plant experience and vendor Analysis 2-7290  
 core vibration during reactivity pulse operation, expt. on YAYOI reactor (Japanese) 2-43578  
 criticality benchmark calcs. using ENDF/B-V files 2-39178  
 data guide for reactor neutron metrology, activation and fission reactions 2-14988  
 data library creation for few group effective macro cross-sections (Bulgarian) 2-15430  
 digital hierarchical decentralized information system for reactor start-up and shut-down 2-7256  
 direct computer control, feasibility 2-15571  
 direct digital control system, optimal design 2-43580  
 direct entry reactor core rod drive concepts (German) 2-510  
 display technique, Janus, for control-room CRTs 2-11229  
 EBR-II, power distrib. calc. in control rod below core 2-15460  
 ENDF/B-V based three fast group reflector consts. 2-15458  
 fast power reactors, macroscopic heterogeneities in anisotropic diffusion approx. 2-34164  
 fast power reactors, neutron data errors, effect on criticality and breeding coeff. calcs. 2-15436  
 fast reactors, resonance theory 2-15456  
 fast response of the regulator in a cylindrical reactor 2-15549  
 fast-response regulator in the spatial dynamics of a reactor 2-15548



**fission reactor core control and monitoring continued**

- FFTF<sub>4</sub> core, thermal-hydraulic anal. using SUPERENERGY-2 2-19707  
 FFTF calorimetric methods, comparison and qualification 2-11223  
 FFTF reactor cavity, neutron and gamma characterisation 2-34167  
 fission product analytic impulse source functions 2-39103  
 fission product capture cross-sections evaluation for ENDF/B-V 2-7259  
 fission product decay, buildup, mass transfer, calc. method 2-7134  
 fission product kinetics, perturbation theory and sensitivity anal., for core charac-teristics 2-3999  
 FMSR, collision density peaking effect on sodium void reactivity 2-15562  
 fuel element response determ. by fission product monitoring by gamma-ray (Croatian) 2-43549  
 fuel motion surveillance, fast neutron hodoscope at TREAT 2-39172  
 GCFR, heterogeneous core configuration 2-15466  
 harmonic regulation of the power of a power reactor 2-29313  
 heterogeneous lattices, Feinberg-Galanin eqn. two group stochastic neutronics 2-19593  
 heterogeneous LMFBR, reactivity slumping in coupled reactor theory 2-4096  
 hot-loop activity generators in water reflector, mutual influence coeffs. 2-7236  
 HTR core, water ingress, neutronic safety anal. (German) 2-534  
 in-core neutron flux monitoring in PWRs and BWRs (Czech) 2-43582  
 in-reactor fuel behaviour observation system 2-24354  
 in-service surveillance for French PWRs, present and future techniques 2-15584  
 inadequate core cooling instrumentation 2-15576  
 induced neutronic fluctuation anal. of two-phase flow thermal-hydraulics 2-15448  
 ion thermometers in reactor technology 2-11220  
 IRT-2000 reactor, thermal neutron flux in reflector (Bulgarian) 2-15543  
 KAHTER, critical THGR test facility, heterogeneous poisoning, power reactor initial loading study 2-29359  
 Karachi nuclear power plant, control and instrumentation technology 2-4056  
 kinetics models, explosive solns. with positive reactivity feedback 2-7136  
 limited positive reactivity assembly bowing effects, reactor response 2-515  
 LMFBR, breeding ratio uncertainty estimation, cross section adjustment 2-452  
 LMFBR, plant protection and control systems, digital simulation 2-11255  
 LMFBR accidents, coolant temp. fluctuations 2-7231  
 LMFBR core disruptive accident, upper structure dynamics simulation 2-7279  
 LMFBR transient analysis, appl. of DSNP simulation language 2-49103  
 local core flux determ. in anal. multigroup coarse mesh method 2-34114  
 local power variation calcs., approximation using coarse reactor loop solns. (German) 2-449  
 loose part detector for PWR, acoustic system 2-15586  
 LWR, control-rod-drive operational events, defect flow anal. 2-7225  
 LWR, off-line operating and test data anal. (German) 2-450  
 LWR, Pu fuelled, control and safety 2-4107  
 LWR, stability analysis for nonuniformly heated boiling channel 2-19712  
 LWR core, thermal-hydraulic anal. code, THERMIT 2-39107  
 LWR degraded nuclear reactor core coolability, effects of debris bed press. and particle size 2-39191  
 Magnox reactor corrosion, in-core monitoring developments 2-15582  
 man-machine interface design features and developments 2-29378  
 MIT research reactor, element rotation/inversion to increase fuel depletion 2-19720  
 modular approach to improved operator aids in the control room 2-34161  
 Monte Carlo validation of integral transport and diffusion methods for BWR core analysis 2-15462  
 neutron absorption by fission products, single effective fragment approx. for thermal reactor 2-29305  
 neutron activation, development, production and certification 2-19870  
 neutron cross section data assessment using spectrum and reaction rate ratio meas. 2-39095  
 neutron diffusion calc. code FEDM 2-39098  
 neutron leakage, effect on cell calcs. for fast critical assembly 2-39099  
 neutron noise, contradictory results 2-15563  
 neutron noise analysis by infinite medium slowing down theory 2-7129  
 neutron spectra unfolding using statistical regularisation method 2-15432  
 North Anna Power Station Unit 2 natural circulation test report 2-15597  
 nuclear control room man-machine interface advancement 2-29377  
 off-normal system equations, control system design 2-7227  
 on the local-global decomposition in slowing-down theory 2-19594  
 one region spherical reactor, neutron flux, spatial dependence of effective resonance cross sections 2-7132  
 online computer control using optimal control and state estimation methods 2-7255  
 operator emergency guidance program 2-7242  
 optimal calibration of core power measurement instrumentation in secondary loop 2-11228  
 pebble-bed high-temperature reactor temp. transients during disturbed residual heat removal (German) 2-15542  
 pebble-bed reactors, instrumentation to measure flux variations (German) 2-488  
 Philippsburg KKP-1 BWR, core transient recording and calc. (German) 2-489  
 PHWR, press. control system in primary loops, energy consumption anal. 2-7232  
 PNP 3000 pebble-bed reactor, spatial flux trimming (German) 2-487  
 power density distribution, multilevel control 2-7257  
 power/response spectrum consistent generation, iterative procedure 2-24360  
 POWERPLEX—in-core monitoring method: concept and results 2-15561  
 protection system setpoints, thermal-hydraulic anal. 2-24371  
 PWR, 900 MWe, tihange type Pu, steady state and accident anal. 2-29399  
 PWR, asymm. power tilt phenomenon, computer analysis 2-34182  
 PWR, fault detection, meas. and anal. methods (German) 2-39169  
 PWR, improved in-core instrumentation 2-15575  
 PWR, in core fuel management anal. 2-49101  
 PWR, LOCA computer analysis for in-core injection system 2-34188  
 PWR, natural circulation conditions, B injection transients, computer anal. 2-34189  
 PWR, neutron flux density distribution control (Czech) 2-43581

**fission reactor core control and monitoring continued**

- PWR, risk reduction from safety-grade means of reaching and maintaining cold shutdown 2-7299  
 PWR control with straight line steam generator (German) 2-11234  
 PWR core, one-dims. model, fluid-struct. interaction 2-24290  
 PWR feedwater control valves, remote surveillance 2-15555  
 PWR homogenised channels, transport coeff. for enthalpy exchange 2-15435  
 PWR power estimation, Kalman filter appl. 2-49147  
 PWR protection, thermal-hydraulic design 2-24369  
 PWR rod control system, safety and reliability assessment methods 2-24380  
 PWRs, in-core detector signals, dynamic following (German) 2-490  
 Rancho Seco nuclear station, fuel cycle extension by part-length control rod removal 2-29361  
 RBMK reactors, automatic control system by power distribution in a power-generating reactor 2-11219  
 reactivity analysis of core distortion effects in the FFTF 2-15465  
 reactivity discontinuities, noise anal. (German) 2-29309  
 research reactors, computerised monitor and control systems 2-29373  
 resonance cross sections, source anisotropy, nonuniformity in multiregion problems 2-15457  
 resonance shielding in thermal reactor lattices 2-15455  
 rod bundles, critical heat flux calc. 2-19708  
 rod bundles, critical heat flux prediction using BODYFIT-2PC code 2-19709  
 self-powered neutron detector, sensitivity anal. (German) 2-15580  
 self-tuning load-following control of a nuclear power plant 2-546  
 SNEAK-11: Mockup critical studies of a small sodium-cooled fast reactor 2-34165  
 steel control rods, He embrittlement reduction using correct movement strategy (German) 2-486  
 stereoscopic TV system for monitoring of Magnox nuclear power station 2-15583  
 symptom-oriented approach to post-trip transient control 2-34162  
 theory of monitoring 2-19728  
 THTR-300 pebble-bed reactor, emergency shutdown rods, fitting and removal (German) 2-517  
 TMI-2, core temp. transient in early phase of core uncovering 2-4078  
 Toshiba automatic load following operation system, reactor power regulator 2-15553  
 TREAT, pinhole imaging system for fuel motion diagnosis 2-15552  
 TRIGA, instrumentation reconstruction for research reactor renewals 2-4067  
 two region slab reactor, neutron flux, spatial dependence of effective resonance cross sections 2-7132  
 two-circuit high temp. PBR, shutdown concepts (German) 2-11232  
 two-phase flow, component velocity determ. from light scatt. correl. (German) 2-525  
 two-phase flow thermal hydraulics, induced neutronic fluctuations anal. 2-15556  
 VVER reactors internal vibration monitoring and control (Czech) 2-49144  
 WWER, real struct. assembly in few group diffusion calcs. (Bulgarian) 2-15429  
 WWER-440 reactor, reactivity coeff. dynamic expt. (Russian) 2-11217  
 ZPPR, 6000 litre LMFBR core studies 2-34166  
 ZPPR, heterogeneous core critical expts., design implications 2-34116  
 ZPPR-6 assembly 7, parameters from Monte Carlo calc. 2-15459  
<sup>241</sup>Am, A=241,243, critical mass and radii, calc. 2-7133  
<sup>244</sup>Cm, critical mass and radii, calc. 2-7133  
<sup>237</sup>Np, critical mass and radii, calc. 2-7133  
<sup>237</sup>Np(n,γ), 0.01 eV-200 keV, cross-section 2-405  
<sup>238</sup>Pu, A=238, 240, 242, critical mass and radii, calc. 2-7133  
<sup>232</sup>Th(n,f), reactor induced, product mass distrib. 2-7123  
<sup>232</sup>Th(n,γ), 0.006-18 eV, capture and total cross-sections 2-404  
<sup>238</sup>U, fuel pellet cracking, gap cond. effect, fuel stored energy 2-49122  
<sup>238</sup>U, neutron capture shielded group cross section calcs. 2-15519
- fission reactor decommissioning**  
 see also *fission reactor safety; radiation protection; radioactive waste*  
 damaged radioactive components disposal (German) 2-19635  
 EEC report 2-43637  
 funding for reactor decommissioning, Nuclear Regulatory Commission perspective 2-49198  
 nuclear facilities total decommissioning (German) 2-7149  
 nuclear power plant decommissioning and spent fuel storage and disposal, financial and regulatory aspects 2-34134  
 nuclear power plants and reprocessing facilities decommissioning, main parameters comparison (German) 2-7150  
 nuclear power plants decommissioning waste disposal (German) 2-7151  
 nuclear power stations, safe enclosure in decommissioning (German) 2-7148  
 nuclear power stations closing-down in Federal Republic of Germany (German) 2-39206
- fission reactor fuel**  
 see also *claddings; fission of plutonium; fission of uranium; fission reactor fuel preparation and reprocessing; isotope separation; radioactive waste*  
 actinide integral cross sections in fast critical assembly 2-3928  
 actinide irradiation experiments in EBR II 2-15557  
 actinides, process and product stream concs. by energy-dispersive X-ray fluorescence 2-4036  
 analysis by inductively coupled plasma spectroscopy, reprocessing safeguards appl. 2-7194  
 APWR, neutron physics aspects (German) 2-7324  
 assembly identification using ultrasonic seals 2-7201  
 breeding reactor schemes for future fuel cycles 2-7176  
 BRIG-300 reactor, defective fuel element, model expts. (Russian) 2-4021  
 BWR, fuel assembly, transient nonequilib. vapour generation, computer model 2-4098  
 BWR, power-flattening method 2-4055  
 BWR, progressive conversion concept, fuel use 2-4060  
 BWR, rod drop accident, BNL-TWIGL code anal. 2-39194  
 BWR, spent fuel characteristics, α- and γ-spectra study 2-11185  
 BWR burnup calcs., few group effective microscopic cross sections 2-24289  
 BWR fuel and components, poolside inspection 2-24331  
 BWR fuel rods, PCI/SCC failure behaviour (Japanese) 2-11178  
 BWR irradiated fuel, neutron emission anal. and meas. 2-7156  
 BWR spent fuel, post-irrad. anal., burnup and isotope buildup 2-7193



**fission reactor fuel continued**

camera for fuel element pin bow obs. 2-7233  
 carbide fuel rod casing carburisation anal. (*German*) 2-11199  
 cask handling at hot cells 2-24327  
 Chinese nuclear technology, current status (*German*) 2-43528  
 clad config. with complicated boundary shape, temp. distrib., approx. analytical soln. 2-34142  
 cladding, chemical behaviour under irradiat. (*Japanese*) 2-43551  
 cladding failure at MIT research reactor 2-19632  
 claddings, ferrite content meas. eddy current method 2-24328  
 coated fuel particles, fission-product retaining kernel additives, irradiat. performance 2-39133  
 core accident, transient fission-gas release, fuel microcracking 2-49163  
 creep relaxation of fuel pin bending and ovaling stresses 2-39158  
 delayed neutron energy spectra, six-group representation 2-39012  
 EBR-II metallic driver fuel 2-39157  
 economics of uranium supply and demand for nuclear power 2-27578  
 element response determ. by fission product monitoring by gamma-ray (*Croatian*) 2-43549  
 energy releases during fission 2-24336  
 EPRI LWR core materials performance programme progress made in 1979 and 1980 2-24337  
 examination, holography appls. 2-24324  
 examination facilities, improvement 2-24326  
 experimental nuclear reactor fuel unit behaviour due to flooding and during nuclear drying (*German*) 2-11202  
 fast breeder reactors and Pu fuel supplies 2-7329  
 fast reactor vibro-compacted fuel pins, melting expts. 2-7169  
 fast-neutron hodoscope for fuel-motion surveillance at TREAT 2-39172  
 FBBF, fission rate meas. 2-15521  
 FBR, faulty mixed oxide fuel rod behaviour (*German*) 2-11198  
 FFTF, multiduct test assembly, fuel pin life 2-11188  
 FLIP-TRIGA fuel element, failure mechanism 2-15522  
 fluid fuel materials 2-19614  
 FTR, partial carbide core, transient overpower accident, cladding failure, molten fuel ejection, consequences 2-4097  
 FTR blanket test physics evaluation—supercell nuclear model 2-15464  
 fuel particles, coated, size effect on irradiation performance 2-19610  
 FUGEN HWR development in Japan 2-34153  
 gas release model at high temps. 2-49117  
 gas-cooled fast reactor, fuel element efficiency (*Russian*) 2-15578  
 GCFR, fuel disruption in loss-of-flow accident 2-4095  
 high burnup fuel assembly, on-site rod extraction 2-24443  
 high density reduced enrichment plate type fuels, irradiation tests 2-19722  
 high density spent fuel storage racks, AMPX-KENO benchmark calcs. 2-39127  
 higher actinides, fast integral cross sections 2-3927  
 higher fuel burnups, low leakage fuel management programme, USA 2-34136  
 HTGR fuel, thermally failed, fission product species release 2-7289  
 HTGR spherical fuel units,  $\gamma$ -spectrometry on fuelless zone (*German*) 2-11203  
 HTR fuel cycle options (*German*) 2-43568  
 IAEA's activities 2-24313  
 integrated fuel-cycle models for fast breeder reactors 2-19605  
 internally cooled fuel elements, heat transfer anal., conformal mapping approach 2-34143  
 irradiated nuclear fuel, safe storage of nuclear waste (*German*) 2-11196  
 K-edge photon absorptiometry for reprocessing feed and product anal. 2-7191  
 Kahl experimental reactor, fuel element seals, demonstration expt. (*German*) 2-7200  
 KNK-II fuel elements, gas fraction meas. in coolant flow (*German*) 2-11230  
 KNK-II reactor, second fuel element damage localisation and detection (*German*) 2-11258  
 KWU LWR plants, pellet clad interaction protection 2-4002  
 limited positive reactivity assembly bowing effects, reactor response 2-515  
 LMFBR, fuel freezing in whole core accidents 2-4080  
 LMFBR, fuel-coolant interaction, quasi transient heat cond. model 2-11218  
 LMFBR, fuel-coolant interaction, spherical geometrical constraint, energy conversion 2-7262  
 LMFBR, LOF-TOP accident, fuel pin failure, time delay effect 2-39197  
 LMFBR, Na-saturated fuel particle beds, heat transfer behaviour, one-dimensional computation method 2-15544  
 LMFBR fuel bunches, thermal-hydraulic/mechanical interaction 2-24335  
 LMFBR fuel disruption under prompt burst heating, in-pile expts. 2-7277  
 LMFBR fuel rod clads failure, pressure and mass rate transients anal. (*Italian*) 2-34173  
 LMFBR loss-of-flow accidents simulation expt., fuel motion study 2-29402  
 LMFBR sub-assembly grids, local blockages formation, modelling 2-15479  
 LOCA, reactor meltdown, heat sources and sinks in fuel 2-39192  
 LOFT fuel module, post-irrad. examination 2-24332  
 long term dry storage of irradiated oxide fuel and vitrified waste 2-11180  
 LWR, computer code WTRLGD, waterlogged fuel rods under RIA condition, transient anal. 2-15590  
 LWR, fuel cycle cost considerations of increased discharge burnups 2-39136  
 LWR, meltdown, core entrainment and sweepout in reactor cavity interactions 2-7283  
 LWR, performance improvement 2-15538  
 LWR, poolside fuel examination 2-24330  
 LWR, spent fuel safeguards, surveillance, integrated monitoring system 2-4038  
 LWR and FBR fuel cycle strategies, optimisation with constraints on U availability 2-39132  
 LWR fuel assembly, coarse-mesh transport computations, finite element approach 2-49094  
 LWR fuel bundles, safeguard system using US cap seal 2-19634  
 LWR fuel consumption calcs., epithermal resonance screening effect (*German*) 2-447  
 LWR fuel rods,  $\gamma$ -ray scanning inspection assessment 2-29346  
 Mark C fuel irradiation tests (*German*) 2-11201

**fission reactor fuel continued**

metallic nuclear fuel rods numerical study and computation of thermoelastic stresses 2-24309  
 methanation of CO and CO<sub>2</sub> for heat production 2-7223  
 mixed oxide fuel, transport and thermodynamic props. 2-34141  
 mixed-oxide fast reactor fuel pins, direct obs. of fuel-cladding mech. interaction 2-47128  
 modified pulse design expts., gap conductance, temp. transients 2-49146  
 molten, plugging and freezing in LMFBR core disruptive accident 2-4081  
 natural draught centralized dry store for irradiated fuel and active waste 2-34137  
 natural U nuclear fuel, heavy atom isotope correl. 2-19619  
 neutron cross section data assessment using spectrum and reaction rate ratio meas. 2-39095  
 neutron cross sections in resonance regions 2-15518  
 neutron-spectrometric analysis of the samples 2-4044  
 new concept for the packaging and disposal of intermediate level waste 2-11181  
 nuclear fuel performance in Boiling Water Reactors 2-15537  
 nuclear fuel rods nondestructive assay using lead spectrometer 2-11171  
 nuclear materials, IR spectra meas. by matrix isolation method (*Czech*) 2-7164  
 nuclear power plant decommissioning and spent fuel storage and disposal, financial and regulatory aspects 2-34134  
 nuclear reactor fuel behaviour modelling, adjoint sensitivity anal. 2-11161  
 nuclear reactor operating modes, data processing programme (*Bulgarian*) 2-7226  
 pellet-clad interaction predictions, in-pile irradiations for verifications 2-29324  
 pellet-cladding interaction of LMFBR fuel elements 2-39159  
 performance testing with respect to pellet clad interaction 2-7167  
 Phenix fuel irradiation expts., depletion anal. and sensitivity study 2-15520  
 37 pin fuel assembly phantom, filtered neutron beam computed tomography 2-37027  
 poolside fuel examination in Westinghouse PWRs 2-24364  
 poolside fuel rod  $\gamma$ -ray scanner 2-24334  
 poolside fuel rod scanning, data acquisition and reduction system 2-24366  
 post-irradiation examination facilities at Dounreay 2-24325  
 PWR, 900 MWe, tihange type Pu, steady state and accident anal. 2-29399  
 PWR, asymm. power tilt phenomenon, computer analysis 2-34182  
 PWR, in core fuel management anal. 2-49101  
 PWR, semiannual refuelling evaluation 2-49150  
 PWR fuel assemblies, post-irrad. passive neutron meas. 2-19638  
 PWR fuel elements in LOCA, burst pressure, fracture, grain-size distrib. (*German*) 2-461  
 PWR fuel industry, France (*French*) 2-43563  
 PWR fuel rod, dynamic characteristic 2-49119  
 PWR uranium resource utilisation 2-15535  
 PWR uranium resource utilisation 2-15536  
 PWR uranium resources utilisation 2-15534  
 PWR with tight-lattice core using UO<sub>2</sub>-PuO<sub>2</sub> and very low water volume fraction, technical feasibility study 2-15524  
 PWRs, fuel element cross-section tables for computer calcs. (*German*) 2-448  
 pyrocarbon coatings for HTR fuel, composition temp. depend. (*German*) 2-7184  
 radioactive waste management and disposal costs 2-24301  
 recharging fuel units for nuclear reactor, operational stresses and defect freq. (*German*) 2-15532  
 refuelling machine, semiautomated, for BWR in Switzerland 2-15477  
 reprocessing plants, safeguarding, using process results from existing instruments 2-7218  
 research reactor developments 2-19612  
 rod performance prediction using COMETHE IIIJ and FCODE-Alpha computer codes 2-43565  
 safeguards, electronic identification seals (*French*) 2-4037  
 safeguards, reusable tamper indicating security seal 2-7203  
 safeguards, sealing, integrated sensor system for surveillance 2-7206  
 safeguards, tamper-indicating fuel rods for underwater storage 2-7202  
 safeguards for model fuel cycle 2-7186  
 SAMURA code predictions comparison with expt. fuel pin data 2-11160  
 sealed cans for PuO<sub>2</sub> and (U,Pu)O<sub>2</sub> storing, weld signature US verification, report 2-43631  
 security system CCTV, video disc recording appl. 2-43544  
 SGHWR, fuel element design development 2-34145  
 spacer elements for fuel rod assemblies, hydraulic resistance, generalised equations 2-39156  
 special nuclear materials, alternatives to self protection criteria for research reactors 2-19631  
 spent fuel, alpha-emitter array, coincidence method 2-49124  
 spent fuel from VVER-365, burnup and isotope composition determ. 2-15510  
 spent fuel shipping cask failure, temp. distribution calc. 2-7166  
 spent nuclear fuel safe handling and storage 2-24302  
 surface deposition of magnetite particles, colloidal interactions 2-19675  
 thermal cross-sections of <sup>239</sup>Pu and <sup>241</sup>Pu, evaluation 2-49104  
 thorium [fuel cycle, nuclear and materials aspects, review] 2-19689  
 THTR-300, safeguards system, data verification, optimisation 2-4034  
 THTR-300 reactor, total fuel control system, safeguards (*German*) 2-463  
 transient fission gas swelling due to grain boundary bubble growth, cellular computer model 2-7174  
 TRIGA fuel elements, burnup from  $\gamma$ -ray spectra 2-24297  
 VVER, safeguarding system, spent fuel neutron scanning 2-7190  
 VVER spent fuel, neutron rad. energy spectra 2-15513  
 waste management options assessment by West German Government 2-34135  
 WER spent fuel, neutron rad. yield 2-15514  
 Winfrith SGHWR operating experiences 1968-1981 2-34144  
 WWER, burn up, interlaboratory comparative experiment SROK-2 2-29334  
 ZEBRA, safeguards system prototype 2-7208  
 Zircaloy clad fuel rods,  $\text{ZrO}_2$  corrosion films, eddy current meas. 2-24333  
 $\alpha\beta\gamma$  active material, chemical handling facility 2-24350  
 $\alpha\beta\gamma$  active material, chemical handling facility, engineering aspects 2-24351



**fission reactor fuel continued**

- $\beta$ -Cs<sub>2</sub>O<sub>7</sub> form. in irradi. fuel, heat capacity and thermodynamic functions, standard enthalpy of form. 2-37093
- H isotope separation by cryogenic distillation, computer anal. 2-24418
- <sup>3</sup>H distrib. in poisoned fuel rods (German) 2-11200
- <sup>233</sup>Pa, intermediate nuclide reactivity worth in <sup>235</sup>U-Th reactor 2-39128
- Pu lattices, heavy-water moderated, local power peaking factor meas. 2-7157
- Pu, mass spectroscopy, sample preparation for interlaboratory comparison (German) 2-3653
- Pu, metallurgy in France, initial 1954 studies (French) 2-39118
- Pu, nondestructive analysis by X-ray fluorescence using sealed <sup>192</sup>Ir source 2-4035
- Pu passive assay, with shift register neutron coincidence counter 2-4137
- Pu reference solutions for chem. anal., sealed ampoule preparation (French) 2-7195
- Pu safeguarding, verification accountability system 2-19643
- Pu safeguards, controlled pot. coulometry anal. 2-19641
- Pu solns. in Pu purification process, automated in-line meas. 2-29339
- Pu solutions, sampling and volume during tank storage (French) 2-4049
- Pu, test criteria specification for containers to be used in air transport 2-7269
- Pu/U ratios, X-ray fluoresc. method 2-19637
- PuO<sub>2</sub> fuel, alpha-autoradiography, dielectric detector appls. (Russian) 2-9506
- PuO<sub>2</sub>, large samples, neutron coincidence counting, systematic errors 2-19636
- PuO<sub>2</sub>, powder, physical props. related to transport container design (French) 2-34130
- <sup>A</sup>Pu(n,x), A=239, 240, 30 keV to 4.8 MeV, total neutron cross-sections 2-7105
- <sup>239</sup>Pu(n,x), 2 eV-20 keV, transmission and self indication meas. 2-7210
- Pv, role in LWR and LMFBR fuel cycles, use of heat spike 2-39131
- (Th, U)O<sub>2</sub>, irradi. lattice parameter change 2-43555
- ThF<sub>3</sub>-LiF(NaF), fused, elec. cond. 2-21339
- Th<sub>2</sub>N<sub>4</sub>, nonstoichiometric, elec. correl. and defect struct. 2-51171
- Th<sub>2</sub>N<sub>2</sub>O, nonstoichiometric, elec. correl. and defect struct. 2-51171
- ThO<sub>2</sub>, enthalpy up to 3400K 2-49116
- ThO<sub>2</sub>, spherical assembly, neutron spectra meas. 2-4041
- ThO<sub>2</sub>-, thermodynamic props., high temp. 2-27152
- <sup>232</sup>Th, neutron cross section data evaluation 2-24317
- <sup>232</sup>Th, s-wave neutron widths from 21 to 2006 eV 2-15517
- <sup>232</sup>Th(N,β), 100-4000 eV, radiative capture yield 2-39023
- <sup>232</sup>Th(n,x), 30 keV to 4.8 MeV, total neutron cross-sections 2-7105
- <sup>232</sup>Th(n,γ), capture rate meas. at FBBF 2-4043
- Th(n,γ), nuclear data uncertainties influence on fusion-fission blanket nucleonics 2-418
- (U,Ce)O<sub>2+x</sub>, O diffusion under chemical potential gradient (French) 2-49111
- (U,Pu)O<sub>1.975</sub> fuel pin, neutron yield meas. 2-15526
- (U,Pu)O<sub>2</sub>, γ-ray emission, fuel pin age determ. 2-39109
- (U,Pu)O<sub>2</sub>, nuclear reactor fuels, thermodynamic aspects 2-24312
- (U<sub>0.75</sub>,Pu<sub>0.25</sub>)O<sub>2</sub>, dynamically heated, fission product release 2-24311
- (U,Y)O<sub>2</sub>, near stoichiometric solid soln., Y content effect on thermal cond. 2-50936
- U energy contents (German) 2-39114
- U enrichment plants, licensing procedures in West Germany 2-19682
- U, exploration, recent developments 2-27580
- U extraction from seawater in Japan, present status (Japanese) 2-4001
- U, mass spectroscopy, sample preparation for interlaboratory comparison (German) 2-3653
- U metallurgy in Chicago, 1942-45 2-18853
- U, nondestructive analysis by X-ray fluorescence using sealed <sup>192</sup>Ir source 2-4035
- U, nonirrad., control by nondestructive method using pulsed neutron source 2-15507
- U, oxidation in air at 348 to 765K 2-43552
- U, reaction with O<sub>2</sub> and H<sub>2</sub>O vapour up to 300°C, review 2-49114
- U reference solutions, sealed ampoule preparation (French) 2-7195
- U, waste storage, fuel elements production and Swiss requirements (German) 2-34149
- U-O system, thermodynamic study at 1050°C (French) 2-26080
- U(Al,Fe) dil. alloys, TEM obs. of microstruct. rel. to hardness 2-43557
- UC, atomic displacement around C vacancy (French) 2-50629
- UC<sub>2</sub>O<sub>3</sub> fissile particles made from weak acid resins, fission product behaviour 2-29329
- UF<sub>6</sub> analysis by isotope mass spectroscopy 2-19640
- UF<sub>6</sub> container safeguards, sealing systems 2-7204
- UO<sub>2</sub>, <sup>239</sup>Pu formed during irradiation, radial conc. and effect on temp. 2-29337
- UO<sub>2</sub>, bubble diffusion model 2-43556
- UO<sub>2</sub> condensation, following expansion in Ar, particle size distrib. 2-4088
- UO<sub>2</sub>, conversion from ammonium uranyl carbonate, precipitation, chemical variation and powder props. 2-29354
- UO<sub>2</sub> diffusion of O<sub>2</sub> 2-50913
- UO<sub>2</sub> enrichment meas. using Ge(Li) and NaI(Tl) detectors 2-7192
- UO<sub>2</sub> fuel, irradiated, leaching and dissolution 2-39141
- UO<sub>2</sub> fuel bundles, subcritical, cross-section validation 2-7171
- UO<sub>2</sub> fuel freezing in LMFBR core disruptive accident 2-4082
- UO<sub>2</sub> fuel pellet cracking, gap cond. effect, fuel stored energy 2-49122
- UO<sub>2</sub> fuel pellets, thermal-mechanical behaviour model 2-39150
- UO<sub>2</sub> fuel rod inspection by nondestructive array 2-9514
- UO<sub>2</sub>, isostatic hot-pressing 2-5850
- UO<sub>2</sub> kernels, metallic fission product retention properties of silicon-alloyed pyrocarbon coatings 2-29333
- UO<sub>2</sub> kernels, monolayer capacity in physical adsorpt. of Kr 2-30756
- UO<sub>2</sub>, molten fuel-coolant interaction during reactivity initiated expt. 2-15545
- UO<sub>2</sub>, neutron scattering studies 2-8399
- UO<sub>2</sub> powders, sintering, quantitative characterisation 2-46968
- UO<sub>2</sub>, thermophysical props., review 2-50880
- UO<sub>2</sub>-fission product system for temps. ≥1600°C, simulation expts. for phase formation (German) 2-506
- UO<sub>2</sub>-liquid steel, influence of Na vapour on wetting, scanning Auger spectroscopy 2-45683
- UO<sub>2</sub>-PuO<sub>2</sub> fuel assemblies, storage and handling study (French) 2-7211
- UO<sub>2</sub>-PuO<sub>2</sub> mixed oxide fuels pellets, PuO<sub>2</sub> microheterogeneities limiting sizes specification 2-4004
- UO<sub>2</sub>-Zircaloy-2 interactions, defects location through fission product release 2-29325

**fission reactor fuel continued**

- UO<sub>2</sub>-Zr-rare earth oxide systems, oxygen content, lattice struct. 2-4024
- UO<sub>2</sub>-ZrO<sub>2</sub>-R<sub>2</sub>O<sub>3</sub> (R=La,Ce or Nd), solid soln. and phase equilib., 1270 to 1670K 2-43553
- UO<sub>2+x</sub>-CeO<sub>2</sub>-ZrO<sub>2</sub>-ThO<sub>2</sub> crystalline ceramic nuclear waste, phase relations 2-15473
- γ-U<sub>3</sub>O<sub>8</sub>, atomic array similarities with U<sub>4</sub>O<sub>9</sub> 2-45133
- U<sub>3</sub>O<sub>8</sub>, enrichment meas. using Ge(Li) and NaI(Tl) detectors 2-7192
- U<sub>3</sub>O<sub>8</sub>/Al cermet fuel for DIDO and PLUTO 2-4029
- U<sub>3</sub>O<sub>8</sub>-Al fuel plates, U loading 2-49121
- U<sub>3</sub>O<sub>8</sub> atomic array similarities with γ-U<sub>3</sub>O<sub>8</sub> 2-45133
- UO<sub>2</sub>Y<sub>2</sub>O<sub>3</sub>(Gd<sub>2</sub>O<sub>3</sub>)(Eu<sub>2</sub>O<sub>3</sub>)(Nd<sub>2</sub>O<sub>3</sub>) solid soln., relation between lattice parameter and O/M ratio 2-50597
- <sup>A</sup>U, A=235,238, natural, <sup>235</sup>U thermal neutron induced fission to <sup>238</sup>U spontaneous fission ratio 2-49110
- <sup>A</sup>U(n,x), A=233, 235, 238, 30 keV to 4.8 MeV, total neutron cross-sections 2-7105
- <sup>235</sup>U, enrichment, determ. by passive gamma-ray spectrometry (Czech) 2-49118
- <sup>235</sup>U(n,x), 2 eV-20 keV, transmission and self indication meas. 2-7210
- <sup>235</sup>U(n,f), 14.1 MeV, fission cross section, time-correlated assoc.-particle technique 2-39076
- <sup>235</sup>U(n,f), chemical depend. of delayed neutron yield 2-3976
- <sup>238</sup>U, neutron capture shielded group cross section calcs. 2-15519
- <sup>238</sup>U resonance capture integrals in reactors, neutron self-indication meas. 2-39090
- <sup>238</sup>U(n,2n)<sup>237</sup>U, 6.5-10.5 MeV cross section 2-15407
- <sup>238</sup>U(n,γ), 400, 660 MeV, ENDF/B calcs. 2-7103
- <sup>238</sup>U(n,γ), capture rate meas. at FBBF 2-4043
- <sup>238</sup>U(n,n′γ), 0.70 to 1.96 MeV, level cross-sections 2-7104
- <sup>238</sup>U(n,n′γ), 0.5 to 5.0 MeV, cross-sections 2-3930

**fission reactor fuel preparation and reprocessing**

- see also isotope separation; radioactive waste
- accelerator breeder reactors, present status (Japanese) 2-11206
- actinide isotopes, generation and burn-up, nuclear data anal. 2-4052
- actinides, process and product stream concs. by energy-dispersive X-ray fluorescence 2-4036
- adjoint γ-ray estimation to cylinder surface, remote reprocessing facility anal. 2-34216
- Advanced converter reactors, fuel cycles 2-4053
- anion exchanger system, element separation (Chinese) 2-19684
- back end fuel cycle, provisions in West Germany, trade unions' view (German) 2-19603
- back end fuel cycle technologies development in West Germany (German) 2-19681
- Barnwell reprocessing plant, near real-time accounting for safeguards 2-7220
- breeding, using alternative fusion power concepts for fission-based energy economy 2-4119
- breeds fuel, remote fabrication 2-15540
- Brown Boveri reactor fuel units, tests to ensure safe mech. construction (German) 2-11212
- BUGEY PWR's, Pu recycling, cycle rate, control and safety studies (French) 2-34171
- calcines from reprocessing plant, leaching props. chem. composition 2-39148
- CANDU, advanced fuel cycle potential 2-34154
- conservation and proliferation prospects 2-37194
- containment/surveillance devices, development 2-7221
- criticality safety in Albuquerque Operations Office 2-7400
- criticality safety training in Babcock and Wilcox naval fuel division 2-15594
- criticality safety in Hot Fuel Examination Facility 2-15539
- cropped pin transfer system for the fuels and materials examination facility 2-24439
- cycling plant, electricity supply loss effect (German) 2-479
- denatured fuel cycles 2-4054
- dibutylphosphate separation from aqueous phase (German) 2-11210
- dissolver tank solutions safeguards, remote plasma atomic emission spectroscopy appl. 2-6084
- electrical penetration feedthrough for FMEF 2-15541
- EPRI nuclear fuel-cycle accident risk assessment 2-11237
- external fuel cycle, realisation (Russian) 2-15424
- fast reactor fuel cycle, inventory and production rate estimates (Dutch) 2-15546
- FBR mixed oxide fuels, residue composition from decomposition (German) 2-11189
- FBR spent fuel reprocessing technology in Japan (Japanese) 2-4047
- final store for nuclear waste in Salzbergr, thermal and mech. effects calcs. (German) 2-11194
- fissile material release from mixed oxide fuel fabrication plant 2-19690
- fissile material transport, criticality risk and packaging design (French) 2-24348
- French back end nuclear fuel radioactive waste storage and reprocessing 2-24293
- fuel cycle, state of art and problems 2-11208
- FUGEN HWR development in Japan 2-34153
- fusion hybrid reactor for nuclear fission power station fuel prod. 2-11277
- German Federal Republic developments, back end fuel cycle concept implementation (German) 2-19680
- German Federal Republic developments, social and technical aspects of waste management (German) 2-19602
- handling facilities, design, operation, maintenance, decommissioning 2-24444
- handling facilities, operation and maintenance 2-24447
- handling facilities and equipment, maintenance and decommissioning 2-24448
- high density fuel tablet prod. by heat impact solidification (German) 2-11213
- HTR fuel cycle options (German) 2-43568
- HTR fuel cycles, comparison of high- and low-enrichment (German) 2-478
- industrial experience in bituminisation of reprocessing waste 2-29335
- insoluble fission products, mag. susceptibility meas. 2-19688
- integrated fuel-cycle models for fast breeder reactors 2-19605
- irradiated nuclear fuel packaging criteria and representative models (French) 2-24347
- K-edge photon absorptiometry for reprocessing feed and product anal. 2-7191
- laser beam machining appls. 2-24349



**fission reactor fuel preparation and reprocessing continued**

- laser isotope separation using two-step photodissociation method (*Japanese*) 2-43571  
 LMFBR, fuel cycle alternatives 2-49143  
 LMFBRs, extended burnup fuel cycle using denatured fuel 2-7213  
 long term alternatives for fuel cycles (*Finnish*) 2-39160  
 LWR, underwater fuel disassembly and rod storage 2-24352  
 LWR fuel cycle, proton linac appls. 2-7212  
 magnetic separation, high gradient, appl. to fuel reprocessing 2-19685  
 mixed oxide fuel fabrication line, Pu balance, safety 2-19644  
 nuclear cross sections for technology, conf. Knoxville, TN, USA, (Oct. 1979) 2-33235  
 nuclear fuel cycle industries establishment and technical working problems (*German*) 2-43569  
 nuclear fuel reprocessing with short cooling time (*German*) 2-482  
 nuclear fuel-reprocessing plants, pot. safety-related incidents 2-19733  
 nuclear power plants and reprocessing facilities decommissioning, main parameters comparison (*German*) 2-7150  
 nuclear power stations with PWRs, fuel elements preparation and waste disposal (*Czech*) 2-49141  
 nuclear waste disposal in Federal Republic of Germany 2-39113  
 online computer system for continuous criticality control 2-7214  
 PFR fuel reprocessing, remote handling equipment performance 2-24440  
 plasma focus device, fissile fuel production, plasma focus breeder scheme 2-40189  
 power fluidics developments 2-43576  
 proliferation routes, comparative risk 2-49199  
 PTFE, diffusion of H, D and T 2-30656  
 PWR uranium resource utilisation 2-15535  
 pyrocarbon coating facility in fluidized bed reactor (*German*) 2-34155  
 radioactive liquor clarification, mag. separation trials using Cr powder simulant 2-19687  
 radioactive material transportation in nuclear fuel cycle (*French*) 2-24322  
 radioactive waste treatment for reprocessing plant (*Dutch*) 2-34131  
 radioactivity emissions in the EEC 2-39248  
 red-oil reaction, possible explosions in reprocessing plants (*German*) 2-480  
 reprocessing facility, nuclear material inventory estimation 2-39167  
 reprocessing plants, safeguarding, using process results from existing instruments 2-7218  
 safeguard systems, containment/surveillance systems 2-7222  
 safeguarding, mixed oxide fuel fabrication inventory errors 2-19642  
 safeguards, appl. of inductively coupled plasma spectra 2-7194  
 safeguards, containment monitoring (*German*) 2-7216  
 safeguards, dynamic material accountancy 2-4051  
 safeguards, held-up materials accounting 2-7196  
 safeguards, inventory estimation using near real-time accounting 2-7219  
 safeguards, materials accounting, integration with containment/surveillance measures 2-19691  
 safeguards, reprocessing plant input verification by isotope correl. technique 2-4050  
 safeguards for model fuel cycle 2-7186  
 safeguards in centrifuge enrichment plant, measurements 2-7215  
 safety evaluation using probabilistic risk assessment 2-24381  
 small-scale reprocessing plant, safeguards, continuous inspection 2-7217  
 solvent extractants, solubilized, removal from aqueous waste streams 2-24346  
 spent fuel management and extended storage 2-24345  
 spherical high temp. reactor nuclear fuels, large scale expt. (*German*) 2-11209  
 subcritical fuel solutions, neutron noise anal. 2-7130  
 Super-Phenix, spent fuel handling, radiation protection (*German*) 2-481  
 thorium [fuel cycle, nuclear and materials aspects, review] 2-19689  
 waste actinides elimination by recycling to nuclear reactors 2-24316  
 waste management options assessment by West German Government 2-34135  
 world-wide nuclear energy expansion possibility (*German*) 2-19761  
 Zircaloy fire in reprocessing plant, temp. variation, computer simulation (*German*) 2-462  
 $\alpha\beta\gamma$  active material, chemical handling facility 2-24350  
 $\alpha\beta\gamma$  active material, chemical handling facility, engineering aspects 2-24351  
 $\text{Fe}(\text{OH})_3$  filtration, appl. of high gradient mag. separation 2-19686  
 Kr-Ar mixture released during nuclear fuel reprocessing, data on stabilising materials for low temp. rectification (*German*) 2-11211  
 Pu recovery method from combustible  $\alpha$ -waste in extraction agent (*German*) 2-11192  
 Pu safeguarding, verification accountancy system 2-19643  
 Pu solutions, sampling and volume during tank storage (*French*) 2-4049  
 $\text{Pu}^{4+} + \text{Cl}^- \rightleftharpoons \text{Pu}^{3+} + 1/2\text{Cl}_2$ , in molten  $\text{NaCl}/2\text{CsCl}$ , chem. eqn., IR spectra study 2-17888  
 $\text{Pu}_2\text{C}_3$ , synthesis by dioxide reduction with graphite 2-43572  
 $\text{Pu}(\text{III})$ , oxidation by  $\text{HNO}_3$  in tri-n-butyl phosphate soln., kinetics, Pu loss effects 2-49142  
 $\text{Pu}(\text{NO}_3)_3$ , self-radiolysis in  $\text{HNO}_3$  2-27464  
 T, gaseous releases from reprocessing plant, radiological assessment 2-29448  
 $\text{ThO}_2$  fuel cycles, data needs for fuel handling and waste management 2-483  
 U enrichment by gas centrifuge, theory 2-39165  
 U enrichment in France by gas diffusion (*French*) 2-39166  
 U enrichment plants, licensing procedures in West Germany 2-19682  
 U extraction from its ores 2-24344  
 U extraction from seawater in Japan, present status (*Japanese*) 2-4001  
 U fabrication techniques for Pu production piles, 1942-45 2-18854  
 U isotope separation, chemical methods (*Czech*) 2-43573  
 U, isotope separation, chemical methods (*Czech*) 2-43575  
 U mines and mills occupational radiological safety 2-24434  
 $\text{UF}_4$ , catalytic fluoridation by  $\text{NiF}_2$  and  $\text{CuF}_2$  2-9573  
 $\text{UF}_4$ , conversion from ammonium uranyl carbonate, precipitation, chemical variation and powder props. 2-29354  
 $\text{UO}_2$  fuel particles for HTGR, prod. by microwave hardening of aqueous droplets (*German*) 2-24343  
 $\text{UO}_2$  reprocessing facility of La Hague, France (*Dutch*) 2-34152  
 $\text{UO}_2$  sintered spheres, sol-gel technique (*Czech*) 2-43574  
 $\text{UO}_2\text{-PuO}_2$  fuel assemblies, storage and handling study (*French*) 2-7211  
 $\text{UO}_2\text{F}_2$ , catalytic fluoridation by  $\text{NiF}_2$  and  $\text{CuF}_2$  2-9573  
 $\text{UO}_2(\text{NO}_3)_2$ , tributyl phosphate extraction system, density, viscosity and surface tension meas. (*Chinese*) 2-19683

**fission reactor instrumentation** see *nuclear reactor instrumentation***fission reactor materials**

- see also *claddings; fission reactor fuel; fusion reactor materials; materials handling; moderators; radioactive waste*  
 1200 MWe Superphenix in France component assembly on site and progress report 2-15476  
 advanced high temp. reactor materials (*German*) 2-468  
 aerosol coagulation, deposition and leakage during nuclear reactor accident 2-7263  
 AGR, implications for condensate purification of operation at pH 9.6 2-4012  
 AGR boiler design and construction in UK 2-4014  
 AGR boiler feedwater chemistry 2-39155  
 AGR coolant gas chemistry 2-39155  
 AGR steam generator operation experience 2-4008  
 alkali metal oxide systems, reactor applications, thermodynamic review 2-19616  
 Alloy 600 tubed nuclear steam generators, system chemistry consideration 2-4011  
 Argentina nuclear metallurgy 2-19615  
 austenitic steel steam generator superheater for PFR, stress corrosion cracking 2-15500  
 Barnwell reprocessing plant, near real-time accounting for safeguards 2-7220  
 boiler, denting corrosion, inhibition, model expts. 2-15495  
 BWR, corrosion product deposition, activity transportation, parametric study 2-19676  
 BWR, electrochemical pot. meas., rel. to water chemistry and stress corrosion 2-19657  
 BWR, primary coolant system surface deposits, decontamination 2-29386  
 BWR, water chemistry, radiation levels, Sweden 2-29384  
 BWR cobalt transport model 2-29381  
 BWR intergranular stress corrosion cracking, causal factors and mitigation 2-39163  
 BWR intergranular stress corrosion cracking research programme 2-29347  
 BWR piping systems, residual stresses, weld parameter effects, evaluation by finite element analysis 2-24338  
 BWR stress-associated pipe-crack generation counter measures 2-34148  
 CANDU damaged boiler tubes, replacement in situ 2-15493  
 CANDU nuclear steam generators, materials performance 2-4006  
 CANDU steam generator, corrosion studies under fault water conditions 2-19656  
 capsule design for pressure vessel steel irradiation tests 2-19716  
 ceramic materials for HTR appls., thermomech. props. (*German*) 2-473  
 ceramic type protective coatings for high temp. reactors (*German*) 2-474  
 ceramics, appl. to nuclear industry, fission and fusion reactors (*French*) 2-34129  
 ceramics, insulating, for prototype large breeder reactor headers, thermodynamic calc. 2-49131  
 ceramics, time to failure, neutron and gamma irradiation effects 2-5961  
 circular plate, loss of carrying capacity on irradiation (*Russian*) 2-12634  
 cladding tube ballooning problem with account of displacement and bending components 2-39112  
 colour flaw detection, high temp. 2-13879  
 component decontamination 2-15516  
 concrete, B addition, for neutron shielding, quality control method (*German*) 2-39121  
 concrete, oxidised, viscosity in hypothetical core meltdown (*German*) 2-460  
 concrete, serpentine and ferro-serpentine for biological shield (*Czech*) 2-43562  
 concrete press. vessel, 20 MN breaking load tension member development (*German*) 2-4031  
 concrete structure, viscoelastic and thermal behaviour with reference to containment vessel 2-4730  
 control rod drive, decontamination by electrochemical polishing 2-7181  
 control rod drive, decontamination by electrochemical polishing 2-19624  
 control rods, materials and design and fabrication 2-49138  
 core flow test loop fuel rod simulators, joining techniques 2-39129  
 corrosion and cladding expts., 1942-45 2-18855  
 corrosion product release effect of  $\gamma$ -radiation 2-19679  
 corrosion products, synthesis for simulation studies 2-19674  
 corrosion related problems 2-49136  
 creep and long-term strength testing, loading device for tubular samples within reactors 2-2669  
 creep under irradiation, microstructure developments 2-30485  
 criticality safety in Hot Fuel Examination Facility 2-15539  
 defect reconstruction and classification by phased arrays 2-52140  
 dibutylphosphate separation from aqueous phase (*German*) 2-11210  
 Dounreay PFR, evaporator welds, cracking 2-15486  
 Dounreay water supply from Loch Sherry, soluble organic material chemistry 2-19661  
 ductile material complex fracture mechanics techniques 2-16265  
 elastic moduli meas., 20 to 1100°C, US method 2-17830  
 elastoplastic structures, shakedown anal., review 2-11245  
 Electric Power Research Institute's Nondestructive Evaluation Center 2-29348  
 Euratom safeguards, containment and surveillance 2-7407  
 fast reactor, fuel breeding system, expt. data anal. 2-29314  
 FBR, container mech. behaviour under stresses, transient effect (*German*) 2-15530  
 FBR, steam generator, materials development 2-15484  
 FBR steam generator tubing, material development 2-15485  
 FBR steam generators, water chemistry, cleaning 2-15490  
 feed water for prototype fast reactor, organic material water chemistry 2-19662  
 feed-water duct, automatic welding appl. (*German*) 2-475  
 fibre mat insulation efficacy, press. gradient influence (*German*) 2-509  
 fluid-elastic parameters for reactor internals model testing 2-49120  
 fluid-solid interaction and fluid acoustical effects, piping system dynamics 2-11244  
 Freon-12 coolant, flow boiling burnout correlation 2-34139  
 graphite, corrosion by  $\text{H}_2\text{O}$  in HTR core (*German*) 2-459  
 graphite, development 2-19611  
 graphite, HTGR struct. components, material characts. and eval. 2-18431  
 graphite, isotropic, nucl. grade, irreversible expansion and shrinkage during graphitisation 2-41560  
 graphite, methane profile calc. in MEDIC model for AGR 2-15525



## fission reactor materials continued

graphite, neutron irradiation damage, substitutional B effect 2-25938  
 graphite, nucl. grade, NDT eval. of fatigue damage using US meas., phys. and mech. props. correl. 2-41832  
 graphite, nuclear reactor appl. (*Polish*) 2-456  
 graphite annealing, Wigner energy release 2-19736  
 graphite for HTGR, macroporosity changes under oxygen corrosion 2-49108  
 graphite under multiaxial loadings, incremental stress-strain law 2-15478  
 Hastelloy X, in high temp. gas cooled reactors, protective against carburisation with Si enriched layers 2-29344  
 Hastelloy X welded joint, creep behaviour 2-15501  
 heat resistant materials for medium high temp. ranges, chem. and phys. props. (*German*) 2-472  
 HTGR, steam generator materials performance 2-4007  
 HTR metal under process gas atm., temp. cycling influence on tritium permeability (*German*) 2-470  
 IAEA safeguards, research and development 2-7404  
 Incoloy 800 and Inconel 600, steam generator tube for PHWR, NaH<sub>2</sub>PO<sub>4</sub> evaluation as denting inhibitor 2-4016  
 Inconel 600, corrosion in LWR coolant by cationic resin beads 2-4017  
 Inconel 600 boiler tubing, stress corrosion cracking 2-15494  
 Inconel 600 steam generator, stress relief heat treatment, stress corrosion cracking 2-15496  
 Inconel 600 tubing in nuclear power demonstration unit boiler, chem. cleaning 2-4019  
 Inconel 617, SIMS study of carburisation and decarburisation 2-31961  
 Inconel 617 structural materials for HTGR, corrosion behaviour in impure He gas 2-6055  
 Inconel 625, superalloy, thermal stability 2-47060  
 Inconel 690, stress-corrosion cracking, treatment, reactor boiler appls. 2-15497  
 Inconel 706, influence of Ti, Nb, Al additions on struct. and mech. props. (*French*) 2-2729  
 inelastic analysis, benchmark problems, modelling and accuracy of solns. 2-34138  
 iron, neutron transport meas. and anal. 2-3991  
 LMFBR, fuel-coolant interaction, spherical geometrical constraint, energy conversion 2-7262  
 LMFBR, HCDA, expanding multiphase bubbles, Na entrainment 2-34174  
 LMFBR, US beam generating and receiving system, flow detect. appl. 2-49130  
 LMFBR above core alloys, striping resistance 2-39154  
 LMFBR cladding breach monitoring by solid state tagging of fuel element surface 2-24340  
 LMFBR steam generator SNR 300, experience in materials 2-4020  
 LMFBR steam generators fabrication technology 2-15481  
 LMFBR welded components, thermally stressed, linear elastic fracture mech. applic. 2-39111  
 LMFBRs, boiler piping and heat exchangers, material development 2-15483  
 loop reactor unit, corrosion product precip. from N<sub>2</sub>O<sub>4</sub> coolant (*Russian*) 2-4022  
 LWR, corrosion product release, effect on cooling system shutdown dose rate 2-29353  
 LWR, HCDA, dryout in large particle, deep debris beds 2-34187  
 LWR, meltdown, core entrainment and sweepout in reactor cavity interactions 2-7283  
 LWR, primary coolant system surface deposits, decontamination 2-29386  
 LWR, steam explosion, two-dimens. hydrodynamics computer model 2-34191  
 LWR pressure vessel damage dosimetry, least squares anal. 2-4045  
 Magnox reactor corrosion, in-core monitoring developments 2-15582  
 materials testing reactors and hot labs. in EEC, handbook 2-14987  
 mechanical testing in nuclear reactor channels, automated unit 2-37012  
 metal, defect production, fission neutron source for study 2-29331  
 metal nuclear power station components, constructional strength, systems approach 2-49129  
 microstruct. after ageing and after neutron irradiation. (*French*) 2-51947  
 molten salts, problems of corrosion and electrometallurgy in the nuclear field (*French*) 2-27330  
 Monel 400 steam generator tubes, low cycle fatigue 2-15503  
 monitoring using acoustic emission 2-49139  
 Neutron-8 unit for intrareactor tensile tests of constructional materials over wide deform. rate and temp. range 2-52160  
 neutron count moment analysis method, applic. to passive assay 2-39228  
 neutron energy spectra in the Fast Breeder Blanket Facility 2-4042  
 neutron scattering studies 2-8399  
 neutron transport through annular duct of large radius, expts., shielding calc. assessment 2-7128  
 Nimonic PE 16 superalloy, thermomechanically processed, precipitation, deform. and fracture 2-51948  
 nuclear core materials limitations, economic impact 2-29310  
 nuclear cross sections for technology, conf. Knoxville, TN, USA, (Oct. 1979) 2-33235  
 nuclear power plant refuelling machines components deformation under asymmetrical thermal load, deformation calc. (*German*) 2-49128  
 nuclear reactor containment vessel, steel linear design against rupture 2-9410  
 nuclear steam generating systems, chem. thermohydraulics 2-4010  
 nuclear steam generator materials, pitting corrosion studies 2-4018  
 nuclear steam generator materials performance, conf., St. Petersburg, FL, USA (Oct. 1980) 2-3327  
 nuclear steam generator tubing, eddy current inspection 2-13921  
 nuclear steam generator tubing, eddy current inspection 2-13922  
 Oconee PWR, steam generator debris anal. 2-39161  
 organic materials, radiation effects 2-49135  
 PGV reactor coolant, evaporation kinetics (*Russian*) 2-15523  
 pipe, bending and torsion, with creep 2-24320  
 piping systems subjected to dynamic loads, stress and strain criteria (*German*) 2-7264  
 plant piping, dynamic response and cumulative damage makes excess earthquake loadings 2-455  
 plasma-GMA welding for Al assemblies 2-34151  
 plate, orthotropic rectangular, with ribbonlike inclusion, thermal stress 2-25254  
 plates, acoustic loading due to gas flow (*German*) 2-457  
 pore distribution model for graphite gas transport properties 2-39153  
 post-irradiation examination in UK 2-24323

## fission reactor materials continued

prepolishing of surfaces for exposure control and increased plant availability 2-7180  
 prepolishing of surfaces for exposure control and increased plant availability 2-19623  
 pressure tube failure, ductile fracture anal. 2-4025  
 pressure vessel, deformation and stress anal. (*Chinese*) 2-43546  
 pressure vessels, influence of austenitic stainless steel internal cladding on H embrittlement resistance 2-19633  
 pressure vessels, pumps, valves and piping, general design criteria given by ASME code, survey (*Croatian*) 2-15515  
 pressure vessels and piping, plastic fracture mechanics techniques 2-34140  
 PWR, Lovisa 1 NPP, primary circuit water chemistry 2-19732  
 PWR, natural circulation conditions, B injection transients, computer anal. 2-34189  
 PWR containment, overpressurisation, debris/water interaction effect 2-7282  
 PWR feedwater pipes, fatigue cracking, metallurgical anal. 2-15505  
 PWR model steam generators, corrosion resistance 2-49153  
 PWR secondary water chemistry study 2-19660  
 PWR station nonradioactive wastewater treatment design and operation 2-39164  
 PWR steam generator, electrochemical thermodynamics 2-19673  
 PWR steam generator corrosion control, condensate polisher appl. 2-19664  
 PWR steam generator materials, Cu and Ni compounds effects on corrosion 2-4013  
 PWR steam generator sludge anal. 2-34163  
 PWR steam generator tubing, material requirements 2-4009  
 PWR steam generators materials performance 2-4005  
 radioactive components, high resoln. neutron radiographic method 2-41836  
 RBMK coolant circuit, oxalic acid decontamination soln. 2-7390  
 reinforced concrete press. vessel construction for high temp. reactors (*German*) 2-4030  
 reprocessing plant, safeguards, containment monitoring (*German*) 2-7216  
 reprocessing plant safeguards, held-up materials accounting 2-7196  
 reprocessing plant safeguards, inventory estimation using near real-time accounting 2-7219  
 reprocessing plants, safeguard systems, containment/surveillance systems 2-7222  
 safeguards, accounting methods, loss detection, meas. errors 2-7199  
 safeguards, appl. of distribution-of-differences method for variance of data with outliers 2-6840  
 safeguards, compatibility between USA and Europe 2-7406  
 safeguards, computerised account auditing 2-4039  
 safeguards, containment and surveillance, function in IAEA 2-7187  
 safeguards, containment/surveillance instruments, performance anal. 2-7399  
 safeguards, information system for IAEA 2-4145  
 safeguards, integrated data evaluation system, design 2-7402  
 safeguards, integrated systems effectiveness, quantification 2-7408  
 safeguards, international, containment and surveillance, design and evaluation (*French*) 2-7188  
 safeguards, loss estimation, sequential methods (*French*) 2-7197  
 safeguards, measurement random error variance precision in Grubbs' technique 2-43543  
 safeguards, NDA instrumentation, intelligent devices 2-4135  
 safeguards, nuclear materials accounting, computer systems 2-4040  
 safeguards, record and report units, rounding 2-4144  
 safeguards, research and development programmes 2-7405  
 safeguards, sampling plan to verify large inventories 2-7403  
 safeguards, sealing systems development 2-7207  
 safeguards, sensor systems selection criteria for intrusion detector systems 2-43542  
 safeguards, statistical anal. of data evaluation, verification of defects 2-7198  
 safeguards NDA instruments, microprocessor automation 2-7189  
 safeguards seals, surface topographic identification 2-7205  
 safeguards surveillance, camera system based on Super 8 2-7209  
 secondary water chemistry of PWR nuclear power plant 2-19659  
 security, interaction between R and D and safeguards in EEC 2-7185  
 security, safeguards development, review 2-4033  
 SGHWR, coolant circuit surfaces, activity retention 2-29383  
 SGHWR, feedwater and coolant powdered resin purification 2-19663  
 single tube steam generator, stress corrosion cracking 2-19652  
 small-scale reprocessing plant, safeguards, continuous inspection 2-7217  
 stainless steel, molten, behaviour in past-accident heat removal debris beds 2-4059  
 stainless steel clad rod bundles, thermal quenching by reflooding 2-7314  
 standard material, destructive tests on stress induced swelling (*German*) 2-15531  
 steam generator, eddy current leak testing 2-15492  
 steam generator components, creep, ductility, fatigue 2-15489  
 steam generator tubes, dent profilometry 2-49140  
 steam generator tubes, flow-induced vibr. and wear 2-15488  
 steam generators, chemical cleaning process 2-15491  
 steam generators, corrosion due to acid chloride in coolant 2-19654  
 steam generators, denting corrosion with water leaking in 2-15504  
 steam generators, recirculating, denting, lab. study 2-19655  
 steam generators, solute concentration in crevices 2-19653  
 steel, A508, reactor-pressure-vessel, lower-bound fracture toughness 2-5934  
 steel, austenitic, mech. degradation in prototype large breeder reactor 2-49132  
 steel, austenitic, no.14981, radiation-induced creep and swelling between 400 and 500°C (*German*) 2-47130  
 steel, austenitic stainless, 1.4948 and 1.4919, hold time influence on load-creep-fatigue at 550°C (*German*) 2-469  
 steel, austenitic stainless, irradiation creep, interrelation with swelling 2-22269  
 steel, austenitic stainless, irradiation induced swelling and creep 2-29340  
 steel, austenitic stainless, liq., metal embrittlement by Te-Cs mixture 2-36966  
 steel, austenitic stainless, pipe welds in BWRs, intergranular stress corrosion cracking, causes and crack age determ. 2-27356  
 steel, austenitic stainless, stress corrosion cracking, decontamination reagent effects 2-39138  
 steel, austenitic stainless, type 304, H and D transport at elevated temp. 2-5276



**fission reactor materials continued**

- steel, carbon, corrosion and chemistry study under steam blanketing 2-19650
- steel, carbon, erosion-corrosion in nuclear steam generators 2-19645
- steel, corrosion-austenite, chemistry effects in steam generators 2-19646
- steel, Cr-Mn, eutectic, surface topography after He ion bombardment 2-25946
- steel, Cr-Mo, friction on refractories 2-49133
- steel, Cr-Mo (12, 1 wt.%), optimisation for SNR boilers 2-15482
- steel, Cr-Mo (2.25, 1 wt.%), I sorption in HTGR coolant circuit 2-7175
- steel, Cr-Mo (9, 1%), deposition and corrosion studies in high press. boiler loop 2-19651
- steel, Cr-Ni-Nb, oxidised in CO<sub>2</sub> at 1123K, nature of oxide formed 2-52099
- steel, creep-rupture props., 426-872°C 2-31795
- steel, fatigue cracks in reactor structural materials 2-15512
- steel, ferritic, low-alloy, creep, decarburisation effect 2-15487
- steel, ferritic stainless, mech. degradation in prototype large breeder reactor 2-49132
- steel, irradi. effects study using HVEM and energy dispersive X-ray analysis of films (*French*) 2-30497
- steel, maraging Cr-Ni type, strength characts. at elevated operating temps. 2-52047
- steel, mild, response to water chemistry changes, hysteresis effects 2-19647
- steel, nuclear press. vessel, crack tip energy dissipation and elastic-plastic fracture toughness 2-22315
- steel, pressurised water reactor, review of AE appl. 2-17804
- steel, stainless, B alloy, sheets for nuclear engineering, props. and testing (*German*) 2-43545
- steel, stainless, defect prod. by neutrons at 4.7K 2-29330
- steel, stainless, exposed to liq. Li, trapping and radiation-induced detrapping of H 2-45272
- steel, stainless, fatigue testing within reactor 2-47282
- steel, stainless, ferritic, oxide dispersion strengthened, prep. and mech. props. 2-41548
- steel, stainless, hydrogen recycling 2-29426
- steel, stainless, type 304 pipe welds in BWRs, intergranular SCC, O<sub>2</sub> concentration, temp., cyclic load, effects 2-41818
- steel, stainless, Type 316, nonelastic deform., unified phenomenological model 2-41671
- steel, stainless, Type 316, nonelastic deform., unified phenomenological model 2-41672
- steel, stainless, void nucleation, solute addition effects 2-50625
- steel, stainless, weld overlay, H-induced cracking in heat-affected zone of steam generator forging 2-4015
- steel, stainless AISI 316, stress rupture optimisation using computer programme 2-31775
- steel, stainless AISI type 304L, straight pipe for LWR, fatigue and fracture behaviour 2-11184
- steel, stainless type 316, crack initiation in corrosion fatigue, current transient method 2-17769
- steel, type 316, neutron irradiated, low. temp. fatigue crack propag. 2-47159
- steel, type 316 Ti, Si and Ti conc. effect on swelling following electron irradi. (*French*) 2-39120
- steel austenitic, casings for carbide fuel rods, carburisation anal. (*German*) 2-11199
- steel bar reinforcement for high loaded concrete structures in nuclear power plants 2-15480
- steel control rods, He embrittlement reduction using correct movement strategy (*German*) 2-486
- steel Cr-Mo ferritic steel stress corrosion cracking in caustic environment 2-15498
- steel liner membrane under constraint load, failure anal. 2-11243
- steel plates, thick welded, US defect location and sizing 2-47294
- steel pressure vessel, neutron-embrittlement, recovery obs. 2-49126
- steel stainless, pipe welds in BWRs intergranular stress corrosion cracking study 2-2633
- steel stainless, type 316 and mixed oxide fuel, transport and thermodynamic props. 2-34141
- steels, 12Kh18N10T, and 09Kh16N15M3B, oxidation in N<sub>2</sub>O<sub>4</sub>, ESCA study 2-9471
- steels, austenitic stainless and ferritic, fretting and wear in LMFBR boiler 2-15499
- steels, Mn-Mo-Ni, temper embrittlement, ductile-brittle transition temp. 2-15502
- steels compatibility in FBR in high temp. Na (*Japanese*) 2-7160
- structural analysis programs, current status (*Japanese*) 2-11158
- structural materials in fast reactors, Doppler effect 2-7158
- superalloy, thermal stability 2-47060
- surface oxidised HTR heat exchanger materials, tritium and H permeation reduction (*German*) 2-471
- Three Mile Island accident, assessment of H release into containment 2-34181
- ultrasonic testing methods repeatability study 2-17814
- water, ultra pure production, use of ion exchange resin selectivity coeffs. 2-19667
- water chemistry in reactor systems, conference, Bournemouth, England (Oct. 1980) 2-18819
- water cooled reactor, materials corrosion and corrosion cracking 2-24339
- water purification, condensate plant 2-19666
- water purification, mixed bed performance in a condensate polishing plant 2-19665
- water purification in TRIPOL process 2-19668
- water shields, distrib. of  $\gamma$ -rays arising from neutron interactions 2-7153
- water-chemical cycle in RBMK type reactor 2-15508
- water-cooled nuclear power reactors during 1979, steam generator tube performance 2-29322
- weld metal, neutron irradiated, low. temp. fatigue crack propag. 2-47159
- Winfrith SGHWR, water reactor chemistry technology development 2-34146
- Winfrith SGHWR coolant circuit decontamination using LOMI reagents 2-34147
- Winfrith SGHWR operating experiences 1968-1981 2-34144
- Zircaloy, I<sub>2</sub> SCC, lab. data, phenomenological model, in-reactor behaviour prediction 2-31835
- Zircaloy, pellet-cladding interaction failure, occurrence on power ramping 2-29323
- zircaloy cladding, irradiated, stress corrosion cracking 2-31823

**fission reactor materials continued**

- Zircaloy cladding, irradiated, stress corrosion cracking relevance to pellet-cladding interaction failure 2-31824
- Zircaloy fire in reprocessing plant, temp. variation, computer simulation (*German*) 2-462
- Zircaloy rod bundles, thermal quenching by reflooding 2-7314
- Zircaloy tube, quenching characteristics 2-49134
- Zircaloy-2, Bauschinger effect 2-47129
- Zircaloy-2, I stress corrosion cracking susceptibility, texture and surface condition effects 2-31843
- Zircaloy-2, in-reactor deform. of tubes at 330K 2-47125
- Zircaloy-2, proton irradi. creep 2-47127
- Zircaloy-2 and -4, neutron irradi., dislocation struct. 2-50649
- Zircaloy-2 fuel cladding tubes, external pressure creep (*Japanese*) 2-11179
- Zircaloy-2 tubing, deformation history effect on yield locus and texture change (*Japanese*) 2-39117
- Zircaloy-2 tubings, I-induced stress corrosion cracking, surface condition influence on crack initiation 2-31844
- Zircaloy-4, cladding embrittlement due to inner surface oxidation 2-43529
- Zircaloy-4, high-temp. transient creep, phenomenological description for non-stationary loading 2-47126
- Zircaloy-4 cladding, chemical interaction with simulated fission products at elev. temp. 2-49112
- Zircaloy-4 cladding, creep and irradi. growth models development and correl. 2-39110
- Zircaloy-4 nuclear fuel sheathing, second-phase particle identification 2-39122
- Zircaloy-4 tubes, high temp. deformation behaviour 2-39116
- Zircaloy-clad UO<sub>2</sub> elements, cladding strain; fuel density and relocation effects 2-39137
- Al, defect prod. by neutrons at 4.7K 2-29330
- <sup>241</sup>Am, A=241.243, critical mass and radii, calc. 2-7133
- B<sub>4</sub>C, neutron irradiated, volume swelling theory 2-25939
- Be, thermal neutron transport, lattice struct. effect 2-7154
- BeO, cryst. moderator, thermal neutron scatt. anisotropy 2-39092
- <sup>244</sup>Cm, critical mass and radii, calc. 2-7133
- Co dissolved in coolant, behaviour in CANDU cones 2-19677
- Cr, (n, $\alpha$ ), 5-10 MeV, cross sections for fast reactor structural materials 2-419
- Cu, defect prod. by neutrons at 4.7K 2-29330
- D separation technology, present status (*Japanese*) 2-11205
- D<sub>2</sub>O, assay methods for safeguarding 2-19639
- D<sub>2</sub>O, production problems in Indian nuclear power program 2-15475
- (Eu,Gd)<sub>2</sub>O<sub>3</sub>, compatibility with type 316 stainless steel in out-of-pile heating studies 2-39115
- Eu<sub>2</sub>O<sub>3</sub>, C to B transformation 2-47022
- Eu<sub>2</sub>O<sub>3</sub>, compatibility with type 316 stainless steel in out-of-pile heating studies 2-39115
- Fe, (n, $\alpha$ ), 5-10 MeV, cross sections for fast reactor structural materials 2-419
- Fe, shielding benchmark expts. for LMFBRs 2-24319
- Fe-Cr-Ni commercial alloys, irradi. induced swelling 2-50716
- FeO<sub>12</sub>, molten drops, steam explosion, LWR core meltdown appl. 2-7284
- Fe<sub>2</sub>O<sub>3</sub>, deposition on steam generator tube surface, steel corrosion 2-19649
- Fe<sub>2</sub>O<sub>3</sub> solubility in coolant, hydrogen pressure influence 2-19648
- Gd<sub>2</sub>O<sub>3</sub>, monoclinic, microcracking behaviour 2-49113
- H<sub>2</sub>O coolant, flow boiling burnout correlation 2-34139
- He, impure pressurised coolant in HTGR, O and C pot., thermodynamic anal. 2-6055
- <sup>7</sup>Li(d,n), 35 MeV, neutron spectra on thick Li for FMIT 2-4125
- MgO insulation in heat resistant cables, elec. cond. meas. 2-29341
- <sup>25</sup>Mg( $\alpha$ ,n), 0-4.8 MeV, total cross-sections 2-427
- Mo, ductilisation of electron-beam welds, C addition effects 2-47158
- Mo, neutron irradi., deform. behaviour in tensile and hardness tests 2-31745
- Mo, total neutron cross-section in range 2.2 eV-3 meV 2-24284
- Mo-Zr (300 ppm), defect prod. by neutrons at 4.7K 2-29330
- Na rewetting on hot stainless steel surface 2-7168
- Na shields of LMFBR, neutron penetration study 2-15474
- Nb, microstruct. and strength, effect of He 2-36914
- Nb-Zr (300 ppm), defect prod. by neutrons at 4.7K 2-29330
- Ni, (n, $\alpha$ ), 5-10 MeV, cross sections for fast reactor structural materials 2-419
- Ni, defect prod. by neutrons at 4.7K 2-29330
- Ni-Cr (75, 16 wt.%) Alloy 600, stress corrosion cracking susceptibility, heat treatment effect 2-17768
- Ni-Cr-Al-Ti, Alloy 800,  $\gamma$ -particle coarsening and yield, TEM study 2-31701
- Ni-Cr-Fe, heat treatment effect on stress and corrosion in BWR, PWR environment 2-29345
- Ni-Cr-Fe alloy 600, stress corrosion cracking in PWR steam generator 2-49137
- Np reference solutions for chem. anal., sealed ampoule preparation (*French*) 2-7195
- <sup>237</sup>Np, critical mass and radii, calc. 2-7133
- Pu, determ. in large amount of Am (*Chinese*) 2-47402
- <sup>239</sup>Pu, A=238, 240, 242, critical mass and radii, calc. 2-7133
- SiC, polycrystalline, containing excess Si after neutron and ion irradi., microstruct. 2-30496
- T, separation technology, present status (*Japanese*) 2-11205
- UO<sub>2</sub>-Zircaloy-2 interactions, defects location through fission product release 2-29325
- V-Zr, defect prod. by neutrons at 4.7K 2-29330
- Zr alloys performance and development, as structural material 2-19618
- Zr, irradiation growth, intrinsic anisotropy of point defect diffusion rates 2-45285
- Zr, irradiation growth of single crystals 2-45284
- Zr, metal and alloys, hydriding in electrochemical corrosion 2-19658
- Zr, metal and alloys, R and D in W.Germany (*German*) 2-39119
- Zr, uses 2-19613
- Zr-Nb (2.5 wt.%), crack growth at elevated temps., acoustic emission monitoring 2-31860
- Zr-Nb (2.5 wt.%), fracture initiation at hydrides 2-47178
- Zr-Nb (2.5 wt.%), in-reactor deform. of tubes at 330K 2-47125



**fission reactor operation**

see also *fission reactor cooling and heat recovery; fission reactor core control and monitoring; fission reactor safety*  
 Abnormal Transient Operating Guidelines programme for nuclear power station operators 2-29412  
 AGR steam generator operation experience 2-4008  
 breeder reactor, ductless core refueling, handling test 2-11224  
 BWR, progressive conversion concept, fuel use 2-4060  
 BWR, start-up planning method 2-43577  
 BWR feedwater nozzle, fatigue-cracked, precision remote repair 2-11292  
 BWR nuclear power plant load following operation, reactor power regulator, microcomputer system 2-29365  
 BWR startups, dissolved O<sub>2</sub> and H<sub>2</sub>O<sub>2</sub> concentration control procedures 2-4066  
 CANDU operating experience, performance, reliability and safety 2-34160  
 Clinch River Breeder, operability, inspectability, maintainability 2-7253  
 Clinch River Breeder, operability, inspectability, maintainability 2-19703  
 command role-stress decision program 2-19721  
 component decontamination and repair to shorten outage critical path 2-15568  
 control room communications 2-39183  
 CRT display variables and formats study for BWR power plant start-up operation 2-34156  
 data handling system redundancy, availability analysis 2-29374  
 decision-making, analysis 2-49168  
 design for optimum safety incorporating the human factor (*French*) 2-39104  
 EBR-II-6 years of successful operation with a pool-type reactor 2-7248  
 EBR-II-6 years of successful operation with a pool-type reactor 2-19698  
 EBR-II operational reliability testing 2-34157  
 EBR-II safety and operating experience 2-15603  
 exposure reduction techniques during refueling operations 2-15596  
 FBR, container mech. behaviour under stresses, transient effect (*German*) 2-15530  
 FFTF operations: 1980-A year of achievement 2-7251  
 FFTF operations: 1980-A year of achievement 2-19701  
 French nuclear safety policy, human factors significance, lessons learned from Three Mile Island (*French*) 2-39198  
 German nuclear plant operation, 1980 Report (*German*) 2-29355  
 high temp. molten-salt reactors in free convection regime, physical peculiarities 2-7258  
 IAEA role in safety and operational availability (*German*) 2-34170  
 initial operating experience on the Fort St. Vrain high temperature reactor (*German*) 2-43596  
 integrated data approach to nuclear plant information requirements 2-15570  
 JOYO, operational experience 2-7250  
 JOYO, operational experience 2-19700  
 LMFBR, cc Na-cooled, operating experiences and environmental risk anal. (*German*) 2-7315  
 LMFBR, design feature to maximise simplicity, operability, safety 2-7254  
 LMFBR, design feature to maximise simplicity, operability, safety 2-19704  
 LMFBR, incorporating operating experience into future designs 2-7145  
 LMFBR, incorporating operating experience into future designs 2-19599  
 LMFBR boilers, maintenance and repair methods, demonstration test 2-11226  
 LMFBR operation, safety aspects (*Czech*) 2-7273  
 LWR, fuel cycle cost considerations of increased discharge burnups 2-39136  
 microprocessor-controlled nuclear steam supply system simulator for evaluation and training 2-29379  
 nuclear electric-power generating plants, operating statistics and data 2-11214  
 nuclear Generating Stations Productivity Improvement Program 2-19715  
 nuclear power plant safety, human factor considerations (*French*) 2-39175  
 nuclear power plants during start-up, radiological meas. 2-11279  
 nuclear power station VVER 440 reactor primary and secondary circuit diagnostic system characts. (*Czech*) 2-49158  
 nuclear reactor operating modes, data processing programme (*Bulgarian*) 2-7226  
 nuclear reactor operator training, full-scope simulators by British CEGB 2-34200  
 off-normal system equations, control system design 2-7227  
 outage management, Zion station 2-15564  
 outage planning and coordination 2-15566  
 outage planning for the life of a nuclear plant 2-15565  
 outage planning systems—status overview 2-15567  
 performance and operating data, 1978 and 1979 2-39177  
 Phenix, comparison to Rapsodie 2-7249  
 Phenix, comparison to Rapsodie 2-19699  
 plant availability improvement, transient analysis model 2-29376  
 preoperational vibration testing program 2-15569  
 pressure boundary components, requalification standard 2-39179  
 probability distribution of the unavailability of a system 2-15441  
 production reactor productivity improvement plan 2-29375  
 PWR, redesign for frequent refuelling 2-7138  
 PWR, semiannual refuelling evaluation 2-49150  
 PWR transient tests for verifying reactor system transient analysis computer codes 2-4065  
 Rapsodie, comparison to Phenix 2-7249  
 Rapsodie, comparison to Phenix 2-19699  
 refuelling machine, semiautomated, for BWR in Switzerland 2-15477  
 remote machining and handling equipment 2-11293  
 simulator, minicomputer implementation 2-43586  
 simulator, multipurpose, based on interactive graphics 2-43587  
 THTR-300 reactor, total fuel control system, safeguards (*German*) 2-463  
 TMI-2 cooldown and cleanup 2-29410  
 training on Health Physics Research Reactor 2-43588  
 training simulators, data anal., trainee debriefing 2-19727  
 US power reactor operation 2-11215  
 US power reactors operation during May-June, 1981 2-29356  
 water moderated water cooled reactor, physico-chemical state 2-49173  
 water-cooled nuclear power reactors, steam generator tube performance 2-29322  
 Winfrith SGHWR operating experiences 1968-1981 2-34144  
 YAYOI pulsed fast reactor, operational experiences 2-24357

**fission reactor safety**

see also *fission reactor cooling and heat recovery; fission reactor core control and monitoring*  
 Abnormal Transient Operating Guidelines programme for nuclear power station operators 2-29412  
 accident, emergency monitoring centre role 2-29407  
 accident consequence analyses, computer codes 2-4101  
 accidental emissions, remote monitoring system 2-39236  
 accidental radioactive atmospheric release, environmental measurements 2-39204  
 accidental radioactivity releases, emergency procedures 2-39245  
 accidental releases, consequences, uncertainties 2-39201  
 accidental releases, improvement in predictions 2-39249  
 accidental releases, safety precautions in service (*German*) 2-39188  
 accidents, long-term somatic effects 2-39202  
 accidents, subsequent radiation exposure by discharge into surface water 2-29446  
 aerosols, post-accident containment, simulation using steel balls in glycerine 2-4087  
 AGR, fuel temp. coeff. of reactivity inverse kinetics anal. 2-39130  
 AGR safety margins, Windscale 33 MWe prototype appl. for further experimental confirmation 2-15589  
 analysis procedures for utility power plants 2-29409  
 anomaly diagnosis using fluctuating signals (*Japanese*) 2-39190  
 APWR, neutron physics aspects (*German*) 2-7324  
 Argonaut reactor pebble-beds, water entry effects (*German*) 2-518  
 as-built nuclear power plant buildings, dynamic testing, review 2-11246  
 atmospheric radioactivity dispersion, Gaussian plume model, inaccuracies during real appl. 2-29443  
 ATWS, loss of main feedwater initiated, in B and W PWR, computer calc. 2-34183  
 Barnwell reprocessing plant, near real-time accounting for safeguards 2-7220  
 Battelle LOCA simulation tests in NRU 2-4108  
 BRIG-300 reactor, defective fuel element, model expts. (*Russian*) 2-4021  
 Brown Boveri reactor fuel units, tests to ensure safe mech. construction (*German*) 2-11212  
 Browns Ferry, control rod inert failure, WASH 1400 predictions 2-7296  
 Browns Ferry scram system malfunction, review 2-7243  
 BUGEY PWR's, Pu recycling, cycle rate, control and safety studies (*French*) 2-34171  
 BWR, ATWS with steam line dynamics and spacetime kinetics, computer analysis 2-7281  
 BWR, containment dynamic loadings, transient computer models, use in plant testing 2-34175  
 BWR, control and radiator level assessment 2-29414  
 BWR, corrosion product activation and transport, CRVD calc. code 2-29321  
 BWR, dilute chemical decontamination process evaluation 2-29417  
 BWR, loss-of-coolant accident, CCFL/refill system 2-49167  
 BWR, Mark I containment, venting strategies, vent-filters, probabilistic risk assessment 2-11253  
 BWR, NUREG-0460 requirements implementation 2-7293  
 BWR, rod drop accident, BNL-TWIGL code anal. 2-39194  
 BWR, rod drop accident, press. and flow effect, computer analysis 2-34186  
 BWR, safety-related events, experience and reactor site as determinants 2-29396  
 BWR, spray cooling following LOCA 2-39170  
 BWR, transient nonequilibrium vapour generation model, adaptation to MAYU4a code 2-4098  
 BWR, unanticipated incomplete control rod insertion, transient simulation 2-34180  
 BWR, water chemistry, radiation levels, Sweden 2-29384  
 BWR blowdown emergency core cooling programme, 64 rod bundle blowdown heat transfer phase, test results 2-24393  
 BWR containment spray by large scale facility, I removal tests 2-7270  
 BWR LOCA, bundle partial blockage effects on heat transfer, cladding temp. and quenching 2-39195  
 BWR LOCA, heat transfer study 2-24356  
 BWR LOCA, refill-reflood anal. program 2-39200  
 BWR plant diagnosis system development 2-15446  
 BWR post-accident sampling system 2-4133  
 BWR pressure relief system, exhaust tube geometry (*German*) 2-493  
 BWR refill-reflood program 2-39182  
 BWR system—criteria for man-rem reduction based on operational experience 2-29415  
 BWR under transient condition, manual depressurisation anal. 2-29401  
 Californian reactor sites, health consequences of severe accidents 2-511  
 camera for fuel element pin bow obs. 2-7233  
 cancer fatalities following accident at large reactor 2-29447  
 CANDU, gamma-ray field decay 2-4105  
 CANDU nuclear reactors, heat transfer and fluid mechanics of water loop during breakdown and injection 2-24383  
 CANDU operating experience, performance, reliability and safety 2-34160  
 cell utilities, design guides for atmospheric control and fire protection 2-24446  
 ceramic type protective coatings for high temp. reactors (*German*) 2-474  
 Clinch River Breeder, sodium-water reaction, design basis failures 2-4094  
 coded aperture imaging fuel motion system, capability expts. 2-7238  
 commercial power plants, nuclear regulating requirements sources 2-7266  
 component failure, scarce data anal. 2-11254  
 computer-aided instruction 2-7275  
 concrete, B addition, for neutron shielding, quality control method (*German*) 2-39121  
 concrete, oxidised, viscosity in hypothetical core meltdown (*German*) 2-460  
 concrete, serpentine and ferro-serpentine for biological shield (*Czech*) 2-43562  
 conference, energy outlook in the 1980s, Ames, Iowa, April 1981 2-23365  
 conference on radiological impact of nuclear facilities Lausanne, Switzerland (Oct. 1981) 2-28606  
 containment/surveillance devices, development 2-7221  
 control system apps., review (*German*) 2-39168  
 coolant drops, catastrophic breakup, two-stage Rayleigh-Taylor model 2-25429  
 coolant system simulation in PWR, example of parallelism 2-15559  
 cooling loss simulation program (*German*) 2-503



**fission reactor safety continued**

Coordinated emergency procedures from plant experience and vendor Analysis 2-7290  
 CORCON/MOD1 predictions for meltdown-concrete substructure interactions 2-7288  
 core accident, transient fission-gas release, fuel microcracking 2-49163  
 core meltdown, downward heat transfer in sacrificial bed, model expts. 2-512  
 core meltdown, radiation release, measurement and effects (*German*) 2-560  
 core uncovering boiloff transients in 3X3 rod bundle 2-43594  
 core vibration during reactivity pulse operation, expt. on YAYOI reactor (*Japanese*) 2-43578  
 core-melt accident, radioactivity releases, residual risk 2-29404  
 countercurrent flow, in conduit, flooding, appl. to emergency core cooling system in nuclear reactors 2-11216  
 countercurrent steam condensation on subcooled liq. film, rel. to LOCA 2-8151  
 cracked growth in flawed LWR structures, calc. by BIGIF computer program 2-24292  
 critical heat flux during blowdown transients, appl. to nuclear reactor loss of coolant accidents 2-12139  
 critical safety functions and nuclear power plant operation 2-29403  
 criticality safety in Albuquerque Operations Office 2-7400  
 criticality safety in UK, administrative practices 2-7401  
 criticality safety training in Babcock and Wilcox naval fuel division 2-15594  
 criticality safety in Hot Fuel Examination Facility 2-15539  
 cropped pin transfer system for the fuels and materials examination facility 2-24439  
 data collection for use in analysis 2-11168  
 data guide for reactor neutron metrology, activation and fission reactions 2-14988  
 debris bed dryout heat flux, particle diameter depend. 2-7239  
 debris bed post-accident heat removal, fluidisation 2-7240  
 decay heat removal systems, alternative options for improved safety 2-7244  
 decontamination, present situation 2-29416  
 degraded core accidents, effects of NRC regulations on existing plant 2-7301  
 Diablo Canyon auxiliary feedwater system reliability analysis 2-19747  
 dissolver tank solutions safeguards, remote plasma atomic emission spectroscopy appl. 2-6084  
 disturbance anal. systems for nuclear plant safety 2-34195  
 doorway monitors for safeguards security 2-4138  
 earthquake damage in Albstadt, Germany, 1978, rel. to reactors (*German*) 2-538  
 EBR-II, natural convection, steady-state temperature rise, flow rate 2-4092  
 EBR-II operational reliability testing 2-34157  
 EBR-II safety and operating experience 2-15603  
 elastoplastic structures, shakedown anal., review 2-11245  
 electrical cable burn mode tests 2-7285  
 Electricite de France, SRDF reliability data collection system 2-24382  
 emergency core cooling system, test procedure periodicity 2-11221  
 emergency planning for the nuclear power plant Ringhals (Sweden) 2-39203  
 emergency planning in Switzerland, overview 2-29406  
 emergency plans for UK reactors, revision post-TMI 2-29408  
 emergency post-accident sampling at San Onofre nuclear generating station 2-7393  
 emergency response system, microprocessor-based, for public officials 2-39205  
 environmental monitoring, for plumes from LWRs 2-49194  
 EPRI nuclear fuel-cycle accident risk assessment 2-11237  
 EPRI nuclear safety and analysis research programmes 2-11257  
 EPRI Reliability and Maintainability Analyser for reliability simulation of complex systems, study appls. 2-4103  
 EPRI Reliability and Maintainability Analyser for reliability simulation of complex systems 2-4104  
 Euratom safeguards, containment and surveillance 2-7407  
 evaluation using probabilistic risk assessment 2-24381  
 experimental nuclear reactor fuel unit behaviour due to flooding and during nuclear drying (*German*) 2-11202  
 exposure reduction techniques during refueling operations 2-15596  
 failure rate analysis, alternatives to Chi-squared approach 2-29319  
 fast reactor loss-of-flow accident simulation at Argonne National Laboratory, USA, evaluation 2-7317  
 faster than real-time simulation by the modular modeling system 2-15595  
 fault-tree, high-population component, dependent failure 2-11248  
 FBR, notional accidental releases, radiological consequences 2-4070  
 FBR cooling system, shock waves, elastic-plastic fluid-struct. code 2-24379  
 FFTF reactor cavity, neutron and gamma characterisation 2-34167  
 fibre mat insulation efficacy, press. gradient influence (*German*) 2-509  
 fission research reactors, radiation protection, legal requirements fulfilment, economic considerations (*German*) 2-49172  
 Florida Power Corporation, cost of implementing safety proposals post-TMI 2-4142  
 flow rate-limiting inserts characteristics in reactor loop emergency of integrity 2-15593  
 flow rundown transient, 7-pin bundle two-phase simulation 2-24377  
 fluid-solid interaction and fluid acoustical effects, piping system dynamics, finite element anal. 2-11244  
 fluid-structure interaction in three-dimensional space, finite element formulation 2-19749  
 free gas cloud, explosion propagation, pressure increase effects (*German*) 2-1227  
 French nuclear safety policy, human factors significance, lessons learned from Three Mile Island (*French*) 2-39198  
 FTR, partial carbide core, transient overpower accident, cladding failure, molten fuel ejection, consequences 2-4097  
 fuel assembly identification using ultrasonic seals 2-7201  
 fuel element overheating 2-15550  
 fuel performance testing with respect to pellet clad interaction 2-7167  
 fuel safeguards, reusable tamper indicating security seal 2-7203  
 fusion-fission hybrids, environmental aspects 2-11278  
 GCFR, fuel disruption in loss-of-flow accident 2-4095  
 general administrative safety-related activities 2-29398  
 graphite annealing, Wigner energy release 2-19736

**fission reactor safety continued**

HCDA, particle-size distribution from condensation in  $\text{UO}_2$  expansion in argon 2-4088  
 heterogeneous LMFBR, reactivity slumping in coupled reactor theory 2-4096  
 high temperature test reactor, safety system functional testing (*German*) 2-11259  
 high-level waste, with unseparated Pu, criticality safety calc. 2-7173  
 hot horizontal tube, refilling and rewetting, 2-fluid model struct. 2-8206  
 hot horizontal tube, refilling and rewetting, rel. to LOCA 2-8205  
 HTGR, seismic response with flock type fuel 2-24387  
 HTGR, temperature stabilisation, safety engineering (*German*) 2-535  
 HTGR fuel, thermally failed, fission product species release 2-7289  
 HTR, operator training rel. to accident severity (*German*) 2-532  
 HTR, water ingress, risk anal., radionuclide emissions (*German*) 2-533  
 HTR 1160, probabilistic safety study (*German*) 2-29390  
 HTR core, graphite corrosion by  $\text{H}_2\text{O}$  (*German*) 2-459  
 HTR core, water ingress, neutronic safety anal. (*German*) 2-534  
 HTR with core heating, fission product return mechanism, safety study (*German*) 2-7318  
 HTR-1160, core heating, water break-in, radioisotope releases (*German*) 2-531  
 human error understanding and aiding of human diagnostic behaviour 2-34194  
 human errors, incident anal. method 2-15587  
 IAEA role in safety and operational availability (*German*) 2-34170  
 IAEA safeguards, research and development 2-7404  
 IBR-30 reactor Dubna, biological channel neutron beam characteristics (*Russian*) 2-49160  
 improvements in Germany post-TMI (*German*) 2-39186  
 Indian Point-2, recirculation phase, probabilistic anal. 2-19746  
 Indian Point-3, post-accident reactor coolant sampling system 2-4131  
 interactive safety assessment of nuclear reactor systems 2-7319  
 Kahl experimental reactor, fuel element seals, demonstration expt. (*German*) 2-7200  
 KAHTER, critical HTGR test facility, heterogeneous poisoning, power reactor initial loading study 2-29359  
 KANUPP, reactor protection and control systems 2-4077  
 kinetics models, explosive solns. with positive reactivity feedback 2-7136  
 KNK-II fuel elements, gas fraction meas. in coolant flow (*German*) 2-11230  
 KNK-II reactor, second fuel element damage localisation and detection (*German*) 2-11258  
 KWU LWR plants, pellet clad interaction protection 2-4002  
 limited positive reactivity assembly bowing effects, reactor response 2-515  
 liquid drop fragmentation in safety anal. 2-4089  
 liquid-cooled reactors, surface boiling effects, thermo-hydraulic anal. (*German*) 2-523  
 liquids, nonequilibrium superheat-subcooling under sudden pressurisation 2-25428  
 LMFBR, buoyancy-induced flow reversal, thermal stratification effect 2-19705  
 LMFBR, container structs., load rejection performance in LOCA, gas damping (*German*) 2-541  
 LMFBR, core disruptive accident, molten fuel plugging, freezing, two-phase flow effects 2-4081  
 LMFBR, decay heat removal, prediction 2-24361  
 LMFBR, design feature to maximise simplicity, operability, safety 2-7254  
 LMFBR, design feature to maximise simplicity, operability, safety 2-19704  
 LMFBR, fission product release into primary system (*Japanese*) 2-39189  
 LMFBR, fragmentation of liquid metal droplet by impact of water jet 2-49156  
 LMFBR, fuel element container meltdown, heat transfer modelling (*German*) 2-536  
 LMFBR, fuel freezing in whole core accidents 2-4080  
 LMFBR, fuel-coolant interaction, spherical geometrical constraint, energy conversion 2-7262  
 LMFBR, HCDA expanding multiphase bubbles, Na entrainment 2-34174  
 LMFBR, high-pressure containment, cost-benefit study 2-4091  
 LMFBR, LOF-TOP accident, fuel pin failure, time delay effect 2-39197  
 LMFBR, loss-of-coolant accident, simulation with spatial anal. (*German*) 2-519  
 LMFBR, Na-saturated fuel particle beds, heat transfer behaviour, one-dimensional computation method 2-15544  
 LMFBR, plant protection and control systems, digital simulation 2-11255  
 LMFBR, sodium purification loop, computerised control system 2-19706  
 LMFBR, sodium-concrete ablation model 2-4090  
 LMFBR accident, aerosol behaviour code, gravit. collision efficiency 2-513  
 LMFBR accidents, coolant temp. fluctuations 2-7231  
 LMFBR accidents, escaping radioactive effluent effects (*Italian*) 2-19737  
 LMFBR core disruptive accident, boiling inception in volume heated liquids 2-4083  
 LMFBR core disruptive accident, fuel freezing expts. 2-4082  
 LMFBR core disruptive accident, transition to dispersed drop flow 2-4085  
 LMFBR core disruptive accident, upper structure dynamics simulation 2-7279  
 LMFBR fuel disruption under prompt burst heating, in-pile expts. 2-7277  
 LMFBR fuel elements with spiral wire spacers, coolant blockage calc. (*German*) 2-505  
 LMFBR fuel rod clads failure, pressure and mass rate transients anal. (*Italian*) 2-34173  
 LMFBR heat exchanger, flow instabilities due to inlet thermal transient 2-19713  
 LMFBR heat exchanger scale model, low flow thermal transient buoyancy effects 2-19710  
 LMFBR loss of flow simulations in the sodium loop safety facility 2-39199  
 LMFBR loss-of-flow accident simulation, microwave heating uniformity 2-4084  
 LMFBR loss-of-flow accidents simulation expt., fuel motion study 2-29402  
 LMFBR operation, safety aspects (*Czech*) 2-7273  
 LMFBR plant dynamic simulation under natural circulation 2-11256



**fission reactor safety continued**

LMFBR safety in light of Three Mile Island incident 2-7316  
 LMFBR transient analysis, appl. of DSNP simulation language 2-49103  
 LMFBR transient overpower cladding failure, simulation, computerised test system 2-7276  
 LMFBR two-stage accident, charcoal filter behaviour 2-49162  
 LMFBRs, large area Na fires, thermodynamic effects (*German*) 2-537  
 LOCA, coolant flow boiling burnout correlation 2-34139  
 LOCA, coolant pump characts. (*German*) 2-522  
 LOCA, downflow post-critical heat flux heat transfer to low press. H<sub>2</sub>O 2-39196  
 LOCA, maximum mech. load calc., fracture area and pressure loss time-depend. (*German*) 2-540  
 LOCA, pressure suppression system, dynamic response 2-49169  
 LOCA, reactor meltdown, heat sources and sinks in fuel 2-39192  
 LOCA, small break, two-phase phenomena, scaling studies 2-34190  
 LOCA, small-break, natural circulation two-phase flow expts. 2-49166  
 LOCA, two-phase flow dynamics (*Japanese*) 2-11241  
 local blockage experiments with water, SABRE2A code predictions 2-4093  
 LOFT, cooled coaxial low flow velocimeter development 2-39184  
 LOFT, flow calibration using drag disc/turbine transducer 2-34169  
 LOFT, pulsed neutron activation results, mechanistic anal. 2-24373  
 LOFT fuel module, post-irrad. examination 2-24332  
 loose part detector for PWR, acoustic system 2-15586  
 low flow-rate subcooled boiling, void fraction distrib. 2-24359  
 LWR, computer code WTRLGD, waterlogged fuel rods under RIA condition, transient anal. 2-15590  
 LWR, control-rod-drive operational events, defect flow anal. 2-7225  
 LWR, coolant chemical decontamination reagent choice mass transfer implications 2-29385  
 LWR, core meltdown, molten FeO<sub>3</sub> steam explosion expt. 2-7284  
 LWR, corrosion product release, effect on cooling system shutdown dose rate 2-29353  
 LWR, evaluation code (*Japanese*) 2-43591  
 LWR, factors affecting post-departure of nuclear boiling 2-49155  
 LWR, HCDA, dryout in large particle, deep debris beds 2-34187  
 LWR, hypothetical core meltdown accident, gas explosion, thermal detonation model (*German*) 2-529  
 LWR, leak detection in pressurised parts using sound emission (*German*) 2-19753  
 LWR, low conc. decontamination reagent development 2-29387  
 LWR, meltdown, core entrainment and sweepout in reactor cavity interactions 2-7283  
 LWR, molten fuel-coolant interaction during reactivity initiated expt. 2-15545  
 LWR, Pu fuelled, control and safety 2-4107  
 LWR, radiation control via coolant chemistry, Co reduction, high temp. filtration, decontamination 2-19755  
 LWR, radiation streaming in pressure vessel cavity 2-34193  
 LWR, safety level concept appl. 2-7137  
 LWR, spent fuel safeguards, surveillance, integrated monitoring system 2-4038  
 LWR, spray flow from nozzles, analytic model development 2-25415  
 LWR, steam explosion, two-dimens. hydrodynamics computer model 2-34191  
 LWR, steam explosion following postulated core meltdown accident, containment failure anal. 2-15592  
 LWR beta-gamma ray decay heat from fission products, standards 2-4068  
 LWR containment vessel improvement concepts, review 2-24394  
 LWR degraded nuclear reactor core coolability, effects of debris bed press. and particle size 2-39191  
 LWR press. vessel surveillance dosimetry improvement program 2-7267  
 LWR safety program, Mod-3 results review 2-11238  
 LWR shielding problems, optimised broad group structures 2-7310  
 LWR shielding problems, optimised broad group structures 2-19739  
 LWR spent fuel pins, high density storage, criticality expts. 2-7170  
 Magnox reactor corrosion, in-core monitoring developments 2-15582  
 MAVA, exhaust gas section, noise dynamics, probabilistic noise dynamics (*German*) 2-527  
 meltdown accident, analysis code KESS (*German*) 2-528  
 meltdown accident physics 2-7286  
 meltdown probability rel. to emergency cooling system factors (*German*) 2-539  
 2-mercaptopbenzothiazole, corrosion inhibitor, radiation chemistry, nuclear reactor appl. 2-29388  
 methodology applications program, Oconee results 2-7295  
 Missouri University Research Reactor, indoctrination program 2-15598  
 modified pulse design expts., gap conductance, temp. transients 2-49146  
 molten salt reactors, inherent safety improvement 2-7327  
 neutron dose rate meas., detector error evaluation 2-19775  
 North Anna Power Station Unit 2 natural circulation test report 2-15597  
 NPP Angra 2 reactor building, pile foundation seismic anal. 2-4075  
 NRC changes to 10 CFR 20, effect on Duke Power Co. 2-7306  
 NRC proposed changed to 10 CFR 20 2-7305  
 NSSS accidental physical states analyses for operator assistance 2-7292  
 nuclear criticality accident dosimetry system performance 2-7303  
 nuclear facilities, accidental activity release, radioactive plumes, wet deposition calc. 2-14131  
 nuclear plant safety and availability, Operational Support Systems improvement 2-29413  
 nuclear power development in the USA, LWR and FRR role 2-15602  
 nuclear power plants, fire occurrence rates 2-15591  
 nuclear power plants, human factors engineering 2-11240  
 nuclear power plants, radiation doses due to accidental radioactive release, quick assessment (*German*) 2-11280  
 nuclear power plants under seismic loads, dynamic anal. with finite elements 2-11247  
 nuclear power station, design requirements, probabilistic and cost-benefit anal. 2-11239  
 nuclear power station U-tube boilers, dynamic thermal-hydraulic behaviour 2-24378  
 nuclear power station VVER 440 reactor primary and secondary circuit diagnostic system characts. (*Czech*) 2-49158  
 nuclear reactor, events resulting in shutdown and their causes 2-29394  
 nuclear reactor accident, aerosol coagulation, deposition and leakage, scale modelling 2-7263  
 nuclear reactor safety-related events in May and June 1981 2-29395

**fission reactor safety continued**

nuclear safety cooling system pumping with forged housings (*German*) 2-542  
 NUSS standard 2-49164  
 occupational radiation-exposure reduction technology planning study 2-19751  
 Oconee 2B once through steam generator tube vibr. response 2-29370  
 on-line isotopic analysis of reactor coolant and containment atmosphere under post-accident conditions 2-7246  
 one-dimensional exponential expansion discrete ordinates nodal method 2-7308  
 online hazard detection, anticipator system approach 2-15601  
 operate-shutdown decision and test policy of safety systems 2-7321  
 operator decision-making, analysis 2-49168  
 operator emergency guidance program 2-7242  
 outlet plenums, mixing study following reactor scram 2-19743  
 Oyster Creek feed and condensate system reliability study 2-19745  
 packing ring joint in He reactor coolant technology, leak tests (*German*) 2-508  
 post-accident heat removal debris beds, molten steel behaviour 2-4059  
 pebble-bed reactor, 2250 MW, emergency cooling, delayed heat removal (*Russian*) 2-501  
 phased mission system reliability anal., PWR LOCA emergency cooling system anal. 2-39105  
 Philippsburg KKK-1 BWR, core transient recording and calc. (*German*) 2-489  
 piping systems subjected to dynamic loads, stress and strain criteria (*German*) 2-7264  
 plant piping, dynamic response and cumulative damage makes excess earthquake loadings 2-455  
 plant struct., dynamic characts. and seismic response, math. modelling 2-34172  
 PNP-500, heat removal system, water and air ingress, graphite corrosion (*German*) 2-500  
 post-accident contaminated water, processing methods 2-11250  
 post-accident heat removal, one-dimensional particle bed dryout model 2-485  
 post-accident heat removal in bottom heated porous layer 2-4058  
 post-accident sampling, Commonwealth Edison experience 2-7391  
 post-accident sampling, regulatory requirements development 2-7302  
 post-accident sampling, systems at Duke Power Company 2-4130  
 post-accident sampling system at Fort Calhoun nuclear power station 2-4132  
 post-accident sampling system for Yankee Atomic Power Company 2-7392  
 post-accident simulations, qualification, accelerated aging methodology appl. 2-11252  
 post-accident waste management using ion-exchange, radiolytic effects 2-11187  
 power reactor projects undergoing licensing review 2-29418  
 power/response spectrum consistent generation, iterative procedure 2-24360  
 preoperational vibration testing program 2-15569  
 pressure relief systems, bubble collapse, pressure transients (*German*) 2-504  
 pressure tube failure, ductile fracture anal. 2-4025  
 pressure vessel, deformation and stress anal. (*Chinese*) 2-43546  
 pressure vessels, cracking problems, safety margins in nuclear design 2-49161  
 pressurisation transients in BWR, RAMONA computer code simulations 2-15599  
 prestressed cast steel press. vessel, cold press. test results (*German*) 2-543  
 probabilistic risk assessment, uncertainty propagation 2-7297  
 probabilistic risk assessment of HTGRs 2-19734  
 process control software, reliable software, development and validation methodology 2-15588  
 protection system setpoints, thermal-hydraulic anal. 2-24371  
 protective logic system (*French*) 2-7260  
 public acceptance of nuclear reactors through mitigation of maximum accident consequences 2-7294  
 public opinion trends 2-43632  
 PWR, 900 MWe, tihange type Pu, steady state and accident anal. 2-29399  
 PWR, asymm. power tilt phenomenon, computer analysis 2-34182  
 PWR, bubble detection and level meas. in main coolant ccts. using ultrasonic transducers (*German*) 2-11260  
 PWR, compressibility and added masses in blowdown anal. (*German*) 2-11236  
 PWR, fault detection, meas. and anal. methods (*German*) 2-39169  
 PWR, heat transfer coeffs. under LOCA conditions in containment buildings 2-4076  
 PWR, hypothetical core meltdown, wall distortion, reaction force, time-depend. (*German*) 2-530  
 PWR, improved in-core instrumentation 2-15575  
 PWR, LOCA, full length emergency cooling heat transfer, TRAC-PD2 model 2-34178  
 PWR, LOCA, PKL reflood test K9, TRAC-PD2 model 2-34177  
 PWR, LOCA, Standard Problem 10, RELAP/MOD7 model 2-4100  
 PWR, LOCA, transients with auxiliary feedwater unavailability, bleed-and-feed recovery, simulation 2-34185  
 PWR, LOCA, Yankee Rowe analysis, lower plenum phase separation, computer model 2-34179  
 PWR, LOCA computer analysis for in-core injection system 2-34188  
 PWR, loss-of-coolant-accident, primary cooling system effects 2-24391  
 PWR, microprocessor-based, on-line decision aid for resolving conflicting nuclear reactor instrumentation 2-19696  
 PWR, natural circulation conditions, B injection transients, computer anal. 2-34189  
 PWR, primary cooling circuit leak, heat transport scale expt. (*German*) 2-502  
 PWR, radioactivity transport, computer simulation 2-19756  
 PWR, risk reduction from safety-grade means of reaching and maintaining cold shutdown 2-7299  
 PWR, steam line break induced steam generator tube rupture, computer simulation 2-34184  
 PWR, tests for LOCAs, simulation 2-24390  
 PWR accident simulation, prototype nozzle to produce stationary two-phase flow (*German*) 2-524  
 PWR containment, overpressurisation, debris/water interaction effect 2-7282



**fission reactor safety continued**

PWR containment response during a postulated core meltdown event 2-7287

PWR coolant loss effects, computer simulation (*German*) 2-520

PWR coolant-level instruments, using differential pressure transducers 2-34168

PWR corrosion products in primary coolant circuit, radiation field 2-19731

PWR design for optimum safety incorporating the human factor (*French*) 2-39104

PWR dry containment, core-melt accident, safety margins 2-24388

PWR facility, REBEKA, emergency cooling expts. (*German*) 2-29391

PWR fuel elements in LOCA, burst pressure, fracture, grain-size distrib. (*German*) 2-461

PWR LOCA, determ. variation and sensitivity in computer models 2-43524

PWR LOCA, upper plenum dump during reflood 2-24386

PWR loss-of-fluid test facility for reactor safety research 2-34199

PWR plant component failures and protection system challenges 2-29411

PWR plant shutdown operational methods, radiation control aspects 2-4102

PWR pressuriser, instrument fault detection 2-39193

PWR primary circulation leak, transient refilling, steam condensation (*German*) 2-495

PWR protection, thermal-hydraulic design 2-24369

PWR reactivity accident anal. using REPAID, VVER-D, SICHTA, DYN79 codes (*Slovenian*) 2-43592

PWR reflooding expt., simulation (*German*) 2-521

PWR rod control system, safety and reliability assessment methods 2-24380

PWR safety related systems, probabilistic assessment of technical specifications 2-7320

PWR safety study, German, methods and results (*German*) 2-39187

PWR scaled model, momentum and mass exchange during refill 2-7274

PWR single tube reflood expts., quench front heat transfer 2-4106

PWR steam generator overfill transient, safety aspects 2-29397

PWR with tight-lattice core using  $\text{UO}_2\text{-PuO}_2$  and very low water volume fraction, response to loss-of-coolant accident 2-15524

quasi-steady state two-dimensional wetting cond. problem, method for soln. 2-11242

radial shielding analysis of the gas-cooled fast reactor 2-7309

radial shielding analysis of the gas-cooled fast reactor 2-19738

radiation exposure in nuclear power plants, reduction by preventive maintenance 2-19735

radiation protection standards, proposed changes 2-7307

radiation safety appraisals of 47 operated nuclear power reactors 2-7298

radioactive fallout following nuclear accident, realistic assessment (*French*) 2-4079

radioisotopes, energy releases during fission 2-24336

radionuclides releases, obs. in Susquehanna River sediments 2-32133

reactivity perturbation accident anal. (*Czech*) 2-49159

reactor fuel, transient fission gas swelling due to grain boundary bubble growth, cellular computer model 2-7174

real-time dose prediction system, for nuclear accidents 2-39238

red-oil reaction, possible explosions in reprocessing plants (*German*) 2-480

reference accidents, appl. to real-time dose prediction 2-29405

reflood test facility, heat transfer coeff. correl. for saturated film boiling 2-7271

refuelling machine, semiautomated, for BWR in Switzerland 2-15477

reliability/availability database for advanced reactors, CREDO 2-11249

reprocessing facility, safeguards, dynamic material accountancy 2-4051

reprocessing plant, safeguards, containment monitoring (*German*) 2-7216

reprocessing plant, safeguards, materials accounting, integration with containment/surveillance measures 2-19691

reprocessing plant safeguards, held-up materials accounting 2-7196

reprocessing plant safeguards, inventory estimation using near real-time accounting 2-7219

reprocessing plants, safeguard systems, containment/surveillance systems 2-7222

reprocessing plants, safeguarding, using process results from existing instruments 2-7218

research reactor, reactor safety assurance consideration (*Japanese*) 2-4074

response surface methodology handbook, state of art 2-19754

risk anal., probabilistic method based on adaptive models (*German*) 2-526

risk assessment appl. to safety system status monitoring 2-7300

risk assessment in relation to major hazards 2-7322

ROSA-III core inlet flow rate meas., press. guide tube design and construction 2-7272

safeguarding, mixed oxide fuel fabrication inventory errors 2-19642

safeguards, accounting methods, loss detection, meas. errors 2-7199

safeguards, appl. of distribution-of-differences method for variance of data with outliers 2-6840

safeguards, compatibility between USA and Europe 2-7406

safeguards, computerised account auditing 2-4039

safeguards, containment and surveillance, function in IAEA 2-7187

safeguards, containment/surveillance instruments, performance anal. 2-7399

safeguards, electronic identification seals (*French*) 2-4037

safeguards, information system for IAEA 2-4145

safeguards, integrated data evaluation system, design 2-7402

safeguards, integrated systems effectiveness, quantification 2-7408

safeguards, international, containment and surveillance, design and evaluation (*French*) 2-7188

safeguards, loss estimation, sequential methods (*French*) 2-7197

safeguards, NDA instrumentation, intelligent devices 2-4135

safeguards, nuclear materials accounting, computer systems 2-4040

safeguards, record and report units, rounding 2-4144

safeguards, reprocessing plant input verification by isotope correl. technique 2-4050

safeguards, research and development programmes 2-7405

safeguards, sampling plan to verify large inventories 2-7403

safeguards, sealing, integrated sensor system for surveillance 2-7206

safeguards, sealing systems development 2-7207

safeguards, statistical anal. of data evaluation, verification of defects 2-7198

safeguards, tamper-indicating fuel rods for underwater storage 2-7202

safeguards for model fuel cycle 2-7186

safeguards in centrifuge enrichment plant, measurements 2-7215

**fission reactor safety continued**

safeguards NDA instruments, microprocessor automation 2-7189

safeguards seals, surface topographic identification 2-7205

safeguards surveillance, camera system based on Super 8 2-7209

safety parameter display systems evaluation 2-49170

security, interaction between R and D and safeguards in EEC 2-7185

security, safeguards development, review 2-4033

seismic response, active control appl. 2-24438

seismic testing, EPRI sponsored research 2-43590

Semiscale Mod-3 core, transition boiling heat transfer during reflood 2-49145

Sequoyah nuclear plant full-scale GO availability. analysis overview 2-19744

SGHWR, coolant circuit surfaces, activity retention 2-29383

short term cavity transient following LOCA, BEACON/MOD3 code calcs. 2-7241

short-lived fission products, average beta-ray energies 2-38983

simulator, multipurpose, based on interactive graphics, safety improvement 2-43587

small break accident, heat removal, natural convection tests 2-49154

small-scale reprocessing plant, safeguards, continuous inspection 2-7217

SNR-300 fast breeder reactor in Germany, energy release following accident, updated assessment (*Dutch*) 2-49157

society's general exposure to risk 2-19752

sodium boiling experiments in a 19-pin bundle under loss-of-flow conditions 2-24358

Soviet nuclear power stations using VVER-1000 standard reactor, safety systems 2-19748

space nuclear power, US flight safety process overview 2-7265

special nuclear materials, alternatives to self protection criteria for research reactors 2-19631

special nuclear materials, detection in portal monitors, for safeguards 2-4139

stainless steel clad rod bundles, thermal quenching by reflooding 2-7314

steel, stainless AISI type 304L, straight pipe for LWR, fatigue and fracture behaviour 2-11184

steel liner membrane under constraint load, failure anal. 2-11243

structural confinement and safety design of a fast reactor core 2-29316

structural safety and performance, sub-coating defect effects (*French*) 2-43593

subcritical fuel solutions, neutron noise anal. 2-7130

sudden pipe break, pressurised hot water, early response 2-19750

symptom-oriented approach to post-trip transient control 2-34162

symptoms characterization as a basis for post-accident procedures 2-7291

system reliability engineering, US nuclear industry perspective 2-7323

Tarapur nuclear power station, inservice inspection appl. 2-24384

terrestrial food chains, radioecology following accident release, season depend. 2-39247

thermal stress analysis in concrete 2-514

thermal-hydraulic methods, for transient thermal margin anal. 2-24368

Three Mile Island, how and why and effects 2-4109

Three Mile Island 2 accident, defense-in-depth approach to safety in LWR 2-29392

Three Mile Island accident, assessment of H release into containment 2-34181

Three Mile Island hands-on decontamination auxiliary building 2-7312

Three Mile Island hands-on decontamination auxiliary building 2-19741

THTR-300, safeguards system, data verification, optimisation 2-4034

THTR-300 pebble-bed reactor, emergency shutdown rods, fitting and removal (*German*) 2-517

TMI decontamination, on-site information releases, public relations problems 2-7311

TMI decontamination, on-site information releases, public relations problems 2-19740

TMI-2, conditions inside containment following accident 2-7304

TMI-2, core temp. transient in early phase of core uncovering 2-4078

TMI-2, fallout, infant mortality 2-19771

TMI-2, major lessons from accident 2-7261

TMI-2 accident,  $^{131}\text{I}$  and  $^{135}\text{Xe}$  release, off-gas handling 2-11251

TMI-2 accident, radioactivity release pathways (*Japanese*) 2-4073

TMI-2 accident, thermal-hydraulic and core-damage anal. 2-29393

TMI-2 containment decontamination 2-7313

TMI-2 containment decontamination 2-19742

TMI-2 cooldown and cleanup 2-29410

TMI-2 core/vessel/shield configuration, neutron spectral shift effects evaluation 2-29400

transient critical heat flux following nuclear reactor design basis accident, study results summary 2-4062

transient critical heat flux following nuclear reactor design basis accident, study test result data packages 2-4063

transient thermohydrodynamic processes following rupture of steam-generating channel in water cooled water moderated reactor, development mechanisms (*Russian*) 2-24392

transition boiling heat transfer in fission reactor cores during reflooding after LOCA 2-49165

transport of radioactive materials, accident-related risks 2-29462

TREAT Mk III coolant loop, thermoelastoplastic stress anal., finite-element calc. 2-7280

turbine failure, fragment kinetics 2-24389

two phase mass flow rate meas. techniques 2-25457

two-phase flow, component velocity determ. from light scatt. correl. (*German*) 2-525

vehicles passing  $^{137}\text{Cs}$   $\gamma$ -ray field, shielding factors 2-39231

VVER, safeguarding system, spent fuel neutron scanning 2-7190

WAMCOM computer code for common cause methodologies using large fuel trees 2-15600

Waste Isolation Pilot Plant, criticality safety anal. 2-7172

water shields, distrib. of  $\gamma$ -rays arising from neutron interactions 2-7153

water-cooled reactor, LOCA, reverse core steam flow, CREARE flashing transients, RELAP4 model 2-4099

water-cooled reactor, LOCA, transient heated pipe, RELAP4/MOD6 vertical slip model 2-34176

Westinghouse J-loop loss-of-coolant accident test facility 2-516

Westinghouse PWR, reliability engineering process 2-19758

WVER premises during LOCA in blowdown period, program package for NPS behaviour anal. (*Bulgarian*) 2-7268

ZEBRA, safeguards system prototype 2-7208

Zircaloy fire in reprocessing plant, temp. variation, computer simulation (*German*) 2-462

Zircaloy rod bundles, thermal quenching by reflooding 2-7314

ZPPR reactor, unified diffusion coeff. for Na-void worth anal. 2-3995



**fission reactor safety continued**

- C, activated, inert gas adsorption, review and evaluation 2-30744
- D<sub>2</sub>O, assay methods for safeguarding 2-19639
- Fe, shielding benchmark expts. for LMFBRs 2-24319
- He, impure pressurised coolant in HTGR, O and C pot., thermodynamic anal. 2-6055
- <sup>85</sup>Kr monitoring during TMI-2 purge 2-49193
- Na rewetting on hot stainless steel surface 2-7168
- Na<sub>2</sub>O aerosol, behaviour in nuclear safety pilot plant containment 2-4086
- Pu safeguarding, verification accountability system 2-19643
- Pu safeguards, controlled pot. coulometry anal. 2-19641
- UC-Na liquid interaction, vapour explosions 2-7278
- UF<sub>6</sub> container safeguards, sealing systems 2-7204
- UO<sub>2</sub> aerosol, behaviour in nuclear safety pilot plant containment 2-4086

**fission reactor theory and design**

- see also fission reactors; fission research reactors; neutron transport theory
- 800 MWe HTGR gas-turbine power plant design 2-29320
- aggregate fission product formulation in WIMS code depletion calcs. 2-39094
- AGR, fuel temp. coeff. of reactivity inverse kinetics anal. 2-39130
- anthropometric data base for power plant design 2-29318
- availability engineering, appl. to power plant design 2-11167
- bounded limit for the Monte Carlo point flux estimator 2-15444
- Browns Ferry scram system malfunction, review 2-7243
- buckling method for calc. of large symmetric cores 2-3998
- BWR, Mark 1 containment, venting strategies, vent-filters, probabilistic risk assessment 2-11253
- BWR, neutron noise and neutron wave propag. in heterogeneous media 2-39087
- BWR, nodal methods for three-dimensional simulator 2-34112
- BWR, NUREG-0460 requirements implementation 2-7293
- BWR, power distrib. change evaluation during daily load following operation (Japanese) 2-7229
- BWR, power-flattening method 2-4055
- BWR, rod drop accident, BNL-TWIGL code anal. 2-39194
- BWR blowdown emergency core cooling programme, 64 rod bundle blow-down heat transfer phase, test results 2-24393
- BWR burnup calcs., few group effective microscopic cross sections 2-24289
- BWR design, 200/400 MWe range, for developing countries, new concept 2-34109
- BWR dynamics, coarse-mesh core calc., a posteriori evaluation 2-29360
- BWR plant diagnosis system development 2-15446
- BWR pressure suppression pools, air bubble radial oscillation freq. 2-39171
- CDFR, policy decisions and international collaboration 2-49102
- centrifugal pump start up transients, mathematical model and expt. verification 2-34159
- charged-particle and neutron induced reactions, multigroup transfer matrices, two-body interaction 2-38993
- Clinch River Breeder, sodium-water reaction, design basis failures 2-4094
- coarse mesh calculations, a-posteriori evaluation 2-34115
- coated fuel particles, fission-product retaining kernel additives, irradiation performance 2-39133
- component failure, scarce data anal. 2-11254
- core flow test loop fuel rod simulators, joining techniques 2-39129
- coupled continuum/discrete radiation transport, continuous-energy adjoint Monte Carlo theory 2-39102
- coupled core reactor model, one-dimensional calcs. 2-11156
- cracked growth in flawed LWR structures, calc. by BIGIF computer program 2-24292
- Creys-Malville FBR, design reexamination 2-7139
- criticality, influence of geometrical perturbation 2-11165
- criticality benchmark calcs. using ENDF/B-V files 2-39178
- data collection for use in analysis 2-11168
- data evaluation, nuclear model appl. 2-4147
- data evaluation problem 2-4146
- data library creation for few group effective macro cross-sections (Bulgarian) 2-15430
- DIMCO system, E2 version for component calcs. (Spanish) 2-39097
- district heating reactor, core physics, calc. codes 2-11159
- EBR-II, power distrib. calc. in control rod below core 2-15460
- eigenfunction neutron transport problems, practical adjoint Monte Carlo technique 2-34106
- ELIN code, steady state and transient thermohydraulic calcs. (Bulgarian) 2-15431
- ENDF/B data from Monte Carlo calcs. 2-7355
- ENDF/B fission product data 2-15450
- ENDF/B-V actinide and fission product decay power 2-15449
- ENDF/B-V based three fast group reflector consts. 2-15458
- EPRI-CELL, core performance and fuel management code, assessment 2-15463
- failure rate analysis, alternatives to Chi-squared approach 2-29319
- fast critical expts., review 2-4112
- fast power reactor, finite difference and finite element theories comparison 2-49099
- fast power reactors, macroscopic heterogeneities in anisotropic diffusion approx. 2-34164
- fast power reactors, neutron data errors, effect on criticality and breeding coeff. calcs. 2-15436
- fast reactor, effective multiplication factors and reaction rates calc. with fission spectra 2-3994
- fast reactor, fuel breeding system, expt. data anal. 2-29314
- fast reactor, reson. self-shielding factors, interpolation method accuracy 2-3996
- fast reactor group constant collapsing by continuous slowing down theory 2-15445
- fast reactors, boundary resonance effects with steel or nickel reflectors 2-11166
- fast reactors, heterogeneous core grouping, effect on physical characteristics 2-15438
- fast reactors, resonance theory 2-15456
- fast reactors with axial position of oxide and metal fuels in the core 2-15437
- FBR, nuclear data needs 2-19600
- finite difference neutron diffusion theory, double error mode extrapolation procedure 2-39086

**fission reactor theory and design continued**

- finite element code FENDER for diffusion eqn. soln. in shield design appl. 2-49186
- finite element method for reactor calcs. 2-49088
- finite element methods in radiation physics, seminar, London, England (April 1981) 2-48386
- fissile elements, nucleon and pion collisions, particle prod., intranuclear cascade-evaporation model 2-7090
- fission product analytic impulse source functions 2-39103
- fission product capture cross-sections evaluation for ENDF/B-V 2-7259
- fission product data libraries for fast and light water reactors 2-15451
- fission product decay, buildup, mass transfer, calc. method 2-7134
- fission product kinetics, perturbation theory and sensitivity anal., for core charact. eristics- 2-3999
- fission product neutron cross sections, Japanese evaluation 2-15452
- fission products decay heat calcs. for  $\beta$  and  $\gamma$  energies 2-24288
- fluid-elastic parameters for reactor internals model testing 2-49120
- flux distribution determ. using heterogeneous computing methods (Romanian) 2-24291
- FMSR, collision density peaking effect on sodium void reactivity 2-15562
- French, designs for export (French) 2-43525
- FTF blanket test physics evaluation—supercell nuclear model 2-15464
- fuel clad config. with complicated boundary shape, temp. distrib., approx. analytical soln. 2-34142
- fuel motion surveillance, fast neutron hodoscope at TREAT 2-39172
- fuel rod performance prediction using COMETHE IIIJ and FCODE-Alpha computer codes 2-43565
- FUGEN HWR development in Japan 2-34153
- fuzzy expectation values in multistage optimization problems, nuclear reactor investment strategy example 2-15433
- gas-cooled fast reactor in 1981 2-7135
- gas-cooled reactors, development into HTGR and GCFR 2-7140
- GCFR, heterogeneous core configuration 2-15466
- generalized modified coarse-mesh diffusion nodal method 2-15443
- Genkai power station, secondary water chemistry control 2-19725
- geometrical splitting, second moment, variance ratio, benefit functions, Monte Carlo anal. 2-39101
- graphite, methane profile calc. in MEDIC model for AGR 2-15525
- graphite, neutron wave propag. across a temp. discontinuity, multigroup approach 2-39088
- harmonic regulation of the power of a power reactor 2-29313
- heterogeneous lattices, Feinberg-Galanin eqn. two group stochastic neutronics 2-19593
- HEXKIN code, hexagonal lattice reactor spatial kinetics code 2-49100
- HTR fuel cycles, comparison of high- and low-enrichment (German) 2-478
- HTR fuel pellets, Ag migration behaviour (German) 2-15528
- HTR status and possibilities for electricity generation (German) 2-43523
- hybrid reactor, sensitivity of characteristics to secondary neutron spectra 2-11163
- induced neutronic fluctuation anal. of two-phase flow thermal-hydraulics 2-15448
- internally cooled fuel elements, heat transfer anal., conformal mapping approach 2-34143
- irregular three-dimensional geometries, thermohydraulics, Navier-Stokes eqn., coord. transform. method 2-39100
- kinetic equations simulation, metrological testing (Russian) 2-19595
- kinetics models, explosive solns. with positive reactivity feedback 2-7136
- LASER, core performance and fuel management code, assessment 2-15463
- LEOPARD, core performance and fuel management code, assessment 2-15463
- LMBR steam generator, forced-connection boiling upflow system, instabilities in parallel channel 2-7326
- LMFBR, breeding ratio uncertainty estimation, cross section adjustment 2-452
- LMFBR, design feature to maximise simplicity, operability, safety 2-7254
- LMFBR, design feature to maximise simplicity, operability, safety 2-19704
- LMFBR, design inspectability, assessment 2-39106
- LMFBR, design inspectability assessment 2-34113
- LMFBR, fast reactor core concept using internal blanket 2-29311
- LMFBR, incorporating operating experience into future designs 2-7145
- LMFBR, incorporating operating experience into future designs 2-19599
- LMFBR, long-life cores, thermohydraulic feasibility study 2-11170
- LMFBR, Na-saturated fuel particle beds, heat transfer behaviour, one-dimensional computation method 2-15544
- LMFBR, spectral shift effects on reactivity coeffs. induced by Doppler broadening 2-15434
- LMFBR, USA developmental plant design 2-7144
- LMFBR, USA developmental plant design 2-19598
- LMFBR core design, lifetime rel. to double time 2-11169
- LMFBR loss of flow simulations in the sodium loop safety facility 2-39199
- LMFBR sub-assembly grids, local blockages formation, modelling 2-15479
- LOCA, downflow post-critical heat flux heat transfer to low press. H<sub>2</sub>O 2-39196
- LOCA, reactor meltdown, heat sources and sinks in fuel 2-39192
- local core flux determ. in anal. multigroup coarse mesh method 2-34114
- local power variation calcs., approximation using coarse reactor loop solns. (German) 2-449
- lumped fission product cross sections from ENDF/B-V for fast reactor analysis 2-15453
- LWR, computer code WTRLGD, waterlogged fuel rods under RIA condition, transient anal. 2-15590
- LWR, fuel cycle cost considerations of increased discharge burnups 2-39136
- LWR, off-line operating and test data anal. (German) 2-450
- LWR, safety level concept appl. 2-7137
- LWR and FBR fuel cycle strategies, optimisation with constraints on U availability 2-39132
- LWR bundles, auxiliary program SETNP for GGTC-E input prep. 2-3993
- LWR core, thermal-hydraulic anal. code, THERMIT 2-39107
- LWR degraded nuclear reactor core coolability, effects of debris bed press. and particle size 2-39191
- LWR fuel assembly, coarse-mesh transport computations, finite element approach 2-49094



**fission reactor theory and design continued**

- LWR fuel consumption calcs., epithermal resonance screening effect (*German*) 2-447
- LWR shielding problems, optimised broad group structures 2-7310
- LWR shielding problems, optimised broad group structures 2-19739
- main feedwater/condensate system, cost-benefit anal. 2-11222
- materials, inelastic analysis, benchmark problems, modelling and accuracy of solns. 2-34138
- MATXS-TRANSX system and the CLAW-IV nuclear data library 2-453
- moderator, propagating density perturbation, two-detector cross power spectral density, asymptotic freq. behaviour 2-39125
- modular approach to improved operator aids in the control room 2-34161
- molten-salt acceleration breeder reactor, single fluid type, design concept 2-29419
- Monte Carlo code for generalised geometry problems by tracking in finite element mesh 2-49096
- Monte Carlo parametric importance sampling with particle tracks scaling 2-24283
- Monte Carlo validation of integral transport and diffusion methods for BWR core analysis 2-15462
- neutron absorption by fission products, single effective fragment approx. for thermal reactor 2-29305
- neutron activation and decay data for decay-dominated applications 2-7143
- neutron activation and decay data for decay-dominated applications 2-19597
- neutron cross section data assessment using spectrum and reaction rate ratio meas. 2-39095
- neutron diffusion calc. code FEDM 2-39098
- neutron diffusion standard perturbation theory 2-34107
- neutron field distortion with randomly distributed macroscopic cross sections 2-15439
- neutron flux, functional perturbation, Monte Carlo calc. 2-11164
- neutron leakage, effect on cell calcs. for fast critical assembly 2-39099
- neutron noise, contradictory results 2-15563
- neutron reactions, critical parameter of a class of branching processes, estimation 2-29315
- neutron rethermalisation, singular Fredholm integral eqn. anal. 2-39084
- neutron spectra, data evaluation studies, unfolding methods, derivation and comparisons 2-39083
- neutron spectra unfolding using statistical regularisation method 2-15432
- neutron spectrum unfolding codes, standardisation anal. 2-7141
- neutron transport equation in a general curvilinear coordinate system 2-15625
- neutron transport through annular duct of large radius, expts., shielding calc. assessment 2-7128
- NSSS, inferring population characteristics from sample data 2-15447
- nuclear engineering education, interactive computer codes use 2-43527
- nuclear reactor, stochastic nonlinear modelling of fluctuations 2-3992
- nuclear reactor fuel behaviour modelling, adjoint sensitivity anal. 2-11161
- nuclear reactor kinetics splitting-up methods (*French*) 2-34108
- on the local-global decomposition in slowing-down theory 2-19594
- one region spherical reactor, neutron flux, spatial dependence of effective resonance cross sections 2-7132
- one-dimensional exponential expansion discrete ordinates nodal method 2-7308
- Oyster Creek feed and condensate system reliability study 2-19745
- Pall-Bell equation derivation for two-point reactors 2-39093
- Palo Verde power station, design innovation 2-15467
- pebble bed reactor design for easier construction and maintenance (*German*) 2-43522
- periodic systems, asymptotic stability on slow timescales, reactor dynamics appl. 2-11162
- phased mission system reliability anal., PWR LOCA emergency cooling system anal. 2-39105
- plant struct., dynamic characts. and seismic response, math. modelling 2-34172
- PNP 3000 pebble-bed reactor, spatial flux trimming, half-core computer model (*German*) 2-487
- pore distribution model for graphite gas transport properties 2-39153
- power station water-system needs matched to hydraulic transient anal. for waterhammer reduction 2-34111
- power system simulation, solution methods 2-29317
- power system simulations 2-19794
- pressure vessels and piping, plastic fracture mechanics techniques 2-34140
- probability distribution of the unavailability of a system 2-15441
- public acceptance of nuclear reactors through mitigation of maximum accident consequences 2-7294
- PWR, in core fuel management anal. 2-49101
- PWR, redesign for frequent refuelling 2-7138
- PWR cell, multigroup diffusion-transport problems in two dimensions, finite element method 2-49095
- PWR core, one-dimens. model, fluid-struct. interaction 2-24290
- PWR design for optimum safety incorporating the human factor (*French*) 2-39104
- PWR homogenised channels, transport coeff. for enthalpy exchange 2-15435
- PWR LOCA, determ. variation and sensitivity in computer models 2-43524
- PWR pressuriser, instrument fault detection 2-39193
- PWR reactivity accident anal. using REPA1D, VVER-D, SICHTA, DYN79 codes (*Slovenian*) 2-43592
- PWR single tube reflood expts., quench front heat transfer 2-4106
- PWR subchannel simulation codes, experimental testing (*German*) 2-451
- PWR with tight-lattice core using  $\text{UO}_2$ -PuO<sub>2</sub> and very low water volume fraction, technical feasibility study 2-15524
- PWRs, fuel element cross-section tables for computer calcs. (*German*) 2-448
- PWRs, two-phase flow, machine recognition of void fraction 2-16365
- radial shielding analysis of the gas-cooled fast reactor 2-7309
- radial shielding analysis of the gas-cooled fast reactor 2-19738
- radiation and neutron transport problems, zero variance biasing scheme for Monte Carlo calc. 2-39085
- radioisotopes, energy releases during fission 2-24336
- random matrices theory appl. to reactor noise 2-49105
- RBMK, load parameter improvement by macroscopic cross section correction 2-29312
- RBMK calc., homogenisation and heterogenisation errors 2-15440

**fission reactor theory and design continued**

- reactivity analysis of core distortion effects in the FFTF 2-15465
- resonance cross sections, source anisotropy, nonuniformity in multiregion problems 2-15457
- resonance shielding in thermal reactor lattices 2-15455
- RETRAN-02 computer-code for best-estimate analysis of LWR systems 2-3997
- SAMURA code predictions comparison with expt. fuel pin data 2-11160
- Sequoyah nuclear plant full-scale GO availability analysis overview 2-19744
- SGHWR, fuel element design development 2-34145
- simulator, minicomputer implementation 2-43586
- sodium water reactor, subchannel simulation codes, experimental testing (*German*) 2-451
- spacer elements for fuel rod assemblies, hydraulic resistance, generalised equations 2-39156
- splitting optimisation in Monte Carlo deep penetration models 2-7142
- splitting optimisation in Monte Carlo deep penetration models 2-19596
- square and hexagonal cylinder vibr. in liquid 2-20695
- steel, austenitic stainless, stress corrosion cracking, decontamination reagent effects 2-39138
- step-wise time depend. backward Kolmogorov eqn. with delayed neutrons in counting statistics 2-39096
- structural analysis programs, current status (*Japanese*) 2-11158
- structural confinement and safety design of a fast reactor core 2-29316
- TERHID code, steady state and transient thermohydraulic calcs. (*Bulgarian*) 2-15431
- thermal cross-sections of <sup>239</sup>Pu and <sup>241</sup>Pu, evaluation 2-49104
- time and energy Green's function for neutrons slowing down 2-15442
- TMI-2 core/vessel/shield configuration, neutron spectral shift effects evaluation 2-29400
- TREAT Mk III coolant loop, thermoelectroplastic stress anal., finite-element calc. 2-7280
- two phase bubble of hot water in cold water tank EXCOBULLE model anal. 2-34110
- two region slab reactor, neutron flux, spatial dependence of effective resonance cross sections 2-7132
- two-lump fission product model for fast reactor analysis 2-15454
- Westinghouse PWR, reliability engineering process 2-19758
- WWER, real struct. assembly in few group diffusion calcs. (*Bulgarian*) 2-15429
- WWER-440 reactor, reactivity coeff. dynamic expt. (*Russian*) 2-11217
- Zircaloy-clad  $\text{UO}_2$  elements, cladding strain; fuel density and relocation effects 2-39137
- ZPPR, heterogeneous core critical expts., design implications 2-34116
- ZPPR reactor, unified diffusion coeff. for Na-void worth anal. 2-3995
- ZPPR-10, criticality bias from critical expt. anal. 2-15461
- ZPPR-6 assembly 7, parameters from Monte Carlo calc. 2-15459
- <sup>241</sup>Am,  $A = 241.243$ , critical mass and radii, calc. 2-7133
- <sup>244</sup>Cm, critical mass and radii, calc. 2-7133
- <sup>25</sup>Mg( $\alpha, n$ ), 0-4.8 MeV, total cross-sections 2-427
- Na shields of LMFBR, neutron penetration study 2-15474
- <sup>237</sup>Np, critical mass and radii, calc. 2-7133
- <sup>240</sup>Pu, 0.01 eV-200 keV, cross-section 2-405
- <sup>240</sup>Pu,  $A = 238, 240, 242$ , critical mass and radii, calc. 2-7133
- <sup>240</sup>Pu(n,f), 0.35-9.6 MeV, cross-section ratio to <sup>235</sup>U 2-7124
- <sup>238</sup>Pv, role in LWR and LMFBR fuel cycles, use of heat spike 2-39131
- <sup>232</sup>Th(n,f), reactor induced, product mass distrib. 2-7123
- <sup>232</sup>Th(n, $\gamma$ ), 0.006-18 eV, capture and total cross-sections 2-404
- <sup>235</sup>U(n,f) 0.35-9.6 MeV, cross-section ratio to <sup>240</sup>Pu 2-7124
- <sup>238</sup>U, neutron capture shielded group cross section calcs. 2-15519
- <sup>238</sup>U resonance capture integrals in reactors, neutron self-indication meas. 2-39090
- U(p,n), 0-1.5 GeV, incorporation in HETC transport code 2-7095

**fission reactors**

- see also fission reactor decommissioning; fission reactor materials; fission reactor operation; fission reactor theory and design; fission research reactors; hybrid reactors; nuclear engineering; nuclear physics; nuclear power stations
- 1200 MWe Superphenix in France component assembly on site and progress report 2-15476
- accelerator-supported regionally distributed nuclear heat systems with nuclear-waste abatement capacity 2-39225
- Advanced converter reactors, fuel cycles 2-4053
- advanced PWR, neutron physics aspects (*German*) 2-19760
- advanced PWR, thermohydraulic and constructional limiting conditions (*German*) 2-11262
- American Nuclear Society conference, San Francisco, CA, USA (Nov.-Dec., 1981) 2-42785
- application of HTGR process heat to oil shale retorting 2-22537
- book, nuclear energy technology, theory and practice 2-48418
- Brazilian coal and oil shale development processes using nuclear energy (*German*) 2-19762
- breeder development in international cooperation (*German*) 2-34196
- breeder reactors, development in the USA 2-15611
- BWR, neutron flux distrib. analyser, operational testing (*German*) 2-11235
- BWR, weak radioactive waste solidification and intermediate storage in nuclear power station (*German*) 2-11191
- BWR pressure vessel, feed water line fitting problems (*German*) 2-547
- Calandria for BARC 100 MW thermal research reactor 2-34197
- CANDU system (*Japanese*) 2-4110
- CANDU technology, evolution and development 2-34202
- Creys-Malville FBR, design reexamination 2-7139
- cumulative fast reactor fission yields 2-7325
- dangers and limitations, generalised survey 2-553
- EBR-II safety and operating experience 2-15603
- epithermal neutron activation analysis with a SLOWPOKE nuclear reactor 2-17937
- fast breeder reactors and Pu fuel supplies 2-7329
- fast breeder reactors in Europe, case for programme 2-15604
- fast breeders, West German program experience 2-29420
- fast neutron breeder reactors, economic aspects (*French*) 2-34203
- FBR, development (*French*) 2-544
- FFTF, calorimetric methods, comparison and qualification 2-11223
- FFTF, role in LMFBR development 2-15610
- FFTF Na cooled reactor startup 2-15609
- gas-cooled reactors, development into HTGR and GCFR 2-7140
- German nuclear reactor construction delay costs, economic anal. (*German*) 2-15607



**fission reactors continued**

- high power high temp. reactor, design concepts with process steam exchanger (*German*) 2-11263
- high temp. gas-cooled reactor as flexible heat source, potential 2-7328
- high temp. reactors, nonelectric appl. prospects 2-6132
- high temperature reactor, construction planning concepts (*German*) 2-19759
- high-temperature gas-cooled reactor applications to fossil conversion processes 2-9634
- HTR, coal gasification appl. 2-27581
- HTR, side reflector construction (*German*) 2-548
- JRR-4 reactor, three-dimensional neutron streaming expt., Monte Carlo anal. 2-15425
- licensing since TMI-2, review 2-4143
- LMFBR, development program 2-4734
- LMFBR power plant experience, published Phenix data summary 2-39208
- LMFBR research progress in the USA 2-15608
- LMFBR steam generator US design 2-4111
- LWR accidents, consequences and effects (*Dutch*) 2-4071
- LWR nuclear plant shut-down costs (*German*) 2-15533
- multi-span heat exchanger tubes, tube-support interaction, analytical and expt. studies 2-4003
- nuclear cross sections for technology, conf. Knoxville, TN, USA, (Oct. 1979) 2-33235
- nuclear industry, public and occupational hazards, risk management, equity aspects 2-29433
- nuclear power station explosive dismantling practicality (*German*) 2-11291
- nuclear power stations, safe enclosure in decommissioning (*German*) 2-7148
- nuclear power stations with PWRs, fuel elements preparation and waste disposal (*Czech*) 2-49141
- nuclear reactor demolition, contaminated tubes and tube bundles explosive separation (*German*) 2-11289
- OPKLO phenomenon and the role of nuclear data in its study 2-4148
- plant welding technology, pipe line weld beads treatment (*German*) 2-4032
- pressure vessels explosive demolition method (*German*) 2-11290
- PWR, two-loop, 600 MWe, designed for export 2-34198
- PWR nuclear power plant total removal, flow chart concept (*German*) 2-476
- PWRs commissioning programme for Belgian electrical power generation industry (*German*) 2-43595
- RBMK graphite-water steam-generating reactor in the USSR 2-34201
- rotating bed reactor, EM gun power source appl. 2-49171
- seawater, radionuclides simultaneous determ. by hydroxide precip. 2-7384
- siting, hydrological requirements, radiological precautions (*Spanish*) 2-39252
- spallation breeders, prospects for replacing breeder reactors (*French*) 2-7368
- thermal neutron fluence meter, glass microslide type 2-609
- Three Mile Island, how and why effects 2-4109
- THTR steam generator development (*German*) 2-4115
- Tokamak maintenance method with downward access to inboard structures 2-24417
- tubular cracking oven based on test plant EVA II for PNP-reactor, conceptual presentation (*German*) 2-39207
- world-wide nuclear energy expansion possibility (*German*) 2-19761
- Na cooled breeder reactor, distance meas. under Na by ultrasonic means (*German*) 2-11231

**fission research reactors**

- see also fission reactor core control and monitoring; fission reactor theory and design; nuclear reactor instrumentation
- actinide irradiation experiments in EBR II 2-15557
- AECL programs in advanced systems research 2-4113
- Annular Core Research Reactor transition-phase fuel freezing expts. 2-4082
- Argonaut reactor pebble-beds, water entry effects (*German*) 2-518
- Battelle LOCA simulation tests in NRU 2-4108
- BWR, nodal methods for three-dimensional simulator 2-34112
- capsule design for pressure vessel steel irradiation tests 2-19716
- Clinch River Breeder, operability, inspectability, maintainability 2-7253
- Clinch River Breeder, operability, inspectability, maintainability 2-19703
- core vibration during reactivity pulse operation, expt. on YAYOI reactor (*Japanese*) 2-43578
- EBR-II—6 years of successful operation with a pool-type reactor 2-7248
- EBR-II—6 years of successful operation with a pool-type reactor 2-19698
- EBR-II metallic driver fuel 2-39157
- epithermal neutron beams for medical applications using research reactors 2-19719
- experimental nuclear reactor fuel unit behaviour due to flooding and during nuclear drying (*German*) 2-11202
- fast critical expts., review 2-4112
- fast neutron dosimeter diodes for reactor physics measurements 2-49151
- FFTF, multiduct test assembly, fuel pin life 2-11188
- FFTF reactor cavity, neutron and gamma characterisation 2-34167
- FRJ-2 expts. on fusion blanket technology (*German*) 2-15579
- fuel developments 2-19612
- fuel performance testing with respect to pellet clad interaction 2-7167
- German nuclear plant operation, 1980 Report (*German*) 2-29355
- Health Physics Research Reactor, operator training appls. 2-43588
- high temperature test reactor, safety system functional testing (*German*) 2-11259
- IBR-2, LMFBR, research program, pulsed neutron source 2-4069
- IBR-30 reactor Dubna, biological channel neutron beam characteristics (*Russian*) 2-49160
- Inconel 600 tubing in nuclear power demonstration unit boiler, chem. cleaning 2-4019
- JAERI model containment test facility under LOCA simulated conditions, I removal tests 2-7270
- KAHTER, critical HTGR test facility, heterogeneous poisoning, power reactor initial loading study 2-29359
- KNK reactor, Ar bubble transport in Na coolant (*German*) 2-492
- LMFBR loss-of-flow accidents simulation expt., fuel motion study 2-29402
- Lowell University Reactor, funding problems 2-15606
- materials testing reactors and hot labs. in EEC, handbook 2-14987

**fission research reactors continued**

- Missouri University reactor, high precision irradiation facilities 2-19718
- Missouri University reactor, new instrumentation 2-19717
- Missouri University Research Reactor, indocination program 2-15598
- MIT research reactor, element rotation/inversion to increase fuel depletion 2-19720
- monitor and control system 2-29373
- neutron transport through annular duct of large radius, expts., shielding calc. assessment 2-7128
- nuclear facilities total decommissioning (*German*) 2-7149
- nuclear reactor, events resulting in shutdown and their causes 2-29394
- Ohio State University, Reactor Sharing Program 2-15573
- PNP 3000 pebble-bed reactor, spatial flux trimming (*German*) 2-487
- prototype large breeder, insulating ceramics for header 2-49131
- PWR loss-of-fluid test facility for reactor safety research 2-34199
- radiation protection, legal requirements fulfilment, economic considerations (*German*) 2-49172
- reflood test facility, heat transfer coeff. correl. for saturated film boiling 2-7271
- RPI Critical Facility, role in nuclear industry training 2-15572
- safety assurance consideration from experiences in research reactors (*Japanese*) 2-4074
- SNEAK-11: Mockup critical studies of a small sodium-cooled fast reactor 2-34165
- special nuclear materials, alternatives to self protection criteria for research reactors 2-19631
- THTR-300, safeguards system, data verification, optimisation 2-4034
- TRIGA, instrumentation reconstruction for research reactor renewals 2-4067
- University Reactor Sharing and Fuel Assistance Program 2-15605
- YAYOI pulsed fast reactor, operational experiences 2-24357
- ZEBRA, safeguards system prototype 2-7208
- ZPPR, 6000 litre LMFBR core studies 2-34166
- ZPPR, heterogeneous core critical expts., design implications 2-34116
- ZPPR-10, criticality bias from critical expt. anal. 2-15461
- U<sub>3</sub>O<sub>8</sub>/Al cermet fuel for DIDO and PLUTO 2-4029
- fissures** see cracks
- flame sprayed coatings**
  - metallic coating, plating and anodising 2-31813
  - Ni-Al powdered protective coatings on steel, phase struct. changes 2-22385
- flame spraying**
  - Fe-Ni based alloys, amorphous, production by flame-spray quenching 2-2480
- flameproofing**
  - see also fires
  - plastics, fillers props. influence 2-5057
- flames**
  - see also chemically reactive flow; combustion; fires
  - air-acetylene, meas. of atomic collisional broadenings and shifts of profiles 2-20003
  - atomic absorpt. spectrometry internal standard method 2-17947
  - atomic absorpt. spectrophotometry using a flame atomiser, polarised Zeeman effect 2-15209
  - burner for laser probing of flames 2-43013
  - combustion processes, CARS probing 2-13958
  - convective flame front propag. in semi-confined tubes partly filled with propellant (*Russian*) 2-25376
  - detectors for burners, UV, electrode and photoresistive types, TTL interface (*French*) 2-48723
  - diagnostics, Raman spectroscopy using metal vapour lasers 2-6036
  - excited species probing using pulsed multichannel Raman spectroscopy 2-3631
  - fire plume rising from burning heat source 2-8192
  - gas sampling probe for flame structure analysis (*Polish*) 2-9548
  - hydrocarbon flame, soot formation and decomposition by combustion 2-22449
  - jet flame impinging on heat sensing surface, heat transfer 2-30201
  - laminar flame front, linear stability 2-12245
  - metallohalides flame emission, use for halogen anal. 2-22516
  - methane, laminar diffusion flame, thermal radiation, boundary layer eqns. 2-31921
  - methane diffusion flame, crossed-beam, background-free CARS 2-13960
  - natural gas flames, temp. meas. by multielement thermocouple 2-33523
  - nitramine, flame chemistry and deflagration, flame 2-41901
  - photography, back-lit, shadow and schlieren, using pulsed metal vapour laser source 2-15257
  - polymers, combustion in oxidising atmosphere, limiting conditions 2-47344
  - positive ions identification and examination in flames by MX-1307 mass spectrometer 2-22508
  - propagation hydrodynamics and principles in a planar slit in condensed matter 2-52209
  - propane-air flame, laser-induced Na fluoresc. saturation characts., chem. reaction role 2-47343
  - turbulent, temp. and vel. probability density functions (*French*) 2-12248
  - turbulent diffusion, chemical reactions, Lewis number effects 2-16392
  - turbulent diffusion flames, characts. determ. by single-pulse Raman meas. 2-6035
  - turbulent flame, combustion, coherent structure interaction 2-17896
  - turbulent mean reaction rates in large activation energy limit 2-4901
  - unsteady flame propagation in duct of varying cross-section 2-50321
  - Ba + O<sub>2</sub> low press. flames, chemiluminesc., rule of BaO<sub>2</sub> 2-31919
  - C particulate, in small pool fire flames, laser transmission meas. 2-13957
  - CN(B<sup>2</sup>Σ<sup>+</sup>) state, vibr. relax. 2-779
  - CO flames, alkali metals ionisation, RF reson. study and RF system design 2-4238
  - CO flames, Cs(K)(Na)(Li) ionisation rate const., RF reson. determ. 2-4239
  - CS<sub>2</sub>/O<sub>2</sub> and CS<sub>2</sub>/O<sub>2</sub>/N<sub>2</sub>O flames, CO(v) luminescence, elec. collision quenching 2-2715
  - Cu, optogalvanic resonance detection of pulsed dye laser atomic absorption 2-2744
  - H<sub>2</sub>-air flame, aspirated at. Na distrib. study using spatially resolved saturated absorpt. spectroscopy 2-22512
  - H<sub>2</sub>-O<sub>2</sub> flame temperature distrib. meas. by moire deflectometry 2-33602
  - H<sub>2</sub>PO<sub>2</sub>+inert gas mixtures laminar burning velocities 2-27738
  - Li, optogalvanic resonance detection of pulsed dye laser atomic absorption 2-2744
  - N flame, rot. struct. of CN emission 2-7565



**flames continued**

- Na, optogalvanic resonance detection of pulsed dye laser atomic absorption 2-2744
- O atoms in flames, coherent anti-Stokes Raman spectra 2-10879
- PO chemiluminescence flame, UV light amplification 2-44266
- S flame, use to raise power level of CO chemical laser operating by oxidation of CS<sub>2</sub> 2-39640

**flare stars** *see variable stars***flares, solar** *see solar flares***flash lamps**

- Braun F910 portable electronic flash, review 2-10886
- laser pump cavity design around flashlamp 2-29834
- laser-pumping flashlamps, failure, reson. mechanism 2-11707
- photomicrography, automation of microprocessor electronic flash 2-28915
- radiative transfer processes in combustion atmosphere 2-35041
- synchronising circuit for photographic flashes (*Italian*) 2-3640
- DF pulsed chemical laser with diff.-limited beam divergence 2-44268
- Xe small flash lamp pump source for colour centre lasers 2-7777

**flash photolysis** *see photolysis***flashover**

- air, voltage breakdown between closely spaced electrodes over polymeric insulator surfaces 2-50466
- glass insulator, surface flashover measurements in vacuum and N<sub>2</sub> gas 2-17408
- high vacuum accelerator tubes, prebreakdown and breakdown processes, review 2-11310
- HV impulse devices with aqueous insulation, insulator shape optimisation 2-44923
- insulator flashover vacuum, surface props. 2-17409
- Myler thin film, surface flashover arc orientation 2-36518
- spacecraft charging tests using multiple electron guns, NASCAP simulation 2-38038

**flaw detection** *see crack detection***flexoelectricity**

- liquid crystals, twisted, flexoelectric effect (*Russian*) 2-21027
- MBBA nematic layer, asymmetric anchored, penetration depth of surface forces 2-16564

**flexural strength** *see bending strength***flicker noise** *see random noise***flip-chip devices**

- see also thin film circuits*
- optical coupler, fabrication between single-mode fibres and LiNbO<sub>3</sub>:Ti channel waveguides 2-44443

**floating zone method (crystal growth)** *see zone melting***floating zone refining** *see zone refining***floculation**

- see also colloids; sedimentation*
- fibres, movement in alternating elec. field (*Russian*) 2-31928
- minerals, mag. floculation and treatment, theoretical model 2-52253
- mixed colloidal systems, heterocoagulation, adhesion and microflotation 2-47380
- powder dispersion in liquid, surface processes 2-47381
- suspensions, floculation in laminar tube flow 2-16278

**flow**

- see also boundary layers; chemically reactive flow; compressible flow; Couette flow; electrohydrodynamics; external flows; flow instability; flow measurement; flow through porous media; Knudsen flow; laminar flow; magnetohydrodynamics; multiphase flow; non-Newtonian flow; pipe flow; plasma flow; Poiseuille flow; pulsatile flow; rotational flow; shear flow; stratified flow; supersonic flow; transonic flow*
- free molecular flow regime, spiral grooved gas dynamic seal performance (*Japanese*) 2-23652
- shallow water theory, existence of unique soln. of initial boundary value problem 2-53

**flow birefringence**

- cellulose nitrate, high substituted soln., mol. characterisation, diffusion, flow birefringence, viscometry study (*Russian*) 2-44156
- para-copolyamides, flow birefr. and rigidity in H<sub>2</sub>SO<sub>4</sub> (*Russian*) 2-31450
- 2,6-lutidine/water binary liq. mixture, flow birefr. near crit. point 2-2215
- polyamide benzimidazole in sulphuric acid, optical anisotropy and mol. rigidity (*Russian*) 2-44158

**flow charts** *see flowcharting***flow control**

- district heating steam turbine, method 2-44803
- fission reactor loop emergency loss of integrity, flow-rate limiting inserts characteristics 2-15593
- flowmeters development in West Germany 2-12263
- gas flow, into evacuated devices control using batching valves 2-23622
- liquid flow stabiliser design, for flowmeter testing assembly 2-25464
- nuclear reactor pipeline protection using vortex amps. 2-43589
- solar line-focus collector, analytical dynamic modelling, control appl. 2-37449
- techniques, conf. at Dusseldorf, Germany 1980 2-12262
- valves, meters and gauges, survey of types 2-16400

**flow diagrams** *see flowcharting***flow instability**

- amplitude equation near convective threshold, appl. to time depend. heating 2-4821
- annular supersonic jet, shock wave effects, impinging on concave body, separation bubble 2-20705
- annulus, developing axial flow spatial stability against axisymm. disturbances 2-35221
- anomalous fluctuations near nonequilib. soft transitions, Rayleigh-Benard instability in nematics 2-3546
- N Atlantic Ocean circulation, nonlinear evolution of medium-scale perturbations 2-23019
- atmosphere, effect of  $\beta$  on chaotic amplitude behaviour of unstable baroclinic waves 2-14534
- atmosphere, linear theory for disturbances and eddy fluxes in Southern Hemisphere flows 2-14532
- axisymmetric perturbations during compression of gas-filled hollow by ideal liquid (*Russian*) 2-8266
- axisymmetric turbulent mixing layer, mixing mechanism and struct. 2-20647
- n-azoxyanisole, electroconvective flow threshold characts. (*Russian*) 2-16581
- baroclinic wave packets described by spatially varying Lorenz equations 2-44744

**flow instability continued**

- Bernard problem between rotating spheres, bifurcation and stability of rotating waves (*French*) 2-44737
- boundary layers, implicit noniterative scheme calcs. 2-44703
- Boussinesq approx. accuracy for incompressible fluid 2-50254
- breakaway flows, convergence and regularisation of discrete eddy method (*Ukrainian*) 2-1233
- catastrophic instabilities and related results in a fluid of third grade 2-1173
- cavitation, artificial, in non-steady-state flow around thin obstruction (*Russian*) 2-8193
- cholesteric liquid crystals, convective instabilities when heated from below 2-16320
- circular cascading blades, unsteady aerodynamic forces and moments 2-44746
- circular hydraulic jump, form, instability 2-30199
- circular jet, external flow velocity influence on inviscid instability 2-39964
- circulation reversal in nuclear power plant superheating channels, boundary investigation 2-19723
- compressible viscous flow, unsteady, alternating direction implicit finite element method 2-4847
- confined turbulent flow, numerical anal., appl. to confined jet axisymmetric mixing 2-44705
- Couette flow, nonisothermic, stability conditions 2-8114
- Couette flow transition determ. in finite geometries 2-12126
- developing flow in a channel, nonparallel effects 2-1175
- developing flow in pipe, stability, nonparallel effects 2-12226
- developing flow stability in a pipe, non-axisymm. disturbances 2-4794
- developing flow stability in two-dimens. channel, symmetric vs. antisymmetric disturbances 2-12219
- disturbances in 2-dimens. compressible flow, transformation of eqn. 2-39889
- double diffusive convection, subcritical instability, asymptotic anal. 2-44730
- dynamical system chaotic motions and strange attractors, review 2-3492
- EHD stability in presence of thermal gradient 2-8245
- electrically conducting viscous liquid, convective flow, stability 2-20672
- elliptic flows, high Reynolds number, hybrid and quadratic-upstream differencing comparison 2-25359
- enclosed rotating fluid, symm. baroclinic instability 2-1202
- finite Benard system crit. fluctuations, unavoidable pretransitional macroscopic fluid motion 2-50265
- fluid, conducting film, removal of Rayleigh-Taylor instability by mag. field and heat flux 2-8117
- fluid layer, periodically-heated, stability 2-4793
- fluidised beds, Rayleigh-Taylor instabilities, theory 2-35116
- free convection around horizontal cylinder in stratified liquid, investig. 2-1249
- free shear layer, axisymm., turbulent spot azimuthal struct. and initiation mechanism 2-16295
- free shear layers, turbulent mixing layers coherent structure determ. 2-16299
- free stream turbulence, interaction with screens and grids 2-44707
- fuel, steady-state burning stability in semiclosed vol. (*Russian*) 2-31920
- galaxies gaseous protoclusters, stability of contracting pancakes 2-14928
- gas, laser induced convection instability 2-35158
- gas, wave propagation in presence of thermal radiation (*Italian*) 2-20688
- gas flow, drag and unsteady flow at a liquid drop anal. 2-16362
- gas flows, one dimens. stability in expanding regions 2-50239
- geophysical fluid dynamics, instabilities 2-28074
- Gila River, Arizona, braided sandbed river, channel instability 2-23037
- gravitating disc, nonlinear instability 2-28570
- gravitational instability in multicomponent fluid, anal. rel. to relativistic cosmology 2-42592
- gravity waves, internal interaction with shearing motion 2-35173
- Hele Shaw cell, radial fingering 2-35217
- horizontal layers of immiscible fluids heated from above, instability 2-20642
- hydrodynamic instabilities, transition to turbulence, book 2-23392
- hydromagnetic stratified shear flow, stability 2-8243
- ideal gas, unsteady flow, shock wave motion, integral inequalities 2-16341
- ideal nonuniform liquid, stationary flow stability 2-20643
- incompressible liquid in channel, turbulent flow, numerical simulation (*Russian*) 2-8236
- incompressible Navier-Stokes fluid, hydrodynamic stability, bifurcation 2-25356
- induction pump channel uniform turbulent flow, hydrodynamic stability 2-39887
- inertial confinement fusion targets, coatings 2-11271
- instability wave generation in boundary layer by external turbulence 2-30103
- interstellar clouds, gravitationally driven instabilities in shock compressed gas layers 2-48299
- jet, 2-D, stability 2-12190
- jet, instabilities simulation and sound generation 2-12134
- jet stream-generated Kelvin-Helmholtz instability, VHF radar meas. 2-10141
- jets, horizontal, viscous buckling 2-8201
- jets, shear layer, noise and its effect on jet forcing 2-16360
- Kelvin-Helmholtz instability, vortex sheet dynamic struct. 2-39921
- Kelvin-Helmholtz instability growth, shear layer effects 2-48142
- laminar boundary layers, flow on swept cylinders, similar solns. 2-20636
- laminar flame front, linear stability 2-12245
- liquid films, flow down oscillating plane, nonlinear stability 2-20641
- liquid films, linear stability with interfacial phase change 2-35115
- liquid flow stabiliser design, for flowmeter testing assembly 2-25464
- liquid layer, thin cylindrical, nonlinear instability 2-50238
- liquid metal, instability in alternating mag. field, surface undulations 2-39994
- LMBR steam generator, forced-connection boiling upflow system, instabilities in parallel channel 2-7326
- LMFBR heat exchanger, flow instabilities due to inlet thermal transient 2-19713
- magnetisable fluid flow, interface instability study 2-1172
- magnetisable liquid, stationary cylindrical column stability 2-1171
- marginally stable inviscid flows with critical layers, review 2-8115
- MHD flow past porous plate, rot. effects, time-depend. free stream 2-50241



**flow instability continued**

- MHD unsteady Hele-Shaw flow of Kuvshinsky-type viscoelastic fluid 2-1269  
 mixed convection over horizontal flat plate, vortex mode instability 2-8165  
 mixture, stability of horizontal layers, convection 2-20663  
 multifluid incompressible flow simulation by finite element method, Rayleigh Taylor instability 2-4882  
 natural circulation system with parallel loops, steady-state and transient flow rates 2-50270  
 nematic liquid crystal, thermoconvective instability theory 2-45029  
 nematic liquid crystals, flow alignment instability during rectilinear oscillatory shear 2-12124  
 nematic liquid crystals, transition to turbulence, EHD instabilities, and tumbling phenomenon 2-12125  
 Newton-Busemann unsteady flow theory, appl. to oscill. bodies of revolution 2-39884  
 non-steady-state isothermal flow of viscous liq. in 2-dimens. planar region (Russian) 2-8116  
 nonlinear hydrodynamics stability, numerical studies by computer extended perturbation series 2-4797  
 nonlinear low-frequency cavity-oscillations behind a circular cylinder 2-1239  
 nonlinear waves in a liquid film entrained by a turbulent gas stream 2-50280  
 one-dimens. unsteady particle-laden flows with shocks, numerical calcs. 2-39885  
 onset in constricted tubes, turbulence region 2-1174  
 Ortolfo-Ives equation, stability anal. 2-4795  
 parallel flow, linear and nonlinear hydrodynamic instability mechanism 2-12127  
 perfect fluid, vortex flow, shallow water approximation calcs. 2-30146  
 pipe flow, aperiodic two-phase flow instability determination 2-12201  
 pipe flow, axisymmetric, finite-amplitude stability 2-30231  
 pipe orifice, high speed steady compressible flow characts. 2-39984  
 plunging airfoil, unsteady wake 2-44704  
 polyatomic gas, supersonic flow, anomalous relaxation 2-50298  
 polymer solutions, Couette flow, Taylor stability, mol. models 2-35184  
 primordial intergalactic cloud one-dimensional collapse, instability 2-28589  
 between prolate spheroids, unstable flow and rot. in narrow gap, arbit. axis ratio 2-50320  
 pulsed laminar free jets, unsteady effects, numerical soln. 2-20722  
 quadrupole vortex street, stability 2-39919  
 Rayleigh-Benard and Marangoni problems, eigenvalues 2-20644  
 Rayleigh-Benard convection, transition to turbulence, hydrodynamic instability 2-25377  
 Rayleigh-Taylor instability in LMFBR core disruptive accident 2-34174  
 rectangular channel, free convection onset 2-4823  
 Reynolds stress equations, in rotating coords., stabilisation, misalignment (French) 2-12133  
 Rivlin-Eriksen fluids of complexity  $n$ , canister flows, stability 2-25401  
 rotating disk flow, instability and transition 2-20677  
 rotating fluid, mean flow induced by travelling wave 2-12163  
 rotating rectangular boxes, thermal cellular convection, flow pattern visualisation 2-39907  
 rotating spheres, stability, non-uniqueness and turbulence transitions 2-16286  
 salt fingers, collective instability 2-6389  
 shear flow, compressible, thermal instability 2-25386  
 shear flow instabilities, laminar to turbulent transition, boundary layers 2-25358  
 shear flow instability, in rotation system with soap membrane (French) 2-20678  
 shear flow instability obs. in rotating system with soap membrane 2-1207  
 shear layer, spatially periodic, vortices, instabilities 2-39892  
 shear to sideways diffusion instability transition in vertical slot 2-30101  
 smectic A liquid crystals, convective instabilities when heated from below 2-16320  
 spherical clouds, self-gravitating, convective instability 2-32826  
 spherical particles, charged, uniform, coherent stream production 2-16371  
 spherical particles, charged, uniform, for studying matter in extreme states 2-16370  
 spinning axisymmetric body, boundary-layer transition, smoke visualisation 2-50334  
 stability and separation of freely interacting boundary layers 2-1176  
 stationary flow around gas bubble, stability and minimum principle (Russian) 2-1257  
 steady-state MHD convection in vertical planar channel, mag. field effects 2-39997  
 stratified fluid, double diffusive instability in porous medium 2-35118  
 stratified viscous free shear layers, energy budgets, linear anal. 2-44772  
 subharmonic sequences in Faraday expt., departure from period doubling 2-1212  
 subsonic diverging flow, stability aspects, comments and reply 2-8113  
 supersonic flow past body, combustion states, uniqueness and stability 2-12176  
 swirling pipe flow, vortices, modes of stationary breakdown 2-20680  
 Taylor instability, nonlinear theory, cut-off wave number in three dims. 2-39886  
 Taylor-Görtler instability of turbulent wall jets along concave surface 2-4796  
 thermal instabilities in radiatively driven winds appl. to emission line clouds of quasars and active galaxies 2-28326  
 thermally driven unsteady laminar flow in cavities, heat transfer, numerical calcs. 2-30137  
 thermocapillary stability during gravity flow of a liquid film 2-16285  
 thermoviscoelastic fluid in Couette flow, Taylor stability 2-30100  
 transonic flow, unsteady oscils., mean values calcs. 2-44754  
 tube banks subjected to liq. cross flow, fluid elastic instability 2-35117  
 turbulence, multivalued velocity field model 2-8118  
 turbulent convection, laser Doppler imaging 2-1181  
 turbulent flame, combustion, coherent structure interaction 2-17896  
 turbulent shear flows, mixing layer, vortices and instabilities, flow visualisation 2-16410  
 two dimensional unbounded flow, unsteady characteristics of cavitation behind circular cylinder 2-1240  
 two phase bubble of hot water in cold water tank EXCOBULLE model anal. 2-34110  
 two-component Benard problem, convection onset 2-4824

**flow instability continued**

- unsteady characteristics of two-dimensional rectangular cylinders in a uniform flow (Japanese) 2-20651  
 unsteady compressible 3-dimens. stagnation point laminar boundary layers, self-similar soln. 2-8111  
 unsteady compressible laminar boundary-layer flow within a moving expansion wave 2-50235  
 unsteady flow past a sphere at low Reynolds number 2-30102  
 unsteady gas flows, shock waves, radiative heat transfer, energy transport processes 2-16284  
 unsteady subsonic flow past on oscillating cascade, numerical anal. 2-50286  
 viscous dusty cond. gas, unsteady flow between coaxial cylinders 2-50240  
 viscous flow, in pipes with finite wall viscosity, wave motion, inertial effects 2-16375  
 viscous flow in annulus with rotating inner cylinder, radial temp. gradient effect on stability (German) 2-50242  
 viscous incompressible flow, between rotating cylinders, flow instabilities and transitions 2-25357  
 viscous incompressible fluid, marginal stability of Couette flow, spin decay 2-50278  
 viscous incompressible fluid, unsteady flow between coaxial circular cylinders, roughness effect 2-25355  
 viscous incompressible liquid, accelerating nonisothermal jets in field of centrifugal forces, instability anal. 2-39961  
 vorticity equation, linearised, numerical soln. using two-level implicit scheme 2-20683  
 H II regions, Rayleigh-Taylor instability of ionisation front rel. to Bok globules form. 2-14909  
<sup>3</sup>He-<sup>4</sup>He superfluid, Rayleigh-Benard instability, convective heat transfer 2-35827  
<sup>3</sup>He-<sup>4</sup>He superfluid mixture, convective instability 2-26167

**flow measurement**

- see also *anemometers; flow visualisation; flowmeters; laser velocimeters*  
 aerodynamic flows, density meas. using laser induced fluoresc. (French) 2-50344  
 aerodynamic testing using water towing tank techniques 2-16405  
 aerospace industry test methods advances, conf., Indianapolis, IN, USA (April 1981) 2-38367  
 aerospace turbomachinery flow diagnostics, using holographic interferometry and laser anemometry 2-20790  
 air flow rate meas. in aviation motor construction 2-30257  
 air-water mixtures, pipe flow, flow patterns, pressure gradients 2-30218  
 airflow through cascade of turbine blades, laser anemometry appl. 2-8248  
 annular two-phase flow in nuclear heat transport systems, electro-optical instrumentation development 2-4881  
 automatic null balance for flow probes (German) 2-1278  
 axisymmetric flow, rear sphere in spheric cavity (French) 2-39880  
 biomedical photoelectric plethysmography, fundamental aspects of reflection and transmission methods 2-42186  
 blast waves meas., attenuated by water sheets 2-16406  
 blood, Doppler US flow meas., max. freq. indication 2-42174  
 blood, US CW flow metering principles and appl. to peripheral arterial system study (Italian) 2-52588  
 blood flow, regional cerebral, meas. using NMR flowmeter focusing techniques 2-14318  
 blood flow detect. by intersecting zone Doppler unit 2-37637  
 blood flow in common carotid artery, transcutaneous meas. using US 2-37635  
 blood flow measurement in human legs using NMR noninvasive flowmeter 2-14317  
 blood flow monitor, for heart monitoring 2-52622  
 blood flow patterns, normal and abnormal renal artery, US echo-Doppler scanning meas. 2-47667  
 blood flow rate, EM noninvasive flowmetry, principles, math. models, instrumentation and methods 2-14309  
 boiler flow section temp. and pressure meas. error calc. 2-50345  
 boundary layer transducer, flow over helicopter rotor blades meas. 2-20788  
 BWR, feedwater nozzle, leakage flow rate meas. device 2-24374  
 calibration and certification systems in USSR, for pressurised and open flows 2-30248  
 carotid artery flow, transcutaneous meas. by US volume flowmeter 2-14307  
 coherent structures, variable interval time average and pattern recognition techniques 2-16305  
 compressible flow density gradient meas., by noise deflectometry 2-16343  
 constricting devices computing, optimal-precision 2-30256  
 cooled coaxial low flow velocimeter, for nuclear reactor test facility 2-39184  
 coronary blood flow, angiographic meas. by video dilution technique 2-27872  
 corrosive and toxic liquids, pipe-and-piston installations prospects 2-30249  
 decane, evaporating thin film, heat transfer in contact line region, microphotometric obs. 2-10842  
 differential laser microanemometer, contactless meas. of flow velocity distrib. 2-20776  
 differential pressure transducer design 2-33512  
 digital image processing for speckle flow velocimetry 2-42993  
 direction and pressure, using seven-hole probes 2-40011  
 discharge meas. Annular averaging pilot probe development 2-35243  
 dispersion flow, holdup and axial mixing in packed extraction column, meas. technique 2-25433  
 district heating steam turbine, method 2-44803  
 Doppler effect laser sweep anemometer for velocity profile measurement (French) 2-35241  
 electromagnetic flowmeters, sensitivity to vel. distrib., comparison 2-30245  
 EM flow transducer, dynamic characts. estimate 2-25469  
 evaporating bubble spray, size and velocity meas., heat transfer, stroboscopic photography technique 2-12203  
 fibre optic measurement sensors 2-44475  
 finite Benard system crit. fluctuations, unavoidable pretransitional macroscopic fluid motion 2-50265  
 finite element computer model of the hole pressure problem 2-30260  
 flow signal conversion meas., digital processing methods (German) 2-40009  
 flowmeters development in West Germany 2-12263



flow measurement continued

fetal aortic blood flow, human, Doppler US meas. 2-47665  
forced convection, heat transfer coeff. meas., electrolytic method 2-30117  
fuel flow and density meas., reference installations 2-30251  
gas, using stabilised ring laser 2-25061  
gas flow meas. and calibration facility,  $8 \times 10^{-7}$  to  $2.6 \times 10^2$  kg/sec 2-35244  
gas flow monitor for pressurised metal pipelines 2-12255  
gas-liquid mixture meas., local gas content determ. 2-25463  
groundwater flow, integral transform method for linearised Boussinesq eqn. 2-23030  
hot-film static-pressure probe for surveying flow fields, hypersonic wind tunnel appl. 2-35247  
human digital arteries, noninvasive pulsed Doppler blood flow vel. meas. and calc. flow 2-32239  
human limb blood flow meas. by elec. admittance plethysmography, evaluation of parallel conductor theory 2-37699  
hydrometeorological data, remote transmission and processing (Italian) 2-28211  
hypersonic wind tunnel, boundary layer transition sensors evaluation 2-35246  
induction pump, nonuniform channel flow construction charact. 2-39999  
internal combustion engine, flow velocity rapid estimate using photon correlation laser anemometry 2-12256  
jets, heterogeneous, high temp., contact methods for mass flow meas (Russian) 2-35240  
laser anemometer, output noise gradient spectrum modelling (Russian) 2-4903  
laser Doppler imaging system for flow velocity distrib. meas. 2-25475  
laser Doppler velocimeter based on electron-optical converter and photomultiplier 2-50337  
laser velocimetry for a large wind tunnel 2-40013  
laser-Doppler speed measuring system with microcomputer (Dutch) 2-8250  
level-flow method, liquid flow in open channel meas. 2-25471  
limb blood flow meas. by admittance plethysmography, evaluation of parallel conductor theory (Japanese) 2-52653  
liquid metal, regulating device, EM pump, flow rate meas. 2-40007  
liquid metals, meas. of flow rate 2-40006  
liquid-liquid droplet system, mass transfer effect, surface renewal phenomena 2-4878  
liquids and gases, using Laser-Doppler velocity meter (Dutch) 2-4906  
low-conductivity liquids, turbulent flow, correlation meas. 2-40008  
mass flow measurement with critical flow nozzles 2-25414  
mass flow rate meas., using vibrating Pitot tube to set up small press. var. (Japanese) 2-1274  
mass-filter probe, rarefied gasdynamical problems appl. (Japanese) 2-4905  
micropolar flow, fluid injection in an infinite channel, flow picture 2-12218  
microvascular blood flowmetry using intravital microscope-TV system, improvement by 1-bit correlator (Japanese) 2-47772  
molecular beams, shock-heated, velocity anal. by time-of-flight method (Japanese) 2-38713  
nozzle for subcooled water upstream flow, factors affecting metering performance 2-40014  
ocean currents investigation, EM techniques anal. (Russian) 2-10071  
optical correlation techniques in fluid dynamics 2-20775  
optical fibre high-resolution laser Doppler velocimeter for pulsatile blood flow meas. 2-9901  
particle entrainment measurement from fluidised beds 2-25436  
piezoelectric measurement of the local characteristics of the motion of solid particles in a two-phase flow 2-30246  
polystyrene, adsorpt. on Pyrex glass, conformation and dimensions, viscosimetry study 2-5299  
porous media flow, hydrodynamics, Doppler investig. 2-30247  
precision improvement by using probing methods 2-25474  
pulsating flow rate meas. by float-area-type flow meters 2-4889  
pulsed thermistor technique for measuring very low liquid flow rates 2-16402  
pyroelectric anemometers, preparation and flow velocity meas. 2-16393  
rippled beds in oscill. flow, vel. meas. 2-30244  
ROSA-III core inlet flow rate meas., press. guide tube design and construction 2-7272  
rotating cones in quiescent air, flow and heat transfer expt. study (Japanese) 2-25374  
sea-bed instrument for measurement of current and pressure 2-42502  
shallow gas-fluidised beds, coherent particle oscillation meas. 2-25435  
shear flow, stress differences meas. using truncated-cone and plate apparatus 2-30259  
shock tube data processing, using time delay computer 2-35237  
shock tube expt., density profiles of boundary layers predicting by laser interferometry 2-20791  
shrouded longitudinal fin array with tip clearance, press. drop characts. 2-12261  
slow variable sign flows with continuous velocity spectra, laser Doppler velocimeter meas. 2-35242  
solid particle motion in turbulent flow, moving irregularities effects 2-35212  
solid-liquid interface, channel flow, vorticity, wave motion, thermoelectric MHD 2-8246  
solid-liquid mixture, upward flow through vertical pipes, heat transfer meas. 2-30211  
solid-liquid mixture, vertical downward pipe flow, heat transfer 2-30210  
spherical blast waves interaction, reflected particle trajectory anal., photogrammetry 2-35233  
static measurement of flow in a heat meter, from Landis & Gyr. 2-20773  
steady accelerated flow, velocity meas., spark tracer method 2-20770  
symmetrical swirling pipe flow, orifice plate discharge coeff., ang. momentum flux 2-25450  
tandem steam turbines flow section characts., vibrations and aerodynamic testing 2-43009  
techniques, conf. at Dusseldorf, Germany 1980 2-12262  
thermoanemometer measuring transducers of fluid mass flow rates, metrological characts. 2-25467  
thermoanemometer sensor for low flow speed meas., using Si crystal whisker 2-25462  
thermosetting cmpds. flowability eval. using monohole flow test with high frequency preheating 2-25402

flow measurement continued

tidal channel flow, laser Doppler velocimeter meas. of geophysical turbulence 2-28247  
transient flow calibration facility, using drag disc/turbine transducer, mass flow calc. 2-34169  
turbulence, vel. fluctuations, 3-dimens., minicomputer-aided meas. (Japanese) 2-8251  
turbulent, discharges averaging intervals estimate 2-25473  
turbulent boundary layer, heated layer, Reynolds number effect, flow meas. 2-4809  
turbulent boundary layer separating struct., high-order turbulence results 2-35123  
turbulent boundary layer separating struct., mean flow and Reynolds stresses 2-35122  
turbulent boundary layer separating struct., transverse vel. meas. 2-35124  
turbulent coherent structure, conf., Madrid, Spain (1980) 2-14980  
two phase flow monitoring instruments, effects of flow dispersing screens 2-25459  
two phase frictional pressure drop calc. method 2-25423  
two phase mass flow rate meas. techniques 2-25457  
two phase suspension flow, laser Doppler anemometry for in-situ meas. of flow props. 2-25458  
two-phase flow, component velocity determ. from light scatt. correl. (German) 2-525  
two-phase flow in nuclear reactor, liquid thin film thickness meas. 2-38634  
two-phase flow in porous media, liquid saturation meas. using gamma densitometer 2-35245  
two-phase flow sensor, based on neutron field in reactor core 2-39185  
two-phase flows, gamma densitometers design aspects for void fraction meas. 2-25455  
unstable airflow, single-particle velocity and trajectory meas. of microscale inhomogeneities 2-50341  
unsteady reversing flow, probe for meas. velocity and wall shear stress 2-25477  
US flow metering, differential transit time method 2-50339  
US flow metering, generation of plane acoustic waves using partially-electroded piezoceramic discs 2-50044  
US flowmeters, self-balancing AC potentiometer (Russian) 2-23604  
valves, meters and gauges, survey of types 2-16400  
vertical two phase flow, statistical anal. of pressure fluctuations 2-39973  
viscoelastic fluid, rimming flow in rotating cylinder, viscosity determ. 2-35238  
wall shear stress, disturbed turbulence struct. effect on Preston tube meas. 2-50335  
water local velocity measurement with hot wire anemometers (German) 2-44800  
well-type flow-rate meters, with turbine transducers 2-25466  
wind tunnel, hypervelocity, flowfield surveying techniques using traversing probe system 2-16409  
wind tunnel, using laser interferometer skin friction meter 2-20789  
wind tunnels, flow field meas. using US system 2-39785  
 $BF_3$ , band model parameters, flame and flow tube, meas., IR absorpt. coeffs. 2-7561  
 $CO_2$  slug, in downflowing liquid, gas absorpt. meas. 2-20732  
Hg porosimetry, hysteresis, entrapment and wetting angle 2-25460  
N<sub>2</sub> supersonic jet flow, shock waves, flow struct. study 2-50297  
N<sub>2</sub> molecular flow meas. using stimulated Raman gain spectroscopy 2-8249  
 $NH_4Cl \cdot H_2O$  solution solidification, gravity-related flow study using laser shadowgraph and schlieren systems 2-25454

**flow process charts** see flowcharting

**flow resistance** see viscosity

**flow separation**  
3-dimensional, free vortex type, streamline method determ. 2-39916  
airfoils, viscous flows including separation, coupling approach to calcs. (French) 2-1234  
annular supersonic jet, shock wave effects, impinging on concave body, separation bubble 2-20705  
axisymmetric entrance diffuser, channel flow, oblique shock, flow separation 2-30226  
boundary layer flow past two dimens. obstacles 2-35112  
computation of flows including strong viscous interactions with coupling methods (French) 2-1215  
detached flow around objects by an accelerated flow of a nonviscous fluid 2-39925  
dry-surface coating method for visualization of separation on a bluff body 2-12252  
heat transfer and flow characteristics around cylinder (Japanese) 2-44733  
hypersonic flow, around spherically blunted cone, streamline method calcs. 2-39916  
impact of a figure of revolution in a stream of incompressible fluid with separation of a jet 2-20795  
laminar boundary layer flow, singularity at separation, forced convection 2-16281  
laminar boundary layer flow separation over moving walls, MRS criterion 2-20637  
laminar boundary layer separation in supersonic flow following shock wave 2-20639  
laminar flow over backsteps, visualisation study 2-50234  
laminar separated flows, two-dimensional boundary-layers calc. 2-16280  
laminar separation bubble with transition-attempt at prediction with local coupling (French) 2-1259  
nonsteady three-dimensional stagnation point flow with hard blowing 2-25409  
nozzle with strongly curved walls, separationless flow 2-39966  
radial flow between closely-spaced parallel plates, transitions 2-30232  
separated boundary layer flows with high Reynolds numbers 2-4782  
separated flow past slender elliptic cone at incidence 2-1237  
shock wave-boundary layer interaction, calc. with flow separation (French) 2-1232  
spherical column packing, local aerodynamics and heat transfer characts. (Russian) 2-12215  
stability and separation of freely interacting boundary layers 2-1176  
supersonic and hypersonic laminar separated flow, numerical soln. (Chinese) 2-25388  
supersonic axisymmetric flow, over sharp edge of bodies, boundary layers, viscosity influence 2-30171



**flow separation continued**

- supersonic flow, viscous, around solid of revolution, bow separation zone, computer simulation 2-30176
- surface vorticity modelling of separated flows from two-dimensional bluff bodies of arbitrary shape 2-16344
- transonic flow, viscous-inviscid interaction, over airfoils, separated laminar and turbulent flows, boundary layers 2-8174
- triple-deck solns. for subsonic flow past humps, steps, corners, trailing edges 2-44751
- 3-D turbulent boundary layer, singularities and separation phenomena 2-8124
- turbulent boundary layer separating struct., high-order turbulence results 2-35123
- turbulent boundary layer separating struct., mean flow and Reynolds stresses 2-35122
- turbulent boundary layer separating struct., transverse vel. meas. 2-35124
- turbulent boundary layer separation criterion based on turbulent fluctuation intensity 2-44714
- turbulent flow in arbitrary geometries, finite-volume method appl. 2-30108
- two dimensional flows with finite length separated regions 2-1235
- two-dimensional flow, perpendicular to flexible impervious membrane 2-16348
- two-dimensional separated flow, discrete vortex dynamics 2-1236
- two-phase stratified pipe flow, pressure drop and holdup, separated flow, Lockhart-Martinelli theory 2-12202
- unsteady flows, separation definition 2-20720
- unsteady reversing flow, probe for meas. velocity and wall shear stress 2-25477
- viscous incompressible liquid, accelerating nonisothermal jets in field of centrifugal forces, instability anal. 2-39961
- viscous-inviscid interactions, AGARD conf., Colorado Springs, CO, USA (Sept.-Oct. 1980) 2-11

**flow through porous media**

- air, flow through highly deformable porous media 2-25440
- air, perpendicular jet flow through perforated wall for small Reynold numbers, convective heat exchange 2-25371
- alluvial aquifer, pollution propagation, distance-effect (French) 2-3038
- arbitrary profile, movement in fluid bounded by rectilinear porous wall (French) 2-4883
- blowing into a supersonic stream through a permeable surface 2-39979
- boiling, crisis phenomena under conditions of free convection in bundle of pipes, flushed with air 2-4703
- bone, wet, cantilever bending, streaming pot. and piezoelectric mechanism comparison 2-22718
- capillary porous body, struct., mathematical description 2-37039
- capillary porous body of spherical geometry under boundary conditions of first kind, heat and mass transfer 2-8136
- carboxymethyl cellulose, aqueous soln., mass transfer and pressure drop in fixed and fluidised beds 2-20743
- cellulose nitrate-poly(vinyl pyrrolidone) blend membranes, ultrafiltration and dialysis charact. 2-14005
- channel with porous layer, heat transfer during liq. filtration 2-30135
- coastal aquifer, moving interface problems, BIEM solns. 2-37912
- compressible boundary layer with stationary origin on continuous moving porous surface with large suction 2-35111
- compressible porous media models, theory of mixtures formalism 2-50078
- conduit flow of fluid through its solid phase, intraglacial channel flow appls. 2-30227
- convection in layered porous medium heated from below 2-16313
- cubic packing model, wall layer hydrodynamics, Doppler investig. 2-30247
- cylindrical tube with one-sided heating, porous cooling, efficiency 2-25232
- developed flow in tube with injection and suction through porous walls 2-20648
- disk, translation in viscous fluid, friction coeff. 2-30221
- dispersion flow, holdup and axial mixing in packed extraction column, meas. technique 2-25433
- East Mesa geothermal field, California, plausible two-dimensional vertical model 2-42308
- Ekman-flow induced by a naturally permeable bed 2-39922
- elastic porous media, diffusion process anal. using semi-analytical finite element scheme 2-20745
- elastic viscous fluid past infinite porous plate with constant suction, 2-D flow, heat transfer 2-20729
- electrolysis cell, gas flow through porous medium, math. model 2-44782
- filtration theory problems, porous media and partially saturated flow equations 2-12206
- fission reactor rod bundles, local blockage experiments with water, SABRE2A code predictions 2-4093
- flow in immediate vicinity of porous shroud, flow visualisation study 2-16398
- flow through horizontal plate bounded by permeable bed, free convection effects 2-35216
- fluid saturated porous materials, mech. response 2-16374
- free and forced convection flow through channel, wall porosity and Hall effects interactions 2-8222
- free convection and mass transfer flow through a porous medium bounded by an infinite vertical limiting surface with constant suction 2-20746
- free convective mass transfer in porous media 2-1194
- gas, 2-D transonic flow around an airfoil in wind tunnel with porous walls 2-39938
- gas flow through porous medium with turbulent filtration 2-8220
- geothermal systems, vapour-dominated, one-dimensional model 2-32546
- glass membrane, finely porous, water filtration 2-17915
- groundwater, hydromechanical behaviour of deformable rock fracture under normal stress 2-32506
- groundwater, pore pressure and water level changes accompanying fault creep rel. to earthquake prediction 2-32439
- groundwater flow, statistical mechanical theory 2-23031
- Hartmann flow through porous media 2-35215
- heat transfer coeff. for perforated plate positioned normal to oncoming flow 2-44725
- heat-carrier flow, through porous mat. in channel, heat transfer (Russian) 2-50256
- Hele Shaw cell, radial fingering 2-35217
- horizontal porous layer, three dimens. thermoconvective struct. (French) 2-1261

**flow through porous media continued**

- inclined annular insulation layer, 3-dimens. natural convection in porous medium (Japanese) 2-4819
- incompressible fluid with variable physical props. in tube in porous walls, drag and heat transfer in laminar motion 2-25352
- ingots, axis-symmetric, macrosegregation, effect of fluid flow 2-9353
- isothermal nonlinear anisotropic filtration, boundary-value problems 2-20749
- laminar boundary layer, reverse transition influence of suction (Russian) 2-30098
- laminar boundary layer on permeable surface in neighbourhood of symmetry plane of blunt bodies 2-39883
- laminar film condensation on a porous vertical wall with non-uniform normal velocity 2-50231
- lateral intrusion of natural convection into a horizontal porous structure 2-8144
- linear hodograph solutions of natural convection equations in a porous medium 2-44722
- liquid saturation meas. using gamma densitometer 2-35245
- metals, gas flow charact., porosity and particle size effects 2-44781
- MHD oscillatory flow past infinite porous vertical plate, suction and free convection currents effect (Croatian) 2-16388
- micropolar fluid flow in channel with porous walls, numerical soln. 2-50316
- multiphase flow with diffusion and chem. reactions in porous media, macroscopic eqns. 2-50310
- natural convection through horizontal porous layer, asymptotic anal. 2-20664
- natural convective heat transfer through vertical porous layer, transient behaviours 2-30116
- Newtonian fluids flow through granular beds, correl. of resistance data 2-25438
- non-Newtonian flow 2-4865
- non-steady-state flow at porous plate with blowing or suction 2-12214
- non-steady-state Navier-Stokes, eqn., suction effects on planar flow (Russian) 2-8221
- nonisothermal adsorbable mixture, motion through porous medium 2-39978
- nonlinear anisotropic flow through porous medium, equations 2-39980
- nonsteady flow through porous media in the presence of a threshold gradient 2-8219
- numerical methods in fluid dynamics, conf., Stanford, CA, USA 2-28608
- oil, nonisothermal displacement from porous medium 2-20742
- oil reservoirs, miscible displacement of fluid, heat transfer calcs., appl. of NAMMU program 2-8224
- particle to gas heat transfer coeff. meas. from one shot thermal responses in packed beds 2-30220
- plastic flow in porous materials, energy, bilateral estimation (Russian) 2-30035
- polyethylene terephthalate melts, flow through granular bed, correl. of resistance data 2-25438
- polymer additives in H<sub>2</sub>O, relative permeabilities of porous media 2-1735
- poroelastic dry body, fluid in filtration, rigid skeleton model 2-12217
- Pozzi-Friedman problems, boundary variation method 2-20748
- pulsatile blood flow in a rigid pulmonary alveolar sheet with porous walls 2-22779
- pulsatile visco-elastic channel flow, heat transfer, approx. soln. by perturbation theory 2-12135
- PWR containment, overpressurisation, debris/water interaction effect 2-7282
- radioactive solutions, infiltration into water-bearing strata (German) 2-458
- Rayleigh-Benard convection in a slightly tilted porous cavity (French) 2-44728
- rectilinear profile, movement through fluid parallel to porous wall (French) 2-4884
- rock joint permeability, depend. on specimen size 2-32496
- rocks, effect of specimen size on pore fluid movement in fractures 2-32511
- sedimentary rocks, moderately permeable, geothermal heat flushing 2-32026
- singularity method appl. to investigating flow in porous region bounded by confocal prolate spheroids 2-8223
- smectic A liquid crystals, permeative and hydroelastic flow 2-12123
- soil, flow of nonfreezing water interlayers and frost damage 2-18472
- spheres, piecewise similar, numerical soln. of problems of filtration and heat conductivity (Russian) 2-12210
- stationary fresh-water lens, boundary variation method 2-44783
- steady flow through porous media 2-12207
- Stokes' flow past porous particles, fluid velocity calcs. 2-12212
- stratified fluid, double diffusive instability in porous medium 2-35118
- sublimation, with coupled heat and mass transfer in porous medium 2-35038
- thermal convection from conc. heat sources in porous media 2-8143
- thermal equation for flow in porous media 2-50314
- thermal propagation, energy equation (French) 2-12208
- transient 3-dimens. natural convection in porous media 2-8145
- transient heat transfer to porous medium, perturbation solns. 2-35164
- two phases in relative motion, boundary value problem for temp. field 2-16364
- unsteady hydromagnetic flow near a moving porous plate 2-12237
- unsteady MHD flow past porous plate, rot. effects, time-depend. free stream 2-50241
- unsteady porous flow with a free surface 2-12209
- void diffusion in porous medium with surface diffusion, mean free path theory 2-40015
- wall effects, in laminar flow through packed beds 2-35214
- water, flow through highly deformable porous media 2-25431
- water, mass transfer and pressure drop in fixed and fluidised beds 2-20743
- <sup>4</sup>He, melting, freezing, and superfluidity in porous media 2-35776
- Hg porosimetry, hysteresis, entrapment and wetting angle 2-25460
- Ni, pressed powder, porous permeable element, porous leaks 2-25439

**flow visualisation**

- aeroballistic trajectory, holographic interferometer for three-dimens. gas flow visualisation 2-1277
- aerodynamic testing using water towing tank techniques 2-16405
- aerospace turbomachinery flow diagnostics, using holographic interferometry and laser anemometry 2-20790
- agrometeorology, heat and mass transfer, electrochem. simulation 2-4687



**flow visualisation continued**

- atherosclerotic human abdominal aorta, flow visualisation in mould 2-42131  
 computerised image analysis appl. to aerodynamic testing 2-40012  
 confined counter current flow tilting, stretching, pairing of collapse vortex struct. 2-25448  
 convection flow field, natural, visualization techniques review 2-20784  
 data quantitative interpretation, by coupling video techniques and micro-computer 2-20785  
 dry-surface coating method for visualization of separation on a bluff body 2-12252  
 electrostatic precipitation method 2-20780  
 expanding bodies, flow visualisation 2-12178  
 flow in immediate vicinity of porous shroud, flow visualisation study 2-16398  
 fluid dynamics of flow excited reson. 2-16396  
 fluid-dynamic interaction between two spheres 2-25422  
 gas reactions, valence-shell photoelectron spectroscopy 2-44002  
 heat transfer coeff. for perforated plate positioned normal to oncoming flow 2-44725  
 holographic cinematography of time-varying reflecting and phase objects using Nd:YAG laser 2-49709  
 interferometer, polarisation, with double-refr. prisms, flow obs. around sphere and behind shock wave 2-3616  
 laminar separating flow, over backsteps, visualisation study 2-50234  
 laser Doppler imaging system for flow velocity distrib. meas. 2-25475  
 lateral forces on a slender body and their alleviation at high incidence 2-50304  
 liquid beds, glass particles in H<sub>2</sub>O, flow regimes and transitions, visualisation study 2-12211  
 LMFBR heat exchanger scale model, low flow thermal transient buoyancy effects 2-19710  
 natural convection in undivided and partially divided rectangular enclosures 2-50269  
 orifice flow, polymer additives behaviour effects on cavitation 2-30192  
 pump impeller passages, low specific speed 2-20787  
 Rayleigh scattering method, marking using photochromic molecules (*French*) 2-50342  
 reversible multistage pump-turbine bladed diffuser conveyor flow behaviour anal. (*Italian*) 2-35227  
 rotating rectangular boxes, thermal cellular convection, flow pattern visualisation 2-39907  
 schlieren flow visualisation using laser diode source 2-1276  
 sediment gravity flows, visualisation in water tanks 2-20779  
 segmented liquid-gas flow, tracer dispersion, lumped parameter model 2-20771  
 shock oscillations on spiked body obs., at Mach 3, using laser interferometer 2-20786  
 spinning axisymmetric body, boundary-layer transition, smoke visualisation 2-50334  
 surface flow phenomena, study using Fizeau interferometry of oil films 2-25453  
 Taylor vortex flow, transition from laminar flow, visualisation study 2-20774  
 turbulence, non-mathematical introduction, flow visualisation 2-1180  
 turbulent convection, laser Doppler imaging 2-1181  
 turbulent growth regions in laminar boundary layers 2-4800  
 turbulent jet flow, eddy coherent investigation, flow visualisation 2-16358  
 turbulent shear flows, mixing layer, vortices and instabilities, flow visualisation 2-16410  
 viscoelastic liquid, slow flow past circular cylinder 2-35239  
 vortex corner interaction modelling using point vortices 2-39924  
 water tunnel simulation facility, for aircraft industry 2-20792  
 ZnI<sub>2</sub> solns., flow visualisation method 2-44802

**flowcharting**

- see also *programming; systems analysis*  
 PWR nuclear power plant total removal, flow chart concept (*German*) 2-476

**flowmeters**

- see also *anemometers; flow measurement; laser velocimeters*  
 Annubar averaging pilot probe, for discharge meas. 2-35243  
 biomedical EM flowmeter, effect of blood vessels on sensitivity 2-52598  
 blood, 3 to 10 MHz US meters using Doppler effect (*Spanish*) 2-6284  
 blood flow monitor, for heart monitoring 2-52622  
 calibration and certification systems in USSR, for pressurised and open flows 2-30248  
 calibration process standardisation 2-25465  
 cryogenic, calibration, using piston installation 2-30250  
 development in West Germany 2-12263  
 EM, calibration and testing without liquid 2-30254  
 EM, present states and future possibilities 2-50026  
 EM, reference, testing installation 2-30252  
 EM, velocity profile effect on accuracy (*German*) 2-25478  
 EM float flowmeter with mag. suspension 2-16394  
 EM float flowmeters, characteristics linearisation 2-20769  
 EM flowmeter transducer, reduced error with change in velocity profile 2-12258  
 flow monitor, for heart monitoring 2-52622  
 fuel flow and density meas., reference installations 2-30251  
 gas streams dust content meas., using flow-type primary transducer 2-25461  
 geothermal well choke-meter for enthalpy and flow meas. 2-27541  
 industrial, Brown Boveri Kent range and developments 2-30240  
 laminar flowmeter research and appl. (*Chinese*) 2-16395  
 liquid crystal devices appl. 2-38638  
 liquid metals, meas. of flow rate 2-40006  
 microprocessor-based two-phase flow meas. 2-20782  
 monolithic integrated direction-sensitive flow sensor for gas or liquid flow 2-35234  
 NMR flowmeter, focusing techniques for regional cerebral blood flow meas. 2-14318  
 NMR flowmeter for blood flow meas. in human legs 2-14317  
 NMR tracer-flowmeter parameters testing, expt. investigation 2-30253  
 noncontact EM flowmeters, zero drift reduction by duality principle 2-12257  
 pneumotachograph calibration for inspiratory and expiratory flows during HeO<sub>2</sub> breathing 2-52652  
 precision improvement by using probing methods 2-25474  
 pulsed thermistor technique for measuring very low liquid flow rates 2-16402

**flowmeters continued**

- reference set total conversion coeff. evaluation 2-25472  
 standardisation, GOST recommendations analysis and implementation 2-30255  
 static measurement of flow in a heat meter, from Landis & Gyr. 2-20773  
 testing assembly, liquid flow stabiliser design 2-25464  
 trace-type, precision increasing meas. channel design 2-25468  
 ultrasonic, present states and future possibilities 2-50026  
 ultrasound multiplexed Doppler microcomputer combination as noninvasive blood flowmeter 2-47666  
 US, supply-pipe surface roughness effect evaluation 2-25470  
 US flowmeters, self-balancing AC potentiometer (*Russian*) 2-23604  
 US multichannel pulsed Doppler blood flowmeter, minicomputer-based 2-18280  
 US volume flowmeter, transcutaneous meas. of carotid artery flow 2-14307  
 valves, meters and gauges, survey of types 2-16400  
 vibrating Pitot tube, mass flow rate meas. by detect. of small press. var. (*Japanese*) 2-1274  
 vortex shedding flowmeter, observations of vortices shedding from rings (*Japanese*) 2-20781  
 well-type flow-rate meters, with turbine transducers 2-25466  
 Hg porosimetry, hysteresis, entrapment and wetting angle 2-25460

**fluctuations**

- see also *Brownian motion; critical fluctuations; current fluctuations; noise; random processes*  
 alkali silicate glasses, viscous flow, fluctuation microcavity vol., activation vol. and molar vol. 2-8450  
 anharmonic atomic chain, destructive energy fluctuations 2-50581  
 V603 Aquilae (Nova Aquilae 1918), brightness fluctuations rel. to eclipse period determ. 2-48254  
 atmosphere humidity, short-term temporal spectrum of precipitable water vapour 2-23085  
 Boltzmann principle, kinetic analogue 2-42978  
 boundary layer topped by a density interface 2-35128  
 cavitating flow through orifice with enormous press. fluctuations, Johnsson effects 2-30190  
 charge transport in fluctuating systems, quasicorrelation 2-40860  
 chemical instabilities, fluctuation dynamics 2-6033  
 chemical instabilities and broken symmetry, hard mode case 2-6032  
 chemical reaction-diffusion system, to travelling wave fronts evolution of large scale fluctuations 2-17910  
 circularly polarised photons, Boltzmann-Langevin eqn., time-correl. functions 2-141  
 closed time path Green's functions and nonlinear response theory 2-33435  
 commensurate-incommensurate transition and fluctuations in two and three dimensions 2-40513  
 convection to turbulence transition thermal fluctuation effect 2-30136  
 cosmology, constraints on primaeval adiabatic perturbations from mass distrib. 2-6687  
 cosmology, soln. of eqns. for chaotic universe, Friedmann in mean 2-10541  
 Couette flow, thermodynamic fluctuation theory 2-30091  
 deep inelastic heavy-ion reactions, fluctuations influence 2-39069  
 dense fluids, dynamical model, Langevin equation approach 2-50506  
 diffusion in bistable pot., functional integral approach 2-38572  
 droplet, drag in translating fluctuating flow 2-12187  
 finite disordered system, resistivity fluctuations 2-17043  
 fluctuation-dissipation theory, Brownian dynamics 2-48612  
 fluid dynamics, obs. of vacillation in thermally driven rotating flow in annulus 2-16331  
 fluids, simple, with radial many-body interactions, higher-order correl. functions of number fluctuations 2-10715  
 Fokker-Planck eqn. approach to fluctuations about nonequilibrium steady states 2-38573  
 Fokker-Planck equation, one-dimens., with time-depend. potential, fluctuation, relaxation 2-3487  
 Gaussian optical beam in random med., intensity fluctuations correlation function 2-39571  
 hard sphere gas, fluctuations about Boltzmann eqn. 2-38607  
 heavy ion fission fragments mass distrib. within dynamical treatment 2-39079  
 heavy ions deep inelastic collisions, charge distrib. dispersion (*Russian*) 2-3956  
 Heisenberg field, extended objects, Lorentz covariance, tree approx. 2-3695  
 heterophase fluctuations, microscopic statistical theory 2-28810  
 heterophase systems, spaces of states 2-48618  
 interacting Brownian particles, generalised Langevin eqn. derivation 2-38571  
 intermittent temperature measurement, influence of heat conduction (*French*) 2-33516  
 interplanetary medium props., high-freq. fluctuations rel. to transient phenomena originating at Sun 2-6517  
 interstellar medium, electron density fluctuations from radio sources scintillation 2-3296  
 interstellar medium, parameters of plasma irregularities rel. to pulsar scintillation 2-3297  
 ionic solutions, concentration fluctuations in small volumes 2-52252  
 Ising system, two-dimens., phase separation line, local struct. 2-38595  
 isenthalpic-isobaric ensemble, classical statistical mech., fluctuation formulas 2-101  
 Josephson junction, current driven, microwave induced steps, thermal fluctuations and transition rates 2-31093  
 Josephson junction, voltage fluctuations, microscopic theory 2-31092  
 kinetic corrections to lineshape predictions, approx. methods comparison 2-3533  
 laser radiation multiple scattering by large-scale discrete inhomogeneities, statistical characts. of intensity fluctuations 2-846  
 laser radiation propag., intensity fluctuations correl. function (*Russian*) 2-34666  
 light scattering, phase fluctuations, Fourier spectroscopy, 1 in 10<sup>19</sup> resolution 2-28907  
 limit cycle state, fluctuations and phase chaos 2-15114  
 linear non-Markovian processes, kinetic eqn., transport processes, non-equilib. thermodynamics 2-38583  
 liquid system, fluctuating, quasi-percolation charge transport 2-5377  
 logistic system behaviour, external noise influence 2-38574



**fluctuations continued**

- magnetic semiconductor, bound mag. polarons, effect of magnetisation fluctuations 2-51093
- magnetic systems, Curie-Weiss susceptibility and general spin fluctuations 2-21777
- master equation, one-dimensional system, nonequilibrium fluctuations 2-33427
- Maxwell-Langevin eqns. and Kubo formulae 2-23500
- mechanical oscillators, dissipative contrib. of internal multiplicative noise 2-28781
- microemulsion, single-phase system, crit. behaviour 2-14013
- moment inequalities and realisability constraints 2-19015
- nebulae, effect of small-scale electron density and temp. fluctuations on forbidden-line intensity ratios 2-28540
- noise induced transitions 2-3549
- noise phenomena classification 2-46087
- non-equilibrium fluctuations and the hierarchy, book contrib. 2-10768
- nonequilibrium systems, fluctuation theory 2-6031
- nonlinear fluctuating measurement systems, Bayesian anal. 2-6758
- nonlinear system, fluctuations of thermodynamic fluxes (*Rumanian*) 2-15130
- nonlinear systems, deterministic limit, stochastic dynamics, fluctuations 2-48622
- nuclear reactor, stochastic nonlinear modelling of fluctuations 2-3992
- optical fibre, multimode, transmitted laser signal, amplitude fluctuation 2-7872
- phase random multipath ocean acoustic fluctuations, memory detection models 2-1064
- photographic emulsions, exposure fluctuations, statistics due to intensifying screens 2-10897
- plasma, fluctuating elec. field meas. using He forbidden transition 2-16509
- quantum spin system, with friction, Brownian motion 2-48610
- quasi one-dimensional Frohlich model, Peierls transition, fluctuation effects, RPA calc. 2-16991
- quasielastic and deep-inelastic heavy ion collisions, neutron and proton exchange, statistical model 2-34076
- random media, multiple scatt., coherent pot. propagators, fluctuations 2-40861
- relativistic thermodynamics, heat flux and electric fluctuations 2-3541
- relaxation theory from instabilities 2-33441
- second-order phase transitions, fluctuation induced 2-33477
- selforganization through increase of number of components 2-19020
- sine-Gordon chain, long-time behaviour of displacement fluctuations 2-19016
- solar activity, peculiarities of fine struct. of 11-year cyclicity 2-10385
- solar photosphere brightness fluctuations, geometrical smearing effect on solar limb obs. 2-38060
- solar photosphere granulation, brightness fluctuations meas. using data restoration for solar limb obs. anal. 2-38059
- stochastic systems, fluctuations and relaxation 2-23566
- thermal fluctuations, fast and slow components 2-33482
- thermal fluctuations in quantum gravity, semiclassical description 2-18997
- thermodynamic equilibrium, statistical theory based on macroscopic theory of fluctuation 2-6815
- time-dependent dissipative steady states, fluctuations and transition rates, hysteretic Josephson junction appl. 2-42951
- Tokamaks, ICRF heating, particle transport, fluctuations 2-25615
- transient growth when sweeping system through bifurcation 2-19022
- transition metals, magnetic props., method of localised fluctuations (*Russian*) 2-21759
- tropospheric duct attenuation field, refractive index fluctuations effect 2-47981
- TTF-TCNQ, elec. resist., polarisation energy fluctuations as important scatt. mechanism 2-5396
- turbulence statistical theory 2-19019
- turbulent developed flow in tube with injection and suction through porous walls 2-20648
- turbulent transport theory in nonequilibrium statistical thermodynamics 2-28785
- ultrarelativistic matter with Van der Waals eqn. of state, phase transitions and fluctuations 2-19471
- early Universe, origin of struct. from thermal fluctuations 2-42764
- velocity of light in vacuum, random fluctuations 2-3557
- vertical two phase flow, statistical anal. of pressure fluctuations 2-39973
- water flow through orifice, polymer additive effect on cavitation development, static press. effects 2-30191
- $\alpha$ -AgI, superionic, Coulomb-correlated density fluctuations effect on cond. 2-16864
- C-PVC composites, fluctuation modulation of tunnel junctions by applied AC stress 2-40998
- Fe, ferromagnetism, fluctuating band picture 2-31126
- $^4\text{He}$ , superfluid, lambda point crit. dynamics, high temp. expansion 2-35765
- $^4\text{He}$ , superfluid, pair fluctuations and superfluid mass density, sum rule 2-35793
- $^4\text{He}$ , superfluid, quantum hydrodynamics, fluctuational corrections 2-40624
- KCl aqueous solns., resist. fluctuations and rel. flow 2-35725
- Ni, ferromagnetism, fluctuating band picture 2-31126
- $\text{PbF}_2$ , superionic, quasielastic light scatt.. study 2-9159

**fluctuations in superconductors**

- used only for thermal (thermodynamic) fluctuations around the order parameter near the critical point
- charge imbalance fluctuations, transmission line model 2-36229
- collective modes, inductive excitation and propag. 2-36224
- Coulomb superconductors with inverted quasi-particle distrib., mag. props. 2-2031
- filaments, phase-slip centres, self-consistent nonequilib. description 2-51372
- films with periodic modulation in order parameter, collective modes 2-36230
- graphite intercalation cpd. with K, supercond., K conc. depend. 2-13212
- Josephson junction, hysteretic, nonequilib. steady state, thermal fluctuations and lifetime 2-51380
- Josephson junctions, spectrum of small oscils. 2-21732
- Josephson junctions, ultrasmall tunnelling chars. 2-31074
- Josephson junctions, weakly coupled, thermal fluctuations and phase locking 2-17223

**fluctuations in superconductors continued**

- Josephson superconducting point contact, current noise 2-46204
- Josephson tunnel junction, resistively shunted, obs. of zero point fluctuations 2-13245
- nonequilibrium superconductors, stability 2-31062
- quasi-one-dimens. supercond., fluctuation effects 2-36235
- quasi-one-dimensional conductor, excess conductivity due to fluctuations above supercond. transition temp. 2-5500
- quasi-one-dimensional conductor, perpendicular conductivity 2-5501
- small metallic particles, electronic props. 2-30988
- SQUID, resistive, with large crit. current, Josephson oscillation 2-17231
- superconductor-normal metal tunnel junction, charge imbalance fluctuations 2-17221
- (TMTSF) $\text{PF}_6$ , quasi-one-dimens. supercond., fluctuation effects 2-36235
- transition metals, magnetic and nonmagnetic, p-wave superconductivity 2-31002
- two-dimensional dirty supercond., vortex fluctuations, universal resist transition 2-46202
- two-dimensional superconductors, quantum fluctuations, crit. behaviour 2-26556
- Al film, granular, vortex motion dynamics of two-dimens. supercond. 2-2034
- Nb microbridges, fluctuation induced transition between superconducting and dissipative states 2-31077
- Nb, superconductor (*Spanish*) 2-41065
- PbBi clustered film, supercond. props. 2-30995
- Sn microbridges, fluctuation induced transition between superconducting and dissipative states 2-31077
- Sn, superconducting films, fluctuation induced cond., Ge coating effect 2-36233
- Sn thin films, superconductivity, fluctuation effects 2-46203
- V, superconducting films, crit. fluctuations, zero-, one- and two-dimens. 2-31061
- V thin films, resist. transition broadening due to He ion implantation 2-17222

**fluctuations of cross sections** see statistical theory of nuclear reactions and scattering

**fluid composition control** see chemical variables control

**fluid composition measurement** see chemical variables measurement

**fluid dynamics**

- see also aerodynamics; biological fluid dynamics; drag reduction; flow; hydrodynamics; liquid oscillations; Navier-Stokes equations; rarefied fluid dynamics; relativistic fluid dynamics; surface waves (fluid); turbulence; wakes
- aerosols, motion in inhomogeneous temp. field, influence of flat wall 2-39969
- approximate Riemann solvers, parameter vectors, and difference schemes 2-38437
- astrophysics, higher order eqns. for multicomponent nonequilib. stellar atmospheres and star clusters 2-32829
- biharmonic problem, numerical method 2-18896
- CANDU nuclear reactors, heat transfer and fluid mechanics of water loop during breakdown and injection 2-24383
- chaotic behavior and fluid dynamics 2-25361
- computational fluid dynamics, finite element tensor product algorithm 2-48
- computer extended seminumerical technique for solving flow problems 2-8103
- conjugate gradient iterative method 2-3388
- coordinate generation with precise controls 2-3385
- discrete fluid mechanics, Markov theory 2-28663
- dynamically symmetric flows 2-38439
- economical methods for solving the problems of gas dynamics 2-8106
- Eulerian flow, relation to velocity statistics of Lagrangian particles 2-39879
- finite difference schemes, use of Riemann problem 2-1164
- flooding and flow reversal, film model 2-50346
- flow excited reson. 2-16396
- flow in a stratum in the case of pumping from an imperfect well near a basin 2-39876
- flow of liquid with an anisotropic viscosity tensor, elongation flow 2-20796
- fluid dynamics, nongaussian processes, computer expts. 2-15038
- fluid-solid interaction and fluid acoustical effects, piping system dynamics 2-11244
- forced corner flows, inertia effects 2-28664
- gas dynamics, conservation laws 2-10761
- geophysical fluid dynamics, instabilities 2-28074
- geophysics (book) 2-3338
- hybrid random choice method, appl. to internal combustion engines 2-4785
- hydrodynamic instabilities, transition to turbulence, book 2-23392
- impact of a figure of revolution in a stream of incompressible fluid with separation of a jet 2-20795
- implicit schemes for equations of fluid dynamics 2-8105
- incompressible Newtonian fluids, binary mixture, response functions determ. 2-50230
- inhomogeneous media, gasdynamic flow calcs. using conc. method 2-33302
- inviscid barotropic compressible fluid dynamical eqn. characterisation, calculus of horizontal vars. 2-23448
- inviscid gas dynamics, adiabatic motions with homogeneous deform. (*Russian*) 2-48511
- Joukowski formula for cylinder lift in arbitrary steady stream of incompressible fluid 2-50229
- liquid jet, dynamics, asymptotic eqns. 2-39960
- multidimensional flows, reformulation of method of characteristics method 2-4783
- multiple solutions and bifurcation of finite difference approximations to some steady problems of fluid dynamics 2-33299
- natural circulation system with parallel loops, steady-state and transient flow rates 2-50270
- Newtonian liquid, extrusion through matrix, heating 2-12141
- nonhydrodynamic systems, instabilities and chaos 2-25351
- nonlinear fluid systems, Fourier anal. 2-39878
- one-dimensional gas dynamics system with viscosity, one-sided maximum principle for space derivatives (*Russian*) 2-48510
- oscillatory flow matrix, Wiener-Hopf factorisation 2-23450
- perfect non-conservative fluid motion examples (*French*) 2-49



**fluid dynamics continued**

- physical nonlinear systems, noise in chemical reactions and in fluid flow 2-50252  
 pipes, split ring use in modelling ductile axial crack extension 2-4772  
 pneumomechanical model of oscillation generator, stability conditions 2-33  
 projectiles, non-linear vibrations, Magnus effect 2-15034  
 randomly stirred fluids, time depend. velocity correlation functions from mode coupling theories 2-3383  
 return steam flow from feedheater to turbine in case of sticking non return valve (*Russian*) 2-20758  
 scaling theory for the criticality of fluids between plates 2-33300  
 sea drift struct. and compensating currents near bank slope 2-32533  
 shear flow, wall-bonded, turbulent struct., numerical simulation 2-16302  
 spheres in viscous fluid, motion and Brownian motion 2-48615  
 symmetric potential formulation for fluid-structure interaction 2-44696  
 viscous flow, finite difference approx. 2-8107  
 viscous gas, stationary flow in thin 3-D shock layer 2-39946  
 viscous incompressible fluid motion in orthogonal rheometer 2-30143  
 viscous incompressible liq. dynamics, eqn. splitting using Lagrangian-Eulerian grid (*Ukrainian*) 2-10616

**fluid flow** *see* flow**fluid instability** *see* flow instability**fluid mechanics**

- see also* capillarity; cavitation; compressibility of gases; compressibility of liquids; fluid dynamics; hydrostatics; Mach number  
 bifurcation theory 2-15039  
 compact differencing schemes for advective problems 2-3386  
 computer extended seminumerical technique for solving flow problems 2-8103  
 energy injection into fluid by stochastic volume forces and random stirring forces 2-3384  
 environmental fluid mechanics 2-18558  
 FENE-P dumbbell model 2-20629  
 generalised Newtonian fluid, similarity solutions 2-42866  
 grid evolution in time asymptotic problems 2-38606  
 Kirchhoff Langevin equation derivation for fluid with chemical reaction 2-1161  
 Navier-Stokes equation, soln. by finite differences, convergence of iterative methods 2-1163  
 nonlinear phenomena, soliton aspects, review 2-15045  
 nonlinear phenomena, soliton aspects, review 2-15047  
 sessile-drops and captive bubble meridians and props., capillary phenomena 2-50  
 statistical mechanics of inhomogeneous fluids 2-18906

**fluid theory, dense** *see* liquid theory**fluid valves** *see* valves**fluidic amplifiers**

- see also* hydraulic amplifiers  
 axial vortex amplifiers, stability improvements 2-20687  
 nuclear reactor pipeline protection using vortex amps. 2-43589

**fluidic devices**

- meters, gauges and valves survey of types 2-16400  
 pneumatic micrometer circuit with ejector type nozzle, dynamic analysis (*Japanese*) 2-19083  
 pyrometer, plasma arc spray coatings 2-15175

**fluidic logic**

- pneumatic materials test system for low temp. appl. 2-22404

**fluidised beds**

- binary particle mixtures, liq. fluidisation, overall bed expansion 2-16361  
 biomass gasification 2-2760  
 carboxymethyl cellulose, aqueous soln., mass transfer and pressure drop in fixed and fluidised beds 2-20743  
 combustion, status and advantages (*French*) 2-17965  
 combustion systems in electric power generation industry 2-31922  
 effective radial conductivity 2-35218  
 electrostatic, cross-flow type, dynamics 2-20750  
 flow distrib. anal., variational approach, effect of distrib. grid 2-16373  
 flow through dispersed particles, drag calc., appl. to multiphase flow and fluidised bed study 2-20728  
 gas fluidised beds, vertical internals, axial solids mixing, diffusion, bubble characts. 2-20741  
 gas particulate fluidised beds, two-phase shock waves, struct. 2-20747  
 granular bed, bubble mass transfer, mol. and convective diffusion 2-12213  
 large-particle fluidised beds, gas convection dominant heat transfer 2-12216  
 liquid beds, glass particles in H<sub>2</sub>O, flow regimes and transitions, visualisation study 2-12211  
 multistage fluidized bed apparatus 2-30222  
 particle entrainment measurement from fluidised beds 2-25436  
 particle mixing, countercurrent diffusion model (*Russian*) 2-4887  
 particle-fluid heat transfer and dispersion in fluidised beds 2-25434  
 pressure fluctuations in a fluidized bed 2-1260  
 pressurised fluidised bed, jet penetration 2-20744  
 Rayleigh-Taylor instabilities, theory 2-35116  
 shallow gas-fluidised beds, coherent particle oscillation meas. 2-25435  
 solid phase, longitudinal mixing in fluidised beds with average bulk packing 2-35211  
 solids motion at horizontal tube surfaces in a large gas-solid fluidized bed 2-44780  
 spherical column packing, local aerodynamics and heat transfer characts. (*Russian*) 2-12215  
 thermal energy storage in saturated solutions of inorganic salts, heat exchanger appl. 2-18147  
 tube immersed in air fluidised bed, heat transfer coeff. 2-50262  
 water, mass transfer and pressure drop in fixed and fluidised beds 2-20743  
 Si chunks continuous production process, combined fluidized bed apparatus 2-2692

**fluidised powders** *see* powders**fluidity** *see* viscosity**fluids**

- see also* bubbles; classical theories of fluid structure; disperse systems; fluid mechanics; fluidised beds; gases; gravity waves; liquids; non-Newtonian fluids; quantum fluids; quantum theories of fluid structure  
 interface deflections induced by Marangoni effect, IR-visible image conversion appl. 2-23701

**fluorescence**

- see also* atomic fluorescence; fluorescent lamps; fluorescent screens; molecular fluorescence; nonradiative transitions; X-ray fluorescence analysis  
 aerodynamic flows, density meas. using laser induced fluoresc. (*French*) 2-50344  
 alkali halide thin single-crystal layers, prebreakdown electrolum. mechanism 2-46770  
 anthracene: 2-hydroxyanthracene cryst., fluoresc. lifetime and site-selective photochem. 2-51694  
 anthracene, cryst., laser excitation fluoresc. study 2-36679  
 anthracene, low-temp. fluorescence excitation spectra (*Russian*) 2-13560  
 anthracene, photoionisation and mag. field modulated recomb., time resolved fluoresc. 2-46680  
 anthracene, R-centre luminescence spectrum (*Russian*) 2-17544  
 anthracene-2-hydroxyanthracene, energy transfer and chemical reactivity, luminesc. obs. 2-46717  
 anthracene-tetrachlorophthalic anhydride, charge transfer cryst., triplet excitation energy migration and annihilation 2-26972  
 anthracene-tetrachlorophthalic anhydride, ODMR and luminescence studies of triplet state 2-46431  
 aromatic molecules in solution, quenching by O<sub>2</sub>, singlet state luminescence 2-34466  
 azulene, fluorescence study of lowest triplet state 2-46703  
 benzophenone:benzopinacol crystals., fluoresc., UV irradi. effects 2-13542  
 benzopinacol crystals., fluoresc., UV irradi. effects 2-13542  
 beta-induced fluoresc., principles and development of radiation detection 2-22098  
 biphenyl, cryst., temp. effect, phase transition, fluoresc. 2-26952  
 2,2'-bipyridine, two-photon excited fluoresc. and absorpt. 2-13566  
 biorelination, phosphoresc. and delayed excimer fluoresc. 2-31533  
 chlorella algae, delayed fluorescence, time resolved spectroscopy 2-47581  
 para-chlorophenyl isocyanate, in ethanol soln., decay time, quantum yield, fluoresc. and phosphoresc. 2-29646  
 chlorophyll, in vivo, in chloroplasts and algae, fluorescence lifetimes 2-47580  
 chlorophyll a, laser-induced Raman backscatter and fluorescence 2-10178  
 chromatograph, liquid, computer controlled system, absorpt., fluoresc. and CARS detection 2-31960  
 confocal fluorescent microscopy, super-resolution 2-48773  
 coronene:perylene, thin crystalline film, energy transfer diagram 2-17514  
 coumarin dye solution, two-photon excited, fluorescence spectra (*Russian*) 2-13557  
 cresyl violet-azulene, translational diffusion, electronic energy transfer, time-resolved spectra 2-5737  
 cyclodextrin inclusion compound, excited-state optical activity 2-2213  
 dibenzofuran, dye vapour, fluorescence characteristics in UV-region (*Japanese*) 2-4918  
 dibenzothiophene, two-photon fluoresc. excitation spectrum 2-36674  
 $\beta$ -9,10-dichloroanthracene, ODMR and luminescence studies of triplet state 2-46431  
 diethylaniline in isopropanol, fluoresc. intensity mag. modulation 2-22060  
 dipalmitoylphosphatidylcholine bilayer liposome, phase transition, memory boundary pot. effect 2-16784  
 diphenyl:pyrene, adsorpt. and fluoresc. spectra 2-31551  
 durene:pyrene, adsorpt. and fluoresc. spectra 2-31551  
 dye cresyl violet soln., ps. fluoresc. depolarisation meas. by freq. conversion 2-31536  
 dye in doped polymer matrix, Stokes shift 2-46727  
 dye layer on glass fibre, fluorescence enhancement induced by microstructure resonances of fibre 2-5745  
 dye monolayer coatings on Ag grating, light emission 2-22075  
 EBBA, nematic liquid cryst., order parameters, polarised fluorescence study, anisotropy effects 2-50524  
 Ehrlich's ascites tumour cells, X-ray induced cytoproteins increase rel. to UV-fluoresc. (*Russian*) 2-42153  
 erythrocyte ghost membranes, fluoresc. probe monitoring instrumentation, microwave irradi. expts. 2-42246  
 ethanol-water mixtures, struct. features, picosecond fluorescence anisotropy obs. 2-20994  
 fluorene, dye vapour, fluorescence characteristics in UV-region (*Japanese*) 2-4918  
 fluorometry, phase-modulation, photomultiplier tube timing errors correction 2-38674  
 glass:Cr<sup>3+</sup> based materials, fluorescent, for luminescent solar collector 2-52387  
 glass:Cr(III), luminesc. conc. quenching, EPR study 2-31265  
 glass:Nd, nonradiative energy transfer processes 2-31555  
 glass, laser excited fluorescence spectroscopy, book contrib. 2-17549  
 glass hosts, impurities dephasing, temp. depend. 2-51128  
 homogeneous-heterotropic fluorescent liquid crystal cells 2-8418  
 honeycomb bond structures, real time fluoroscopic imaging system 2-9501  
 HPr phosphocarrier protein, alkylated nanosecond fluorescence spectra 2-47571  
 impurity centres, absorpt. and fluoresc. spectra 2-26949  
 incoherent transfer dynamics, fluorescence, time evolution, book contrib. 2-17547  
 indole, substituted, high press. luminesc. in solns. 2-2326  
 inert gases, solid and liquid, excitation self-trapping, defect prod. 2-41388  
 insulators, laser spectroscopy, book 2-14989  
 laser excited IR fluorescence spectra meas. (*Japanese*) 2-28904  
 laser induced saturated fluorescence spectroscopy, multimode laser beam effects 2-33643  
 lipid membrane system, rank order param. by fluoresc. polarisation 2-6217  
 liquid chromatography, beta-induced fluoresc. detection 2-31970  
 liquid chromatography, beta-induced fluoresc. quenching detection 2-31971  
 liquid crystal multicolour fluorescent display by scatt. states 2-8417  
 methyl methacrylate-styrene copolymer, dibromethane and I<sub>2</sub> quenching, soln. fluoresc. 2-17516  
 microprocessor-based fast fluorescence waveform system 2-33649  
 molecular crystals, effect of spin relax. on fluorescence 2-46705  
 naphthalene, triplet exciton annihilation, spin relaxation effects 2-22086  
 naphthalene N-h<sub>2</sub> and N-d<sub>8</sub>, triplet T<sub>1</sub> Davydov components, high resolution excitation spectra 2-46655  
 naphthalene with d( $\beta$ -naphthyl)-1,2-ethylene, pure electronic transition band in absorpt. and fluorescence spectra (*Russian*) 2-13562  
 naphthalene-chrysene, mixed cryst., impurities and defects, delayed luminesc. obs. 2-5738



## Fluorescence continued

- naphthalic acid derivatives, fluorescence emission spectra, data processing, quantum efficiency (*Rumanian*) 2-1912  
 nematic liquid cryst., order parameters, polarised fluorescence study, anisotropy effects 2-50524  
 neodymium formate, cryst. field levels, stark splitting, laser induced fluoresc. study 2-36680  
 neuronal lipofuscin, accumulation in human brain, autofluorescence intensity meas. 2-32189  
 noble metal microspheres, surface local fields, rel. to enhancement of Raman scatt. and fluoresc. emission 2-13480  
 optical fibre preform core dia. meas. by fluoresc. 2-34904  
 organic molecules in solution, site selection spectroscopy 2-46701  
 organic solids with diagonal disorder, localised states and electronic transport, review 2-8774  
 $\alpha$ -perylene, nonlinear fluoresc. reabsorpt. by electronically excited mols. 2-51699  
 phenanthrene cryst., nonlinear polariton effects 2-41389  
 phenoxathiin, pure and thick single cryst., absorption and emission spectra (*French*) 2-22080  
 phenyl isocyanate, in ethanol soln., decay time, quantum yield, fluoresc. and phosphoresc. 2-29646  
 phosphorylase b, intramolecular fluctuations, fluoresc. parameter, deuteration and solvent effects 2-47572  
 photoreceptor cells, fluoresc., in vivo fly eye obs. 2-18204  
 phthalocyanine films, vacuum deposited, struct. singularity, crit. optimisation effect 2-5328  
 phycocyanin, energy transfer, photochemical hole burning obs. 2-47582  
 phycoerythrin, energy transfer, photochemical hole burning obs. 2-47582  
 picosecond fluorescence, absorption and Raman spectroscopy 2-3634  
 poly(1,3-diphenyl-5-(p-methacryloyloxyphenyl)-2-pyrazoline), amorphous, singlet excitation energy migration, fluorescence quenching study 2-51693  
 poly(1,3-diphenyl-5-(p-vinylphenyl)-2-pyrazoline), amorphous, singlet excitation energy migration, fluorescence quenching study 2-51693  
 poly-N-vinylcarbazole, extrinsic carrier photogeneration, charge transfer fluoresc. quenching by elect. field 2-41395  
 poly-N-vinylcarbazole film, electron acceptor doped, carrier photogeneration, fluoresc. quenching 2-13533  
 polyeoxypropylcarbazole layer sensitization by rhodamine 6G, photodiscarge in electrophotographic system, fluoresc., photocurrent (*Russian*) 2-10910  
 polymers, excimer formation and energy migration 2-13544  
 polymethine dyes, anomalous amplification of  $S_2$ -fluorescence intensity after two-step excitation by ps laser pulses (*Russian*) 2-31556  
 polystyrene, excimers, dibromethane and  $I_2$  quenching, soln. fluoresc. 2-17516  
 polystyrene, solns., excimer formation and energy migration 2-13544  
 polystyrene films, excimer formation and energy migration 2-13544  
 polyvinylarenes, energy migration, triplet mechanism 2-5736  
 polyvinylcarbazole films, fluoresc. excitation spectra, mobility threshold for singlet exciton transport 2-51646  
 Porphyra sp. in situ, spectroscopic obs. 2-52454  
 pyrene, fluorescence spectra, monomer emission 2-46699  
 pyrene, nonlinear fluoresc. reabsorpt. by electronically excited mols. 2-51699  
 pyrene in isopropanol, fluoresc. intensity mag. modulation 2-22060  
 pyromellitic N,N'-dimethylidide-anthracene, triplet exciton annihilation rate enhancement 2-51697  
 rhodamine B (6C), aq. and ethanol solns., protonation, fluoresc. study 2-26968  
 rhodamines, micellar water solns., fluoresc., conc. quenching 2-24775  
 ruby, laser-pumped, electronically excited states effect on elastic consts., sound vel. changes 2-12692  
 ruby, R, fluorescence line, high press. red shift 2-21981  
 ruby R, fluorescence freq. shift, in press. meas. in diamond cell 2-6865  
 semiconductor, excitons bound to neutral donors, props. 2-1838  
 solid solution, donor fluoresc. decay 2-41390  
 solids, laser spectroscopy techniques and exptl. methods, book contrib. 2-15242  
 spectrophotometry and spectrofluorometry with the self-scanned photodiode array 2-48740  
 p-terphenyl, cryst., laser-excited delayed fluoresc. 2-22079  
 p-terphenyl, dye vapour, fluorescence characteristics in UV-region (*Japanese*) 2-4918  
 p-terphenyl-tetracene, energy transfer and chemical reactivity, luminesc. obs. 2-46717  
 tetracene, luminescence spectra, press. and temp. induced modification 2-13541  
 Tetrahymena pyriformis membrane, chemoreception, fluoresc. probe study 2-47615  
 tetramethyl-p-phenylenediamine, delayed fluoresc. obs. 2-51645  
 thianthrene, pure and thick single cryst., absorption and emission spectra (*French*) 2-22080  
 thioxanthene, pure and thick single cryst., absorption and emission spectra (*French*) 2-22080  
 time-resolved fluorescence spectroscopy in biochemistry and biology, NATO Advanced Studies Institute report 2-15241  
 BaMnF<sub>4</sub>, antiferromag., pure exciton and magnon sideband optical transitions 2-2332  
 Ba<sub>0.8</sub>Sr<sub>0.6</sub>Nb<sub>2</sub>O<sub>6</sub>Pr<sup>3+</sup>, fluorescence lifetime study 2-17524  
 CaF<sub>2</sub> precipitates, rare earth doped, O-compensated sites, defect processes 2-41399  
 CaF<sub>2</sub>:Eu<sup>2+</sup>, acoustic phonon freq. depend. lifetimes 2-45437  
 CaF<sub>2</sub>:Pr<sup>3+</sup>, optical hole burning by superhyperfine interactions 2-36691  
 CaF<sub>2</sub>:Tb<sup>3+</sup>:(Yb<sup>3+</sup>), defect clustering identification using three body energy transfers 2-22076  
 Ca(PO<sub>3</sub>)<sub>2</sub>:Eu<sup>3+</sup>, excitation energy transfer, temporal and temp. depend., reson. fluoresc. 2-51650  
 CaSO<sub>4</sub>:Dy, Bi, phosphors; X-ray induced fluorescence and phosphorescence 2-26956  
 CaWO<sub>4</sub>:Sm<sup>3+</sup> cryst., energy transfer investig. by dye laser spectroscopy 2-41397  
 CdF<sub>2</sub>:Eu<sup>3+</sup>, optical study of Eu<sup>3+</sup> centres 2-9185  
 CdS, biexciton states, real and virtual, Raman, fluoresc. and radiative recomb. spectroscopy 2-45841  
 EuGa<sub>2</sub>:Cr<sup>3+</sup>, site selective fluoresc. spectrum 2-22066  
 EuP<sub>6</sub>O<sub>7</sub>, time resolved laser induced fluoresc. 2-46678  
 GaP, impurity-doped, efficient linear IR to visible upconversion, IR detect. using NEA photocathode 2-17532  
 Gd(Cr<sub>x</sub>Al<sub>1-x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688

## Fluorescence continued

- Gd(Cr<sub>x</sub>Ga<sub>1-x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688  
 GdOCl:Eu<sup>3+</sup>, free ion and cryst. field parameters, Stark levels, fluores. 2-9178  
 GeO<sub>2</sub>-Li<sub>2</sub>O:Nd, energy transfer, radiationless quenching rate, fluorescence obs. 2-46723  
 H<sub>2</sub>O fluorescence, Nimbus 7 SAMS meas. in 2.7  $\mu$ m band in mesosphere 2-23071  
 LaAlO<sub>3</sub>:Cr<sup>3+</sup>, energy transfer, fluoresc. responses, time resolved laser spectroscopy 2-26964  
 LaCl<sub>3</sub>:Eu<sup>3+</sup>, Ho<sup>3+</sup>(Pr<sup>3+</sup>), energy transfer from <sup>5</sup>D<sub>1</sub> and <sup>5</sup>D<sub>0</sub> levels, temp. depend. 2-26978  
 LaMgB<sub>2</sub>O<sub>7</sub>:Eu<sup>3+</sup>(Tb<sup>3+</sup>), self-quenching of luminesc., one-dimens. interactions 2-26965  
 La<sub>1-x</sub>Nd<sub>x</sub>MgAl<sub>10</sub>O<sub>19</sub>, prep., struct., optical and mag. props. 2-31619  
 LaOCl:Eu<sup>3+</sup>, free ion and cryst. field parameters, Stark levels, fluores. 2-9178  
 LaOCl:R<sup>3+</sup> (R=Sm, Eu, Tb, Dy, Tm), fluoresc., local crystal symmetry 2-41403  
 LaP<sub>2</sub>O<sub>4</sub>, energy transfer mechanisms, donor-acceptor interaction, fluorescence obs. 2-46719  
 La<sub>2</sub>Pr<sub>1-x</sub>Cl<sub>3</sub>Nd, fluorescence, inhomogeneous profiles, satellite lines, energy-transfer and up-conversion processes 2-51652  
 La<sub>2</sub>S<sub>3</sub>:Ce(Nd), luminesc. and energy transfer 2-51685  
 LiAl<sub>2</sub>O<sub>4</sub>:Fe<sup>3+</sup>, fluorescence of octahedral site impurities 2-51657  
 LiGa<sub>2</sub>O<sub>4</sub>:Fe<sup>3+</sup>, fluorescence of octahedral site impurities 2-51657  
 LiNdP<sub>2</sub>O<sub>12</sub>, radiative transition probabilities of Nd<sup>3+</sup> ion, oscillator strengths, absorption spectra and fluoresc. 2-26930  
 Lu(Cr,Al<sub>1-x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688  
 Lu(Cr,Ga<sub>1-x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688  
 LuOCl:R<sup>3+</sup> (R=Sm, Eu, Tb, Dy, Tm), fluoresc., local crystal symmetry 2-41403  
 Mg porphyrin in anthracene fluoresc. spectra 2-51648  
 MnF<sub>2</sub>:Zn<sup>2+</sup>, magnon sideband transactions, fluorescence line narrowing 2-46749  
 NaBr:Eu<sup>2+</sup>, precipitated phase, optical absorpt. and luminesc. spectra 2-41408  
 NaI:Eu<sup>2+</sup>, precipitated phase, optical absorpt. and luminesc. spectra 2-41408  
 Nd<sup>3+</sup>:POCl<sub>3</sub>-P<sub>2</sub>O<sub>5</sub>-Cl<sub>4</sub>-SnCl<sub>4</sub> system, laser performance and fluoresc. lifetime (*Chinese*) 2-15996  
 NdAl<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, time-resolved site-selection spectroscopy study 2-13538  
 Nd<sub>4</sub>La<sub>1-x</sub>P<sub>5</sub>O<sub>14</sub>, luminesc. kinetics and excitation spectra, quenching 2-46724  
 P<sub>2</sub>O<sub>5</sub>-Li<sub>2</sub>O-ZnO-Al<sub>2</sub>O<sub>3</sub>:Nd, energy transfer, radiationless quenching rate, fluorescence obs. 2-46723  
 P<sub>2</sub>O<sub>5</sub>-Nd<sub>2</sub>O<sub>3</sub>:Nd, energy transfer, radiationless quenching rate, fluorescence obs. 2-46723  
 RbBr:Eu<sup>2+</sup>, thermoluminesc., fluoresc., and optical absorpt. meas., luminesc. mechanism 2-27002  
 RbMnCl<sub>3</sub>, phase transitions, Raman scatt. obs. 2-31476  
 Rh complex, halopentamminerhodium (III) compound, luminesc. lifetimes, temp. depend. 2-2327  
 Rh complex, hexamamminerhodium (III) compound, luminesc. lifetimes, temp. depend. 2-2327  
 Ru(II) complexes, electronic, absorpt., emission and excitation spectra, luminesc. lifetimes meas. 2-46657  
 SeOCl<sub>2</sub>:R<sup>3+</sup> (R=Sm, Eu, Tb, Dy, Tm), fluoresc., local crystal symmetry 2-41403  
 SiO<sub>2</sub>-Li<sub>2</sub>O-CaO-Al<sub>2</sub>O<sub>3</sub>:Nd, energy transfer, radiationless quenching rate, fluorescence obs. 2-46723  
 SrF<sub>2</sub>:Ho<sup>3+</sup> single cryst., laser excited fluoresc. study 2-36678  
 SrF<sub>2</sub>:Sm<sup>2+</sup>, coated with Be film, phonon fluoresc. spectra excited by elec. current pulses 2-36699  
 W, X-ray fluorescence spectra, least squares anal., Si(Li) detector response function appl. 2-22119  
 YAlO<sub>3</sub>:Eu<sup>3+</sup>, nuclear mag. moment anomaly of Eu<sup>3+</sup>, optical hole burning and optically detected NQR expts. 2-2163  
 YOCl:Eu<sup>3+</sup> free ion and cryst. field parameters, Stark levels, fluores. 2-9178  
 ZnS:TM<sup>3+</sup>, fluorescence from nonequivalent TM<sup>3+</sup> centres 2-51665  
 ZnS:YEuO<sub>2</sub>S thin film, electrolum. complex centre characts., fluoresc. and time resolved spectra 2-46672

## fluorescence of atoms see atomic fluorescence

## fluorescence of molecules see molecular fluorescence

## fluorescent lamps

- discharge lamps, electrodeless, RF excited, as atomic fluorescent spectroscopy sources 2-9599  
 standard source for vacuum UV region, spectral brightness density meas. 2-996

## fluorescent screens

- see also electroluminescence  
 medical rare-earth intensifying screens in radiography, performance of automatic exposure controls 2-32322  
 photographic emulsions, exposure fluctuations, statistics due to intensifying screens 2-10897  
 radiographic intensifying screens with two-band Titan 2 phosphor universal to all films 2-52607  
 thermographic luminescent screen characts. for IR radiation detect. 2-48785

## fluorimetry see spectrochemical analysis

## fluorine

- see also nuclei with .....  
 amorphous solar cells performance effects 2-37312  
 atom, adsorption on Mo(100) and (111), binding energies 2-40695  
 atom, core exchange polarisation effects calc. using SCF Xalpha wave functions 2-43800  
 atom, expectation values in equalities, momentum density monotonicity, HF calcs. 2-39302  
 atom, Van der Waals radius, mean statistical value 2-4364  
 atom and ions, correlation energies, effective valence shell convergence, many-body perturbation theory 2-7508  
 atomic laser pumped by pulsed hollow cathode glow discharge, red lines 2-20327  
 contamination detection using <sup>19</sup>F(p,p'<sup>γ</sup>)<sup>19</sup>F reaction 2-47391  
 determination in ceramics and glazes, with photoselective electrode 2-31964  
 hot spring water content, San'in dist. Japan (*Japanese*) 2-28114  
 ion+He, one-electron ions ionisation and capture 2-7636  
 ions, electron impact ionisation in plane-wave Born approx. 2-44109



**fluorine continued**

- K-shell partial cross-section, for electron energy-loss spectrometry 2-29720  
 microanalysis by  $^{19}\text{F}(\text{d},\text{X})$  reactions 2-47393  
 molecule, electron impact K-shell excitation, energy loss spectra 2-15909  
 molecule, exponential transformation of molecular orbitals, general formulation for UHF calcs. 2-39298  
 molecule, fluoresc., reaction kinetics of mixtures with inert gases 2-49483  
 $\text{Al}_2\text{O}_3\text{:F}$ , nature of F modified oxide surfaces, NMR study 2-31303  
 Ar-Kr- $\text{F}_2$  gas mixture, plasma props. under steady discharge condition (*Chinese*) 2-8367  
 $\text{D}_2\text{-F}_2\text{-CO}_2$  chemical amplifier of nanosec. pulses, numerical optimisation 2-34740  
 $\text{F}^-$ , dipole polarisability using elect. field variant Gaussian-type orbitals, perturbation theory 2-39305  
 $\text{F}^-$ , in various gases, ion mobility determ. 2-20813  
 Flacridine cryst., triplet-triplet absorpt. study 2-46702  
 F-like ions, intershell correlation corrections to energy levels of  $n=2$  states 2-43810  
 F-like ions, relativistic Auger and X-ray deexcitation rates 2-11446  
 $\text{F-Si}(111)$ , plasma etching, quantum chem. calcs. (*German*) 2-47220  
 $\text{F+Br}_2$ , transformation of spin-orbit excited states 2-52180  
 $\text{F+H}_2$ , exchange reactor, pot. surfaces, nonempirical calcs. 2-22435  
 $\text{F+H}_2$  reaction, approx. quantum differential cross sections 2-52182  
 $\text{F+H}_2\rightarrow\text{FH}+\text{H}$ , reaction path calcs. 2-9544  
 $\text{F+H}_2\rightarrow\text{H+HF}$  reaction, quantum mech. state-to-state differential cross section calc. 2-37069  
 $\text{F+HBr}(\text{DBr})$ , nonadiabatic reactions, dynamics, isotope effect, pot. energy surface 2-9538  
 $\text{F+HBr}(\text{HI})$ , time resolved vibr. chemiluminesc., reaction rate const. 2-37049  
 $\text{F+HNF}$ , IR chemiluminesc. obs., heat of form., ab initio and statistical calcs. 2-37077  
 $\text{F+isocyanic acid}$ , IR chemiluminesc. obs. 2-37077  
 $\text{F+NF}_3+\text{Ne}\rightarrow\text{NF}_3+\text{Ne}$ , mol. recombination in laser media, theoretical study 2-47312  
 $\text{F+Na}_2$ , emission spectra from transition state 2-37055  
 $\text{F}^+\text{+CO}(\text{D}_2)(\text{N}_2)$ , electron detachment, direct coupling, charge exchange, shape resonances 2-44070  
 $\text{F}^+\text{+H}\rightarrow\text{HF}(\text{v})+\text{e}^-$  assoc. detachment reaction, HF vibr. state distrib. 2-17884  
 $\text{F}^+\text{+HX}\rightarrow\text{HF}+\text{X}^+$ , X-Cl, Br and I, HF vibr. state distrib., IR chemiluminesc. 2-17883  
 $\text{F}^+$  methylbromide, space charge effects in flowing afterglow, rate const. 2-17879  
 $\text{F}_2^+$ , ab initio SCF pair pot. and polarisabilities 2-49537  
 $\text{F}_2\text{-D}_2\text{-Ar}(\text{He})(\text{CO}_2)$  mixtures, detonation investig. 2-22451  
 $\text{F}_2+\text{H}_2\rightarrow\text{HF}$ , shock wave induced reaction, vibr. relax. of HF 2-13940  
 $\text{F}_2+\text{H}(\text{Mu})$ , exoergic reactions, mass variation invest., rate const. 2-22430  
 $\text{F}_2+\text{I}_2$ , reaction rate const. meas. 2-27414  
 $\text{F}_2+\text{Mu}(\text{H})(\text{D})(\text{T})$ , distorted wave method, vibr.-rot. product distrib. 2-47314  
 $\text{Si:F}$ , amorphous, chem. bonding environment of Si and dopant 2-40275  
 $\text{Si:F}$ , amorphous, core level and valence band UPS and XPS spectra 2-2414  
 $\text{Si:F}$ , amorphous, phonon densities of states and eigenvectors 2-35627  
 $\text{Si:F}$ , amorphous, structural model 2-45030  
 $\text{Si:F}$ , H, amorphous, annealing effects, NMR and ESR studies 2-41214  
 $\text{Si:F}$ , H, amorphous, vibr. excitations 2-45495  
 $\text{Si:F}$ , H amorphous CVD film, hydrogenation effect, elec. cond. and ESR meas. 2-40906  
 $\text{Si:F}$ , sputtered amorphous coating, struct. model, expt. study 2-16593  
 $\text{Si:F,H,P}$  films, optical study of intermediate order, elec. cond. 2-46797  
 $\text{a-Si:F,H}$  Schottky-barrier diodes, elec. props. 2-46104  
 $\text{Si:F}$  amorphous film, glow discharge plasma deposition from  $\text{SiF}_2$  gas 2-40725  
 $\text{Si:F}$  amorphous films, surface props., photoelectron spectra study 2-41491  
 $\text{Si:F}$  evaporated amorphous films, DC cond., impurities effect 2-13070  
 $\text{a-Si:F,H}$ , electrical, spectral and doping properties 2-45790  
 $\text{Si:H}(\text{H,F})$ , amorphous, plasma deposition kinetics model 2-40731  
 $\text{Si-F-H}$  amorphous film, Schottky-barrier and MIS solar cell appls. 2-37344  
 $\text{SiC:F}$ , ion implanted, defect luminescence spectra 2-36712  
 $\text{SiO}_2\text{:F}$ , nature of F modified oxide surfaces, NMR study 2-31303  
 $\text{SnO}_2\text{:F}$  conductive transparent thin films, characts. for solar cells appl. 2-27549

**fluorine compounds**

- fluorite crystals, interacting Frenkel defects at high conc. and superionic transition 2-1473  
 fluorites: $\text{O}_2^-$  coloration, struct. and dynamical aspects, EPR and ENDOR study 2-36427  
 period II element fluorides, nonempirical PRDDO and ab initio calcs. 2-15716  
 period III element fluorides, nonempirical PRDDO and ab initio calc. 2-15715  
 solid fluorides as electrolytes, preliminary studies (*French*) 2-16896  
 $\text{BaFCl}(\text{Br})(\text{I})\text{:Eu}^{2+}$ , EPR study of  $\text{Eu}^{2+}$  ground state splitting 2-36420  
 $\text{CaFCl:Eu}^{2+}$ , EPR study of  $\text{Eu}^{2+}$  ground state splitting 2-36420  
 $\text{F}^-$  (acetonitrile) $_n$  clusters, struct. and stability calcs. 2-29740  
 $\text{F-C...NCH}$  H-bonded complex, stretching force const. and dipole moment at SCF level 2-29728  
 $\text{FCO}$  radical, IR diode laser spectroscopy of  $\nu_1$  and  $\nu_2$  bands 2-24697  
 $\text{FCI}^2$ , ab initio SCF pair pot. and polarisabilities 2-49537  
 $\text{FH}$ , diatomic state mixing and pot. energy curve, atoms-in-molecules calc. 2-29504  
 $\text{FH}$ , dipole moments and polarisabilities, correlation effects, fourth order corrections 2-15730  
 $\text{FH}^+$ , diatomic state mixing and pot. energy curve, atoms-in-molecules calc. 2-29504  
 $\text{FH+H}$ , stabilisation calcs. of resonance energies using SCF and CI trial functions 2-47324  
 $(\text{FH}_2)^+$ , diatomics-in-molecules calc. 2-29504  
 $\text{FH.CN}^-$ , prod. from  $\text{HF CN}^-$  reaction, electronic struct. and geometry, quantum chem. calc. 2-22433  
 $\text{F}_2\text{O}$ , ab initio force const. determ. 2-43781  
 $\text{F}_3\text{P}$ ,  $^{31}\text{P}$  NMR shielding tensor anisotropy, CNDO/2 interpretation (*German*) 2-19981

**fluorine compounds continued**

- $\text{F-H...OH}_2$ , stretching force const., correl. effects 2-39328  
 $\text{SrFCl:Eu}^{2+}$ , EPR study of  $\text{Eu}^{2+}$  ground state splitting 2-36420  
**flux (magnetic)** *see magnetic flux*  
**flux (neutron)** *see neutron flux*  
**flux creep**  
*see also flux pinning*  
 hysteresis loops, minor, in magnetisation curves, flux creep 2-41093  
 NbTi multifilamentary supercond. wires, flux creep phenomenon 2-36286  
**flux crystal growth** *see crystal growth from solution*  
**flux flow**  
*see also flux pinning*  
 barrier against flux exit 2-21741  
 electric current and temp. gradient, effect on flux flow 2-31116  
 inhomogeneous vortex motion in single crystalline samples, flux flow noise, mag. field and temp. dependence 2-46222  
 Josephson junction, fluxon propag. with external mag. field 2-17230  
 Josephson junction, long, fluxon interactions (*Russian*) 2-21733  
 Josephson junction, long, fluxon propag. 2-31096  
 Josephson junction array, 2-dimensional, vortex motion, numerical anal. 2-26568  
 Josephson junctions, long, Fiske steps, dynamic fluxon model 2-31097  
 Josephson transmission line, Ohmic dissipation due to fluxon motion, anomalous DC current 2-36240  
 Josephson tunnel junction, large, fabrication and eval. (*Japanese*) 2-17235  
 Josephson tunnel junctions, intermediate length, fluxon dynamics 2-31095  
 noise during inhomogeneous vortex motion, DC vel. field depend. 2-46221  
 two-dimensional dirty supercond., vortex fluctuations, universal resist transition 2-46202  
 two-dimensional superconducting films, vortex noise meas. 2-46223  
 type II superconductors, discontinuous plasticity and jump-like penetration of vortices (*Russian*) 2-5508  
 type II superconductors, helical instability of force-free vortex configurations 2-36287  
 Al film, granular, resist. transitions, vortex unbinding 2-17249  
 In superconducting film, flux flow vel. meas. using interference effects 2-21742  
 In superconducting film, flux flow vel. and viscosity coeff. 2-41091  
 In-Pb, pinning force study 2-36291  
 Nb, barrier against flux exit 2-21741  
 Nb, low pinning foil, prep. of Nb<sub>3</sub>Sn pinning structs. for guided flux motion 2-51386  
 Nb, pinning force study 2-36291  
 Nb, single crystal, supercond., non-isothermal flux penetration 2-8920  
 Nb superconducting bridge, short variable-thickness, vortex flow regime 2-8921  
 Nb-Pb, Josephson tunnel junctions, long, zero-field steps, temp. depend. 2-36254  
 PbIn, barrier against flux exit 2-21741  
 Sn-SnO<sub>2</sub>-Sn, long Josephson tunnel junctions, resistive branches, step struct. 2-36252  
 V, barrier against flux exit 2-21741  
 $\text{Zr}_8\text{Si}_{15}$  amorphous superconductor, flux flow, critical currents 2-36290  
**flux-line lattice**  
 antiferromagnetic superconductors, behaviour near lower crit. field, vortex line and vortex lattice creation 2-13251  
 ferromagnetic superconductor, mag. and supercond. props., EM interaction between persistent current and mag. moments 2-13232  
 ferromagnetic superconductors, vortex phase stabilisation, generalised Ginzburg-Landau theory 2-13231  
 filamentary superconductors, in situ, supercond. props. and coupling mech. review 2-8910  
 hard and composite superconductors, plastic strain and flux jumps 2-31115  
 inhomogeneous vortex motion in single crystalline samples, flux flow noise, mag. field and temp. dependence 2-46222  
 Josephson junction array, 2-dimensional, vortex motion, numerical anal. 2-26568  
 magnetic superconductor, layered structure, theory 2-46194  
 research activities at Electrotechnical Institute, Slovak Acad. of Sciences, review 2-17183  
 steady state flux-line cutting, in type II superconductors, double cutting model 2-41086  
 superconducting thin film, critical currents and elec. fields 2-21745  
 two-dimensional dirty supercond., vortex fluctuations, universal resist transition 2-46202  
 type II superconductor, attractive interaction between surface and single flux line 2-41089  
 type II superconductors, helical instability of force-free vortex configurations 2-36287  
 type II superconductors, weak flux-line pins, statistical-summation theory 2-36289  
 Nb, low pinning foil, prep. of Nb<sub>3</sub>Sn pinning structs. for guided flux motion 2-51386  
 V, superconductivity and upper crit. field anisotropy 2-46217  
 $\text{V}_3\text{Si}$ , flux-line lattice, small-angle neutron diffr. obs. 2-46220  
**flux line motion** *see flux flow*  
**flux pinning**  
*see also flux creep; flux flow*  
 electric current and temp. gradient, effect on flux flow 2-31116  
 inhomogeneous vortex motion in single crystalline samples, flux flow noise, mag. field and temp. dependence 2-46222  
 noise during inhomogeneous vortex motion, DC vel. field depend. 2-46221  
 nonideal superconductor, low pin density with large interaction forces, pinning force density 2-17248  
 research activities at Electrotechnical Institute, Slovak Acad. of Sciences, review 2-17183  
 type II superconductor, induced-voltage waveform. response to time-varying mag. field 2-26569  
 type II superconductors, helical instability of force-free vortex configurations 2-36287  
 type II superconductors, weak flux-line pins, statistical-summation theory 2-36289  
 Al-Ag (13.5 at.%), torque oscills. damping, magnetisation curves, fluxoid pinning (*Russian*) 2-17247



**flux pinning continued**

- Al-Ag (13.5 at.%) alloy, Abrikosov fluxoid pinning by mag. and torque meas. 2-13252  
 Al-Ag (13.5 wt.%), mag. moment and pinning of Abrikosov fluxoids 2-41094  
 Cu<sub>2</sub>Mo<sub>6</sub>S<sub>8</sub> film, critical currents and pinning forces 2-17252  
 Cu<sub>2</sub>Mo<sub>6</sub>S<sub>8</sub> film, critical currents and pinning forces 2-21748  
 In-Pb, pinning force study 2-36291  
 LuRh<sub>2</sub>B<sub>4</sub>, superconducting props. 2-31043  
 Nb, flux pinning by ferromagnetic overlayer 2-36288  
 Nb, low pinning foil, prep. of Nb<sub>3</sub> Sn pinning structs. for guided flux motion 2-51386  
 Nb, pinning force study 2-36291  
 Nb, supercond., surface pinning forces 2-41090  
 Nb-Hf/Cu-Sn-Ga, multifilamentary supercond., crit. current, strain effects 2-17251  
 Nb-Ti composite high-field supercond., current-carrying, stability, elec. charge effect 2-51385  
 NbN film, two-dimens. granular, resist. characts. of phase incoherent-phase coherent supercond. transition 2-17208  
 Nb<sub>3</sub>Sn filamentary superconductor, bronze processed, microstruct. effects under strain 2-8918  
 Nb<sub>3</sub>Sn multifilamentary wires, crit. current and pinning behaviour, 4.2K to crit. temp. 2-13258  
 Nb<sub>3</sub>Sn wire, bronze-processed, flux pinning 2-8922  
 PbMo<sub>6</sub>S<sub>8</sub> film, critical currents and pinning forces 2-17252  
 PbMo<sub>6</sub>S<sub>8</sub> film, critical currents and pinning forces 2-21748  
 Sn<sub>1-x</sub>Mo<sub>x</sub>S<sub>8</sub> thin film, critical currents, transition temp. 2-17254  
 V<sub>3</sub>Si, supercond., pinning parameters 2-41092

**flux vortex flow** *see flux flow***flux vortex lattice** *see flux-line lattice***fluxmeters**

*see also magnetic field measurement; magnetic flux*

No entries

**fluxoid array** *see flux-line lattice***foams**

*see also bubbles*

- expanded metallic foam for use in gettering of contaminant gases in vacuum deposition processes 2-51815  
 flow in tube, hydraulic resistance calc. 2-16382  
 plastic insulating foam for liquid H tank, closed cell proportion meas. method (*Chinese*) 2-15176  
 plastics, cellular, low-density, modulus aggregate model 2-16707  
 polyurethane, density of air for ultrasonic freqs. 2-35609  
 polyurethane, rigid foams, microstruct. rel. to density 2-51869  
 polyurethane foam, appl. in high-porosity metals prod. 2-17646  
 thermoplastic, shock mitigating props., predicted from stress-strain data 2-31782  
 vibration and noise control, materials 2-25178  
 ZrO<sub>2</sub>, polishing suspension, foaming and foam suppression characts. 2-49963

**focused collision sequences** *see sputtering***focusing**

*see also self-focusing*

- aberration balancing and tolerance for instruments with inhomogeneous exit pupil (*Hungarian*) 2-34671  
 achromatic systems, electrostatic mirrors design 2-11629  
 antiproton prod. within fixed acceptance, optimisation and efficiency 2-39256  
 autofocus system for lens shutter cameras, using NMOS technology 2-33674  
 charged particles, space-time focusing in electrostatic fields with rot. symm. 2-49647  
 coherent optical information processing system adjustment using speckle, Talbot and moire effects (*Chinese*) 2-44425  
 conical exponential mirror analyser, design 2-3656  
 conservative fields, dispersion and focusing props. calc. 2-20240  
 Debye integral representation of focused fields, validity conditions 2-823  
 dipole magnetic calc. for vel. filter SHIP and fusion expts. computer simulation 2-245  
 dipole particle beams, spatial focusing 2-15950  
 dynamic diffractive focusing of X-ray plane wave by bent crystal 2-1371  
 echelon lens, expt. test for maximum intensity in focus 2-44426  
 electric-magnetic focusing deflection system, relativistic aberration theory (*Chinese*) 2-20238  
 electron beam circular scanning in dissector, parameters meas. using CRT 2-23771  
 electron beam effects on contamination in STEM 2-23792  
 electron optics of emission systems with electron mirrors 2-832  
 electrostatic ellipsoidal mirror, fast separator for recoiling and highly charged particle 2-15660  
 EM isotope separator ion optics 2-4046  
 ETA gun characts. 2-564  
 eye, servo controlled, human and primate, response to confined visual environment 2-47596  
 flat lens doublets for parallel ray focusing 2-25093  
 Foucault optical focusing patterns in investigations into optical systems, evaluation of errors (*Russian*) 2-44428  
 Fresnel lens integrated on oxidised Si substrate, focusing efficiencies 2-34944  
 gas lens, thermal, numerical analysis of imaging props. 2-34873  
 grating focusing-device-design using Poynting-vector-optics 2-16092  
 heavy ion fusion, transverse emittance requirements 2-4156  
 Heidelberg proton microprobe using 6 MV tandem Van de Graaff accelerator 2-14044  
 holograms, computer synthesized, use for focusing light into specified volume 2-49715  
 image converter, high voltage magnetically focused, aberrations and transverse field effects 2-34468  
 integrated optics, geodesic components, use of aspherical surfaces 2-7883  
 integrated optics spectrum analyser, aspheric geodesic lenses 2-7884  
 ion accelerator facility for nuclear bombardment target prep. 2-7412  
 ion beam accelerator system, electrostatic and geometric principles 2-6924  
 JAERI magnetic spectrograph design for heavy-ion reaction studies 2-4168  
 laser beam focusing effect on multiphoton process power depend. 2-7620  
 laser fusion, appl. of aspheric optics 2-7849  
 laser high power system, apodisation influence on radiation characts. in geometrical focus 2-16050

**focusing continued**

- laser optical system error sensing using scattered light 2-49764  
 linear accelerator, quadrupole RF focusing, high current beam dynamics, space charge effect 2-24455  
 linear solar cell string with diode bypassing illuminated by parabolic-trough sunlight concentrator, shading anal. 2-27665  
 magnet optics, beam transport for ion implantation processes 2-4448  
 magnetic spectrograph ion-optical system, induced aberrations optimisation 2-4169  
 magnetic spectrograph SPES 4 for particle identification up to 4 GeV/c 2-15661  
 MAMI microtron, beam optics and magnet technology 2-4152  
 mass spectrometer, double-focusing, metastable ions, energetics of fragmentation reactions (*Rumanian*) 2-22515  
 mass spectrometer using mag. and elec. sector fields, ion optics 2-3648  
 matrix technique of Gaussian optics near an arbitrary ray 2-44195  
 mirror, paraboloidal, object field transform., focusing error influence on image form 2-34678  
 NMR flowmeter, focusing techniques for regional cerebral blood flow meas. 2-14318  
 nonlinear distortions correction of light beams by optical system with feedback 2-981  
 objective lenses of thermal viewers for focusing at different distances, image quality preservation 2-49863  
 optical image processing, anthropological methods, informative element separation by defocusing 2-24964  
 optical system alignment operation using gas laser, focusing by interf. pattern 2-49865  
 optimum spatial filters for optical defocus sensing, generation rate of blur-image, appl. 2-34685  
 passive optical system, axially symm. aberration-free, three dimens. problem of apodisation 2-44208  
 permanent magnet quadrupoles, variable strength focusing 2-4155  
 phonon imaging and focusing 2-45444  
 photoacoustic cell using elliptical acoustic focusing 2-43095  
 photovoltaic concentrating collectors, linear-focus and point-focus Fresnel lens using Si solar cells, overview 2-37263  
 planar lens with refractive index varying over the plane 2-44431  
 polymer light-focusing element, refr. index profile form. during diffusion process 2-34946  
 relativistic electron beam focusing in high-voltage diode, mag. fields observation 2-15657  
 second optical harmonic, spherical aberrations in focused optical pumping system 2-44388  
 semiconductors, phonon optics, ballistic phonon focussing 2-30544  
 shock weak waves, focusing at an axisymm. arete 2-4861  
 SIMS beam optics 2-246  
 SNICS, surface ionisation sputter-type ion sources, sputter cathode enhanced axial erosion 2-11343  
 soft X-ray scattering, filtering and focusing by mirrors, review 2-28950  
 solar cell linear focus concentrator, actively-cooled photovoltaic receiver, low-cost design 2-27664  
 solar energy parabolic-cylinder concentrator with tubular heat receiver, focusing characts. and efficiency 2-2771  
 spherical 2-layer lenses, RTV silicon rubber/zinc powder mixture, Luneberg lens comparison (*Japanese*) 2-8004  
 spherical wave diffraction by circular aperture, Debye and Kirchhoff approx. 2-29761  
 spherical waves, diffracted, converging, focal shifts 2-824  
 tandem Van de Graaff accelerator pulsed beam 2-11320  
 thick-grating non-divergent focusing device, two dimens. analysis 2-7853  
 variable focal length lenses for colour TV cameras 2-4573  
 weak 3-dimens. shock wave, focusing at an arete 2-39945  
 wedge, interferential, reflected and transmitted fringe shapes 2-11635  
 X-ray diffraction focusing 2-44951  
 X-ray optics, use of nonspherical mirrors 2-6935  
 Li lenses for high energy particle beams axially symmetric focusing 2-24465  
 LiNbO<sub>3</sub> crystal, radiation conversion, strong focusing effect 2-49822  
 NaCl, focused laser beam deform., multiphoton polaron and avalanche optical breakdown models 2-7813  
 Nd:glass laser, aberration cancellation by wavefront inversion, appl. to plasma diagnostics 2-20325

**focusing, particle** *see focusing; particle optics***fog**

- dispersal by CO<sub>2</sub> laser pulses, exact soln. including prevaporisation heating 2-48000  
 dispersal by linear heat source, calc. of clearing zone 2-28184  
 high-inversion fog episodes in Central California 2-32607  
 interferometric imaging through fog with Fizeau interferometer 2-28889  
 laser beam propagation through hazes, fogs and clouds, significance of higher-order multiple scatt. 2-48002  
 light propagation in turbulence and particulate media, multiple scatt. effects 2-32640  
 radiation and radiation-advective fogs, statistical forecasting 2-23089  
 radiative cooling in low fog or cloudiness conditions via 8-13 micron window (*Russian*) 2-37968  
 transmission in 0.53 to 10.1  $\mu$ m range 2-23109  
 water fog sound absorption properties 2-20452  
 CO<sub>2</sub> laser propagation in fog, pulse shape and delay 2-24946

**foils**

- Havar thin foil, resistance to rupture measurement (*German*) 2-12950  
 Kepton H, resistance to rupture measurement (*German*) 2-12950  
 mechanical testing, clamping devices, review 2-47284  
 medical intensifying foils for X-ray diagnostics (*German*) 2-52621  
 metal foils and plated wires, electron emission study using flash X-ray spectrum 2-31602  
 multiple foil bremsstrahlung sources, theoretical and expt. studies 2-29471  
 perfluoroalcoxy film, nonmetallized electret, charge storage 2-36528  
 piezoelectric AA for electroacoustic transducers (*German*) 2-23675  
 polyethylene terephthalate foils, isothermal and TSC 2-9077  
 resistance to rupture measurement (*German*) 2-12950  
 steel, stainless, resistance to rupture measurement (*German*) 2-12950  
 strain gauges, foil, reliability in repeated cyclic deform. 2-13913  
 thickness measurement by  $\alpha$ -absorption method (*German*) 2-10786  
 Ag foil, CESR at 42.5 MHz 2-26747  
 Ag-<sup>111</sup>In foil, quenched, vacancy detrapping, TDPAC study 2-12632  
 Ag-Cu, directionally solidified and deformed eutectic alloys with fibre structure, Hall effect and elec. cond. meas. 2-1893



# foils continued

- Al cryst. foils, bent, crossed bend contours, fine struct. appearing in electron microscope images 2-25697
- Al foil, CESR at 42.5 MHz, evidence for electron-electron spin scatt. process 2-26747
- Al foils, energy loss straggling for electrons 2-31593
- Al foils in artificial quartz atmosphere, electrical explosion 2-1361
- Al, XPS quantitative anal. of surface 2-46881
- Al-Li, electron microscope thin foils, precipitation induced by ion-beam thinning 2-31698
- Al-Mg and Al-Li(Zn)-Mg, corrosion cracking, role of defects near boundary 2-17772
- Be-Cu foil-substrate system, photoacoustic effect, substrate effects 2-30533
- C, amorphous and graphitised foils, differences in stripper qualities 2-11336
- C, electron beam evaporation and glow discharge prep., optical absorpt. meas. 2-51728
- C foils, protons and deuterons energy loss at 50-150 keV per nucleon 2-615
- C stripper foil behaviour in  $^{127}\text{I}$  beam 2-11338
- C stripper foils, radiation lifetimes and failure mechanisms 2-11335
- C stripper foils made by DC glow discharge process, physical props. and structure 2-11334
- Cu/Ni foil composites, electrodeposits, 2-phase metal layer, H-diffusion (Japanese) 2-8672
- Fe foil, electrodeposited, mag. props. 2-26664
- Fe/Ni foil, dynamic magnetisation powers, 3-DIM neutron polarisation anal. 2-26661
- Nb, dislocation behaviour of single crystals with [110] and [100] tensile axis at low temp. 2-1483
- Ni electrodeposit, prep. of vertically thin foils, fibre texture (French) 2-13663
- Ni-Cr-W-Mo-Al-Ti (16.9,4.1,4.1,4 wt.%),  $\gamma'$  phase discontinuous precipitation and recryst. (Russian) 2-51909
- Pd/Ni foil composites, electrodeposits, 2-phase metal layer, H-diffusion (Japanese) 2-8672
- Tb, thin foil, mag. domain struct. obs. by transmission electron microscopy 2-13312
- V foil, thermally oxidized, phase composition and metal-semiconductor transition 2-1829
- Zr alloy oxide films, correl. between phase composition and corrosion kinetics, Mossbauer investg. 2-21929

# Fokker-Planck equation

- advanced fuel fusion reactor, high-beta confinement expts. 2-16494
- axially-channelled relativistic electrons, Fokker-Planck eqn. soln. 2-25960
- Brownian motion, Fokker-Planck equation solution, relax. to diffusive eqn. 2-10714
- Brownian particles, steady absorpt. by infinite cylinder 2-38567
- butane, torsional Fokker-Planck eqn. 2-7490
- channelling, axial, thermal dechannelling theory 2-21195
- charged particle differential collision terms in  $S_n$  appl. 2-34222
- charged particle transport in plasma, transport eqn. by matrix factorisation 2-20829
- deep electrostatic-magnetic traps, particle loss numerical study 2-40150
- deep inelastic collisions, mass diffusion coeff. microscopic calc. using linear response theory 2-24267
- diatomic molecule distribution over vibr. states, sharp peak evolution 2-4368
- diffusion in bistable pot., functional integral approach 2-38572
- discrete ordinate neutron transport codes to perform Fokker-Planck calc. 2-34105
- dislocation dynamics statistical theory, math. props. 2-25898
- ferromagnetic small particle system, phase transitions 2-31246
- ferromagnets, Fokker-Planck eqn. coeffs. and transport effects 2-1881
- ferromagnets, Fokker-Planck eqn. coeffs. and transport effects 2-5374
- fluctuations about nonequilibrium steady states, Fokker-Planck eqn. approach 2-38573
- fluctuations nonlinear dynamics, low freq. correl. functions 2-48617
- fluid dynamics, nongaussian processes, computer expts. 2-15038
- fusion reactor core plasmas, linear response function of  $\alpha$ -particle heating for temp. and density perturbations 2-4985
- Josephson junction, current driven, microwave induced steps, thermal fluctuations and transition rates 2-31093
- kinetic boundary layer with absorbing boundary 2-23597
- LH wave steady-state current generation, Fokker-Planck study 2-4936
- linear non-Markovian processes, kinetic eqn., transport processes, non-equilib. thermodynamics 2-38583
- Markov processes, Onsager-Machup function derivation by Kullback-Leibler entropy minimisation 2-3484
- mirrors, tandem and conventional, collisional end losses 2-4988
- multiphoton lasers and multiphoton instability, unified approach 2-7739
- multiple scattering of electrons at axial channelling 2-25957
- neutral beam-driven Tokamak, Fokker-Planck/transport model 2-12281
- nonlinear Gaussian noise, theory 2-3497
- nonlinear hydrodynamic fluctuations around equilibrium 2-48509
- nonlinear systems, stochastic electrodynamics and quantum theory 2-10628
- one-dimensional, with time-depend. potential, fluctuation, relaxation 2-3487
- optical bistability, adiabatic results for populations 2-44376
- optical fibres, graded-index, mode coupling due to microbending 2-20415
- oscillator in external force, Fokker-Planck eqn. for Brownian motion, stationary soln. 2-48619
- path integral approach to Fokker-Planck eqns. soln. 2-24216
- pendulum Brownian motion, Kamers eqn. eigenvalues and eigenfunctions appl. 2-48614
- phase transformations, noise-induced, in Fokker-Planck formalism 2-3550
- planar channelling process at small depths 2-25950
- quasielastic and deep-inelastic heavy ion collisions, neutron and proton exchange, statistical model 2-34076
- reduced Fokker-Planck eqn., finite element soln. 2-20889
- relativistic channelled particles, passage and radiation 2-25961
- resonance-light pressure on atomic particles, Fokker-Planck eqn. derivation 2-20012
- selectively absorbing boundaries, kinetic boundary layer for Fokker-Planck eqn. 2-38570
- solution, appl. to centrifugal trap for plasma 2-1330
- spherical plasmas, charged particle transport, Fokker-Planck eqn. soln. using numerical methods 2-16430

# Fokker-Planck equation continued

- steady-state current generation in plasma by electron cyclotron waves 2-40129
- stochastic bistable systems, classical and quantum theory 2-4550
- stochastic equation of motion of open systems, information gain solns. 2-110
- stochastic systems, fluctuations and relaxation 2-23566
- superionic conductor, thermal conductivity dispersion, freq. depend. for one-dimensional conductors (Russian) 2-26156
- thermalization of energetic charged particle beams channelled through crystal 2-35555
- Tokamak with large-banana-width effects, fast-ion thermalisation 2-20892
- toroidal plasma, electron current, RF waves, collisions, Fokker-Planck eqn. 2-44858
- transport coefficients in high energy nuclear collisions 2-19526
- two-mode lasers, correl., transients, bistability and phase-transitions analogy 2-7740
- Si crystal, channelling length of high energy positrons 2-35558
- food processing industry**
  - beer volatile constituents analysis, using multi-detector gas chromatograph with automatic sampler 2-14021
  - chromatographic sample concentrator appl., microprocessor-controlled 2-14024
  - grain drying, solar heated dehumidification system in India 2-9633
  - on-line chemical analysis for cost effective process control 2-31987
- forbidden gap** *see energy gap*
- Forbush decreases** *see cosmic ray variations*
- force**
  - see also atomic forces; coercive force; Coriolis force; force control; force measurement; molecular force constants; nuclear forces*
  - geometrical treatment of force, appl. to general relativity 2-18840
  - Newton's second law experiment, student demonstration 2-48456
  - relativistic mech., spatial relations between force and accel. 2-48449
  - relativity, reintroduction of force concept, repulsion 2-28731
- force constants** *see lattice dynamics; molecular force constants*
- force control**
  - mechanical loading, static and dynamic, instrument with modulating capability 2-25335
  - Neutron-8 unit for intrareactor tensile tests of constructional materials over wide deform. rate and temp. range 2-52160
- force measurement**
  - see also dynamometers*
  - detection on macroscopic mechanical oscillator, quantum limit standard 2-10780
  - dynamometer, for surface grinding appl., theoretical study (Chinese) 2-38644
  - foot, dynamic vertical force distrib. beneath, characterisation methods 2-47732
  - impulsive forces meas. on wind tunnel model, using conventional strain gauge balance 2-20783
  - integrated optical force and stress sensor 2-6843
  - mechanical loading, static and dynamic, instrument with modulating capability 2-25335
  - multiwire chambers, filament tension meas. device 2-15163
  - multiwire chambers, filament tension meas. device 2-19097
  - sensor-machine interaction identification and quantification 2-38642
  - surgical vascular clips, compression force determ. by clinically useable variable depth dynamic sensor 2-14356
  - wind tunnel facilities, rotary balance development and trial 2-19100
  - wind tunnel force instrumentation, cryogenic, using strain gauge balances 2-38641
- force meters** *see force measurement*
- forecasting, technological** *see technological forecasting*
- forging**
  - drop forge hammer noise source identification by residual spectrum modelling 2-9742
  - hammer impact noise and overall plant noise control 2-9740
  - porous materials, sintered, cold extrusion forging 2-13670
  - powder metallurgy products, bonded, strength and ductility 2-36810
  - steel, Cr-Ni, austenitic, forgings for low temp. appls. (German) 2-46978
  - steel, low-alloy, powder forged, preforming treatments influence on mech. props., inclusion content 2-41736
  - steel, strain-temp. correl., obtained an application of axisymm. compressive stresses 2-47138
  - Al, obtained an application of axisymm. compressive stresses 2-47138
  - Ti-Al-Sn-Zr-Mo-Si, hot forging, deform. and unstable flow 2-17712
  - Ti-Al-Sn-Zr-Mo-Si (6, 2, 4, 2, 0.1 wt.%), forging deform., characterisation and modelling 2-36912
- form factors, atomic** *see atomic structure*
- form factors (elementary particles)**
  - see also form factors (nuclear)*
  - baryon mag. moments, spectrum-generating group theory 2-3784
  - baryon semileptonic decays in quark model 2-33835
  - exclusive QCD processes, helicity selection rules and gluon spin tests 2-43298
  - hadronic, at large  $q^2$  and deep inelastic lepton scatt., parton model 2-7036
  - kaons form factor study in  $e^+e^-$  annihilation,  $\phi(1.64)$  resonance prod. 2-15350
  - Majorana neutrinos, form factors, spin flavour rotation, magnetic fields 2-23889
  - meson exchange currents,  $\pi NN$  form factors, in the deuteron (Korean) 2-11097
  - neutron charge radius and diquark clustering, quark-diquark model 2-3786
  - neutron elec. form factor 2-48993
  - nucleon form factors in geometrodynamical model 2-11052
  - nucleon form factors in time-like region and  $NN$  system energy levels (Russian) 2-48995
  - pion-baryon, in chiral bag model (Russian) 2-11023
  - proton elec. and mag. form factors,  $p$ -meson pole position from space-like region data 2-7034
  - proton-neutron mass difference calc. using off shell form factors 2-43347
  - QCD, vertex functions, double logarithmic asymptotic behaviour, perturbation theory eighth order 2-7004
  - QCD asymptotic dynamics, coherent states and quark form factor 2-29074



**form factors (elementary particles) continued**

- quark EM form factors in QCD, asymptotic behaviour, renormalisation 2-320  
 quarks and leptons low-lying excited states in composite models 2-43313  
 semileptonic baryon decay, weak elec. coupling, quark model calc. 2-48986  
 singlet quark form factor in first six orders of perturbation theory 2-7003  
 Sudakov form factor, asymptotic behaviour in QCD 2-38853  
 VDM, photon-vector meson coupling strength, photon momentum depend. 2-43319  
 $B \rightarrow \pi l \nu$ ,  $l = \tau$  or  $e$ , semileptonic decays, form factor effects 2-48976  
 $D^+ K^0 e^+ \nu_e$ , form factors, QCD short distance behaviour 2-11045  
 $\Delta(1232)$  resonance width,  $\pi N \Delta$  coupling effects, vertex form factors, quark model 2-33806  
 ed, elastic scatt., recoil electron polarization 2-43357  
 $e^+ e^- \rightarrow hh$ ,  $h =$  baryon resonance with spin 5/2, differential cross section calc. 2-3800  
 $e^+ e^- \rightarrow K^+ K^-$ , charged kaon form factor for 1.0-1.4 GeV 2-33842  
 $e^+ e^- \rightarrow X$ , form factors 2-24010  
 $e\pi$  elastic scatt., form factor meas. 2-48997  
 $\gamma^* \gamma^* \rightarrow$  meson, exclusive two-photon process, higher order QCD corrections 2-38917  
 $K \rightarrow \pi l \nu$ , form factors, QCD short distance behaviour 2-11045  
 $K$  resonant time-like form factor, radiative corrections, charge radius 2-29109  
 $\bar{p} d \rightarrow e^+ n n$ , reactor energies, form factors 2-19534  
 $\pi^- \rightarrow \pi^+ l \nu$ , form factors, QCD short distance behaviour 2-11045  
 $\pi e$ , 100 GeV/c, elastic scatt.,  $\pi^-$  form factor, differential cross section 2-23986  
 $\pi N$  scattering, Coulomb correction to phase shift in  $P_{33}$  resonance region 2-3805  
 $\pi N \rightarrow X$ , large  $p_T$  jets, direct pion coupling, QCD sub-processes 2-24043

**form factors (nuclear)**

- $^2H(e,e)$ , low  $Q^2$ , neutron charge form factor slope (Russian) 2-11130  
 $^2He(e,e)$ , deuteron form factor, relativistic effects in impulse approx. 2-29256  
 charge form factors, wave functions, accuracy in ATMS calcs. 2-3839  
 compressibility, from radii and binding energy 2-24096  
 electron elastic scatt. by isotopes and isotones, in distorted-wave high-energy approx. 2-34015  
 electron-deformed nuclei elastic scatt., form factors in eikonal approx. 2-34013  
 electron-nucleus inelastic scatt. and giant multipole reson. 2-34014  
 EM interactions, photon emission and absorption 2-3905  
 Helm model, nuclear charge and current distrib. 2-3838  
 (H1, H1') direct reactions, inelastic transition form factors, semiclassical theory 2-15398  
 light nuclei, two meson exchange forces calcs. 2-29201  
 medium and heavy even-even nuclei, charge density distrib. from electron scatt. form factors 2-38940  
 meson structure of the optical pot. isovector part 2-33978  
 pion coupling to He, Li, Be, C, N, O, review 2-49035  
 two nucleon cluster spectroscopic factors, bound state parameters search in DWBA calcs. 2-19441  
 $\alpha$ -d separable interaction form factor for transfer reactions 2-43419  
 $\pi NN$ ,  $\pi N \Delta$  and  $\pi \pi p$  form factors from quasi-two-body hadronic reactions 2-33896  
 $^{10}B(e,e)$ , form factors, second Born approx. corrections (Russian) 2-11131  
 $^9Be(e,e)$ , form factors, second Born approx. corrections (Russian) 2-11131  
 $^{209}Bi(e,e)$ , transverse elastic form factor, relativistic calc., nuclear current operator 2-33894  
 $^{12}C(e,e)$ , A=12, 13, M1 form factors, core polarisation effects 2-24109  
 $^{12}C$  spectrum in multi-configuration HF basis 2-24073  
 $^{12}C(e,e)$ , elastic scatt. in  $\alpha$ -particle model 2-34016  
 $^{48}Ca(^{16}O, ^{16}O)$ , inelastic scatt. microscopic calc. 2-49080  
 $^2H$ , EM form factors 2-43417  
 $^2H$ , tensor polarisation and mag. form factor, percentage D state 2-33895  
 $^2H(e,e)$ , deuteron mag. structure function, relativistic effects 2-33899  
 $^2H(\gamma, p)$ , E1 density transitions, dynamical dipole polarisability 2-43476  
 $^2H(e, e^-) nn$ , reactor energies, form factors 2-19534  
 $^3H$ , three-particle systems description by oscillator-basis method 2-24093  
 $^3H(K^+, K^+)He$ , 0.4-1 GeV, single charge exchange reaction cross section 2-34088  
 $^3He$ , charge form factor, enhancement by 3-body force 2-43428  
 $^3He$ , nucleon polarisation and nuclear charge operator 2-49031  
 $^3He$ , three-particle systems description by oscillator-basis method 2-24093  
 $^4He$ , nuclear coupling constants from data on nuclear charge form factors 2-24129  
 $^4He$ , A=3,4, EM form factors 2-43417  
 $^4K$ , A=38,39,41-47, isotope shifts and HFS by laser spectroscopy 2-49341  
 $^6Li(\gamma, X)$ , photodisintegration, charge form factor, RMS radius, charge density, quadrupole moment 2-392  
 $^7Li$  charge form factor, antisymmetrisation in microscopic calc. 2-24112  
 $^7Li$  charge form factor, semimicroscopic cluster-model anal. 2-33898  
 $^7Li$ , charge form factor and quadrupole moment 2-29192  
 $^{14}N(e,e)$ , form factors, second Born approx. corrections (Russian) 2-11131  
 O isotopes scatt., semimicroscopic anal. 2-39054  
 $^{16}O$ , nuclear coupling constants from data on nuclear charge form factors 2-24129  
 $^{16}O$  nucleons, 3-alpha forces 2-24128  
 $^{208}Pb(^{16}O, ^{16}O)$ , inelastic scatt. microscopic calc. 2-49080  
 $^{56}Fe$ , A=43.45, levels,  $J^\pi$ , anal. powers, form factors, DWBA anal. of  $Ti(p, \alpha)$  2-39010

**formation, heat of** *see* **heat of formation****forming processes**

- see also* casting; electroforming  
 metal forming using radial-mode US vibratory systems, effect of load impedance on response characts. 2-4667  
 polymer melt spinning, interactive computer simulation program 2-46996  
 polyolefin blends, binary and ternary, processing and internal morphology 2-46995  
 sheet metals, formability maps 2-52003  
 shell, elasticoplastic, interaction with rigid punch 2-25327

**forming processes continued**

- steel, Ti, low C, nitridable, cold forming processes 2-36871  
 unworkable materials, electrical erosion for improving efficiency and quality of treatment by super-hard abrasive tools (Russian) 2-9419  
 Ni-Fe, high permeability, sheet permeability (Japanese) 2-36909
- Foucault currents** *see* **eddy currents**
- fountain effect** *see* **superfluid helium-4**
- Fourier analysis**  
*see also* **Fourier transforms; harmonic analysis; waveform analysis**  
 $\alpha$  Canis Minoris (Procyon), microturbulence and rot. vel. from Fourier anal. of spectral lines 2-28451  
 computerised tomography, reconstruction using direct Fourier inversion 2-18300  
 disk, elastic circular symmetrically situated elliptic hole, equilib. (Russian) 2-12026  
 Earth tides, Fourier anal. of solid tidal tilting in West Australian gold-fields 2-9910  
 ECGs of isolated rat hearts as a meas. of viability after cooling 2-6292  
 EEG power spectrum, Walsh vs. Fourier estimators 2-14348  
 energy band calc., smooth interpolation with gradient utilisation 2-45803  
 EF Eridani (2A 0311-227), AM Herculis star, Fourier anal. of UVB photometry rel. to nonsinusoidal light curve 2-53315  
 galaxy images automatic classification, appl. of Fourier structural anal. 2-33144  
 laminates, cross-reinforced, edge effects 2-20540  
 nonlinear echoes, phase conjugation, time reversal, and electronic holography, review of expts. 2-42808  
 nonlinear fluid systems 2-39878  
 perpendicular incidence photometric ellipsometry of anisotropic surfaces 2-10846  
 plane waves on sphere and some appl. 2-10979  
 plates, trapezial, three-ply freely supported, free vibrs. 2-39854  
 power press die and tooling noise 2-9741  
 pyrophosphate scintigraphy, improved detect. of acute myocardial infarction 2-27877  
 recessed shells of revolution, DSISR program appl. 2-39816  
 scintillation camera collimators, accuracy of PSF and MTF computation by Fourier anal. 2-52614  
 seismology, reconstruction of sparse spike train from portion of spectrum and appl. to high-resolution deconvolution 2-28029  
 time depend. charged particle in crystal, transformation modified singular spherical integrals 2-29769  
 Z Ursae Majoris, semi-regular variable star, periodicities from Fourier anal. of light curve 2-10453  
 vertical pendulum, Hamiltonian maps in complex plane 2-23426  
 $Bi_{2-x}Ca_{2x}(Sr_{2-x})(Ba_{2x}O_{3-x})$  solid soln., cryst. struct. 2-12571  
 DTA  $WO_6$ , D site location from neutron powder diff. data 2-21118  
 Fe effects on toroidal conductor, magnetostatic field calcs. 2-29747  
 Ni surface, adsorbed Se, photoelectron diff. data for surface-struct. determ. 2-51767
- Fourier series** *see series (mathematics)*
- Fourier transform optics**  
*see also* **Fourier transform spectroscopy**  
 Abbe image formation theory in the microscope 2-24963  
 astronomy, appl. of optical Fourier transformation system to solar granulation anal. 2-6577  
 closed-form object restoration from limited spatial and spectral information 2-15966  
 coherent optical processor aberrations, phase errors in Fourier transformed plane 2-852  
 diffraction through tilted slit, simplified treatment 2-38390  
 electro-optical filter, for rotationally invariant objects detection (Russian) 2-4575  
 electronic Talbot interferometer using two Fourier images 2-214  
 filter system, output signal, influence of partially coherent illumination and misalignment of spatial filter (German) 2-4459  
 Fresnel diffraction field, periodic amplitude and phase structures visualisation (Russian) 2-4454  
 geodesic lens system for high-resolution RF spectrum analyser 2-7894  
 holographic storage, thermoplastic recording media, in two-loop data retrieval systems (Russian) 2-4464  
 holography, achromatic Fourier transform, in temporally broadband light 2-4465  
 holography, Dennis Gabor memorial symposium, Haifa, Israel (Mar. 1980) 2-33216  
 holography and Fourier optics, wavelength var., operator algebra description 2-34690  
 holography and inverse scattering 2-34689  
 hybrid optoelectronic system for wideband complex-valued Fourier transform meas. 2-24949  
 image restoration of images possessing a finite Fourier series 2-44209  
 incoherent system for integral transform realisation 2-20258  
 integral transforms with Bessel function kernels, optical implementation 2-49695  
 interferogram processing, by spatial filtering 2-29787  
 inverse optical scattering, encoding of information 2-7726  
 jittered arrays of periodic structures, regularity diagnostic using diff. patterns 2-860  
 Lagrangian interpolated binary Fourier holograms, Lohmann hologram phase error modification (Chinese) 2-15968  
 laser beam propagation in anisotropic scatt. media, small-angle scatt. approx. soln. limiting cases 2-39564  
 matched filtering, multiple, using sampling spatial filter 2-25102  
 memories, optical large capacity, correlator appls. 2-862  
 microdensitometer transfer functions for a slit aperture with random angular misalignment 2-23705  
 miniaturisation limits in optics (German) 2-44434  
 multicolor holographic readout systems 2-34691  
 multiple images produced by spatial freq. sampling, spectral width and source size effects 2-853  
 object cross section image reconstruction from projections 2-15964  
 optical elaboration of images (Italian) 2-4457  
 OTF, measurement and technical derivation (Hungarian) 2-11646  
 phase problem, function regeneration from modulus of its Fourier transform (Russian) 2-848  
 phase retrieval using two intensity measurements in the complex plane 2-15965  
 phase-retrieval problem for radial functions, uniqueness results 2-39577  
 photographic image coherent and incoherent optical processing techniques 2-7727



**Fourier transform optics** continued

- planar lens with refractive index varying over the plane 2-44431
- quasi-differentiating concept, possible optical implementation 2-20259
- real-time correlator for photon statistics investigations 2-11650
- sampled data, superresolution technique nonuniqueness 2-15962
- signal processing in one dimens. 2-24955
- speckle patterns, one-dimens. elongated dichromatic, surface roughness depend. 2-7718
- speckle photography data numerical processing by Fourier transform 2-34663
- tomography using Fresnel zone plate, optical reconstruction numerical simulation (*French*) 2-52611
- two-lens system, Fourier transform of complex amplitude, comparison of thin- and thick-lens systems 2-20262
- Van Cittert-Zernike theorem, multiplex version 2-39710
- weak scatterer structure determ. from holographic images 2-20274
- white light image addition and subtraction by colorimetric meas. (*Chinese*) 2-39576

**Fourier transform spectroscopy**

- amorphous mag. alloys, Fourier analysis of Mossbauer spectra 2-26803
- Auger spectroscopy, self-deconvolutions, sequential and Fourier transform methods 2-15271
- autoregressive spectral estimate, phase error effects 2-48794
- benzene adsorbed on Pt-Al<sub>2</sub>O<sub>3</sub>, Fourier transform IR spectroscopy, evidence for  $\pi$ - and  $\sigma$ -bonded chemisorbed species 2-40694
- benzonitrile quadrupole coupling, microwave Fourier transform spectroscopy 2-11470
- blood proteins, adsorption kinetics, Fourier transform IR spectroscopy 2-52422
- cholesterol, <sup>13</sup>C NMR spectral simplification and assignment with spin-echo Fourier transform technique 2-34445
- clipped Fourier Transform mass spectral compression algorithm for micro-computer-compatible search systems 2-17929
- coherent optical detection, real time Fourier processing, chirped heterodyne method 2-43085
- cyanocetylene-d, D quadrupole coupling by microwave Fourier transform spectroscopy 2-11471
- cyclohexane adsorbed on Pt-Al<sub>2</sub>O<sub>3</sub>, Fourier transform IR spectroscopy, evidence for  $\pi$ - and  $\sigma$ -bonded chemisorbed species 2-40694
- dielectric spectroscopy utilizing real-time operating system, permittivity meas. appl. 2-13396
- electrolyte solutions, subMM absorpt. coeffs. meas. 2-4277
- energy-dispersive X-ray spectrometry, detectability limits and deconvolution, statistical considerations 2-43156
- epoxy-sorbed water vapour interaction, Fourier-transform IR study 2-46572
- EPR spectra, alternating linewidths, simulation method 2-28877
- ethane-1,1,1-d<sub>3</sub>, high resolution IR spectrum of rovibr. levels 2-24695
- EXAFS, structural anal., regularisation and Fourier transformation methods, error sensitivity 2-22116
- far IR, phase-error correction 2-38705
- glow discharges formed in low press. upper atm. gases, IR emission spectroscopy 2-50462
- high resolution Fourier transform spectroscopy with phase correction in real time 2-23745
- ICR spectrum sidebands, appl. to ion mass determ. 2-28925
- IR ellipsometry using photometric ellipsometric and Fourier spectrometer 2-28887
- IR laser spectroscopy, appl. to H<sub>2</sub>O vapor high resolution spectra 2-19187
- IR photoacoustic spectroscopy, appls. 2-23743
- IR spectrometry, review 2-48789
- JIPP T-II Tokamak plasma, electron cyclotron emission meas. with Fourier transform spectrometer 2-35321
- liquids, refractive index, determ. by dispersive Fourier transform reflection spectra 2-19193
- materials for near MM-wave plasma diagnostics, Fourier transform refl. and transmission spectroscopy 2-40183
- methanol, high resolution Fourier transform spectroscopy in far IR 2-39392
- methanol catalysts, adsorpt. of CO, FT-IR spectrosc. obs. 2-27487
- micelles, organic counterion binding determ., Fourier transform NMR self-diffusion meas. 2-21915
- Michelson interferometer, asymmetric, for direct determ. of far IR opt. consts. of semicond. 2-15245
- p-nitrobenzoic acid, mol. monolayer chemisorbed on oxide-coated Cu, FT IR spectrum 2-17455
- nitrosobenzene, N quadrupole coupling by microwave Fourier transform spectroscopy 2-11469
- nitrosyl cytochrome c oxidase, frozen soln. EPR, Fourier transform resolution enhancement 2-29635
- NMR, 2-dimens., solvent elimination using Hahn echo 2-3603
- NMR and chemical exchange rapid scan theory 2-33593
- NMR Fourier spectrometer for study of rare isotopes in crystals 2-28871
- NMR spectra, accumulation, signal-to-noise ratio 2-6880
- NMR spectra, dispersion mode contrib. suppression, pseudo echo method 2-17365
- NMR spin coupling constants, relative sign by 2-dimens. FT spectrosc. 2-24750
- NMR spin-spin relaxation times 2-15816
- NMR time axis Zeugmatography of nuclear spin density wave mapping 2-33596
- n-octane, C-H stretching bands, solvent-induced freq. shifts, FT IR invest. 2-4275
- phase error correction of spectra with positive and negative intensities 2-38696
- phase Fourier spectroscopy, 1 in 10<sup>19</sup> resolution 2-28907
- photoacoustic spectrometer, high-luminosity, visible and near-IR 2-33640
- photoacoustic spectroscopy, quantitative Fourier transform IR, of condensed phases 2-43109
- poly(2,6-dimethyl 1,4-phenylene oxide)-atactic polystyrene blends, orientation, FT IR obs. 2-46604
- polymer coated metals, photochem., thermal and environmental degradation, FT IR obs. 2-27470
- polymers, amorphous state, Fourier transform IR spectra and calorimetry 2-5059
- polymers, low loss, optical constants, 4 to 40 cm<sup>-1</sup> 2-21966
- polyphenylene oxide-poly-4-chlorostyrene, incompatible blends, factor anal. and Fourier transform IR spectra 2-24900

**Fourier transform spectroscopy** continued

- polyphenylene oxide-polystyrene blend, factor anal. and Fourier transform IR spectra 2-24900
- polyvinylidene fluoride films, structure changes during dielec. polarization, study by far IR Fourier transform spectroscopy 2-13402
- PVC, pressure-induced freezing of conformational states 2-26052
- pyromellitic acid dihydrate, deuterated, EFG tensors and deuteron positions, FT NMR obs. 2-24735
- Raman spectrum peak resolution, appl. to polyvinyl chloride 2-5689
- resist films, VUV photochem. reactions, Fourier transform IR difference spectra study 2-9555
- solid state NMR spectroscopy, analog transient recorder-computer interface 2-33591
- solids, FT IR photoacoustic spectra normalisation 2-23746
- spectral analyser, integrated acoustooptic, prototype 2-1046
- stellarator plasma, electron cyclotron emission, Fourier spectral anal. using max. entropy method 2-16506
- stratosphere, emission spectra in submm range, constituent identification 2-6426
- surfactant-hydrocarbon-water microemulsion systems, Fourier transform NMR self-diffusion obs. 2-37108
- thermal deflection Fourier transform spectroscopy for high-sensitivity absorpt. and dichroism meas. 2-43093
- trace gas minimum detectable quantities using high resolution spectroscopy 2-27758
- visible region Fourier approach to absolute spectroradiometry 2-232
- <sup>10</sup>B/<sup>11</sup>B isotope ratio determ. using FT IR spectrosc. 2-23744
- <sup>12</sup>C/<sup>16</sup>O<sub>2</sub>, rovibr. transitions, emission Fourier spectra anal. in 4.5  $\mu$ m region 2-24693
- CuInS<sub>2</sub>:Fe, low freq. B<sub>1</sub> mode, IR absorption and Fourier transform spectroscopy 2-31529
- CuInS<sub>2</sub>:Fe, vibrational modes, impurity effects, IR spectra study 2-16735
- GaTe, phonon modes and optical consts., far IR complex refl. meas. 2-5669
- I<sub>2</sub>, rotation-vibr. anal. of electronic states by laser induced fluoresce. Fourier transform spectroscopy 2-15923
- <sup>15</sup>N satellites in PMR, 2-dimens. Fourier transform. obs. 2-24742
- OH+HO<sub>2</sub>NO<sub>2</sub>(propene), reaction rate const. determ. by FTIR spectroscopy and relative rate method 2-22412
- PbTiO<sub>3</sub>, amorphous, EXAFS study 2-41449
- Si, laser-induced amorphous, adsorpt. of O, expt. study 2-45268
- Si, oxidation by ion implantation and laser irradiation 2-16675
- Si:C<sup>+</sup>(N<sup>+</sup>)(O<sup>+</sup>), formation of SiC, Si<sub>3</sub>N<sub>4</sub> and SiO<sub>2</sub> by laser annealing 2-50675

**Fourier transforms**

- see also fast Fourier transforms; Fourier analysis; Fourier transform optics
- acoustic wave scattering, integral transforms, asymptotic expansion method 2-15079
- Armco Fe, thin elastic cylindrical shell, sound pulse scattering (*Russian*) 2-16162
- B-scan resolution enhancement using Fourier transform holography 2-17845
- bispectrum and higher-order spectra, bibliography 2-10564
- $\alpha$  Canis Minoris (Procyon), mean residual Fourier transform of spectral lines 2-28451
- convolution arrays, generalised time/space approach 2-44594
- cylinder, hollow thick-walled composite dynamic stationary elastic problem (*Russian*) 2-8037
- cylinder, infinite solid, under bending by conc. load, stress state 2-4726
- digital storage and analysis of speech 2-16195
- dipole-dipole interactions, Fourier transforms using Ewald's method 2-1413
- distribution function partial spatial moments, calc. from Fourier transform 2-48649
- EEG intervals, spectral decomposition using Walsh and Fourier transforms 2-27916
- EM field for coil moving over ferromag. layers, Fourier transform calc. 2-29753
- EXAFS, automatic background removal 2-2368
- fluids, free energy derivation in the mean spherical approx. 2-50882
- Fourier-Bessel transform, calc. algorithm 2-3366
- half plane under impact load, transient response of finite crack 2-50192
- infinite-dimensional distributions, Fourier transforms, Feynman integrals 2-69
- inverse scatt. problem, generating operator for  $n \times n$  linear system 2-23847
- Mayer expansions coeffs. estimates on IR region boundary 2-3528
- measurement data compression using orthogonal transforms (*Slovak*) 2-15133
- modulation transfer functions: definition and measurement 2-20483
- multiple scale Fourier transform, appl. to oscillations and wave problems 2-38451
- plate, thin infinite elastic, external crack problem, transform method of soln. 2-12102
- random walks with self-similar clusters 2-28793
- relativistic quantum mechanics, non-standard anal. appls. 2-3407
- reverse Fourier neutron time-of-flight expt., correl. in statistical anal. 2-44975
- reverse Fourier neutron time-of-flight expt., correl. in statistical anal. 2-44976
- SAW time inversion system distortion estimation, based on delta function approx. 2-7978
- solar granulation, comparison of optical and digital Fourier transformation 2-6577
- solar magnetic field, two-dimensional Fourier transform rel. to flux tubes models 2-10365
- stellar dynamics, spectral anal. using Fourier transforms of coordinates 2-53337
- STO charge distribution, two-centre, Fourier transform calc. program 2-4200
- two-dimensional system, configurations generated by computer simulation, orientational order analysis method 2-5338
- US images, lateral resolution improvement 2-35022
- X-ray film/screen systems, modulation transfer function, math. modelling 2-23793
- <sup>13</sup>C NMR spectra, adjustable param. sine bell apodisation appl. 2-15810



**Fourier transforms continued**

- Ti-C, interstitial solns. with FCC and BCC lattices, interatomic interaction 2-21058
- Zr-C, interstitial solns. with FCC and BCC lattices, interatomic interaction 2-21058

**fractionation** *see distillation***fracture**

- see also brittle fracture; crack-edge stress field analysis; cracks; creep fracture; ductile-brittle transition; ductile fracture; embrittlement; fatigue; fracture toughness; stress corrosion cracking*
- acoustic emission waveform analysis 2-17797
- alloys, ductility evaluation, by microfracture with indenter 2-2642
- aluminous cement/perlite composite, low density, mech. props. 2-51963
- b.c.c. crystal, temp. depend. of ideal fracture strength 2-1553
- blank production by breaking, loading parameters effect on metal fracture process 2-51940
- brass, work hardened thin specimens, role of anisotropy coeff. R (French) 2-22317
- brittle materials, fracture surface energy determination, conditions selection 2-9477
- brittle solids, fracture front dynamics 2-44685
- butt welds, reliability against fracture as inferred from inspection data 2-4762
- C Ti-Al-V alloys, BT6, BT20, rate sensitivity of mech. props. and fracture characts. 2-41720
- ceramics, structural, correlation of static strengths and speeds of rotational failure 2-31767
- charged particle emission, electrons and positive ions, during fracture of materials 2-9398
- combined modes of loading, crack initiation criteria 2-35086
- compact tension specimen, local stress intensity factor distrib., 3D finite element anal. 2-44683
- compression fracture process, stability, two-layer high-pressure vessel example 2-39863
- concrete, boundary condition effect on behaviour conc. of load 2-27235
- contact interface, deformation of asperities (Japanese) 2-27253
- crack growth, in detrimental gaseous environments 2-41740
- crack growth, slow, meaning of elastic-plastic fracture criteria 2-8088
- crack nucleation site distrib., influence in fracture probability (German) 2-30060
- cylindrical tensioned bodies, cracked, linear elastic fracture mechanics computation 2-25305
- decomposition approach to statistical aspects of fracture 2-30061
- dielectric transparent materials containing optical discontinuities, laser fracture, thermoelastic wave fields 2-30071
- dislocation-free zone model 2-45332
- disperse system, struct. and mag. charact. relationship 2-31248
- dissipative solids with internal defects and imperfections, stability phenomena 2-16250
- double cantilevered beam model, crack extension 2-8092
- dynamic crack growth, theory 2-12095
- dynamic crack propag. behaviour, microscopic approach (Japanese) 2-4758
- dynamic crack propag. behaviour, microscopic approach (Japanese) 2-4759
- dynamic fracture and crack propagation, exptl. studies 2-16268
- Earth interior, three-dimensional spontaneous rupture propag. rel. to earthquake source mechanism 2-9954
- elastic waves and microstruct., conf., Oxford, England (Dec. 1980) 2-28602
- elastic-plastic crack problems, three-dimensional finite element anal. 2-20611
- elastic-plastic fracture mechanics, and wear 2-50208
- engineering materials, quantitative US eval. of mech. props., review 2-17821
- epoxy polymers, elastomer modified, fracture 2-2582
- epoxy powder coatings, fracture props. 2-47181
- failure limit curve construction using damage (Polish) 2-25272
- ferritic fracture surfaces, oxidised, SEM fractography (German) 2-13916
- ferroelectrics, microscopic fracture mechanisms, dislocation model 2-31429
- fibre composite, modelling of fracture micromechanisms (Russian) 2-2579
- fibre glass, strength spread, rel. to struct. defects 2-31748
- fibre reinforced composites, dislocation model of fibre peeling 2-36960
- fibre reinforced composites, fibre fracture, stress redistrib. dynamics 2-20610
- fibre reinforced composites, multifibre, stress redistribution due to brittle fibres fracture 2-36964
- fibre reinforced plastics, adhesive joint strength, effect of joint shape and lap length (Japanese) 2-5949
- fibres with brittle shape layers, prediction of tensile strength 2-35587
- fibrous composite with elastic-plastic matrix, fracture mechanics under compression 2-35090
- glass fibre reinforced polyester, interlaminar fracture energy and compliance 2-22307
- glass optical fibres, precision fracture 2-34920
- granite, hydraulic fracturing expt. at Monticello, S.Carolina 2-32491
- granular material fracture, particle sliding mechanism as stochastic process 2-21223
- graphite, fracture surface energy determination, conditions selection 2-9477
- half-space, weakened by vertical cylindrical cavity, equilb., dynamic rupturing 2-50184
- heterogeneous materials, fracture acoustic signals parameters rel. to dimensions of breaks in continuity 2-37032
- high temperature, role of grain boundaries 2-41732
- homogenisation approach to microscopic damage model derivation (French) 2-1141
- igneous rocks, shock-induced microfractures characterisation by differential strain anal. 2-22975
- II-VI semiconductor film, elastic props. and defects, lattice mismatch of film-substrate systems 2-12946
- indentation, fracture initiation 2-50756
- indentation fracture, stress field anal. 2-50744
- infinite matrix, fracture behaviour by two cracks around an elliptic rigid inclusion 2-50174
- Innisfree meteorite, photographic anal. of fragmentation, dynamics and luminosity 2-14828
- intergranular crack nucleation and fracture 2-27261

**fracture continued**

- ionic crystal, mechanochem. decomposition and fast-electron emission 2-27059
- lattice crack dynamics 2-44687
- layer stripped from fracture surface, thickness meas. method 2-2638
- layered filamentary composite, interlaminar shear strength study at cryogenic temps. 2-22332
- low-temp. brittleness (Chinese) 2-22302
- macrocrack models analysis and improvement 2-39864
- mechanics, COD and J-integral, theoretical and expt. study (German) 2-13809
- mechanics, thermoelastic problem, integral eqns. 2-50183
- metal, damage variable role in elec. resist. (French) 2-5381
- metal, pipe, props. determ. during failure with specified crack vel. 2-13885
- metal structures, strength determ. taking account of strain hardening 2-50126
- metallic fibre reinforced composites, deform. characts. and fracture 2-36918
- metals, deformation, rel. to fracture, under low-cycle creep 2-31759
- metals, polycrystalline, microfracture during high-temp. creep 2-41728
- metals, rel. between mech. prop. and critical fracture angle of a slanted crack (Chinese) 2-22298
- metals, spalling fracture, crit. conditions, temp. effects 2-13802
- mica flake integrated sheet/epoxy laminates, mech. and elec. props. 2-27222
- mode III fast fracture arrest by elastic to viscoplastic material props. transition 2-50187
- multispin vibrating beam, support fracture, unsteady dynamic response 2-25288
- Nimonic PE 16 superalloy, thermomechanically processed, precipitation, deform. and fracture 2-51948
- nonlocal fracture criterion, expt. verification 2-5932
- notched specimens, fracture resist. 2-5933
- nylon-6,6, semicryst., fatigue damage and fracture mechanism 2-21225
- on thermal boundary front observed during dynamic crack propagation (Japanese) 2-4757
- one dimensional system, breaking, effect of low freq. vibrs. 2-35586
- optical fibres, low-strength breaks, fractographic anal. 2-1033
- organic fibre reinforced polymers, tensile failure in reinforcement direction 2-36961
- Oshima granite, influence of strain rate on dilatancy and strength under uniaxial compression 2-32507
- $\beta$ -phase membrane with oriented conduction plane, ion transport in Na-Na cells 2-26134
- pipes, circumferentially cracked, wall breakthrough, plastic fracture instability analysis 2-30072
- plastic composite structures, strain hardened, rupture under striker impact 2-35089
- plate, elastic, with hole bounded by two intersecting circles, fracture (Russian) 2-50194
- plate submitted to rupture criterion, optimal design 2-23440
- PMMA, laser-fracture cracks, limiting size 2-22323
- PMMA, secondary afterfailure fractures due to transversely reflected waves 2-52014
- poly(vinylidene fluoride), semicryst., fatigue damage and fracture mechanism 2-21225
- polybutadiene, linear, fracture in liq. media above glass transition temp. (Russian) 2-22329
- polyethylene, cross-linked, morphological study (Japanese) 2-9404
- polyethylene, environmental stress cracking fracture surfaces 2-52072
- polyacetal, semicryst., fatigue damage and fracture mechanism 2-21225
- polymer, glassy, viscoelastic dissipations in fracture near glass transition temp. 2-31785
- polymer fibre, solid, anisotropic, plastic deform. under discharge wave (Russian) 2-41670
- polymer fibrils, fracture kinetics 2-35585
- polymer/crazing, two-dimensional quasifracture 2-47157
- polymers, crack healing theory 2-16714
- polymers, limiting regimes of determ. 2-27250
- polyolefines, mixing amorphous-crystalline with amorphous types, effect on mech. props. (Russian) 2-41578
- polystyrene, fracture of crazes by propag. of interfacial stress waves 2-52025
- polystyrene, indentation fracture initiation, slip-line field analysis 2-27280
- powders, heated state, adhesive force and fluidity (Japanese) 2-36948
- process stability, eval. by means of rupture 2-1150
- PWR fuel elements in LOCA, burst pressure, fracture, grain-size distrib. (German) 2-461
- quarter-point element misuse 2-50180
- reliability against defect generated fracture 2-50182
- resin sand mixture, cold-setting, bonding mechanism, fracture appearance 2-27257
- rock, dilatant, memory, relaxation and microfracturing 2-28069
- rock, fracture energy of stick-slip events in large scale biaxial expt. 2-18383
- rock, thin walled tube specimens of large diameter, multiaxial loading 2-32502
- rock fractures, effect of specimen size on pore fluid movement 2-32511
- rock testing, size effect on fracture mechanism 2-32497
- rocks, hydromechanical behaviour of deformable fracture subject to normal stress 2-32506
- rocks, macrofractures (joints) rel. to experimental tectonophysics 2-32665
- rocks, size depend. props. of joints and faults 2-32496
- sedimentary rocks of NW Siberian platform, decrepitation anal. rel. to regional hydrothermal activity 2-52843
- SiC, polycryst., frictional deform. and fracture 2-27294
- solids, deform. and fracture, power-type constitutive eqns. 2-30005
- solids, inelastic, fracture criterion 2-30064
- solids under impulsive loading, deform. and fracture 2-30512
- spall fracture, gas dynamic approach 2-30067
- spall fracture, kinetic characts. meas. 2-31779
- stable crack extension, with nonlinear fracture criterion, finite element simulation 2-30069
- statistical theory, multiaxial stress states using Weibull's function 2-12669
- steel, alloy, nitriding in vac. 2-22381
- steel, C, hydrogen embrittlement, high temp. 2-13799
- steel, C, type S10C and S45C, fatigue life under rot. bending and reversed torsion, understress effect 2-5923



**fracture continued**

steel, C (0.9 wt.%), crack propagation resistance, nonmonotonic variation during low temp. tempering (*Russian*) 2-5938  
 steel, Cr-Ni-Mn, energy loss during fracture 2-31722  
 steel, CrNiMo, medium-C, correlations between numerical fracture characts. and fracture toughness (*Chinese*) 2-22301  
 steel, CrNiMoV, medium-C, forgings, lamellar fracture characts. (*Chinese*) 2-22300  
 steel, ferritic stainless,  $\chi$ -phase precip. hardened, fracture props. and ductility improvement 2-17725  
 steel, low strength, H embrittlement, fracture topographical feature 2-52012  
 steel, low-alloy, avoiding transverse cracking by surface temp. control 2-2573  
 steel, low-alloy, fracture and low-cycle deform. at low temps. 2-41746  
 steel, mild and structural, AE associated with fracture processes 2-31868  
 steel, Ni (3.5 wt.%), AE during deform. and fracture, microstruct. effect 2-31871  
 steel, P-containing, low-temp. brittleness (*Chinese*) 2-22302  
 steel, Si-Cr valve, cold-drawn, fracture-mechanics anal. (*Chinese*) 2-22299  
 steel, spall fracture, kinetic characts. meas. 2-31779  
 steel, spalling fracture, crit. stress depend. on loading time 2-13803  
 steel, stainless, Cr-Ni, wear resist. of protective layer of secondary structs., mild wear in vac. 2-41762  
 steel, stainless AISI type 304L, straight pipe for LWR, fatigue and fracture behaviour 2-11184  
 steel, structural, deform. and fracture at low temps., twinning role 2-41750  
 steel, structural, fractures inspection for nonmetallic inclusions using TEM and C replicas 2-47276  
 steel, structural and weldments, AE rel. to deform. and fracture 2-31869  
 steel 17G2AF, surface study, by spatial-energy spectrometry 2-23775  
 steel linear design for nuclear reactor containment vessel 2-9410  
 steels, martensitic, ultra-high strength, fracture behaviour 2-47156  
 steels, St.3 and 12Kh18N10T, spalling fracture, crit. conditions, temp. effects 2-13802  
 stress intensity for interacting flaws 2-52050  
 stress-intensity-factor calibrations, expt. wt. function 2-50213  
 sulphone polymers, high performance, fracture energy and surface topology in cracking 2-13801  
 surface, three dimensional geometry determ. (*German English*) 2-17806  
 surface-cracked plates and shells, elastic-plastic fracture mechanics parameters 2-20560  
 tensile quasi-static fracture models, comparative study 2-20605  
 thermoplastics, energy related failure criteria 2-22320  
 thick films, adhesion, effects of substrate heating and ion cleaning 2-52171  
 thin biological samples, ultrarapid freezing, freeze fracture studies 2-32382  
 times for crack initiation and propagation, correlation 2-12094  
 two-parameter fracture models, characteristic dimension 2-25311  
 viscoelastic bodies, fracture mechanics, review 2-4770  
 viscoelastic materials, kinetic criteria for crack, global energy balance 2-25309  
 viscoelastic materials, kinetic criteria for crack, global energy balance 2-25310  
 woven plastic glasses, crack resistance depend. on stacking 2-36970  
 Zircaloy-4 cladding, chemical interaction with simulated fission products at elev. temp. 2-49112  
 Al alloys AD1, D16, AMg6, spalling fracture, crit. conditions, temp. effects 2-13802  
 Al and Al alloys 7075 and 7050, AE during tensile and compressive deform., microstruct., effect 2-31883  
 Al, polycrystalline, microfracture during high-temp. creep 2-41728  
 Al protective coatings on heat-resist. steel, mech. props. 2-27348  
 Al, spalling fracture, crit. stress depend. on loading time 2-13803  
 Al thin film, fracture kinetics (*Russian*) 2-21473  
 Al, work hardened thin specimens, role of anisotropy coeff. R (*French*) 2-22317  
 Al-Mg (2 wt.%), dissolution of beta-phase, effect of cold work, fracture stress 2-5891  
 Al-Mg adhesive joints, bonding and failure mechanism 2-6015  
 Al-polyethylene, sandwich laminates, cold press workability 2-13745  
 Al-Si alloys, fracture strain, influence of particle cracking 2-21226  
 Al<sub>2</sub>O<sub>3</sub>-refractories, micro- and macrocrack growth 2-31765  
 Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, alumina-mullite ceramic, susceptibility to delayed failure after dynamic testing 2-5920  
 B fibre reinforced Al, damage accumulation during low-cycle deform. 2-36921  
 B fibre reinforced Al, deform. characts. and fracture 2-36918  
 B fibre reinforced composites, strength, interface effect 2-36919  
 Be, viscous boundary glide and plasticity, low temp. (*Russian*) 2-21210  
 C fibre reinforced Al, damage accumulation during low-cycle deform. 2-36921  
 C fibre reinforced Al composite, corrosion and mech. props., carbide phase content effect 2-41556  
 C fibre reinforced C composite, fibre infiltration from propane by CVD, microstruct. and fracture behaviour 2-41716  
 C fibre reinforced composites, reinforcement properties realisation 2-36925  
 C fibre reinforced plastics, fractography 2-27263  
 C fibre reinforced plastics, laminar, with 3 reinforcement angles, mech. breakdown, layer ratio influence 2-36965  
 Co, initial fracture stages during cold rolling (*Russian*) 2-5939  
 Cr-TaC(NbC)-MgO-Ti, rubbing surfaces rupture characts., 20-1000°C 2-17742  
 Cu alloy M1, spalling fracture, crit. conditions, temp. effects 2-13802  
 Cu, fracture kinetics, role of surface energy at boundary with liq. Bi-Pb 2-41742  
 Cu in liq. Hg, lifetime-under-load and fracture kinetics 2-36971  
 Cu, intergranular crack nucleation and fracture 2-27261  
 Cu, persistent slip bands, form near regions of surface damage 2-35510  
 Cu, spalling fracture, crit. stress depend. on loading time 2-13803  
 Cu wire, fine, electroplastic drawing, reduction in breaking tendency (*Russian*) 2-9393  
 Cu-Al (2.5 wt.%), intergranular cavitation fracture in presence of a priori crack 2-47155  
 Fe, Armco, nitriding in vac. 2-22381  
 Fe, cast, grey, Mg modified, struct. state effect on failure 2-41755  
 Fe, fatigue crack prop. under cyclic loads (*Russian*) 2-22304

**fracture continued**

Fe-P alloys, P segregation, rel. to grain boundary struct. 2-22222  
 Fe-Si (3.25 wt.%), propag. of rapidly moving crack, effect of twins (*Russian*) 2-22305  
 fibre reinforced epoxyanilinophenol formaldehyde, loading rate effect on type of failure 2-36962  
 Ga, melting, during erosion by hard particles 2-30571  
 Gd<sub>2</sub>O<sub>3</sub>, monoclinic, room temp. fracture energy 2-17727  
 InBi, impact-induced fracture 2-27272  
 MgO, defects form. due to disintegrated breaking, EPR study (*Russian*) 2-51459  
 Mo, ductility improvement by forming surface layer containing B 2-31836  
 NaCl, yield stress influence on fracture 2-45334  
 Na<sub>3</sub>-Si<sub>2</sub>Zr<sub>2</sub>P<sub>3</sub>-O<sub>12</sub>, NASICON, chemical stability in liq. Na, fracture and cracking 2-52251  
 Nb-Zr-C, deformation mechanism, singularities (*Russian*) 2-22266  
 Ni alloy NP2, spalling fracture, crit. conditions, temp. effects 2-13802  
 Ni<sub>3</sub>Si<sub>10</sub>B<sub>12</sub> amorphous thin plates, deform. and fracture at crack tip (*Japanese*) 2-27231  
 Pb(Zr<sub>0.52</sub>Ti<sub>0.48</sub>)O<sub>3</sub>, influence of microcracking and slow crack growth on planar coupling coeff. 2-31777  
 Si<sub>3</sub>N<sub>4</sub>, energy-absorbing reaction-sintered surface layers on hot-pressed substrates 2-52007  
 Si<sub>3</sub>N<sub>4</sub>, polycryst., frictional deform. and fracture 2-27294  
 Ti alloy VT14, spalling fracture, crit. conditions, temp. effects 2-13802  
 Ti(C,N) films, synthesis by vapour deposition and struct. 2-51054  
 Zn, polycrystalline, microfracture during high-temp. creep 2-41728  
 Zr-Nb (2.5 wt.%), fracture initiation at hydrides 2-47178  
 ZrO<sub>2</sub>, commercial, partially stabilised, grain boundaries, fracture and heat treatment 2-52028

**fracture strength** see **fracture toughness**

**fracture strength testing** see **fracture toughness testing**

**fracture toughness**  
 see also **notch brittleness**; **notch ductility**; **notch strength**  
 abrasive grains, friability test (*Japanese*) 2-27392  
 Al products, computer data bank 2-13807  
 alloy design, for fracture resist. 2-5957  
 alloys, hard, crack resist., loading rate and temp. effects 2-31789  
 brittle solids, crit. stress intensity factors, evaluation by indentation method with low crack-to-indentation ratios 2-50754  
 C-shaped specimen, J<sub>IC</sub> evaluation by US method (*Japanese*) 2-9494  
 Charpy V-notch energy, statistical rels. between fracture appearance 2-47154  
 composite laminates, strength, 3-D fracture mech. approach 2-13874  
 composite materials, fracture strength, correl. 2-50757  
 composite materials, two-level bounds, probability distributions for strength 2-1146  
 composite polymer matrices, highly cross-linked, fracture viscosity improvement 2-36959  
 composites, brittle, toughening by second-phase particles, crack paths 2-27270  
 embrittlement, P segregation effect (*Chinese*) 2-5922  
 epoxy polymers, elastomer modified, fracture 2-2582  
 epoxy-rubber, particulate composite, low temp. behaviour 2-17726  
 fibre reinforced refractory oxides, composite strength 2-27269  
 glass, plate, of varying As content, gamma-radiation effect as strength 2-31778  
 glass, toughening by metallic particles 2-17687  
 glass ceramics, fracture toughness meas., SEM secondary electron and backscattered electron image appls. 2-17809  
 glass fibre reinforced polyester composite, mech. testing 2-22406  
 graphite, HTGR struct. components, material characts. and eval. 2-41831  
 graphite fibre reinforced advanced epoxy matrix composites, sub-T<sub>g</sub> annealing studies 2-17693  
 Havar thin foil, resistance to rupture measurement (*German*) 2-12950  
 hydroxyapatite ceramics, biocompatible, mech. behaviour 2-9415  
 Inconel 706 Base material and gas W arc weldments, cryogenic mech. props. meas. 2-22330  
 Kepton H, thin foil, resistance to rupture measurement (*German*) 2-12950  
 metal sheets, fracture toughness determ. under static loading 2-41749  
 metals, ductile, fracture toughness calc. 2-2589  
 NDT, fracture mechanics implications 2-9511  
 plasma-sprayed coatings, formation, microstruct. and props. 2-17760  
 plastic zone size, toughness and crack growth, specimen size effects 2-52017  
 PMMA, overloading with microsecond stresses 2-17739  
 polycarbonate, environmental crack growth 2-47211  
 polyethersulphone, fracture behaviour 2-47180  
 polyethylene blends, tensile props., mixture compatibility degree of crystallinity role 2-47145  
 polyethylene terephthalate fibre reinforced polypropylene, fracture toughness 2-31786  
 polymer/concrete composites, review of physical props. 2-13783  
 prime candidate alloy, optimisation of struct. and props. by rapid solidification 2-31692  
 PVC, fatigue crack prop., mol. wt. and specimen history effects, glass transition temp. 2-47162  
 Sialon, effect of additives on sintering and mech. props. 2-17657  
 Silcomps, thermomech. props. and statistical anal. (*French*) 2-36968  
 steel, 4340, Charpy tests, relationship of toughness, fracture initiation energy and specimen deflection 2-13806  
 steel, 65Cr4W3Mo2VNb, microstructure, mechanical properties and heat treatment 2-27216  
 steel, A508, reactor-pressure-vessel, lower-bound fracture toughness 2-5934  
 steel, alloy, Ni-Co, Charpy impact props., role of oxide and sulphide particles 2-13820  
 steel, austenitic stainless, fracture and strength props. at cryogenic temps. 2-9390  
 steel, austenitic stainless, N strengthened, props., for cryogenic magnet structs. 2-22331  
 steel, C, surface modification by electron beam glazing 2-47265  
 steel, C, US prediction of grain size, strength and toughness 2-17825  
 steel, Cr-Mo-Ni-Mn, effect of partial replacement of Ni by Mn 2-5914  
 steel, Cr-Mo-V cast, quenching, tempering and ageing rel. to mech. props. 2-13750



## fracture toughness continued

- steel, crack growth and fracture toughness, temp. variation effects 2-41712
- steel, CrNiMo, medium-C, correlations between numerical fracture characs. and fracture toughness (*Chinese*) 2-22301
- steel, fracture toughness parameters rel. to ductile-brittle transition temp. (*Czech*) 2-47171
- steel, high Mn, wrought, phase comp. and props., effect of C, Mn, Ni and N concs. 2-51938
- steel, high-speed, prod. by atomisation and hot extrusion, heat treatment and props. 2-22252
- steel, high-speed, struct. and mech. props. with isothermal deform. 2-2568
- steel, load line extensometer eval. for elastic-plastic fracture toughness eval. 2-22394
- steel, low C, fracture toughness characs., load cyclicity effect 2-41745
- steel, low-alloy, ferritic-pearlitic, fracture toughness energy content, VC precipitates influence 2-5960
- steel, low-alloy sintered, density effect on fracture behaviour, model investigation 2-41735
- steel, low-alloy sintered, density effect on tensile strength, fracture toughness and fatigue crack propag. 2-41734
- steel, low-C, mech. props. and strain hardening, temp. effect 2-2528
- steel, low-C, sulphide cracking resist., multiple alloying influence 2-17778
- steel, mild, crack initiation, slow crack growth, unstable propag. of ductile fracture 2-9403
- steel, mild, hot rolled sheet, MnS inclusion effect on mech. props. 2-51959
- steel, Mn-Ni-Mo, A533 gr. B, upper nose temper embrittlement mechanism 2-5899
- steel, Ni-Cr, fracture toughness effect of solute segregation 2-47175
- steel, nonmetallic inclusions, role in metallurgical quality 2-5951
- steel, nuclear press. vessel, crack tip energy dissipation and elastic-plastic fracture toughness 2-22315
- steel, side grooved specimens obs. 2-17728
- steel, stainless, precip. hardening, H embrittlement 2-47179
- steel, stainless, thin foil, resistance to rupture measurement (*German*) 2-12950
- steel, stainless AISI 316, stress rupture optimisation using computer programme 2-31775
- steel, structural, brittle fracture tendency eval. 2-22327
- steel, structural, crack toughness charact. by tearing modulus parameter and AC 2-52033
- steel, tool, cold working, ductility after heat treatment in salt soln. (*German*) 2-22288
- steel, V-Nb, microalloyed, thin sheet, fracture toughness test results, validity (*Slovak*) 2-47172
- steel containing coarse second phase, ductile fracture 2-2574
- steel plate, and strip, controlled rolling 2-22237
- steel wires, cracked, linear elastic fracture mechanics computation 2-25305
- steels, ductile structural, rel. between stretched zone parameters and fracture toughness 2-27271
- steels, HY-80 and HY-130, and their weldments, dynamic fracture toughness parameters 2-5929
- structural failure, fracture and cracking, mechanical aspects (*German*) 2-44681
- structural materials, stress state kinetics near stress raisers under high-temp. creep conditions 2-41705
- thin foils, resistance to rupture measurement (*German*) 2-12950
- transformation toughening, contrib. to fracture toughness 2-51923
- Al alloy, 7075-T651, compact tension specimens,  $K_{IC}$  values, effect of crack length and crack front geometry 2-12670
- Al alloy 7076-T6, moving load controlled displacement machine 2-13876
- Al alloy semifinished products, fracture toughness struct. relationship, metallography appl. 2-52042
- Al alloy sheets, fracture toughness determ. under static loading 2-41749
- Al-Li-X alloys, microstruct., mech. props., and corrosion resist. 2-31740
- Al-Zn-Mg, 7075, toughness, effect of thermomech. treatment 2-47161
- BN, superhard polycryst., struct. and mech. props., annealing effect 2-31788
- BN-SiO<sub>2</sub> ceramics, hot pressing, props. 2-31673
- cc Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> composites, transform. toughening, fabrication and fracture toughness 2-51925
- LiF-MgF<sub>2</sub> precipitated composites, fracture toughness meas. 2-36941
- Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub>-SiO<sub>2</sub> and Li<sub>2</sub>O-K<sub>2</sub>O(Ag<sup>+</sup>)-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass ceramics, deform. rate influence on bending strength and failure 2-52046
- Mo, tensile properties under cathodic H<sub>2</sub> charging (*Japanese*) 2-13781
- Mo-Ti-Zr alloy TZM, tensile properties under cathodic H<sub>2</sub> charging (*Japanese*) 2-13781
- Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub> system glasses, comp. and struct. effect on mech. characts. 2-41756
- PbO-ZnO-B<sub>2</sub>O<sub>3</sub> glasses, elastic modulus and fracture toughness 2-51969
- Se-Ge-As glasses, fracture toughness, microhardness, and Young's modulus 2-36945
- SiAlON, thermomech. props. and statistical anal. (*French*) 2-36968
- SiC base refractories, high-temp. strength 2-52008
- SiC, fracture toughness as function of indentation crack parameters 2-36947
- SiC, self-bonded, mech. props., crystallite size effect 2-41744
- $\alpha$ -SiC, sintered, fracture phenomena 2-9413
- SiC, thermomech. props. and statistical anal. (*French*) 2-36968
- SiC-AlN, hot-pressed, fabrication and charact. 2-36817
- Si<sub>3</sub>N<sub>4</sub> ceramics, indentation plasticity and fracture 2-31774
- Si<sub>3</sub>N<sub>4</sub>, fracture toughness as function of indentation crack parameters 2-36947
- Si<sub>3</sub>N<sub>4</sub>, hot-pressed, study of oxidation with IR reflection spectroscopy 2-2603
- Si<sub>3</sub>N<sub>4</sub> reaction bonded with artificial pores, strength 2-52031
- Si<sub>3</sub>N<sub>4</sub> reaction-bonded, oxidation effect on strength and fracture toughness 2-36937
- Si<sub>3</sub>N<sub>4</sub>, solid particle erosion 2-9431
- Si<sub>3</sub>N<sub>4</sub>, thermomech. props. and statistical anal. (*French*) 2-36968
- Ta, strength and plasticity characts., temp. and strain rate effect 2-51999
- Ti-Mo-Al-V alloy, BT-16, thermal cycling simulating diffusion welding, strength and fracture toughness 2-41721
- W, powder metallurgical, failure features, 20-1600°C, in vac. 2-52043
- WC-Co, crack resist., loading rate and temp. effects 2-31789

## fracture toughness continued

- ZrN-Al<sub>2</sub>O<sub>3</sub>-Mo(W) cermets, sintered, strength 2-13693
- ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub> composites, transform. toughening, expt. obs. 2-51924
- fracture toughness testing**  
see also notch testing
- aluminosilicate refractories, crack stability in work-of-fracture test 2-37024
- Charpy V-notch energy, statistical rels. between fracture appearance 2-47154
- chevron V-notched bend bar fracture toughness specimens, eval. 2-5994
- constant force system for delayed fracture experiments 2-9496
- critical stress intensity factor, determ. at brittle crack arrest 2-13797
- double torsion specimens, effect of side grooves depth on plane strain fracture toughness 2-25314
- drop-weight impact tests with the use of laser-Doppler velocimetry 2-20618
- ductile rupture, evaluation with Charpy-V type specimens, influence of notch root radius 2-9489
- epoxy glue joints, static crack stability determ. 2-13908
- four-point loading, test procedures and equipment improvements 2-52162
- glass fibre reinforced plastic, toughness assessment, comparison of impact test methods 2-13906
- high-melting materials, unit for high temps. in vac. or inert medium 2-9479
- hot workability testing apparatus, for flow stress determ. and fracture 2-2649
- indentation technique, critical eval. of direct crack meas. 2-17798
- indentation technique, critical eval. of strength method 2-17799
- load line extensometer eval. for elastic-plastic fracture toughness eval. 2-22394
- metals, fracture toughness, determ. in presence of cracks 2-6001
- moving load controlled displacement machine 2-13876
- notch final formation, crack resist. characts. determ. by indentation method 2-9478
- piezoceramic, fracture toughness determ. using double torsion and impression methods 2-52159
- plane strain crack instability under small-scale yielding conditions 2-20606
- plastic pipe, residual stress determ. method, role in fracture 2-47290
- repeated determ. method for  $J_{IC}$  on single specimen 2-13882
- scale factor, physical nature of appearance 2-39870
- steel, AISI 4340, H-induced cracking unit eval. by acoustic emission technique (*Japanese*) 2-52134
- steel, alloy, quenched and tempered, sharp crack and blunt notch toughness behaviour 2-47288
- steel, alloy, structural, criteria for working capacity determ. 2-5952
- steel, alloy type, fracture toughness characts., loading cycle influence 2-52040
- steel, cleavage controlled instability monitoring by AE 2-27362
- steel, comparison of methods 2-13888
- steel, fracture toughness, determ. in presence of cracks 2-6001
- steel, low-C, resist. to brittle crack development, X-ray fractography appl. 2-37009
- steel, structural, cyclic fracture toughness determ., cylindrical sample with circular crack 2-27379
- structural materials, critical stress intensity factor determ., from allowance for load-displacement graph 2-47280
- thin specimens, method for crit. stress intensity factor determ. 2-13883
- three-point bend  $K_{II}$  specimen, and mode II fracture toughness, sliding mode stress intensity factors 2-25315
- wood, fracture toughness, mode II, meas. by mixed-mode test method 2-52128
- Al alloys, expt. dynamic fracture toughness meas. (*French*) 2-41834
- Al alloys, fracture toughness characts., loading cycle influence 2-52040
- Al alloys, high-strength, fracture toughness determ. from stress intensity factor at moment of crack starting 2-9476
- Fe, Armo, fracture toughness characts., loading cycle influence 2-52040
- Ti alloys, fracture toughness characts., loading cycle influence 2-52040
- francium**  
see also nuclei with .....  
No entries
- francium compounds**  
No entries
- Frank-Condon factors**
- anthracene, soln., fluoresc. lifetime, viscosity and temp. depend. 2-34481
- astrophysical molecules 2-49519
- 9,9'-bifluorenylidene, reson. Raman spectra 2-49428
- bound-continuum Franck-Condon factors at four coinciding points 2-4354
- combination bands, Raman excitation profiles rel. to Condon approx. 2-4301
- cytochrome oxidase, Raman scatt. with Soret exciting lines 2-11606
- diatomic molecules, Franck-Condon factors, high rot. quantum numbers effect 2-34499
- diatomic molecules, high vibr. states, Franck-Condon-factor calcs. 2-7608
- 1,6-diphenylhexatriene, intermediate excited states, spectroscopic and luminesc. param. effect 2-20104
- liquids, spectral line collisional dephasing, Franck-Condon approach 2-39448
- malonaldehyde, H-bonded tunnelling mol., 3540 Å electronic transition 2-7676
- 3-methylaminophthalimide, intermediate excited states, spectroscopic and luminesc. param. effect 2-20104
- 9-methylanthracene, soln., fluoresc. lifetime, viscosity and temp. depend. 2-34481
- molecular electronic transition energies, expt. and calc. values 2-4352
- molecules, antiresonance in the pre-resonance region of Raman scattering 2-49418
- molecules, electron impact excitation non-Frank-Condon collisional transitions analysis 2-15908
- polyenes, linear, Franck-Condon anal. of  $1^1A_g \rightarrow 1^1B_u$  absorpt. 2-7604
- Schrodinger eqn., one-dimens., eigenvalues and eigenvectors, difference eqn. method 2-3412
- AlO ( $A^2\Sigma-X^2\Sigma$ ) band system, Franck-Condon factors, r-centroids and electronic transition moment variation 2-24791
- Ar<sup>+</sup> + O<sub>2</sub>, charge transfer, O<sub>2</sub><sup>+</sup>( $^1\Pi_u$ ) product state, rate coeffs. 2-34555
- BeAr<sup>+</sup>, A-X system, Frank-Condon factor, rot. depend., pot. energy curves 2-24792
- BeKr<sup>+</sup>, A-X system, Frank-Condon factor, rot. depend., pot. energy curves 2-24792



**Frank-Condon factors continued**

- BiF,  $A_0^+ - X_0^+$  system, electronic spectrum 2-39373  
 $Br_2$ , E $\rightarrow$ B transition, UV-visible emission spectra 2-49447  
 CaCl<sub>2</sub> jet, laser-induced fluoresc. obs. (*German*) 2-745  
 CaI,  $A^+ - X^+_{2^+}$  and  $B^+ - X^+_{2^+}$  systems, vibr.-rot. and deperturbation anal., fluoresc., Frank-Condon factors 2-4345  
 H<sub>2</sub>O, photoexcitation and ionisation, calcs. 2-39453  
 HgAr<sup>+</sup>, A-X system, Frank-Condon factor, rot. depend., pot. energy curves 2-24792  
 I<sub>2</sub>, vibration rotation Frank-Condon factors 2-34501  
 Li<sub>2</sub>, E $\rightarrow$ S $\rightarrow$  state, pulsed optical-optical double reson. spectra, Frank-Condon factors 2-34456  
 Lu<sub>2</sub>O<sub>3</sub>:S:Ce<sup>3+</sup>, red luminesc., large Stokes shifts 2-51669  
 NH<sub>3</sub><sup>+</sup>, charge transfer, H transfer, cross sections photoelectron obs. 2-9542  
 NO<sub>2</sub><sup>+</sup>, photodetachment, vibr., UV and visible obs. 2-20144  
 NO<sub>2</sub>, Frank-Condon factors in terms of pot. of two states 2-757  
 OH, UV band intensity, rot. effects 2-731  
 SiN, K $\rightarrow$ A''II and D $\rightarrow$ II-A''II bands, Frank-Condon factors and r-centroids 2-24679  
 SiS, A''-X $\rightarrow$ S $\rightarrow$  system, valence states, rot. anal. 2-49378  
 YF, in inert gas matrices, spectroscopy and triplet state lifetime 2-34479  
 Y<sub>2</sub>O<sub>3</sub>:S:Ce<sup>3+</sup>, red luminesc., large Stokes shifts 2-51669  
 ZnD, mol. const., pot. curves, Frank-Condon factors, isotope effects, visible obs. 2-49445  
 ZrS<sub>2</sub>, layer compound, IR, Raman, reson. Raman spectra and valence force field 2-31472

**Frank-Read sources**

- US effects on dislocation multiplication and steady-state nonlinear vibrs. 2-50639  
 UV effects, dislocation configurations 2-5117

**Fraunhofer lines** *see solar spectra***free-electron approximation**

- graphite, polycrystalline,  $\gamma$ -ray Compton profile 2-9063  
 metals, transverse current correl. and neutron scatt., diamag. screening 2-25692  
 plasmons, UV, dielectric function in short lifetime limit 2-21517  
 AuSn, amorphous, elec. resist. Faber-Ziman theory calc. 2-45932  
 C, glassy,  $\gamma$ -ray Compton profile 2-9063  
 Cu-Ga alloys, Fermi level shift study by X-ray absorpt. spectroscopy 2-1812  
 Cu-Ge alloys, Fermi level shift study by X-ray absorpt. spectroscopy 2-1812  
 CuSn, amorphous, elec. resist. Faber-Ziman theory calc. 2-45932  
 H, adsorption on Ni and Pd, ordered struct. form., role of H-H interactions 2-1744

**free electron lasers**

- amplifier, design considerations and simulation 2-20288  
 amplifier, numerical two-dimens. model 2-16006  
 cavity resonator mode theory 2-39662  
 Cherenkov free electron laser model, S-matrix theory 2-29825  
 Cherenkov laser, theory 2-49761  
 Cherenkov Raman free electron lasers, theoretical and expt. performance 2-39665  
 Cherenkov stimulated radiation, quantum theory 2-48550  
 classical electron generator advancement into short-wavelength bands, review 2-29824  
 coherent and incoherent radiation with axial guide field 2-11706  
 coherent Liénard-Wiechert fields produced by free-electron lasers 2-34776  
 collective-interactions, mag. field effects at millimetre wavelengths 2-44322  
 Compton free electron laser, axial DC elec. field, high power visible radiation generation 2-44318  
 cyclotron autoresonance masers and relativistic gyrotrons, theoretical discussion 2-20287  
 frequency tuning and high-harmonic generation with intense pumping 2-24235  
 gain in uniform magnetic field, soln. for arbitrarily strong EM radiation fields 2-44317  
 gain mechanism for helical and planar magnet arrays, one-dimens. anal. 2-25022  
 hamiltonian model, cooperative and chaotic transition 2-44320  
 harmonic generation, linearly polarised wiggler, CW calcs. 2-44323  
 harmonic generation, quasiperiodic wiggler theory 2-34715  
 instability for relativistic annular electron beam propag. through helical wiggler field 2-39660  
 introduction, basic principles, electron bunching, recoil and spread 2-880  
 isochronous storage ring, free electron laser electron source, theory 2-7779  
 laser optics, conf., Leningrad, USSR (Jan. 1980) 2-28594  
 LELA undulator design 2-19814  
 magnetic diffusive wiggler pump, spatially periodic 2-924  
 magnetic resonant 3-D kinetic theory 2-39664  
 multimode free-electron lasers with inhomogeneous freq. broadening, quasi-linear theory 2-44319  
 multiphoton processes, EM wave amplification (*Russian*) 2-15978  
 multiple beam lasers and optical klystrons 2-39659  
 nonlinear theories, review 2-39661  
 optical autocorrel. function of 3.2  $\mu$ m free electron laser 2-44321  
 oscillation mechanism for relativistic electron beam immersed in transverse static mag. field 2-34778  
 quantum theory, stimulated emission of bremsstrahlung in periodic mag. field 2-34775  
 Raman free electron laser expt. at MM wavelength 2-39663  
 recent advances in free electron lasers 2-16005  
 research and applications, review (*French*) 2-29827  
 review 2-49760  
 second harmonic generation, Feynman diagram technique 2-25023  
 stimulated free-electron laser radiation from single-electron oscills. in mag. wiggler field 2-16007  
 stimulated radiation of a high-current electron beam in a periodic magnetic field 2-34712  
 theory, collective effects on operation, with axial guide field 2-39666  
 theory, quantum and classical aspects 2-20313  
 theory, review 2-34777  
 three dimensional nonlinear theory 2-39658  
 three-dimensional nonlinear theory of free electron laser 2-20312  
 variable-wiggler free-electron-laser experiment 2-39681

**free energy**

- acetylacetone-carbon tetrachloride, isothermal liquid-vapour equilibria, Gibbs energies 2-16764  
 acrylonitrile sorption isotherms on an acrylonitrile-styrene copolymer 2-50995  
 acrylonitrile-carbon tetrachloride (tetrachloroethylene), isothermal liquid-vapour equilibria, Gibbs energies 2-16764  
 adsorption of Ar, monolayer and bilayer films, lattice const. and vibr., thermodynamic props. 2-45714  
 alkali halide-Ag halide liq. mix., activity coeff. and excess molar Gibbs functions at varying temp. and composition 2-12783  
 alkali metals, liquid, selfconsistent theory, surface tension 2-25717  
 n-alkanes, vaporisation props., free energy, enthalpy and entropy 2-12780  
 n-alkanone-n-alkane (-n-alkanone) mixtures, thermodynamic props., quasi-chemical group contribution model 2-21326  
 amorphous ferromagnets, Curie temp., susceptibility, coordination number fluctuation effects 2-46258  
 amorphous systems, phase transitions, generalized Landau theory 2-31180  
 anisotropic liquid with rotational degrees of freedom, chain version of the molecular field approx. 2-25720  
 anisotropic liquids, thermodynamic props., mol. field approx. 2-25721  
 anisotropic materials, spin density waves and supercond., phase transitions. 2-13211  
 antiferromagnet, one-dimensional, with finite band width, solitary excitations 2-46301  
 antiferromagnet, triangular lattice, superfrustration models 2-17298  
 antiferromagnetic superconductors, mixed state free energy, crit. fields, magnetisation curves 2-17243  
 BaCl<sub>2</sub>, freezing of ionic melt into superionic phase 2-26022  
 Baxter model free energy derivation 2-10735  
 b.c.c. crystal, temp. depend. of ideal fracture strength 2-1553  
 benzene, thermodynamic props. and struct., appl. to polymer solns. 2-8641  
 1,5-benzodioxepin and dimethyl derivative, conformational dynamics, <sup>1</sup>H and <sup>13</sup>C NMR 2-4322  
 1,5-benzodioxepin and dimethyl derivative, conformational dynamics, <sup>1</sup>H and <sup>13</sup>C NMR 2-11508  
 bis-propyl ammonium tetrachloro zincate, ferro-paraelectric phase transitions 2-41292  
 carbonaceous-graphitic materials, vapour comp., partial press., sublimation heats, free energy changes 2-40527  
 centrosymmetric prototype phase, Landau-Devonshire theory with rotationally invariant expansion coefficients 2-46481  
 ceramic, crystn. of glass of liq. segregated in grain boundaries 2-12490  
 charged fluids, solvation forces, expression for free energy 2-37094  
 chemical potential in solids 2-40473  
 chemical reaction-diffusion system, to travelling wave fronts evolution of large scale fluctuations 2-17910  
 cholesteric blue phase, BCC orientational order, Landau theory 2-16592  
 cholesteric structures and the role of phase biaxiality 2-30391  
 classical linear chain, nonanalytic thermodynamics, crit. density 2-3518  
 coarse-grained Helmholtz free energy functional, book contrib. 2-10772  
 crystal-solution interface, two-dimens. critical nucleus size effect on interfacial tension, monolayer adsorption model 2-35866  
 crystals, free energy and sp. ht., correl. contribs. 2-12781  
 crystals pulled from melt, effect of anisotropy in free surface energy on profiling 2-25771  
 Curie-Weiss exactly solvable random spin model, free energy calc. 2-46292  
 Curie-Weiss ferromagnet, spin-flip dynamics, metastable states with complex free energy 2-26643  
 cyclohexane vapour, homogeneous nucleation, double-diaphragm shock tube study 2-35656  
 cyclopentylamine, thermodynamic props. 2-5248  
 cyclopropylamine, thermodynamic props. 2-5248  
 $\beta$ -dicarbonyl compounds, dimer fluoresc. 2-7588  
 3,5-dichloro-2-hydroxythiophenol in soln., conformational study 2-43938  
 differential heat flow calorimetry 2-8704  
 2,3-dihydronaphthalene-Mn<sup>2+</sup>(Fe<sup>2+</sup>)(VO<sup>2+</sup>) chelates, stability const. and thermodynamic functions 2-9562  
 1,2-dimethoxyethane aq. soln., thermodynamics of autoionisation, structuredness of solvents 2-45595  
 1,4-dioxane-methanol mixtures, excess Gibbs free energy, heat of mixing and form., equil. const. (*German*) 2-27469  
 effective free energy for nonlinear dynamics 2-28766  
 elastic, coherency strains, semi-discrete model 2-21207  
 elastic-plastic models, small strain incremental theory, thermomechanics 2-35069  
 equilibrium approach in osmotically coupled and uncoupled systems, free energy dissipation rates 2-9561  
 excess Gibbs energy models, equations of state, local composition concept 2-19062  
 fast ion transport in solids induced by an electric field 2-40589  
 ferroelectric models, minimality principle violation of free energy in SCF approx. 2-31394  
 ferroelectric smectic layer, A-C\* phase transition, boundary condition effects 2-16782  
 ferroelectric transitions, sp. ht. calc., free energy expansion high order terms effect 2-31402  
 ferromagnet, incipient domain formation, Brown's eqn., bifurcation solns. (*Chinese*) 2-41157  
 ferromagnetic superconductors, vortex phase stabilisation, generalised Ginzburg-Landau theory 2-13231  
 first order phase transitions, kinetics, Landau-Ginzburg eqn. anal. 2-45524  
 fluids, free energy derivation in the mean spherical approx. 2-50882  
 frustrated layered Ising model, free energy, critical points 2-46317  
 gas solutes in various solvents, Gibbs free energies of solute solvent interactions 2-41920  
 generalised Cauchy relation, elastic const. (*Russian*) 2-45311  
 glass, two-level system, microscopic model 2-30405  
 glass forming melts, mol.-kinetic model for critical cooling rates 2-8445  
 H theorem with allowance for density parameter approx. 2-44817  
 helical spin density wave due to antisymmetric exchange interaction 2-41118  
 heteromolecular nucleation in vapours, free energy change, electrostatic energy contrib. 2-20801  
 n-hexane-n-dodecane, excess enthalpy, excess vol., excess Gibbs free energy at 298.15 and 308.15K 2-1627



## free energy continued

- III-V semiconductors, immiscibility, excess free energy of mixing (Japanese) 2-50868  
 incommensurate superstructure transition theory (Russian) 2-12740  
 incommensurate system, lock-in wave vectors, symmetry determ. 2-41287  
 interacting point particles system in equilibrium, mean field description 2-48658  
 2-iodophenol soln., O-H stretching bands cis-trans free energy differences, spin-spin coupling study 2-49456  
 Ising antiferromagnet, FCC, low temp. series expansions 2-2089  
 Ising antiferromagnetic, I(1) model, FCC lattice, crit. and thermodynamic props., series expansion calc. (Chinese) 2-41146  
 Ising ferromagnet, specific heat, magnetisation, renormalisation group approach 2-46314  
 Ising model, infinite range, tricrit. point 2-46321  
 Ising model, partition functions, bounds, frustration appl. 2-10727  
 Ising model free energy derivatives calc. by modified Kadanoff variational method 2-38588  
 isothermal seed generation, kinetic and thermodynamic parameters, student research project 2-48442  
 Lennard-Jones fluid, free energy, vapour-liquid equilib., Monte Carlo calcs. 2-50500  
 Lennard-Jones liquid mixtures, free energy of mixing phase stability and local composition 2-40240  
 liquid, thermodynamics using hard sphere vs. one component plasma reference systems 2-8415  
 liquid crystals, nonlocal continuum theory 2-21016  
 liquid metal, thermodynamic properties using one-component plasma reference system 2-45013  
 liquid metals, surface tension pseudopotential perturbation theory 2-45682  
 liquid noble metals, effective pair potential and thermodynamic props. 2-45015  
 liquid-vapour critical phenomena, asymm. Landau-Ginzburg-Wilson model 2-8603  
 liquid-vapour interface, molecular models 2-8690  
 low energy surfaces, characterisation by standard surface method 2-5295  
 magnet, biquadratic exchange model, low temp. behavior 2-31170  
 magnetic lattice gas, disordered, infinite long range interactions with Gaussian prob. distrib. 2-46309  
 magnetic lattice gas, distrib. function formulation 2-46308  
 magnetic semiconductor, susceptibility of spin polaron states in s-f exchange model, above Curie temp. 2-21775  
 magnetic system, quasi two-dimens., successive phase transitions 2-36365  
 magnetic system with random interaction, quenched free energy, thermodynamic limit 2-28777  
 magnetic transitions, order parameter symms., Landau theory appl. 2-46293  
 mean field spin glass, Sompolinsky free energy functional derivation 2-26635  
 metamagnetism, spontaneous, appl. of Landau theory 2-5541  
 methane, dense fluid, Van der Waals partition function, empirical corrections 2-44994  
 methyl cyclopentane, US dispersion and thermodynamic prop. studies 2-12684  
 3-methylcyclohexanone, energy parameters, US dispersion studies 2-50774  
 methylenecyclobutane, thermodynamic props. 2-5248  
 molecular fluids, principal moments of inertia, quantum corrections and computer simulations 2-20989  
 nearly classical one-component plasma in two dimensions, mag. props. 2-50375  
 negative differential cond. systems, thermodynamic description 2-46009  
 nematic liquid cryst., biaxial, hydrodynamic eqns., free energy density, sound wave attenuation 2-50535  
 nonequilibrium statistical thermodynamics expression 2-42979  
 nucleation, two dimens., crit. size and crit. free energy 2-12523  
 nucleation centre form. near phase transition crit. points 2-35648  
 one-dimensional classical system, Yang-Lee edge behaviour 2-19066  
 Parisi equation for Sompolinsky's soln. to Sherrington-Kirkpatrick model 2-31193  
 Peierls-Frohlich problem and pot. with finite number of gaps 2-3529  
 perovskites ferroelectric, incommensurate superstructure transition theory (Russian) 2-12740  
 phase transitions near Lifshitz point, phase diagram with incommensurate phase 2-40519  
 polymer, hydrophilic, surface free energy dispersive component, nondispersive interactions with polar liqs. 2-35868  
 polymer bridging forces in liquid/liquid systems 2-35864  
 polymer chains, self-avoiding random walks mag. analog on a lattice 2-8947  
 polymer solution, rod-like, isotropic to liq. cryst. phase transition, elec. field effect 2-21307  
 polymer solutions, intrinsic viscosity in nonpolar solvents, effect of correl. of molecular orientations 2-1538  
 polymer solutions, intrinsic viscosity in nonpolar solvents, effect of solvent steric hindrance 2-1539  
 polymers, Gibbs energy of mixing, sorbate effect calc. from static sorption data (Russian) 2-21317  
 porous material structure characterisation, adsorption isotherm 2-50996  
 random bond Ising model in self-avoiding walk approximation 2-46320  
 random Ising model phase transition 2-19037  
 random-bond Ising models, frustration effect and spin glass transition temp. 2-2088  
 randomly disordered harmonic lattice, free energy using the replica trick 2-10739  
 rare earth alloys, RFe<sub>2</sub> 2-8985  
 reentrant nematic phase transition, order parameters, free energy functional 2-16791  
 relativistic heavy-ion collisions, very hot nuclear matter and pion prod. 2-39051  
 renormalisation group transform of free energy in random process 2-28817  
 semiconductor, electronic energy levels, statistical mechanical treatment 2-35931  
 semiconductors, statistical mechanics of band states and impurity states 2-12967  
 simple cubic lattice, Ising model, free energy, lower band approx. 2-33443  
 site dilution in the fully frustrated triangular lattice in two dimensions 2-10740

## free energy continued

- smectic A-smectic A phase transition, order parameters, free energy functional 2-16791  
 smectic-C\* liq. crystals, ferroelec. state, molecular model 2-21024  
 solid particles embedded in solid matrix, surface stress and chem. equilib. 2-35897  
 spherical particles, faceting, surface energy mass 2-50962  
 spin glass, Ising model, stationarity of free energy 2-2091  
 spinodally modulated structures, energetics of dislocation motion 2-25875  
 steel, stainless, void nucleation, solute addition effects 2-50625  
 superconductor, antiferromagnetic, one-dimensional, electron pairing in homogeneous mag. field 2-51369  
 superfluid density and helicity modulus, renormalisation group calc. 2-45657  
 superfrustration models 2-17256  
 temperature-dependent finite thermoelectric stress and deformation in a circular cylindrical coordinate system 2-29996  
 ternary system, Kohler method and subregular model incompatibility 2-10759  
 tetrahydrofuran aq. soln., thermodynamics of autoionisation, structuredness of solvents 2-45595  
 thiourea, sinusoidal antiferroelectricity theory 2-21953  
 (TMTSF)<sub>2</sub>PF<sub>6</sub>, spin density waves and supercond., phase transitions 2-13211  
 transformation toughening, contrib. to fracture toughness 2-51923  
 transformation toughening, size effects assoc. with thermodynamics of constrained transform. 2-51922  
 transition metal complexes with protic solvents, cooperative effects of dx electron delocalisation 2-13998  
 transition metals and oxides, 3d, catalytic props. in mag. transition temp. region 2-31948  
 TTF-TCNQ, frustration and commensurate pinning, Landau free energy study 2-35675  
 type II superconductor, attractive interaction between surface and single flux line 2-41089  
 water-dimethylsulphoxide mixtures, free energies of transfer of single ions calc. using spectrophotometric meas. 2-13997  
 Ag, liq., O activity, electrochem. meas. 2-8647  
 Ag/AgPO<sub>4</sub>(AgAsO<sub>4</sub>) electrodes in formamide, standard electrode potentials, thermodynamic quantities 2-52212  
 Ag-S system, thermodynamic quantities meas. by EMF method (Japanese) 2-50885  
 Ag(111), adsorpt. of Xe(Kr), monolayer and bilayer films, lattice consts. and vibrs., thermodynamic props. 2-45714  
 Al melting point, thermodynamic calc. 2-5209  
 Al-Ca, absorption of H<sub>2</sub>, thermodynamics, H<sub>2</sub> titration method 2-8706  
 Al<sub>2</sub>S<sub>3</sub>, thermodynamic props. 2-30629  
 BaMnF<sub>4</sub>, magnetolectric, Landau theory predictions 2-41170  
 Bi, liq., O activity, electrochem. meas. 2-8643  
 Bi<sub>2</sub>Sb<sub>1-x</sub>SI solid-solution ferroelectric semiconds., free energy and singularity 2-5649  
 CdAs, high pressure phase, thermodynamic props. 2-26083  
 CdCr<sub>2</sub>Se<sub>4</sub>, ferromagnetic semiconductor, P<sub>Se2</sub>-aCdSe phase diagram (Japanese) 2-45531  
 Ce compounds, with unstable 4f shells, Gruneisen parameter 2-16743  
 β-Co-Ga, ordered, enthalpy of form. anal. defect struct. 2-51877  
 Co-W-C, equilib. diagram in Co rich corner, thermodynamic study, 1000 to 1200°C (Czech) 2-31681  
 Co+CoO system, thermodynamic props. determ. by EMF method using solid electrolyte electrochem. sensors 2-12776  
 Cr+Cr<sub>2</sub>O<sub>3</sub> system, thermodynamic props. determ. by EMF method using solid electrolyte electrochem. sensors 2-12776  
 Cs, structural and thermodynamic props. using local transition metal pseudopot. 2-8472  
 CsRCl<sub>3</sub>:Gd<sup>3+</sup>, displacive phase transitions, ESR spectra obs. 2-36424  
 Cu, corrosion in SO<sub>2</sub>, pure and pre-oxidised specimens, 500-950°C 2-27336  
 Cu, liq., O activity, electrochem. meas. 2-8647  
 Cu-benzotriazole, absorpt. isotherm 2-45711  
 Cu-Co, liquid alloys, thermodynamic study (Japanese) 2-27144  
 Cu-Zn(Al)(Sn), liq., free energy and other thermodynamic props., conc. depend. 2-12779  
 Cu<sub>2</sub>O(s), standard Gibbs energy of formation, 1066-1220°C 2-16816  
 CuS, thermodynamic props. 2-26079  
 Cu<sub>2</sub>S, thermodynamic props. 2-26079  
 D<sub>2</sub>, liquid and solid, quadrupole interactions, differential vapour press. meas. 2-44136  
 Fe-Cu system, phase diagram, α(δ)/γ equilibrium 2-13697  
 Fe-Mo system, phase equilib. and thermodynamics 2-27140  
 Fe-Mo-O system, phase equilib. and thermodynamics 2-27140  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, metallic glass, torsional elastic behaviour 2-31720  
 Fe<sub>2</sub>O<sub>3</sub>-Fe<sub>3</sub>O<sub>4</sub>, reduction, microstruct. changes 2-9348  
 Fe<sub>2</sub>O<sub>4</sub>-FeAl<sub>2</sub>O<sub>4</sub> spinel solid solns., thermodynamic props. 2-35695  
 Fe<sub>2</sub>O<sub>4</sub>-FeV<sub>2</sub>O<sub>4</sub>(FeCr<sub>2</sub>O<sub>4</sub>), spinel solid soln., thermodynamic props. 2-51883  
 Ga-Ag-S solvent, dil. soln. of S, thermodynamic study 2-51878  
 H<sub>2</sub>O, liquid, photoelectron emission spectra 2-9239  
<sup>3</sup>He solid solution, phase separation, X-ray diff. 2-45675  
<sup>3</sup>He, superfluid density, renormalisation group and ε expansion 2-45656  
 In-Sb, liq., O activity 2-8644  
 K, structural and thermodynamic props. using local transition metal pseudopot. 2-8472  
 KS, gas phase, thermodynamics props. 2-30268  
 K<sub>2</sub>S, gas phase, thermodynamics props. 2-30268  
 Kr-methane system, liq.-vapour equilib. 2-26031  
 Li<sub>2</sub>Fe<sub>2</sub>O<sub>3</sub>, order-disorder transition, first order 2-30589  
 MnO, thermodynamic activity in melts containing SiO<sub>2</sub>, B<sub>2</sub>O<sub>3</sub> and TiO<sub>2</sub> 2-8645  
 Mo-B system, thermodynamic modelling, liq. phase behaviour 2-13698  
 Mo<sub>2</sub>B and Mo<sub>2</sub>Si, standard free energy of form. by EMF meas. (Japanese) 2-27142  
 N<sub>2</sub>, liquid, thermodynamic props. from perturbation theory for ISM fluids 2-30628  
 NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>, nucleation from aqueous soln., impurity effect 2-35413  
 NaCl-AlCl<sub>3</sub>, thermodynamics 2-45591  
 Nb-C-O, equilib. vapour press. meas. by Knudsen effusion method (Japanese) 2-27143  
 NbB<sub>2</sub>, high temp. enthalpy, heat capacity, entropy and reduced Gibbs energy determ. 2-16808  
 Ni, EMF-pH diagram, revised 2-52215



**free energy continued**

- Ni+NiO system, thermodynamic props. determ. by EMF method using solid electrolyte electrochem. sensors 2-12776  
 O<sub>2</sub>, solubility limit in liq. Ni, thermodynamic props. 2-2726  
 Pb-Ag, liq., thermodynamic behaviour of dil. soln. of S 2-40562  
 Pb-Bi alloys, dil., unidirectional solidification 2-2499  
 Pb<sub>1-x</sub>ZrO<sub>3-x</sub>, Gibbs energy of formation 2-30630  
 Pd crystallites, Al<sub>2</sub>O<sub>3</sub> supported, in oxygen, form. of pits, role of interfacial phenomena, TEM 2-12886  
 Rb, structural and thermodynamic props. using local transition metal pseudopot. 2-8472  
 RbD<sub>2</sub>H<sub>2</sub>PO<sub>4</sub>, polarisation meas., Landau free energy expansion coeffs. 2-41260  
 Si (111)(2×1)-(7×7) surface reconstruction transitions, thermodynamic theory 2-1719  
 Si, amorphous-crystalline transition, thermodynamic criterion 2-45569  
 Si, B-defect form. and growth, thermodynamic model 2-50630  
 Sn, liq., O activity, electrochem. meas. 2-8643  
 Sn-Te, liq., thermodynamic props., high temp., EMF meas. 2-12782  
 SrWO<sub>4</sub> crystallisation from Na<sub>2</sub>WO<sub>4</sub> melt, DTA, thermodynamic and kinetic parameters 2-35415  
 TaSe<sub>2</sub>, 2H polytype, commensurate CDW phases, transition temps. 2-45571  
 Tb, anisotropic magnetisation time depend. in basal plane 2-26668  
 ThO<sub>2-x</sub>, thermodynamic props., high temp. 2-27152  
 TiB<sub>2</sub>, chemical vapour transport by different transport agents, expt. and thermodynamics models 2-35422  
 TiO<sub>2</sub>, nonstoichiometric, CVD at high temps., conditions 2-35905  
 TiO<sub>2</sub> solid solns., high temp. vaporisation and thermodynamics 2-27151  
 TiO<sub>2</sub>+Si<sub>3</sub>N<sub>4</sub>, reaction mechanism, thermodynamic anal. 2-37059  
 WO<sub>3-x</sub>, thermodynamic props., 700 to 900°C EMF meas. 2-41917  
 Xe, solubility in n-alkanes, partial molar Gibbs energy determ. 2-37088  
 ZnO, allotropic transform., free energy changes, electrochem. determ. 2-21304  
 ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub> composites, transform. toughening, expt. obs. 2-51924  
 ZrO<sub>2</sub>+Si<sub>3</sub>N<sub>4</sub>, reaction mechanism, thermodynamic anal. 2-37059  
 ZrO<sub>2</sub>-(Al<sub>2</sub>O<sub>3</sub>)-Y<sub>2</sub>O<sub>3</sub>-CeO<sub>2</sub> composites, transform. toughening and fracture toughness, effect of alloying additions and temp. 2-51926

**free field rooms** see *anechoic chambers***free induction decay (optical)** see *optical coherent transients***free radical reactions**

- bis(trifluoromethyl) nitroxide+toluene, H abstraction, quantum tunneling, kinetic EPR study 2-9536  
 2,5-diphenylxazole in cyclohexane soln., pulse radiolysis, radical ion kinetics, EPR study 2-15823  
 emulsion polymerisation kinetics, Smith-Ewart eqn. 2-47340  
 ethynyl radical+O<sub>2</sub>(H<sub>2</sub>)(methane), time resolved chemiluminesc., 'rate coeff. 2-31923  
 flow systems, valence-shell photoelectron spectroscopy 2-44002  
 kinetics, laser mag. resonance and pump/probe expts. 2-22427  
 polyethylmethacrylate, γ-ray irradi., free radical form. and decay, US detect. 2-52200  
 radical pair recombination, influence of exchange and electrostatic interactions on mag. effects. 2-47308  
 radical pair recombination, mag. effects and nucl. polarisation 2-37070  
 TCNE+radical, radical trapping, rate reaction rate, mass spectra 2-27421  
 TCNQ+organic radicals, radical trapping, gas-phase struct., mass spectra 2-24892  
 TCNQ+radicals, radical trapping, rate reaction rate, mass spectra 2-27421  
 TCNQ++organic radicals, radical trapping, product struct. and isomerisation, mass spectra 2-27422  
 tetracyanopyrazine+radical, radical trapping, rate reaction rate, mass spectra 2-27421  
 C<sub>4</sub>H<sub>4</sub><sup>+</sup>, gas phase chem. 2-9531  
 CXYZ, (X, Y, Z=H, F, OH, CN), free radicals, struct. and reactivity, HF calcs. 2-4204  
 HO<sub>2</sub>+H, reaction rate consts., LMR spectrosc. determ. 2-15821  
 NH<sub>2</sub>+H, polarised fluoresc., inelastic energy transfer, reorientation, spin correl. interaction 2-49554

**free radicals**

- see also *free radical reactions; paramagnetic resonance of free radicals*  
 n-alkane cations, [H(CH<sub>2</sub>)<sub>n</sub>H]<sup>+</sup> α-delocalised radical, ESR spectra 2-34452  
 alkoxyalkyl nitroxides, anomeric effects and nitroxide conformations 2-24754  
 anthracene, γ-ray irradi., radical pair form., EPR study 2-2136  
 azomethane radical, stability, decomposition path, ab initio SCF calcs. 2-24589  
 bacteriopheophytin a anion radical, soln. ENDOR, ESR and TRIPLE reson. obs. 2-15822  
 benzyl(-d<sub>7</sub>) radicals, emission and excitation spectra in solid Ar 2-24718  
 4-biradical, <sup>13</sup>C CIDNP 2-29628  
 1,4-bis(trifluoromethyl)benzene, free radical, X-band, <sup>1</sup>H and <sup>19</sup>F dynamic nucl. polarisation study 2-49466  
 o-carboranylcarbene, frozen soln. triplet EPR spectra, delocalisation 2-739  
 chlorodifluoromethane, multiphoton dissociation reaction channels, secondary reactions, IR-laser photolysis/mass spectra study 2-22482  
 cyclobutadiene radical cation, pot. surface, ab initio and CI calcs., Jahn-Teller effect 2-49310  
 di-t-butyl peroxide, photolysis, radical decay rate constants, abstraction reaction, thermal lensing study 2-22473  
 dibenzodioxin, radical cations, electronic struct., XPS obs. 2-44001  
 1,1-difluoroethylene radical anion, geom. struct., EPR investig. 2-4335  
 3,4-dihydroxyphenylalanine photolysis, semiquinone anion radicals prod., ESR charact. 2-11524  
 5,5-dihydroxybarbituric acid trihydrate, α-radical detection, ESR study 2-36434  
 dimethyl ether cation radicals, ESR spectrum, prod. from γ-irrad. trichlorofluoromethane frozen matrix 2-21881  
 dimethyl sulphide dimer radical cation, time-resolved reson. Raman spectrum 2-11492  
 p-dimethylaminobenzonitrile radical cation, resonance Raman bands, 77K 2-4307  
 1,8-diphenylnaphthalene radical anion, transannular electron, ENDOR study 2-51499  
 ESR spectra in presence of paramag. ions, dipole-dipole broadening 2-34455

**free radicals continued**

- ethynyl radical, laboratory millimeter and submillimetre spectrum 2-32831  
 fluorobenzene cation radicals, 1-3 methyl substituents, spectroscopy and decay dynamics 2-43901  
 formation, in polyethylene and n-alkanes after high-energy radiation 2-5154  
 galvinoxyl radicals, sterically hindered, <sup>1</sup>H and <sup>13</sup>C ENDOR investig. 2-46425  
 5-halouracil derivatives, solid, radiation-induced free radicals 2-52228  
 hydroxyalkyl trifluoromethyl nitroxides 2-24754  
 1-hydroxyl-1-methylethyl radical, photochemically produced, on colloidal metal, H<sub>2</sub> formation catalyst 2-13983  
 isobutyl radicals, barrier for internal rot. calc. using ab initio SCF calcs. 2-43787  
 laser magnetic resonance spectroscopy 2-20088  
 laser-Raman matrix isolation spectroscopy 2-236  
 matrix isolated, hyperfine tensor components, ESR spectrosc. sign determ. 2-39424  
 methyl acetate cation radical, electronic struct., external elec. field effects 2-663  
 methyl free radicals, dipole moment derivative calcs. 2-29513  
 methyl radical, IR spectra, vibr.-rot. spectra, rot., centrifugal distortion and spin-rot. interaction const. 2-20059  
 methyl radical+NO<sub>2</sub>, mechanism and rate consts., photoionisation mass spectra 2-27417  
 2-methyl-o-carboranylcarbene, frozen soln. triplet EPR spectra, delocalisation 2-739  
 methylviologen radical cation, IR, Raman, and reson. Raman spectra 2-49429  
 mutual effect of nuclei upon CIDNP in high fields, violation of Kaptain rules 2-43940  
 neopentyl radicals, barrier for internal rot. calc. using ab initio SCF calcs. 2-43787  
 nitrobenzene radical anion, <sup>14</sup>N ENDOR in soln. 2-11527  
 nitrosylhaemoglobin, EPR and chem. in single crystals. 2-14184  
 octafluorotoluene, free radical, X-band, <sup>19</sup>F dynamic nucl. polarisation study 2-49466  
 organic radicals+TCNQ; radical trapping, gas-phase struct., mass spectra 2-24892  
 organic radicals+TCNQ, radical trapping, product struct. and isomerisation, mass spectra 2-27422  
 pentafluorophenol radical cation, fluorescence, vibr. anal. 2-11538  
 perfluoroacetylmethylmethylene quintet radical pair, isolation and ESR detection 2-43996  
 phenazines, substituted, radical cations, electronic struct., XPS obs. 2-44001  
 phenoxathiine, radical cations, electronic struct., XPS obs. 2-44001  
 polyenes, methyl substituted, twisted, sudden polarisation effect 2-11396  
 polymers, crystalline, tensile failure, brittle fracture, crazing, microcrack growth, free radical prod. 2-47164  
 polythene, spin trapped radicals, motion, annealing and melting effects, ESR obs. 2-17340  
 poly[p(2-hydroxyethoxy) benzoic acid] fibers, free radicals EPR spectra 2-21882  
 pyridine, adsorbed on Ag electrode, Raman intensity enhancement due to radicals form. 2-5711  
 radical+TCNE reaction, radical trapping, rate reaction rate, mass spectra 2-27421  
 radical+TCNQ reaction, radical trapping, rate reaction rate, mass spectra 2-27421  
 radical+tetracyanopyrazine, radical trapping, rate reaction rate, mass spectra 2-27421  
 radical cation states, valence-shell photoelectron spectroscopy 2-44002  
 radical pair recombination, influence of exchange and electrostatic interactions on mag. effects. 2-47308  
 tanol substrate, free radical nitroxide, mag. props. and metamagnetism, susceptibility and magnetisation meas. 2-13293  
 tetrahydrofurans cation radicals, ESR spectrum, prod. from γ-irrad. trichlorofluoromethane frozen matrix 2-21881  
 1,2,4-trifluorobenzene, free radical, X-band, <sup>1</sup>H and <sup>19</sup>F dynamic nucl. polarisation study 2-49466  
 1,2,3-trifluorobenzene radical cation, ground state splitting and struct., low-temp. gas phase and matrix spectra 2-39440  
 triphenylamines, radical cations, electronic struct., XPS obs. 2-44001  
 uridine-5'-phosphate disodium salt, free radicals from X-irrad. single crystals. 2-31937  
 vinylidene radical formation as an intermediate in triplet methylene combination reaction 2-41878  
 water, free radical prod. by high-power UV laser radiation 2-52226  
 p-xylosemiquinone radical, in sodium dodecyl-sulphate micelle, mag. field effect, laser photolysis study 2-22472  
 AsO radical, IR laser mag. reson. spectra 2-29633  
 Br-containing free radicals, high-freq. ENDOR meas. 2-24760  
 C<sub>3</sub>+alkenes (alkynes) (allenes), reaction mechanisms, rate consts. 2-22414  
 C<sub>4</sub>H<sub>4</sub><sup>+</sup>, gas phase chem. 2-9531  
 CN, X<sup>2</sup>Σ free radicals, characterisation and temp. controlled prod. in free jet expansion 2-15837  
 CXYZ, (X, Y, Z=H, F, OH, CN), free radicals, struct. and reactivity, HF calcs. 2-4204  
 ClO, matrix isolated in CO<sub>2</sub>, EPR spectra (German) 2-39425  
 ClO radical, stratospheric composition 2-32618  
 ClO<sub>2</sub> radical, IR microwave double reson. spectroscopy 2-24764  
 FCO radical, IR diode laser spectroscopy of ν<sub>1</sub> and ν<sub>2</sub> bands 2-24697  
 HIF structure study 2-39503  
 HO<sub>2</sub><sup>+</sup>, X<sup>2</sup>A'' state, VUV PES of transient species 2-34493  
 Mn(CO)<sub>5</sub>, EPR spectrum 2-9036  
 NF<sub>3</sub><sup>+</sup>, metastable states, spontaneous emission, radiative lifetimes 2-24781  
 NH<sub>2</sub>+H, polarised fluoresc., inelastic energy transfer, reorientation, spin correl. interaction 2-49554  
 NH<sub>4</sub>HSO<sub>4</sub>, antiferroelectric, behaviour of free radicals in phase transition (French) 2-36566  
 NO<sub>2</sub>, atmosphere diurnal variation and formation chemistry 2-42414  
 O<sub>2</sub>/CS<sub>2</sub> and O<sub>2</sub>/CS<sub>2</sub>/N<sub>2</sub>O flames, CO(v), luminescence, elec. collision quenching 2-2715  
 OH, <sup>2</sup>Σ state, population inversion within rot. levels 2-29659  
 OH, A<sup>2</sup>Σ<sup>+</sup> state, fluoresc. quantum beats and optical spectra 2-34487  
 OH conc. in atmos., vertical column abundances, 1976 to 1979 obs. 2-10132



**free radicals continued**

- OH, excited rot. levels, quenching rate coeff., radiative lifetimes 2-44004  
 OH free radical fundamental band, sensitive mag. rotation spectroscopy with colour centre laser 2-11531  
 OH radical prod. from Pt-catalysed decomposition of water, energetics and mechanism, fluorese, 2-17872  
 OH, with  $^{16}\text{O}$  and  $^{18}\text{O}$ , UV spectrum and mol. consts. meas. 2-47330  
 OH( $X^2\Pi$ ) product of  $\text{H}_2\text{O}$  photolysis, rot. energy distrib. 2-43882  
 SH  $X^2\Pi$  free radicals, characterisation and temp. controlled prod. in free jet expansion 2-15837  
 SH, radical, deuterium isotope effects, rot. anal., vacuum UV obs. 2-11505

**freezing**

see also refrigeration

- alkali halides, freezing, classical statistical mech. theory 2-26021  
 alloys, binary, freezing, classical statistical mech. theory 2-26021  
 $\text{BaCl}_2$ , freezing of ionic melt into superionic phase 2-26022  
 biological materials, phys., biochemical and physiological effects of low temp., review 2-32169  
 biological particles, fluctuation X-ray scattering, using synchrotron radiation 2-32378  
 biological specimens, prep. for SEM 2-27966  
 biological specimens, use of propane/isopentane mixtures for rapid freezing 2-32374  
 1,2diaminoethane, adsorbate on  $\text{TiO}_2$ , phase transition 2-8702  
 dispersed media, freezing and thawing, thermophysical charact. determ. by appl. of inverse heat conduction problem soln. 2-12005  
 formic acid, adsorbate on  $\text{TiO}_2$ , phase transition 2-8702  
 frost layer growth and densification under forced convection and densification 2-4704  
 fundamental entropy change in transitions from liquid state 2-40572  
 haemoglobin, struct. changes at the haeme induced by freezing 2-18173  
 ice formation in pipe, transition and turbulent regimes 2-12225  
 liquefied natural gas pipeline, low-temp., installed above ground, freezing over influencing factors 2-44639  
 liquid direct correlation function, singlet densities, and freezing 2-40244  
 liquid metal, hot, flow through cylindrical pipe, nozzle blockage by freezing, mathematical model 2-44706  
 melting and freezing with convection, numerical anal. 2-29989  
 natural convection heat transfer coeff. meas. 2-35034  
 propane-jet freezing, ultra rapid freezing method for temp. dependent lipid phases preservation 2-32373  
 PVC, pressure-induced freezing of conformational states 2-26052  
 soft inverse power potential systems, bridge function universality and semiempirical freezing criterion 2-35367  
 soil, flow of nonfreezing water interlayers and frost damage 2-18472  
 thin biological samples, ultrarapid freezing 2-32382  
 transition from convection-controlled to conduction-controlled growth 2-4705  
 two dimensional first order freezing, density wave theory 2-45536  
 water, transient freezing process with supercooling (Japanese) 2-26025  
 Al, liquid layer, freezing after laser pulse irradiation, non-equilib. Pb segregation effects 2-35699  
 Au freezing point, cavities emissivity and temp. evaluation 2-15170  
 $^4\text{He}$ , melting, freezing, and superfluidity in porous media 2-35776  
 K, freezing and liq. struct. factor 2-40517  
 Na, freezing and liq. struct. factor 2-40517  
 $\text{NaSO}_3 \cdot 10\text{H}_2\text{O}$  multifreeze-cycle life testing in a rolling cylinder heat store 2-47524  
 Ti-Pd (20 at.%), amorphous supercond. alloy, crystallisation temp. (Chinese) 2-21030  
 Xe monolayer on graphite, freezing transition, X-ray scatt. study 2-40684

**Frenkel defects**

- alkali halides, F-colouring, role of impurities on primary process 2-12591  
 alkaline earth oxides, defect energies and volumes calc. 2-5112  
 fast ion transport in solids induced by an electric field 2-40589  
 fluorite crystals, interacting Frenkel defects at high conc. and superionic transition 2-1473  
 fluorites, nature of disorder in superionic state 2-45148  
 radiation cascades in crystals, spatial distrib. of vacancies and interstitials, theory 2-45248  
 superionic semicond., transition to high cond. state induced by elec. field, defect conc. 2-45618  
 transition metal oxides, defect energies and volumes calc. 2-5112  
 AgBr, diffusion of  $\text{Rb}^+$ , Frenkel defect form. energy 2-12854  
 AgBr(Cl), acoustic phonon anomaly, Brillouin scatt. study 2-46626  
 $\beta\text{-Ag}_2\text{Se}$ , electronic and electrogalvanic props., homogeneity range (French) 2-40890  
 Au:He, spontaneous precipitation of He 2-13727  
 BaF<sub>2</sub>, superionic cond., thermal expansion and refractive index 2-17437  
 CaF<sub>2</sub>, Frenkel defect form. entropies in quasiarmonic approx. 2-45506  
 Cd chalcogenides, defect formation mechanism under thermal neutron irradiation 2-8546  
 CsBr, tunnelling charge transfer to Frenkel defects, luminesc. obs. 2-45153  
 Cu, electron irradiated, atom displacement threshold energy, nucleation and growth of dislocation loops, electron microscopy obs. 2-25933  
 $\text{Cu}_3\text{Au}$  ordered alloy, ion irradi., atomic replacement, resistivity meas. 2-8547  
 CuI, ionic cond. and thermoelec. power 2-1657  
 Ge, electron irradiated, form. probability of separated Frenkel pairs 2-35541  
 $\text{Hg}_{0.9}\text{Cd}_{0.1-w}\text{Te}$ , undoped and In and Ag doped, interdiffusion study 2-12859  
 KCl:Br, doped and undoped, exciton decay into Frenkel pairs, optical absorption study 2-45846  
 LiF, Frenkel pairs separation, self-trapped exciton annihilation mechanism, INDO simulation 2-25870  
 NaCl, triplet self-trapped exciton, Frenkel defect form. and intersystem crossing 2-41401  
 PbF<sub>2</sub>, high press. phase transitions, effect of Frenkel defects. 2-12736  
 $\beta\text{-PbF}_2$ , superionic, computer simulation 2-16879  
 Si, electron irradiated, form. probability of separated Frenkel pairs 2-35541  
 $\text{SrCl}_2$ , high press. phase transitions, effect of Frenkel defects. 2-12736  
 $\text{SrCl}_2$ , intrinsic and lightly doped crystals, defect struct. 2-5109  
 $\text{SrF}_2$ , Frenkel defect form. entropies in quasiarmonic approx. 2-45506  
 $\text{UO}_2$  diffusion of  $\text{O}_2$  2-50913

**Frenkel defects continued**

- VSe<sub>2</sub>, thermal expansion, X-ray diffr. study, 40 to 1175K 2-8648  
 ZnSe, electron irradi., anisotropic Zn displacement Frenkel defect production 2-45281

**frequency changers** see frequency converters**frequency control**

see also automatic frequency control

- dye laser on at. reference scanned by mag. field (French) 2-4528  
 formants and fundamental freq. control in singing, coupling between voice tract and voice source 2-9808  
 servo-control system, freq. and amplitude stabilisation of CW  $\text{CO}_2$  laser 2-4522

**frequency converters**

see also mixers (circuits); optical frequency conversion

- parametric frequency up-conversion of electromagnetic waves in bounded electron beams 2-39549

**frequency division multiplexing**

- cylindrical concave diffraction grating, manufactured with multimode slab waveguide 2-25108  
 monolithic integrated microgratings and photodiodes for wavelength demultiplexing 2-44487  
 optical all-fibre directional couplers, single-mode and multimode, for WDM 2-4592  
 passive multiplexing techniques, for fibre optic sensor systems 2-11826

**frequency-domain analysis**

- array adaptive noise cancellation with wanted signal leakage 2-44588  
 nuclear power plants under seismic loads, dynamic anal. with finite elements 2-11247

**frequency measurement**

see also atomic clocks

- Bragg filters in optical fibres, freq. response meas. by thermal scanning (French) 2-29870  
 broadband instantaneous microwave freq. meas., discriminator technique, low-cost appl. 2-38665  
 comparator of small frequency deviations on the basis of phase detection 2-23615  
 frequency discrimination for pure and complex tones 2-9809  
 frequency standards and their appls. 2-48681  
 He-Ne/ $\text{I}_2$  laser as a frequency standard in the visible spectrum 2-44370  
 laser spectroscopy, sub-Doppler, quantum metrology appl. 2-6905  
 quantum frequency standard and spectral line shift and broadening (Chinese) 2-10874  
 scales comparison, Loran-C system appl. 2-3556  
 standards in very-long-baseline interferometry, coherence limits 2-28227  
 standards stability improvement, cooling atomic ions with lasers 2-15135  
 time-domain reflectometry automated, using stroboscopic convertor, accuracy increase 2-3567  
 visible laser line freq. difference meas. up to 170 GHz using MIM point contact diodes 2-15150  
 $^{13}\text{CO}_2$  laser hot band transitions, heterodyne freq. meas. 2-16045  
 Cs frequency standard, squarewave frequency modulation servo system, freq. stability (Japanese) 2-166  
 Rb frequency standards, testing by appl. of Zeeman optical pumping 2-48678  
 Rb standard, passive, S/N ratio and short-term stability 2-23614  
 Si p-n junction, cut-off freq. meas. using chopped photon beam 2-41001

**frequency meters**

see also wavemeters

- DFCM 500 8-digit freq. and capacitance meter, mains or Ni-Cad battery operation 2-33564  
 Lambda metre resolution enhancement using novel freq. metre 2-15216  
 optical photodetector, freq.-characteristic meter 2-19182  
 output matching to transcriber 2-48694

**frequency modulation**

see also frequency shift keying

- audio, lock-in amp. using a 4-quadrant analog multiplier and PLL 2-6884  
 FM radiation analysis on optical band using four-mirror interferometer 2-10862  
 optical fibre, wideband FM signal conversion to AM through group velocity dispersion 2-49927  
 synthetic standing wave production in sinusoidally frequency modulated waves (Chinese) 2-3395  
 AlGaAs injection-locked semiconductor laser, optical FM signal amplification and FM noise reduction 2-16039

**frequency regulation** see frequency control**frequency response**

- atmosphere, thermally-driven, freq. response to laser beam propag. 2-47999  
 computerised system meas. error 2-38623  
 electrochemical experiments, digitally driven system 2-47411

**frequency shift keying**

- optical FSK heterodyne detect. expts. using semicond. laser transmitter and local oscillator 2-4541

**frequency stability**

see also frequency control; laser frequency stability

- frequency standards and their appls. 2-48681  
 parametric frequency up-conversion of electromagnetic waves in bounded electron beams 2-39549  
 UHF injector for linear electron accelerator 2-49201

**friction**

see also internal friction; lubrication

- abrasion of rubbing pairs at high slip speeds (Russian) 2-8097  
 aerostatic bearings, instability on rough surfaces, characteristics 2-20614  
 antifriction materials for cryogenic environments, review 2-22343  
 antifriction performance of lubricants, new method for rapid estimation 2-27393  
 asperity interaction for pair of rough surfaces, contact analysis during sliding 2-50201  
 BCC, rolled, computer simulation of surface texture development (Japanese) 2-47236  
 bonded solid film lubricants, frictional behaviour 2-36975  
 boundary frictional processes, depth of vac. influence, lubricant choice (Russian) 2-31797  
 calorized, wear charact. during dry rubbing (German) 2-27289  
 ceramic type protective coatings for high temp. reactors (German) 2-474  
 coefficient, magnitude with and without adhesion (German) 2-35588  
 cracked elastic body, behaviour under load 2-4771



**friction** continued

cylinder, tall hollow, with high interfacial friction, static axial compression 2-16242  
 cylinder pair, elastic layer bonded, with sheet in nip, steady rolling contact 2-25323  
 deformation of elastic half-space in sliding of circular cylinder 2-50198  
 device with a disc spring, elasto-frictional characts. (*Russian*) 2-30002  
 die materials, friction and wear testing apparatus 2-41854  
 disk, translation in viscous fluid, friction coeff. 2-30221  
 elastic theory 2-12107  
 elasto-hydrodynamic lubrication, non-conventional 2-27296  
 electrodes on rotating disc, mass transfer and friction reduction, polymer additives effects (*French*) 2-25399  
 energy-based model, of friction, appl. to coated systems 2-50207  
 flow in soft-walled tubes, effect of friction on shock like transitions 2-44790  
 flow pattern and frictional losses in incompressible pulsating laminar pipe flow 2-44785  
 glass-fibre-epoxy composite, friction coeff. meas. 2-13825  
 granite fault, time-depend. friction expts. 2-14461  
 gyroscope with elastic main-axis ball bearings, translational vibr. effect on errors 2-25238  
 gyroscopes, two, drift during ang. base oscills. (*Ukrainian*) 2-50073  
 harmonic oscillator motion with sliding and viscous friction 2-48452  
 heat formation, and distrib. in frictional zone under non-stationary heat exchange conditions 2-50206  
 hexamethylenedisilazane coated motion lead-ions, frictional characts., coating method influence (*Russian*) 2-9420  
 homopolymers, polydisperse viscoelastic props., transient network model 2-17702  
 hydrodynamic resistance coeff., Reynolds number depend. 2-16376  
 laminar radial flow through rot. annular discs, heat transfer and friction loss 2-8141  
 liquid-crystalline state of interphase layers during sliding 2-44689  
 lubrication theory, book 2-17  
 metal-polymer friction pairs, tribological systems, acoustic spectrometry eval. 2-22340  
 metal-thermoplastic system, structural changes in surface layer of plastic due to sliding friction 2-31799  
 metal/insulator pairs, transient slip behaviour, at 4.2K 2-21209  
 metals, friction and wear, break-in behaviour in sliding contact 2-31804  
 metals, hot working, friction, influence of scale thickness and comp. 2-31805  
 metals, sliding, mechanisms for transitional friction and wear behaviour 2-47191  
 MHD free convection flow of viscous incompressible fluid over hot plate with variable suction 2-12228  
 microcracked medium with friction, model (*French*) 2-39813  
 noise generation, angle of incidence effects 2-39867  
 noise generation, periodic surface roughness effects 2-39866  
 optomechanical instrument sliding bases, math. methods and laboratory evaluations of friction coeff. 2-29892  
 parametric regeneration effect under nonlinear space oscills. (*Ukrainian*) 2-35079  
 polyethylene, ultrahigh mol. wt., friction and wear, effect of  $\gamma$ -irrad. 2-27295  
 prototype large breeder reactor, friction, of  $2\frac{1}{4}$ Cr-1Mo steel on refractories 2-49133  
 PTFE, coke dust free type F4K20, antifriction props. in end face rubbing 2-17649  
 PTFE coated motion lead-ions, frictional characts., coating method influence (*Russian*) 2-9420  
 rigid-plastic pair, friction coeff. determ. on basis of pyramidal surface model 2-25326  
 ring, circular, contact problem 2-8098  
 rod system with Coulomb friction at discontinuity surface, vibr. anal. (*Polish*) 2-8078  
 San Andreas fault gouges, permeability and frictional props. 2-32492  
 shrouded longitudinal fin array with tip clearance, press. drop characts. 2-12261  
 SiC, polycryst., frictional deform. and fracture 2-27294  
 skin friction and heat transfer at an infinite swept attachment line 2-50253  
 sliding contacts, heat distrib. parameters, compilation 2-20615  
 sliding metals, scoring resistance 2-22339  
 steel, 40 Kh, nitriding influence in electrolytic plasma on frictional characts. (*Russian*) 2-31796  
 steel, austenitic stainless, fretting, high temps. 2-22335  
 steel, dual-phase study of unlubricated friction and wear break-in behaviour 2-47192  
 steel, stainless, boride coated, frictional props. at high temps. in vac. 2-41758  
 steel, stainless, boronised Kh23N18MsB and carburised Kh23N18MsTs, powder metallurgy materials, antifriction props. in end face rubbing 2-17649  
 steel, stainless, Cr-Ni, wear resist. of protective layer of secondary struts., mild wear in vac. 2-41762  
 steel, stainless, preliminary results with high-vac. friction and wear machine (*Japanese*) 2-5963  
 steel pairs, hardened dry, kinetic friction testing 2-52164  
 steels and Armo Fe, expt. and theory 2-9430  
 stick-slip motion, crit. vel., influence of Coulomb, viscous and accel.-depend. terms of kinetic friction 2-25983  
 superconductors, fatigue and friction behaviour rel. to supercond. state 2-13824  
 supercritical flow in collapsible tubes, theoretical study 2-1267  
 surface roughness effect on friction processes 2-6004  
 thermoplastic slip, sliding friction in ceramics casting process 2-41757  
 turbulent boundary layer, heat transfer and fluid friction relationship 2-16292  
 viscoelastic substrates, high speed rolling friction, hysteretic damping factor determ. 2-52056  
 vulcanisates containing C black, rolling resist. 2-47196  
 wear mechanisms, review 2-9423  
 Ag chips, with and without Ag<sub>2</sub>S tarnish layer, subject to friction load, contact resist., adhesion and wear 2-36973  
 Al, friction welded tubes, residual stress assessment 2-27297  
 Al-Cu porous alloy, sintered, friction and wear (*Japanese*) 2-22333  
 Al-Zn-Mg-Cu, high strength, heat treatment, struct. and props. 2-27243  
 Au film, ion plated, frictional and morphological characts. 2-30775

**friction** continued

C fibre reinforced polymer material for precision sliding base components of optomech. instrums. (*ij*) 2-36972  
 C-graphite materials AG1500B83 and AG1500BS30, antifriction props. in end face rubbing 2-17649  
 Cr-TaC(NbC)-MgO-Ti, rubbing surfaces rupture characts., 20-1000°C 2-17742  
 Cu, preliminary results with high-vac. friction and wear machine (*Japanese*) 2-5963  
 Fe, cast, grey, wear resist. in oil-abrasive medium, impulse hardening influence 2-41760  
 Fe sintered, friction in liq. corrosive medium, electrochem. phenomena effect 2-41763  
 Fe-(Cu)-graphite, dynamic hot pressing, antifriction characts. 2-17648  
 Fe-graphite-ZnS alloy ZnGr3Tss4, antifriction props. in end face rubbing 2-17649  
 MoS<sub>2</sub> sputtered coating, synergistic effects of cosputtered metals 2-30774  
 MoS<sub>2</sub> sputtered film in rolling hertzian contacts, tribological characts. 2-30776  
 Na<sub>2</sub>O-CaO<sub>2</sub>-SiO<sub>2</sub> glass, sliding fracture in liquid environment 2-27313  
 Ni-base superalloy, Inconel 718, fretting, high temps. 2-22335  
 Pb film, ion plated, frictional and morphological characts. 2-30775  
 Si<sub>3</sub>N<sub>4</sub>, polycryst., frictional deform. and fracture 2-27294  
 Sn alloys, antifriction, microstructural studies by SEM, TEM and X-ray microanalysis (*Rumanian*) 2-21319  
 Sn based antifriction alloy, struct. obs. in contact areas (*Rumanian*) 2-16805  
 Ti-Al-V, fretting, high temps. 2-22335  
 TiN based vacuum-plasma coatings, frictional characts. and wear (*Russian*) 2-9418  
 WSe<sub>2</sub>-In-Ga sputtered film in rolling hertzian contacts, tribological characts. 2-30776  
 Zr-ZrN sputtered tribological coatings 2-31820

**friction, internal** see internal friction

**frictional electricity** see triboelectricity

**FSK** see frequency shift keying

**fuel**

see also coal; fission reactor fuel; pulverised fuels  
 agricultural residue gasification, Canadian technical and economic evaluation 2-27522  
 algae conversion to ethyl alcohol, theoretical and economic aspects 2-6156  
 alternative energy sources, conf. Kuwait, Feb. 1980 2-52270  
 application of HTGR process heat to oil shale retorting 2-22537  
 automobile fuel economy standards 2-17960  
 biogas plants for rural Egypt, design and operational aspects 2-6183  
 biogas technology, energy planning role in India 2-6184  
 biomass derived energy in Dominican Republic, potential assessment 2-6095  
 biomass derived energy in United States, social, legal and economic obstacles 2-6096  
 biomass gasification of wood using catalysts, technical and economic feasibility 2-6105  
 biomass gasification project at University of Florida 2-6185  
 biomass hydrothermalolysis to produce source material for liquid fuel 2-6102  
 biosynthesis of neutral solvents, economic advantages 2-6100  
 burning, steady-state, stability in semiclosed vol. (*Russian*) 2-31920  
 cellulose conversion to liquid fuel by aqueous, alkaline, thermal degradation 2-6104  
 coal, past, present and future utilisation trends (*German*) 2-9607  
 coal pyrolysis for substitute petroleum and for low-cost power plant solid fuel 2-47432  
 coal-based synthetic fuels for electric utilities 2-32016  
 coal-derived fuel utilisation in gas-turbine combined cycles 2-32015  
 coal-oil mixtures and coal-water slurries as alternatives to oil fuel 2-17961  
 cogeneration boiler design for bark and waste wood combustion 2-41976  
 commercial and industrial biomass programme, Tennessee Valley Authority, USA 2-27529  
 compression ignition engines, H<sub>2</sub> fueled, experimental study 2-47530  
 energy from wood, technical and economic viability, fourteen industrial case studies 2-6109  
 ethanol, large-scale renewable systems, design considerations 2-52282  
 ethanol from biomass, process commercialisation and economic projections 2-52307  
 ethanol fuels from biomass projects 2-27528  
 ethanol production by cellulose acid hydrolysis 2-6097  
 ethanol production from sugar beet, industrial model 2-32121  
 ethanol production from sweet sorghum, potential assessment 2-6098  
 Federal Germany's energy imports and balance of payments (*German*) 2-32007  
 flow and density meas., reference installations 2-30251  
 fluidized bed biomass gasification 2-2760  
 fossil fuel demand forecasting, math. model. 2-2761  
 gas for steam power station (*Russian*) 2-37427  
 gasification of rice husk 2-27526  
 H<sub>2</sub> fuel internal combustion engine backfire control 2-9614  
 liquid fuel from brown coal, pilot plant planning 2-47427  
 liquid fuels from biomass, assessment of technology for production 2-27527  
 liquid fuels produced by thermochemical liquefaction of various biomass materials, chemical comparisons 2-6103  
 liquid H<sub>2</sub> as automotive fuel, storage and refueling 2-6196  
 liquid H<sub>2</sub> worldwide production prospects for utilisation as aircraft fuel 2-37461  
 logging residues as energy source, feasibility study 2-6108  
 low temp. energy sources usage to increase fuel utilisation efficiency 2-6111  
 methane-based fuel gas production, cost effectiveness (*German*) 2-9609  
 microalgae as source of fuel oils, production economics 2-6106  
 municipal refuse-burning power plant technology and economics 2-41977  
 natural gas reserves of nonbiological origin in Earth's interior, hypothesis (*German*) 2-52276  
 on-board fuel storage systems of hydrogen powered vehicles, comparison of expenses 2-37464  
 organic refuse bio-chemical conversion to synthetic fuel and electric power, simulating criterion 2-18141  
 polymer fuel soln. FM-9, progressively shear-thickening solns., rheological behaviour 2-16700



**fuel continued**

- power generation from biomass fuels, potential in Dominican Republic 2-6099  
 PROALCOOL, Brazil's large-scale renewable energy programme 2-52281  
 shredded municipal refuse combustion steam generators 2-41978  
 solid waste fuel and coal combinations, combustion processes and effects 2-41979  
 substitute natural gas as automotive fuel 2-17972  
 sugarcane bagasse as fuel for experimental power plant 2-6101  
 synfuel production, using lignite and HTR process heat 2-52275  
 synfuel production in Iceland, peat drying and processing using geothermal heat and hydroelectricity 2-17971  
 synthesis gas for fuels, production using nuclear process heat 2-27582  
 synthetic, production, water and energy requirements 2-17970  
 synthetic, survey of reasons for and against 2-17969  
 synthetic fuel production, report to study group of APS 2-17967  
 synthetic fuel production and environmental control cost balance 2-18150  
 synthetic fuel production using HYFIRE commercial fusion Tokamak reactor high-temp. electrolysis system 2-7365  
 synthetic fuel programs and developments, overview 2-27523  
 synthetic fuels, complementary role to other energy sources in USA 2-37142  
 synthetic fuels, production by solar potential energy conversion 2-6190  
 synthetic fuels, R&D efforts, Hawaii 2-22531  
 synthetic fuels production from biomass energy resources, state-of-the-art in USA 2-52286  
 synthetic liquid fuels production, international cooperation between developed industrial countries (Hungarian) 2-52273  
 synthetic-fuel production processes, coal-based overview of technical and engineering status 2-52285  
 thermal power plants, low-power, using refuse-derived fuel 2-17978  
 transportation fuels from wood, production methods 2-6110  
 US Department of Energy biomass program, review 2-27731  
 USSR energy resources current status and future development 2-47426  
 vegetable oil as a diesel engine fuel 2-9610  
 vehicle alternative fuel requirements and resources in Manitoba 2-17963  
 wood, energy resource potential and effects of increased combustion on air quality 2-17983  
 wood energy resource, availability, characts., conversion 2-32008  
 wood fuel processing methods, economic assessment 2-6107  
 wood gasification demonstration project for hospital 2-6186  
 world conference on hydrogen energy 2-47534  
 H<sub>2</sub> fueled ships, United States Navy studies review 2-6195

**fuel batteries see fuel cells****fuel cells**

- alcohol-air, using alkali electrolytes 2-9647  
 alkaline regenerative fuel cell systems for energy storage, application in low earth orbit space missions 2-22602  
 baseline phosphoric acid fuel cell power plant studies, EPRI, USA 2-22608  
 carbonate fuel cell power plant systems 2-32060  
 carbonate fuel cell technology progress 2-22606  
 characteristics of an NH<sub>3</sub>-air fuel cell system for vehicular applications 2-22611  
 coal/air fuel cell, electrolyte management 2-22609  
 design considerations for vehicular fuel cell power plants 2-22610  
 development and appls., present status and future improvements (Japanese) 2-22598  
 electrode materials for high-temp. solid electrolyte fuel cells 2-14069  
 first-generation fuel cell demonstration and commercialisation programme in USA 2-37206  
 first-generation fuel cell demonstration and commercialization activities 2-47473  
 foil perturbations in three-region fuel cell, estimation by Monte Carlo methods 2-9648  
 hydrocarbon electrocatalytic oxidation using stabilised zirconia electrolyte employing Au or Pt electrodes 2-22459  
 hydrocarbon fuel cell anodic current-overpotential behaviour, Sc<sub>2</sub>O<sub>3</sub> stabilised ZrO<sub>2</sub> electrocatalytic role 2-14071  
 materials research for advanced batteries 2-52331  
 military-vehicles using H<sub>2</sub> fuel cells 2-32132  
 mixed conductor, transport equations for electrons and ions 2-21638  
 molten carbonate, coating appls. 2-22601  
 molten carbonate fuel cells for industrial cogeneration appls. 2-22607  
 organic acids, evaluation as fuel cell electrolytes, electrochem. props. 2-27443  
 OTEC fed fuel cells and hydrogen technology 2-9670  
 phosphoric acid fuel cell system without noble metals on the anode, realization, application and economics 2-22612  
 power for the space shuttle 2-9645  
 power plant using methane-rich gas from anaerobic digestion of raw sewage, design, application and cost 2-18048  
 redox, chemically regenerative, operation and major features and problems 2-52330  
 regenerative systems state-of-the-art and developments for orbital energy storage applications 2-22603  
 solid electrolyte coatings for electrochemical devices 2-22554  
 solid electrolyte NH<sub>3</sub> oxidation to NO 2-22600  
 status of molten carbonate fuel cell program, Department of Energy, USA 2-22605  
 status of new electrochemical storage and conversion technologies for vehicle applications 2-22581  
 Texas Instruments Solar Energy System, solar cell chem. convertor, energy storage, fuel cell convertor 2-52363  
 thermionic spacers heat cond. effect on I-V characteristics and temp. fields 2-9646  
 westinghouse fluidized bed coal gasification process for phosphoric acid fuel cell power plant 2-9649  
 H<sub>2</sub> fueled automotive vehicles, fuel cell substitution for internal combustion engines 2-6194  
 H<sub>2</sub>-O<sub>2</sub>, review of development (Czech) 2-18047  
 H<sub>2</sub>-O<sub>2</sub> hydrogen supply generation by Mg-Al hydrolysis catalysed by C<sub>3</sub>O<sub>4</sub> and MoO<sub>3</sub> 2-2816  
 H<sub>2</sub>PO<sub>4</sub> 4.5 MW fuel cell power plant urban demonstration 2-32061  
 H<sub>2</sub>PO<sub>4</sub> fuel-cell power system, 500 W capacity, operating characts. (Japanese) 2-22599  
 H<sub>2</sub>PO<sub>4</sub>, supports for Pt electrocatalysts, alternative materials and evaluation methods 2-37205  
 H<sub>2</sub>SO<sub>4</sub> production by electrogenerative oxidation of SO<sub>2</sub> 2-22455

**fuel cells continued**

- O<sub>2</sub> reduction in fuel cells with H<sub>3</sub>PO<sub>4</sub> electrolyte, Pt catalyst performance optimisation 2-52332  
 ZrO<sub>2</sub> solid electrolyte electrochem. cell, energy conversion at high temp. 2-14068  
 ZrO<sub>2</sub> thin films for solid electrolyte fuel cells by RF sputtering 2-14070

**fugacity**

- see also kinetic theory of gases  
 exergy computation using new thermodynamic function called fugergy 2-19069  
 EuS-H<sub>2</sub>S-H<sub>2</sub>-CO<sub>2</sub>, chem. equilib. study 2-41919

**full wave rectification see rectification****function approximation**

- see also interpolation  
 discontinuous processes, approximation by continuous ones 2-3499  
 heat transfer, nonlinear phenomena, solns. and critical points, approximation 2-44631  
 least-squares fitting of functions of the form  $f(\mu(x-x_0))$ , radiotherapy appl. 2-42847  
 shallow water theory, existence of unique soln. of initial boundary value problem 2-53  
 X-ray diffraction profiles, shape approx., ternary convolution appl. 2-12427

**function evaluation**

- Weber parabolic cylinder functions, numerical algorithm 2-18948

**function generators**

- see also pulse generators; square-wave generators; time bases  
 digital function generator, based on D/A converter, electrochemical appls. 2-22506  
 education, electronic unknown-signal generator, student oscilloscope expts. 2-48458  
 multi-purpose instrument with wide range of features (German) 2-33565  
 visual grating displays, computer-controlled function generator 2-52669

**functional analysis**

- see also harmonic analysis  
 Airy functions continuum functions, matrix elements 2-18958  
 associated Legendre function, numerical value of roots with respect to order 2-23411  
 associative algebra of generalized functions closed with respect to differentiation and integration 2-42899  
 Borel summable function props. 2-33341  
 classical scattering, boundary-value problems, functional anal. 2-15075  
 convergence of sequences of linear functionals 2-23410  
 convolved live profiles, asymptotic forms 2-226  
 Coulomb unitarity relation and series of products of Legendre functions 2-33342  
 electromagnetic fields as functionals acting on observation systems 2-38457  
 Feigenbaum function, analyticity props. 2-3363  
 Fermi distrib. power, expansion of moments 2-28753  
 fundamental physics, conf., Bogota, Columbia (July-Aug., 1979) 2-10554  
 Gribou ambiguities from bifurcation theory viewpoint 2-38750  
 Navier-Stokes equations, stationary solutions, functional invariant sets 2-54  
 nested Hilbert spaces refinement and interpolation theory 2-28697  
 nuclear and conuclear spaces, book 2-48420  
 Pade approximation and the Riemann monodromy problem 2-79  
 phase problem, function regeneration from modulus of its Fourier transform (Russian) 2-848  
 Poincare theorem, the Boltzmann equation, and equations of the Korteweg-de Vries type 2-33275  
 pre-Hilbert space props. 2-38481  
 QED, mean field with external gravit. field, generating functional (Russian) 2-10679  
 regular first order system, differential eqns., genotopic transformations and Lagrangians 2-48486  
 Riemann monodromy problem, isomonodromy deformation equations and completely integrable systems 2-78  
 Schrodinger equation, inverse scattering problem, functional eqn. 2-15072  
 second-order nonlinear PDEs, initial boundary problem, functional approach 2-51  
 solution method for diff. eqn. containing symbolic functions 2-28  
 summing method for nonalternating asymptotic series 2-42844  
 superconducting transition temp., series solution, singular points (Chinese) 2-30989  
 tapered cantilever beams, flexural vibr., Reissner method anal. 2-25292  
 trilocal structures, momentum depend. tree functions 2-23479  
 U( $\infty$ ) lattice gauge theory in two-dimens., Wilson loop functional 2-3690  
 zeroth order coulombic hyperangular interaction integrals, analytic evaluation 2-33339

**functional equations**

- fission reactor, neutron flux, functional perturbation, Monte Carlo calc. 2-11164  
 Lippmann-Schwinger equations for acoustic vibr. field in stratified medium 2-48512  
 measure-preserving functional equation, discontinuous solns. 2-11876  
 superfluid density and helicity modulus, renormalisation group calc. 2-45657  
 Takagi-Taupin equations, comparison of two numerical methods for integration 2-38410  
<sup>4</sup>He, superfluid density, renormalisation group and  $\epsilon$  expansion 2-45656

**functionals see functional equations****functions**

- see also Bessel functions; Boolean functions; describing functions; Green's function methods; random functions; recursive functions; transfer functions; vertex functions; Walsh functions  
 affine cubic, nonsingular at infinity 2-6729  
 analytic functions in optics 2-7715  
 Feigenbaum function, analyticity props. 2-3363  
 Hough functions, appl. to meteorological anal. (Chinese) 2-23049  
 quasixtended asymptotic functions 2-42842  
 thermodynamic functions, piecewise analyticity 2-38616  
 Voigt functions, reducibility 2-39082

**fundamental constants see constants****fundamental law tests**

No entries



**fundamental particles** *see elementary particles*

**fundamental physics concepts** *see physics fundamentals*

**fundamentals of physics** *see physics fundamentals*

## furnaces

*see also electric furnaces; refractories*

- case-hardening furnace, microprocessor-controlled, requirements 2-19109
- centrifugal, metal oxides fusion (*Japanese*) 2-36804
- Claus furnace, air-H<sub>2</sub>S equilibria 2-31943
- complex thermal analysis apparatus use in field of ceramics (*Czech*) 2-28855
- flame oven, radiative heat transfer, gray radiation model appl. 2-12015
- foundry solar furnace, working experience 2-47450
- graphite tube furnace, longitudinal atom density distrib. using coherent forward scatt. 2-15173
- high-pressure furnace cell for piston-cylinder apparatus 2-38654
- MBE evaporation source cell design 2-51819
- microprocessor control, for furnace atmosphere 2-19108
- microprocessor controlled, case-hardening furnace, requirements 2-19109
- solar, H<sub>2</sub> production, high temp. processes interfacing with conc. solar radiation 2-27555
- solar, heliostat type (*Japanese*) 2-33533
- solar, metal oxides fusion in centrifugal furnace (*Japanese*) 2-36804
- supercharged boilers, convective heat transfer to furnace waterwalls 2-20673
- vacuum, pressurised gas quenching, for hardening of high speed steels 2-48706
- vacuum arc with permanent electrode, for manufacture of superalloys and Ti (*German*) 2-46980
- Al distributed furnaces fibre reinforced composite leads appl. 2-41576
- GaAs, single cryst. growth, heat pipe assisted zone melter 2-27078

**Furry theorem** *see quantum electrodynamics*

**fusion** *see melting*

**fusion, nuclear** *see nuclear fusion*

**fusion-fission reactors** *see hybrid reactors*

## fusion reactor fuel

- advanced fuel fusion reactors, wall loading limitations effect and choice of beta 2-11264
- alternate fusion fuel cycle research 2-24411
- fuel cycles, ignition criteria, radiation losses, direct elec. recovery and fissile breeding prospects, overview 2-39209
- fusion reactors, T technology (*Japanese*) 2-7342
- glass microshell laser imploded target, X-ray emission spectra, O<sub>2</sub> ion distrib. (*Chinese*) 2-9218
- IEEE international conference on plasma science, Santa Fe, NM, USA (May 1981) 2-23366
- ISX-B Tokamak, pellet fuelling 2-12330
- laser fusion targets, ultrasmooth plasma polymerised coatings 2-7341
- magnetic fusion, concepts for confinement and fuel cycles 2-43618
- singular self-similar superdense compression regimes for laser targets 2-11269
- solid pellet ablation in hot plasma, subsonic steady state theory 2-20872
- Tokamak advanced fuel reactor, plasma stability, wall loading limits, engineering constraints, overview 2-39210
- Tokamak reactor, pellet fuelling and burn control using 1-D radial transport code 2-24409
- underdense plasma forward Raman instability and electron acceleration 2-12295
- D separation technology, present status (*Japanese*) 2-11205
- D-based plasma, <sup>3</sup>He recover, optimal plasma conditions 2-39211
- D-T and catalysed D-D fusion blankets for high temp. process heat prod. 2-39212
- D-T fusion,  $\mu$ -catalysed, kinetics and energetics 2-39222
- D-T pellet heated by laser, thermal cond. study 2-43619
- D<sub>2</sub> pellets, cryostat for prod. and accel. (*German*) 2-11272
- DT sphere, initially uniform and finally nonuniform, isentropic compression, numerical anal. 2-19768
- DT sphere, isentropic compression, method of characts. 2-15623
- H, cryogenic distillation, column control system 2-39219
- H pellet injection as fuel gas for fusion ignition 2-43615
- <sup>3</sup>H, enrichment by sorption on KC, lamellar compounds 2-39220
- T separation technology, present status (*Japanese*) 2-11205
- T technology development for US mag. fusion energy programme 2-24406
- U, natural, estimated requirements to year 2000 2-27579
- UO<sub>2</sub> vibro-compacted microspheres, model of thermal cond. of powder beds 2-43554

## fusion reactor ignition

- see also fusion reactor materials; plasma heating; plasma production*
- ablation pressure, laser driven implosions 2-16464
- ACT-1 toroidal device, plasma heating by wide k<sub>||</sub> spectrum waveguide system 2-25583
- alfven wave heating studies in Tokapole II 2-4952
- Alfven-wave heating of fusion plasmas 2-25573
- Aurora pulser, high-impedance ion-diode expt. 2-43655
- burn phase and structural problems of compact fusion experiments 2-43616
- compact Tokamak ignition test reactor design 2-12364
- DIVA divertor Tokamak, high efficiency ICRF heating 2-25577
- filamentation and two-stream instabilities of light ion beams in fusion target chambers 2-40088
- fuel cycles, ignition criteria, radiation losses, direct elec. recovery and fissile breeding prospects, overview 2-39209
- fundamental research on ion sources for nuclear fusion experiments (*Japanese*) 2-49205
- gyrotron MM-wave high-power oscillator, plasma heating in fusion reactor appl. 2-49182
- halide pulse compressors for inertial fusion appls. 2-11723
- heavy ion fusion, transverse emittance requirements 2-4156
- high power laser appls., review (*Czech*) 2-34780
- high-gain pellet fusion 2-24405
- HYFIRE II system characts. and design for H<sub>2</sub> and O<sub>2</sub> production 2-15629
- ICF, energetic ions transport in plasma, Fokker-Planck eqn. soln. using numerical methods 2-16430
- ICF target, ion driven, ion energy deposition, finite material temp. model 2-19763
- ICRH high power experiments on the Wisconsin Levitated Octupole 2-12343
- ignition with lower hybrid heating 2-25593

## fusion reactor ignition continued

- impact fusion, mass accelerator appl. 2-49177
- inert gas halide pulse compressors for inertial fusion appls. 2-11723
- inertial confinement fusion, heavy ion induction linac appls. 2-15616
- inertial confinement fusion, ion beam drivers 2-15613
- inertial confinement fusion, laser interaction, wavelength effect 2-16466
- inertial confinement fusion, LASL program 2-24398
- inertial confinement fusion, research of Osata 2-24399
- inertial confinement fusion driven daylight ion beam, ignition and turning calc. 2-7338
- inertial confinement fusion program, declassification 2-29424
- inertial confinement heavy ion fusion, RF linac driver 2-15615
- inertial-confinement fusion research using relativistic-electron-beam (REB) generators 2-16492
- ion beam range shortening and the possibility of thermal instability 2-25949
- ion beam-pellet fusion, ICF theoretical studies 2-15621
- ion Bernstein wave heating: theory and the ACT-1 experiments 2-12356
- ISX-B Tokamak, electron cyclotron heating 2-12330
- JFT-2 Tokamak, results on plasma heating 2-25619
- JXFR Tokamak fusion reactor first wall, radiative heat deposition anal. 2-7336
- laser double-foil target with pinhole, absorpt. and hydrodynamic efficiency improvement 2-43604
- laser driven micro-implosions, X-ray and  $\alpha$ -particle emissions, cooled imaging using micro-Fresnel zone plates 2-40169
- laser fusion,  $\alpha$ -particle energy transport, diffusive model 2-551
- laser fusion, appl. of aspheric optics 2-7849
- laser fusion, KrF laser backward wave Raman pulse compression in methane 2-7797
- laser fusion, KrF laser intensification, backward-wave Raman pulse compression and stacking 2-16024
- laser fusion, laser pulse shaping 2-16043
- laser fusion, radiation-plasma interaction, implosion 2-24401
- laser fusion, short pulse generation using axisymm. angular encoder 2-4540
- laser fusion driver, chem. pumped I laser modelling 2-4498
- laser fusion experiments, I laser advanced concepts 2-905
- laser fusion target gas press. monitoring using nondestructive interferometric method 2-33628
- laser fusion targets, atmospheric type modes 2-8337
- laser fusion targets, multishell cryogenic, use of supercond. levitation 2-7330
- laser fusion targets with tamped flow, scaling laws 2-24419
- laser implosion of target in hydrodynamic regime, physical processes 2-15620
- laser inertial confinement fusion driver, angular multiplexed 50 kJ KrF amplifier design 2-7786
- laser inertial confinement fusion driver, HF chemical laser conceptual design 2-4518
- LASL fast liner implosion expt. 2-15619
- layered targets, laser produced compression and press. 2-24421
- macroparticle ablation acceleration in spiral mag. field 2-39221
- multimegavolt ion accelerator for fusion energy research 2-11328
- multiple beam electrostatic quadrupole focused linac, heavy ion fusion appls. 2-15642
- neutral beam injection, university development 2-4121
- neutral beam injector heating, beam energy, current, pulse width, review 2-15617
- neutral beam injectors, high power, research at Fontenay-aux-Roses 2-15618
- neutron beam injector in plasma heating facility, cryopump design (*Japanese*) 2-43614
- nonlinear optical phenomena, photon transport theory 2-4556
- nonmonoenergetic ion stream, energy recuperation in crossed E<sub>||</sub>H fields 2-11270
- Ohmically heated fusion reactor, power balance 2-49178
- particle beam-driven fusion research 2-15612
- particle bunches, intense nonrelativistic, longitudinal stability in resistive struct. 2-7711
- PLT, fast wave ion-cyclotron heating 2-25576
- Pulselac C inductive linear accelerator, space charge neutralised ion beam for inertial fusion 2-4150
- quasi-steady expansion of plasma ablated from laser-irradiated pellets 2-20884
- radiative transitions, free-bound and bound-free, in intense laser field 2-20886
- regenerative amplifier development at the Laboratory for Laser Energetics 2-944
- reversed field pinch, heating and ignition model 2-16486
- reversed field pinch, transport calcs., instability, ignition 2-16488
- reversed-field pinch reactor, ideal and resistive magnetohydrodynamic stable startup and burn 2-39213
- RF-glow discharge, ignition and arcing appl. to fusion devices 2-20960
- RFP reactor, ohmically ignited, energy balance consideration 2-4120
- singular self-similar superdense compression regimes for laser targets 2-11269
- solid pellet ablation in hot plasma, subsonic steady state theory 2-20872
- solid-state laser systems for thermonuclear fusion 2-39654
- spherical shell targets, interaction with short wavelength laser irradi. 2-16465
- stable thermonuclear pinch 2-8338
- TFR 600 Tokamak, neutral-beam heating results 2-25586
- TFR-600, ICRF heating, wall interaction, impurities 2-25574
- thermal cond. via transport eqn. with appl. to laser-fusion 2-4118
- thermonuclear fusion, ignition, appl. of plasma physics 2-43617
- thermonuclear target, ignition and reserve at ignition criterion 2-15624
- Tokamak, intense pulsed-ion beam injection, appl. to plasma heating and current maintenance 2-40130
- Tokamak plasma, ignition and burn control 2-24395
- Tokamak plasma, toroidal ripple effects on fast-ion behaviour and burn control 2-24396
- Tokamak reactor,  $\alpha$ -particle ripple losses during slow down 2-50441
- Tokamak with large-banana-width effects, fast-ion thermalisation 2-20892
- Tokamaks, large, ignition in one-dimensional models 2-24397
- Tokamaks, lower-hybrid plasma heating and current drive 2-25584
- Tokamaks, mag. confinement theory survey 2-16497
- toroidal plasma, propag. and heating by electron cyclotron waves 2-25620
- toroidal plasmas, neutral injection heating, ignition 2-25596



**fusion reactor ignition continued**

- UV high power laser interaction with target, thermal cond., mass ablation, press. and preheat 2-4981  
 WEGA Tokamak, lower-hybrid heating study at 2.5 T using four-waveguide grill 2-25585  
 ZETA laser facility, symmetric laser irr., plasma densities 2-24400  
 Al-SiO<sub>2</sub> layered targets irradiated by picosecond Nd-laser pulses, energy transport parameters determ. 2-40171  
 (CD<sub>2</sub>)<sub>n</sub> microspherical targets, six-beam laser irradiation (*Chinese*) 2-20882  
 CO<sub>2</sub> stable single-line mode-locked oscillator development 2-49779  
 D<sup>+</sup> and H<sup>+</sup> high energy beams, non-H<sub>2</sub> neutralisation, appl. to plasma heating 2-40128  
 D-T plasmas, isobarically compressed inertially compressed, ignition criterion 2-8273  
 D<sub>2</sub>O<sub>2</sub> plasma, fusion by explosive-driven implosions 2-49181  
 DT isobaric plasma, ignition critical profiles for small fusion targets 2-19766  
 DT microexplosions, chemical ignition 2-49175  
 DT mixture compression by elec. exploded cylindrical shell, thermonuclear fusion probability calc. 2-29427  
 DT sphere, initially uniform and finally nonuniform, isentropic compression, numerical anal. 2-19768  
 DT sphere, isentropic compression, method of characts. 2-15623  
 H pellet injection as fuel gas for fusion ignition 2-43615  
 I laser, chemically pumped, candidate laser fusion driver 2-908  
 I laser, chemically pumped, reactor size, total system efficiency 2-932  
 I photodissociation lasers for controlled thermonuclear fusion, review 2-36639  
 KrF angular multiplexed 50-kJ laser module for inertial confinement fusion, conceptual design 2-931  
 KrF lasers for compression and fusion 2-11274  
 Xe ions, spectral line obs. in 2.5-3.0 Å range from laser-imploded targets 2-15737

**fusion reactor materials**

- see also *fission reactor materials; fusion reactor fuel; radioactive waste*  
 Bitter-type toroidal field magnet for ZEPHYR 2-11172  
 blanket, heating calcs. from fission reactor expt. 2-7357  
 blanket and shield nuclear analysis of a D-D tandem mirror reactor 2-7358  
 blanket technology, expts. using FRJ-2 research reactor (*German*) 2-15579  
 blankets and shields, conceptual designs review 2-7364  
 closed magnet system for Kristall-2 torsatron, cooling problems 2-11177  
 coatings for fusion reactor appl., thermal fatigue testing 2-12949  
 coatings for inertial confinement fusion targets 2-11271  
 double shell targets, fabrication 2-7339  
 electromagnetoelastic buckling on three-coil superconducting partial torus (*Japanese*) 2-7337  
 first wall, cyclical ion bombardment, blistering study 2-12649  
 first wall, neutronics anal. for HIBALL heavy ion beam reactor 2-7359  
 first-wall environment, simulation in a fission reactor 2-39217  
 FMIT nuclear data needs 2-555  
 FMIT test cell, flux and damage spatial depend. 2-7366  
 FT U Tokamak, LN<sub>2</sub> cooled magnet, stress anal., reliability problems 2-11175  
 fusion materials irradiation test facility simulation, lithium and heat transport systems for abnormal events study 2-39224  
 fusion plasma, soft X-ray insts. 2-30335  
 fusion reactors, inertial confinement, forced-convection Li test loop for developing and designing cooling and blanket systems (*Japanese*) 2-24416  
 glass micro-balloon wall-thickness meas. by imaging method (*Chinese*) 2-19077  
 glass-sealed laser fusion targets containing a gas not permeable through the wall preparation method 2-7340  
 graphite, pyrolytic, surface struct. following H<sup>+</sup> irr., RHEED study 2-40653  
 Hastelloy B, high temp. behaviour in HCl/water vapour atmos. 2-43610  
 inertial confinement fusion reactor first wall, void growth under intense radiation pulsing, anal. approach 2-35547  
 inertial fusion target, soft X-ray emission 2-30331  
 integral experiment for design 2-4124  
 iron, neutron transport meas. and anal. 2-3991  
 irradiation induced creep, fusion neutron induced damage by light ion beams from accelerator 2-17722  
 irradiation test facility, Li system, remote maintenance 2-24423  
 laser fusion targets, X-ray emission 2-30329  
 layered targets, laser produced compression and press. 2-24421  
 long life coil of field 50 T for plasma research 2-11176  
 low energy X-ray diagnostics conference, Monterey 1981 2-33205  
 magnetic fusion plasma, low energy X-ray emission 2-30330  
 magnetic fusion reactors, stress analysis of constituent superconducting magnets 2-15632  
 metallic materials, radiation damage 2-24424  
 MFTF magnets, neutron induced heating and activation 2-7349  
 Mirror Fusion Test Facility, mechanical behaviour of the superconducting magnet coils 2-15633  
 multifilamentary A15 superconductors, development at Aircor (USA) 2-17255  
 Nimonic PE16, defect struct. in dual beam irr. material, TEM obs. 2-43609  
 nonmagnetic alloy permeation rate anal. 2-15628  
 nuclear cross sections for technology, conf. Knoxville, TN, USA, (Oct. 1979) 2-33235  
 optical inspection 2-15627  
 organic index-matching fluids, high-intensity transmission props., laser fusion appls. 2-973  
 poloidal coils and transformer core for JET—design and manufacture 2-11173  
 prime candidate alloy, optimisation of struct. and props. by rapid solidification 2-31692  
 steel, austenitic stainless, multispecimen fatigue crack propagation testing 2-31893  
 steel, carbon, use in VK-50 power station coolant loop with unmodified water 2-15511  
 steel, stainless, unipolar arc damage 2-12636  
 steel, stainless austenitic, type 0Kh16N15M3B, blistering under simultaneous D<sup>+</sup> and He<sup>+</sup> irr. 2-29428

**fusion reactor materials continued**

- superconducting coil system for fusion reactors, NbTeTa superconductor, Nb<sub>3</sub>Sn conductor, coil stabilization (*Japanese*) 2-19764  
 superconducting devices, conf., Chicago, USA (Nov. 1980) 2-14984  
 superconducting magnets, appl. (*French*) 2-24422  
 superconducting magnets, USSR status and trends 2-7334  
 superconducting toroidal field coils for Tokamak reactor 2-24412  
 surface material developments in the university linkage organisation 2-29429  
 TEXTOR magnet system 2-7333  
 three-coil superconducting partial torus, finite element analysis of magnetoelastic buckling and expts. 2-15634  
 Tokamak discharge cleaning in TFR, wall temp. effects 2-29425  
 Tore Supra Tokamak, superconducting mag., status report 2-11267  
 WITAMIR-1 fusion reactor magnet system 2-11174  
 ZEPHYR Bitter type toroidal field mag. stress anal. 2-24414  
 ZEPHYR poloidal field coils 2-11268  
 ZEPHYR tape wound toroidal field mag. concept, stress anal. 2-24413  
 Al, T release, chem. forms. 2-43605  
 Al/NbTiCu composite supercond. for tokamak toroidal field coils 2-11273  
 Al<sub>2</sub>O<sub>3</sub>, irradiated, tritium trapping release 2-4117  
 B CVD coating, D<sub>2</sub> trapping meas. for tokamak fusion test reactor 2-12948  
<sup>4</sup>B(n,n), A=10, 11, elastic and inelastic cross sections, Legendre coeffs. 2-39089  
 C(n,X), neutron total cross-sections from 0.5 to 60 MeV 2-4123  
 C(n,n), 3 to 40 MeV, total cross sections 2-19543  
<sup>4</sup>Cr(n,p), A=52-54, 14.8 MeV, cross-sections 2-3918  
<sup>54</sup>Cr(n,α), 14.8 MeV, cross-sections 2-3918  
<sup>64</sup>Cu(n,α), A=63, 65, 14.8 MeV, cross-sections 2-3918  
 Fe, pure, ion beam irr., dislocation and void prod. 2-21190  
<sup>54</sup>Fe(n,α), 14.8 MeV, cross-sections 2-3918  
<sup>54</sup>Fe(n,p), 14.8 MeV, cross-sections 2-3918  
<sup>54</sup>Fe(n,X), neutron total cross-sections from 0.5 to 60 MeV 2-4123  
<sup>3</sup>H, production evaluation in blankets by <sup>7</sup>Li(n,n')<sup>3</sup>H reaction 2-39218  
 H(n,X), neutron total cross-sections from 0.5 to 60 MeV 2-4123  
 Ho, D release by low energy H ions, dose and energy dependence 2-43608  
 Li<sub>2</sub>O, T in-reactor solid breeder expt. TRIO-01, neutronics calcs 2-43598  
 Li liq. blankets, response to neutron and X-ray pulses 2-39216  
 LiAlO<sub>2</sub>, T in-reactor solid breeder expt. TRIO-01, neutronics calcs 2-43598  
 LiO, pellets, in-pile T release tests 2-43612  
 LiOH, Li<sub>2</sub>O, neutron irradiated, kinetic studies of T release 2-43606  
 Li<sub>7</sub>Pb<sub>83</sub> liquid metal eutectic coolant/breeder, coupled neutronics-photonics anal. 2-7360  
<sup>7</sup>Li(n,n), 5.1 to 15.4 MeV double differential cross sections 2-3921  
<sup>7</sup>Li(n,t), 6-10 MeV, cross section determ. 2-39019  
<sup>6</sup>Li(n,n), A=6, 7, 3 to 40 MeV, total cross sections 2-19543  
 Mo, V<sup>+</sup> ion irr., void swelling 2-43607  
 Mo-Zr alloy, TSM-6, heat treated, He ion blistering 2-12648  
<sup>4</sup>Mo(n,α), A=92, 98, 100, 14.8 MeV, cross-sections 2-3918  
<sup>4</sup>Mo(n,p), A=92, 95, 96, 97, 98, 14.8 MeV, cross-sections 2-3918  
<sup>4</sup>Mo(n,X), cross sections for fusion reactor technology 2-556  
<sup>23</sup>Na(n,X), cross sections in ENDF/B-V code 2-19769  
 Nb, electron irr., hardening of single crystals 2-45276  
 Nb, ion irradiated, void growth and shrinkage, irr. temp. change effects 2-50723  
 Nb, microstruct. and strength, effect of He 2-36914  
 NbO<sub>2</sub>, vaporisation by mass effusion and mass-spectrometric methods 2-43611  
 Nb<sub>3</sub>Sn, filamentary, supercond. props., stress effects, mag. fusion energy program appl. 2-21747  
 Nb<sub>3</sub>Sn multifilamentary supercond. for high field test facility at Lawrence Livermore Lab. 2-29431  
 O(n,X), neutron total cross-sections from 0.5 to 60 MeV 2-4123  
 Pt-Co, multishell cryogenic laser fusion targets use of supercond. levitation 2-7330  
 SiO<sub>2</sub>, irradiated, tritium trapping release 2-4117  
 T, permeability through metals and alloys (*Japanese*) 2-7342  
 Ti/T film, T real-time imaging by secondary electron emission detection 2-7331  
 TiC coating, behaviour under H<sub>2</sub> and D<sub>2</sub> ion bombardment 2-43613  
 TiC coating on stainless steel, unipolar arc damage 2-12636  
 TiC vapor deposited coatings, sputtering under D<sup>+</sup> and He<sup>+</sup> bombard. 2-13615  
 W, desorption of C, Ar ion bombardment expt. Auger spectra 2-26207

**fusion reactor theory and design**

- see also *fusion reactor ignition; fusion reactor materials; plasma confinement; plasma heating; plasma production*  
 advanced fuel reactor, plasma stability, wall loading limits, engineering constraints, overview 2-39210  
 alfvén wave heating studies in Tokapole II 2-4952  
 blanket, heating calcs. from fission reactor expt. 2-7357  
 blanket and shield nuclear analysis of a D-D tandem mirror reactor 2-7358  
 Culham Conceptual Tokamak Reactors, power station design 2-24425  
 EBT, hot electron rings physics 2-16483  
 EBT transport, heating and stability, theoretical calcs. 2-16482  
 ENDF/B data from Monte Carlo calcs. 2-7355  
 energetics of beam driven D-cycle plasmas 2-43597  
 Engineering Test Facility, vacuum pumping duct shielding, coupled Monte Carlo/S<sub>N</sub> calcs. 2-7346  
 ETF, neutron and gamma-ray streaming in neutral beam injectors 2-7361  
 field reversed mirror plasma device, particle confinement quadrupole mag. field effect 2-40139  
 field-reversed plasma equilibrium from self-consistent particle orbits, analytical approach 2-40154  
 first wall, neutronics anal. for HIBALL heavy ion beam reactor 2-7359  
 first-wall environment, simulation in a fission reactor 2-39217  
 FMIT shield design, neutron streaming anal. 2-7351  
 fuel cycles, ignition criteria, radiation losses, direct elec. recovery and fissile breeding prospects, overview 2-39209  
 fusion plasma, computer models 2-44833  
 ICF, energetic ions transport in plasma, Fokker-Planck eqn. soln. using numerical methods 2-16430



**fusion reactor theory and design continued**

- ICF target, ion driven, ion energy deposition, finite material temp. model 2-19763  
 ICF theoretical studies 2-15621  
 ICRF waveguide, reactor engineering problems 2-4946  
 IEEE international conference on plasma science, Santa Fe, NM, USA (May 1981) 2-23366  
 implosion motion simulation of hollow shell target, proton beam bombardment, hydrodynamic code 2-19767  
 INTOR, Tokamak fusion reactor conceptual design 2-49179  
 INTOR progress 2-15631  
 INTOR type Tokamak reactor, bundle divertor considerations 2-24409  
 INTOR-J, radiation streaming calcs. for divertor throat and neutral beam injector 2-7347  
 ion Bernstein wave heating: theory and the ACT-1 experiments 2-12356  
 ion-beam superpinch 2-8351  
 JET, MHD problems 2-40054  
 JET, MHD simulation 2-40055  
 laser fusion,  $\alpha$ -particle energy transport, diffusive model 2-551  
 magnetic fusion, concepts for confinement and fuel cycles 2-43618  
 modular stellarator power reactor, UWTR-M, design 2-35305  
 multiple mirror configurations, reactor design study 2-44898  
 neutron transport equation in a general curvilinear coordinate system 2-15625  
 ORNL radiation streaming integral expt. anal. 2-7350  
 particle transport model in high-density plasmas 2-20830  
 PDX, activation calcs. 2-7356  
 plasma electrostatic ballooning mode due to  $\alpha$ -particles 2-44845  
 products, interaction rate calc. 2-49174  
 radiation shielding for the ignition experiment ZEPHYR 2-7352  
 reduced Fokker-Planck eqn., finite element soln. 2-20889  
 reversed field pinch, approach to fusion power 2-20899  
 reversed field pinch, transport calcs., instability, ignition 2-16488  
 reversed-field pinch, resistive interchange modes, nonlinear evolution 2-20893  
 reversed-field pinch reactor, ideal and resistive magnetohydrodynamic stable startup and burn 2-39213  
 rf-driven Tokamak reactor with sub-ignited, thermally stable operation 2-4122  
 Starfire, commercial Tokamak design concept 2-24402  
 STARFIRE commercial Tokamak, design 2-7344  
 TFTR, radiation streaming in diagnostic ports 2-7353  
 thermonuclear fusion, ignition, appl. of plasma physics 2-43617  
 Tokamak, hybrid bundle divertor design 2-39215  
 Tokamak, oscillating multiple limiter concept 2-39214  
 Tokamak, plasma transport and impurity behaviour in edge and divertor regions 2-16479  
 Tokamak fusion reactors, operating point, thermomag. control 2-34205  
 Tokamak reactor, heat and particle flow distrib. and He separation in divertor channel 2-24408  
 Tokamak reactor, supercond. toroidal field coils 2-24412  
 Tokamak reactors, alpha particle confinement, thermonuclear instability 2-4987  
 Tokamak with large-banana-width effects, fast-ion thermalisation 2-20892  
 Tokamak with poloidal divertor, current for MHD stability 2-4929  
 toroidal plasma, RF flux control 2-25623  
 TRACT, triggered reconnection adiabatically compressed toroid fusion reactor, conceptual design and development programmes 2-552  
 transport of 14-MeV neutrons through heavy materials,  $150 < A \leq 208$  2-7354  
 WITAMIR I, radiation streaming limitations 2-7348  
 ZEPHYR tape wound toroidal field mag. concept, stress anal. 2-24413  
 D<sup>+</sup> and H<sup>+</sup> high energy beams, non-H<sub>2</sub> neutralisation, appl. to plasma heating 2-40128  
 D-based plasma, <sup>3</sup>He recover, optimal plasma conditions 2-39211  
 D-T and catalysed D-D fusion blankets for high temp. process heat prod. 2-39212  
 DT fusion reactor based on dense Z-pinch, scaling, calcs. and system energy balance 2-19765  
 Li<sub>2</sub>O, T in-reactor solid breeder expt. TRIO-01, neutronics calcs 2-43598  
 Li liq. blankets, response to neutron and X-ray pulses 2-39216  
 LiAlO<sub>2</sub>, T in-reactor solid breeder expt. TRIO-01, neutronics calcs 2-43598  
 Li<sub>17</sub>Pb<sub>83</sub> liquid metal eutectic coolant/breeder, coupled neutronics-photonics anal. 2-7360
- fusion reactors**  
 see also fusion reactor ignition; fusion reactor materials; fusion reactor theory and design; hybrid reactors; plasma heating  
 advanced fuel fusion reactor, high-beta confinement expts. 2-16494  
 advanced fuel fusion reactors, wall loading limitations effect and choice of beta 2-11264  
 AECL programs in advanced systems research 2-4113  
 Alcator A Tokamak, submillimeter synchrotron emission meas., D<sub>2</sub>O laser Thomson scatt. implications 2-4986  
 alternative fusion concepts, reactor system studies 2-24410  
 alternative fusion power concepts for fission-based energy economy 2-4119  
 American Nuclear Society conference, San Francisco, CA, USA (Nov.-Dec., 1981) 2-42785  
 axially symmetric MHD modes stabilisation with wall and conductor arrays 2-40070  
 book, nuclear energy technology, theory and practice 2-48418  
 Bumpy Torus, plasma confinement expt. studies 2-16484  
 circuit breakers, vacuum, DC, parallel operation full-scale test and anal. for Tokamak, JT-60 device 2-49176  
 conference, energy outlook in the 1980s, Ames, Iowa, April 1981 2-23365  
 conference on plasmas and controlled fusion, Brussels, Belgium (July, 1980) 2-33210  
 controlled nuclear fusion device, nonlinear phenomena study in HF plasma heating expt. 2-16459  
 controlled thermonuclear fusion, current status and Hitachi's role 2-43599  
 counter-streaming plasma interaction in longit. mag. field, high temp. plasma prod. 2-25587  
 Culham Levitron, fluctuation studies 2-16439  
 dangers and limitations, generalised survey 2-553  
 DITE bundle divertor, expt. results 2-16471

**fusion reactors continued**

- Doublet III Tokamak, divertor plate heat load reduction 2-20895  
 Doublet III Tokamak, ohmically heated D-shaped plasma, energy confinement 2-50430  
 fast ion production by suprathermal electrons in laser fusion plasmas 2-4982  
 fast neutron spectrometer for TFR Tokamak 2-24477  
 fast Z-pinch liner programme review 2-16493  
 Heliotron E facility, engineering aspects 2-43600  
 ICF reactors, constricted liquid metal curtain 2-7335  
 ICRF waveguide, reactor engineering problems 2-4946  
 impurities expulsion by neutral-beam injection in Tokamak plasmas 2-1335  
 industrial processes, fusion thermal energy appls. 2-4114  
 inertial confinement fusion using light ion beams 2-15614  
 inertial confinement, forced-convection Li test loop for developing and designing cooling and blanket systems (Japanese) 2-24416  
 Japan's ambitious fusion program 2-34204  
 JET, a European expt., book 2-42796  
 JET project 2-43603  
 JFT-2 Tokamak, electron cyclotron reson. heating with ordinary-mode antenna 2-20891  
 JIPPT-II hybrid stellarator/Tokamak apparatus, technical problems with design and construction 2-43602  
 Josephson junctions, plasma physics, and electron temperatures 2-49183  
 JT-60 Tokamak system for plasma feasibility experiments, manufacture 2-43601  
 laser fusion reactor concept using magnetically guided Li flow 2-24404  
 LF microscopic stability 2-12395  
 magnetic confinement-fusion expts. summary 2-16496  
 magnetic fusion reactor, eddy current induced in thin structures, finite element anal. 2-24415  
 magnetic fusion using tandem mirror approach, summary of physics properties of 3 generations of mirror devices 2-30318  
 magnetic traps with rotating plasma, expt. on stabilisation 2-25611  
 magnetically confined fusion plasma,  $\alpha$ -particle distrib. meas. technique 2-11265  
 magnetised plasma boundary, secondary electrons picket fence suppression 2-50436  
 microwave power feeding for magnetic fusion devices, multipactor in the Brambilla Grill 2-49180  
 mirror fusion, Lawrence Livermore National Laboratory research 2-24420  
 Mirror Fusion Test facility, data acquisition and control executive, software design 2-7455  
 moving plasmoid reactor, expansion chamber magnetic energy recovery 2-15630  
 neutron emission spectra induced by 14.6 MeV neutrons 2-7106  
 nuclear cross sections for technology, conf. Knoxville, TN, USA, (Oct. 1979) 2-33235  
 nuclear data for fusion reactors 2-7332  
 OCLATOR, one coil low aspect toroidal reactor 2-11266  
 plasma and the controlled thermonuclear reaction (Chinese) 2-20915  
 plasma diagnostics using intense laser field, radiative line broadening 2-1346  
 plasmas near thermonuclear conditions, conf., Varenna, Italy (Sept. 1979) 2-23381  
 PLT, electron thermal cond. coeff. from neutral-beam injection, temp. depend. 2-20897  
 PLT, radiation losses during neutral-beam and ICRF heating expts. 2-1327  
 PLT limiter, high-energy runaway electron transport deduced from photo-nuclear activation 2-20894  
 PLT Tokamak, central He density meas. 2-40156  
 power from nuclear fusion, economic and social choices in pursuit of goal 2-7363  
 programme in United States, associated legislation 2-7362  
 progress in nuclear fusion development 2-39223  
 prospects for practical fusion power in United States 2-554  
 radiation in thermonuclear regime 2-25505  
 review of fusion research 2-4116  
 RF current drive in fusing plasma 2-15626  
 rf-driven Tokamak reactor with sub-ignited, thermally stable operation 2-4122  
 RF-plugged open systems, plasma confinement simulation theory 2-25610  
 SPAC-VI toroidal device, plasma confinement expt. by intense relativistic electron beam ring 2-25608  
 Spheromak formation and evolution and general compact toroids 2-25603  
 STARFIRE commercial Tokamak fusion power reactor concept 2-29432  
 steady-state beam-driven field-reversed mirror, method for sustaining current 2-50435  
 steady-state current generation in plasma by electron cyclotron waves 2-40129  
 superconducting magnet system for fusion reactors, pot. failures and hazards 2-550  
 superconducting magnets development for nuclear fusion machines appl. 2-25617  
 survey or reactor concepts and related technologies 2-15622  
 synergetic fission-fusion-spallation systems 2-19770  
 synthetic fuel production using HYFIRE commercial fusion Tokamak reactor high-temp. electrolysis system 2-7365  
 T-12 Tokamak expt. 2-16470  
 tandem mirror plasma, electron cyclotron reson. heating 2-40155  
 tandem mirror reactors, improved axisymmetric cusp plugs 2-1326  
 tandem mirror reactors with thermal barriers 2-24403  
 TEXTOR fusion experiment principles and plasma-wall interactions (German) 2-50444  
 TFR experiments on superbanana particle diffusion, small-scale turbulence and transport 2-12277  
 TFTR diagnostics, electron cyclotron emission meas. using InSb and Ge bolometers,  $\gamma$ -ray and neutron effects 2-35329  
 TFTR fast-scanning heterodyne receiver, 75-210 GHz, electron temp. profile determ. 2-35325  
 thermonuclear fusion research, atomic physics aspects 2-25636  
 thermonuclear fusion research, computer control and instrumentation 2-29430  
 Tokamak, adiabatic compression as plasma generation method with thermonuclear parameters 2-25621  
 Tokamak advanced fuel reactor, plasma stability, wall loading limits, engineering constraints, overview 2-39210



**gadolinium compounds continued**

- (Y<sub>2</sub>GdCa)<sub>3</sub>(FeVM)<sub>2</sub>O<sub>12</sub> (M=In, Zr), magnetostatic losses and saturation magnetisation temp. depend. 2-21828  
 Y<sub>1-x</sub>Gd<sub>x</sub>Rh<sub>2</sub>B<sub>4</sub>, magnetic superconductor, NMR study 2-17219  
 (Y<sub>2</sub>GdYbBi)<sub>3</sub>(FeAlGa)<sub>2</sub>O<sub>12</sub> epitaxial film, mag. domain wall displacement in weak field 2-46354  
 (YSmGdR)<sub>3</sub>(GaFe)<sub>2</sub>O<sub>12</sub> (R=Tm, Yb, Lu), single layer LPE films for 1 μm diameter bubble ion implanted contiguous disc devices 2-5569  
 (YSmLuCa)<sub>3-x</sub>Gd<sub>x</sub>(FeGe)<sub>2</sub>O<sub>12</sub> garnet film, bubble collapse field, zero temp. coeff. 2-36403

**gain (amplification) see amplification****gain measurement**

- CO<sub>2</sub> TEA laser, electron beam controlled, small gain meas. 2-888

**galactic cosmic rays**

- abundances of elements Sc to Mn 2-18665  
 acceleration, effect of losses on diffusive scatt. through shock waves 2-10280  
 antiproton flux in closed Galaxy model, theory 2-32777  
 antiproton flux measurement and search for antihelium 2-10288  
 antiprotons origin in SNRs (*Russian*) 2-14734  
 diurnal variation fourth harmonic (1968-79) 2-42555  
 electrons transport and propag., analytic solns. 2-33148  
 Forbush decreases effect on ionosphere, VLF EM wave propag. and radio noise anal. 2-32782  
 gamma radiation, obs. between 0.4 MeV and 7 MeV at balloon altitudes using Compton telescope 2-10289  
 gamma-ray emission components 2-38310  
 gamma-ray emission from interstellar clouds, plasma process enhancing electron fluxes 2-48308  
 heliolatitude variation from Dhajala chondrite radiation history 2-42556  
 high energy cosmic ray anisotropy and origin 2-18666  
 intensity correl. with SAS II gamma ray data longitudinal distrib. 2-10514  
 interaction with Moon, irradiation history of lunar soil 2-42618  
 interplanetary propagation, gradients in plane of ecliptic from radioactivity data for Bruderheim chondrite 2-48116  
 interplanetary propagation of relativistic particles in corotating interaction regions 2-23198  
 interstellar acceleration (*Russian*) 2-32779  
 interstellar molecular clouds irradiation, contrib. to number of apparent γ-ray sources 2-28534  
 isotopic composition of B,C,N and O nuclei, obs. 2-23197  
 kinetics of cosmic ray gas (*Russian*) 2-33122  
 scattering in interstellar space due to mag. field irregularities 2-32778  
 sidereal anisotropy of cosmic ray flux, meas. near 1500 GV 2-10279  
 solar modulation, time depend. Green's functions of transport eqn. 2-32780  
 transverse gradient, solar wind magnetic drift effects 2-14736  
 tri-diurnal variation obs. in 1962 to 1979 period 2-42557  
 ultraheavy cosmic rays (24 ≤ Z ≤ 59), abundances as indicators of nucleosynthesis and accel. processes 2-32786  
 Z=6 to 14 cosmic ray nuclei, charge and isotopic comp. at source 2-53030

**galactic nuclei**

- active galactic nuclei, effect of galaxy mergers on luminosity and total energy prod. 2-38302  
 active galaxies, anisotropic synchrotron sources, inverse Compton scatt. 2-10311  
 active galaxies, variable sources, central massive black hole as energy source 2-14926  
 active galaxies identified as counterparts to X-ray source in Einstein Observatory surveys 2-48159  
 active nuclei, absolute-space/universal time formulation for black hole electrodynamics 2-38231  
 active nuclei spectrophotometric classification 2-33176  
 Arakelian 120, Seyfert galaxy, spectrum var., emission line region conditions, visible obs. 2-33138  
 massive black holes, stationary spherical symmetric accretion rel. to radiation spectrum and luminosity 2-53311  
 broad-line gas dynamics in type I Seyferts 2-53361  
 3C 293, identification with VV 5-33-12, core struct., SHF/UHF obs. 2-3312  
 Galaxy, bulge X-ray sources GX 349+2, GX 17+2, Serperus X-1 periodicity 2-48362  
 Galaxy, radio source struct., SHF obs. 2-14921  
 Galaxy, X-ray sources obs. 2-48359  
 IC 5063, radiogalaxy, giant elliptical or SO spiral, struct., visible obs. 2-18792  
 ionised gas collapse, gravitational instability and virial eqn. 2-3302  
 IR sources, resolution using spatial interferometry in IR 2-53105  
 AP Librae, BL Lacertae-type object, UVB photoelectric photometry of mini-quasar nucleus 2-48319  
 luminosity evolution, evolving mass supply rate, theoretical models 2-38328  
 magnetoid interaction with surrounding stars 2-53298  
 Markarian 171a and b, nuclei gas characts. and emission line obs. 2-6669  
 NGC 1275 Seyfert galaxy nucleus, gas structure from emission line variability 2-42746  
 NGC 4151, cloudy structure of Seyfert nucleus from forbidden O II line profile anal. 2-48322  
 NGC 4151, Seyfert nucleus, optical variability peculiarities (*Russian*) 2-33159  
 primordial black holes and super-massive stars [in galactic nuclei] 2-48273  
 radiogalaxies with steep spectrum cores, spectral index-luminosity relation 2-38322  
 radiogalaxy pairs, fluxes and struct., X-ray/SHF obs. 2-23345  
 Seyfert 1 nuclei, X-ray luminosity function from optical luminosity function 2-48337  
 Seyfert activity in spiral galaxy nuclei, recurrent events 2-23349  
 Seyfert galaxies, emission line form., photoionisation and heating 2-33177  
 Seyfert galaxies nuclei, kinematics of gas clouds (*Russian*) 2-53369  
 Seyfert galaxy nuclei, optical positions, obs. 2-33150  
 spiral galaxies radio emission struct. interpretation, UHF obs. 2-33131  
 star formation bursts 2-42741  
 supermassive rotating star, general relativistic collapse, black hole form. 2-53076  
 Virgo A, central source magnetic field structure (*Russian*) 2-33158  
 galactic nuclei continued  
 X-ray emission, physical processes 2-48357  
 X-ray emission from winds in active nuclei 2-48325  
 X-ray galaxies evidence for Seyfert-1 nucleus or miniquasar 2-14923  
 OH absorption, UHF obs. 2-38294  
 galactic radio waves see radiofrequency cosmic radiation  
 galaxies  
 see also BL Lacertae-type objects; clusters of galaxies; galactic nuclei; H I regions; H II regions; intergalactic matter; Magellanic Clouds; Markarian galaxies; nebulae; radiogalaxies; Seyfert galaxies; The Galaxy  
 3.3 μm emission feature, occurrence in galaxies 2-38314  
 0016+16, red galaxies cluster at z=0.54, multicolour photometry 2-33165  
 absorption line coronae, theory rel. to quasars absorpt.-line systems 2-28541  
 active galactic nuclei, broad emission line profiles theory 2-6684  
 active galaxies with jets, space telescope use, conf., Munich, FRG (February 1981) 2-23370  
 active nuclei, empirical results from spectrophotometric study 2-28543  
 active nuclei, thermal and secular stability of innermost parts of accretion discs 2-33062  
 active nuclei, thermal instabilities in radiatively driven winds rel. to emission line clouds 2-28326  
 active nuclei, X-ray emission theory 2-28555  
 active nuclei modelled as supermassive binary 2-14936  
 automatic classification of galaxy images, appl. of Fourier structural anal. 2-33144  
 barred, effect of resonances near corotation 2-18794  
 binary galaxies in rich clusters, separation as distance indicator 2-38315  
 centroids motion vector eqn. (*Russian*) 2-6646  
 collapsing gaseous protoclusters of galaxies, initial fragmentation 2-33196  
 in Coma Berenices cluster, dynamic anal. (*French*) 2-53374  
 Coma Berenices cluster, dynamical anal. model (*French*) 2-48341  
 compact blue object in Ursa Major, spectra and variability 2-42744  
 companion galaxies, discoveries of nearby quasars 2-28576  
 conference on structure and evolution, Cambridge, England (August 1980) 2-23378  
 cosmology (book) 2-23386  
 counts, empirical evidence cosmological models 2-14968  
 DDO 161, southern dwarf galaxy, central knots visible spectral obs. (*Russian*) 2-6672  
 disc-halo galaxies, N-body simulations of isolated systems, tidal interactions and merging 2-14929  
 disk galaxy, gas ablation by intergalactic gas dynamical pressure (*Japanese*) 2-28559  
 distance determination from H II regions size distrib. 2-48158  
 distances measurement, appl. of obs. of novae 2-33149  
 distant objects, optical appearance 2-48313  
 Draco dwarf spheroidal galaxy, RR Lyrae stars, period distrib. 2-53290  
 dwarf galaxies, catalogue and integrated magnitudes and mean colours in UVB system 2-10337  
 dwarf galaxies revealed by isolated extragalactic H II regions 2-23348  
 dwarf spheroidal galaxies, tidal radii used to determine Galaxy mass 2-53368  
 dynamics, nonlinear instability of Maclaurin disc of stars surrounded by giant halo 2-42749  
 dynamics of model stellar disks 2-3283  
 early-type galaxies in clusters, supernovae and star form. rates 2-10462  
 elliptical galaxies, effect of dissipative processes on global props. 2-14930  
 elliptical galaxies, stellar population evolutionary synthesis from visible/IR obs. 2-6664  
 elliptical galaxies, symm. kinematic model, appl. to M31 edge on bulge 2-18791  
 elliptical galaxies formation, dynamical evolution of collisionless systems of gravitating masses 2-28569  
 elliptical galaxies intrinsic shape test, use of surface brightness-axis ratio relation 2-6540  
 elliptical galaxy X-ray source near M33, Long et al. object 9, redshift obs. 2-53391  
 ellipticals, geometrical structure from gaseous disks 2-38290  
 ellipticals with low surface brightness shells, model anal. 2-42748  
 equilibrium of rotating gaseous disc of finite thickness, anal. 2-28339  
 ESO/Uppsala galaxies, spectroscopic and photometric obs. third catalogue 2-18721  
 ESO/Uppsala survey of the ESO (B) Atlas of the southern sky 2-32864  
 evolution, metric size function appl. 2-38280  
 evolution, s-process nucleosynthesis 2-3191  
 explosions causing large red shift intergalactic shells 2-6662  
 extinction and dust detection using dust sensitive forbidden line ratios 2-32858  
 face-on galaxies, CO distrib. 2-38295  
 faint galaxies in galactic plane, H I 21 cm obs. 2-38297  
 formation, blini theory, rel. to superunified models 2-38824  
 formation, effect of convective instability is bounded uniform self-gravitating spherical clouds 2-32826  
 formation, instability of primordial cloud collapsing in one dimension 2-28589  
 formation, Mach-Poincare gravodynamics rel. to condensation phenomena in expanding universe 2-10536  
 formation, origin of struct. in Universe from thermal fluctuations 2-42764  
 formation, role of massive black holes and large oscillatory loops 2-14962  
 formation, stability of contracting gaseous protoclusters (pancakes) 2-14928  
 formation, thermal evolution of gas with primordial chemical comp. in gravit. contraction 2-3309  
 formation and evolution 2-48326  
 formation epoch, neutrino dating 2-42765  
 formation from evolution of adiabatic perturbations in weakly nonlinear regime 2-33195  
 formation in early Universe, massive neutrinos effects 2-33188  
 formation in Friedmann Universe 2-33189  
 formation in Goldstone field, cosmological density fluctuation production 2-33198  
 formation in neutrino-dominated Universe 2-53366  
 Fornax dwarf galaxy, late-type stellar content 2-38293  
 gravitational lens, effect of spherical galaxy 2-10310  
 gravitational lenses, realistic galaxy models 2-28335



**galaxies continued**

gravitational transparent lens model for  $1.3 \times 10^{15} M_{\odot}$  galaxy 2-53073  
 halos mass profile form., secondary infall N-body simulation 2-33130  
 heavy element yield rel. to metallicity, chemical evolution 2-48330  
 Hercules region, redshifts meas. rel. to supercluster bridge between groups of galaxy clusters 2-10520  
 hydrodynamic interaction between galactic disc and halo, appl. to origin of warping gaseous discs. 2-33147  
 IC 1613, discovery of peculiar WR star in Sandage 3 H II region 2-42691  
 inner Lindblad resonance in galaxies, nonlinear theory for self-consistent bars 2-33145  
 interacting galaxies kinematics, motions in nests and chains 2-42753  
 interacting objects, H I line profile information 2-48309  
 interactions between galaxies rel. to star formation in bright spirals 2-38291  
 interstellar gas stripping in clusters of galaxies, effects on intracluster gas evolution 2-6668  
 irregular galaxies, H I distrib., UHF obs. 2-14925  
 isolated galaxies, anal. of isolation criterion 2-6675  
 Kazaryan objects with UV excess, morphology and spectra (*Russian*) 2-33157  
 AP Librae, BL Lacertae-type object, UVB photoelectric photometry of extended component 2-48319  
 in Lick astrophysical survey, galaxies selection and relationship of galaxy counts to galactic absorpt. 2-14927  
 Lick counts rel. to local interstellar  $H_2$  absorption 2-48297  
 local group galaxies, IR luminosities of M-type supergiants rel. to use as distance indicators 2-10412  
 luminous galaxies, dynamics 2-38284  
 M101, giant spiral galaxy, assoc. of H I concentrations and H II complexes from radio obs. 2-33146  
 M101 H II regions, IR, UV and EHF obs. 2-6665  
 M31, broad-line  $H\alpha$  sources discovery 2-10457  
 M31, magnetic field 2-48324  
 M31, photoelectric UVB obs. of 110 globular clusters (*Russian*) 2-33094  
 M31, thermal and nonthermal radio continuum emission distrib. 2-48318  
 M31 and M33, spiral galaxies, mag. field config. 2-10518  
 M31 edge on bulge, appl. of symm. kinematic model 2-18791  
 M31 S Doradus stars AF and A-1 Andromedae, models, visible spectra obs. 2-10420  
 M33, forbidden O III/ $H\beta$  ratios of emission regions and luminosity functions at fronts of arms 2-33143  
 M33, obs. over six decades in frequency of H II region complex (NGC 604) 2-48298  
 M33, struct. of interstellar H II, Zelentchuk 6 m telescope obs. (*French*) 2-18789  
 M33, Wolf-Rayet stars discovery in giant H II region (NGC 604) 2-3257  
 M33 disk star formation comparison with our Galaxy 2-33128  
 M33 Wolf Rayet stars assoc. with giant H II regions, visible obs. 2-14919  
 M83 and M51, images and spiral struct. power spectra anal. 2-53360  
 M 51, spiral galaxy, mass distrib., light distrib., inclination, B-photometry obs. 2-14924  
 Magellanic Clouds, implications of vel. struct. of interstellar gas 2-10508  
 matter-antimatter annihilation in active galaxies,  $\gamma$ -ray constraints 2-14935  
 MCG+07-29-043, discovery and spectroscopic obs. of probable Type I supernova 2-42703  
 MCG-5-28-17, possible supernova discovery, (1982 January 19) 2-42704  
 mergers rel. to globular star cluster populations 2-38255  
 N-galaxies, elliptical component visible obs. 2-53367  
 NGC 1052, active elliptical galaxy, UV spectrum obs. 2-3306  
 NGC 1313, kinematics and dynamics of barred spiral 2-42740  
 NGC 1316 (Fornax A), BV photometry of supernova (1980 December 24 to 1981 January 3) 2-38221  
 NGC 1316 supernovae SN 1980m and SN 1981d, Type I events, JHK light curves 2-23316  
 NGC 1344, elliptical galaxy, shell nature, BVRJH obs. 2-42748  
 NGC 1365, images and spiral struct. power spectra anal. 2-53360  
 NGC 2268, precise posn., of SN (1982 Feb.) 2-53301  
 NGC 2268, supernova discovery and photovisual magnitude, (1982 February 12) 2-48265  
 NGC 2525 and 7741, vel. fields in barred spirals 2-48327  
 NGC 253, extended halo in blue light 2-48323  
 NGC 2841, 3198, 5033, 5055 and 7331, H I 21 cm line studies 2-48310  
 NGC 3379, elliptical galaxy, gas flows fuelled by stellar mass loss, evolution 2-33151  
 NGC 3938, H I vel. dispersion in nearly face-on ScI galaxy 2-42742  
 NGC 4203, S0 galaxy, extended H I disk map, UHF obs. 2-33126  
 NGC 4536, max. light spectrum of Type I supernovae 2-53299  
 NGC 4536 supernova SN 1981b, Type I event, JHK light curves 2-23316  
 NGC 4565, edge on spiral galaxy, halo mass/light ratio, K-photometry obs. 2-23344  
 NGC 4647 and 4321, search for young optical pulsars in old supernovae (*Russian*) 2-6611  
 NGC 5233, filamentary structure from O III photograph 2-33154  
 NGC 5679A, B, binary galaxy, supernova discovery and apparent magnitude, (1982 March 23) 2-53312  
 NGC 6946, SN 1980k, X-ray detect. 35 days after max. light, obs. 2-53300  
 NGC 7479, SB(s)c galaxy, bar and bar-arm region, dust and stellar content 2-53359  
 nonlinear instability of gravitating gas disc, theory 2-28570  
 normal galaxies, ionised gas density, electron temp.,  $L_c$  quanta and luminosity determ. (*Russian*) 2-14937  
 normal galaxies, multidimensional statistical analysis of integral properties 2-33142  
 northern elliptical galaxies globular clusters, counts and freq., obs. 2-33136  
 nuclear X-ray galaxies evidence for Seyfert-I nucleus or miniquasar 2-14923  
 on massive-neutrino halos and galactic structures 2-28565  
 optical false pairs, identification method (*Russian*) 2-6543  
 orientations in Local Supercluster 2-48342  
 populations distinguished by right/left handed neutrinos 2-14961  
 protogalaxy dissipationless collapse, instantaneous mass loss, N-body simulation 2-3301

**galaxies continued**

Q0957+561A,B, quasar, intervening galaxy possible origin for new absorpt. system 2-14946  
 quadratic redshift-distance law, observational mag. cutoff bias, correction 2-38288  
 red shifting mech., intrinsic, and compact synchrotron sources shower model 2-28568  
 relativistic electrons transport and propagation in galaxies, analytic solns. 2-33148  
 rotating stellar systems, equilib. and bifurcation 2-48321  
 rotation, structure and star form., review (*Spanish*) 2-6674  
 Sculptor dwarf galaxy, late-type stellar content 2-38293  
 Sculptor Dwarf Irregular Galaxy, luminosity function and individual stars V photometry 2-33139  
 size determination, use of assoc. quasars (*Russian*) 2-3202  
 South Polar Cap galaxies, UVB sequences 2-38254  
 southern hemisphere galaxies, peculiar and associations, redshift, spectral obs. 2-3305  
 southern late type/irregular galaxies survey with UK 1.2 m Schmidt 2-53358  
 space distributions, rel. to constraints on Universe primaeval adiabatic perturbation 2-6687  
 spectral stellar dynamics, theory for two-dimens. 2-53337  
 spheroidal galaxy with rigid body, interaction with intergalactic gas flow 2-33137  
 spin and inclination in Virgo cluster 2-38317  
 spiral, rotational motions used to determine intergalactic space inertial frames 2-28322  
 spiral and S0 galaxies, vel. dispersions in galactic bulges rel. to three-component model 2-28542  
 spiral arm dynamics 2-10513  
 spiral arms and a supernova-dominated interstellar medium 2-48329  
 spiral galaxies, edge-on, in Ursa Major and Cancer clusters, CCD photometry 2-10510  
 spiral galaxies, extensive mag. halos 2-33190  
 spiral structure, two alternatives 2-10512  
 spirals, 4:1 resonance 2-3282  
 spirals, arm shapes along Hubble sequence 2-48312  
 spirals, H I distrib. and kinematics rel. to morphology 2-48311  
 spirals, interstellar gas bending and warping 2-33137  
 spirals, near IR photographic atlas 2-53364  
 star formation, induced, effect in one zone model galaxy 2-6666  
 star system, local quadratic integral (*Russian*) 2-53338  
 stars diffusion in harmonic pot. 2-33090  
 stellar dynamics, near-circular motion in rotationally symmetric potential field 2-28325  
 structure, density response of stellar disc to growing oval mass distrib. 2-3304  
 superthin galaxies, spectroscopic obs. 2-28545  
 UBVR photometry used to find absolute magnitudes and intrinsic colours (*Russian*) 2-6671  
 UGC 10683, interacting galaxy pair, visible spectral obs. 2-6667  
 Ursa Minor dwarf galaxy, metal abundance range 2-28557  
 velocity dispersion in Revised Shapley-Ames redshift catalogue 2-38282  
 velocity fields surveyed with galaxymeter and Fabry Perot interferometer 2-33161  
 Virgo cluster galaxies, H I obs. 2-38304  
 Virgo cluster galaxies, luminosity function 2-38303  
 Virgo cluster low luminosity ellipticals, vel. dispersion-luminosity relation 2-23347  
 Vlasov simulations of stellar disks (*Japanese*) 2-18782  
 VV 5-33-12 identification with radiogalaxy 3C 293, SHF/UHF obs. 2-3312  
 weak turbulence in self-gravitating gaseous disc, regular three-wave processes 2-28572  
 Webb Society deep-sky observer's handbook 2-42799  
 X-ray emitting southern objects, IR continua, JHKL photometry 2-38305  
 II Zw 40, optical structure of dwarf galaxy 2-48328  
 H I, catalogue of 21 cm data, UHF obs. 2-42745  
 H II region diameters, freq. distrib. 2-10500

**gallium**  
*see also nuclei with .....*  
 adsorption on GaAs (111), total-current spectra fine struct. 2-17583  
 amorphous, elec. field gradients, TDPAC studies 2-31350  
 atom, gas phase high temp. photoelectron spectra 2-34360  
 atomic excitation cross-section by low-energy electrons (*Russian*) 2-4393  
 atoms and solid, binding energy, Auger and photoelectron spectra 2-34367  
 diffusion coating form. on Armco Fe, influence of impregnating medium comp. 2-41803  
 diffusion coeff. in molten Ge 2-35722  
 dislocation glide systems, justification by dislocation specific energies 2-40390  
 evaporation onto Si(100), surface struct., RHEED study 2-26195  
 Fermi level shift study by X-ray absorpt. spectroscopy 2-1812  
 liquid, ion source, droplet emission Rutherford backscatt. spectrometry 2-36767  
 liquid, ion source for scanning microbeam 2-48835  
 liquid, positive ion source, mass transport 2-584  
 liquid, struct. determ. by synchrotron radiation 2-25718  
 liquid-metal ion source extraction region, trajectory calcs. 2-51775  
 liquid-metal ion sources, field evaporation and ionisation, optical emission probe of neutral atoms 2-51707  
 melting, during erosion by hard particles 2-30571  
 melting point, 29.7714°C primary temperature standard appl., for laboratory and industrial appl. 2-38629  
 metastable  $\beta$ -phase, phonon dispersion curves, neutron inelastic scatt. study 2-12705  
 molten mixtures, interaction with stainless steel, and Nb-Zr-C 2-41801  
 nonlinear acoustic effects, influence of supercond. ordering 2-25159  
 overlayer on GaAs (110), model, appl. to MBE 2-12935  
 polymorphic transformation, hysteresis under press., low temp. (*Russian*) 2-21291  
 proton interaction, heavy fragments energy spectra 2-25944  
 RF size effect resonances, press. depend. 2-35925  
 superconducting, high freq. cond., US propag. meas. (*Russian*) 2-5495  
 superconductivity, press. depend. 2-2024  
 ultrathin filaments, heat capacity meas. (*Russian*) 2-17215



## gallium continued

- CdCr<sub>2</sub>Se<sub>4</sub>Ga, ferromagnetic semicond., susceptibility and photoinduced anisotropy disaccommodation 2-26606  
 CdCr<sub>2</sub>Se<sub>4</sub>Ga, ferromagnetic semicond., complex mag. susceptibility, photo-induced anisotropy 2-36333  
 CdCr<sub>2</sub>Se<sub>4</sub>Ga, mag. domain struct., photoinduced destabilisation in elec. field 2-13313  
 CdP<sub>2</sub>Ga, cathodoluminesc. spectrum 2-46784  
 CdTe:P,Ga, localised vibr. modes, Green's function calc. 2-50814  
 Ga, channelographic projection patterns at 295.77 and 4K, lattice struct. (French) 2-5075  
 Ga<sup>+</sup>, electron impact excitation autoionisation 2-44110  
 Ga<sup>+</sup>, electron impact ionisation cross section meas. 2-44114  
 Ga<sup>+</sup> ions, condensation on Si surface 2-17584  
 Ga-Mo interface, comp. and surface atom stability, high mass resolution atom probe anal. 2-35898  
 Ga-Si (111) interface, Schottky barrier formation 2-41011  
 Ga-W(Mo), interface struct, FEM, FIM and atom-probe studies (Japanese) 2-26238  
 Ge:Ga, far IR and sub-MM detector, spectral response from blackbody meas. 2-19180  
 Ge:Ga, impurity band, antiferromag. ordering, photoluminescence study 2-2340  
 Ge:Ga, neutron transmutation doping, degree of compensation 2-50673  
 Ge:Ga, single cryst., high temp. dislocation mobility under applied stress 2-45183  
 Ge:Ga electron-hole liq., photoluminesc. polarisation in mag. field study 2-35952  
 Ge:Ga heavily doped single crystals grown from melt, interface breakdown 2-25777  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Ga, elec. prop. press. depend. 2-17067  
 Si:Ga, float zone growth, improved uniformity 2-17620  
 Si:Ga, high dose implanted, thermal annealing and elec. activation 2-5147  
 Si:Ga, implanted, solute trapping after laser annealing 2-45262  
 Si:Ga, MBE grown, sharp profiles with high and low doping levels 2-16670  
 Si:Ga, shallow acceptor population and free hole conc. with IR-photoexcitation 2-51213  
 Si:Ga, trap population and free hole conc. with IR photoexcitation 2-51211  
 YIG:Ga film, mag. profile determ. by ferromagnetic resonance 2-2138  
 YIG:Ga, <sup>57</sup>Fe NMR line splitting, cation distrib. 2-9054  
 YIG:Ga, PbO-PbF<sub>2</sub> flux-grown crystals, lattice distortions caused by growth striations near surface 2-45089  
 YIG:Ga<sup>2+</sup>, nonmag. ion doped, optical constns., ellipsometric parameters 2-46531  
 YbI<sub>2</sub>Bi,Pr,Ga, for magneto-optical appls. LPE growth, Pr, Bi and Pb segregation 2-31644

## gallium alloys

- see also gallium compounds  
 rare earth alloys, RGa<sub>3</sub>, RGa<sub>5</sub>, cryst. struct. 2-8477  
 Al-Ga, dil., electron irradiated, interstitial trapping by Ga or Si atoms 2-35543  
 Al-Ga (0.5 wt.%), cold work internal friction peak at low temp. 2-45342  
 CC UGa<sub>2</sub>, mag. props. effect of 5f electron localisation 2-31236  
 Co-Ga,  $\beta$ -phase, slow cooled, mag. phase diag., AC susceptibility study 2-41137  
 $\beta$ -Co-Ga, ordered, enthalpy of form. anal. defect struct. 2-51877  
 CoGa, aspects of diffusion in intermetallic phase (German) 2-1681  
 CoGa<sub>1-x</sub>, mag. props. and spin glass-ferromag. transition 2-41132  
 CoGa<sub>100-x</sub>, electronic band struct. and localised states, rel. to elec. props. 2-40813  
 Co<sub>2</sub>YGa, Heusler alloys, mag. and magneto-optical props. 2-26671  
 Cu-Ga alloys, Fermi level shift study by X-ray absorpt. spectroscopy 2-1812  
 Cu-Sn-Ga/Nb-Hf, multifilamentary supercond., crit. current, strain effects 2-17251  
 Cu-V<sub>3</sub>Ga composites, in situ prep., supercond. and mech. props. 2-13263  
 Fe<sub>3</sub>Ga, ordering, electron diff. study 2-45047  
 Ga-Au (Ag)(Cu), liquid, elec. cond. and mag. susceptibility (Russian) 2-51143  
 Ga-Cd melt, atomic distrib. pattern during demixing 2-12459  
 Ga-Te, liq., reflectance and density of states, metal-semicond. transition 2-9162  
 Ga-Te, liq. alloys, density and elec. cond. 2-45309  
 Ga-Tl melt, atomic distrib. pattern during demixing 2-12459  
 Ga<sub>2</sub>Ag<sub>3</sub>, amorphous film, sp. ht., 0.2 to 1.0K 2-30623  
 Ge-B-Ga, amorphous, crystn. temp., mag. props. 2-41160  
 Ho-Ga system, phase diagram, DTA, X-ray diff. and SEM study 2-51874  
 $\delta$ -HoGa<sub>3</sub>, cryst. struct. refinement 2-8480  
 InGa-ZnSe-InGa, contact I-V characts. 2-26517  
 In<sub>1-x</sub>Ga<sub>x</sub>, thin film, superconducting T<sub>c</sub> 2-36182  
 La-Al-Ga metallic glasses, struct. determ. by X-ray diff. 2-12492  
 La-Ga, amorphous, elec. transport props. 2-26355  
 La-Ga, metallic glass form. conditions and short-range order features 2-41577  
 La<sub>80</sub>Ga<sub>20</sub>, amorphous, press. depend. of supercond. transition temp. 2-36176  
 Mo-Ga, crystallisation in outer-space conditions 2-27169  
 Nb<sub>2</sub>(Ge,Ga<sub>1-x</sub>) A-15 compound, supercond. props. 2-46215  
 Nb<sub>2</sub>(Ge,Ga<sub>1-x</sub>) films, superconducting parameter meas. 2-5487  
 Ni-Zn-Ga, phase diagram, vacancies (German) 2-13702  
 Ni<sub>3</sub>Ga, strength, positive temp. depend., effect of nonstoichiometry 2-9356  
 Pb-Bi-Ga, supercond. transition temp., comp. depend. 2-36168  
 Se-Ga, high-pressure phases 2-9330  
 U<sub>0.15</sub>Ho<sub>0.85</sub>Ga<sub>2</sub>, mag. behaviour and dominant interactions 2-8962  
 V-Ga wires and tapes, quench cracking, low-temp. brittleness, transition temp. 2-13679  
 V-Ga/Cu-Ga-Al composite system, metallurgical processing, superconducting props. of V<sub>3</sub>Ga wires 2-13686  
 V-Ga-Ce (16, 1 wt.%), irr. conditions on mechanical props. 2-13757  
 V<sub>100-x</sub>Ga<sub>x</sub>, upper crit. field, temp. depend., comp. effect 2-8919  
 V<sub>3</sub>Ga bronze processed wires, effect on props. of adding In, Zn, Mn 2-8923  
 V<sub>3</sub>Ga, multifilamentary, precip. from supersaturated BCC phases, supercond. props. 2-26532

## gallium alloys continued

- V<sub>3</sub>Ga, neutron irr., scaling low, exptl. test, critical current density 2-13257  
 V<sub>3</sub>Ga, spin-lattice relax. and Knight shift, temp. depend. 2-36472  
 V<sub>3</sub>Ga, tape, superconducting shielding tube test 2-2030  
 V<sub>3</sub>Ga tapes, supercond., microstruct. and crit. current density, prep. by composite process 2-13255  
 V<sub>3</sub>Ga wire, critical current, sample-holder thermal contraction effect 2-5511  
 V<sub>3</sub>Ga wire, superconducting props., formation temp. effects 2-8927  
 V<sub>3</sub>Ga-Cu in situ multifilamentary composite, preparation and superconducting props. 2-13683  
 V<sub>3</sub>Ga<sub>2</sub>, composites preparation, props. and improvements in current-carrying capacities in high mag. fields 2-13685  
 V<sub>3</sub>GaH<sub>x</sub>, sp. ht., 1.2 to 20K 2-30618  
 V<sub>3</sub>GaH<sub>x</sub>, sp. ht., lattice parameters, and supercond. props., 1.2 to 20K, comp. depend. 2-26552  
 V<sub>6</sub>GaSb, thermal expansion 2-50890  
 V<sub>3</sub>Ga tapes, supercond. props., prep. by composite process 2-13254  
 WSe<sub>2</sub>-In-Ga sputtered film in rolling hertzian contacts, tribological characts. 2-30776  
 Zn-Ga (0.2 at.%), anneal hardening 2-51932
- gallium arsenide**  
 $\alpha$ -particle irr., primary defects migration 2-16690  
 amorphous, disorder effects and optical props. 2-2357  
 amorphous films, EXAFS, optical and cond. meas. (French) 2-46826  
 anion antisite defects, electronic props. 2-17017  
 anodic oxide film, comp. and dielec. strength, SIMS study 2-47214  
 anodisation in DC plasma of GaAs precoated with Al, composite oxide film formation 2-17762  
 antisite defect 2-26321  
 ballistic transport with collisions 2-1917  
 bonding in liquid and amorphous binary semiconductor alloys 2-8436  
 Bragg diffraction, ion implantation effects 2-21114  
 buried optical guide laser, passively mode-locked, subpicosecond pulses 2-4539  
 capless annealing, for microwave devices 2-2531  
 carrier removal using O implementation 2-21162  
 cathodoluminescence lifetime patterns of surface near dislocations 2-46780  
 cleaning by exposure to O<sub>3</sub> and UV light, for MBE 2-52079  
 cold semicond., hot electrons, luminesc. expts. 2-51676  
 collective coordinates of tetrahedral cluster, inner displacement effect 2-13028  
 collisional broadening effect on Monte Carlo simulation of high-field transport 2-17078  
 compressibilities, Debye-Waller factors and melting criteria 2-1580  
 controlled microcleaving process 2-12673  
 core exciton binding energies 2-40800  
 core excitons, energy calc. 2-1832  
 corrosion and growth selective processes (Chinese) 2-9438  
 covalent solids, tight-binding parameters by Louie peripheral states 2-40754  
 crystal growth from melt, thermal conditions effect on large-diameter growth of single crystals 2-2432  
 crystal growth rate anisotropy analysis in CVD system 2-35901  
 crystal polarity, and struct.-factor phase rels. using electron diff. 2-44985  
 crystals and solid solns., hot electron luminescence 2-46712  
 cyclotron emission investig. as function of doping 2-5586  
 Czochralski grown, liq. encapsulated technique, elec. compensation, melt stoichiometry effect 2-51164  
 damaged surface layer, X-ray diff. and photoemission struct. study 2-21435  
 deep charged centres, ground state energy, photoionization cross section, model electron pot. calc. 2-17014  
 deep levels, electron trap and hole trap discharge ratio, temp. dependence (Japanese) 2-30818  
 deep levels, ideal-vacancy-induced 2-30823  
 deformation potentials of bulk semiconds. 2-35622  
 depth profiling by O ion bombardment, SIMS study (Japanese) 2-48833  
 dielectric functions, impurity scatt., Thomas-Fermi theory 2-51097  
 difference frequency generation with pulsed CO<sub>2</sub> laser freq. nonlinear mixing (Russian) 2-34831  
 diffusion of Zn for optical waveguide modulators 2-49896  
 dislocation helicoidal twisting obs. in GaAs single crystals and epitaxial structs. 2-45174  
 dislocation observation by new anodic etch 2-16649  
 doping during low press. VPE growth 2-51830  
 doping superlattices, photoexcited carrier conc. and mobility, Hall effect meas. 2-51226  
 dynamic effective charges and piezoelec. constns. 2-2190  
 electron energy deposition profile, calc., by Monte Carlo method (French) 2-50726  
 electron irradiated, anisotropic defect introduction 2-12641  
 electron mobility, space-charge and central-cell scatt. contrib. reassessment 2-13092  
 electron mobility and compensation ratio at 77K, variational calc. 2-51169  
 electron trap, 0.82 eV, origin and annihilation by shallow donors 2-51110  
 electron trap outdiffusion due to thermal treatment 2-51104  
 electron-hole plasma, spatial expansion, luminesc. meas. 2-51680  
 electron-hole plasmas and excitons, picosecond luminesc. spectroscopy 2-51677  
 electron-nucleus spin system, optical orientation in inclined mag. field 2-35981  
 electronic band struct. calcs. 2-40782  
 electronic struct., first principles calc. 2-30793  
 electrostatic energy and lattice vibrs. in thin ionic slabs 2-50782  
 energy levels of deep traps 2-45889  
 epilayers, phonon generation and electron-phonon scattering 2-21257  
 epitaxial film growth, CLEFT process 2-2463  
 epitaxial films, defect and conc. nonuniform effects on IMPATT diode avalanche breakdown (Russian) 2-2018  
 epitaxial films, Hall effect of hot electrons 2-36162  
 epitaxial growth by MO-VPE, growth mechanism 2-5831  
 epitaxial layer doped near MM wave studies of sub-micron layers 2-36728  
 epitaxial layer photoelastic electro-optical directional couplers, 1.15  $\mu$ m, strain-induced waveguides 2-7889



**gallium arsenide continued**

epitaxial layer thickness, dependence of electrophysical parameters (*Russian*) 2-13200  
 epitaxial layers, breakdown characts. 2-17080  
 epitaxial layers, CVD on Ge heteroepitaxial films 2-12932  
 epitaxial layers, impurity luminescence study (*Chinese*) 2-13563  
 epitaxial layers, screw and circular structures 2-8521  
 epitaxial layers, soln. grown, steps on facets 2-30761  
 epitaxial layers doping with O and Si 2-5141  
 epitaxial multilayers, vacuum metalorganic CVD growth 2-27092  
 epitaxial thin film, persistent photocond. 2-26435  
 epitaxially grown, p-type buffer layer; evaluation using Hall meas. 2-17095  
 etalon, bistable device, external off and on switching 2-49811  
 etalon, intrinsic bistable optical device, regenerative pulsations 2-44372  
 exciton energy spectra, uniaxial press. effect, photo EMF meas. 2-35949  
 fast neutron irradiated,  $\text{As}_{\text{Ga}}$  antisite defect, ESR spectra 2-46376  
 FET, magnetoresistance oscills. and transition from 3-D to 2-D cond. low temps. 2-46129  
 FET, short-gate, ballistic transport 2-51185  
 FET amplifier, UHF SQUID magnetometer, at 4.2K 2-19140  
 film, chemical thinning by etching 2-17763  
 film, molecular beam epitaxial growth 2-31627  
 film growth in Cl gas transport systems, supersaturation effects 2-35911  
 films, epitaxial growth simulation 2-5322  
 force const., phonon dispersion curves, and dielec. const., ab initio calc. 2-50820  
 $\text{n-Ga}_{1-x}\text{Al}_x\text{As}$ , grown by organometallic vapour phase epitaxy, hole traps 2-51112  
 $\text{Ga}_{1-x}\text{In}_x\text{P}$ -GaAs heterostructures, luminesc., effect of mismatch between lattice const. and thermal expansion coeffs. 2-9195  
 p-GaAlAs, non-alloyed ohmic contacts, using MO-CVD contact layers 2-46938  
 GaAs shallow-homojunction concentrator solar cells 2-27679  
 GaAs-Ga $_{1-x}\text{In}_x$ -P MBE DH, interface recombination vel. and misfit strain, photoluminescence study 2-22073  
 Hall devices, highly linear, fabricated by ion implantation 2-33581  
 heat treatment in controlled atmos., role of S (*French*) 2-1687  
 heavily doped, hot carrier relax., picosecond luminesc. study 2-46742  
 heteroepitaxial layer deposited by laser pulse, condensation mechanism 2-35904  
 hot carrier ballistic transport, displaced Maxwellian formulation 2-46002  
 hot carrier photoluminescence, picosecond correlation effects 2-46713  
 hot carrier relax., picosecond laser pulse studies, review 2-46528  
 hot electron nonMaxwellian distrib. function in mag. field, cyclotron emission study 2-46038  
 hot photoexcited electrons, effect of electron-electron scatt. 2-46066  
 hyperabrupt junctions, avalanche breakdown voltage calc. 2-30961  
 impact ionisation, band struct. depend. 2-45994  
 impurity inhomogeneity obs. by phase-contrast defocusing method 2-35525  
 impurity luminescence decay kinetics 2-41423  
 impurity spectra, cyclotron resonance in high mag. fields 2-22054  
 injection amplifier, dynamic characts. 2-34758  
 intrinsic defect theory 2-45884  
 ion implantation and low temp. epitaxial regrowth 2-8532  
 ion implantation of Si into semi-insulating LEC grown GaAs wafers, elec. props. obs. 2-8530  
 ion implanted, defects produced by laser annealing 2-1523  
 ion implanted, Raman scatt. characteris. of changes induced by encapsulation and thermal annealing 2-17477  
 ion implanted and laser annealed, residual damage, TEM study 2-30502  
 irradiated, point defect mobility 2-12586  
 laser, actively mode locked, subpicosecond pulse generation in external ring cavity 2-25038  
 laser, broadening ratio calc. from multimode oscillation threshold 2-24985  
 laser, DFB, optically pumped, with variable grating period, mode selectivity and threshold gain 2-4509  
 laser, dye-in-polymer films for ablative optical recording 2-39708  
 laser annealed, pulsed, and ion implanted, photoluminesc. spectrum 2-51643  
 laser annealing induced defects 2-40433  
 laser cyclotron resonance, Zeeman absorpt. 2-41205  
 laser induced Pt thin film deposition, Auger electron anal. 2-51836  
 laser oxidation, expt. study 2-17751  
 laser photochemical doping technique, solar cell prod. 2-12620  
 lattice defects electronic struct. 2-40829  
 lattice energy and density of states, pseudopot. calc. 2-45874  
 layers, vapour phase growth rate and morphology, elec. field effect 2-36792  
 LED, struct. defects, TEM studies 2-5332  
 local field effects and zone centre phonons 2-26006  
 low-temperature electron mobility calcs. 2-46028  
 LPE, mass transfer processes influence 2-5838  
 LPE, peculiarities of isothermal contact of liq. and solid phase 2-30763  
 LPE growth, high purity, elec. props. 2-46958  
 LPE layers on GaAs substrate, terrace formation, dynamical X-ray refl. 2-21452  
 magnetoabsorption, far IR, photoexcited carriers (*Japanese*) 2-36609  
 MBE,  $\text{n}^+\text{p}^+$  tunnel junction, ohmic contact for cascade solar cell 2-6141  
 MBE growth, volatile metal oxide incorporation 2-12936  
 melt grown, physical props. 2-22158  
 metal-GaAs contact interface, metallurgical and elec. props., heat treatment effects (*Chinese*) 2-21672  
 metal-GaAs junctions, transition region, diffusion profile 2-2004  
 metalorganic CVD, in a molecular beam system 2-5818  
 metalorganic epitaxial layers, Be doping 2-50679  
 microwave device technology appls. of large diameter bulk crystals 2-17619  
 minority carrier lifetime, electron beam induced current study 2-46014  
 MIS solar cell, degradation, metal-oxide interfacial reaction, AES study 2-52343  
 MIS struct. with plasma anodized  $\text{Al}_2\text{O}_3$  film 2-51340  
 MO-CVD grown, under different Ga/As mol fractions, deep levels 2-5832  
 monolithic integration of electro-optic bistable device 2-49949  
 MOS solar cell, open circuit voltage enhancement mechanism 2-52333  
 MOS structures, charge trapping in anodic native oxide under pulsed laser illum. 2-41016

**gallium arsenide continued**

mosaic blocks dimensions, on 100 surface, determ. by LEED 2-50973  
 multilayer struct., carrier conc. and mobility, rapid determ. method 2-8815  
 $\text{n}^+\text{pp}^+$  shallow-homojunction solar cells on epitaxial Ge grown on Si substrates 2-37370  
 n-beam kinematical reflections, in dynamical formalism, intensity problem treatment 2-44948  
 n-type,  $\text{D}^+$  irradiated, carrier removal 2-1533  
 n-type, far IR two-photon transitions, magnetophotocond. 2-13126  
 n-type, high power far IR photocond. meas., photoresponse tail 2-5434  
 n-type, lightly doped, nonequilib. carrier transport transient processes, re-emission effect 2-36061  
 n-type, magnetophonon effect of hot electrons 2-26417  
 n-type, methodic error in carrier conc. meas. by far IR absorpt. 2-5414  
 n-type, oxide surface layer, interface defect states effect on electronic props. 2-26509  
 n-type, passivation and interface state studies 2-17747  
 n-type, periodic oscills. and turbulence of hot-carrier plasma at 4.2K 2-46050  
 n-type, photoconductivity, far-IR two-photon transitions and two-photon cyclotron resonance 2-40973  
 n-type, photocurrent noise caused by impact ionization of neutral donors and free/bound excitons 2-46078  
 n-type, photoelectrochem. corrosion, kinetic anal. 2-30966  
 n-type, Raman scatt. from ion implanted carriers 2-46607  
 n-type, semiconductor electrodes in photoelectrochemical cells, surface state role 2-14086  
 n-type, semiconductor-electrolyte interface, surface modification, photochemical 2-14089  
 n-type, spectroscopic line fitting to DLTS data 2-26326  
 n-type, surface, light-induced changes of oxidation potential for temps. between 150 and 410K 2-1991  
 n-type, surface (100) exposed to  $\text{O}_2$  and electron irradiated, energy band bend shifts, UPS 2-40984  
 n-type, unidimensional particle model of cond. at low temps., contacts influence 2-45955  
 n-type tunnel diode, excess current behaviour, electron irradi. effects 2-36062  
 n-type wafer, proton implanted, IR reflectivity characteris. 2-17478  
 near-ballistic electron transport device, AC impedance 2-51181  
 neutral acceptor bound exciton ground state, electron-hole exchange interaction effect 2-26304  
 nuclear electric resonance, dielectric loss meas. (*Russian*) 2-13429  
 ohmic contacts of laser-annealed Au-Ge, microstruct. and resistivity 2-21675  
 ohmic contacts to n-type GaAs using graded band gap  $\text{Ga}_{1-x}\text{In}_x\text{As}$  layers by MBE 2-13174  
 OM-VPE layer growth 2-8723  
 optical detection of NMR under optical pumping, spin-exchange averaging between electronic states 2-17369  
 optical element, Gaussian beam distortion by thermal lens 2-34859  
 optical props., calc. using first-principles electronic struct. 2-13442  
 optically bistable devices, large refr. index nonlinearities 2-11745  
 oxidation, optically enhanced with visible laser light 2-27316  
 $\text{p}^+\text{-n}$  junction, impact ionisation coeffs. determ. 2-17083  
 $\text{p}^+\text{-n-n}^+$  structs., nonequilib. minority carriers, effective lifetime in lightly doped n-type region 2-17155  
 p-n junction characts. effect of X-ray irradiation (*Russian*) 2-30965  
 p-type, degenerate, low temp. luminesc., doping effect 2-36695  
 p-type, IR transmission characteris. of impurities 2-17508  
 p-type, linear photogalvanic effect (*Russian*) 2-40972  
 p-type, MO-CVD, diffusion lengths 2-8808  
 p-type, photon drag effect, polarisation, spectral and temp. characts. 2-1950  
 p-type, reemission effect on carrier transport 2-8814  
 p-type, semiconductor electrodes, laser induced photoelectrochemistry 2-13962  
 phonon optics and propagation in epitaxial or thin-film superlattice material 2-30543  
 TA phonon pulse generation and propag. 2-45643  
 LO-phonon-plasmon dispersion, IR and Raman spectra, hydrodynamic model 2-21521  
 phonons, near zone-edge non-thermal, ballistic transport and decay 2-45448  
 phonons, zone centre, ab initio calc., local field effects 2-50797  
 photoacoustic spectroscopy near fund. absorpt. edge (*Japanese*) 2-35599  
 photoanodes, photoelectrochemical cells, energy storage 2-14088  
 photoanodes, protection with photoelectrochemically generated polypyrrole films 2-47203  
 photocathode with neg. electron affinity, photoelectron spectra 2-13630  
 photocathodes, for low light level imaging, MOCVD 2-9284  
 photoelectrochemical corrosion, effect of Au monolayer 2-13181  
 photoelectrochemical solar cells, photocorrosion process on n-GaAs and corrosion prevention 2-22627  
 photoexcited electron-hole plasmas, collective modes 2-12983  
 photogenerated degenerate electron distribs., spin relax. time 2-17528  
 photoluminescence, analysis, review 2-22089  
 photoluminescence, inhibited relaxation of nonresonantly excited electrons in a cold lattice 2-46741  
 photoluminescence of UHV cleaved crystals 2-51642  
 photoluminescence spectra, obs. of emission band at  $\sim 1.40$  eV 2-36676  
 photovoltaic cells, thermal impedance effects 2-27683  
 piezoelectric, photogalvanic effect for interband transitions 2-1949  
 plasma anodisation and  $\text{SiO}_2$  plasma deposition 2-47217  
 plasma anodisation kinetics 2-13830  
 plasma anodisation kinetics using multipole plasma source 2-47218  
 polarisation of hot photoluminescence spectra, role of split-off subband 2-17542  
 post-implant annealing, encapsulation of semiconductor with CVD  $\text{Si}_3\text{N}_4$  to prevent decomposition 2-41634  
 proton bombarded and annealed, photolum. 2-22074  
 proton implanted, cathodolum., Rutherford backscatt. and SIMS studies 2-46778  
 radiation defect annealing, redistrib. of point defects 2-45152  
 Raman active modes, stress depend. 2-2256  
 Raman scatt. by two LO-phonons near  $\Gamma$  2-36642  
 rectifying variable planar-doped-barrier structures, MBE fabrication and characts. 2-5455  
 S-type diode, negative photocond. 2-41004  
 Schottky contacts, light emission behaviour, exptl. data 2-41429



## gallium continued

- CdCr<sub>2</sub>Se<sub>4</sub>Ga, ferromagnetic semicond., susceptibility and photoinduced anisotropy disaccommodation 2-26606  
 CdCr<sub>2</sub>Se<sub>4</sub>Ga, ferromagnetic semicond., complex mag. susceptibility, photo-induced anisotropy 2-36333  
 CdCr<sub>2</sub>Se<sub>4</sub>Ga, mag. domain struct., photoinduced destabilisation in elec. field 2-13313  
 CdP<sub>2</sub>Ga, cathodoluminesc. spectrum 2-46784  
 CdTe:P,Ga, localised vibr. modes, Green's function calc. 2-50814  
 Ga, channellographic projection patterns at 295.77 and 4K, lattice struct. (French) 2-5075  
 Ga<sup>+</sup>, electron impact excitation autoionisation 2-44110  
 Ga<sup>+</sup>, electron impact ionisation cross section meas. 2-44114  
 Ga<sup>+</sup> ions, condensation on Si surface 2-17584  
 Ga-Mo interface, comp. and surface atom stability, high mass resolution atom probe anal. 2-35898  
 Ga-Si (111) interface, Schottky barrier formation 2-41011  
 Ga-W(Mo), interface struct, FEM, FIM and atom-probe studies (Japanese) 2-26238  
 Ge:Ga, far IR and sub-MM detector, spectral response from blackbody meas. 2-19180  
 Ge:Ga, impurity band, antiferromag. ordering, photoluminescence study 2-2340  
 Ge:Ga, neutron transmutation doping, degree of compensation 2-50673  
 Ge:Ga, single cryst., high temp. dislocation mobility under applied stress 2-45183  
 Ge:Ga electron-hole liq., photoluminesc. polarisation in mag. field study 2-35952  
 Ge:Ga heavily doped single crystals grown from melt, interface breakdown 2-25777  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Ga, elec. prop. press. depend. 2-17067  
 Si:Ga, float zone growth, improved uniformity 2-17620  
 Si:Ga, high dose implanted, thermal annealing and elec. activation 2-5147  
 Si:Ga, implanted, solute trapping after laser annealing 2-45262  
 Si:Ga, MBE grown, sharp profiles with high and low doping levels 2-16670  
 Si:Ga, shallow acceptor population and free hole conc. with IR-photoexcitation 2-51213  
 Si:Ga, trap population and free hole conc. with IR photoexcitation 2-51211  
 YIG: Ga film, mag. profile determ. by ferromagnetic resonance 2-2138  
 YIG:Ga, <sup>57</sup>Fe NMR line splitting, cation distrib. 2-9054  
 YIG:Ga, PbO-PbF<sub>2</sub> flux-grown crystals, lattice distortions caused by growth striations near surface 2-45089  
 YIG:Ga<sup>3+</sup>, nonmag. ion doped, optical const., ellipsometric parameters 2-46531  
 YbIG:Bi,Pr,Ga, for magneto-optical appls. LPE growth, Pr, Bi and Pb segregation 2-31644

## gallium alloys

- see also gallium compounds  
 rare earth alloys, RGa<sub>2</sub>, R<sub>2</sub>Ga<sub>3</sub>, cryst. struct. 2-8477  
 Al-Ga, dil., electron irradiated, interstitial trapping by Ga or Si atoms 2-35543  
 Al-Ga (0.5 wt.%), cold work internal friction peak at low temp. 2-45342  
 CC UGa<sub>2</sub>, mag. props. effect of 5f electron localisation 2-31236  
 Co-Ga,  $\beta$ -phase, slow cooled, mag. phase diag., AC susceptibility study 2-41137  
 $\beta$ -Co-Ga, ordered, enthalpy of form. anal. defect struct. 2-51877  
 CoGa, aspects of diffusion in intermetallic phase (German) 2-1681  
 Co<sub>2</sub>Ga<sub>1-x</sub>, mag. props. and spin glass-ferromag. transition 2-41132  
 Co<sub>2</sub>Ga<sub>100-x</sub>, electronic band struct. and localised states, rel. to elec. props. 2-40813  
 Co<sub>2</sub>YGa, Heusler alloys, mag. and magneto-optical props. 2-26671  
 Cu-Ga alloys, Fermi level shift study by X-ray absorpt. spectroscopy 2-1812  
 Cu-Sn-Ga/Nb-Hf, multifilamentary supercond., crit. current, strain effects 2-17251  
 Cu-V<sub>3</sub>Ga composites, in situ prep., supercond. and mech. props. 2-13263  
 Fe<sub>3</sub>Ga, ordering, electron diff. study 2-45047  
 Ga-Au (Ag)(Cu), liquid, elec. cond. and mag. susceptibility (Russian) 2-51143  
 Ga-Cd melt, atomic distrib. pattern during demixing 2-12459  
 Ga-Te, liq., reflectance and density of states, metal-semicond. transition 2-9162  
 Ga-Te, liq. alloys, density and elec. cond. 2-45309  
 Ga-Tl melt, atomic distrib. pattern during demixing 2-12459  
 Ga<sub>2</sub>Ag<sub>2</sub>, amorphous film, sp. ht., 0.2 to 1.0K 2-30623  
 Ge-B-Ga, amorphous, crystn. temp., mag. props. 2-41160  
 Ho-Ga system, phase diagram, DTA, X-ray diff. and SEM study 2-51874  
 $\delta$ -HoGa<sub>3</sub>, cryst. struct. refinement 2-8480  
 InGa-ZnSe-InGa, contact I-V characts. 2-26517  
 In<sub>1-x</sub>Ga<sub>x</sub>, thin film, superconducting T<sub>c</sub> 2-36182  
 La-Al-Ga metallic glasses, struct. determ. by X-ray diff. 2-12492  
 La-Ga, amorphous, elec. transport props. 2-26355  
 La-Ga, metallic glass form. conditions and short-range order features 2-41577  
 La<sub>80</sub>Ga<sub>20</sub>, amorphous, press. depend. of supercond. transition temp. 2-36176  
 Mo-Ga, crystallisation in outer-space conditions 2-27169  
 Nb<sub>3</sub>(Ge,Ga<sub>1-x</sub>) A-15 compound, supercond. props. 2-46215  
 Nb<sub>3</sub>(Ge,Ga<sub>1-x</sub>) films, superconducting parameter meas. 2-5487  
 Ni-Zn-Ga, phase diagram, vacancies (German) 2-13702  
 Ni<sub>3</sub>Ga, strength, positive temp. depend., effect of nonstoichiometry 2-9356  
 Pb-Bi-Ga, supercond. transition temp., comp. depend. 2-36168  
 Sc-Ga, high-pressure phases 2-9330  
 U<sub>0.15</sub>Ho<sub>0.85</sub>Ga<sub>2</sub>, mag. behaviour and dominant interactions 2-8962  
 V-Ga wires and tapes, quench cracking, low-temp. brittleness, transition temp. 2-13679  
 V-Ga/Cu-Ga-Al composite system, metallurgical processing, superconducting props. of V<sub>3</sub>Ga wires 2-13686  
 V-Ga-Ce (16, 1 wt.%), irr. conditions on mechanical props. 2-13757  
 V<sub>100-x</sub>Ga<sub>x</sub>, upper crit. field, temp. depend., comp. effect 2-8919  
 V<sub>3</sub>Ga bronze processed wires, effect on props. of adding In, Zn, Mn 2-8923  
 V<sub>3</sub>Ga, multifilamentary, precip. from supersaturated BCC phases, supercond. props. 2-26532

## gallium alloys continued

- V<sub>3</sub>Ga, neutron irr., scaling low, exptl. test, critical current density 2-13257  
 V<sub>3</sub>Ga, spin-lattice relax. and Knight shift, temp. depend. 2-36472  
 V<sub>3</sub>Ga, tape, superconducting shielding tube test 2-2030  
 V<sub>3</sub>Ga tapes, supercond., microstruct. and crit. current density, prep. by composite process 2-13255  
 V<sub>3</sub>Ga wire, critical current, sample-holder thermal contraction effect 2-5511  
 V<sub>3</sub>Ga wire, superconducting props., formation temp. effects 2-8927  
 V<sub>3</sub>Ga-Cu in situ multifilamentary composite, preparation and superconducting props. 2-13683  
 V<sub>3</sub>Ga<sub>2</sub>, composites preparation, props. and improvements in current-carrying capacities in high mag. fields 2-13685  
 V<sub>3</sub>GaH<sub>x</sub>, sp. ht., 1.2 to 20K 2-30618  
 V<sub>3</sub>GaH<sub>x</sub>, sp. ht., lattice parameters, and supercond. props., 1.2 to 20K, comp. depend. 2-26552  
 V<sub>6</sub>GaSb, thermal expansion 2-50890  
 Va<sub>3</sub>Ga tapes, supercond. props., prep. by composite process 2-13254  
 WSe<sub>2</sub>-In-Ga sputtered film in rolling hertzian contacts, tribological characts. 2-30776  
 Zn-Ga (0.2 at.%), anneal hardening 2-51932
- gallium arsenide**  
 $\alpha$ -particle irr., primary defects migration 2-16690  
 amorphous, disorder effects and optical props. 2-2357  
 amorphous films, EXAFS, optical and cond. meas. (French) 2-46826  
 anion antisite defects, electronic props. 2-17017  
 anodic oxide film, comp. and dielec. strength, SIMS study 2-47214  
 anodisation in DC plasma of GaAs precoated with Al, composite oxide film formation 2-17762  
 antisite defect 2-26321  
 ballistic transport with collisions 2-1917  
 bonding in liquid and amorphous binary semiconductor alloys 2-8436  
 Bragg diffraction, ion implantation effects 2-21114  
 buried optical guide laser, passively mode-locked, subpicosecond pulses 2-4539  
 capless annealing, for microwave devices 2-2531  
 carrier removal using O implantation 2-21162  
 cathodoluminescence lifetime patterns of surface near dislocations 2-46780  
 cleaning by exposure to O<sub>3</sub> and UV light, for MBE 2-52079  
 cold semicond., hot electrons, luminesc. expts. 2-51676  
 collective coordinates of tetrahedral cluster, inner displacement effect 2-13028  
 collisional broadening effect on Monte Carlo simulation of high-field transport 2-17078  
 compressibilities, Debye-Waller factors and melting criteria 2-1580  
 controlled microcleaving process 2-12673  
 core exciton binding energies 2-40800  
 core excitons, energy calc. 2-1832  
 corrosion and growth selective processes (Chinese) 2-9438  
 covalent solids, tight-binding parameters by Louie peripheral states 2-40754  
 crystal growth from melt, thermal conditions effect on large-diameter growth of single crystals 2-2432  
 crystal growth rate anisotropy analysis in CVD system 2-35901  
 crystal polarity, and struct.-factor phase rels. using electron diff. 2-44985  
 crystals and solid solns., hot electron luminescence 2-46712  
 cyclotron emission investig. as function of doping 2-5586  
 Czochralski grown, liq. encapsulated technique, elec. compensation, melt stoichiometry effect 2-51164  
 decorated surface layer, X-ray diff. and photoemission struct. study 2-21435  
 deep charged centres, ground state energy, photoionization cross section, model electron pot. calc. 2-17014  
 deep levels, electron trap and hole trap discharge ratio, temp. dependence (Japanese) 2-30818  
 deep levels, ideal-vacancy-induced 2-30823  
 deformation potentials of bulk semiconds. 2-35622  
 depth profiling by O ion bombardment, SIMS study (Japanese) 2-48833  
 dielectric functions, impurity scatt., Thomas-Fermi theory 2-51097  
 difference frequency generation with pulsed CO<sub>2</sub> laser freq. nonlinear mixing (Russian) 2-34831  
 diffusion of Zn for optical waveguide modulators 2-49896  
 dislocation helicoidal twisting obs. in GaAs single crystals and epitaxial structs. 2-45174  
 dislocation observation by new anodic etch 2-16649  
 doping during low press. VPE growth 2-51830  
 doping superlattices, photoexcited carrier conc. and mobility, Hall effect meas. 2-51226  
 dynamic effective charges and piezoelec. consts. 2-2190  
 electron energy deposition profile, calc. by Monte Carlo method (French) 2-50726  
 electron irradiated, anisotropic defect introduction 2-12641  
 electron mobility, space-charge and central-cell scatt. contrib. reassessment 2-13092  
 electron mobility and compensation ratio at 77K, variational calc. 2-51169  
 electron trap, 0.82 eV, origin and annihilation by shallow donors 2-51110  
 electron trap outdiffusion due to thermal treatment 2-51104  
 electron-hole plasma, spatial expansion, luminesc. meas. 2-51680  
 electron-hole plasmas and excitons, picosecond luminesc. spectroscopy 2-51677  
 electron-nucleus spin system, optical orientation in inclined mag. field 2-35981  
 electronic band struct. calcs. 2-40782  
 electronic struct., first principles calc. 2-30793  
 electrostatic energy and lattice vibrations in thin ionic slabs 2-50782  
 energy levels of deep traps 2-45889  
 epilayers, phonon generation and electron-phonon scattering 2-21257  
 epitaxial film growth, CLEFT process 2-2463  
 epitaxial films, defect and conc. nonuniform effects on IMPATT diode avalanche breakdown (Russian) 2-2018  
 epitaxial films, Hall effect of hot electrons 2-36162  
 epitaxial growth by MO-VPE, growth mechanism 2-5831  
 epitaxial layer doped near MM wave studies of sub-micron layers 2-36728  
 epitaxial layer photoelastic electro-optical directional couplers, 1.15  $\mu$ m, strain-induced waveguides 2-7889



**gallium arsenide continued**

epitaxial layer thickness, dependence of electrophysical parameters (*Russian*) 2-13200  
 epitaxial layers, breakdown characts. 2-17080  
 epitaxial layers, CVD on Ge heteroepitaxial films 2-12932  
 epitaxial layers, impurity luminescence study (*Chinese*) 2-13563  
 epitaxial layers, screw and circular structures 2-8521  
 epitaxial layers, soln. grown, steps on facets 2-30761  
 epitaxial layers doping with O and Si 2-5141  
 epitaxial multilayers, vacuum metalorganic CVD growth 2-27092  
 epitaxial thin film, persistent photocond. 2-26435  
 epitaxially grown, p-type buffer layer, evaluation using Hall meas. 2-17095  
 etalon, bistable device, external off and on switching 2-49811  
 etalon, intrinsic bistable optical device, regenerative pulsations 2-44372  
 exciton energy spectra, uniaxial press. effect, photo EMF meas. 2-35949  
 fast neutron irradiated,  $\text{AsGa}^{4+}$  antisite defect, ESR spectra 2-46376  
 FET, magnetoresistance oscills. and transition from 3-D to 2-D cond. low temps. 2-46129  
 FET, short-gate, ballistic transport 2-51185  
 FET amplifier, UHF SQUID magnetometer, at 4.2K 2-19140  
 film, chemical thinning by etching 2-17763  
 film, molecular beam epitaxial growth 2-31627  
 film growth in Cl gas transport systems, supersaturation effects 2-35911  
 films, epitaxial growth simulation 2-5322  
 force const., phonon dispersion curves, and dielec. const., ab initio calc. 2-50820  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>As, grown by organometallic vapour phase epitaxy, hole traps 2-51112  
 Ga<sub>x</sub>In<sub>1-x</sub>P-GaAs heterostructures, luminesc., effect of mismatch between lattice const. and thermal expansion coeffs. 2-9195  
 p-GaAlAs, non-alloyed ohmic contacts, using MO-CVD contact layers 2-46938  
 GaAs shallow-homojunction concentrator solar cells 2-27679  
 GaAs-Ga<sub>x</sub>In<sub>1-x</sub>P MBE DH, interface recombination vel. and misfit strain, photoluminescence study 2-22073  
 Hall devices, highly linear, fabricated by ion implantation 2-33581  
 heat treatment in controlled atmos., role of S (*French*) 2-1687  
 heavily doped, hot carrier relax., picosecond luminesc. study 2-46742  
 heteroepitaxial layer deposited by laser pulse, condensation mechanism 2-35904  
 hot carrier ballistic transport, displaced Maxwellian formulation 2-46002  
 hot carrier photoluminescence, picosecond correlation effects 2-46713  
 hot carrier relax., picosecond laser pulse studies, review 2-46528  
 hot electron non-Maxwellian distrib. function in mag. field, cyclotron emission study 2-46038  
 hot photoexcited electrons, effect of electron-electron scatt. 2-46066  
 hyperabrupt junctions, avalanche breakdown voltage calc. 2-30961  
 impact ionisation, band struct. depend. 2-45994  
 impurity inhomogeneity obs. by phase-contrast defocusing method 2-35525  
 impurity luminescence decay kinetics 2-41423  
 impurity spectra, cyclotron resonance in high mag. fields 2-22054  
 injection amplifier, dynamic characts. 2-34758  
 intrinsic defect theory 2-45884  
 ion implantation and low temp. epitaxial regrowth 2-8532  
 ion implantation of Si into semi-insulating LEC grown GaAs wafers, elec. props. obs. 2-8530  
 ion implanted, defects produced by laser annealing 2-1523  
 ion implanted, Raman scatt. characteris. of changes induced by encapsulation and thermal annealing 2-17477  
 ion implanted and laser annealed, residual damage, TEM study 2-30502  
 irradiated, point defect mobility 2-12586  
 laser, actively mode locked, subpicosecond pulse generation in external ring cavity 2-25038  
 laser, broadening ratio calc. from multimode oscillation threshold 2-24985  
 laser, DFB, optically pumped, with variable grating period, mode selectivity and threshold gain 2-4509  
 laser, dye-in-polymer films for ablative optical recording 2-39708  
 laser annealed, pulsed, and ion implanted, photoluminesc. spectrum 2-51643  
 laser annealing induced defects 2-40433  
 laser cyclotron resonance, Zeeman absorpt. 2-41205  
 laser induced Pt thin film deposition, Auger electron anal. 2-51836  
 laser oxidation, expt. study 2-17751  
 laser photochemical doping technique, solar cell prod. 2-12620  
 lattice defects electronic struct. 2-40829  
 lattice energy and density of states, pseudopot. calc. 2-45874  
 layers, vapour phase growth rate and morphology, elec. field effect 2-36792  
 LED, struct. defects, TEM studies 2-5332  
 local field effects and zone centre phonons 2-26006  
 low-temperature electron mobility calcs. 2-46028  
 LPE, mass transfer processes influence 2-5838  
 LPE, peculiarities of isothermal contact of liq. and solid phase 2-30763  
 LPE growth, high purity, elec. props. 2-46958  
 LPE layers on GaAs substrate, terrace formation, dynamical X-ray refl. 2-21452  
 magnetoabsorption, far IR, photoexcited carriers (*Japanese*) 2-36609  
 MBE, n<sup>+</sup>/p<sup>+</sup> tunnel junction, ohmic contact for cascade solar cell 2-6141  
 MBE growth, volatile metal oxide incorporation 2-12936  
 melt grown, physical props. 2-22158  
 metal-GaAs contact interface, metallurgical and elec. props., heat treatment effects (*Chinese*) 2-21672  
 metal-GaAs junctions, transition region, diffusion profile 2-2004  
 metalorganic CVD, in a molecular beam system 2-5818  
 metalorganic epitaxial layers, Be doping 2-50679  
 microwave device technology appls. of large diameter bulk crystals 2-17619  
 minority carrier lifetime, electron beam induced current study 2-46014  
 MIS solar cell, degradation, metal-oxide interfacial reaction, AES study 2-52343  
 MIS struct. with plasma anodized Al<sub>2</sub>O<sub>3</sub> film 2-51340  
 MO-CVD grown, under different Ga/As mol fractions, deep levels 2-5832  
 monolithic integration of electro-optic bistable device 2-49949  
 MOS solar cell, open circuit voltage enhancement mechanism 2-52333  
 MOS structures, charge trapping in anodic native oxide under pulsed laser illum. 2-41016

**gallium arsenide continued**

mosaic blocks dimensions, on 100 surface, determ. by LEED 2-50973  
 multilayer struct., carrier conc. and mobility, rapid determ. method 2-8815  
 n<sup>+</sup>pp<sup>+</sup> shallow-homojunction solar cells on epitaxial Ge grown on Si substrates 2-37370  
 n-beam kinematical reflections, in dynamical formalism, intensity problem treatment 2-44948  
 n-type, D<sup>+</sup> irradiated, carrier removal 2-1533  
 n-type, far IR two-photon transitions, magnetophotocond. 2-13126  
 n-type, high power far IR photocond. meas., photoresponse tail 2-5434  
 n-type, lightly doped, nonequilib. carrier transport transient processes, re-emission effect 2-36061  
 n-type, magnetophonon effect of hot electrons 2-26417  
 n-type, methodic error in carrier conc. meas. by far IR absorpt. 2-5414  
 n-type, oxide surface layer, interface defect states effect on electronic props. 2-26509  
 n-type, passivation and interface state studies 2-17747  
 n-type, periodic oscills. and turbulence of hot-carrier plasma at 4.2K 2-46050  
 n-type, photoconductivity, far-IR two-photon transitions and two-photon cyclotron resonance 2-40973  
 n-type, photocurrent noise caused by impact ionization of neutral donors and free/bound excitons 2-46078  
 n-type, photoelectrochem. corrosion, kinetic anal. 2-30966  
 n-type, Raman scatt. from ion implanted carriers 2-46607  
 n-type, semiconductor electrodes in photoelectrochemical cells, surface state role 2-14086  
 n-type, semiconductor-electrolyte interface, surface modification, photochemical 2-14089  
 n-type, spectroscopic line fitting to DLTS data 2-26326  
 n-type, surface, light-induced changes of oxidation potential for temps. between 150 and 410K 2-1991  
 n-type, surface (100) exposed to O<sub>2</sub> and electron irradiated, energy band bend shifts, UPS 2-40984  
 n-type, unidimensional particle model of cond. at low temps., contacts influence 2-45955  
 n-type tunnel diode, excess current behaviour, electron irradi. effects 2-36062  
 n-type wafer, proton implanted, IR reflectivity characteris. 2-17478  
 near-ballistic electron transport device, AC impedance 2-51181  
 neutral acceptor bound exciton ground state, electron-hole exchange interaction effect 2-26304  
 nuclear electric resonance, dielectric loss meas. (*Russian*) 2-13429  
 ohmic contacts of laser-annealed Au-Ge, microstruct. and resistivity 2-21675  
 ohmic contacts to n-type GaAs using graded band gap Ga<sub>1-x</sub>In<sub>x</sub>As layers by MBE 2-13174  
 OM-VPE layer growth 2-8723  
 optical detection of NMR under optical pumping, spin-exchange averaging between electronic states 2-17369  
 optical element, Gaussian beam distortion by thermal lens 2-34859  
 optical props., calc. using first-principles electronic struct. 2-13442  
 optically bistable devices, large refr. index nonlinearities 2-11745  
 oxidation, optically enhanced with visible laser light 2-27316  
 p<sup>+</sup>-n junction, impact ionisation coeffs. determ. 2-17083  
 p<sup>+</sup>-n<sup>+</sup> structs., nonequilib. minority carriers, effective lifetime in lightly doped n-type region 2-17155  
 p-n junction characts. effect of X-ray irradiation (*Russian*) 2-30965  
 p-type, degenerate, low temp. luminesc., doping effect 2-36695  
 p-type, IR transmission characteris. of impurities 2-17508  
 p-type, linear photogalvanic effect (*Russian*) 2-40972  
 p-type, MO-CVD, diffusion lengths 2-8808  
 p-type, photon drag effect, polarisation, spectral and temp. characts. 2-1950  
 p-type, reemission effect on carrier transport 2-8814  
 p-type, semiconductor electrodes, laser induced photoelectrochemistry 2-13962  
 phonon optics and propagation in epitaxial or thin-film superlattice material 2-30543  
 TA phonon pulse generation and propag. 2-45643  
 LO-phonon-plasmon dispersion, IR and Raman spectra, hydrodynamic model 2-21521  
 phonons, near zone-edge non-thermal, ballistic transport and decay 2-45448  
 phonons, zone centre, ab initio calc., local field effects 2-50797  
 photoacoustic spectroscopy near fund. absorpt. edge (*Japanese*) 2-35599  
 photoanodes, photoelectrochemical cells, energy storage 2-14088  
 photoanodes, protection with photoelectrochemically generated polypyrrole films 2-47203  
 photocathode with neg. electron affinity, photoelectron spectra 2-13630  
 photocathodes, for low light level imaging, MOCVD 2-9284  
 photoelectrochemical corrosion, effect of Au monolayer 2-13181  
 photoelectrochemical solar cells, photocorrosion process on n-GaAs and corrosion prevention 2-22627  
 photoexcited electron-hole plasmas, collective modes 2-12983  
 photogenerated degenerate electron distrib., spin relax. time 2-17528  
 photoluminescence, analysis, review 2-22089  
 photoluminescence, inhibited relaxation of nonresonantly excited electrons in a cold lattice 2-46741  
 photoluminescence of UHV cleaved crystals 2-51642  
 photoluminescence spectra, obs. of emission band at ~1.40 eV 2-36676  
 photovoltaic cells, thermal impedance effects 2-27683  
 piezoelectric, photogalvanic effect for interband transitions 2-1949  
 plasma anodisation and SiO<sub>2</sub> plasma deposition 2-47217  
 plasma anodisation kinetics 2-13830  
 plasma anodisation kinetics using multiple plasma source 2-47218  
 polarisation of hot photoluminescence spectra, role of split-off subband 2-17542  
 post-implant annealing, encapsulation of semiconductor with CVD Si<sub>3</sub>N<sub>4</sub> to prevent decomposition 2-41634  
 proton bombarded and annealed, photolum. 2-22074  
 proton implanted, cathodolum., Rutherford backscatt. and SIMS studies 2-46778  
 radiation defect annealing, redistrib. of point defects 2-45152  
 Raman active modes, stress depend. 2-2256  
 Raman scatt. by two LO-phonons near  $\Gamma$  2-36642  
 rectifying variable planar-doped-barrier structures, MBE fabrication and characts. 2-5455  
 S-type diode, negative photocond. 2-41004  
 Schottky contacts, light emission behaviour, exptl. data 2-41429



**gallium arsenide continued**

self-diffusion of Ga, radiotracer study 2-16841  
 semi-insulating, deep donor, near IR optical absorpt. 2-17507  
 semi-insulating bulk-grown, selective excitation luminesc. 2-51641  
 semiconductor devices, collisional broadening effect on Monte Carlo simulations of high-field transport 2-17079  
 SIMS of Cr impurities in undoped samples 2-1509  
 single step selective implantation technology using proximity annealing, 10 GHz FET fabrication 2-16666  
 solar cell, MOS thin-film, steel substrate passivation with tungsten layer 2-2791  
 solar cell arrays, monolithic 2-37403  
 solar cell radiation damage, annealing, thermally and by minority carrier injection 2-27660  
 solar cell radiation damage and thermal annealing, conc. of vacancies, divacancies, thermochem. model 2-27661  
 solar cells, development review (*Croatian*) 2-47479  
 solar cells, electron and proton damage coefficients and thermal annealing 2-37284  
 solar cells, optical characterisation, computer-controlled instrumentation, spectral photoresponse, reflectivity, transmissivity, GaAs and stacked cells 2-37388  
 solar cells, optimum sunlight conc. in space, determ. 2-27663  
 solar cells, physics, book contrib. 2-52357  
 solar cells, status and prospects for space appls. 2-27650  
 solar cells, thin film homojunction, characts. 2-22614  
 solar cells for space applications 2-27651  
 solar cells for space missions, technology requirements 2-37291  
 solar cells with distributed parameters, I-V characts. effect of ohmic losses 2-18055  
 structural defects, dynamic characts., internal friction method 2-1555  
 substrate, asymm. triangular grating profiles produced by ion-beam erosion 2-1047  
 substrate, Cr, Si, Mn, and Fe distrib. after annealing with and without SiO<sub>2</sub> encapsulant 2-30478  
 substrate, dislocation behaviour during LPE of Ga<sub>x</sub>Al<sub>1-x</sub>As 2-1480  
 substrate for Ga<sub>0.5</sub>In<sub>0.5</sub>P film, anisotropic theory of crystal-film interface 2-5311  
 substrate for InSb sputtered coating, elastic stress, X-ray diffr. study 2-16974  
 substrates, monolayer-Sn technique for solving substrate film interface high resist. problem in MBE 2-26243  
 superlattice, periodic doping structures grown by MBE, space charge field of impurities, cond. modulation 2-8870  
 superlattice, simultaneous modulation of electron and hole conductivity 2-51297  
 superlattice obs. of tunable band gap and 2-D subbands, luminesc. and Raman meas. 2-2232  
 surface, (110), chemisorption of Cl (*Chinese*) 2-26205  
 surface, (110), Cl chemisorption 2-8708  
 surface, (110), H<sub>2</sub>O dosed, photon stimulated ion desorption of H<sup>+</sup> ions 2-1740  
 surface, (110), models of column III and V element overlayers, appl. to MBE 2-12935  
 surface, (110), tight binding calc. (*Chinese*) 2-30943  
 surface, (110) bonding of column 3 and 5 atoms 2-30728  
 surface, (111), Ga adsorpt., total-current spectra fine struct. 2-17583  
 surface, (111), pulsed laser annealing, LEED study 2-45267  
 surface, Al MBE growth, TEM and Rutherford backscatt. study 2-45760  
 surface, high resolution EELS, review 2-27040  
 surface, ion bombarded, channelling-backscatt. study, dechannelling correction 2-16697  
 surface, thin native oxide covered, interfacial chemical reactivity of metal contacts 2-8879  
 surface {100}, condensed Pb films, thermal desorption spectra 2-21437  
 surface {001}, MBE growth, valence bands, angle-resolved photoemission study 2-36761  
 surface {001}c(4×4), submonolayer growth of Au, AES and RHEED study 2-1793  
 surface {100}, cathodoluminesc. lifetime pattern meas. 2-31563  
 surface {100}, low energy Ar ion bombard. damage, Rutherford backscatt. study 2-36750  
 surface {110}, MBE growth of Al film 2-51812  
 surface {110}, O and metal overlayers, synchrotron radiation study, book contrib. 2-36766  
 surface {110} band bending, phonon-plasmon coupled modes, Raman scatt. study 2-9146  
 surface {110} core excitations, ab initio calc. 2-8850  
 surface {110} core excitons, binding energies and oscill. strengths 2-8852  
 surface chemistry and interface Fermi level position, single defect model 2-26460  
 surface core level shifts, Madelung pot. effect 2-30949  
 surface electron scatt., diffusivity and mean free path (*Russian*) 2-13127  
 surface EM waves in far IR 2-4615  
 surface oxidation, composition changes 2-52086  
 surface potential, Kelvin probe method, photoemission (*French*) 2-5449  
 surface reconstruction, angle integrated photoemission study 2-8695  
 thermal oxidation, anomalously rapid 2-52084  
 thin-film MOS solar cells, 10 μm film thickness, characts. 2-37398  
 thin-film solar cells 2-37308  
 time-resolved reflectivity and transmission under intense laser excitation 2-17435  
 transient transport phenomena 2-17092  
 ultrasonic attenuation coefficient, temp. and frequency dependence 2-35597  
 ultrathin films, used for solar cell construction 2-47490  
 undoped semi-insulating, growth by liquid encapsulated Czochralski method 2-12622  
 VPE, in AsCl<sub>3</sub>-Ga-N<sub>2</sub> system 2-46936  
 VPE grown, elec. and optical props. of deep levels 2-8768  
 VPE growth in low press. halogen transport system 2-17632  
 VPE in Cl system 2-46935  
 VPE layers, implemented and annealed, elec. and optical props. 2-46164  
 XPS, angle-resolved, for solid surface characterisation 2-5794  
 Z 2-51167  
 zone melting furnace heat pipe assisted, for single cryst. growth 2-27078  
 A GaAs-GaAs heterojunction, selective dry etching 2-26486  
 (Al,Ga)As DH injection laser with asymm. gain distrib., computer model 2-44291  
 (Al,Ga)As epilayers, and DH lasers, minority carrier lifetime and luminescence 2-8807

**gallium arsenide continued**

(Al,Ga)As heterostruct. fabricated by isothermal diffusion of Al, props. 2-12941  
 (Al,Ga)As multilayers, efficient luminesc. band created by athermal laser processing 2-9177  
 (Al,Ga)As, use of sapphire liners to eliminate edge growth in LPE 2-13661  
 (Al,Ga)As/GaAs heterostructures, molecular beam epitaxy growth 2-36789  
 (Al,Ga)As-GaAs heterostructures, growth monitoring and characterisation, ellipsometry 2-6890  
 (Al,Ga)As-GaAs heterostruct., electron mobility, background doping effect 2-26483  
 Al/GaAs, plasma anodisation, composite oxide film formation, AES study 2-52075  
 Al-GaAs (110), exchange reaction, angle integrated photoemission study 2-8695  
 Al-GaAs interfaces, at. geometry, soft XPS and elastic LEED studies 2-8714  
 Al-SiO<sub>2</sub>-GaAs-n<sup>+</sup>-GaP, MIS light modulators using Franz-Keldysh effect 2-4585  
 AlAs-Al<sub>0.1</sub>Ga<sub>0.9</sub>As-GaAs superlattices, absorpt., stimulated emission and clustering 2-46794  
 AlAs-GaAs MBE superlattice, photolum., 0.7 to 0.08 μm 2-2329  
 AlAs-GaAs solid solns., Al and Ga density profiles determ. by SIMS 2-17950  
 AlAs-GaAs superlattice, absorption and stimulated emission 2-31526  
 Al<sub>0.1</sub>Ga<sub>0.9</sub>As-GaAs heterojunction FET, magnetoconductance, g-factor, gate voltage 2-41003  
 AlGaAs CSP laser, used in optical switch 2-34783  
 AlGaAs constricted DH laser, low threshold current temp. sensitivity 2-29819  
 AlGaAs constricted double-heterojunction diode lasers, structs. and electrophysical characts. 2-34789  
 AlGaAs, DH IR source, luminesc., external quantum efficiency, rough and smooth emitting surfaces 2-51712  
 AlGaAs DH laser, highly RF modulated, effect of cavity length on picosecond pulse generation 2-29832  
 AlGaAs DH laser amplifiers, signal gain, freq. bandwidth, saturation output power 2-16049  
 AlGaAs DH laser diodes, Si optical bench for reproducible optical feedback path 2-29889  
 (AlGa)As DH lasers, molecular beam epitaxy for optical communication systems 2-34793  
 (AlGa)As DH lasers, MBE grown, CW aging 2-39646  
 AlGaAs DH lasers, modulation characts. in 6 to 10 GHz range 2-39651  
 AlGaAs DH wavelength multiplexing injection laser source with graded comp. along active layer 2-919  
 AlGaAs diode laser, RF modulated, generation of ultrashort optical pulses (*Japanese*) 2-4542  
 AlGaAs diode laser, subpicosecond coherent optical pulse generation by passive mode locking 2-44354  
 (AlGa)As, graded index waveguide separate confinement heterostruct. laser, MBE grown 2-49773  
 AlGaAs high-bandgap solar cell for 10-unit dichroic filter spectral splitter module 2-27571  
 (AlGa)As injection laser, metallisation and heat sink problems 2-4519  
 AlGaAs injection locked semiconductor laser, optical phase modulation 2-49778  
 AlGaAs injection-locked semiconductor laser, optical FM signal amplification and FM noise reduction 2-16039  
 AlGaAs lasers, narrow proton-implanted, for audio/video discs, optical communication and recording 2-7802  
 AlGaAs lasers with micro-cleaved mirrors suitable for monolithic integration 2-49774  
 AlGaAs, layers growth by OM-VPE 2-8723  
 AlGaAs mode-locked diode lasers, oscillation characts. of coherent ultrashort optical pulses 2-25012  
 AlGaAs, organometallic VPE grown, characterisation for solar cell appls. 2-30762  
 AlGaAs oxide stripe CW lasers, spatial mode stability during aging 2-7764  
 AlGaAs, short wavelength laser and LEDs, role of buffer layers in reducing degradation 2-934  
 AlGaAs stripe-geometry DH lasers with soft turn-on, extinction ratio 2-34753  
 AlGaAs window stripe laser, optimum design conditions 2-7787  
 n-AlGaAs:Be, p-n junction formation by Be<sup>+</sup> implantation 2-51287  
 AlGaAs/GaAs, semiconductor laser amplifiers (*Japanese*) 2-34754  
 AlGaAs/GaAs concentrator solar cell array, high efficiency-large area for concentrating photovoltaic array of 1 kWp, construction and performance 2-42017  
 AlGaAs/GaAs high efficiency cascade solar cells, efficiencies of 15% at AM0 and 16.4% at AM1 2-32083  
 AlGaAs/GaAs solar cells high conc./photovoltaic module, development and testing 2-27574  
 AlGaAs/GaAs solar cells, high efficiency with high resist. to radiation damage 2-27696  
 AlGaAs-GaAs concentrator solar cells, fabrication by OM-VPE and LPE, performance and durability 2-32085  
 AlGaAs-GaAs heterostructures, LPE growth for solar energy conversion 2-46952  
 AlGaAs-GaAs laser with external dispersive resonator, bistable operation and spectral tuning 2-34817  
 AlGaAs-GaAs lasers, MO-CVD grown, review 2-7765  
 AlGaAs-GaAs solar cells, deep-level defects, low temp. periodic annealing effects 2-32066  
 AlGaAs-GaAs solar cells, proton irradi., radiation-induced deep-level defects, annealing, DLTS, SEM 2-32084  
 AlGaAs-GaAs-AlGaAs struct., phonon scatt. of electron gas 2-36131  
 Al<sub>0.4</sub>Ga<sub>0.6</sub>As:Ge LPE film, dislocation clusters, TEM obs. 2-45762  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs, superlattice avalanche photodiode, large ionisation rate ratio 2-51289  
 Al<sub>0.1</sub>Ga<sub>0.9</sub>As, alloy clustering effects on impact ionisation 2-46008  
 Al<sub>0.1</sub>Ga<sub>0.9</sub>As buried heterostruct. laser, single mode operation by loss stabilisation 2-7788  
 Al<sub>0.1</sub>Ga<sub>0.9</sub>As, comp. change w.r.t. LPE temp. (*Russian*) 2-16967  
 Al<sub>0.1</sub>Ga<sub>0.9</sub>As DH laser, deep level luminesc., spatial distrib. 2-915  
 Al<sub>0.1</sub>Ga<sub>0.9</sub>As epilayers, mm thick, Peltier-induced LPE and compositional control 2-5318  
 Al<sub>0.1</sub>Ga<sub>0.9</sub>As epilayers, MBE, protection during ambient transfer 2-5815



## gallium arsenide continued

Al,Ga<sub>1-x</sub>As, epitaxial layer, MBE growth 2-21469  
 Al,Ga<sub>1-x</sub>As films, VPE grown in inorganic transport systems 2-13653  
 Al,Ga<sub>1-x</sub>As, grown by MOVPE, luminescence 2-9182  
 Al,Ga<sub>1-x</sub>As grown by MBE, photoluminescence studies 2-13532  
 Al,Ga<sub>1-x</sub>As injection heterojunction laser with high pulsed power 2-20329  
 Al,Ga<sub>1-x</sub>As modified multiquantum well heterostructure lasers, MBE grown, extremely low threshold operation 2-20304  
 Al,Ga<sub>1-x</sub>As, OMVPE growth 2-5820  
 Al,Ga<sub>1-x</sub>As p-n junction solar cells, grown-in deep-level defects 2-37393  
 Al,Ga<sub>1-x</sub>As, photoluminesc. with graded forbidden band under pulsed excitation 2-13545  
 Al,Ga<sub>1-x</sub>As, photoluminescence, carrier mobility and lifetime determ. 2-41424  
 Al,Ga<sub>1-x</sub>As Schottky barriers and p-n junctions, current-voltage characts. 2-5452  
 n-Al,Ga<sub>1-x</sub>As, Schottky barrier, MBE growth, deep levels, substrate growth temp. effects, DLTS study 2-17009  
 Al,Ga<sub>1-x</sub>As solid solns., epitaxial, variable composition, surface recombination (*Russian*) 2-1925  
 Al,Ga<sub>1-x</sub>As solid solution, elec. cond. slow relax. 2-45987  
 Al,Ga<sub>1-x</sub>As:Cr variable gap semicond. solid solns., deep impurity centres and impurity photoluminescence 2-17025  
 Al,Ga<sub>1-x</sub>As:Ge(Sn)(Te) epitaxial layers, photolum. rel. to surface composition (*Russian*) 2-9189  
 Al,Ga<sub>1-x</sub>As:Si graded-band-gap p-n structs., photoluminescence spectra 2-13528  
 Al,Ga<sub>1-x</sub>As:Sn, MBE grown, photolum. spectrum, As/Ga flux ratio effect 2-5734  
 n-Al,Ga<sub>1-x</sub>As:Te, heavily doped, photolum. in indirect energy gap region 2-2324  
 Al,Ga<sub>1-x</sub>As-AlAs-GaAs quantum well heterostruct., size fluctuations and laser operation 2-25011  
 Al,Ga<sub>1-x</sub>As-GaAs, V shaped DH laser, metalorganic CVD growth and properties 2-20323  
 Al,Ga<sub>1-x</sub>As-GaAs heterostructure, modulation doped, MBE grown, electron mobility study 2-8865  
 Al,Ga<sub>1-x</sub>As-GaAs heterostructures, carrier mobility enhancement 2-36130  
 Al,Ga<sub>1-x</sub>As-GaAs heterojunction FET, magnetoconductance, g-factor 2-41002  
 Al,Ga<sub>1-x</sub>As-GaAs heterojunction, selectively doped, cyclotron reson. linewidth 2-51467  
 Al,Ga<sub>1-x</sub>As-GaAs quantum-well heterostruct. lasers, MBE growth, clustering and phonon effects 2-4510  
 Al,Ga<sub>1-x</sub>As-GaAs quantum-well heterostructure laser, transient and noise characts. 2-7767  
 Al,Ga<sub>1-x</sub>As-GaAs quantum-well heterostruct. lasers, MBE grown, alloy clustering, photoluminesc. study 2-44336  
 Al,Ga<sub>1-x</sub>As-GaAs quantum well heterostruct. laser, photopumped, CW 7270 Å operation at 300K 2-49746  
 AlGaSb/GaInAsSb/GaSb laser, light confinement and divergence 2-44364  
 AlGaSb/GaSb laser, light confinement and divergence 2-44364  
 AlGaSb-GaAsSb cascade solar cells, elec. and spectral response characts. 2-37394  
 Al<sub>0.48</sub>In<sub>0.52</sub>As<sub>0.52</sub>As/Ga<sub>0.47</sub>In<sub>0.53</sub>As/Al<sub>0.48</sub>In<sub>0.52</sub>As DH laser, MBE grown 2-7791  
 Au/Ni/SnNi/n-GaAs interface, ohmic contact form. 2-41010  
 Au-GaAs Schottky barrier, deep centres, photoionisation cross sections and optical charging rates 2-13012  
 Au-n-GaAs Schottky barrier diodes, ion beam damage during low energy cleaning 2-50721  
 AuGe-GaAs ohmic contact, low temp., sintered 2-51301  
 Cu<sub>1-x</sub>S-GaAs heterojunction photoconverter 2-22651  
 (Ga,Al)As-GaAs heteroepitaxial layers, stacking faults and substructure 2-35515  
 (Ga,In)As alloys, on InAs substrates, substrate instability during LPE growth 2-2466  
 Ga-InAs, MOCVD 2-5829  
 GaAs photovoltaic systems for combined heat/electricity generation, using high solar concentration ratios 2-37245  
 GaAl As LPE layers, Al profiles, appl. of method for fitting error functions to data 2-8738  
 GaAlAs bistable CW injection heterolaser 2-34756  
 GaAlAs channel-substrate-planar lasers with elevated facet reflectivities, operating characts. 2-910  
 GaAlAs, channelled substrate planar and V-groove lasers, microwave-induced oscillations 2-4507  
 GaAlAs DH diode laser wavefront meas. and anal. 2-25049  
 GaAlAs DH injection laser, coherent reception, multimode. effects 2-38688  
 GaAlAs DH laser, strain related degradation phenomena, SEM cathodoluminescence and induced current study 2-39652  
 GaAlAs DH laser diode, optical source for fibre-optical digital communication 2-7880  
 GaAlAs DH shallow proton stripe laser grown by metalorganic CVD, current threshold uniformity 2-44283  
 GaAlAs, growth by low-pressure MO-CVD, gettering of O<sub>2</sub> 2-5821  
 GaAlAs heterostructure, screening of scatt. fields by carrier space charge, theory 2-13172  
 (GaAl)As injection laser linewidth measurements, CW longit. mode struct. 2-7768  
 (GaAl)As injection lasers, mode locking study 2-11697  
 GaAlAs laser, spectrum-narrowing ratio determ. by optical feedback 2-39647  
 GaAlAs laser frequency stabilisation using automatic freq. control system 2-4527  
 GaAlAs lasers, second-harmonic generation, use of KNbO<sub>3</sub> waveguides 2-29850  
 GaAlAs p-n junction characters., effect of X-ray irradiation (*Russian*) 2-30965  
 (GaAl)As single-mode injection laser, power-depend. linewidth meas. 2-7769  
 GaAlAs single-mode laser, dynamic wavelength tuning 2-7770  
 GaAlAs substrate, Au-Sn-Al metallisations, interfacial struct. study 2-8713  
 GaAlAs, volume photovoltaic effect in case of high rates of carrier prod. and radiative recomb. 2-27605  
 GaAlAs:Cr<sup>2+</sup>, luminesc. of Cr<sup>2+</sup> internal transition 2-51661

## gallium arsenide continued

GaAlAs:Sn, thin layer emitters, luminescence and Sn-X centres 2-46772  
 GaAlAs/GaAs, DH single-mode injection lasers for optical fibre communication 2-16143  
 GaAlAs/GaAs concentrator solar cells, nonlinear response to solar insolation 2-27698  
 GaAlAs/GaAs double heterostructures, for opto-electronic devices, MOCVD growth 2-9283  
 GaAlAs/GaAs multilayer monolithic integration of active and passive components for integrated optics 2-11868  
 GaAlAs-GaAs DH lasers, low threshold narrow stripe, controlled Zn diffusion 2-7790  
 GaAlAs-GaAs heteroface solar cell, window layer thickness, reflection loss minimisation 2-6140  
 GaAlAs-GaAs heterojunction solar cells with different contact materials, thermal stability 2-27653  
 GaAlAs-GaAs multilayer structures, monolithic integration of optoelectronic, electronic and passive components 2-49945  
 GaAlAs-GaAs oxide stripe laser, low degradation rate, high performance 2-926  
 Ga<sub>0.68</sub>Al<sub>0.32</sub>As:Te(Zn) laser pumped by electron beam, cathodolum. and threshold current density, doping influence 2-7766  
 Ga<sub>0.7</sub>Al<sub>0.3</sub>As-GaAs heterostructure laser, electron-beam-pumped, operating at low accel. voltages 2-34760  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, conduction band structure from Hall mobility measurements at high pressures 2-46030  
 Ga<sub>1-x</sub>Al<sub>x</sub>As DH laser, threshold current temp. depend., 0.74 to 0.9 μm 2-7762  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, deep impurities, cross-section for photoionisation to conduction bands 2-35968  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, disorder activated Raman scatt. 2-2244  
 Ga<sub>1-x</sub>Al<sub>x</sub>As electron-beam-pumped laser, oxide film influence on threshold current density 2-34822  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layers, Hall to drift mobility ratio 2-8821  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layers, electron mobility 2-13076  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layer, intervalley scatt., Hall mobility study 2-17062  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, epitaxial layers, Raman scatt. study 2-46577  
 Ga<sub>1-x</sub>Al<sub>x</sub>As heteroepitaxial layers, coherent, on-axis layers, characterisation by X-ray multiple diffr. technique 2-1783  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, hot electron transport, expt. and Monte Carlo simulation 2-46001  
 Ga<sub>1-x</sub>Al<sub>x</sub>As injection laser, second-harmonic generation by KNbO<sub>3</sub> crystal 2-16062  
 Ga<sub>1-x</sub>Al<sub>x</sub>As injection light source radiation, electron-beam control 2-34759  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, local field effects and IR optical props. 2-22028  
 Ga<sub>1-x</sub>Al<sub>x</sub>As MBE layers, alloy clustering 2-40740  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, MO-CVD growth, quantum well transport structs. 2-9282  
 Ga<sub>1-x</sub>Al<sub>x</sub>As n<sup>+</sup>/p<sup>+</sup> tunnel junction, MBE, ohmic contact for cascade solar cell 2-6141  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, photocond. storage obs. at low temp. 2-46071  
 Ga<sub>1-x</sub>Al<sub>x</sub>As solid solns., epitaxial film prep. from gas phase, deposition thermodynamics 2-13651  
 Ga<sub>1-x</sub>Al<sub>x</sub>As structs., varying band gap, for solar cells, liquid phase epitaxy 2-21467  
 p-Ga<sub>1-x</sub>Al<sub>x</sub>As:Ge, LPE grown, charge compensation, photoluminescence spectrum 2-17517  
 Ga<sub>1-x</sub>Al<sub>x</sub>As:Se, donor energy levels, elec. cond. and electron conc. study 2-51106  
 Ga<sub>1-x</sub>Al<sub>x</sub>As:Si epitaxial layers, free-to-bound transitions, photoluminesc. study 2-22072  
 Ga<sub>1-x</sub>Al<sub>x</sub>As/Ga<sub>1-y</sub>Al<sub>y</sub>As DH lasers, facet degradations 2-44294  
 Ga<sub>1-x</sub>Al<sub>x</sub>As-GaAs heterojunction lasers, accelerated life tests, temp. interval optimisation 2-44300  
 Ga<sub>1-x</sub>Al<sub>x</sub>As-GaAs heterojunction lasers, reliability forecasting 2-44301  
 Ga<sub>1-x</sub>Al<sub>x</sub>As-GaAs interfaces, nondestructive charact. using nucl. profiling 2-12921  
 Ga<sub>x</sub>Al<sub>1-x</sub>As epitaxial layers on GaAs, morphology and misfit dislocations 2-5319  
 Ga<sub>x</sub>Al<sub>1-x</sub>As, heterostructure MESFET devices, LPE 2-1802  
 Ga<sub>x</sub>Al<sub>1-x</sub>As LPE growth, GaAs substrate dislocation behaviour 2-1480  
 Ga<sub>x</sub>Al<sub>1-x</sub>As MBE growth, volatile metal oxide incorporation 2-12936  
 Ga<sub>1-x</sub>Al<sub>x</sub>As<sub>1-y</sub>Sb<sub>y</sub>, energy band gap calc. using dielec. theory of electronegativity 2-8755  
 Ga<sub>1-x-y</sub>Al<sub>x</sub>In<sub>y</sub>As, energy band gap calc. using dielec. theory of electronegativity 2-8755  
 GaAs:Cr, π-type, semi-insulating, Cr concentration determ. on basis of temp. dependencies of electron mobility and carrier concentration ratio (*Slovak*) 2-51200  
 GaAs (100) planes, grating corrugation form (*Chinese*) 2-20400  
 GaAs (100)-Al, interface behaviour and crystallographic relationships 2-8715  
 GaAs (110)-Al interface, initial stage of formation 2-8881  
 GaAs (110)-In(Ge), interface form., surface reconstruction 2-46112  
 GaAs, compensation mechanisms related to deep B implantation 2-50678  
 GaAs dendritic web, grown by liq. encapsulation, characterisation 2-2427  
 GaAs epilayers, growth by MOCVD, appl. to microwave MESFETs 2-5834  
 GaAs, epitaxial layer, MBE growth 2-21469  
 GaAs epitaxial layers, by low pressure MOVPE, using triethylgallium as Ga source 2-5817  
 GaAs epitaxial thin film solar cell fabrication using organometallic CVD, single-crystal Si substrates 2-37369  
 GaAs, expt. determ. of bonding of III and V elements 2-35871  
 GaAs, growth rate anisotropy and growth in gas transport systems 2-27065  
 GaAs, high purity prepared from trimethylgallium and arsine 2-5816  
 GaAs lasers, longitudinal mode control using three mirror active passive cavity 2-20333  
 n-GaAs, Monte Carlo modelling of hot electron behaviour 2-40926  
 p-GaAs, non-alloyed ohmic contacts, using MO-CVD contact layers 2-46938  
 GaAs, organometallic VPE grown, characterisation for solar cell appls. 2-30762  
 n-GaAs, positron annihilation study of radiation defects due to proton irradi. 2-2366  
 n-GaAs, proton implanted, IR absorpt. 2-34886  
 GaAs single cryst. film growth, by sputter deposition, ion-surface interaction effects 2-46921



## gallium arsenide continued

GaAs single-mode DH lasers using three-mirror active-passive cavity, longit.-mode control 2-11700  
 GaAs substrate, semi-insulating, effect of Cr-doping on device quality 2-45767  
 GaAs, VPE in China, review 2-46937  
 GaAs, vapour phase epitaxy, flow channel reactor 2-46934  
 p-GaAs,  $\Sigma$  2-17114  
 GaAs:As<sup>+</sup>, ion implanted layers, solid phase epitaxial regrowth 2-16960  
 GaAs:B(Si)(Se), ion implanted, stoichiometric disturbances 2-1501  
 GaAs:Be MBE layers, photoluminescence study 2-31543  
 GaAs:Be(Zn) MBE and LPE layer photocathode struct., photoelectron spin polarisation 2-46867  
 GaAs:C, implanted, IR localised mode vibr. spectroscopy, annealing temp. depend. 2-17509  
 GaAs:C, ion implanted, photolum. study 2-17512  
 GaAs:Cd<sup>2+</sup>, ion-doped films, elec. props. 2-21701  
 GaAs:Cr, compensated, nonequilib. carrier recomb., Cr impurity centre role, photoelec. props. and luminesc. 2-30928  
 GaAs:Cr, defects in III-V semicond., EPR studies, review 2-31285  
 GaAs:Cr, diffused, photoluminescence study 2-36694  
 GaAs:Cr, dislocation density variation 2-30468  
 GaAs:Cr, intrinsic density, band gap and effective mass parameters, Cr acceptor capture coeff. 2-51203  
 GaAs:Cr, ion implanted, stoichiometric disturbances and Cr redistrib. during annealing 2-21161  
 GaAs:Cr, ion-implanted, depth distrib., range-energy data and shape factors 2-1500  
 GaAs:Cr, luminescence, no phonon at 0.84 eV, Zeeman and axial stress splitting calc. 2-51659  
 GaAs:Cr, no-phononluminescence, ground set of states 2-41402  
 GaAs:Cr, phonon scatt. by impurities, thermal cond. meas. 2-8584  
 GaAs:Cr, phonon scatt. by Cr ions, uniaxial stress effect, thermal cond. meas., 50 mK to 100K 2-45648  
 GaAs:Cr, phonon spectra, supercond. tunnel junction meas. 2-50798  
 GaAs:Cr, photoluminescence anisotropy, high mag. field Zeeman splitting 2-22090  
 GaAs:Cr, subMM EPR obs. of impurity centres 2-2131  
 GaAs:Cr, symmetric struct., impurity carrier traps, electroluminescence study 2-26995  
 GaAs:Cr amorphous film, hopping conduction 2-41032  
 GaAs:Cr in metal-semicond.-metal structures I-V characts. (Slovak) 2-40920  
 GaAs:Cr n<sup>+</sup>-n-n<sup>+</sup> diode struct., magnetosensitivity, effect of strong carrier accumulation 2-46119  
 GaAs:Cr S-type diode, photoelec. props., neg. resistance under reverse bias 2-1959  
 GaAs:Cr S-type diodes, impedance under double injection conditions, switching mechanism 2-30962  
 GaAs:Fe, heat treated substrate, photoluminescence props. studies 2-13531  
 GaAs:Fe, impurity redistrib. on annealing, saturation density 2-1508  
 GaAs:Fe p- $\pi$ -n-n struct., current-voltage characts. and electrolum. study 2-13178  
 GaAs:Ge LPE film, dislocation clusters, TEM obs. 2-45762  
 GaAs:Ge MBE layers, elec. behaviour obs., autocompensation mechanism 2-51361  
 GaAs:Ge(Se), epitaxial, study of donors, far IR photoconductivity and high mag. fields 2-1864  
 GaAs:Ge(Se), neutron transmutation doping, elec. and physical props. 2-12619  
 GaAs:H, amorphous, RF sputtering and optical props., H<sub>2</sub> partial press. effect 2-40730  
 GaAs:Mn, heat treatment below Si<sub>3</sub>N<sub>4</sub> encapsulant of Mn implant, dopant profiles and diffusion mechanism (French) 2-5897  
 GaAs:Mn, photoresistive detector, elec. and photoelec. props. 2-36101  
 GaAs:Mn,Fe, heat treatment effects on surfaces, thermal redistrib. of impurities 2-5151  
 GaAs:Nb, impurity luminesc., intracentre transitions 2-51703  
 GaAs:O, implanted, redistribution of O 2-50687  
 GaAs:O(C), crystal microstruct., impurities effect, TEM study 2-40419  
 n-GaAs:S, electron irradi., As anti-site defects, EPR study 2-36429  
 n-GaAs:S, MBE layers, electrochem. S doping 2-45222  
 GaAs:Sb, reson. Sb level, photocond. study 2-21537  
 GaAs:Se, electron beam annealing, multiply-scanned beam method 2-1526  
 GaAs:Se, electron beam annealing, multiply-scanned beam method 2-8542  
 GaAs:Se, ion implantation, substrate orientation effects 2-25915  
 GaAs:Se(S), impurity profile, implantation temp. and crystallinity depend. 2-40423  
 GaAs:Si, heavily doped, annealing-induced changes, Si defect conc. depend. 2-30889  
 GaAs:Si, implanted, multiply scanned electron beam annealing 2-45211  
 GaAs:Si, ion implanted and annealed, carrier conc. profiles, C-V meas. techniques 2-12623  
 GaAs:Si, MBE growth, effect of growth conditions on Si doping 2-21449  
 GaAs:Si (Te), cathodoluminescence and dislocation struct. 2-31566  
 GaAs:Si epitaxial p-n junctions, injection luminesc. 2-46773  
 GaAs:Si growth using MBE evaporation source cell design 2-51819  
 GaAs:Si MBE layer, doping 2-12616  
 GaAs:Sn, laser implantation, impurity distrib. 2-35518  
 n-GaAs:Sn, laser-assisted doping from Sn evaporated films, ohmic contact form. 2-35521  
 GaAs:Te, heavily doped, degenerate, photoluminescence 2-26979  
 GaAs:Te, ion implanted, laser annealing, Mossbauer spectroscopy study 2-30481  
 GaAs:Te,Zn, heavily doped material with p-n junction, SEM local cathodolum. obs. 2-46776  
 GaAs:Te(Si), Cr<sup>2+</sup>, surface (110) photovoltage spectroscopy of Cr<sup>2+</sup> 2-26462  
 GaAs:Zn, annealed, diffusion profiles meas. 2-26139  
 GaAs:Zn, nonequilib. substitutional-interstitial Zn diffusion, photoluminesc. study 2-16899  
 GaAs:Zn, polycrystalline, optoelectronic props. rel. to grain boundary features, cathodoluminesc. anal. 2-36713  
 GaAs:Zn<sup>2+</sup>, implanted layers, photoluminescence study 2-41422  
 GaAs:Zn(Mg)(Si)(Se) ion-implanted homojunction solar cells, pulsed ruby laser annealing, SEM, TEM and SIMS meas. 2-27662  
 GaAs:Zn(Se), ion implanted, annealed, TEM study 2-25894  
 GaAs/AlGaAs TJIS lasers, gain suppression 2-7759

## gallium arsenide continued

GaAs/Au-Ge ohmic contacts, laser annealed, resistivity and SIMS profile 2-26497  
 GaAs/GaAlAs curved rib waveguides, loss value meas. 2-11867  
 GaAs/GaAlAs injection lasers, grown by MOCVD 2-7801  
 GaAs/GaAlAs lasers, MO-CVD grown, props. as function of stripewidth 2-34790  
 GaAs/n-AlGaAs heterostructures, selectivity doped, high mobility electrons, high-speed devices appl. 2-36790  
 p-GaAs/P-Ga<sub>1-x</sub>Al<sub>x</sub>As isotype heterojunction in DH laser materials 2-46111  
 n-GaAs/propylene carbonate electrochem. photovoltaic cells 2-27712  
 GaAs-(Al,Ga)As heterostructure growth, qualitative and quantitative assessments by fast ellipsometers 2-8730  
 GaAs-(Al,Ga)As heterostructs., light scatt. spectroscopy of electrons, rel. to transport props. 2-13500  
 GaAs-(Al,Ga)As heterojunction interfaces, modulation doped, electron mobility depend. on electron density and Al conc. 2-21662  
 GaAs-(Al,Ga)As heterostructure, coupled electron-LO phonon excitation 2-50808  
 GaAs-Al interface, chemical reaction study 2-12857  
 GaAs-Al<sub>0.25</sub>Ga<sub>0.75</sub>As multiquantum well struct., resonant degenerate four-wave mixing 2-44401  
 GaAs-Al<sub>0.2</sub>Ga<sub>0.8</sub>Sb non-lattice matched stacked solar cells, laser bonding 2-37407  
 GaAs-Al<sub>2</sub>O<sub>3</sub> devices I-V characts., hopping cond., space-charge-limited currents 2-51329  
 GaAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As, heterojunctions and superlattices, band struct., effective mass approx. tight binding calc. 2-51292  
 GaAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As DH laser, basic props. 2-4508  
 GaAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As diode struct. elec. charact., gamma radiation effect 2-46125  
 GaAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As heterostructure, modulation doped surface and interface proximity effect on quantum melt electron mobilities 2-13170  
 GaAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As heterojunctions, exciton excited levels 2-13551  
 GaAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As heterostruct., Hall effect, fine struct. const. determ. 2-28831  
 GaAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As multiquantum well structures, opt. props. and interface disorder, growth-temp. optimisat- ion 2-8869  
 GaAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As superlattice, energy levels and cond. in appl. mag. field 2-8866  
 GaAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As submicron heterostructs., IR optical characterisation 2-17565  
 GaAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As superlattices, as sources of polarised photoelectrons 2-17595  
 GaAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As superlattice, mag. quantisation and transport 2-26492  
 GaAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As selectively doped multilayer systems, reson. inelastic light scatt., single particle and collective excitons 2-26493  
 GaAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As:Si interface, far IR emission from 2D electrons 2-2336  
 GaAs-AlAs (100) superlattice, vacancy induced band gap levels 2-45883  
 GaAs-AlAs heterojunction band discontinuities, XPS meas., growth sequence depend. 2-13619  
 GaAs-AlAs interface, antisite defect 2-26321  
 GaAs-AlAs superlattice, phonons, Raman scatt. study 2-51587  
 GaAs-AlGaAs DH injection laser, active layer radiative processes in strong mag. field 2-49751  
 GaAs-AlGaAs DH laser with p-type active layer, operation in mag. field 2-7761  
 GaAs-AlGaAs DH system, monolithic integration of optical sources and detectors, processing techniques 2-4611  
 GaAs-AlGaAs heterojunction interface, backside-gated modulation-doped 2-8862  
 GaAs-AlGaAs interface, hot electron effects in 2D electron gas 2-51291  
 n-GaAs-anodic oxide interface, props., anal. using MOS theory 2-41015  
 n-GaAs-Au Schottky barrier height increase, Fermi energy pinning behaviour 2-5451  
 GaAs-AuGe/Pt pulsed electron beam alloyed ohmic contacts, reliability 2-5458  
 GaAs-Cu(Ag)(Zn)(Sn)(Al) contacts, metal diffusion, penetration depth, SEM and microprobe anal. 2-40701  
 GaAs-electrolyte junction, flat band pot., electroreflectance study 2-17156  
 GaAs-Ga<sub>1-x</sub>Al<sub>x</sub>As channel injection heterojunction laser characts. 2-4511  
 GaAs-Ga<sub>1-x</sub>Al<sub>x</sub>As multilayer epitaxial heterocomps., elec. active defects, combined SEM and TEM obs. 2-50620  
 GaAs-Ga<sub>1-x</sub>Al<sub>x</sub>As stripe geometry DH laser, threshold current, self consistent calc. 2-44296  
 GaAs-Ga<sub>1-x</sub>Al<sub>x</sub>As V-groove lasers for fibre-optic communications 2-7881  
 GaAs-Ga<sub>2/3</sub>Se solid solns., EXAFS study 2-41454  
 GaAs-Ga<sub>2</sub>Al<sub>3</sub>As DH and multiple quantum well superlattices, luminesc. props. and struct. 2-46779  
 GaAs-GaAlAs, DH laser grown by metalorganic CVD process 2-937  
 GaAs-GaAlAs, selective MOCVD epitaxy for optoelectronic devices 2-5833  
 GaAs-GaAlAs, stripe DH laser, Zn-diffused, metalorganic CVD grown 2-49772  
 GaAs-GaAlAs DH lasers, nonradiative lifetime and leakage losses 2-7763  
 GaAs-GaAlAs diode laser, multiple segment stripe contact, effect of non-uniform current 2-935  
 GaAs-GaAlAs flat-band semicond. heterostructures, electronic props. 2-1994  
 GaAs-GaAlAs heterojunction, localisation and interaction effects in electron gas 2-21664  
 GaAs-GaAlAs heterostructure, Gunn oscillation optically triggered by 1.06 micron radiation 2-17077  
 GaAs-GaAlAs injection lasers, state of the art, operating parameters and limitations rel. to apps. 2-4525  
 GaAs-GaAlAs integrated optical devices fabricated by MBE and metalorganic CVD 2-49947  
 GaAs-GaAlAs interface, cyclotron emission, two-dimens. character of electron gas 2-5586  
 GaAs-GaAlAs modulation doped multilayer struct., optimum cond. and effective mobility conditions, LPE grown -struct. 2-5456  
 GaAs-GaAlAs stripe laser, proton-isolated, with tilted facet reflectors 2-25035  
 GaAs-GaAlAs superlattices, band struct. calcs. 2-40784  
 GaAs-GaAlAs:Zn CVD layers, cryst. defect incorporation during growth 2-31635



## gallium arsenide continued

- GaAs-GaAlAsP heterojunctions, lattice strain and misfit dislocations 2-26254
- GaAs-GaSb n-p heterojunction intercell Ohmic contact, laser bonded, for monolithic multicolour solar converter 2-13168
- GaAs-Ge abrupt (110) interface, geometry 2-12920
- GaAs-Ge interface, atomic and elec. struct. 2-12923
- GaAs-metal ohmic contacts, microstructure, correl. with elec. characts., electron microscopy obs. 2-40700
- GaAs-metal-semiconductor FET, transient radiation study 2-21658
- n-GaAs-molten salt electrolyte interface, mech. of charge transfer 2-8874
- GaAs-n-AlGaAs heterostructure grown by MBE, growth temp. effect on two-dimens. electron gas mobility 2-8867
- GaAs-n-AlGaAs heterostructure, MBE gram. effect of annealing on elec. props. 2-26485
- GaAs-oxide interface, ion beam channelling characterisation 2-26236
- GaAs-oxide interface states: gigantic photoionization via Auger-like process 2-26510
- n-GaAs-oxide-Au struct., forward biased, electroluminesc. 2-17553
- GaAs-Pd/Ni contact, electrical characts., interphase interaction, heat treatment effect 2-51303
- GaAs-Pd/Ni Schottky barrier, phase interactions, SIMS study 2-51304
- n-GaAs-room temperature molten salt electrolyte interface, photoelectrochemical device operation 2-9659
- GaAs-Si<sub>3</sub>N<sub>4</sub>, RF sputtered, characterization of intermediate layer 2-51062
- GaAs-Si<sub>3</sub>N<sub>4</sub> interface, trap studies 2-26507
- GaAs-Sn layers, laser annealed, interface struct. and diffusion 2-30757
- GaAs-SnO<sub>2</sub> MIS solar cell, interface, Auger study 2-14084
- GaAs-strained GaAsP-GaAs (100) heterostructure, electron transmission probabilities 2-13171
- GaAs-thermally grown sulphide films, C-V and current leakage meas. on MIS diodes 2-51332
- n-GaAs-YIG thin film struct., electron drag by surface spin waves 2-46350
- GaAs-ZnSe heterojunction interface, LPE conditions effect 2-45748
- GaAs+As<sub>2</sub>O<sub>3</sub>, interfacial reaction, Raman scatt. detection 2-6086
- GaAsP, composition modulated, electron microscopy images 2-44983
- GaAs<sub>0.6</sub>P<sub>0.4</sub>Fe(Ni), impurity centre characts., thermal and optical capacitance transients study 2-5362
- GaAs<sub>1-x</sub>P<sub>x</sub> (110), intrinsic electronic surface states 2-13159
- GaAs<sub>1-x</sub>P<sub>x</sub>, direct gap, high excitation luminesc., electron-hole plasma expansion effects 2-51679
- GaAs<sub>1-x</sub>P<sub>x</sub>, epitaxial multilayers, vacuum metalorganic CVD growth 2-27092
- GaAs<sub>1-x</sub>P<sub>x</sub> layers, mixed cryst. comp. rel. to vapour phase comp. in Ga-HCl-PH<sub>3</sub>-AsH<sub>3</sub>-(NH<sub>3</sub>)-H<sub>2</sub> system 2-36791
- GaAs<sub>1-x</sub>P<sub>x</sub>N, cathodoluminescence spectra 2-2348
- GaAs<sub>1-x</sub>P<sub>x</sub>N, photoluminescence spectra 2-41421
- GaAs<sub>1-x</sub>P<sub>x</sub>Zn(N), ion implanted, optical and elec. props. (*Chinese*) 2-8800
- GaAs<sub>1-x</sub>P<sub>x</sub>-GaAs, partial misfit dislocation formation during heteroepitaxy 2-21465
- GaAs<sub>1-x</sub>P<sub>y</sub> solid soln., static bond charge props., X-ray study 2-1442
- GaAs<sub>1-x</sub>P<sub>y</sub>Sb<sub>z</sub>, energy band gap calc. using dielec. theory of electronegativity 2-8755
- GaAs<sub>1-x</sub>Sb<sub>x</sub> n-n heterojunctions on GaAs, internal electroabsorpt. obs. 2-17444
- GaAs<sub>1-x</sub>Sb<sub>x</sub> p-n heterojunction, impact ionisation coeffs. for electrons and holes 2-41006
- GaAs<sub>1-x</sub>Sb<sub>x</sub> Schottky barrier quadrant detector development for 1 μm appl. 2-15225
- GaAsSb<sub>1-x</sub> electron effective mass values 2-5345
- GaAs<sub>1-x</sub>Sb<sub>x</sub>GaAs heterojunction cascade solar cell, LPE growth and photocurrent spectra 2-37215
- (GaAs)<sub>1-x</sub>(ZnSe)<sub>x</sub> solid solns., electrophys. props. 2-40927
- GaAs(111)-In<sub>0.45</sub>Ga<sub>0.55</sub>As<sub>1-x</sub>P<sub>y</sub> heteroepitaxial system, formation of discrepancy dislocations 2-45754
- GaInAs heteroepitaxial layer, X-ray meas. of lattice mismatch 2-30367
- GaInAs layer growth by vapour phase heteroepitaxy, thermodynamic delineation 2-46941
- GaInAs VPE growth, hydrides and organometallics methods (*French*) 2-17629
- GaInAs-AlInAs structures grown by molecular beam epitaxy 2-21456
- Ga<sub>0.47</sub>In<sub>0.53</sub>As LPE, CVD and VPE layers, electron and hole mobilities of n- and p-type films 2-5480
- Ga<sub>0.47</sub>In<sub>0.53</sub>As, LPE growth, baking temp. effect on purity, photoluminesc. and elec. props. 2-27106
- Ga<sub>0.47</sub>In<sub>0.53</sub>As, low temp. LPE growth 2-17637
- Ga<sub>0.47</sub>In<sub>0.53</sub>As uniform, MBE growth with rotating sample holder 2-17626
- Ga<sub>0.47</sub>In<sub>0.53</sub>As:Sn, MBE layers, elec. props. 2-30978
- Ga<sub>0.47</sub>In<sub>0.53</sub>As-Al<sub>0.48</sub>In<sub>0.52</sub>As heterojunction, MBE, modulation doped, electron mobility 2-46108
- Ga<sub>0.1</sub>In<sub>0.9</sub>As photocathode with neg. electron affinity, photoelectron spectra 2-13630
- Ga<sub>1-x</sub>In<sub>x</sub>As, epitaxial layers, Raman scatt. study 2-46577
- Ga<sub>1-x</sub>In<sub>x</sub>As epitaxial layers preparation and properties for photoelectric applications (*Slovak*) 2-51228
- Ga<sub>1-x</sub>In<sub>x</sub>As, epitaxial multilayers, vacuum metalorganic CVD growth 2-27092
- Ga<sub>1-x</sub>In<sub>x</sub>As MOS structures, plasma anodisation and interface props. 2-46133
- Ga<sub>1-x</sub>In<sub>x</sub>As solid soln., static bond charge props., X-ray study 2-1442
- Ga<sub>1-x</sub>In<sub>x</sub>As uniform epitaxial layers, organometallic VPE growth, elec. characts. 2-31638
- Ga<sub>1-x</sub>In<sub>x</sub>As, electron drift, electric field depend., Monte Carlo calc. 2-51196
- Ga<sub>1-x</sub>In<sub>x</sub>As, Sb<sub>y</sub>-, epitaxial layers, defect formation characts. 2-51039
- GaInAsP buried crescent laser emitting at 1.52 μm, dispersion effects 2-44289
- GaInAsP heteroepitaxial layer, X-ray meas. of lattice mismatch 2-30367
- GaInAsP laser diode freq. doubling in LiNbO<sub>3</sub>:Ti waveguide, coherent green radiation source 2-7833
- GaInAsP, proton bombard., optical props. 2-9206
- GaInAsP single-mode optical waveguides 2-49911
- GaInAsP VPE growth, hydrides and organometallics methods (*French*) 2-17629
- GaInAsP/InP DH lasers, optical gain spectra, temp. depend. 2-911
- GaInAsP/InP integrated twin-guide lasers for single-mode operation, fabrication techniques 2-7888

## gallium arsenide continued

- GaInAsP/InP long-wavelength lasers, efficiency, threshold current temp. depend., intervalence band absorpt. 2-49753
- GaInAsP/InP surface emitting injection laser with buried heterostructures 2-16017
- GaInAsP-InP BH distributed-Bragg-reflector integrated-twin-guide lasers, 1.58 μm wavelength 2-29814
- GaInAsP-InP BH distributed Bragg reflector integrated-twin-guide laser emitted at 1.5 to 1.6 μm 2-29830
- GaInAsP-InP chip, laser-polyimide/SiO<sub>2</sub> slab waveguide interconnection 2-49946
- GaInAsP-InP DFB buried heterostruct. lasers, CW operation in 1.5 μm wavelength region 2-34787
- GaInAsP-InP DH CW operated laser diodes, current dependence of temp. rise 2-29817
- GaInAsP-InP DH laser material, nonradiative regions correlation with dislocation clusters 2-34751
- GaInAsP-InP DH diode lasers emitting at 1.5 μm grown by LP-MO CVD 2-44290
- GaInAsP-InP injection laser, fabrication and output characteristics 2-4517
- GaInAsP-InP laser transmitter module, external cavity controlled single longitudinal mode 2-25030
- GaInAsP-InP layers, long wavelength, temp. depend. photolum., surface recomb. vel. 2-5753
- GaInAsP-InP mode-controlled long wavelength lasers, BH, MSB and TS types 2-4526
- GaInAsP-InP p-n and avalanche photodiode detectors for 1.1 to 1.6 μm operation, state of the art 2-3622
- Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, energy band gap calc. using dielec. theory of electronegativity 2-8755
- (GaIn)AsP lasers, temp. sensitivity 2-49754
- Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> electron Hall mobility calc. with two longitudinal optic phonon model 2-17094
- Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, IR refl. spectra, free carrier parameters and lattice vibrations. 2-5678
- Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>/InP terraced substrate single-mode laser 2-16016
- Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>/InP stripe lasers with chemically etched-mirrors, review 2-44332
- Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>-InP laser, 1.3 μm, index-guiding struct. grown on terraced substrate 2-936
- Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>-InP heterostruct., thermal expansion coeff. difference determ. 2-45601
- GaInPAs lasers, transient freq. and temp. variation, Michelson interferometric study 2-49748
- Ga<sub>1-x</sub>In<sub>x</sub>P<sub>1-y</sub>As<sub>y</sub> thin epitaxial layers, refl. spectra 2-17563
- GaP-GaAs, heteroepitaxial system, GaP layer growth 2-51017
- GaPAs<sub>1-x</sub>, band gaps, direct and indirect, conc. depend. 2-51082
- GaPAs<sub>1-x</sub>/GaP film structures, layerwise spectral anal. 2-9582
- Ge-GaAs (111) and (111) interfaces, electronic struct., EHT calc. 2-8854
- Ge-GaAs bicolor system, Ge solar cell design and efficiency anal. 2-6142
- Ge-GaAs eutectic alloy, thermo-EMF and thermal cond., temp. depend. thermal quality factor 2-13108
- Ge-GaAs model heterojunction, local density of states, oscills. (*Russian*) 2-17146
- Ge-GaAs n-n heterojunction, electron transport 2-8864
- Ge-GaAs superlattices, MBE growth 2-8728
- Ge<sub>2</sub>N<sub>2</sub>-GaAs MIS devices, elec. characts. and memory behaviour 2-46147
- Ge<sub>2</sub>N<sub>2</sub>-n-GaAs MIS devices, interface characts. determ. 2-30970
- In-Ga-Cr-In struct. with S-type I-V characts., field distrib., switching mechanism 2-36153
- In-Ga-P-As, LPE growth in vertical furnace 2-46954
- InAlAs/InGaAs MBE layer structs., ion beam anal. 2-35906
- InAlAs/InGaAs interface, MBE, channelling anal. 2-12922
- (InAs)<sub>1-x</sub>(GaAs)<sub>x</sub>(GaSb)<sub>1-x</sub>(GaAs)<sub>x</sub> superlattices, electronic and at. struct., phase separation effects 2-16969
- InGaAs, reduction in dislocation densities in MBE step graded growth 2-21450
- InGaAs/InP, MBE, double heterostructure laser (*Japanese*) 2-49781
- InGaAs-InP BH lasers, with LPE burying layers, CW operation at 1.65 μm 2-44328
- InGaAs-oxide, native grown plasma oxides and inversion layers 2-41014
- In<sub>0.05</sub>Ga<sub>0.95</sub>As-In<sub>0.45</sub>Ga<sub>0.55</sub>As<sub>1-x</sub>P<sub>y</sub>-GaAs heteroepitaxial system, dislocation struct., buffer layer effect 2-35504
- n-In<sub>0.5</sub>Ga<sub>0.47</sub>As, electron drift velocity meas. at 300K using microwave time-of-flight technique 2-30916
- In<sub>0.53</sub>Ga<sub>0.47</sub>As, Hall factor, temp. and elec. conc. depend. meas. 2-51212
- In<sub>0.53</sub>Ga<sub>0.47</sub>As, near-band-gap absorpt. and photolum. 2-41394
- In<sub>0.53</sub>Ga<sub>0.47</sub>As on InP substrate, Mn as p-type dopant, distrib. coeff., room temp. mobility and diffusion coeff. 2-25914
- p-In<sub>0.5</sub>Ga<sub>0.47</sub>As, photoexcited minority electrons, velocity field characts. 2-5432
- In<sub>0.51</sub>Ga<sub>0.49</sub>As-InP FET, short-gate, ballistic transport 2-51185
- In<sub>0.45</sub>Ga<sub>0.55</sub>As epitaxial layers, electron mobility (*Czech*) 2-8897
- InGaAsP alloys, VPE growth by single flat temp. method 2-2461
- InGaAsP DH, electroluminescence, efficiency and kinetics 2-13573
- InGaAsP DH layers, laser characts., nonradiative recomb. effect 2-29820
- InGaAsP, deep level centre photolum., comp. depend. 2-5751
- InGaAsP diode to single-mode fibre efficient coupling using two lens combination in confocal condition 2-16122
- InGaAsP epitaxial layers, near-band-gap absorpt. at 1.3 μm wavelength 2-46803
- InGaAsP grown by LPE, layer thickness calc. 2-45768
- InGaAsP heterostructures, nonequilib. carrier lifetime and edge luminesc. reemission 2-13554
- InGaAsP, high purity grown by liq. phase epitaxy 2-36802
- InGaAsP high T<sub>0</sub> low threshold crescent-shape mesa substrate buried heterostruct. laser fabrication 2-44330
- InGaAsP injection laser, metallisation and heat sink problems 2-4519
- InGaAsP inverted rib-wavelength lasers, fabrication and operation characteristics 2-20318
- InGaAsP lattice, matched to InP, growth and charact. review 2-13662
- InGaAsP long-wavelength laser devices, recent developments 2-11726
- InGaAsP low threshold DH lasers double clad with InGaAsP confining layers 2-29815
- InGaAsP, material requirements for near IR photodetectors, LPE and VPE growth techniques 2-15224



**gallium arsenide continued**

- InGaAsP modulated single-longit. mode semicond. laser and fibre transmission characts. at 1.55  $\mu\text{m}$  2-16047  
 InGaAsP, monolithic integration of optical sources and detectors 2-4611  
 InGaAsP, ohmic contacts, low specific contact resistance, metallisation 2-2005  
 InGaAsP planar layer optical strip waveguides by metal diffusion 2-49910  
 InGaAsP ridge waveguide laser performance at 1.3  $\mu\text{m}$  2-11698  
 InGaAsP short cavity single-mode 1.3  $\mu\text{m}$  lasers with evaporated high-reflectivity mirrors 2-29816  
 InGaAsP/InP 1.3  $\mu\text{m}$  laser material, meltback and pullover as causes of LPE growth disturbances 2-46956  
 InGaAsP/InP Z 2-16143  
 InGaAsP/InP:Cd DH lasers, LPE growth 2-22178  
 InGaAsP-InP buried heterostructure lasers, fabrication and application to fault location measurement 2-4516  
 InGaAsP-InP buried DH lasers with chemically etched mirrors 2-11714  
 InGaAsP-InP CW lasers, low-threshold-current, distributed feedback 2-49776  
 InGaAsP-InP DH laser, elec., threshold and temp. characts. analysis 2-913  
 InGaAsP-InP DH laser Gbit/sec pulse generation, gating with LiNbO<sub>3</sub> waveguide modulator 2-7811  
 InGaAsP-InP DH laser, degradation obs. by electron probe microanal. 2-44282  
 InGaAsP-InP DH lasers, gain meas. in 1.3  $\mu\text{m}$  2-44292  
 InGaAsP-InP DH laser, degraded, lattice defect struct., SEM and TEM study 2-49769  
 InGaAsP-InP diode lasers, intrinsic saturable absorption anal. 2-977  
 InGaAsP-InP distributed-feedback BH lasers emitting at 1.57  $\mu\text{m}$ , room-temp. CW operation 2-29818  
 InGaAsP-InP dual wavelength lasers emitting at 1.2  $\mu\text{m}$  and 1.3  $\mu\text{m}$  wavelengths 2-34785  
 InGaAsP-InP dual wavelength transverse junction stripe lasers emitting at 1.17  $\mu\text{m}$  and 1.3  $\mu\text{m}$  2-34786  
 InGaAsP-InP integrated LED-detector device 2-44489  
 InGaAsP-InP laser, current injection induced acoustic signals 2-950  
 InGaAsP-InP laser, Sn doping of active region 2-45210  
 InGaAsP-InP plano-convex waveguide 1.3  $\mu\text{m}$  laser, transverse mode stabilisation 2-921  
 InGaAsP-InP planar buried heterostruct. laser diode with low threshold current fabrication by LPE technique 2-34784  
 p-In<sub>0.75</sub>Ga<sub>0.25</sub>As<sub>0.55</sub>P<sub>0.45</sub>:Cd LPE layer, doping characts. and elec. props. 2-41031  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> laser and LED reliability for fibre-optic communications 2-4610  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>-InP buried-crescent laser diode 1.3  $\mu\text{m}$  fundamental transverse mode and life test 2-4532  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>y</sub>P<sub>1-y</sub> LPE thin films, simultaneous Bragg diff. of X-rays 2-30759  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>y</sub>P<sub>1-y</sub> laser transitions, Auger recombination mechanisms 2-44295  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>y</sub>P<sub>1-y</sub> lattice matched to InP, comp. depend. of mobility, peak vel. and threshold field 2-5479  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>y</sub>P<sub>1-y</sub>, temp. depend. of transferred electron threshold current 2-17076  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>y</sub>P<sub>1-y</sub> ultrashort cavity lasers, optically pumped, picosec. operation, 0.83-1.59  $\mu\text{m}$  2-16001  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-x</sub>P<sub>x</sub>, deep vacancy levels theory (French) 2-40818  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>-GaAs(111) heteroepitaxial system, formation of discrepancy dislocations 2-45754  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>y</sub>P<sub>1-y</sub>, stabilisation by InP substrate inside unstable region in LPE 2-51833  
 InGaPAs DH diode laser on GaAs substrate, fabrication and visible light emission 2-16019  
 InP-In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> PIN photodiodes for fibre-optic communications 2-7881  
 InP-InGaAsP, DH laser wafer, LPE growth and struct. 2-45744  
 InP-InGaAsP DH lasers, bistable operation by optical injection 2-25029  
 InP-InGaAsP heterostructure, electrolum. polarization due to internal strain 2-41432  
 Pd-GaAs Schottky diodes, current-voltage and capacitance-voltage characts., electron irradiat. effects 2-13165  
 SiO<sub>2</sub>-GaAs interface, props. of spin-on interfaces 2-2013  
 solar cells, thin film, OM-CVD growth technique 2-27652  
 T 2-29829  
 T 2-49777

**gallium compounds**

- see also gallium alloys; gallium arsenide  
 (100) superlattice, vacancy induced band gap levels 2-45883  
 chalcogenides, electronic props. 2-40316  
 EXAFS, optical and cond. meas. (French) 2-46826  
 Ga<sub>1-x</sub>In<sub>x</sub>P-GaAs heterostructures, luminesc., effect of mismatch between lattice const. and thermal expansion coeffs. 2-9195  
 GaP:Mn, impurity centre struct., positron annihilation study 2-17570  
 GaP:Zn, defect reactions, photolum. studies 2-2333  
 nuclear mag. shielding investig. and theory 2-4231  
 rare earth Ga(In,Tl)-chalcogen system, reactions and phase diagrams 2-9335  
 single cryst. film growth, by sputter deposition, ion-surface interaction effects 2-46921  
 AgGaGeS<sub>3</sub> cryst. struct. determ. 2-35468  
 AgGaSe<sub>3</sub>, deep levels, optically controlled EPR study 2-5580  
 AgGaSe<sub>3</sub>(Se<sub>2</sub>), use in freq. conversion of CO<sub>2</sub> laser (Japanese) 2-20365  
 AgGaSe<sub>3</sub>, determ. of trap levels (Russian) 2-12993  
 AgGaTe<sub>2</sub>, monocystals, residual cond. (Russian) 2-13066  
 Al-SiO<sub>2</sub>-GaAs-n<sup>+</sup>-GaP, MIS light modulators using Franz-Keldysh effect 2-4585  
 AlAs-GaAs heterojunction stripe geometry lasers, nonlinear power-current characteristics 2-29831  
 AlGaAsSb/GaInAsSb/GaAs laser, light confinement and divergence 2-44364  
 AlGaAsSb/GaAs laser, light confinement and divergence 2-44364  
 Al<sub>1-x</sub>Ga<sub>x</sub>In<sub>1-x-y</sub>Sb<sub>y</sub> lattice const. and optical energy gap, comp. depend. 2-25818  
 Al<sub>1-x</sub>Ga<sub>x</sub>P solid soln., Raman scatt. by optical phonons 2-17485  
 Al<sub>0.26</sub>Ga<sub>0.74</sub>Sb-GaAs photodetector, LPE growth and photo response (Japanese) 2-2469

**gallium compounds continued**

- Al<sub>1-x</sub>Ga<sub>x</sub>Sb heterostructure, reproducible epitaxial layer growth from saturated Ga soln. 2-17634  
 Al<sub>1-x</sub>Ga<sub>x</sub>Sb, LPE (Japanese) 2-2469  
 Al<sub>0.48</sub>In<sub>0.52</sub>As<sub>0.52</sub>As/Ga<sub>0.48</sub>In<sub>0.52</sub>As/Al<sub>0.48</sub>In<sub>0.52</sub>As DH laser, MBE grown 2-7791  
 Au-n-Ga<sub>1-x</sub>Al<sub>x</sub>P surface barrier struct., photoelectric effect 2-26500  
 CC Ga<sub>0.5</sub>In<sub>0.5</sub>P nuclear spin system reson. cooling, cond. electrons g-factor effect 2-36478  
 Cd<sub>1-x</sub>Ga<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, cathodolum., band struct., impurity states 2-31562  
 CdGa<sub>2</sub>S<sub>4</sub>, fundamental optical transitions study 2-46546  
 CdGa<sub>2</sub>S<sub>4</sub>, linear susceptibility in transparency range, band calc. 2-9124  
 CdGa<sub>2</sub>S<sub>4</sub> single crystal narrow-band tunable optical filter 2-34878  
 CdGa<sub>2</sub>Se<sub>4</sub>, energy band struct.,  $\lambda$ -modulated reflectivity 2-16989  
 CdGa<sub>2</sub>Se<sub>4</sub>, Raman study of optical phonons 2-5686  
 CdInGaS<sub>4</sub>, Raman light scatt. spectra 2-5687  
 Cr<sub>2</sub>O<sub>3</sub>:Ga<sub>2</sub>O<sub>3</sub>, EPR line width, nonmag. dopant effects (German) 2-21875  
 (Cu<sub>1-x</sub>Ag<sub>x</sub>)(In<sub>1-y</sub>Ga<sub>y</sub>)Te<sub>2</sub>, lattice const. values 2-12554  
 p-CuGa<sub>1-x</sub>In<sub>x</sub>S<sub>2</sub>/n-ZnSe heterojunction LPE growth from In soln. 2-16966  
 CuGa<sub>1-x</sub>Se<sub>2</sub> solid solns., band gap, comp. depend., transmission spectra 2-46603  
 CuGaS<sub>2</sub>, angular phonon dispersion in bound exciton spectra 2-5747  
 CuGaTe<sub>2</sub>, anisotropic thermal expansion, X-ray diffraction study 2-1642  
 CuIn<sub>1-x</sub>Ga<sub>x</sub>(Se<sub>2</sub>Te<sub>2</sub>)<sub>1-x</sub> heterojunction solar cells prep., RF sputtering technique, characts. 2-37371  
 Eu<sub>0.6</sub>Y<sub>2.4</sub>Ga<sub>1.26</sub>Fe<sub>3.74</sub>O<sub>12</sub> film, nondestructive sensing of wall-state transition 2-2109  
 Ga complex, GaCl-phthalocyanine, solns., excited states, radiative lifetimes, triplet-triplet absorpt. spectra 2-9188  
 Ga complex, Ga(urea)<sub>3</sub>(ClO<sub>4</sub>)<sub>3</sub>, antiferrodistortive, two-dimensional critical behaviour 2-12738  
 Ga-Al-As-Ge quaternary system, phase diagram 2-13703  
 Ga-Sb-Te system, GaSb-based solid soln. region investig. comp. depend. of carrier conc. 2-12720  
 GaAlP, MO-CVD growth 2-5824  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>P epitaxial films, cathodoluminesc. spectra 2-22097  
 Ga<sub>1-x</sub>Al<sub>x</sub>P variable-gap surface barrier UV photodetectors 2-43089  
 Ga<sub>1-x</sub>Al<sub>x</sub>Sb epitaxial layer, Raman selection rules, resonance and inhomogeneity 2-2362  
 Ga<sub>1-x</sub>Al<sub>x</sub>Sb:Te, high field magnetotransport props. under hydrostatic press., direct-indirect band transition 2-8828  
 GaAs, p-n junction, pressure effects on avalanche breakdown voltage 2-26481  
 GaAs-Ga<sub>2</sub>Se solid solns., EXAFS study 2-41454  
 GaAs-GaSb n-p heterojunction intercell Ohmic contact, laser bonded, for monolithic multicolour solar converter 2-13168  
 GaAs<sub>1-x</sub>P<sub>x</sub>, direct gap, high excitation luminesc., electron-hole plasma expansion effects 2-51679  
 GaAs<sub>1-x</sub>P<sub>x</sub>, direct-gap, electron-hole plasma expansion, photoluminesc. study 2-21617  
 GaAs<sub>1-x</sub>P<sub>x</sub> layers, mixed cryst. comp. rel. to vapour phase comp. in Ga-HCl-PH<sub>3</sub>-AsH<sub>3</sub>-(NH<sub>3</sub>)-H<sub>2</sub> system 2-36791  
 GaAs<sub>1-x</sub>P<sub>x</sub>:Zn(N), ion implanted, optical and elec. props. (Chinese) 2-8800  
 GaAs<sub>1-x</sub>P<sub>x</sub> solid soln., static bond charge props., X-ray study 2-1442  
 GaAs<sub>1-x</sub>Sb<sub>x</sub> n-n heterojunctions on GaAs, internal electroabsorpt. obs. 2-17444  
 GaAs<sub>1-x</sub>Sb<sub>x</sub> Schottky barrier quadrant detector development for 1  $\mu\text{m}$  appl. 2-15225  
 GaD<sub>2</sub>, anharmonicity correction and mol. const. 2-24809  
 GaH<sub>3</sub>, mass spectrometric determ. of dissociation energies 2-29726  
 GaH<sub>3</sub>, anharmonicity correction and mol. const. 2-24809  
 GaInAs, grown by MOCVD, for microwave and optoelectronic appls. 2-5822  
 GaInAsP, grown by MOCVD, for microwave and optoelectronic appls. 2-5822  
 GaInAsP/InP surface emitting injection laser with buried heterostructures 2-16017  
 GaInAsP-InP layers, long wavelength, temp. depend. photolum., surface recomb. vel. 2-5753  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>y</sub>P<sub>1-y</sub> electron Hall mobility calc. with two longitudinal phonon model 2-17094  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>y</sub>P<sub>1-y</sub> InP laser, 1.3  $\mu\text{m}$ , index-guiding struct. grown on terraced substrate 2-936  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>y</sub>P<sub>1-y</sub> InP heterostruct., thermal expansion coeff. difference determ. 2-45601  
 Ga<sub>0.5</sub>In<sub>0.5</sub>P film on GaAs, anisotropic theory of crystal-film interface 2-5311  
 Ga<sub>1-x</sub>In<sub>x</sub>P mixed cryst., Raman scatt. and IR absorpt. spectra 2-2235  
 Ga<sub>1-x</sub>In<sub>x</sub>P MBE film, struct. and photolum. props. 2-45758  
 Ga<sub>1-x</sub>In<sub>x</sub>P:N, luminescence study of exciton radiation transitions 2-46693  
 Ga<sub>1-x</sub>In<sub>x</sub>P<sub>1-y</sub>As<sub>y</sub> thin epitaxial layers, refl. spectra 2-17563  
 Ga<sub>1-x</sub>In<sub>x</sub>Se, layer compound, lattice instability, ionicity and phase diag. 2-50800  
 GaN epitaxial film on sapphire, SEM and electron diff. obs. 2-45753  
 GaN epitaxial layers, photoluminescence 2-46663  
 GaN epitaxial layers, refl. 5 to 30 eV, dielec. function and electron energy loss function 2-22045  
 GaN film, RF reactively sputtered, dielec. props. 2-13422  
 GaN, high pressure vapour growth 2-27098  
 GaN:Zn, photoluminesc. and electroluminesc., light polarisation 2-26980  
 Ga<sub>2</sub>O<sub>3</sub> on GaAs surface, interfacial chemical reactivity of metal contacts 2-8879  
 Ga<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> liq. liq. phase separation 2-26036  
 $\beta$ -Ga<sub>2</sub>O<sub>3</sub>-K<sub>2</sub>O-Na<sub>2</sub>O mixed alkali cond. anomaly 2-26132  
 Ga<sub>2</sub>O<sub>3</sub>-K<sub>2</sub>O-Na<sub>2</sub>O, superionic cond.,  $\beta$ -Al<sub>2</sub>O<sub>3</sub> isomorph, ionic cond. and Raman spectra 2-26125  
 $\beta$ -Ga<sub>2</sub>O<sub>3</sub>-K<sub>2</sub>O(Na<sub>2</sub>O) and  $\beta$ -Ga<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, defect struct., X-ray diff. study 2-25871  
 $\beta$ -Ga<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-K<sub>2</sub>O, atom distrib. rel. to mixed alkali effect 2-25845  
 Ga(OH)<sub>3</sub>, dissolution and crystn. mechanism from NaOH soln., ionic equilibria and cryst. phases 2-30426  
 GaP (110), surface core excitons, binding energies and oscill. strengths 2-8852  
 GaP (110) and (111) surfaces, atomic struct., LEED study 2-8693  
 GaP (110) surface struct., elastic LEED intensities, dynamic anal. 2-12891  
 GaP, amorphous, disorder effects and optical props. 2-2357  
 GaP amorphous thin films, struct. and optical props. 2-5329



## gallium compounds continued

- GaP, anion antisite defects, electronic props. 2-17017  
 GaP, bond charge study by X-ray data 2-45109  
 GaP, compressibilities, Debye-Waller factors and melting criteria 2-1580  
 GaP, core exciton binding energies 2-40800  
 GaP, core excitons, energy calc. 2-1832  
 GaP cryst., morphology and mechanism of growth from gas phase 2-27064  
 GaP, cryst. defects, correlation between light and electron microscopy images 2-25880  
 GaP crystal, bound state in Raman spectra 2-22034  
 GaP, deep level defect, thermocomb. model 2-51119  
 GaP, deep levels in light-emitting devices, electron trap and hole trap discharge ratio, temp. dependence (*Japanese*) 2-30818  
 GaP, defects in III-V semiconductors, EPR studies, review 2-31285  
 GaP, deform. pot., one-phonon Raman scatt. 2-51586  
 n-GaP, deformation pots., far IR spectra study (*Ukrainian*) 2-13463  
 GaP diodes, deep recombination centre parameters, TSC study 2-35972  
 GaP, ESR of deep double donor  $P_{Ga}$  2-13337  
 p-GaP electrode, photoelectrochem. reaction mechanisms 2-22417  
 n-GaP, electrodes, surface-trapped holes, photo- and electroluminesc. 2-41428  
 GaP, electronic struct., first principles calc. 2-30793  
 GaP films, amorphous and cryst., core levels, disorder effects, XPS and AES 2-46173  
 GaP first dynode photomultiplier tubes, anomalous variations in dark pulse rate 2-39272  
 GaP, IR absorption induced by impurities and radiation damage 2-46644  
 GaP, impurity-doped, efficient linear IR to visible upconversion, IR detect. using NEA photocathode 2-17532  
 GaP, intrinsic defect theory 2-45884  
 GaP LED, struct. defects, TEM studies 2-5332  
 GaP, lanthanide doping influence on elec. and photolum. props., LED material 2-41391  
 GaP layers, deposited on GaAs substrate, initial growth and defect struct. 2-51017  
 GaP, MO-CVD growth 2-5824  
 GaP, metallic modification, supercond. transition at 9.3K (*Russian*) 2-26533  
 GaP, nuclear spin system reson. cooling, cond. electrons g-factor effect 2-36478  
 GaP, optical props., calc. using first-principles electronic struct. 2-13442  
 GaP p-n junction, avalanche multiplication and impurity profile, SEM study 2-51194  
 GaP, p-n junction, pressure effects on avalanche breakdown voltage 2-26481  
 GaP, phase-conjugate refl. through degenerate four-wave mixing, 530 nm 2-39697  
 GaP, prep. by MO-CVD 2-46939  
 GaP, Raman scatt. by bound two-phonon states, polariton Fermi resonance (*Russian*) 2-13492  
 GaP, recombination-enhanced defect reactions, cathodoluminesc. and photoluminesc. study 2-46783  
 p-GaP, saturable absorption of high intensity  $CO_2$  laser light 2-975  
 p-GaP, semiconductor electrodes, laser induced photoelectrochemistry 2-13962  
 GaP semiconductor photoelectrodes, current doubling reaction study 2-9557  
 GaP semiconductor Raman laser for far IR generation 2-39657  
 GaP, solubility and distrib. ratios of transition metal impurities in melt-cryst. system 2-5146  
 GaP, struct.-energy calcs. using pseudopot. and localised Gaussian orbitals 2-30815  
 GaP, studies using megagauss fields 2-31290  
 GaP substrates, LEC, microdefects study by TEM and etching 2-45176  
 GaP, surface EM waves in far IR 2-4615  
 GaP, surface oxidation, composition changes 2-52086  
 GaP, vacancy electronic struct. 2-45882  
 GaP:Ag(Au), influence of heat treatment on distrib. of diffused impurities 2-26141  
 GaP:Bi p-n struct., electrolum. and photoresponse spectra 2-36709  
 GaP:Co<sup>2+</sup>, IR luminesc., temp. depend. 2-51654  
 GaP:Cr, photoluminesc., near IR-visible up conversion 2-49819  
 GaP:Cr<sup>3+</sup>, EPR signals of multiples of classical reson. mag. field 2-31269  
 GaP:Cu, photoluminescence spectrum 2-46694  
 GaP:Cu, TSC trace, estimation of capture cross sections 2-13007  
 GaP:Cu, triplet exciton recombination at 1.91 eV, ODMR study 2-46433  
 GaP:Fe, hole localization and charge transfer excitation by time depend. photolum. meas. 2-51702  
 GaP:Fe(Ni), doubly charged donors, IR spectra 2-21538  
 GaP:Ge and GaP:Ge, Cr epitaxial films, behaviour of Ge, elec. props. and photoluminesc. 2-13008  
 GaP:Mg, ion implanted, minority carrier diffusion length meas. 2-26411  
 GaP:N, Al<sup>2+</sup> postimplantation gettering effects in p-n junctions 2-12627  
 GaP:N, dense carrier system, decay kinetics and phase behaviour 2-51678  
 GaP:N, luminescence study of exciton radiation transitions 2-46693  
 GaP:N, model calcs. for excitons and bielectrons 2-45840  
 GaP:N, pure and doped, absorption edge, fine structure of the zero phonon component 2-22046  
 GaP:Nb, impurity luminesc., intracenter transitions 2-51703  
 GaP:Ni, optical absorpt. spectra and photocapacitance meas. 2-13518  
 GaP:Ni<sup>2+</sup>, <sup>3</sup>T<sub>1</sub>(P) absorpt. band, Jahn-Teller anal. 2-5732  
 GaP:Pr,Y, heat treated, photoluminescence 2-17541  
 GaP:S, donor state valley-orbit splitting 2-40826  
 GaP:S,Zn, donor-acceptor spin-spin interaction, optically detected EPR study 2-5605  
 GaP:Sb, In, impurity location by asymmetry of channelling dips 2-16693  
 GaP:Te, ion implanted, laser annealing, Mossbauer spectroscopy study 2-30481  
 GaP:Te, kinetic model for dopant incorporation during VPE 2-45766  
 GaP:ZnO, epitaxial films deep level parameters by fabrication of double surface-barrier diodes 2-51126  
 p-GaP/Au-Zn contact system, out-diffusion process, barrier metals effect 2-46128  
 GaP/Si interface, impurity deep traps 2-51267  
 n-GaP/stearic acid, surface pot. studies on Langmuir-Blodgett films 2-26511  
 GaP-Au surface barrier structs., elec. breakdown mechanisms 2-17159  
 n<sup>+</sup>-GaP-p-Si heterojunctions, elec. and photoelec. props. 2-41005  
 GaP,As<sub>1-x</sub>, band gaps, direct and indirect, conc. depend. 2-51082

## gallium compounds continued

- GaP,As<sub>1-x</sub>/GaP film structures, layerwise spectral anal. 2-9582  
 GaP(110), surface electronic struct., self-consistent pseudopot. technique 2-40989  
 GaS, Hall effect and TSC study 2-26414  
 GaS, layer semicond., inelastic neutron scatt. and lattice dynamics 2-50788  
 GaS, opto-electronic props. 2-36587  
 GaS<sub>2</sub>-FeS system, phase diagram and crystallographic study (*French*) 2-36841  
 GaS<sub>2</sub>-MnGa<sub>2</sub>S<sub>4</sub>/Mn<sub>3</sub>Ga<sub>2</sub>S<sub>6</sub> system, differential vapour pressures 2-26017  
 GaS<sub>2</sub>-SnS system, phase diagram and characteris. of mixed sulphides SnGa<sub>2</sub>S<sub>4</sub> and Sn<sub>2</sub>Ga<sub>2</sub>S<sub>4</sub> (*French*) 2-36839  
 GaS(Se)(Te), Debye temp. study (*Russian*) 2-21264  
 GaS(Se)(Te), elastic moduli, pulse US method obs. 2-5169  
 GaSb (110), surface core excitons, binding energies and oscill. strengths 2-8852  
 GaSb amorphous film, flash evaporated, electronic props. 2-46174  
 GaSb amorphous films, EXAFS, optical and cond. meas. (*French*) 2-46826  
 GaSb band structure, from tunnel diode pressure effect 2-26290  
 GaSb, compressibilities, Debye-Waller factors and melting criteria 2-1580  
 GaSb, core exciton binding energies 2-40800  
 GaSb, core excitons, energy calc. 2-1832  
 p-GaSb, degenerate, low temp. luminesc., doping effect 2-36695  
 GaSb, electron transport and conduction band struct. 2-46012  
 GaSb epitaxial layer growth, on InAs substrates 2-46953  
 GaSb, interband Auger recombination lifetimes (*Russian*) 2-13096  
 GaSb, mean square atomic displacements, neutron diffraction determ. 2-40324  
 GaSb on TTF-TCNQ and (TMTSF)<sub>2</sub>PF<sub>6</sub>, tunnelling props. and gap opening 2-26476  
 GaSb, p-n junction, pressure effects on avalanche breakdown voltage 2-26481  
 GaSb single crystals, with low dislocation density, LEC growth technique 2-27072  
 GaSb surface (110), substitutional defect deep levels 2-51271  
 GaSb thin film, thermal treatment effect on elec. cond. and struct. 2-21697  
 GaSb, undoped single crystals, obs. of growth striations 2-35421  
 n-GaSb:S, minority carrier diffusion length, photoconductivity study 2-21604  
 GaSb:S MBE film, S doping with H<sub>2</sub>S gas 2-40718  
 GaSb:Te, Czochralski grown, impurity distrib., cathodoluminesc. study 2-51715  
 GaSb:Te, ion implanted, laser annealing, Mossbauer spectroscopy study 2-30481  
 GaSb:Te, pressure induced alteration of energy spectrum (*Russian*) 2-5368  
 GaSb:Te and GaSb:Te,Zn, charge transport characts., 80 to 700K 2-30895  
 p-GaSb:Zn, Auger recombination nonradiative lifetimes 2-46840  
 GaSb-AlSb-InAs polypolyte superlattices and multi-heterojunction characts. 2-1993  
 GaSb-InAs, heterojunctions and superlattices, band struct., effective mass approx., tight binding calc. 2-51292  
 GaSb+Sb<sub>2</sub>O<sub>3</sub>, interfacial reaction, Raman scatt. detection 2-6086  
 (GaSb)<sub>1-x</sub>Ge<sub>x</sub> films, single cryst. metastable, growth, thermal stability and characteristics 2-27089  
 (GaSb)<sub>1-x</sub>Ge<sub>x</sub>, metastable single phase polycryst., from annealing of amorphous mixtures 2-51015  
 GaSe, diodes, Schottky barrier study, photo-EMF 2-17142  
 GaSe, down conversion improvement of LiNbO<sub>3</sub> optical parametric oscillator output 2-11752  
 GaSe electrodes photocurrents, crystallographic anisotropy effect 2-36082  
 GaSe, excitonic spectra, phase transitions (*Russian*) 2-31557  
 GaSe, excitons, magneto-optical effects 2-26873  
 GaSe,  $\gamma$ -neutron and electron irradi., photosensitivity 2-21633  
 GaSe, injection-induced impurity breakdown, low freq. current oscills. 2-13086  
 GaSe, intercalated, exciton photoluminescence and reflection spectra 2-17540  
 GaSe, intercalated with Ba or anthracene, electroreflection spectra 2-13453  
 GaSe, optical dielectric function, band struct. calcs. 2-17387  
 GaSe, opto-electronic props. 2-36587  
 GaSe, photocurrent oscills. due to internal interf. of light 2-40966  
 GaSe, polarised luminescence in mag. field 2-9197  
 GaSe, polymorphic stability, band struct. and phonon spectra study 2-40786  
 p-GaSe single crystal, photoconduction measurements 2-46055  
 GaSe, single crystals, IR quenching of photoelectrical memory (*Russian*) 2-40953  
 GaSe single crystals, growth 2-31620  
 GaSe, slowly relaxing cond. and elec. memory effect 2-26404  
 GaSe, studies using megagauss fields 2-31290  
 GaSe:Cu, defect level analysis, photoluminescence spectra 2-9184  
 GaSe:O, edge luminesc. spectrum, 4.2K, isoelectronic impurity effect 2-9196  
 GaSe:Sn, photocurrent interference oscills. 2-40970  
 p-GaSe-n-CuInSe<sub>2</sub> heterojunction, photoelec. and elec. props. 2-17152  
 GaSe<sub>3</sub>, growth, physicochem., electrophysical and optical characts. (*Russian*) 2-20386  
 Ga<sub>2</sub>/Se polymorphs, EXAFS study 2-41454  
 GaSe<sub>3</sub> phase equilibria, DTA, X-ray diffractometer and cryst. growth obs. 2-51885  
 GaSe<sub>3</sub> thin films in MS/IS structure, elec. props., localised states influence 2-26479  
 Ga<sub>2</sub>Se<sub>3</sub>-In<sub>2</sub>Se<sub>3</sub> thin films, elec. and optical props. 2-5477  
 (Ga<sub>2</sub>Se<sub>3</sub>-In<sub>2</sub>Se<sub>3</sub>)-Bi metal-semiconductor contact, elec. and photovoltaic props. 2-51298  
 GaSe<sub>1-x</sub>S<sub>x</sub>, edge luminesc. spectra, optical and microwave study 2-46751  
 GaSe<sub>1-x</sub>S<sub>x</sub>, polarised luminescence in mag. field 2-9197  
 GaSe<sub>0.95</sub>Te<sub>0.05</sub>:Sn, photocurrent interference oscills. 2-40970  
 GaSe,Te<sub>1-x</sub>:Sn, photoelectric props. 2-21629  
 GaTe, bonding in liquid and amorphous binary semiconductor alloys 2-8436  
 GaTe, liquid semiconductor, nucl. quadrupole relax. 2-46421  
 GaTe, opto-electronic props. 2-36587



## gallium compounds continued

- GaTe, phonon modes and optical consts., far IR complex refl. meas. 2-5669  
 GaTe, Raman scatt. under press. 2-2255  
 Ga<sub>2</sub>Te<sub>3</sub> thin films, prep. and elec. props. 2-5475  
 Gd(Cr<sub>2</sub>Ga<sub>1-x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688  
 Ge-Se-Ga thin film, amorphous, trap distrib., SCLC obs. 2-30908  
 In-Ga complexes and salts, In-Ga bonds, Raman spectra 2-43918  
 InAs-GaSb flat-band semiconductor, heterostructures, electronic props. 2-1994  
 InAs-GaSb superlattices, spatial separation of carriers, optical absorption meas. 2-9208  
 InAs-GaSb superlattices in high magnetic fields, band struct., elec. and optical props. 2-21669  
 InAs-GaSb superlattices, band struct. calcs. 2-40784  
 (InAs)<sub>1-x</sub>(GaAs)<sub>x</sub>(GaSb)<sub>1-x</sub>(GaAs)<sub>x</sub> superlattices, electronic and at. struct., phase separation effects 2-16969  
 InGaAsP, deep level centre photolum., comp. depend. 2-5751  
 InGaAsP n-channel inversion mode MISFET with low interface state density 2-13188  
 InGaAsP, ohmic contacts, low specific contact resistance, metallisation 2-2005  
 InGaAsP/InP diode, 1.5 µm wavelength laser light emission, detection by IR excitable phosphors 2-15219  
 InGaAsP/InP: Cd DH lasers, LPE growth 2-22178  
 InGaAsP/InP DH laser, degradation obs. by electron probe microanal. 2-44282  
 InGaAsP/InP diode lasers, intrinsic saturable absorption anal. 2-977  
 InGaAsP/InP laser, current injection induced acoustic signals 2-950  
 InGaAsP/InP laser, Sn doping of active region 2-45210  
 p-In<sub>0.75</sub>Ga<sub>0.25</sub>As<sub>0.55</sub>P<sub>0.45</sub>: Cd LPE layer, doping characters. and elec. props. 2-41031  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> lattice matched to InP, comp. depend. of mobility, peak vel. and threshold field 2-5479  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-x</sub>P<sub>x</sub>, deep vacancy levels theory (French) 2-40818  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, stabilisation by InP substrate inside unstable region in LPE 2-51833  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>Sb<sub>y</sub> LPE growth with enriched composition on InAs substrate 2-27107  
 InGaP-InGaAlP double heterostructures, optically pumped laser action at 77K, MBE prep. 2-49750  
 In<sub>1-x</sub>Ga<sub>x</sub>P, disorder induced Raman scatt. 2-22032  
 InGa<sub>1-x</sub>P, Brillouin scatt. study, comp. depend. 2-5724  
 InGa<sub>1-x</sub>P, MBE growth on GaAs, at high substrate temps. 2-26251  
 InP-InGaAsP heterostructure, electrolum. polarization due to internal strain 2-41432  
 K<sub>2</sub>O-Ga<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, migration of He 2-12852  
 Li<sub>2</sub>O-Ga<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, migration of He 2-12852  
 Lu(Cr<sub>2</sub>Ga<sub>1-x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688  
 MnS-Ga<sub>2</sub>Se<sub>3</sub>-GeS<sub>2</sub>, vitreous, mag. susceptibility and high field magnetisation (French) 2-13275  
 Na<sub>2</sub>O-Ga<sub>2</sub>O<sub>3</sub>, β<sup>n</sup> phase, Na/Zn compensated, composition control and fast ion cond. 2-5272  
 Na<sub>2</sub>O-Ga<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, migration of He 2-12852  
 Sb-GaSb, metallic, crystallisation speed influence on elec. props. and struct. (Russian) 2-5382  
 p-Si/(n-Ga<sub>2</sub>Se<sub>3</sub>-In<sub>2</sub>Se<sub>3</sub>) heterojunction, I-V characters. and prep. 2-51295  
 Si-GaP heterojunction, elec. and photoelec. props. 2-46123  
 TiGaSSe, electrical props., forbidden band width 2.2 eV (Russian) 2-13142  
 TiGaS<sub>2</sub>Se<sub>2</sub>(1-x), exciton states, absorpt. spectra study 2-36666  
 TiIn<sub>1-x</sub>Ga<sub>x</sub>Se<sub>2</sub>, solid soln., heat cond. (Russian) 2-5286  
 Y<sub>2</sub>Fe<sub>17-x</sub>Ga<sub>x</sub>O<sub>12</sub>, superhigh-freq. EM radiation at pumping freq. (Russian) 2-21891  
 ZnGa<sub>2</sub>S<sub>4</sub>, band struct. 2-5346  
 ZnGa<sub>2</sub>Se<sub>4</sub>, band struct. 2-5346

## galvanoluminescence see luminescence

## galvanomagnetic effects

- see also Hall effect; magnetoresistance; Suhl effect; thermomagnetic effects  
 amorphous alloys, recent studies, review (Japanese) 2-26354  
 anisotropic semiconductor, electron scatt. in mag. field 2-51219  
 cryostat, production and meas. of temps. to 0.9K 2-10811  
 cylindrical cooling element under steady state thermal conditions, galvanomagnetic effect 2-29998  
 ferrite-semiconductor struct., azimuthal resonance galvanomag. effect 2-1933  
 ferrite-semiconductor struct., azimuthal resonance galvanomag. effect 2-8827  
 metals, transport phenomena depend. on quasiloocal electron states 2-1891  
 metals, transport phenomena depend. on quasiloocal electron states 2-5387  
 phonon drag effect in strong mag. field, transport eqns. 2-26418  
 phonon drag theory in strong mag. field 2-21549  
 polar crystal, photogalvanic effect, mag. field influence, and carrier mass determ. 2-51234  
 reciprocity relations in two-dimensional percolation theory (Russian) 2-5376  
 semiconductor plasma, magnetised, hybrid mode excitation due to laser beam modulation 2-1937  
 semiconductor superlattice, galvanomagnetic and high freq. phenomena 2-13106  
 semiconductor thin film, influence of band bending on transport processes 2-17176  
 semiconductor with superlattice, galvanomagnetic phenomena in case of inelastic electron scatt. 2-13103  
 semiconductors, hot carriers, conf., Montpellier, France (July '81) 2-42780  
 semiconductors, hot electron effects in crossed mag. and static microwave elec. fields 2-46036  
 semiconductors, S-type current-voltage characteristics in classically strong mag. fields 2-40937  
 Be, galvanomagnetic coefficients by path integration 2-51150  
 Bi, galvanomagnetic instability, electroluminescence 2-46043  
 Bi magnetoresistive thermometry for transient temp. meas. in liquid He 2-3635  
 Co, ferromagnetic, domain dragging by elec. current at 4K 2-17047  
 GaAs, hot electron nonMaxwellian distrib. function in mag. field, cyclotron emission study 2-45038  
 Gd-Co amorphous films, transport props. 2-21690  
 n-Ge anisotropic semiconductor, electron scatt. in mag. field 2-51219

## galvanomagnetic effects continued

- p-Ge, hopping transport at large uniaxial stress and high mag. field 2-36047  
 p-Ge, hot electron population inversion in mag. field., expt. and Monte Carlo simulation 2-46039  
 n-Ge, uniaxially deformed, drag thermoelectric powers in quantising mag. field 2-1935  
 Ge:P, photoconductivity spectrum in mag. field, elec. field effects 2-26443  
 n-InSb, 1/f noise, mag. field effect 2-26458  
 InSb dielectric response function for sub-MM radiation interacting with quasi-free carrier gas, high mag. field 2-36070  
 p-InSb, extrinsic semicond., magnetoconc. effect 2-8823  
 Mn, cylindrical film, mag. flow quantisation (Russian) 2-5391  
 Mo bicrystal interface, galvanomag. phenomena 2-40873  
 Pb bicrystal interface, galvanomag. phenomena 2-40873  
 Te, galvanomagagnetic phenomena, effect of a-edge dislocations (Russian) 2-40946  
 Te, impurity states in high mag. fields 2-26331  
 galvanomagnetism see electromagnetism  
 galvanometers  
 No entries  
 galvanothermomagnetic effects see thermomagnetic effects  
 game theory  
 see also information theory  
 player aggregation in noncooperative games 2-28641  
 solar energy, consumer incentives 2-52306  
 gamma fission reaction see photofission  
 gamma radiation see gamma-rays  
 gamma-ray absorption  
 absorption coefficient as a function of energy, demonstration expt. 2-48459  
 low energy photons self-absorption, method for correction 2-11359  
 one-photon free-free absorpt., off-shell effects 2-34566  
 quasi-α-particle absorption in <sup>12</sup>C, <sup>16</sup>O, <sup>27</sup>Al, <sup>28</sup>Si, <sup>40</sup>Ca 2-43474  
 semiempirical formulae for γ-ray absorpt. coeffs. 2-46809  
 Al, gamma-ray attenuation coeff., Mossbauer spectrometer meas. (Chinese) 2-19907  
 gamma-ray angular distribution  
 see also gamma-ray spectra  
 (i) γ, angular distribution meas., information on nuclear props. 2-3903  
 At having six valence nucleons levels study 2-15371  
<sup>12</sup>C(<sup>12</sup>C, <sup>13</sup>C)<sup>12</sup>C, 87 MeV, inelastic scatt., spin-flip probability 2-19561  
<sup>12</sup>C(<sup>12</sup>C, <sup>13</sup>N)<sup>12</sup>C, 94 MeV, inelastic scatt., spin-flip probability 2-19561  
<sup>40</sup>Ca, A=56, 58, γ-radiation ang. anisotropy meas. 2-24162  
<sup>166</sup>Er, γ-γ ang. correlations from 2.173 keV transition 2-7075  
<sup>168</sup>Er, level transitions, from <sup>168</sup>Tm electron capture, γ-γ correl. 2-11110  
<sup>153</sup>Gd level structure studied in <sup>150</sup>Sm(α, n)<sup>153</sup>Gd reaction 2-24079  
<sup>165</sup>Ho(α, 2n)<sup>167</sup>Tm, γ-ray ang. distrib. anal. 2-24250  
<sup>14</sup>In, A=107, 108, high spin states, γ excitation functions and ang. distrib. from <sup>129</sup>Mo(<sup>19</sup>F, 2pxnγ) 2-358  
<sup>191</sup>Ir, 129.4 keV state, g-factor determ. from perturbed ang. distrib. of reson. scatt. γ-rays 2-24121  
<sup>160</sup>O(<sup>16</sup>He, pγ), 3.75 MeV, <sup>16</sup>F 3<sup>+</sup> state g-factor from γ-ray ang. distrib. 2-362  
<sup>16</sup>O(p, pγ)<sup>16</sup>O, 23.7 and 44.6 MeV, 6.13 MeV γ-ray prod., implications for γ-ray astronomy 2-34039  
<sup>182</sup>Os, band crossings study 2-38931  
<sup>182</sup>Os, sidebands and high-spin states 2-38930  
<sup>196</sup>Pt, 2<sup>+</sup> state, populated by Coulomb excitation in <sup>32</sup>S and <sup>58</sup>Ni, inelastic scatt., hyperfine field vel. depend. 2-19564  
<sup>70</sup>Se, level struct., γ-ray spectra, spins, parities, yrast states from <sup>58</sup>Ni(<sup>14</sup>N, pn) 2-19449  
<sup>82</sup>Se(p, nγ)<sup>82</sup>Br, 1.0-2.8 MeV, <sup>82</sup>Br excited levels investigation 2-19536  
<sup>49</sup>Y, hindered interband M1 transition, levels, lifetime, parity follow ng <sup>46</sup>Ti(α, pγ) 2-29225  
 gamma-ray applications  
 see also radiation therapy  
 cermets, nondestructive testing, scanning γ-ray method 2-47278  
 density nonuniformity detection in barrier from flux of scattered γ-radiation 2-27387  
 flow meas. through porous media, liquid saturation determ. 2-35245  
 velocity meas. using nuclear gamma-resonance meter 2-23616  
 gamma-ray astronomical observations  
 Crab Nebula, gamma-ray line at 73 keV, balloon obs. 2-38266  
 Cygnus X-3, correl. between X-ray and high energy gamma-ray emission 2-33073  
 Cygnus X-3, X-ray binary, gamma radiation periodic component 2-42720  
 diffuse, gamma-ray flux, obs. between 0.4 MeV and 7 MeV at balloon altitudes using Compton telescope 2-10289  
 Galaxy, COS-B obs. of large-scale distrib. gamma radiation 2-48315  
 gamma ray bursts catalogue from KONUS expt. on Venera 11/12 (Nov. 1978 to Feb. 1980) 2-14790  
 gamma ray bursts from KONUS expt. on Venera 11, 12 (Sept. 1978 to May 1979) 2-14788  
 gamma ray bursts from KONUS expt. on Venera 11/12 (May to Oct. 1979) 2-14789  
 lunar surface chemistry, anal. from X-ray and gamma-ray remote sensing expts. 2-42615  
 MCG 8-11-11, Seyfert galaxy 2-48336  
 Moon, Fe concentration in surface rocks, regional Apollo γ-ray obs. 2-53126  
 NGC 4151, Seyfert galaxy, X-ray and γ-ray obs. 2-48336  
 pulsars, X-ray and gamma-ray obs. 2-6622  
 Sun, delayed second phase acceleration in flares 2-53196  
 gamma-ray astronomy  
 see also gamma-ray sources (astronomical)  
 active galactic nuclei, γ-ray absorpt. and X-ray emission mechanisms 2-28567  
 annihilation radiation from a hot e<sup>-</sup>-e<sup>-</sup> plasma 2-28331  
 UV Ceti stars, flares, high energy obs. comparison with Sun 2-53272  
 cosmic gamma-ray scintillation detector, calibration procedure 2-10327  
 diffuse, gamma-ray flux, obs. between 0.4 MeV and 7 MeV at balloon altitudes using Compton telescope 2-10289  
 emission from interstellar clouds, plasma process enhancing electron fluxes 2-48308  
 Gamma-Ray Observatory, Burst and Transient Source Experiment 2-53044



**gamma-ray astronomy continued**

- ion chamber gamma burst detector 2-53082
- longitudinal distrib. in Galaxy from SAS II data, correl. with cosmic ray intensity 2-10514
- matter-antimatter annihilation in active galaxies,  $\gamma$ -ray constraints 2-14935
- modulated Multiple Split Camera for improved localization of gamma ray bursts 2-53079
- pulsars gamma-ray spectra for radiation produced by accel. particles 2-10467
- solar flare gamma ray emission, high energy originating particles effect on photosphere 2-53220
- superfast photometer 2-42606
- telescope, passively anti-collimated, design, calibration and sensitivity 2-18703
- telescope using coded aperture mask and drift chamber for high resolution obs. 2-38058
- third-generation small spectroscopy experiment for hard transient events 2-53080

**gamma-ray detection and measurement**

see also *gamma-ray spectrometers; radioactivity measurement*

- 120 channel HV regulator, DATEP, for gamma detector photomultipliers 2-24525
- absorption coefficient as a function of energy, demonstration expt. 2-48459
- APL satellite Ge X-ray detectors, mechanical refrigerator system 2-53051
- background counting rate from scintillation  $\gamma$ -ray counter components 2-29482
- background radiation, in Sulaimanyia town, Iraq (*Arabic*) 2-18427
- background-reduction shielding chamber effectiveness obs. 2-49224
- benchmark gamma-ray skyshine expt. 2-34215
- BGO scintillator timing props. 2-600
- coincidence information, determ. by sum peaks anal. of single spectrum 2-49241
- conversion electron Mossbauer spectroscopy using channel electron multipliers at low temp. 2-24479
- cosmic gamma-ray scintillation detector, calibration procedure 2-10327
- densitometers design aspects for void fraction meas. in two-phase flows 2-25455
- detectors for photonuclear physics 2-4193
- Diacel as a high exposure  $\gamma$ -ray dosimeter 2-43620
- diamond radiation detector, characts. and sensitivity to  $^{60}\text{Co}$  radiation 2-29481
- $\gamma$ -ray diffractometer, design and performance at 0.12 Å 2-38729
- doorway monitors for safeguards security 2-4138
- dwelling, gamma-ray dose rates in Poland 2-11284
- electret dosimeter for neutrons and gamma rays 2-15638
- energy equivalent correction of independent  $\alpha$ -reference sources 2-43697
- environmental  $\gamma$ -ray dose-rate meas. guide 2-11288
- environmental  $\gamma$ -ray dosimeter using  $\text{CaSO}_4\cdot\text{Dy}$  Teflon TLD discs 2-52417
- extended source, radiation field exposure determ. (*Chinese*) 2-34211
- flux density meas. from mixed  $\gamma$ -ray field using scintillation counter 2-7385
- gamma camera, pulse dividing circuit 2-19895
- gaseous radioactivity meas.,  $\gamma$ -ray-source geometry corrections 2-43743
- geophysical surveying instrument with large-vol. plastic detector 2-28221
- geophysical well logging, theory of  $\gamma$ -ray spectra within rock 2-28222
- graphite ionisation chambers, ionisation error due to porosity 2-19892
- IC compatible ionizing radiation detector fabricated using MOS processing techniques 2-49230
- ion chamber for neutron dosimetry, book 2-18823
- ion chambers for photon dosimetry, minimum operational requirements, book contrib. 2-19875
- ionisation gamma constant and the gamma equivalent in dosimetry 2-6825
- Kodak RM film for personnel monitoring, extension of exposure range using activation technique 2-43621
- lead-glass total absorption counters in hodoscope gamma spectrometer 2-15659
- Lixscope, NDT appl. 2-9519
- low energy photons self-absorption, method for correction 2-11359
- lubricant  $\gamma$ -ray dosimeter 2-9879
- mixed-field dosimetry using ionisation chambers, uncertainty anal. 2-19787
- multiple channel  $4\pi\beta\text{-}\gamma$  anti-coincidence counting 2-24528
- multiplicity logic unit 2-19894
- neutron temperature meas. using multi-indicator capture gamma ray neutron thermometer, activation anal. appl. 2-590
- non-hydrogenous ionisation chambers, relative neutron sensitivity 2-19788
- nonhydrogenous ionisation chamber appl. in mixed field dosimetry 2-19791
- online track filtering, GA103 microprogrammable processor appl. 2-24555
- passive monitoring of  $^{222}\text{Rn}$  and  $\gamma$ -ray exposures in houses, dosimeters for 2-42226
- photofoission products,  $\mu\text{s}$  isomeric states meas., background reduction system 2-43742
- photon detector efficiency for monochromatic photons 25 to 234 MeV 2-43674
- plastic scintillator, low energy  $\gamma$ -rays detection 2-608
- poolside fuel rod  $\gamma$ -ray scanner 2-24334
- proportional counter method, photon dose fraction determ. in neutron beam, expt. uncertainty 2-19792
- radioactive sources,  $\gamma$ -ray energies meas. using Ge semicon. detectors 2-15378
- SAMPO80 gamma spectrum anal. program for minicomputer 2-24476
- scintillation detector optimization using GUERAP-3 computer program 2-11353
- self-powered detectors, neutron and gamma sensitivities, Monte Carlo calc. 2-11349
- small angle tagging system of CELLO 2-24512
- special nuclear materials, detection in portal monitors, for safeguards 2-4139
- streamer chamber absolute  $\gamma$  quantum flux meas. apparatus 2-43691
- superconducting X and  $\gamma$  ray imaging device 2-7438
- superficial specific contamination, meas. error sources (*Rumanian*) 2-15687

**gamma-ray detection and measurement continued**

- TE ion chamber, tube length at gas exhaust port, influence on response, book contrib. 2-19888
- TE ion chamber meas. for neutron dosimetry, interpretation and corrections and book contrib. 2-19885
- TE ion chambers model IC-17 for dose meas., calibration constancy 2-19886
- telescope, passively anti-collimated, design, calibration and sensitivity 2-18703
- thermoluminescent dosimeter, LiF powder, deexcitation meas. instrument 2-19773
- tissue equivalent plastic ionisation chambers, response characts. in photon and neutron fields, book contrib. 2-19887
- TNO spherical tissue equivalent ion chamber for neutron dosimetry, characts., book contrib. 2-19883
- total gamma-ray cross section meas. in O, F and Cl 2-43738
- transmission-type polarimeter, analysing power meas. 2-43737
- $\gamma$ -ray spectrum anal. method using IAEA test spectra, quantitative evaluation 2-43741
- n- $\gamma$  dose meas. in water phantom for 18.4 MeV neutrons 2-19789
- $\text{Bi}_2\text{Ge}_2\text{O}_7$  scintillator detectors for high-energy gamma radiation 2-596
- $\text{CaSO}_4\cdot\text{Dy}$  phosphor with high Dy conc., high level  $\gamma$ -dosimetry 2-29438
- CdTe detector characteristics for  $\gamma$  dosimetry 2-43625
- CdTe detectors, thyroid tracer gamma monitoring appl. 2-22819
- CsI:TI  $\gamma$  scintillation length and amplitude effects 2-43696
- Ge detector, on-line neutron capture gamma anal. 2-603
- Ge detectors, response to monoenergetic electron, positron and gamma ray beams 2-39267
- Ge polarimeter system for  $\gamma$ -ray spectroscopy of  $^{61}\text{Zn}$  2-43444
- Ge(Li) detector, efficiency calibration at short source-to-detector distance 2-24490
- Ge(Li) detector calibration for neutron activation anal. (*Rumanian*) 2-24504
- Ge(Li) detector response for total absorption of photons 2-574
- Ge(Li) detectors, activity meas. using sum peaks 2-19855
- Ge(Li), large cylindrical counters, response to  $\gamma$ -rays 2-19845
- $^{125}\text{I}$  activity determ., implementation of coincidence method 2-49245
- $^{125}\text{I}$  decay rate determ., precaution in appl. of coincidence method 2-49243
- $^{85}\text{Kr}$  irradiation facility using pressurisation-dissolution method 2-7428
- LiF TLD, relative thermoluminescent response of 4 keV X-rays to  $^{60}\text{Co}$   $\gamma$ -rays 2-15636
- Mg-Ar ion chamber sensitivity to high energy neutrons 2-19790
- NaI(Tl) detector, efficiencies and parasitic pulses for spherical source system, Monte Carlo calcs. 2-598
- $\text{SiO}_2$ , fused, high-level  $\gamma$ -ray dosimetry 2-11282
- Xe, liquid, position-sensitive gamma-ray detector for positron annihilation expts. 2-15671

**gamma-ray diffraction**

- deformed crystals, Mossbauer radiation diffr. 2-40231
- $\gamma$ -ray diffractometer, design and performance at 0.12 Å 2-38729
- double crystal gamma ray diffractometer 2-30369
- Ge, double crystal gamma ray diffractometer 2-30369
- Si, double crystal gamma ray diffractometer 2-30369

**gamma-ray effects**

- see also *biological effects of gamma-rays; radiolysis*
- $\gamma$ -ray irradi., point defects, laser annealing 2-50696
- acylglycerols, mono-, di- and tri-, radiolytic compounds after irradi. 2-27458
- alcohol clusters in  $\gamma$ -irrad. glass mixt., electron trapping study 2-44083
- alcohols, glassy, localised electron spectra evolution gamma irradi. at 4K 2-13513
- aminoanthraquinone dyes, radiation damage and H bonding 2-52227
- butadienecarboxylic acids and its derivatives, free radicals, gamma irradi., EPR spectra 2-51465
- butene and its derivatives, free radicals, gamma irradi., EPR spectra 2-51465
- C-CD, gamma-induced noise anal. and meas. 2-29435
- ceramics, time to failure, neutron and gamma irradi. effects 2-5961
- corundum:Cr, influence of impurity on defect struct. (*Russian*) 2-17029
- 5-cyclohexenyl-1,5-dimethyl barbituric acid,  $\gamma$ -ray free radical prod., ESR study 2-27456
- dihydropyrimidines, ESR and spin-trapping studies,  $\gamma$ -radiolysis and UV photolysis 2-52229
- 2,3-dimethylbutane, solid forms, unsaturated heavy products 2-27457
- energy deposition at interfaces, semi-empirical electron transport model 2-30503
- ethanol glasses, electron scavenging, gamma-ray irradi. at 77 and 4.2K 2-13987
- ethanol-water glasses, electron trapping at ultra-low temps. 2-13525
- fibre optics, gamma irradiated, thermolum. obs. 2-5760
- fission reactor materials, corrosion product release effect of  $\gamma$ -radiation 2-19679
- glass, plate, of varying As content, gamma-radiation effect as strength 2-31778
- layered structures, channelling of neutral particles 2-5165
- methylcyclohexane-methane system, pulse and gamma-radiolysis, ion decay nonhomogeneous kinetics 2-13989
- 3-methylpentane-1-propanol glass mixtures, electron transfer and solvation, gamma ray irradi. at 77 and 4K 2-13523
- molecular sieve material,  $\gamma$ -ray induced outgassing 2-40683
- phospholipids, saturated,  $\gamma$ -radiolysis products 2-27459
- PMMA, radiation degradation investig. 2-6722
- polyacrylonitrile,  $\gamma$ -irrad., gelation dose, spectrophotometric determ. 2-47365
- polydiacetylene crystal, defect struct. during polymerisation, X-ray topography study 2-45145
- polyethylene, gamma irradiated, viscoelastic and elec. props. meas. 2-45273
- polyethylene, internal stress-pattern memory effect, stress relax.,  $\gamma$ -ray irradiated (*French*) 2-47070
- polyethylene, IR spectra changes after  $\gamma$ -irradiation in proces of elec. ageing in air (*Russian*) 2-35539
- polyethylene, ultra high modulus, creep and recovery 2-17716
- polyethylene, ultrahigh mol. wt., friction and wear, effect of  $\gamma$ -irrad. 2-27295
- polyethylene fibrillar films, high mol. wt., effect of nitric acid and  $\gamma$ -rays on melting behaviour (*Japanese*) 2-30417
- polyethylmethacrylate,  $\gamma$ -ray irradi., free radical form. and decay, US detect. 2-52200



## gamma-ray effects continued

- polyisobutylene,  $\gamma$ -ray irradi., entanglement density, mol. wt., NMR meas. 2-49616  
 polyolefine-elastomer blends, elec. strength and struct., ionising radiation effects (Russian) 2-21946  
 polyolefines, elec. strength and struct., ionising radiation effects (Russian) 2-21946  
 polyvinylidene fluoride film, piezoelectric,  $\gamma$ -irradiated, props. 2-36530  
 polyvinylidene fluoride films, gamma irradi., piezoelectric, aging behavior 2-8540  
 PTFE, irradiation effects on charge storage and cond.,  $^{60}\text{Co}$  gamma radiation 2-8544  
 PVC, plasticized, mol. conformation relaxation 2-44150  
 PVC, rigid and soft,  $\gamma$ -irrad., elec. behaviour 2-45962  
 quartz, crystalline, gamma-neutron irradiated, electrooptical anharmonicity, defects effect 2-13454  
 quartz, freq. chars. 2-21187  
 quartz, ionic conduction, X-ray and  $\gamma$ -ray induced, annealing, activation energy 2-50910  
 quartz, smoky, gamma irradi., acoustic saturation freq. depend. 2-45397  
 quartz crystals, electrical chars., gamma ray effects 2-21941  
 quartz glass-polymer fibre waveguides,  $\gamma$  irradi. influence on optical loss temp. depend. 2-49932  
 Rochelle salt crystals,  $\gamma$ -ray irradi. hardening 2-21174  
 ruby, gamma-bombarded,  $\text{Cr}^{3+}$  valence change, X-ray emission study 2-12639  
 ruby laser in  $\gamma$ -radiation field, colour centres, laser generating props. (Russian) 2-29823  
 soda lime glass detectors, high dose  $\gamma$ -irrad. effect on track development props. 2-4175  
 steel, stainless, exposed to liq. Li, trapping and radiation-induced detrapping of H 2-45272  
 steel, stainless, sensitized 304, SCC in high temp. water under  $\gamma$ -ray irradi. 2-22365  
 TGS, Brillouin scatt. in pure and  $\gamma$ -irrad. crystals 2-36656  
 TGS, switching chars., and phase transition, gamma irradi. effects, thermal noise study 2-31422  
 thermolum. dosimeters, response chars., nonlinearity mech., review 2-29440  
 thymine-(methyl- $^{14}\text{C}$ ) in aq. soln.,  $\gamma$ -ray-induced demethylation 2-52230  
 trichlorofluoromethane frozen matrix, gamma-irrad., cation radicals prod. 2-21881  
 AgCl, UV illuminated,  $\gamma$ -irrad.  $\text{Cd}^{2+}$  doped, load relax. studies 2-41647  
 $\text{Ce}^{3+}$  in ethylenediamine tetra-acetate aqueous solns., gamma-radiolysis 2-13990  
 $\text{Cr}(\text{CO})_6\cdot\text{Fe}(\text{CO})_5$  single cryst., EPR spectrum 2-36413  
 $\text{CsH}_2\text{PO}_4$ , X-ray and  $\gamma$ -ray irradiated, polarisation props. chars., domain struct. 2-51534  
 Cu, dislocation pinning effects, US attenuation and vel. meas. 2-45194  
 Cu, plastically deformed, dislocation struct., US investig. 2-45190  
 GaAs, radiation defect annealing, redistrib. of point defects 2-45152  
 GaAs-Al $_x$ Ga $_{1-x}$ As diode struct. elec. charact., gamma radiation effect 2-46125  
 Ge hot-electron bolometers for FTIR diagnostics,  $\gamma$ -ray and neutron effects 2-35329  
 Ge, neutron and  $\gamma$ -ray irradi., point defects, positron capture 2-51741  
 Ge, point defects and disordered regions due to irradi., magnetoresist. meas. 2-8826  
 Ge:Au, gamma irradi., radiation defects interaction with impurity 2-12633  
 Ge:Cu, gamma-ray induced defect formation 2-40437  
 Ge:Li,  $\gamma$ -irrad., radiation defect interaction with impurity atoms 2-25918  
 Ge:Pd, Sb,  $\gamma$ - and electron-irrad., complex formation, primary defects charge state effect 2-40436  
 H, trapped atoms in  $\text{H}_2\text{SO}_4$  at 77K, ESR 2-4240  
 n-InP,  $\gamma$ -irradiated, homogeneously compensated, electron mobility at low electron density 2-26390  
 InSb hot-electron bolometers for FTIR diagnostics,  $\gamma$ -ray and neutron effects 2-35329  
 KCl, deformed cryst.,  $\gamma$ -irrad., dislocation damping coeff. 2-16653  
 KCl:(Fe(CN) $_6$ ) $^{4-}$ , X- and  $\gamma$ -irrad., ESR studies 2-31267  
 KCl-KBr mixed crystals, gamma-ray induced F-bands study 2-40379  
 $\text{KH}_2\text{PO}_4$ , ferroelec., dielectric props., plastic deform. and radiation defect influence 2-36502  
 $\text{KH}_2\text{PO}_4\cdot\text{CrO}_4^{2-}$ , radiation damage, optical absorpt. spectra and EPR spectra 2-1525  
 KI quartz glass, colorimetric  $\gamma$ -ray dosimeter 2-19776  
 LiF crystal, dislocation motion damping const., press. depend. 2-45193  
 $\text{MgAl}_2\text{O}_4$  crystals exposed to  $\gamma$ -rays, optical spectra 2-51631  
 MgO powder, defects mechanically activated by compressive, shear stress,  $\gamma$ -irrad. effect 2-35540  
 $\text{MgO}\cdot\text{Al}_2\text{O}_3\cdot\text{SiO}_2\cdot\text{TiO}_2$  glass, radiation induced paramag. centres 2-2133  
 $(\text{NH}_4)_2\text{SO}_4$ , ferroelectric transition, EPR study 2-46513  
 $\text{N}_2\text{H}_4\text{SO}_4$ , gamma irradiated, paramagnetic centre, EPR study 2-13339  
 NaCl crystal, dislocation motion damping const., press. depend. 2-45193  
 NaCl, deformed cryst.,  $\gamma$ -irrad., dislocation damping coeff. 2-16653  
 NaCl, dislocation photodamping with F-centres, internal function study 2-45188  
 NaCl, energy stored during plastic deform., influence of point defects and struct. 2-35576  
 $\text{NaNd}_2\text{SeO}_4\cdot 2\text{D}_2\text{O}$ ,  $\gamma$ -irrad., ferroelec. transition, ESR obs. 2-2119  
 $\text{NaNH}_4\text{SeO}_4\cdot 2\text{H}_2\text{O}$ ,  $\gamma$ -irrad., ferroelec. transition, ESR obs. 2-2119  
 $\text{NaNbO}_3$ , switching chars. and phase transition, gamma irradi. effects, thermal noise study 2-31422  
 $\text{Na}_2\text{O}\cdot\text{Al}_2\text{O}_3\cdot\text{B}_2\text{O}_3\cdot\text{Ce}$ , gamma-ray irradi., absorpt. bands, optical density variation 2-31527  
 RbBr:(Fe(CN) $_6$ ) $^{4-}$ , X- and  $\gamma$ -irrad., ESR studies 2-31267  
 RbCl:(Fe(CN) $_6$ ) $^{4-}$ , X- and  $\gamma$ -irrad., ESR studies 2-31267  
 Se, glassy,  $\gamma$ -irrad., struct. relax. 2-21036  
 Si, defect creation and recomb. lifetime due to high energy and  $\gamma$ -irradiation 2-50715  
 Si, gamma-ray irradi., uniaxial deform. influence on nonequilibrium carrier recombination 2-26410  
 Si,  $\gamma$ -irrad., defect levels, electron thermal emission rate, TSC study 2-21603  
 Si, point defects and disordered regions due to irradi., magnetoresist. meas. 2-8826  
 p-Si:B,  $\gamma$ -irrad., impurity-point radiation defects interactions 2-25928  
 n-Si:Gd,  $\gamma$ - and electron-irrad., defect formation; elec. and optical study 2-21175

## gamma-ray effects continued

- Si-SiO $_2$  interface in MOS structs., memory effects caused by irradi. (Russian) 2-21681  
 Si-SiO $_2$  interface in MOS structures, radiation-induced trivalent Si defect buildup 2-30969  
 SiO $_2$ , fused, high-level  $\gamma$ -ray dosimetry 2-11282  
 SiO $_2$ , irradiated, electron-hole recombination from microdosimetry viewpoint 2-30905  
 SiO $_2$ , irradiated with electrons and  $\gamma$ -rays, defect form. dose depend. 2-21176  
 SiO $_2$ , optical fibres; as-drawn and irradi., photoluminesc. study, role of nonbridging O defect centres 2-13536  
 SiO $_2$ , vitreous, accumulation kinetics of radiation defects, for fibre light guides appl. 2-8541  
 SiO $_2$ , vitreous, containing hydroxyl, ESR meas. 2-13338  
 SiO $_2$ -Si interface states generation at low temp. with ionising radiation 2-30944  
 SrTiO $_3$  single crystals, 3d and 4f ion activated, absorpt. spectra and  $\gamma$ -radiation stability 2-46646  
 U $^{238}$ , neutron or gamma irradiated, Mossbauer effect study 2-30498  
 V-Ga-Ce (16, 1 wt.%) irradi. conditions on mechanical props. 2-13757  
 Y $_2\text{O}_3$  ceramics, effect of  $\gamma$ -radiation on optical props. 2-22347  
 (YSmLuCa) $_3$ (FeGe) $_2$ O $_{12}$  bubble epitaxial layers, neutron and  $\gamma$ -irrad., mag. props. 2-31252
- gamma-ray interactions**  
 see also gamma-ray scattering  
 No entries
- gamma-ray lasers**  
 development approaches, review 2-879  
 Doppler-line-width gamma laser prospects, 10-100 keV range 2-49724  
 $^{161}\text{Dy}$  isomer polarised nuclei,  $\gamma$ -laser creation possibility (Russian) 2-5608  
 $^{65}\text{Zn}$  isomer polarised nuclei,  $\gamma$ -laser creation possibility (Russian) 2-5608
- gamma-ray polarisation**  
 transmission-type polarimeter, analysing power meas. 2-43737  
 $^{61}\text{Zn}$ , gamma-ray spectroscopy and planar Ge polarimeter system 2-43444
- gamma-ray production**  
 Frascati polarised gamma beam, preliminary results 2-11333  
 Gamacell 220 drawer transit doses, magnitude and position dependence 2-9878  
 nuclear reactor water shields, distrib., of  $\gamma$ -rays arising from neutron interactions 2-7153  
 radiometric systems, distrib. gamma sources, Monte Carlo method 2-43658  
 relativistic nuclei accelerators, quasi-monochromatic gamma-ray source (Russian) 2-29475  
 $\text{pp}\rightarrow\pi^+(\gamma)\text{X}$ , 63 GeV, jet and direct prod. from event struct. 2-354  
 $^{137}\text{La}$ , A-141, 2,  $\gamma$ -ray emission probabilities 2-3873
- gamma-ray scattering**  
 see also Compton effect; gamma-ray interactions  
 atmospheric reflection from localised sources, point kernel model calc. 2-39229
- gamma-ray sources** see gamma-ray production
- gamma-ray sources (astronomical)**  
 active galactic nuclei,  $\gamma$ -ray absorpt. and X-ray emission mechanisms 2-28567  
 burst model involving neutron star accretion by mag. field 2-53384  
 burst of 1979 March 5, neutron star accretion of solid body 2-10526  
 burst of 1979 March 5, prototype for single non accreting neutron star source 2-53383  
 burst source model involving neutron star asteroid accretion 2-53385  
 burst sources, critical luminosity of compact star with strong mag. field 2-28492  
 burst sources, neutron star evolution and thermonuclear model 2-53382  
 burst sources observable by HEAO-B in X-rays 2-33186  
 burster in Sculptor constellation, obs. of optical counterpart 2-38342  
 catalogue from KONUS expt. on Venera 11, 12 (Sept. 1978 to May 1979) 2-14788  
 catalogue from KONUS expt. on Venera 11/12 (May to Oct. 1979) 2-14789  
 catalogue from KONUS expt. on Venera 11/12 (Nov. 1978 to Feb. 1980) 2-14790  
 concentrations and local galactic spiral structure (Russian) 2-33160  
 Crab Nebula, gamma-ray line at 73 keV, balloon obs. 2-38266  
 Cygnus X-3, correl. between X-ray and high energy gamma-ray emission 2-33073  
 Cygnus X-3, X-ray binary, gamma radiation periodic component 2-42720  
 discrete source identification with supernova remnants and pulsars 2-42755  
 discrete sources, reviews 2-6685  
 galactic disc diffuse emission, contrib. of discrete sources 2-42755  
 galactic emission components 2-38310  
 interstellar molecular clouds, contrib. of cosmic ray irradiation to number of apparent  $\gamma$ -ray sources 2-28534  
 MCG 8-11-11, Seyfert galaxy, X-ray and  $\gamma$ -ray obs. 2-48336  
 neutron star-asteroid collision, radiation emission 2-10471  
 neutron stars, asteroid impact, scatt. as  $\gamma$ -ray burst source giant 2-10527  
 neutron stars, gamma-ray bursts as manifestation of inherent activity 2-42706  
 neutron stars, magnetic, nonradial accretion rel. to gamma-ray emission 2-6629  
 neutron stars, non accreting, as gamma ray sources, 1979 March 5 source anal. 2-53383  
 neutron stars asteroid impact,  $\gamma$ -ray burst precursors 2-53386  
 NGC 4151, Seyfert galaxy, X-ray and  $\gamma$ -ray obs. 2-48336  
 pulsar windzones as X-ray and  $\gamma$ -ray emitters 2-6613  
 pulsars,  $\gamma$ -quanta capture by mag. field rel. to pair creation suppression 2-38227  
 pulsars, EM cascades theory rel. to gamma-ray spectrum 2-53304  
 quasars, contrib. to 2 keV to 100 MeV background and X-ray source counts at 2 keV 2-6686  
 supernova outbursts, gamma-ray emission from shock wave front 2-28487  
 supernova remnants, nuclear gamma-ray line fluxes 2-10506  
 supernovae in molecular clouds, constraint on prompt cosmic ray prod. from  $\gamma$ -ray obs. 2-6512



## gamma-ray spectra

- see also *gamma-ray angular distribution; gamma-ray spectra of liquids and solids; nuclear decay theory*
- analysis program, SAMPO80, with nuclide identification 2-17939
- atmospheric natural gases, from Cerna Valley, radioactivity (*Rumanian*) 2-23086
- BWR, spent fuel characteristics,  $\alpha$ - and  $\gamma$ -spectra study 2-11185
- centrifuge enrichment plant, gamma spectrometry for safeguards evaluation 2-7215
- coincidence information, determ. by sum peaks anal. of single spectrum 2-49241
- discrete-ordinates code for gamma-ray transport through infinite homogeneous ore medium 2-48647
- fission products, short-lived nuclear data appl. 2-19586
- gamma-ray multiplicity moments for heavy ion-massive transfer reactions 2-43499
- graphite, polycrystalline,  $\gamma$ -ray Compton profile 2-9063
- high-energy  $\gamma$ -ray spectra, automated anal. 2-24478
- highly rotating nuclei, deexcitation, low energy M1  $\gamma$ -ray emission 2-24164
- isotope identification from  $\gamma$ -ray spectrum meas. 2-19694
- multiple-integral-coincidence spectrometer characts. and appl. 2-34231
- neutron deficient nuclei, neutron multiplicity technique for in-beam  $\gamma$ -spectroscopy 2-19839
- neutron temperature meas. using multi-indicator capture gamma ray neutron thermometer, activation anal. appl. 2-590
- production cross sections for fast neutrons from Al, Ni, Cu, Nb 2-411
- production cross sections for MeV neutrons 2-415
- prompt gamma neutron activation anal. facility 2-17934
- radioactive sources,  $\gamma$ -ray energies meas. using Ge semicon. detectors 2-15378
- radioisotope decay characts., data table (*French*) 2-29177
- SAMPO80 gamma spectrum anal. program for minicomputer 2-24476
- TRIGA fuel elements, burnup from  $\gamma$ -ray spectra 2-24297
- (n,n $\gamma$ ), gamma quanta formation group and total cross sections 2-15406
- (n,n $\gamma$ ), gamma spectra cross section for fast neutrons 2-15405
- $\pi^-$  p, 40 GeV/c,  $\gamma$  quanta prod. with strange particles, multiplicity and inclusive spectra (*Russian*) 2-29151
- <sup>110m</sup>Ag,  $\beta$ -decay strength function meas. using  $\gamma$ -ray total absorb ion spectrometer 2-19834
- <sup>26</sup>Al,  $\gamma$ -decay reson. states study in <sup>25</sup>Mg(p, $\gamma$ )<sup>26</sup>Al 2-24160
- <sup>84</sup>As, <sup>84</sup>Se, beta strength function study, gamma-ray spectroscopy 2-19506
- <sup>208</sup>At having six valence nucleons levels study 2-15371
- <sup>187</sup>Au structure, complex radioactive decay schemes far from beta stability 2-15390
- <sup>196m</sup>Au 9.7 h 12<sup>-</sup> isomer, nuclear mag. moment 2-38945
- <sup>147</sup>Ba, beta-decay study, nuclear spectroscopy 2-15387
- C contamination detection using <sup>12</sup>C(p, $\gamma$ )<sup>13</sup>N reson. reaction 2-47395
- C, glassy,  $\gamma$ -ray Compton profile 2-9063
- <sup>12</sup>C(n,n $\gamma$ ),  $\gamma$ -ray line Doppler broadening, C content determ. 2-9591
- <sup>4</sup>Cd, A=110-112, levels characts. study 2-24149
- <sup>4</sup>Ce, A=142, 144, 146, 148, excited 0<sup>+</sup> and other levels in transitional nuclides, ang. correl. studies 2-15379
- <sup>4</sup>Ce, A=142, 144,  $\gamma$ -ray transition study by  $\gamma\gamma$ -directional correl. method 2-15380
- <sup>144</sup>Ce, gamma ray emission probabilities 2-38979
- <sup>146</sup>Ce, level structure study following beta-decay of <sup>146</sup>La 2-15368
- <sup>148</sup>Ce band structure from mass separated <sup>148</sup>La decay 2-15369
- <sup>52</sup>Cr(n, $\gamma$ ), low energy neutron capture  $\gamma$ -ray spectra (*Chinese*) 2-34044
- <sup>43</sup>CS, <sup>43</sup>Xc, A=121,123, gamma emissions 2-33963
- <sup>147</sup>Cs, beta-decay study, nuclear spectroscopy 2-15387
- <sup>148</sup>Dy decay, at. mass from Q-value meas. 2-33964
- <sup>153</sup>Dy,  $\gamma$ -ray, internal conversion electron and  $e\gamma$ -coincidence spectra study 2-24153
- <sup>153</sup>Dy level scheme study from <sup>153</sup>Ho decay 2-15382
- <sup>155</sup>Dy, decay diagram investigation 2-19479
- <sup>4</sup>Er, A=161, 163, 165, rotational states lifetimes and  $\gamma$ -transition reduced probabilities study 2-24172
- <sup>155</sup>Er  $\rightarrow$  <sup>155</sup>Ho,  $\beta$ -decay and <sup>155</sup>Ho excited levels 2-19480
- <sup>158</sup>Er, third discontinuity in yrast levels 2-43404
- <sup>166</sup>Er,  $\gamma$ -rays ang. correl. study 2-24156
- <sup>168</sup>Er, deformed nuclei, rot.,  $\gamma$ -vibr. motion 2-33892
- <sup>56</sup>Fe(n,x $\gamma$ ), 14 MeV, gamma-ray spectra description using statistical model 2-43487
- <sup>153</sup>Gd level structure studied in <sup>150</sup>Sm( $\alpha$ ,n)<sup>153</sup>Gd reaction 2-24079
- <sup>154</sup>Gd(n, $\gamma$ )<sup>155</sup>Gd, neutron capture reaction study at isolated reson. (*Russian*) 2-29270
- <sup>155</sup>Gd, 180-86 keV cascade, ang. correl. perturbation study 2-24152
- <sup>65</sup>Ge, T<sub>1/2</sub>=1/2  $\beta$ -delayed proton decay study 2-24180
- <sup>4</sup>Hf, A=162-165, refractory isotopes on-line separation at ISOCELE separator 2-19692
- <sup>4</sup>Hf, A=167, 168, backbending and band-crossing picture 2-24086
- <sup>4</sup>Hf, A=167,168,  $\gamma$ - $\gamma$  energy correl. study with Compton-suppression spectrometers 2-24163
- <sup>166</sup>Ho  $\rightarrow$  <sup>166</sup>Er,  $\gamma\gamma$ -directional correl. meas. 2-38978
- <sup>104</sup>In<sup>m</sup> nuclei decay study 2-24150
- <sup>114</sup>In<sup>m</sup> nuclei decay study 2-24150
- <sup>98</sup>Ir, gamma ray emissions in beta decay 2-43455
- <sup>73</sup>Kr, T<sub>1/2</sub>=1/2  $\beta$ -delayed proton decay study 2-24180
- <sup>83</sup>Kr level structure from <sup>80</sup>Se( $\alpha$ ,n)<sup>83</sup>Kr reaction,  $\gamma$ -ray spectra 2-33951
- <sup>134</sup>La, decay scheme, X-ray obs. 2-374
- <sup>147</sup>La, beta-decay study, nuclear spectroscopy 2-15387
- <sup>4</sup>Lu, A=158, 160-5, neutron-deficient isotopes decay study 2-15388
- <sup>52</sup>Mn(n, $\gamma$ ), low energy neutron capture  $\gamma$ -ray spectra (*Chinese*) 2-34044
- <sup>82</sup>Mo, production and decay,  $\gamma$ -ray spectra, level schemes 2-24197
- <sup>18</sup>N  $\rightarrow$  <sup>18</sup>O,  $\beta$  decay and T=2 states 2-38987
- <sup>4</sup>Na, A=27-34,  $\gamma$ -activities from  $\beta$ -decay 2-24188
- <sup>144</sup>Nb levels excited in <sup>144</sup>Zr(p, n $\gamma$ )<sup>144</sup>Nb reaction 2-24148
- <sup>144</sup>Nb,  $\gamma$ -ray spectra, multipole charact. from (n, $\gamma$ ) 2-38976
- <sup>4</sup>Ni(<sup>4</sup>He, d), A=62, 64, radiation widths correl. and spectroscopic factors meas. 2-24230
- <sup>4</sup>Ni(p,  $\gamma$ ), A=62, 64, radiation widths correl. and spectroscopic factors meas. 2-24230
- <sup>16</sup>O(p,p' $\gamma$ )<sup>16</sup>O, 23.7 and 44.6 MeV, 6.13 MeV  $\gamma$ -ray prod., implications for  $\gamma$ -ray astronomy 2-34039
- <sup>182</sup>Os, band crossings study 2-38931
- <sup>182</sup>Os, sidebands and high-spin states 2-38930
- <sup>188</sup>Os levels spectrum 2-24126
- <sup>36</sup>P, beta decay, half life,  $\gamma$ -ray obs. 2-24189
- <sup>96</sup>Pd, production and decay,  $\gamma$ -ray spectra, level schemes 2-24197

## gamma-ray spectra continued

- <sup>138</sup>Pm  $\rightarrow$  <sup>138</sup>Nd, <sup>138</sup>Nd structure study from  $\beta^+$ -decay 2-24185
- <sup>206</sup>Po decay, gamma-gamma directional correl. 2-24165
- <sup>214</sup>Po,  $\gamma$  radiation above 2 MeV (*French*) 2-15377
- <sup>144</sup>Pr, gamma ray emission probabilities 2-38979
- <sup>147</sup>Pr, decay scheme, X-ray obs. 2-374
- <sup>191</sup>Pt, nuclear orientation, gamma-ray anisotropy, multipole mixing ratios 2-29226
- Pu, in mixed oxide fuel pin, age determ. 2-39109
- Pu isotope ratios, gamma spectroscopic method 2-14036
- <sup>226</sup>Ra, determ. in natural waters by  $\gamma$ -ray spectrometry 2-31958
- <sup>226</sup>Ra,  $\gamma$  radiation in equil. with its derivatives, above 2 MeV (*French*) 2-15377
- <sup>226</sup>Ra,  $\gamma$  radiation study, 1-2 MeV (*French*) 2-570
- <sup>228</sup>Ra, determ. in natural waters by  $\gamma$ -ray spectrometry 2-31958
- <sup>82m</sup>Rb  $\rightarrow$  <sup>82</sup>Kr,  $\gamma$ -ray spectrum study 2-24151
- <sup>4</sup>Re, A=177-191, odd isotopes mag. moments 2-33901
- <sup>183</sup>Re, internal conversion electron spectrum study 2-33953
- <sup>100</sup>Rh<sup>m</sup> nuclei decay study 2-24150
- <sup>106</sup>Rh<sup>m</sup>, gamma ray energies and intensities following beta decay 2-43454
- <sup>124</sup>Sb,  $\beta$ -decay strength function meas. using  $\gamma$ -ray total absorption spectrometer 2-19834
- <sup>70</sup>Se, level struct.,  $\gamma$ -ray spectra, spins, parities, yrast states from <sup>82</sup>Ni(<sup>14</sup>N, pn) 2-19449
- <sup>82</sup>Se(p,n $\gamma$ )<sup>82</sup>Br, 1.0-2.8 MeV, <sup>82</sup>Br excited levels investigation 2-19536
- <sup>28</sup>Si structure from high-spin states spectroscopy 2-24166
- <sup>28</sup>Si(n,x $\gamma$ ), 14 MeV, gamma-ray spectra description using statistical model 2-43487
- <sup>144</sup>Sm(<sup>3</sup>He, 2n)<sup>145</sup>Gd, medium-spin levels and 20.4 ms 13/2<sup>+</sup> isomer character in <sup>145</sup>Gd 2-38951
- <sup>150</sup>Sm,  $\gamma$ -ray spectra, multipole charact., from (n, $\gamma$ ) 2-38976
- <sup>150</sup>Sm, internal ionisation probability in beta decay 2-29232
- <sup>4</sup>Sn, A=109,111,  $\gamma$ -ray and integral anticoincidence spectra 2-43452
- <sup>4</sup>Sn(p,p' $\gamma$ ), A=112-124, collective states in even Sn nuclei 2-33888
- <sup>100</sup>Sr, strongly deformed nucleus,  $\gamma$  ray and conversion electron spectra 2-24168
- Ta with deformed nucleus, K X-ray and  $\gamma$ -ray emission correl. 2-4251
- <sup>181</sup>Ta(n, $\gamma$ ), 0.5, 3.0 MeV, fast neutron capture cross section meas. 2-15404
- <sup>148</sup>Tb(T<sub>1/2</sub>=2.2 min) decay, at. mass from Q-value meas. 2-33964
- <sup>154</sup>Tb,  $\beta$ -decay strength function meas. using  $\gamma$ -ray total absorption spectrometer 2-19834
- <sup>155</sup>Tb  $\rightarrow$  <sup>155</sup>Gd,  $\gamma$ -ray, internal conversion electron and  $e\gamma$ -coincidence spectra study 2-24154
- <sup>90</sup>Tc<sup>m</sup> beta decay, <sup>90</sup>Mo level structure study 2-38990
- <sup>229</sup>Th, decay modes,  $\gamma$ -ray spectra following <sup>228</sup>Th(n, $\gamma$ ) 2-3876
- <sup>232</sup>Th, high-spin yrast states g-factors 2-49033
- <sup>232</sup>Th, rotational band crossings 2-43407
- Tm with deformed nuclei, K X-ray and  $\gamma$ -ray emission correl. 2-4251
- <sup>4</sup>Tm  $\rightarrow$  <sup>4</sup>Er, A=161, 162, 165, internal conversion and  $\gamma$ -ray spectra study 2-24158
- <sup>238</sup>U, high-spin yrast states g-factors 2-49033
- <sup>238</sup>U( $\gamma$ ,f),  $\mu$ s isomeric states meas. in photofission products 2-43742
- <sup>51</sup>V levels populated in (n,n' $\gamma$ ) reaction, decay scheme and lifetimes 2-24161
- <sup>51</sup>V(n, $\gamma$ ), low energy neutron capture  $\gamma$ -ray spectra (*Chinese*) 2-34044
- <sup>125</sup>Xc decay,  $\gamma$ -ray and  $e\gamma$ -coincidence spectra study 2-24159
- <sup>61</sup>Zn, gamma-ray spectroscopy and planar Ge polarimeter system 2-43444
- <sup>4</sup>Zr, A=88, 92, 94, O<sub>2</sub><sup>+</sup> states decay and E0 systematics 2-24173

## gamma-ray spectra of liquids and solids

- see also *Mossbauer effect*
- diamond, electron channelling, planar,  $\gamma$ -emission spectrum 2-46450
- hyperfine, textured interaction, angular correlation and distrib. expts. formulation 2-26341
- materials science appl. of nucl. and electron reson., spectroscopies, conf., Boston, MA, USA (Nov. 1980) 2-33241
- metal, defects detected by spin precession methods, review 2-30848
- metals and alloys, noncubic, elec. field gradient, PAC studies 2-31352
- spin precession methods appl. to materials science problems 2-31341
- transition metals, hyperfine interaction studies of He trapping 2-31342
- Ag, geometrical structure of lattice defect-impurity config., TDPAC study 2-31354
- Ag, internal In oxidation study by TDPAC 2-31353
- Ag, <sup>111</sup>In foil, quenched, vacancy detrapping, TDPAC study 2-12632
- Au, geometrical structure of lattice defect-impurity config., TDPAC study 2-31354
- B-C, CVD deposited, comp. and struct. changes, temp. and supersaturation effects 2-40715
- BaCrO<sub>4</sub>, elec. quadrupole interaction, TDPAC obs. 2-36483
- BaCr<sub>2</sub>O<sub>7</sub>, elec. quadrupole interaction, TDPAC obs. 2-36483
- Bi, amorphous, elec. field gradients, TDPAC studies 2-31350
- Cd, HCP, lattice defects, PAC and distrib. methods study 2-30462
- Cd-Mg, <sup>111</sup>Cd probe nuclei, electric field gradient, quadrupole coupling const., TDPAC meas. 2-17372
- Cu, geometrical structure of lattice defect-impurity config., TDPAC study 2-31354
- Cu: <sup>111</sup>In, channelling and gamma-ray spectra 2-50730
- Ga, amorphous, elec. field gradients, TDPAC studies 2-31350
- HfV<sub>2</sub>, electric field gradient and phase transition 2-26340
- In<sub>80</sub>Ag<sub>20</sub>, amorphous, elec. field gradients, TDPAC studies 2-31350
- In<sub>50</sub>Au<sub>50</sub>, amorphous, elec. field gradients, TDPAC studies 2-31350
- In<sub>2</sub>Se<sub>3</sub>, cryst. struct. and phase transition, elec. field gradient, TDPAC study 2-26797
- Ni, Hf ion implanted, laser pulse melting, TDPAC, Rutherford backscatt. and channelling meas. 2-31351
- NiH<sub>2</sub>, ion implanted, resistivity annealing and TDPAC study 2-46180
- Se-Te alloys, Se-rich, motional correl. time of dil. <sup>111</sup>Cd impurities, TDPAC meas. 2-31348
- SnCd, lattice damage at recoil Sm impurity 2-25943
- Th-Ce, extremely dilute, intermediate valence, TDPAD study 2-2169
- Zn, HCP, lattice defects, PAC and distrib. methods study 2-30462

## gamma-ray spectrometers

- see also *gamma-ray spectra*
- APL satellite Ge X-ray detectors, mechanical refrigerator system 2-53051
- atmospheric radioactive inert gases, low-level concentration determ. 2-32155
- Cherenkov, Pb-glass, electron energy meas. in presence of hadron background 2-24502



**gamma-ray spectrometers continued**

- cosmic gamma-ray scintillation detector, calibration procedure 2-10327  
 data acquisition system 2-11363  
 fast-response spectrometer of positron lifetimes 2-43728  
 fission reactor fuel element response determ. by fission product monitoring by gamma-ray (Croatian) 2-43549  
 gamma-ray scintillation detector, calibration procedure 2-10327  
 high resolution spectroscopy appl. for neutron cross section meas. 2-4171  
 hodoscope gamma spectrometer GAMS-200 using lead-glass detectors 2-15659  
 leading edge discriminator for  $\gamma$ -ray time of flight spectroscopy 2-49237  
 Mossbauer, modification of multichannel analyzers 2-19837  
 multiple-integral-coincidence spectrometer characts. and appl. 2-34231  
 NDT, neutron capture gamma-ray spectrometer 2-13894  
 neutron deficient nuclei, neutron multiplicity technique for in-beam  $\gamma$ -spectroscopy 2-19839  
 neutron temperature meas. using multi-indicator capture gamma ray neutron thermometer, activation anal. appl. 2-590  
 ocean bottom,  $\gamma$ -ray spectrometer complex for sediment analysis 2-23138  
 total absorption spectrometer for  $\beta$ -decay strength functions meas. 2-19834  
 transactinium nuclides, decay scheme studies and anal.,  $\gamma$ -ray spectrometry appl. 2-11347  
 transmission polariser for Mossbauer spectrometer 2-250  
 velocity meas. using nuclear gamma-resonance meter 2-23616  
 $\alpha$ - $\gamma$  coincidence spectrometers, high resolution, for transuranium nuclides meas. (Chinese) 2-43668  
 Hg<sub>12</sub>, fast neutron detection gamma spectrometer 2-591  
 NaI(Tl), fast neutron detection gamma spectrometer 2-591

**gamma-ray transport** *see photon transport theory***gamma-rays**

No entries

**gamma transition** *see glass transition (polymers)***Gamow-Teller transitions** *see beta-decay***garnets**

- includes ferrimagnetic insulators,  $M_3Fe_2O_{12}$ ; for rock-type garnets,  $MM'(SiO_3)_2$ , *see minerals*  
*see also ferrimagnetic properties of substances*  
 bubble film, ion implanted layer, mag. state, temp. depend. study 2-26759  
 bubble films, ion irradiat., anisotropy change, ferromag. and stripe lattice reson. study 2-21861  
 bubble garnet epitaxial films, mag. anisotropy determ. using field orientation depend. in ferromag. resonances 2-5566  
 conference, Kharkov, USSR (Sept. 1979) 2-28593  
 cylindrical garnet:Nd component, induced anisotropy and birefr. 2-11703  
 Czochralski growth, of some oxide single crystals, fluid flow, temp. field 2-8457  
 electrical conductivity of garnets and garnet containing rocks 2-37852  
 ferrimagnetic multilayered struct., magnetostatic bulk waves excitation 2-21785  
 ferrimagnetic resonance freq. meas. for remote temperature sensing in organic tissue 2-47680  
 ferrite-garnet epitaxial layer, anisotropic, domain struct. in mag. field (Russian) 2-26705  
 ferrite-garnet film, pulsed remagnetisation, appearance of domains with new magnetisation direction 2-51444  
 film, (111) tilted, dynamic props. of bubbles and stripes 2-21854  
 film, domain wall widening in high drive fields 2-21855  
 film, domain-wall vibrs. 2-26697  
 film, ion-implanted, mag. domain struct. 2-5568  
 film, LPE, expt. evidence for step growth mechanism 2-26240  
 film, magnetic bubble layers, influence of implantation-induced stress gradients 2-9012  
 film, static collapse discrimination of  $S=0$  mag. bubbles 2-31254  
 film bubble domain, stationary motion contraction of wall thickness 2-21857  
 films, implanted bubble, dynamics of formation of statically stable 2II Bloch lines 2-26699  
 films, mag. bubbles, submicron diameter, characterisation techniques 2-51443  
 flux growth, use of cryst. seal 2-5804  
 implanted, charged walls 2-17311  
 ion implanted, stress profile determ. 2-25910  
 ion-implanted, strain and damage distrib., kinematic X-ray diffr. in cryst. films 2-45296  
 layer, Ne implanted, stress distrib. determ., nondestructive method 2-9491  
 magnetic bubble materials, ion implanted, strain distrib. modelling 2-2111  
 magnetic garnet films, domain wall oscils. 2-26702  
 rare earth ferrite-garnets, high freq. and thermodynamic props., rare earth sublattice role (Russian) 2-2064  
 rare earth gallium garnets, Czochralski grown, lattice parameters and distrib. coeffs. as function of Ca, Mg and Zr concs. 2-45091  
 rare earth garnet, sublattice contrib. to second-order magneto-optical effects 2-21993  
 rare earth garnets,  $R_3Fe_2O_{12}$ , ferrimag., exchange constants 2-51402  
 rare earth iron garnet magneto-optic isolator for optical fibre transmission (Chinese) 2-44482  
 review of garnet science in France, 1971 to 1981 2-31118  
 small-bubble, nonvulcanic meas. of collapse field 2-26703  
 small-bubble materials, capping walls and self-bias 2-21856  
 synthesis, oxide ionic struct. characts. rel. to initial mixture density and vol. changes 2-41564  
 YIG crystals, isothermal growth by PbF<sub>2</sub>-B<sub>2</sub>O<sub>3</sub> flux evaporation 2-2428  
 Bi<sub>3-2x</sub>Ca<sub>2x</sub>Fe<sub>3-x</sub>V<sub>x</sub>O<sub>12</sub> crystal, ferromag. reson. linewidth anisotropy, theory (Chinese) 2-26752  
 Ca<sub>2</sub>Ga<sub>2</sub>Ge<sub>2</sub>O<sub>12</sub>, Raman and Mandel'shtam-Brillouin light scatt. 2-51601  
 DyGa<sub>2</sub>O<sub>12</sub>, IR and Raman study (French) 2-41361  
 Er<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub>, field-induced noncollinear mag. struct., Faraday effect obs. 2-46252  
 ErGa<sub>2</sub>O<sub>12</sub>, IR and Raman study (French) 2-41361  
 Er<sub>3</sub>Ga<sub>2</sub>O<sub>12</sub>-Er<sub>3</sub>Al<sub>2</sub>O<sub>12</sub>, IR and Raman study (French) 2-41361  
 ErIG, mag. props. in high mag. fields up to 150 kOe 2-17272  
 ErIG, sp. ht. meas., rel. to mag. props. 2-17287  
 Er<sub>2</sub>Ti<sub>8</sub>Fe<sub>2</sub>O<sub>12</sub>, garnet, Faraday rotation 2-21990  
 (Eu, Tm, Y, Ca)<sub>3</sub>(Fe, Ge)<sub>2</sub>O<sub>12</sub> film, mag. bubble domain lattice pulsations 2-2112  
 Eu<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub> garnet, optical anisotropy study (Russian) 2-13459*

**garnets continued**

- EuGa<sub>2</sub>Cr<sub>3</sub><sup>3+</sup>, site selective fluoresc. spectrum 2-22066  
 Eu<sub>0.6</sub>Y<sub>2.4</sub>Ga<sub>2.6</sub>Fe<sub>3.4</sub>O<sub>12</sub> film, nondestructive sensing of wall-state transition 2-2109  
 Eu<sub>0.6</sub>Y<sub>2.4</sub>Ga<sub>2.6</sub>Fe<sub>3.4</sub>O<sub>12</sub> film, bubble wall radial motion mech., chirality switching and collapse 2-26700  
 Gd-Ga garnet crystals, growth spirals 2-45175  
 Gd<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub>, spin wave spectrum, temp. depend. 2-26617  
 GdGa<sub>2</sub>O<sub>12</sub>, IR and Raman study (French) 2-41361  
 Gd<sub>3</sub>Ga<sub>2</sub>O<sub>12</sub> LPE growth and dissolution, physical chem. of garnet molten solns. 2-46959  
 Gd<sub>3</sub>Ga<sub>2</sub>O<sub>12</sub>-Ne<sup>+</sup>, strain and damage profiles, X-ray diffraction and back-scatt. anal. 2-45290  
 GdIG, departure from stoichiometry, 800 to 1400°C 2-5238  
 GdIG, spin reorientation transition induced by mag. field, dislocations influence 2-46285  
 GdIG, studies using megagauss fields 2-31290  
 Gd<sub>1-x</sub>Pb<sub>x</sub>Fe<sub>3-y</sub>Ge<sub>y</sub>O<sub>12</sub>, Faraday rotation conc. and temp. depend. 2-21988  
 Gd<sub>2.9</sub>Sc<sub>2.1</sub>Al<sub>3</sub>O<sub>12</sub>, pure and Nd<sup>3+</sup> doped Bridgman-Stockbarger growth of single crystals 2-31618  
 Ho<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub>, ferrogarnet form. from metal hydroxides, prep. conditions and mechanism, characts. 2-41536  
 Ho<sub>3</sub>Y<sub>3-x</sub>Fe<sub>2</sub>O<sub>12</sub> ferrite garnet, mag. transition, phase diagram 2-31178  
 Nd<sup>3+</sup>-YAG radiation coloured crystals, colour centre influence on energy characts. 2-34772  
 Nd<sub>3</sub>Ga<sub>2</sub>O<sub>12</sub>, IR and Raman study (French) 2-41361  
 PbO-xPbF<sub>2</sub>-yB<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>, variable comp.-system, dynamics of boundaries of cocrystallising phases 2-27159  
 Pr<sub>3</sub>Ga<sub>2</sub>O<sub>12</sub>, IR and Raman study (French) 2-41361  
 (Sm,Lu,Ca)<sub>3</sub>(Si,Lu,Fe)<sub>2</sub>O<sub>12</sub> film, domain wall motion, magnetisation and comp. depend. 2-26704  
 TbAl garnet, resonance Raman scattered light pulse, time evolution 2-5688  
 Tb<sub>3</sub>Ga<sub>2</sub>O<sub>12</sub>, refinement of coordinates of O<sub>2</sub> ions 2-35475  
 TblG, studies using megagauss fields 2-31290  
 (Y,Bi)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub>, ferrite-garnet film, 360° dynamic domain wall (Russian) 2-46351  
 (Y,Eu,Tm,Sm,Ca)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub>, magnetic epitaxial film, bubble domain lattice high freq. vibrs. 2-46353  
 (Y,Eu,Tm,Sm,Ca)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub>, epitaxial ferrite garnet film, domain wall mobility 2-9014  
 (Y, Gd, Sm, Tm)<sub>3</sub>(Fe, Ga)<sub>2</sub>O<sub>12</sub>, garnet films, grown from PbO-B<sub>2</sub>O<sub>3</sub> flux, growth conditions influence on props. 2-30760  
 (Y,Sm,Ca)<sub>3</sub>(Ge,Fe)<sub>2</sub>O<sub>12</sub> film, domain wall motion, magnetisation and comp. depend. 2-26704  
 (Y,Sm,Lu,Ca)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub>, ferrite-garnet film, 360° dynamic domain wall (Russian) 2-46351  
 (Y,Sm)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub>, ferrite-garnet film, 360° dynamic domain wall (Russian) 2-46351  
 (Y,Sm)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub>, epitaxial ferrite garnet film, domain wall mobility 2-9014  
 (Y,Sm)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub> magnetic epitaxial film, bubble domain lattice high freq. vibrs. 2-46353  
 (Y, Yb, Bi, Gd)<sub>3</sub>(Fe, Al)<sub>2</sub>O<sub>12</sub> epitaxial garnet films, domain wall widening 2-13324  
 YAG, Er<sup>3+</sup> and Nd<sup>3+</sup> substituted, adiabatic demagnets., low-temp. prod. device appl. 2-21795  
 YAG laser, active garnet element, thermal operating parameters determ. 2-44361  
 YAG, plastic deform. of subsurface layers rel. to point defect motion, microcathodolum. obs. 2-46775  
 YAG:<sup>147</sup>Nd, dopant distrib., autoradiographic study 2-5149  
 YAG:Co<sup>2+</sup>, ESR, Co<sup>2+</sup> spin sites 2-41183  
 YAG:Cr, antiferromag., fine struct. of R absorption lines of Cr<sup>3+</sup> 2-26940  
 YAG:Nd, Czochralski grown crystal, residual stress, high temp. annealing effect (Chinese) 2-45144  
 YAG:Nd crystals grown by Czochralski method, supercooling and dislocation generation during interface conversion (Chinese) 2-8464  
 YAG:Nd<sup>3+</sup> <sup>147</sup>Is<sub>9</sub> ground level, cryst. field splitting 2-51133  
 YAG:Nd<sup>3+</sup> Bridgman-Stockbarger grown single crystals., real crystn. rate and effect on cryst. quality 2-31617  
 YAG:Nd<sup>3+</sup> pulsed laser, kinematic mode synchronisation 2-11704  
 YAG:Tb<sup>3+</sup>, cathodoluminescence saturation effects 2-51717  
 Y<sub>3</sub>Al<sub>2</sub>O<sub>12</sub>, garnet, energies of dislocations 2-12593  
 (Y,Bi)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub> ferrite garnet epitaxial film, domain wall reson. obs. 2-36404  
 (Y,Bi)<sub>3</sub>(Fe,Ga)<sub>2</sub>O<sub>12</sub> garnet LPE film, mag. props. 2-41168  
 (YCa)<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub> thin film, magnetostatic modes, temp. depend., FMR study 2-21887  
 Y<sub>1-x</sub>Eu<sub>x</sub>Fe<sub>3-y</sub>Ga<sub>y</sub>O<sub>12</sub> epitaxial layers, laser annealed in O<sub>2</sub>, mag. props., FMR study 2-31589  
 Y<sub>3</sub>Fe<sub>2-x</sub>Al<sub>x</sub>O<sub>12</sub>, Faraday rotation study 2-21994  
 Y<sub>3</sub>Fe<sub>2-x</sub>Al<sub>x</sub>O<sub>12</sub>, ferrimagnetic, magneto-optical Kerr effect and reflectivity 2-21987  
 YFe<sub>3-x</sub>Ga<sub>x</sub>O<sub>12</sub>, FMR linewidth, annealing effects 2-21888  
 Y<sub>3</sub>Fe<sub>2-x</sub>Ga<sub>x</sub>O<sub>12</sub>, ferrimagnetic, magneto-optical Kerr effect and reflectivity 2-21987  
 Y<sub>3</sub>Fe<sub>2-x</sub>In<sub>x</sub>O<sub>12</sub>, ferrimagnetic, magneto-optical Kerr effect and reflectivity 2-21987  
 Y<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub> crystals, growth 2-27159  
 Y<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub>:Ru, angular variation of mag. linear dichroism 2-21992  
 Y<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub>, changes in Curie temp. induced by neutron irradi. 2-41139  
 Y<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub>, exchange interaction influence on NMR freq. 2-36454  
 Y<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub> layers, grown epitaxially on spheres, facet formation 2-1782  
 Y<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub>-CCl system, thermodynamic anal., YIG single cryst. growth 2-30427  
 Y<sub>3</sub>Fe<sub>2-x</sub>Si<sub>x</sub>O<sub>12</sub>, plate, domain struct., effect of plane polarised light (Russian) 2-26655  
 (Y,GdCa)<sub>3</sub>(FeV)<sub>2</sub>O<sub>12</sub> (M=In, Zr), magnetostatic losses and saturation magnetisation temp. depend. 2-21828  
 (Y,GdYbBi)<sub>3</sub>(FeAlGa)<sub>2</sub>O<sub>12</sub> epitaxial film, mag. domain wall displacement in weak field 2-46354  
 YIG anisotropic planar lightguide covered by metal layer, TE=TM mode conversion 2-20431  
 YIG, Bloch line motion in normal mag. field 2-41158  
 YIG crystal, ferromag. reson. linewidth anisotropy, theory (Chinese) 2-26752  
 YIG, departure from stoichiometry, 800 to 1400°C 2-5238  
 YIG, dynamic resonant domain struct., magneto-optical meas. 2-36381



## garnets continued

- YIG, electrostriction meas. 2-10820  
 YIG epilayers, SIMS anal. of Pb and B content 2-27497  
 YIG epitaxial layers, magnetostatic waves anisotropic propag., expt. and computer simulation 2-21846  
 YIG epitaxial layers,  $\text{Xe}^+$  irradi., magnetisation, Faraday rot. and FMR linewidth 2-21847  
 YIG, Faraday effect in mm region of spectrum 2-26870  
 YIG, ferromag. reson., photoacoustic detection 2-26753  
 YIG, ferromagnetic relaxation, influence of low temp. electron and neutron irradiation (*Russian*) 2-26762  
 YIG film, surface spin wave propagation, nonlinear effects 2-2108  
 YIG films, domain wall vel. anomaly due to coercivity 2-46352  
 YIG films, magnetostatic waves, FMR study 2-26696  
 YIG, magnon distrib. function changes during nonresonance parallel pumping (*Russian*) 2-31163  
 YIG, motion of isolated  $180^\circ$  domain boundary 2-31231  
 YIG, polycryst., magnetoelastic anisotropy due to exchange striction 2-46274  
 YIG single crystals deformed at high temp., dissociation of dislocations with  $a/2(111)$  Burgers vectors 2-40393  
 YIG single crystals, growth by chem. vapour transport, thermodynamic anal. of  $\text{Y}_2\text{Fe}_2\text{O}_{12}\text{-CCl}_4$  system 2-30427  
 YIG, solid-phase synthesis and sintering, kinetics and mechanism, electrophys. props. 2-41516  
 YIG, sp. ht. meas., rel. to mag. props. 2-17287  
 YIG, substituted, mol. field coeff. and cation distrib. 2-17267  
 YIG, substituted with diamag. ions,  $^{57}\text{Fe}$  NMR line splitting, cation distrib. 2-9054  
 YIG, surface activation and deactivation, electron microscopic decoration, AES and SIMS obs. 2-45710  
 YIG, thermal cond. at low temp. 2-45653  
 YIG, thin plates and epitaxial films, fast magnetoelastic waves (*Russian*) 2-21866  
 YIG:Bi, Pb, for magneto-optical appls. LPE growth, Pr, Bi and Pb segregation 2-31644  
 YIG:Ca film, mag. linear dichroism, stability of  $\text{Fe}^{4+}$  centre 2-21991  
 YIG:Co films, (100) and (111), Co substitution influence on domain struct., anisotropy influence, ferromag. reson. obs. 2-9011  
 YIG:Co films, (111), ferromag. reson. parameters, anisotropy fields and domain struct. 2-9037  
 YIG:Ga $^{3+}$ (Al $^{3+}$ ), nonmag. ion doped, optical const., ellipsometric parameters 2-46531  
 YIG:Gd(Tm)(Ga) film, mag. profile determ. by ferromagnetic resonance 2-2138  
 YIG:(Ga), PbO-PbF $_2$  flux-grown crystals, lattice distortions caused by growth striations near surface 2-45089  
 $\text{Y}_{2.5}\text{Pr}_{0.5}\text{-Ca}_x\text{Fe}_5\text{O}_{12}$ , induced uniaxial anisotropy caused by  $\text{Pr}^{4+}$  2-26623  
 $\text{Y}_{2.6}\text{Sm}_{0.4}\text{Fe}_{3.9}\text{Ga}_{1.1}\text{O}_{12}$  epitaxial LPE garnet films, growth steps due to misorientation 2-12939  
 (YSmGdR) $_3(\text{GaFe})_2\text{O}_{12}$  (R=Tm, Yb, Lu), single layer LPE films for 1  $\mu\text{m}$  diameter bubble ion implanted contiguous disc devices 2-5569  
 (YSmLuCa) $_3(\text{FeGe})_2\text{O}_{12}$ , LPE grown, mag. bubble props., melt composition depend. 2-31250  
 (YSmLuCa) $_3(\text{FeGe})_2\text{O}_{12}$  bubble epitaxial layers, neutron and  $\gamma$ -irrad., mag. props. 2-31252  
 (YSmLuCa) $_3\text{-Gd}_x(\text{FeGe})_2\text{O}_{12}$  garnet film, bubble collapse field, zero temp. coeff. 2-36403  
 (YSmTm) $_3(\text{GaFe})_2\text{O}_{12}$  bubble thin film, ion implanted, mag. anisotropy, FMR study 2-31251  
 (YTmBi) $_3(\text{FeGa})_2\text{O}_{12}$  garnet film, (110)-oriented, controlled generation and conversion of wall coded mag. bubbles 2-26698  
 (YTmBi) $_3(\text{FeGa})_2\text{O}_{12}$ , garnet LPE film, mag. props. 2-41168  
 YbAG electronic Raman scatt. data, crystal-field analysis 2-45919  
 YbGG, electronic Raman scatt. data, crystal-field analysis 2-45919  
 (YbGd)IG:Bi,Pr,Al, for magneto-optical appls. LPE growth, Pr, Bi and Pb segregation 2-31644

## gas see gases

## gas analysis see chemical analysis

## gas breakdown see electric breakdown of gases

## gas bubbles see bubbles

## gas discharge lamps see discharge lamps

## gas-discharge tubes

## see also ion sources; thyratrons

- glow discharge mm-wave interaction 2-50415  
 hollow cathode device, for negative glow study by effusion technique 2-8366  
 light refraction, Abel inversion 2-16454  
 CO $_2$  waveguide laser discharge tubes, signal amplification in 10.6  $\mu\text{m}$  band 2-39682  
 He filled diodes, electric breakdown initiated by long-lived metastable states (*Croatian*) 2-4914  
 Kr filled diodes, electric breakdown initiated by long-lived metastable states (*Croatian*) 2-4914

## gas discharges see discharges (electric)

## gas dynamics see aerodynamics

## gas ionisation see ionisation of gases

## gas lasers

## see also chemical lasers; excimer lasers; gasdynamic lasers; ion lasers

- acetaldehyde, CW optically pumped far-IR laser action 2-4491  
 carbon tetrafluoride, optically pumped laser, in nonsaturating pump regime, parametric characterisation 2-49732  
 computerised optical diagnostic system for UV and visible supersonic flow pulsed lasers 2-10876  
 D $_2$ O laser Thomson scattering and sub-MM wave heterodyne receiver meas. for Alcatraz C Tokamak 2-40178  
 deuterated fluoroform SMMW laser transitions optically pumped by tunable CO $_2$  waveguide laser 2-44256  
 deuterated methylene fluoride SMMW laser transitions optically pumped by tunable CO $_2$  waveguide laser 2-44256  
 1,1-difluoroethylene SMMW laser transitions optically pumped by tunable CO $_2$  waveguide laser 2-44256  
 discharge lasers, pulsed electron beam control, review (*Rumanian*) 2-20324  
 discharge resonance characteristics utilisation for laser radiated power stabilisation (*Russian*) 2-20314  
 electron-beam-controlled lasers, optimal pumping conditions allowing for ang. divergence of radiation 2-4495

## gas lasers continued

- emission line asymmetry, expt. and theoretical evidence for causes (*French*) 2-49802  
 extended preionizing UV source for pulsed gas lasers 2-49762  
 far IR CC rectangular metallic waveguide resonator performance evaluation near 1.2 mm wavelengths 2-34802  
 far IR CW laser emission, by optical pumping with tunable waveguide CO $_2$  laser 2-39634  
 far IR hybrid laser with TEM $_{00}$  output beam 2-20319  
 far IR lasers, high power, freq. tuning and efficiency enhancement 2-39633  
 far IR lasers, optically pumped, theory for nonlinear Hanle effect 2-39637  
 far IR lasers, pumped by waveguide CO $_2$  laser 2-39676  
 far IR lasers, resonator configs. for pumping, operational techniques (*German*) 2-44258  
 far-IR lasers, CW optically pumped, developments review 2-39612  
 flow effects on saturation intensity and gain (*Chinese*) 2-4476  
 fluoromethane, 496  $\mu\text{m}$  transition, resonant pumping case, lethargic gain 2-897  
 fluoromethane,  $^{12}\text{CH}_3\text{F}$  and  $^{13}\text{CH}_3\text{F}$ , far IR Raman laser with high intensity laser pumping 2-7747  
 fluoromethane, far IR hybrid laser with TEM $_{00}$  output beam 2-20319  
 fluoromethane distributed feedback gas laser (*German*) 2-16015  
 fluoromethane optically pumped 496  $\mu\text{m}$  DFB gas laser 2-11713  
 fluoromethane-d $_3$ , vibrational lasing 2-20292  
 gas-discharge lasers, volt-ampere characts. investig. 2-11680  
 Gaussian beams, theory (*French*) 2-25039  
 He-Ne/ $I_2$  laser as a frequency standard in the visible spectrum 2-44370  
 high energy laser device technology for military appls., overview 2-7780  
 high-power, photodiode power monitor 2-7819  
 hollow-cathode lasers, electron energy distrib. review (*Japanese*) 2-49734  
 HV square-pulse generator with enhanced pulse top stability 2-49235  
 IR, 16  $\mu\text{m}$  wavelength, development for IR dissociation of mols. 2-44237  
 IR heterodyne spectroscopy, tunable CO $_2$  laser sidebands, resonant electro-optic modulator 2-38702  
 IR tunable laser sideband spectrometer, combination of stabilized CO $_2$  laser lines with tunable MM waves, appls. 2-38703  
 laser optics, conf., Leningrad, USSR (Jan. 1980) 2-28594  
 lethargic gain, optical intensity growth, under mode-locked CO $_2$  optical pumping conditions 2-897  
 magnetically stabilised coaxial laser discharge 2-11710  
 metal vapour pulsed lasers, UV-visible laser development review 2-904  
 metal vapour recombination laser transitions in expanding plasmas 2-39627  
 methanol, far IR lasant, optically pumped, Doppler-free optoacoustic spectroscopy 2-39635  
 methanol far IR optically pumped lasers, Si Fabry-Perot interferometer appl. as variable coupler 2-3613  
 methanol optically pumped around CO $_2$  9R(10) and 10R(34) laser lines, high resolution IR-far IR spectroscopy 2-39630  
 methanol pumped by isotopic CO $_2$  lasers, submillimetre laser line obs. and assignment 2-44253  
 methyl alcohol, CH $_3\text{OH}$  and CD $_3\text{OD}$ , optically pumped, Stark effect in subMM laser lines 2-25000  
 methyl alcohol, optically pumped, FIR laser lines, meas. and assignments 2-24998  
 methyl fluoride, optically pumped, vibr. matrix elements determ. using heterodyne meas. of two-photon splittings 2-43886  
 methyl fluoride, plasma diagnostics FIR scattering from electrostatic modes at ion cyclotron range of freqs. in Tokamak plasma 2-40179  
 methyl fluoride distributed feedback laser, optically pumped, 496  $\mu\text{m}$  wavelength 2-39636  
 methyl fluoride-d $_3$ ,  $^{13}\text{CD}_3\text{F}$ , optimally pumped, sub MM wave laser emission 2-7746  
 methyl isocyanide, CW optically pumped far-IR laser action 2-4491  
 methyl isocyanide, optically pumped MM wave CW laser lines, 823, 938 and 2140  $\mu\text{m}$  2-4490  
 methylene fluoride far IR lasant, optically pumped, Doppler-free optoacoustic spectroscopy 2-39635  
 molecular IR laser, resonant optical pumping 2-15988  
 molecular lasers, optically pumped, thermal conditions 2-44262  
 molecular lasers, powerful, in submm. region (*Russian*) 2-4520  
 near millimetre wave sources, gas phase approach 2-7735  
 noncoherent optical pumping in gas lasers 2-44251  
 nonlinear laser equation, time evolution relax. and loss parameter effect 2-34716  
 optically pumped with common pump and lasing level, kinetic model 2-7749  
 plenum chamber of gasdynamic laser heat losses simulation in shock tube 2-25233  
 pulsed subMM lasers of generator-amplifier type, linear transverse optical excitation (*Russian*) 2-20294  
 radiative collisional laser amplifier, theoretical and expt. evidence 2-15993  
 radio pulse generator, for lasers with high freq. transverse discharge 2-20322  
 Raman lasers, far IR molecular gas, with high intensity laser pumping 2-7747  
 rare gas halide lasers, rare gas recovery system 2-20295  
 research and applications, review (*French*) 2-29827  
 ring laser, light-induced optical nonreciprocity 2-20376  
 tetrafluoromethane laser, isotopically pumped, isotope effects 2-44339  
 transient glow discharges in laser excitation and breakdown effects 2-11708  
 two-frequency operation, stability limit, tuning range calcs. 2-7737  
 UV-visible laser development review 2-904  
 vacuum system operation for use with gas laser 2-34782  
 vinyl chloride, CW, optically pumped far-IR laser action 2-4491  
 waveguide gas lasers (*Chinese*) 2-7742  
 Ar laser coagulation treatment of bleeding ulcers 2-18288  
 Ar-Xe, IR laser excited by UV preionised discharge 2-44246  
 Ar-Xe multiple path fission foil nucl. lasing 2-15982  
 Au vapour laser, pulsed (*Chinese*) 2-25028  
 CF $_4$  laser, combination band excitation, hot band lasing 2-15988  
 CO CW laser, long wavelength operation up to 8.18  $\mu\text{m}$  2-16013  
 CO electric-discharge continuous-flow laser using H $_2$ -containing mixture 2-25002  
 CO electron-beam-controlled discharge laser, kinetics and energy characts. 2-34730



## gas lasers continued

- CO laser, intensity modulation, freq. stabilisation and tuning by extracavity Stark cell 2-34818  
 CO laser, single line operation, transition struct. anal. 2-49736  
 CO laser, vibrational exchange cycles 2-7533  
 CO laser discharge, UV sustained 2-4492  
 CO pulsed high-pressure laser, electron-beam-controlled 2-34794  
 CO pulsed laser, electron-beam-controlled, active medium heating influence 2-44264  
 CO pulsed laser having selective and nonselective resonators, spectral characts. 2-44358  
 CO-He-Xe CW laser discharge, O<sub>2</sub> addition effect on plasma kinetics 2-11716  
 CO<sub>2</sub> 10.6  $\mu$ m laser radiation CW degenerate four-wave mixing in HgCdTe 2-16068  
 CO<sub>2</sub> 16- $\mu$ m bending-mode laser system 2-890  
 CO<sub>2</sub> 1.5 kW laser with excitation in a transverse RF-discharge (*German*) 2-7794  
 CO<sub>2</sub> 3 kW laser beam collecting, directing and shaping with metallic waveguide system 2-16110  
 CO<sub>2</sub> advanced laser rangefinders, direct- and heterodyne-detect. type comparison 2-11739  
 CO<sub>2</sub> amplifiers, electron-beam-controlled, inversion recovery following saturated extraction 2-892  
 CO<sub>2</sub> CW and RSP laser appl. for bladder tumour control and eradication 2-18287  
 CO<sub>2</sub> CW fast flow laser coupled to toroidal resonator-cavity, expt. 2-20331  
 CO<sub>2</sub> CW laser, freq. and amplitude stabilisation using servo control system 2-4522  
 CO<sub>2</sub> CW laser, sealed-off with tuning over lines of first two sequential bands 2-20328  
 CO<sub>2</sub> coherent TEA laser rangefinder, transmitter/local oscillator design 2-956  
 CO<sub>2</sub> conventional and waveguide laser as pump for far IR lasers 2-39676  
 CO<sub>2</sub> discharge current modulation of output 2-887  
 CO<sub>2</sub> electron-beam controlled pulsed, discharge and flow characteristics 2-11675  
 CO<sub>2</sub> electron-beam-controlled discharge lasers, review 2-34719  
 CO<sub>2</sub> electron-beam-controlled discharge laser, kinetics and energy characts. 2-34730  
 CO<sub>2</sub> fast-axial-flow longit.-discharge lasers, kinetic modelling 2-39616  
 CO<sub>2</sub> fast-flow pulsed closed-cycle laser with CO<sub>2</sub> regeneration unit 2-34725  
 CO<sub>2</sub> freq. conversion using chalcopyrite crystals. (*Japanese*) 2-20365  
 CO<sub>2</sub> heterodyne laser rangefinder using pulse compression 2-11740  
 CO<sub>2</sub> high freq. capacitive discharge 10.6  $\mu$ m gain 2-44242  
 CO<sub>2</sub> high-power CW TE laser with graphite electrodes 2-891  
 CO<sub>2</sub> high-power military waveguide laser 2-11725  
 CO<sub>2</sub> high-pressure lasers with selective optical pumping, output parameters 2-44243  
 CO<sub>2</sub> high-speed flow electrodeless laser with active medium transverse pumping, amplification parameter calc. (*Russian*) 2-4480  
 CO<sub>2</sub> hybrid TEA laser, freq. sweeping, origin 2-34807  
 CO<sub>2</sub> laser, electron beam controlled, small signal gain and uniformity meas. 2-4523  
 CO<sub>2</sub> laser, electron beam ionisation, efficiency reflected electrons effect 2-44343  
 CO<sub>2</sub> laser, electron-beam ionisation, electron beam economy, pump pulse shape effect 2-15981  
 CO<sub>2</sub> laser, high press. CW, output power, self-absorption effects 2-884  
 CO<sub>2</sub> laser, high pressure sealed-off condition, power characteristics (*Japanese*) 2-4521  
 CO<sub>2</sub> laser, optogalvanic stabilisation using electrodynamic tuning element 2-49728  
 CO<sub>2</sub> laser, pulsed, metallised film mirror with variable curvature 2-16036  
 CO<sub>2</sub> laser, RF excited, high repetition rate at 10 atm operation 2-49768  
 CO<sub>2</sub> laser, reactive electrooptic Q-switching 2-25044  
 CO<sub>2</sub> laser, third harmonic of 10.2  $\mu$ m R(30) transition, rel. to methane-stabilised He-Ne laser, freq. difference (*Japanese*) 2-4486  
 CO<sub>2</sub> laser, UV preionisation pulsing by capillary discharges, laser optimisation 2-11678  
 CO<sub>2</sub> laser, wave instability regions in glow discharge, pressure-current meas. 2-4478  
 CO<sub>2</sub> laser amplifiers, electron-beam controlled, gain meas. 2-49800  
 CO<sub>2</sub> laser discharge vibr. population distrib. meas. with tunable diode laser 2-49727  
 CO<sub>2</sub> laser excited in matched regime, 3 kJ output energy 2-44244  
 CO<sub>2</sub> laser gas mixture, magnetically stabilised coaxial laser discharge 2-11710  
 CO<sub>2</sub> laser interferometer, vibration compensated, heterodyne for plasma diagnostics 2-48756  
 CO<sub>2</sub> laser light absorber, use of GeO<sub>2</sub>-ZnO-K<sub>2</sub>O glass 2-49803  
 CO<sub>2</sub> laser microsurgery trends, wet-field technique 2-22812  
 CO<sub>2</sub> laser optical material characts. 2-29856  
 CO<sub>2</sub> laser plasma flare, target atoms electronic struct. effect 2-16468  
 CO<sub>2</sub> laser pulse-solid target interaction in mag. field 2-1322  
 CO<sub>2</sub> laser radiation freq. conversion to 0.5  $\mu$ m range in nonlinear crystals. 2-44393  
 CO<sub>2</sub> laser radiation transmission through ZnSe window into moist gas at high pressures 2-49883  
 CO<sub>2</sub> laser system, amplifying props. of CO<sub>2</sub>-N<sub>2</sub>-He medium with different microwave preionisation systems 2-34723  
 CO<sub>2</sub> laser with annular resonator, performance with polariser in annular leg 2-25037  
 CO<sub>2</sub> laser with intracavity diff. selector, emission spectrum 2-34722  
 CO<sub>2</sub> lasers, high-power nanosec. pulse generation, new approach 2-29807  
 CO<sub>2</sub> lasers in ophthalmic surgery 2-9854  
 CO<sub>2</sub> lasers with 16 micron wavelength for IR dissociation of mols., development 2-44237  
 CO<sub>2</sub> medical laser devices, applications and status 2-14311  
 CO<sub>2</sub> Michelson interferometer meas. of shot start movement, using CO<sub>2</sub> laser 2-19175  
 CO<sub>2</sub> multiline TEA laser, laser amplification efficiency 2-34718  
 CO<sub>2</sub> nuclear pumped laser system using He-N<sub>2</sub>-CO<sub>2</sub>-UF<sub>6</sub> mixture 2-11676  
 CO<sub>2</sub> photoionisation laser with high pulse repetition freq. 2-44239  
 CO<sub>2</sub> properties of some diffusers, speckle pattern effects 2-7818

## gas lasers continued

- CO<sub>2</sub> pulse-periodic waveguide laser pumped by longit. capacitor discharge 2-34798  
 CO<sub>2</sub> pulsed amplifier, thermal defocusing, numerical anal. 2-44365  
 CO<sub>2</sub> pulsed electric discharge laser amplifier, freq. chirp meas. 2-7743  
 CO<sub>2</sub> pulsed laser, electron-beam-controlled, operating regime optimisation 2-34720  
 CO<sub>2</sub> pulsed laser difference freq. generation in subMM range using GaAs crystals (*Russian*) 2-34831  
 CO<sub>2</sub> pulsed laser oscillators, electron-beam-controlled, theory and expt. comparison, four-temp. model 2-39615  
 CO<sub>2</sub> pulsed RF waveguide laser, gain-switched output 2-4524  
 CO<sub>2</sub> repetitively pulsed sealed TE laser using O<sub>2</sub> tolerant discharge scheme 2-11711  
 CO<sub>2</sub> ridged waveguide laser modulator 2-49889  
 CO<sub>2</sub> sealed TE laser discharge, gas chromatographic analysis of products 2-883  
 CO<sub>2</sub> sealed waveguide laser, long-term operation 2-11721  
 CO<sub>2</sub> sealed-off laser, gas constitution and electrode material effects on lifetime (*Chinese*) 2-25025  
 CO<sub>2</sub> sealed-off single-mode type, characts. and performance (*Rumanian*) 2-16027  
 CO<sub>2</sub> sequence band TEA laser, multi-joule pulses 2-946  
 CO<sub>2</sub> short-pulse line-tunable laser for photochemical studies 2-20316  
 CO<sub>2</sub> stable single-line mode-locked oscillator development 2-49779  
 CO<sub>2</sub> static CW waveguide laser with high-freq. excitation 2-34724  
 CO<sub>2</sub> TE continuously tunable laser using three mirror resonator, single mode operation 2-886  
 CO<sub>2</sub> TEA 4.3  $\mu$ m laser action 2-11677  
 CO<sub>2</sub> TEA laser, electron beam controlled, small gain meas. 2-888  
 CO<sub>2</sub> TEA laser, emission lines in 10.4 and 9.4  $\mu$ m bands 2-889  
 CO<sub>2</sub> TEA laser, injection-locked tunable, for sub-MM laser pumping for Tokamak plasma ion temp. meas. 2-39618  
 CO<sub>2</sub> TEA laser, photo-preionised, small signal gain (*German*) 2-4479  
 CO<sub>2</sub> TEA laser, tunable single longit. mode output 2-11720  
 CO<sub>2</sub> TEA laser emitting lines in 00<sup>2</sup>-(10<sup>1</sup>,02<sup>0</sup>)<sub>1,11</sub> bands, output parameter investigation 2-4482  
 CO<sub>2</sub> TEA laser mode-locking, gas lenslike effect influence (*Chinese*) 2-44240  
 CO<sub>2</sub> TEA laser with air as gas source (*Chinese*) 2-7782  
 CO<sub>2</sub> technological laser with closed gasdynamic channel, numerical investigation 2-49729  
 CO<sub>2</sub> tunable laser, spectral tuning using intracavity spatial filtering 2-7799  
 CO<sub>2</sub> tunable pulsed laser 2-7795  
 CO<sub>2</sub> tunable TEA laser with intracavity NaCl prisms as dispersive elements (*Chinese*) 2-24987  
 CO<sub>2</sub> tunable waveguide laser with high transverse mode and line discrimination 2-44241  
 CO<sub>2</sub> waveguide laser, 00<sup>1</sup> vibr.-level lifetime meas. 2-34816  
 CO<sub>2</sub> waveguide laser, development of sealed-off long life device 2-16025  
 CO<sub>2</sub> waveguide laser, effect of resonator-mirror curvature on output power 2-20337  
 CO<sub>2</sub> waveguide laser, feedback controlled current stabilised power supply (*Chinese*) 2-7783  
 CO<sub>2</sub> waveguide laser, optogalvanic stabilisation and offset tuning 2-44360  
 CO<sub>2</sub> waveguide laser, parameters of active medium by luminesc. study 2-34721  
 CO<sub>2</sub> waveguide laser, saturation parameter determ. in waveguide tube consisting of metal and highly reflecting coating 2-4483  
 CO<sub>2</sub> waveguide laser discharge tubes, signal amplification in 10.6  $\mu$ m band 2-39682  
 CO<sub>2</sub> waveguide lasers containing diff. grating, coupling losses 2-39619  
<sup>13</sup>CO<sub>2</sub> laser hot band transitions, heterodyne freq. meas. 2-16045  
<sup>13</sup>C<sup>16</sup>O<sub>2</sub> isotopic laser pump for <sup>15</sup>NH<sub>3</sub> far IR laser system 2-16021  
 CO<sub>2</sub>-C<sup>18</sup>O<sub>2</sub> laser, optically pumped in 4.3  $\mu$ m band, lasing investigation in 24- and 38- $\mu$ m region 2-44238  
 CO<sub>2</sub>-He(N<sub>2</sub>) high freq. capacitive discharge 10.6  $\mu$ m gain 2-44242  
 CO<sub>2</sub>-N<sub>2</sub> mixing laser, performance using rapid mixing technique 2-885  
 CO<sub>2</sub>-N<sub>2</sub>-He mixture, transverse discharge, laser radiation amplification (*French*) 2-24988  
 CO<sub>2</sub>-N<sub>2</sub>-He-CO high-power electronic discharge convection laser, ionic and thermal instability 2-15980  
 CO<sub>2</sub>-N<sub>2</sub>-(He) 2-12266  
 CO<sub>2</sub> 80  $\mu$ m hollow-core slab waveguide laser, 10.6  $\mu$ m optical gain meas. 2-15979  
 Cu halide laser pumped by vac.-tube and thyratron oscillators 2-4496  
 Cu laser-active level excitation efficiency in electric discharges 2-49742  
 Cu vapour, dense, discharge and lasing characteristics 2-29809  
 Cu vapour laser, 1.5 litre active volume, mean output power and emission pulse energy 2-16029  
 Cu vapour laser, active medium gain investigation 2-34736  
 Cu vapour laser, electron beam controlled discharge 2-44342  
 Cu vapour laser, limiting mean power/output 2-4489  
 Cu vapour laser, multiparameter optimisation 2-34731  
 Cu vapour laser, reson. wavefront reversal in active medium containing Cu vapour 2-44405  
 Cu vapour laser, stimulated emission radial characts. 2-898  
 Cu vapour laser (*Chinese*) 2-20290  
 Cu vapour laser operation, transverse and longit. discharge modes 2-25036  
 Cu vapour laser pumping of LiF laser 2-16004  
 Cu vapour lasers radiation influence on dyes lasing 2-4504  
 Cu vapour transverse-discharge laser 2-49739  
 CuBr laser, helical transversely excited 2-44334  
 CuBr TE laser, operating characts. 2-11684  
 CuCl laser, burst-mode, temp. depend. 2-7748  
 D<sub>2</sub>O, 385  $\mu$ m transition, adiabatic Raman case, lethargic gain 2-897  
 D<sub>2</sub>O high power pulsed ring resonators in far IR 2-39674  
 D<sub>2</sub>O, mode-locked, optically pumped, lethargic gain and short pulse generation 2-39631  
 D<sub>2</sub>O vapour, laser emission 2-39624  
 F laser pumped by pulsed hollow cathode glow discharge, red lines 2-20327  
 fluoromethane, mode-locked, optically pumped, lethargic gain and short pulse and short pulse generation 2-39631  
 H<sub>2</sub> VUV laser excited by travelling wave discharge 2-929  
 HCN CW subMM laser construction, output wavelength meas. (*Chinese*) 2-44327  
 HCN CW submillimetre wave laser (*Chinese*) 2-11709



## gas lasers continued

- HCN laser, far-IR, CW, cavity length stabilization system 2-34803  
 HCN laser, highly stable long-lasting 2-20320  
 HCN stabilised laser with HF pumping 2-49780  
 HCN sub-MM wave laser, intensity modulation with Schottky barrier diode 2-39679  
 HD VV 2-34730  
 HN<sub>3</sub> far IR laser, reson. pumping 2-15984  
 H<sub>2</sub>O CW waveguide laser, 118.6  $\mu$ m 2-49775  
 H<sub>2</sub>O, far-IR radiation generation possibility through vapour supersonic expansion 2-39629  
 H<sub>2</sub>O vapour pulsed laser (*Russian*) 2-34729  
 He-<sup>22</sup>Ne laser, freq. stabilisation by CH<sub>4</sub> intracavity polarisation spectroscopy 2-925  
 He-Ar-Xe, IR laser excited by UV preionised discharge 2-44246  
 He-Cd II hollow cathode metal vapour lasers, oscill. spectra, 533.7 and 537.8 nm lines 2-44255  
 He-Cd laser with RF pumping, quasi-CW operation 2-44257  
 He-N<sub>2</sub> radiative-collision high-efficiency UV laser amplifier 2-39626  
 He-Ne, interferometric dilatometer for thermal expansion, coeffs. meas. (*Japanese*) 2-19081  
 He-Ne, transverse modes obs. of an optical resonator 2-42834  
 He-Ne <sup>121</sup>I<sub>2</sub> stabilised lasers at 633 nm, international comparison 2-34726  
 He-Ne cascade laser, two-photon amplification 2-11681  
 He-Ne frequency stabilised laser, optical feedback effects 2-16031  
 He-Ne gas discharge laser, volt-ampere characts. investig. 2-11680  
 He-Ne laser, gas press. and gas partial press. ratio determ. by intensity ratio meas. (*Chinese*) 2-24990  
 He-Ne laser, high power, single freq. operation anal., resonant cavities 2-893  
 He-Ne laser, I<sub>2</sub> stabilized, wavelength meas. by Michelson interferometer 2-6824  
 He-Ne laser, inverted Lamb dip, expt. and strong signal formalism calc. 2-44247  
 He-Ne laser, methane-stabilised, rel. to third harmonic of 10.2  $\mu$ m R(30) transition of CO<sub>2</sub> laser, freq. difference- $\nu$  (*Japanese*) 2-4486  
 He-Ne laser, photoelec. counting meas., detuning effect on fluctuation props. 2-49725  
 He-Ne laser, simple method for single-freq. operation and stabilisation 2-11712  
 He-Ne laser applications in engineering meas. 2-7825  
 He-Ne laser in transverse HF discharge 2-894  
 He-Ne laser line profile and width meas. at 6328 Å using optogalvanic spectroscopy (*Chinese*) 2-24991  
 He-Ne laser power stabilisation (*Russian*) 2-4485  
 He-Ne laser radiation wavefront reversal by light-induced shaping of an absorbing material surface 2-4549  
 He-Ne laser stabilised with I<sub>2</sub> vapour, absorpt. cell evaluation (*Slovak*) 2-44347  
 He-Ne laser stabilized by methane saturated dispersion spectrum 2-25045  
 He-Ne laser with hollow cathode and limited discharge (*Chinese*) 2-24989  
 He-Ne laser with planospherical resonator, output-power instability investigation 2-49731  
 He-Ne laser with transverse microwave pumping, unsaturated gain determ. 2-4488  
 He-Ne two-mode ring laser, two-time correl. meas. 2-29843  
 He-Ne Zeeman lasers, mirror anisotropy effects, Jones matrix representation 2-39623  
 He-Ne/methane laser with periodically varying optical length, nonlinear absorber influence on radiation parameters 2-7752  
 He-Ne/methane stabilised laser, freq. meas. (*Russian*) 2-7745  
 He-Sr recombination laser, freq. tuning and mode self-locking, 430.5 nm 2-44263  
 He-Te positive column laser transitions, excitation mechanism 2-7744  
 He-Xe, IR laser excited by UV preionised discharge 2-44246  
 He-Xe 3.51  $\mu$ m laser CW amplified spontaneous emission output, orthogonally polarised component intensity fluctuations, anticorrels. 2-4487  
 He-Xe frequency offset locked laser, performance at 3.51  $\mu$ m 2-11679  
 He-Zn II, hollow cathode metal vapour lasers, oscill. spectra, 492.4 nm line 2-44255  
 He-Zn II laser using natural Zn, single-mode operation, 492.4 nm 2-44331  
<sup>3</sup>He-Ne laser, CW nuclear pumped, lasing transition theory 2-24992  
<sup>3</sup>He-Xe laser, nuclear pumped, lasing at 2.63  $\mu$ m 2-4484  
<sup>3</sup>He-Xe laser amplifier, direct nuclear pumped 2-39620  
 KrF lasers for compression and fusion 2-11274  
 N atomic laser action in hollow cathode discharge 2-24997  
 N<sub>2</sub> gas laser photolysis system, microcomputer controlled, appls. (*Japanese*) 2-6046  
 N<sub>2</sub> laser system with subnanosec. pulse duration for flash photolysis 2-15991  
 NH<sub>3</sub> 12- $\mu$ m Raman laser pumped by low power CO<sub>2</sub> laser pulse 2-900  
 NH<sub>3</sub> far IR intracavity laser pumped by TE CO<sub>2</sub> laser 2-39675  
 NH<sub>3</sub> laser, optical pumping, lasing in fundamental band 2-15988  
 NH<sub>3</sub> laser, optically pumped, amplification at 11.707  $\mu$ m 2-25031  
 NH<sub>3</sub> laser, temp. characts. 2-44260  
 NH<sub>3</sub>, optically pumped with common pump and lasing level, kinetic model 2-7749  
<sup>14</sup>NH<sub>3</sub>, <sup>15</sup>NH<sub>3</sub>, far IR laser lines predictions for CO<sub>2</sub>, N<sub>2</sub>O pump laser lines 2-49737  
<sup>14</sup>NH<sub>3</sub>, far IR CW Raman and laser gain 2-11685  
<sup>15</sup>NH<sub>3</sub>, far IR laser system, isotopic CO<sub>2</sub> laser pumped, high power and efficiency 2-16021  
 Ne, superradiation characteristics obs. at 614.3 nm in pulsed discharge in capillary 2-44248  
 Pb vapour laser, IR emission at 3.15 and 7.15  $\mu$ m 2-34737  
 SO<sub>2</sub> laser pumped by CO<sub>2</sub> laser radiation, transition identification, 139.5-685  $\mu$ m range 2-44261  
 SO<sub>2</sub> sub-MM wave lasers, transitions meas. by diode laser heterodyne spectroscopy 2-39632  
 Tl laser emission at 535 nm by two-photon-dissociation of TlBr 2-7751  
 Xe laser utilising 5d(3/2)<sub>1</sub><sup>0</sup>-6p(3/2)<sub>1</sub> transition, buffer gas role investigation 2-44249  
 Xe-He laser, reduction in radiation amplitude fluctuation using HF discharge 2-35344  
 Yb laser, output power depend. on pump pulse repetition freq. 2-34732

## gas permeability see permeability

## gas phase electron diffraction

- anthracene, mol. struct., bond lengths and angles, gas phase 2-29714  
 anthraquinone, mol. struct., bond lengths and angles, gas phase 2-29714  
 bicyclo[3,2,1]octane, mol. struct., force field, electron diff. study 2-39491  
 bis(acetylacetonato)zinc(II), mol. struct. studied by gas phase electron diff. 2-34259  
 bis(dimethylphosphino)methane, mol. struct., gas phase electron diff. 2-29713  
 cyclobutane-1,2-dione, mol. struct., electron diff., bond lengths and angles determ. 2-20184  
 trans-1,2-dichloroethene, mol. struct., electron diff. determ. 2-49573  
 p-difluorobenzene, mol. struct. and ring distortions determ. by electron diff. 2-43895  
 dimethyl ether-boron trifluoride, mol. struct., gas phase electron diff., temp. effects 2-34260  
 1,2-dimethylhydrazine conformers struct. determ. by microwave spectra and gas electron diff. 2-7544  
 dimolybdenum tetra-acetate, mol. struct. studied by gas phase electron diff. 2-49590  
 molecular beam, electron scatt., diff. patterns investig. 2-44091  
 molecular scatt. function, vibr. anharmonicity effect, variational treatment 2-4385  
 naphthalene, mol. struct., gas phase electron diff. 2-29715  
 trans-pent-2-ene, struct. investigated using electron diff., vibr. anal. and mol. mechanics 2-34258  
 phenylsulphenyl chloride, mol. struct., bond lengths and angles, electron diffraction study 2-39504  
 salts of type M<sub>2</sub>XO<sub>4</sub>, structure, gas phase electron diff. 2-15898  
 silyl(methyl)acetylene, mol. struct., vibr., rot. consts., electron diff. obs. 2-29712  
 CO<sub>2</sub>, gas phase electron diff. intensities, vibr. anharmonicity effects, var. calcs. 2-15894  
 MnBr<sub>2</sub>, monomeric mol. struct., electron diff. studies 2-7668  
 NbO<sub>2</sub> molecule, harmonic equilib. struct. and vibr. freqs., electron diff. determ. 2-29711  
 Rb<sub>2</sub>MoO<sub>4</sub>, struct., gas phase electron diff., internuclear distances determ. 2-11571  
 RbNO<sub>3</sub>, mol. struct., electron diff. obs. 2-49575  
 Rb<sub>2</sub>WO<sub>4</sub>, structure, gas phase electron diff. 2-15898  
 SF<sub>6</sub>, electron diffraction appl. of data correlation anal. 2-24853  
 SF<sub>6</sub>, mean amplitude of vibration, multiple scatt., struct., electron diff. obs. 2-24855  
 SO<sub>2</sub>, gas phase electron diff. intensities, vibr. anharmonicity effects, var. calcs. 2-15894  
 SO<sub>2</sub>, structure parameters, electron diff. study 2-24854  
 Si<sub>3</sub>Cl<sub>8</sub>, mol. struct. determ. by electron diff. 2-34262
- gas pressure cables**  
 partial discharges measurement and location (*German*) 2-44922
- gas-surface interactions** see sorption
- gas technology, natural** see natural gas technology
- gas turbine power stations**  
 100 MW integrated coal gasification combined cycle power plant, USA 2-2774  
 800 MWe HTGR gas-turbine power plant design 2-29320  
 coal-derived fuel utilisation in gas-turbine combined cycles 2-32015  
 Hüntorf, West Germany, utilising compressed air storage, economics (*Dutch*) 2-42041
- gas turbines**  
 see also gas turbine power stations; turbogenerators  
 aerospace turbomachinery flow diagnostics, using holographic interferometry and laser anemometry 2-20790  
 airflow through cascade of turbine blades meas. and computing 2-8248  
 blades, cooled, state of strain control, thermoplastic hardening 2-41644  
 coal-burning, research advances in erosion prediction and reduction 2-16271  
 coatings in industrial gas turbines, in-service experience and lab. tests 2-31817  
 engine, using Ni and Co alloys, corrosion prevention due to surface treatment 2-47221  
 fluidised bed combustion, status and advantages (*French*) 2-17965  
 gas-cooled solar tower power station, combined gas-steam cycle 2-27544  
 solar power station, cavity tube receivers design (*German*) 2-27545  
 thermal barrier coatings for thermal insulation and corrosion resistance in industrial gas turbine engines 2-31818  
 thermionic combustor 2-18117  
 thermionic combustor application to combined gas and steam turbine power plants 2-18116  
 training facility noise control techniques 2-9731  
 vibration testing of turbine parts, use of electronic speckle pattern interferometer 2-2635  
 Co-Cr-Al-Y plasma sprayed coatings for aircraft gas turbine appl. 2-47262  
 Ni based superalloys, influence of Pt+Al coatings and hot corrosion on fatigue behaviour 2-31850  
 ZrO<sub>2</sub>, Y<sub>2</sub>O<sub>3</sub> stabilised, plasma sprayed ceramic turbine seals, sputtered primer for improved thermal shock resist. 2-31852
- gasdynamic lasers**  
 acetylene combustion product laser 2-44259  
 explosion-type laser utilising acetylene combustion products, characts. 2-34735  
 high energy laser device technology for military appls., overview 2-7780  
 metallurgical use of gasdynamic laser with working medium heated by high temp. regenerative heat exchanger 2-39685  
 plasmodynamic laser, optimal parameters calc. in Na vapour (*Russian*) 2-20293  
 research and applications, review (*French*) 2-29827  
 theoretical aspects, book 2-899  
 CO electrically excited gasdynamic laser, electron-beam preionised, expt. research (*Chinese*) 2-24995  
 CO, gasdynamic laser, adiabatic expansion through supersonic nozzle, mol. vibr. relax. calc. 2-50308  
 CO gasdynamic laser utilising active medium containing H<sub>2</sub> 2-34733  
 CO laser, active medium energy and spectral characts. 2-49741  
 CO<sub>2</sub>, cold, rapid mixing with hot N<sub>2</sub> gases in gas throat, optical gain 2-4477  
 CO<sub>2</sub>, gain and vibr. temps. meas. and calc. 2-44245  
 CO<sub>2</sub> gasdynamic laser, three-freq. periodic pulse, energy capabilities 2-39617



**gasdynamic lasers continued**

- CO<sub>2</sub> gasdynamic laser with electric-arc heating, stimulated emission at 18.4  $\mu$  2-39672
- CO<sub>2</sub> laser media consisting of low N<sub>2</sub> fuel combustion products 2-49730
- CO<sub>2</sub>-N<sub>2</sub>-He laser mixture, supersonic flow, dynamic parameters calc. 2-4481
- D<sub>2</sub>-HCl-Ar(He), thermally pumped, gain and energy parameters 2-20296
- H<sub>2</sub>-HCl laser characts. 2-34734
- H<sub>2</sub>O diffusional, submillimeter-range radiation generation 2-39628

**gaseous insulation**

- air, corona-onset field strength calcs. and equiv. radius concept 2-8365
- air, streamer breakdown criterion for compressed gases 2-1357
- corona and partial discharges, effects on insulation, alleviation and exploitation 2-12420
- electronegative gases used in technical insulating appls., breakdown development 2-1289
- electrostatic machine insulating gases dielectric strength, problems in using small scale meas. 2-11316
- hexafluoropropylene, dielec. strength under breakdown and prebreakdown conditions 2-25486
- plasma diagnostics in SF<sub>6</sub> pulse discharges (*German*) 2-25659
- relative electric strengths and the molecular weights of gases, correl. for 82 gases 2-44823
- vapour-mist dielectrics, cooling and insulating media for vapour-cooled power transformers 2-16419
- N<sub>2</sub>, streamer breakdown criterion for compressed gases 2-1357
- SF<sub>6</sub>, effect on the breakdown voltage of surface roughness (*Czech*) 2-8368
- SF<sub>6</sub>, point-plane corona pulses 2-20954
- SF<sub>6</sub>, streamer breakdown criterion for compressed gases 2-1357
- SF<sub>6</sub>-N<sub>2</sub> mixtures, diffusion rate of SF<sub>6</sub> into N<sub>2</sub> determ. 2-44811

**gases**

see also aerodynamics; compressibility of gases; density of gases; dielectric properties of gases; diffusion in gases; electric breakdown of gases; electrical conductivity of gases; equations of state of gases; ionisation of gases; kinetic theory of gases; liquefaction of gases; luminescence of gases; Scott effect; Senftleben-Beenakker effect; specific heat of gases; thermal conductivity of gases; thermal diffusion in gases; viscosity of gases

No entries

**gauge field theory**

see also Weinberg model; Yang-Mills theory

- 4D gauge theory dynamical symmetry breaking, closed form bound state effective pot. 2-23871
- SU(5) supercooled phase transform., coupling const. temp. depend. 2-6974
- $\Delta B=2$  effective interactions in unified gauge theories n-n transitions 2-3732
- $\xi$  scaling, kinematical corrections, Nachtmann moments 2-321
- $\sigma$  model, gauge generalisation with nonvanishing Hopf invariant 2-19234
- a classical gauge theory, Riemann geometry, analogy with general relativity 2-23858
- Abelian gauge theory, Lorentz-invariant renormalisability 2-48899
- Abelian Higgs model, elec. and mag. gauge symmetries 2-3686
- ABJ anomalies and superfield formalism in gauge theories 2-19254
- additive pot. model of coloured quarks 2-19325
- analyticity and renormalization group 2-28995
- Anderson model, nonlinear  $\sigma$  theory, asymptotic gauge invariance 2-40815
- baryons, Wilson loop average in large-N limit 2-6948
- Bogulubov's spontaneous symmetry-breaking mechanism and the Higgs phenomenon 2-10988
- Born-Infeld non-polynomial Lagrangian generalisation to non-abelian SU(2) gauge theory 2-15280
- broken gauge theory with adjoint representation, Higgs mechanism, charge quantisation 2-19246
- canonical Fermi mass matrix for pure generation structure 2-38760
- charged harmonic oscillator, in EM field, quantum theory, gauge-invariant formulation 2-48544
- chiral CP(n) and  $\sigma$  models, Lund-Regge method appl., gauge theory relations 2-19280
- classical axial gauges, boundary conditions and spurious singularities 2-33729
- classical gauge fixing in quantum field theory 2-38790
- classical magnetic poles under time reversal 2-3701
- coloured black holes, trace anomaly of gauge theory energy-momentum tensor 2-10474
- composite gauge fields 2-29007
- composite model for leptons and quarks 2-48959
- conference on superspace and supergravity, Cambridge, England (June 1980) 2-23379
- confinement and chiral symmetry breakdown 2-43289
- confinement in nonAbelian gauge theory 2-38749
- confining gauge theories, unbroken flavour symmetries 2-29069
- constructive and Euclidean field theory and connections to statistical mechanics 2-33737
- contour equation for supersymmetric calibration theory (*Russian*) 2-15289
- cosmic strings, evolution and cosmological consequences 2-14962
- cosmological term and supersymmetry 2-43227
- Coulomb systems, one-dimens.,  $\theta$  vacuum states, confinement 2-38752
- coupled Yang-Mills and scalar fields in temporal gauge, Cauchy problem 2-23808
- covariant derivatives and non-linear realizations 2-28980
- covariant gauge formalism for photons in Friedmann space-time 2-33721
- covariant quantization of gauge fields without Gribov ambiguity 2-23830
- CP<sup>1</sup> instanton solns., algebraic classification 2-43176
- CP violation in particle physics and cosmology in unified gauge theories 2-43240
- crystals and topological defects, gauge fields for electrons 2-35965
- Delbourgo representation and the gluon propagator in the light-like ( $n^2=0$ ) gauge 2-19335
- dimensional reduction schemes, fermions parity violation 2-38761
- Dirac dynamics on stochastic phase spaces for spin 1/2 particles 2-264
- Dirac singletons, SO(3,2) invariant scatt. 2-38741
- dynamical selection rules 2-33744
- E<sub>6</sub> gauge field theory, particle assignments, spontaneous symmetry breaking, Higgs fields 2-23883
- E<sub>6</sub> gauge theory, scalar quartic and Yukawa coupling renormalisation in unified theories 2-6985

**gauge field theory continued**

- education, electric dipole approx. gauge transformations 2-48441
- effective action, fermionic contrib., Monte Carlo simulation combined with a hopping parameter expansion 2-10963
- effective action in coord. space 2-28737
- effective Lagrangian for non-abelian gauge theory 2-10952
- Einstein and Einstein-Cartan theories, dual description of space-time 2-94
- Einstein Centennial Symposium, unified fields, Jerusalem, Israel (March 1979) 2-14983
- Einstein-Maxwell field as a gauge-invariant vector-metric field 2-38538
- electromagnetic model for quantum field theory of indefinite mass particles 2-23824
- electromagnetism and space-time holomorphic props. 2-18931
- electron anomalous mag. moment, effective field theories and higher-dimens. operators 2-6964
- electroweak gauge model,  $\mu$ -e universality from mass-scale inequality 2-29042
- electroweak gauge theory, chiral symm. breaking, fermion mass generation 2-15302
- electroweak interactions, gauge formalism review 2-43250
- electroweak models based on  $\gamma$ -W<sup>0</sup> mixing expansion 2-43235
- elementary particle interactions, prospect for gauge theories 2-33748
- elementary particle physics and gauge theories, book 2-42802
- EM field stochastic quantisation 2-29060
- EM potentials, symmetry group, compensating gauge transform. 2-10938
- Euclidean and Hamiltonian lattice QCD, scales and string tension 2-43271
- Euclidean lattice gauge theories without fermions, phase structure, chiral symmetry breaking 2-19244
- exact rotating Julia-Zee dyon soln. with Kerr-Newman metric 2-19251
- exact Schwinger dyon solution in Kerr-Newman space-time 2-33722
- extended BRS symmetry in non-Abelian gauge theories, superfield formulations 2-260
- extended Kaluza-Klein unified gauge theories 2-38823
- extended objects in field theory with non-Abelian group symmetry 2-48861
- extended technicolour interactions, pseudo-Goldstone boson masses from broken gauge interactions 2-43279
- false vacuum decay, monopole and vortex dissociation, nucleation 2-33724
- fermionic contribution to  $A_{\text{lattice}}$  direct evaluation 2-38786
- fermions, gauge and Higgs fields dynamical unification 2-33771
- fibre bundle, principal, connections with equal curvatures (*Russian*) 2-48901
- finite lattice gauge theories, boundary value effects on Wilson loop average 2-43190
- finite-energy SU(3) solution which does not satisfy the Bogomolny equations 2-38740
- finitely separated multimonomoles generated as solitons 2-15291
- flavourdynamics and heavy quark weak decays, gauge framework and electroweak interactions 2-43267
- form factor double logarithmic asymptotic behaviour of scalar particles in non-Abelian gauge theory 2-28991
- four-dimensional lattice gauge theories and two-dimensional spin systems, exact relation 2-48873
- fractional charge states, astrophysical prod. in broken QCD 2-23939
- fractional quantum numbers of solitons 2-262
- free EM field Landau gauge, Fock realisation 2-3703
- G<sub>1</sub>×G<sub>2</sub> gauge theory, two-loop  $\beta$  function 2-38798
- gauge of the electromagnetic orientation in the general theory of relativity 2-18990
- gauge theories, massive neutrinos and proton decay, Orbis Scientiae, Coral Gables, FL, USA (Jan. 1981) 2-42794
- generalized torsion tensor fields and the reduced fiber bundle 2-33387
- geometric (4+n)-dimens. field theory, mag. and elec. charge solns. 2-38785
- geometrical aspects of gauge configurations 2-38736
- geometrical gravitational theory 2-10691
- geometry, introduction to fibre bundle formalism 2-38737
- geometry of symmetry breaking in gauge theories 2-38738
- ghosts and geometry 2-48870
- GL(2f,C)×GL(2c,C) gauge-theoretical foundation of color geometrodynamics 2-43213
- Goldstone theorem for symm. violation by gauge fixing 2-48867
- grand unified models with automatic Peccei-Quinn symmetry 2-29037
- grand unified theories, direct product of groups 2-29035
- grand unified theories, low-energy neutral current phenomena 2-6977
- grand unified theories, statistical concepts 2-53394
- grand unified theories, statistical notions, applicability to early Universe 2-29055
- grand unified theories, supersymm., gauge hierarchy 2-3735
- grand unified theories, supersymmetry, particle physics and gravitation 2-33783
- grand unified theories 2-33776
- grand unified theories and Universe lepton number 2-14963
- Grassmannian  $\sigma$ -models with non-Abelian gauge group, classical solns. 2-43177
- gravitation, Einstein-Cartan-Sciama-Kibble theory, uniqueness as Poincare/Lorentz gauge theory 2-42919
- gravitation, gauge theories 2-10689
- gravitation, L<sub>0</sub>U(1) gauge theory, spherically symm. and static soln. (*Chinese*) 2-23522
- gravitation, reformulation of scale-invariant theory and astrophysical test 2-3190
- Gribov ambiguities from bifurcation theory viewpoint 2-38750
- ground state energy defined by SU(N)-invariant Lagrangian, T/N theory, high-order calc. 2-38799
- ground state hadrons, wave functions, SU(3) colour gauge theory, SU(6) flavour model 2-291
- ground unification and proton stability in chiral SU(8) theory 2-43247
- GUTs, gauge hierarchies and symmetry behaviour at high temps. 2-6983
- hadron masses in lattice gauge theories with fermions, Monte Carlo evaluation 2-48880
- hadron spectra and quarks 2-10570
- hadron structure theory 2-15326
- heavy neutrinos and the evasion of cosmological bounds 2-19252
- heavy quark long-range spin-spin forces in gauge theories 2-33805
- Higgs and gauge fields, unified picture 2-38832
- Higgs and lattice gauge theories with quark fields, confinement test, disorder parameter 2-43185



## gauge field theory continued

Higgs and Yang-Mills field topological equivalence in SU(2) gauge theory dyon sector 2-3683  
Higgs model, non-Abelian, meron gauge fields, axially symmetric (*Russian*) 2-43209  
Higgs phenomenon without symmetry breaking order parameters 2-19243  
Higgs pot. minima, group-theoretical determ. 2-33770  
high-energy physics, contemporary status and prospects 2-48900  
high-energy physics techniques, NATO Advanced Study, St. Croix, US Virgin Islands (July, 1980) 2-28591  
horizontal symmetry and pseudo-Goldstone bosons, Higgs pot. minimisation 2-23884  
horizontal symmetry quantum numbers, generation mixing and mass ratios 2-43252  
infrared behavior of asymmetric models in different space dimensions 2-38831  
instanton angles  $\theta$ , CP-invariance consequences 2-29059  
instantons, solitons, monopoles and homotopy theory, review 2-3671  
instantons in nonlinear  $\sigma$ -models, gauge theories and general relativity 2-43212  
integral formulation of gauge theory 2-48909  
intermediate field mass, spin and quantisation, renormalised theories (*Spanish*) 2-254  
Jordan-Kaluza-Klein type scalar tensor theories of gravity with gauge fields 2-33404  
Klein-Kaluza gauge field, torsion effect 2-28985  
large momentum transfer processes, gauge field theory approach, QCD and parton model 2-265  
lattice field theories, equivalence to local gauge, massless photons 2-23855  
lattice field theories, fermions, gauge fields and supersymmetry 2-23817  
lattice field theory in quasicontinual representation 2-255  
lattice gauge and chiral models, large N phase transition, 4d lattice QCD 2-38763  
lattice gauge models, phase struct. 2-38743  
lattice gauge systems, duality and criticality 2-38589  
lattice gauge systems with fermions, mean field theory 2-33731  
lattice gauge theories, ground state energies, perturbative variational calcs. 2-43191  
lattice gauge theories, renormalisation transform., Monte Carlo calcs. 2-28998  
lattice gauge theories, U(1), SU(2), SO(3), phase transitions, plaquette energies, mean field methods 2-3687  
lattice gauge theories in 4-dimens., decoupling points and dual symmetric perturbation theory 2-19241  
lattice gauge theories with continuous gauge groups, cross-over points 2-6952  
lattice gauge theory, concept and props. 2-6956  
lattice gauge theory, quark confinement using Monte Carlo calcs. 2-6993  
lattice gauge theory and surface roughening 2-33736  
lattice gauge theory on discrete groups, Migdal recursion eqn. 2-33725  
lattice gauge theory, Wilson loop weak coupling perturbative calcs., string tension 2-6945  
lattice models with finite subgroups of SU(3), Monte Carlo simulation 2-38791  
lattice QCD, 1/N topological expansion 2-43280  
lattice QCD,  $\Lambda_{\text{lattice}}$  fermionic contrib. 2-29014  
lattice QCD, hadron mass spectrum calc. 2-29095  
lattice QCD, SU(3) and U(3) invariant group integrals 2-23918  
lattice QCD vacuum in large-N limit 2-43273  
lattice systems, off-axis string tension and rot. symm. restoration 2-6805  
left-right symmetric electroweak model without broken gauge interactions, quark-lepton composite model 2-6984  
light composite fermions, broken chiral symmetries, strongly interacting gauge theory 2-11031  
linearised gravitational field, stochastic quantisation 2-33406  
local gauge invariant QED with fundamental length 2-19303  
local internal supersymmetry of the free Maxwell theory 2-38816  
local QSp(4/2) supersymmetry and extended BRS transformations for gravity 2-48593  
long-ray interaction between spins 2-3681  
Lorentz gauge field, linear approx. 2-48865  
magnetic monopoles, duality and cosmological phase transitions 2-48875  
many-particle exclusive and inclusive semi-inclusive processes, renormalisation group approach 2-7007  
mass and IR regularisation in nonlittike axial gauge 2-19260  
mass generation, gauge-mixing mechanism and dimens. reduction technique 2-43166  
mass hierarchies in supersymmetric theories, gauge hierarchies 2-15294  
massless boson fields, covariant representations 2-3679  
massless Fermi fields, gauge-invariant states, covariant representations 2-3678  
massless Schwinger model 2-28990  
massless totally antisymmetric tensor field in arbitrary dimensional space-time, classification 2-43196  
mathematical physics developments, conf. Schladming, Austria (Feb. 1981) 2-38356  
matrix models and gauge models, large N phase structure 2-43204  
mesons, QCD model, hadron classification 2-15324  
metacolour gauge theory, solutions, massless spectrum 2-48920  
metric from matter, general relativistic invariant theory 2-3462  
minimal SU(S) grand unified theory, early Universe phase struct. 2-18994  
modern field theories, symp. Stockholm, Sweden (Sept, 80) 2-33227  
monopole charges in unified gauge theories, comments on previous work 2-6980  
monopole charges in unified gauge theories 2-6979  
motion on half line, mechanical example of gauge theory 2-38396  
multi-instanton contributions in quantum mechanics 2-23827  
multidimensional unified gauge field theories 2-23880  
multimonopole generation by soliton theoretic method 2-38742  
multiplicative functionals and gauge fields 2-19268  
N=1 supergravity, minimal geometric approach 2-48602  
N=2 supergravity multiplets 2-48601  
N=8 supergravity, gauging in superspace 2-48598  
N=8 supergravity model 2-48600  
N=8 supergravity with local SO(8)×SU(8) invariance 2-42929  
natural axion invisibility and SU(N) flavor unification 2-38795  
nematic-smectic A transition and gauge transforms. 2-35690  
neutral current-like interactions, EM coupling const. universality 2-11006

## gauge field theory continued

neutrinoless double beta decay in gauge models 2-28997  
Noether anal. for hidden symmetry responsible for infinite set of nonlocal currents 2-19259  
Noether theorem, extension to transforms 2-33702  
non-Abelian fields, gauge invariant IR regularisation 2-33743  
non-abelian gauge models, quark confinement by half-instanton gas 2-11018  
non-Abelian gauge theories, vector pot. orbit space study 2-33733  
non-Abelian gauge theories in the large N limit, classical eqns. 2-43183  
non-Abelian gauge theories with generalized covariant derivatives and magnetic currents 2-38758  
non-abelian gauge theory, N→0 limit, model for self-avoiding random surfaces 2-48878  
non-Abelian gauge theory, permanent quark confinement, topological mech., monopoles, SU(3) 2-43306  
non-abelian gauge theory, space-time symmetry 2-48877  
non-Abelian gauge theory, surface integrals and monopole charges 2-3675  
non-Abelian lattice gauge theories, specific heat phase transitions, spherical model 2-29002  
non-Abelian theories, Monte Carlo anal. 2-15290  
non-associative algebras and exceptional gauge groups 2-43307  
nonAbelian charged field, coherent state representation 2-29005  
nonabelian gauge theories, asymptotic states, IR divergences, S-matrix elements, soft gluons 2-38765  
nonAbelian gauge theories, gauge condition topology, confinement phases 2-19342  
nonabelian gauge theories, path-space formula 2-23805  
nonabelian gauge theories, Stokes theorem generalisation 2-28989  
nonAbelian gauge theory, light cone quantisation 2-10947  
nonAbelian gauge theory loop eqn. as equilib. condition in stochastic quantisation 2-19245  
nonAbelian planar gauge, ghosts, Slavnov identities and renormalisation 2-23832  
noncompact gauge group for Dirac eqn. 2-48908  
noncompact gauge transformations and gauge fixing 2-33742  
noncovariance, light-cone quantisation, scale-invariance 2-29004  
nonlinear  $\sigma$  models, classical solns. 2-48905  
nonlinear  $\sigma$ -model on symmetric spaces, higher local conservation laws 2-23812  
nonlinear spinor field theory, meronlike solns. 2-10944  
nonlocal electrodynamics, physical concepts rel. to differential geometry 2-38754  
nonrelativistic bound states of the non-Abelian gauge potential 2-38789  
O(3) model, gauge hierarchy, decoupling and heavy particle effects 2-43216  
O(3) two-dimens.  $\sigma$ -model, instanton contribs., vacuum cluster prop. 2-10958  
O(N) three-dimensional theory at large distances 2-10969  
periodic QED in 2+1 dimens., scatt. in lattice gauge theory 2-38788  
perturbative QCD, quark-quark and quark-antiquark pot. 2-19333  
perturbative QCD modification, confining pot. for heavy static quarks 2-23915  
phase space in theories with gauge group (*Russian*) 2-48903  
photon spin, as rotation in gauge space 2-48894  
plane wave description of particles, topological distinction 2-23823  
Poincare gauge theory for fundamental particles, scatt. amplitudes 2-3459  
Poincare gauge theory of gravitation, axial vector particle 2-48585  
Poincare supergravity N=1 formulation, minimal off-shell version 2-19002  
Postnikov system appls. 2-23819  
Potts lattice gauge model, many-component limit, mean field approx. 2-28982  
Potts model, N-state spin and gauge versions, variational approach 2-38600  
probability amplitudes, gauge transform., Foldy-Wouthuysen transforms., energy conservation 2-33334  
pseudoscalar mesons, chiral-symmetry breakdown and spectrum in QCD 2-7000  
QCD<sub>2</sub>, local meson operator construction from path-ordered operator 2-7001  
QCD, and classical correspondence in large-N limit 2-7002  
QCD, Bloch-Nordsieck counter example 2-292  
QCD, fermion mass dynamical origin (*Russian*) 2-23932  
QCD, finite temp., phase transition, struct. 2-6942  
QCD, gauge independent renormalisation group function with flavour thresholds 2-3692  
QCD, gauge invariances and renormalisation schemes 2-38856  
QCD, gluon propagator in axial gauge 2-43275  
QCD, higher twist contribs., physical basis 2-3753  
QCD, instanton effects on physical processes 2-48945  
QCD, introducing review 2-11025  
QCD, nonperturbative confinement, Mandelstam approximate eqn. study 2-29067  
QCD, parton distrib. and decay functions 2-43293  
QCD, quark propagator and confinement in axial gauge, chiral symmetry breaking 2-19328  
QCD, Stoke's theorems for non-Abelian fields 2-19334  
QCD, string operator renormalisation 2-43274  
QCD, theory of hadrons, review 2-33797  
QCD, unitarity relations and number of flavours 2-43281  
QCD, vertex functions, double logarithmic asymptotic behaviour, perturbation theory eighth order 2-7004  
QCD and electroweak gauge model, gauge bosons, spin asymmetries in large-pt prod. 2-29144  
QCD chiral currents, vacuum polarisation, massive quarks effect 2-29013  
QCD external field problem in SU(N) lattice gauge theories 2-23924  
QCD in 1+1 space time, gauge invariant approach 2-19318  
QED, continuum strong coupling expansion 2-29012  
QED, Gauss's law and path-integral representation 2-11012  
QED, manifest gauge and Poincare covariance 2-19299  
QED, super-renormalisation for  $n \geq 4$  2-38747  
quantised space-time, traceable to nature of gauge field 2-6943  
quantization of gauge-invariant theories through the Dirac-bracket formalism 2-38792  
quantum field theory, mag. monopoles and other topological objects 2-33734  
quantum Potts gauge-matter systems at finite temperature 2-38772  
quantum theory, transition probability gauge depend. 2-23488



## gauge field theory continued

- quark confinement, colour SU(3) group, gauge theory, QCD 2-23931
- quark confinement in non-Abelian gauge field theory 2-33796
- quark gas, screening of instantons 2-23926
- radiative quark mass generation and a fourth quark family in model with chiral gauge interaction 2-23996
- random paths and random surfaces on digital computer 2-19250
- real gauge hierarchy problem, mass scales from spontaneous symmetry breaking 2-6944
- reduction chiral models, geometric Lund-Regge model, gauge transform. 2-10946
- Regge limit in QCD, IR props., 3 gluon exchange eqns. 2-290
- relativistic canonical commutation relations on space-time, gauge and reciprocally invariant formalism 2-43174
- relativistic mechanics with constraints, gauge fixing, evolution generators, world-line conditions 2-10596
- relativistic spinning particle, Lagrangian description 2-10974
- relativistic wave function at origin and pion decay constant 2-43206
- renormalisation-group-improved matching conditions for decoupling calc. 2-6957
- Riemann-Cartan type  $R+R^2$  theories of gravity, Birkhoff's theorem 2-10694
- scalar field compositeness effect on dynamical symmetry breaking patterns 2-19257
- scalar field gravitational coupling, cosmological first order phase transition 2-18993
- scalar instanton spectrum investigation 2-15281
- Scharzschild-de Sitter wormholes creation by cosmological first-order phase transition 2-48376
- Schwinger model and lattice gauge theories, Monte Carlo calculations with fermions 2-23835
- self dual SU(3) gauge field symmetries 2-38783
- self-dual gauge fields, semiclassical functional integrals, instantons 2-19232
- SI(2) gauge field, with external source, variational condensate ground state, gluon screening 2-38797
- simple and extended supersymmetry and central charges 2-48915
- $SO_0 \otimes SO_0 \otimes SO_0$ , weak, EM and strong interaction unified model 2-48921
- $SO(10)_V \times SO(10)_H$ , flavour-colour-hypercolour unification 2-43255
- $SO(10)$ , neutrino mixing 2-43254
- $SO(10)$  model with harmless axion, baryon nonconservation 2-48923
- $SO(14)$  grand unified theory, fermion generation problems (Chinese) 2-33778
- $SO(15)$  fermion family unification, weak interaction and solar neutrino mixing 2-19287
- $SO(2,1)$ -invariant nonlinear  $\sigma$  model, two-dimens., Backlund transform. 2-10945
- $SO(3,1)$  gauge theory of gravitation 2-33405
- $Sp(2N)$  and  $SO(-2N)$  gauge theories, equivalence 2-6950
- space-time topology and spontaneous symmetry breaking 2-10983
- spin-1 and spin-2 gauge fields in unified  $SL(2n, C)$  models 2-38830
- spontaneous breaking of global baryon number symmetry 2-23873
- spontaneous compactification, gauge symmetry and the vanishing of the cosmological constant 2-33199
- spontaneous dimensional reduction in generalized Kaluza's high-dimensional theory 2-43238
- spontaneously broken gauge theories, strong mag. field and high temp. effects 2-19258
- stable self-dual monopoles, mag. charges 2-15286
- statistical enhancement of gauge invariance 2-48864
- Stevenson optimised perturbation theory appl. to factorisation and mass scheme depend. 2-43294
- stochastic quantisation and Faddeev-Popov ansatz equivalence in covariant and axial gauges 2-43182
- strong, weak and EM interactions gauge theories 2-29022
- strongly coupled lattice gauge theories, composite massless fermions 2-23831
- structure with spontaneous symmetry breaking 2-10967
- $SU(16)$  maximal symmetries test in low energy expts. 2-43224
- $SU(2)_L \times SU(2)_R \times U(1)$  gauge theory, quark mass matrices 2-15303
- $SU(2)_L \times SU(2)_R$  gauge theory, unified, induced Yukawa coupling and finite mass 2-43242
- $SU(2)_L \times U(1)$  electroweak gauge theory, leptonic decay, theory 2-7031
- $SU(2)_L \times U(1)$  gauge group, Weinberg-Salam theory comparison with  $\nu_e e$  elastic scatt. results 2-15334
- $SU(2)_L \times U(1)$  model, pseudoscalar-meson leptonic, decays, weak processes involving neutrinos, general theory 2-3774
- $SU(2) \times U(1) \times SU(2)$  gauge model with heavy weak bosons and small additional neutral current interaction 2-48935
- $SU(2) \times U(1) \times U(1)_H$  model, flavour diagonal horizontal interactions 2-43246
- $SU(2) \times U(1)$  electroweak model, nonlinear  $R_\xi$  gauge condition 2-43232
- $SU(2) \times U(1)$  gauge models, Higgs-scalar sector anal. through intermediate boson decay 2-43249
- $SU(2)$  and  $SU(3)$  lattice gauge theories, phase struct. 2-23840
- $SU(2)$  and  $Z(2)$  lattice gauge model, roughening effect in small Wilson loops 2-6940
- $SU(2)$  colour gauge theory, short-distance structure of instantons 2-3688
- $SU(2)$  gauge theory, deconfining phase transition 2-38801
- $SU(2)$  gauge theory, dynamical symmetry breaking 2-3714
- $SU(2)$  lattice gauge model, four-dimens. partition function complex zeros 2-38778
- $SU(2)$  lattice gauge theory, finite size Wilson loops 2-10953
- $SU(2)$  lattice gauge theory, gluon condensation 2-38864
- $SU(2)$  lattice gauge theory, high-temp. nonAbelian mag. field 2-48897
- $SU(2)$  lattice gauge theory, link between strong and weak coupling expansions 2-23836
- $SU(2)$  lattice gauge theory, meson mass calc. 2-28999
- $SU(2)$  lattice gauge theory, Monte Carlo simulation program 2-23814
- $SU(2)$  lattice gauge theory, topological charge fluctuation 2-38777
- $SU(2)$  lattice gauge theory, with four dimens. fermion lattice, Monte Carlo simulation 2-38771
- $SU(2)$  lattice gauge theory,  $\psi$  meson mass 2-38775
- $SU(2)$  lattice gauge theory, weak and crossover region calcs., Wilson loops 2-6953
- $SU(2)$  pure lattice gauge theory mean field approx., phase struct. 2-6946
- $SU(2)$  quasiAbelian and nonAbelian gauge field copies, classification 2-43165
- $SU(2)$  vs.  $SU(2)/Z_2$  lattice gauge theory, crossover from weak to strong coupling 2-48872

## gauge field theory continued

- $SU(3)_C \times SU(2)_C \times U(1)$ , unified theories for quarks and leptons based on Clifford algebras 2-48928
- $SU(3)_C \times SU(3)_R \times SU(3)_C$  gauge model, for electroweak and strong interaction 2-48917
- $SU(3) \times SU(6) \times SU(6)$  metacolour theory for light composite fermions, anomaly matching 2-43312
- $SU(3) \times U(1)$  weak-EM gauge theory, dynamical symm. breaking 2-23893
- $SU(3)$  lattice gauge theory in 4 dimensions with a modified Wilson action 2-38780
- $SU(4)$  four-dimensional lattice gauge theory, phase transition 2-19249
- $SU(4)$  gauge theory, four dimens., high-temp., expansion, Monte Carlo simulation 2-38779
- $SU(4)$  magnetic monopoles, complete soln. set 2-38800
- $SU(5)$  and  $SU(3)$  gauge hierarchy, Higgs potential for one-loop correction (Chinese) 2-33747
- $SU(5)$  gauge theory on four-dimens. lattice, high-temp. expansion 2-3689
- $SU(5)$  grand unification, asymptotically free models (Russian) 2-33782
- $SU(5)$  grand unified model, cosmic domain walls formation 2-48922
- $SU(5)$  Higgs pot. in one-loop approx. (Russian) 2-33781
- $SU(5)$  model, heavy fermions and vector bosons mass hierarchy 2-43245
- $SU(5)$  model, Higgs bosons and gauge bosons couplings 2-19298
- $SU(5)$  model with hierarchical fermion masses and phantom axion 2-19291
- $SU(5)$  theory and toy model, effective pot., gauge hierarchy problem, radiative corrections 2-43234
- $SU(6)$  gauge theory, four dimens., high-temp., expansion, Monte Carlo simulation 2-38779
- $SU(6)$  grand unified theory without fundamental Higgs scalars 2-43248
- $SU(7) \times U(1)$  anomaly-free gauge unification theory 2-43244
- $SU(N-\alpha)$  gauge theories, third order phase transition studies 2-28978
- $SU(N)$  gauge system, magnetic flux ambiguities, Bander's conjecture proof 2-43203
- $SU(N)$  Higgs models,  $Z_N$  topology and charge confinement 2-19332
- $SU(N)$  lattice gauge theory with Villain's action 2-43179
- $SU(N)$  Yang-Mills theories, Gribov vacuum copies, Coulomb and Landau gauges interpolation 2-10951
- subcomponent models for quarks and leptons, baryonic number nonconservation 2-43314
- subconstituent models satisfying 'tHooft anomaly conditions and approx. proton stability 2-43304
- supercolour, supersymmetric theory with elementary scalars 2-29070
- supercurrents, N-extended supersymmetry irreducible off-shell representation 2-28993
- supergravity, superfield formulation, auxiliary fields and tensor calculus 2-48599
- supergravity, trivial solutions, necessary and sufficient conditions 2-48595
- supergravity component gauges 2-15100
- superprojectors, construction algorithm in terms of chiral superfields 2-3722
- supersymmetric gauge theories, superloop approach 2-38759
- supersymmetric gauge theories as models for supergravity theories 2-29021
- supersymmetric model, gauge hierarchy 2-48874
- supersymmetric technicolour model of particle physics 2-11016
- supersymmetric theory,  $R_\xi$  gauge fixing, radiative symm. breaking 2-48913
- supersymmetry and scale of unification 2-6973
- symmetry restoration, background field method 2-33700
- technicolour and the three-fermion composite model 2-7016
- thermo field dynamics and KMS condition, gauge fields at finite temps. 2-28975
- Thirring and pre-Schwinger models, charge restoration, Lorentz-transform prop. 2-43200
- Thirring model, Wightman functions 2-43208
- three-dimensional lattice Yang-Mills field with gauge group  $U(1)$ , bound states of Hamiltonian 2-3711
- three-dimensional  $U(1)$  lattice gauge theory, static quark confinement 2-48949
- topological charges of fields with cross gauge symmetry 2-23826
- topological finite energy monopole theory, recent developments 2-38739
- torison field theory, gauge theory analogy 2-6781
- Twisted axial symmetry and finitely separated monopoles 2-6951
- two indistinguishable particles system, quantisation 2-18940
- two-dimensional chiral gauge theories, tumbling, most attractive channel condensation 2-15285
- two-dimensional gauge field with independent values of field tensor at every point 2-6967
- two-dimensional massless QED, ground state structure 2-15313
- two-dimensional melting, gauge fields and geometric approach to order 2-154
- two-dimensional abelian spin systems and Coulomb gas, Kosterlitz-Thouss transition 2-6802
- $U(1)$  compact gauge on four dimens. lattice, critical exponent meas. 2-29063
- $U(1)$  compact theory on four dimens. lattice, plaquette-plaquette correlation 2-29062
- $U(1)$  lattice gauge field theory, glueball excitations, boson representation 2-38796
- $U(1)$  lattice gauge model, Monte Carlo study 2-48898
- $U(1)$  lattice gauge theories, small coupling expansions 2-48910
- $U(2)$  chiral model, Monte Carlo study 2-15283
- $U(\infty)$  lattice gauge theory in two-dimens., Wilson loop functional 2-3690
- $U(N)$  lattice gauge theory, four-dimens., phase transitions, Monte Carlo calc. 2-38802
- $U(N)$  lattice gauge theory, one-link integral 2-10942
- unified electroweak theory, quantum flavour dynamics, review 2-33775
- unified gauge theory, group theory, principal bundles, monopoles 2-3733
- Universe baryon asymmetry generation in left-right symmetric grand unified theories 2-286
- Universe multi-production by first-order phase transition of vacuum 2-48377
- vacuum expectation value for ferromagnetic vacuum 2-38833
- vacuum instability and zero-charge in gauge theory with spontaneously broken symmetry (Russian) 2-23911
- vanishing refractive index as a gauge-invariant mechanism of mass generation 2-38842
- variant actions and phase structure in lattice gauge theory 2-38787



**gauge field theory continued**

- vector  $SU(N_c)$  gauge theories, anomaly eqns. and persistent mass condition 2-48938
- vectorlike gauge theories, solns. to 't Hooft's consistency condition 2-38793
- vortex-fermion system, zero modes of Dirac eqn. 2-23833
- weak interactions confining model 2-11014
- Weyl fermion mass matrix, diagonal form in real or pseudoreal gauge group representations 2-19248
- Weyl tensors for asymmetric complex curvature 2-18983
- Wilson and Polyakov confinement tests, elementary derivation from Hamiltonian formulation 2-23943
- Wilson loop variables in gauge theories 2-10968
- Wu-Yang potentials for the Dirac monopole 2-33709
- WZH<sup>±</sup> coupling in hypercolour and  $SU_L(2) \otimes U(1)$  extended gauge theories 2-23892
- Yang-Mills fields, gauge-fixing conditions and natural decompositions 2-43193
- Yang-Mills fields in planar gauge, renormalisation (*Russian*) 2-23851
- Yang-Mills theories, vertex functions, generating functionals (*Russian*) 2-3712
- Yang-Mills-Higgs magnetic monopoles with gauge group  $SU(3)$  broken to  $U(2)$  2-33730
- Yang-Mills-Higgs system in 2+1 dimens., quantum gauge fields topology and duality 2-29000
- $Z_2$  and  $U(1)$  lattice gauge theories, phase transitions and critical point 2-6947
- $Z_2$  gauge model on truncated tetrahedron lattice, spin system equivalence 2-38756
- $Z_2$  lattice gauge theory, continuum limit 2-38769
- $Z(2)$  gauge and spin models, canonical and gauge symmetries of phase transitions 2-48883
- $Z(2)$  lattice gauge theory, finite size Wilson loops 2-23841
- $Z(2)$  lattice gauge theory, phase diagram, role of gauge invariance, variational and mean field calcs. 2-29001
- $Z(n)$  bubble anal. of  $SU(n)$  gauge theories at finite temp. 2-19235
- $Z(N)$  lattice gauge models, phase struct. and generalized actions 2-43189
- $Z(N)$  theory, hidden parafermions 2-3696
- zero-mass limit, photon mass, phase transitions, IR divergences 2-10956
- $Z_0, D_s^0$  mass difference and CP violation in  $SU(2) \times U(1)$  gauge model 2-19376
- $e^+e^- \rightarrow \gamma hX$ , QCD prediction for direct photon prod. 2-7008
- $e^+e^- \rightarrow l^+l^-$ , test of gauge theory with two  $Z^0$ s 2-24000
- $e^+e^-$  three jets, transversely polarised, lowest order calcs. in broken colour gauge theory 2-49000
- $K^0 \rightarrow \pi^+ \pi^-$ , effective Hamiltonian and matrix elements in  $SU(3) \times U(1)$  gauge theory (*Russian*) 2-38879
- $K^+ \rightarrow \pi^+ \pi^0$ , effective Hamiltonian and matrix elements in  $SU(3) \times U(1)$  gauge theory (*Russian*) 2-38879
- $K_s^0$ -light neutrals, CP violation, gauge theory calc., heavy quark mass 2-38876
- $PP \rightarrow \gamma X$ , direct photon prod. in  $SU(2)_c \times U(1) \times SU(3)_c$  gauge theory 2-19408
- $pp \rightarrow l^+l^- X$ , cross-sections and forward-backward, asymmetry calc. in  $SU(2) \times U(1) \times G$  model 2-19409
- $^{40}Ca(\mu, e^-)^{40}Ar$ , branching ratios, lepton conversion in gauge model 2-39018
- $SU(5) \rightarrow SU(3) \times SU(2) \times U(1) \rightarrow SU(3) \times U(1)$  gauge hierarchy, in super-symm. theory 2-43241

**Gaussian noise** see random noise

**Gaussian orbital calculations** see GO calculations

**Gaussian-type orbital calculations** see GTO calculations

**Ge-Si alloys**

- amorphous, transition temp. and heat of crystn., DSC determ. 2-8435
- amorphous films, composition anal. (*Japanese*) 2-41955
- crystallisation, FCC and diamond type binary cryst. growth kinetics 2-12527
- Hall mobility of holes in solid solns. 2-45988
- IR detection material, Czochralski growth and crucible-free process prep. 2-22160
- n-type, heavily-doped, short term heat treatment effects on thermoelectric props. 2-36071
- p-n junction, quantum yield, spectral distrib. (*Russian*) 2-1942
- solid solution, comp. control of homogeneous single crystals. during melt growth 2-5806
- spin-orbit splitting of valence band solid soln., electroreflectance study 2-17445
- Ge-Si, energy gap, electroreflectance determ. 2-17443
- Ge-Si, solid solutions, kinetics of photoconductivity (*Russian*) 2-13120
- $Ge_{100-x}Si_x$  amorphous films, crystn. on  $SiO_2$  growth kinetics 2-5327
- $Ge_{100-x}Si_x$  amorphous layers, heterostruct. fabrication by solid phase growth 2-8736
- Si rich Si-Ge alloys for IR detectors, elec. and optical meas. 2-21628
- Si-Ge for new photovoltaic devices, review 2-46077
- Si-Ge:P, thermal cond. change by precip. of dopant 2-45967
- SiGe:H amorphous film solar cell, Tandem type 2-47488
- $Si_{1-x}Ge_x$ , amorphous, ESR g-values due to dangling bonds, EHT calc. 2-36430
- $a-Si_{1-x}Ge_x$  films for high performance solar cells 2-37227
- $Si_{1-x}Ge_x$ :H, amorphous, photoconductivity, dark cond. 2-36104
- $Si_{1-x}Ge_x$ :H film, amorphous, ESR and IR studies 2-26740
- $n-Si_{63.5}Ge_{36.5}$ , thermal cond. and thermoelec. conversion, phonon-grain boundary scatt. effect 2-40947
- $Si_{1-x}Ge_x$ :H alloy amorphous films, optical and elec. props., solar cell appls. 2-37345

**gegenschein** see zodiacal light

**Geiger counters**

- counting rate range extension 2-19847
- fast-neutron sensitivity, comparison using different techniques 2-34238
- high voltage generator cct., using AF amplifier for counting tube (*German*) 2-24499
- semicylindrical organic type GM counter design and performance 2-19893
- thiols, tritium activity, Geiger internal counting method 2-11352
- unshielded background counting rates and GM counter dimension relation 2-43687
- $H_2S$ , tritium activity, Geiger internal counting method 2-11352

**Geiger Muller counters** see Geiger counters

**gelatin**

- see also gels
- aqueous solution, US absorption props. 2-30528
- dichromated, for white light reconstructed hologram fabrication (*Chinese*) 2-44214
- dichromated gelatin film, hologram formation mechanism 2-11665
- dichromated gelatin film, volume phase hologram image formation, expt. study (*Russian*) 2-44226
- photogelatin films, sensitised, climatic protection with varnish 2-24981
- photographic gelatins, adsorption layer compression-dilatation props. (*German*) 2-43116
- solution, kinetics of reduction of surface tension 2-47557

**gels**

- alkali borosilicate gradient-index AR film deposited by sol-gel process 2-49951
- binary polymer mixture, vulcanisation and gelation 2-121
- critical phenomena, gel points, percolation theory appl. 2-14014
- glass-forming systems, colloidal and polymer gels, monolithic transformation 2-41944
- hydrogel surface, contact angles of water droplet, hysteresis effect, polymer mol. mobility and orientation effect 2-45684
- light beating spectroscopy developments, scatt. from gel systems 2-230
- nematic, weak, mechanical, optical, and elec. props. 2-30393
- PAA, swollen network, phase transition, electrostatic interactions effects 2-47378
- phantom materials for radiation dosimetry, liqs. and gels 2-47715
- poly(2-hydroxy-ethyl methacrylate)-hydrogels, mech. strength, morphology (*German*) 2-22318
- poly( $\gamma$ -phenacyl L-glutamate) in N,N-dimethylformamide, gel formation and melting 2-8612
- polyacrylamide, dynamic light scatt. under hydrostatic pressure 2-17928
- polyarylates, carborane-containing, low temp. transformations (*Russian*) 2-30601
- polydimethylsiloxane gel, rubbery and glassy states, metallization 2-51816
- polymer, swollen network, phase transition, electrostatic interactions effects 2-47378
- polymer gel, crosslink density determ. by end group anal. after partial degradation 2-22496
- polymer gelation site bond correlated percolation theory, appl to polymer with preferential binding at two disparate sites 2-35376
- polymer gels model, percolation on randomly expanded lattice 2-28789
- polymers, Brillouin light scatt. 2-22039
- polymers, crosslinked photochromic, photomech. effects 2-41315
- polysaccharide gel aqueous soln., Raman Rayleigh-wing scatt., 20-400  $cm^{-1}$  2-17495
- polystyrene, isotactic, extended-chain struct., X-ray diff. and calorimetric data 2-22495
- reaction bath near gelation threshold, mechanical props., polycondensation, elastic and viscosity behaviour 2-14015
- rubber, SBR compounds, mixing, masterbatch stage effect on processing safety 2-46998
- swollen, Gaussian networks, photoelastic behaviour, inhomogeneities and deviations 2-17439
- transition metal oxides, elec. and electrochromic props., review 2-45973
- water glass, struct. formation in neutralised solns., optical density 2-47375
- $Na_2O-CaO-SiO_2-H_2O$  gels, swelling props., rel. to expansion of concrete 2-37109
- $Na_2SiO_3$ , water glass, struct. formation in neutralised solns., optical density 2-47375
- $Na_2Zr_2Si_2PO_{12}$ -Nasicon electrolyte, fabrication and characterisation 2-17656
- SiN, prep. by sol-gel processing 2-9323
- $SiO_2$  gel, effect on fluorination of surface texture 2-30730
- $SiO_2$  gel surfaces,  $Cu^{2+}$  electron spin echo, interaction with  $H_2O$  and  $NH_3$  adsorbates 2-9028
- $SiO_2$ , surface treated, change of surface struct. after pyrolysis (*Japanese*) 2-37101
- $V_2O_5$  gels, lamellar struct., intercalation of polar organic solvents (*French*) 2-2741

**general relativity**

- see also cosmology; gravitation; gravitational red shift; Schwarzschild metric; space-time configurations; unified field theories
- a classical gauge theory, Riemann geometry, analogy with general relativity 2-23858
- accelerated matter, dimensional anal. of EM field driving (*French*) 2-38522
- accelerated observers math. formulation 2-38516
- accelerated observers math. formulation 2-38517
- accretion discs, thermal and secular stability of innermost parts 2-33062
- action at distance and quasiseparability 2-18986
- Alexandrov topology completeness for space-time 2-38514
- V1343 Aquilae (SS 433), possible additional relativistic effects 2-28473
- areas conservation law, rel. to ang. momentum conservation law for dissipative Kepler's problem 2-6528
- asymptotic flatness 2-6772
- asymptotically flat initial data sets, existence in space-times containing manifolds with ends 2-23508
- atomic time scales, gravit. effects of Sun and Moon (*Italian*) 2-10317
- axially symmetric and stationary solutions of new general relativity 2-42914
- Bell-Szekeres space-time, geodesics eqn. for charged particle 2-38515
- Bianchi type I anisotropic cosmological model with a collisionless gas 2-42766
- Bianchi type-I radiation-filled Universe in general scalar tensor theory 2-3315
- binary stars, radiation damping due to gravitational wave emission (*Chinese*) 2-28508
- binary system, relativistic quadrupole-moment contrib. to spin precession 2-18987
- black hole, internal space-time metric 2-14872
- black hole electrodynamics, absolute-space/universal time formulation 2-38231
- Bondi mass positivity 2-85
- Bondi mass positivity 2-48569
- bound muon, decay in nucleus, EM time dilation 2-23517
- bounded systems, post-Newtonian spin and ang. momentum 2-38424
- Brans-Dicke-Maxwell eqns., stationary axially symmetric, soln. 2-3437



## general relativity continued

centrally symmetric gravit. fields, Birkhoff theorem analogy 2-23512  
 charged dust distribution in nonrigid rotation 2-10670  
 charged NUT field, test particle motion and cosmic censorship 2-38529  
 charged particle, gravit. field in bimetric general relativity 2-23526  
 charged particle in uniform mag. field, response to gravitational radiation 2-10304  
 charged spheres in general relativity 2-10671  
 charged static fluid sphere calcs. 2-18978  
 collapse of radiating fluid spheres 2-38524  
 complete group invariance gravitation theory 2-10665  
 conformally flat gravitational fields produced by ideal fluid 2-3465  
 conformally flat Green's functions, closed forms 2-3435  
 coordinate-dependent 3+1 formulation of the general relativity equations for a perfect fluid 2-23516  
 cosmic censorship, evidence in spherical system adiabatic collapse 2-38525  
 cosmological singularities, matter and physical fields influence, book contrib. 2-33201  
 cosmology, constraints on primaeval adiabatic perturbations from mass distrib. 2-6687  
 cosmology, soln. of eqns. for chaotic universe, Friedmann in mean 2-10541  
 cosmology, theory of gravitational instability in multicomponent fluid 2-42592  
 curved space-time, atom as probe 2-10658  
 curved space-time, Riemannian method in quantum theory 2-18996  
 curved-space scattering 2-15300  
 cylinder, hollow, rotating, gravit. field, rigorous soln. 2-48561  
 cylindrical nonstatic fluid distrib., with pressure-density, general relativity 2-28733  
 cylindrical symmetric space time with two degrees of freedom, Petrov classification 2-33383  
 de Broglie's quantum potential, analysis w.r.t. stochastic interpret. of quantum mech. (French) 2-33314  
 de Sitter space-time, asymptotic symmetries 2-81  
 de Sitter space-time, geodesic eqns. soln. 2-10674  
 Dirac delta function, products and compositions, junction condition appl. 2-33310  
 dual-mass in general relativity 2-28723  
 dust shells and deformed stars falling into black hole, grav. collapse and radiation 2-23514  
 dynamics of test mini black holes 2-28340  
 Einstein's eqns., axisymmetric stationary soln. using computer program 2-10666  
 Einstein's eqns., Cauchy problem 2-3440  
 Einstein's eqns., matrix  $Q$  of charact. determinant 2-3441  
 Einstein's equations, transcendental soln. 2-38523  
 Einstein's quest for unity 2-15095  
 Einstein eqn. soln. for perfect fluid distribution with three Killing vectors 2-28720  
 Einstein equations, charact. form 2-48573  
 Einstein equations, exact axially symmetric solns. 2-10668  
 Einstein equations, with vacuum polarisation, cosmology soln., singularity problem 2-53403  
 Einstein equations in vacuum, N-soliton soln. 2-33393  
 Einstein field eqns. solns. 2-48382  
 Einstein gravitation field eqns., gauging coarseness of statistical description 2-3439  
 Einstein gravity with cosmological constant, stability props. 2-48370  
 Einstein Maxwell eqn. soln., corresponding to plasma cylinder 2-30283  
 Einstein Podolsky Rosen paradox, use of reduced density matrix 2-33391  
 Einstein quadrupole formula, Feynman graph derivation 2-33394  
 Einstein static universe, symmetry breaking and restoration 2-6692  
 Einstein vacuum field equations, asymptotic characteristic initial value problem 2-23510  
 Einstein-Cartan gravitation, superenergy tensors 2-82  
 Einstein-Cartan theory, derivation of solns. 2-3454  
 Einstein-Cartan-Maxwell-Bianchi cosmologies 2-33192  
 Einstein-Maxwell equations, soln. family 2-38518  
 Einstein-Murphy interaction 2-48562  
 electrodynamics in curved spacetime, 3+1 formulation 2-38053  
 EM fields, viscous fluid interpretation in general relativity 2-23519  
 EM fields and viscous fluids equivalence 2-28734  
 empty Robertson-Walker space-time instabilities 2-6770  
 energy-momentum tensor, Reissner-Nordstrom metric 2-42915  
 equation of motion including gravitational radiation reaction 2-10659  
 equations of motion, two bodies, reaction of gravitational radiation (French) 2-6764  
 equations of motion in a generalized theory of gravitation 2-23531  
 Ernst eqns. with EM fields, similarity solns. 2-33386  
 Ernst metric, null tetrad analysis 2-42917  
 exact general relativity, gravit. field, radiative degrees of freedom 2-42923  
 exceptional type D shearing twisting electronic with  $\lambda$  2-33390  
 expanding universes, finite temp. quantum fields 2-42763  
 expanding viscous fluid with heat flow, conformally flat soln. of Einstein eqns. 2-33301  
 field eqns. solns. (Italian) 2-3432  
 field of sphere composed of concentric shells 2-10662  
 five-dimensional unified theory and projective relativity 2-6783  
 flatness conditions, cosmological version 2-42913  
 force, concept reintroduction, short-range repulsion 2-28731  
 Friedmann model, Reggeisation, cosmological solns. 2-48571  
 Friedmann Universe, props. and evolution, quantum statistics approach 2-42767  
 Friedmann-Robertson-Walker universes with quantised matter, general-relativistic many-particle system formalism appl. 2-53395  
 fundamental physics, conf., Bogota, Columbia (July-Aug., 1979) 2-10554  
 gauge of the electromagnetic orientation in the general theory of relativity 2-18990  
 gauge theories of gravitation 2-10689  
 generalised Einstein equations, corresponding to nonlinear lagrangian (French) 2-15093  
 generalised spacetimes, covariant and contravariant tensors 2-33377  
 generalised torsion two-forms, null tetrad formalism, vacuum space-times 2-42911  
 generalized Killing-Yano tensors, structural eqns. 2-48563  
 generalized NUT metric 2-38521  
 generalized torsion tensor fields and the reduced fiber bundle 2-33387

## general relativity continued

geodesic first integrals with explicit path-parameter depend. in Riemannian space-times 2-18980  
 geodesic precession in a Kerr field 2-38526  
 geometrical gravitational theory 2-10691  
 geometrical treatment of force, appl. to general relativity 2-18840  
 ghost-free gravity Lagrangians with propagating torsion 2-6776  
 global existence, rel. to cosmic censorship 2-48564  
 gravitation, classical model 2-6780  
 gravitation, Sen-Dunn theory, class of exact solns. for axially symmetric charged perfect fluid distrib. 2-48576  
 gravitational constant, dynamical generation from massless spin-2 self interacting field 2-3458  
 gravitational energy negativity 2-48570  
 gravitational field in vac., dynamic props. 2-3433  
 gravitational quadrupole formulae for gravitat. bound systems 2-23215  
 gravitational repulsion in general relativity 2-48572  
 gravitational scattering, small angle, radiation reaction and ang. momentum loss 2-33392  
 Heisenberg-like equation of motion for Dirac algebra 2-38531  
 helicity operator for integral spin fields 2-28676  
 homogeneous self-gravitating perfect fluid, solns. 2-48557  
 Huggins term in general relativity 2-6771  
 incoherent fluid, streamlines and gravit. field, rel. to Finsler geodesic 2-23520  
 incompressibility in relativistic continuous media, shock wave propag. 2-23518  
 indeterminacy compatibility 2-33321  
 inhomogeneous perfect fluid cosmologies 2-38519  
 instantons in nonlinear  $\sigma$ -models, gauge theories and general relativity 2-43212  
 interacting gravitational and matter fields, Hamiltonian structure 2-18932  
 IR stable Yang-Mills theories, Newton's gravitational constant calc. 2-48869  
 Jacobi equation for vector fields and one-forms, rel. to world vectors 2-84  
 jet bundles and Weyl geometry 2-42916  
 Kerr black hole, rigid rotating disk model 2-42707  
 Kerr-Newman black holes, spin-3/2 perturbation anal. by linearising  $O(2)$  field eqns. 2-14873  
 Killing vector structure in expanding HH spaces 2-33389  
 Killing-Yano tensors, generalisation 2-6773  
 Klein-Kaluza and Einstein-Cartan theory generalisation 2-42912  
 Left-flat spaces, null geodesics 2-6774  
 left-flat spaces as H-spaces, example 2-6775  
 light propag., gravitational and EM radiation nonlinear effects 2-87  
 linear homogeneous eqns. invariant under arbitrary coordinate changes, field eqns. classification 2-33385  
 local transverse-traceless tensor operators 2-18982  
 Lorentz signature metric tensor field homotopy classes, four-dimensional kinks 2-10667  
 Mach's principle and space-time structure, review 2-38530  
 Machian gravitation, bimetric, cosmology study 2-6691  
 magnetic dipole, gravitational field, Einstein-Maxwell eqn. soln. 2-38539  
 magnetic monopole in variations on Einstein's nonsymmetric unified field theory 2-10688  
 massive scalar fields, generation by conformal transform. 2-14967  
 metric tensor, determ. from Riemann tensor components, algebraic method 2-83  
 monodromy preserving deformation appl. to gravitational field eqn. 2-6777  
 multipole moment expansion 2-3431  
 multipole moments in general relativity 2-3434  
 n-dimensional complex Riemann-Einstein spaces with  $O(n-1, C)$  as symmetry group 2-6532  
 naked singularity space-time, timelike nongeodesic trajectories, causality violation 2-10669  
 neutrino fields in Einstein-Cartan theory 2-6768  
 neutron stars, cooling, general relativistic effects 2-14870  
 Newton's theory of gravitation and Newtonian approx. 2-10673  
 nonexistence of spherically symmetric attractive long range scalar fields with charged dust distrib. 2-33384  
 nonlinear electrodynamics in curved space-time 2-33397  
 nonlinear Heisenberg-Klein-Gordon eqn., geon-type solns. 2-10965  
 nonstatic gravitation, effects on compactification 2-10686  
 non-twisting N-type solns. with cosmological constants 2-28727  
 number theory appl. in physics communication engineering and artistic designs 2-33379  
 on higher order causality violations 2-3438  
 on the regularization of the cosmological singularity in general relativity 2-86  
 orthogonal Bianchi cosmologies, bounds of physical quantity time evolution 2-28586  
 parameterised postNewtonian metric, nonlinearities 2-48565  
 partially self-similar solns. 2-48568  
 perfect fluid sphere 2-18979  
 photon theory of the electron 2-3447  
 planetary theory, relativistic perturbations (French) 2-42579  
 point masses, generalised lagrangian, post-post Newtonian approx. (French) 2-48558  
 post Newtonian approximation, radiation reaction, power loss 2-48575  
 pregeometry including fundamental gauge bosons 2-38527  
 quantum cosmology and geometric quantization 2-14955  
 radiative transfer in spherically symmetric flows, comoving-frame eqn. rederived 2-28329  
 reaction force of gravitational radiation, quasi-Minkowskian motion perturbation (French) 2-3443  
 reaction forces of gravitational radiation, quasi-Newtonian motion perturbation (French) 2-3442  
 Regge calculus and obs., formalism and appl. to radial motion and circular orbits 2-10660  
 relativistic precession, ballistic motion in Schwarzschild metric 2-48497  
 relativistic wave equations in Riemann spaces, internal consistency 2-28721  
 Ricci and Plebanski tensors classification using Newman-Penrose formalism 2-28724  
 Riemann-Cartan space-time, spectral geometry, rel. to axial anomaly 2-42922  
 Riemann-Cartan type  $R+R^2$  theories of gravity, Birkhoff's theorem 2-10694



## general relativity continued

- Riemannian variance with conformable conservative curvature tensor (French) 2-42909  
 rigid motion, retardation 2-48559  
 rigid motions in relativity 2-38425  
 Robertson-Walker flat background with relativistic eqn. of state 2-38344  
 Robertson-Walker space-times, geodesic incompleteness stability 2-6769  
 Robertson-Walker universe, space curvature 2-10538  
 rotating bodies, relativistic gravit. field 2-18985  
 rotating disk, appearance 2-10663  
 rotating star relativistic collapse 2-28493  
 Schwarzschild soln., group-theoretic approach 2-42817  
 Schwarzschild-like interior soln. for charged spheres 2-33398  
 self-gravitating scalar field with cubic nonlinearity, Einstein eqns. solns. 2-3464  
 self-similar cosmological models 2-38512  
 self-similar gravitational fields in plane system space-times (Russian) 2-10676  
 slow rotation in scalar-tensor gravit. theory 2-38546  
 slowly rotating fluid spheres in general relativity with and without radiation 2-10672  
 soliton concept in general relativity 2-6765  
 space-time G structures prolongations 2-28722  
 space-time metrics, symmetric coord. systems 2-42910  
 space-time nonmanifold theory 2-18981  
 space-times homogeneous on a time-like hypersurface 2-33381  
 spacetime concept generalisation 2-28729  
 spacetimes with spacelike singularities, simultaneous synchronous coord. existence 2-28728  
 spatially homogeneous cosmologies, nonscalar singularities 2-6778  
 spherical polytropes, Pade approximant soln. 2-38513  
 spherically symmetric conformally flat metric, charged dust distrib., zero mass scalar field 2-33395  
 spherically symmetric self-gravitating fluids, Einstein eqn. solns. 2-38520  
 spherically symmetric space times in bimetric relativity theory 2-48581  
 spontaneous compactification, gauge symmetry and the vanishing of the cosmological constant 2-33199  
 standard framework, Maxwellian tensors, physical interpretation 2-23507  
 static configuration with an ultrarelativistic equation of state at the center, Einstein eqn. soln. 2-38534  
 stationary axisymmetric fields, circular orbits, positive cosmological const. effect 2-48560  
 stationary axisymmetric space-times, Backlund transformations in Hauser-Ernst formalism 2-28725  
 stationary flow around a rot. black hole (Russian) 2-23513  
 stationary gravitational field analyticity at spatial infinity 2-18984  
 stiff mag. field lines, geometrical foundation 2-6767  
 super Killing equation and super-symmetry transformation 2-15094  
 supermassive rotating star, general relativistic collapse, black hole form. 2-53076  
 symmetry in geometrodynamics 2-28726  
 Synge's eqns. of motion, radiation damping terms 2-10661  
 T-domain, analysis with single R-reference system 2-38532  
 Taub metrics, discrete solns. (French) 2-6762  
 Taub solution, static source 2-33378  
 test bodies, general-relativistic mechanics inverse problems and appl. to general relativity 2-97  
 test object dynamics, high-frequency force effects in general relativity 2-38533  
 tetrad space theory, spherically symm. soln. 2-48566  
 trajectories calc. using small computers 2-42832  
 two-body problem in general relativity, with quantum gravity 2-10687  
 two-soliton solutions of the Ernst equation 2-33380  
 U(4) Reimann-Cartan space time, torsion, nonlinear wave eqn. 2-42921  
 unified field tensor  $*g^{\mu\nu}$ , n-dimensions. representations 2-33400  
 Universes rotating, time-dependent, Einstein eqns., finite nonsingular solns. 2-33194  
 vacuum handles carrying ang. momentum, electrovac handles carrying net charge 2-33388  
 vacuum Minkowski state, quantum detection by non-uniformly accelerated observers 2-3444  
 vacuum temperature in nonEuclidean topology (Russian) 2-10675  
 wave eqns. for particles with spin in constant curvature Riemannian space 2-48567  
 weak field eqns., cylindrically symmetric, static solns. 2-6766  
 Weyl tensors for asymmetric complex curvature 2-18983  
 zero rest mass scalar fields, nonexistence for certain space times 2-33396  
<sup>4</sup>He superfluid, gravitational and inertial effects 2-98

## generator coordinate method

- see also nuclear structure theory  
 light spherical nuclei, monopole giant resonance, collective Hamiltonian in generator coord. method 2-39003  
 molecules, bound and resonance states, calcs. by generator coordinate method 2-622  
 neutron matter,  $\pi^0$  condensed phase, collective modes, generator coord. method 2-49047  
 neutron matter, pion condensation study using generator coordinate method 2-19467  
 particle cluster scatt. and effective pot. between clusters 2-23942  
 single-particle-collective coupling, generator coord. method 2-29209  
 two cluster generator coordinate theories with different widths, spurious CM effect elimination 2-3859  
 NN, time dependent generator coordinate method anal. 2-48962  
<sup>40</sup>Ca, breathing mode calcs., generator coordinate method kernels 2-3858  
 He, multipole polarisabilities, spectral sums, dispersion coeffs., perturbation theory, GCM appl. 2-7660  
 $\Lambda^0(\alpha, \alpha)$ , A=16,18, neutron blocking, generator coordinate method 2-43497  
<sup>16</sup>O, breathing mode calcs., generator coordinate method kernels 2-3858  
<sup>18</sup>O(<sup>16</sup>O, <sup>16</sup>O), microscopic study with generator coordinate method 2-11146

## generator protection see machine protection

## generators, acoustic see acoustic generators

## generators, electric see electric generators

## geochemistry

- see also Earth structure; geology  
 Aleutian island arc magmas, <sup>137</sup>Nd/<sup>144</sup>Nd, <sup>87</sup>Sr/<sup>86</sup>Sr and trace element constraints on petrogenesis 2-42355  
 alkaline igneous rocks origin, anal. in light of data on fluid mantle flow 2-37868

## geochemistry continued

- Amazon near Obidos, marine cyclic salts flux, precipitation and surface water anal. 2-32545  
 Amitsoq gneisses, W. Greenland, trace elements metamorphic differentiation rel. to Lu-Hf dating 2-14421  
 Andean lavas (Peru), O, Sr, Nd, Pb isotope and trace element variations 2-52758  
 Antarctic Circumpolar Current, <sup>210</sup>Pb and <sup>226</sup>Ra var. with depth and location 2-18467  
 aquifer in Lincolnshire, England, chemistry of <sup>234</sup>U/<sup>238</sup>U ratios 2-52879  
 aquifers of Florida and Texas, S isotope ratios in dissolved sulphide 2-28110  
 Archaean crust (3800 Myr) in E India, Sm-Nd data rel. to early mantle differentiation 2-6348  
 Archaean gabbro-anorthosite complex at Tessiuyakh Bay, Labrador, tectonic setting, rock chemistry and metamorphism 2-37860  
 Athabasca Oil Sands area, shallow groundwater chemistry vars. 2-37895  
 S Atlantic, equatorial tropical zone surface layer petroleum aggregates 2-6401  
 Atlantic Ocean, equatorial, carbonate system components distrib. and variability 2-10083  
 mid Atlantic Ridge, basalt compositional variation 2-52779  
 basalt glasses from Mid-Atlantic Ridge (29°N to 73°N), first-order major element var. 2-32515  
 biostratigraphy of Pleistocene marine cores for ocean palaeotemperatures 2-37847  
 borehole Rn data, fast Fourier analysis, seismicity correl. 2-22912  
 NEBrazil, Mesozoic magmatism from K-Ar ages and Sr isotope ratios 2-9974  
 calc-alkaline granite batholiths of Sierra Nevada and Peninsular Ranges, California, Nd and Sr isotopic study 2-42359  
 Caledonian plutonic intrusions in Britain, geochemical props. rel. to origin 2-38381  
 Colorado Plateau province, USA, REE geochem. of garnet ilherzolite 2-52760  
 deep continental crust, fluid evolution and graphite genesis 2-37809  
 Coso volcanic field, California, Pleistocene high-silica rhyolites 2-42288  
 DSDP basaltic glasses, microscale chemical effects of low temp. alteration 2-32516  
 earthquake prediction in China, geochemical methods 2-32427  
 East Pacific Rise basalts and sulphides, Pb and Sr isotope ratios 2-18395  
 East Pacific Rise deposits and hydrothermal waters, <sup>87</sup>Sr/<sup>86</sup>Sr ratio 2-18468  
 evolution of mantle, rel. to isotope composition of mantle rocks 2-52755  
 garnet two-mica granites in Ruby Mountains, Nevada, petrogenesis 2-42364  
 Geodynamics Program, conf., July 1980, Paris, France 2-42786  
 granite, S-type, phase relationships with H<sub>2</sub>O to 35 kbar, results for muscovite granite 2-42360  
 granite (I-type), phase relationships for granite with various H<sub>2</sub>O contents 2-42351  
 graphitic sulphide-rich schists from Maine, petrology, desulphidation during prograde regional metamorphism 2-37857  
 Greenland Ice Sheet, no correl. between nitrate concs. and supernova 2-37901  
 groundwater, Rn content and chemistry rel. to seismicity in S. California 2-22911  
 hydrothermal activity, submarine, off N Baja California, evolution and isotope geochemistry 2-37899  
 hydrothermal circulation on East Pacific Rise at latit. 21°N, rel. to isotopic comp. and origin of S deposits 2-37846  
 hydrothermally alteration of mid-ocean ridge rocks 2-52762  
 Iapetus Ocean seawater, estimate of Nd isotopic comp. from ca. 490 Ma metalliferous sediments 2-37891  
 Iceland, <sup>230</sup>Th-<sup>238</sup>U disequilibrium in historical lavas 2-37792  
 Iceland, hydrothermal Sr isotopes and seawater contamination 2-52880  
 SW Japan batholith, mineralogy and magma genesis 2-42301  
 Juan de Fuca Ridge, NE Pacific, tectonic activity and geochem. 2-52811  
 Kalka layered basic intrusion, central Australia, Nd-Sr isotopic evidence for extreme crustal contamination 2-37861  
 Kane Fracture Zone, basalt compositional variation 2-52779  
 Ketetahi Hot Springs, New Zealand, phys. and chem. survey 2-37822  
 Lachlan Fold Belt, Australia, identification of 3 volcanic suites 2-42295  
 lamprophyre petrogenesis (of potash-rich basic lamprophyres) 2-52763  
 large scale tests, potential for geochemical expts. 2-32666  
 Lewisian gneiss geochemistry and Archaean crustal development models 2-14422  
 magma chamber subjected to influx of new magma, fluid dynamic behaviour 2-52765  
 magma melt segregation from partially molten source regions, role of melt density and source region size 2-22952  
 upper mantle, Pt and Pd minerals in ilherzolite xenoliths 2-37864  
 mantle chemical evolution, rel. to hotspots and basalts trace elements conc. patterns 2-10002  
 mantle geochem. fractionation processes 2-47851  
 mantle isotopic structure explained by mixing histories of magma reservoirs 2-52754  
 mantle melt segregation, implications of fine-scale isotopic heterogeneity in sub-Atlantic mantle 2-37808  
 W Mexico, geologic history of igneous rocks of Sierra Madre Occidental 2-42299  
 mid-ocean ridge hydrothermal systems, sulphate chemistry 2-52759  
 mineral spring in fault zone, gas bubble emission, Ar/He ratio as earthquake precursor 2-6334  
 minerals and rocks geochemical process kinetics, review (book) 2-3340  
 New England Batholith, E Australia, geochemical vars. in time and space 2-42361  
 New York Bight, <sup>234</sup>Th and <sup>228</sup>Th removal rates 2-6400  
 New York Bight, natural radionuclides removal time and mechanism 2-18439  
 nitrates determ. in sea and fresh water, improved reduction column method 2-6468  
 obsidian hydration, appl. to dating of volcanic events 2-14435  
 ocean chemistry, role of crustal processes of Mid-Ocean Ridge 2-10039  
 ocean crust alteration and water transport from pore water O isotopic comp. 2-42348  
 ocean crust basalt alteration pattern from site 396B, DSDP, correl. with rock chemistry 2-42356  
 oceanic basalts of W Atlantic Ocean, geochemistry rel. to construction processes at Cretaceous ridge axis 2-22968



**geochemistry continued**

- oceanic basalts of W Atlantic Ocean, magma fractionation rel. to eruptive chronology 2-22967  
 olivine to spinel cryst. struct. transition at high-pressure 2-14462  
 E Pacific Rise,  $^3\text{He}$  in hydrothermal vent plume 2-32543  
 phonolithic lavas, lherzolite bearing, geochemistry and evolution 2-22978  
 Pikes Peak batholith, Colorado, USA, thermogravitational diffusion in Precambrian batholith 2-42300  
 Pilbara Block, W.Australia, REE geochem., isotopes and crust evolution 2-14423  
 plagioclase, crystal growth model rel. to oscillatory compositional zoning 2-32518  
 Precambrian crust, fractionation and cratonisation rel. to Earth tectonic evolution 2-10032  
 o-pyroxene, Fe-rich, geochrometry, reaction reversal expts. and geological implications 2-37858  
 o-pyroxenes, cation disordering rate obs. 2-35446  
 Qorqut granite complex (Late Archaean), SW Greenland, struct. and comp. rel. to origin 2-42366  
 radioelements, concs. in deep profile through Precambrian basement of Vredefort structure 2-42304  
 radioisotopes in Laurentian Great Lakes, concs. of  $^{239,240}\text{Pu}$ ,  $^{137}\text{Cs}$  and  $^{90}\text{Sr}$  in 1973 and (1976) 2-9698  
 rare earth metals, partitioning between sanidine and coexisting volcanic glass 2-42286  
 Roccamonfina volcano Italy, xenoliths in pyroclastic deposits 2-52764  
 rock glacier, talus-derived, drainage systems chemistry rel. to internal struct. 2-37893  
 rock sample chem. anal. method, for gases released during heating 2-52942  
 Samail ophiolite, Oman, isotope systematics of abducted oceanic crust 2-3001  
 seawater, Cd, Cu and Pb determ. 2-18588  
 seawater total alkalinity, exact definition and procedure for estimation of alkalinity and total inorganic C 2-6398  
 sediments anoxic interstitial waters, Fe (II), Mn (II) and sulphide ions meas. techniques 2-52952  
 seismo-geochemical precursors, to earthquakes, mechanisms 2-32428  
 shaskovite, a new supergene mineral ( $\text{Hg}_8\text{Sb}_2\text{O}_{13}$ ) 2-52784  
 siderophile element abundances in upper mantle, evidence for sulphide signature and equil. with core 2-9981  
 Sierra el Virulento, mid-Tertiary ash flow tuffs in Mexico 2-42294  
 Sierra La Primavera, Mexico, geology of rhyolitic volcanic rocks 2-42284  
 silicic magma chambers, compositional gradients rel. to magmatism 2-42285  
 silicic volcanics of Queensland and NSW, Australia 2-42289  
 solute partitioning under continuous cooling conditions, appl. as rock cooling rate indicator 2-32874  
 St. Francois Mountains, Missouri, USA, geochem. of Precambrian volcanics 2-42298  
 St. Francois Mountains, Missouri, USA, geochem. of Proterozoic volcanics 2-42297  
 stable isotope geochemistry (book) 2-3342  
 subducted sediments role in island arc volcanics, Eu admixing 2-10013  
 submarine hot springs, Eu enrichment, redox behaviour 2-47834  
 tholeiites from ocean ridges and continents, Nd, Sr and Pb isotopes 2-52756  
 two-mica granites of NE Nevada, comps. and mineralogy rel. to origin 2-42365  
 Usu volcano, Japan,  $^{13}\text{C}/^{12}\text{C}$  and  $^{87}\text{Sr}/^{86}\text{Sr}$  ratios of volcanic gases and rocks (French) 2-52789  
 volcanic ash beds of western USA, late Cainozoic volcanism 2-42287  
 volcanic rocks from Galapagos spreading centre, minor and trace element geochemistry 2-32514  
 Vourinos ophiolites, N.Greece 2-37798  
 Vulcano Island, volcano seismic activity rel. to aquifer Rn anomalies 2-28034  
 well water, chemical changes rel. to earthquakes 2-22906  
 whole rock U-Pb systems, new interpretive procedure and appl. to Vredefort crustal profile 2-42307  
 Al, concs. in precipitation, streams and shallow groundwater in New Jersey Pine Barrens 2-22680  
 Be content of standard igneous rock reference samples (NIMROC) 2-52767  
 $^7\text{Be}$  in sediments of rivers and coastal regions, use in sedimentation dynamics 2-10184  
 $^{10}\text{Be}$  in continental sediments of Louisiana, USA and Gulf of Mexico 2-37791  
 Cr, ore deposits correl. with type of ophiolite 2-47857  
 $\text{FeS}_2$ , trace element distrib., SIMS obs. (French) 2-6081  
 Ge marine geochemistry 2-14496  
 Mn, hydrothermal, over Juan de Fuca Ridge; contrib. to marine geochemistry 2-18469  
 Na volatilisation from silicate melt spheres, rel. to form. of chondrules 2-10361  
 OCS, atmospheric, ocean hydrolysis rate rel. to tropospheric OCS lifetime 2-18501  
 $^{18}\text{O}$  depletion in igneous intrusions due to groundwater convection 2-32466  
 Pb isotope isochronism systematics, application to planetary-evolution 2-14795  
 T, concs. in natural waters of Ispra area, Italy (Italian) 2-9704  
 U, geochemistry of sediments of Orca Basin, north-west Gulf of Mexico 2-10035  
 U-Pb systematics in fragments of single zircon grain, results from Pikes Peak batholith 2-52841  
 Zr in sediments of central Pacific, Zr trapping in fish debris (French) 2-52818

**geochronology**

- see also radioactive dating  
 Aileu Formation, East Timor, age and tectonic significance of deform. and metamorphism 2-32509  
 SW Alaska, age and origin of hybrid granodiorites intruding accretionary prism 2-42363  
 alkaline acidic complexes of Kahuzi and Biega in Zaire, tectonic significance (French) 2-6354  
 Amitsoq gneisses, West Greenland, Lu-Hf total-rock age 2-14421  
 apatite and zircon, fission track dating 2-6460  
 apatite fission track dating by isothermal plateau method 2-6464

**geochronology continued**

- Arctic Basin, detailed aeromag. investigation rel. to plate tectonic development 2-22888  
 Arctic Ocean, Icelandic region crust, age map from mag. anomalies obs. 2-9998  
 N Asia, Pliocene and Early Pleistocene climatic changes 2-52924  
 atmosphere  $^{14}\text{C}$  activity, long term vars. and relation to geophysical and astrophysical phenomena 2-47948  
 atmosphere  $\text{CO}_2$  concentration during past 40000 yr, results from ice core sample meas. 2-37958  
 atmosphere cosmogenic  $^{14}\text{C}$  content, secular non-random vars. during last 8000 yrs 2-37922  
 W. Australia, Archaean age of Kambalda and Kanowna greenstones 2-28047  
 Australian-Antarctic depression, struct. and tectonic origin 2-47848  
 biotite mica, track registration props.,  $\alpha$ -recoil dating method prospect 2-6465  
 NEBrazil, Mesozoic magmatism from K-Ar ages and Sr isotope ratios 2-9974  
 British Columbia, early Cenozoic resetting of K-Ar dates and geothermal history in N Okanagan area 2-14417  
 British Tertiary igneous complex, date of dyke emplacement in Skye 2-47797  
 Brunhes palaeomagnetic events, revised age estimates leading to correl. between geomag. and Earth eccentricity 2-37755  
 Central Srednogie Alpine intrusions, K-Ar age determ. 2-6366  
 E.China Sea,  $^{14}\text{C}$  chronology of continental shelf and eustatic movement 2-9997  
 Cordillera Darwin, Chile, orogenic events timing and isotopic ages 2-18408  
 Coso volcanic field, California, Pleistocene high-silica rhyolites 2-42288  
 deep-sea basalts, U distrib. and age pattern, fission-track anal. 2-6345  
 Dover Fault, tectonic boundary between Gander and Avalon Zones of NE Newfoundland Appalachians, age and origin 2-42280  
 Egypt, alkaline ring complexes in SE Desert, emplacement ages 2-3002  
 E Elburz Mountains (Iran), K-Ar dating rel. to plate tectonics 2-14431  
 Enisei Ridge region, Siberia, age of Upper Precambrian deposits 2-52785  
 fission track dating, solid state track detectors appls. 2-19871  
 fission track dating, track age uncertainty evaluation 2-6461  
 fission track dating methods 2-6459  
 fission track dating procedures for zeolite 2-28237  
 fission-track ages and their geological interpretation 2-6344  
 fission-track dating in opaque and other SSNTD, technique applicability 2-6466  
 fission-track dating method, pot. evaluation for geothermal energy in Hohi area 2-6467  
 fluvio-glacial deposits, Deux-Alpes, France, palynological study and radio-carbon dating (French) 2-14498  
 Galapagos axial mag. anomaly, evidence for Emperor event in Brunhes 2-37756  
 geomagnetic secular variation in SE Australia, 10000 yr record from three volcanic maars 2-9927  
 Gorringer Bank of N.Atlantic, age of alkaline volcanism 2-52761  
 Greenland Ice Sheet, core dating rel. to correl. between nitrate concs. and supernovae 2-37901  
 groundwater  $^{14}\text{C}$  dating in confined aquifers, implications of aquitard diffusion 2-23036  
 Gulf of Oman, heat flow and age 2-37795  
 Hawaiian hotspot, Cenozoic latitudinal shift and implications for true polar wander 2-14440  
 Helikian magmatism, Labrador, geology and geochronology 2-14416  
 Himalayas of Pakistan, uplift history deduced from fission track ages 2-52806  
 E India, 3800 million-year-old crust detect. rel. to early mantle differentiation 2-6348  
 Ipswichian fauna of Victoria Cave, N.England, dating rel. to marine palaeoclimatic record 2-37806  
 KBS Tuff, Koobi Fora Formation,  $^{40}\text{Ar}/^{39}\text{Ar}$  age 2-22941  
 Kerguelen Islands, alkaline volcano-plutonic complexes (French) 2-37816  
 Keweenaw age intrusive rock near Clam Lake, Wisconsin, palaeomagnetism and age 2-32402  
 Kolyvan-Tomsk folded zone and adjacent areas, struct. and chronology of Palaeozoic complex 2-47865  
 Lake Manitoba, Canada, Late Quaternary history 2-14508  
 lava flows of Mont-Dore and Cezallier in France, subrecent age obs. (French) 2-3004  
 Llyn Gwernan, late glacial sediments; stratigraphic resolution and  $^{14}\text{C}$  dating 2-10090  
 marine deposits in Chott el Djerid, S.Tunisia 2-37865  
 marine sediments in N.E. Madagascar, K-Ar age, rel. to Seychelles-Indian-Madagascar block dislocation (French) 2-6363  
 metamorphisms from Broken Hill, N.S.W.,  $^{40}\text{Ar}/^{39}\text{Ar}$  age spectra 2-14420  
 microsyenitic and microdioritic dykes, Badajoz Province, Spain, K-Ar dating (French) 2-42279  
 Mount Everest region, Ar isotope dating of major uplift 2-9994  
 obsidian glass, thermally affected fission tracks, corrections, age plateau method 2-37859  
 oceanic basalts of W Atlantic Ocean, magma fractionation rel. to eruptive chronology 2-22967  
 oceanic crust area rel. to age, causes and tectonic implications 2-52812  
 Okhotsk-Anadyr rift, NE. Asia continental margin rift system, chronology 2-37810  
 SW Okinawa Trough, heat flow and age 2-18397  
 ophiolitic melange on Indus suture zone, Late Cretaceous emplacement 2-14463  
 Ordovician rocks of Siberian platform; nomenclature of Lower to Middle Ordovician boundary deposits 2-47861  
 N Pacific Ocean, lithospheric age dependence of off-ridge volcano production rate 2-18417  
 N Pacific Ocean, Mesozoic tectonics rel. to igneous evolution of Hess Rise 2-22969  
 Palaeocene and Early Eocene, revised mag. polarity time scale and implications for Pacific plate motion 2-27977  
 peridotites under Japan Island arcs, annealing times estimated from roundness of inclusions 2-10043  
 NW Philippine Sea, geological and tectonic history 2-42339  
 Pilbara Block, W.Australia, REE geochem., isotopes and crust evolution 2-14423  
 planet formation and evolution, application of Pb isochronism statistics 2-14795  
 pottery age determination, description of thermolum. techniques 2-52936



**geochronology continued**

- Precambrian perspectives on Earth tectonic evolution 2-10032  
 Precambrian syenite, U-Pb systems and age from fragments of single zircon grain 2-52841  
 pyroclastics, fission track dating of quartz melt inclusions (*French*) 2-28051  
 rare isotope detection with tandem accelerators, molecular dissociation method, tandem accelerator appl. 2-43125  
 Ruby Mountains, Nevada, ages and petrogenesis of garnet two-mica granites 2-42364  
 Samail ophiolite, Oman, isotope systematics of abducted oceanic crust 2-3001  
 sand dune dating by new thermoluminescence technique 2-48033  
 Scourian gneisses of Lewisian complex, Scotland, mineral assemblages dating and cooling 2-52840  
 Shikoku Basin (of S.Japan), geological and tectonic history 2-42339  
 Siberia, chronology of Precambrian rift-like structures and metallogenic significance 2-14430  
 Sierra Nevada, California, petrology and geochronology of metamorphosed volcanic rocks and volcanic neck 2-42302  
 slates and limestones and schists from Nehou, Cotenin in France, ages derived from microfossils (*French*) 2-9975  
 Snake River Plain, Idaho, basalt lava flows, evidence for Emperor reversed polarity event 2-37757  
 Trinity peridotite, N California, petrology and petrogenesis 2-52780  
 tuffs and volcanic ashes, fission track dating 2-6462  
 Vancouver Is. palaeoclimate and Late Pleistocene chronology 2-52753  
 volcanic ash beds of western USA, late Cainozoic volcanism 2-42287  
 volcanic events, obsidian hydration dating hydration dating 2-14435  
 volcanic glass, size correction and plateau age meas. by fission track method 2-10206  
 volcano, Cerro del Monagrillo in Spain, radiometric age and correl. with Neogene sediments of Hellin basin (*French*) 2-6351  
 Vredefort, geochronology of deep profile through Archaean basement rel. to early crustal evolution 2-42306  
 Vredefort crusted section, appl. of new interpretive procedure for whole rock U-Pb systems 2-42307  
 Vredefort dome, time lapse between overturning by Pretoria group quartzites and shatter cones form. 2-42368  
 Vredefort ring, evidence for separate shock metamorphism events in collar 2-42367  
 Wadi Shwas volcanics, Saudi Arabia, age 2-9977  
 Weddell Sea, sedimentological evidence for late Wisconsin glaciation 2-18475  
 Late Wisconsinan glaciation, models for northern Maine and adjacent Canada 2-14507  
 zircons, natural, trace element distrib., PIXE meas., proton microprobe dating 2-48018  
<sup>14</sup>C activity, natural vars. on prolonged time scale rel. to solar activity 2-47827  
 K-Ar dating method for rocks, using Ar isotope dilution technique (*French*) 2-10180  
<sup>210</sup>Pb chronology using ionisation chamber and Si detector 2-17936  
<sup>230</sup>Th and <sup>231</sup>Pa radioactive dating method for marine phosphorites 2-52940

**geodesy**

- see also gravity  
 African geodetic database 2-52703  
 N. Atlantic Ocean, variability of dynamic topography west of Mid-Atlantic Ridge between 30° and 55°N (*French*) 2-6368  
 atmosphere refraction, effects of abnormal phenomena on geodetic meas. 2-6436  
 atmosphere refraction effects on geodetic meas., computation using meteorological meas. 2-6305  
 atmospheric refraction coeffs., numerical filtering 2-6433  
 atmospheric refraction errors, statistical estimation of influence of environment on results of obs. 2-6306  
 S. Australia, free-air geoid, zone effects 2-37727  
 boundary value problems of physical geodesy, recent advances 2-18361  
 Cactus accelerometer results, air drag and radiation pressure effects (*French*) 2-9906  
 S. California, crust strain accumulation, 1973-80 period 2-32465  
 S. California uplift, accuracy of geodetic measurements 2-2987  
 data management, conf. Copenhagen, Denmark (May 1981) 2-48400  
 DBMS requirement 2-52700  
 Earth crust, deform. of near-surface layers from geodetic meas. 2-6343  
 Earth crust, obs. of short-period elastic deform. of near-surface layers from geodetic data 2-10019  
 Earth crust deformation measurement, laser interferometer appl. 2-52957  
 Earth indifferent equilibrium shape (IES-geoid), effects of gravity slippage 2-6298  
 Earth tides, solid tidal tilting obs. in West Australian goldfields 2-9910  
 Earth-figure perturbations in lunar theory, computation 2-42621  
 EM wave propagation in troposphere, geodetic appls. of precursors 2-3080  
 fault displacement field, determination from geodetic data 2-14613  
 geodetic-astronomical observations with Danjon astrolabe, Potsdam, effects of local temp. field disturbances (*German*) 2-9907  
 geodynamics research, appl. of space technology 2-10209  
 geoid anomaly in the vicinity of subduction zones (SW Pacific) 2-14376  
 geoid undulation computation with modified Stokes' function 2-32390  
 geoid undulation computations, ellipsoidal corrections using cap gravity anomalies 2-37737  
 geoid undulations, migration, effect on sea level oscils. throughout geological history 2-18465  
 German Geodetic Research Inst. database 2-52712  
 W. Germany, gravity base net for 1976 AD 2-37732  
 graphic interactive computer systems for geodetic data and mapping 2-52710  
 gravimetric and magnetometric problems solved by approximation-interpolation method (*Russian*) 2-47788  
 gravity, representation for local and global field 2-18358  
 gravity field of Earth, sampling function and finite element method representation 2-18360  
 gravity field of Earth, stability of various representations 2-18359  
 gravity survey errors, procedure for reduction of 'drift' 2-37733  
 gravity temporal variations, described using Stokes' formula (*German*) 2-37743  
 gravity tides, obs. at Alice Springs, Australia, dispersive effects 2-42253

**geodesy continued**

- N. Greenland, geoid prediction using collocation and digital terrain models 2-6296  
 Gulf of Tonkin and vicinity geology and Bouguer gravity anomalies 2-47828  
 IGN geodetic database, feasibility study 2-52701  
 Indian geodetic datum, initial values using gravity data 2-37730  
 Indian subcontinent, partial geoidal parameter determ. 2-27972  
 inertial technology, conference, Banff, Canada (June 1981) 2-23363  
 internal flattening, Earth model with self-consistent representation 2-37789  
 inverse singularity problem 2-9909  
 Iran geodetic network 2-9917  
 Izu Peninsula, Japan, geodetic survey, 1979-80 obs. (*Japanese*) 2-18376  
 Izu-Hanto-Toho-Ōki, 1980 earthquake pre- and co-seismic crust tilt obs. 2-18375  
 Lake Bonneville, Utah, USA, old shoreline levels and crust isostatic compensation 2-52810  
 land information systems, geodetic data 2-52713  
 large volume geodetic and geophysical data management 2-52704  
 laser ranging by satellites (*French*) 2-10177  
 leveling arrays used as multicomponent tiltmeters 2-42474  
 levelings, repeated measurements, comparison with gravity obs., geodynamic aspects 2-32386  
 levelling refraction research, present state and future possibilities 2-3092  
 levelling survey, correction of atmos. refraction errors 2-37731  
 likelihood ratio formula for random fields with application to physical geodesy 2-52696  
 Matsushiro Seismological observatory site (Japan), crustal movement obs. (*Japanese*) 2-10007  
 measurement techniques allowing meas. of plate tectonic motion and Earth interior props. (*Chinese*) 2-48016  
 Mendocino fracture zone in E Pacific, thermal model and geoid anomalies 2-52776  
 Mexican geodetic database 2-52702  
 microcomputers for data acquisition and preprocessing 2-52708  
 National Geodetic Survey Database, horizontal observations validation 2-52706  
 National Geodetic Survey database query system, design and development 2-52705  
 National Land Survey of Sweden, geodetic and cartographic data handling 2-52714  
 NAVSTAR, appl. of Global Positioning System geodetic receiver to geodesy and geophysics 2-6518  
 New Hebrides Island Arc, slow deformation, use of leveling arrays as multicomponent tiltmeters 2-42474  
 Nigerian geodetic database establishment 2-52715  
 NNSS application (*Japanese*) 2-27970  
 North America Datum, redesign of software 2-52711  
 observations, variance and covariance estimation 2-37726  
 oceanic tides, studies via geodetic satellite orbit perturbations 2-6369  
 Ordnance Survey of Great Britain (OSGB) scientific network, satellite and terrestrial data combination 2-6297  
 SW Pacific, geoid anomalies due to mantle subduction zones 2-14376  
 San Andreas fault, California, fault system, slip rate obs. 2-28055  
 San Francisco Bay region faults, crustal deformation, plate motion, geodetic obs. 2-37837  
 satellite altimetry, calibration validation for GEOS 3 altimeter 2-23205  
 satellite geodesy, appls. of problem of many fixed centres 2-42584  
 satellite geodesy, refraction calc. in model atmospheres rel. to range corrections 2-10167  
 Society Islands lithosphere flexure from island uplift, bathymetry and geoid height obs. 2-6339  
 space geodetic experiments, use of micro-accelerometers 2-6437  
 subducted lithosphere regional compensation, effect on geoid, gravity and topography 2-10014  
 surveying network, datum definition by free net adjustment 2-37729  
 Switzerland, gravity survey results and uplift of Alps 2-37826  
 synthetic aperture radar, spacetime for planetary geodesy and navigation 2-42594  
 Tangshan earthquake (1976) previous fault movements and stress accumulation, geodetic data anal. 2-52729  
 tectonic movement measurement by interferometry (points several km apart) 2-37975  
 terrestrial refraction, elimination from geodetic meas. using multiwave or single wave methods 2-3094  
 three dimensional geodesy, observational equations in geometry and gravity space (*German*) 2-9916  
 Tokai district, Central Honshu, Japan, Quaternary and geodetically measured crustal movements 2-32483  
 trenches in oceanic crust, geoid anomalies 2-47845  
 triangulation system using airborne stellar directions and laser distances (*German*) 2-37744  
 trigonometrical levelling traverses, investigation of atmospheric refr. 2-9918  
 upper mantle parameters derived from geoid anomalies of cooling lithosphere 2-32460  
 Vancouver Island, B.C., Canada, precise gravity survey results 2-14377  
 vertical refraction effect in networks, models 2-37728  
 Victoria, Mexico, strain and displacement meas. for earthquake of 1980 June 9 2-32432  
 VLBI appl., coherence limits 2-28227  
 VLBI delay and delay rate accuracy 2-14787  
 Washington State, USA, crustal strain obs. and tectonic implications 2-9986
- geodetics** see geodesy  
**geolectricity** see terrestrial electricity  
**geography**  
 N. Asia, palaeogeographic history rel. to Pliocene and Early Pleistocene climatic changes 2-52924  
 boundary lines, computer-aided determ. (*German*) 2-42256  
 parabolic trough solar collector design, geography and weather influences, analysis 2-6174  
 Phanerozoic land-sea and albedo variations as climate controls 2-52921  
 seismic shakeability maps, anal. for example of Kirgizia and Uzbekistan 2-9958
- geology**  
 see also geomorphology; rocks; topography (Earth)  
 Agulhas Plateau, SW. Indian Ocean, crust struct. and geology 2-9985



## geology continued

- Aileu Formation, East Timor, deformation and metamorphism and tectonic significance 2-32509  
 N. Alaska continental shelf, sediment and crust acoustic props. 2-3007  
 Algeria, meteorite impact and impact-like structures 2-52849  
 allochthonous terranes of formation, continental accretion of oceanic plateaus 2-10031  
 Almklovdalen peridotite massif, Norway, struct. anal. 2-10004  
 NW Anatolia, suture zone of Tethys Ocean (*French*) 2-22933  
 Andean cordillera, igneous history of region around 46°S 2-28049  
 Andean lavas (Peru), O, Sr, Nd, Pb isotope and trace element variations 2-52758  
 N Apennine shear zone, strain anal. from deformed marble breccias 2-52838  
 Archaean gabbro-anorthositic complex at Tessiuyah Bay, Labrador, tectonic setting, rock chemistry and metamorphism 2-37860  
 Archaean mantle heterogeneity, deduced from W. Australian rocks 2-28047  
 Arnold, Missouri, groundwater contamination by sanitary landfill leachate in carbonate terrain 2-9703  
 NE Asia, struct. of continental margin rift system (Okhotsk-Anadyr rift) 2-37810  
 astronomical cause for terrestrial events with 50 to 100 Myr periodicity 2-52847  
 N Atlantic mid-ocean ridge, struct., geology and spreading 2-10028  
 mid Atlantic Ridge, basalt compositional variation 2-52779  
 N. Atlantic ridge basalt rocks, seawater hydrothermal alteration 2-9993  
 Atlantic/USA continental margin, development and geology 2-42315  
 Australasian continental margin Cretaceous sediments rel. to eustatic sea levels 2-42314  
 SE Australia, palaeomagnetic overprinting and thermal and geologic history 2-6314  
 W Australian goldfields, geological tilt-strain coupling rel. to solid tidal tilting obs. 2-9910  
 Australian mining industry, conf., July 1981, Sydney, Australia 2-33237  
 Baikal Rift Zone, effects of regional metamorphism on earthquakes depths distrib. 2-14413  
 Baikal Rift Zone, relative displacement of tectonic plates 2-14445  
 Bara Basin, Sudan, hydrogeological characts. from gravity exploration 2-37898  
 Barbados Ridge, geology and tectonic origin 2-42320  
 Barberton Mountain Land, S. Africa, geology indicating rifted Archaean continental margin 2-47837  
 basalt platforms tectonic positions rel. to petroleum content of ancient platforms 2-52816  
 batholiths, obs. of seismic refls. from basal contacts 2-42303  
 Benue Trough, Nigeria, gravity interpretation of struct. and tectonics 2-14465  
 Betic Cordilleras, SE Spain, Alpine tectonics and diapir struts. 2-22930  
 British Columbia, early Cenozoic resetting of K-Ar dates and geothermal history in N Okanagan area 2-14417  
 British Isles, Caledonian plutonism 2-38381  
 British Tertiary igneous complex, date of dyke emplacement in Skye 2-47797  
 Cretaceous sea-levels from Australian marine sediments 2-42314  
 carbonate platforms of passive continental margins 2-47838  
 NW Caribbean, isotope study of Quaternary alkaline volcanic events 2-52757  
 Caucasus region tectonics, implication for evolution of Tethys Ocean 2-52796  
 Celtic Sea tectonics and Variscan Front location 2-22958  
 Central Srednogie Alpine intrusions, K-Ar age determ. 2-6366  
 Chile, Late Palaeozoic stratigraphy, struct. and tectonic framework 2-32453  
 Colorado Plateau province, USA, REE geochem. of garnet lherzolite 2-52760  
 Columbia River Basalt flows, correl. using palaeosecular mag. field data 2-52725  
 Columbia River fault zone, Shushwap and Monashee complexes, tectonic boundary 2-14439  
 conference in honour of Sir Edward Bullard, Jan. 1980, Scripps Institution of Oceanog., USA 2-48394  
 continental margins, conf., July 1980, Paris, France 2-38362  
 continental suture zones, review 2-10000  
 Corsica, Alpine obduction, related transverse lineation and large scale struct. 2-52837  
 Coso volcanic field, California, Pleistocene high-silica rhyolites 2-42288  
 late Cretaceous lithostratigraphy, Catalan Pyrenees, Spain, contrib. of heavy minerals (*French*) 2-37823  
 Cretaceous/Tertiary boundary 2-37869  
 W Cyprus, evidence for Upper Cretaceous transform fault metamorphism due to heating 2-18409  
 data segmentation, using Kolmogorov-Smirnov test, in FORTRAN 2-42354  
 dating of rocks containing zeolites, fission track method 2-28237  
 Dead Sea Rift, plate tectonics rel. to sedimentary rocks 2-37840  
 Dead Sea-Jordan rift zone, crust struct., mag. and gravity study 2-37813  
 Detour Zn-Cu-Ag deposit, NW Quebec, airborne EM discovery 2-28071  
 diapirism in northern Tunisia 2-22929  
 Dover Fault, tectonic boundary between Gander and Avalon Zones of NE Newfoundland Appalachians, age and origin 2-42280  
 dykes formed of carbonatite, showing comb-layering struct. 2-28048  
 East Mesa geothermal field, California, plausible two-dimensional vertical model 2-42308  
 Egypt, alkaline ring complexes in SE Desert, emplacement ages 2-3002  
 Elberton granite pluton, in Georgia Inner Piedmont, USA, cooling history 2-28046  
 E Elburz Mountains (Iran), K-Ar dating rel. to plate tectonics 2-14431  
 Enisei Ridge region, Siberia, age of Upper Precambrian deposits 2-52785  
 fission-track ages and their geological interpretation 2-6344  
 external French Alps, thrust tectonics and crustal shortening from seismic cross-section 2-14447  
 Fukuoka Prefecture, Japan, active fault outcrops (*Japanese*) 2-32455  
 galactic cyclicity of geological processes (*Russian*) 2-52851  
 gems minerals, conf. July 1980, Orleans, France (*French, English*) 2-42773  
 geodynamic evaluation of external Hellenids, Southern Peloponnissus, Greece (*French*) 2-18406  
 geological materials, sequential scanning ICP emission spectrosc. anal. 2-18583  
 geothermometry of basic intrusions by  $^{40}\text{Ar}/^{39}\text{Ar}$  dating method 2-6341

## geology continued

- glacial sediments of N. Maine and adjacent Canada, stratigraphy rel. to Late Wisconsinian glaciation 2-14507  
 Goddard pendant, Sierra Nevada, California, gravity model and structural implications 2-32512  
 Gore Mountain, Warren County, New York, parting in giant garnets as indicator of late brittle deformation 2-18424  
 granite (I-type), phase relationships for granite with various H<sub>2</sub>O contents 2-42351  
 granulite facies metamorphism, fluid evolution and graphite genesis in deep continental crust 2-37809  
 graphite deposit, Bavaria, resistivity sounding with different electrode arrays 2-9922  
 graphitic sulphide-rich schists from Maine, petrology, desulphidation during prograde regional metamorphism 2-37857  
 N Greenland Fold Belt, structural geology 2-22931  
 Guevgueli ophiolitic complex, evidence for magmatic differentiation processes (*French*) 2-42278  
 Gulf of Mexico basin, model of early struct. evolution 2-42334  
 Gulf of Tonkin and vicinity geology and Bouguer gravity anomalies 2-47828  
 Helikian magmatism, Labrador, geology and geochronology 2-14416  
 Hess Rise, N Pacific Ocean, bathymetry, surface sediment distrib. and environment of deposition 2-42349  
 High Ruzizi volcanic series, (South Kivu, Zaire) (*French*) 2-6336  
 hybrid granulitoides intruding accretionary prism in SW Alaska, comps. rel. to origin 2-42363  
 hydrothermally alteration of mid-ocean ridge rocks 2-52762  
 Iceland,  $^{230}\text{Th}$ - $^{238}\text{U}$  disequilibria in historical lavas 2-37792  
 igneous rocks granite and rhyolite 2-42283  
 S. India and Sri Lanka, elec. cond. struct. rel. to tectonic history 2-42262  
 India-Eurasia collision, Tibetan evidence 2-22942  
 native iron found at Disko Island, Greenland, petrogenesis 2-52778  
 Japan, natural radioactivity map 2-47826  
 SW Japan batholith, mineralogy and magma genesis 2-42301  
 Juan de Fuca Ridge, NE Pacific, tectonic activity and geochem. 2-52811  
 Kalka Instrusion, Giles Complex, Australia, magma dynamics, Sr isotopic resolution 2-22980  
 Kalka layered basic intrusion, central Australia, Nd-Sr isotopic evidence for extreme crustal contamination 2-37861  
 Kane Fracture Zone, basalt compositional variation 2-52779  
 KBS Tuff, Koobi Fora Formation,  $^{40}\text{Ar}/^{39}\text{Ar}$  age 2-22941  
 Kolyvan-Tomsk folded zone and adjacent areas, struct. according to geologic and geophysical data 2-47865  
 Krakatoa, 1883 eruption mechanism deduced from deposits 2-37820  
 Lachlan Fold Belt, Australia, identification of 3 volcanic suites 2-42295  
 lamprophyre petrogenesis (of potash-rich basic lamprophyres) 2-52763  
 Libyan Desert Glass, meteorite impact material composition 2-52850  
 Long Valley caldera, California, attenuation of P and S waves in magma chamber 2-32472  
 magma chamber subjected to influx of new magma, fluid dynamic behaviour 2-52765  
 Magog-Mt. Orford ophiolitic sequence, Quebec, palaeomagnetic study 2-47801  
 Manaslu leucogranite (Nepal), Himalayan collision signature, model for genesis and emplacement 2-42362  
 manganese nodules, mineralogy of N. Pacific samples 2-52820  
 Maritime Alps (S.E. France), Permian sediments deformation 2-14458  
 Mesozoic-Cainozoic palaeocontinental maps based on palaeomag. data 2-52809  
 metal ore deposits on ocean floor (*Japanese*) 2-3009  
 meteorite crater at Ries, Germany, chondrules, spherules, etc. 2-37870  
 W Mexico, geologic history of igneous rocks of Sierra Madre Occidental 2-42299  
 mid-ocean ridge hydrothermal systems, sulphate chemistry 2-52759  
 Middle America Trench, accretion, underplating and subduction history 2-42341  
 mid-ocean ridge faults, serpentinization of mantle due to seawater circulation 2-52808  
 mineralogy of silicates, conf. July 1980, Orleans, France (*French, English*) 2-42773  
 Morocco, Hercynian dislocated platform of West-African Shield (*French*) 2-22932  
 Namibia Pan African mobile belts junction structural history 2-18415  
 Neda Fe ore (Late Ordovician) from Wisconsin, Iowa and Illinois, remanence and palaeomagnetism 2-18363  
 net projections generation, 2D, Cartesian coordinate construction, in FORTRAN 2-42353  
 NE Nevada, origin of two-mica granites 2-42365  
 E New England, palaeomg. investigations in igneous metamorphic rock units 2-14381  
 New England Batholith, E Australia, geochemical vars. in time and space 2-42361  
 North Anatolian fault zone, opposed shear senses inferred from neotectonic mesofracture systems 2-52836  
 oceanic carbonatite volcano on Santiago, Cape Verde Islands, geology, mineralogy and geochemistry 2-37819  
 upper oceanic crust, preferred crack orientation rel. to seismic anisotropy obs. 2-18382  
 oil and gas reservoirs, estimation using seismic PP to SS refl. coeff. ratio 2-9947  
 ophiolite origin and Cr ore content rel. to tectonic origin 2-47857  
 orebody exploration by geochemical methods 2-38004  
 circum-Pacific ring, types of oceanic palaeocrust and features of comp., form. and development 2-47862  
 Palaeozoic rocks of SE West Siberian platform, appl. of common-depth-point sounding 2-47864  
 Papua New Guinea, formation of rhyolite suites 2-42290  
 passive continental margins, sediments, subsidence and sea levels 2-42313  
 Patagonian plateau, igneous history of region around 46°S 2-28049  
 Pelagonian zone, Greece, tectonic history 2-14438  
 peridotite with rounded mineral inclusions, kinetics of rounding process 2-10043  
 peridotites under Japan Island arcs, annealing times estimated from roundness of inclusions 2-10043  
 petrogenesis of oceanic andesites 2-42291  
 petrology of magmatic liquid inclusions, conf. July 1980, Orleans, France (*French, English*) 2-42773  
 NW Philippine Sea, geological and tectonic history 2-42339  
 Pikes Peak batholith, Colorado, USA, thermogravitational diffusion in Precambrian batholith 2-42300



**geology continued**

- Pilbara Block, Australia, geology indicating rifted Archaean continental margin 2-47837  
 Pilbara Block, W.Australia, REE geochem., isotopes and crust evolution 2-14423  
 pluton emplacement into deforming crust, strain patterns 2-22928  
 Precambrian geological record, perspectives on Earth tectonic evolution 2-10032  
 prospecting for ore-bodies, geophysical techniques 2-38006  
 prospecting for ore-bodies in Australia, applicability of geological techniques 2-38005  
 o-pyroxene, Fe-rich, geochrometry, reaction reversal expts. and geological implications 2-37858  
 o-pyroxenes, cation disordering rate obs. 2-35446  
 Qorot granite complex (Late Archaean), SW Greenland, struct. and comp. rel. to origin 2-42366  
 Quebec Appalachians 2-47836  
 radioactive waste disposal in rhyolite glass, hydrothermal leaching study 2-32164  
 radioactive waste disposal safety assessment, geological processes probability anal. 2-24300  
 radioactive waste migration through fissured rock with micropores, model 2-9759  
 rare earth metals, partitioning between sanidine and coexisting volcanic glass 2-42286  
 remote sensing, reduction of satellite magnetometer data for geological studies 2-32673  
 Roccamonfina volcano Italy, xenoliths in pyroclastic deposits 2-52764  
 rock folding mechanism, anal. of most important aspects 2-52842  
 rock sample chem. anal. method, for gases released during heating 2-52942  
 rock strain rates 2-52832  
 Roosevelt Hot Springs area, Utah, USA, underlying body of low seismic vel. 2-28041  
 Ruby Mountains, Nevada, petrogenesis of garnet two-mica granites 2-42364  
 Samail ophiolite, Oman, isotope systematics of abducted oceanic crust 2-3001  
 W Scotland, continental margin struct. and sediments 2-52772  
 seafloor topography, obs. of GLORIA side scan sonar 2-52933  
 sediment (marine) acoustic props., meas. system for core samples 2-18601  
 Sevan ophiolite zone of Minor Caucasus, ultrabasic massifs (*Russian*) 2-47829  
 Shikoku Basin (of S.Japan), geological and tectonic history 2-42339  
 W. Siberia, Palaeozoic deposits study by combined use of refr. and refl. seismic waves 2-37867  
 Siberia, Precambrian rift-like structures and metallogenic significance 2-14430  
 W Siberian plate, study of Palaeozoic deposits by seismic exploration 2-14412  
 Siberian platform, nomenclature of Lower to Middle Ordovician boundary deposits 2-47861  
 NW Siberian platform, traprock magmatism rel. to regional hydrothermal activity 2-52843  
 Sierra el Virulento, mid-Tertiary ash flow tuffs in Mexico 2-42294  
 Sierra La Primavera, Mexico, geology of rhyolitic volcanic rocks 2-42284  
 Sierra Morena, S.Spain, strain in emplaced pluton 2-22928  
 Sierra Nevada, California, pathology and geochronology of metamorphosed volcanic rocks and volcanic neck 2-42302  
 Sierra Nevada, California, USA, crust struct. from seismic refr. obs. 2-28039  
 silicic magma chambers, compositional gradients rel. to magmatism 2-42285  
 silicic volcanics of Queensland and NSW, Australia 2-42289  
 slates and limestones and schists from Nehou, Cotenin in France, ages derived from microfossils (*French*) 2-9975  
 Socorro, New Mexico, evidence for upper crustal intrusion from three-dimensional vel. anomalies 2-32433  
 Socorro, New Mexico, magma bodies geometry and physical props. from seismic refl. profiles 2-32513  
 Southern Ocean abyssal plains, formation and sediment origin 2-22970  
 St. Bees Sandstone, relation between mag. components and diagenetic features in reddened Triassic alluvium 2-10041  
 St. Francois Mountains, Missouri, USA, geochem. of Precambrian volcanics 2-42298  
 St. Francois Mountains, Missouri, USA, geochem. of Proterozoic volcanics 2-42297  
 St. Francois Mountains, Missouri, USA, geology of Precambrian calderas 2-42296  
 subduction complex in Franciscan assemblage, N.California 2-42321  
 sulphide deposit, Andhra Pradesh, multifrequency Turam meas. 2-27976  
 sulphide ores, disseminated, containing elongated mineralisation, induced polarisation 2-27975  
 sutural folding, as one of characteristic forms of deformational process 2-47863  
 Tertiary rocks of Taoyuan and Hsinchu area, Taiwan, struct. from gravity and mag. studies (*Chinese*) 2-22977  
 thermal inertia mapping of geological materials, effect of surface temp. vars. with elevation 2-32521  
 tholeiites from ocean ridges and continents, Nd, Sr and Pb isotopes 2-52756  
 Tokyo base rock, seismic waves from Yumenoshima explosions 2-32420  
 Transbaikalia, ore deposits rel. to gravity anomalies, systems investigation 2-37742  
 Transverse Ranges, California, geology rel. to subduction of Murray transform 2-28057  
 Trinity peridotite, N California, petrology and petrogenesis 2-52780  
 N Tunisia, diapirs 2-22929  
 Twin Peaks, Utah, USA, gravity and thermal model of Tertiary volcanics 2-42292  
 Twin Peaks, volcanic complex, Utah, USA (late Cainozoic) 2-42293  
 NW.United States, extent of Late Eocene-Early Oligocene unconformity 2-22945  
 Venetian Alps (Italy), magneto- and biostratigraphy of Cretaceous-Eocene rocks 2-37793  
 N. Vietnam, Mesozoic volcanic rock complexes comps. rel. to geological and tectonic conditions 2-52792  
 vitrinite, light reflectance as function of metamorphic history 2-32490  
 volcanic ash beds of western USA, late Cainozoic volcanism 2-42287

**geology continued**

- Vologograd area, oil and gas deposits rel. to gravimetric data (*Russian*) 2-47830  
 Vredfort, geochronology of deep profile through Archaean basement rel. to early crustal evolution 2-42306  
 Vredfort dome, occurrence and orientation of shatter cones in Pretoria Group, quartzites, impact origin precluded 2-42368  
 Vredfort ring collar, shock metamorphism and evidence for internal shock sources 2-42367  
 Vredfort structure, implications of radioelement profile for continental heat flow 2-42305  
 Vredfort structure, radioelement concs. in deep profile through Precambrian basement 2-42304  
 World geologic map produced by the Commission for Geological Map of the World 2-32648  
 Zhamanshin crater, USSR, origin of irghizites and zhamanshinites 2-14464  
 Be content of standard igneous rock reference samples (NIMROC) 2-52767  
 MSiO<sub>4</sub> (M=Hf, Zr, U, Th), phase transitions and densities for mantle conditions 2-52822  
<sup>18</sup>O depletion in igneous intrusions due to groundwater convection 2-32466  
 SiO<sub>2</sub>, high-pres. phase transition at 36 GPa 2-50843  
<sup>230</sup>Th and <sup>231</sup>Pa radioactive dating method for marine phosphorites 2-52940  
 U content in geological objects, using <sup>239</sup>Np high resolution gamma spectrometry 2-32679
- geomagnetic storms** *see magnetic storms*
- geomagnetic variations**  
*see also micropulsations*  
 aa index, variable correl. with cosmic ray neutrons 2-28300  
 AE-index, relation with D<sub>st</sub>-index during geomag. storms 2-6511  
 AL index diurnal variation, influencing processes 2-32404  
 Alay earthquake, Uzbekistan, precursory changes to Nov. 1978 quake 2-32425  
 amplitude distribution rel. to K-index 2-14388  
 antipodal indices, used as study of solar cycle (*French*) 2-10377  
 E Asia continental field, secular changes (*Chinese*) 2-47792  
 auroral zone, ground mag. field obs. rel. to ionosphere current flow during substorm recovery 2-32742  
 auroral zone geomagnetic activity, solar wind control 2-18633  
 Birkeland currents distant mag. field effects determ. 2-32768  
 Early Cambrian polar wander, data from Normandy, France 2-32399  
 Carlisle earthquake, England, geomagnetic precursors to 1979 event 2-47816  
 D<sub>st</sub>-index, relation with AE-index during geomag. storms 2-6511  
 D<sub>st</sub>-index, variation rel. to interplanetary mag. field 2-6508  
 disturbances caused by ring current over S.America during IGY-IGC 2-23186  
 diurnal variation, correl. with positive equatorial D<sub>st</sub>-index 2-23187  
 Egyptian, adobe bricks as record of past 3000 yr mag. field, climate link 2-2992  
 equatorial field during morning counter electrojet, solar flare effect 2-42258  
 Central Europe, geomag. variations rel. to crustal elec. cond. (*Russian*) 2-47804  
 field spherical anal. based on archaeomagnetic data 2-52718  
 Gondwanaland apparent polar wander paths and tectonics 2-52804  
 H-component variations, rel. to equatorial counter electrojet events and low-latitude E-drifts changes 2-23167  
 Holocene lake sediments, Krakenes lake, Norway 2-32407  
 Iceland, magnitude of field during Plocene 2-32396  
 IMF sector structure behaviour from South Pole data, 1959 to 1970 AD 2-10293  
 India, Palk Strait region, crust-mantle boundary currents and geomag. anomalies 2-27978  
 S.India and Sri Lanka, elec. cond. struct. rel. to tectonic history 2-42262  
 Indian region abnormal quiet day Sq(Z) ranges due to Sq current system movement 2-27981  
 international geomagnetic reference field for 1980, IAGA recommendations 2-32398  
 interplanetary mag. field B<sub>z</sub> component correl. to geomagnetic activity variations 2-32709  
 interplanetary magnetic field polarity effects on F<sub>2</sub>-layer via geomag. field 2-48078  
 ionosphere, auroral, disturbed mag. conditions rel. to meas. of long delayed radio echoes 2-32718  
 ionosphere midlatitude MF and HF absorption winter anomaly, geomag. control 2-32726  
 Izu Peninsula, Japan, 1980 earthquake and geomag. changes (*Japanese*) 2-18378  
 Jurassic/Cretaceous mixed polarity interval from Hungarian rocks 2-52717  
 K<sub>p</sub>-index, correl. with Pc 5 pulsations amplitude at Nagarampalem (17°43'N, 83°18'E) 2-3161  
 K<sub>p</sub>-index, rel. to statistics of electrons of low-energy geosynchronous plasma environment 2-14726  
 K<sub>p</sub>-index, rel. to statistics of ions of low-energy geosynchronous plasma environment 2-14727  
 Kargapolovo geomag. excursion 40000 years B.P., palaeomag. of River Ob sediments 2-9929  
 Km index rel. to solar wind electric field 2-38031  
 lunar daily variation, determ. from short data series, differencing method 2-6452  
 M-index, appl. to ultralong-range prediction of solar activity 2-48203  
 measurement of local temporal variations using a proton magnetometer array 2-48024  
 Mesozoic Africa, polar wander path reconstruction 2-27982  
 MHD waves in magnetosphere, effect on threshold wave field for initiating VLF nonlinear growth and emissions 2-6510  
 Nigerian dip equator, daily vars. rel. to anomalous conductivity 2-42263  
 ocean wave magnetic induction fields in coastal regions 2-47800  
 palaeomagnetic excursions, aborted reversals and transitional fields 2-18364  
 paleointensity determination, physical preconditions for method of gradual mag. polarity reversal 2-6313  
 Permocarboneous vars., spectral analysis of glacial rhythmite data 2-22885  
 polar wander path, method for best-fit smooth curve 2-10207



**geomagnetic variations continued**

- polarity changes explained by self-exciting dynamo theory 2-14390  
 polarity reversals, analytical two-dimensional model for pole-on magnetosphere 2-14804  
 Late Precambrian Keweenaw asymmetric reversals 2-22891  
 prediction, use of disappearing solar filaments 2-18645  
 Proterozoic palaeomag. of W.Greenland, pole positions and tectonics 2-42261  
 reversal of dipole field, models of transient fields 2-52721  
 $S_0$  and  $L$ , spherical harmonic anal. of 1964-1965 data 2-14391  
 sea floor geomagnetic variations, meas. via ocean bottom proton magnetometer 2-32676  
 secular variation, rel. to atmospheric  $^{14}\text{C}$  activity and solar activity 2-47948  
 secular variation, rel. to inviscid, frozen flux vel. components at top of Earth's core 2-18399  
 secular variation and core mag. signals 2-42259  
 secular variation in SE Australia, 10000-yr record from three volcanic maars 2-9927  
 secular variation jump, 1969-1970, planetary nature (*French*) 2-37745  
 secular variations, multipole anal. of global geomag. field for different time intervals 2-6312  
 seismomagnetic effect, underground mag. dipole representation 2-37778  
 solar eclipse effects 2-6307  
 South China Sea, gravity and mag. anomalies 2-37741  
 spectral analysis of geomagnetic time series, method of max. entropy 2-32664  
 spectral analytic estimation methods 2-37985  
 spectrum of temporal variations, survey 2-2989  
 subducting lithospheric slab, temp. distrib. rel. to time varying EM field perturbations 2-37838  
 substorm currents in ionosphere and magnetosphere, deduction from ground based geomag. obs. 2-3136  
 Late Tertiary reversals seen in Iceland flood basalts 2-47796  
 Transcarpathian seisomagnetic trough, geomag. local time variations (*Russian*) 2-47805  
 E United States, review of geomag. var. meas. and implications for continental tectonics 2-14382  
 Vietnam, July 1978 obs. of field anomalies and variations 2-32400  
 Yunnan Province, China, anal. of geomag. effect of solar eclipse (1980 February 16) (*Chinese*) 2-3142

**geomagnetism**

- see also *geomagnetic variations; magnetic storms*  
 anomalies, computation of spectrum of potential field due to three-dimensional homogeneous bodies (*Chinese*) 2-3097  
 anomalies due to dikes, interpretation by complex gradient method 2-32660  
 anomalies due to vertical rectangular prisms, theory 2-47793  
 anomalies interpretation, unsolved plane problems in mathematical theory 2-6453  
 anomaly modeling by Gauss-Legendre quadrature integration (spherical coords.) 2-9914  
 arc magmatic rocks recording palaeomag. fields and banded structure 2-32394  
 Arctic Basin, detailed aeromag. investigation rel. to plate tectonic development 2-22888  
 Arctic Ocean, Icelandic region crust, age map from mag. anomalies obs. 2-9998  
 artificial satellite, magnetised, rot. in Earth's mag. field 2-28317  
 E Asia continental geomag. anomalous field (*Chinese*) 2-47792  
 Azumason Volcano, Japan, distrib. of elec. resistivity and geomag. field components in Zyododaira area 2-32393  
 Baikal Rift Zone, magnetotelluric sounding rel. to earthquakes depths and seismic controlling factors 2-14413  
 Birkeland currents on large scale, seasonal depend. from mag. field data 2-38021  
 Brazil magnetic field anomaly comparison with Jovian Great Red Spot (*Russian*) 2-6563  
 Brunhes palaeomagnetic events, revised age estimates leading to correl. between geomag. and Earth eccentricity 2-37755  
 Caledonian plutonic intrusions in Britain, aeromag. props. rel. to origin 2-38381  
 Canada, 1980 magnetic declination mapping, SHE appl. (*French English*) 2-37758  
 Canada, Yukon and Mackenzie Delta region, geomag. depth sounding profile 2-14378  
 Carpathian Arc Bend, resist. and struct. model from magnetotelluric sounding (*Rumanian*) 2-32408  
 Caucasus mountains, geomagnetic anomalies rel. to crust elec. cond. (*Russian*) 2-47803  
 inner core rotation due to geomag. dynamo effects 2-52724  
 cosmic ray photons, pair prod. in Earth's mag. field 2-28304  
 Dead Sea-Jordan rift zone, crust struct., mag. and gravity study 2-37813  
 declination control of equatorial F-region dynamo electric field development and spread-F 2-42532  
 Detour Zn-Cu-Ag deposit, NW Quebec, airborne EM discovery 2-28071  
 dipole field, seasonal and daily displacements of magnetically conjugate points 2-14685  
 dynamo, core dipole moment behaviour and buoyancy prod. 2-37759  
 dynamo effect, mechanism 2-22881  
 dynamo theory, interaction of mag. fields and convection 2-52723  
 dynamo theory, mag. field generation with a homogeneous conductivity distrib. 2-32401  
 dynamo theory and mean field MHD (book) 2-48415  
 dynamo theory of magnetic field 2-52722  
 Earth surface mag. field, rel. to vel. components at top of Earth's core 2-18399  
 electrojet, storm time surface mag. field, ionosphere/magnetosphere current contrib. 2-6504  
 EM field of elec. dipole over two-layer Earth 2-9920  
 EM fields in World Ocean 2-14386  
 EM induction, E-polarisation boundary conditions above laterally non-uniform conductors 2-9921  
 EM induction, numerical methods for establishing solns. to inverse problem 2-32403  
 EM induction, transient response of induction logging tool in borehole 2-28218  
 EM induction sounding, method of reducing terrain relief effects from VLF-EM data 2-37754  
 EM probing, appl. to injected fluid flow monitoring 2-10192

**geomagnetism continued**

- EM response of spheroid directly beneath loop, effect of host rock induced currents 2-37751  
 EM sounding, multifrequency Turam meas. over sulphide deposit 2-27976  
 field generation with inhomogeneous conductivity distrib. 2-9928  
 field strength below horizontal magnetic dipole at surface 2-14392  
 field synthesizing algorithm, in FORTRAN 2-42257  
 N.Fiji Basin, tectonic rot. suggested by geomag. obs. 2-52807  
 Galapagos axial mag. anomaly, evidence for Emperor event in Brunhes 2-37756  
 groundwater, EM prospecting in Precambrian terrain in Upper Volta 2-48023  
 E. Gulf of Aden continental margin, struct. and early development 2-32459  
 H component rel. to decametric oblique sounding signal fading in ionosphere 2-14656  
 high-frequency signal propagation and scattering in guiding channels 2-18366  
 S.India and Sri Lanka, elec. cond. struct. rel. to tectonic history 2-42262  
 induced magnetic field at Earth surface, equatorial electrojet effect 2-22882  
 induction logging results, effect of invaded zone 2-22886  
 intensity determination, thermal techniques errors and resolution 2-52951  
 international geomagnetic reference field for 1980, IAGA recommendations 2-32398  
 ionosphere, axial magnetic field influence on radiowave scatt. (*Russian*) 2-23184  
 ionosphere total electron content, geomag. conjugate effects, correl. study 2-14669  
 Kolyvan-Tomsk folded zone and adjacent areas, mag. sounding rel. to struct. 2-47865  
 Kuril-Kamchatka trench, magnetic inhomogeneity 2-22892  
 low-energy electron magnetometer for terrestrial and aerial mag. field meas. 2-3595  
 low-latitude asymmetric disturbances, Birkeland current explanation 2-48101  
 magnetosphere, effects of interplanetary mag. field east-west component on tail lobe fields 2-32750  
 outer magnetosphere, energetic electrons trapping near mag. field high-latitude minima 2-6505  
 magnetosphere, mag. field distrib. due to solar wind MHD plasma flow 2-3147  
 magnetosphere, mag. field line configuration for pole-on model 2-14804  
 magnetosphere, magnetically open, asymmetry effects due to interplanetary mag. field X-component 2-3163  
 magnetosphere, nature of field-aligned elec. fields on auroral lines of force 2-6493  
 magnetosphere Alfvén wave resonances in a realistic magnetospheric mag. field geometry 2-18647  
 magnetosphere polar region open flux area geometry depend. on interplanetary mag. field 2-3162  
 magnetospheric satellite, MAGSAT, control system for magnetometer boom 2-52949  
 magnetotelluric inversion, analytic one-dimensional scheme 2-9925  
 magnetotelluric inversion, new technique for layered Earth interpretation 2-27974  
 central Maldivé Ridge (Eight Degree Passage), gravity and geomag. studies (*Russian*) 2-10036  
 marine anomalies, ocean floor gabbro stable NRM effect 2-14459  
 marine currents, assoc. geomag. field disturbances 2-6311  
 Mont Dore volcanic massif, structure and geothermal implications from aeromagnetic data (*French*) 2-22927  
 multipole analysis of global geomag. field for different time intervals, rel. to secular vars. 2-6312  
 Natal Valley of SW.Indian Ocean, lineations of opening of S.Atlantic 2-52814  
 North Magnetic Pole location history 2-25  
 ocean, anal. of EM technique for investigation of currents (*Russian*) 2-10071  
 ocean wave magnetic induction fields in coastal regions 2-47800  
 ocean-coast model 2-6309  
 oceanic crust, anomalies of intermediate wavelength (65-1500 km) 2-52719  
 oceanic crust, intermediate wavelength anomalies 2-52720  
 oceanic EM induction problems, numerical soln., iterative scheme 2-10193  
 SE Pacific, Early Cenozoic plate tectonic history 2-52801  
 S Pacific Ocean, marine mag. anomalies rel. to uncertainties of finite plate rotations 2-32484  
 polar winter field, interplanetary mag. field sector effects 2-27980  
 positive equatorial  $D_{st}$ -index, correl. with geomag. field diurnal var. 2-23187  
 potential field computation, piecewise continuous basis function approach 2-28217  
 prospecting developments (1975-1980) 2-37978  
 reversal of dipole field, models of transient fields 2-52721  
 Rosemary Bank Seamount, Rockall Trough, Atlantic Ocean, magnetisation anal. 2-9978  
 satellite magnetometer data, examination of reduction for geological studies 2-32673  
 sea waves in electrically stratified seas, EM field 2-10169  
 spatial spectrum of main geomag. field, and spectrum of temporal vars. 2-2989  
 subauroral latitude geomag. sounding data, interpretation and source effects 2-9924  
 superconducting magnetometers used in Fe-ore prospecting 2-52727  
 surface impedance tensor of lower boundary of ionosphere for arbitrary geomagnetic field (*German*) 2-28267  
 Taiwan, gravity and mag. studies of Taoyuan and Hsinchu area (*Chinese*) 2-22977  
 telluric-magnetotelluric method in two and three dimensions 2-37980  
 time-derivative magnetometers to be installed on spacecraft, development (*Japanese*) 2-3183  
 topside ionosphere, height variations in auroral zone electrodynamics 2-32720  
 two-dimensional problems solved by approximation-interpolation method (*Russian*) 2-47788  
 Ukrainian Shield, Moho discontinuity model (*Russian*) 2-47831  
 upper atmosphere, mag. field meas. via ring core magnetometer on K-9M-72 rocket (*Japanese*) 2-3182



**geomagnetism continued**

- Vietnam, July 1978 obs. of field anomalies and variations 2-32400
- wind wave crests, magnetic induction 2-14387
- Xizang (Tibet) plateau, mag. anomalies and obduction of Indian Plate (*Chinese*) 2-47842

**geometrical optics**

- analytical solutions with diffraction approx. 2-24937
- applicability limits 2-11641
- baffle design, surface scatt. theories BRDF meas. 2-11778
- baffles, first-order design 2-11780
- boundaries of applicability of geom. optics and related problems 2-49671
- Bravais system, general paraxial anal. 2-25094
- cascaded apertures to reduce far IR diff. problems, geometrical diff. theory 2-28881
- cascaded apertures to reduce far IR diff. problems, geometrical diff. theory expt. confirmation 2-28882
- caustics with anomalous phase shifts 2-29782
- conical light beam generation for smoke-chamber demonstrations 2-28636
- conical reflector parameters and telescope receiver irradi. coeff. calc. for total-radiation pyrometer 2-1002
- diffraction of arbitrary form, generalised ray-tracing 2-11802
- electromagnetic radiation concentration, thermodynamic limitations 2-50067
- electron cyclotron heating of a dense Tokamak plasma 2-50420
- EM wave propag. in nonlinear media; nonlinear integro-differential equation (*Russian*) 2-20379
- EM wave refraction at curved dielectric interface, geometrical optics soln. 2-39533
- fibre, gradient-index, tapered, image props. (*Chinese*) 2-39742
- fibres, graded-index, mode coupling due to microbending 2-20415
- flat lens doublets for parallel ray focusing 2-25093
- Foucault optical focusing patterns in investigations into optical systems, evaluation of errors (*Russian*) 2-44428
- gas lens, ray trajectory eqn., analytic soln. method 2-34874
- Hamilton eqns. of geomorphic optics for media with moderate absorption 2-39566
- holographic concave grating, automatic correction based on ray tracing 2-20401
- hydrogel contact lens wet cells, optical power calc., ray-tracing procedures 2-32299
- image quality evaluation by contrast calcs. 2-44211
- information processing, appl. of optical ang. discriminator 2-11651
- lens meridional ray tracing, refr. index meas. at 6328 Å 2-997
- lens system, paraxial, impulse response, operator algebraic derivation 2-11777
- Lie algebra theory of geometrical optics and optical aberrations 2-49658
- light beam calculation, optical control calc. by means of spear coords. (*Hungarian*) 2-11631
- light propagation through inhomogeneous media with radial refr. index. appl. to laser beam thermal blooming 2-34664
- matrix technique of Gaussian optics near an arbitrary ray 2-44195
- miniaturisation limits in optics (*German*) 2-44434
- multiport theory applied to optical design and analysis 2-49869
- nonconvex obstacles, theory 2-4450
- out-of-field radiation estimation, simplified technique 2-11779
- parallel light beams, demonstrations 2-48470
- passive optical system, axially symm. aberration-free, three dimens. problem of apodisation 2-44208
- penumbral diffraction fields in inhomogeneous media 2-39572
- polarization effect, use in light modulators and deflectors 2-16096
- rastrer line size, reproducible space depth in integrated photography (*Russian*) 2-25099
- ray path calc. on programmable TI 58/59 calculator (*Czech*) 2-11776
- reflected caustics method for mode III stress intensity factor evaluation in cracked plates 2-1144
- reflector mappings in computer plane, uniqueness theorem, Monge-Ampere eqn. 2-4444
- relativistic hot magnetised plasma, relativistic lagrangian and adiabatic invariant (*Russian*) 2-20922
- Schmidt type satellite telescope, stray light calcs. without using large computers 2-14771
- stress field analysis using caustics 2-25330
- symmetrical system, caustic surface and illuminance computation, optical aberration functions 2-15960
- unstable optical resonator, mode restriction characts. (*Chinese*) 2-44346
- unstable resonator with mirror misfigures, near field phase calc. 2-940
- wave field near nonsingular caustic, short-wavelength asymptotic behaviour 2-29758
- wave packets, localised pulses, dual-ray theory 2-18914
- X-ray optics, use of nonspherical mirrors 2-6935

**geometry**

- see also space time configurations*
- alignment of randomly distributed objects, geometrical anal. rel. to significance of quasar triplets 2-53379
- atmospheric mechanics, space and space-time geometries 2-23064
- complex, application to supergravity (*Russian*) 2-10695
- curved phase space, geometric quantisation 2-48533
- differential geometric quantisation appl. 2-42906
- differential geometric quantization scheme generalizing those of Kostant-Souriau and Czyz 2-42905
- differential geometrical methods in mathematical physics, conf., Clausthal, Germany (July 1978) 2-48401
- differential geometry and supersymmetric nonlinear  $\sigma$ -model 2-43217
- gauge theories, configuration space Riemannian geometry 2-6939
- general relativity, symmetry in geometrodynamics 2-28726
- general vector field representations of local Heisenberg systems 2-42907
- geometrization of unified fields 2-15096
- Geometroelectrodynamics, topological confinement 2-38860
- gravitational theory 2-10691
- jet bundles and Weyl geometry 2-42916
- motion of strings, embedding problem and soliton equations 2-10618
- non-Euclidean and non-Desarguesian geometries, models for hadron structure 2-48495
- quantum cosmology and geometric quantization 2-14955
- Regge calculus and obs., formalism and appl. to radial motion and circular orbits 2-10660
- role in contemporary physics 2-15010

**geometry continued**

- space, time and their pseudo-euclidian geometry, gravitational field eqns. 2-18977
  - space-time G structures prolongations 2-28722
- geomorphology**
- see also topography (Earth)*
  - Algeria, meteorite impact and impact-like structures 2-52849
  - Australasia, coastal regimes tropical cyclone activity and sedimentation, erosion and flooding 2-14526
  - Barents Sea, geomorphological signs of ice sheet movements 2-47911
  - beach cusp formation, theory 2-3008
  - bergschund crevasses in Alberta, Canada 2-3037
  - Bolivian Andes, variation in type and annual distrib. of precipitations (*French*) 2-14511
  - earthflow occurrence dependence on porefluid salinity 2-52845
  - graphitic sulphide-rich schists from Maine, petrology, desulphidation during prograde regional metamorphism 2-37857
  - Great Sand Sea, Egypt, crater feature in sand dunes 2-14468
  - ground surface deformation due to groundwater level var. (*Chinese*) 2-32520
  - Gulf of Corinth, earthquake fault displacement deduced from coastline changes 2-52731
  - Haute Savoie, France, glacial overdeepenings, Quaternary deposits (*French*) 2-14499
  - Hutuo River terraces in Taihang Canyon section, Quaternary tectonic movement (*Chinese*) 2-6359
  - SE Ireland gravel beach, overwash processes 2-28061
  - lakeshore ice action, Schefferville, Canada examination 2-37896
  - limestone solutional erosion, prediction from rainfall and runoff data 2-52878
  - New Zealand, geomorphic mapping from Landsat-3 Return Beam Vidicon (RBV) imagery 2-18428
  - ocean shore wave generated sand ripples, size and shape 2-14455
  - Patiala, India, effects of geomorphology on echo sounding of lower atmosphere 2-23135
  - Pilot Mountains, Nevada, Late Mesozoic thrusting kinematics 2-3005
  - pimple mound genesis, archaeological evidence 2-18431
  - ring structures classification and origin (*Russian*) 2-3003
  - river channel morphology, depend. on size of drainage area 2-52877
  - river cross-section asymmetry of channels, quantitative indices 2-52876
  - river drainage network structure, effects of regional geomorphology on diameter-magnitude relation 2-23035
  - river meanders, bend theory, linear development 2-32547
  - sand dune dating by new thermoluminescence technique 2-48033
  - sand dunes of SE Ghana rel. to Holocene climate 2-28194
  - seismoglyphs of Altai-Sayan Mts., USSR used to study past earthquakes 2-52748
  - shoreface maintenance by wave orbital currents and mean flow, obs. from Long Island coast 2-28062
  - slope movement in permafrost area, Garry Island, N.W.T. 2-52846
  - surface runoff nonlinearity, geomorphological approach 2-10097
  - tectonics and landforms, book 2-38380
  - Victoria, Australia, coasts and continental shelf, conf., Melbourne, Australia (October 1979) 2-14970
  - Victorian coastal geomorphology 2-18420
  - Victorian coastline evolution 2-18421
- geons** *see gravitons*
- geophones** *see seismometers*
- geophysical aspects of cosmic rays**
- albedo neutron flux, solar diurnal anisotropy meas. 2-53029
  - diurnal variations in cosmic ray flux, rel. to upper atmosphere temp. diurnal amplitude 2-10279
  - Forbush decreases effect on ionosphere, VLF EM wave propag. and radio noise anal. 2-32782
  - gamma-radiation, atmospheric flux meas. between 0.4 MeV and 7 MeV at balloon altitudes 2-10289
  - low energy particles, ions, in ionosphere 2-52977
  - muon spectrum at sea level, derivation from primary cosmic ray energy spectrum 2-53032
  - nonrandom component study in Southern Hemisphere 2-28303
  - thunderstorm freq. correl. 2-32783
  - $^{14}\text{C}$  production, short-term vars., 1909-1952, rel. to 11-year cosmic ray vars. 2-48120
  - $^{14}\text{C}$  tree ring record since 300 AD, evidence for solar changes 2-18750
- geophysical equipment**
- see also atmospheric measuring apparatus; data loggers; geophysical prospecting; geophysical techniques; meteorological instruments; oceanographic equipment; seismometers*
  - AF demagnetizer for palaeomagnetic studies with unrotated specimens 2-10199
  - airborne thermal viewing system, appl. to study of Earth resources 2-52958
  - airgun firing data acquisition system (*Japanese*) 2-32650
  - biaxial apparatus, low stress, potential for geophysical expts. in large scale tests 2-32495
  - borehole logging, meas. of flow with laser velocimeter (*Chinese*) 2-48015
  - DC plasma echelle emission spectrometer, data processing 2-2745
  - discrete velocity filter design for seismic data processing 2-37987
  - down-bore hole ion-controlled diodes, temp. depend. of gate-controlled portion 2-37986
  - earthquake seismograph development, modern history 2-6445
  - earthquake seismograph development, modern history 2-10186
  - electrical conductivity meas. instrumentation for rock studies 2-48022
  - electrical resistivity arrays, focused, theoretical and practical expts. 2-10191
  - fluxgate magnetometer with two 6-81 Mo permalloy core sensor 2-18587
  - gamma-ray survey instrument with large-vol. plastic detector 2-28221
  - geodetic receiver with NAVSTAR Global Positioning System, appl. to geodesy and geophysics 2-6518
  - geological materials, sequential scanning ICP emission spectrosc. anal. 2-18583
  - GEOS 3 altimeter, calibration validation 2-23205
  - Gough-Reitzel magnetometer, second generation instruments 2-10200
  - Heidelberg proton microprobe using 6 MV tandem Van de Graaff accelerator 2-14044
  - induction logging tool in borehole, transient response 2-28218
  - IR/visible ratioing radiometer, reflectance and radiance meas. 2-23146
  - laser altimeters, anal. of target signatures 2-48010
  - laser interferometer for study of deformations of Earth's crust, Earth tides meas. 2-52957



**geophysical equipment continued**

- low-energy electron magnetometer for terrestrial and aerial mag. field meas. 2-3595
- magnetometers, time-derivative, to be installed on spacecraft, development (*Japanese*) 2-3183
- micro-accelerometers, appl. for space geodetic expts. 2-6437
- mosaic staring sensor, balloon-borne, appl. to Earth-atmosphere IR back-ground meas. 2-48055
- neutron activation analysis system for sample or well logging chem. anal. 2-52937
- ocean bottom proton magnetometer, design and testing 2-32676
- particle induced X-ray emission anal. appl. to analytical problems 2-14029
- photometric detector, with automatic display regulator (*Russian*) 2-6442
- prospecting, transient methods, shape of generating pulses (*Russian*) 2-37995
- proton precession magnetometer, based on principle of NMR for geomagnetic field meas. (*Chinese*) 2-37976
- radio-echo sounder, phase-sensitive, appl. to detailed study of glacier beds 2-10085
- radiometers, principles and appl. (*German*) 2-52953
- radiometers for Earth surface reflectance meas., use of two radiometers for irradiance changes correction 2-18602
- reduction column for nitrates determ. in freshwater 2-6468
- resistivity profiles, electrode arrays, appl. of different arrays over graphite deposit 2-9922
- rock sample chem. anal. method, for gases released during heating 2-52942
- sediment (marine) acoustic attenuation, meas. with quantitative seismic profiler 2-28219
- seismic detectors, selection guidelines for high-resolution appls. 2-32690
- seismic mantle wave recording system 2-23124
- seismic measurement systems, optimisation from error for inverse modelling schemes 2-28028
- seismic sources, appl. of new distributed charge 2-28027
- seismic vibrator, amplitude and phase response 2-10190
- seismic wave signal real time data processing system (*Japanese*) 2-18579
- seismic wave source for marine seismic exploration, theoretical model and exptl. results 2-37782
- soil surface props. sensing using vibrator probe with piezoceramic transducer 2-14634
- solar survey instruments, procedures and pitfalls 2-41987
- spinner magnetometer, operation and principle 2-6451
- Stereosat spacecraft line-array camera system, cartographic potential 2-18357
- Système Probatoire d'Observation de la Terre (SPOT) satellite, remote sensing mission 2-18681
- tacheometer, instrument with microprocessor-controlled computer 2-52964
- telemetering equipment for Japanese coseismic terrestrial electricity data system (*Japanese*) 2-10174
- telemetry ocean bottom pressure observation system at depth of 2200 m, appl. to earthquake prediction 2-32678
- tiltmeters, function and prospects for earthquake prediction 2-18590
- triaxial cells, high press. and temp., for rock testing, design and manufacture 2-32669
- upper atmospheric sounding rockets, use of closed-cycle cryogenic pumps 2-43038
- X-ray fluorescence, portable apparatus for minerals exploration (*Chinese*) 2-37977
- zero-method pendulum with electronic control for gravity meas. (*Rumanian*) 2-32687

**geophysical prospecting**

see also *minerals*

- acoustic logging, cylindrical waves in transversely isotropic media 2-16153
- acoustic waves, one-dimensional vel.-inversion 2-15092
- acoustic well logging, direct and spiral waves for sources and receivers of various polarisation and symmetry 2-52742
- airborne geophysical instruments, I/O structure, microinterrupts appl. 2-28252
- Australian mining industry, conf., July 1981, Sydney, Australia 2-33237
- basin struct., telluric current anomaly, modelling with boundary value problem 2-2993
- borehole formation evolution, use of nucl. techniques 2-28240
- borehole logging, meas. of flow with laser velocimeter (*Chinese*) 2-48015
- borehole logging space-time dependence of acoustic waves 2-34957
- borehole mineral anal. by neutron induced  $\gamma$ -ray spectrometry 2-6482
- Brantley damsite, New Mexico, relation of geophysical meas. to hydraulic conductivity 2-37897
- common-depth-point sounding, preliminary subtraction of multiple waves 2-47864
- developments (1975-1980) 2-37978
- dipole EM field over two-layer Earth 2-9920
- dipole-dipole array, resistivity sounding 2-2991
- electric sounding of buried 3-D resistivity struct., calc. method 2-37752
- electric sounding of fissured ground using surface dipole 2-37753
- electrical conductivity profile measurement using the field of an infinite cable 2-9930
- electrical conductivity radial gradient modeling in logging problems 2-52726
- electrical resistivity sounding data interpretation, use of Cole-Cole dispersion 2-10188
- electrical sounding, implications of scale invariance of low-freq. props. of inhomogeneous media 2-3010
- electrical sounding by induced polarisation method, use of Cole-Cole model 2-10189
- electrical sounding by transient method, determination of loose rock thickness (*Russian*) 2-48025
- EM exploration methods used in Hungary for hydrocarbon prospecting (*Hungarian*) 2-23137
- EM induction in 2-D buried perfect conductors, theory 2-9933
- EM induction sounding, method of reducing terrain relief effects from VLF-EM data 2-37754
- EM prospecting in Precambrian terrain in Upper Volta 2-48023
- EM response of spheroid directly beneath loop, effect of host rock induced currents 2-37751
- EM sounding, discovery of Detour Zn-Cu-Ag deposit of NW Quebec by airborne survey 2-28071

**geophysical prospecting continued**

- EM sounding, transient response of induction logging tool in borehole 2-28218
- EM sounding of using horiz. dipole over vertically inhomogeneous ground 2-6448
- exploration, recent developments 2-27580
- gamma-ray survey instrument with large-vol. plastic detector 2-28221
- gamma-ray well logging, theory of  $\gamma$ -ray spectra within rock 2-28222
- geomagnetic anomaly mapping using superconducting magnetometers 2-52727
- geomagnetic sounding of cond. anomalies at sub-auroral latitudes 2-9924
- geothermal prospecting in New Zealand, use of Rn ground obs. 2-10205
- gravity, anomalous fields interpretation by optimisation method 2-22879
- gravity sounding, approximate method for direct three-dimensional problem 2-9912
- gravity sounding, determ. of number and parameters of isolated sources 2-14631
- gravity surface and subsurface meas., direct inversion by least squares method 2-32659
- gravity survey errors, procedure for reduction of 'drift' 2-37733
- gravity surveys, near topographic correction method 2-3104
- groundwater exploration in Sudan, via combination of elec. resistivity, seismic refr. and gravity meas. 2-28108
- groundwater in Bara Basin, Sudan, appl. of gravity exploration 2-37898
- high-frequency signal propagation and scattering in guiding channels 2-18366
- induced polarisation sounding, theory for disseminated sulphide ores containing elongated mineralisation 2-27975
- induction logging results, effect of invaded zone 2-22886
- inverse problem for gravity, hybrid algorithm 2-6299
- magnetic anomalies due to dikes, interpretation by complex gradient method 2-32660
- magnetic anomalies due to vertical rectangular prisms, theory 2-47793
- magnetic field strength below horizontal magnetic dipole at surface 2-14392
- magnetite mapping with multicoil airborne, electromagnetic system 2-32661
- magnetotelluric sounding, automatic model for 1-D problem 2-32397
- magnetotelluric sounding, E-polarisation boundary conditions above laterally non-uniform conductors 2-9921
- maritime EM prospecting equipment, composite dipole radiator appl. (*Russian*) 2-37994
- metal ore deposits on ocean floor (*Japanese*) 2-3009
- neutron activation analysis system for sample or well logging chem. anal. 2-52937
- neutron moisture probe, moments method appl. 2-24285
- oil and gas exploration, theoretical stochastic approach for optimal strategy 2-14609
- oil and gas prospecting, physical principles of high-frequency induction log isoparametric sounding 2-48048
- oil and gas reservoirs, estimation using seismic PP to SS refl. coeff. ratio 2-9947
- oil well data analysis computer program (KOALA) 2-28241
- ore-body geophysical exploration techniques used in Australia 2-38006
- ore-body prospecting in Australia, applicability of geological methods 2-38005
- orebody exploration by geochemical methods 2-38004
- ores, U and Th X-ray intensities from PIXE anal. 2-19217
- petroleum exploration, statistical techniques 2-14611
- Powder River basin, Wyoming, First Leo sandstone lenses, assoc. seismic amplitude anomalies 2-32422
- seismic airgun, calibration procedure using hydrophone with flat response procedure 2-37983
- seismic exploration, appl. to study of Palaeozoic deposits of W Siberian plate 2-14412
- seismic exploration, use of industrial explosions 2-52745
- seismic profile from sonic log in borehole, calc. of synthetic profile 2-6446
- seismic profiling using borehole, tube wave noise reduction methods 2-6447
- seismic prospecting, appl. of new distributed charge as seismic source 2-28027
- seismic prospecting, error estimates for inverse modelling schemes using travel times meas. 2-28028
- seismic prospecting data anal., multichannel data-adaptive polarisation filters 2-28220
- seismic refl. sounding, time domain approach to normal incidence inverse problem 2-37774
- seismic reflection data, determ. of three-dimens. vel. information, inverse scatt. data 2-37771
- seismic reflection profiling, data inversion for 3-D vel. struct. 2-9944
- seismic reflection profiling 2-27991
- seismic reflection profiling of sedimentary sequences, theoretical response 2-6318
- seismic reflection sounding, application of hyperbolic 'moveout' filters 2-37773
- seismic reflection sounding, dip limitations on migrated sections 2-28031
- seismic reflection sounding, non-linear estimation of refl. coeffs. 2-37772
- seismic reflection sounding using impulsive SH line source, for density profiles and shear modulus 2-14407
- seismic refraction interpretation, use of generalised reciprocal method 2-32656
- seismic refraction sounding, data inversion by wave eqn. continuation 2-6319
- seismic refraction sounding, inversion of slant stacks 2-32437
- seismic sounding, amplitude and phase response of seismic vibrator 2-10190
- seismic sounding, Kunetz energy relations derivation 2-9946
- seismic sounding, recursive migration in three-dimens. 2-37775
- seismic sounding, recursive predictive deconvolution method 2-28030
- seismic sounding, shover shear-wave generation by vibration orthogonal to polarisation 2-9948
- seismic sounding, small-scale fault parameters estimation from common-depth-point seismograms 2-6327
- seismic sounding for density and vel. profiles, direct Born inversion algorithm 2-9943
- seismic sounding of layered Earth, using torsional vibrator, inverse problem 2-28036
- seismic streamer array, calibration procedure using hydrophone with flat response procedure 2-37983
- seismic vertical profiles attenuation meas. 2-32424



**geophysical prospecting continued**

- seismic wavelet estimation and deconvolution 2-32657
- seismic waves interval velocity estimates, max. uncertainty 2-32423
- seismology, analysis of dispersed surface wave train by wave field transformation 2-6320
- signal processing and modeling, by state-variable models 2-28032
- sulphide deposits in volcanic covered area, prospecting, use of redox chem. remanent magnetisation 2-37982
- telemetry application in China 2-18611
- telluric-magnetotelluric method in two and three dimensions 2-37980
- transient methods, shape of generating pulses (*Russian*) 2-37995
- tunnel resolution investigation using an automated resistivity tank analog 2-47794
- Ukrainian Shield, transient electric sounding obs. (*Russian*) 2-48025
- VLF EM inductive exploration method, interpretation by tilt angle and ellipticity obs. 2-32662
- Volgograd area, oil and gas deposits rel. to gravimetric data (*Russian*) 2-47830
- X-ray fluorescence, portable apparatus for minerals exploration (*Chinese*) 2-37977
- Cr, ore deposits correl. with type of ophiolite 2-47857

**geophysical techniques**

- see also *atmospheric techniques; hydrological techniques; ionospheric techniques; oceanographic techniques*
- acoustic well logging, direct and spiral waves for sources and receivers of various polarisation and symmetry 2-52742
- airship for geosciences monitoring, very large stratosphere solar heated craft 2-6480
- apatite fission track dating by isothermal plateau method 2-6464
- beach sand mineralogy, moisture and grain size from remotely-sensed reflectance 2-48046
- biotite mica, track registration props.,  $\alpha$ -recoil dating method prospect 2-6465
- borehole formation evolution, use of nucl. techniques 2-28240
- borehole logging, meas. of flow with laser velocimeter (*Chinese*) 2-48015
- borehole mineral anal. by neutron induced  $\gamma$ -ray spectrometry 2-6482
- cartography, potential of Stereosat spacecraft line-array camera system 2-18357
- common-depth-point sounding, preliminary subtraction of multiple waves 2-47864
- conductive ore bodies, detect. techniques 2-37751
- crust seismic refl. sounding used to trace surface features to great depths 2-47839
- crustal deformation and block rotation, palaeomagnetic method appl. 2-23134
- database techniques for geodetic data management 2-52704
- dating of rocks containing zeolites, fission track method 2-28237
- differential strain analysis, appl. to characterisation of shock-induced microfractures in rocks 2-22975
- digital signal processing, display enhancement for seismic interpretation 2-18589
- dipole EM field over two-layer Earth representation by uniform asymptotic approx. 2-9920
- distributed cosmic objects, application of technical diagnostics in remote sensing 2-37999
- Earth core velocity components determ. from surface mag. field obs., new methodology 2-18399
- Earth crust, deform. of near-surface layers from geodetic meas. 2-6343
- Earth crust deformation measurement, laser interferometer appl. 2-52957
- Earth holography, appl. to lithospheric studies 2-37780
- Earth-atmosphere IR background radiation, meas. from balloon-borne staring sensor 2-48055
- earthquake cluster location using teleseismic data 2-27995
- earthquake depth resolution in central Asia, by anal. of Rayleigh wave data 2-14404
- earthquake epicentre location 2-23122
- earthquake ground motion anal., numerical simulation 2-2998
- earthquake magnitude determination based on seismic coda envelopes 2-9956
- earthquake parameter evaluation from macroseismic data, using computer method 2-14401
- earthquake precursor seismic activity, time and space scanning technique (*Chinese*) 2-32652
- earthquake prediction, appl. of seismic gap technique to quiet zone near W Nicaragua 2-18384
- earthquake prediction, appl. of telemetry ocean bottom press. obs. system at 2200 m 2-32678
- earthquake prediction, appl. of two-dimensional model of earthquakes clustering 2-52740
- earthquake prediction, characts. of foreshock activity of Izu Peninsula, Japan from 1901 to 1980 2-32415
- earthquake prediction, implications of 1980 earthquake swarm off Izu Peninsula 2-32414
- earthquake prediction, implications of water level changes accompanying fault creep 2-32439
- earthquake prediction, possible effects of Earth tides on seismicity in Taiwan 2-22875
- earthquake prediction, seismicity parameters preceding moderate to major earthquakes 2-32440
- earthquake prediction, tiltmeters function and prospects 2-18590
- earthquake prediction, underground mag. dipole representation of seismomagnetic effect 2-37778
- earthquake prediction, worldwide data on  $^{222}\text{Rn}$  content of groundwater as earthquake precursor 2-32444
- earthquake prediction in China, geochemical methods 2-32427
- earthquake prediction in Japan, probability method 2-32446
- earthquake prediction in Sichuan and Yunnan provinces, use of atm. precipitation (*Chinese*) 2-32412
- earthquake predictions, microseism vars. before and after Tangshan earthquake (1976 July 29) (*Chinese*) 2-2996
- earthquake simulation 2-27985
- earthquake-source parameter determination from long period surface wave data 2-10208
- earthquakes activity deduction from focal region seismographs 2-52748
- earthquakes and nuclear detonations, seismic signature discrimination, appl. of pattern recognition techniques 2-37996
- electric sounding of buried 3-D resistivity struct., calc. method 2-37752
- electrical conductivity profile measurement using the field of an infinite cable 2-9930

**geophysical techniques continued**

- electrical exploration data anal., multichannel data-adaptive polarisation filters 2-28220
- electrical resistivity sounding data interpretation, use of Cole-Cole dispersion 2-10188
- electrical sounding, implications of scale invariance of low-freq. props. of inhomogeneous media 2-3010
- electrical sounding, physical principles of high-frequency induction log isoparametric sounding 2-48048
- electrical sounding by induced polarisation method, use of Cole-Cole model 2-10189
- electrical sounding by transient method, determination of loose rock thickness (*Russian*) 2-48025
- electrical sounding of oceanic crust, using vertical dipole in ocean 2-52946
- electron microprobe analysis of Na in natural and synthetic glasses quantitative methods 2-6072
- EM exploration methods used in Hungary for hydrocarbon prospecting (*Hungarian*) 2-23137
- EM induction in 2-D buried perfect conductors, theory 2-9933
- EM induction sounding, method of reducing terrain relief effects from VLF-EM data 2-37754
- EM induction sounding, numerical methods for establishing solns. to inverse problem 2-32403
- EM probing, appl. to injected fluid flow monitoring 2-10192
- EM sounding, discovery of Detour Zn-Cu-Ag deposit of NW Quebec by airborne survey 2-28071
- EM sounding, multifrequency Turam meas. over sulphide deposit 2-27976
- EM sounding, transient response of induction logging tool in borehole 2-28218
- EM sounding of sea floor layers with horizontal dipole (*Russian*) 2-47802
- EM sounding of using horiz. dipole over vertically inhomogeneous ground 2-6448
- environmental science, remote sensing methods based on molecular absorption (*Italian*) 2-2827
- fault displacement field, determination from geodetic data 2-14613
- fault location by channel wave seismic techniques 2-18610
- Fisher distributions, mean direction discrimination method appl. to palaeomagnetism 2-6449
- fission track dating, track age uncertainty evaluation 2-6461
- fission track dating method, standard error estimation of age 2-48035
- fission track dating methods 2-6459
- fission track method for apatite palaeotemperature determ. 2-6463
- fission-track dating in opaque and other SSNTD, technique applicability 2-6466
- fission-track dating method, pot. evaluation for geothermal energy in Hohi area 2-6467
- fission-track dating of apatite and zircon: an interlaboratory comparison 2-6460
- gamma ray well logging resolution 2-14630
- gamma-ray well logging, theory of  $\gamma$ -ray spectra within rock 2-28222
- geochemical experiments, potential of large scale tests 2-32666
- geochronology, new interpretive procedure for whole rock U-Pb systems applied to Vredefort crustal profile 2-42307
- geodesy, appl. of NAVSTAR Global Positioning System geodetic receiver 2-6518
- geodesy, appl. of statistics to estimation of influence of environment on results of obs. 2-6306
- geodesy, appls. of precursors of EM wave propag. 2-3080
- geodesy, atmospheric refr. investigation in trigonometrical levelling traverses 2-9918
- geodesy, collocation and digital terrain models for geoid prediction in N.Greenland 2-6296
- geodesy, present state and future possibilities of levelling refr. research 2-3092
- geodesy, satellite and terrestrial data combination by Ordnance Survey of Great Britain (OSGB) scientific-network 2-6297
- geodesy, use of meteorological meas. for computing refractive effects on electro-optical distance meas. 2-6305
- geodetic measurement, use of multiwave or single wave methods for eliminating terrestrial refr. 2-3094
- geodetic observations, variance and covariance estimation 2-37726
- geodetic triangulation system using airborne stellar directions and laser distances (*German*) 2-37744
- geodetic-astronomical observations with Danjon astrolabe, Potsdam, effects of local temp. field disturbances (*German*) 2-9907
- geodynamics research, appl. of space technology 2-10209
- geomagnetic anomaly mapping using superconducting magnetometers 2-52727
- geomagnetic field measurement, new time-derivative magnetometers to be installed on spacecraft (*Japanese*) 2-3183
- geomagnetic field paleointensity determination, physical preconditions for method of gradual mag. polarit. y reversal 2-6313
- geomagnetic intensity determ., thermal techniques errors and resolution 2-52951
- geomagnetic polar wander path, method for best-fit smooth curve 2-10207
- geomagnetic temporal variation meas. at local site with proton magnetometer array 2-48024
- geomagnetic variations, use of spectral analytic estimation methods 2-37985
- geomagnetic variations meas. on sea floor, appl. of ocean bottom proton magnetometer 2-32676
- geomorphic mapping, appl. of Landsat-3 Return Beam Vidicon (RBV) imagery 2-18428
- geopotential field computation method 2-23129
- geothermal heat flushing from moderately permeable sediments 2-32026
- geothermal models identification and validation, theory 2-22948
- geothermal prospecting in New Zealand, use of Rn ground obs. 2-10205
- geothermal systems modelling, identification of Wairakei geothermal system, New Zealand 2-22947
- geothermics, borehole temp. stabilisation theory rel. to true formation temp. estimation 2-28040
- geothermometry of basic intrusions by  $^{40}\text{Ar}/^{39}\text{Ar}$  dating method 2-6341
- gravimetry, approximate method for direct three-dimensional problem 2-9912
- gravity anomalies interpretation, unsolved plane problems in mathematical theory 2-6453



## geophysical techniques continued

- gravity anomalies terrain correction, improvement of conic prism model for rugged topography 2-6300
- gravity exploration, appl. to search for groundwater in Bara Basin, Sudan 2-3798
- gravity field approximation, use of height data by collocation 2-42252
- gravity observations at sea, topographic-isostatic reduction of profile gravimetric obs. 2-6302
- gravity sounding, computation of spectrum of potential field due to three-dimensional homogeneous bodies (*Chinese*) 2-3097
- gravity sounding, determ. of harmonic moments of disturbing bodies from gravity anomalies 2-38000
- gravity sounding, determ. of number and parameters of isolated sources 2-14631
- gravity sounding, equivalence of gravit. potential induced by perturbation masses with varying density 2-6303
- gravity surface and subsurface meas., direct inversion by least squares method 2-32659
- gravity survey errors, procedure for reduction of 'drift' 2-37733
- gravity survey methods for highly precise observations 2-14377
- gravity surveys, near topographic correction method 2-3104
- ground displacement determ. use of strong motion 2-52943
- heat flux from natural surfaces, estimation using remotely sensed surface temp. 2-6443
- Hilbert transform evaluation by FFT technique 2-23130
- igneous rock reference sample, Be content of NIMROC 2-52767
- induced polarisation sounding, contour map presentation of dipole-dipole data 2-9923
- induced polarisation sounding, theory for disseminated sulphide ores containing elongated mineralisation 2-27975
- interactive cluster analysis procedure (ICAP) for remote sensing data 2-48045
- interferometry, very-long-baseline geodetic appl., coherence limits 2-28227
- International Geoscience and Remote Sensing Symposium, Washington, DC, USA (1981 June 8 to 10) 2-12
- inversion of reflected wave travel-time curve 2-23127
- ion microprobe techniques, appl. to anal. of olivine and low-Ca pyroxene 2-6071
- IR imaging, METEOSAT image deformation problems solution 2-48050
- isostatic anomalies, calc. technique for Baikal Rift Zone 2-14446
- large-scale laboratory testing in geomechanics, conference, Berkeley, California, (1981 February 17 to 18) 2-28596
- laser ranging by satellites (*French*) 2-10177
- leveling arrays used as multicomponent tiltmeters 2-42474
- Lg(Rayleigh type), multi-mode anal. of wave trains 2-27988
- Lg wave train (Rayleigh type) multimode anal. method, application to Californian obs. 2-27989
- linear filtering of geophys. data meas. on rectangular net 2-52941
- lunar daily geomagnetic var., determ. from short data series, differencing method 2-6452
- machine processing of remotely sensed data, conference, West Lafayette, Indiana (1981 June 23 to 26) 2-14979
- magnetic anomalies due to dikes, interpretation by complex gradient method 2-32660
- magnetic anomalies interpretation, unsolved plane problems in mathematical theory 2-6453
- magnetic granulometry of sediment cores, rapid method with appls. to environmental studies 2-28067
- magnetic sounding, computation of spectrum of potential field due to three-dimensional homogeneous bodies (*Chinese*) 2-3097
- magnetite mapping with multicoil airborne electromagnetic system 2-32661
- magnetotelluric inversion, analytic one-dimensional scheme 2-9925
- magnetotelluric inversion, new technique for layered Earth interpretation 2-27974
- magnetotelluric modelling, one-dimensional, topography and minimisation of standard deviation 2-9926
- magnetotelluric sounding, automatic model for 1-D problem 2-32397
- magnetotelluric sounding, E-polarisation boundary conditions above laterally non-uniform conductors 2-9921
- lower mantle material thermodynamic property meas. apparatus 2-32505
- marine seismic exploration, theoretical model of seismic wave source and exptl. results 2-37782
- microwave remote sensing instrumentation for Earth satellites, advances 2-48049
- mineral semiquantitative analysis using TEM equipped with semicond. detector device 2-48017
- mineralogical analysis (book) 2-18827
- natural glass and rocks, chem. anal. of gases released on heating 2-52942
- neutron activation analysis determination of U in geological objects, using <sup>235</sup>Np high resolution gamma spectrometry 2-32679
- neutron activation analysis system for sample or well logging chem. anal. 2-52937
- obsidian hydration dating of volcanic events, results from rhyolite flows 2-14435
- oceanic EM induction problems, numerical soln., iterative scheme 2-10193
- oil well data analysis computer program (KOALA) 2-28241
- on the fission-track dating of tuffs and volcanic ashes 2-6462
- operative position finding, artificial satellite appls. in navigation, geophysics and surveying, dist. meas., radio interferometry (*German*) 2-28238
- orbital image sensor geometry simulation, in FORTRAN 2-18580
- palaeomagnetism, correl. of separated rock formations using secular variation field 2-52725
- passive ring resonator method for sensitive inertial rot. meas. in geophysics and relativity 2-23702
- photogrammetry, effects of atmospheric refr. 2-3093
- plate tectonic reconstructions, determ. of uncertainties of finite rotations 2-32484
- polar motion Chandler component estimation, best method 2-47787
- potential field computation, piecewise continuous basis function approach 2-28217
- pottery age determination, description of thermolum. techniques 2-52936
- pressure estimation in silicates of shocked rocks, reflectivity meas. technique 2-22979
- prospecting developments (1975-1980) 2-37978
- radar remote sensing of 'inhomogeneous slab' objects, theory 2-52955
- radiogenic heat distrib. in Earth's interior, determ. via Pontryagin's maximum principle 2-22936

## geophysical techniques continued

- radiometers, principles and appl. (*German*) 2-52953
- rare isotope detection with tandem accelerators 2-43125
- reflection seismology, appl. of PP/SS refl. coeff. ratio to estimating oil and gas reservoirs 2-9947
- reflection seismology, resolution of statics, structure and residual normal moveout 2-6321
- refractive index of minerals, oblique obs. in microscope method 2-33630
- remote sensing, analytic correction method for satellite multispectral scanner geometric distortions 2-18581
- remote sensing, appl. of airborne thermal viewing system for studying Earth resources 2-52958
- remote sensing, atmos. correction to satellite radiometry data for rugged terrain 2-18429
- remote sensing, characts. of Systeme Probatoire d'Observation de la Terre (SPOT) satellite 2-18681
- remote sensing, Earth Observation Satellite, Landsat (*Japanese*) 2-14752
- remote sensing, line scan imagery, two dimens. resampling by one dimens. processing 2-37997
- remote sensing, reduction of satellite magnetometer data for geological studies 2-32673
- remote sensing, statistical scale-up estimators for surveys where detect. and classification errors exist 2-18603
- remote sensing and photogrammetry in Hungary (*Hungarian*) 2-10201
- remote sensing of land surface, multispectral classification and mapping 2-18430
- resistivity inversion, three dimens., use of alpha centres 2-37981
- resistivity profiling, appl. of different electrode arrays over graphite deposit 2-9922
- resistivity sounding, theoretical and practical expts. with focused elec. resistivity arrays 2-10191
- rock deformability measurement, experience with in situ meas. techniques 2-32667
- rock mechanics, potential for geophysical expts. in large scale tests 2-32495
- rock melt ultrasonic vel. and attenuation meas. method 2-52947
- rock sample testing, design and manufacture of high press. and high temp. triaxial cells 2-32669
- rock sample thermal diffusivity meas. by Angstroms method 2-32672
- rock specimens large-scale laboratory testing, samples acquisition and preparation 2-32668
- rock testing, size effect on fracture mechanism 2-32497
- rocks cooling rates determ., appl. of solute partitioning under continuous cooling conditions 2-32874
- rocks large-scale laboratory testing, strain relaxation characts. rel. to sample preparation 2-32498
- sand dune dating by new thermoluminescence technique 2-48033
- satellite altimetry, calibration validation for GEOS 3 altimeter 2-23205
- satellite appl. to surveying and ocean navigation, Transit development 2-10297
- sediment (marine) acoustic attenuation, meas. with quantitative seismic profiler 2-28219
- sediment (marine) acoustic props., meas. system for core samples 2-18601
- sediment conductivity determ. using sea current electric field 2-23116
- seismic acoustic reflection data anal., Born WKBJ inversion method 2-32658
- seismic activity anal. using two dimens. Chebychev functions and oblique projection 2-10210
- Seismic Array at Minnesota, USA, magnitude calibration procedure 2-28213
- seismic b-value determination methods and earthquake prediction (*Chinese*) 2-32653
- seismic bed velocity in 3-dimens. case, two iteration methods 2-52962
- seismic data inversion in r-p plane, techniques 2-18594
- seismic data processing procedure, US modelling expt. 2-52743
- seismic exploration, appl. to study of Palaeozoic deposits of W Siberian plate 2-14412
- seismic exploration, use of industrial explosions 2-52745
- seismic ground motion studies, digital processing technique 2-28215
- seismic lateral velocity struct. determination by inversion of seismic data 2-32438
- seismic multiple reflected waves removal method, appl. to W Siberian plate Palaeozoic deposits 2-52961
- seismic profile data deconvolution, linear prediction filter design 2-10187
- seismic profile from sonic log in borehole, calc. of synthetic profile 2-6446
- seismic profiling using borehole, tube wave noise reduction methods 2-6447
- seismic prospecting, appl. of new distributed charge as seismic source 2-28027
- seismic prospecting, error estimates for inverse modelling schemes using travel times meas. 2-28028
- seismic reflection profiling, data inversion for 3-D vel. struct. 2-9944
- seismic reflection profiling 2-27991
- seismic reflection profiling of sedimentary sequences, theoretical response 2-6318
- seismic reflection sounding, application of hyperbolic moveout filters 2-37773
- seismic reflection sounding, dip limitations on migrated sections 2-28031
- seismic reflection sounding, non-linear estimation of refl. coeffs. 2-37772
- seismic reflection sounding using impulsive SH line source, for density profiles and shear modulus 2-14407
- seismic reflectivity analysis, ray parameter-intercept time spectral ratio method 2-42475
- seismic refraction data, curved raypath interpretation 2-47810
- seismic refraction interpretation, use of generalised reciprocal method 2-32656
- seismic refraction sounding, data inversion by wave eqn. continuation 2-6319
- seismic refraction sounding, inversion of slant stacks 2-32437
- seismic S-onset time detection by 2-D AR model fitting 2-52967
- seismic signal detection algorithm (automatic) based on Walsh transform 2-28214
- seismic signal processing and modeling, by state-variable models 2-28032
- seismic signals adaptive deconvolution, prediction theory (*Hungarian*) 2-6329
- seismic sounding, amplitude and phase response of seismic vibrator 2-10190
- seismic sounding, combined use of refr. and refl. waves for study of W. Siberia Palaeozoic deposits 2-37867



**geophysical techniques continued**

- seismic sounding, density and compressibility profiles of layered acoustic medium from precritical incidence data 2-23452  
 seismic sounding, detect. of transformed refl. PS-waves by CDP method with nonsymmetrical sampling 2-37783  
 seismic sounding, guidelines for selecting seismic detectors for high-resolution appls. 2-32690  
 seismic sounding, Kunetz energy relations derivation 2-9946  
 seismic sounding, props. of transverse waves in deep investigations 2-47821  
 seismic sounding, recursive predictive deconvolution method 2-28030  
 seismic sounding, shover shear-wave generation by vibration orthogonal to polarisation 2-9948  
 seismic sounding, small-scale fault parameters estimation from common-depth-point seismograms 2-6327  
 seismic sounding, soln. of direct kinematic problems by nonlinear programming methods 2-37784  
 seismic sounding, systematic classification of layer-induced transverse isotropy 2-9949  
 seismic sounding, wave fields calc. by edge waves superposition method 2-47820  
 seismic sounding for density and vel. profiles, direct Born inversion algorithm 2-9943  
 seismic sounding of layered Earth, using torsional vibrator, inverse problem 2-28036  
 seismic travel time data inversion for heterogeneous vel. struct., linearisation approach 2-6450  
 seismic travel time meas., errors from paper seismograms 2-23128  
 seismic velocity of rocks, US measurement method allowing for transducer-bond phase shifts 2-10196  
 seismic wave signal real time data processing system (*Japanese*) 2-18579  
 seismic wavelet estimation and deconvolution 2-32657  
 seismic waves inversion, appl. to focal depths and moment 2-32442  
 seismograms, synthetic, calculation method including absorpt. and dispersion effects 2-37979  
 seismology, analysis of dispersed surface wave train by wave field transformation 2-6320  
 seismology, appl. of reverse filtering for processing seismograms of industrial explosions 2-52744  
 seismology, cepstrum analysis theory and appl. 2-18584  
 seismology, new spectral ratio method rel. to anal. of magma bodies geometry and physical props. 2-32513  
 seismology, reconstruction of sparse spike train from portion of spectrum and appl. to high-resolution deconvolution 2-28029  
 seismology, slowness techniques to interpret travel time data 2-52734  
 seismology, study of focal radiation pattern of strong earthquake using P-wave envelopes 2-6325  
 slip-fault dislocations, dip angle and azimuthal orientation 2-47819  
 soil microwave emission prediction 2-14629  
 soil moisture remote sensing by microwave brightness temp.method 2-10197  
 space geodetic experiments, use of micro-accelerometers 2-6437  
 space-enhancing technological leadership, conf., Boston, MA, USA, (Oct. 1980) 2-18686  
 Spacelab I, Metric Camera and Microwave Remote Sensing experiments 2-28320  
 spectral analysis of geomagnetic time series, method of max. entropy 2-32664  
 spectrochemical analysis of ashed samples computing 2-2745  
 sulphide deposits in volcanic covered area, prospecting, use of redox chem. remanent magnetisation 2-37982  
 surface temperature remote sensing from satellite, to subpixel resolution 2-18605  
 surveying, correction of atmos. refraction errors 2-37731  
 surveying network, datum definition by free net adjustment 2-37729  
 tectonic movement measurement by interferometry (points several km apart) 2-37975  
 tectonic uplift from remanent magnetisation method 2-14610  
 tectonophysics, experimental, laboratory techniques 2-32665  
 telemetering equipment for Japanese coseismic terrestrial electricity data system (*Japanese*) 2-10174  
 telluric-magnetotelluric method in two and three dimensions 2-37980  
 thermal inertia mapping of geological materials, effect of surface temp. vars. with elevation 2-32521  
 transient pulse technique and modified technique, errors, in rock permeability determ. 2-28224  
 triple probe method for plasma parameter display in spacecraft condition 2-32805  
 VLF EM inductive exploration method, interpretation by tilt angle and ellipticity obs. 2-32662  
 X-ray fluorescence, appl. to microscale chemical effects of low temp. alteration of DSDP basaltic glasses 2-32516  
 zero-method pendulum with electronic control for gravity meas. (*Rumanian*) 2-32687  
 K-Ar dating method for rocks, using Ar isotope dilution technique (*French*) 2-10180  
<sup>230</sup>Th and <sup>231</sup>Pa radioactive dating method for marine phosphorites 2-52940

**geophysics**

- see also Earth; erosion; geochronology; geodesy; geology; geomagnetism; geophysical aspects of cosmic rays; geophysical techniques; hydrology; meteorology; oceanography; radiation belts; rocks; seismology; solar-terrestrial relationships; space research; terrestrial atmosphere; time and latitude; upper atmosphere  
 AGU 1981 Fall meeting, San Francisco (Dec. 1981) 2-48389  
 alkali feldspars, Al distrib. in tetrahedral sites and lattice parameters calc., AFEL program in FORTRAN 2-40207  
 conference in honour of Sir Edward Bullard, Jan. 1980, Scripps Institution of Oceanog., USA 2-48394  
 fluid dynamics, instabilities 2-28074  
 geosciences, directional statistics 2-14466  
 geosphere interactions, quantification rel. to environmental crisis 2-9696  
 IAU (1976, 1979) System of Fundamental Astronomical Constants, numerical values 2-42582  
 large-scale laboratory testing in geomechanics, conference, Berkeley, California, (1981 February 17 to 18) 2-28596  
 many fixed centres problem, appls. to geophysics 2-42584  
 mining geostatistics practice (1980) 2-14467

**geophysics continued**

- NAVSTAR, appl. of Global Positioning System geodetic receiver to geodesy and geophysics 2-6518  
 Quebec Appalachians 2-47836  
**geophysics computing**  
 see also computerised instrumentation  
 ADAPT geo-based modelling system, appl. in water resource management 2-23041  
 alkali feldspars, Al distrib. in tetrahedral sites and lattice parameters calc., AFEL program in FORTRAN 2-40207  
 atmosphere, automatic cloud tracking technique appl. to GOES and METEOSAT obs. 2-14615  
 atmospheric transmission and radiation, LOWTRAN5 code, 5 cm<sup>-1</sup> band model option 2-3086  
 boundary lines, computer-aided determ. (*German*) 2-42256  
 cartography computer assisted mapping, digitizing and automatic output errors 2-37740  
 coastal transport of solids eval. using observations of state of the sea (*Italian*) 2-22987  
 data processing for weather forecasting (*French*) 2-23125  
 digital simulation of narrow-band ocean systems 2-18598  
 earthquakes and nuclear detonations, seismic signature discrimination, appl. of pattern recognition techniques 2-37996  
 geological data segmentation using Kolmogorov-Smirnov test, in FORTRAN 2-42354  
 geological net projections generation, 2D, Cartesian coordinate construction, in FORTRAN 2-42353  
 geological prospecting in China, telemetry appl. 2-18611  
 geomagnetic field synthesizing algorithm, in FORTRAN 2-42257  
 German Meteorological Office, image data preparation of weather satellites (*German*) 2-23126  
 GOES imagery, interactive techniques for precipitation estimation 2-23145  
 hydrologic modelling, real time information system and interface 2-23042  
 LANDSAT multitemporal data, environmental change monitoring system 2-10183  
 Landsat remote sensing data image processing system implementation of general-purpose computer, software development 2-3095  
 magnetosphere, computer simulation of EM kinetic instabilities in multi-component space plasmas 2-32776  
 magnetotelluric inversion, analytic one-dimensional scheme 2-9925  
 magnetotelluric modelling, one-dimensional, topography and minimisation of standard deviation 2-9926  
 meteorological automatic data processing, objective anal. (*Chinese*) 2-23114  
 meteorological satellite image processing, computer system 2-10175  
 National Weather Service (USA) river forecasting computer graphics appl. 2-23043  
 ocean bottom seismometer, time code reader, data processing appl. (*Japanese*) 2-32655  
 oceanographic undulating recorder Mark 2, with data acquisition and processing 2-42501  
 oil well data analysis computer program (KOALA) 2-28241  
 reflection sounding, non-linear estimation of refl. coeffs. 2-37772  
 remote sensing, analytic correction method for satellite multispectral scanner geometric distortions 2-18581  
 remote sensing, line scan imagery, two dims. resampling by one dims. processing 2-37997  
 remote sensing, simulation of orbital image sensor geometry 2-18580  
 remote sensing data, interactive cluster analysis procedure (ICAP) 2-48045  
 river flood boundaries from Landsat, manual versus digital anal. 2-22982  
 rockfill dam 3-D seismic behaviour anal. (*Italian*) 2-9942  
 seismic data processing procedure, US modelling expt. 2-52743  
 seismic transformed reflected waves digital processing 2-14410  
 seismological data, computerised processing, Moxa-Jena system (*German*) 2-37972  
 SKYLINE: the incident solar radiation calculation model for areas with complex orography (*Italian*) 2-47949  
 stereo presentation technique for meteorological data 2-23120  
 sunlight, predeterm. of irradiation on inclined surfaces for different European centres 2-6423  
 weather forecasting in Europe 2-14531

**geopotential see geodesy****geothermal power**

- alternative energy technologies occupational and public health and safety implications 2-17959  
 alternative sources of power 2-37147  
 aquifer compressed air, energy storage digital simulation 2-17995  
 aquifer field test for compressed air energy storage 2-17996  
 CAES load regulation 2-17991  
 CAES system champagne effect mechanism and control 2-17997  
 CAES system economics 2-17998  
 CAES technology 2-18001  
 California, in USA, development from 1960 to present day 2-37169  
 complimentary design for geopressure geothermal methane extraction and power generation 2-9619  
 direct coupled CAES evaluation 2-18000  
 economic planning tool 2-6124  
 economics of solar, geothermal and conventional space heating 2-2781  
 electricity generation prospects, United Kingdom 2-6123  
 electricity production appl. (*French*) 2-17993  
 environmental planning and geothermal resource exploitation in Texas and Louisiana, in USA 2-37170  
 experimental evaluation of a prototype hybrid redox halogen energy storage device for storing solar and geothermal energy 2-22672  
 Geysers steam field, N. California, depletion of reserve (1974-7 period) 2-14049  
 HDR energy programme 2-9620  
 hot dry rock geothermal energy 2-9617  
 hybrid advanced compressed air energy storage plant 2-17999  
 isobutane-isopentane mixture condensation film coefficients 2-9622  
 Jemez Mountains, New Mexico, USA, geothermal energy extraction by hydraulic fracture 2-32025  
 Louisiana Frio Formation geopressure studies program, integration of environmental planning 2-32024  
 Lysholm engine performance chars. 2-9624  
 mixed hydrocarbon binary thermodynamic cycles 2-9621



**geothermal power continued**

- performance and operational experience of a prototype binary geothermal power plant 2-9623
- possible use of geothermal energy for heating (*German*) 2-37168
- post use and future prospects 2-47445
- renewable energy sources, peculiarities of international co-operation (*Hungarian*) 2-52295
- renewable energy shapes (*French*) 2-14051
- reservoir, disc-shaped, stability when subjected to hydraulic and thermal loading 2-9618
- rock-water system for electricity generation (*German*) 2-17994
- some possibilities utilising the energy of geothermal waters from the Baile Herculane (*Rumanian*) 2-17992
- space heating and hot water supply appl., efficiency and economics aspects (*French*) 2-2770
- synfuel production in Iceland, peat drying and processing using geothermal heat and hydroelectricity 2-17971
- thermoelectric energy conversion 2-18002
- United States geothermal potential, assessment 2-2769
- well choke-meter for enthalpy and flow meas. 2-27541

**geothermal power stations**

- aquifer thermal energy storage system 2-32028
- California, in USA, development from 1960 to present day 2-37169
- energy planning and economy in US (*Hungarian*) 2-27540
- geopressed resources energy conversion plants system thermodynamics 2-32027
- noise control by Pacific Gas and Electrical Company, USA 2-4646
- predicted performance of geopressed geothermal energy conversion systems using thermodynamic availability concepts 2-47444
- scale and corrosion parameters at a geothermal loop experimental facility 2-13856

**germanate glasses**

- alkali germanate and germanosilicate glasses, struct. determ. by XPS 2-30401
- anomalous properties, rel. to O anomalies 2-5055
- IR spectra, rel. to nonradiative deactivation of rare earth ions 2-26921
- optical glasses, glass-forming systems, optical const., review 2-25090
- $B_2O_3$ - $GeO_2$ , viscosity in glass transition range (*Japanese*) 2-22290
- $B_2O_3$ - $GeO_2$  glass, retarded elasticity 2-41650
- $B_2O_3$ - $GeO_2$  system, small-angle X-ray scatt. obs. of struct. 2-40287
- $Ba_2Ge_2TiO_8$ , glass-ceramic and single crystals, piezoelec. props. 2-51529
- $20Fe_2O_3 \cdot 80(3B_2O_3 \cdot GeO_2(1-y)PbO)$ , Fe valence states, matrix composition influence, Mossbauer effect study 2-46443
- $GeO_2$ - $Li_2O$ - $Nd$ , energy transfer, radiationless quenching rate, fluorescence obs. 2-46723
- $GeO_2$ - $Na_2O$  glass, low alkali, dielectric relaxation strength 2-51525
- $GeO_2$ - $Na_2O$  glasses, transport props., impurity OH effect 2-8668
- $GeO_2$ - $SiO_2$  glass preforms, pure and codoped, UV absorpt. obs. 2-39705
- $GeO_2$ - $SiO_2$  glasses and fibres, Raman spectra study 2-2230
- $GeO_2$ - $ZnO$ - $K_2O$  glass, use as  $CO_2$  laser light absorber 2-49803
- $Ge_3S_7Ag$ , glasses, DC electrical cond. at high hydrostatic pressure 2-1902
- $Li_2O$ - $GeO_2$  glasses, ion exchange interaction with molten alkali nitrates and refr. index gradient 2-26147
- $Na_2O$ - $GeO_2$ , internal press. from elastic constants 2-25969
- $SiO_2$ - $GeO_2$  glass, material dispersion zero 2-16078
- $SiO_2$ - $GeO_2$ - $F_2O_3$ , single mode fibres, chromatic dispersion effects calc. 2-44452
- $TeO_2$ - $B_2O_3$ - $GeO_2$ , phase separation, electron microscope obs. 2-13707
- $Te_2O_3$ - $GeO_2$ - $MnO$ , phase separation, electron microscope obs. 2-13707

**germanium**

- see also nuclei with .....
- acoustooptic refractive IR chopper 2-11796
- adsorption, of  $O_2$ , on atomically clean surface, calorimetric heat of adsorpt. determ. 2-12907
- adsorption of  $O_2$  on (111) surface, AES, thermal desorption, work function, and EELS study 2-12917
- adsorption of  $O_2$  on alkali metal covered (111) surface, AES, EELS, thermal desorption, and work function meas. 2-12918
- AES and EELS, elastic peak electron spectroscopy, eval. procedure 2-27506
- amorphous, annealing effect, struct. modelling 2-45055
- amorphous, dangling bonds defects, g-values of ESR signal 2-2134
- amorphous, DC hopping cond., Mott  $T^{-1/4}$  law from rate eqn. formalism 2-13071
- amorphous, electronic density of states calc., liq. metal model approx., results (*Russian*) 2-8749
- amorphous, electronic struct., CPA study 2-12959
- amorphous, hopping cond. mechanism in strong elec. field 2-26387
- amorphous, laser-induced metastable states 2-45895
- amorphous, press. induced metal-semiconductor transitions 2-40790
- amorphous, props. 2-40772
- amorphous, solid-phase epitaxial crystn. on Si (100) 2-12932
- amorphous, transition temp. and heat of crystn., DSC determ. 2-8435
- amorphous and cryst., EXAFS anal. 2-5772
- amorphous and single crystal, scattered-ion yield enhancements near  $180^\circ$ , reversibility effects 2-46853
- amorphous disorder types and electronic structures 2-45045
- amorphous film, defects study, SAW technique 2-35874
- amorphous film, laser induced crystallisation 2-16595
- amorphous UHV deposited films, struct., elec. and optical props. 2-40732
- atom, electron affinity, calcs. from dissociative electron attachment meas. on GeS (*French*) 2-34584
- atoms and solid, binding energy, Auger and photoelectron spectra 2-34367
- ballistic phonon flux modulation by He gas film at solid/superfluid He interface 2-50981
- bicrystal, grain boundary levels, transient capacitance meas. 2-51117
- bicrystal, symmetrical, energy and elastic field of dislocation arrays, anisotropic elasticity theory 2-5115
- carrier capture by slow surface states, effect of adsorbed hexane carbon tetrachloride 2-8855
- cascade photogenerators, matrix-type, practical realisation of series and parallel connected efficiency estimation 2-22615
- channelled electrons and channeling radiation, energy levels 2-25955
- channeling and dechanneling, semiclassical approach 2-35557
- chemical etching and cleaning procedures 2-2597
- chemical etching and cleaning procedures 2-9437
- chemical transport, with  $H_2O$  (*German*) 2-30428
- cleared (111) surface, electrical conductivity (*Russian*) 2-13161
- covalent crystals, lattice energy, electron-gas functional theory 2-1446
- covalent solids, tight-binding parameters by Louie peripheral states 2-40754
- crystals, thermal props. by photoacoustic spectroscopy 2-21241
- crystals, with diamond struct., reorientation during growth of twins 2-21159
- CVD, on Si from  $GeH_4$ -He gas mixtures 2-2454
- dechanneling of H and He ions 2-45307
- defect structure by high resolution electron microscopy 2-25888
- deformation pot. const. from piezoresist. temp. depend., 77 to 300K 2-17068
- deformed, diamagnetic susceptibility of indirect excitons (*Russian*) 2-5525
- detector, on-line neutron capture gamma anal. 2-603
- detector for precise beta endpoint energy determ. 2-43682
- detectors response to monoenergetic electron, positron and gamma ray beams 2-39267
- determination, by at. absorpt. spectrosc. 2-14034
- dielectric to metal transitions and supercond. at high press. 2-1853
- direct absorpt. in electron-hole liquid, warping effects, final state interactions 2-26301
- dislocation mobility changes during slip direction inversion (*Russian*) 2-5128
- dislocation nucleation process as point defect condensation 2-25878
- dislocation-misfit defect interaction 2-1510
- dislocations, elec. and dynamic props. 2-40834
- dispersive phonon focusing 2-45445
- donor local field corrections to binding energies 2-21536
- donor-bound multi-exciton complexes, theory 2-1840
- double crystal gamma ray diffractometry 2-30369
- electro-hole plasmas, high density, thermomodification 2-30918
- electron energy deposition profile, calc. by Monte Carlo method (*French*) 2-50726
- electron irradiated, defects study by electron microscopy 2-45274
- electron irradiated, form. probability of separated Frenkel pairs 2-35541
- electron-hole droplet cloud, phonon-wind-induced anisotropy 2-12976
- electron-hole droplet drag velocity quantum oscills. 2-1841
- electron-hole droplets, momentum damping time and phonon wind force 2-12977
- electron-hole drops, far IR magneto-plasma absorptions 2-26875
- electron-hole liq., phonon absorpt. spectra 2-45843
- electron-hole liquid in high mag. field, luminesc. meas. 2-26989
- electronic struct., first principles calc. 2-30793
- electronic struct., quantitative disorder effect 2-21495
- electronic struct. and total energy, self consistent local pseudopot. method 2-45823
- energy gap, impurity depend. 2-12964
- energy spectrum of surface recombination centres, effect of sorption processes 2-1980
- epitaxial films on GaAs (110), surface defect struct., LEED study 2-8694
- epitaxial layers on Si, CVD and vacuum deposited, phys. and elec. props. 2-51024
- EPR of electrons at dislocations obs. 2-31282
- far IR emission from population-inverted hot-carrier system 2-46771
- Fermi level shift study by X-ray absorpt. spectroscopy 2-1812
- field penetration effect on surface states 2-30947
- film, amorphous, laser processing, explosive crystn., liq. layer existence 2-45265
- film, amorphous, scanned laser crystn., phase boundary kinetics meas. 2-45264
- film, amorphous, vacuum deposited, internal stress and Young's modulus (*Japanese*) 2-26264
- film, polycryst., low temp. growth by UV laser photodissociation of  $GeH_4$  2-51823
- film growth by ion beam epitaxiation, sticking probability rel. to self-sputtering 2-46928
- film on Au and Pb, far IR surface plasmon coupling and attenuation 2-36725
- films, vac. deposited, optical props. in IR region 2-51726
- foil, p, d and  $\alpha$ -particles energy-loss straggling in energy range 0.2-2.4 MeV 2-49239
- four-wave interaction at  $10.6 \mu$ , multifreq. signal refl. 2-34850
- ground state manifold, off-diagonal Zeeman effects 2-21543
- heavily doped, band-gap narrowing, impurity conc. depend. 2-1821
- heavily doped, DC hopping cond., Mott  $T^{-1/4}$  law from rate eqn. formalism 2-13071
- hole response to static elec. and microwave elec. field, temp. depend., Monte Carlo method 2-13113
- hot-carrier phenomena, transient, method of moments for anal. 2-45998
- hot-electron bolometers for FTIR diagnostics,  $\gamma$ -ray and neutron effects 2-35329
- impurity photoconductivity spectra for Ge containing  $Hg^0$ ,  $Zn^-$  and  $Cd^0$  centres, photoimpact ionization and oscills. 2-1953
- indirect exciton ground state Stark shift and splitting 2-21505
- interband Faraday and Kerr effects anal. 2-26874
- ionisation potentials and energy barriers estimation at hetero junctions (*German*) 2-12963
- IR laser radiation scatt. study of local inhomogeneities 2-22033
- laser cyclotron resonance, Zeeman absorpt. 2-41205
- laser excited, enhanced direct-free-hole absorption 2-51222
- laser thermal breakdown, hysteresis effects 2-16678
- lattice dynamics, ab initio calc., local density functional formalism 2-50796
- lattice thermal cond., contrib. of low freq. longitudinal phonons 2-45651
- lattice thermal cond. and phonon-phonon scatt. relax. rate 2-12863
- LEED study of clean high Miller index surfaces 2-50972
- liquid, O activity, electrochem. meas. 2-8643
- liquid metal field-emission ion sources 2-578
- LMFBR cladding breach monitoring by solid state tagging of fuel element surface, appl. 2-24340
- local field effects and zone centre phonons 2-26006
- Lomer dislocation core struct. 2-45180
- magnetoresonance, electron-hole droplet, quantum transport theory 2-5426
- marine geochemistry 2-14496
- MM-wave detector using hot carriers, performance 2-36081
- mode Gruneisen parameters for long-wave phonons under press. 2-12712
- molecule, pot. curve, Xalpha-SW calcs. 2-39315



## germanium continued

- molten, diffusion coeff. of Ga 2-35722  
muonium depolarisation mechanisms 2-41242  
n<sup>+</sup>-n junction, carrier exclusion for low impurity carrier conc. 2-46117  
n-GeAs(Sb), ballistic heat pulse scatt., mag. field effects 2-50943  
n-type, EM wave absorption in mag. field 2-17452  
n-type, impurity elec. resist. anisotropy in quantising mag. fields 2-13105  
n-type, impurity elec. resist. in quantising mag. fields 2-13104  
n-type, many-valley semicond., Faraday effect in crossed elec. and mag. fields 2-17453  
n-type, neutron bombarded, minority carrier injection and extraction 2-46027  
n-type, piezoresist. differences, electron scatt. mechanisms 2-17069  
n-type, surface cond. meas. in transverse elec. fields, storage effect 2-21654  
n-type, uniaxially deformed, drag thermoelectric power in quantising mag. fields 2-1935  
n-type, weak-field magnetoresist. skewness and galvanomag. coeffs. 2-13099  
n-type, weak-field magnetoresistance coeffs., magnetoresistance skewness 2-51217  
negative magnetoresistance, quantum theory anal. (Russian) 2-13102  
neutron and  $\gamma$ -ray irradi., point defects, positron capture 2-51741  
nonlinear screening of positive point charges, spatial dielec. function 2-21524  
optical element, Gaussian beam distortion by thermal lens 2-34859  
optical props., calc. using first-principles electronic struct. 2-13442  
optical waveguide, field distrib. and harmonic generation 2-44387  
p-i-n and avalanche photodiode detectors for 1.1 to 1.6  $\mu$ m operation, state of the art 2-3622  
p-n junction, avalanche breakdown voltage, pressure depend. 2-30955  
p-n junction, hot carrier thermo-EMF under strong forward bias conditions 2-5454  
p-n junctions, second breakdown patterns 2-13180  
p-type, hopping transport at large uniaxial stress and high mag. field 2-36047  
p-type, hot carrier population inversion, Hall effect study 2-46037  
p-type, hot holes, noise, inelastic scatt., meas. at microwave freqs. 2-46088  
p-type, IR absorpt. saturation, expt. study 2-49833  
p-type, light-hole band overpopulation in strong crossed elec. and mag. fields 2-40924  
p-type, phonon thermal cond. in intermediate conc. region, 2 to 50K 2-26157  
p-type, submillimeter radiation amplification by cyclotron res. of light holes in intraband optical excitation 2-51469  
p-type, two-wave saturation spectroscopy with subpicosecond relax. time, theory 2-7840  
p-type film, picosecond photoconductive detector 2-1940  
phonon conductivity, role of thermal expansion 2-45642  
phonon conductivity due to nondiagonal energy-flux operator 2-45650  
phonon focusing caustics, singular effects 2-45446  
phonon frequencies and mode Gruneisen parameters, volume depend. 2-1572  
phonons, zone centre, ab initio calc., local field effects 2-50797  
photoconductivity spectra, for IR, of quenched in acceptors 2-1956  
photoconverters, electrical characts. under high illumination intensities 2-6139  
photodielectric and photocond. effects, shallow impurities charge state changes effect 2-40965  
photoelastic response 2-31449  
photoexcited hot carriers, picosecond interband saturation and intraband relax. 2-46004  
photovoltaic effects due to heating by stationary EM radiation effect (Russian) 2-21636  
planar dechannelling of GeV particles in bent crystals 2-21191  
plastically deformed, magnetoresistance 2-36068  
point defects and disordered regions due to irradi., magnetoresist. meas. 2-8826  
polymorphs, phase-difference approach to EXAFS anal. 2-5771  
self-interstitials and vacancies, absolute zero to melting temp., review 2-30461  
Si-Ge interfaces, low energy EELS study 2-9232  
solar cell, MOS thin-film, steel substrate passivation with tungsten layer 2-2791  
spin-dependent recomb. centres, photoinduced ESR study 2-46379  
Stepanov growth, impurity distrib. 2-1504  
stressed, electron-hole liquid, exchange correlation energy and phase separation 2-1851  
structural defects, dynamic characts., internal friction method 2-1555  
superconductivity transition temp. rise with press. reduction 2-13215  
surface, (111), adsorbed In, surface superstruct., RHEED study 2-26196  
surface, (111), Cl chemisorption config. study, cluster model and EHT method 2-8708  
surface, (111), pulsed laser annealing, LEED study 2-45267  
surface, adsorbed K(Na), work function, field desorpt. and theoretical study 2-46103  
surface, vacuum cleaned (111), reconstruction and itinerant magnetism 2-17258  
surface (111) 1 $\times$ 1, atomic relaxation, tight binding Green's function approach 2-16936  
surface electron localisation and cond., effect of adsorbed impurity atoms (Russian) 2-13151  
surface helical instability, nonlinear props. 2-40993  
surface overlayers detection and minimisation using spectroscopic ellipsometry 2-15210  
surface recombination and bulk lifetime contactless PME investig. 2-17116  
thermal gradient drift domain rel. to sample shape change 2-36051  
thermal gradient-drift domains in electron-hole plasma 2-17106  
thermoluminescence rise in far IR spectrum (Russian) 2-31571  
thin film p-n junction solar cell, thermovoltaic energy conversion 2-37240  
tunnelling, band struct. 2-40999  
two-component electron hole liquid, phase separation under tensile stress 2-26302  
uniaxially deformed, excitons and excitonic molecules in mag. field (Russian) 2-5354  
uniaxially stressed, luminescence of excitonic molecules 2-46692  
vacancy diffusion, temp. depend., Morse pot. calc. (Russian) 2-45620  
vibrational modes at vacancy site 2-50813  
wafers, refr. index variations, acoustic method meas. 2-4567

## germanium continued

- window material optical absorpt. investigation using photoacoustic spectroscopy (Chinese) 2-20383  
X-ray detector, comparison with Si(Li) detector 2-43716  
XPS, angle-resolved, for solid surface characterisation 2-5794  
Al-Tb<sub>2</sub>GeS<sub>2</sub>-Fe structure, charge transport mechanism 2-21683  
Al<sub>0.4</sub>Ge<sub>0.6</sub>As:Ge LPE film, dislocation clusters, TEM obs. 2-45762  
Al<sub>0.4</sub>Ge<sub>0.6</sub>As:Ge epitaxial layers, photolum. rel. to surface composition (Russian) 2-9189  
amorphous, electronic density of states calc., liq. metal model approx., theory (Russian) 2-1816  
Cd<sub>3</sub>As<sub>2</sub>:Ge, transport props. study 2-40943  
 $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>:Ge<sup>4+</sup> electrodes, photoactivity, doping effect 2-26436  
p-Ga<sub>1-x</sub>Al<sub>x</sub>As:Ge, LPE grown, charge compensation, photoluminescence spectrum 2-17517  
GaAs:Ge, epitaxial, study of donors, far IR photoconductivity and high mag. fields 2-1864  
GaAs:Ge, neutron transmutation doping, elec. and physical props. 2-12619  
GaAs:Ge LPE film, dislocation clusters, TEM obs. 2-45762  
GaAs:Ge MBE layers, elec. behaviour obs., autocompensation mechanism 2-51361  
GaP:Ge and GaP:Ge, Cr epitaxial films, behaviour of Ge, elec. props. and photoluminesc. 2-13008  
n-Ge anisotropic semiconductor, electron scatt. in mag. field 2-51219  
n-Ge, impurity band cond. study 2-40919  
Ge single crystals, grown in different directions, radial distrib. of dopant 2-1498  
Ge:Al, ion implanted, annealing behaviour obs., Al conc. profiles determ. 2-45241  
Ge:As, 1s and 2p states, quantitative piezospectroscopy 2-26863  
Ge:As, luminescence study, exciton excited hole state 2-46691  
Ge:As, precipitation-induced defects, X-ray diffr. study, three-crystal spectrometry 2-45181  
Ge:As(P), four-wave spectroscopy of shallow donors 2-22055  
Ge:As, direct obs. of trap-charging waves 2-17088  
Ge:As, gamma irradi., radiation defects interaction with impurity 2-12633  
Ge:Cu, defect levels, H passivation, DLTS study 2-51108  
Ge:Cu, gamma-ray induced defect formation 2-40437  
Ge:Ga, far IR and sub-MM detector, spectral response from blackbody meas. 2-19180  
Ge:Ga, impurity band, antiferromag. ordering, photoluminescence study 2-2340  
Ge:Ga, neutron transmutation doping, degree of compensation 2-50673  
Ge:Ga heavily doped single crystals grown from melt, interface breakdown 2-25777  
Ge:Ga(Sb), single cryst., high temp. dislocation mobility under applied stress 2-45183  
Ge:H, amorphous film, interaction of US phonons with defects 2-26011  
Ge:H, amorphous, AC loss at audio freq., electron tunnelling model 2-40897  
Ge:H, P, amorphous, US phonon interaction with donor impurities 2-45482  
Ge:Li,  $\gamma$ -irrad., radiation defect interaction with impurity atoms 2-25918  
Ge:Li, Hall effect, cyclotron resonance study of converted regions 2-40941  
Ge:Li, photocond. IR detectors, low photon background appl. 2-39179  
Ge:Li film, amorphous, electret effect 2-17395  
Ge:P, photoconductivity spectrum of shallow donors, elec. field effect 2-26443  
Ge:P epitaxial films, P doping during gas phase chem. precip. 2-12612  
Ge:P(Bi),  $\gamma$ -ray irradi., point defects, laser annealing 2-50696  
Ge:Pd, Sb,  $\gamma$ - and electron-irrad., complex formation, primary defects charge state effect 2-40436  
Ge:Sb, metal-insulator transition density, wave-function anisotropy effect 2-16993  
Ge:Sb, shallow traps and D<sup>-</sup> centre, photoconductivity 2-45888  
Ge:Sb(As)(Ga), electron-hole liq., photoluminesc. polarisation in mag. field study 2-35952  
Ge:Si, impurity states, optical spectra and microhardness meas. 2-35971  
Ge:Te, crystalline and amorphous, Mossbauer study of disorder 2-41238  
Ge:Zn, second impurity level, activation energy, random field effects 2-51124  
p-Ge/CdS junction, admittance with deep impurity levels, space-charge anal. 2-13169  
Ge/Pd/Si/(111)Si system, kinetics of solid-phase heteroepitaxy 2-51036  
Ge/Si(111) system, pseudomorphic struct. at interface, high energy ion scatt. study 2-12938  
Ge-Au interface formation, UPs study 2-40699  
Ge-GaAs (100) interface, atomic and elec. struct. 2-12923  
Ge-GaAs (111) and (111) interfaces, electronic struct., EHT calc. 2-8854  
Ge-GaAs abrupt (110) interface, geometry 2-12920  
Ge-GaAs bicolour system, Ge solar cell design and efficiency anal. 2-6142  
Ge-GaAs eutectic alloy, thermo-EMF and thermal cond., temp. depend. thermal quality factor 2-13108  
Ge-GaAs model heterojunction, local density of states, oscills. (Russian) 2-17146  
Ge-GaAs n-n heterojunction, electron transport 2-8864  
Ge-GaAs superlattices, MBE growth 2-8728  
Ge-GeO<sub>2</sub> system, photomemory, structure defect form. 2-30929  
Ge-InP ohmic contacts, contact resistivity meas. 2-13173  
Ge-Si (GaAs), interface form., surface reconstruction 2-46112  
Ge-Si<sub>3</sub>N<sub>4</sub> interface in metal-dielectric-semiconductor structs., dielec. film conductivity, quasistationary accumulation of charge 2-51325  
Ge-SiO<sub>2</sub>, dislocation configurations and misfit dislocations, in heterostructures with continuous and island films 2-5121  
Ge(Li) coaxial detectors, charge losses in sensitive film near-surface region (Russian) 2-19873  
Ge(Li) detector, efficiency calibration at short source-to-detector distance 2-24490  
Ge(Li) detector response for total absorption of photons 2-574  
Ge(Li) detectors for X-ray spectrometry 2-43715  
InP:Ge, etched and unetched, dislocation obs. and Huber etching assessment 2-40396  
InSb:Ge, effect of nonmetal-metal transition due to doping in lattice thermal cond. 2-50939  
p-type, hot electron population inversion in mag. field., expt. and Monte Carlo simulation 2-46039



## germanium continued

- Si, liquid, structural modelling 2-40251  
 Si:Ge, high fluence implantation, radiation damage annealing, backscatt. and channelling, anal. 2-45289  
 Si:Ge, ion irradiat. damage, complex-refr. index profiles 2-5654  
 Si-Ge thermoelectric generators, long term behaviour 2-27716  
 Si-Ge two junction tandem solar cells for thermophotovoltaic appls. 2-37338  
 SiC self-bonded, joining by Ge metal 2-9521  
 Si(Li)-Ge(Li) coincidence cct. adjustment, radioactive sources 2-19816  
 SiO<sub>2</sub>/Ge optical fibre waveguides, losses induced by ionising radiation 2-29880  
 Si(111)(2×1)-Ge heterojunction, localised interface states, photoemission spectra and tight-binding calc. 2-40991  
 Sn-Ge phase boundary, orientational depend. of surface tension 2-1777  
 TiInSe<sub>2</sub>/Ge, heat cond., influence of Ge, Si and Sn doping (*Russian*) 2-12862  
 V<sub>2</sub>O<sub>5</sub>/Ge, electron localisation and ionic radii of cations, ESR obs. 2-45890

## germanium alloys

- see also Ge-Si alloys  
 metal-Ge, cryst. alloys, atomic vol. 2-12541  
 rare earth ternary intermetallics, RMn<sub>2</sub>Ge<sub>2</sub>, mag. props. study 2-2073  
 Al-Ge, morphology of eutectics with metastable phases 2-17662  
 Al-Ge evaporated thin film, effect of crystallinity on morphology, resist. meas. and TEM 2-40721  
 Al-Ge film, nongranular, low supercond. transition temp. 2-31016  
 Al-Ge-Si, heat of form. determ. by high temp. calorimetry 2-9563  
 Au-Ge laser-annealed ohmic contacts on GaAs, microstruct. and resistivity 2-21675  
 Au-Ge/GaAs ohmic contacts, laser annealed, resistivity and SIMS profile 2-26497  
 AuGe/Pt pulsed electron beam alloyed ohmic contacts on GaAs reliability 2-5458  
 CeGe<sub>2</sub>, cryst. struct., thermal and mag. props. 2-45117  
 Co-Ge, molten, elec. resist., temp. and conc. depends. (*Russian*) 2-21555  
 Co-Mn-Ge, crystal and mag. struct. 2-45115  
 Co,Ni<sub>1-x</sub>MnGe, mag. struct. and props. 2-36324  
 Cr-Cr alloy, spin density waves, neutron diffr. study 2-26585  
 Cu-Au-Ge, dilute, thermoelec. power, impurity scatt. contrib. 2-5393  
 Cu-Au-Ge (Ni-Ge), Hall coeff. for isotropic electron scatt. 2-36019  
 Cu-Ge, single cryst., kinetics of plastic flow 2-51981  
 Cu-Ge (8 at.%) single crystals, in situ obs. of deform. twinning 2-40412  
 Cu-Ge (8.7 at.%) shock pulses, strengthening effect of deform. twins and dislocations 2-17688  
 Cu-Ge alloys, Fermi level shift study by X-ray absorpt. spectroscopy 2-1812  
 α-Cu-Ge alloys, Fermi surface dimensions, nonlinear composition depend. 2-40758  
 Cu-Nb-Ge, dil. alloy, superconductor, glass coated melt spinning, mech. props. 2-22185  
 Cu-Ni-Ge, dilute, thermoelec. power, impurity scatt. contrib. 2-5393  
 Cu-Sn-(Ni,Al,Ge,In), phase transforms. 2-51916  
 Fe-Ge, molten, elec. resist., temp. and conc. depends. (*Russian*) 2-21555  
 Fe-Ge-Mn(Co)(Ni), crystal and mag. struct. 2-45115  
 Fe-Ni-X, X=Ge, P, Au or Pt, ternary partition coeff., expt. determ. 2-36860  
 FeGe, crystals, growth rate influence, on lateral face development character. Czochralski method 2-21050  
 Ge-Bi, amorphous, elec. props. 2-17084  
 Ge-Cu thermocouple, thermoelectric conversion (*French*) 2-47505  
 Ge-Sb, amorphous, elec. props. 2-17084  
 LaPd<sub>2</sub>Ge<sub>2</sub>, supercond. transition temp. meas. 2-46188  
 LaPt<sub>2</sub>Ge<sub>2</sub>, supercond. transition temp. meas. 2-46188  
 Mn<sub>2</sub>Ge<sub>2</sub>-Ge, eutectic alloy, unidirectionally solidified, microstructure 2-36846  
 Mo<sub>2</sub>Ge, ion irradiat., superconducting T<sub>c</sub>, specific heat, elec. cond. 2-36180  
 Mo<sub>2</sub>Ge<sub>1-x</sub>, amorphous thin film, reflection small-angle X-ray scatt. method 2-44968  
 Nb-Ge film, prep. and anal. by electron beam co-evaporation (*Chinese*) 2-21521  
 Nb-Ge film, superconducting transition, struct. 2-41052  
 Nb-Ge films, DC sputtering prep. and struct. rel. to supercond. props. 2-30992  
 Nb-Ge sputtered coating, supercond. transition temp., composition and struct. depend. 2-30998  
 Nb-Ge supercond. film, high T<sub>c</sub>, prep. and anal. (*Chinese*) 2-9316  
 Nb-Ge-B, A-15 compound, supercond. props. 2-46215  
 Nb-Ge-(Si) CVD films, supercond. crit. temp. 2-30991  
 Nb-Si-Ge, amorphous supercond., formation by liq. quenching on hot substrate 2-52059  
 Nb<sub>3</sub>Al<sub>0.75</sub>Ge<sub>0.25</sub>, elec. cond., lattice const. (*Russian*) 2-45939  
 Nb<sub>3</sub>(Al<sub>0.75</sub>Ge<sub>0.25</sub>), supercond. wire, manufacture from powder (*Chinese*) 2-41539  
 NbGe-SiO<sub>2</sub>-Pb tunnel junction, tunnelling α<sup>2</sup>F(ω) 2-17237  
 Nb<sub>3</sub>Ge composite tape conductors, total AC losses 2-36277  
 Nb<sub>3</sub>Ge, laser annealing effect on transition temp. 2-36179  
 Nb<sub>3</sub>Ge layer, vapour-deposited on stainless steel tape, thermal cond. 2-21721  
 Nb<sub>3</sub>Ge long tape with T<sub>c</sub> above 20K 2-8926  
 Nb<sub>3</sub>Ge, reflection electron energy loss spectra, plasmons 2-31594  
 Nb<sub>3</sub>Ge, supercond. Tape, preparation by continuous CVD process (*Chinese*) 2-41523  
 Nb<sub>3</sub>Ge, superconducting film preparation by sputtering (*Japanese*) 2-5813  
 Nb<sub>3</sub>(Ge,Ga<sub>1-x</sub>) A-15 compound, supercond. props. 2-46215  
 Nb<sub>3</sub>(Ge,Ga<sub>1-x</sub>) films, superconducting parameter meas. 2-5487  
 Ni-B-Ge system, metallic glass form., struct. and mech. props. 2-12493  
 Ni-Ge, molten, elec. resist., temp. and conc. depends. (*Russian*) 2-21555  
 NiZn<sub>2</sub>Ge<sub>2</sub>, mixture, stability range (*German*) 2-2490  
 Pb-Ge foils, melting study 2-50836  
 Sn-Ge, In diffusion along interphase twist boundaries 2-35744  
 UCu<sub>2</sub>Ge<sub>2</sub>, antiferromagnetic-ferromagnetic phase transition, neutron diffr. study 2-36346  
 V<sub>2</sub>Fe, ion irradiat. damage, effect on supercond. transition temp., channelling meas. 2-5162  
 V<sub>66</sub>(Fe<sub>1-x</sub>Ge<sub>x</sub>)<sub>24</sub>, metallic glass, struct. and elec. props. 2-21031  
 V<sub>3</sub>Ge, polycrystalline, thermal expansion below 40K 2-30636  
 V<sub>3</sub>Ge, spin-lattice relax. and Knight shift, temp. depend. 2-36472  
 V<sub>3</sub>Ge<sub>1-x</sub>Fe<sub>x</sub> solid solns., Mossbauer spectra 2-26801

## germanium alloys continued

- YMn<sub>2</sub>Ge<sub>2</sub>, cryst. and mag. struct. 2-8959  
 YbCu<sub>2</sub>Ge<sub>2</sub>, superconducting, absence 2-46188  
 YbPd<sub>2</sub>Ge<sub>2</sub>, supercond. transition temp. meas. 2-46188

## germanium compounds

## see also germanium alloys

- chalcogenides, amorphous, photostructural changes revealed through UPS 2-45059  
 AgGaGeSe<sub>4</sub>, cryst. struct. determ. 2-35468  
 As-Ge-Se, glasses and melts, thermal and elec. cond. 2-8683  
 As-Ge-Se system, elec. cond. in glassy and liq., states across GeSe<sub>2</sub>-As<sub>2</sub>Se<sub>3</sub> and GeSe<sub>2</sub>-AsSe sections and with excess Se conc. 2-26393  
 As-Ge-Se system with excess Se, vitrification temp. calc. method 2-40279  
 As-Ge-Te glasses, pure and doped, elec. and dielec. props. 2-17075  
 As-Se-Ge, amorphous film, anal. of relief-type gratings (*Japanese*) 2-39589  
 As<sub>25</sub>Ge<sub>10</sub>Te<sub>65</sub>, amorphous, dielec. const. and loss meas. 2-17390  
 As<sub>30</sub>Te<sub>48</sub>Ge<sub>10</sub>Si<sub>12</sub>, amorphous, transient switching process, simple analytical explanation 2-8840  
 Ba<sub>2</sub>Ge<sub>2</sub>TiO<sub>8</sub>, glass-ceramic and single crystals, piezoelec. props. 2-51529  
 CdGeAs<sub>2</sub>, use in freq. conversion of CO<sub>2</sub> laser (*Japanese*) 2-20365  
 CoGe<sub>1.5</sub>Si<sub>1.5</sub>(Se<sub>1.5</sub>S), far IR lattice vibr. spectra 2-31491  
 Ga-Al-As-Ge quaternary system, phase diagram 2-13703  
 (GaSb)<sub>1-x</sub>Ge<sub>x</sub> films, single cryst. metastable, growth, thermal stability and characteristics 2-27089  
 (GaSb)<sub>1-x</sub>Ge<sub>x</sub>, metastable single phase polycryst., from annealing of amorphous mixtures 2-51015  
 GaSe<sub>2</sub>Te, glasses, broken chalcogen chemical order 2-40272  
 Ge-Ag-S(Se) glasses, X-ray diffr. radial distrib. functions 2-45052  
 Ge-As solid solution, lattice const. meas. 2-21103  
 Ge-As(Sb)-S(Se) vitreous chalcogenides CaF<sub>2</sub>/Ge<sub>24</sub>As<sub>12</sub>S<sub>64</sub> type antirefl. coatings, visible and IR 2-16086  
 Ge-GeO<sub>2</sub> system, photomemory, structure defect form. 2-30929  
 Ge-S, chalcogenide semiconductor, defect and impurity effects 2-45906  
 Ge-S glasses, crystn., positron annihilation and Doppler broadening study 2-22108  
 Ge-Sa-As(Sb)(Bi) vitreous, influence of bond metallisation on elec. cond. 2-5402  
 Ge-Sb-S glasses, defect centres, ESR study 2-2135  
 Ge-Sb-S glasses, optical gap temp. depend., exponential absorpt. edge 2-13438  
 Ge-Sb-Se glasses, optical props., dispersion energy and struct. (*Russian*) 2-26857  
 Ge-Sb-Se system, beam-resistant films, prep. and struct., thermal stability, optical parameters 2-5317  
 Ge-Se, glass, doped, elec. transport props. 2-45971  
 Ge-Se evaporated film, amorphous, non-dispersive and dispersive transport 2-46019  
 Ge-Se system, elec. cond. in glassy and liq. states 2-26392  
 Ge-Se/Ag films, photo and electrochem. doping, AES and XPS study 2-45051  
 Ge-Se-Ga thin film, amorphous, trap distrib., SCLC obs. 2-30908  
 Ge-Se-Te system glasses, elec. cond. over wide temp. range, struct. component 2-5403  
 Ge-Te, glass, doped, elec. transport props. 2-45971  
 Ge<sub>24</sub>As<sub>12</sub>S<sub>64</sub>/CaF<sub>2</sub> type antirefl. coatings for Ge-As(Sb)-S(Se) vitreous chalcogenides in visible and IR 2-16086  
 GeAsSe, crystal struct. determ. 2-21091  
 GeB<sub>2</sub>As<sub>20</sub>, rhombohedral single cryst. solid soln., X-ray diffr. study 2-40344  
 Ge<sub>20</sub>Bi<sub>8</sub>Se<sub>80-x</sub>, n-type semiconducting chalcogenide glasses, photoconductivity 2-51236  
 Ge<sub>20</sub>Bi<sub>8</sub>Se<sub>70-x</sub>Te<sub>10</sub>, n-type semiconducting chalcogenide glasses, photoconductivity 2-51236  
 Ge<sub>1-x</sub>C<sub>x</sub>, amorphous, ESR g-values due to dangling bonds, EHT calc. 2-36430  
 GeC<sub>1-x</sub>CD, XVD coating, struct. and optical props. 2-45773  
 GeCl<sub>4</sub>, Ar resonance photolysis products, IR matrix spectra 2-29589  
 GeCl<sub>4</sub> liq., partial struct. factors, X-ray determ. (*German*) 2-50509  
 GeCl<sub>4</sub>(a<sup>2</sup>Σ<sup>+</sup>-X<sup>2</sup>Σ<sup>+</sup>) emission system, vibr. anal. 2-29622  
 GeH<sub>4</sub>, ν<sub>3</sub> and ν<sub>1</sub> IR band anal., vibr.-rot. interaction, isotope effects 2-11474  
 GeH<sub>4</sub>, ν<sub>4</sub> IR band, tunable diode laser study 2-49409  
 GeH<sub>4</sub>, amorphous film, defects study, SAW technique 2-35874  
 Ge<sub>3</sub>N<sub>4</sub>-GaAs MIS devices, elec. characts. and memory behaviour 2-46147  
 Ge<sub>3</sub>N<sub>4</sub>-n-GaAs MIS devices, interface characts. determ. 2-30970  
 Ge<sub>2</sub>N<sub>2</sub>O, electronic band struct. calcs. 2-40785  
 GeO, A<sub>1</sub>T<sub>1</sub>X<sup>2</sup>Σ<sup>+</sup> band system, high resolution studies 2-11460  
 GeO optical fibres, stimulated Raman scatt. studies (*Chinese*) 2-49924  
 GeO<sub>2</sub>, α-quartz to rutile transition, kinetics under high press. 2-50840  
 GeO<sub>2</sub>, deposited on quartz crystal surface, RHEED struct. obs., epitaxy relations 2-16961  
 GeO<sub>2</sub> deposition, on SiO<sub>2</sub> (I), struct. and morphology 2-12926  
 GeO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>, vitreous, internal press. from elastic constants 2-25969  
 GeO<sub>2</sub>-MnO-Mn<sub>2</sub>O<sub>3</sub> system, phase diagram at 900°C 2-2493  
 GeO<sub>2</sub>-SiO<sub>2</sub>, glass preforms, pure and codoped, UV absorpt. obs. 2-39705  
 GeO<sub>2</sub>-(BaO) amorphous thin films, optical absorpt. edge, optical band gap 2-46804  
 GeS (001), density of empty states meas. in cond. band 2-8746  
 GeS, electroabsorption and optical absorpt. spectra 2-21982  
 GeS, electron impact, dissociative ionisation, Ge electron affinity calcs. (*French*) 2-34584  
 GeS, SCL currents, layer thickness depend., static current-voltage characts. meas. 2-36049  
 GeS single crystals, far IR transmission properties 2-26924  
 GeS single crystals, vapour grown, surface morphology and facet anal. 2-30725  
 GeS, thermoreflectance meas., 1.2-5.2 eV 2-13461  
 GeS<sub>2</sub>, cryst. struct. determ. 2-35468  
 GeS<sub>2</sub>, glass, high-pressure, optical studies 2-46574  
 GeS<sub>2</sub>-Te, glasses, broken chalcogen chemical order 2-40272  
 GeS<sub>2</sub>-Li<sub>2</sub>S(Na<sub>2</sub>S)(Ag<sub>2</sub>S), glass form. and ionic cond. 2-12824  
 GeS<sub>2</sub>-Na<sub>2</sub>S glass, superionic cond. and prep. 2-17659  
 Ge<sub>2</sub>S<sub>3</sub>, vitreous, electroabsorpt., polarised light anisotropy 2-46544  
 Ge<sub>2</sub>S<sub>3</sub> glass, paramag. defects, thermal quenching and generation, ESR study 2-5581  
 Ge<sub>2</sub>S<sub>3</sub>Ag<sub>2</sub> glasses, DC electrical cond. at high hydrostatic pressure 2-1902



**germanium compounds continued**

- GeS(Se), amorphous, local struct. EXAFS, XPS studies 2-45032  
 Ge<sub>2</sub>S<sub>3</sub>(Se<sub>2</sub>), chalcogenides, electron stimulated ESR 2-5582  
 GeS(Se)(Te), amorphous, electronic states calcs. 2-40764  
 GeSe (001), density of empty states meas. in cond. band 2-8746  
 GeSe, amorphous, small angle X-ray scatt., density-density correl. 2-12494  
 GeSe-Ge<sub>1-x</sub>S<sub>x</sub> system, chem. vapour transport and thermal behaviour, microgravity data 2-51780  
 GeSe<sub>2</sub> amorphous thin films, laser-induced phase transition 2-5762  
 a-GeSe<sub>2</sub> films, laser induced oscillatory phenomena, absorption coeff., photocurrent 2-36721  
 GeSe<sub>2</sub> glass, photoluminescence. spectra after thermal annealing 2-46750  
 GeSe<sub>2</sub> glass, reversible reconstruction and crystn. under laser irradi., Raman scatt. study 2-30410  
 GeSe<sub>2</sub> glassy films, self diffusion and kinetics of annealing, optical absorption edge meas. 2-21357  
 GeSe<sub>2</sub>, polarised IR and Raman spectra 2-26903  
 GeSe<sub>2</sub> refl. spectra (*Russian*) 2-13507  
 Ge<sub>10</sub>Se<sub>90</sub> and Ge<sub>70</sub>Se<sub>30</sub>, amorphous, chem. shifts of K-absorpt. discontinuities of Ge and Se 2-31585  
 Ge<sub>1-x</sub>Se<sub>x</sub> glass film, evaporated and sputtered, Raman study 2-5662  
 Ge<sub>1-x</sub>Se<sub>x</sub> glasses, heat capacities below 1K 2-40567  
 Ge<sub>1-x</sub>Se<sub>x</sub>:In(Cu)(Fe) glasses, photocond. and elec. cond., dopant effects 2-36089  
 Ge<sub>10</sub>Se<sub>80</sub>Te<sub>10</sub> and Ge<sub>33</sub>Se<sub>40</sub>Te<sub>26</sub>Se<sub>7</sub>, amorphous, chem. shifts of K-absorpt. discontinuities of Ge and Se 2-31585  
 GeSe<sub>2</sub>Te films, charged defects, Poole-Frenkel effects study 2-45992  
 Ge<sub>1-x</sub>Sn<sub>x</sub>S<sub>1-x</sub>, Raman scatt. study of long-wavelength optical phonons 2-36648  
 Ge<sub>1-x</sub>Sn<sub>x</sub>Se, Raman scatt. study of long-wavelength optical phonons 2-36648  
 GeTe amorphous thin films, elec. cond. mechanisms 2-13083  
 GeTe, bonding in liquid and amorphous binary semiconductor alloys 2-8436  
 GeTe, low temp. elec. resist. and Debye temp. 2-13079  
 GeTe, plasma IR reflection, conc. phase heterogeneity 2-46612  
 GeTe, thermoelec. hole spectrum model of transport props. 2-26424  
 GeTe-AgBiTe<sub>2</sub> system, physicochem. investig. of phase diagram 2-5207  
 GeTe-Bi<sub>2</sub>Te<sub>3</sub>-Cu<sub>2</sub>Te<sub>3</sub> quasiternary system, electrophys. props. of GeTe-based solid solns., double doping effect 2-13089  
 GeTe<sub>4</sub>:Ag, amorphous films, Ag diffusion kinetics, Rutherford backscatt. study 2-45625  
 Ge<sub>0.8</sub>Te<sub>0.2</sub>, amorphous, <sup>125m</sup>Te ion implanted, Mossbauer study of disorder 2-41238  
 Ge<sub>3</sub>Te<sub>1</sub>S<sub>3</sub>Sb<sub>2</sub>, amorphous films, elec. props. (*Chinese*) 2-5408  
 IrGe<sub>1-x</sub>S<sub>x</sub>(Se<sub>1-x</sub>), far IR lattice vibr. spectra 2-31491  
 MnS-Ga<sub>2</sub>S<sub>3</sub>-GeS<sub>2</sub>, vitreous, mag. susceptibility and high field magnetisation (*French*) 2-13275  
 Mo-Ge<sub>1-x</sub>Te<sub>x</sub> amorphous film, elec. transport and struct. 2-40913  
 Pb<sub>1-x</sub>Ge<sub>x</sub>(VO<sub>4</sub>)<sub>2</sub>, centrosymmetric crystal, electrogyration study 2-13451  
 Pb<sub>1-x</sub>Ge<sub>x</sub>Te injection laser fabrication 2-16028  
 Pb<sub>1-x</sub>Ge<sub>x</sub>Te, optical props. in rhombohedral and cubic phases 2-31481  
 RhGe<sub>1-x</sub>S<sub>x</sub>(Se<sub>1-x</sub>), far IR lattice vibr. spectra 2-31491  
 S-Ge, vitreous, order parameter in glass transition, Raman spectra study 2-36629  
 Sb-Ge-Se system, elec. cond. glassy and liq. states 2-26394  
 Sb-Ge-Se system with excess Se, vitrification temp. calc. method 2-40279  
 a-Se-Ge alloys, Raman spectra and average band gap meas. 2-45058  
 Se-Ge-As glasses, fracture toughness, microhardness, and Young's modulus 2-36945  
 Se<sub>1-x</sub>Ge<sub>x</sub>:Ag film, amorphous, bilayer system for high resolution optical imaging 2-39709  
 Se<sub>94</sub>Ge<sub>6</sub>Te<sub>7</sub>, amorphous film, carrier mobility, thermal annealing and light irradi. effects 2-13199  
 Si-Ge-As-Te-(Mn), glassy semicond. elec. cond. in high elec. fields 2-51195  
 SiCl<sub>4</sub>-GeCl<sub>4</sub> mixtures, liq., partial struct. factors, X-ray determ. (*German*) 2-50509  
 SiO<sub>2</sub> optical fibres, GeO<sub>2</sub> doped, OH overtone vibr., Raman spectra 2-44472  
 SiO<sub>2</sub>-GeO<sub>2</sub> glass, material dispersion zero 2-16078  
 SiO<sub>2</sub>-GeO<sub>2</sub>-F-P<sub>2</sub>O<sub>5</sub> single mode fibres, chromatic dispersion effects calc. 2-44452  
 Si<sub>18</sub>Te<sub>45</sub>As<sub>28</sub>Ge<sub>29</sub>, amorphous chalcogenide IR emitting diode, optical props. 2-36705  
 Te-Ge system, glass formation 2-50857  
 Te-GeTe doped eutectic alloys, electrophys. props. and struct. doping influence 2-40882  
 Te<sub>48</sub>As<sub>30</sub>Si<sub>12</sub>Ge<sub>10</sub>, chalcogenide glass threshold switching devices, thermal cond., temp. meas. using liquid crystals 2-36108  
 Te<sub>39</sub>As<sub>36</sub>Si<sub>17</sub>Ge<sub>7</sub>P, glass, field effect meas. 2-40916  
 Te<sub>83</sub>Ge<sub>15</sub>, semicond. glasses, photocond. meas. 2-1955  
 Te<sub>80</sub>Ge<sub>20-x</sub>As<sub>x</sub> (A=Sb, Bi), glass transition and crystn. effects, thermal anal. 2-12499  
 Te<sub>83</sub>Ge<sub>10</sub>Sb<sub>5</sub>, semicond. glass, photocond. meas. 2-1955  
 ZnGeP<sub>2</sub> p-n homojunction diodes, photoresponse anisotropy, bias voltage depend. 2-13136  
 ZnGeP<sub>2</sub>, pseudopotential calcs. of band struct. 2-1822

**getters**

- see also vacuum techniques*  
 MOS capacitor, improved oxide from backsurface Ar implantation 2-2006  
 space chambers, small, vac. pumping systems (*Japanese*) 2-43037  
 vacuum deposition processes using inert gases, gettering of contaminant gases using expanded metallic foam 2-51815  
 Ba getter film, residual gas interactions, AES and XPS study 2-48711  
 GaAlAs, growth by low-pressure MO-CVD, gettering of O<sub>2</sub> 2-5821  
 GaP:N, Al<sup>2+</sup> postimplantation gettering effects in p-n junctions 2-12627  
 Si, gettering and redistrib. of O, 300 to 500°C 2-8536  
 Si wafer, Au gettering by P diffusion and Ar implementation, mech. and limitations 2-1671  
 Si wafer, thermally induced defect behaviour and effective intrinsic gettering sink 2-35505  
 Si wafer processing, defect and contamination control 2-25866  
 Si:Au, implantation gettering of Au, neutron activation study 2-35519

**GFRP** *see glass fibre reinforced plastics***giant pulsations (earth)** *see micropulsations***giant resonances** *see nuclear collective states and giant resonances***giant stars**

- see also supergiant stars*  
 Algol binaries, totally eclipsing, cool subgiants brightness var. due to transfer events, obs. 2-28497  
 AX Andromedae, Mira variable, period revision from AAVSO light curve 2-10454  
 angular diameters, meas. by two-telescope interferometry. at optical wavelengths 2-28445  
 anomalous giant stars in Magellanic Clouds clusters, absolute magnitudes and evolution 2-48238  
 HS Aquilae, long-period variable, possible change in period 2-33040  
 AS 296, high vel. symbiotic or disk star, visible spectral obs. 2-38217  
 GQ Aurigae, Mira variable, period and light curve 2-10455  
 binary in bipolar nebula, nebula model involving primary giant mass ejection 2-14901  
 WX Canis Minoris, Mira variable, period revision from AAVSO light curve 2-10454  
 Y Capricorni, long-period variable, revised period and light curve 2-10456  
 5 Ceti (HR 14), new and pu ling variable star, photoelectric photometry 2-3277  
 o Ceti (Mira), late-type variable star, linear polarisation obs. in (1981) 2-38206  
 chromospheric UV obs. 2-53244  
 FK Comae Berenicens, G-type giant-star, regular vars. in H $\alpha$  profile 2-33033  
 FK Comae Berenicens, UBVRI photometry and light curves 2-38199  
 T Coronae Borealis, recurrent nova, evidence for periodic eruptions related to orbital phase 2-38208  
 CI Cygni, eclipsing symbiotic star, photoelectric obs. during egress from eclipse 2-38204  
 CH Cygni, high-dispersion obs. 2-33044  
 CI Cygni, symbiotic eclipsing binary, viable spectral obs. (*French*) 2-33035  
 CH Cygni, symbiotic star, new outburst report and UBV photometry 2-38202  
 CI Cygni, symbiotic star 's-process episode' as eclipse ingress 2-48249  
 early-type stars, mass-loss rates determ. by fitting Balmer alpha profiles 2-3242  
 F-K giants, coronae, soft X-ray emission in cool half of H-R diagram 2-28439  
 G5-M3 red giant branch stars, absolute mags. and space motions 2-48236  
 G-type giant stars, rotation and turbulence meas. 2-28452  
 GW Geminorum, eclipsing binary, subgiant secondary structure, BV photometry 2-33076  
 AU Geminorum, long period variable, OH maser emission, SHF obs. 2-23298  
 Gliese 83.3, red variable star, seven colour photoelectric photometry 2-6601  
 HD 115444, extreme Population II. Ba star, model atmosphere analysis 2-48242  
 HD 182040, H-poor C star search for C<sub>2</sub><sup>-</sup> features 2-48246  
 HD 21018, 30021, 158837, 190658, spectroscopic orbits from photoelectric radial vels. 2-48275  
 HD 27144, spectroscopic binary orbit from photoelectric radial vels. 2-6641  
 HD 34454, semi-regular variable, brightness var. assoc. with refl. nebula, UVB obs. 2-42697  
 HD 84903 and 184711, halo stars, chromosphere emission and mass loss, UV obs. visible 2-33009  
 93 Herculis, candidate Ba star, differential curve of growth anal. 2-38214  
 high luminosity stars with initial mass >3M $\odot$ , numbers anal. 2-14920  
 HR 2947, energy distrib., possible variability due to thin gass shell form., obs. 2-14854  
 HR 551, giant spectroscopic binary, orbit and radial vel. obs. 2-38252  
 HR 774, Ba II star, elimination of C<sub>3</sub> as Bond-Neff depression opacity source 2-53270  
 in / Ursa Minor dwarf galaxy, metal abundance range 2-28557  
 IRC+10216 (CW Leonis), circumstellar shell props. from IR spectroscopy 2-53381  
 late type, (2,0) CN band spectra, visible obs. 2-38183  
 late type, evolution, mass loss rates and coronal temps. 2-10405  
 late type stars, chromosphere emission lines, UV obs. 2-33018  
 late type stars, space density distrib. in solar neighbourhood 2-10414  
 late type stars far UV line anal., atm. characts., obs. 2-18759  
 long period variables, SiO maser radiative pumping model 2-14762  
 low mass evolution, zero age main sequence to asymptotic giant branch 2-38163  
 36 Lynx, B-type giant, visible spectra identification, obs. 2-33007  
 M3, M13, globular clusters, C and N abundances in giant stars 2-33015  
 M-type emission line stars from two objective prism lists, additional and newly-named variable stars 2-38065  
 M-type stars in the Galaxy, evidence for two populations 2-10413  
 M-type stars space distrib. towards Cassiopeia, spectral classification and UVB obs. 2-10413  
 metal-deficient giant stars, temps., metallicities and colour excesses from Vilnius system photometry 2-38180  
 Mira type variables, circumstellar shell, SiO masers, ground vibr. state prod. 2-14858  
 Mira variables in Baade windows, IR photometry rel. to distance to galactic centre 2-38213  
 NGC 5139 globular cluster faint subgiants, abundances, membership and motion, visible spectra obs. 2-10489  
 OH 26.5+0.6, OH/IR star, circumstellar shell/envelope OH maser emission, UHF obs. 2-23299  
 $\omega$  Orionis, Be star, shells and mass loss at polar latitudes, spectral anal. 2-53274  
 U Orionis, Mira variable, OH maser emission evolution, UHV obs. 2-6597  
 $\beta$  Pegasi, shell velocity fields 2-38173  
 AG Pegasi, symbiotic star, orbital period from UBV photometry 2-6603  
 Perseus I star field, star space density and interstellar extinction, RGU obs. 2-38274  
 extreme Population II stars, C/Fe ratios meas. 2-3251  
 red giant interiors, shell flashes 2-3256



**giant stars continued**

- red giants expansion, interaction with planets, accretion shock detect. 2-28513  
 red giants physical processes, conference, Sicily, Italy (September 1980) 2-23369  
 S-type stars in IRC and AFGL catalogues, possibility of circumstellar shells 2-10409  
 HM Sagittae, symbiotic star, visible spectra and photometry obs. (*Russian*) 2-6606  
 subgiants, solar type, Li abundances and Ca II K-line chromosphere flux 2-10401  
 superluminous giants in Magellanic Cloud clusters 2-10411  
 symbiotic stars, soft X-ray obs. of 19 objects 2-14866  
 symbiotic stars (*Japanese*) 2-53271  
 symbiotic stars as old disk population, radial vel. anal. 2-38218  
 Z Ursae Majoris, semi-regular variable star, periodicities from Fourier anal. of light curve 2-10453  
 V1068 Cygni, possible long-period RS Canum Venaticorum star, photometric and spectroscopic obs. 2-48283  
 variable giant stars, analytical solns. of radial pulsation eqn. for rot. and mag. star models 2-6589  
 variable stars of long-period, pulsations, grain condensation and mass loss 2-28461  
 variables, high-vel. long-period objects, atmospheric kinematics 2-48261  
 X-ray emission, differential rotation and dynamo action 2-48233  
 C stars,  $^{13}\text{CN}$  line profiles and C star  $^{12}\text{C}/^{13}\text{C}$  ratio 2-38220  
 C stars, effects of gap in stellar mass distribution 2-32993  
 C-stars in Magellanic Clouds and Galaxy, luminosities and IR props., JHK obs. 2-14920  
 OH/IR star distrib. and galactic bulge mass models 2-38195  
 $^{16}\text{O}(\alpha,\gamma)^{20}\text{Ne}$  reson. reaction rate and screening effect 2-24252  
 SiO maser  $\nu=1$ ,  $J=1-0$  transition, flux correlations 2-48231

**Gibbs free energy** see free energy

**Gibbs function** see free energy

**Ginzburg-Landau theory**

- antiferromagnetic superconductors, behaviour near lower crit. field, vortex line and vortex lattice creation 2-13251  
 Bose gas model, dynamic renormalisation group treatment 2-28757  
 ferromagnetic superconductors, vortex phase stabilisation, generalised Ginzburg-Landau theory 2-13231  
 first order phase transitions, kinetics, Landau-Ginzburg eqn. anal. 2-45524  
 generalized Ginzburg-Landau equations, slaving principle and center manifold theorem 2-15128  
 hard-mode instabilities, time-depend. Ginzburg-Landau eqns. 2-23457  
 hollow superconductors in a steady magnetic field, Ginzburg-Landau eqns. appl. (*Chinese*) 2-17205  
 incommensurate phase transitions, ground state determ. 2-45526  
 infinite order critical points 2-21513  
 London limit, Ginzburg-Landau eqns. soln. in special coord. system (*Chinese*) 2-21711  
 nonequilibrium superconductivity, kinetic eqn., multiple gap states, Ginzburg-Landau theory 2-21730  
 reversible and irreversible processes studied using variational principle (*German*) 2-38402  
 superconductor, charge imbalance waves, Ginzburg-Landau theory 2-36207  
 superconductor, quasi one-dimens., fluctuation effects 2-36235  
 superconductors, nonequilibrium, stability with different electron and hole spectral branch populations (*Russian*) 2-41055  
 thiourea- $\text{d}_4$ , field-induced commensurate phase 2-51531  
 type II superconductor, anisotropic, currents near upper crit. field 2-46214  
 type II superconductor, attractive interaction between surface and single flux line 2-41089  
 Al superconducting strip, freq. depend. of AC crit. current amplitude 2-41057  
 Al, voltage response time delay to supercritical current pulses 2-31108  
 Bi film, amorphous, resist. transition, Ginzburg-Landau eqn., Kosterlitz-Thouless theory 2-17193  
 H, spin polarised, total and superfluid density profiles in an inhomogeneous mag. field 2-35860  
 Nb-Cu composite superconductor, anisotropic critical fields 2-31111  
 (SN), coupled fibrous supercond., upper crit. fields, Ginzburg-Landau theory 2-26567  
 Sn-Al alloys, supercond. props. 2-17185

**glaciology**

- accumulation region of glacier, response to climate change 2-6402  
 E Antarctic ice sheet, response to climate change 2-6402  
 Antarctic meteorite falls, transport in ice and accumulation 2-32961  
 Antarctica, ice core sample meas. rel. to atmosphere  $\text{CO}_2$  concentration during past 40000 yr 2-37958  
 arctic regions, glacier melt rel. to streamflow regimes 2-14501  
 Batura Glacier, terminus kinematical study 2-10089  
 bergschrund crevasses in Alberta, Canada 2-3037  
 China, Laohugou glacier no.12, variations and runoff effects 2-42409  
 climate model, with mantle and ice sheet flow 2-10157  
 continental ice sheets, crustal deformation 2-6361  
 deglaciation from last ice age due to oceanic mechanisms 2-28113  
 Earth rotation variations due to global water exchanges 2-27973  
 Erebus Glacier Tongue melting, induced thermohaline steps in McMurdo Sound 2-14487  
 fluvio-glacial deposits, Deux-Alpes, France, palynological study and radio-carbon dating (*French*) 2-14498  
 glacier beds sounding, detailed study using radio-echo techniques 2-10085  
 S. Greenland, ice core record of summer weather, since 200 BC 2-3082  
 Greenland, ice core sample meas. rel. to atmosphere  $\text{CO}_2$  concentration during past 40000 yr 2-37958  
 Greenland Ice Sheet, no correl. between nitrate concs. and supernova 2-37901  
 Haute Savoie, France, glacial overdeepenings Quaternary deposits (*French*) 2-14499  
 ice age climate model, annual snow-ice boundary cycle 2-42463  
 ice sheet dynamics 2-47928  
 Jakobshavn floating glacier, W. Greenland, tidal flexure obs. 2-3043  
 Lake Donjek, Yukon Territory, Canada, estimates of magnitude of glacier outburst floods 2-37894  
 Lake Manitoba, Canada, ice sheet retreat rel. to Late Quaternary history 2-14508

**glaciology continued**

- Northern Hemisphere, model study of relation between glaciation and precip. rates 2-18560  
 outwash aquifers, electrical resistivity-hydraulic conductivity 2-37908  
 Permocarboriferous glacial varves from Itarare Subgroup, S Brazil 2-22884  
 Pleistocene glacial periods, effects of Arctic Ocean ice sheets on O isotope and sea level records 2-37876  
 rhythmites, spectral analysis of Permocarboriferous geomagnetic var. data 2-22885  
 rock glacier, talus-derived, internal struct. deduced from hydrological parameters 2-37893  
 water conduit flow within glacier ice, intraglacial channel flow appls. 2-30227  
 Weddell Sea, sedimentological evidence for late Wisconsin glaciation 2-18475  
 Late Wisconsinan glaciation, models for northern Maine and adjacent Canada 2-14507  
 Pb natural concs. in ancient ice from Greenland and Antarctica 2-52896

**glass**

- for semiconductor glasses see amorphous semiconductors and chalcogenide glasses  
 see also aluminosilicate glasses; amorphous semiconductors; borate glasses; chalcogenide glasses; germanate glasses; glass fibre reinforced plastics; glass fibres; glass industry; glass-metal seals; optical glasses; phosphate glasses; phosphosilicate glasses; vitreous state; vitrification  
 acoustic props. at low temps. and low freqs. 2-16725  
 alkali silicate glass, mixed-alkali, elec. cond. theory, electronegativity and internal ion exchange rel. 2-12822  
 alkali silicate glass, surface tension rel. to microhardness 2-30742  
 alkali silicate glasses, relaxation transitions and deform. below glass-transition temp. 2-9364  
 alkali silicate glasses, struct. determ. by XPS 2-30401  
 alkali silicate glasses, viscous flow, fluctuation microcavity vol., activation vol. and molar vol. 2-8450  
 brittle fracture under combined action of thermal and mechanical loads 2-31790  
 bulk amorphous oxynitride structs., using network theory of glasses, anal. 2-50554  
 calcine glasses for high level radioactive waste storage, volatility meas. 2-34126  
 ceramic, machining damage effect on strength 2-17752  
 ceramic synthesis, optimisation of technological parameters 2-5852  
 ceramic-glass coatings with quartz, X-ray investigation of microstresses 2-37036  
 ceramics, fracture toughness meas., SEM secondary electron and backscattered electron image appls. 2-17809  
 collective dissociative desorption of  $\text{H}_2\text{O}$ , flash tube effect 2-52233  
 covalent, atomic tunnelling states 2-25755  
 crack growth, slow, post-indentation 2-2584  
 crack velocity measurement, modified sonic technique 2-5998  
 devitrified and technical, strength, seawater influence 2-5918  
 dielectric glasses, Zeeman transition in quadrupole perturbed spin systems 2-46413  
 E glass, strength in soln. of varying pH 2-27310  
 E-glass fabric, organic acid effect 2-17753  
 elastic and heat characteristics correl. 2-13767  
 electron microprobe analysis of Na content 2-6072  
 electron pairs self-localisation in tunnelling states 2-17031  
 electronic-vibrational transitions in Raman scatt. spectra of adsorbed Xe atoms (*Russian*) 2-13479  
 enamel slips, thixotropy eval. by disturbance method 2-30080  
 enamel-glass coatings on steel tubes, temp. regime for induction annealing 2-37003  
 enamels, corrosion 2-36986  
 F11, irradi. thermoluminesc. detectors, correction (*Czech*) 2-34213  
 flat, high-temp. relax. processes 2-41666  
 float glass stretching, two-dimens. computer simulation model 2-36831  
 float-glass plates, acoustic emission in fracture 2-31776  
 fluorozirconate glasses as solid electrolytes, preliminary studies (*French*) 2-16896  
 fracture, acoustic emission 2-31776  
 fracture, emission of electrons and positive ions 2-9398  
 glass:  $\text{Cr}^{3+}$  based materials, fluorescent, for luminescent solar collector 2-52387  
 glass:  $\text{Cr}(\text{III})$ , luminesc. conc. quenching, EPR study 2-31265  
 glass:  $\text{Mn}^{2+}$ , 3d level struct., luminesc. excitation spectra obs. 2-9192  
 glass:  $\text{Nd}^{3+}$ , Faraday effect and optical recording of EPR, laser polarimetry method 2-36411  
 glass-crystalline composite, deform. calcs., X-ray microstress meas. 2-1550  
 glass-isopropanol slurries, electrophoretic deposition of coatings 2-9294  
 glass-liquid transition, nature of internal changes, review 2-8616  
 glass-methyl alcohol-glass system, acoustic wave propag., dispersion relation 2-11873  
 glass-water interface, adsorption of surface-active azo dye, reson. Raman spectra 2-5716  
 glazes and ceramics, F concentration, determ. with photoselective electrode 2-31964  
 granite glasses containing Sn, Mossbauer spectra (*Czech*) 2-31337  
 hardness indentations, elastic recovery 2-5945  
 high-level waste solidification 2-24298  
 high-silica, mech. strength, effect of surface energy 2-2522  
 impurities dephasing, temp. depend. 2-51128  
 insulator, surface flashover measurements in vacuum and  $\text{N}_2$  gas 2-17408  
 ion exchange, bending strength, surface damage effect 2-13818  
 ionic conductive glasses, electrochem. props. 2-26118  
 ionically conducting, shape of complex resistivity arcs 2-16846  
 Kapitza conductance of localised surface excitations in glass-liq. He interface 2-35878  
 laminated, safety, thermal cond., heating rate effect, 30-150°C 2-30665  
 laser beam heating, comparison with the effect of ball lightning 2-42453  
 laser excited fluorescence spectroscopy, book contrib. 2-17549  
 leach tests for radioactive waste storage 2-34118  
 leached, evidence for interdiffusion of hydronium and alkali ions 2-12844  
 low temperature glasses, electron scavenging, multi-step tunnelling model 2-12504  
 melt, dissolution and growth of rising bubble containing single gas 2-35206



## glass continued

- melting processes, intensification by thermohydrodynamic methods 2-25235  
 melts, mol.-kinetic model for critical cooling rates 2-8445  
 melts, substrates prod. for surface energy meas. 2-16929  
 membrane, finely porous, water filtration 2-17915  
 3-methylpentane, electron absorpt., temp. effect, pulse radiolysis effect 2-22479  
 microcavity H<sub>2</sub> storage using hollow glass microspheres, two grades assessment 2-9692  
 microshell laser imploded target, X-ray emission spectra, O<sub>2</sub> ion distrib. (Chinese) 2-9218  
 molecular glass, localised molecular-ion and exciton states, photoemission, UV absorpt. and transport 2-35974  
 molten, convective currents, role of deform. of free surface 2-30141  
 molten, flow modelling methods 2-12148  
 molten, gas bubble expulsion by surface-tension gradient method 2-5851  
 molten glass, cooling-solidification process, radiative transfer 2-35137  
 nonradiative transitions, inductive-resonance theory 2-26948  
 nuclear track detectors, solar eclipse effect on response 2-29479  
 optical constants determ. using IR spectroscopic ellipsometry, BK7 glass 2-28887  
 organic glass, nonphotochem. hole burning at OK 2-26958  
 organic glasses, excess electrons recombination kinetics at low temps. 2-13552  
 oxide glass, positronium form., paramag. impurities influence 2-46815  
 oxide glasses, coordination of Fe<sup>3+</sup> and Mn<sup>2+</sup> ions, model calcs. 2-2127  
 oxide glasses, local structure, Na environments, EXAFS study 2-45033  
 packed beds of glass or metal particles at low temps., thermal conductivity meas. (Japanese) 2-3580  
 particle-detector track diameter and area meas. 2-49223  
 phase separation, ESR studies 2-31286  
 phlogopite mica-glass composites, thermal conductivity and linear expansions 2-35759  
 plate, differential device for optical distortions determ. 2-27371  
 plate elements, hardening stresses optimisation 2-5917  
 plate glass, of varying As content, gamma-radiation effect as strength 2-31778  
 point and line defects in glasses 2-40284  
 polar glass ceramics, pyroelec., piezoelec., dielec. and electromechanical props. 2-31381  
 polybutadiene-glass adhesion strength, rel. to no. of chem. bonds. 2-37040  
 polymer glasses, eqn. of state to interpret time depend. free vol. 2-16244  
 powder, porous bodies, penetration of liq., influence of necks between powder particles (Japanese) 2-2475  
 preparation, with high chem. stability 2-27134  
 properties and research topics, review 2-45048  
 Pyrex, adsorpt. of polystyrene, conformation and dimensions, viscosimetry study 2-5299  
 Pyrex, film, Ar and He sputtering yields, meas. using quartz crystal oscillator (Japanese) 2-27045  
 quartz glass, annealing influence on ultrasonic velocity 2-5190  
 quartz glass, Faraday rot., energy gap determ. 2-26868  
 quartz glass heated by CW long-wave light, pulsed optical breakdown 2-5778  
 quartz-glass, heat-resist., corrosion resist. 2-9441  
 quasidefect connection with glass formation in substances with high lone-pair electron conc. 2-21037  
 radioactive vitrified waste, leach rates and radiation effects 2-42056  
 radioactive waste, vitrified, aqueous leaching mechanisms 2-39143  
 radioactive waste, vitrified, immobilisation, glass corrosion concepts appl. 2-39139  
 radioactive waste, vitrified, leach tests, pH control 2-39144  
 radioactive waste disposal in rhyolite glass, hydrothermal leaching study 2-32164  
 radioluminescence, shot-noise-driven Poisson process discrimination by external dead time 2-34705  
 radioluminescence photon counting distrib., fluctuations of multiplied-Poisson light 2-4473  
 rod, bending motions, volume viscosity, compressibility, shear behaviour, logical and thermodynamic models 2-25225  
 SAXS anal. of nucleation, matrix scattering and sample surface effects 2-50827  
 scintillator glass SCGIC shower detector, longit. response 2-24486  
 semiconducting, AC conductivity below 10<sup>11</sup> Hz 2-40899  
 sheet, air quenching 2-36828  
 sheet, optical indices improvement, quality control 2-36827  
 short-range order parameters 2-1407  
 silica glasses, chemical stability for radioactive waste fixation 2-13835  
 silicate, high-temp. sp. ht., average and true values, temp. depend. 2-40568  
 silicate and silicate salt glass-forming melts, viscosity rel. to struct., conc. depend., polymer soln. theory 2-12803  
 silicate glass: Cu, high SiO<sub>2</sub> content, nature of colour centres of Cu-ruby type 2-9199  
 silicate glasses, containing S, Se, and Cd compound additions, colour centres 2-9173  
 silicate glasses, dielec. props. and struct., liquation regions 2-5623  
 silicate glasses, IR spectra, rel. to nonradiative deactivation of rare earth ions 2-26921  
 silicate glasses, local struct. 2-21038  
 silicate glasses containing Sb oxide or As oxide, elec. props. 2-16897  
 silicates, binary, quantitative anal. of O<sup>0</sup>, O<sup>-</sup> and O<sup>2-</sup> ions by XPS (Japanese) 2-5053  
 soda lime glass detectors, high dose  $\gamma$ -irrad. effect on track development props. 2-4175  
 solar photovoltaic arrays, arrays, low-cost, glass encapsulation 2-37223  
 spectroscopic and lasing props. of highly conc. glasses 2-44302  
 structural changes during heat treatment 2-27192  
 structural model of two-level states 2-21039  
 subcritical crack growth, brittle fracture (Russian) 2-5940  
 substrate, sputtered etched, contamination, Rutherford backscatt. study 2-45787  
 surface contours, ion-erosion, simple meas. method for the charact. curve S( $\theta$ )/cos $\theta$ /S(0) 2-33493  
 surface reacted with water, elec. resist. 2-1658  
 surface stress meas., by critical ray (Japanese) 2-52166  
 surfaces, bombarded by noble gas ions at 30...50 keV, electron microscopic investigations 2-5785  
 tellurate glasses, O anomalies, rel. to props. 2-5055

## glass continued

- tempering, meas. of degree, in large pieces 2-27191  
 textolite, stress waves arising from rapid heating by laser radiation 2-30524  
 thermal conductivity, temp. depend. 2-26152  
 thermally-lowered fission-track age correction 2-19915  
 toughening by metallic particles 2-17687  
 trimethylsilylation method, for silicate anions anal. (Japanese) 2-8443  
 two-level system, microscopic model 2-30405  
 undercooled, electrochem. behaviour, thermodynamic props., galvanic cells 2-13967  
 viscosity determination by ball pulling method 2-35727  
 volcanic glass, size correction and plateau age meas. by fission track method 2-10206  
 Ag halide:Cu photochromic glasses, effects of electron-hole separation on recomb. probability 2-5415  
 (Ag-As-S)-AgI(Br)(Cl) glasses, fast ion cond. 2-12823  
 AgI-Ag<sub>2</sub>MoO<sub>4</sub> superionic conducting glass, thermoelec. power 2-16858  
 AgI-Ag<sub>2</sub>WO<sub>4</sub>(Ag<sub>2</sub>MoO<sub>4</sub>):Cu<sup>+</sup>, Na<sup>+</sup> glass, superionic cond. and diffusion 2-16890  
 AgPS<sub>3</sub>-AgI(Br)(Cl) glasses, fast ion cond. 2-12823  
 B coordination calc. using partially relaxed Abe rule model 2-40281  
 B<sub>2</sub>S<sub>3</sub>-Li<sub>2</sub>S glasses, solid electrolyte, synthesis, struct., correl. and Raman spectra 2-16885  
 B<sub>2</sub>S<sub>3</sub>-Na<sub>2</sub>S glass, superionic cond. and prep. 2-17659  
 BeF<sub>2</sub> based glasses, rare-earth doped, struct., mol. dynamics simulation 2-8441  
 BeF<sub>2</sub>-NaF, fluid and glass, defects and F diffusion, mol. dynamics study 2-8663  
 CaF<sub>2</sub>-CaO-SiO<sub>2</sub> glasses, struct. study by XPS, X-ray emission, IR spectra, and F ionic refr. 2-30403  
 CaO-Al<sub>2</sub>O<sub>3</sub> glasses, crystn. characts., SEM study 2-50553  
 CaO-FeO-SiO<sub>2</sub>, crystn. of glasses and formation of sitalls 2-8448  
 Cs<sub>2</sub>O-Na<sub>2</sub>O-SiO<sub>2</sub> glasses, Brillouin spectra, US vels., and mech. props. 2-13501  
 Eu<sup>3+</sup>, in glasses, <sup>5</sup>D<sub>0</sub>-<sup>7</sup>F<sub>0</sub> transition, homogeneous and inhomogeneous line-widths 2-13534  
 F rapid determination, down to 0.1 wt.% by X-ray fluorescence spectrometry 2-37110  
 GeS<sub>2</sub>-Na<sub>2</sub>S glass, superionic cond. and prep. 2-17659  
 HfF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glasses, influence of processing conditions of IR edge absorpt. 2-5680  
 HfF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glasses, influence of processing conditions of IR edge absorpt. 2-13475  
 In-granular glass composite, structural magnetoresist. and Hall coeff. 2-5388  
 In-granular glass composite, structural magnetoresist. and Hall coeff. 2-8787  
 K<sub>2</sub>CO<sub>3</sub>-As<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, Raman spectra 2-5675  
 KI quartz glass, colorimetric  $\gamma$ -ray dosimeter 2-19776  
 K<sub>2</sub>O-Ga<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, migration of He 2-12852  
 Li containing glasses, rapidly quenched, ionic cond. variation 2-8669  
 Li-Li<sub>2</sub>S-P<sub>2</sub>S<sub>3</sub> glasses, fast ion cond. 2-12823  
 Li<sub>2</sub>O-SiO<sub>2</sub> glass, crystn., activation energy from derivative DTA curves 2-45049  
 Li<sub>2</sub>O-Ga<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, migration of He 2-12852  
 Li<sub>2</sub>O-MnO-Fe<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, mag. props., Mossbauer effect 2-21842  
 Li<sub>2</sub>O-SiO<sub>2</sub> glass system, elec. cond., heat treatment effects 2-35732  
 Li<sub>2</sub>O-ZrO<sub>2</sub>-SiO<sub>2</sub> system, phase diagram 2-2498  
 Li<sub>2</sub>O.2 SiO<sub>2</sub>, double nucleation in identical glass (Czech) 2-30411  
 Li<sub>2</sub>S-P<sub>2</sub>S<sub>3</sub>-LiI glass, superionic cond., and struct. 2-16888  
 Li<sub>2</sub>SO<sub>4</sub>-based glasses, roller quenching prep., struct. and ionic cond. props. 2-30402  
 Li<sub>2</sub>SiO<sub>3</sub> glass-ceramics, pyroelec. 2-2198  
 Na<sub>2</sub>O-BaO-Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> glasses, alkaline durability 2-52085  
 Na<sub>2</sub>O-CaO glass track detectors, etch pit cone angle, energy and Z-depend. 2-24483  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glass, sliding fracture in liquid environment 2-27313  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glass, median crack initiation and propag. beneath a disc glass cutter 2-27268  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glass, subcrit. crack growth, effect of corrosion 2-36944  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glass nuclear track detectors, pre-irradiation annealing effect on bulk etch rate 2-29478  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glasses, weathering and water leaching 2-52073  
 Na<sub>2</sub>O-CaO-SiO<sub>2</sub> glasses, SnO<sub>2</sub> coated, effects of alkaline solns. on surfaces 2-52074  
 Na<sub>2</sub>O-Ga<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, migration of He 2-12852  
 Na<sub>2</sub>O-SiO<sub>2</sub> glass, elec. relax. from hydrated surface layers 2-13407  
 Na<sub>2</sub>O-SiO<sub>2</sub> glass, fluctuations in ionic current induced by mech. strain 2-27302  
 Na<sub>2</sub>O-SiO<sub>2</sub> glass, subcrit. crack growth, effect of corrosion 2-36944  
 Na<sub>2</sub>O-SiO<sub>2</sub> glass struct., Raman intensity calc. 2-5670  
 Na<sub>2</sub>O.3SiO<sub>2</sub> glass, elec. cond., water content effect 2-50914  
 Nd: laser glass, nonradiative energy transfer processes 2-31555  
 PbO-SiO<sub>2</sub>, commercial, US attenuation 2-45387  
 PbO-SiO<sub>2</sub> (61.8 mol.%) glass, first row transition element impurities, optical and mag. props. 2-41383  
 PbO-SiO<sub>2</sub> glass, Raman and IR invest. 2-26891  
 PbO-SiO<sub>2</sub> glass melts, substrates prod. for surface energy meas. 2-16929  
 xPbO.(1-x)SiO<sub>2</sub> glass model of effective coordination states 2-8750  
 Si-Al-O-N based glasses, prep. and props. 2-9325  
 Si-O-N based glasses, prep. and props. 2-9325  
 SiO<sub>2</sub>, defect centres, <sup>29</sup>Si hyperfine struct. of nonbridging O hole centre and peroxy radical 2-31283  
 SiO<sub>2</sub> glass, stress corrosion, dissolution rate in water, press. depend. 2-36992  
 SiO<sub>2</sub> glass, struct. parameters, X-ray diff. determ. 2-25752  
 SiO<sub>2</sub>, luminesc. autoradiography after  $\alpha$ ,  $\beta$  or  $\gamma$  irradiat. 2-5743  
 SiO<sub>2</sub> porous glass, adsorption of biological materials in sea water 2-32168  
 SiO<sub>2</sub>:TiO<sub>2</sub> thermal expansion rel. to heat treatment 2-30639  
 SiO<sub>2</sub>-Li<sub>2</sub>O (Na<sub>2</sub>O) glass, ionic cond., computer simulation 2-16887  
 SiO<sub>2</sub>-Na<sub>2</sub>CO<sub>3</sub>-ZnO-CdCO<sub>3</sub>-ZnS-Se-Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, selenium ruby glasses, SAXS anal. of nucleation 2-50828  
 SiO<sub>2</sub>-Na<sub>2</sub>O-CaO-SnO<sub>2</sub>-Au, gold ruby glasses, SAXS anal. of nucleation 2-50829  
 SiO<sub>2</sub>-Na<sub>2</sub>O(K<sub>2</sub>O)(Li<sub>2</sub>O), binary glasses, H<sub>2</sub>O vapour effect on internal friction 2-51968  
 SiO<sub>2</sub>-Na<sub>2</sub>Si<sub>2</sub>O<sub>5</sub>, melt, enthalpy and thermal capacity 2-30633  
 SiO<sub>2</sub>-PbO-Fe<sub>2</sub>O<sub>3</sub> glass, ESR spectra, 300 to 700K 2-31268



**glass continued**

- SiO<sub>2</sub>-TiO<sub>2</sub>, highly dispersed, IR spectra obs. of struct. conversions 2-17457  
 TiO<sub>2</sub>-SiO<sub>2</sub>, glasses, effects of prep. history 2-2485  
 V contribution in view of ligand field theory 2-40856  
 V<sub>2</sub>O<sub>5</sub>-based binary systems, glass form. 2-12495  
 WO<sub>3</sub>-Li<sub>2</sub>O(Na<sub>2</sub>O)(K<sub>2</sub>O) glasses, rapid quenching technique prep., electrochromic props. 2-31674  
 ZnO opacified glazes, ligation rel. to crystn. 2-25747  
 ZnO/interdigital transducer/ZnO/glass struct., SAW electro-mechanical coupling constant 2-26202  
 ZnSO<sub>4</sub>-K<sub>2</sub>SO<sub>4</sub>-Mn(Co)(Ni) glasses, mag. susceptibility meas. 2-21764  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub>, influence of processing conditions of IR edge absorpt. 2-5680  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub>, influence of processing conditions of IR edge absorpt. 2-13475  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-ThF<sub>4</sub> glass, US propag., two-level tunnelling system 2-35602  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-ThF<sub>4</sub>-TbF<sub>3</sub> glasses, luminesc. props. 2-26962  
 ZrF<sub>4</sub>-ThF<sub>4</sub>-BaF<sub>2</sub> system glasses, elastic constants 2-12660  
 ZrO<sub>2</sub>-glass system, dielectric coating contrast in photoemission electron microscopy 2-46866

**glass fibre reinforced plastics**

- acrylic-acid-polypropylene copolymer, tensile stress strain curves (*Japanese*) 2-31754  
 conical shells, longit. compressed, supporting power 2-35075  
 cryogenic properties of filamentary-reinforced composites, review 2-2550  
 cryogenic struct. materials, mech. and phys. props. requirements (*Japanese*) 2-43026  
 cylinders, thick-walled, temp. stresses 2-36897  
 epoxy, reinforced, damping 2-50762  
 epoxy resin/phenol resin matrix, oriented, factors affecting physico-mech. props. (*German*) 2-22282  
 epoxy-fibreglass tension member support, ultimate strength, creep 2-13788  
 fibreglass laminate with simulated flaws orthogonal to surface, thermal NDT using liquid crystals 2-52126  
 glass-fabric-epoxide-resin composite piston for bubble chamber 2-13688  
 glass-fibre-epoxy composite, friction coeff. meas. 2-13825  
 metal-glass fibre material composite cylinders, supporting power taking into account edge effect 2-35065  
 Nylon 6, tensile stress strain curves (*Japanese*) 2-31754  
 phenol resin matrix, oriented, factors affecting physico-mech. props. (*German*) 2-22282  
 phenolic-based insulating materials, elec. cond. and thermal decomp. 2-8790  
 polyamide 6, reinforced, influence of water uptake on fatigue limit (*German*) 2-9411  
 polyamide-6-injection moldings, X-ray radiography (*German*) 2-22397  
 polyester composite, fibreglass reinforced, mech. props. meas. 2-22406  
 polyester fibreglass, pultruded, thermal and mech. props., low temp. meas. 2-22297  
 polyester matrix, compression strength, effect of kinked, misaligned and poorly adhering fibres 2-9367  
 polyester matrix, creep rupture and damage mechanisms 2-27308  
 polyester matrix, fatigue and failure mechanisms under complex stresses 2-17740  
 polyester matrix, interlaminar fracture energy and compliance 2-22307  
 polyester matrix, SMC R-50, interlaminar shear fatigue 2-13811  
 polyester matrix, unsaturated resin sheet moulding compd., rheological charact. 2-12117  
 polyester resin, reinforced, damping 2-50762  
 polyester resin matrix, oriented, factors affecting physico-mech. props. (*German*) 2-22282  
 polypropylene, tensile stress strain curves (*Japanese*) 2-31754  
 polystyrene matrix, molecular orientation effect on mech. props. 2-13782  
 shell, cylindrical, with branch pipe, stress state under axial compression 2-35064  
 silicon-based insulating materials, elec. cond. and thermal decomp. 2-8790  
 strength spread, rel. to struct. defects 2-31748  
 temperature stresses in thick-walled orthotropic cylinders on nonuniform cooling 2-20541  
 textile, stress strain state anal. when subjected to one-sided heating 2-36898  
 thermoplastic PET matrix, stress corrosion crack propag. 2-22355  
 toughness assessment, comparison of impact test methods 2-13906

**glass fibres**

- see also fibre optics; optical fibres*  
 blanket, standard reference material, effective thermal cond. 2-26151  
 communications technology appl. (*German*) 2-34905  
 diameter, effect on props., for reinforced composites 2-17699  
 E-glass, surface coatings, IR spectroscopic characterisation 2-16934  
 glass fibreboard, standard reference material, effective thermal cond. meas. 2-8680  
 insulant, apparent thermal conductivity, effect of compression and moisture content 2-35752  
 onion geometry study using average constant method 2-36829  
 optical fibres, precision fracture 2-34920  
 silicate, weakened by heat treatment, correl. between struct. and strength 2-41645  
 sound-absorbing materials, industrial and commercial noise control appls. 2-4648  
 thin dye layer coated, fluorescence enhancement induced by microstructure resonances of fibre 2-5745  
 Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, structural changes during heating, oxide additives influence 2-5217  
 Na-S battery, hollow fibre, recent developments and progress 2-22592  
 Na<sub>2</sub>O-BaO-Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> glasses, alkaline durability 2-52085

**glass formation** *see vitrification***glass industry**

- ceramic synthesis, optimisation of technological parameters 2-5852  
 optical fibre diameter; regulation and control by automatic system, BIS-2 meter 2-19079  
 processing, gas-bubble expulsion by surface-tension gradient method 2-5851

**glass-metal seals**

- gas bubble expulsion from molten glass by surface-tension gradient method 2-5851

**glass-metal seals continued**

- hermetic diffusion sealing of GKZ-A quartz and W at high temp. (*Chinese*) 2-6861  
 Kovar/glass bonding, new technique for surface prep. of metal 2-22370

**glass transition (glasses)**

- see also vitrification*  
 p-alkyl-p'-alkoxy-azobenzene mesophases, glass transition, DSC study 2-35691  
 basalt, glass transition obs. 2-32508  
 fundamental entropy change in transitions from liquid state 2-40572  
 internal changes, review 2-8616  
 metallic alloys, glass-forming ability, theoretical aspects 2-8613  
 nematic liquid cryst., dielec. relax. and glass transition 2-51526  
 order parameter description of glassy state 2-5058  
 organic glass-forming liquids, ESR obs. 2-41203  
 oxide glasses, viscosity in glass transition range (*Japanese*) 2-22290  
 PET, solid and molten, PVT props. 2-25761  
 properties and research topics, review 2-45048  
 PVC films, crystallinity and glass transition temp., annealing, thermal history and solvent treatment effect 2-16797  
 residual entropy and glass transition 2-26055  
 second-order transition, thermodynamics Landau theory appl. 2-26054  
 structural relaxation rate dispersion in liquid-glass transition 2-16597  
 supercooled liquid/glass transition, isothermal-isobaric computer simulation 2-8615  
 As-S glasses, retarded elasticity in glass transition range, creep meas. 2-13761  
 As-Se glass, inelastic props. at very low freq. 2-45360  
 As-Se glasses, dielectric consts., loss tangents, depend. on composition 2-17386  
 As<sub>2</sub>S<sub>3</sub>, amorphous, glass transition rel. to reversible photostruct. changes 2-26056  
 As<sub>2</sub>S<sub>3</sub> glasses, elect. props. 2-21612  
 As<sub>2</sub>Se<sub>3</sub> glass, temp. depend. of struct. factor up to glass transition 2-30404  
 B<sub>2</sub>O<sub>3</sub>-GeO<sub>2</sub> glass, retarded elasticity 2-41650  
 B<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O, (LiCl) glass, diborate and metaborate, fast Li<sup>+</sup> cond. 2-16886  
 Ge-Sa-As(Sb)(Bi) vitreous, influence of bond metallisation on elec. cond. 2-5402  
 Ge-Se system, elec. cond. in glassy and liq. states 2-26392  
 GeO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>, vitreous, internal press. from elastic constants 2-25969  
 Li salts in D<sub>2</sub>O and H<sub>2</sub>O, homogeneous nucleation and glass transition temp., doubly unstable glass regions 2-12716  
 Li<sub>2</sub>S-P<sub>2</sub>S<sub>5</sub>-LiI glass, superionic cond., and struct. 2-16888  
 Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub> glass, internal press. from elastic constants 2-25969  
 Na<sub>2</sub>O-GeO<sub>2</sub> glass, internal press. from elastic constants 2-25969  
 P-Se glasses, thermal capacity, 300 to 600K 2-26074  
 PbO-B<sub>2</sub>O<sub>3</sub> glasses, viscosity and thermal expansion in glass transition interval 2-26087  
 S-Ge, vitreous, order parameter in glass transition, Raman spectra study 2-36629  
 Se amorphous film, glass transition temp. depend. on heating rate and ageing 2-12756  
 Se glass, inelastic props. at very low freq. 2-45360  
 Se, glassy, γ-irrad., struct. relax. 2-21036  
 Se<sub>80</sub>Ge<sub>20-x</sub>As<sub>x</sub>, amorphous alloys, x=0.9, 0.85, US vel. behaviour near glass transition 2-1564  
 Se<sub>80</sub>Te<sub>20</sub> and Se<sub>90</sub>Te<sub>10</sub>, amorphous, US vels. and thermal expansion coeffs. 2-50770  
 Se<sub>80</sub>Te<sub>20-x</sub>As<sub>x</sub>, amorphous system, kinematical transform. and struct. ageing, glass transition, enthalpy, thermal anal. 2-50551  
 SiO<sub>2</sub>-TiO<sub>2</sub> glasses, comp. rel. to thermophys. props. 2-30406  
 Te-Ge system, glass formation 2-50857  
 Te<sub>80</sub>Ge<sub>20-x</sub>As<sub>x</sub>, (A=Sb, Bi), glass transition and crystn. effects, thermal anal. 2-12499  
 Ti-Pd (20 at.%), amorphous supercond. alloy, glass transition temp. (*Chinese*) 2-21030  
 Ti-Pd (20 at.%), amorphous supercond. alloy, glass transition temp. (*Chinese*) 2-21707  
 V<sub>2</sub>O<sub>5</sub>-based binary systems, glass form. 2-12495  
 WO<sub>3</sub>-Li<sub>2</sub>O(Na<sub>2</sub>O)(K<sub>2</sub>O) glasses, rapid quenching technique prep., electrochromic props. 2-31674

**glass transition (polymers)**

- aliphatic epoxy polymers, diamine cured, ultrasonic props. 2-12689  
 amorphous polymers, relax. rate in primary transition region 2-27201  
 chloroprene rubber, molecular motions studied by NQR, radiothermoluminesc. and dynamical method, glass transition (*Russian*) 2-24906  
 composites, polymer-C, elec. props., effect of glass transition temp. (*Japanese*) 2-36984  
 epoxy resin, cross-linked, dynamic props. at large cyclic and static deform. 2-31783  
 epoxy resin, glass transition temp. and moisture absorpt., curing effect 2-45583  
 epoxy resins, cured, dynamic mech. props. and nodular morphology 2-17705  
 epoxy-rubber, particulate composite, low temp. behaviour 2-17726  
 epoxyamine networks, dense, cross-linked, liquid-glass struct. transition rel. to mech. props. (*Russian*) 2-30605  
 homopolymers, glass transition temps., effect of degree of polym. 2-12758  
 insulating polymers, carrier trapping, thermoluminesc. and TSC obs. (*Japanese*) 2-9076  
 liquid crystalline polymer, oriented, spin probe ESR study 2-30396  
 methyl methacrylate-styrene and methyl methacrylate-p-chlorostyrene copolymers, dielec. relax. and glass transition temp. 2-46472  
 plasticised, glass transition temp. calcs. 2-45582  
 plastics, humid ageing, long term 2-31716  
 PMMA, heterotactilike monodisperse, glass transition temp. and heat capacity, correl. with tacticity 2-45585  
 poly(2-hydroxy-ethyl methacrylate)-hydrogels, mech. strength, morphology (*German*) 2-22318  
 poly(ethyl methacrylate) near glass transition, photon correl. spectroscopy 2-24904  
 poly(methyl methacrylate), damped Debye lattices relax. 2-41662  
 poly(n-butyl acrylate)/polystyrene interpenetrating networks, mol. mixing via modulus-temp. studies 2-41661  
 poly(p-acryloyloxybenzoic acid) mesophase, glass transition 2-12757  
 poly(styrene-butadiene) random copolymer, nonlinear stress relax. 2-27202



**glass transition (polymers) continued**

- polycarbonate film, plane stress deformation zone at crack tip 2-13777  
 polyester blend, compatibility and phys. props. 2-30420  
 polyethylene, estimation of gamma transition from transition temp. of comblike polymer with long n-a- lyl side chain 2-5226  
 polyethylene, low density, glass transition temp. investigation by temp. dependent linear expansion method (*Korean*) 2-50560  
 polyethylene terephthalate, deformed, DTA obs. (*French*) 2-47404  
 polyethylene-terephthalate films, obs. of orientation loss above glass transition temp., Brillouin scattering 2-25760  
 polyitaconic acid esters containing pendant cycloalkyl rings, glass transition temp. 2-12755  
 polylactone blends, miscibility, melting pts., enthalpies of fusion and morphologies 2-26019  
 polymer dispersion mech. props., US absorption study, relation of particles to film props. (*German*) 2-22281  
 polymer props. depend. on molecular characteristics 2-50558  
 polymeric glasses, local motion, free volume fluctuations and thermodynamic recovery 2-5060  
 polymers, amorphous, rubbery-viscous transition temp., mol. interpretation 2-12511  
 polymers, amorphous, sorption and diffusion of alcohols 2-30658  
 polymers, cross-linked, compatibility with plasticizers, meas. by glass transition temp. and swelling tests 2-16796  
 polymers, glass transition, Goldstein theory, law of corresponding states and scaling, glass fictive temp. 2-8614  
 polyolefins, fluorinated, dielectric props., glass transition dissipation factor 2-21959  
 polyporphazenes, thermomech. transitions 2-45584  
 polypropylene, thermostimulated creep study of mech. energy loss 2-47136  
 polypropylene silicone rubber, radiothermoluminescence study of structure (*Russian*) 2-40291  
 polystyrene, atactic, in bulk state near glass transition, light scatt., photon cond. spectroscopy 2-4429  
 polystyrene, glass transition elevation by crosslinking 2-40546  
 polystyrene, glassy, sub- $T_g$  structural relax. 2-16795  
 polystyrene, glassy state thermodynamics 2-8642  
 polystyrene, plasticized, glass transition point calc. method (*Polish*) 2-30604  
 polysulphone-polybutadiene block copolymers, mol. mobility and struct., NMR obs. (*Russian*) 2-31299  
 polyurethane elastomer, viscoplastic behaviour at high press. 2-16710  
 polyurethane-ureas, struct., morphology and phys. props. 2-45082  
 polyurethanes, containing sodium tetraphenylborate, dynamic mech. props. 2-27203  
 polyurethanes, linear segmented, with butadiene soft segments, thermal and mech. props. 2-41660  
 PVC, fatigue crack propag., mol. wt. and specimen history effects, glass transition temp. 2-47162  
 PVC, plasticized, glass transition point calc. method (*Polish*) 2-30604  
 PVC, pressure-induced freezing of conformational states 2-26052  
 PVC filled with ground glass and glass fibre powders, dynamic mech. props. (*Japanese*) 2-31721  
 PVC-polyester blends, miscibility 2-16803  
 relaxation in the multiparameter model of the glass transition 2-5227  
 styrene ionomers, sulfonates, viscoelastic props. 2-47073  
 thermal density fluctuations, in polymer glasses 2-26053  
 time-dependent order parameter, connection with meas. glass transition temp. 2-50858  
 viscoelastic dissipations in fracture near glass transition temp. 2-31785

**glasses see glass****glassy state see vitreous state****glide, dislocation see slip****globular star clusters**

- age, dependence on gravitational const. 2-10306  
 blue globular clusters and in Magellanic Clouds, nature of anomalous giant stars 2-48238  
 circular velocity around Galaxy 2-53365  
 cores, dust cloud effects, radiation transfer and press., models 2-18784  
 dynamics of globular clusters, review 2-14894  
 galactic cluster system and centre distance 2-38311  
 galactic distribution of populations, radial rel. depend. on eccentricities 2-33089  
 horizontal branch, evolutionary models, He diffusion 2-38179  
 M15, X-ray globular cluster, centre struct. anal. and surface brightness distrib. UBVR<sub>H</sub> obs. (*Russian*) 2-53340  
 M15 (NGC 7078), period changes for RR Lyrae stars 2-48244  
 M15 RR Lyrae stars, colour, amplitude, period relations, UBV obs. 2-3285  
 M15 X-ray globular cluster centre, star colours, magnitude and positions, BV obs. 2-38257  
 M31 objects, photoelectric UBVR obs. of 110 clusters (*Russian*) 2-33094  
 M3, M13, C and N abundances in red giant stars 2-33015  
 M3 (NGC 5272), photometric obs. of double mode RR Lyrae star (V68) 2-10438  
 M56, membership from relative proper motions meas. 2-6546  
 M5, UV spectrophotometry anal. and obs. 2-33093  
 M92, low metal stars spectral features depend. on luminosity, metallicity and colour, model 2-48221  
 NGC 1466, 2214 and 2257 in LMC, UBVR sequences 2-14892  
 NGC 1866, globular-like cluster superluminous giants 2-10411  
 NGC 2808, 1851, high-resolution optical survey interstellar absorpt. lines 2-42727  
 NGC 3201, photometry of main sequence stars 2-10490  
 NGC 362, 5824, 6093 nuclei, comp., UV spectral obs. 2-33092  
 NGC 5139 faint subgiants, abundances, membership and motion, visible spectra obs. 2-10489  
 NGC 6712, X-ray globular cluster, photometry of cluster core 2-28514  
 NGC 6712 and 6723, RR Lyrae stars metal abundances, visible spectra obs. 2-28517  
 in northern elliptical galaxies, counts and freq., obs. 2-33136  
 polarisation of scattered light in globular clusters, theory and obs. 2-28518  
 populations rel. to galaxy mergers 2-38255  
 RR Lyrae stars, period distrib. 2-53290  
 star formation in initial stages of cluster form. (*Russian*) 2-14893  
 tidal radii used to determine Galaxy mass 2-53368

**globular star clusters continued**

- 47 Tucanae, high-resolution optical survey of interstellar absorpt. lines 2-42727  
 UBVR photometry of 208 clusters in Magellanic Clouds 2-18785
- glossaries**  
 astronomy and astrophysics, glossary 2-38374  
 IMEKO glossary of technical diagnostics and condition based maintenance 2-48409
- glow discharge lamps see discharge lamps**
- glow discharge microphones see microphones**
- glow discharges**  
 air, DC positive streamer corona enhancement due to electronegative gas addition 2-25668  
 air, nanosecond vol. discharge contraction process investigation 2-20958  
 air transverse flow, glow discharge, electron characteristics 2-5011  
 austenitic stainless steels, AISI 304L and 316L, glow discharge optical spectroscopy of passive film (*French*) 2-52101  
 cast iron piston rings, improvement of corrosion and wear resist. by nitriding (*Russian*) 2-31829  
 cathode cavity of glow discharge, inversion in mag. field 2-40133  
 cold cathode glow discharges, negative end, review 2-30348  
 conical bottom hollow-cathode discharge, Hanle signal and spectrosc. effects 2-4247  
 electronegative gases, AC glow discharge, positive column, spontaneous modulation of oscillations 2-5009  
 electronegative gases, low-temp. plasmas, elementary processes investig. (*Russian*) 2-40192  
 emission pause after ns-pulse excitation 2-20950  
 gas, local temp. and density meas. by coherent anti-Stokes light scatt. method 2-20809  
 gas flow, spatial modulation, gas-dynamic and electrical parameters 2-12418  
 glow-to-arc transition in high-pressure air 2-8369  
 Grimm's glow discharge lamp, modified, appl. to steel anal. 2-43105  
 Grimm's glow discharge lamp as emission source, blackening curves for copper 2-25672  
 high voltage discharge, crit. param. 2-20949  
 hollow cathode device, for negative glow study by effusion technique 2-8366  
 hollow cathode discharge, line intensity simplification, anal. appls. 2-52260  
 hollow-cathode discharge, pulsed, XUV laser and radiation source appls. 2-44932  
 hollow-cathode lasers, electron energy distrib. review (*Japanese*) 2-49734  
 IR emission spectroscopy of glow discharges formed in low press. upper atm. 2-50462  
 laser excitation and breakdown effects, transient glow discharges 2-11708  
 mm-wave interaction 2-50415  
 nonself maintained high voltage glow discharge between spherical electrodes 2-5008  
 plasma, millimeter wave interaction, current-voltage variations, bremsstrahlung emission 2-50471  
 plasma etching, mechanisms, review 2-27309  
 plasma sheath, glow transition 2-20952  
 polyfluoromethane films, prep. in glow discharge, props. 2-17893  
 RF-glow discharge, H plasma, cleaning and conditioning of plasma device walls 2-8387  
 RF-glow discharge, ignition and arcing appl. to fusion devices 2-20960  
 streamer propagation, laser mechanism 2-44943  
 surface analysis uses of glow discharge spectroscopy 2-12898  
 transverse air flow, glow discharge, spatial distrib. of electron conc. 2-8374  
 turbulence, effect on glow discharge characteristics 2-16531  
 voltamper characteristics of corona discharge with nonlinear ion mobility, calc. method 2-40190  
 Ag hollow cathode CW ion laser at 4788 Å (*Chinese*) 2-16010  
 Ag ion UV and IR hollow-cathode laser, operating characts. 2-15985  
 Ar and Ar-Cl<sub>2</sub> mixture, glow discharge, positive column, electrical characteristics, electrical energy distrib. functions 2-8375  
 Ar, electron swarm parameters 2-25487  
 Ar, Langmuir probe, cleaning of vacuum chambers 2-50475  
 Ar, Rydberg states, colour centre laser optogalvanic spectroscopy in hollow cathode discharges 2-49316  
 Ar/O<sub>2</sub>, Langmuir probe, cleaning of vacuum chambers 2-50475  
 Ar-O<sub>2</sub>, RF sputtering glow discharge, excited states, optical emission spectroscopy study 2-20953  
 Au ion UV and IR hollow-cathode laser, operating characts. 2-15985  
 Ba, Rydberg states, colour centre laser optogalvanic spectroscopy in hollow cathode discharges 2-49316  
 C stripper foils made by DC glow discharge process, physical props. and structure 2-11334  
 CO<sub>2</sub> high-speed flow electrodischarge laser with active medium transverse pumping, amplification parameter calc. (*Russian*) 2-4480  
 CO<sub>2</sub> laser, wave instability regions in glow discharge, pressure-current meas. 2-4478  
 CO<sub>2</sub> molecules in heterogeneous gas-cluster system, vibr. relax. 2-43887  
 Cu I 578.2 nm transition Doppler-free spectra using polarisation intermodulated excitation spectroscopy 2-7518  
 Cu II hollow cathode laser characts. 2-15989  
 Cu ion UV and IR hollow-cathode laser, operating characts. 2-15985  
 Cu, optogalvanic resonance detection of pulsed dye laser atomic absorption 2-2744  
 Cu vapour transverse-discharge laser 2-49739  
 Cu-Zn:Mn(Pb) alloys, anal. by Grimm glow discharge-emission spectrometry (*Japanese*) 2-52259  
 CuII UV laser optimisation 2-15986  
 H glow discharge, anode transition 2-12412  
 H, positive column, of glow discharge, forward ionisation waves, externally excited 2-8382  
 H<sub>2</sub> flowing, glow discharge, positive column props. 2-16529  
 H<sub>2</sub>, Langmuir probe, cleaning of vacuum chambers 2-50475  
 He fine structure transitions, IR diode laser spectroscopy obs. 2-43826  
 He-Cd II hollow cathode metal vapour lasers, oscill. spectra, 533.7 and 537.8 nm lines 2-44255  
 He-Ne laser with hollow cathode and limited discharge (*Chinese*) 2-24989  
 He-Zn, hollow cathode laser discharge, excitation processes (*Japanese*) 2-49733  
 He-Zn II, hollow cathode metal vapour lasers, oscill. spectra, 492.4 nm line 2-44255



## glow discharges continued

- He-Zn II laser using natural Zn, single-mode operation, 492.4 nm 2-44331  
 Kr, electron swarm parameters 2-25487  
 Li, optogalvanic resonance detection of pulsed dye laser atomic absorption 2-2744  
 Li, Rydberg states, colour centre laser optogalvanic spectroscopy in hollow cathode discharges 2-49316  
 N atomic laser action in hollow cathode discharge 2-24997  
 N, quasistationary glow discharge, contraction, interferometric meas. of distrib. of density of gases 2-16523  
 N<sub>2</sub> laser, simple small open air TEA, effective glow form. 2-16022  
 N<sub>2</sub>, transverse abnormal glow discharge between two cylindrical electrodes 2-50461  
 Na, optogalvanic resonance detection of pulsed dye laser atomic absorption 2-2744  
 Ne, enhanced optogalvanic effect in pulsed optical double resonance spectroscopy 2-674  
 Ne, Rydberg states, colour centre laser optogalvanic spectroscopy in hollow cathode discharges 2-49316  
 Ne, self-excited ionisation waves, nonlinear non-resonant interaction 2-12414  
 Ne-O<sub>2</sub> glow discharge, cataphoretic segregation, light intensity study 2-50467  
 Si, amorphous, new fabrication technologies 2-46923  
 p-Si:H, B amorphous film, high cond., prep. by Penning discharge 2-41530  
 α-Si:H, large-area low-freq. discharge-produced 2-51019  
 Si:H amorphous film deposition by Penning glow discharge of SiH<sub>4</sub> 2-41528  
 U I hollow-cathode-generated plasma, resonance transition self-absorpt. determ. 2-50453  
 U ionisation and excitation in hollow-cathode lamp, carrier gas influence 2-15886  
 XeCl\* exciplex form. and luminesc. in hollow cathode pulsed discharge 2-43987  
 XeF\* exciplex form. and luminesc. in hollow cathode pulsed glow discharge 2-43987  
 Xe\* deexcitation cross-section from electron distrib. function in glow discharge 2-24628

## GO calculations

- see also GTO calculations  
 ethane, FSGO point charge models, accuracy and extension to higher Gaussians 2-11398  
 ethane, geometry and rotation barrier, MG-FSGO calc. 2-11400  
 ethane, tetrahedral Gaussian lobe functions, polarisation effects 2-11399  
 Gaussian basis sets for mol. electronic struct. calcs., review 2-4211  
 methane, tetrahedral Gaussian lobe functions, polarisation effects 2-11399  
 thioformaldehyde, geometries of ground and first excited triplet states 2-43815  
 transition metals, first series, Gaussian basis sets 2-19955  
 transition metals, second row elements, flexible Gaussian d basis sets calc. 2-19956  
 transition metals, second series, Gaussian basis sets 2-19955  
 Be<sup>2+</sup>-NH<sub>3</sub>(H<sub>2</sub>O)(HF), complex form., electronic struct., FSGO method 2-41918  
 H<sub>2</sub> molecule, forces, virial theorem in density-functional formalism 2-43794  
 He, correlated CI wave functions using corr. Gaussians 2-11408  
 HeH<sup>2+</sup>, comparative test of multiple versus single centered spherical Gaussian 2-39304  
 Li<sup>+</sup>-NH<sub>3</sub>(H<sub>2</sub>O)(HF), complex form., electronic struct., FSGO method 2-41918  
 Mg<sup>2+</sup>-NH<sub>3</sub>(H<sub>2</sub>O)(HF), complex form., electronic struct., FSGO method 2-41918  
 Na<sup>+</sup>-NH<sub>3</sub>(H<sub>2</sub>O)(HF), complex form., electronic struct., FSGO method 2-41918  
 Pn<sub>2</sub><sup>+</sup>+ethylene, electrophilic addition, non-empirical SCF MO calc. 2-6022

## gold

- see also nuclei with .....  
 1/f noise in continuous metal films is not due to temperature fluctuations 2-51252  
 acid plating, theoretical considerations 2-41811  
 adsorption, of Ni, photoemission spectroscopy (German) 2-17598  
 adsorption kinetics of NH<sub>3</sub> on Au surface studied by monitoring gas conc. using optoacoustic effect 2-52247  
 AES and EELS, elastic peak electron spectroscopy, eval. procedure 2-27506  
 angle-resolved photoemission, energy coincidence method 2-17603  
 atoms, bombarded with 9-155 MeV alpha particles, K-shell ionisation cross section and XES 2-777  
 atoms, electron impact excitation of resonance times, effective cross sections 2-15904  
 coating for electrical contacts, tribology 2-31800  
 coating materials of metal hollow O-ring 'Sureket' (Japanese) 2-19118  
 coating on TGS, coating influence on ferroelec. domains, SEM study 2-36579  
 coin elemental analysis by particle induced X-ray emission 2-22498  
 crystallites on KBr cleavage plane, mobility 2-45631  
 cylinder, diffusion of Ag through gas interlayer (Russian) 2-35730  
 decorating particles on NaCl, Ar<sup>+</sup> ion bombard., surface topology electron microscope obs. 2-45286  
 decoration with Sn of NaCl surface, point defects study 2-45690  
 deposits 2-9554  
 differential scattering cross-sections for ions in energy range 65-135 keV 2-46852  
 diffusion, radiation-stimulated, in amorphous SiO<sub>2</sub> 2-40600  
 diffusion in dislocated Si, kick-out mechanism 2-50924  
 diffusion in GeTe<sub>4</sub> amorphous films, diffusion kinetics 2-45625  
 discontinuous film, density of states meas. 2-41028  
 discontinuous film, structure, elec. cond., statistical description 2-26261  
 disordered film, inelastically reflected electron energy spectra 2-5784  
 edge dislocations, dihedral, elastic props. calcs. 2-40384  
 electrodeposited coatings, for sliding contacts, adhesive wear props. 2-9425  
 electron backscattering by polycryst., 0.3 to 1.2 MeV calcs. (French) 2-5781  
 electron irradiated, cathodoluminescence study 2-46786

## gold continued

- electron structure, beginning and end of third period, X-ray emission props. (Russian) 2-36736  
 electron-dislocation scatt. relax. time anisotropy 2-45943  
 electroplated, in Fresnel zone plate, fabrication using reactive sputter etching 2-251  
 epitaxial film on Pt (100), surface struct., LEED and AES meas. 2-1718  
 epitaxial layers on Pt (100), reactivity, coverage depend. 2-2736  
 Fermi surface electron-phonon interaction anisotropy 2-40759  
 Fermi surface radii, RF size effect 2-40760  
 film, 1/f noise, temp. fluctuations 2-51250  
 film, (001) top and bottom surface struct., high resolution TEM 2-40660  
 film, Debye temp., X-ray diff. determ. 2-51065  
 film, epitaxial growth on PbS(111), RHEED study 2-5326  
 film, evaporated on Si, growth, backscatt. study 2-46924  
 film, ion plated, frictional and morphological characts. 2-30775  
 film, localisation in surface electron bombardment 2-47066  
 film, point defects, exoelectron emission, photostimulated emission and oriented growth on NaCl 2-45757  
 film, surface Brillouin scatt., ripple and elastooptic coupling 2-5727  
 film adsorbed pyridine, surface enhanced Raman scatt. 2-36614  
 film growth on SiO<sub>2</sub>, AES and RHEED study 2-45759  
 film thickness distribution at oblique evaporation 2-51028  
 films, on Si (111), interaction after heating, surface phase form., LEED, EELS, AES, TEM, and photoelectron spectra 2-35747  
 foil, annealed under reduced Cl<sub>2</sub> press., elec. cond. increase, 4.2K 2-35994  
 freezing point, cavities emissivity and temp. evaluation 2-15170  
 hydrocarbon electrocatalytic oxidation using stabilised zirconia electrolyte employing Au electrodes 2-22459  
 ion bombarded Au {110}, focused ejection 2-41478  
 ion bombarded single crystals, orientation, surface struct. and sputtered spot patterns 2-46857  
 ion implanted, diffusion of Al 2-12847  
 ion laser, hollow-cathode, UV and IR, operating characts. 2-15985  
 IR absorption coeff., pseudopot. calc. (Russian) 2-22012  
 K-shell ionisation by protons 2-43875  
 laser plasma prod., fast electron range reduction meas. 2-44879  
 lattice defect-impurity configuration, geometrical struct. determ. by TDPAC 2-31354  
 lattice dynamics, phonon dispersion rel. 2-35614  
 lattice steering of relativistic positrons from implanted positive muons 2-21194  
 liquid, effective pair potential and thermodynamic props. 2-45015  
 liquid, ion source, droplet emission, SEM obs. 2-36767  
 liquid-metal ion sources, field evaporation and ionisation, optical emission probe of neutral atoms 2-51707  
 microspheres, surface local fields, rel. to enhancement of Raman scatt. and fluoresc. emission 2-13480  
 MIL-M-38510 finishes for microelectronic components 2-47210  
 monolayer on n-GaAs, photoelectrochem. corrosion 2-13181  
 monolayers, on Si (111), catalytic effect on oxidation 2-13836  
 MOS capacitor, Au-doped, truncated load method for modelling (Rumanian) 2-5464  
 optical constants determ. using ellipsometer 2-10572  
 optical props., empirical band calc. 2-21970  
 particles, single cryst. nm size, habit planes determ. 2-12930  
 particles grown on MoS<sub>2</sub> vacuum-cleaved surfaces, double positioning, obs. by electron microscopy 2-8727  
 particular growth, high-resoln. studies, multiply-twinned particles 2-1492  
 particulate growth, high-resoln. studies, single crystals, lamellar twins and polyparticles 2-1493  
 phonon dispersion relations, phenomenological models 2-45435  
 photoeffect cross sections at K-edges 2-7525  
 physisorption of pyridine, enhanced Raman scatt. 2-5707  
 planar target 0.35 μm laser radiation absorpt., meas. and interpretation 2-50423  
 plasma, laser produced, radiation conversion and transport, X-ray emission 2-30287  
 plasma chemical transport etching in Cl<sub>2</sub> plasma 2-41813  
 plated sandpaper, BRDF meas. 2-10852  
 positron annihilation studies of bulk and finely dispersed Au 2-17567  
 pressure-volume relations and elastic consts. under press. 2-1545  
 proton interaction, heavy fragments energy spectra 2-25944  
 pseudopotential study of energy gaps and resistivities 2-26282  
 pulse plating processes, status and prospects (German) 2-52216  
 radioactive Au colloid as tracer of macromol. transport 2-37713  
 Rutherford backscattering spectra of α-particles 2-46854  
 search for superconductivity 2-31021  
 silicide formation on Si (111), studied by high energy He<sup>+</sup> scatt. 2-27477  
 small particles, dislocations, direct lattice imaging 2-5122  
 spike effect obs. in heavy-ion sputtering 2-2398  
 spin-orbit interaction pseudopot. parameters 2-1873  
 sputtered Au atoms from Au target, effects of ion mass on energy spectrum 2-41479  
 sputtering yield of heavy atomic and mol. ion bombardment, influence of bombarding angle 2-22135  
 stopping power in Bethe region 2-43735  
 stopping power of H and He in ions 20 to 150 keV region, backscattering study 2-1534  
 stopping powers for 20-140 keV H<sup>+</sup> and He<sup>2+</sup> 2-43734  
 submonolayer growth on GaAs (001)c(4×4), AES and RHEED study 2-1793  
 subshell ionisation cross section meas. using HIXE and comparison with theories 2-51745  
 substrate for Ge film, far IR surface plasmon coupling and attenuation 2-36725  
 substrate for Zn electrodeposition from zincate solns. 2-26245  
 superconductivity not observed in pure Au down to 100 μK 2-31007  
 surface, adsorbed electronically excited <sup>13</sup>Bu pyrazine mol., time resolved energy transfer 2-41398  
 surface, adsorbed pyridine, surface enhanced Raman scatt. 2-51563  
 surface, interaction of Cs atoms, van der Waal forces 2-44036  
 surface, precision diamond-machined, pulsed laser-induced melting at IR wavelengths 2-9226  
 surface, salt-water vapour interactions, study using piezoelectric effect 2-36539  
 surface (110), search for broken symmetry 2-1716  
 surface (111), reconstructed, UHV transmission electron microscopy 2-50970



## gold continued

- surface (112), angle-resolved photoemission calc. 2-2415  
 surface modified with Ag, adsorbed pyridine, enhanced Raman scatt. from adsorbate 2-2292  
 surface plasmon dispersion relation determ. by MOM tunnel structs. 2-36152  
 surface plasmon dispersion relation determined by MOM tunnel structures 2-51344  
 surface sputtering by diatomic mol. ion bombardment (*Japanese*) 2-51757  
 surfaces, steam condensation, use of electroplating bath and vacuum vapour deposition 2-50071  
 thin film, elec. cond. size effect, mean free path, specularly parameter surface roughness 2-51350  
 thin film deposition on InP, laser beam induced, Auger electron anal. 2-51836  
 thin films, optical anal. by combined refl. and transmission ellipsometry 2-51729  
 transition metal alloy with  $^{197}\text{Au}$ , Mossbauer isomer shift, cellular, model 2-36488  
 transmission diffraction gratings for soft X-ray spectroscopy 2-28963  
 transmission gratings with submicrometre spatial periods, fabrication, holographic lithog., X-ray lithog. and microplating 2-39728  
 vapour laser, pulsed (*Chinese*) 2-25028  
 $\text{Al}_2\text{Se}_3\text{Te}_2\text{As}_4\text{Ge}_{32}\text{-Au}$  structure, elec. characts. of amorphous semicond. layer 2-26525  
 Au adsorption on PbS, rest. pot. and surface photovoltage changes 2-41008  
 $\text{Au}^{+}$  threshold ionisation pot. 2-7664  
 $\text{Au}^{+}$  threshold ionisation pot. 2-7664  
 $\text{Au}^{+}$ , Z 2-7664  
 Au/He, spontaneous precipitation of He 2-13727  
 Au/Ag(111) epitaxy, first stage, backscatt./channelling anal. 2-50965  
 Au/AuPd biccrys., hexagonal dislocation networks, TEM contrast 2-25887  
 Au/Ni/SnNi/n-GaAs interface, ohmic contact form. 2-41010  
 Au/Si (111) interface, growth mode, energetics, structural and electronic props. 2-2002  
 Au/Si adhesion on radiation detector substrate, temp. and aging depend. 2-49215  
 Au/Si $_3$ N $_4$ /p-Si structure, charge transfer, temp. depend. 2-17163  
 Au/Si(111) interface, AES, EELS, LEED and depth profiling study, UHV conditions 2-21446  
 Au/Sn thin film couples, interdiffusion, TEM, X-ray and Rutherford backscatt. study 2-21403  
 Au-aq. electrolyte interface, electrorflectance spectra 2-2220  
 Au-Ag thin film couples, interfacial reactions, Auger depth profiling, TEM, and contact resist. meas. 2-8678  
 Au-Al interfaces, energy deposition, semi-empirical electron transport model 2-30503  
 Au-amorphous Si:H interface, struct. and elec. props. 2-41012  
 Au-CdS Schottky barrier solar cell, Ta $_2$ O $_5$  antireflection coating 2-27613  
 Au-Cu thin film diffusion couples, diff. profiles 2-26145  
 Au-GaAs Schottky barrier, deep centres, photoionisation cross sections and optical charging rates 2-13012  
 Au-GaP:Zn, O, Schottky diodes, deep levels in GaP epitaxial film 2-51126  
 Au-InP contacts, interfacial reactions, metallurgical and elec. behaviour 2-51306  
 Au-InP Schottky diode, elec. characts. 2-26472  
 Au-InP system, binary cpd. form., 320 to 360°C 2-1680  
 Au-Langmuir film-InP 0.085 eV Schottky barrier 2-46105  
 Au-mica-p-Te:Cu film MIS struct., field effect studies 2-41017  
 Au-Mo(Pt) bilayer epitaxial films, phase boundaries form. in high condensation temp. ranges 2-45741  
 Au-n-Ga $_{1-x}$ Al $_x$ P surface barrier struct., photoelectric effect 2-26500  
 Au-n-GaAs Schottky barrier diodes, ion beam damage during low energy cleaning 2-50721  
 Au-oxide-n-GaAs struct., forward biased, electroluminesc. 2-17553  
 Au-SiO $_2$ -Au diodes, electroforming in organic gases, voltage controlled negative differential resist 2-51345  
 Au-Sn-Al metallisations on GaAlAs, interfacial struct. studies 2-8713  
 Au+H $^{+}$ , K-shell ionisation, impact parameter depend. 2-44042  
 $^{198}\text{Au}$  absolute intensity meas., efficiency extrapolation method (*Chinese*) 2-34250  
 CdTe-Au Schottky barrier diodes, elec. props. rel. to semicond. surface damage 2-51278  
 Cs-Au amorphous mixture, metal-insulator transition 2-40795  
 n-GaAs-Au Schottky barrier height increase, Fermi energy pinning behaviour 2-5451  
 GaP:Au, influence of heat treatment on distrib. of diffused impurities 2-26141  
 GaP-Au surface barrier structs., elec. breakdown mechanisms 2-17159  
 Ge:Au, direct obs. of trap-charging waves 2-17088  
 Ge:Au, gamma irradi., radiation defects interaction with impurity 2-12633  
 Ge-Au interface formation, UPs study 2-40699  
 $^4\text{He}^{+}$  energy straggling meas. by backscattering technique, foil nonuniformity correction 2-4181  
 Nb-Au superconducting-normal metal junction, Nb soft modes 2-12713  
 Ne-Ta, L-shell X-ray cross section meas. in energy range 0.125-4 MeV/amu 2-39487  
 Ni, oxidation in SO $_2$ , effect of Au, Pt and W marker materials 2-9469  
 Pd/Au biccrys. film, pseudomorphic epitaxial growth, deposit thickness depend., TEM study 2-35909  
 Pd-Au biccrys. film, pseudomorphic epitaxial growth, deposit thickness depend., TEM study 2-35909  
 Si:Au, Auger recombination with deep impurities 2-40929  
 Si:Au, crystal-liquid interface vel. during pulsed laser annealing 2-31591  
 Si:Au, deep levels, effect on device performance (*Japanese*) 2-30818  
 Si:Au, Fe, hyperfine interactions of Au-Fe complex, electronic struct., EPR obs. 2-45920  
 Si:Au, intrinsic carrier conc., temp. depend. energy gap, Fermi level 2-16986  
 Si:Au, photoluminescence, impurity states 2-36692  
 Si:Au, surface, nonequilib. depletion layer, relax. vel. meas. (*Russian*) 2-46096  
 Si:Au,Fr, EPR study, hyperfine interactions 2-41187  
 Si:Au n-n $^{+}$  diode struct., magnetosensitivity, effect of strong carrier accumulation 2-46119  
 Si:Au, phase shift spectroscopy of modulated photocurrent 2-1947

## gold continued

- Si-Au interface, electronic struct. 2-51302  
 Si-Au interface acoustic phonons, Brillouin scatt. study 2-51615  
 Si-Au-Ag interface, AES and EELS meas. 2-40698  
 Si+Au, precipitation and formation of impurity clusters 2-26065  
 Ti/Au thin films, interdiffusion and phase formation, expt. study 2-45749  
 Ti-Au film on quartz resonator, natural freq., intrinsic stresses effect 2-16973  
 Zn $_3$ P $_2$ -Au Schottky barrier solar cells, photo-voltage spectral response 2-27655
- gold alloys  
 see also gold compounds  
 dilute impurity binding energy, correlation with heat of formation 2-1497  
 electrodeposited coatings, for sliding contacts, adhesive wear props. 2-9425  
 Ag-Au, binary solid solutions, self-diffusion theory 2-1654  
 Ag-Au, surface segregation region, comp. and thickness, AES method 2-12889  
 Ag-Au alloy in HNO $_3$ , selective dissolution of Ag, oxide form. 2-47255  
 Ag-Au alloys, material sputtered by Ar $^{+}$ , ang. distrib. 2-46914  
 Ag-Au-Cu liquid alloys, surface tensions 2-45685  
 Al-Au dilute alloy for moderate-strength, high cond. appls. 2-5489  
 Al-Au films, amorphous, short range order, electron diff. study 2-5330  
 Au/AuPd biccrys., hexagonal dislocation networks, TEM contrast 2-25887  
 Au/Ti thin films, segregation of Ti, chemisorpt.-induced 2-51907  
 Au-Ag, conc. alloy, de Haas-van Alphen effect 2-35921  
 Au-Ag (15 at.%), short-range order form. and annihilation of vacancies 2-36985  
 Au-Cd, internal friction and elastic modulus near martensitic transform. 2-47105  
 Au-Cd, martensitic transformation in  $\beta_1$ -phase, quenching effect 2-13719  
 Au-Cd, thermoelastic phase transition, acoustic emission study 2-5874  
 Au-Cd (47.5 wt.%), thermoelastic martensitic phase transform. AE meas. 2-51897  
 Au-Co solid soln., elec. resist. and mag. susceptibility 2-30861  
 Au-Co solid soln. thin films, elec. resist., annealing treatment depend. 2-21693  
 Au-Cr, dil., Hall effect 2-17048  
 Au-Cu-Fe(Mn) alloys, low temp. elec. cond., scatt. mechanisms 2-35997  
 Au-Cu-Fe(Mn) spin glass, RKKY interaction, conduction electron mean free path depend. 2-46271  
 Au-Er, dil. alloy, effects of near surface layer on EPR lineshapes, low temp. study 2-36421  
 Au-Fe, dil., Hall effect 2-17048  
 Au-Fe, dilute, crit. behaviour at onset of ferromag., dynamic response meas. 2-2076  
 Au-Fe, Kondo system, thermoelec. transport parameters 2-36021  
 Au-Fe alloy, negative magnetoresistance 2-36018  
 Au-Fe(14.5 at.%), field induced ferromagnetism, close to percolation limit (*French*) 2-51411  
 Au-Gd(Er), dil., muon diffusion detection by paramag. impurity introduction 2-31360  
 Au-Ge laser-annealed ohmic contacts on GaAs, microstruct. and resistivity 2-21675  
 Au-In, search for superconductivity 2-31021  
 Au-Mg system, electron microscopic and electron diff. study 2-50588  
 Au-Mn, dilute alloy, Korringa relax. rate of Mn ion 2-26619  
 Au-Mn, dilute spin glass, low temp. T $^{3/2}$  magnetisation 2-31203  
 Au-Mn (2.98 at.%) spin glass, AC susceptibility, freq. and field depend. 2-51418  
 Au-Mn dilute alloy, spin glass and mixed phase EPR study 2-31207  
 Au-Mn system, 2D antiphase structs. based on DO $_{22}$  struct. high-voltage-high resolu. microscopy 2-40233  
 Au-Ni (18 wt.%), braze alloy spreading high temp. obs. by oxide penetration on stainless steel 2-5984  
 Au-Pd, differential sputtering and surface segregation, enhanced diffusion effect 2-5786  
 Au-Si, thin film, laser induced melting and quenching process 2-51061  
 Au-transition metal alloys, electromech. polishing 2-47285  
 Au-Zn/p-GaP contact system, out-diffusion process, barrier metals effect 2-46128  
 Au+50InPb, vertical section of phase diagram 2-47010  
 AuAl, film, supercond. energy gap and transition temp. 2-36257  
 Au $_2$ Al, diffusion-formed, optical props., ellipsometric study 2-17432  
 AuCu $_2$  polycrystalline film, vacuum condensate, atomic ordering, thickness depend. (*Russian*) 2-51020  
 Au $_3$ Cu, anomalous internal friction peak after quenching and deform. 2-47094  
 AuGe/Pt pulsed electron beam alloyed ohmic contacts on GaAs reliability 2-5458  
 AuGe-GaAs ohmic contact, low temp., sintered 2-51301  
 AuIn $_2$  thin film, low temp. elec. resist. 2-41027  
 Au $_2$ Mg, 2D antiphase struct. studied by high-voltage-high-resolu. electron microscopy 2-44992  
 Au $_7$ Mg $_{23}$  phase, electron microscopic and electron diff. study 2-50588  
 Au $_4$ Mn, ordering under electron irradi. 2-30494  
 AuPd film, elec. props. at low temps., nonmetallic behaviour 2-30982  
 AuSn, amorphous, elec. resist. Faber-Ziman theory calc. 2-45932  
 AuSn, supercond., specific heat, low temp. 2-31050  
 AuSn $_2$ , cryst. struct., annealing temp. depend. 2-8474  
 AuZn-InP ohmic contacts, contact resist. meas. 2-13173  
 Au $_3$ Zn 2d, incommensurate, cryst. struct. determ. 2-12539  
 Ce-Au, amorphous, mag. susceptibility and sp. ht. 2-31201  
 Cs-Au liquid alloy, metal-insulator transition 2-1828  
 CsAu, bonding in liquid and amorphous binary semiconductor alloys 2-8436  
 CsAu, vapour phase reaction growth 2-22173  
 Cu-Al-Fe, phase transform. under anomalous elastic deform. 2-47031  
 Cu-Au, anodic dissol., O $_2$  reduction and corrosion 2-5987  
 Cu-Au, short-range order and Fermi surface, X-ray diff. study 2-50587  
 Cu-Au, short-range order hardening 2-36868  
 Cu-Au-Ge, dilute, thermoelec. power, impurity scatt. contrib. 2-5393  
 Cu-Au-Ge, Hall coeff. for isotropic electron scatt. 2-36019  
 Cu $_3$ Au alloy, two-body interatomic interaction and props. 2-1617  
 Cu $_3$ Au, ordered, Fermi surface and electronic struct. 2-40761  
 Cu $_3$ Au ordered alloys, proton,  $\alpha$ , and ion irradi., atomic replacement, resistivity meas. 2-8547



**gold alloys continued**

- Eu-Au, surface core level binding energy, chem. shift, surface segregation 2-51272  
 Fe-Au, dil., hyperfine field, press. and temp. depend. 2-35980  
 Fe-Au-Ni, 2-13729  
 Fe-Ni-X, X=Ge, P, Au or Pt, ternary partition coeff., expt. determ. 2-36860  
 FeAuPd<sub>2</sub>, ferromagnetic-antiferromagnetic transition (*Russian*) 2-51404  
 Ga-Au, liquid, elec. cond. and mag. susceptibility (*Russian*) 2-51143  
 GdCoAu, amorphous bubble film, domain drag propag. vel., bias field depend. 2-13323  
 In<sub>50</sub>Au<sub>50</sub>, amorphous, elec. field gradients, TDPAC studies 2-31350  
 Ni-Au, laser irradi., Soret effect in molten layer 2-40582  
 Ni-Au, laser irradiation, defect structures and surface analysis 2-50701  
 Ni-Au, surface films, pulsed laser mixing, expt. study 2-50703  
 Ni-Au alloys, composition change from Ar<sup>+</sup> bombardment, Rutherford backscatt. meas. 2-45292  
 Pb-Au, dil. alloy, electron irradi., dipole formation, resistivity-annealing spectra study 2-36880  
 Pb-Au, dilute molten, O<sub>2</sub> activities 2-5243  
 Pb-In-Au Josephson junction electrodes, microstruct. and strain, thermal stability 2-51943  
 Pd-Au alloy wire, adsorption and reaction of CO and O<sub>2</sub> 2-26230  
 Pd-Au/Au bicryst. film, pseudomorphic epitaxial growth, deposit thickness depend., TEM study 2-35909  
 Pd-Au-H, solid solns., kinetic behaviour 2-40549  
 Pd-Au-H, solid solns., thermodynamic behaviour 2-40548  
 Sn-Au, amorphous films, transport props. and phase stab., electron conc. effect 2-35987  
 Sn-Au alloyed ohmic contact formation on n-InP 2-5463  
 V<sub>0.5</sub>Au<sub>0.5</sub>, superconducting transition temp., elec. cond., density of states 2-36178  
 Yb-Au, surface core level binding energy, chem. shift, surface segregation 2-51272

**gold compounds**

see also gold alloys

- Au-Si surface phases, LEED, AES, and sputter depth profiling 2-1714  
 AuBr, vibr. spectra and normal coord. anal. 2-31506  
 AuCl, vibr. spectra and normal coord. anal. 2-31506  
 AuH, heat of form., bond anal., local density functional approx. 2-35433  
 AuH, relativistic effects on Re and De from all-electron Dirac-Hartree-Fock calcs. 2-39338  
 AuI, vibr. spectra and normal coord. anal. 2-31506  
 (Au(NH<sub>3</sub>)<sub>4</sub>)<sup>2+</sup> and (Au(ND<sub>3</sub>)<sub>4</sub>)<sup>2+</sup>, vibr. spectra, normal coord. anal. 2-31511  
 AuTe<sub>2</sub>Br, Fermi surface determ. by Shubnikov-de Haas effect 2-1811  
 Cu<sub>2</sub>Au<sub>5</sub>Te<sub>70</sub>, amorphous, elec. resist. at high press., time depend. 2-30888  
 SiO<sub>2</sub>-Na<sub>2</sub>O-CaO-SnO<sub>2</sub>-Au, gold ruby glasses, SAXS anal. of nucleation 2-50829

**goniometers**

- discrete step goniometer for human elbow movement meas. 2-32342  
 interference, radiation source selection 2-29859  
 optical glass wedge deflection angle, goniometer meas. using ray bundle multiple passage 2-1007  
 two-circle, computer assisted, for single crystal EPR studies 2-10833  
 variable temperature implantation and anal., medium energy facility 2-6917  
 X-ray exam. of crystal orientation, microscope fixture with special goniometer head (*German*) 2-30364

**GP zones** see Guinier-Preston zones**grain boundaries**

- for grain boundary diffusion, see diffusion in solids; for grain boundary segregation, see segregation  
 see also bicrystals; subboundary structure; twin boundaries  
 $\alpha$ -brass, intergranular creep cavities, growth mechanism 2-41685  
 alloys, microstruct., lattice defects (*German*) 2-31680  
 alloys, nucleation mechanism for discontinuous precipitation cells (*Russian*) 2-50826  
 alloys, strengthening against creep 2-5888  
 alloys, strengthening mechanisms 2-5887  
 axisymmetric cavity, steady state diffusional growth on grain boundary 2-5108  
 bicrystal, grain boundary anal. using TEM 2-21158  
 bicrystal, plastic accommodation of stress conc. at step on sliding grain boundary 2-30508  
 $\alpha$ -brass, stress corrosion cracking in ammoniacal soln., effect of crosshead speed and temp. 2-13844  
 cell arrangement in network, theory 2-41580  
 ceramic, crystn. of glass of liq. segregated in grain boundaries 2-12490  
 ceramic polycrystals, creep rupture, effects of inhomogeneity 2-13791  
 creep cavitation, influence of impurity segregation 2-41612  
 creep cavity growth, fatigue failure at high temps. 2-50752  
 creep fracture, diffusive crack growth model 2-52030  
 creep Nabarro-Herring and Coble, effect of grain shape 2-40476  
 creep-ductility material, growth of dominant crack 2-50758  
 Cs halides, additively doped, Cs colloids, precip. and growth kinetics 2-25874  
 deformation processes, interactive 2-40470  
 diffusion-controlled coarsening, decreasing average particle size possibility 2-41609  
 diffusional creep, grain boundary sliding, contrib. to axial strain 2-40475  
 2,2-dimethyl propanoic acid, sub-grain-boundary self-diffusion (*French*) 2-1662  
 discontinuous precipitation reactions, at grain boundaries 2-2512  
 dislocation spacing in pile-ups at grain boundaries, calc. 2-45197  
 electrical resistivity of relaxed periodic grain boundaries (*French*) 2-1890  
 equilibrium segregation of P at grain boundaries 2-5881  
 fatigue growth threshold of small cracks 2-8560  
 fine-grained materials, creep, influence of pipe diffusion 2-25978  
 fission gas release model, approx. treatment of grain boundary loss terms 2-29332  
 fracture, high temp., role of grain boundaries 2-41732  
 glide-induced steps, in periodic grain boundaries 2-40408  
 grooving by volume diffusion, nonlinear evolution eqn. (*French*) 2-2729  
 intercrystalline boundaries, branching condition, O-lattice model 2-25904  
 intergranular crack nucleation and fracture 2-27261  
 internal friction, dislocation model, continuous distrib., with inhomogeneous sliding along high-angle grain boundaries 2-43354

**grain boundaries continued**

- internal friction and US attenuation in solids, conf., Lausanne, Switzerland (July 1981) 2-38360  
 internal shape changes, kinetics, role of interfaces 2-40409  
 irradiation damage, sink strength theory 2-21169  
 metal bicrystals, high freq. props., effects of planar defects (*Russian*) 2-17105  
 metal-polymer-metal boundaries, US interface wave attenuation 2-45703  
 metallic bicrystal model, equilib. density matrix of conduction electron gas 2-17028  
 metallic film, polycryst., Hall coeff. at low mag. field 2-45940  
 metallic film, polycrystalline, contribution of grain boundary orientation to elec. resistivity (*French*) 2-26521  
 metallic thin film, electromigration induced damage; diffusive creep model 2-26150  
 metallic thin films, thermoclec. power 2-45941  
 metals, fatigue, high temp., form. of boundary serrations and cavities 2-41733  
 metals, FCC, mech. behaviour in plastic deform. 2-2558  
 metals, Nelson curves for H attack, model calc. 2-50751  
 metals, porous sintered, grain growth mechanism (*Japanese*) 2-2476  
 metals, subgrain strengthening 2-41619  
 metals and alloys, amorphous, positron annihilation and positive muon study 2-9214  
 metals and alloys, oxidation, hot-stage for high temp. in situ studies 2-9507  
 metals and alloys, polycrystalline, yielding, role grain boundaries 2-31733  
 migrating, thermal grooving 2-50663  
 Nimonic 80A bolts, for elec. generating plant, grain boundary particle anal. by scanning Auger microscopy 2-16657  
 phosphosilicate glass/Al-Si thin film structs., stress, temp. depend. 2-1804  
 photoelectrochemical solar cells, photocorrosion process on n-GaAs and corrosion prevention 2-22627  
 polycrystalline hollow cylinder, thermal loading, energy conditions for brittle fracture (*Russian*) 2-13808  
 polycrystalline materials, effect of grain size on diffusion 2-26103  
 polycrystalline materials, grain misorientation 2-45204  
 polycrystalline metal film, elec. conductivity, grain boundary scatt. model 2-36154  
 polycrystalline metal films, three-dimens. analytical separation of grain boundary/surface scatt., non-cubic grains 2-36155  
 polycrystalline metallic films, lattice defects and DC-elec. cond. 2-8527  
 polycrystalline solid electrolytes, impedance 2-50900  
 polycrystals, cavitating, high temp. creep rate/stress relationships 2-30517  
 polycrystals, grain boundary diffusion effective coeff. 2-45632  
 polycrystals, ordered two-dimens., grain growth 2-41581  
 polydiacetylene, single crystals. 2-8402  
 positron trapping at grain boundaries, grain size effects 2-51737  
 quartz grains, natural, electron irradi. damage obs. 2-25934  
 reactor fuel, transient fission gas swelling due to grain boundary bubble growth, cellular computer model 2-7174  
 recrystallisation, dynamic, during creep and hot working 2-41624  
 segregation intergranular and surface kinetics during annealing, AES 2-51906  
 semiconductor, electronic response to illumination, surface effects 2-17111  
 semiconductor, polycrystalline, carrier mobility, grain boundary barrier model 2-21580  
 semiconductor material/device characteris. using two-wavelength laser scanner 2-16057  
 semiconductors, polycrystalline, grain boundary scatt., charge scatt. model 2-51159  
 SiC, polycryst., frictional deform. and fracture 2-27294  
 solar cells, polycrystalline, grain boundary passivation effects 2-37400  
 solar cells, Si-on-ceramic, evaluation for low-cost fabrication 2-18072  
 solute segregation, role in grain boundary diffusion 2-21316  
 steel, austenite recrystallisation, retardation by solutes 2-41625  
 steel, austenitic stainless, creep curves, intergranular microcavities 2-31731  
 steel, austenitic stainless, dislocation emission, strain-induced, from grain boundaries 2-25882  
 steel, austenitic stainless, fatigue life, high temp., effect of strain wave shape, appl. of strain range partitioning method 2-13821  
 steel, austenitic stainless, grain boundary dislocations, extrinsic, effect on state of random boundaries 2-35512  
 steel, austenitic stainless, precipitate-free, high temp. creep, grain boundary sliding 2-27255  
 steel, austenitic stainless, work hardening, effect of H 2-36881  
 steel, austenitic stainless, yielding, role grain boundaries 2-31733  
 steel, austenitic stainless 316, influence of  $\delta$ -ferrite on precipitation, thermal ageing 2-5880  
 steel, C, H attack cavity growth mode 2-47177  
 steel, cc NiCr (3.5, 1.7 wt.%), grain boundary etching to detect P segregation (*Japanese*) 2-13887  
 steel, Cr, crack initiation and propagation, microstruct. effect (*German*) 2-13823  
 steel, Cr-Al, corrosion, high temp. effect of Al content (*Korean*) 2-22377  
 steel, Cr-Mo, low alloy, segregation of Cr to prior austenite boundaries during quenching 2-5875  
 steel, Cr-Mo (2.25, wt.%), stress relief cracking, multicomponent segregation effects 2-52005  
 steel, Cr-Mo-V, tensile ductility, effects of autenitization temp. and impurities 2-51993  
 steel, ductility at high temps. 2-41688  
 steel, H attack, kinetics 2-17734  
 steel, hypereutectoid, precip. of spheroidal graphite during cooling from liq. states (*Japanese*) 2-5878  
 steel, low alloy, grain boundary melting and hot embrittlement on over-heating (*Japanese*) 2-25980  
 steel, low alloy, P segregation, effect of Ni, Cr and Mn 2-13730  
 steel, low alloy CrMo, grain boundary etching method appl. (*Japanese*) 2-25903  
 steel, martensitic, austenite grain growth, during repeated austenitising, effect of hot working temp. (*Polish*) 2-2532  
 steel, mild, stress corrosion behaviour, effect of Al additions and grain size (*Korean*) 2-41791  
 steel, Mn-Ni-Mo, A533 gr. B, upper nose temper embrittlement mechanism 2-5899  
 steel, Ni-Cr, fracture toughness effect of solute segregation 2-47175



**grain boundaries continued**

- steel, Si, grain oriented, secondary recrystn. kinetics, high temp. back-ground damping 2-47052
- steel, stainless, 316, grain boundary precipitate study, metallographic techniques (*German, English*) 2-41849
- steel, stainless, creep, angular frequency of cavitated boundaries on sectioning plane 2-50664
- steel, stainless, type-304, grain boundaries comp. in low temp. sensitisation 2-40415
- steel, stainless 316, metallographic assessment of structural degradation during creep-fatigue 2-5995
- steel, type EP-838 austenitic, oxidation process (*Russian*) 2-2615
- steel plate, and strip, controlled rolling 2-22237
- steps, props. and effects, appl. to diffusion-induced grain boundary migration 2-40414
- structure and sliding, role of impurities 2-40410
- superconducting hot spots, continuously forced ballast resistor model 2-36234
- superplasticity, structural, dislocation motion and grain boundary sliding 2-41687
- superplasticity and creep, significance of grain boundary sliding 2-40469
- surface alloying, use of grain boundary diffusion 2-17764
- symmetrical tilt, high-angle, intrinsic secondary grain boundary dislocation arrays 2-12611
- temper embrittlement, impurity-induced, simplified model 2-50753
- thin film diffusion couples, diff. profiles 2-26145
- thin films, grooving at grain boundaries 2-50666
- thin films, monocryst., transverse Hall effect, theoretical anal. 2-13196
- thin metal films, energy depend. of thermoelectric power, graphical determ. 2-51153
- two-dimensional melting mechanisms, computer simulation studies 2-1598
- two-phase bodies, continuously interconnected, internal morphology 2-30570
- vacancy struct. in grain boundaries, computer simulation 2-12584
- void sheets nucleation, in creep and hydrogen attack 2-27217
- void sink strength including bulk recombination, rel. to grain boundary sink strengths 2-40381
- warm-rolled metal, grain boundary strengthening 2-41632
- weak-beam electron microscopy, review 2-48850
- X-ray topographic method, determ. of subgrain misorientation 2-8526
- Zircaloy-2 and -4, neutron irradi., dislocation struct. 2-50649
- Ag, film, removed from substrate, interpretation of stress in crystalline grains (*Japanese*) 2-26265
- Ag, recrystn. temp., effect of trace elements (*Japanese*) 2-9360
- Al, AE response during tensile straining (*Slovak*) 2-31753
- Al alloy 7075, stress corrosion susceptibility, soln. treatment temp. effect 2-41778
- Al film, grain-boundary sliding, vibrating reed technique 2-45792
- Al, grain boundaries, low-energy orientations (*Russian*) 2-21156
- Al, grain boundaries, sliding behaviour and dislocation struct. 2-40411
- Al, grain boundary dissociation study 2-12610
- Al metallisation, electromigration meas. techniques for grain boundary diffusion activation energy 2-30662
- Al, movement of grain boundary dislocations in recrystallising interfaces 2-40413
- Al, stress induced migration of symmetric tilt boundaries 2-8676
- Al, use of Ga-induced brittle fracture, for grain struct. anal. (*German, English*) 2-52156
- Al-Cr, rapidly solidified, coarsening of intermetallic particles 2-41611
- Al-Cu-Mg-Fe-Ni, superplasticity in creep (*Russian*) 2-5905
- Al-Fe, rapidly solidified, coarsening of intermetallic particles 2-41611
- Al-Mg (5 wt.%), internal friction, grain boundary effect of environment 2-51962
- Al-Mn, grain boundary and precipitation effects, internal friction and dynamic elastic modulus meas. 2-47038
- Al-Ni, rapidly solidified, coarsening of intermetallic particles 2-41611
- Al-poly-Si Schottky-barrier solar cell, large grain, majority carrier current characteristics 2-2788
- Al-SiO<sub>2</sub>-Si solar cells polycrystalline, grain boundaries passivation 2-18080
- Al-Zn, eutectoid transform., determ. of activation energy using DSC 2-13714
- Al-Zn (38 at.%), spinodal decomp., various stages 2-47007
- Al-Zn-Mg, environmental embrittlement (*Japanese*) 2-27331
- Al-Zn-Mg (2.8, 1.9 wt.%), precip. on low-angle grain boundaries 2-17683
- Al-Zn-Mg-Cu, slip behaviour, effect of solute content 2-47141
- Al-Zn-Mg-Cu, stress corrosion charact., effect of heat treatment and Cu content 2-37004
- Al-Zn-Mg-Cu (6, 2, 0.01-2.1 wt.%), high strength, low cycle fatigue behaviour in T7351 condition 2-27276
- Al-Zn(-Sn)-In, sacrificial anodes, sea water testing 2-52093
- AlN, densification kinetics during hot pressing 2-27125
- Al<sub>2</sub>O<sub>3</sub>, polycryst., creep cavitation effects 2-13790
- Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-K<sup>+</sup>(Ca<sup>2+</sup>),  $\beta$  and  $\beta'$  phases, grain boundary and bulk cond., impurities effect 2-12834
- $\beta'$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-CaO, fast ion cond., Ca segregation at grain boundaries 2-26129
- Au/Ti thin films, segregation of Ti, chemisorpt.-induced 2-51907
- Au-Ag thin film couples, interfacial reactions, Auger depth profiling, TEM, and contact resist. meas. 2-8678
- Au-mica-p-Te:Cu film MIS struct., field effect studies 2-41017
- Au-Sn-Al metallisations on GaAlAs, interfacial struct. studies 2-8713
- BaPb<sub>0.5</sub>Bi<sub>0.5</sub>O<sub>3</sub> film, grain boundary Josephson current 2-2035
- Be, superplasticity and built-in zones 2-17717
- Bi thin film resistivity, air-exposure effect 2-41026
- CaCO<sub>3</sub>, synthetic calcite crystal, cleavage face etch pits, low-angle grain boundaries 2-25902
- Cd single crystals, X-ray topographic study of substruct. and dislocations (*Japanese*) 2-8522
- CdS film, grain struct. 2-51051
- CdS:Al<sub>2</sub>O<sub>3</sub>(SnO<sub>2</sub>) coating prep. by spray pyrolysis, solar cells appl. 2-51042
- CdS/Cu<sub>2</sub>S sintered solar cells, controlled annealing of sintered c dS layer effects on photovoltaic performance 2-6172
- Cd<sub>1-x</sub>Zn<sub>x</sub>S film, grain struct. 2-51051
- Ce<sub>1-x</sub>Al<sub>x</sub>Co<sub>3</sub>, constitution, struct. and mag. props. 2-47199
- Co-base superalloy, cast, MM509, air embrittlement 2-36955
- Cu alloy, superplastic, microstructural exam. of flow behaviour 2-13778
- Cu bicrystals, deformed, grain boundary effects 2-51973

**grain boundaries continued**

- Cu, creep and cavity growth at low stresses 2-51975
- Cu grain boundaries, anisotropy of Bi segregation 2-40416
- Cu, high purity, Matthiessen's rule deviations 2-17045
- Cu, intergranular crack nucleation and fracture 2-27261
- Cu, STEM/X-ray microanalytical study of Bi equilib. segregation 2-31699
- Cu:P, electropolishing in H<sub>3</sub>PO<sub>4</sub> solns. (*Russian*) 2-22371
- Cu-Ag alloys, discontinuous precip. reaction, invest. using electron microscopy and X-ray diff. 2-2511
- Cu-SiO<sub>2</sub>, dispersion hardened, diffusion creep threshold 2-41686
- Cu-Sn, diffusional interaction with Nb, Nb<sub>3</sub>Sn layer growth 2-40304
- Cu-Sn thin film diffusion couple, Marker shift obs. by AES 2-50932
- Cu-Ti (4 at.%), solution treated single crystals, and polycrystals, cyclic deform. 2-36934
- Fe, BCC, grain boundary self-diffusion, evidence for vacancy mechanism, mol. dynamics simulation 2-35731
- Fe, fracture, intergranular, cathodic pot., effect of grain boundary chem. 2-9406
- Fe, oxidation FeO grain size and cavities effects 2-41779
- Fe, pure polycrystalline, internal friction effect of H, low temps. 2-22261
- Fe:rare earth, dopant distrib. studied by internal friction 2-45238
- Fe-base superalloy, IN903A, grain boundary embrittlement 2-9408
- Fe-C alloys and structural steel, AE during tensile tests 2-31873
- Fe-C-P, equilibrium segregation of P at grain boundaries 2-5881
- Fe-C-Si (Ni, Mn, Cr), grain boundary ferrite allotriomorphs, growth kinetics 2-16659
- Fe-C-Si (Ni, Mn, Cr), proeutectoid ferrite growth kinetics, influence of carbide precip. 2-17682
- Fe-Cr-Al, high temp. props. improvement by rare earth additions, internal friction study 2-45355
- Fe-Cr-C-P, equilibrium segregation of P at grain boundaries 2-5881
- Fe-Cu, liq. phase sintered, grain boundary wetting, temp. depend. 2-35869
- Fe-Ni-C alloy, TEM study of strain rate influence and deform. mode on substruct. 2-5904
- Fe-Ni(Si), grain boundary etching method appl. (*Japanese*) 2-25903
- Fe-P, equilibrium segregation of P at grain boundaries 2-5881
- Fe-P alloys, P segregation, rel. to grain boundary struct. 2-22222
- Fe-S, self-diffusion, bulk and grain boundary (*French*) 2-50902
- Fe-Si (3 wt%) sheets, grain oriented, remanence theory in presence of external stresses 2-26708
- Fe-Si-Sb alloy, grain boundary relaxation, grain boundary segregation effect 2-47081
- Fe-Si(3 wt.%) crystal, X-ray topographic method, determ. of subgrain misorientation 2-8526
- $\alpha$ -Fe-Sn, intergranular creep fracture at migrating and sliding grain boundaries 2-13813
- Fe-Zn (9-32 wt.%), grain boundary migration, diffusion-induced, metallographic study 2-12609
- Fe-Zn-C, phase transform kinetics, effect of Zn 2-36853
- GaAs:Zn, polycrystalline, optoelectronic props. rel. to grain boundary features, cathodoluminesc. anal. 2-36713
- Ge bicrystal, grain boundary levels, transient capacitance meas. 2-51117
- Ge, defect structure by high resolution electron microscopy 2-25888
- He, three-dimens., solidification, surface and confinement effects 2-50957
- <sup>4</sup>He, solid, ionic current bursts, charged low angle grain boundary motion model 2-35857
- Hg<sub>1-x</sub>Cd<sub>x</sub>Te IR detectors, MIS diode and photoconductive devices, perform. rel. to grain boundary angles 2-48788
- p-InP based photocathodes, solar to H<sub>2</sub> conversion, polycryst. films improvement by reacting Ag with grain boundaries 2-42033
- LiF, polarisation effects at small-angle boundaries, space charge distrib. 2-26819
- Lil, ionic conduction, composition and imperfections effects 2-21371
- LiNbO<sub>3</sub> bicrystal, thermal bonding, influence of planar diffusion bonded boundaries on props. 2-26840
- Mg, grain-boundary struct. influence on props. 2-45203
- Mo alloys, cold-shortness temp. for intergranular and transcrystalline fracture (*Russian*) 2-5937
- Mo CVD coating, He ion irradiation effects 2-12651
- Mo-B alloy, B segregation, nuclear reactions study (*Russian*) 2-13725
- Na<sub>1-x</sub>Y<sub>x</sub>Zr<sub>2-x</sub>(PO<sub>4</sub>)<sub>3</sub> ionic conductor, conduction paths 2-16871
- Na<sub>1-x</sub>Y<sub>x</sub>Zr<sub>2-x</sub>(PO<sub>4</sub>)<sub>3</sub>, sintered ionic conductive material, conduction paths 2-21356
- Na<sub>1-x</sub>Zr<sub>2</sub>Si<sub>2</sub>P<sub>3-x</sub>O<sub>12</sub>, NASICON, solid electrolyte, thermal cycling effects on conductivities and mech. props. 2-5270
- Ni, cavity form. mechanism, high temp. oxidation 2-41775
- Ni, plasticity rel. to magnetism (*Russian*) 2-9384
- Ni, polycryst., intercryst. props., influence of S segregation (*French*) 2-22221
- Ni, role of interfaces in H embrittlement 2-41741
- Ni:In, grain boundary diffusion of In, meas. by SIMS 2-35739
- Ni-Al-Mo-base superalloys, microstruct. features 2-41689
- Ni-base superalloy, IN-738, extending creep life, intermediate regenerative heat treatments 2-22774
- Ni-base superalloy, Nimonic 115, 22 2-52039
- Ni-base superalloys, astrolay, grain boundary microcracking after room temp. deform. 2-41737
- Ni-Cr superalloy, IN597, long term isothermal ageing at 850°C, microstruct. and creep props. 2-41673
- Ni-Mo-Cr, Hastelloy, long-term ageing charact. 2-9361
- NiAl, creep props., high temp., effect of graphite impurity 2-13775
- PZT, TEM obs. of grain boundary phase, sintering effects 2-17652
- Pb (Zr<sub>0.5</sub>Ti<sub>0.5</sub>)O<sub>3</sub> ceramics, influence of mixing medium on sintering and coupling coeff. 2-51841
- Pb-Sn, nucleation mechanism for discontinuous precipitation cells (*Russian*) 2-50826
- Pd powders, sintering kinetics, modification by surface oxide 2-9304
- Pr<sub>1-x</sub>Al<sub>x</sub>Co<sub>3</sub>, constitution, struct. and mag. props. 2-47199
- Si bicrystals growth and characterisation for solar cells 2-17618
- Si CVD films, polycryst., elec. props., depend. on grain size and impurity doping conc. 2-30981
- Si, carrier recombination at grain boundaries 2-1924
- Si, defect structure by high resolution electron microscopy 2-25888
- Si film, grain boundaries, TEM and EBIC obs. 2-30472
- Si, hot-pressed, tilt boundary, TEM and electron diff. study 2-30470
- n-Si photoanode, grain boundary and surface damage effects on stabilisation, rotating ring disc electrode studies 2-16932
- Si, polycryst., deform. and recryst. 2-17709



**grain boundaries continued**

- Si, polycryst., modification of grain boundaries by exposure to  $F_2$  and  $O_2$  2-16656
- Si, polycrystalline, carrier transport and recombination processes at grain boundaries under optical illumination 2-36105
- Si, polycrystalline, comparison of electrical conduction model with experiment 2-5400
- Si, polycrystalline, model for conduction using grain boundary mechanisms 2-5399
- Si polycrystalline, n and p-type, photocurrents and diffusion length new grain boundaries, interfacial recomb. vel. 2-51209
- Si, polycrystalline, potential barrier form. at grain boundaries following anneal 2-35514
- Si, polycrystalline, solar cells, grain size dependence of photovoltaic props. 2-22622
- Si, polycrystalline, solar cell, effect of grain boundaries, review 2-37414
- Si, polycrystalline, X-ray topography and photoresponse of grain boundaries, solar cell appls. 2-37402
- Si polycrystalline diffused p-n junction solar cells, grain boundaries effect in I-V characts. 2-52337
- Si polycrystalline in MIS devices, grain boundary effects, capacitance, cond. 2-21679
- Si, polycrystalline RAD polysilicon sheets characterisation using SEM in EBIC mode 2-17091
- Si polycrystalline solar cell performance, effect of grain boundaries, energy-gap narrowing, trap-assisted recombination 2-37270
- Si, polycrystalline thin film, pulsed laser recrystallisation, SEM technique 2-51057
- Si powder, plasma sprayed, preparation and characterisation, for application as base material in solar cell fabrication 2-18074
- Si, refined metallurgical, single crystal and polycrystalline solar cells, AMI efficiency study 2-14075
- Si semicrystalline Schottky diode, quantitative model of grain boundaries influence on junctions space charge 2-37243
- Si solar cells, polycrystalline,  $p^+-n-n^+$  structure, low cost development 2-18079
- Si solar cells bicrystalline, scanning spectral response measurements for process optimisation 2-18085
- Si solar cells columnar, diffusion parameters optimisation using two-step diffusion of phosphorus 2-18081
- Si solar cells crystalline, non-single, grain boundaries electrical props. 2-18088
- Si solar cells polycrystalline effects of special processing on diffusion lengths 2-18084
- Si, twins, grain boundaries, atomic struct. 2-50661
- Si:H, microcryst. plasma deposited coating, elec. cond. and optical absorpt. 2-46165
- Si:H, microcrystalline and amorphous films, Raman scatt. 2-46564
- Si:Li polycrystalline solar cells, effect of diffusion on grain boundary transport and minority carrier recombination 2-37399
- Si:P, ion implanted, I-V characts., temp. depend., elec. cond. model 2-51356
- Si:P polycrystalline films, grain size and sheet resistivity meas. 2-51362
- Si-Si interface electronic props. 2-51288
- SIC ceramic, inclusions of grain boundaries, EELS (TEM study) 2-35511
- SIC compacts, 6H to 3C reverse transform. 2-51893
- SiC, etching behaviour, microstruct. study 2-52080
- SiC, polycrystalline, containing excess Si after neutron and ion irradi., microstruct. 2-30496
- n-Si<sub>0.3</sub>Ge<sub>0.7</sub>, thermal cond. and thermoelec. conversion, phonon-grain boundary scatt. effect 2-40947
- Si<sub>3</sub>N<sub>4</sub> ceramics, indentation plasticity and fracture 2-31774
- Si<sub>3</sub>N<sub>4</sub>, hot-pressed, activation energies from densification, creep, grain-boundary sliding 2-31666
- Si<sub>3</sub>N<sub>4</sub>, polycryst., frictional deform. and fracture 2-27294
- Sm thin films, elec. resist., substrate temp. and grain boundary scatt. effects 2-36157
- Sn-Ge, In diffusion along interphase twist boundaries 2-35744
- Sn-Ge phase boundary, orientational depend. of surface tension 2-1777
- $\alpha$ -TaO<sub>3</sub>, stabilized, solid electrolyte, complex impedance meas. 2-21382
- Ti, creep, steady state, effect of polycryst. grain size 2-22285
- $\alpha$ -Ti,  $\Sigma=7$  tilt boundary, struct. and at. vibr., mol. dynamics simulation 2-45201
- Ti, technical purity, intergranular precipitation (Russian) 2-22220
- Ti-Al-V(Fe-Ag), crack initiation and propagation, microstruct. effect (German) 2-13823
- Ti-C-N coated WC-Co hard alloy, TiB<sub>2</sub> interaction 2-40607
- V<sub>3</sub>Ga tapes, supercond., microstruct. and crit. current density, prep. by composite process 2-13255
- VaF<sub>2</sub> single crystals, dissolution studies 2-21314
- W alloys, cold-shortness temp. for intergranular and transcrystalline fracture (Russian) 2-5937
- Zn, bicrystal, incompatible, work hardening 2-17691
- Zn, bicrystal, plastic strain incompatibility effect on 0.1% proof stress 2-13786
- Zn-Al (0.4 wt.%), fine grain, creep characts. (Russian) 2-9383
- Zn-Al (22 wt.%) superalloy, solution-precipitation mechanism for grain boundary discontinuities 2-47045
- Zn-Al eutectoid alloys, superplastic roles of interphase and intercryst. boundary sliding 2-41667
- ZnO ceramics, non-ohmic, microstruct. TEM, SEM, and X-ray diff. study 2-50875
- ZnO films prep. by oxidation of diethyl zinc 2-21460
- ZnO:K, hot-pressed, microstructural defects, TEM study 2-5132
- ZnSe, electrically active grain boundaries, SEM cathodoluminescence and induced current obs. 2-40417
- Zr, irradiation growth of single crystals 2-45284
- ZrO<sub>2</sub>, commercial, partially stabilised, grain boundaries, fracture and heat treatment 2-52028
- ZrO<sub>2</sub>, stabilised solid solns., accretive recrystn. rate, growth kinetics of cubic grains 2-41623

**grain boundary diffusion** *see diffusion in solids***grain growth**

- cement hydration, meas. by US wave refl. 2-5990
- coarsening of second phase particles, volume fraction effect 2-41607
- metals, electrodeposition, substrate electronic struct. effects 2-45782
- metals, porous sintered, grain growth mechanism (Japanese) 2-2476
- metals, refractory, stability of substructurally strengthened states under thermal shock conditions (Russian) 2-36884

**grain growth continued**

- polycrystals, ordered two-dimens., grain growth 2-41581
- sintered materials, porous phase, mean free path 2-46966
- stagnation 2-51919
- steel, C, eroded surface under salt water, SEM study 2-5980
- steel, Cr-Ni, oxidation, influence of metal grain growth 2-9470
- steel, Cr-Zr, Zr effect on props. 2-2565
- steel, martensitic, austenite grain growth, during repeated austenitising, effect of hot working temp. (Polish) 2-2532
- steel, metallurgical props., US vibr. effect 2-47053
- Al-Mn, grain boundary and precipitation effects, internal friction and dynamic elastic modulus meas. 2-47038
- Al<sub>2</sub>O<sub>3</sub> powders, ultrafine, particle growth in plasma-chem. reactions 2-31669
- 3Al<sub>2</sub>O<sub>3</sub>.2SiO<sub>2</sub>, fusion, in centrifugal furnace, grain growth (Japanese) 2-36804
- BaFe<sub>2</sub>O<sub>7</sub>.SiO<sub>2</sub>, coprecipitated, uniaxially hot pressed, coercivity and texture 2-21838
- Be wire, recryst. and grain growth in annealing 2-2526
- Bi deposition on C film, grain size meas. of nuclei shape 2-26241
- Cu, dynamic recrystn. during hot compression (Russian) 2-36878
- Cu-Al-Si-Co (2.8, 1.8, 0.4 wt.%), superplastic, doubt over existence of Region I 2-31730
- Fe, Armco, dynamic recrystn. during hot rolling (Russian) 2-36878
- Fe-base superalloy, IN903A, grain boundary embrittlement 2-9408
- Fe-P, amorphous, crystn. mechanism, DTA and X-ray diff. invest. (Korean) 2-40283
- Fe-Si (3%), grain substruct. formation during recrystallisation 2-13746
- Fe-Zn (9-32 wt.%), grain boundary migration, diffusion-induced, metallographic study 2-12609
- Ni, thin film, elec. resistivity and structure, effect of annealing 2-51351
- Pb-Bi film, Josephson junction electrodes, thermal stability 2-51944
- Si:As, ion implanted, polycrystn. film, laser irradi., elec. props. grain size, annealing effect 2-17173
- $\beta$ -SiC, reaction bonded, ultra-fine grained, microstruct. and props. 2-9412
- SnO<sub>2</sub> powders, ultrafine, particle growth in plasma-chem. reactions 2-31669
- TiN(C)(B<sub>2</sub>) powders, ultrafine, particle growth in plasma-chem. reactions 2-31669
- UO<sub>2</sub>, isostatic hot-pressing 2-5850
- ZrO<sub>2</sub>, stabilised solid solns., accretive recrystn. rate, growth kinetics of cubic grains 2-41623
- grain refinement**
- solidification, effects of vibr. 2-2502
- steel, low-alloy, austenitising processes, direct electron microscopy study 2-51937
- steel developments, carbon and alloy types 2-22241
- Cu-Sn (12 and 15 wt.%), deformability improvement by hot extrusion and boride grain refining additions (German) 2-13755
- Ni base superalloy, cast, CoO inoculant for surface grain refinement (Chinese) 2-17692
- grain size**
- see also grain growth; grain refinement*
- alloy, long-range ordered, brittle to ductile transition, grain size effect 2-27260
- alloy design, for fracture resist. 2-5957
- alloy design, microstructural synthesis 2-5869
- alloys, biphasic isotropic, elastoplastic props., comparison with constituent props. (French) 2-30507
- alloys, strengthening mechanisms 2-5887
- binary alloys, effect of second-phase vol. fraction on grain size stability and flow stress during superplastic flow 2-22268
- brass, internal friction in conc. alloys 2-45344
- brass sheets, weakly textured, biaxial stretching, influence of sheet thickness and grain size 2-9378
- cell arrangement in network, theory 2-41580
- ceramic microstructure orientation by hot-forming methods 2-46988
- creep Nabarro-Herring and Coble, effect of grain shape 2-40476
- diamond-Co system, sintering behaviour at high temp. and press. 2-51864
- diffusional creep, grain boundary sliding, contrib. to axial strain 2-40475
- electrophotographic copies, optical density, carrier powder grain size influence (German) 2-28918
- fatigue growth threshold of small cracks 2-8560
- fatigue limit and stress intensity factors, effect of grain size and yield stress 2-30521
- film, semiconducting, struct., X-ray diff. study 2-45788
- film preparation method for improved microstruct. 2-13645
- films, CVD, amorphous and polycryst., cond. mechanism 2-46171
- fine-grained materials, creep, influence of pipe diffusion 2-25978
- granular materials grain size determination by linear anal. (German) 2-22401
- hard magnetic ferrite, economic importance, development of comminution (German) 2-47198
- internal friction and creep rupture behaviour 2-47083
- liquid matrix, size distrib. during coarsening (Korean) 2-41579
- metallic thin film grain size control by lithographic methods 2-27097
- metals, ductile, fracture toughness calc. 2-2589
- metals, electrodeposition, substrate electronic struct. effects 2-45782
- metals, FCC, mech. behaviour in plastic deform. 2-2558
- Ostwald ripening, spherical grain size determ. from average area of intersection annealing 2-9505
- particle by particle anal., anisotropy study, image anal. using table digitiser 2-52153
- polycrystalline hollow cylinder, thermal loading, energy conditions for brittle fracture (Russian) 2-13808
- polycrystalline materials, effect of grain size on diffusion 2-26103
- polycrystalline metallic films, lattice defects and DC-elec. cond. 2-8527
- positron trapping at grain boundaries, grain size effects 2-51737
- powder processing, effect of powder characts. 2-46964
- prime candidate alloy, optimisation of struct. and props. by rapid solidification 2-31692
- rocks, scale invariance of low-freq. elec. props. rel. to pore and grain size determ. 2-3010
- snow, effect of grain size and snowpack water equivalence on satellite visible and near IR obs. 2-23040
- steel, alloy, laser surface heat treatment, microstruct. study 2-47242
- steel, alloy, microstruct. and mech. props., effect of thermal cycling (Korean) 2-5946



## grain size continued

steel, alloy, V modified, hardenability, heat treatment 2-22229  
 steel, austenitic stainless, creep, high temp., precip. free specimens, appl. of deform. mechanism maps 2-17710  
 steel, austenitic stainless, interaction with Li, effect on struct. and mech. props. 2-41798  
 steel, austenitic stainless, precipitate-free, high temp. creep, grain boundary sliding 2-27255  
 steel, austenitic stainless, residual strength and microstruct., effect of shock deform. 2-47139  
 steel, austenitic stainless, tensile response, influence of shock-loading temp. and pulse duration 2-47140  
 steel, austenitic stainless, work hardening, effect of H 2-36881  
 steel, C, US prediction of grain size, strength and toughness 2-17825  
 steel, Cr, martensitic struct., TEM and optical microscopy study 2-5872  
 steel, Cr-Mo, with different grain sizes, test temp. influence on impact fatigue crack growth 2-5996  
 steel, Cr-Ni-Al, discontinuous precipitation of Ni-Al intermetallic compd. 2-51913  
 steel, creep resistant, struct. deforms. under thermal tensioning 2-41700  
 steel, high-speed, struct. and mech. props. with isothermal deform. 2-2568  
 steel, high-speed, struct. and props. after cold treatment 2-27196  
 steel, low alloy, crack growth, effects of overstraining 2-31769  
 steel, low alloy, high strength, fatigue crack propag., effect of low temp. and grain size 2-47174  
 steel, low alloy, laser transform. hardened, presence of retained austenite 2-22388  
 steel, low C, low cycle fatigue, grain size effects 2-47152  
 steel, low C, near threshold fatigue crack propag., stress ratio and grain size effects 2-52015  
 steel, low C, sheets, weakly textured, biaxial stretching, influence of sheet thickness and grain size 2-9378  
 steel, low C, sheets, well-developed preferred orientation, biaxial stretching, effect of grain anisotropy 2-9379  
 steel, low C, US attenuation and microstruct. 2-31876  
 steel, low-alloy, pipe, B microalloying effectiveness, heat treatment influence 2-36889  
 steel, low-C, water vapour effect on fatigue crack tip stress and strain distrib., crack propag. energy 2-2581  
 steel, mild, stress corrosion behaviour, effect of Al additions and grain size (Korean) 2-41791  
 steel, plain-C, US prediction of grain size and mech. props. 2-37026  
 steel, quantitative determ. of grain size and inhomogeneity detection by US backscattering meas. 2-17823  
 steel, strain hardening rate, changes during adsorption and desorption of H during cathodic charging 2-22243  
 steel, strain-temp. correl., obtained an application of axisymm. compressive stresses 2-47138  
 steel austenitic stainless type OOKh16N15MB, radiation damage anisotropy by high-voltage electron microscopy 2-16680  
 steel plate, and strip, controlled rolling 2-22237  
 steels, high-speed, powder-processed, rel. between microstruct. and strength 2-9387  
 superplasticity, fundamentals and appl. 2-47150  
 transformation toughening, size effects assoc. with thermodynamics of constrained transform. 2-51922  
 warm-rolled metal, grain boundary strengthening 2-41632  
 Al, grain boundary dissociation study 2-12610  
 Al, obtained an application of axisymm. compressive stresses 2-47138  
 Al sheets, well-developed preferred orientation, biaxial stretching, effect of grain anisotropy 2-9379  
 Al-Li system, alloy development 2-31693  
 Al-Mg, dispersion strengthened by mech. alloying 2-17689  
 Al-Sn, struct. and mech. props., heat treatment effects, X-ray diff. obs. 2-35443  
 Al-Zn-Mg, 7075, toughness, effect of thermomech. treatment 2-47161  
 Al-Zn-Mg-Cu, slip behaviour, effect of solute content 2-47141  
 Al-Zn-Mg-Cu-Fe-Ni(Zr), struct. and mech. props., Fe with Ni or Zr addition effect 2-51991  
 AlN, densification kinetics during hot pressing 2-27125  
 Al<sub>2</sub>O<sub>3</sub>, large-grained, microcracking 2-47173  
 Al<sub>2</sub>(SO<sub>4</sub>)<sub>3</sub>, decomp., characterisation of resultant aluminas 2-5849  
 Au-Ge laser-annealed ohmic contacts on GaAs, microstruct. and resistivity 2-21675  
 BaTiO<sub>3</sub> films, preparation and struct. 2-46917  
 BaTiO<sub>3</sub>, porous ceramic, stoichiometry effect on positive TCR 2-51172  
 BaTiO<sub>3</sub>, thick films, dielec. const., grain size depend. 2-17383  
 BaTiO<sub>3</sub>/Sb, PTC effect as function of 3d element doping, elec. resist., grain sizes, carrier density 2-30887  
 BaTiO<sub>3</sub>/Sb<sub>2</sub>O<sub>3</sub> semiconducting ceramics, positive temp. coeff. of resist., microstruct. effect 2-36040  
 Bi deposition on C film, grain size meas. of nuclei shape 2-26241  
 Bi<sub>2</sub>Sb<sub>20</sub> alloy thin films, elec. props., vacuum-deposited at different substrate temps. 2-30979  
 Bi<sub>2</sub>Te<sub>88</sub>Se<sub>12</sub>, extruded, elec. props. and struct. 2-40979  
 C, non-graphitising, graphitisation and densification under high press. (Japanese) 2-22411  
 C, pitch-bonded green carbon bodies, linear dims. changes during baking 2-51852  
 C resistance thermometer, electron tunnelling 2-33528  
 CaS:B, thermolum. phosphor, phys. parameters, operation importance 2-22101  
 cc Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> composites, transform. toughening, fabrication and fracture toughness 2-51925  
 CdS film, grain struct. 2-51051  
 CdS:Al<sub>2</sub>O<sub>3</sub>(SnO<sub>2</sub>) coating prep. by spray pyrolysis, solar cells appl. 2-51042  
 CdS/Cu<sub>2</sub>S sintered solar cells, controlled annealing of sintered C dS layer effects on photovoltaic performance 2-6172  
 Cd<sub>1-x</sub>Zn<sub>x</sub>S film, grain struct. 2-51051  
 β-Co, transient stage in low stress viscous creep 2-5915  
 Co-P chemically deposited film, mag. props., effects of activation and acceleration 2-9009  
 Co-Re sputtered film, effect of orientation and microstructure on mag. props. 2-21848  
 Cr<sub>1/2</sub>C<sub>1/2</sub>-Ni(15 wt.%), hot pressing conditions effect on densification and struct. 2-41553  
 Cu, fracture kinetics, role of surface energy at boundary with liq. Bi-Pb 2-41742

## grain size continued

Cu sheets, weakly textured, biaxial stretching, influence of sheet thickness and grain size 2-9378  
 Cu sheets, well-developed preferred orientation, biaxial stretching, effect of grain anisotropy 2-9379  
 Cu, ultrasonic waves damping factors, rel. to microstruct. 2-13880  
 Cu-SiO<sub>2</sub>, dispersion hardened, diffusion creep threshold 2-41686  
 Cu-Sn-Cr, ultrasonic waves damping factors, rel. to microstruct. 2-13880  
 CuSnIn bronze/Nb single core Al<sub>2</sub>S diffusion layers, influence of In on supercond. props. (German) 2-13219  
 CuZn 30 sheets, struct. and texture study on cold rolling (German) 2-2530  
 ErH<sub>2</sub>, crystal growth, Er metal hydrided at 950°C 2-9272  
 Fe, Armco, liq. metal embrittlement, grain size role 2-17738  
 Fe, atomised powder compacts, high purity, mag. props. 2-47200  
 Fe ore, prereduced, feasibility of a type specimen (French) 2-2424  
 Fe, oxidation, (001) and (112) crystals, growth and struct. of oxide films, 200-300°C 2-2622  
 Fe, strain hardening rate, changes during adsorption and desorption of H during cathodic charging 2-22243  
 Fe-Ni-Al alloy YuND4 magnets, cooling rate rel. to mag. props. 2-26674  
 Fe-Si (3.25 wt.%), grain-oriented, core-loss, effect of cutting operation 2-17744  
 Gd<sub>2</sub>O<sub>3</sub>, monoclinic, microcracking behaviour 2-49113  
 Ge film, polycryst., low temp. growth by UV laser photodissociation of GeH<sub>4</sub> 2-51823  
 In<sub>2</sub>O<sub>3</sub> film, semiconducting, struct., X-ray diff. study 2-45788  
 InP, polycrystalline, low temp. growth, elec. props. meas. 2-22155  
 Mo, stress relaxation and thermally activated deform. (Japanese) 2-47071  
 Mo-Re alloy films, annealing behaviour 2-8890  
 Nb<sub>3</sub>Sn wire, bronze-processed, flux pinning 2-8922  
 Ni, thin film, elec. resistivity and structure, effect of annealing 2-51351  
 Ni<sub>3</sub>Mo-Fe sintered strip, struct. and mech. props. 2-31658  
 Ni<sub>3</sub>Fe orderable alloy, work hardening, grain size effect 2-27188  
 Pb-Sn, eutectic alloy, high temp. deform., expt. constitutive eqns. 2-22270  
 Pb-Sn eutectic alloy, superplastic flow, uniqueness of stress-strain rate relations 2-36915  
 PbTiO<sub>3</sub>, amorphous, crystallisation, Raman study 2-41340  
 Pb(Zr<sub>0.52</sub>Ti<sub>0.48</sub>)O<sub>3</sub>, influence of microcracking and slow crack growth on planar coupling coeff. 2-31777  
 Pb<sub>1-x</sub>(Zr<sub>0.5</sub>Ti<sub>0.5</sub>)O<sub>3-x</sub> ceramics, microstruct. and props., effect of processing and excess PbO 2-5845  
 Si amorphous film on SiO<sub>2</sub>, crystn. by CW laser irradi. 2-51013  
 Si CVD films, polycryst., elec. props., depend. on grain size and impurity doping conc. 2-30981  
 Si film, encapsulated, zone-melting recrystn. on SiO<sub>2</sub>, morphology and crystallography 2-51012  
 Si film, polycryst., low temp. growth by UV laser photodissociation of SiH<sub>4</sub> 2-51823  
 Si film, polycryst., on SiO<sub>2</sub>, grain growth by CW scanning electron beam annealing 2-12925  
 Si, layer growth by CVD on liquid Sn coated graphite substrate 2-13657  
 Si, polycryst., deform. and recryst. 2-17709  
 Si, polycrystalline, solar cells, grain size dependence of photovoltaic props. 2-22622  
 Si, polycrystalline film, on amorphous substrates, CW laser recrystn. 2-2442  
 Si, polycrystalline solar grade, directional solidification technique 2-36849  
 Si, recrystallisation of amorphous and small grained polycrystalline material 2-13756  
 Si rheotaxial film development by CVD on low cost substrate, solar cell appl. 2-2455  
 Si, thin film, laser growth, in patterned structures 2-51059  
 Si:As, ion implanted, polycrystn. film, laser irradi., elec. props. grain size, annealing effect 2-17173  
 Si:F, amorphous, structural model 2-45030  
 Si:F, sputtered amorphous coating, struct. model, expt. study 2-16593  
 Si:P film, LPCVD, polycryst., grain size and resist. 2-13202  
 Si:P polycrystalline films, grain size and sheet resistivity meas. 2-51362  
 SiC base refractories, high-temp. strength 2-52008  
 β-SiC, reaction bonded, ultra-fine grained, microstruct. and props. 2-9412  
 SiC, self-bonded, mech. props., crystallite size effect 2-41744  
 n-Si<sub>0.35</sub>Ge<sub>0.65</sub>, thermal cond. and thermoelec. conversion, phonon-grain boundary scatt. effect 2-40947  
 SmCo<sub>5</sub> permanent magnets, deform. sintered, struct. and mag. props. 2-31245  
 Sr<sub>0.5</sub>Ba<sub>0.5</sub>Nb<sub>2</sub>O<sub>6</sub>:Cu ceramics, ageing study through photovoltaic effect 2-26432  
 SrO-Fe<sub>2</sub>O<sub>3</sub> system, comminution, effect on grain size, mag. props. and X-ray line breadth (German) 2-52061  
 Ti, creep, steady state, effect of polycryst. grain size 2-22285  
 α-Ti, transient stage in low stress viscous creep 2-5915  
 TiC CVD coatings on cemented carbide, nucleation and growth, phenomenological study 2-51052  
 TiC, polycrystalline, mech. props. 2-51984  
 TiC-Ni-Mo, hot pressing, conditions effect on coercive force and grain size 2-17647  
 TiO<sub>2</sub> film, reactive DC plasmatron sputtered, optical and struct. props. 2-51043  
 TiO<sub>2</sub> film, reactively sputtered, light scatt. 2-46808  
 U, rapidly solidified, early work 2-17673  
 V<sub>2</sub>Ga wire, superconducting props., formation temp. effects 2-8927  
 VSe<sub>2</sub>-S<sub>8</sub>, struct., mag., and electrochem. props., battery cathode appls. 2-41905  
 W, hot rolled, struct. form., impurities role 2-41643  
 W-Ni-Fe binder phase, struct., heat treatment conditions effect 2-17696  
 WC-Co cold-upsetting tool, surface layer struct. 2-17743  
 WC-Co-B alloying electrodes, grain size effect on coating form. in elec.-spark alloying 2-13861  
 Zn electrodeposition at high current densities, deposit characteristics 2-27445  
 ZnO luminophores, low-temp. studies on grain-size effect on electro-optical effects 2-46540  
 ZnO(Se)(S), RF sputtered film struct., TEM, X-ray and electron diff. obs. 2-40746  
 Zn<sub>3</sub>P<sub>2</sub> film, quasi-rheotaxial growth 2-13650



## grain size continued

- $\alpha$ -Zr, fatigue, cold work effect at elev. temp. 2-31772  
 ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub> composites, transform. toughening, expt. obs. 2-51924

grain structure *see crystal microstructure*grain subboundaries *see subboundary structure*

## gramophones

No entries

Granato-Lücke theory *see dislocation damping*

## granular materials

*see also granular structure*

- capsule deformation during hot isostatic pressing of discs 2-17643  
 cryochemical synthesis products, kinetics of sublimation drying 2-52170  
 deformation, double-sliding free-rot. model 2-30039  
 deformation and plastic flow, review 2-16247  
 electrocorundum, spherical granules prod. from thermoplastic slips 2-41570  
 fracture, particle sliding mechanism as stochastic process 2-21223  
 grain size determination by linear anal. (German) 2-22401  
 granular flow, stress tension at high shear rates 2-4781  
 keramzite refractory, prod. for light porous granular fillers 2-36823  
 limestone, stress-strain relations under repeated loading 2-17721  
 metals, elec. resist., temp. depend., percolation model 2-30857  
 metals, granular and disordered, superconductivity destruction 2-46185  
 periclase, spherical granules prod. from thermoplastic slips 2-41570  
 plasticity theory for kinematics of ideal granular materials 2-21212  
 rheology, micromechanical description 2-12050  
 spinel, spherical granules prod. from thermoplastic slips 2-41570  
 superconductor, normal-state resist., transition temp. depend. 2-26540  
 superconductors, granular, transition temp., normal state resist. depend., percolation calc. 2-46187  
 thermoplastic slips, spherical granules prod. 2-41570  
 yield criteria, stress tensor distortion 2-21211  
 Al, granular superconductor, crit. field and transition temp. 2-46190  
 Al<sub>2</sub>O<sub>3</sub> material, spherical granules prod. from thermoplastic slips 2-41570  
 NbN film, two-dimens. granular, resist. characts. of phase incoherent-phase coherent supercond. transition 2-17208  
 Se film, discontinuous struct., mass transport effects 2-45781  
 ZrO<sub>2</sub>, spherical granules prod. from thermoplastic slips 2-41570

granular metallic thin films *see discontinuous metallic thin films*

## granular structure

*see also granular materials*

- BaC<sub>2</sub>O<sub>4</sub>.nH<sub>2</sub>O, morphologic, crystallographic charact. and surface props., grinding effect (French) 2-9299  
 CaC<sub>2</sub>O<sub>4</sub>.H<sub>2</sub>O, morphologic, crystallographic charact. and surface props., grinding effect (French) 2-9299  
 K<sub>2</sub>C<sub>2</sub>O<sub>4</sub>.H<sub>2</sub>O, morphologic, crystallographic charact. and surface props., grinding effect (French) 2-9299  
 Zn electrodeposition at high current densities, deposit characteristics 2-27445

## graph theory

*see also trees (mathematics)*

- diffractionmeter lines exposure planning, graphical methods appl. 2-8390  
 maximal clique determination for undirected linear graphs 2-38400  
 percolation, critical probability of infinite connected graph 2-38591  
 single number representation, identification 2-33267

graphic equipment, computer *see computer graphic equipment*graphics, computer *see computer graphics*

## graphite

- adsorbed <sup>3</sup>He solid layers, magnetic coupling 2-16923  
 adsorbed He, selective adsorption intensity features, perturbative calcs. 2-41480  
 adsorbed hydrocarbon films, orientational order 2-1756  
 adsorbed methane film, specific heat, rot. transition 2-30749  
 adsorbed methane on Grafoil, heat capacity of first monolayer 2-30625  
 adsorbed monolayers, superstructures, powder diffr. patterns near commensurate-incommensurate transition 2-1758  
 adsorbed N<sub>2</sub>, fluctuation induced phase transition 2-40686  
 adsorbed Xe (Kr), two-dimensional phase transforms. 2-8700  
 adsorbed Xe monolayers on (0001) slab, lattice dynamical calc. 2-40664  
 adsorbed Xe overlayer, H atom diffractive scatt. 2-2400  
 adsorption, of ethane, thermodynamic props. investig. (French) 2-21461  
 adsorption of Ar, monolayer and bilayer films, lattice const. and vibr., thermodynamic props. 2-45714  
 adsorption of Ar, second surface virial coeff. calc. 2-14002  
 adsorption of N<sub>2</sub>, molecular axes orientational ordering 2-40685  
 adsorption of Ne submonolayers, struct. and phase transitions 2-30748  
 AES and EELS, elastic peak electron spectroscopy, eval. procedure 2-27506  
 alkali graphite intercalation compounds, phonons 2-50787  
 alkali-graphite intercalation cpds., thermal expansion meas. 2-50892  
 Auger line shape construction 2-27031  
 bonded solid film lubricants, frictional behaviour 2-36975  
 carbonaceous-graphitic materials, vapour comp., partial press., sublimation heats, free energy changes 2-40527  
 condensed phase-gas phase transform. near graphite-liquid-vapour triple point 2-45546  
 corrosion by H<sub>2</sub>O in HTR core (German) 2-459  
 corrosion by water and air penetration in PNP-500 reactor (German) 2-500  
 development for reactors 2-19611  
 Earth crust, anal. of fluid evolution and graphite genesis in deep continental crust 2-37809  
 electrical props. in high mag. fields 2-21566  
 energy bands, smooth interpolation with gradient utilisation 2-45803  
 epoxy resin-graphite fibre composites, water-soaked, broadband NMR spectra, temp. depen d. 2-17347  
 fibre reinforced advanced epoxy matrix composites, sub-T<sub>g</sub> annealing studies 2-17693  
 film, ion bombardment to form solid high-resistivity form of C 2-16692  
 fission reactor graphite annealing, Wigner energy release 2-19736  
 fracture, emission of electrons and positive ions 2-9398  
 fracture surface energy determination, conditions selection 2-9477  
 glassy, positron lifetimes, struct. defects 2-17568  
 graphite+H<sub>2</sub>O reactions and its implication for radioactive waste storage 2-24303  
 graphite-AlCl<sub>3</sub>, intercalate, Shubnikov-de Haas effect (Russian) 2-8820  
 graphite-ICl intercalate, Shubnikov-de Haas effect (Russian) 2-8820  
 HTGR structural components, materials characts. and eval. 2-41831

## graphite continued

- HTR, side reflector construction (German) 2-548  
 intercalated with H<sub>2</sub>SO<sub>4</sub>, electronic and chem. struct., XPS study 2-27051  
 intercalated with SbF<sub>6</sub>, XPS studies 2-41497  
 intercalation compound, bond length change and cond., review 2-26270  
 intercalation compound, C<sub>24</sub>Rb, ordered struct., X-ray diffr. study 2-45126  
 intercalation compound, C<sub>6</sub>Eu, high field magnetisation 2-17319  
 intercalation compound, C<sub>6</sub>Li, universality, tritricity, and Potts transition 2-40535  
 intercalation compound, KC<sub>8</sub>, back-folded graphite band excitations, EELS study 2-41467  
 intercalation compound, struct. and electronic props., review 2-26269  
 intercalation compound with Cs, staging and ordering 2-1618  
 intercalation compound with FeCl<sub>3</sub>, longitudinal lattice modes, inelastic neutron scatt. study 2-16732  
 intercalation compound with K, charge distrib. 2-1852  
 intercalation compound with K, order-disorder phase transitions 2-1619  
 intercalation compounds, discommensurations, X-ray diffuse scatt. study 2-25829  
 intercalation compounds, effect of electron-phonon interaction on Raman spectra 2-51585  
 intercalation compounds, elec. props. in high mag. fields 2-21566  
 intercalation compounds, electronic dispersion relations, energy bands 2-12956  
 intercalation compounds, lattice dynamics modelled by phonon dispersion of linear chains 2-50790  
 intercalation compounds, lattice sums evaluation in graphite struct. 2-40752  
 intercalation compounds, order-disorder transition and charge density waves 2-16780  
 intercalation compounds, phonon dispersion curves, phenomenological model 2-40500  
 intercalation compounds, phonons 2-50779  
 intercalation compounds, role of phonons in intra-plane ordering 2-50780  
 intercalation compounds, single-staged, magnetorefr. and Shubnikov-de Haas expts. 2-22002  
 intercalation compounds, spin susceptibility 2-31263  
 intercalation compounds, struct. studies using (001) X-ray diffr. 2-12563  
 intercalation compounds with alkali metals, mech. of supercond. 2-46181  
 intercalation compounds with halogens, enthalpy changes of phase transitions 2-16778  
 intercalation compounds with halogens, X-ray diffr. obs. of intralayer ordering and phase transitions 2-16779  
 intercalation cpd. with K, supercond., K conc. depend. 2-13212  
 intercalation cpd. with NiCl<sub>2</sub>, second stage, mag. phase transition in external mag. field 2-5547  
 intercalation cpds., positive electrodes in galvanic cells 2-6039  
 intercalation cpds., press. enhancement of elec. cond. 2-5394  
 intercalation reaction dynamics, quasi-one-dimens. cond. 2-41871  
 ionisation chambers, ionisation error due to porosity 2-19892  
 isotropic, nucl. grade, irreversible expansion and shrinkage during graphitisation 2-41560  
 laser pulse-solid target interaction in mag. field 2-1322  
 lattice properties, bonding and thermal props. 2-50582  
 low-energy electron transport, Monte Carlo simulation (French) 2-50727  
 magnetostriiction and deformation potentials 2-9019  
 metal-graphite soldered joints, installation for making and testing 2-9484  
 neutron irradiat., de Haas-van Alphen freqs. 2-35924  
 neutron irradiation damage, substitutional B effect 2-25938  
 neutron wave propag. across a temp. discontinuity, multigroup approach 2-39088  
 nodules in nodular cast Fe, US attenuation caused by Rayleigh scattering 2-12687  
 non-metallic electrodes, in O sensor (Chinese) 2-37112  
 novae IR development, effect of surrounding small graphite grains 2-38211  
 nuclear, thermal expansion under compressive stress at high temp. 2-43558  
 nuclear grade, macroporosity changes under oxygen corrosion 2-49108  
 nuclear grade, NDT eval. of fatigue damage using US meas., phys. and mech. props. correl. 2-41832  
 nuclear reactor appl. (Polish) 2-456  
 physisorbed methane-d<sub>4</sub> monolayers, melting, neutron diffr. studies 2-1760  
 physisorbed neopentane, NMR study (French) 2-26219  
 physisorbed O<sub>2</sub>, vibr. bands in photoemission spectra 2-13623  
 plasma production, using quasisteady laser torch 2-28903  
 polycrystalline,  $\gamma$ -ray Compton profile 2-9063  
 polycrystalline and pyrolytic, emissive props. 2-40578  
 pore distribution model for graphite gas transport properties 2-39153  
 positron lifetimes, struct. defects 2-17568  
 potential energy functions, anisotropic, for C atoms, rel. to interaction with He 2-15868  
 powders, black, IR optical const. determ. from refl. meas. 2-24945  
 production, energy considerations (German) 2-51851  
 pyrographite, neutron irradiat., XPS 2-13620  
 pyrolytic, highly oriented, C-axis elec. resist. 2-1912  
 pyrolytic, surface struct. following H<sup>+</sup> irradiat., RHEED study 2-40653  
 radioactive waste melting into inorganic graphite matrix (German) 2-11197  
 reinforced epoxy laminates, creep rupture and viscoelastic moduli 2-52022  
 resistance thermometer, electron tunnelling 2-33528  
 ribbon surface with <sup>4</sup>He film, superflow onset, thermal conductance obs. 2-1689  
 scientific and industrial advances, conf., Baden-Baden, Germany (July 80) 2-38357  
 spheroidal two-layer graphite inclusion forming in cast high-eutectoid inoculated Fe (Ukrainian) 2-27165  
 stopping power of H and He in ions 20 to 150 keV region, backscattering study 2-1534  
 stress-strain law, incremental, under multiaxial loadings 2-15478  
 subcritical crack growth, brittle fracture (Russian) 2-5940  
 substrate, adsorbed <sup>3</sup>He, second layer and nucleation, neutron diffr. study 2-40637  
 substrate, freezing transition of monolayer Xe 2-40684  
 substrate for Si electrodeposition 2-9292  
 surface, (0001), D scattering, mol. beam apparatus 2-2405



**graphite** continued

- surface, adsorbed Lennard-Jones Ar submonolayers, grand ensemble Monte Carlo study 2-21443
- surface, adsorbed methane, rot. tunnelling, inelastic neutron scatt. spectra 2-21442
- surface, basal plane, oxidation, chemisorption, rate consts. diffusion, kinetics and mechanism 2-9571
- surface, melting of  $^3\text{He}$  submonolayers and struct. of adsorbed  $^4\text{He}$  2-1698
- surface, pair pot. of adsorbed Kr 2-1768
- surface, pyrolytic, sputter-textured, electron reflection and secondary electron emission 2-22126
- surface, with adsorbed ethylene monolayers, NMR obs. of melting and reorientation 2-2159
- surface, with adsorbed benzene and toluene monolayers, thermal neutron diffr. obs. two-dimens. crit. phenomena and structures 2-1767
- surface, with adsorbed He, anisotropic pair pot. and band struct. effects 2-1772
- surface, with adsorbed hydrocarbon monolayers, vibr. dynamics and melting effect 2-1766
- surface, with adsorbed methane, neutron scatt. obs. of triple pt. and phase transitions 2-1763
- surface, with adsorbed methane, triple pt., phase diagram and two-dimens. behaviour 2-1765
- surface, with He submonolayers, dislocation-mediated two-dimens. melting 2-1700
- surface, Xe monolayer heat capacity, density-temp. phase boundary, triple pt. 2-1773
- surface atomic displacements, He atom scatt. study 2-36748
- surface erosion and re-emission behaviour of various types under He ion bombardment 2-50722
- surface of large crystals, heat capacity of  $^4\text{He}$  submonolayer 2-1699
- surface phonon dispersion, He atoms reson. scatt. study 2-50983
- surface with adsorbed  $\text{N}_2$ , LEED obs. of vapour press. isotherms, phase coexistence and transforms. 2-1762
- synthetic, tempering, modulus of elasticity 2-5901
- tube furnace, longitudinal atom density distrib. using coherent forward scatt. 2-15173
- Al-graphite particle composites, dry wear 2-2595
- $\text{AlCl}_3$  intercalation compounds, order-disorder transformation 2-27171
- $\text{AsF}_5$  intercalated graphite, cond. and anisotropy of skin depth,  $^{19}\text{F}$  NMR spectra 2-45965
- $\text{AsF}_6^-$  intercalated, prep. by electrochem. method, characterisation 2-5839
- C-graphite materials AG1500B83 and AG1500BS30, antifriction props. in end face rubbing 2-17649
- $\text{C}_{24}\text{Cs}(\text{H}_2)_x$ , H rot. tunnelling spectra 2-35408
- $\text{C}_{72}\text{Rb}(\text{H}_2)_x$ , H rot. tunnelling spectra 2-35408
- Cr-graphite composite coatings, electrodeposited, effect of plating variables 2-9291
- $\text{EuC}_6$  intercalate, Raman spectra 2-36647
- Fe-(Cu)-graphite, dynamic hot pressing, antifriction characts. 2-17648
- Fe-C-Si alloys, formation mechanism of precipitated graphite shapes (Japanese) 2-2516
- Fe-graphite-Cu rolled strip, appl. to mating parts of friction and wear testing apparatus 2-41854
- Fe-graphite-ZnS alloy  $\text{ZnGr}_3\text{Tss}_4$ , antifriction props. in end face rubbing 2-17649
- K-graphite intercalates, press. induced anomaly in c-axis resistivity 2-51141
- $\text{LiC}_8$ , graphite intercalation cpd., electronic struct. calc. 2-12955
- $\text{PF}_6^-$  intercalated, prep. by electrochem. method, characterisation 2-5839
- $\text{RbC}_8$  intercalation cpd., neutron spectroscopy of phonons 2-50789
- $\text{SbCl}_5$ -graphite, intercalant species identification by Mossbauer spectroscopy 2-31335
- $\text{SbF}_6^-$  intercalated, prep. by electrochem. method, characterisation 2-5839
- $\text{VOF}_3$  intercalated graphite, synthesis (French) 2-22182

**graphitisation**

- diamond-Co system, sintering behaviour at high temp. and press. 2-51864
- isotropic C materials, nucl. grade, irreversible expansion and shrinkage during graphitisation 2-41560
- pyrocarbon, Si-containing, struct. props. and graphitisation 2-41633
- steel, hypereutectoid, precip. of spheroidal graphite during cooling from liq. states (Japanese) 2-5878
- C fibres, graphitising, magnetoresistance effect rel. to heat treatment temp. 2-46035
- C, non-graphitising, graphitisation and densification under high press. (Japanese) 2-22411
- C-LaB<sub>6</sub> system, powder, hot-pressing 2-51845
- Ni-resist. type-2, austenitic cast Fe, potentiometric study of corrosion 2-27327

**graphitising**

- steel, Si-Al-(Co)-Mn, graphitised, with ferrite and ferrite-carbide matrix, damping props. 2-2566
- C, thermal stress role in initiation of struct. transform. 2-47067

**graphs**

- see also *nomograms*
- No entries

**gratings (diffraction)** see *diffraction gratings***gratings (optical)** see *diffraction gratings***gratings (spectra)** see *diffraction gratings***gravimeters**

- see also *geodesy*
- No entries

**gravimetric instruments** see *gravimeters***gravimetry** see *density measurement; weighing***gravitation**

- see also *general relativity; gravitational collapse; gravitational lenses; gravitational red shift; gravitational waves; quantum field theory of gravitation; Schwarzschild metric; unified field theories*
- astrophysics, implications of relation between gravit. and elementary particle physics (book) 2-48416
- axially symmetric and stationary solutions of new general relativity 2-42914
- axially symmetric Brans-Dicke-Maxwell solutions 2-10682
- Bergmann-Wagoner-Nordvedt gravit. theory, Palatini variational principle 2-23529

**gravitation** continued

- bi-metric procedure, appl. to inertia-free mechanics 2-10314
- Bianchi type I cosmology, quantum fluctuations singularities 2-6779
- bimetric theory, Killing vectors and generation laws 2-23523
- bimetric theory of gravitation, numerical solns. for rotating polytropic configurations 2-28338
- binary stars, gravitational spin precession 2-38248
- black holes, rotating, dissipative spin-thermodynamic systems 2-10473
- Bondi gravitational mass, positivity 2-93
- Brans-Dicke scalar fields, plane symmetric vacuum solns. 2-18991
- Brans-Dicke theory, photon escape from infinite cylinder 2-10685
- Brans-Dicke-Maxwell eqns., stationary axially symmetric, soln. 2-3437
- centrally symmetric gravit. fields, Birkhoff theorem analogy 2-23512
- charged particle, gravit. field in bimetric general relativity 2-23526
- classical model for gravitation 2-6780
- complete group invariance gravitation theory 2-10665
- conformally flat charged dust 2-10678
- cosmogonism model, mass formula 2-38350
- cosmological homogeneous isotropic model, excitation evolution, single-loop quantum gravitational corrections (Russian) 2-14965
- cosmology and broken scale invariance 2-38545
- covariant general theory, in flat space-time 2-48580
- curved space-time, atom as probe 2-10658
- cylinder, hollow, rotating, gravit. field, rigorous soln. 2-48561
- dynamic properties of gravit. field in vac. 2-3433
- early Universe, inhomogeneity form., initial value problem method 2-6690
- Eddington's cosmological number, rel. to Einstein's number criterion and Rydberg's rational system of dimensions (German) 2-10535
- Einstein and Einstein-Cartan theories, dual description of space-time 2-94
- Einstein equations, charact. form 2-48573
- Einstein equations, with vacuum polarisation, cosmology soln., singularity problem 2-53403
- Einstein gravitation field eqns., graining coarseness of statistical description 2-3439
- Einstein gravity with cosmological constant, stability props. 2-48370
- Einstein-Cartan gravitation, Maxwellian tensors, physical interpretation 2-23507
- Einstein-Cartan gravitation, superenergy tensors 2-82
- Einstein-Cartan theory, derivation of solns. 2-3454
- Einstein-Cartan theory, static dust sphere solns. 2-28738
- Einstein-Cartan theory over principle fibre bundle, unified field theory geometrical background 2-3448
- Einstein-Cartan-Maxwell-Bianchi cosmologies 2-33192
- Einstein-Cartan-Sciama-Kibble theory, uniqueness as Poincare/Lorentz gauge theory 2-42919
- Einstein-Maxwell field as a gauge-invariant vector-metric field 2-38538
- electromagnetic fields in spaces with torsion 2-88
- electromagnetic-gravitational energy systems 2-23540
- elementary quantum, consequences in physics and astrophysics of minimal energy quantum 2-53078
- equations of motion in a generalized theory of gravitation 2-23531
- equivalence principle for charged bodies in a theory of gravitation 2-23532
- Ernst eqns. with EM fields, similarity solns. 2-33386
- field of sphere composed of concentric shells 2-10662
- fluid source, far field rel. to interior, post-Newtonian approx. 2-23515
- forces and moments computation from external fields 2-42589
- Friedmann cosmology, curvature-squared terms effect 2-33200
- fundamental physics, conf., Bogota, Columbia (July-Aug., 1979) 2-10554
- gauge theories of gravitation 2-10689
- gauge theory,  $L\otimes U(1)$ , spherically symm. and static soln. (Chinese) 2-23522
- general relativity, EM fields and viscous fluids equivalence 2-28734
- general relativity on Weitzenbock space-time 2-38544
- general theory of relativity, Newton's theory of gravitation and Newtonian approx. 2-10673
- generalised field theory, linearised field equations. 2-28732
- ghost-free gravity Lagrangians with propagating torsion 2-6776
- Hermitian metric theory in nonRiemannian space-time, linear approx. 2-3449
- Hermitian theory of gravitation, role of spin 2-48582
- hierarchical models of unified theories 2-3457
- incoherent fluid, streamlines and gravit. field, rel. to Finsler geodesic 2-23520
- instability in hot Universe with nonzero rest mass primordial neutrinos 2-3319
- integral inequalities in the dynamics of a gravitating gas 2-38536
- Jacobi equation for vector fields and one-forms, rel. to world vectors 2-84
- Kaluza-Klein theory and BRS symmetry in 4-dimens. Einstein-Yang-Mills theory 2-42920
- Kasner metric, VGM gravitation theory (Chinese) 2-38511
- Kerr metric, perfect fluid source 2-48579
- Klein-Kaluza and Einstein-Cartan theory generalisation 2-42912
- Klein-Kaluza theory with a torsion 2-38535
- Lorentz invariant theories of gravitation 2-18837
- Machian gravitation, bimetric, cosmology study 2-6691
- massive neutrinos, trapping in collapsing stars 2-14871
- metric gravitation theories, optical test 2-10697
- metric tensor, determ. from Riemann tensor components, algebraic method 2-83
- metric-teleparallel theories 2-33403
- microwave background fluctuations due to galaxy clusters causing gravit. pot. var. 2-23354
- monodromy preserving deformation appl. to gravitational field eqn. 2-6777
- nonexistence of spherically symmetric attractive long range scalar fields with charged dust distrib. 2-33384
- nonlocal energy-mass, field source 2-10690
- nonstatic gravitation, effects on compactification 2-10686
- nonsymmetric unified field theory, comment on criticism 2-28735
- on quasimagnetic properties of the NUT field 2-3445
- parameterised postNewtonian metric, nonlinearities 2-48565
- planckon vacuum model, cosmology, mass formula 2-38537
- Poincare gauge theory of gravitation, axial vector particle 2-48585
- polarised medium, light refraction 2-23436
- post-Newtonian approximation of a new theory of gravity 2-18874
- projective unified field theory 2-38540



**gravitation continued**

- quantum conformal fluctuations of gravity in a singular space-time 2-53393
- $R+R^2$  actions with quadratic torsion, Birkhoff theorem, asymptotic flatness, reflection symm. 2-38528
- relativistic body, slow rotation in scalar-tensor gravit. theory 2-38546
- relativistically rotating disk, appearance 2-10663
- repulsion in general relativity 2-48572
- reversible and irreversible processes studied using variational principle (*German*) 2-38402
- Riemann-Cartan space, conformal and axial anomalies 2-48583
- Rosen bimetric theory, spherically symm. field 2-38542
- rotating bodies, relativistic gravit. field 2-18985
- rotation and uniform deformation of space 2-28730
- scalar-tensor theory of stability of massive objects 2-3455
- scale covariant kinetic theory for particles and photons 2-10305
- scale covariant theory appl. to stellar structure and evolution 2-10306
- scale invariant gravitational Lagrangian, supplementation by matter Lagrangian, Kembhavi and Pollock's form 2-38049
- scale invariant gravity, formulation based on conspiracy hypothesis 2-14761
- scale invariant theory and gravit. const. var. 2-38048
- scale-invariant gravitation theory, reformulation and astrophysical test 2-3190
- Schwarzschild-like interior soln. for charged spheres 2-33398
- self-dual field solns., edth operator, associated Green's functions 2-23524
- self-similar gravitational fields in plane system space-times (*Russian*) 2-10676
- Sen-Dunn theory, class of exact solns. for axially symmetric charged perfect fluid distrib. 2-48576
- small angle gravitational scattering, small angle, radiation reaction and ang. momentum loss 2-33392
- SO(3,1) gauge theory of gravitation 2-33405
- space, time and their pseudo-euclidian geometry, gravitational field eqns. 2-18977
- spherically symmetric space times in bimetric relativity theory 2-48581
- static perfect fluid in Brans-Dicke theory 2-10681
- stationary axisymmetric space-times, Backlund transformations in Hauser-Ernst formalism 2-28725
- stationary gravitational field analyticity at spatial infinity 2-18984
- Stokesian fluids and cosmology 2-3316
- super Killing equation and super-symmetry transformation 2-15094
- timelike geodesics deviation, in space-time 2-3436
- torsion field theory, gauge theory analogy 2-6781
- two-soliton solutions of the Ernst equation 2-33380
- U(4) Reimann-Cartan space time, torsion, nonlinear wave eqn. 2-42921
- Universes rotating, time-dependent, Einstein eqns., finite nonsingular solns. 2-33194
- Venus, gravity high resolution map 2-32888
- Weyl's theory, generalisation 2-28736
- Weyl-Dirac gravit. theory, with torsion, Brans-Dicke scalar 2-48586
- zero rest mass scalar fields, nonexistence for certain space times 2-33396

**gravitational acceleration** *see gravitation***gravitational collapse**

- see also black holes; cosmology*
- closed cosmological Friedmann model, spontaneous symmetry breaking 2-14966
- condensation phenomena in expanding universe, Mach-Poincare gravodynamic theory 2-10536
- core-bounce at neutron star densities, computer simulations 2-28486
- cosmic censorship, evidence in spherical system adiabatic collapse 2-38525
- cosmic strings, evolution and cosmological consequences 2-14962
- critical mass limits for collapsed stars in gravitation theory 2-23217
- dust shells and deformed stars falling into black hole, grav. collapse and radiation 2-23514
- Earth-Moon system formation by gravitational accretion in dust disc 2-32870
- Friedmann Universe with non-universal collapse, black hole or radiation dominated 2-6694
- galaxies formation, thermal evolution of gas with primordial chemical comp. in gravit. contraction 2-3309
- galaxies gaseous protoclusters, initial fragmentation 2-33196
- interstellar adiabatic rotating clouds, collapse and fragmentation 2-28529
- interstellar cloud collapse, theory for rotating non-axisymmetric isothermal cloud 2-14847
- interstellar clouds, formation, collapse and fragmentation; mag. field role 2-6659
- interstellar clouds, gravitationally driven instabilities in shock compressed gas layers 2-48299
- interstellar clouds, mag. flux and field direction conservation during gravit. collapse 2-53352
- ionised gas in galactic nuclei or star cluster centres 2-3302
- large star collapse, supernova theory, shock waves 2-53302
- massive scalar fields, generation by conformal transform. 2-14967
- model for matter-free torsion ball 2-10692
- molecular clouds, global press. instability leading to collapse 2-33117
- primordial intergalactic cloud one-dimensional collapse, instability 2-28589
- protogalaxy dissipationless collapse, instantaneous mass loss, N-body simulation 2-3301
- protostellar cloud collapse, re-examination of fragmentation in rotating protostar 2-14848
- protostellar gas cloud dynamic collapse, role of rot. 2-10389
- quantum cosmology and geometric quantization 2-14955
- radiating fluid sphere collapse 2-38524
- rotating star relativistic collapse 2-28493
- scalar-tensor theory of stability of massive objects 2-3455
- shear-free collapse with heat flow 2-28587
- spherically symmetric collapse in quantum gravity 2-19000
- star, rotating core collapse, dynamical evolution and two dimens. hydrodynamic code 2-32991
- stars, energy release induced by nucl. energy generation 2-14832
- stars, massive neutrino trapping in interiors 2-14871
- stars, neutrino interactions with outer star layers, circular polarised EM radiation prod. (*Russian*) 2-14850
- stellar core, giant collapse and radiation, homogeneous ellipsoid modelling 2-28441
- stellar core, infall epoch, hydrodynamics models 2-10392

**gravitational collapse continued**

- Sun, energy release induced by nucl. energy generation, neutrino problem 2-14832
- supermassive rotating star, general relativistic collapse, black hole form. 2-53076
- supernova matter, eqn. of state, mean field calc. 2-38970
- gravitational constant**
- dynamical generation from massless spin-2 self interacting field 2-3458
- geometrical gravitational theory 2-10691
- IR stable Yang-Mills theories, Newton's gravitational constant calc. 2-48869
- Newtonian gravitational constant redeterm. by Boyes method 2-38630
- scalar-tensor theory of stability of massive objects 2-3455
- scale invariant gravitational Lagrangian, supplementation by matter Lagrangian, Kembhavi and Pollock's form 2-38049
- variability, effect on stellar evolution, radiative transport equation appl. 2-10306
- variability, implication for relativity and cosmology 2-10307
- variation, modern look 2-32825
- variation and scale invariant gravit. theory 2-38048
- gravitational experiments**
- antenna for gravit. radiation, background noise due to Earth free oscills. 2-15103
- antenna for gravit. radiation, background signals due to seismological phenomena 2-15102
- antenna for gravit. waves, background noise of terrestrial origin 2-38555
- antenna for gravitational waves, with new type of suspension 2-38554
- antenna for gravitational waves (reson. bar type), signal and noise response 2-18709
- gravitons, X and  $\gamma$ -ray, flux detect. 2-10693
- low-frequency gravitational waves detect. via spacecraft, effect of path length changes due to tropospheric refr. 2-10153
- metric gravitation theories, optical test 2-10697
- parametric EM wave registration mechanisms (*Russian*) 2-3468
- radiation antenna, low temp., at Stanford, status 2-28744
- radiation detector, using capacitive transducer, optimal mode of operation 2-10696
- resonant-mass gravitational wave detectors, random noise 2-48603
- $^4\text{He}$  superfluid, gravitational and inertial effects 2-98
- gravitational lenses**
- galaxy models, focal effects 2-28335
- interfering delay signal cepstral analysis for detection 2-42605
- nebular lens, effect of spherical galaxy 2-10310
- Q0957+561A,B, new absorpt. sys discovery, origin, UV spectral obs. 2-14946
- Q 0957+561A, B, double quasar, detect. of third compact radio component 2-10524
- QSO 0957+561, double quasar, variation of two components 2-38340
- QSO 0957+561 A,B, double quasar, gravitational lens effect 2-53380
- QSO 0957+561 AB emission line form. region, size and number of clouds 2-38341
- radio sources, observability of gravitational scintillation 2-28333
- transparent lens model for  $1.3 \times 10^{15} M_{\odot}$  galaxy 2-53073
- gravitational radiation** *see gravitational waves*
- gravitational red shift**
- see also cosmology*
- accreting matter onto neutron stars and black holes, spectral shifts 2-10472
- black holes, unstable photon orbit amplification by stimulated emission, red shift effects 2-53313
- Sagnac effect, relativistic freq. shift formula 2-39
- gravitational waves**
- see also gravitons*
- antenna for gravit. radiation, background noise due to Earth free oscills. 2-15103
- antenna, low temp., at Stanford, status 2-28744
- antenna (reson. bar type) signal and noise response 2-18709
- antenna for gravit. radiation, background signals due to seismological phenomena 2-15102
- antenna for gravit. waves, background noise of terrestrial origin 2-38555
- antenna with new type of suspension 2-38554
- binary stars, radiation damping due to gravitational wave emission (*Chinese*) 2-28508
- Bondi mass positivity 2-48569
- bound gravitational quantum system, gravit. wave damping, energy loss 2-96
- cataclysmic short period binary, gravitational radiation as main evolutionary driving mechanism 2-28470
- charged particle in uniform mag. field, response to gravitational radiation, general relativistic approx. 2-10304
- detection experiments, Frascati antenna (*Italian*) 2-3467
- detector, tunnel diode oscillators, stabilisation using supercond. cavities 2-33411
- dust shells and deformed stars falling into black hole, grav. collapse and radiation 2-23514
- Einstein's eqns., Cauchy problem 2-3440
- Einstein quadrupole formula, Feynman graph derivation 2-33394
- equation of motion including gravitational radiation reaction 2-10659
- equations of motion, two bodies, reaction of gravitational radiation (*French*) 2-6764
- general relativity, gravitational energy negativity 2-48570
- general relativity, local transverse traceless tensor operators 2-18982
- general relativity, post Newtonian approximation, radiation reaction, power loss 2-48575
- generalized plane gravitational waves 2-10677
- generation from cosmic strings 2-18988
- high-frequency gravitational waves, propag., nonlinear effects 2-48574
- interacting gravitational and matter fields, Hamiltonian structure 2-18932
- interference 107 caused by gradients of the static gravitational field in the detection of gravity waves 2-18989
- Kerr-Newman black hole, grav. and EM waves perturbation eqns. 2-3446
- light propag., gravitational and EM radiation nonlinear effects 2-87
- low-frequency gravitational waves detect. via spacecraft, effect of path length changes due to tropospheric refr. 2-10153
- multipole moments in general relativity 2-3434
- parametric EM wave registration mechanisms (*Russian*) 2-3468
- pulsar, gravitational waves from binary component 2-28489
- quadrupole formulae for gravitat. bound systems 2-23215



**gravitational waves continued**

- radiation detector, using capacitive transducer, optimal mode of operation 2-10696
- reaction force of gravitational radiation, quasi-Minkowskian motion perturbation (*French*) 2-3443
- reaction forces of gravitational radiation, quasi-Newtonian motion perturbation (*French*) 2-3442
- resonant-mass gravitational wave detectors, random noise 2-48603
- stellar core, giant collapse and radiation, homogeneous ellipsoid modelling 2-28441
- superluminal propagation velocity 2-23511
- Syngé's eqns. of motion, radiation damping terms 2-10661
- vacuum Minkowski state, quantum detection by non-uniformly accelerated observers 2-3444
- <sup>4</sup>He superfluid, gravitational and inertial effects 2-98

**gravitons**

- bremssstrahlung cross section calcs. (*Russian*) 2-23536
- Einstein quadrupole formula, Feynman graph derivation 2-33394
- Friedmann Universe, graviton creation near cosmological singularity 2-48594
- gamma-ray, flux detect. 2-10693
- Kasner metric, VGM gravitation theory (*Chinese*) 2-38511
- quantum gravity, instabilities in path integral formalism, graviton propagator 2-48587
- riehon model; structure of graviton 2-299
- X-ray, flux detect. 2-10693

**gravity**

see also gravitation

- anomalies, computation of spectrum of potential field due to three-dimensional homogeneous bodies (*Chinese*) 2-3097
- anomalies, determ. of harmonic moments of disturbing bodies 2-38000
- anomalies, equivalence of gravit. potential induced by perturbation masses with varying density 2-6303
- anomalies interpretation, unsolved plane problems in mathematical theory 2-6453
- anomalous gravity field analysis, determ. of number and parameters of isolated sources 2-14631
- anomaly modeling by Gauss-Legendre quadrature integration (spherical coords.) 2-9914
- Arctic Basin, free-air gravity anomaly rel. to extinct spreading centre in Beaufort Sea 2-22888
- Atlantic Ocean, isostasy of fracture zones from gravity and topography profiles 2-32487
- axially symmetric bodies, 1-D FFT for gravity effect 2-22877
- N Baikal region rift basins interior struct., gravity anal. 2-52783
- Baikal Rift Zone, gravity sounding rel. to earthquakes depths and seismic controlling factors 2-14413
- Baikal Rift Zone, isostatic anomalies calc. 2-14446
- Bara Basin, Sudan, gravity exploration for groundwater 2-37898
- Benue Trough, Nigeria, gravity anomaly study of tectonic origin 2-37845
- Benue Trough, Nigeria, gravity interpretation of struct. and tectonics 2-14465
- Bouguer anomaly, orientation independent filtering 2-32387
- Brouwer geopotential theory for satellite motion, improved efficiency 2-3187
- Caledonian plutonic intrusions in Britain, gravity props. rel. to origin 2-38381
- Canada's National Gravity Data Base, organisation and management 2-52716
- $\alpha$  Canis Majoris (Sirius), chemical comp., gravity and temp. 2-3250
- celestial mechanics, spherical functions, addition theorem 2-6523
- continental margin gravity anomalies predicted by geodynamic model 2-42333
- Crimean polygon, gravity var. maps (*Russian*) 2-27971
- crust and upper mantle, model field with gradational layered struts. 2-9911
- crustal stresses, anal. of gravity-induced stresses near topography of small slope 2-32467
- Darfur Swell, Africa, gravity constraints on isostatic compensation 2-18398
- data management, field to publication 2-52707
- data management at BGI 2-52709
- Dead Sea-Jordan rift zone, crust struct., mag. and gravity study 2-37813
- direct three-dimensional problem, approximate method of soln. 2-9912
- Earth, boundary conditions for gravity on surfaces of discontinuity of displacements 2-9983
- Earth, gravity slippage rel. to indifferent equilb. shape (IES) geoid 2-6298
- Earth's global gravity field, stability of various representations 2-18359
- Earth's gravity field, boundary value problem representation 2-18361
- Earth's gravity field, sampling function and finite element method representation 2-18360
- Earth's local and global field representation 2-18358
- Earth gravity field, appls. of problem of many fixed centres 2-42584
- Earth-figure perturbations in lunar theory, computation 2-42621
- ellipsoidal thin shells exterior and interior gravity fields (*Polish*) 2-42591
- field approximation, use of height data by collocation 2-42252
- force function between two celestial bodies 2-6524
- Galaxy, gravit. force function in z-direction rel. to massive galactic corona 2-48320
- geodetic measurement techniques allowing meas. of Earth interior props. (*Chinese*) 2-48016
- geodetic survey errors, field procedure for reduction of 'drift' 2-37733
- geoid undulation computation with modified Stokes' function 2-32390
- geoid undulation computations, ellipsoidal corrections using cap gravity anomalies 2-37737
- geological objects, gravitational anomalies, Fourier parametrization (*Russian*) 2-2985
- geopotential, 15th and 30th order lumped coeffs. determ. from ANS orbital inclination var. 2-28253
- geopotential, lumped 29th-order harmonics from Cosmos 837 rocket orbit analysis 2-42255
- geopotential determination from Intercosmos 11 and Tiros 7 rocket 15th order orbital reson. 2-9908
- geopotential field computation method 2-23129
- W.Germany, gravity base net for 1976 AD 2-37732
- Geyers-Clear Lake region, California, crust gravity and seismic velocity struct. 2-14427
- Goddard pendant, Sierra Nevada, California, gravity model and structural implications 2-32512

**gravity continued**

- gravimetric problems solved by approximation-interpolation method (*Russian*) 2-47788
- N.Greenland, geoid prediction using collocation and digital terrain models 2-6296
- groundwater exploration in Sudan, via combination of elec. resistivity, seismic refr. and gravity meas. 2-28108
- E. Gulf of Aden continental margin, struct. and early development 2-32459
- Gulf of Tonkin and vicinity geology and Bouguer gravity anomalies 2-47828
- helical magnetic field effect on gravitating cylinder stability, galaxy spiral arm appl. 2-10513
- Himalayas, crust struct. and tectonics, gravity survey study 2-52766
- Hoggar Massif, Africa, free air gravity evidence for lithosphere alteration 2-10003
- homogeneous ellipsoids, exterior and interior gravity fields (*Polish*) 2-42591
- Indian peninsular shield, gravity study rel. to origin of anorthosites and Eastern Ghats orogeny 2-14432
- inverse problem, hybrid algorithm 2-6299
- Izu-Hanto-Toho-Oki, 1980 earthquake, Japan, pre- and post-event gravity surveys (*Japanese*) 2-18377
- Kolyvan'-Tomsk folded zone and adjacent areas, gravity sounding rel. to struct. 2-47865
- least squares, method for direct inversion of surface and subsurface data 2-32659
- Madagascar Ridge deep struct. 2-18402
- central Maldiva Ridge (Eight Degree Passage), gravity and geomag. studies (*Russian*) 2-10036
- mantle convection currents, inferred from gravity and heat flow data 2-10011
- mantle/core inhomogeneities from gravity and seismic obs. 2-37734
- Mendocino fracture zone in E Pacific, thermal model and geoid anomalies 2-52776
- S Mid-Atlantic Ridge isostasy transfer function from gravity and topography anal. 2-42329
- Moon, gravit. effects on atomic time scales (*Italian*) 2-10317
- Moon, POLO expt. 2-42623
- narrow structures, statistics 2-37736
- oceanic tides, gravity field studies via artificial satellites orbit perturbations 2-6369
- orbits near critical inclination, inclusion of lunisolar perturbations 2-18694
- SW Pacific, geoid anomalies due to mantle subduction zones 2-14376
- central Pacific gravity field anomalies, satellite-satellite tracking obs. 2-6304
- E Pacific Rise, isostasy, magma chambers and plate driving forces 2-10023
- palaeogeomorphological structures, use of gravimetry survey (*Rumanian*) 2-32392
- Pamir mountains, crust struct. and tectonics, gravity survey study 2-52766
- planet, determ. from artificial satellite photos loading to orbit 2-6525
- planet potential, effect of harmonic coeffs., nutation and precession 2-6529
- potential field computation, piecewise continuous basis function approach 2-28217
- profile gravimetric observations at sea, topographic-isostatic reduction 2-6302
- prospecting, anomalous fields interpretation by optimisation method 2-28279
- prospecting developments (1975-1980) 2-37978
- repeated measurements, comparison with geodetic levelings, geodynamic aspects 2-32386
- resonant gravity coeff. determ., SIRIO-2 laser ranging experiment 2-42572
- satellite orbits analysis, upper atmosphere and gravitational field research review 2-42571
- secular variation of surface gravity of Earth, application of Stokes' formula (*German*) 2-37743
- solid bodies, gravitating, Kolmogorov theorem applicability (*Russian*) 2-23431
- South China Sea, gravity and mag. anomalies 2-37741
- spherical harmonic model from dynamic near-Earth satellite data 2-42254
- state-space models of gravity disturbance gradients, Kalman filters design for inertial navigation system 2-6301
- subducted lithosphere regional compensation, effect on geoid, gravity and topography 2-10014
- Sun, gravit. effects, on atomic time scales (*Italian*) 2-10317
- Sunda forearc region (Sumatra), crust struct. from gravity data 2-32391
- survey, near topographic correction method 2-3104
- Switzerland, gravity survey results and uplift of Alps 2-37826
- Taiwan, Earth tides obs. and possible effects on seismicity 2-22875
- Taiwan, gravity and mag. studies of Taoyuan and Hsinchu area (*Chinese*) 2-22977
- terrain correction in rugged topography, improvement of conic prism model 2-6300
- tidal gravity obs. at Alice Springs, Australia, dispersive effects 2-42253
- Transbaikalia, systems investigation of gravity anomalies, transition from morphologic to processional system 2-37742
- trenches in oceanic crust, geoid anomalies 2-47845
- Twin Peaks, Utah, USA, gravity anomaly model of Tertiary volcanic area 2-42292
- Ukraine, quasi-periodic vars. (*Russian*) 2-27971
- Ukrainian Shield, Moho discontinuity model (*Russian*) 2-47831
- Vancouver Island, B.C., Canada, precise gravity survey results 2-14377
- Venus, Pioneer Orbiter data analysis 2-10346
- Venus lithosphere elastic thickness from topography and gravity anal. 2-38088
- zero-method pendulum with electronic control for gravity meas. (*Rumanian*) 2-32687

**gravity meters** see gravimeters**gravity waves**

- acoustic phase conjugation and self-focusing by nonlinear interaction with liquid surface 2-44513
- atmosphere, acoustic-gravity waves from Mount St. Helens eruption, 1980 May 18, rel. to explosive yield 2-28053



## gravity waves continued

- atmosphere, effect of gravity waves on specular echoes observed by Poker Flat MST radar 2-32566  
 atmosphere, gravity wave (*Chinese*) 2-23049  
 atmosphere, gravity waves rel. to diurnal fluctuations in time signals (*Italian*) 2-10317  
 atmosphere, internal gravity waves produced by lightning discharges (*Russian*) 2-10122  
 atmosphere, internal solitary waves along Earth's surface (*Russian*) 2-47953  
 atmosphere, obs. of oscillations after 1980 May 18 eruption of Mount St. Helens 2-6411  
 atmosphere internal waves spiral struct. 2-32625  
 atmosphere waves instability through wave-wave interactions 2-37945  
 atmosphere with anisotropic conductivity, large-scale perturbations propag. 2-42507  
 atmospheric acoustic-gravity waves, OH band intensity oscils 2-23153  
 atmospheric standing acoustic-gravity waves in high latitudes 2-14641  
 atmospheric waves, evolution processes, WKBJ anal. 2-1213  
 capillary-gravity wave packet nonlinear evolution eqn. at two superposed fluid interface 2-44745  
 chromosphere, propagation of adiabatic and linear internal gravity waves 2-10370  
 deep water gravity waves (book) 2-23395  
 E-region upward propag. assoc. with sporadic-E and F-region disturbances 2-48077  
 equatorial spread-F, gravity wave initiation, case study, backscattering maps 2-32723  
 finite amplitude, forced gravity-capillary waves in perfect fluid (*French*) 2-35174  
 internal atmospheric hydromagnetic planetary-gravity waves in zonal wind-magnetic shears 2-53077  
 internal gravity waves interactions 2-16334  
 internal interaction with shearing motion 2-35173  
 internal waves generated by moving singular sources, two dims. problem 2-50281  
 limiting gravity waves in water of finite depth 2-6397  
 mesosphere turbulence and stress due to gravity waves and tidal breakdown 2-38011  
 nonlinear waves in a self-gravitating medium 2-15044  
 ocean, evolution of wind-generated gravity wave spectra due to dissipation 2-18441  
 ocean, wave response to changing wind direction 2-52862  
 ocean capillary-gravity wave generation by steep gravity waves (*Russian*) 2-10047  
 ocean gravity-capillary waves, steady state spectral density, air-sea interaction 2-47896  
 ocean surface waves trapped against straight coastline, linearised 3-dims. eqns. 2-18460  
 ocean wind driven gravity waves, optical meas. in 1978 Wave Dynamics Expt. 2-52864  
 oscillation ripple marks of highly viscous fluids 2-20693  
 Pacific Ocean, east equatorial region, inertial-gravity waves effect on struct. of ocean 2-47891  
 power dissipation of progressive gravity waves (*Italian*) 2-33297  
 semi-free liquid sphere, axial and tangential vibr. modes (*French*) 2-33298  
 solar atmosphere, no reson. between linear fast MHD waves and gravity acoustic waves 2-48212  
 stratosphere/mesosphere, wave anal., use of temp. and density obs. 2-37990  
 surface gravity waves, dispersion rel. and component phase speed, non-linearity and spectral bandwidth effects 2-32530  
 surface gravity waves, dispersion relation and component phase speeds, nonlinearity and spectral bandwidth 2-16339  
 trapped gravity waves nonlinear excitation by short swells 2-16333  
 travelling ionospheric disturbances, internal atmospheric gravity wave theory 2-38023  
 turbulent spectra of gravitational waves on the surface of fluids 2-39933  
 upper atmosphere, internal gravity wave intensity rel. to tidal motions (*Russian*) 2-10214  
 Venus atmosphere, gravity waves from UV albedo contrast anal. 2-6552  
 water, finite amplitude gravity wave instabilities 2-39932  
 water, instability of finite amplitude Stokes wave 2-39931  
 water steep waves, surface tension effects 2-4843  
 wind generated surface waves, phase vel. meas. interpretation 2-35171

## greasing see lubrication

## Green's function methods

- see also CPA calculations; KKR calculations  
 (100) superlattice, vacancy induced band gap levels 2-45883  
 $\Phi_s^4$  quantum field theory, Borel transform local existence 2-28976  
 alkali halide optical spectra, F-centre absorpt., vibr. props. 2-9170  
 alloys, disordered, Coulomb correlations, Green's function study 2-12953  
 alloys, random, with short-range order, electronic props., self-consistent theory 2-1810  
 amorphous system, electronic struct., analytic approx., unitarity preserving 2-26279  
 Anderson impurity in local spin fluctuation limit, props. 2-36340  
 Anderson model, density of states, intermediate valence case and Kondo limit 2-13000  
 anharmonic crystals, self consistent phonon theory, thermodynamic Green's function method 2-35612  
 anharmonic mol. cryst., dynamics, Green's function methods 2-45431  
 anisotropic hereditary-elastic medium, Green's function construction 2-43  
 asymptotically free field theory, Green's function integral representations, renormalisation group construction 2-48888  
 atomic two-, three- and four-level systems, strong field, resonances and spontaneous transitions 2-7521  
 atoms, two-particle-hole Tamm-Dancoff approx. calcs. 2-19946  
 axial conduction, heat flux wall, temp. profile soln. 2-4818  
 band models with Coulomb interaction, cluster approx. and perturbation theory 2-40753  
 BCS pairing theory, quasiclassical Green's function 2-26546  
 BCS pairing theory, quasiclassical Green's function 2-31035  
 benzene, momentum distrib. and ionisation pot. for valence orbitals 2-29723  
 Bogolyubov transformation in massive particle capture by quantum field 2-10982  
 Bondi mass positivity 2-85  
 boson-fermion coupled system, Monte Carlo calc. 2-33365

## Green's function methods continued

- bound particle with orbital moment in elec. or mag. field (*Russian*) 2-18972  
 Casimir force on circular boundary, Green's function calc. 2-44166  
 causal Green's function formalism in statistical mechanics of composite particles 2-23544  
 chemical perturbation studies, Green's function appl. 2-24577  
 chemisorbed atoms, indirect interaction (*German*) 2-45734  
 closed time path Green's functions and nonlinear response theory 2-33435  
 cluster expansion in field theory 2-33718  
 composite superconductor, multi-filamentary, nonequilibrium superconductivity, characterised by electric charge 2-31079  
 conformally flat Green's functions, closed forms 2-3435  
 CP<sup>n-1</sup> model, Dirac eqn. classical solns., Green functions 2-33712  
 cyclopropene, valence ionisation spectra, Green's function calcs. 2-24682  
 deep defects, Green's function formalism, quasi-band-struct. representation 2-40828  
 deformed linear mixed cryst., semi-infinite, surface electronic props. 2-1983  
 degenerate Bose systems, Greens functions low-freq. asymptotic behaviour, kinetic characts. 2-19013  
 dense ion plasmas, spectral line shift, Green's function approach 2-50449  
 diamond, defects, unrelaxed neutral vacancy and substitutional N, energy levels 2-26324  
 diatomic molecules, resonance Raman scatt. amplitude, standing wave Green's function 2-49438  
 diazine, valence ionisation spectra, Green's function calcs. 2-24682  
 dielectrics, nonlinear energy transport of radiation, due to virtual biexciton formation 2-41317  
 dilute alloys, impurity exciton band, density of states and absorpt. line profile 2-5353  
 dilute alloys, matter transport by vacancies, linear response theory, impurity correlation factor 2-35745  
 dioxiran, valence ionisation spectra, Green's function calcs. 2-24682  
 disordered system, effective medium theory 2-48488  
 disordered systems, excitation spectra calcs. 2-1867  
 dispersion relation for Gell-Mann-Low function, spectrality condition and invariant charge asymptotic behaviour 2-263  
 doped displacive ferroelectrics, elec. field depend. of neutron scatt. cross section 2-44977  
 dynamic Green's tensor of elastic-half space or layered medium 2-42864  
 electron gas, inhomogeneous, linear response functions 2-40810  
 electron-phonon systems, macroscopic transport theory, two-time Green's function calc. 2-45476  
 EM field theory Green's functions, eigenfunction expansions, equiv. layers of surface charge, current sheet and polarisation 2-816  
 EM scattering theory for SAR imaging ocean surface appl. 2-28250  
 EM wave propagation in optically active and magnetoelec. media of arbitrary geometry 2-44173  
 EM wave radiation in dispersive gyrotropic medium, Green's tensor function determ. 2-15956  
 EM wave scatt. from half-space of dielec. mixture, strong fluctuation random medium theory, effective permitt., backscatt. 2-49630  
 ethane, outer shell ionisation pots., many-body Green's function methods 2-11588  
 Euclidean boson field theories, Legendre transforms and r-particle irreducibility 2-28977  
 FCC crystal, surface (001), electronic struct., atom absorption, SCF calcs. 2-40986  
 ferroelectric, H bonded, dynamical modes 2-36544  
 ferroelectric solid soln., correlated defect sites, ferroelec. props. calc. 2-31390  
 ferromagnetic semiconductor, elementary excitation theory 2-26610  
 ferromagnetic semiconductor, mag. polaron, exact Green's function 2-30806  
 ferromagnetic semiconductors, magnetic polaron theory 2-21510  
 ferromagnetic superconductors, phase transitions and mag. reson. line shifts 2-13228  
 ferromagnets, critical dynamics above Curie temp. in a mag. field (*Russian*) 2-41145  
 Feshbach and J-matrix methods equivalence 2-38486  
 Feynman path integrals on manifolds and geometric methods 2-42887  
 finite temp. Green functions, hierarchy of eqns. 2-15058  
 fusion reactor core plasmas, linear response function of  $\alpha$ -particle heating for temp. and density perturbations 2-4985  
 $g\phi^4$  field theory, modified normalisation conditions, general formalism and physical implication 2-10950  
 gauge field at finite temps., thermo field dynamics and KMS condition 2-28975  
 gauge theory and effective Lagrangians 2-10952  
 generalised Dirac eqn. for constant EM fields, Green's function 2-3739  
 Green's function Monte Carlo and the many-fermion problem 2-28767  
 Green function solution for two hybridised electronic bands 2-30788  
 Heisenberg antiferromagnet, spin-flop-paramag. phase transition 2-13310  
 Heisenberg ferromagnet, anisotropic, energy gap calc. 2-17257  
 Heisenberg ferromagnet, HCP lattice, spin wave spectrum and crit. temp. 2-41156  
 Heisenberg ferromagnetic chain, solitons and bound magnon states 2-21815  
 Heisenberg spin Hamiltonian, commutator Green's function calc. in HF approx. 2-5513  
 hot electrons, retarded transport, quantum physics 2-51184  
 III-V semiconductors and ternary alloys, deep levels, ideal-vacancy-induced 2-30823  
 independent Landau electrons, thermodynamics pot. calc. 2-3475  
 intensity attenuation law in far wings of molecular light scatt. lines (*Russian*) 2-15797  
 interfaces, excited atom and molecule deactivation 2-5447  
 ion implantation profile evolution, atomic mixing influence 2-45225  
 layer metallic crystals, N-type transverse current-voltage characteristics 2-45936  
 layered media, mech. problem solving 2-8034  
 liquid metal, theory, variational prop. of effective medium approx. 2-1815  
 localised and delocalised electron system, electrical conductivity 2-21553  
 longitudinal waves in modulated beams, Green functions and combination freqs. (*Russian*) 2-40075  
 Lorentz reciprocity between currents and fields in plane stratified magnetoplasmas 2-8344  
 magnet, HF mag. susceptibility tensor 2-5531



**Green's function methods continued**

magnetic phases of strongly correlated electrons in a nearly half-filled narrow band 2-41101  
 magnetic solids, electronic specific heat 2-5546  
 magnetically concentrated crystals, NMR line-shape due to horizontal transitions (*Russian*) 2-13350  
 magneto-elastodynamics, three-dimensional, eqns. of motion for vibr. of circular cylinder 2-20571  
 magnon-phonon modes, coupled in mag. crystals with Shubnikov symmetry 2-17270  
 massless theories, IR divergences, Green's function and renormalisation 2-20917  
 massless theories, IR divergences of Green's functions, renormalisation 2-3707  
 matter transport by vacancies, linear response theory, five-freq. model 2-35746  
 metal, Mossbauer impurity atom, vacancy trapped, second-order Doppler shift, anharmonicity effect 2-21925  
 metal host, impurity problem generalisation, Green function, impurity-impurity interactions 2-45885  
 metal-semiconductor interface, metal thickness effects on electronic props. 2-26498  
 metals, amorphous and liq., electronic props., tight binding single s-band model, Ishida-Yonezawa approx. 2-5342  
 metals, elec. resist., electron-phonon scatt. effect at high temp. 2-45950  
 methyl isocyanide, mol. consts., Green's function method 2-49364  
 MIM structures, resonant broadening of trap assisted tunnelling 2-21688  
 N-body Green's functions and their semiclassical expansion 2-6759  
 NMR lineshape in magnetically diluted cryst. 2-21898  
 non-closed quasiperiodic classical trajectories, Green's function semiclassical quantisation 2-28685  
 noninteracting particle Green's function, Sturm representation 2-7495  
 nonlinear transport props. calc., nonperturbative Green's function technique 2-51189  
 normal-superconductor system, order parameter, spatial depend. 2-13244  
 nuclei, spherical, self-consistent Hartree description in relativistic quantum field theory 2-3863  
 one dimensional many electron system, coupled with acoustical phonons, one-electron Green function 2-50811  
 overlayer-covered surfaces, dynamics, elastic Green functions anal. 2-1726  
 perovskite ferroelectrics, electrocrystalline anisotropy, permittivity 2-46493  
 phonon assisted tunnelling, relax. time, Green function approach 2-35623  
 phonon drag effect in strong mag. field, transport eqns. 2-26418  
 phonon drag theory in strong mag. field 2-21549  
 phonon-defect interactions scatt. near spin exciton freq. diagrammatic perturbation theory 2-45484  
 Poisson's eqn. soln. for arbitrary periodic charge distrib. 2-33457  
 polar semiconductor, exciton interband scatt. by optical phonons, Urbach rule derivation 2-40801  
 polaron, acoustic deformation, strong coupled, in one dimens., adiabatic perturbation theory calc. 2-45850  
 polyacetylene, soliton interaction and soliton lattice 2-45801  
 polymeric molecules, localised states, appl. to chem. and biological processes 2-39517  
 polymeric molecules, localised states, transfer matrix method for long range interactions 2-39516  
 positronium, total Green's function eqn., kernel construction 2-807  
 QCD, fermion mass dynamical origin (*Russian*) 2-23932  
 QED, one loop thermodynamical pot. in external EM field, proper time method calc. 2-48930  
 quasi-one-dimensional CDW distorted solid, charge density fluctuations 2-30812  
 quasi-one-dimensional systems, electron localisation, off diagonal Green function matrix elements 2-8773  
 rare earth metals, heavy, spin-wave excitation spectrum and dynamical susceptibility 2-31158  
 reduced wave eqn. with fixed incident wave, inverse problem 2-28671  
 relativistic  $e^-e^+$  gas, quantum electrodynamics, two point Green's functions 2-11007  
 resonance states, radial wave functions and Green's functions 2-23485  
 Rochelle salt, dynamical study including proton-optical phonon interaction 2-36547  
 Rowe's renormalised RPA, derivation from Bethe-Salpeter eqn. 2-3478  
 scalar field theory, planar Green's function, functional equations for planar graphs 2-10957  
 scattering in superconducting state, theory 2-46196  
 second-order differential eqns., bounds on Green's functions 2-33418  
 semi-microscopic optical pot. calc. by nuclear matter approach 2-38998  
 semiconducting crystals, excitonic absorption bonds, at finite temp. and weak mag. fields (*Russian*) 2-2223  
 semiconductor, electronic states introduced by ideal vacancy or surfaces, tight binding (orbital removal) method 2-8769  
 semiconductor, laser heated, nonlinear dynamic heat transport, carrier diffusion effect 2-2380  
 semiconductor surfaces, point-defect electronic states, core excitons, and intrinsic electronic states 2-8851  
 semiconductors, cubic, phonon transport mechanism, influence of dynamical Jahn-Teller effect 2-45645  
 semiconductors, defects, electronic struct. 2-40833  
 semiconductors, heavily doped, screened impurity band theory 2-30821  
 semiconductors, impurity band metal-insulator transition and off-diagonal disorder 2-40796  
 semiconductors, n-type, quantum transport theory of impurity and electron-electron scatt. resistivity 2-26350  
 shaft, elastic circular, stress conc., Green's function for body force problems 2-4715  
 shells, composite, method for constructing Green's type matrices (*Ukrainian*) 2-25240  
 solar potential magnetic fields calculation, Green's function methods 2-53235  
 spatially disordered systems, electron localisation calcs. 2-40848  
 spherical particle, weakly anisotropic, light scatt., dyadic Green's function soln. 2-34656  
 standard basis operator Green's functions, self-consistent many-body theory 2-5560  
 Stokes flow, axisymmetric, due to stokeslet near hole in plane wall 2-39955  
 strip footing, rigid, bonded to viscoelastic cross-anisotropic halfspace, dynamic compliance matrix 2-39824

**Green's function methods continued**

superconductivity, matrix electron Green's function derivation in electron-ion metal model 2-31028  
 superconductors, dirty, kinetic eqns., quasiclassical Green's function formalism 2-36209  
 superconductors, dirty, nonequilib., quasi-particle distrib. function, kinetic eqns. 2-31032  
 surface electronic states, localised orbital basis functions method 2-8849  
 ten electron atoms, scaled atomic number expansion of HF energies 2-621  
 thiiran, valence ionisation spectra, Green's function calcs. 2-24682  
 thin film, polaritons, Green's functions, power series, Raman scatt. 2-26308  
 thin shell theory, Green's matrices in static problems 2-28661  
 Thirring model, operator product  $\mu(x)\psi(x)$  2-10976  
 three-dimensional Schrödinger equation for anharmonic oscillator, analytical soln., Green's function 2-10644  
 time and energy Green's function for neutrons slowing down 2-15442  
 transition metal, electronic structure of impurities, review 2-26333  
 transition metals, band struct., model Green function and density response function, reson. model pot. method 2-12961  
 transverse field coupled to acoustic phonons, longitudinal spin dynamics 2-36546  
 tricritical logarithms in three dimensions 2-3543  
 U(1) lattice gauge theories, small coupling expansions 2-48910  
 underground tunnels, EM wave scatt., Green's function approach 2-34630  
 underwater light, Green's function calc. of effects of air-water interface on optical propag. 2-32539  
 uniaxial ferromagn., Greens function for single ion anisotropy, canted spin phase 2-46227  
 wave decay instability, Alfvén waves, Green's function calcs. (*Russian*) 2-25546  
 Yang-Mills fields in planar gauge, renormalisation (*Russian*) 2-23851  
 Yang-Mills theory, self-dual field solns., edth operator, associated Green's functions 2-23524  
 BaClF, U-centre localised and reson. modes, Green's function study 2-45490  
 C, surface (111)  $1 \times 1$ , atomic relaxation, tight binding Green's function approach 2-16936  
 CO low lying valence states, excited state props., MC time depend. HF and MC RPA calcs. 2-39297  
 Cd, Hg, Te, density of states calcs. 2-21486  
 CdTe:(P,Ga)(P,Al)(P,In), localised vibr. modes, Green's function calc. 2-50814  
 CuCl, reson. Raman scatt. and luminescence from highly excited states 2-22025  
 Cu<sub>2</sub>O, reson. Brillouin scatt., theory 2-5723  
 DyVO<sub>4</sub> type crystal, Jahn-Teller ferrodistorion antiferroelec., elementary excitations in elec. field 2-13026  
 Fe-Cr, mag. moments for different local at. configs. 2-46255  
 Fe-V alloy, local mag. moments and atomic ordering, continued fraction technique calcs. 2-31147  
 Ga<sub>1-x</sub>In<sub>x</sub>P mixed cryst., Raman scatt. and IR absorpt. spectra 2-2235  
 Ge, surface (111)  $1 \times 1$ , atomic relaxation, tight binding Green's function approach 2-16936  
 H atom, excited bound states, 3-dimens. reduced Coulomb Green's function 2-625  
 H<sub>2</sub>, two-photon ionisation, HF Green's function calcs. 2-20017  
<sup>3</sup>He, superfluid phases in mag. field., grand pot., Green's function approach 2-30688  
 HoCo<sub>2</sub>, mag. excitations, neutron scatt. study 2-51396  
 InSb type narrow band gap semicond., free and bound magneto-polarons 2-40807  
 KCl, R-centres, optical absorpt. R<sub>2</sub> band, lineshape calc. 2-2320  
 KH<sub>2</sub>PO<sub>4</sub> type cryst., ferroelectric resonance and nonlinear effect 2-36545  
 KH<sub>2</sub>PO<sub>4</sub> type cryst., first order ferroelec. phase transition theory 2-36553  
 NH<sub>4</sub>Cl, two-phonon bound state calcs. 2-45440  
 NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>(AsO<sub>4</sub>) and ND<sub>4</sub>D<sub>2</sub>PO<sub>4</sub>, antiferroelec. transitions, pseudospin model, Green's function theory 2-46514  
 Ni, chemisorpt. of H on (100) surface, transfer matrix calcs. 2-26222  
 Ni complex, cyclopentadienyl nickel nitrosyl, ground and cationic states, ionisation pot., INDO MO study 2-39324  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te, density of states calcs. 2-21486  
 α-Pd hydrides, tight binding estimate of dipole force tensor 2-40418  
 Si, surface (111)  $1 \times 1$ , atomic relaxation, tight binding Green's function approach 2-16936  
 Si:H, amorphous, electronic struct. of model defect 2-40820  
 SrClF, U-centre localised and reson. modes, Green's function study 2-45490  
 UC, atomic displacement around C vacancy (*French*) 2-50629  
 V-Ta, dilute alloy, phonon sp. ht. at low temp. 2-30622  
 V-W, dilute alloy, phonon sp. ht. at low temp. 2-30622  
 V<sub>2</sub>Si, model for arresting elastic modulus softening in supercond. state 2-31038  
 ZnS:Cr(Mn)(Fe)(Co)(Ni), Raman scatt., local force variations, press effects 2-41358  
 ZnS:Mn(Co), Raman spectra, impurity induced, press. depend. 2-46645  
 ZnS:Se(Ti)(V)(Mn)(Fe)(Co)(Ni), impurity electronic struct., Green's function method 2-40823  
 ZnSe:Ti<sup>2+</sup>, impurity states, Green's function method 2-35969

**grinding**

aspheric f/1 focusing lens, design and production 2-7907  
 deep-polishing method for glass, accelerated (*t*) 2-34951  
 grinding wheel surface condition monitoring by pneumatic back press. meas. 2-27394  
 hard magnetic ferrite, economic importance, development of comminution (*German*) 2-47198  
 optical component finishing on production lines 2-1053  
 optical component manufacture on 3B12 universal disc grinder 2-11871  
 reactor plant welding technology, pipe line weld beads treatment (*German*) 2-4032  
 surface, two dimensional dynamometer (*Japanese*) 2-43008  
 X-ray reflection optics, conicoid generation by grinding process 2-6936  
 Ba<sub>2</sub>Co<sub>4</sub>nH<sub>2</sub>O, morphologic, crystallographic charact. and surface props., grinding effect (*French*) 2-9299  
 Ba<sub>2</sub>Co<sub>4</sub>nH<sub>2</sub>O, phase modification by grinding 2-13736  
 Ca<sub>2</sub>Co<sub>4</sub>H<sub>2</sub>O, morphologic, crystallographic charact. and surface props., grinding effect (*French*) 2-9299



**grinding continued**

- CaC<sub>2</sub>O<sub>4</sub>·H<sub>2</sub>O, phase modification by grinding 2-13736  
 CaS:B, thermolum. phosphor, phys. parameters, operation importance 2-22101  
 Dy, tribophysical pulverisation 2-47185  
 Fe<sub>2</sub>O<sub>3</sub>, multi-domain and milled, magnetisation processes, neutron diffraction study 2-36386  
 Gd, tribophysical pulverisation, martensitic transformation 2-47185  
 K<sub>2</sub>C<sub>2</sub>O<sub>4</sub>·H<sub>2</sub>O, morphologic, crystallographic charact. and surface props., grinding effect (*French*) 2-9299  
 Li<sub>0.5</sub>Fe<sub>2.5</sub>O<sub>4</sub>, substruct. and partial dislocations, duration of grinding influence 2-50645  
 MgO, high-density, production 2-36816  
 NiFe<sub>2</sub>O<sub>4</sub>, substruct. and partial dislocations, duration of grinding influence 2-50645  
 SrO-Fe<sub>2</sub>O<sub>3</sub> system, comminution, effect on grain size, mag. props. and X-ray line breadth (*German*) 2-52061  
 Tb, tribophysical pulverisation, martensitic transformation 2-47185  
 α-Ti, nitrided, N diffusion profile determ., appl. of techniques for preparing and grinding diffusion layers 2-12849  
 TiBr-TiI type KRS-5 crystal, disturbed layer magnitude determ. at different stages of mech. finishing 2-1051  
 TiCl-TiBr type KRS-6 crystal, disturbed layer magnitude determ. at different stages of mech. finishing 2-1051

**grinding mills** *see grinding***ground services, aerospace** *see ground support systems***ground support systems**

- see also navigation; telemetering systems*  
 clock synchronisation technique, for tracking and controlling deep space probes 2-18679  
 ESOC flight dynamics support 2-42575  
 spacecraft flight dynamics, conf., Darmstadt, Germany (May 1981) 2-38364

**grounding** *see earthing***groundwater**

- alluvial aquifer, pollution propagation, distance-effect (*French*) 2-3038  
 aquifer flow routes and residence time, determination by dual radiotracer method 2-10198  
 aquiferous rock, heat, mineralisation and water discharge/accumulation propag. (*Rumanian*) 2-32550  
 aquifers, flow in double system; modelling with inhomogeneous permeabilities 2-37920  
 aquifers, flow in double system, modelling with homogeneous permeability 2-37919  
 aquifers, leaky/layered/confined/unconfined, BIEM solns. 2-37911  
 Arizona, hydrothermal circulation rel. to terrestrial heat flow meas. 2-22940  
 Athabasca Oil Sands area, shallow groundwater chemistry vars. 2-37895  
 N. Atlantic ridge basalt rocks, seawater hydrothermal alteration 2-9993  
 Bara Basin, Sudan, gravity exploration for groundwater 2-37898  
 Brantley damsite, New Mexico, relation of geophysical meas. to hydraulic conductivity 2-37897  
 S. California, <sup>226</sup>Ra and <sup>222</sup>Rn in groundwaters 2-22914  
 California, stable isotope ratios in seismically active regions 2-22907  
 coastal aquifer, moving interface problems, BIEM solns. 2-37912  
 coastal aquifer, salinity intrusion, simulation using limited quantities of computer resources 2-47932  
 complex permittivity of soil and water mixtures, using evanescent waveguide technique at 9 GHz 2-43045  
 contamination by sanitary landfill leachate and domestic wastewater in carbonate terrain, anal. 2-9703  
 diffusion in quartz at high press., tectonic implications 2-32464  
 dissolved salts, convective diffusion during filtration into drainage (*Russian*) 2-32138  
 East Mesa geothermal field, California, plausible two-dimensional vertical model 2-42308  
 EM prospecting in Precambrian terrain in Upper Volta 2-48023  
 Escalante Desert, Utah, USA, heat flow and groundwater influences 2-52775  
 fault-assoc., precursory U concs. and <sup>234</sup>U/<sup>238</sup>U activity ratios 2-22913  
 Florida and Texas aquifers, S isotope ratios in dissolved sulphide 2-28110  
 flow, Darcian vel. and mass balance, finite element modelling 2-37918  
 flow, statistical mechanical theory 2-23031  
 flow analysis, integral transform method for linearised Boussinesq eqn. 2-23030  
 geothermal brine wells, down-hole sensor using ion-controlled diodes 2-37986  
 geothermal models identification and validation, theory 2-22948  
 geothermal systems, vapour-dominated, one-dimensional model 2-32546  
 Geysers steam field, N. California, depletion of reserve (1974-7 period) 2-14049  
 glacial outwash, electrical resistivity-hydraulic conductivity 2-37908  
 Grimsvotn geothermal area, Iceland, penetration of water into hot rock boundaries of magma 2-52781  
 hot springs, Sin'etu dist., Japan, chemical composition (*Japanese*) 2-28115  
 hydraulic conductivity, contaminant transport prediction 2-37914  
 hydromechanical behaviour of deformable rock fracture under normal stress, physical model 2-32506  
 hydrothermal activity, submarine, off N Baja California, evolution and isotope geochemistry 2-37899  
 Iceland, hydrothermal Sr isotopes and seawater contamination 2-52880  
 igneous intrusion <sup>18</sup>O depletion due to groundwater convection 2-32466  
 Israel, coastal plain aquifer, solute sources from Na/Cl ratios 2-10098  
 Izu-Hanto-Toho-Oki (Japan), June 1980 earthquake, precursory water level changes (*Japanese*) 2-18373  
 Ketetahi Hot Springs, New Zealand, phys. and chem. survey 2-37822  
 kinematic subsurface stormflow 2-37909  
 Krafla caldera, Iceland, episodic rifting and volcanism rel. to Rn emission 2-52791  
 level variations leading to ground surface deformation (*Chinese*) 2-32520  
 mid-ocean ridge hydrothermal systems, sulphate chemistry 2-52759  
 mineral spring in fault zone, gas bubble emission, Ar/He ratio as earthquake precursor 2-6334  
 neutron moisture probe, moments method appl. 2-24285  
 New Jersey Pine Barrens, Al concs. in precipitation, streams and shallow groundwater 2-22680  
 Newcastle geothermal area, Utah, USA, heat flow and groundwater influences 2-52775

**groundwater continued**

- Oahu, Hawaii, crust strain changes due to rain 2-28056  
 E Pacific Rise, <sup>3</sup>He in hydrothermal vent plume 2-32543  
 pollutant transport in soil-groundwater system, analytic solns. 2-37472  
 pore fluid movement in rock fractures, effect of specimen size 2-32511  
 pore water pressure in natural slopes, calc. method 2-32881  
 Puerto Rico coastline, freshwater springs location 2-10053  
 radioactive dating, T rel. to <sup>14</sup>C and <sup>85</sup>Kr (*German*) 2-6458  
 radioactive waste geologic disposal, radionuclide migration in groundwater, speciation effects 2-39135  
 radioactive waste migration through fissured rock with micropores, model 2-9759  
 radioactive waste remobilization, effect of complexing ions, bench-scale tests 2-29343  
 radioactivity transfer factors, soil-plant, lysimeter meas. 2-32134  
 San Andreas fault, meas. of permeability and frictional props. of San Andreas fault gouges 2-32492  
 San Andreas fault gouge, interlayer water rel. to pseudo-pore pressure and gouge strength 2-28072  
 seasonal reversals of groundwater flow around lakes, rel. to stagnation points and lake budgets 2-23038  
 seawater intrusion in coastal aquifer, artificial recharge 2-14506  
 soil water, unsaturated 2-D flow, nodal domain integration model 2-37910  
 soil with plant roots extracting water, laboratory model of flow 2-47931  
 solute source tracing in semiarid zone 2-10098  
 spring flow cessation, 1980 E. Kentucky earthquake precursor 2-22916  
 submarine hot springs, Eu enrichment, redox behaviour 2-47834  
 in Sudan, groundwater exploration via combination of elec. resistivity, seismic refr. and gravity meas. 2-28108  
 Taoyuan-Chungli area, N Taiwan, subsurface water exploration by elec. sounding 2-23027  
 SE USA, forested freshwater swamps, methane emission to troposphere 2-28109  
 Visakhapatnam Basin, India, quality of groundwater 2-37903  
 Vulcano Island, volcano seismic activity rel. to aquifer Rn anomalies 2-28034  
 Wairakei geothermal system, New Zealand, identification of model 2-22947  
 water level changes accompanying fault creep, implications for earthquake prediction 2-32439  
 well level changes as precursors to earthquakes 2-22909  
 well water, chemical changes rel. to earthquakes 2-22906  
<sup>14</sup>C dating of groundwater in confined aquifers, implications of aquitard diffusion 2-23036  
 F content of hot springs, San'in dist., Japan (*Japanese*) 2-28114  
 Na/Cl ratios, solute source tracing in semiarid zone 2-10098  
 Ra content, <sup>226</sup>Ra/<sup>228</sup>Ra activity ratio in groundwater from bedrock 2-10086  
 Rn anomalies rel. to Palmdale Bulge area earthquakes 2-22910  
 Rn data, fast Fourier analysis, seismicity correl. 2-22912  
<sup>222</sup>Rn content of groundwater as earthquake precursor, worldwide data evaluation 2-32444  
<sup>234</sup>U/<sup>238</sup>U aquifer groundwater chemistry, Lincolnshire, England 2-52879
- group theoretical schemes**  
 classical and quantal, relativistic and nonrelativistic elementary particles, state spaces 2-33759
- group theory**  
*see also Clebsch-Gordan coefficients; crystal symmetry; elementary particle theory; group theoretical schemes; Lie groups; renormalisation; SU<sub>n</sub> theory*  
 Φ<sup>n</sup> models with global O(N) symmetry, renormalisation group 2-33707  
 Abelian groups, local limit theorems for invariant Markov chains (*Russian*) 2-48626  
 Abelian groups, recurrence of invariant Markov chains (*Russian*) 2-114  
 atomic and molecular theory, book 2-7485  
 atoms, two-electron correlations, group theoretic approach 2-662  
 bis-propyl ammonium tetrachloro zincate, ferro-paraelectric phase transitions 2-41292  
 Brauer-Wall groups, spinor scalar products 2-18943  
 C<sup>\*</sup> algebra, unbounded derivations commuting with compact group actions 2-28687  
 chalcopryrite structure crystals, deformation, internal ionic displacements 2-40474  
 classical and quantal systems of imprimitivity 2-33336  
 colour symmetry, contemporary concepts, algebraic study 2-38401  
 compact groups over fields of charact. zero, representation theory 2-33338  
 complex rotation group, irreducible representation in terms of rotation angles and axis 2-28696  
 crystal symmetry, D<sub>2h</sub> groups, props. and isomorphisms 2-16614  
 dihedral groups, weight and step operators 2-23473  
 discrete subgroups of the three-dimensional rotation group 2-42840  
 displacive structures hexagonal NiAs to orthorhombic MnP type transition appl., macroscopic method of anal. (*French*) 2-35664  
 E(3,1) invariant four vectors 2-33752  
 eigenvalue problems and group representation in quaternionic Hilbert spaces 2-33337  
 EM field theory, group theory appl. employing symm. (*German*) 2-48520  
 finite groups, parameterisation and representations 2-23863  
 finite supertransformations, group structure 2-6969  
 Galilean relativistic wave equations 2-33716  
 generalised Kepler problem, group theory approach 2-10657  
 generalised Landau-Ginzburg eqn., group props. 2-42843  
 generating functions for G<sub>2</sub> characters and subgroup branching rules 2-33269  
 group theory for unified model building 2-33779  
 Hartree-Bogoliubov time depend. eqn., SO(2N) group coset space 2-3861  
 Hilbert-Schmidt cohomology for Poincaré group 2-15016  
 infinitesimal transformations, symm., feasibility 2-41  
 magnetic lattice, nonspatial symmetry group 2-48642  
 magnetic structure analysis by group theoretical techniques 2-17265  
 molecular calculations, symmetry adapted functions, generation program 2-24581  
 nonrigid crystals, symm. groups 2-16615  
 nonrigid molecule, effective Hamilton, symmetry props. 2-24888  
 open-shell electron propagator theory, unitary group formulation 2-38473  
 plethysms, second and fourth indices 2-33270  
 Plonka sum of complete lattices 2-33468  
 point groups, cyclic and dihedral, as subgroups of limiting group 2-1430



**group theory continued**

- quantum spherical top, quantized Bertrand systems on  $SO(3,R)$  and  $SU(2)$  2-65  
 $R_3$  shift operators, quadratic products 2-43221  
 Racah algebra for groups with time-reversal asymm. 2-23864  
 reductional symmetry, of tensors 2-21053  
 regular semigroups, algebraic results 2-10580  
 relativistic oscillator, dynamical symmetry group and spherical function props. on hyperboloids (*Russian*) 2-3430  
 relativistic wave eqns. associated with Poincare group indecomposable representation 2-3702  
 rotation group representations, symmetrised powers 2-3361  
 spectral subspaces for compact actions 2-3358  
 spherical top, Bertrand systems on  $SO(3,R)$  and  $SU(2)$  2-64  
 spin system on Abelian group, global symm. 2-33459  
 spin system on Abelian groups, global symm. 2-33458  
 spin-orbit interactions in superexchange, coupling coeff. and operator algebra for chain  $O^*CSU_2$  2-45925  
 spinors, relationship to Maxwell's poles (*Russian*) 2-23471  
 superexchange, spin orbit interaction coupling coeff. and operator algebra for chain  $O^*CSU_2$  2-45925  
 surfaces, clean, second-order phase transitions, translational symm. changes 2-12897  
 symmetry adapted molecular orbitals, computer generation 2-11387  
 symplectic group associated with canonical commutation relations, complex extension of representation 2-3362  
 symplectic nuclear collective model,  $sp(6)$  states in an  $SU(3) \times U(1)$  basis 2-33931  
 trimethylammonium cadmium chloride, group theory anal. of phase transitions 2-35669  
 $U(nm)$  unitary group, noncanonical subgroup restrictions 2-27  
 vectorlike electric charge, in ground unified theories 2-23882  
 X-ray emission effect on lower atm. electron density 2-49184  
 $Bi_2GeO_{10}$ , optical phonon freq., linear wave-vector depend. 2-1574  
 $KH_2PO_4$ , constitutive eqns., group theoretic methods 2-26830  
 $TbCo_5$ , magnetic ordering processes (*Russian*) 2-5528

**Gruneisen coefficient**

- $Al_5$  compounds, supercond. transition temp. and Debye temp. correlation 2-46200  
 alcohols, surface tension, Eotvos const., compressibility, press. coeff., expansivity and Gruneisen parameter 2-30718  
 alkali halide thin film TO mode freq. press. depend. 2-45434  
 alkali halides, crystal binding energies and Gruneisen-Anderson parameters 2-1437  
 alkali hydride, thermal expansion coeff., isothermal compressibility and Gruneisen const. determ. 2-50819  
 alkali-graphite intercalation cpds., thermal expansion meas. 2-50892  
 amorphous and cryst. solids, photoelastic response 2-31449  
 cyclohexane binary mixtures 2-21259  
 halides, potential energy function for repulsive interaction 2-16746  
 heat capacities calc. at const. press. and volume using empirical Nernst and Lindemann eqns. 2-21322  
 heavy water surface tension, Eotvos const., compressibility, press. coeff., expansivity and Gruneisen parameter 2-30718  
 iodoform, cryst., Raman and IR spectra, press. and temp. depend. 2-51577  
 ionic crystals, Yamashita-Kurosawa dielec. theory, optic mode frequencies and Gruneisen parameters 2-25994  
 ionic cubic crystals, general expression for Gruneisen function 2-45504  
 metals, Gruneisen coefficient, temp. independ. at high temp. 2-12711  
 polyethylene, high density,  $B_{1u}$  lattice vibr., Gruneisen parameters and press. depend. 2-22026  
 polymer chains, mechanically stressed, quasi-harmonic IR bands, temp. effect 2-17459  
 pressure-induced changed in mode Gruneisen parameters and general eqns. of state 2-50817  
 rutile structure cpds., Raman active modes, Gruneisen parameters. and deform. pot. 2-45505  
 solids, phonon conductivity, role of thermal expansion 2-45642  
 TCNQ salts, press. depend. of lattice modes, Raman spectrum 2-51583  
 water, surface tension, Eotvos const., compressibility, press. coeff., expansivity and Gruneisen parameter 2-30718  
 Ce compounds, with unstable 4f shells, Gruneisen parameter 2-16743  
 $CsNiCl_3$ , one-dimens. antiferromag., thermal expansion, low temp. 2-30635  
 Gd, thermal expansion near Curie temp. 2-46305  
 Ge, mode Gruneisen parameters for long-wave phonons under press. 2-12712  
 Ge, phonon conductivity, role of thermal expansion 2-45642  
 Ge, phonon freq. and mode Gruneisen parameters, volume depend. 2-1572  
 HgSe, press. effects on elastic consts. up to phase transition 2-45317  
 K, lattice dynamical props. 2-21250  
 $La_2S_4$ , thermal expansion at low temps., rel. to supercond. props. 2-12787  
 $LiIO_3$ , Raman modes, press. depend. 2-31452  
 $\alpha-LiIO_3$ , Raman spectrum, piezospectroscopic study 2-46592  
 $MnTe_2$ , thermal expansion meas. 2-16824  
 $(Mo_0.6Ru_{0.4})B_{14}$  metallic glass, supercond. transition temp., press. depend. 2-36200  
 $(NH_4)BeF_4$ , ferroelectric phase transitions, X-ray dilatometric study 2-21954  
 NaCl, Gruneisen parameter and  $(\partial T/\partial P)$ , and lower mantle conditions 2-32505  
 P, black, orthorhombic and rhombohedral structures, press. depend. of lattice vibr., Raman scatt. study 2-16730  
 $PdD_{0.71}$ , mode Gruneisen parameters and supercond. transition temp. press. derivative 2-5200  
 $PdD_{0.71}$ , mode Gruneisen parameters and supercond. transition temp. press. derivative 2-8591  
 Si, harmonic and anharmonic props. 2-45421  
 Si, mode Gruneisen parameters for long-wave phonons under press. 2-12712  
 Si, phonon conductivity, role of thermal expansion 2-45642  
 Si, phonon frequencies and mode Gruneisen parameters, volume depend. 2-1572  
 Si, phonon-phonon interaction temp. depend., ultrasonic meas. 2-45470  
 $SiO_2$ , vitreous, Gruneisen coeff., thermoelastic determ. 2-35628  
 $SiO_2$ , vitreous, Gruneisen parameter, thermoelastic determ. 2-45598

**Gruneisen coefficient continued**

- V-Ta (0.98 at.%) solid soln., thermal expansion and sp. ht. (*Russian*) 2-5252  
 $VSe_2$ , thermal expansion, X-ray diffr. study, 40 to 1175K 2-8648  
 $ZnS(Se)(Te)$ , linear thermal expansion coeff. and phonon curves at covalent-ionic transition press. 2-45468  
 $ZrF_4-ThF_4-BaF_2$  system glasses, elastic constants 2-12660

**GTO calculations**

see also GO calculations

- semiconductors, electronic struct., first principles calc. 2-30793  
 transition metal atoms, systematic prep. of CGTO sets 2-19959  
 $CH_2(X^2B_1)$ , spin-orbit interactions, fine struct., GAUSSIAN program, ab initio calcs. 2-29515  
 $F^-$ , dipole polarisability using elect. field variant Gaussian-type orbitals, perturbation theory 2-39305  
 $H_2$ , Gaussian MO ab initio calcs. including configuration interaction 2-7511  
 $H_2S$ , absolute proton affinity, ab initio mol. orbital theory 2-44138  
 $NH(X^2\Sigma^-)$ , spin-orbit interactions, fine struct., GAUSSIAN program, ab initio calcs. 2-29515  
 $NiCO$ , coupling between Ni-C and C-O stretch motion 2-43799  
 $O_2(X^2\Sigma_g^-)$ , spin-orbit interactions, fine struct., GAUSSIAN program, ab initio calcs. 2-29515  
 $PH_3$ , absolute proton affinity, ab initio mol. orbital theory 2-44138

**Gudden-Pohl effect** see electroluminescence**guided electromagnetic wave propagation**

see also guided light propagation; waveguides

- dielectric medium, simultaneous assignment of real and imaginary masses 2-39547  
 high-frequency signal propagation and scattering in guiding channels 2-18366  
 hollow elliptical cylinder surrounded by dissipative medium, propag. characts. of dominant modes in tunnels 2-34637  
 troposphere, VHF ducting, modal eqn. roots 2-42444  
 wave spectrum for ring waveguide in container filled with anisotropic magneto-dielectric (*Russian*) 2-44177  
 whistlers, nonlinear ducting in plasma 2-40122

**guided light propagation**

see also optical waveguides

- adiabatic lightguides, light transmission 2-11814  
 atmosphere, abnormal refr. rel. to Novaya Zemlya effect 2-6436  
 atmosphere, Over-the-Horizon optical scatter propag. meas. in marine boundary layer 2-32639  
 fibre, single-mode, bandwidth, parametric effects, expt. verification 2-49915  
 fibre cross coupling, propagating beam theory 2-16131  
 fibre light propagation, amplification by evanescent wave coupling 2-1040  
 fibre ring interferometer, phase shift fluctuations between opposite waves 2-34924  
 fibres, multimode, graded-index, WKB formulation comparisons 2-39748  
 fibres, single-mode, birefr., forward-backward transmission, polarisation-sensitive meas. interpretation 2-25132  
 multimode, 2-variable approach to scattering problem 2-20416  
 multimode twisted fibres, light propagation, Verdet const. (*Russian*) 2-20427  
 optical waveguides, inhomogeneous, anisotropic, light propag. anal., generalised WKB method 2-16103  
 principles of manufacture of optical fibres and data transmission (*French*) 2-34906  
 reflection and transmission of guided waves calc. method 2-44446  
 reflection of light waves from uniaxial anisotropic media, longitudinal and polar config. (*Japanese*) 2-29873  
 resonant coupling phenomena of guided mode with metal surface plasma mode (*Japanese*) 2-29874  
 scalar wave equation modal solns. for graded index media 2-15954  
 surface periodic gratings, guided wave scatt., perturbation field theory, normal-mode anal. 2-39562  
 LiF film roughness determ. using guided light modes 2-31578  
 $LiNbO_3:Ti$  asymmetric branching waveguides, optical guided wave propag. characts. 2-16102

**Guinier-Preston zones**

- Al and alloys, AE during deform., microstruct. effect 2-31882  
 Al-Ag (13.5 at.%), torque oscils. damping, magnetisation curves, fluxoid pinning (*Russian*) 2-17247  
 Al-Zn, vacancy behaviour during Guinier-Preston zone form. and growth, positron expts. 2-21141  
 Al-Zn (10 wt.%), solute conc. fluctuation effect on ageing at low temp. 2-47042  
 Al-Zn (10 wt.%), solute conc. fluctuation effect on ageing at low temp. 2-47043  
 Al-Zn (5.3-6.8 at.%), unmixing kinetics, neutron small angle scatt. study 2-50859  
 Al-Zn-Mg (4.5, 2 at.%), reversion behaviour, precipitate size depend. 2-2517  
 Al-Zn-Mg (4.5, x wt.%), influence of Mg content formation and reversion of GP zones 2-2538  
 Al-Zn-Mg (6 at.%Zn, 0.81, 1.73 at.% Mg), early decomp. behaviour, isothermal resist. curves analytical description 2-17681  
 Al-Zn-Mg supersaturated alloy, decomposition behaviour, heat treatment influence 2-13724  
 Al-Zn-Mg-Cu, slip behaviour, effect of solute content 2-47141  
 Al-Zn-Mg-(Cu), Guinier-Preston zone form., early stages, neutron scatt. invest. 2-51905  
 Cu-Be,  $\alpha$ -solid, soln. neutron bombarded, decomposition study (*Russian*) 2-12644

**Gunn devices**

see also Gunn diodes

- GaAs FET, short-gate, ballistic transport 2-51185  
 $In_{0.53}Ga_{0.47}As$ -InP FET, short-gate, ballistic transport 2-51185

**Gunn diodes**

No entries

**Gunn effect**

see also limited space charge accumulation; negative resistance effects

- semiconductors at IBM: physics, novel devices, and materials science, review 2-36031  
 GaAs FET, short-gate, ballistic transport 2-51185  
 GaAs-GaAlAs heterostructure, Gunn oscillation optically triggered by 1.06 micron radiation 2-17077



**Gunn effect continued**

- Ga<sub>1-x</sub>In<sub>x</sub>As, electron drift, electric field depend., Monte Carlo calc. 2-51196  
 In<sub>0.51</sub>Ga<sub>0.49</sub>As-InP FET, short-gate, ballistic transport 2-51185  
 In<sub>1-y</sub>Ga<sub>y</sub>AsP<sub>1-y</sub>, temp. depend. of transferred electron threshold current 2-17076  
 Te single crystal, electron transfer effect 2-51191

**Gunn effect devices see Gunn devices****Gunn oscillators**

- InP transferred electron oscillators, effect of S doping on mobility 2-46044

**guns, plasma see plasma guns****gyration see rotation****gyromagnetic effect**

- see also *gyromagnetic ratio; magnetic resonance*  
 magnetic tape, gyromagnetic remanence and anisotropy 2-37855  
 rock, gyromagnetic remanence and anisotropy 2-37855

**gyromagnetic ratio**

- see also *g-factor; magnetic resonance*  
 DD, p, gyromagnetic ratio determ. 2-33840  
<sup>69</sup>As, 1306 keV level, gyromagnetic ratio 2-43425  
<sup>18</sup>F, 3<sup>+</sup> state gyromag. ratio, g-factor from <sup>16</sup>O(<sup>3</sup>He, p $\gamma$ ) 2-362  
 Ga compounds, nucl. mag. shielding investig. and theory 2-4231  
 GaAs-type semiconds., electron-nucleus spin system, optical orientation in inclined mag. field 2-35981  
<sup>199</sup>Pt, low-lying states, gyromag. ratio 2-29190  
 YAG:Nd<sup>3+</sup>, <sup>4</sup>I<sub>9/2</sub> ground level, cryst. field splitting 2-51133

**gyroscopes**

- see also *navigation*  
 cryogenic NMR gyroscope, rotation-sensing device, He isotope appls. 2-23610  
 elastic main-axis ball bearing gyroscope, translational vibr. effect on errors 2-25238  
 elastically suspended, nonstationary motion in magnetic fields calcs. (*Chinese*) 2-33513  
 fibre-optic laser gyro with easily introduced phase-difference bias 2-34902  
 fibre gyroscope with nonreciprocally operated fibre-coupled LiNbO<sub>3</sub> phase shifter 2-25131  
 fibre optic rotation sensor appl. 2-34913  
 fibre-optic gyroscope, all-single-mode, long-term stability 2-4601  
 fibre-optic gyroscope, closed-loop, low-noise 2-4602  
 fibre-optic rotation sensor, toward an integrated device, review 2-1036  
 fibre-optic rotation sensors, unpolarised reciprocal operation 2-1042  
 interferometers with (3×3) directional couplers, analysis 2-7873  
 laser gyro, optically biased 2-4537  
 motion, power series soln. (*Russian*) 2-50075  
 noncontact suspension on two-component vibr. of base, gyroscope resonant motion 2-25237  
 optical fibre gyro, backscatt. error reduction 2-1041  
 optical fibre gyro with ring interferometer, sensitivity limiting factors 2-49926  
 optical gyroscopes, review 2-49809  
 oscillations, angular base, two-gyroscope device drift (*Ukrainian*) 2-50073  
 relativistic precession, ballistic motion in Schwarzschild metric 2-48497  
 relativistic precession, circular orbits 2-33289  
 ring laser, for internal navigation systems 2-39684  
 superconducting gyroscope, cryogenic gas spin-up system 2-33543

**H-centres**

- alkali halides, F-colouring, role of impurities on primary process 2-12591  
 alkali halides, irradiated, colloidal centres growth (*Russian*) 2-2740  
 fluorite structure crystals, H-centres, geometry and charge distrib. 2-12589  
 KBr, X<sub>2</sub><sup>-</sup> centre generation by pulsed electron irradi., absorpt. spectra study 2-25936  
 KBr:Se, electron irradi., interstitial trapping by divalent impurities (*French*) 2-16646  
 KCl:KH, ground, excited state absorption, emission and Raman props. of F<sub>1</sub>(H<sup>-</sup>) centre 2-36643  
 KCl:PbCl<sub>2</sub>, X-ray irradi., H, V<sub>2</sub> centres, polarised luminesc., absorption, emission bands 2-46745  
 KCl(Br), F-H recomb. and intrinsic light emission 2-26967  
 LiF, electronic structure, hole centres (*Russian*) 2-21527  
 LiF, F, H, V<sub>k</sub> centres, electronic struct., optical absorption energy, INDO calc. 2-45886  
 NaCl, optical breakdown, laser-induced primary defect form. role 2-8539  
 RbI, recombination luminescence of H-centres (*Russian*) 2-5742

**H I regions**

- absorption line survey towards radiosources, UHF obs. 2-38275  
 anomalous motions of H I clouds 2-48303  
 in Centaurus A (NGC 5128), H I obs. 2-3307  
 Cetus-Eridanus region H I feature connection with H II filaments 2-28539  
 cold clouds in Galaxy (*Japanese*) 2-33104  
 concentrations and local galactic spiral structure (*Russian*) 2-33160  
 Cygnus OB2 members energy injection to interstellar medium, H I supershell form. 2-28515  
 in faint galaxies in galactic plane, 21 cm obs. 2-38297  
 galactic H I atlas, part III 2-18719  
 galaxies, irregular, H I distrib., UHF obs. 2-14925  
 galaxies H I, catalogues of 21 cm data, UHF obs. 2-42745  
 GS 241-01+15, H I shell in Puppis, PSR 0740-28 assoc. 2-53306  
 high velocity cloud (HVC A1), H I fine struct. obs. 2-6656  
 in LMC, hot stars and interstellar H distrib. 2-6660  
 in M101, giant spiral galaxy, assoc. of H I concentrations and H II complexes from radio obs. 2-33146  
 M16 (NGC 6611), investigation of neutral and ionised gas 2-6648  
 Magellanic Stream and H I remnants of Magellanic Cloud tidal disruption, obs. 2-33127  
 N70, in LMC, mass-loss bubble within massive collapsing H I cloud, radio and optical obs. 2-28520  
 NGC 2841, 3198, 5033, 5055 and 7331, H I 21 cm line studies of spiral galaxies 2-48310  
 NGC 4203, S0 galaxy, extended H I disk map, UHF obs. 2-33126  
 p Ophiuchi region, H I self absorpt. rel. to visual extinction, discrepancies, UHF obs. 2-33105  
 Orion Nebula, near IR spectrophotometer of forbidden C I emission from H I-H II boundary zones 2-3289  
 ridges formation in galaxies 2-33137

**H I regions continued**

- in Scorpius OB-2 association 2-28519  
 South Celestial Pole region ( $l^{\text{II}}=301^\circ$ ,  $b=-18^\circ$  to  $-31^\circ$ ), distrib. of galactic H I and dust 2-38277  
 spatial distribution, determ. from H I absorpt. towards pulsars 2-6609  
 in spiral galaxies, H I distrib. and kinematics rel. to morphology 2-48311  
 supernova remnants directions, H I absorpt. distances to nearby point radio sources 2-48346  
 very high-velocity H I clouds, evidence against intergalactic population hypothesis 2-10501  
 Zeeman effect in H I regions, implications for mag. fields in dense interstellar clouds 2-53352  
 CO in H I clouds, 2.6 mm line obs. and correls. with H I and OH 2-3290

**H II regions**

- Carina Nebula, UV obs. of high vel. interstellar lines 2-38265  
 Carina Nebula direction, CO mapping of mol. complex, EHF obs. 2-18787  
 Cepheus A-associated radio H II regions, 21 cm. line obs. 2-48305  
 Cetus-Eridanus region H I feature connection with H II filaments 2-28539  
 V645 Cygni, search for assoc. H II region, EHF obs. 2-33185  
 Cygnus X region, IR medium resolution maps interpretation 2-53376  
 distribution in M33 and Milky Way used to calculate stars form. 2-33128  
 30 Doradus Nebula, in LMC, identification of central object (R136) as supermassive star 2-10416  
 DR21, formaldehyde absorpt. mapping 2-14911  
 dusty H II regions, interstellar extinction law meas. 2-3291  
 electron temp. and level population var. determ. using recombination lines 2-18790  
 embedded OB associations, evolution, H $\beta$  emission line equiv. width 2-33102  
 emission-line spectra of H II regions surrounding early-type stars, model 2-48223  
 extinction and dust detection using dust sensitive forbidden line ratios 2-32858  
 extragalactic, size distrib. used to determine host galaxy dist. 2-48158  
 extragalactic, star formation and extinction 2-33107  
 forbidden-line intensity ratios, effect of small-scale electron density and temp. fluctuations 2-28540  
 formation in four and two spiral arm Galaxy 2-33129  
 G10.2-0.3 and 10.3-0.1 in W 31, H I absorption and distance 2-48304  
 G316.8-0.1, distance, UHF/IR obs. 2-18799  
 G82.6+0.4 (GL 2636), high-resolution radio obs. 2-28580  
 galactic H II regions, abundances of Ar, S and Ne from IR forbidden lines 2-28524  
 in galactic plane, correl. with space distrib. of pulsars 2-33058  
 in galaxies, freq. distrib. of H II region diameters 2-10500  
 interstellar radiowave scattering matter, galactic distrib. rel. to H II regions and supernova remnants 2-3296  
 ionisation front interactions, rel. to form. of globules 2-14909  
 isolated extragalactic H II regions reveal dwarf galaxies 2-23348  
 kinematics relative to spiral arm structure and density waves (*Russian*) 2-6673  
 line emission in O III and N III, abundances and electron densities, IR obs. 2-33098  
 in LMC, hot stars and interstellar H distrib. 2-6660  
 in M101, giant spiral galaxy, assoc. of H I concentrations and H II complexes from radio obs. 2-33146  
 in M101, IR, UV and EHF obs. 2-6665  
 M16 (NGC 6611), investigation of neutral and ionised gas 2-6648  
 M17, C II forbidden line halos, mapping, IR obs. 2-23333  
 in M33, forbidden O III/H $\beta$  ratios of emission regions in spiral arms and disc 2-33143  
 in M33 galaxy, struct. of interstellar H II, Zelentchuk 6 m telescope obs. (*French*) 2-18789  
 M33 Wolf Rayet stars assoc. with giant H II regions, visible obs. 2-14919  
 M8 and assoc. open cluster NGC 6530, UBV and H $\alpha$  stellar obs. 2-18783  
 Magellanic Clouds H II regions, age and H $\beta$  line equiv. width, obs. 2-18793  
 N105 in LMC, OH Type I maser detect., UHF obs. 2-38307  
 N159 in Large Magellanic Cloud, protostar discovery, HKL obs. 2-38306  
 N70, in LMC, mass-loss bubble within massive collapsing H I cloud, radio and optical obs. 2-28520  
 NGC 1365, Seyfert galaxy, H II regions obs. rel. to mild radial abundance gradients 2-3303  
 NGC 2237-2246, assoc. cluster NGC 2244, star membership, UBV obs. 2-10493  
 in NGC 5128 (Centaurus A), shock-ionized gas, spectrophotometry and kinematics 2-14934  
 NGC 604, giant H II region in M33, Wolf-Rayet stars discovery 2-3257  
 NGC 604, H II region complex in M33, obs. over six decades in frequency 2-48298  
 NGC 6164-5, nebulosities assoc. with extreme of star HD 148937, obs. and origin 2-28466  
 NGC 7538, assoc. mol. cloud, CO obs. 2-23335  
 NGC 7538, OH obs. of compact H II region (IRS 1) 2-38278  
 NGC 7538 (IRS1), assoc. of 1720 MHz OH masers with formaldehyde masers 2-6678  
 NGC 7822 (W1), evolved H II region, synthesis obs. of radio continuum radiation 2-28536  
 Orion Nebula, continuum and dust props., UV obs. 2-6649  
 Orion Nebula, far UV flux distrib. comparison with central stars flux 2-38268  
 Orion Nebula, interstellar grains size from IR photometry and polarisation obs. 2-6647  
 Orion Nebula, near IR spectrophotometer of forbidden C I emission from H I-H II boundary zones 2-3289  
 Orion Nebula, obs. of assoc. flare stars 2-10442  
 Orion Nebula stars, UV extinction, obs. 2-6650  
 ring nebulae with central WR star, classification and obs. 2-10421  
 S88B, IR and mol. obs. rel. to cloud energetics 2-28525  
 Sandage 3, H II region in IC 1613 dwarf irregular galaxy 2-42691  
 Sh2-152 and 156, O III/He I/O II/H $\beta$  intensity ratios 2-38271  
 Sh2-74, polarisation and distance, UHF obs. 2-33106



## H II regions continued

- shock waves from H II regions, contrib. to interstellar turbulence 2-42736
- star formation regions, 10 and 20 micron images 2-53343
- W31, H I absorption and distance 2-48304
- W3 (OH), highly excited OH obs. 2-38269
- W51, H II region-molecular cloud complex, optical study in forbidden S III emission line 2-48302
- W51 North, H<sub>2</sub>O maser sources proper motion and distances, SHF obs. 2-6651
- W58 (K3-50), formaldehyde absorpt. mapping 2-14911
- water masers, hot gas cold dust pumping 2-6653
- Wolf Rayet star assoc. ring nebulae, H II region type, spectral obs. 2-33023
- II Zw 40, optical structure of 'detached extragalactic H II region' 2-48328

## hadron classification schemes

- fundamental physics, conf., Bogota, Columbia (July-Aug., 1979) 2-10554
- mesons, QCD model, hadron classification 2-15324
- neutral nonstrange mesons, classification scheme based on arrows 2-23955
- semiempirical width rate, constituent masses, family struct. 2-11039

## hadron current

- see also *current algebra*
- $\gamma N \rightarrow l^+ N^*$ , nucleon resonances neutrino excitation in relativistic harmonic oscillator quark model 2-11040
- $\nu N$ , EM and weak corrections to  $\sin^2 \theta_W$  2-43324
- $\tau \rightarrow \nu \pi$  and  $A_1$  reson. 2-48988
- $e^+ p \rightarrow e^- \gamma X$ , weak neutral current effects 2-19384

## hadron decay

- see also *baryon decay*; *meson decay*
- heavy quarks, semileptonic decay, quark fragmentation 2-3780
- weak interaction processes, QCD effects 2-48947

## hadron-deuteron interactions

- see also *hadron-deuteron scattering*; *hyperon-deuteron interactions*; *meson-deuteron interactions*; *proton-deuteron interactions*
- dd annihilation at intermediate energies 2-24013

## hadron-deuteron scattering

- see also *hadron-deuteron interactions*; *hyperon-deuteron scattering*; *meson-deuteron scattering*; *proton-deuteron scattering*
- nd, Efimov effect anal. (Russian) 2-49062

## hadron electroproduction

- deep inelastic scatt. and inclusive annihilation, higher order QCD effects 2-29113
- elementary constituents and hadronic struct., conf., Les Arcs, Savoie, France (March 1980) 2-3331
- $e^+ e^-$  hadrons, mass splittings and leptonic width ratios meas. for  $T$ ,  $T'$  and  $T''$  states 2-15347
- $e^+ e^- \rightarrow hh$ ,  $h$ =baryon resonance with spin 5/2, differential cross section calc. 2-3800
- $e^+ e^- \rightarrow \psi$  or  $\psi'$ ,  $\eta_c$  study by measuring low energy photons from  $\psi$  and  $\psi'$  radiative decays 2-15343
- $e^+ e^-$ , 33 GeV,  $\Lambda$ ,  $\bar{\Lambda}$ ,  $K^0$ ,  $\bar{K}^0$  prod., differential and scaling cross sections 2-7039
- $e^+ e^-$ , annihilation, charmed meson prod. 2-24009
- $e^+ e^-$  charged hadrons,  $\pi^\pm$ ,  $K^\pm$ ,  $p, \bar{p}$  prod. energy depend. study 2-15317
- $e^+ e^- \rightarrow 2\pi^+ 2\pi^- (K^+ K^- \pi^+ \pi^-) (2\pi^+ 2\pi^- \pi^0)$  (pp)( $K^+ K^-$ )( $K_S^0 \bar{K}_L^0$ )( $K_S^0 K^\pm \pi^\mp$ ), 1.4-2.2 GeV, exclusive channel results 2-15350
- $e^+ e^- \rightarrow 2\pi(N\pi)$ , many-particle exclusive processes, renormalisation group approach 2-7007
- $e^+ e^- \rightarrow ABX$ , back-to-back jets in QCD 2-38889
- $e^+ e^-$  annihilation, 9.4, 12.0, 30 GeV, inclusive  $K_S^0$  prod. 2-3798
- $e^+ e^-$  annihilation, hadron prod. through  $2\gamma$  interactions 2-15315
- $e^+ e^-$  annihilation, QCD jets, hadron distrib., transverse momentum moments 2-19320
- $e^+ e^-$  annihilation, thrust distrib., perturbative QCD calcs. 2-24006
- $e^+ e^-$  annihilation 2-6991
- $e^+ e^-$  annihilations, inclusive  $J/\psi$  prod. cross section calc. in perturbative QCD 2-29121
- $e^+ e^-$  collisions, Sterman-Weinberg jet cross sections, gluon cut vertices QCD coupling calcs. 2-29120
- $e^+ e^- \rightarrow e^+ X$ ,  $\gamma\gamma$  scatt. interpretation, photon struct. function 2-29166
- $e^+ e^- \rightarrow gq\bar{q}$ , enhanced baryon prod., B/M ratio 2-29104
- $e^+ e^- \rightarrow \gamma_e Z_e \rightarrow \mu^+ \mu^-$  two jets, long. pot. beams.,  $SU(2)_L \times U(1) \times \bar{U}(1)$ ,  $SU(2)_R \times U(1)$  - predictions 2-3797
- $e^+ e^- \rightarrow \gamma hX$ , QCD prediction for direct photon prod. 2-7008
- $e^+ e^- \rightarrow h$ , parton showers, hadron prod. in QCD 2-339
- $e^+ e^- \rightarrow hX$ , 30 GeV, three-jet events, gluon bremsstrahlung 2-3801
- $e^+ e^- \rightarrow hX$ , hadronic final states, elongated q-q struct. 2-337
- $e^+ e^- \rightarrow HZ^0$  (Hff), polarisation effects, Weinberg model calc. 2-24004
- $e^+ e^-$  hadrons, 33-36.7 GeV, three-jet events, rel. to QCD model 2-38891
- $e^+ e^-$  hadrons, jet prod., hard gluon bremsstrahlung in QCD 2-24011
- $e^+ e^-$  hadrons, jet production, hard gluon bremsstrahlung, strong coupling const. 2-340
- $e^+ e^-$  hadrons, jet structure, QCD tests 2-7040
- $e^+ e^-$  hadrons, MARK J results 2-24012
- $e^+ e^-$  hadrons,  $O(\alpha_s^2)$  QCD radiative corrections for shape variable distributions 2-49003
- $e^+ e^-$  hadrons, QCD event simulation, Monte Carlo program 2-15345
- $e^+ e^-$  jets, transverse momentum distrib., perturbative QCD tests 2-11058
- $e^+ e^- \rightarrow \omega \pi^+ \pi^-$ , 1.65 GeV, observation of isoscalar vector meson  $\omega'$  or  $\phi'$  2-19388
- $e^+ e^-$  physics, lepton and hadron prod.,  $\tau$ ,  $\psi$ ,  $T$  and  $Z^0$  2-43368
- $e^+ e^- \rightarrow \pi^+ X$ , 14-34 GeV, scaling violation 2-38892
- $e^+ e^- \rightarrow \pi^+ \pi^- \pi^+ \pi^-$ , 1.4-2.18 GeV, cross section meas. 2-49002
- $e^+ e^- \rightarrow q\bar{q}\pi$ , one-photon mech. (Russian) 2-38893
- $e^+ e^-$  three jets, transversely polarised, lowest order calcs. in broken colour gauge theory 2-49000
- $e^+ e^- \rightarrow YX$ , 10-30 GeV, three gluon decay model, QCD prediction, strong coupling const. 2-3781
- $e^+ e^-$  annihilations, fast baryon prod., combinatorial rules 2-49001
- $e^+ e^- \rightarrow e^+ \pi^0$ , 1.0 (GeV/c) $^2$ ,  $\pi^0$  electroprod. in resonance region, differential cross sections 2-11054
- $e^+ e^- \rightarrow \pi^+ \pi^- p$ , 11.5 GeV, exclusive  $\rho^0$ ,  $\omega$  and  $\phi$  electroproduction meas. 2-43363

## hadron electroproduction continued

- $T(9.46)$  and  $T'(10.01)$  resonances obs. in electron-positron annihilation 2-15348
- $T'$  narrow resonances obs. in  $e^+ e^-$  annihilation in CLEO detector 2-15346

## hadron-hadron interactions

- see also *baryon-baryon interactions*; *hadron-hadron scattering*; *meson-baryon interactions*; *meson-meson scattering*
  - Centrauro hadron-hadron event,  $10^{12}$ - $10^{15}$  eV, high mass particle prod. cross section, parton model 2-24035
  - cosmic ray interactions at  $10^7$  TeV, obs. in Mt. Fuji 2-24052
  - cross-sections, topological supersymmetric struct. 2-24045
  - direct photon production 2-29125
  - Drell-Yan process, virtual corrections regularisation scheme depend. in perturbative QCD 2-29079
  - Drell-Yan processes, effects of quark sea in nuclei 2-43394
  - elementary constituents and hadronic struct., conf., Les Arcs, Savoie, France (March 1980) 2-3331
  - fundamental interactions theory developments, Winter School, Karpeaz, Poland (Feb.-March, 1980) 2-48384
  - hadron jet emergence (Russian) 2-24047
  - hadron-neutron total cross sections from hd data 2-24026
  - heavy QQ bound states hadronic prod. 2-49015
  - high energy hadron-nucleus reactions, recoil proton distrib., Monte Carlo simulation 2-19410
  - inclusive and exclusive processes at high energies, hyperon polarisation 2-7041
  - inclusive processes, polarisation phenomena quark dynamics (Russian) 2-33814
  - jet phenomena, review 2-29123
  - large transverse momentum phenomena, review 2-38901
  - leading particle effect in dual-parton model 2-3821
  - medium energy, hadronic struct., overview 2-38900
  - multiparticle processes, density matrix for systems in equilibrium with an infinite set of degrees of freedom 2-43316
  - neutral particle production, scaling in the mean hypothesis test 2-49017
  - perturbative QCD, charm prod., central and diffractive components 2-43299
  - QCD and electroweak gauge model, gauge bosons, spin asymmetries in large- $p_T$  prod. 2-29144
  - QCD and hard scatt. processes 2-48946
  - Stevenson optimised perturbation theory appl. to factorisation and mass scheme depend. 2-43294
  - sum rules for partial waves in prod. processes 2-33766
  - super high energy cosmic ray nuclear interactions  $10^{12}$ - $10^{14}$  eV 2-23199
  - ab-C(n-1)X, correlations between neutral and charged particles in multicomponent approach (Russian) 2-349
  - h N, energy depend. and azimuthal correl. structure at high energies (Russian) 2-3808
  - $h_1 h_2 \rightarrow \mu^+ \mu^- X$ , massive lepton pair prod., field theory approach to large momentum transfer process 2-7054
  - hh, low  $p_T$  hadron jets similarity to jets in hard processes 2-29119
  - hh- $m_Q(\eta_c)$ , OZI violation, rel. to  $\psi$  prod. 2-48977
  - hh- $\gamma\gamma X$ , high mass pair production 2-3812
  - hh- $l^+ l^- X$ , Drell-Yan process, QCD factorisation, initial state interactions 2-29147
  - hh- $l^+ l^- X$ , review 2-3818
  - hh- $\mu^+ \mu^- X$ , production simulation 2-7049
  - hh- $\mu^+ \mu^- X$ , Sudakov effects, initial state interactions 2-38913
  - hh- $\pi X$ , large  $p_T$  scatt., naive QCD parton model, gluon distrib. 2-7050
  - hh- $\omega\gamma$ , rel. to  $\eta_c$  prod., OZI violation 2-48977
  - hN- $hX$ , in nuclei, high energy, projectile fragmentation, quark model predictions 2-38910
  - hN- $X$ , cumulative particles, fireball model, quark-gluon bags 2-38911
  - hN- $X$ , high energy, multiparticle prod. in multiple scatt. and composite quark models (Russian) 2-347
  - hp,  $\pi^\pm$ ,  $K^\pm$ , p prod., target proton fragmentation, 2 Reggeon final state 2-43371
- ## hadron-hadron scattering
- see also *baryon-baryon scattering*; *hadron-hadron interactions*; *meson-baryon scattering*; *meson-meson scattering*
  - exclusive QCD processes, helicity selection rules and gluon spin tests 2-43298
  - geometrical model, operator theory (Chinese) 2-33751
  - high energy and fixed momentum transfer, general laws, review 2-3807
  - higher order reggeon field theory results for  $d\sigma/dt$  2-29092
  - inelastic scatt. initiated by gluons coherent interaction in quark sea 2-49014
  - quark masses, from renormalisation group eqn., rel. to hh scatt. 2-38866
  - hp- $hp$ , QCD Born approx. anal. (Russian) 2-11075
- ## hadron interactions
- see *hadron-deuteron interactions*; *hadron-hadron interactions*; *lepton-hadron interactions*; *photon-hadron interactions*
- ## hadron leptonproduction
- see also *baryon production*; *hadron electroproduction*; *meson production*
  - diffractive  $\psi$  and  $\bar{D}D$  muonprod., azimuthal depend., gluon spin, parity and  $k_\perp$  test 2-24003
  - lepton+hadron processes beyond leading order in QCD 2-29080
  - lepton-nucleon deep inelastic scatt. 2-29117
  - neutrino induced  $\pi^+$  prod., resonance background interference 2-43323
  - QCD analysis, twist-4 corrections, appl. to transverse struct. functions 2-3751
  - $e^+ e^-$  hadrons, hadronic vacuum polarisation correction in muonic atoms using cross-section parametrisation 2-11594
  - $e^+ e^- \rightarrow \pi X$ , many-particle exclusive semi-inclusive processes, renormalisation group approach 2-7007
  - $\mu N$ , quarkonium muonproduction review 2-15344
  - $\mu N \rightarrow \mu^+ J/\psi X$ , 280 GeV/c, inelastic  $J/\psi$  prod. results from EMC expt. 2-3792
  - $\mu p$ , azimuthal depend. in semi-inclusive leptonproduction, QCD prediction 2-43296
  - $\nu_n(p) \rightarrow \mu^- hX$ , cross-section ratio  $\sigma(\nu n)/\sigma(\nu p)$  for charged-current and neutral-current interactions below 10 GeV 2-3768
  - $\nu p$ , deep inelastic scatt., hadron transverse momentum distrib. 2-305
  - $\bar{\nu} p \rightarrow \mu^+ h^+ X$ , hadron prod. mechanism in charged-current interactions 2-3769
  - $\pi^- p$ , 147 GeV/c, hadron prod., comparison with deep inelastic leptonproduction 2-29160
  - eN deep inelastic scatt., leptonproduction jet cross section, parton transverse momentum corrections 2-43358



**hadron-nucleus reactions**

see also *hadron-hadron interactions; hyperon-nucleus reactions; meson-nucleus reactions; nucleon-nucleus reactions*  
 $A=2-12$  nuclei, hadron reactions at 0.5-5 GeV, review (Russian) 2-39020  
 diffraction excitation and radiative decays of resonances 2-15397  
 high energy hadron-nucleus reactions, recoil proton distrib., Monte Carlo simulation 2-19410  
 intra-nuclear cascade for 10 GeV hadron-nucleus reactions, number of collisions 2-7096  
 unusual shadowing effects in particle production off nuclei 2-19283  
 $hN-h^+X$ , in nuclei, high energy, projectile fragmentation, quark model predictions 2-38910

**hadron-nucleus scattering**

see also *hadron-hadron scattering; hyperon-nucleus scattering; meson-nucleus scattering; nucleon-nucleus scattering*  
 Compton effect, radiative scatt. by nuclei 2-15409  
 inelastic hadron scatt., collective parameter variation with probe and first-order calc. 2-19460  
 intermediate energy scatt., Coulomb distortion. analytical evaluation 2-34041

**hadron photoproduction**

see also *baryon photoproduction; meson photoproduction*  
 elementary constituents and hadronic struct., conf., Les Arcs, Savoie, France (March 1980) 2-3331  
 spin depend. processes involving real pol. photon, quark and gluon distrib., jets 2-3790  
 $\gamma\gamma \rightarrow 2$  jets, high  $p_T$  hadron prod., lowest order cross section 2-33875  
 $\gamma p \rightarrow h^+X$ , perturbative QCD test 2-7037  
 $\gamma p \rightarrow mX$ ,  $\pi^+K^+$  inclusive meson spectra, large  $p_T$  jets target jet remnants process depend. 2-29115  
 $\gamma p \rightarrow \pi^+ \pi^- \pi^+ \pi^-$ , 25-70 GeV,  $p(1600)$  and  $A_2$  production, jet like  $4\pi$  systems 2-11055  
 $\gamma p \rightarrow \pi^+ hX$ , pol.  $\gamma$ , jet polarisation, gluon spin, in QCD 2-327  
 $\psi$  diffractive photoprod. 60-300 GeV, energy and  $t$  depend. 2-38888

**hadron production**

see also *baryon production; hadron leptonproduction; hadron photoproduction; meson production*  
 large transverse momentum particle production, thermodynamical model 2-11035  
 valon-parton recombination for low  $p_T$  hadron prod. 2-23948  
 $\gamma\gamma$ , four-quark states prod. chars. in MIT bag model 2-43396  
 $pp$ ,  $s^{1/2}=30$  GeV, inclusive momentum distrib. comparison with low-energy  $e^+e^-$  data 2-33864

**hadron scattering** see *hadron-deuteron scattering; hadron-hadron scattering; lepton-hadron scattering; photon-hadron scattering*

**hadronic atoms**

see also *mesic atoms*  
 antiprotonic atoms, optical model anal. of exotic atom data 2-39513

**hadrons**

see also *baryon resonances; baryons; hadron classification schemes; hadron current; hadron decay; meson resonances; mesons*  
 $b$ -quark hadrons, mass in quark model 2-23949  
 charmed hadrons, mass in quark model 2-23949  
 covariant 3-dimens. eqns. for quark bound states, hadron struct. functions 2-33841  
 gluonia, effective masses, QCD approach 2-38863  
 ground state hadrons, wave functions, SU(3) colour gauge theory, SU(6) flavour model 2-291  
 hadron spectra and quarks 2-10570  
 mass splitting in  $u, d, b, t$ -quark sector 2-23961  
 non-Euclidean and non-Desarguesian geometries, models for hadron structure 2-48495  
 quark models 2-29086  
 topological S-matrix bootstrap theory of hadrons 2-29090

**haemodynamics**

see also *blood*  
 ambulatory patients, assessment of circadian rhythm of blood press. and heart rate 2-37695  
 aorta, shock wave evolution in mathematical models 2-9828  
 aorta of octopus, elastic behaviour to aid blood flow 2-32245  
 arterial blood flow, one-dimens. models, distributed outflow modelling 2-37620  
 arterial blood press. meas., comparison of direct and indirect methods 2-9887  
 arterial morphology, correl. with haemodynamic meas. in arterial casts 2-42133  
 arterial pressure, continuous recording during graded bicycle ergometry and stair climbing 2-37613  
 arterial pressure monitoring, radiotelemetry and Remler recorder meas. 2-37718  
 arterial pulse velocity rel. to intracranial press., US meas. 2-32294  
 arterial stenosis, expt. to determ. how best to quantify hydraulic effects 2-18235  
 arterial tree input impedance models, computer identification 2-47552  
 artery models with Newtonian and non-Newtonian fluids, flow velocity meas. 2-14281  
 atherosclerotic human abdominal aorta, flow visualisation in mould 2-42131  
 biomechanics development perspective, lung appl. 2-15002  
 biomedical photoelectric plethysmography, fundamental aspects of reflection and transmission methods 2-42186  
 brain, circulation restoration after ischemia 2-42130  
 calf muscles, human, blood flow response to static contractions 2-52526  
 cardiac contractility evaluation through maximal isovolumic elastance, left ventricular identification in dog 2-32228  
 cardiac left ventricular press. of conscious dogs, telemetry system 2-37717  
 cardiac output, automatic determ., impedance plethysmography method (Japanese) 2-52655  
 cardiac pump optimisation for haemodynamic control (French) 2-37616  
 cardiac stroke volume assessment, beat-by-beat, by pulsed Doppler US in exercise 2-52589  
 carotid artery flow, computerised Doppler tomography and spectrum anal. 2-47668  
 carotid artery flow, transcutaneous meas. by US volume flowmeter 2-14307  
 carotid versus femoral Doppler velocity patterns rel. to cerebral artery flow disturbance 2-22788

**haemodynamics continued**

cerebral blood flow, regional, meas. by the  $^{133}\text{Xe}$  inhalation technique (French) 2-32317  
 cerebral blood flow, regional, meas. using  $^{11}\text{C}$ -methane,  $^{13}\text{N}$ - $\text{N}_2\text{O}$ , and  $^{11}\text{C}$ -acetylene 2-6260  
 cerebral blood flow and central haemodynamics in long-term period of chronic radiation disease (Russian) 2-27812  
 cerebral blood flow and  $\text{O}_2$  metabolism in man, quantitative meas.,  $^{15}\text{O}$  and positron emission tomography 2-2922  
 cerebrovascular disease, non-invasive diagnosis, review of techniques 2-32352  
 clot model, oscill. flow between stenosis and clot 2-6234  
 compliant tubes, fluid-filled, linear and nonlinear pulse propag. 2-50317  
 coronary, biomech. model, rel. to auxiliary circulation research 2-37617  
 coronary blood flow, angiographic meas. by video dilution technique 2-27872  
 curved tube, expt. study of physiological pulsatile flow 2-16379  
 Doppler US flow meas., max. freq. indication 2-42174  
 dusty fluid, oscillating two-phase flow in an elastic tube, fluid velocity, appl. to haemodynamics 2-20751  
 electroarteriography, noninvasive blood velocity determ. 2-14235  
 EM flowmeter, effect of blood vessels on sensitivity 2-52598  
 EM noninvasive flowmetry of blood flow rate, principles, math. models, instrumentation and methods 2-14309  
 encephalovolumeter, noninvasive meas. of changes in brain volume of cerebral pulsation 2-37705  
 flow, cephalic and cerebral, and cardiac output, age related changes in rats 2-6230  
 flow and  $\text{O}_2$  consumption meas. in vivo by proton imaging 2-27950  
 flow calculation, testing of a numerical model 2-47550  
 flow detect. by intersecting zone Doppler unit 2-37637  
 flow in therapeutic arteriovenous fistulas, Doppler US evaluation 2-27859  
 flow monitor, for heart monitoring 2-52622  
 flow of a viscous liquid in the gap between a moving and a fixed sphere at low Reynolds numbers 2-22780  
 flow through bifurcation in presence of transverse magnetic field, mathematical simulation 2-9830  
 foetal aortic blood flow, human, Doppler US meas. 2-47665  
 history of blood flow mechanics 2-15004  
 human digital arteries, noninvasive pulsed Doppler blood flow vel. meas. and calc. flow 2-32239  
 hydrodynamic resistance in turbulent flow 2-2890  
 impedance plethysmography, overview of theory and appls. 2-14354  
 left ventricular perfusion distrib. performance evaluation, computer assisted planimetry of press. waveforms 2-32384  
 leg blood flow, central thermoregulatory control, influence of skin temp. 2-2850  
 limb blood flow meas. by admittance plethysmography, evaluation of parallel conductor theory (Japanese) 2-52653  
 limb blood flow meas. by elec. admittance plethysmography, evaluation of parallel conductor theory 2-37699  
 mitral valve, closure dynamics, collapsible tube model 2-42129  
 mitral valve, natural, fluid mechs. 2-6232  
 model for human circulation demonstration 2-38388  
 Newtonian fluid nonaxisymm. Stokesian flow in circular tube, blood flow modelling 2-50323  
 NMR applications, review (French) 2-32306  
 NMR flowmeter for blood flow meas. in human legs 2-14317  
 noise rel. to hearing loss and high blood press. 2-2881  
 poststenotic flow disturbances, characterisation and evolution 2-9823  
 pressure, continuous recordings in essential hypertension, computer anal. 2-37694  
 pressure, continuous tape-recording, technical considerations 2-37692  
 pressure, direct meas. by liq.-filled catheter manometer systems 2-47744  
 pressure, indirect, fully automatic portable recording 2-37693  
 pressure, radiotelemetry and standard exercise tests 2-37643  
 pressure, segmental meas., timesaving method using Doppler US 2-14305  
 pressure control, automated, using self-tuning regulator, dog expt. 2-22872  
 pressure indirect measurement with two-probe US system (German) 2-22804  
 pressure meas., direct, in the arterial and pulmonary circulation radiotelemetry 2-37716  
 pressure of chick embryo, meas. by implanted needle catheter 2-52681  
 pressure-flow relationship in canine left coronary artery, study of linearity and stationarity 2-47553  
 pulsatile blood flow in a rigid pulmonary alveolar sheet with porous walls 2-22779  
 pulsatile blood flow measurement using optical fibre laser Doppler velocimeter 2-9901  
 pulsatility index, role in clinical assessment of lower limb ischaemia from US waveforms 2-2909  
 radiotelemetry of direct blood press. 2-37642  
 regional cerebral blood flow meas., NMR flowmeter focusing techniques 2-14318  
 renal artery blood flow patterns in normal and diseased humans, US echo-Doppler scanning meas. 2-47667  
 review of physiological fluid mechanics 2-18240  
 steady-state, calc. in vicinity of fusiform aneurysms 2-22782  
 stenoses, modelling using sudden expansions, effects of inlet conditions 2-9826  
 stenosis, partial, 3D simulation of flow past 2-9825  
 systemic arterial model, sensitivity anal. and improved identification 2-42066  
 tumour blood flow, effects of single-dose  $^{60}\text{Co}$  irradiat., rat expts. 2-42169  
 ultrasonics bloodflow meas., simulation study and theoretical comparison of various processing techniques 2-18278  
 ultrasound multiplexed Doppler microcomputer combination as noninvasive blood flowmeter 2-47666  
 US flow metering principles, CW, and appl. to peripheral arterial system study (Italian) 2-52588  
 US flowmeters using Doppler effect (Spanish) 2-6284  
 US multichannel pulsed Doppler blood flowmeter, minicomputer-based 2-18280  
 US scattering, theoretical study 2-47628  
 US transcutaneous measurement of common carotid artery blood flow 2-37635  
 US velocity Doppler signals, instantaneous freq., mean freq. and variance of mean freq. estimators 2-14302  
 vascular endothelial morphology rel. to blood flow pattern 2-42132



**haemodynamics** continued

- velocity measurement, waveform anal. of Doppler US signals 2-42173
- velocity measurement by fibre optic laser Doppler anemometry 2-42191
- venous compliance measurement, appl. of transient process of circulatory equilib. (*Japanese*) 2-52529
- vessel tapering, effect on transition to turbulent flow 2-18239

**haemoglobin** *see proteins***hafnium**

- see also nuclei with .....*
- diffusion of H<sub>2</sub> in hydride phase 2-16900
- electron structure, beginning and end of third period, X-ray emission props. (*Russian*) 2-36736
- ion implementation in Ni, laser pulse melting, TDPAC Rutherford backscatt. and channelling meas. 2-31351
- reaction kinetics of O<sub>2</sub> and N<sub>2</sub> absorption at high temp. in  $\alpha$ -phase (*German*) 2-45738
- sediments of central Pacific, chemical trapping in fish debris (*French*) 2-52818
- solar Hf and W abundances, implications of fast neutron capture on <sup>180</sup>Hf and <sup>184</sup>W 2-48141
- zone-centre [001] LO phonon anomaly 2-26007
- Hf<sup>3+</sup>, electron impact ionisation, excitation-autoionisation contributions 2-792
- <sup>176</sup>Hf/<sup>177</sup>Hf, initial ratio in Amitsoq gneisses, Gr enland, rel. to Lu-Hf total-rock age 2-14421
- V<sub>2</sub>O<sub>5</sub>:Hf, electron localisation and ionic radii of cations, ESR obs. 2-45890

**hafnium alloys**

- see also hafnium compounds*
- Cu-Al-Ti-Hf, precipitation of particles during internal oxidation (*Russian*) 2-22218
- Hf-B eutectic system, crystn. at ultrahigh cooling rate 2-41600
- Nb-Hf/Cu-Sn-Ga, multifilamentary supercond., crit. current, strain effects 2-17251
- Nb-Ti-Hf and Nb-Ti-Ta-Hf, supercond. crit. field, H<sub>c2</sub>, enhancement by alloy additions 2-13248
- Ti-Hf HCP alloys, short-range segregation, diffuse X-ray scatt. anal. (*Russian*) 2-5877
- V-Hf and V<sub>2</sub>Hf<sub>0.2</sub>Zr<sub>0.8</sub> superconductivity, mag. susceptibility 2-36183
- W-C-Hf, cast, struct. and props., alloying effect 2-41743
- Zr-Hf HCP alloys, short-range segregation, diffuse X-ray scatt. anal. (*Russian*) 2-5877

**hafnium compounds**

- see also hafnium alloys*
- Hf and Hf-HfN metallisations on solar cell type Si, contact resistivities 2-36126
- Hf complex, HfCl<sub>4</sub>-acetonitrile-d<sub>0</sub>(-d<sub>3</sub>), vibr., force consts., IR and Raman study 2-2239
- HfCl<sub>3</sub>, single cryst. growth by floating zone method 2-41514
- HfCl<sub>3</sub>, vacancy induced and two-phonon Raman scatt. 2-41356
- HfCl<sub>4</sub>POCl<sub>3</sub>, Raman and IR spectra, normal coordinate anal., Urey Bradley force const., pot. energy functions 2-24703
- HfF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glasses, influence of processing conditions of IR edge absorpt. 2-5680
- HfF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glasses, influence of processing conditions of IR edge absorpt. 2-13475
- HfF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glass, material dispersion characts. determ. 2-17430
- Hf<sub>2</sub>Fe(Co)(Ni)P, formation with Nb<sub>2</sub>CoSi structure 2-5081
- HfH<sub>4</sub> IR fluoride glass, multiphonon absorption 2-49847
- HfO<sub>2</sub>, Er<sub>2</sub>O<sub>3</sub>-stabilised, abrasability and hardness 2-47184
- HfO<sub>2</sub>, supershard hardening from liq. phase (*Ukrainian*) 2-13740
- HfO<sub>2</sub>, thermal expansion, axial and linear 2-5251
- HfO<sub>2</sub>-Dy<sub>2</sub>O<sub>3</sub> system, high temp. solid solns., ordering 2-25797
- HfO<sub>2</sub>-Er<sub>2</sub>O<sub>3</sub> system, high temp. solid solns., ordering 2-25797
- HfO<sub>2</sub>-TiO<sub>2</sub> system, phase diagram and characterisation 2-5860
- HfO<sub>2</sub>-TiO<sub>2</sub> system, phase diagram at 1600-2800°C, phase comp. and struct. 2-5866
- HfO<sub>2</sub>-Yb<sub>2</sub>O<sub>3</sub> system, high temp. solid solns., ordering 2-25797
- Hf<sub>2</sub>Sb, cryst. struct., coordination, and bonding 2-1456
- HfSiO<sub>4</sub>, high-pres. phase transitions at Earth mantle conditions 2-52822
- HfTe<sub>3</sub>, electrical resistance, mag. susceptibility, possible phase transition 2-26375
- HfV<sub>2</sub>, electric field gradient and phase transition 2-26340
- TiC-ZrC-HfC system, pseudoternary phase diagram, 1700°C isothermal section 2-9339

**half-lives (radioactive)** *see radioactive decay periods***half wave rectification** *see rectification***halides**

- see also compounds of individual elements, e.g. "tungsten compounds" and "organic compounds"*
- see also alkali metal halides; halogens*
- heavy metal halides, diatomic mols. binding energy 2-24890
- inert gas halide excimer lasers, stimulated Raman emission generation in gases 2-11765
- ion, adsorption on Ag sols, surface enhanced Raman spectra 2-6068
- melting point relations 2-16758
- metal halide lamps with rare earth halide additives, radiation characts. (*Japanese*) 2-49320
- metal-halide chain, mixed valence cpd., Raman excitation profile, size effect 2-2262
- period II element fluorides, nonempirical PRDDO and ab initio calcs. 2-15716
- period III element fluorides, nonempirical PRDDO and ab initio calc. 2-15715
- potential energy function for repulsive interaction 2-16746
- Ag halide films, use in IR radiation detection 2-43088
- UF<sub>4</sub>, catalytic fluoridation by NiF<sub>2</sub> and CuF<sub>2</sub> 2-9573
- UO<sub>2</sub>F<sub>2</sub>, catalytic fluoridation by NiF<sub>2</sub> and CuF<sub>2</sub> 2-9573

**Hall constant** *see Hall effect***Hall effect**

- amorphous semicond., Hall effect due to hopping cond. in localised states 2-40935
- amorphous semiconductor, Hall mobility in presence of long range pot. fluctuations 2-1930
- amorphous semiconductor, hopping and AC cond., Hall mobility, master eqn. 2-40878
- amorphous semiconductors, tetrahedrally bonded, Hall effect sign anomaly, chem. bond orbital approach 2-13100
- BCS pairing theory, quasiclassical Green's function 2-26546

**Hall effect** continued

- disordered electronic systems, dynamical cond. and Hall cond., scaling theory 2-30855
- disordered electronic systems, scaling theory 2-8781
- electron gas, two-dimens., quantised Hall effect, determ. of fine struct. const., review 2-23608
- electron gas, two-dimensional, localisation and quantised Hall resistance 2-17003
- ferromagnets, Fokker-Planck eqn. coeffs. and transport effects 2-1881
- ferromagnets, Fokker-Planck eqn. coeffs. and transport effects 2-5374
- free and forced convection flow through channel, wall porosity and Hall effects interactions 2-8222
- free and forced convective hydromagnetic flow through channel, Hall current effect 2-8187
- Holstein 3-site hopping process, Hall mobility, r-percolation case 2-40936
- hopping conduction, Hall mobility 2-30909
- II-V compounds, phase diagrams, transport props., pressure investigations 2-27161
- inert-gas plasma with metal additives, nonlinear waves 2-20859
- inversion layers, inhomogeneous, elec. cond., Hall effect, 2D resistor network computer simulation 2-51322
- metal, inhomogeneous, negative magnetoresist. and Hall coeff. at low temp. (*Russian*) 2-51148
- metallic film, polycryst., Hall coeff. at low mag. field 2-45940
- microwave Hall meas. in intermediate conductivity regime using bimodal cavity 2-194
- mobility of carriers hopping in impurity band, r-percolation model 2-21551
- Ni-Pd, anomalous Hall effect anisotropy (*Russian*) 2-21563
- noble metal-transition metal dil. alloys, Hall effect 2-17048
- polar crystal, photogalvanic effect, mag. field influence, and carrier mass determ. 2-51234
- polyacetylene, I doped, galvanomag. effects and nonohmic behaviour interpret. 2-30867
- semiconductor, inhomogeneous sample, Hall EMF and Hall current meas., duality relations 2-46041
- semiconductor, nondegenerate, galvanomagnetic props., size effect 2-51215
- semiconductor plates in cross-magnetic field, Van der Pauw's relation's validity for electrical resistivity determ. (*Rumanian*) 2-40881
- semiconductors, covalently bonded, reconstructed dislocations, electronic struct. 2-26329
- semiconductors, Hall effect, electric field and current localisation, crossed electric and mag. fields 2-40945
- spatially and energetically disordered systems, hopping Hall mobility, temp. depend. percolation theory 2-40895
- spatially random systems, Hall effect in variable-range-hopping regime 2-1931
- thin films, monocryst., transverse Hall effect, theoretical anal. 2-13196
- two-dimensional system, Anderson localisation in Landau levels, Hall cond. and cyclotron resonance lineshape 2-51101
- unsteady MHD boundary layer flow, Hall effects, initial value problem soln. 2-8239
- velocity operator and strong-field Hall effect for non-parabolic bands 2-36063
- Ag-Cu, directionally solidified and deformed eutectic alloys with fibre structure, Hall effect and elec. cond. meas. 2-1893
- AgSbTe<sub>3</sub>, thermoelec. hole spectrum model of transport props. 2-26424
- n-Ag<sub>2</sub>Se, elec. props. 2-1926
- $\beta$ -Ag<sub>2</sub>Se, electronic and electrogalvanic props., homogeneity range (*French*) 2-40890
- $\alpha$ -Ag<sub>2</sub>Se, oriented thick films, Fermi level position, Hall effect 2-46040
- (Al,Ga)As-GaAs heterostruct., electron mobility, background doping effect 2-26483
- Al, low field Hall effect, size effects 2-36012
- Al-Sc(Ti)(V)(Co)(Ni), dil., low field Hall coeff., virtual bound state effect 2-13044
- Al-SiO<sub>2</sub>-Si structure, hole mobility and density of states at Si-SiO<sub>2</sub> interface 2-5469
- Al-Ti(Cr)(Mn)(Fe)(Ni)(Cu), low-field Hall effect, impurity effects 2-36011
- Al-Ti(V), giant low field magnetoresistance and Hall effect 2-36014
- Au-mica-p-Te:Cu film MIS struct., field effect studies 2-41017
- $\alpha$ -B, rhombohedral, elec. cond., thermoelec. power and Hall coeff. 2-40889
- B<sub>2</sub>C, metal-insulator transition, elec. cond., thermoelec. power and Hall effect meas. 2-40975
- Bi, Shubnikov-de Haas oscillations, phase inversion, magnetoresist. and Hall effect study 2-36065
- Bi-Sb films, semicond. behaviour, intercryst. barrier activation energy 2-2017
- Bi<sub>2</sub>Te<sub>3</sub>, band struct., magnetoresist. and Hall effect study 2-46042
- Bi<sub>2</sub>Te<sub>3</sub>-Sb<sub>2</sub>Te<sub>3</sub>, solid solutions, anisotropy coeffs. (*Russian*) 2-1927
- Bi<sub>2</sub>Te<sub>3</sub>Se<sub>0.12</sub> solid soln., halide doping effect on elec. and thermoelec. props. 2-13110
- Cd-As system, solid solution form., solubility boundaries, homogeneity range, physico-chemical investigations 2-26067
- Cd<sub>3</sub>As<sub>2</sub>, cryst. and amorphous thin films, Shubnikov de Haas oscils. in Hall volt. and magnetoresistance 2-26420
- Cd<sub>3</sub>As<sub>2</sub>, resistivity, Hall effect, effects of low temp. phase transition 2-26398
- Cd<sub>3</sub>As<sub>2</sub>:Ge(Cu)(Ag), transport props. study 2-40943
- Cd<sub>3</sub>Hg<sub>1-x</sub>Te, elec. props. study 2-40942
- Cd<sub>3</sub>Hg<sub>1-x</sub>Te, resist. and Hall coeff., 4.2 to 30K 2-30897
- Cd<sub>3</sub>Hg<sub>1-x</sub>Te, semimetallic, magnetophonon reson. of hot carriers at 4.2K 2-40940
- Cd<sub>3</sub>P<sub>2</sub>, resist., Hall coeff., thermoelec. power, band gap, pressure effects 2-26401
- Cd<sub>3</sub>Pb<sub>1-x</sub>S (x=0.0625, 0.15625) superstructural thin film, props. 2-13205
- CdS-S coevaporated thin film prep. and cryst. props. 2-41531
- CdSe, polycrystalline layers, effect of annealing on elec. props. 2-30984
- CdTe undoped p-type annealed in vacuum, electrical and crystalline props. 2-5750
- CdTe:Cl crystals, carrier scatt., Hall effect study 2-26383
- Cd<sub>3-x</sub>Zn<sub>x</sub>As<sub>2</sub>, conduction and valence band struct., Hall effect, resistivity and magnetoresistance meas. 2-26421
- Co<sub>2</sub>Ga<sub>100-x</sub>, electronic band struct. and localised states, rel. to elec. props. 2-40813
- Co<sub>2</sub>Si<sub>1-x</sub> sputtered film, transport props. and magneto-optic Kerr effect 2-21556



## Hall effect continued

- Cu, low field Hall effect, size effects 2-36012  
 Cu-Al (1-16 at.%), elec. and optical props., influence of short range order (German) 2-31806  
 Cu-Au-Ge (Ni-Ge), Hall coeff. for isotropic electron scatt. 2-36019  
 Cu<sub>2</sub>Cr<sub>2</sub>Se<sub>4</sub>-Br<sub>x</sub>, elec. props., anion substitution effect, cond. max. near Curie temp. 2-36044  
 CuInTe<sub>2</sub> single crystals, as-grown elec. props. 2-46011  
 Cu<sub>2</sub>MnAl, Heusler alloy, Hall effect and magnetoresistance 2-36010  
 Cu<sub>2</sub>MoS<sub>4</sub>, single cryst., supercond., Hall coeff. and resist. meas. 2-17099  
 EuB<sub>6</sub>, anomalous anisotropies, behaviour under high mag. field 2-26338  
 EuB<sub>6</sub>, single cryst., elec. props. variation with temp. and press. 2-40888  
 EuB<sub>6</sub>-C<sub>60</sub>, electron localization and transport props., ESR study 2-41199  
 Fe-Co-Mn (46-51, 3-10 at.%), mag. moment, Hall const., outer electron band filling 2-51080  
 Fe-Co-Ni (38-48, 3-11 at.%), mag. moment, Hall const., outer electron band filling 2-51080  
 Fe<sub>1-x</sub>Bx amorphous film, Hall effect meas. 2-51149  
 FeCr<sub>2</sub>In<sub>2</sub>S<sub>4</sub>, electrical props. 100 to 650K (Russian) 2-13098  
 FeFe<sub>0.95</sub>In<sub>0.05</sub>Se<sub>4</sub>, elec. props. 100 to 600K (Russian) 2-1967  
 Fe<sub>3</sub>O<sub>4</sub>, resistance, Hall effect, magnetoresistance study 2-13101  
 Ga-Te, liq. alloys, density and elec. cond. 2-45309  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, conduction band structure from Hall mobility measurements at high pressures 2-46030  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layers, Hall to drift mobility ratio 2-8821  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layers, electron mobility 2-13076  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layer, intervalley scatt., Hall mobility study 2-17062  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, MO-CVD growth, quantum well transport strucs. 2-9282  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, photocond. storage obs. at low temp. 2-46071  
 Ga<sub>1-x</sub>Al<sub>x</sub>Sb<sub>2</sub>Te, high field magnetotransport props. under hydrostatic press., direct-indirect band transition 2-8828  
 GaAs dendritic wett. grown by liq. encapsulation, characterisation 2-2427  
 GaAs doping superlattices, photoexcited carrier conc. and mobility, Hall effect meas. 2-51226  
 p-GaAs epitaxial films, Hall effect of hot electrons 2-36162  
 GaAs epitaxial layers, by low pressure MOVPE, using triethylgallium as Ga source 2-5817  
 n-GaAs, epitaxially grown, p-type buffer layer, evaluation using Hall meas. 2-17095  
 GaAs, ion implanted, defects produced by laser annealing 2-1523  
 n-GaAs, Monte Carlo modelling of hot electron behaviour 2-40926  
 GaAs multilayer struct., carrier conc. and mobility, rapid determ. method 2-8815  
 GaAs substrates, Cr, Si, Mn, and Fe distrib. after annealing with and without SiO<sub>2</sub> encapsulant 2-30478  
 GaAs, VPE layers, implanted and annealed, elec. and optical props. 2-46164  
 GaAs: Cd<sup>2+</sup>, ion-doped films, elec. props. 2-21701  
 GaAs:Ge(Se), neutron transmutation doping, elec. and physical props. 2-12619  
 GaAs-Al<sub>0.1</sub>Ga<sub>0.9</sub>As heterostruct., Hall effect, fine struct. const. determ. 2-28831  
 GaAs-GaAlAs heterojunction, localisation and interaction effects in electron gas 2-21664  
 (GaAs)<sub>x</sub>(ZnSe)<sub>1-x</sub> solid solns., electrophys. props. 2-40927  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, electron Hall mobility calc. with two longitudinal optic phonon model 2-17094  
 GaS, Hall effect and TSC study 2-26414  
 GaSb, electron transport and conduction band struct. 2-46012  
 GaSb:Te and GaSb:Te,Zn, charge transport characts., 80 to 700K 2-30895  
 Gd-Co, amorphous film, low temp. resistivity and Hall effect 2-35986  
 Gd-Co film, amorphous, galvanomag. props., Hall effect curves (Bulgarian) 2-21689  
 Gd-Fe film, amorphous, galvanomag. props., Hall effect curves (Bulgarian) 2-21689  
 Gd<sub>66</sub>, elec. props., hopping cond., thermoelec. power 2-40887  
 Gd<sub>1-x</sub>Co<sub>x</sub>, amorphous sputtered films, extraordinary Hall effect, electrical resist. 2-36009  
 n-Ge, (001) plane, weak field magnetoresist. skewness, galvanomagnetic coeffs. 2-13099  
 Ge epitaxial layers on Si, CVD and vacuum deposited, phys. and elec. props. 2-51024  
 p-Ge, hot carrier population inversion, Hall effect study 2-46037  
 n-Ge, impurity band cond. study 2-40919  
 Ge:Li, Hall effect, cyclotron resonance study of converted regions 2-40941  
 Ge-Se, glass, doped, elec. transport props. 2-45971  
 Ge-Si alloys, n-type, heavily-doped, short term heat treatment effects on thermoelectric props. 2-36071  
 Ge-Te, glass, doped, elec. transport props. 2-45971  
 GeTe, thermoelec. hole spectrum model of transport props. 2-26424  
 GeTe-Bi<sub>2</sub>Te<sub>3</sub>-Cu<sub>2</sub>Te quasiternary system, electrophys. props. of GeTe-based solid solns., double doping effect 2-13089  
 Hg<sub>0.6</sub>Cd<sub>0.4</sub>Te, defect struct., Hall effect study 2-46033  
 Hg<sub>0.8</sub>Cd<sub>0.2</sub>Te:In, defect struct., Hall effect study 2-46032  
 Hg<sub>0.9</sub>Cd<sub>0.1</sub>Te, electron freezeout and hopping cond., magnetoresist. and Hall effect meas. 2-5423  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, electron irradi. and annealed, carrier lifetime and recomb. props. 2-17090  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te epitaxial layers, slider LPE growth using Hg press. controlled growth solns. 2-31645  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, two electron cond., Hall coeff., electron mobility and conc. 2-51216  
 Hg<sub>1-x</sub>Mg<sub>x</sub>Te, Shubnikov de Haas oscills., Hall effect, magnetoresistance meas. 2-51218  
 Hg<sub>1-x</sub>Mn<sub>x</sub>Te, acceptor-state cond. in mag. fields 2-8824  
 Hg<sub>1-x</sub>Mn<sub>x</sub>Te, galvanomag. effects, influence of exchange interaction 2-30911  
 Hg<sub>1-x</sub>Mn<sub>x</sub>Te, zero gap, conduction-valance band overlap in mag. field Hall coeff. and cond. meas. 2-45827  
 HoCo film, amorphous, annealing effect on elec. resist. temp. depend., mag. compensation pt. and Hall parameters 2-9008  
 In-granular glass composite, structural magnetoresist. and Hall coeff. 2-5388  
 In-granular glass composite, structural magnetoresist. and Hall coeff. 2-8787  
 In-Te, liq. alloys, density and elec. cond. 2-45309

## Hall effect continued

- InAs:N<sub>2</sub><sup>+</sup> ion-implanted amorphous and crystalline film prep., electrical conductivity and Hall mobility 2-8533  
 n-InAs<sub>0.65</sub>P<sub>0.35</sub>, transverse magnetoresist., Boltzmann equation calc. 2-21607  
 In<sub>0.53</sub>Ga<sub>0.47</sub>As, Hall factor, temp. and elec. conc. depend. meas. 2-51212  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> lattice matched to InP, comp. depend. of mobility, peak vel. and threshold field 2-5479  
 In<sub>2</sub>O<sub>3</sub>(-SnO<sub>2</sub>) film, transparent conducting, transport and optical props. 2-8899  
 InP epitaxial film, metalorganic CVD, elec. props. 2-21698  
 InP, polycrystalline, low temp. growth, elec. props. meas. 2-22155  
 InP:Co, single cryst. growth and elec. props. 2-9264  
 InP:O, horizontal Bridgman growth, O doping effect, Hall effect meas. 2-16667  
 InP:Se, VPE layers, effect of doping on mobility, Hall effect and magnetoresistance meas. 2-46044  
 InP:Se, ion implanted, pulsed laser annealing 2-30489  
 n-InSb, 1/f noise, mag. field effect 2-26458  
 InSb, deep acceptors, M<sub>1</sub> defect accumulation kinetics after electron irradi. 2-40831  
 p-InSb film, hydrogenated, elec. transport props. 2-8895  
 n-InSb, high elec. field Hall effect meas. 2-51214  
 n-InSb, influence of geometric factors on radioelectric effect 2-17107  
 InSb:N<sub>2</sub><sup>+</sup> ion-implanted amorphous and crystalline film prep., electrical conductivity and Hall mobility 2-8533  
 In<sub>2</sub>Se<sub>3</sub> layered cryst., transport props. 2-36069  
 In<sub>2</sub>-Sn<sub>2</sub>O<sub>3-y</sub> films, sputter deposited, elec. and optical props., heat treatment effects 2-26523  
 K, Righi-Leduc coeff. and Hall coeff., temp. depend. 2-26363  
 K, Righi-Leduc coefficients, temp. depend., microscopic pseudopotential model 2-17050  
 La-Ga, amorphous, elec. transport props. 2-26355  
 La<sub>1-x</sub>Gd<sub>x</sub>Sn<sub>3</sub>, Hall effect, spin-orbit interaction 2-36016  
 La<sub>1-x</sub>Nd<sub>x</sub>Sn<sub>3</sub>, Hall effect, spin-orbit interaction 2-36016  
 Li, electrical transport props. 2-40869  
 LiNbO<sub>3</sub>:Fe, Hall photocurrents 2-21630  
 Li<sub>2</sub>TiS<sub>2</sub>, elec. resist. and Hall coeff. at low temp. 2-35984  
 Li<sub>2</sub>Se<sub>2</sub>, elec. resist. and Hall coeff. at low temp., supercond. props. 2-35984  
 β-MnO<sub>2</sub>, pyrolusite, carrier mobility and conc. meas. 2-46029  
 MnTe, thermoelec. hole spectrum model of transport props. 2-26424  
 Mo-Si films, elec. transport and microstruct. 2-51346  
 Na, Righi-Leduc coeff. and Hall coeff., temp. depend. 2-26363  
 Na, Righi-Leduc coefficients, temp. depend., microscopic pseudopotential model 2-17050  
 Nb:N<sub>2</sub><sup>+</sup> ion irradi. film, elec. cond., Hall effect (Russian) 2-2015  
 NbS<sub>2</sub> (2H), elec. transport props. 2-45944  
 NbS<sub>2</sub>(Se<sub>2</sub>) (2H), magnetic breakdown, magnetoresist. and Hall effect meas. 2-21567  
 NbSe<sub>3</sub>, Fermi surfaces, rel. to CDW transitions and Hall const. behaviour 2-45805  
 NbSe<sub>2</sub>(2H), elec. transport props. 2-45944  
 NbSe<sub>2</sub>(2H), galvanomagnetic effects in CDW state 2-45945  
 Nb<sub>1-x</sub>Ta<sub>x</sub>C<sub>y</sub>, supercond., mag., and normal state elec. props., conc. depend. 2-51368  
 Ni<sub>1-x</sub>Cu<sub>x</sub>S<sub>2</sub>, elec. cond., Hall effect, thermoelectric power 2-26388  
 Ni<sub>3</sub>(Fe,Ti), Hall constant, electron configurations 2-40874  
 NiFe-Cr(Mn) double layer mag. films, planar Hall effect 2-21565  
 Ni<sub>3</sub>(Fe<sub>1-x</sub>Nb<sub>x</sub>), rel. to Nb. conc. and temp. (Russian) 2-13041  
 Ni<sub>3</sub>(Mn,Ti), Hall constant, electron configurations 2-40874  
 Ni<sub>2</sub>MnSn Heusler alloy, elec. resist., galvanomag. effects, and magnetisation meas., scatt. processes 2-5389  
 Ni<sub>2</sub>MnSn Heusler alloy, Hall effect and magnetoresistance 2-36010  
 Pb chalcogenides, strongly compensated, Hall effect and absorpt. spectra 2-5422  
 p-Pb<sub>1-x</sub>Cd<sub>x</sub>Te epitaxial film, elec. transport props. 2-8894  
 (PbSe)<sub>1-x</sub>(SnTe)<sub>x</sub> in solid soln., elec. props. 2-8796  
 n-Pb<sub>1-x</sub>Sn<sub>x</sub>Se, intrinsic defect energy levels, galvanomag. coeffs. meas. 2-30830  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te, epitaxial layer, elec. cond. and Hall effect (Russian) 2-46179  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te: Cd crystals and LPE layers, doping and elec. props. 2-45223  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Ga, elec. prop. press. depend. 2-17067  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:In, impurity fluctuation pot. model, photoelec. and galvanomag. effects 2-13009  
 PbTe (111) epitaxial thin films, elec. transport props., thermal-cycling induced changes 2-13201  
 p-PbTe epitaxial film, elec. props., H<sub>2</sub> effect 2-8900  
 PbTe films, magnetoresistance, Hall mobility 2-51360  
 p-PbTe:Ag epitaxial layers, elec. cond. and Hall coeff. 2-41039  
 PbTe:Cl, self-compensation of donor effect by vacancy-impurity complexes, Hall carrier density meas. 2-36067  
 PbTe:Ti, hole scattering and mobility, impurity effects 2-13107  
 PbSb<sub>2</sub>Te, impurity conduction 2-1915  
 Re, galvanomagnetic props., 4.2 to 273K, anisotropic intersheet electron scatt. and Fermi surface anisotropy effect (Russian) 2-1892  
 Re, magnetothermopower and related effects under mag. breakdown conditions (Russian) 2-40875  
 SMS, semiconducting phase, elec. props. 2-8799  
 Si (100) MOS inversion layers, transverse and Hall conds., temp. depend. under strong mag. fields 2-21686  
 Si CVD films, polycryst., elec. props., depend. on grain size and impurity doping conc. 2-30981  
 Si, carrier density, deformation potential constants, Hall effect anal. 2-21609  
 n-Si, conventional and neutron doped, piezoresist. and Hall coeff. meas. 2-30896  
 n-Si crystals, electron scatt. by clusters, Hall effect and magnetoresist. study 2-26415  
 p-Si, electron irradi., Hall mobility, pot. relief analysis 2-5420  
 Si, extrinsic, elec. parameter calc. using FORTRAN program, Hall effect, dopant states and carrier mobility 2-1903  
 Si, hole mobility and Hall coeff. factor, temp. depend. 2-46034  
 Si, inversion layer, 2-D electron localisation, electron-electron interaction, review 2-40987  
 Si inversion layer in strong mag. field, temp. depend. Hall cond., mobility edge model 2-40933  
 Si inversion layers, logarithmic corrections to two-dimensional transport 2-41018  
 Si, ion implanted, annealing in plasma of pulsed gas discharge 2-40918



**Hall effect continued**

- Si, ion implanted, pulsed electron beam apparatus and annealing 2-12625  
 Si, MBE, background and dopant impurities in film and film-substrate transition region, elec. transport 2-5145  
 Si, MOS inversion layers, Anderson localisation, Hall mobility study 2-51316  
 Si MOSFET, quantised Hall resist. meas. at liq.  $^3\text{He}$  temps. 2-46136  
 n-Si, multivalley semicond., transverse field stratification, elec. field distrib. and current meas. (*Russian*) 2-26416  
 Si, neutron irradiated, carrier scatt. by defect clusters 2-21587  
 Si, self-annealing implantation, elec. and struct. characterisation 2-50681  
 Si wafer, Czochralski grown, photolum. characteris. of thermally-induced defects 2-17535  
 Si:As, ion implanted, polycrystn. film, laser irradi., elec. props. grain size, annealing effect 2-17173  
 Si:Cr, energy levels and degeneracy ratios determ. from Hall coeffs. 2-30825  
 Si:Cr, energy levels and solubility, EPR and Hall effect study 2-40817  
 Si:Ga, high dose implanted, thermal annealing and elec. activation 2-5147  
 n-Si:Gd,  $\gamma$ - and electron-irradi., defect formation; elec. and optical study 2-21175  
 Si:H, amorphous, Hall mobility in presence of long range pot. fluctuations 2-1930  
 Si:H,P amorphous, transport props. 2-45984  
 Si:In(Ga), shallow acceptor population and free hole conc. with IR-photoexcitation 2-51213  
 Si:In(Ga), trap population and free hole conc. with IR photoexcitation 2-51211  
 Si:P, doping using  $\text{P}_2\text{O}_5$ -SiO<sub>2</sub> glass as dopant source, validity of etch rate determ. 2-12615  
 n-Si:P, electrophysical props. thermal annealing and cooling condition effects 2-51175  
 Si:P films, elec. cond., Hall effect 2-46166  
 Si-Al<sub>2</sub>O<sub>3</sub>, charge carrier props. in p-type layers of SOS 2-8812  
 Si-Al<sub>2</sub>O<sub>3</sub>, SOS films, transport props. investig. by gate controlled galvanomagnetic effects 2-51336  
 Si-Ge alloys, Si rich, for IR detectors, elec. and optical meas. 2-21628  
 Si-SiO<sub>2</sub> interface, neutral scatt. centres in MOSFET devices prep. by oxidation of trichloroethylene 2-51339  
 Si- $\text{Ge}$ , solid soln., hole Hall mobility 2-45988  
 SmB<sub>6</sub> single cryst., elec. props. variation with temp. and press. 2-40888  
 SmB<sub>6</sub>, elec. props., hopping cond., thermoelec. power 2-40887  
 SmS, collapsed, press. induced transition from intermediate valence to metallic behaviour 2-26453  
 SmS thin films, electrical, optical and X-ray study 2-8898  
 $\alpha$ -Sn heteroepitaxial films, metastable, growth by metal beam epitaxy 2-8724  
 $\beta$ -Sn, low-temp. Hall effect anomalies 2-5392  
 Sn-Ag(Au), amorphous films, transport props. and phase stab., electron conc. effect 2-35987  
 SnO<sub>2</sub>-(In<sub>2</sub>O<sub>3</sub>) film, transparent conducting, transport and optical props. 2-8899  
 SnOx, amorphous spray coating, elec. and optical props. 2-40908  
 p-SnTe epitaxial thin film, elec. transport, nonstoichiometry effect 2-8901  
 Ta:N<sub>2</sub><sup>+</sup>, ion irradi. film, elec. cond., Hall effect (*Russian*) 2-2015  
 TaS<sub>2</sub>(Se<sub>2</sub>) (2H), magnetic breakdown, magnetoresist. and Hall effect meas. 2-21567  
 TaS<sub>2</sub>(2H), elec. transport props. 2-45944  
 TaSe<sub>2</sub>(2H), galvanomagnetic effects in CDW state 2-45945  
 Ti:N<sub>2</sub><sup>+</sup>, ion irradi. film, elec. cond., Hall effect (*Russian*) 2-2015  
 Ti<sub>1+x</sub>S<sub>2</sub>, transport and optical props. 2-1932  
 Ti<sub>1+x</sub>S<sub>2</sub>, transport props. and Raman scatt., stoichiometry depend. 2-13043  
 Ti-Te, liq. alloys, density and elec. cond. 2-45309  
 TiBSiSe<sub>2</sub>-PbSe, phase diagram, electrophysical props. 2-9334  
 TiSBTe<sub>2</sub>-2PbTe cross section, phase diagram and elec. props. 2-12721  
 Ti<sub>1-x</sub>Te<sub>2</sub>-S(Se), electrophys. props. over solid and liq. range, added S and Se effect 2-40883  
 YB<sub>6</sub> single cryst., elec. props. variation with temp. and press. 2-40888  
 YB<sub>6</sub>, elec. props., hopping cond., thermoelec. power 2-40887  
 Zn, galvanomagnetic effects, rel. to Fermi surface topology 2-13042  
 Zn-C-C chemical gas-phase deposited, Hall effect 2-5419  
 Zn<sub>3</sub>P<sub>2</sub>, single-crystal growth using closed-tube horizontal vapour transport system, bulk elec. props. 2-36770  
 ZnS:Cr<sup>+</sup>, local centre charging, Hall effect 2-17024  
 p-ZnSb, carrier kinetics in mixed scatt. region, cond., thermoelec. power, and Hall effect tensors 2-21602  
 ZnSe crystals, as-grown from melt, growth and elec. props. 2-40891  
 ZnSe:Cr<sup>+</sup>, local centre charging, Hall effect 2-17024  
 ZnSe:In, epitaxial thin films, doped and undoped, electron mobility and carrier conc., temp. depend. 2-51357  
 ZnSnAs<sub>2</sub>, p-type, theoretical evidence for impurity cond., explanation of Hall coeff. temp. depend. 2-1929

**Hall effect devices**

- Kopel permeameter, improvements using Hall devices (*Chinese*) 2-33577  
 magnetometer for stationary mag. field meas. 2-48731

**Hall effect transducers**

- GaAs Hall devices, highly linear, fabricated by ion implantation 2-33581

**Hall generators** *see* Hall effect devices**halogens**

- see also astatine; bromine; chlorine; fluorine; halides; iodine*  
 chemisorption of halogen on Cu and Ag clusters, He I photoemission spectra obs. 2-35886  
 crystals, lattice dynamics 2-21254  
 ions, hydration and struct. changes in H<sub>2</sub>O(D<sub>2</sub>O), isotope effects, thermodynamics 2-16545  
 metalohalides flame emission, use for halogen anal. 2-22516  
 TTF, halogen doped, quasi-one dimensional charge transfer system, Raman scatt. anal. 2-2263

**Hamidashi effect** *see* ferroelectricity**hand tools**

- automatic-light screwdriver using fibre optics (*French*) 2-29881

**handling, materials** *see* materials handling**Hanle effect**

- conical bottom hollow-cathode discharge, Hanle signal and spectrosc. effects 2-4247

**Hanle effect continued**

- far IR lasers, optically pumped, theory for nonlinear Hanle effect 2-39637  
 magnetic field diagnostics in astrophysics 2-32839  
 Cs crossed beams, Hanle signal shape 2-20013  
 Cs, scalar polarisability determ. in 6S-7S transition 2-24879  
 I<sub>2</sub> cells verification for stabilised lasers 2-16009  
 N, F<sub>2</sub>6 (nu=0) B<sup>3</sup> $\Pi_g$  state hyperfine struct. 2-43865

**hard soldering** *see* brazing**hard-sphere fluids** *see* classical theories of fluid structure; liquid theory; quantum theories of fluid structure; statistical mechanics**hardening**

- see also dispersion hardening; quench hardening; radiation hardening; solid solution hardening; surface hardening; work hardening*  
 alloys,  $\beta$ -phase, interactions of martensitic transform. strains with soft elastic modes 2-21296  
 anisotropic materials, hardening model 2-31743  
 cyclic and other loading, stress-strain relations 2-50133  
 dichromated gelatin film, hologram formation mechanism 2-11665  
 epoxyamine networks, dense, cross-linked, liquid-glass struct. transition rel. to mech. props. (*Russian*) 2-30605  
 film structure prep. by ion beam techniques 2-51809  
 glass plate elements, hardening stresses optimisation 2-5917  
 kinematic hardening rule, generalised, with memory of maximal prestress 2-39831  
 laser processing of materials 2-47047  
 metal turbine blades, cooled, state of strain control, thermoplastic hardening 2-41644  
 metals, subgrain strengthening 2-41619  
 metals and alloys, stress-strain paths and constitutive relations in plastic range, review 2-39833  
 Orowan dislocation loops, cross-slip and climb (*Russian*) 2-21145  
 recrystallisation, dynamic, during creep and hot working 2-41624  
 slurry investment casting, alternate hardening scheme (*Chinese*) 2-9343  
 steel, alloy, tempering, transforms. during 2-41636  
 steel, C, induction hardening, props. prediction by computer modelling 2-22251  
 steel, Cr-Mo-(V), heat-resist., long-term strength under creep conditions 2-41683  
 steel, Cr-Mo-Ni-Mn, effect of partial replacement of Ni by Mn 2-5914  
 steel, fracture at different stages of H embrittlement 2-41726  
 steel, high C, struct., alloying principles 2-2586  
 steel, low C, low cycle fatigue, grain size effects 2-47152  
 steel, low-alloy, induction hardening 2-27198  
 steel, martensitic, softening resistance during tempering 2-2542  
 steel, Mn-Cr-Ni-Mo-V, contact resist. in working media, C content influence 2-41759  
 steel, pearlitic, softening resistance during tempering 2-2542  
 steel, temper hardened, props. optimisation 2-51956  
 steel, tool, hardened and tempered, martensite decomp. and nonuniformity 2-51950  
 transformation toughening, contrib. to fracture toughness 2-51923  
 transformation toughening, size effects assoc. with thermodynamics of constrained transform. 2-51922  
 Al-Zn-Mg-Cu, 7000 series, low cycle fatigue behaviour, effect of alloy chem. and heat treatment 2-17735  
 cc Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> composites, transform. toughening, fabrication and fracture toughness 2-51925  
 Co<sub>1-x</sub>Fe<sub>x</sub>, deform., dependence on stoichiometry 2-51974  
 Cu bicrystals, deformed, grain boundary effects 2-51973  
 Cu-Au, short-range order hardening 2-36868  
 Cu-Ge (8.7 at.%), shock pulses, strengthening effect of deform. twins and dislocations 2-17688  
 Cu-Ni-Co (50, 21, 29 wt.%), mech. and mag. hardening 2-17686  
 Cu<sub>2</sub>NiZn, order-strengthening mechanism, electron microscopy study 2-51891  
 Fe-Mn-Co alloys, hardening of martensite (*Russian*) 2-36872  
 Fe-Ni-Cu-Si-Mn-Cr-C, cast austenitic, struct. and mech. props., heat treatment effect 2-51953  
 LiF, dislocation struct., influence of deform., hardening curves 2-45198  
 Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, ion exchange strengthening, thermal shock resist. 2-13819  
 Nb, cyclic deformation of single crystals 2-5174  
 Nb, cyclic deformation of single crystals 2-5175  
 NiAl, creep props., high temp., effect of graphite impurity 2-13775  
 Ni<sub>3</sub>Al, strength, positive temp. depend., effect of nonstoichiometry 2-9356  
 Ni<sub>3</sub>Ga, strength, positive temp. depend., effect of nonstoichiometry 2-9356  
 Ti alloys, phase transform. in alloys heat hardened by high speed heating (*Russian*) 2-36851  
 Ti-Al-Zr-Sn-Nb, IM1 829, fatigue behaviour 2-31770  
 ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub> composites, transform. toughening, expt. obs. 2-51924  
 ZrO<sub>2</sub>-(Al<sub>2</sub>O<sub>3</sub>)-Y<sub>2</sub>O<sub>3</sub>-CeO<sub>2</sub> composites, transform. toughening and fracture toughness, effect of alloying additions and temp. 2-51926

**hardness***see also abrasion; hardness testing*

- alkali halides, anisotropic point defect interactions in radiation induced hardening 2-5152  
 alkali silicate glass, surface tension rel. to microhardness 2-30742  
 boilers of group IV, V and VI materials hardness, interaction and thermodynamic parameters (*German*) 2-21228  
 bone hardness model, interconnected collagen molecules and mineral crystallites 2-27821  
 brittle materials, fatigue analysis using indentation flaws 2-8562  
 brittle solids, crit. stress intensity factors, evaluation by indentation method with low crack-to-indentation ratios 2-50754  
 calcium stearate, soap, plastic and viscoelastic props., meas. by hot hardness 2-47124  
 carbides of group IV, V and VI materials hardness, interaction and thermodynamic parameters (*German*) 2-21228  
 carbon steel, strengthening at crack tip by current pulse (*Russian*) 2-2575  
 carbonitrided, struct. and props. 2-22383  
 compounds isoelectronic with diamond, creation of hard and superhard materials 2-21088  
 crystals, hardness-bond ionicity relationship 2-35583  
 diamond-Co system, sintering behaviour at high temp. and press. 2-51864



## hardness continued

- dislocation mobility correlation with microhardness in semimetals, ionic and covalent crystals 2-16652  
dislocation motion through random network of local defects, cryst., hardening 2-5118  
fatigue crack tip, metallographic method for determ. of plastic strains 2-22395  
graphite film, ion bombardment to form solid high-resistivity form of C 2-16692  
hardness indentations, elastic recovery 2-5945  
high strength alloys, microcryst., prep. by devitrification of metallic glasses 2-9311  
Inconel 625, superalloy, thermal stability 2-47060  
Inconel 706, influence of Ti, Nb, Al additions on struct. and mech. props. (French) 2-27229  
metallic elements, abrasive wear resistance, low stresses, depend. on hardness 2-47188  
metals, erosion model, by spherical particles impinging at normal incidence 2-25984  
micro-hardness testing, bibliography 2-38384  
nitrides of group IV, V and VI materials hardness, interaction and thermodynamic parameters (German) 2-21228  
optical glasses entering into GOST 3514-76, relative abrasion hardness 2-49851  
plastics, fillers props. influence 2-5057  
poly-para-phenylene, powders and pellets, morphology investig. 2-16607  
polyethylene crystals, irradiation, hardening model, interaction between cross-links and dislocations 2-47048  
polymer/concrete composites, review of physical props. 2-13783  
rare earth Ga(In,Tl)-chalcogen system, reactions and phase diagrams 2-9335  
Rochelle salt single crystal, ferroelectric phase transition, microhardness study 2-9111  
sliding wear testing for various surface hardness, test rigs (German) 2-52146  
steel, alloy, Cr, Mo or V, boride layers, wear behaviour 2-22336  
steel, alloy, laser surface heat treatment, microstruct. study 2-47242  
steel, austenitic, tool, 165CrMoWV46, secondary hardening and ductility study (German) 2-22289  
steel, austenitic stainless, interaction with Li, effect on struct. and mech. props. 2-41798  
steel, austenitic stainless, residual strength and microstruct., effect of shock deform. 2-47139  
steel, boronizing in liq. bed, B distrib. and layer composition, Si content influence 2-41789  
steel, C, surface modification by electron beam glazing 2-47265  
steel, CO<sub>2</sub> plasma beam surface hardening 2-5003  
steel, Cr (12 wt.%), carbide dispersion carburizing (Japanese) 2-27183  
steel, Cr-Mn, low C, martensitic, high strength, props. and heat treatment 2-27246  
steel, Cr-Mo-(Ni), effect of alloying on struct. and props. of nitrided case 2-22382  
steel, galvanic coatings of Fe and Fe-Ni, influence on strength under static and cyclic loading (Russian) 2-9392  
steel, heat-affected zone, synthetic weld, transform. behaviour, effect of Cr 2-13716  
steel, high speed, wear resist., effect of electrospark hardening 2-47187  
steel, high strength low alloy, creep resist., microstruct. effects 2-27238  
steel, high-speed, prod. by atomisation and hot extrusion, heat treatment and props. 2-22252  
steel, high-speed, struct. and mech. props. with isothermal deform. 2-2568  
steel, high-speed, struct. and props. after cold treatment 2-27196  
steel, high-temperature thermomechanical treatment, sprayer cooling effect on struct. and props. 2-51955  
steel, HSLA, fail-safe mag. permeability inspections 2-2637  
steel, Kh18N9T, effect of electron irradiation (Russian) 2-31700  
steel, low alloy cylindrical specimens, rolling contact fatigue, effect of Tufftriding 2-27286  
steel, low C, brittle-ductile state diagram in impact bending 2-52044  
steel, martensitic, strengthening mechanism in tempering, after surface plastic deform. 2-41637  
steel, Ni maraging, low temp. ageing and repeated strain ageing 2-41620  
steel, stainless, Cr-Ni 18/10 type, partial substitution of Cr and effects on struct. (French) 2-36875  
steel, stainless, cyclic heat treatment and ultrasonic emission, effect on struct. and mech. props. 2-27200  
steel, stainless, ferritic, oxide dispersion strengthened, prep. and mech. props. 2-41548  
steel, stainless, ferritic and martensitic, calorimetric anal. of ageing reaction (Japanese) 2-27194  
steel, stainless, structural stability, rel. to physicochem. props. 2-17719  
steel, strain-temp. correl., obtained an application of axisymm. compressive stresses 2-47138  
steel, Ti, low C, nitridable, cold forming processes 2-36871  
steel, tool, cold working, ductility after heat treatment in salt soln. (German) 2-22288  
steel, V-Cr, 2-2-51911  
steel, V-Ni medium C, carbide phase soln. and precipitation, Ni addition effect 2-51911  
steel, W, rapidly solidified, as-quenched microstruct. and tempering behaviour 2-9345  
steel OLC 45, nitriding effect of N<sub>2</sub>-H<sub>2</sub> plasmatron, hardness 2-1353  
steels, tool and carbon, surface coating, thermal treatment in presence of ZrB<sub>2</sub> and KBF<sub>4</sub> 2-41788  
steels and Armco Fe, friction, expt. and theory 2-9430  
superalloy, thermal stability 2-47060  
ternary semiconductors, chalcopyrites, electronic props. 2-35431  
Zircaloy 4, creep and stress relaxation, data representation in terms of Hart's phenomenological theory or hyperbolic sine eqn. 2-31746  
Ag, recryst. temp., effect of trace elements (Japanese) 2-9360  
AgCl, UV illuminated,  $\gamma$ -irrad. Cd<sup>2+</sup> doped, load relax. studies 2-41647  
Al alloys, quenching in polyethylene oxide solution, effect on struct. and props. 2-27197  
Al, anodic coated, hardness, wear and abrasion meas. 2-47186  
Al, obtained an application of axisymm. compressive stresses 2-47138  
Al, plasma sputtered, struct. and props. (Russian) 2-2576  
Al-Al<sub>2</sub>O<sub>3</sub> powder composites, wear-resistant, produced by cold extrusion 2-36813  
Al-Cu (4 wt.%), yield stress of alloys containing plate-like precipitates, expt. and theoretical determ. 2-22271

## hardness continued

- Al-graphite particle composites, dry wear 2-2595  
Al-Mg<sub>2</sub>Si, precipitation, influence of initial struct. 2-31702  
Al-Mg-Sc, Sc effect on strength and thermal stability 2-27281  
Al-Mn, grain boundary and precipitation effects, internal friction and dynamic elastic modulus meas. 2-47038  
Al-Si eutectic alloy, cast and heat treated, microstruct. and mech. props. (German) 2-47068  
Al-Sn, struct. and mech. props., heat treatment effects, X-ray diffr. obs. 2-35443  
Al-Zn (40 wt.%), aged, cellular dissoln., mechanism and kinetics 2-36858  
Al-Zn-Mg-Cu, alloy 7075-T651, effects of warm working 2-47064  
AlN ceramic with added Y<sub>2</sub>O<sub>3</sub> or Ni, structural characteristics 2-46989  
 $\alpha$ -Al<sub>2</sub>O<sub>3</sub>, surface microhardness, interaction of aqueous copolymer dispersion with surface (Russian) 2-2599  
Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, mullite, fused, texture anisotropy and mech. props. 2-41622  
As-Se-Te glass, thermal cond. and hardness 2-45641  
B CVD on Be surface 2-13655  
B<sub>2</sub>O(H)(N) zone melting prep., mech. props., impurity effects 2-41723  
BN, superhard polycrystals, struct. and mech. props., annealing effect 2-31788  
BaB<sub>2</sub> single crystals, growth and props. 2-27075  
Bi, polymorphic transformation, plastic deform. influence (Russian) 2-21292  
Bi<sub>2</sub>Te<sub>3</sub>Se<sub>12</sub>, extruded, elec. props. and struct. 2-40979  
CaB<sub>2</sub> single crystals, growth and props. 2-27075  
CaF<sub>2</sub>, rare earth oxyfluoride impurity effect on elec., mech. and optical characts. 2-26880  
cc Al<sub>2</sub>O<sub>3</sub>-ZrO<sub>2</sub> composites, transform. toughening, fabrication and fracture toughness 2-51925  
Cd-As system, solid solution form., solubility boundaries, homogeneity range, physico-chemical investigations 2-26067  
Ce, polymorphic transformation, plastic deform. influence (Russian) 2-21292  
Co-M-B (M=transition metal), amorphous alloys, mech. props., thermal stability 2-31787  
Cr, electrodeposited, low contraction, parameter optimization 2-12947  
Cr<sub>2</sub>C<sub>3</sub>, plasma- and vacuum-plasma sprayed composite coatings, props. 2-17761  
CsI, charge transport, yield point and microhardness, influence of crystal growth method and impurities 2-21208  
Cu, hardness indentations, refl. X-ray topography in single crystals. 2-41851  
Cu-Al (10.1 wt.%), internal friction meas. during tempering 2-47089  
Cu-Al<sub>2</sub>O<sub>3</sub> dispersion strengthened, strengthening and mech. props. study 2-22309  
Cu-Mo layer composite form. by sputter deposition 2-12943  
Cu<sub>2</sub>NiZn, order and domain strengthening in high purity and commercial specimens 2-47049  
Dy-Sb system, phase diagram construction and antimonides characts. 2-41584  
Fe, Armco, diffusion coated with Ga, influence of comp. of impregnating medium 2-41803  
Fe compacts, sintered, based on atomised powder from tinplate scrap 2-36809  
Fe, nitriding effect of N<sub>2</sub>-H<sub>2</sub> plasmatron, hardness 2-1353  
Fe-base materials, hard, microstruct. refinement by laser and electron beam surface melting 2-41794  
Fe-M-B (M=transition metal), amorphous alloys, mech. props., thermal stability 2-31787  
Fe-Mn-Co alloys, hardening of martensite (Russian) 2-36872  
Fe-Ni (22 wt.%), strengthening mechanism in tempering, after surface plastic deform. 2-41637  
Fe-Ni (36 and 50 wt.%), mag. props. after deform. and annealing 2-26673  
Fe-Si (3.25 wt.%), grain-oriented, core-loss, effect of cutting operation 2-17744  
Fe-Ti (3.85 wt.%), carbide dispersion carburizing (Japanese) 2-27182  
Fe-Zn-C, phase transform kinetics, effect of Zn 2-36853  
Fe<sub>2</sub>B<sub>2</sub>, metallic glass, microhardness and porosity investigation (Russian) 2-2577  
Fe<sub>3</sub>B<sub>20</sub>, amorphous, annealing behaviour on continuous heating 2-17690  
Fe<sub>3</sub>Co<sub>9</sub>Ni<sub>2</sub>Cr<sub>10</sub>Si<sub>15</sub>B<sub>4</sub>, metallic glass, microhardness and porosity investigation (Russian) 2-2577  
Fe<sub>3</sub>Cr<sub>10</sub>P<sub>13</sub>C<sub>3</sub> (Russian) 2-2577  
Fe<sub>3</sub>Ni<sub>2</sub>Cr<sub>14</sub>P<sub>12</sub>B<sub>4</sub>, metallic glass, crystallisation and mech. props. 2-8447  
GaAs:Ge(Sb), neutron transmutation doping, elec. and physical props. 2-12619  
Ge-Si, impurity states, optical spectra and microhardness meas. 2-35971  
Ge-Sa-As(Sb)(Bi) vitreous, influence of bond metallisation on elec. cond. 2-5402  
GeO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>, vitreous, internal press. from elastic constants 2-25969  
GeTe-AgBiTe<sub>2</sub> system, physicochem. investig. of phase diagram 2-5207  
HfO<sub>2</sub>, Er<sub>2</sub>O<sub>3</sub>-stabilised, abrasability and hardness 2-47184  
HfO<sub>2</sub>-TiO<sub>2</sub> system, phase diagram and characterisation 2-5860  
KBr, single crystals, annealing and ageing as thermal, and temporal recovery mechanism 2-35581  
KCl, quenched single crystals, micro-hardness load charact. 2-35582  
KCl, single crystals, annealing and ageing as thermal and temporal recovery mechanism 2-35581  
KI, quenched single crystals, micro-hardness load charact. 2-35582  
KI, single crystals, annealing and ageing as thermal and temporal recovery mechanism 2-35581  
Mg-Y-Zr-Nd-Zn, as-cast, creep rates, influence of Nd and Zn additions 2-9377  
Mo, neutron irradiation, deform. behaviour in tensile and hardness tests 2-31745  
Mo-Zr-Nb-C, struct. and props. for reinforcing composite materials 2-36886  
MoN, nitride synthesis during plasma flow condensation (Russian) 2-2458  
MoSi<sub>2</sub>, hardness and oxidation resistance 2-52009  
Mo<sub>2</sub>-WBC, refractory supercond., magnetisation and supercond. props. 2-41053  
NaCl:Ca, influence of deform. on mechanical props., defect interactions 2-35532  
Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub> glass, internal press. from elastic constants 2-25969  
Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub> system glasses, comp. and struct. effect on mech. characts. 2-41756  
Na<sub>2</sub>O-CaO-SiO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub>-Al<sub>2</sub>O<sub>3</sub>-(B<sub>2</sub>O<sub>3</sub>)-(B<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>), bioglass, chem. comp., Vickers hardness, chemical durability (Japanese) 2-41774



**hardness continued**

- Na<sub>2</sub>O-GeO<sub>2</sub>, glass, internal press. from elastic constants 2-25969  
 Na<sub>2</sub>Zr<sub>2</sub>[Si<sub>2</sub>O<sub>7</sub>]Cl<sub>2</sub>H<sub>2</sub>O, cryst. struct., density and hardness 2-35470  
 Nb-Mo(Ti)(Zr), nitrided, struct., phase comp., and hardness 2-52106  
 NbB<sub>4</sub>, single crystals, grown from soln., characteris., hardness anisotropy  
 prismatic slip 2-9417  
 NbCo<sub>9</sub>, single crystals, Vickers microhardness up to 1500°C 2-52010  
 Ni-B-Si-Cr brazing alloy, rapidly solidified surface melts 2-16935  
 Ni-Cr-B-Si matrix, reaction with carbide additives during fusion 2-17784  
 Ni-M-B (M=transition metal), amorphous alloys, mech. props., thermal stability 2-31787  
 Ni-P-Cr coatings heated in air, struct. and props. (Russian) 2-13858  
 Ni<sub>3</sub>Al-Ni<sub>3</sub>Nb, eutectic alloy, directional solidification 2-5868  
 Ni<sub>3</sub>Nb single crystal, Knoop hardness anisotropy (Japanese) 2-47160  
 P-Se-Te, glasses, elastic props., microhardness and US vel. meas. 2-9363  
 PbSe crystal, morphology, struct. and microhardness 2-5084  
 Se-Ge-As glasses, fracture toughness, microhardness, and Young's modulus 2-36945  
 Si steel strengthening at crack tip by current pulse (Russian) 2-2575  
 $\beta$ -SiC, effects of applied pressure on hot-rolling 2-27130  
 $\beta$ -SiC, reaction bonded, ultra-fine grained, microstruct. and props. 2-9412  
 SiC-AlN, hot-pressed, fabrication and charact. 2-36817  
 SiN, with spinel admixtures, pressureless sintering, props. 2-9321  
 Si<sub>3</sub>N<sub>4</sub> ceramics, indentation plasticity and fracture 2-31774  
 Si<sub>3</sub>N<sub>4</sub>, solid particle erosion 2-9431  
 Si<sub>3</sub>N<sub>4</sub>, thermal cond. and microhardness, effect of additives 2-52006  
 SrB<sub>6</sub>, single crystals, growth and props. 2-27075  
 TaC film, reactive ion beams sputtering (Japanese) 2-27086  
 TaCo<sub>0.83</sub>, single crystals, Vickers microhardness up to 1500°C 2-52010  
 Ta-N-ZrB<sub>2</sub>-ZrN(WC) comps., densification and wear resist. 2-31661  
 Ti-Si-O-N system, multiphase materials, invest. from 1200 to 1600°C 2-47011  
 TiB, electrodeposited coating, wear props. 2-47195  
 TiB<sub>2</sub>, single crystals, grown from soln., high temp. hardness, solvent influence (Japanese) 2-9416  
 TiC, CVD coating on sintered WC-Co substrate (Korean) 2-5835  
 TiC-Ni-Mo, sintered, molten Ni penetration, effect on mech. props. 2-31674  
 TiC<sub>0.5</sub>N<sub>0.5</sub>-tool steel materials, sintering and props. 2-31660  
 TiN, nitride synthesis during plasma flow condensation (Russian) 2-2458  
 TiN type coatings on tool steel, struct. and props. 2-22386  
 TiN-TiB<sub>2</sub> system, phase diagram 2-31682  
 TiSe-DySe, structural diagram, DTA and hardness meas. 2-22204  
 W-C-Ti(Zr)(Hf), cast, struct. and props., alloying effect 2-41743  
 WC-TiC-Co, prep. and props. of WCob diffusion layer, X-ray diffr. obs. 2-41787  
 YB<sub>4</sub> single crystals, growth and props. (Japanese) 2-51797  
 Y<sub>66</sub>(Fe<sub>1-x</sub>M<sub>x</sub>)<sub>34</sub>, M=B,C,Si,Ge, metallic glasses, struct. and elec. props. 2-21031  
 Zn-Al alloy castings, damping capacity and mech. props. 2-47170  
 ZnS:Cu single crystals, solubility of Cu<sub>2</sub>S, struct. characts. and mech. prop. anisotropy 2-12674  
 Zr-Nb-Ru (2.5, 0.3wt.%), quenched, microstruct. and mech. props. 2-41646  
 Zr-Si, amorphous ribbons, formation range, thermal stability, mech. and supercond. props. 2-31675  
 ZrCo<sub>9</sub>, single crystals, Vickers microhardness up to 1500°C 2-52010

**hardness testing**

- apparatus review (German) 2-13904  
 Brinell ball hardness tests, new results (German) 2-52147  
 Brinell hardness meas. by penetration depth 2-13905  
 brittle materials, compression of rods method appl. 2-2646  
 diamond taper angle and tip radius microscopy with special eyepiece 2-48771  
 metallised plastic intermediate layer investig., microhardness testing by indentation depth (Russian) 2-13895  
 piezoceramic, fracture toughness determ. using double torsion and impression methods 2-52159  
 plastics, penetration hardness test, measuring errors (German) 2-52157  
 rocks (German) 2-13903  
 Rockwell diamond indenter, new apparatus 2-2687  
 steel, 40kHn, hardness inspection by higher harmonics method 2-6005  
 steel, low-alloy, powder forged, preforming treatments influence on mech. props., inclusion content 2-41736  
 steel, microindentation hardness test block, comparison of meas. by various organisations 2-2686  
 thermal contact resistance used as a hardness tester 2-9492  
 ultra-low-load penetration hardness tester 2-33515

**harmonic analysis**

- see also waveform analysis  
 EM scattering by spheroidal objects, spin-weighted spheroidal harmonics method 2-39540  
 geomagnetic declination in Canada, 1980 mapping, SHE appl. (French English) 2-37758  
 geomagnetic field, multipole anal. for different time intervals rel. to secular vars. 2-6312  
 grating signal quality estimation (Chinese) 2-49885  
 gravity anomalies, determ. of harmonic moments of disturbing bodies 2-38000  
 gravity field, spherical harmonic model from dynamic satellite data 2-42254  
 Maglev system, superconducting, with sheet guideways, magnetic damping and stiffness coefficient 2-49622  
 ocean tides, harmonic anal. of intermittent acoustic obs. 2-28079  
 Roche harmonics construction for appl. to binary stars, soln. method 2-14783  
 underwater light, spherical harmonic theory for multiple scatt. of collimated irradiance 2-32538

**harmonic generation**

- see also optical harmonic generation  
 acoustic harmonic generation by dislocation dipoles and loops 2-21238  
 acoustic harmonic generation in crystals 2-34970  
 atomic systems, third harmonic generation freq. distrib. 2-43838  
 free electron laser harmonic generation, quasiperiodic wiggler theory 2-34715  
 magneto-active plasma, second harmonic generation efficiency by EM wave scatt. (Russian) 2-40046  
 nonlinear Compton scatt., relativistic treatment 2-38822

**harmonic generation continued**

- pyridine, adsorpt. on Ag, equilib. and transient study, second harmonic generation and Raman scatt. appl. 2-22486  
 relativistic electron beams, EM waves steady-state parametric excitation 2-829  
 superconductor, nonlinear acoustic phenomena, paramag. impurities effect (Russian) 2-8914  
 superconductor, with paramag. impurities, acoustic harmonic generation (Russian) 2-26553  
 two-dimensional random system, nonmetallic part of current, alternating elec. field nonlinear effects 2-30856  
 CO<sub>2</sub> laser-plasma interaction expts. 2-12326  
 SAW, nonlinear coupled mode theory 2-49976

**harmonic oscillators**

- anharmonic, generalized perturbation theory without wavefunction 2-15055  
 anharmonic, stochastic classical electrodynamics anal. 2-62  
 anharmonic oscillator, evaluation of functional integrals around a continuous set of important field configurations 2-6941  
 anharmonic oscillator eigenvalues 2-18954  
 anharmonic oscillator with negative anharmonicity, high-order perturbation theory of imaginary part of resonance eigenvalues 2-11434  
 anharmonic oscillators, vibrational exchange cycles 2-7533  
 anharmonic potential, coherent-state representation, quantum mechanics 2-23475  
 anharmonic quantum oscillator, energy levels, phase-integral calc. 2-28711  
 anharmonically coupled oscillators 2-49272  
 asymmetric single and double well anharmonic oscillator, statistical thermodynamics 2-48653  
 charged harmonic oscillator, in EM field, quantum theory, gauge-invariant formulation 2-48544  
 classical and quantum mechanics 2-33364  
 classical statistics inherent in pure quantum states 2-28709  
 coherent state and the damped harmonic oscillator, quantisation 2-33357  
 coherent states for harmonic oscillators, Schrodinger lumps 2-10639  
 coherent states quasidecay in nonharmonic pots. 2-24810  
 collinear collision between particle and nonlinear oscillator in laser field, trajectory studies 2-24816  
 collisions with time depend. force const., Wigner phase space method 2-38474  
 completely integrable N-body quantum systems in three dimensions 2-3474  
 coupled pendulum-harmonic oscillator, horseshoes in perturbations 2-48484  
 covariance, rel. to quantum field theory 2-33703  
 crystal, longitudinal wave propag., continuous model, energetic criterion 2-3391  
 damped, quantum mech. treatment (Chinese) 2-28680  
 damped harmonic oscillator, generalised Lagrangian, conservation law 2-18839  
 decaying mass harmonic oscillator, canonical Hamiltonian 2-38479  
 detection of forces by coordinate integral meas. (Russian) 2-48554  
 diatomic mols., anharmonic oscillators, probability distrib. function, thermal perturbation theory 2-7667  
 dielectrics, local field, Clausius-Mossotti relation, statistical interpretation 2-48450  
 dirac's form of relativistic quantum mechanics 2-28627  
 dissipative systems, Lagrangian description 2-28631  
 distribution function, non-negative quantum-mechanical, props. 2-23487  
 driven anharmonic oscillator, chaotic behaviour, period doubling 2-23466  
 eigenvalue perturbation theory, large orders and summability 2-48534  
 EM radiation interaction with matter, alternative formulation 2-3353  
 energy levels of an oscillator with singular concentrated potential 2-42902  
 energy quantisation, rel. to black body radiation, Einstein's contrib. 2-15131  
 exponential perturbations 2-18951  
 external noise effects on the fluctuation line width 2-10652  
 forced harmonic oscillator with time-dependent freq. 2-15690  
 forced time-dependent harmonic oscillator, dynamical invariant 2-48547  
 free particle and harmonic oscillator problem connection, Schrodinger wave eqn. (Russian) 2-42904  
 Gaussian stochastic processes, coherent frequency modulation 2-23557  
 generalised anharmonic oscillator, variational approach 2-38499  
 $gx^{2n}$  anharmonic oscillator, linear variational approx. 2-33333  
 harmonic oscillator motion with sliding and viscous friction 2-48452  
 Langevin coupled oscillators, Brownian motion 2-6796  
 linear, nonspreading wave packet (Russian) 2-15060  
 model of harmonic oscillator coupled to quantised, massless scalar field 2-28700  
 momentum in stochastic quantum mechanics 2-42885  
 Morse oscillators, perturbed, hypervirial perturbative method 2-39283  
 multidimensional isotropic bounded oscillators, hypervirial treatment 2-33361  
 multiple-well anharmonic oscillators, perturbation theory 2-48540  
 one-dimensional anharmonic oscillator energy spectra 2-74  
 pairing, quadrupole and quadrupole-pairing interaction, harmonic oscillator shell simple symmetry 2-24133  
 path integrals measures 2-38497  
 polymer chains, mechanically stressed, quasiharmonic IR bands, temp. effect 2-17459  
 quantum system of harmonic oscillator coupled to quantised, massless, scalar field, model 2-28701  
 quantum-mechanical harmonic oscillator, spectral class 2-48525  
 quark physics, harmonic oscillator models, review 2-23951  
 quartic oscillators, energy eigenvalues 2-28694  
 relativistic oscillator, dynamical symmetry group and spherical function props. on hyperboloids (Russian) 2-3430  
 rotating, radial Schrodinger eqn., satisfaction by analytic function 2-72  
 simple relativistic oscillator model, EM interaction, formalism 2-42890  
 single-particle system, Noether symmetry 2-3411  
 slender beam, summed and differential harmonic oscillations 2-20573  
 space-time excitons, relativistic harmonic oscillator eigenvalues 2-38753  
 spherical top, Bertrand systems on SO(3,R) and SU(2) 2-64  
 statistical equilibrium establishment in harmonic oscillators quantum chain 2-6792  
 stochastic classical electrodynamics anal. 2-62  
 strong coupling potential with even anharmonicity 2-18947



**harmonic oscillators continued**

- subharmonic stroboscopy as a method to study period-doubling bifurcations 2-38579
- supercoherent states, location and phase meas. 2-33350
- three-dimensional Schrodinger equation for anharmonic oscillator, analytical soln. 2-10644
- time-dependent, coherent states 2-48551
- time-dependent nonlinear systems, dynamical Noether invariants 2-18877
- time-dependent Schrodinger eqn. symmetry, pot. classification by maximal kinematical symmetry 2-18952
- vibrations excited by a harmonic oscillator in Poiseuille flow 2-39991
- wavefunctions, overlap integrals, comments 2-42883
- Weber parabolic cylinder functions, numerical algorithm 2-18948
- $\gamma$ -N $^{+}$ , nucleon resonances neutrino excitation in relativistic harmonic oscillator quark model 2-11040
- H, energy in Stark effect and negatively anharmonic oscill., perturbation series 2-49265
- $^3$ He, nucleon polarisation and nuclear charge operator 2-49031

**harmonics**

- see also harmonic analysis
- aC power-loss measurements in solid dielectric materials at industrial frequency 2-6870

**Hartmann lines** see Luder's bands**Hartree calculations** see SCF calculations**Hartree-Fock approximation** see HF calculations**Hartree-Fock calculations** see HF calculations**Hasiguti relaxation** see anelastic relaxation; dislocation damping**He** see helium**headphones**

- see also earphones
- hearing damage due to noise transmitted by operator headsets 2-32222
- supra-aural audiometric headsets using MX-41/AR and 51 earphone cushions, noise attenuation characts. 2-20462

**health effects of radiation** see biological effects of radiation**health hazards**

- see also biological effects of radiation
- acoustic noise, occupational OSHA standard 1981 amendment 2-52410
- AECL employees, health study 2-4134
- alternative energy technologies occupational and public health and safety implications 2-17959
- BEIR III report, review 2-32260
- bulldozer operator noise exposure reduction, material system approach 2-9744
- Chinese high background radiation area, aspects of environmental radiation and dosimetry 2-27908
- chromosome structural changes and SCE after exposure to fields from 380 kV systems 2-52534
- electrical hazards and monitoring during biomedical diagnosis 2-47743
- ELF EM fields and health risks from HV transmission lines 2-32259
- EM radiation, possible dangers, acceptable levels, biological effects (French) 2-32258
- geophysicists working with ionising radiation sources, medical check-ups (Russian) 2-42225
- hearing impairment, noise induced, in industrial and everyday environments 2-47611
- hospitals, the risk of elec. shocks, review 2-6274
- ionising radiation, review of risks in medical use (German) 2-52551
- ionising radiation risks, informing the public 2-18859
- laser diodes safety aspects, hazard identification 2-14340
- LWR accidents, consequences and effects (Dutch) 2-4071
- microwave and radio-frequency exposure limits standardisation, world's development trends 2-32255
- microwave radiation from solar power satellites, biological effects and exposure standards 2-52544
- microwave radiation exposure of physiotherapists during diathermy treatment 2-42187
- microwaves, long-term exposure to radiation, review of possible hazards and effects 2-27911
- noise, hazard evaluation rel. to freq. of hearing loss in exposed population 2-22832
- nuclear fuel-reprocessing plants, pot. safety-related incidents 2-19733
- nuclear industry, public and occupational hazards, risk management, equity aspects 2-29433
- nuclear power plants during start-up, radiological meas. 2-11279
- nuclear weapons test debris contamination of military personnel 2-32340
- onshore oil drilling rig occupational noise exposure assessment and prediction 2-9737
- photovoltaic energy technologies: examining public and occupational health risks 2-22542
- power frequency fields, biological effects, literature survey including work in West and USSR 2-18241
- power industry, environmental risk assessment 2-52397
- power overhead line electric field effects on humans and animals (Dutch) 2-32246
- power overhead lines, biological effects of electromagnetic fields (Norwegian) 2-52535
- power plant coal fly ash disposal environmental impact assessment 2-18152
- protective goggles, parameters determ. using stereophotogrammetric apparatus 2-32304
- radiation exposure risks and radiation protection standards 2-9840
- radioactive waste, high-level, effects of ICRP Publication 30 and 1980 BEIR report on hazard assessment 2-52643
- radioisotopes, human intake, committed dose equivalents rel. to age at intake 2-18302
- radiology and risk: an economist's perspective 2-2929
- recreational noise exposure, occupational hazard for audio engineers 2-4633
- research department compliance with radiation protection and monitoring regulations (German) 2-49195
- respiratory hazard protection in a radioactive environment 2-52641
- RF surgery equipment, appls. and technical scope, safety problems (German) 2-27928
- RF surgery equipment, review of hazards 2-18329
- scattered radiation distributions around CT scanners and hazard to personnel 2-37677
- semiconductor laser diodes and appls., handbook 2-18825
- solar power satellite transmitting energy to earth via 2.45 GHz continuous wave microwaves, effects on honey bee colony 2-47623

**health hazards continued**

- solar power satellites, health and environmental risk evaluation 2-52543
- soundproofing materials used in recording studios 2-44562
- Spacelab, biological and medical expts. (Italian) 2-22840
- tritium source review 2-32137
- UV sources, irradiance obs., hazard evaluation 2-49852
- VDT operations, radiation and industrial hygiene survey 2-27825
- $^{14}$ C, radiation hazard 2-18270
- $^{125}$ I, airborne, arising from surface contamination 2-37688
- $^{222}$ Rn, airborne particulates, survey at Melbourne kindergartens 2-52403
- $^{222}$ Rn daughters associated with Rn spas, carcinogenic risk 2-37625
- U mines and mills occupational radiological safety 2-24434

**hearing**

- see also bioacoustics; ear; hearing aids; speech
- acoustic maskers, narrow-band, masking patterns 2-9806
- action potential tuning curves, forward-masking in normal and acoustically traumatized ears 2-27809
- annoyance of sounds of different character 2-49987
- articulatory patterns of an adventitiously deaf speaker, auditory information rel. to speech prod. 2-32224
- audiometers, bone-conduction, calibration survey 2-27920
- auditory discrimination, automated testing system 2-2879
- band-reject noise, tone detect. 2-52503
- barn owl, sound differences 2-42116
- binaural signals, partially masked by reproducible noise maker, influence of phase angle on detection 2-9810
- bone conduction vibrators, loudness balance calibration 2-52657
- bone-conduction receiver calibration over extended freq. range using artificial mastoid instrument 2-32285
- brain, human, slow pot. shifts during forewarned reaction, auditory and visual stimuli 2-18188
- brainstem acoustic response, inferred patterns of surface pot. distrib. on cat skull 2-18224
- brainstem acoustic response in diagnosis of acoustic neuroma 2-9843
- brainstem auditory evoked elec. response in cochlear hearing loss 2-18221
- brainstem auditory evoked potentials, importance of stimulus phase and reference recording electrode 2-18212
- brainstem auditory evoked potentials recorded in sleep apnoeas 2-2876
- brainstem auditory evoked potentials recorded in sleep apnoeas 2-6226
- brainstem auditory evoked pots., acute effects of electroconvulsive therapy 2-52495
- brainstem auditory evoked pots., Bessel filtering 2-2978
- brainstem auditory evoked responses, fast meas. method using maximum length sequences 2-22774
- brainstem early responses to fast amplitude and freq. tone glides 2-18213
- brainstem evoked potential, appl. of Wiener filtering 2-18314
- brainstem evoked response, review of expt. studies 2-18218
- brainstem evoked response audiometry, technical aspects of stimulation, recording and signal processing 2-18316
- brainstem response audiometry, ear-canal rel. to mastoid electrode placement 2-18317
- brainstem response audiometry, improved recording technique using a meatal electrode 2-18318
- brainstem response audiometry, normative clinical data 2-18322
- brainstem response audiometry, problems in analogue filtering 2-18321
- brainstem response audiometry, waveform variation anal., FFT and inverse FFT appl. 2-18320
- brainstem response audiometry and electronystagmography in auditory pathway lesion diagnosis, comparative study 2-9844
- brainstem response audiometry and gestational age in the newborn 2-9817
- brainstem response audiometry following severe head trauma 2-9814
- brainstem response audiometry in brainstem lesions 2-9813
- brainstem response audiometry in chronic alcoholism 2-9815
- brainstem response audiometry in operatively verified cerebello-pontine angle tumours 2-9812
- brainstem response audiometry in paediatrics 2-9845
- brainstem response in conductive hearing loss 2-18222
- brainstem response to clicks in normal hearing and steep high-freq. hearing loss 2-18223
- brainstem responses, analogue and digital filtering 2-2971
- brainstem responses, conf., Stockholm, Sweden (Apr. 81) 2-14974
- brainstem responses in cats, latency rel. to stimulus polarity, intensity and acoustic waveform 2-18220
- brainstem responses in multiple sclerosis, comparison of auditory and visual responses 2-9816
- brainstem responses to filtered sine-waves for freq. specific determ. of auditory sensitivity, animal expts. 2-18219
- brainstem-evoked response, physiological mechanisms 2-18217
- bursts of sound production with variable envelopes, appl. to hearing expts. (German) 2-2911
- cancellation tone, dependence of level and phase on frequency range, frequency difference, level of primaries and subject 2-22766
- cats, auditory cortical neurons, sound stimulus to evoke sustained response to complex sounds 2-22773
- cats, auditory cortical neurons, sustained response to tone stimuli 2-22772
- chinchilla, detection of sinusoidally amplitude modulated noise 2-47607
- click-evoked electric brainstem responses, use in audiological diagnosis 2-2972
- cochleas, guinea pig and human, rate-versus-intensity functions and AP responses 2-32215
- combination bands and the meas. of the auditory filter 2-47606
- conference, London, England (Jan. 1981) 2-23359
- consonant recognition, comparison of the effects of hearing impairment and acoustic filtering 2-2877
- damage due to noise transmitted by operator headsets 2-32222
- detection of tone masked by two tones 2-52496
- detection threshold microstructure and its effect on temporal integration data 2-47604
- dichotic listening, stimulus dominance 2-52507
- earmuff threshold attenuation props., psychophysical and physical meas. methods 2-4670
- echolalic autistic individuals, central auditory nervous system dysfunction 2-52506
- echolocating Atlantic bottlenose dolphins, target detection in noise 2-14264
- EEG, auditory driving by complex stimuli, methods for finding single generators 2-42115



**hearing continued**

evoked and EEG potential modelling, hierarchical approaches 2-22714  
 evoked cortical pots., attenuation by knowledge of stimulus timing 2-37584  
 evoked EEG response, maturational effects on middle components 2-2878  
 evoked potential discrimination, information, preliminary obs. 2-22757  
 evoked potential of freely moving cats during repeated d-amphetamine, cross correlation analysis 2-22775  
 evoked potentials, averaged, a posteriori time varying filtering 2-14179  
 evoked potentials, averaged, a posteriori time varying filtering 2-14180  
 evoked potentials, intracranially recorded responses from the human auditory nerve 2-37585  
 evoked response, wave I identification using an atraumatic ear canal electrode 2-18319  
 evoked responses, averaged, rel. to psychometric intelligence 2-52508  
 fatigue of the whole nerve action potential, calculation 2-14260  
 filter shapes derived in simultaneous and forward masking 2-32212  
 fish auditory systems, frequency selective processes, determination of psychophysical tuning curves 2-52497  
 fluctuations, 1/f, and human perception 2-52421  
 forward masking, variation of masker/signal level, procedural comparison 2-32209  
 forward-masking expts. using a lateralization method 2-32211  
 frequency discrimination for pure and complex tones 2-9809  
 frequency discrimination in infancy, preliminary data 2-47609  
 half octave shift, single auditory neuron level analysis 2-14259  
 head-related acoustic transfer function, calculator program 2-52502  
 high-level impulse noise source, to assist in development of hearing protection 2-44615  
 impairment, noise induced, in industrial and everyday environments 2-47611  
 industrial noise, amplitude distributions and effects on hearing damage 2-11940  
 industrial noise control in Australia, worker exposure, hearing impairment, noise reduction costs 2-20471  
 innervation of the auditory system, review 2-18216  
 intensity discrimination, excitation-pattern model 2-37587  
 intensity discrimination thresholds, signal and master uncertainty 2-32213  
 Interaural delay detection in high-freq. noise 2-52499  
 interaural time discrimination in noise 2-22767  
 inverse acoustical problems in speech and hearing 2-18225  
 jittered tones, lateralization thresholds based on differences in interaural arrival time 2-14257  
 localisation of sounds by barn owls, modification by early auditory experience 2-37590  
 loudness, acoustic sensation transmission limits, hearing and masking (Hungarian) 2-16180  
 loudness and quality of stereophonic loudspeakers, correlation 2-37583  
 magnetic auditory evoked fields, dipole orientation 2-52494  
 measurement methods for assessing human perception of loudness, international survey 2-9807  
 microwave hearing effects, field-induced forces at dielectric interfaces as a possible mechanism 2-14288  
 microwave pulse-induced acoustic resonances in spherical head models 2-6249  
 monaural phase sensitivity with Ronken's paradigm 2-37589  
 motorcycle helmets, effects on hearing and detection of warning signals 2-22770  
 music, timbre and the perceptual effects of three types of data reduction 2-11955  
 nerve regeneration, reformation of organised connections 2-14261  
 neuron response characterisation, online microcomputer anal. 2-6295  
 neuronal network, isolation of several local stimuli 2-2875  
 neurons, comparison of spectro-temporal sensitivity to tonal and natural stimuli 2-52493  
 neurons, functional characteristic, spectro-temporal receptive field 2-52492  
 noise, determination of principle of components annoyance (German) 2-37582  
 noise attenuation of weak shock waves by ear muffs 2-20469  
 noise exposure to children, measured by dosimetry, longitudinal hearing study 2-44566  
 noise rel. to hearing loss and high blood press. 2-2881  
 noise-induced hearing loss, cochlear resonance pathogenic model (French) 2-27808  
 noise-induced hearing loss, early, in teenage boys 2-2893  
 noise-induced hearing loss, equivalent continuous sound level for impulse noise 2-11941  
 OSHA noise standard, 1981 amendment 2-52410  
 perception thresholds during trapezoidal displacements of the basilar membrane (French) 2-37581  
 personal ear protectors, performance meas. with objective methods, review 2-4669  
 pitch change of a complex tone following its association with a second complex tone 2-52498  
 pitch detection, temporal and spectral cue stimuli 2-32214  
 pitch of amplitude-modulated noise, observations 2-37588  
 pitch of pure and complex tones, noise-induced shifts 2-35016  
 plasma angiotensin II changes with noise exposure at three levels of ambient temperature 2-22791  
 protection in hazardous noise environments, earplugs and their utilization 2-22838  
 protectors, appraisal of methods for estimating effectiveness 2-22771  
 psycho-acoustics of musical hearing (Hungarian) 2-6227  
 psychoacoustics and sound quality evaluation for audio equipment (Japanese) 2-18214  
 psychology, musical tone formation, historical review (Hungarian) 2-1095  
 psychophysical studies for two multiple-channel cochlear implant patients 2-52500  
 pulsation patterns and nonlinearity of auditory tuning 2-37579  
 pulsation patterns and nonlinearity of auditory tuning 2-37580  
 pure-tone sensitivity and ear canal pressure at threshold in children and adults 2-22765  
 random fluctuating sound, loudness meas. by discrimination test, hearing system simulation (Japanese) 2-27810  
 reflex, acoustic, effects of aging on magnitude 2-52505  
 review of modern acoustics 2-49967  
 road traffic and aircraft, comparison of community response 2-34988  
 short-term adaptation in normal and acoustically traumatized ears, action potential meas. 2-22769

**hearing continued**

slow wave averaged field potentials rel. to auditory stimuli, cross correlation analysis 2-47612  
 sound field audiometric testing, comparison of stimuli used 2-52501  
 speech-reception threshold for sentences in a noisy environment 2-9805  
 speech in noise, detect. by infants 2-32219  
 speech listening, freq.-controlled and freq.-shifted accelerated speech, transfer effects 2-32218  
 speech recognition by hearing-impaired adults, effects of training on performance, audiovisual tests 2-32220  
 speech spectra for normal and hearing-impaired adolescents 2-50015  
 stapedectomy, factors influencing hearing postoperatively 2-2880  
 stapedian reflex, in workers exposed to noise, workplace study (French) 2-25177  
 steady-state vowels, discrimination by blackbirds and pigeons 2-14258  
 study on perceptual processing time in the frequency discrimination of a brief tone—in relation to temporal development of perception accuracy (Japanese) 2-47610  
 suppression effects for complex stimuli 2-47605  
 temporal order identification; some parameter dependencies 2-47608  
 temporary threshold shift due to exposure to noise, RMS sound press. consideration 2-14256  
 threshold levels, low freq., in free and diffuse sound fields 2-37586  
 threshold shift, temporary, physiological and psychophysical meas. in humans 2-32216  
 thresholds, air- and bone-conduction obs. 2-32223  
 timbre perception in sound reproduction, evaluation (Japanese) 2-18215  
 tinnitus, temporal course of masking as a basis for inferring its origin 2-32221  
 traffic noise, annoyance in persons with normal and impaired hearing 2-14165  
 voice discrimination onset time in infancy 2-32210  
 voiceless fricatives, auditory discrimination in children 2-32217  
 word identification, binaural and monaural, effect of noise and reverberation 2-52504

**hearing aids**

cochlear implant prostheses: strategies and progress 2-27935  
 cochlear prosthesis thin-film multielectrode arrays 2-37709  
 computerised method for fitting 2-2975

**heart see cardiology****heat**

see also heat transfer; heating; latent heat; specific heat; temperature; terrestrial heat; thermal variables measurement; thermodynamic properties; thermodynamics  
 No entries

**heat capacity see specific heat****heat conduction**

see also thermal conductivity  
 anisotropic composites, heat conduction, numerical anal. (German) 2-50050  
 annular fin of triangular profile, nonuniform heat transfer 2-35032  
 boundary value problems with nonlinear material and nonlinear boundary conditions 2-42965  
 bushings, low temperature, for high AC voltage 2-6857  
 composite materials, heat conductivity, semiempirical description 2-35030  
 conductive and convective heat transfer below evaporating liquid surfaces 2-30118  
 dynamic crack propagation thermal boundary front (Japanese) 2-4757  
 eccentrically located tube within annulus, tube wall temperature for metal-metal contact 2-35040  
 evacuated solar collectors, He penetration, theory and effect on performance 2-6181  
 ferromagnetic particle in magnetic liquid, vortex, thermal conduct. 2-39974  
 fluid, nonlinear weakly dissipative medium, short wave eqn. 2-12008  
 freezing, transition from convection-controlled to conduction-controlled growth 2-4705  
 freezing and melting with convection, numerical anal. 2-29989  
 frictional contact zone, heat formation and distrib. under conditions of non-stationary heat exchange 2-50206  
 half-space with thermal memory, magnetothermoelasticity, dynamic problem 2-50098  
 heat transfer problems of irregular geometries, generalised finite-difference method 2-29986  
 hollow symmetrical solids, conductive heat transfer, validity of hyperbolic heat eqn. 2-39793  
 human head, complementary extremum principles for nonlinear model of heat conduction 2-2848  
 intermittent temperature fluctuation measurement, influence of heat conduction (French) 2-33516  
 internally cooled fuel elements, heat transfer anal., conformal mapping approach 2-34143  
 inverse boundary-value problem of heat conduction for a two-dimensional domain 2-35031  
 inverse boundary-value problems, thermophysical investigation, automated data processing 2-12004  
 inverse heat conduction problems, review (Polish) 2-20668  
 inverse problem, 1-D, technique for numerical soln. 2-4684  
 inverse problem, anal. and soln. 2-4683  
 inverse problem solution, dispersed media, freezing, thawing, thermophysical charact. determ. 2-12005  
 irreversible-thermodynamic approach to nonequilibrium heat fluctuations 2-42982  
 isotropic solids, irreversible thermodynamics of overdriven shocks 2-40486  
 laminar flow in tubes, convective heat transfer, heat conduction influence (German) 2-39881  
 laminar pipe flow, axial conduction, heat flux wall, temp. profile soln. 2-4818  
 laser fusion, thermal cond. via transport eqn. appl. 2-4118  
 leucosapphire, unsteady radiative-conductive heat transfer calc. 2-4698  
 LMFBFR, fuel-coolant interaction, quasi transient heat cond. model 2-11218  
 LMFBFR, Na-saturated fuel particle beds, heat transfer behaviour, one-dimensional computation method 2-15544  
 mathematical modeling of a transient heat-conduction process 2-12006  
 Maxwell-Cattaneo fluid, asymmetric stress tensor, short wave eqn. coeffs. 2-12009  
 melting around horizontal circular cylinder, heat transport mechanisms anal. 2-44726



**heat conduction continued**

- metal Z (*Russian*) 2-1108
- metals, overdriven shocks, processes, thermodynamics 2-40487
- mixed problem for quasi-linear heat cond. with piecewise discontinuous coeffs. (*Ukrainian*) 2-12002
- mixed problem of heat cond. eqn. with nonlocal initial condition (*Russian*) 2-50049
- natural convection fin with nonmonotonically varying heat transfer coeff., anal. 2-8142
- nonlinear finite element problem, direct implicit time integration 2-29987
- nucleate boiling, bubble waiting time 2-50070
- partially contacting interface, transient heat flow 2-4692
- piezoelectric ceramic discs, heat release assoc. with electroelastic modes 2-7962
- planar Hertz contact with heat conduction, common boundary conditions 2-50061
- plane layer of selective scattering medium, unsteady radiative and conductive heat transfer 2-8021
- plane layer of slightly absorbing medium, radiation conduction heat transfer 2-39792
- quasi-steady state two-dimensional rewetting cond. problem, method for soln. 2-11242
- random system, transmission coeff. 2-12000
- rectangular cavity, geometry determ. from surface temp. scanning, heat flux calc. 2-4694
- relativistic, rel. to objectivity principle 2-44632
- reverse heat conductivity problem, soln. 2-16219
- rotating disk heat conduction via nonequilib. mol. dynamics 2-8139
- rotating roll with surface heat flux and convective cooling, steady-state temp. distrib. 2-4693
- semi-infinite solid, heating by fast moving heat source (*Russian*) 2-1107
- semiconducting p-n junction, heat propag. processes investig. using internal heating of IC (*Russian*) 2-17147
- solidification, thermal and fluid flow effects in a rectangular enclosure 2-35139
- solidification heat transfer with volume change, similarity rule 2-35047
- solution of nonlinear inverse problems of heat conduction 2-16218
- sphere in directed uniform heat flux, temp. distrib. 2-12152
- spheres, piecewise similar, numerical soln. of problems of filtration and heat conductivity (*Russian*) 2-12210
- spherical element with cover, heat conduction (*Russian*) 2-50060
- spin polarised gas, transport props. 2-50350
- stationary heat conduction, linear case, boundary conditions functional (*Russian*) 2-29985
- steady-state heat conduction, general soln. by iterative boundary integral method 2-4686
- steels, quenching and tempering, transform. kinetics, heat cond. and elastic-plastic stress 2-31711
- Stefan problem, nonlinear diffusion eqn. homogenisation 2-4685
- thermal conduction and the blacksmith's paradox 2-38389
- thermosiphon, open, heat cond. regime at small Rayleigh nos., natural convection eqns. soln. (*French*) 2-8131
- transient finite-element analysis of conduction problems subject to variable-speed moving fields 2-1111
- transient heat conduction, 2-dimens., integral method calcs. 2-12010
- transient heat conduction analysis using conjugate gradient method, highly accurate integration formulae 2-44630
- transient heat conduction at low Biot numbers, Heisler's charts 2-20510
- unstationary thermal conduction, in three-ply system, analytical soln. (*Russian*) 2-1110
- wall, thick insulated vertical, combined effects of cond., natural convection and radiation on heat transfer (*French*) 2-8017
- Al, laser irradiated plane target, ion flow characts. 2-36739
- Al, overdriven shocks, processes, thermodynamics 2-40487
- Cu, torsion test specimen, dynamic anal., incl. heat conduction and plastic flow 2-30513
- Cu/Cu-Ni junction, shock compression relaxation obs. by EMF 2-8570
- <sup>4</sup>He cryst., heat conduction study (*Russian*) 2-45677
- Ni-Au, surface films, pulsed laser mixing, expt. study 2-50703
- Pt, overdriven shocks, processes, thermodynamics 2-40487
- UO<sub>2</sub>-PuO<sub>2</sub> mixed oxide fuels pellets, PuO<sub>2</sub> microheterogeneities limiting sizes specification 2-4004

**heat content** see *enthalpy*

**heat convection** see *convection*

**heat dissipation** see *cooling*

**heat engines**

- cost anal. 2-32040
- endoreversible heat engine, two stage, optimal power output 2-47509
- external combustion engine, model optimisation, Pontryagin maximum principle 2-47511
- finite time thermodynamical anal. of optimal expansion of working fluid 2-47510
- harmonically driven engines, performance around state of equilib. 2-27725
- Malone-type liq. heat engine, heat regeneration using parallel-plate thermodynamic pile geometry 2-8019
- Otto cycle, optimal control theory 2-47512
- photochemical reaction engine utilising NO<sub>2</sub> optical decomposition under UV radiation 2-22641
- pyroelectric energy converter employing regeneration 2-37426
- Rankine cycle augmented light-gas-flow turbine studies 2-32101
- single stage regenerate pyroelectric heat engine 2-27727
- solar line-focus collector, analytical dynamic modelling, control appl. 2-37449
- solar mechanical converters, capital costs 2-32110
- thermal engines with power output, role of inertial effects 2-27724
- use of organic working fluids in Rankine engines 2-32102
- Na, thermoelectric conversion using  $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O electrolyte 2-27715

**heat exchange** see *heat transfer*

**heat exchangers**

- see also *cooling towers*
- absorption heat pump using industrial exhaust heat, performance improvement (*Japanese*) 2-22642
- Alclad-aluminum folded-tube heat exchangers for OTEC power plant 2-6166
- ceramic materials, for German solar tower power plant 2-2803
- circulation reversal in nuclear power plant superheating channels, boundary investigation 2-19723
- compact plate-fin heat exchanger, boiling heat transfer 2-30127

**heat exchangers continued**

- corrosion prevention in steam plant cooling ccts., chemical indices limit values (*Rumanian*) 2-17765
- curved heat exchanger tubes, damping factor meas. using EM exciter, stationary and flowing water conditions 2-12112
- electric natural convection heat transfer phenomena in a heat exchanging system 2-20766
- HEAT ECON, appl. to desulfurization system (*Japanese*) 2-27722
- HEAT ECON, heat exchanger with heat pipes, props. and appls. (*Japanese*) 2-27721
- heat pipe, evaporator, heat and mass transfer in right-angled capillary, turbulence obs. (*Russian*) 2-16317
- heat pipe evaporator, heat and mass transfer in capillary, investig. equipment construction (*Russian*) 2-16399
- heat transfer and hydraulic resistance of the tube spaces in a spiral-flow heat exchanger 2-38645
- investigation of flow structure in heat exchanger with helically twisted tubes 2-50053
- laminar flow, interrupted plate passag heat transfer, plate thickness effect , appl. to heat exchanger 2-4790
- Lewis number determ. 2-30133
- LMFBR heat exchanger, flow instabilities due to inlet thermal transient 2-19713
- LMFBR heat exchanger scale model, low flow thermal transient buoyancy effects 2-19710
- LMFBRs, boiler piping and heat exchangers, material development 2-15483
- marine microfouling on Al and Ti heat exchanger surfaces at OTEC facility, Puerto Rico 2-6168
- metal sponge step heat exchanger fabrication and performance characts. 2-33547
- microliquefier, Joule-Thomson type, starting time analysis 2-38657
- molten salt-oil contact heat exchanger theoretical and exptl. investig. (*French*) 2-28852
- multi-span heat exchanger tubes, tube-support interaction, analytical and expt. studies 2-4003
- noise suppression of heat exchangers in heat pump circuits (*French*) 2-6157
- nonstationary temperature distributions in membrane-type heat exchangers 2-38646
- passive energy storage systems using earth-air heat exchanges 2-14111
- passive heat pipe photovoltaic receiver 2-27682
- plate finned tube heat exchangers, heat transfer coeff. enhancement (*Japanese*) 2-43014
- raining packed-bed gas-solid heat exchanger hydrodynamics 2-4885
- refrigeration cycle He temp., max. practical efficiency 2-33534
- rotary heat pipe heat exchanger, research and development (*Japanese*) 2-27723
- shell-and-tube heat exchanges, LMTD calcs. 2-20517
- solar domestic hot water system using storage-type heat exchanger, simulation and verification 2-14110
- solar power station, cavity tube receivers design (*German*) 2-27545
- solar thermosiphon water heaters with heat exchangers, performance anal. using Detailed Loop Model 2-9675
- solid-solid heat exchange system using intermediate fluid medium, effectiveness 2-27735
- steels compatibility in FBR in high temp. Na (*Japanese*) 2-7160
- surface oxidised HTR heat exchanger materials, tritium and H permeation reduction (*German*) 2-471
- surface treatments for enhancement of nucleate boiling heat transfer 2-8157
- thermal energy storage in saturated solutions of inorganic salts 2-18147
- thermoelectric, performance anal. 2-18111
- two-fluid system, non-linear processes, non-iterative simulation method (*French*) 2-19104

**heat flow** see *heat transfer*

**heat insulation** see *thermal insulation*

**heat losses**

- see also *thermal insulation*
- 11 W solar modules operational characts. and experimental study of disequilibria 2-18060
- baby, newborn, energy balance, use of manikin to estimate radiant and convective heat loss 2-52443
- cold trap, thermal loss (*Japanese*) 2-19113
- concentrating solar collectors heat losses reduction design measures 2-47516
- cylindrical parabolic concentrating collector, analytical model and performance data 2-14106
- evacuated solar collectors, He penetration, theory and effect on performance 2-6181
- evacuated tubular glass, He permeation constants determ. 2-9681
- flat-plate collector, transverse slatted, convection losses reduction performance in domestic heating systems 2-47519
- flat-plate collectors operating in normal and reverse configurations, heat losses optimisation anal. and performance 2-27729
- flat-plate solar water heating system time constants determ. 2-27728
- ground collector/storage system with thermal trap, performance 2-37435
- heat and mass transfer coeff. calc. for rivers, influence of net radiation flux (*German*) 2-39914
- hot water storage systems, thermally stratified, optimisation anal. 2-42043
- HV, cooling by heat-dissipation using heat pipes 2-50062
- intermittent temperature fluctuation measurement, influence of heat conduction (*French*) 2-33516
- linear parabolic collector with cylindrical absorber, steady state and transient model for thermal parameters anal. 2-14107
- Malone-type liq. heat engine, heat regeneration using parallel-plate thermodynamic pile geometry 2-8019
- natural gas pipelines, low-temp., heat-insulated, nonstationary temperature regimes anal. 2-44640
- plenum chamber of gasdynamic laser heat losses simulation in shock tube 2-25233
- shell slide heat transfer coeff. in cylindrical heat exchangers, influence of geometrical factors 2-50261
- solar absorber converters, spectrally selective paint for radiation losses reduction 2-4574
- solar air heater performance anal. and optimisation 2-14117
- solar cell module structures, comparative study of thermal characts. 2-27625



**heat losses continued**

- solar collector, thermal characteristics due to heat losses in connection pipe (*Japanese*) 2-37443
- solar collector thermal performance, corrugated cover directional transmittance effects 2-6177
- solar collectors, evacuated tubes, thermal characteristics (*Japanese*) 2-37445
- solar collectors, flat-plate, effect of angle of inclination to horizontal on the heat losses 2-9677
- solar collectors, high-performance, test results (*Japanese*) 2-37444
- solar energy parabolic-cylinder concentrator with tubular heat receiver, focusing characts. and efficiency 2-2771
- solar flat plate collectors, heat loss, insulation effect 2-37453
- solar panels load losses, analogical study (*Italian*) 2-37222
- solar powered thermoelectric generator, efficiency 2-22640
- solar thermal collectors, efficiency of selective surfaces 2-22647
- solar thermal-electric systems, receiver optical props. effect 2-37447
- space heating, heat mirror coatings for energy conserving windows 2-39723
- Stirling engine inner loop parameters calc. method 2-44638
- thermosyphon systems: single vs multi-pass, efficiency comparisons 2-2810
- thermosyphon systems: single vs multi-pass, efficiency comparisons 2-6170
- trapezoidal groove solar collectors, natural convection and sidewall losses 2-6180
- vapour-gas mixture condensation, influence of boundary kinetic effects 2-45545
- Wielh outdoor swimming pool covers for heat losses reduction, cost-effectiveness (*German*) 2-29994

**heat measurement see thermal variables measurement****heat of adsorption**

- acrylonitrile sorption isotherms on an acrylonitrile-styrene copolymer 2-50995
- adsorption kinetics of  $\text{NH}_3$  on Au surface studied by monitoring gas conc. using optoacoustic effect 2-52247
- adsorption of Ar, monolayer and bilayer films, lattice const. and vibr., thermodynamic props. 2-45714
- aerosols, chemically modified,  $\text{N}_2$  adsorpt. energy distrib. functions, condensation approx. 2-41942
- charcoal, adsorption isotherms and heats of adsorption of Ne and  $\text{H}_2$  2-35889
- heterogeneous solid surfaces with random topography, low temp. adsorption of gases 2-26216
- heterogeneous surface, adsorption isotherms (*German*) 2-45737
- oxides, surface clusters, quantum chem. calc. (*German*) 2-45736
- porous material structure characterisation, adsorption isotherm 2-50996
- silicates, layered, heat of adsorption of water 2-1733
- zeolite 13X, adsorption isotherms and heats of adsorption of Ne and  $\text{H}_2$  2-35889
- Ag(111), adsorpt. of Xe(Kr), monolayer and bilayer films, lattice const. and vibr., thermodynamic props. 2-45714
- Al-GaAs (100), interface behaviour and crystallographic relationships 2-8715
- C, activated, high temp. adsorption of water 2-5308
- CoO, surface clusters, quantum chem. calc. (*German*) 2-45736
- KCl:  $\text{Cd}^{2+}$ , linear crystn. rate of KCl, Cd ions influence, adsorption role (*Russian*) 2-31615
- MgO-CoO, surface clusters, quantum chem. calc. (*German*) 2-45736
- NaCl films deposited on Ir and C-coated Ir surfaces, evaporation at temp. above equil., heat of adsorpt. 2-1747
- PbS, adsorpt. of  $\text{O}_2$ , on atomically clean surface, calorimetric heat of adsorpt. determ. 2-12907
- Pd-Au alloy wire, adsorption and reaction of CO and  $\text{O}_2$  2-26230
- Pt, desorption of  $\text{H}_2$ , studied by He beam diff. Debye-Waller effect, surface vibr. 2-51001
- Pt surface (111), interaction with  $\text{H}_2$  studied by He beam diff. 2-41941
- Pt(110), adsorption of  $\text{SO}_2$ , AES, flash desorption and CO titration studies 2-16940
- Rh(110), adsorption of  $\text{SO}_2$ , AES, flash desorption and CO titration study 2-16940
- Si, adsorpt. of  $\text{O}_2$ , on atomically clean surface, calorimetric heat of adsorpt. determ. 2-12907
- SiO<sub>2</sub>, surface clusters, quantum chem. calc. (*German*) 2-45736
- W, adsorption of Li and O, on (100) face, work function and heat of adsorpt. 2-21444

**heat of combustion**

- AlP, heat of formation and combustion,  $\text{O}_2$  bomb calorimetric technique 2-9566
- BP, heat of formation and combustion,  $\text{O}_2$  bomb calorimetric technique 2-9566
- CuFeS<sub>2</sub>, chalcopyrite, standard energy of combustion in F, bomb calorimetry, standard enthalpy of form. 2-27468
- K<sub>2</sub>S, standard energy of combustion in F, bomb calorimetry, standard enthalpy of form. 2-27467
- Zn<sub>3</sub>P<sub>2</sub>, heat of formation and combustion,  $\text{O}_2$  bomb calorimetric technique 2-9566

**heat of crystallisation**

- nucleation, rectangular parallelepiped nuclei, homogeneous and heterogeneous conditions 2-45086
- Ge, amorphous, transition temp. and heat of crystn., DSC determ. 2-8435
- Ge<sub>1-x</sub>Si<sub>x</sub>, amorphous, transition temp. and heat of crystn., DSC determ. 2-8435
- NH<sub>4</sub>I, rectangular parallelepiped nuclei, edge energy 2-45086
- Si, amorphous, transition temp. and heat of crystn., DSC determ. 2-8435

**heat of dissociation**

- 9,10-dipropylanthracene dimer cation, ENDOR spectrum, heat of dissoc. 2-15829
- AgSi, gaseous molecule, dissoc. energy, mass-spectrometric determ. (*German*) 2-28929
- AlCl<sub>3</sub>-NdCl<sub>3</sub>, mass spectrometric investigation 2-9585
- CuSi, gaseous molecule, dissoc. energy, mass-spectrometric determ. (*German*) 2-28929
- FeF<sub>3</sub>, chem. equil., heats of form. and dissoc., mass spectra 2-37086
- FeF<sub>4</sub>, chem. equil., heats of form. and dissoc., mass spectra 2-37086
- LaSb powders, evaporation characts. 2-17914
- NbO<sub>2</sub>, vaporisation by mass effusion and mass-spectrometric methods 2-43611
- NdSb powders, evaporation characts. 2-17914

**heat of dissociation continued**

- PrSb powders, evaporation characts. 2-17914
- SmSb powders, evaporation characts. 2-17914

**heat of formation**

- acetylene, photoionisation mass spectrometric study in VUV region, ab initio calcs., autoionisation 2-34507
- alkali metal alloys, disordered, heat of form., density functional pseudopot. approach 2-5247
- alkali metal alloys, disordered, heat of form., density functional pseudopot. approach 2-8639
- alkaline earth alloys, disordered solid, heat of form., density functional-pseudopot. calc. 2-37097
- alloys, thermochem. data from photoelectron spectra 2-6050
- cyclohexane, electron impact ionisation and fragmentation 2-20196
- cyclopentylamine, thermodynamic props. 2-5248
- cyclopropylamine, thermodynamic props. 2-5248
- dilute alloys, impurity binding energy, correlation with heat of formation 2-1497
- 1,4-dioxane-methanol mixtures, excess Gibbs free energy, heat of mixing and form., equil. const. (*German*) 2-27469
- metal, FCC, single vacancy form. energy 2-35491
- metal hydrides, Debye temp. rel. to heat of formation 2-30561
- methoxy cation, heat of formation from electron impact dissoc. of organic compounds 2-22483
- methylene-cyclobutane, thermodynamic props. 2-5248
- noble metal based alloys, prediction of solid solubility 2-35692
- polyatomic negative ions in KF-AlF<sub>3</sub> system, form., mol. const., thermodynamic functions, ion-mol. reactions 2-22428
- rare earth nitrides, heat of form. calc. based on bonding theory 2-9564
- slags and metal oxides, vaporisation in reactive atmos., MHD and coal gasifier systems 2-26029
- spirohydrocarbons, small-ring, hybridisation, iterative max. overlap approach 2-4227
- ternary system, partial thermodynamic functions and liquidus surface calc. from congruently melting binary cpd. liquidus curve 2-40512
- transition metal borides, carbides, nitrides, silicides and phosphides, enthalpy of formation 2-41916
- transition metal hydrides, heat of form., bond anal., local density functional approx. 2-35433
- Al-Ca, absorption of  $\text{H}_2$ , thermodynamics,  $\text{H}_2$  titration method 2-8706
- Al-Ge-Si, heat of form. determ. by high temp. calorimetry 2-9563
- Al-Si, heat of form. determ. by high temp. calorimetry 2-9563
- $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, thermodynamic stability 2-13994
- AlP, heat of formation and combustion,  $\text{O}_2$  bomb calorimetric technique 2-9566
- Al<sub>2</sub>S<sub>3</sub>, high temp. enthalpy and X-ray powder diff. data 2-50887
- Al<sub>2</sub>S<sub>3</sub>, thermodynamic props. 2-30629
- BP, heat of formation and combustion,  $\text{O}_2$  bomb calorimetric technique 2-9566
- C<sub>2</sub>H<sub>4</sub><sup>2+</sup>, struct. and energies of isomers ab initio calcs. 2-19962
- CO<sub>2</sub>-HF complex, energy hypersurface, stationary points, form. thermodynamics 2-15862
- CaO-Cr<sub>2</sub>O<sub>3</sub>-CrO<sub>3</sub>, calc. of thermodynamic const. 2-6053
- CdCr<sub>2</sub>Se<sub>4</sub>, ferromagnetic semiconductor,  $\text{P}_{\text{Se}}^{\text{Cd}}\text{-a}_{\text{CdSe}}$  phase diagram (*Japanese*) 2-45531
- CdO, standard molar enthalpy of form. in Cd+PbO reaction 2-17912
- $\beta$ -Co-Ga, ordered, enthalpy of form. anal. defect struct. 2-51877
- C<sub>3</sub>CrO<sub>4</sub>, thermodynamic props. 2-2727
- $\beta$ -Cs<sub>2</sub>U<sub>2</sub>O<sub>7</sub>, heat capacity and thermodynamic functions, standard enthalpy of form., (Cs+U+O) thermodynamics 2-37093
- Cu-Co, liquid alloys, thermodynamic study (*Japanese*) 2-27144
- Cu-Zn(Al)(Sn), liq. free energy and other thermodynamic props., conc. depend. 2-12779
- CuFeS<sub>2</sub>, chalcopyrite, standard energy of combustion in F, bomb calorimetry, standard enthalpy of form. 2-27468
- Cu<sub>2</sub>O(s), standard Gibbs energy of formation, 1066-1220°C 2-16816
- Cu<sub>2</sub>S, thermodynamic props. 2-26079
- Cu<sub>2</sub>S, thermodynamic props. 2-26079
- Cu<sub>2</sub>Te, dissociation press. meas. 2-9535
- F+HNF, IR chemiluminesc. obs., heat of form., ab initio and statistical calcs. 2-37077
- Fe-Mo system, phase equil. and thermodynamics 2-27140
- Fe-Mo-O system, phase equil. and thermodynamics 2-27140
- FeF<sub>3</sub>, chem. equil., heats of form. and dissoc., mass spectra 2-37086
- FeF<sub>4</sub>, chem. equil., heats of form. and dissoc., mass spectra 2-37086
- Ga chalcogenides, electronic props. 2-40316
- HF-ClF, minima on 4-31G and 4-31G\* energy hypersurfaces and thermodynamics of form. 2-668
- KCl-CuCl, molten salt systems, mass spectrometric study, enthalpies and entropies of form. 2-9589
- KS, gas phase, thermodynamics props. 2-30268
- K<sub>2</sub>S, gas phase, thermodynamics props. 2-30268
- K<sub>2</sub>S, standard energy of combustion in F, bomb calorimetry, standard enthalpy of form. 2-27467
- LaF<sub>4</sub>, above lanthanum trifluoride, ion-molecular equilibria, enthalpy of form. 2-41913
- LaSb powders, evaporation characts. 2-17914
- LiBr-CuBr, molten salt systems, mass spectrometric study, enthalpies and entropies of form. 2-9589
- LiCl:Ca<sup>2+</sup>(Sr<sup>2+</sup>), ionic cond. of pure and doped single crystals 2-26115
- LiCl-CuCl, molten salt systems, mass spectrometric study, enthalpies and entropies of form. 2-9589
- Mg-Ca, disordered solid, heat of form., density functional-pseudopot. calc. 2-37097
- MgO-Cr<sub>2</sub>O<sub>3</sub>-CrO<sub>3</sub>, calc. of thermodynamic const. 2-6053
- Mo-B system, thermodynamic modelling, liq. phase behaviour 2-13698
- Mo<sub>2</sub>B and Mo<sub>2</sub>Si, standard free energy of form. by EMF meas. (*Japanese*) 2-27142
- N<sub>2</sub>, gaseous, proton affinity and thermochem. props. 2-11587
- Na<sub>2</sub>CO<sub>3</sub>·NaHCO<sub>3</sub>·2H<sub>2</sub>O, trona, standard enthalpies of solution and formation 2-6057
- Na<sub>2</sub>CO<sub>3</sub>·3NaHCO<sub>3</sub>, Wegscheider's salt, standard enthalpies of solution and formation 2-6057
- NaCl-AlCl<sub>3</sub>, thermodynamics 2-45591
- NaI-CuI, molten salt systems, mass spectrometric study, enthalpies and entropies of form. 2-9539
- NbO<sub>2</sub>, vaporisation by mass effusion and mass-spectrometric methods 2-43611
- Nd-B system studied between NdB<sub>4,41</sub> and NdB<sub>8,68</sub>, phase rel., vaporisation, heat of vaporisation 2-12722



**heat of formation continued**

- NdSb powders, evaporation characts. 2-17914  
 Ni compounds, EMF-pH diagram, revised 2-52215  
 Ni, vacancy form. enthalpy, positron annihilation determ. 2-12585  
 $O_2^+$ ,  $(CO_2)_2^+$ , ion cluster formation and reactions 2-7692  
 $O_2^+$ ,  $CO_2^+$ , ion cluster formation and reactions 2-7692  
 $O_2^+$ ,  $H_2O^+$ , ion cluster formation and reactions 2-7692  
 $Pb_{1-x}Zr_xO_{3-x}$ , Gibbs energy of formation 2-30630  
 PrSb powders, evaporation characts. 2-17914  
 $SbF_5$ , enthalpy of formation 2-6058  
 $Sb_2S_3$ , enthalpy of formation and high temp. thermodynamic functions 2-6058  
 $Si_3N_4O$ , thermodynamic props. 2-16820  
 SmSb powders, evaporation characts. 2-17914  
 $ThNH_3$ , cryst. struct. and enthalpy of form. 2-9338  
 $ThO_2$ - $ThC_2$ -C equilib., 1328-1796K 2-2709  
 $TiB_2N_{1-x}$ , core level binding energies, photoelectron spectroscopy 2-41488  
 $UF_5$ ,  $UF_6$  and  $U_2F_9$  in vapour above  $UF_4$ , thermochemical props. 2-16413  
 W halides and oxyhalides, heterogeneous reactions and chemical transport, in incandescent lamps 2-2728  
 $WO_3$ , thermodynamic props., 700 to 900°C EMF meas. 2-41917  
 $ZnCr_2O_4$ , single cryst. growth by chem. transport 2-17611  
 $Zn_3P_2$ , heat of formation and combustion,  $O_2$  bomb calorimetric technique 2-9566  
 ZnSe: alkali metal ion, interstitials energy of form. 2-30459

**heat of fusion**

- 1,12-benzoperylene/coronene solid solns., melting curve 2-1594  
 bromobenzene/chlorobenzene solid solns., melting curve 2-1594  
 cyclopentylamine, thermodynamic props. 2-5248  
 cyclopropylamine, thermodynamic props. 2-5248  
 electrically conducting substances, thermophys. props. at high temps., dynamic meas. technique 2-23643  
 energy storage, expts. on heat transfer during solid-liquid phase change 2-2815  
 latest heat energy storage in paraffin-filled cylindrical capsule, phase change at constant wall temp. (Japanese) 2-42046  
 melting temperature, pressure dependence eqn. 2-45535  
 methylenecyclobutane, thermodynamic props. 2-5248  
 naphthalene, alpha- and beta-halogen derivatives, melting, volume changes and latent heat of melting 2-16754  
 polylactone blends, miscibility, melting pts., enthalpies of fusion and morphologies 2-26019  
 propane, triple pt. temp., meas. on solid-liq. and solid-solid transitions 2-35654  
 rare earth perovskites, stability and thermodynamic props. 2-26078  
 solidification, computer simulation 2-47021  
 thermal energy storage materials using latent heat, screening of eutectic mixtures over temp. range 80 to 500°C (Japanese) 2-14124  
 Bi-Sb solid solns., melting curve 2-1594  
 $^3He$ , zero sound and melting curve, entropy contribs. 2-35823  
 Si, amorphous implanted, phase transitions produced by pulsed laser or electron irradi. 2-45283

**heat of mixing**

- acetone, in non-polar solvents, mol. interactions, viscosity meas. 2-8653  
 1,4-dioxane-methanol mixtures, excess Gibbs free energy, heat of mixing and form., equil. const. (German) 2-27469  
 n-hexane-diester system, excess enthalpies 2-5232  
 n-hexane-n-dodecane, excess enthalpy, excess vol., excess Gibbs free energy at 298.15 and 308.15K 2-1627  
 hydrocarbon-n-alkyl acetate mixtures, heats of mixing and contact interaction 2-1624  
 III-V semiconductor material design for electronic devices used under unusual conditions (Japanese) 2-8618  
 III-V semiconductors, immiscibility, excess free energy of mixing (Japanese) 2-50868  
 liquid alloys, thermodynamic functions, association model, basic concepts. 2-51875  
 liquid alloys, thermodynamic functions, association model, numerical treatment and results 2-51876  
 methyl ethyl ketone, in non-polar solvents, mol. interactions, viscosity meas. 2-8653  
 poly(butadiene-acrylonitrile), polar and nonpolar probes studies, determ. of infinite-dilution solubility parameters 2-26061  
 poly(ethylene-vinylacetate), polar and nonpolar probes studies, determ. of infinite-dilution solubility parameters 2-26061  
 cis-1,4-polybutadiene, polar and nonpolar probes studies, determ. of infinite-dilution solubility parameters 2-26061  
 polychloroprene, polar and nonpolar probes studies, determ. of infinite-dilution solubility parameters 2-26061  
 polymer solutions, intrinsic viscosity in nonpolar solvents, effect of solvent steric hindrance 2-1539  
 polymers, Gibbs energy of mixing, sorbate effect calc. from static sorption data (Russian) 2-21317  
 p-xylene-benzene(dioxane) (cyclohexane) (methylcyclohexane) 2-8620  
 Al-C-B interstitial solid soln., mixing energy (Russian) 2-5228  
 B fibre reinforced Ti, B solubility, matrix alloying effect 2-36867  
 Cd-Zn eutectic alloy, phase diagram, pseudopot. method and thermodynamics 2-22198  
 CoTi, mixing enthalpy, expt. and theoretical, CsCl type phases 2-12765  
 Cu-Bi alloys at 700 to 1100°C, thermodynamics and liquidus equilibrium 2-41582  
 Cu-Ti liq. alloy, thermochemistry 2-8624  
 Fe-Ni(Co), solid and liq., thermodynamic activities and heat of mixing meas. by Knudsen-Cell mass spectrometry 2-16817  
 $Fe_3O_4$ - $FeAl_2O_4$  spinel solid solns., thermodynamic props. 2-35695  
 $Fe_3O_4$ - $FeV_2O_4$ ( $FeCr_2O_4$ ), spinel solid soln., thermodynamic props. 2-51883  
 FeTi, mixing enthalpy, expt. and theoretical, CsCl type phases 2-12765  
 $^3He$ - $^4He$  solid solution, phase separation, X-ray diff. 2-45675  
 MnO, thermodynamic activity in melts containing  $SiO_2$ ,  $B_2O_3$  and  $TiO_2$  2-8645  
 NiTi, mixing enthalpy, expt. and theoretical, CsCl type phases 2-12765  
 Pd-Cu system, mixing enthalpies, expt. determ. using high temp. calorimetry (German) 2-35702  
 Pd-Si alloys, mixing enthalpy, determ. by high temp. calorimetry at 1600K (German) 2-30609  
 Si-Cu system, mixing enthalpies, expt. determ. using high temp. calorimetry (German) 2-35702

**heat of mixing continued**

- V-O solutions, high temp. thermodynamics 2-5230  
 $ZnO$ - $CoO$ (NiO) free energy of mixing 2-21304

**heat of reaction**

- see also heat of combustion; heat of dissociation; heat of formation  
 cadmium oxalate trihydrate:  $Mg^{2+}(Zn^{2+})(Fe^{2+})(Ca^{2+})(Ni^{2+})(Zr^{4+})$   
 thermal decomp. kinetics, impurity effects 2-6029  
 cyclohexanone liq., energy param., US dispersion studies 2-35607  
 shallow water divers, local heating from granular mixture Fe and Mg particles activated by seawater 2-14100  
 $CaO$ - $Cr_2O_3$ - $CrO_3$ , calc. of thermodynamic consts. 2-6053  
 $Cd + PbO \rightarrow Pb + CdO$  reduction equil., calorimetry and equil. meas., enthalpy of reaction and form. of  $CdO$  2-17912  
 $Li_iH_m$  ( $m \leq n \leq 4$ ), electronic struct., ab initio SCF MO calc. 2-43788  
 $MgO$ - $Cr_2O_3$ - $CrO_3$ , calc. of thermodynamic consts. 2-6053  
 $TiO_2 + Si_3N_4$ , reaction mechanism, thermodynamic anal. 2-37059  
 $ZrO_2 + Si_3N_4$ , reaction mechanism, thermodynamic anal. 2-37059  
 ZrP, amorphous, ion exchange mechanism, enthalpy and entropy changes 2-14000  
 $\alpha$ -ZrP, thermodynamics of alkali metal ion exchange 2-14001

**heat of solution**

- alloys, thermochem. data from photoelectron spectra 2-6050  
 amino acids soln., enthalpies, heat capacities and apparent molal volumes of transfer 2-13996  
 p-n-heptyl-p'-cyanobiphenyl, thermodynamics of solns. of nonmesomorphic solutes in nematic and isotropic ph. ases 2-9565  
 3d metals, rare gas interaction pair pot., He-vacancy interaction 2-40425  
 noble gas atoms in metals, heat of soln. and interaction effects 2-12766  
 polyacrylamides in  $H_2O$ , heats of dilution 2-40558  
 polyelectrolyte solns., enthalpy of dilution, temp. effect 2-13993  
 B CVD coating,  $D_2$  trapping meas. for tokamak fusion test reactor 2-12948  
 $CaO$ - $Cr_2O_3$ - $CrO_3$ , calc. of thermodynamic consts. 2-6053  
 CsF, soln. in formic, acetic and propionic acids, heat of soln., H-bonds 2-2725  
 Cu-Ti liq. alloy, thermochemistry 2-8624  
 KF, soln. in formic, acetic and propionic acids, heat of soln., H-bonds 2-2725  
 LiI aq. soln. struct. props. derived from mol. dynamics simulation 2-12456  
 Mg:H,  $H_2$  dissolution enthalpy, high press. anal. 2-45586  
 $MgO$ - $Cr_2O_3$ - $CrO_3$ , calc. of thermodynamic consts. 2-6053  
 $Na_2CO_3 \cdot NaHCO_3 \cdot 2H_2O$ , trona, standard enthalpies of solution and formation 2-6057  
 $Na_2CO_3 \cdot 3NaHCO_3$ , Wegscheider's salt, standard enthalpies of solution and formation 2-6057  
 $O_2$  in liquid Ni, solubility limit, thermodynamic props. 2-2726  
 Pb-Ag, liq., thermodynamic behaviour of dil. soln. of S 2-40562  
 Pd-H(D) dilute solns., thermodynamic props., 500 to 909K 2-40554  
 RbF, soln. in formic, acetic and propionic acids, heat of soln., H-bonds 2-2725  
 SiC, solid solubility of Al and B 2-51884

**heat of sublimation**

- carbonaceous-graphitic materials, vapour comp., partial press., sublimation heats, free energy changes 2-40527  
 naphthalene, liq. and solid, vapour press., 270 to 385K meas. 2-35659  
 $AlCl_3$ - $NdCl_3$ , mass spectrometric investigation 2-9585

**heat of transformation**

- see also heat of crystallisation; heat of fusion; heat of sublimation; heat of vapourisation  
 n-alkyltrimethylammonium halides, long-chain, solid-solid phase transitions study 2-12735  
 benzene-hexa-n-heptanoate, mesogenic disc like mols., heat capacity, 13-393 3K 2-12769  
 ferrocene crystal, thermodynamic props. 2-21332  
 graphite-halogen intercalation compounds, enthalpy changes of phase transitions 2-16778  
 liquid metals, model at melting point (Russian) 2-35378  
 multifunctional thermophysical property meas. adiabatic plate calorimeter (Chinese) 2-48703  
 p-sexiphenyl, nematic to isotropic transition, differential scanning calorimetry 2-16785  
 propane, triple pt. temp., meas. on solid-liq. and solid-solid transitions 2-35654  
 smectic A phase diagrams exhibiting enhancement, calorimetry 2-12744  
 Ba, solids and liquids, heat capacity and heat of phase transition meas. using pulsed differential method 2-16809  
 $Cs_2CrO_4$ , thermodynamic props. 2-2727  
 Cu-Zn-Al alloys, martensitic transformation study by coupled enthalpy and acoustic emission meas. 2-2509  
 Ga, polymorphic transformation, hysteresis under press., low temp. (Russian) 2-21291  
 $Gd_2O_3$ , elec. conductivity and heats of high-temp. phase transitions 2-1905  
 $GeO_2$ ,  $\alpha$ -quartz to rutile transform. kinetics under high press. 2-50840  
 $^3He$ , normal and superfluid phases, sp. ht. meas. phase diagram 2-30690  
 Mn complex, phosphacymantine, order-disorder transition, calorimetric, X-ray and Raman diff. study (French) 2-50847  
 $ND_4Cl$ , effect of press. on  $\lambda$ -transitions 2-5219  
 $NH_4Cl$ , effect of press. on  $\lambda$ -transitions 2-5219  
 NbSe<sub>3</sub>, quasi-one-dimens. cond., calorimetric obs. of phase transitions 2-30611  
 $Ni_{1-x}V_xS$ , first order mag. and elec. transitions, substitution effect 2-17277  
 TlBr-PbBr<sub>2</sub>, X-ray and thermoanalytic investigations (German) 2-13709  
 ZnO, allotropic transform., free energy changes, electrochem. determ. 2-21304

**heat of vapourisation**

- alkali metal halides 2-16765  
 n-alkanes, vaporisation props., free energy, enthalpy and entropy 2-12780  
 benzene, thermodynamic props. and struct., appl. to polymer solns. 2-8641  
 isopropyl alcohol, vaporisation study using pyroelec. differential thermal analyser 2-33517  
 isothermal calorimeter for the direct measurement of enthalpy of vaporization at high pressure and high temperature 2-43020  
 pure fluid, latent heat of vaporisation 2-40526



**heat of vapourisation continued**

- steel stainless, type 316 and mixed oxide fuel, transport and thermodynamic props. 2-34141  
 NbO<sub>2</sub>, vaporisation by mass effusion and mass-spectrometric methods 2-43611

**heat of wetting** *see wetting***heat pipes**

- arterial heat pipes with capillary channels, method for calc. hydrodynamic heat transfer boundary 2-35155  
 chemical, EVA and ADAM processes 2-37421  
 evaporator, heat and mass transfer in capillary, investig. equipment construction (Russian) 2-16399  
 evaporator, heat and mass transfer in right-angled capillary, turbulence obs. (Russian) 2-16317  
 evaporator, heat transfer mechanism, in pipe with screen mesh wick 2-44718  
 gas-regulated heat pipes with soluble gas, heat stabilising props. 2-8018  
 HEAT ECON, heat exchanger with heat pipes, props. and appls. (Japanese) 2-27721  
 high temp. reactors, thermochemical heat pipe appls. 2-6132  
 passive heat pipe photovoltaic receiver, heat exchanger 2-27682  
 rotary heat pipe heat exchanger, research and development (Japanese) 2-27723  
 solar, Philips vapour conductor heat-pipe collector (Dutch) 2-37439  
 solar concentrator cells, passive cooling using Cu heat pipe with water/acetone working fluid 2-27667  
 solar power appl. and optimisation 2-9630  
 temperature separation, by Hartmann-Sprenger tube coupling a secondary resonator 2-30198  
 thermal onset in pipe with heat source 2-1264

**heat pumps**

- absorption heat pump using industrial exhaust heat, heat exchanger performance improvement (Japanese) 2-22642  
 active solar heating and cooling using heat pump systems 2-18120  
 air conditioning plant at Riyadh University, Saudi Arabia, appl. 2-9667  
 air source, electrically driven, for domestic space heating with minimum energy consumption 2-52380  
 boiler-heat pump combinations for space heating, enthalpy and exergy analyses 2-6158  
 chemical heat pumps and competitive systems, cost effectiveness and energy consumption evaluation 2-22673  
 classification, working and installation (Italian) 2-37425  
 compression, industrial application in drying and concentrating processes, technical and economic factors (French) 2-2798  
 COP, determining factors and feasibility study for its increase 2-2801  
 correct dimensioning for residential heating (German) 2-37431  
 design, operation and performance of a ground coupled heat pump system in a cold climate 2-18022  
 development of domestic heat pumps, prototype tests 2-2802  
 drying system development using heat pumps and the Brayton cycle (French) 2-2797  
 efficiency and reliability improvements 2-18118  
 electricity and some new energy sources (French) 2-32031  
 energy conservation test facility, data acquisition system 2-37434  
 fundamentals of heat pump technology 2-14101  
 gas compression, design and energy balance, for optimum energy consumption (German) 2-37433  
 gas engine fed, for malting drying kilns (French) 2-47514  
 geothermal power appl. to space heating and hot water supply (French) 2-2770  
 industrial waste heat recovery for process heating, heat pump concepts 2-27726  
 integrating heat pumps into heating systems 2-14102  
 metal hydride heat pump, thermodynamic analysis 2-32094  
 multichannel data logger for heat pumps using C90 cassettes 2-52378  
 Netherlands energy conservation program using heat pumps (Dutch) 2-32095  
 noise suppression of heat exchangers in heat pump circuits (French) 2-6157  
 performance of an air-water heat pump installed in an experimental house 2-52377  
 plaster blocks drying installation using heat pumps (French) 2-2799  
 principles, and domestic space heating appls. (German) 2-37430  
 railroad driver cab thermoelectric heat pump transient response 2-18114  
 Rankine cycle augmented light-gas-flow turbine studies 2-32101  
 refrigeration system for Wiehl indoor skating rink (German) 2-32099  
 regional supply concerns supplying low-temperature heat for space heating, economic aspects (German) 2-32096  
 residential space and water heating using off-peak electricity supplied heat pumps 2-37423  
 results of test rig operation of hot water heat pumps (German) 2-47515  
 retrofitted solar-assisted heat-pump system, performance evaluation in hot/arid climate 2-27550  
 sand source heat pump systems assessment 2-52379  
 solar absorber as heat source, features and advantages (German) 2-37429  
 solar assisted heat pump system, thermal anal. and outline 2-27551  
 solar assisted series system, computer simulation anal. of operation 2-47513  
 solar driven chemical heat pump system, sensitivity anal. 2-32093  
 solar energy plant with electrically driven heat pump for room heating and hot water, numerical simulation (German) 2-47446  
 solar powered, characts. 2-18020  
 solar powered system performance factors 2-18019  
 solar-assisted heat pump and swimming pool synergy for domestic heating 2-6160  
 solar-assisted heat pump systems, design procedure and appl. 2-6162  
 sources of heat, and installations design for utilisation (Italian) 2-47508  
 space heating, closed-loop earth coupled water source heat pump, performance 2-9668  
 standby power generation unit internal combustion engine co-utilisation to drive heat pump plant 2-18122  
 technical and economic factors in the possible use of gas-engine driven heat pumps for space heating (German) 2-37424  
 test results of prototype solar assisted heat pumps 2-18021  
 zeolite heat pump and zeolite heat transformer for load management 2-22668  
 H<sub>2</sub>SO<sub>4</sub> chemical heat pumps for industry 2-22674

**heat radiation**

- air hypersonic flow, blunt body radiative-convective heat transfer, ablation product effect 2-4855

**heat radiation continued**

- calorimeter design of low temperature radiative transfer between metallic surfaces as spacing function 2-4699  
 condensed medium, plane layer, with optically smooth surfaces, influence of scatt. on radiant transport 2-8020  
 conical bodies vaporising under action of powerful laser radiation, soln. of thermal problem 2-25228  
 droplets, evaporation into dry air and steam at high temps., radiation effect 2-4711  
 ethylene gas, selectivity emitting, radiative cooling 2-1286  
 flame oven, radiative heat transfer, gray radiation model appl. 2-12015  
 gas-particulate tube flow, anisotropically scatt., emitting and absorbing, combined radiation and convection 2-1266  
 harmonic oscillators, energy quantisation, rel. to black body radiation, Einstein's contrib. 2-15131  
 heat and mass transfer coeff. calc. for rivers, influence of net radiation flux (German) 2-39914  
 hemispherical transmissivity and reflectivity for non-azimuthally symmetric radiative transfer in a plane slab 2-50063  
 isothermal cylindrical medium, nongray particulate radiation 2-35042  
 isotropic scattering in finite thick cylindrical medium exposed to a laser beam 2-44193  
 leucosapphire, unsteady radiative-conductive heat transfer calc. 2-4698  
 methane, laminar diffusion flame, thermal radiation, boundary layer eqns. 2-31921  
 molecular gases-particulate cloud interaction, plane-layer mixture, radiative heat transfer 2-20515  
 molten glass, cooling-solidification process, radiative transfer 2-35137  
 monodisperse particle system, radiation transport 2-39903  
 nongray medium, radiative heat transfer, P-1 approx. appl. 2-35043  
 nonlinear viscoplastic fluid, Couette flow, radiative and convective heat transfer 2-25372  
 one dimensional gas dynamics problem, radiation transport eqn. (Russian) 2-30160  
 optically thick boundary layer on isothermal plate, radiation-convection heat transfer 2-12136  
 optically thick layer, radiative and free convection thermal conductivity 2-8023  
 partially contacting interface, transient heat flow 2-4692  
 plane layer of selective scattering medium, unsteady radiative and conductive heat transfer 2-8021  
 plane layer of slightly absorbing medium, radiation conduction heat transfer 2-39792  
 plane nonisothermal nonscattering media, effective emissivity, boundary surface props. 2-12014  
 radiating fins, periodic heat transfer, perturbation anal. (German) 2-50064  
 radiating gas, finite amplitude waves, growth and decay 2-12250  
 radiation effects in single-phase and multiphase flows, review 2-16372  
 radiative heat flux in emitting, absorbing and scattering cylindrical media 2-12016  
 radiative heat transfer in the presence of obscurations 2-20513  
 radiative magnetogasdynamics, growth and decay of weak waves 2-20514  
 radiative transfer, maximum entropy Eddington factors, flux limited diffusion theory 2-8022  
 radiative transfer in finite inhomogeneous plane-parallel atmospheres 2-44641  
 solar collector, parabolic cylinder, radiant energy distrib. (Spanish) 2-32029  
 steel, low C, radiating power, effect of coatings 2-4696  
 steels, transformer and dynamo, degree of blackness, radiation props. in protective medium 2-16224  
 TAU program, heat radiation between elements in different geometries 2-16225  
 temperature measurement from intensity distribution in the spectrum of a radiating heated body 2-39799  
 time-dependent radiative transfer in a semi-infinite medium with a reflecting boundary 2-44643  
 transfer, nonstationary, with Compton effect calcs. (Russian) 2-8024  
 trombe walls and roof pond systems, performance 2-18039  
 unsteady gas flows, shock waves, radiative heat transfer, energy transport processes 2-16284  
 wall, thick insulated vertical, combined effects of cond., natural convection and radiation on heat transfer (French) 2-8017  
 H<sub>2</sub>-He flow, over flat plate, laminar boundary layer, effect of C blowing, heat transfer 2-35131  
 Y<sub>2</sub>O<sub>3</sub>, emissivity of sprayed layers 2-4697  
 ZrO<sub>2</sub>, solid solutions, emissivity of sprayed layers 2-4697

**heat sinks**

- laser diodes metallisation and heat sink problems, (AlGa)As and InGaAsP 2-4519  
 GaAs high concentration photovoltaic cells, thermal impedance effects 2-27683

**heat systems**

- see also boilers; heating*  
 estimation of the energy transfer function/ of a flat-plate solar water heater system/ 2-37188  
 integrating heat pumps into heating systems 2-14102  
 regenerators, thermal performance, waste heat recovery, steam injection effect 2-4689  
 solar absorber-convector arrays, thermal performance simulations for domestic hot water systems 2-37451  
 solar collector optimum position computerised control in domestic water heating systems (German) 2-41985  
 solar thermosyphon domestic water system, temps., mass flow-rates 2-37446  
 Stirling engine inner loop parameters calc. method 2-44638  
 water heater, catalytic combustion of hydrogen in model appliances 2-47506  
 water pool boiling process stabilisation at atmospheric pressure around Pt heating wire using electronic feedback system (French) 2-44719

**heat transfer**

- see also condensation; convection; cooling; evaporation; heat conduction; heat radiation; radiative transfer; thermal diffusivity*  
 Abce enstatite chondrite, thermal history from thermal meas. and heat flow calcs. 2-14826  
 acoustic excitation resonance effects for air in cross flow to a cylinder 2-50260  
 aerosols, motion in inhomogeneous temp. field, influence of flat wall 2-39969



## heat transfer continued

agrometeorology, heat and mass transfer, electrochem. simulation 2-4687  
 air enclosures of aspect ratio less than one, heat transfer 2-50268  
 air injection in stagnation region, shock layer, axisymmetric eqns. 2-30182  
 air jet array, impingement with crossflow, streamwise flow and heat transfer distribts. 2-12194  
 air-rockbed thermal storage system, pressure drop and heat transfer characts. 2-47523  
 alloys, solidifying, processes of heat and mass exchange during dendrite struct. formation 2-22211  
 annular ducts, turbulence models, heat transfer 2-35162  
 arterial heat pipes with capillary channels, method for calc. hydrodynamic heat transfer boundary 2-35155  
 N Atlantic Ocean, surface heat fluxes rel. to thermal struct. of active layer (*Russian*) 2-10070  
 atmosphere, error anal. of Thornthwaite-Holzman eqns. for sensible and latent heat fluxes over crop and forest canopies 2-14550  
 atmosphere, sensible and latent heat transfer over India during drought and normal monsoons 2-3064  
 bibliography of Japanese works on heat transfer 2-3346  
 bibliography of Polish works (1979-1980) 2-19  
 bibliography of Soviet works from 1979 to 1980 2-33257  
 blunt bodies in hypersonic flight, vorticity effect on heat transfer 2-50255  
 boiling crises in horizontal channels with a screen on the inside surface 2-8230  
 boiling curve obtained by static method, thermistor appl. 2-33518  
 boundary conditions in the calculation of transient heat- and mass-transfer processes 2-39877  
 boundary layer, flow over rot. body, heat and mass transfer 2-35146  
 Bridgman crystal growth, thermal modelling 2-45088  
 bubbles, radially pulsating in liq., heat transfer coeff., oscillations decay rates 2-20734  
 building roof/wall, solar gain increase by thermal trap use 2-52383  
 CANDU nuclear reactors, heat transfer and fluid mechanics of water loop during breakdown and injection 2-24383  
 capillary porous body of spherical geometry under boundary conditions of first kind, heat and mass transfer 2-8136  
 carbon tetrachloride, pool boiling heat transfer, surface roughness and subcooling effects 2-35035  
 2-D cavity flow, heat transfer, numerical anal. using finite-analytic method 2-1199  
 ceramics manufacture, heat transfer calc. 2-22188  
 channel with porous layer, heat transfer during liq. filtration 2-30135  
 coefficient for turbulent flow of real gases, nonisothermicity effects 2-25375  
 collector/storage solar water heaters performance anal. for arbitrary demand patterns arising from residential and industrial applications 2-32113  
 compact plate-fin heat exchanger, boiling heat transfer 2-30127  
 complex heat exchange of dispersed turbulent flow in pipe 2-12144  
 composite superconductor, nonstationary heat exchange in normal-zone propagation 2-17214  
 concentrating solar collectors heat losses reduction design measures 2-47516  
 condensation on finned tubes, heat transfer rate calc. (method) 2-16221  
 condensing surface design optimisation, rate calc. (*German*) 2-50072  
 conical bodies vaporising under action of powerful laser radiation, soln. of thermal problem 2-25228  
 conjugated heat transfer in fully developed flow 2-35145  
 convective and radiative heat transfer in MHD radiant boilers 2-47503  
 convective heat and mass transfer from objects immersed in filtering granular bed 2-35210  
 cooling channels, formulas for calc. optimum equivalent diameter 2-30134  
 cooling towers, crossflow, plastics corrugated sheet arrangement for use as heat transfer packing 2-29988  
 core meltdown, downward heat transfer in sacrificial bed, model expts. 2-512  
 corrugated wall channels, with two bends, fluid flow and heat transfer 2-39985  
 countercurrent flow, air and water in vertical duct, wall roughness effect on heat transfer 2-35135  
 coupled heat, mass and momentum transport, thermodynamic fluxes and forces, linear transformations 2-8027  
 coupled heat and mass momentum transport, thermodynamics with finite wave speed 2-1113  
 creeping viscous flow around a heat-generating solid sphere 2-12153  
 critical heat flux during blowdown transients, appl. to nuclear reactor loss of coolant accidents 2-12139  
 critical heat fluxes on the bottom of a dead-end chamber with an impinging circular water jet 2-39905  
 criticality in a model for thermal ignition in three or more dimensions 2-42973  
 cryogenic liquid in piston flow, phase slip and heat transfer in film boiling 2-25370  
 crystal growth from melt, temp. distrib. in transient profiled crystals. 2-1415  
 cylinders, circular, concentric, vibr., heat transfer anal. 2-20670  
 cylindrical parabolic concentrating collector, analytical model and performance data 2-14106  
 decane, evaporating thin film, heat transfer in contact line region, microphotometric obs. 2-10842  
 deformation of a thermal marker in a liquid moving in flat or cylindrical channels 2-8231  
 dehydration technology of thermo- and moisture labile materials, thermal features 2-35046  
 dewar, super-insulated, for liq. N<sub>2</sub> 2-10810  
 dielectric fluid flowing along annular channel, influence of electric field of heat transfer 2-44791  
 diethylphthalate, optically thick semitransparent liquid layer, unsteady heat transfer 2-29995  
 differential scanning calorimetry, mathematical treatment of heat flow 2-48704  
 domestic cooling using passive techniques in Saudia Arabia 2-14055  
 double solar still, transient model 2-52384  
 draining liquid film, heat transfer 2-16314  
 dynamically loaded crack tip, local heating study (*Czech*) 2-29992  
 n-eicosane paraffin melting, heat transfer coeff. about vertical cylinder with or without subcooling 2-1591

## heat transfer continued

elastico viscous fluid past infinite porous plate with constant suction, 2-D flow, heat transfer 2-20729  
 electric machines cooling by heat dissipation through heat pipes (*German*) 2-50059  
 end-wall thermal boundary-layer behind reflected shock wave, numerical anal. 2-30181  
 energy flow and thermal conductivity in one-dimensional, harmonic, isotopically disordered crystals, book contrib. 2-10742  
 ethanol-water, binary distillation, heat and mass transfer meas. 2-30122  
 evacuated tubular glass, He permeation constants determ. 2-9681  
 evaporating bubble spray, size and velocity meas., heat transfer, stroboscopic photography technique 2-12203  
 expanding viscous fluid with heat flow, conformally flat soln. of Einstein eqns. 2-33301  
 fin tip, heat transfer coeffs., analytical calc. 2-4691  
 finely dispersed particles, precipitation from cooled gas flow transverse to heat exchanger surface 2-14008  
 finite disc, rotating compressible flow over edge, wall heating effect 2-12173  
 finned interface heat transfer, boundary integral eqn. anal. 2-29993  
 flat plate immersed in fluid with oscillating temp., thermal response 2-29362  
 flow, heat and mass transfer rate evaluation 2-30131  
 flow around a tube in abank 2-1263  
 flow of continuous medium in channel filled with dispersed material, two-phase heat transfer 2-25373  
 fluid, conducting film, removal of Rayleigh-Taylor instability by mag. field and heat flux 2-8117  
 fluids, boiling in elec. field, heat transfer (*Russian*) 2-30573  
 Freon-11, fully developed pool boiling, rel. to surface characterisation 2-35036  
 frictional contact zone, heat formation and distrib. under conditions of non-stationary heat exchange 2-50206  
 frozen crust periodic growth and decay over heat generating liq. layer 2-12150  
 fully rough turbulent boundary layer, accel., heat transfer 2-35163  
 furnace, introduction of heat exchange agent 2-16222  
 fusion reactors, inertial confinement, forced-convection Li test loop for developing and designing cooling and blanket systems (*Japanese*) 2-24416  
 gas inlet conditions effect on heat transfer in spouting bed 2-1192  
 gas-regulated heat pipes with soluble gas, heat stabilising props. 2-8018  
 gas-solid stream, tube flow, heat transfer (*Russian*) 2-50257  
 gas/film flow, heat transfer, surface evaporation and film condensation (*German*) 2-8154  
 gases, low density, aerodynamics, heat transfer, dimensionless numbers 2-30120  
 glass melting processes, intensification by thermohydrodynamic methods 2-25235  
 glass-enamel coatings on steel tubes, temp. regime for induction annealing 2-37003  
 grid evolution in time asymptotic problems 2-38606  
 ground collector/storage system with thermal trap, performance 2-37435  
 half-space with thermal memory, magnetoelastocicity, dynamic problem 2-50098  
 heat equation with random initial condition, finite element scheme stability anal. 2-25221  
 heat exchange between a surface and an agitated layer of dispersed material 2-35045  
 heat exchange during condensation of water vapor on vertical water-repellent pipes 2-44731  
 heat exchanger, two-fluid system, non-linear processes, non-iterative simulation method (*French*) 2-19104  
 heat flux induced wave fronts 2-20669  
 heat meters, auxiliary wall type, thermal inertia 2-12022  
 heat pipe, evaporator, heat and mass transfer in capillary, investig. equipment construction (*Russian*) 2-16399  
 heat pipe, evaporator, heat and mass transfer in right-angled capillary, turbulence obs. (*Russian*) 2-16317  
 heat pipe with screen mesh wick, evaporator heat transfer mechanism 2-44718  
 heat pipes for solar power, optimisation 2-9630  
 heat pump sources of heat, and installations design for utilisation (*Italian*) 2-47508  
 heat transfer and hydraulic resistance of the tube spaces in a spiral-flow heat exchanger 2-38645  
 heat transfer scaling laws for MHD channels and diffusers 2-47504  
 heat-carrier flow, through porous mat. in channel, heat transfer (*Russian*) 2-50256  
 heat-generating solar collector system, effect of inhomogenous flow distribution 2-22644  
 heated surface, in narrow space, boiling heat transfer, bubble influence 2-30123  
 heterogeneous system detonation, interphase heat and mass transfer (*Russian*) 2-1226  
 hollow cylinder in convective heat transfer, stressed state, surface microgeometry influence 2-39810  
 homogenisation of the stationary diffusion equations in flattened cylindrical dominance (*French*) 2-42971  
 horizontal layers of immiscible fluids heated from above, instability 2-20642  
 hot gas flow past surface, form. of liquid film with variable viscosity, flow, heat and mass transfer 2-16312  
 hot water storage systems, thermally stratified, optimisation anal. 2-42043  
 HV, cooling by heat-dissipation using heat pipes 2-50062  
 hydrodynamic resistance coeff., Reynolds number depend. 2-16376  
 hyperbolic type thermal conductivity eqn., temp. fields 2-35044  
 hypersonic flow, over blunt body, vorticity, boundary layer, heat transfer calcs. 2-35134  
 inclined terrain, geostrophic drag and heat transfer 2-32580  
 Incoloy 800 and Inconel 600, steam generator tube for PHWR, NaH<sub>2</sub>PO<sub>4</sub> evaluation as denting inhibitor 2-4016  
 incompressible fluid with variable physical props. in tube in porous walls, drag and heat transfer in laminar motion 2-25352  
 incompressible immiscible fluids in rotating system, Couette flow and heat transfer 2-8161  
 incompressible viscous fluid past uniformly accelerated vertical plate, mass transfer effect 2-12138



**heat transfer continued**

ingot solidification, continuous casting, intensive heat transfer (*Russian*) 2-9344  
 ingot solidification in continuous casting, intensive heat transfer in liq. and crystallising metal case (*Russian*) 2-17674  
 instabilities in thermal diffusion zones of a porous medium (*French*) 2-44723  
 intercommunicated heat and mass transfer, general variational principle (*Russian*) 2-143  
 interferometer, triangular path reversing, appl. to heat transfer studies in natural convection 2-19172  
 internal pipe flow, critical boiling conditions determ. (*German*) 2-39982  
 internally finned tubes, laminar heat transfer charact., fin conductance effect 2-4813  
 lo, magma heat transport as mechanism allowing thick lithosphere 2-28371  
 irreversible-thermodynamic approach to nonequilibrium heat fluctuations 2-42982  
 isotropic medium weakened by periodic system of circular holes and rectilinear cracks, thermoelasticity problem 2-50099  
 jet flame impinging on heat sensing surface, heat transfer 2-30201  
 laminar boundary layer, heat and mass transfer, coeff. change (*German*) 2-50237  
 laminar boundary layer formed on moving plate, heat transfer 2-20638  
 laminar duct flow, heat transfer contrib. (*German*) 2-50325  
 laminar flow, interrupted plate passag heat transfer, plate thickness effect, appl. to heat exchanger 2-4790  
 laminar flow heat transfer between 2-dimens. water jet and flat surface 2-44717  
 laminar radial flow through rot. annular discs, heat transfer and friction loss 2-8141  
 large-particle fluidised beds, gas convection dominant heat transfer 2-12216  
 large-power solar system using molten nitrate salt mixture for heat transfer and as thermal energy storage fluid 2-6189  
 laser beam machining, heat transfer models 2-1117  
 latent heat-of-fusion energy storage, expts. on heat transfer during solid-liquid phase change 2-2815  
 latest heat energy storage in paraffin-filled cylindrical capsule, phase change at constant wall temp. (*Japanese*) 2-42046  
 lattice with dislocation core, nonlinear heat transfer 2-12001  
 Laval no les, gas curtain effectiveness under nonrated flow conditions 2-12197  
 Lewis number determ. 2-30133  
 linear parabolic collector with cylindrical absorber, steady state and transient model for thermal parameters anal. 2-14107  
 linear thermoelastic problem of a uniform heat flow disturbed by an infinite row of parallel circumferential edge cracks along a cylindrical cavity 2-50755  
 liquefied natural gas pipeline, low-temp., installed above ground, freezing over influencing factors 2-44639  
 liquid, heated from below, mech. equilib., local (*Russian*) 2-1112  
 liquid films, aerodynamic heating, ablation, laminar to turbulent transition, asymptotic props. 2-35132  
 liquid in channels of evaporators, boiling and evaporation, heat transfer 2-25231  
 liquid metal, instability in alternating mag. field, surface undulations 2-39994  
 liquids, nonequilibrium superheat-subcooling under sudden pressurisation 2-25428  
 liquids, Shirokov's formula connecting transfer props. with vel. of sound 2-35156  
 LMFBR, fuel element container meltdown, heat transfer modelling (*German*) 2-536  
 LMFBR, variable flow allocation scheme optimisation 2-29363  
 LOCA, downflow post-critical heat flux heat transfer to low press. H<sub>2</sub>O 2-39196  
 longitudinal streamlining of a semiinfinitely large plate by a viscoelastic fluid with heat transfer 2-35154  
 lumping method for transport phenomena 2-42966  
 Malone-type liq. heat engine, heat regeneration using parallel-plate thermodynamic pile geometry 2-8019  
 mass and heat transfer entry length for power law fluids in cylindrical geometry 2-20667  
 matrix solar air heater design and thermal performance testing 2-32115  
 melting around horizontal circular cylinder, heat transport mechanisms anal. 2-44726  
 melting process, limitations of analytical approx. for phase change problems with large Biot number 2-50068  
 metal conductors, melting by bulk heating 2-16762  
 metal surfaces, high temp., no le spray water cooling, heat exchange 2-12140  
 metal-oxide interface, thermal resistance 2-5460  
 methanol, nucleate boiling heat transfer, bubble flux density appl. 2-35039  
 methanol-water, binary distillation, heat and mass transfer meas. 2-30122  
 MHD Faulkner-Skan flow, vel. and temp. field 2-8244  
 moist unsaturated soil, transient simultaneous heat and mass transfer 2-12151  
 multicomponent systems, coupled heat and mass transfer, Maxwell-Stefan eqns. 2-20666  
 multidimensional objects, heat transfer studied using 1-D solutions for heat loss 2-44634  
 multiphase flow with diffusion and chem. reactions in porous media, macroscopic eqns. 2-50310  
 natural circulation system with parallel loops, steady-state and transient flow rates 2-50270  
 natural gas pipelines, low-temp., heat-insulated, nonstationary temperature regimes anal. 2-44640  
 Newtonian fluid in horizontal rectangular duct, laminar heat transfer, friction factor 2-35136  
 Newtonian liquid, extrusion through matrix, heating 2-12141  
 Newtonian liquids, heat transfer in the swell 2-16223  
 non-Newtonian fluid, boiling heat transfer from rotating horizontal cylinder 2-16349  
 non-Newtonian power law fluids, pipe flow, laminar heat transfer, variable wall heat flux 2-20661  
 non-Newtonian turbulent flow in smooth tubes, heat and transfer 2-4863  
 non-supported droplet, drying process, heat transfer coeff. 2-35185  
 noncharacteristic Cauchy problem in one space dimension 2-10752

**heat transfer continued**

nonfocusing flat-plate solar collector heat transfer processes 2-18129  
 nonisothermal adsorbable mixture, motion through porous medium 2-39978  
 nonlinear heat transfer with phase changes, finite element analysis 2-44637  
 nonlinear medium, motion of thermal wave front 2-12017  
 nonlinear phenomena, solns. and critical points, approximation 2-44631  
 nonlinear phenomena of combined transfer, variational principle of Hamilton type 2-25350  
 nonlinear problem with variable boundary conditions, solution 2-39794  
 nonlinear simultaneous heat and mass transport processes, variational principle (*Russian*) 2-144  
 nonstationary heat exchange of laminar flow of viscous incompressible fluids in channels 2-44732  
 nonstationary regimes in heat engineering systems, freq. methods appl. 2-10747  
 nonstationary temperature distributions in membrane-type heat exchangers 2-38646  
 nuclear steam generating systems, chem. thermohydraulics 2-4010  
 nuclear steam generators, system chemistry consideration 2-4011  
 oil reservoirs, miscible displacement of fluid, heat transfer calcs., appl. of NAMMU program 2-8224  
 one-dimensional phase change, heat transfer, finite element anal. 2-29991  
 one-dimensional transport from a highly concentrated, transfer type source 2-44633  
 optically thick boundary layer on isothermal plate, radiation-convection heat transfer 2-12136  
 optimization of current lead with strong thermal interaction with surrounding structural elements 2-30000  
 oscillatory compressible laminar boundary layers, flow past yawed cylinders 2-12122  
 n-paraffins, superheated binary liq. mixtures, high press. homogeneous bubble nucleation 2-8149  
 particle to gas heat transfer coeff. meas. from one shot thermal responses in packed beds 2-30220  
 particle-fluid heat transfer and dispersion in fluidised beds 2-25434  
 passive energy storage systems using earth-air heat exchanges 2-14111  
 perforated plate positioned normal to oncoming flow, heat transfer coeff. determ. 2-44725  
 pipe flow anisotropic turbulent-diffusion tensor diagonal components calc. method 2-44792  
 pipes flooded with liquid N<sub>2</sub>, cooling down expt. on models 2-185  
 planar channel MHD flow, nonisothermal liq., temp. depend. electrical conduct. 2-12232  
 plane channel with single system of jets in a cross flow (*Russian*) 2-8134  
 plate, finite thickness, ablation calc. 2-21277  
 plated thermocouples for boiling heat transfer studies 2-50069  
 polymer containing thermally active fillers, heat transfer, mathematical modeling 2-12007  
 polymers, fibre filled, heat transfer at low temps. 2-35755  
 pool boiling, surface roughness and subcooling effects 2-35035  
 pool boiling at horizontal tubes, ang. distrib. of heat transfer coeff. (*German*) 2-39912  
 pool-boiling heat transfer in liquid nitrogen 2-25368  
 porous layer, vertical boundary walls, transient heat transfer 2-4690  
 porous materials, saturated, heat flow DSC, appl. to phase transitions and pore size distrib. 2-12145  
 porous medium, sublimation, with coupled heat and mass transfer 2-35038  
 porous medium, transient heat transfer from fluid, perturbation solns. 2-35164  
 porous plasma sprayed coatings, influence of thickness on heat transfer for boiling freon F-113 (*Russian*) 2-35037  
 porous plate at high free-stream turbulence, heat transfer 2-4815  
 power law fluids, in tubes, laminar heat transfer, rheological props. 2-16220  
 pulsatile flow effects in curved tubes 2-35140  
 pulsatile visco-elastic channel flow, heat transfer, approx. soln. by perturbation theory 2-12135  
 PWR, heat transfer coeffs. under LOCA conditions in containment buildings 2-4076  
 PWR, LOCA, full length emergency cooling heat transfer, TRAC-PD2 model 2-34178  
 PWR simulated geometries, heat transfer and two-phase flow, computer program 2-4064  
 R-113, critical heat flux in helically coiled tubes 2-50271  
 rapid solidification, heat flow limitations 2-47020  
 reciprocating refrigerators, shuttle heat transfer calcs. (*Chinese*) 2-38655  
 refilling and rewetting of hot horizontal tube, two-fluid model appl. 2-50964  
 reflood test facility, heat transfer coeff. correl. for saturated film boiling 2-7271  
 refractory materials, crystallisation methods, mathematical models of heat transport 2-35157  
 regenerators, thermal performance, waste heat recovery, steam injection effect 2-4689  
 reverse heat conductivity problem, soln. 2-16219  
 review of 1980 literature 2-30126  
 rock bed solar collector cum storage system operational characts. and economic anal. 2-32116  
 rod-type heat meter for measuring heat transfer into boiling liquid (*Russian*) 2-33519  
 ROSA-III core inlet flow rate meas., press. guide tube design and construction 2-7272  
 rotary regenerators with non-sorbing matrices, heat and mass transfer 2-8140  
 rotating cones in quiescent air, flow and heat transfer expt. study (*Japanese*) 2-25374  
 rubber band, cooling 2-20512  
 sand source heat pump systems assessment 2-52379  
 semi-infinite body, phase change, temp. distrib. calcs. 2-12019  
 semitransparent crystals grown from melts, thermocouple reading, radiant heat exchange effect 2-15171  
 separated flow round cylinder, heat transfer characteristics (*Japanese*) 2-44733  
 shear flows mass and heat transfer second moment turbulence appl. 2-1196  
 shell slide heat transfer coeff. in cylindrical heat exchangers, influence of geometrical factors 2-50261  
 shell-and-tube heat exchanges, LMTD calcs. 2-20517



## heat transfer continued

- shock boiling of a liquid around a pulsed source 2-39904  
 shock-induced ignition of an explosive gas 2-35142  
 short tubes, heat transfer enhancement, crossflow effect 2-35165  
 skin friction and heat transfer at an infinite swept attachment line 2-50253  
 slip flow past finite flat plate, velocity and temp. fields 2-50250  
 snow surface energy exchange 2-10099  
 solar absorber converters, spectrally selective paint for radiation losses reduction 2-4574  
 solar absorber-converters, laminar heat transfer characts. in triangular passages, Nusselt number determ. 2-2808  
 solar air heater diurnal performance characts. prediction using time dependent heat transfer model 2-32105  
 solar collector, wind-related heat transfer coeffs., framing effects 2-8148  
 solar collector top loss coefficient calc. by radiation network method 2-52381  
 solar domestic hot water system using storage-type heat exchanger, simulation and verification 2-14110  
 solar flat-plate collectors, pipe and fin type, calorimetric determ. of bond conductances 2-37436  
 solar parabolic trough plants using black body receivers, heat and mass transfer anal. and hydraulic aspects 2-47520  
 solar thermosiphon water heaters with heat exchangers, performance anal. using Detailed Loop Model 2-9675  
 solar water heating systems, natural thermosiphon circulation, performance anal. for domestic (industrial applications) 2-32117  
 solar water-heater installations for seasonal users of thermal energy, design using mathematical model 2-9671  
 solid surfaces, using laser variable shear interferometer 2-16226  
 solid-liquid mixture, upward flow through vertical pipes, heat transfer meas. 2-30211  
 solid-liquid mixture, vertical downward pipe flow, heat transfer 2-30210  
 spacecraft thermal control, automated data processing from thermal expts. 2-12003  
 sphere in directed uniform heat flux, temp. distrib. 2-12152  
 sphere in rarefied gas, heat transfer problem 2-25369  
 spherical column packing, local aerodynamics and heat transfer characts. (Russian) 2-12215  
 steam generator test facility, critical heat flux 2-4695  
 steam pressure vessels under transient operating conditions, physical and mathematical models (Hungarian) 2-25367  
 steel, alloy, sheet, heat treatment, heating regimes 2-51952  
 steel, liq., fluid flow, heat and mass transfer, invest. by expt. techniques 2-16309  
 steel, mild, circular plate, residual stress distrib. due to axial symm. temp. distrib., effect of heat input (Japanese) 2-21204  
 Stefan problem with emerging free boundary 2-4700  
 Stirling engine inner loop parameters calc. method 2-44638  
 stressed liquid, interface field 2-12156  
 superheated binary liq. mixtures, high press. homogeneous bubble nucleation 2-8149  
 surface treatments for enhancement of nucleate boiling heat transfer 2-8157  
 swimming pool direct solar heating, analytical evaluation 2-47453  
 systems analysis of heat and mass transfer 2-25222  
 terrestrial large animals, heat flow between cold environment 2-6215  
 thermal conductivity meas., packed beds of glass or metal particles at low temps. (Japanese) 2-3580  
 thermal conductivity problem in presence of mobile heat source, approximate soln. (Russian) 2-29997  
 thermal contact resistance between bodies with rough surfaces, variational bounds 2-44644  
 thermal gap resist. and contact resist. meas. by modulated heating method 2-6848  
 thermal symmetrical plane problem soln. using boundary point least squares method 2-30119  
 thermally driven unsteady laminar flow in cavities, heat transfer, numerical calcs. 2-30137  
 thermo-osmosis, temp. polarisation effects 2-41936  
 thermodynamics, non-equilibrium systems, heat, work and mass exchange, global constitutive eqn. 2-15129  
 2D thermoelastic problems, with internal heat generation and heat transfer, analogue soln. 2-50091  
 thermophotovoltaic conversion systems, design of dielectric-metal-dielectric filters for use as wide band filters 2-37217  
 thin plate, heating on thermally dissipating substrate (Russian) 2-1884  
 transient critical heat flux following nuclear reactor design basis accident, study results summary 2-4062  
 transient critical heat flux following nuclear reactor design basis accident, study test result data packages 2-4063  
 trombe walls and roof pond systems, performance 2-18039  
 tube bank operating at low Reynolds numbers, laminar heat transfer calcs. (Japanese) 2-39910  
 tube banks, influence of flow angle of attack on mean heat transfer (Russian) 2-12222  
 tube immersed in air fluidised bed, heat transfer coeff. 2-50262  
 tube-in-tube condenser thermal design, condensation heat transfer coefficient effects (Japanese) 2-12147  
 tubes closely spaced in staggered arrangement bank (Japanese) 2-30140  
 turbine generator rotors, heat flow, finite element anal. 2-25229  
 turbulent asymptotic boundary layer with suction, Prandtl number determ. 2-35133  
 turbulent boundary layer, complex boundary conditions 2-4807  
 turbulent boundary layer, heat transfer and fluid friction relationship 2-16292  
 turbulent boundary layers of accelerated flows (Russian) 2-30125  
 turbulent heat transfer, flow history effect 2-1191  
 turbulent jet stream interacting normal to lamina, heat emission (Russian) 2-8199  
 turbulent shear flow on curved surfaces, heat transfer modeling 2-44734  
 turbulent two-phase dispersions, bubble coalescence, size effect, relevance to heat, mass and momentum transfer 2-12204  
 two phase bubble of hot water in cold water tank EXCOBULLE model anal. 2-34110  
 two-component dispersed flow, heat transfer meas. 2-8150  
 two-dimensional turbulent jet-boundary interaction, temp. distrib. 2-12149  
 two-phase channel flow, bubbles, heat transfer study (Russian) 2-50258  
 two-phase pipe flow, in-line static mixers, condensation, pressure drop, stochastic modelling 2-4879

## heat transfer continued

- unsteady compressible laminar boundary-layer flow within a moving expansion wave 2-50235  
 unsteady heat exchange close to a stagnation point 2-35153  
 vacuum-shield multilayer insulation, heat transfer investig. 2-12012  
 vapour condensation inside horizontal tube, local heat transfer coeff., transition from annular to stratified flow 2-8132  
 vapour-gas bubbles, in fluid, heat and mass transfer dynamics 2-16363  
 vapour-gas mixture condensation, influence of boundary kinetic effects 2-45545  
 vapour-liquid annular mist flow, critical heat transfer in transient boiling 2-16377  
 vapour-liquid flows, bubble interaction on hydrodynamics, heat and mass transfer 2-4877  
 variable incidence flow, over flat plate, local heat transfer coeff. (French) 2-20662  
 variational principle of coupled heat and mass transfer, taking the finite perturbation velocity into account 2-30089  
 Venus lower ionosphere, ion temp. anisotropy and heat flow 2-6553  
 viscous incompressible fluid in planar channel, hydrodynamic and heat exchange calc., Navier-Stokes eqn. 2-4814  
 wafers, gas cooling during ion implantation 2-5139  
 wall, thick insulated vertical, combined effects of cond., natural convection and radiation (French) 2-8017  
 wall temperature of flat or round duct when heat pulse is transferred by liquid flow 2-39902  
 water heater with phase-change storage test results 2-22646  
 water pool boiling process stabilisation at atmospheric pressure around Pt heating wire using electronic feedback system (French) 2-44719  
 weakly-conducting fluid, flow and heat transfer in channel with plane walls, effect of electric field (Russian) 2-8227  
 Wiehl outdoor swimming pool covers for heat losses reduction, cost-effectiveness (German) 2-29994  
 wind flow over rectangular bodies, heat transfer in natural environment 2-8147  
 Al-alloys, profiled, heat removal rate procedure near growth surface, shapers classification 2-2435  
 C particulate, in small pool fire flames, laser transmission meas. 2-13957  
 $\text{CaCl}_2 \cdot 6\text{H}_2\text{O}$  latent heat storage material in heat storage container (Japanese) 2-27733  
 $\text{H}_2$ , liq., vertical flow in rough tubes, heat transfer 2-30124  
 $\text{H}_2\text{O}$ , boiling in pipes, model for heat transfer calc. 2-4702  
 $\text{He}$  I, flow boiling in vertical heated glass tube, press. drop. and flow struct. 2-35220  
 $\text{He}$  II, saturated, film boiling heat transfer, correl. of time depend. recovery 2-26170  
 $\text{He}$  II, saturated, recovery heat flux from film boiling calc. 2-26169  
 $\text{He}$ , liq., rotating dewar, bayonet coupling of transfer tube investig. 2-33537  
 $\text{He}$ , liq., transient heat transfer expts. 2-1114  
 $\text{He}$ , two phase flow in vertical pipe, hydraulic resistance calc. 2-4876  
 $^4\text{He}$ , superfluid, capillary flow, steady inhomogeneous flow states 2-35788  
 $^4\text{He}$ , superfluid, phase separation through narrow slit, two-fluid model anal. 2-35774  
 $^1\text{He}$ , supercrit., turbulent flow in small tubes, heat transfer nomograms 2-25447  
 KCl, monocrystal, gas-liquid inclusions, migration model 2-1676  
 $\text{N}_2$ , liq., transient heat transfer expts. 2-1114  
 NaCl, monocrystal, gas-liquid inclusions, migration model 2-1676  
 $(\text{U}_{0.75}\text{Pu}_{0.25})\text{O}_2$ , dynamically heated, fission product release 2-24311  
 $\text{UO}_2$ , vibro-compacted microspheres, model of thermal cond. of powder beds 2-43554  
 Zr-Nb (1 wt.%) alloy, deposition corrosion products on heat-irradiating surfaces, microstructure anal. (Bulgarian) 2-9451

## heat treatment

- see also annealing; normalising; quenching (thermal); spheroidizing; tempering; thermomagnetic treatment; thermomechanical treatment  
 activated C, sorption of  $\text{CO}_2$ , effect of heat of sorption during kinetic meas. 2-1730  
 $\alpha\text{-Al}_2\text{O}_3$ , electron irradi., thermolum. curves, influence of impurities and heat treatment atm., trap parameters 2-41436  
 alloys, microcryst., prep. from metallic glasses, novel materials technology 2-51846  
 aluminosilicate ceramic fibres, review of props. and appl. 2-41558  
 CANDU damaged boiler tubes, replacement in situ, heat treatment 2-15493  
 carbonitrided, struct. and props. 2-22383  
 cement, K-400, interaction with pyroceramic and quartz, MFTIR IR spectra obs. 2-49840  
 ceramics, fused silica, low-temp. firing 2-22248  
 coal slag, temp. depend. of  $\text{Fe}^{2+}$  cone in air rel. to elec. cond. 2-36113  
 diamond powders, H chemisorption, effect of preceding heat treatment 2-5298  
 dislocation-point defect interactions studied by US meas. during cyclic deform. 2-45242  
 epoxy resin, glass transition temp. and moisture absorpt., curing effect 2-45583  
 FBR, steam generator, materials development post-weld heat treatment 2-15484  
 fission-track ages and their geological interpretation 2-6344  
 furnace atmospheres, control using microprocessors 2-19108  
 furnaces, for case-hardening, microprocessor-controlled, requirements 2-19109  
 glass fibre, weakened by heat treatment, correl. between struct. and strength 2-41645  
 HTR metal under process gas atm., temp. cycling influence on tritium permeability (German) 2-470  
 Inconel 600 steam generator, stress relief heat treatment, stress corrosion cracking 2-15496  
 Inconel 690, stress-corrosion cracking, treatment, reactor boiler appls. 2-15497  
 internal stresses, arising in heat treatment processes 2-51941  
 IR temperature scanner for heat treatment shops 2-221  
 irradiation induced creep, fusion neutron induced damage by light ion beams from accelerator 2-17722  
 laser beam appls. in surface processing 2-5989  
 laser glass active elements, heat treated, characts. 2-7774  
 LMFBR steam generators, post-weld heat treatment 2-15481  
 metal, processing advances, conf., New York, USA (July 1978) 2-42791



**heat treatment continued**

metallic glasses, low metalloid content, crystallisation to form high strength microcrystalline alloys 2-31710  
 metallic glasses, ribbons, magnetisation and mag. anisotropy relax. due to heat treatment 2-21824  
 metals, behaviour on unilateral heating, IPRON-automatic recording system 2-13749  
 metals, laser-plasma processing at high gas press. 2-47259  
 metals, refractory, stability of substructurally strengthened states under thermal shock conditions (*Russian*) 2-36884  
 metals and alloys, heat treatment technology, development trends 2-36890  
 microstruct. and mech. props., effect of thermal cycling (*Korean*) 2-5946  
 multicrystalline Si, anal. before and after various heat treatments 2-18075  
 nonferrous metals, eddy current testing standards 2-13920  
 optical glass, crystallisation tendency, rel. to viscosity and chem. comp. 2-26057  
 organic fibres, thermal degradation and heat capacity 2-21323  
 organotin films, amorphous, semiconductive and conductive, form. and props. 2-41532  
 PET melt-spun fibres, struct., radial diversification (*Polish*) 2-36928  
 PMMA, destruction by unsteady convective heating (*Russian*) 2-9362  
 PMMA, thermal destruction relax. nature, heat treatment effect 2-47066  
 poly(p-phenylene benzobisthiazole), as-extruded and heat treated ribbons, microstruct. study 2-22193  
 poly(p-phenylene benzobisthiazole) films, struct. study 2-21462  
 poly-p-xylylene thin films, carrier traps, TSC meas. 2-40928  
 poly-pyromellitic amino-acid fibres, effect of heat treatment on orientation and mech. props. (*Russian*) 2-36883  
 polyacetylene film, cis-trans isomerisation,  $^{13}\text{C}$  NMR obs. in solid state 2-31906  
 polyacrylamide, high mol. wt. aq. solns., thermal stability 2-22438  
 polyacrylamide solutions, thermal stability, effect of residual impurities on mol. wt. degradation 2-22439  
 polyacrylonitrile fibre, oxidatively stabilized, elec. cond. and ESR at high temp. 2-21584  
 polycarbonates, thermal destruction relax. nature, heat treatment effect 2-47066  
 polycrystalline hollow cylinder, thermal loading, energy conditions for brittle fracture (*Russian*) 2-13808  
 polyester fibres, modification of struct. by stretching and thermal treatment (*German*) 2-22287  
 polyethylene, high mol. wt., phase composition, rel. to heat treatment 2-50557  
 polyimide, mechanical relax. props., influence of degree of monolithisation (*Russian*) 2-5903  
 polymer-C composites, elec. props., effect of glass transition temp. (*Japanese*) 2-36984  
 polymethylacrylate (*Russian*) 2-5903  
 polystyrene, extruded, heat treatment above  $T_g$  in dry and aq. environments 2-13752  
 porcelain materials, microstruct. data and mech. props., correl. 2-22224  
 powder metallurgy products, bonded, strength and ductility 2-36810  
 PTFE, destruction by unsteady convective heating (*Russian*) 2-9362  
 PVC, and chlorinated, weakly plasticised, temp. time variations of physical and mech. props. (*Russian*) 2-41668  
 PVC, plasticized, struct. and viscoelastic props. changes under thermal treatment (*Russian*) 2-31726  
 PVC films thermal treatment, Cd stearate stabiliser effect, IR study 2-51725  
 PVC pipes, high density, carrier lines, He gas recovery 2-3584  
 refractory materials, fired in temp. gradient, props. (*German English*) 2-22246  
 rhodamine 6G in methyl methacrylate and methacrylic acid copolymer, photo and thermal bleaching 2-20373  
 shock or impact loading, local heating detection by heat sensitive films 2-25988  
 steel, 14HG, thermochem. treatment influence on internal friction processes (*Polish*) 2-27211  
 steel, 65Cr4W3Mo2VNb, microstructure, mechanical properties and heat treatment 2-27216  
 steel, alloy, carbonitrided gears, anticorrosion props., retained austenite effect 2-52053  
 steel, alloy, metastable austenite, fatigue failure 2-41725  
 steel, alloy, nitriding in vac. 2-22381  
 steel, alloy, sheet, heat treatment, heating regimes 2-51952  
 steel, alloy 40Kh, heat treatment quality control, inspection instrument, electromag. losses in mag. reversal in weak mag. field meas. 2-27384  
 steel, Alloys 800, 600, 690, materials requirements for PWR steam generator tubing 2-4009  
 steel, austenitic, alloy carbide particle growth 2-13732  
 steel, austenitic stainless, casting, US inspection, heat treatment effect 2-17865  
 steel, austenitic stainless, N strengthened, props., for cryogenic magnet structs. 2-22331  
 steel, austenitic stainless 316, influence of  $\delta$ -ferrite on precipitation, thermal ageing 2-5880  
 steel, C, high strength wire, stress corrosion cracking 2-13840  
 steel, constructional, heat treatment inspection by electromagnetic-acoustic method 2-2679  
 steel, Cr, martensitic struct., TEM and optical microscopy study 2-5872  
 steel, Cr (13-25 wt.%), carburised, struct. form. and wear resist. 2-51951  
 steel, Cr-Mo, 15Kh5M, use of superplasticity to increase heat treatment quality (*Russian*) 2-22551  
 steel, Cr-Mo-(Ni), effect of alloying on struct. and props. of nitrided case 2-22382  
 steel, Cr-Mo-V, creep fracture 2-52036  
 steel, Cr-Mo-V, pearlitic, heat-resist., struct., defectiveness and service during prolonged operation, restoration heat treatment 2-41638  
 steel, Cr-Ni-Mo, boronising, technological processes optimisation 2-52104  
 steel, ferritic, stress relief heat treatment rel. to crack form. (*German*) 2-51961  
 steel, gas carburising, surface mass transfer laws 2-22384  
 steel, high-speed, struct. and props. after cold treatment 2-27196  
 steel, high-speed, transforms. during cold treatment 2-27195  
 steel, high-strength reinforcing, resist. to H embrittlement, surface condition influence 2-27282  
 steel, low alloy, grain boundary melting and hot embrittlement on over-heating (*Japanese*) 2-25980  
 steel, maintenance of constant C conc. 2-43021

**heat treatment continued**

steel, Mn-Cr-Ni-Mo-V, contact resist. in working media, C content influence 2-41759  
 steel, Pb containing, struct., machinability, heat treatment and appls. 2-36885  
 steel, stainless, austenitic, cellular precip. kinetics during heat treatment, effect on mech. props. (*Russian*) 2-31696  
 steel, stainless, cyclic heat treatment and ultrasonic emission, effect on struct. and mech. props. 2-27200  
 steel, stainless, low-Cr ferritic, heating in vacuum effect on surface props. 2-47260  
 steel, stainless, weld overlay, H-induced cracking in heat-affected zone of steam generator forging 2-4015  
 steel, stainless AISI 316, effect of Na on reaction of N 2-6017  
 steel, structural, biphasic, high-strength and ductility, differentiated treatment 2-2564  
 steel, structural and weldments, AE rel. to deform. and fracture 2-31869  
 steel, SUS 304, 316, vac. heated, surface brightness deterioration due to surface roughening (*Japanese*) 2-52100  
 steel, SUS 440C, surface brightness deterioration due to surface roughening (*Japanese*) 2-52100  
 steel, tool, cold working, ductility after heat treatment in salt soln. (*German*) 2-22288  
 steel, tool, ductility, static and dynamic torsion tests (*Polish*) 2-9375  
 steel tool, surface hardness reln. to heat treatment duration (*German*) 2-22338  
 steels, austenitic, 16Cr-14Ni-2.5Mo, phase shifts by long-term isothermal holding rel. to N conc. (*French*) 2-2544  
 steels, transformer and dynamo, degree of blackness, radiation props. in protective medium 2-16224  
 substrate, effects on thick film adhesion 2-52171  
 TGS, ultrasonic props. near phase transition 2-45406  
 ultrasonic method, heating position and tempering 2-47057  
 vinyl chloride-vinyl acetate copolymer, weakly plasticised, temp. time variations of physical and mech. props. (*Russian*) 2-41668  
 Zircaloy 4, creep and stress relaxation, data representation in terms of Hart's phenomenological theory or hyperbolic sine eqn. 2-31746  
 Al alloy AK4-1, heat treatment quality inspection by EM method 2-6012  
 Al/Al<sub>2</sub>O<sub>3</sub>/Pb tunnel junctions, zero-bias resist., voltage and thermal treatment effects, ionic mobility 2-51343  
 Al-Ag (13.5 at.%), torque oscills. damping, magnetisation curves, fluxoid pinning (*Russian*) 2-17247  
 Al-Cu-Mg (4.1, 1.4 wt.%), alloy 142, age-hardening behaviour 2-2537  
 Al-Li system, alloy development 2-31693  
 Al-Mn, grain boundary and precipitation effects, internal friction and dynamic elastic modulus meas. 2-47038  
 Al-Si eutectic alloy, cast and heat treated, microstruct. and mech. props. (*German*) 2-47068  
 Al-Sn, struct. and mech. props., heat treatment effects, X-ray diffr. obs. 2-35443  
 Al-Zn-Mg (4.5, x wt.%), influence of Mg content on formation and reversion of GP zones 2-2538  
 Al-Zn-Mg supersaturated alloy, decomposition behaviour, heat treatment influence 2-13724  
 Al-Zn-Mg-Cu, high strength, heat treatment, struct. and props. 2-27243  
 Al-Zn-Mg-Cu, stress corrosion characts., effect of heat treatment and Cu content 2-37004  
 Al-Zn-Sn alloy sacrificial anodes, heat treatment effects 2-31839  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>, two-peak firing 2-9434  
 Al<sub>2</sub>O<sub>3</sub>-AlN spinel, prep. by carbothermal nitridation of Al<sub>2</sub>O<sub>3</sub> 2-31664  
 Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> fibre, structural changes during heating, oxide additives influence 2-5217  
 Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub>-PdO, spectrophotometric investig. 2-9160  
 Al<sub>2</sub>TiO<sub>3</sub> decomposition by isothermal heating, reaction kinetics (*Japanese*) 2-31902  
 B filament surface layer struct., heat treatment effects, internal friction meas. 2-40655  
 B powder, dispersed, thermal anal. 2-41615  
 B-C compounds, thermoelectric props. 2-17103  
 BaPb<sub>1-x</sub>Bi<sub>x</sub>O<sub>3</sub>, thin superconducting film, preparation by RF sputtering (*Japanese*) 2-2445  
 Bi films, defect density, substrate temp. depend., elec. resist. study 2-51027  
 C, graphitising, thermal stress role in initiation of struct. transform. 2-47067  
 C, pitch-bonded green carbon bodies, linear dimens. changes during baking 2-51852  
 C, pyrolytic, Si-containing, struct. props. and graphitisation 2-41633  
 CO<sub>2</sub> laser heat treatment technology, recent advances 2-29844  
 CaO<sub>2</sub> Al<sub>2</sub>O<sub>3</sub>-H<sub>3</sub>PO<sub>4</sub> system, hardened body, props. and thermal changes 2-52001  
 Cd-Si-As film, sputtered, compositional studies 2-8721  
 CdSnO<sub>4</sub> films, spray deposited, elec. and optical props., solar cells appl. 2-52386  
 Co-P (9 at.%) amorphous ferromag., NMR spectrum, discontinuous variation during heating (*Russian*) 2-5590  
 Cr film on heat treated Cu foil, atm. O<sub>2</sub> effect, SIMS study 2-1786  
 Cr surface, black, solar collector surfaces, thermal degradation 2-22657  
 Cu alloys, strength and elec. props. optimisation by alloying additions (*Polish*) 2-27180  
 Cu targets for sputtering apparatus, improving operation by prior heat treatment 2-46919  
 Cu-(Nb<sub>1-x</sub>Ta<sub>x</sub>)<sub>3</sub> Sn supercond. in situ multifilamentary wire, crit. currents 2-8931  
 Cu-Al (13-16 at.%), elec. and optical props., influence of short range order (*German*) 2-31806  
 Cu-Ni-Zn, order-disorder transform., heat treatment role 2-36852  
 Cu<sub>x</sub>-CdS polycrystalline heat-treated solar cells, atomic absorption anal. and auger depth profiles 2-37325  
 Fe, Armco, nitriding in vac. 2-22381  
 Fe rich amorphous alloys, stress-mag. effects and shock-stress sensors with no power 2-31259  
 Fe-B-C-Si, amorphous low core loss materials, comp. and heat treatment 2-31242  
 Fe-C-Si alloys, formation mechanism of precipitated graphite shapes (*Japanese*) 2-2516  
 Fe-Cr-N, influence of N content on internal friction 2-45374  
 Fe-H, thermocycled, anomalous spontaneous plastic deformation (*Ukrainian*) 2-13773



## heat treatment continued

- Fe-Ni ferritic alloys, mag. and mech. props., telephone receiver appl. 2-26662
- Fe-Ni-Ti, austenite precipitation hardened, decomp., struct. mechanism (Russian) 2-22247
- FeCr<sub>20</sub>Ni<sub>2</sub>Al<sub>2</sub> wire, mass spectrometric anal. of precipitates formed under heat treatment (French) 2-51960
- Fe(Fe<sub>1.5</sub>Al<sub>0.49</sub>)O<sub>4</sub> spinels, thermal segregation of cations 2-31697
- Fe<sub>2</sub>O<sub>3</sub>, hydrated, sorption activity change w.r.t. thermal treatment temp. 2-16942
- GaAs, amorphous, disorder effects and optical props. 2-2357
- GaAs, anomalously rapid thermal oxidation 2-52084
- GaAs, electron trap outdiffusion due to thermal treatment 2-51104
- GaAs, heat treatment in controlled atmos., role of S, thermal cond. meas. (French) 2-1687
- GaAs:Fe, heat treated substrate, photoluminescence props. studies 2-13531
- GaAs:Mn, heat treatment below Si<sub>3</sub>N<sub>4</sub> encapsulant of Mn implant, dopant profiles and diffusion mechanism (French) 2-5897
- GaAs:Mn,Fe, heat treatment effects on surfaces, thermal redistrib. of impurities 2-5151
- GaAs-metal contact interface, metallurgical and elec. props., heat treatment effects (Chinese) 2-21672
- GaAs-Pd/Ni contact, electrical characts., interphase interaction, heat treatment effect 2-51303
- GaAs-Pd/Ni Schottky barrier, phase interactions, SIMS study, heat treatment effect 2-51304
- GaP, amorphous, disorder effects and optical props. 2-2357
- Ge-Si alloys, n-type, heavily-doped, short term heat treatment effects on thermoelectric props. 2-36071
- H<sub>3</sub>BO<sub>3</sub>-ZnO bonding material, composite form. under hot pressing and heat treatment 2-36826
- HgTe, activity coeff. of Hg point defects 2-8509
- In-Cu dispersion-hardening pastes, phase composition 2-5856
- InP, surface oxide film, composition and thermal stability 2-26252
- K(D<sub>2</sub>H<sub>1-x</sub>)<sub>2</sub>PO<sub>4</sub> crystals, high-temp. phase transition 2-21298
- La<sub>70</sub>Cu<sub>30</sub>, amorphous, heat treatment effects below crystn. temp., supercond. props. and normal state resist. 2-36195
- La<sub>70</sub>Cu<sub>30</sub>, amorphous, supercond. penetration depth 2-31046
- LiH, polycrystn., surface features resulting from oxidation and thermal etching, 350°C high vac. bake 2-47206
- Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-P<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub> system pyroceramics, props. 2-9436
- Li<sub>2</sub>O-SiO<sub>2</sub> glass system, elec. cond., heat treatment effects 2-35732
- Mg-Ni ferrites, struct., elec., and mag. props., cation distrib. effects, influence of heat treatment 2-46345
- MgO:Fe, EPR, FMR and electron diff. study 2-46371
- Mn-Zn ferrite, disaccommodation after temp. cycling 2-31713
- Mn-Zn ferrites, low loss, prep. with complex oxalates, mag. props. 2-27116
- MnSb alloy., mag. props. depend. on press. and temp. (Russian) 2-13298
- Mo, ductility improvement by forming surface layer containing B 2-31836
- Mo, internal friction, 300 to 750K, Mo-O-N-C samples, thermochem. and quenching treatment (Polish) 2-27212
- Mo-Cu-Ni(Co), pseudoalloys, phase boundary reactions 2-17665
- MoCl<sub>3</sub>Sr, pretreated, effect of activator content on thermolum. 2-13579
- Nb-Zr-C (1, 0.1 wt.%),  $\epsilon$ - $\alpha$  transformation, plasticity and fracture (Russian) 2-5870
- Nb<sub>2</sub>Al, multifilamentary, precip. from supersaturated BCC phases, supercond. props. 2-26532
- Nb<sub>2</sub>Sn wire, bronze-processed, flux pinning 2-8922
- Ni base superalloy, cast, CoO inoculant for surface grain refinement (Chinese) 2-17692
- Ni, dispersion hardened coating, autocatalytic deposition 2-17782
- Ni, struct. changes, accompanying cyclic heat treatment, influence of strain hardening (Russian) 2-36877
- Ni-base superalloy, IN-738, extending creep life, intermediate regenerative heat treatments 2-22274
- Ni-base superalloys, single crystals, creep props. at 760°C (French) 2-22279
- Ni-Cr, heat-resist., dispersion strengthening with ZrO<sub>2</sub> 2-51927
- Ni-Cr (75, 16 wt.%) Alloy 600, stress corrosion cracking susceptibility, heat treatment effect 2-17768
- Ni-Cr films, segregation, AES, electron diff. and elec. cond. study 2-45786
- Ni-Cr-B-Si matrix, reaction with carbide additives during fusion 2-17784
- Ni-Cu alloys, solid solns., internal friction (Russian) 2-36862
- Ni-Fe-Nb-Al, struct. effect on physical props. (Chinese) 2-2533
- Ni-P-Cr coatings heated in air, struct. and props. (Russian) 2-13858
- NiO crystals, grown by flame fusion and floating zone technique, origin and evolution of polyhedral cavities (French) 2-25864
- P-Se glasses, thermal capacity, 300 to 600K 2-26074
- PbO-TiO<sub>2</sub>-ZrO<sub>2</sub> solid state reactions during calcining 2-51949
- PbTe (111) epitaxial thin films, elec. transport props., thermal-cycling induced changes 2-13201
- Pb(Zr,Ti)O<sub>3</sub> ceramics, piezoelectric props. 2-41272
- Pb(Zr,Ti)O<sub>3</sub> film, lattice const. shift through post-deposition heat treatment 2-16964
- Pb(Zr,Ti)O<sub>3</sub>, structural defect study 2-40372
- Pd<sub>40</sub>Si<sub>20</sub>, amorphous, internal friction peaks 2-47084
- Pt-based L1<sub>2</sub> alloys, pseudo-binary, with B-subgroup elements, temp. depend. of strength 2-5896
- PtSi-Si shallow Schottky barrier contacts, multilayer metallisation technique 2-1990
- Si Czochralski crystal., elec. characterisation of cryst. defects and O<sub>2</sub> using gate controlled diode 2-26488
- Si, Czochralski grown, heat treated, O precipitation, C-O nucleation centres, IR spectra study 2-50861
- p-Si, low resist., minority carrier diffusion length, heat treatment effect 2-46022
- Si, MBE films, dislocation density, growth conditions depend. 2-1785
- Si, out-diffusion of O, diffusion coeffs., O profiles, heat treatment effects 2-35740
- Si polycrystalline film, Ge ion implantation effect on amorphization and recrystn. 2-21474
- Si solar cells with plated Ni-Cu metallisation system, reliability 2-37287
- Si-C, O, role of C in precipitation of O, IR and DLTS studies 2-21315
- Si-O, C, luminescence, thermally-induced defects 2-46748
- Si-O, p-n junction characts., O conc. influence 2-36129
- Si-Ge:P, thermal cond. change by precip. of dopant 2-45967

## heat treatment continued

- Si<sub>3</sub>N<sub>4</sub>, reaction-bonded, effect of rate-controlling nitriding and nitriding atmospheres on formation 2-36882
- SiO<sub>2</sub>, vitreous, additional absorpt. spectrum after heat treatment, structural fragment of SiO<sub>2-x</sub> comp. 2-13491
- SiO<sub>2</sub>, vitreous, surface cond. in moist atm., effect of preliminary heat treatment 2-8857
- SiO<sub>2</sub>:TiO<sub>2</sub>, glass, thermal expansion rel. to heat treatment 2-30639
- SiO<sub>2</sub>:Na<sub>2</sub>O-CaO-SnO<sub>2</sub>-Au, gold ruby glasses; SAXS anal. of nucleation 2-50829
- SiO<sub>2</sub>:TiO<sub>2</sub>, highly dispersed, IR spectra obs. of struct. conversions 2-17457
- Sm-Co alloy film, amorphous, mag. behaviour 2-51440
- Ti as construction material in biomedical electronics (Czech) 2-52650
- Ti, technical purity, intergranular precipitation (Russian) 2-22220
- Ti/Au thin films, interdiffusion and phase formation, expt. study 2-45749
- Ti<sub>50</sub>Be<sub>50</sub>Zr<sub>10</sub> amorphous alloy, spring material appl., stress relaxation tests 2-13759
- TiO<sub>2</sub>-SiO<sub>2</sub>, glasses, effects of prep. history 2-2485
- TiO<sub>2</sub>-SiO<sub>2</sub> antireflection coatings, prepared by sol-gel process, applied to polished Si and heat treated 2-7843
- TiO<sub>2-x</sub> ceramic, preparation, elec. props. 2-46987
- UO<sub>2</sub> fuel particles for HTGR, prod. by microwave hardening of aqueous droplets (German) 2-24343
- V<sub>3</sub>Ga, multifilamentary, precip. from supersaturated BCC phases, supercond. props. 2-26532
- W surface, (110), adsorpt. of NO and heat treatment, surface reconstruction 2-26193
- W-Cu-Ni(Co), pseudoalloys, phase boundary reactions 2-17665
- Y-Si Schottky barrier diode, barrier height and Auger depth profile 2-21656
- YIG, solid-phase synthesis and sintering, kinetics and mechanism, electrophys. props. 2-41516
- YSi<sub>3</sub>-Si Schottky barrier diode, barrier height and Auger depth profile 2-21656
- Zn surface, black, solar collector surfaces, thermal degradation 2-22657
- ZnS phosphors, luminesc. props., influence of formation temp. 2-46729
- ZnSe crystals, effect of heat treatment in Zn, Se, Cd vapour on optical and electro-optical props. 2-13450
- ZnSe:Al, formation of low resist. In contacts 2-21673
- ZrO<sub>2</sub>, commercial, partially stabilised, grain boundaries, fracture and heat treatment 2-52028
- heated cathodes** see thermionic cathodes
- heating**
- see also electric heating; induction heating; ovens; plasma heating; refractories; space heating
- anode process, during heating by a sprayer (Russian) 2-31927
- collector/storage solar water heaters performance anal. for arbitrary demand patterns arising from residential and industrial applications 2-32113
- ellipsoidal nonuniformity material, heating due to elec. losses, temp. stresses 2-25224
- Iona Solar Energy Project-hot water heating system development 2-32108
- multipass solar air heaters, tests and results 2-14116
- noise control in heating and ventilating equipment, practical advice 2-7966
- possible use of geothermal energy for heating (German) 2-37168
- potential of solar flat plate collectors in Israel 2-2813
- quartz glass heated by CW long-wave light, pulsed optical breakdown 2-5778
- results of test rig operation of hot water heat pumps (German) 2-47515
- shallow water divers, local heating from granular mixture Fe and Mg particles activated by seawater 2-14100
- solar absorber convertor installations for Wiehl outdoor swimming pool heating, design and operational experience (German) 2-32112
- solar faculae heating, coupling eqns. for flow-wave field 2-48213
- solar flat plate collector system for computer controlled baseboard hot water system 2-2780
- solar heating and cooling industry, supply problems 2-18011
- solar heating simulation programs for electric utilities, assessment and evaluation project, five major activities 2-18135
- solar heating simulation programs for electric utilities 2-18134
- solar power for water heating, cost effectiveness 2-2772
- solar single-pass water heating system performance anal. 2-18027
- solar water heaters corrugated and cylindrical panels stiffness anal. 2-27542
- solar water heating systems, natural thermosyphon circulation, performance anal. for domestic (industrial applications) 2-32117
- solar water-heater installations for seasonal users of thermal energy, design using mathematical model 2-9671
- stellar degenerate cores, heating by weak shocks rel. to struct. of C burning deflagration front (Russian) 2-53252
- swimming pool direct solar heating, analytical evaluation 2-47453
- heating, buildings** see space heating
- heating elements**
- see also electric heating
- SiC based resistance material 2-31672
- heavily doped semiconductor materials** see heavily doped semiconductors
- heavily doped semiconductors**
- see also degenerate semiconductors; superconducting semiconductors
- bandgap reduction mechanism, bandtailing and rigid band models 2-35932
- diamond:B, elec. cond. mechanisms, 2 to 700K 2-45986
- electron scatt. by ionised impurities, review 2-1880
- lasers, effect of heavy doping 2-7760
- p-n junction, dielectric constant, position depend., elec. field and charge density effect 2-26484
- plasma, magnetised, hybrid mode excitation due to laser beam modulation 2-1937
- polyacetylene:I, morphology, rel. to elec. cond., SEM study 2-16605
- random impurity potential effects on resonance Raman scattering 2-17472
- region of Si device, minority carrier diffusion coeff. 2-46023
- screened impurity band theory 2-30821
- solar cell, band gap narrowing evaluation methodology based on measurements of emitter and base lifetimes and relaxation time 2-42012
- strongly compensated, density of states in mag. field, path integral calc. 2-21485



**heavily doped semiconductors continued**

- strongly compensated, with correlated impurity distrib., density of states 2-1809  
 n-Al<sub>1-x</sub>Ga<sub>x</sub>As:Te, heavily doped, photolum. in indirect energy gap region 2-2324  
 Ba<sub>0.8</sub>Ca<sub>0.2</sub>TiO<sub>3</sub>, single crystals and ceramic, elec. cond. variation with dopant conc. 2-5404  
 Bi<sub>2</sub>Te<sub>0.88</sub>Se<sub>0.12</sub> solid soln., halide doping effect on elec. and thermoelec. props. 2-13110  
 CdTe:Cu high-resolution electron microscopy obs. of defects, coherent precip. and faulted loops 2-5120  
 Ga<sub>1-x</sub>Al<sub>x</sub>Sb:Te, high field magnetotransport props. under hydrostatic press., direct-indirect - band transition 2-8828  
 p-GaAs, heavily doped, hot carrier relax., picosecond luminesc. study 2-46742  
 GaAs:Si, annealing-induced changes, Si defect conc. depend. 2-30889  
 GaAs:Te, heavily doped, degenerate, photoluminescence 2-26979  
 GaAs:Te,Zn, heavily doped material with p-n junction, SEM local cathodolum. obs. 2-46776  
 GaAs:Zn, polycrystalline, optoelectronic props. rel. to grain boundary features, cathodoluminesc. anal. 2-36713  
 (GaAs)<sub>1-x</sub>(ZnSe)<sub>x</sub> solid solns., electrophys. props. 2-40927  
 Ge, band-gap narrowing, impurity conc. depend. 2-1821  
 n-Ge, DC hopping cond., Mott T<sup>-1/4</sup> law from rate eqn. formalism 2-13071  
 Ge:Ga heavily doped single crystals grown from melt, interface breakdown 2-25777  
 Ge-Si alloys, n-type, heavily-doped, short term heat treatment effects on thermoelectric props. 2-36071  
 GeTe-Bi<sub>2</sub>Te<sub>3</sub>-Cu<sub>2</sub>Te quasiternary system, electrophys. props. of GeTe-based solid solns., double doping effect 2-13089  
 InP:Se epitaxial layer, heavily doped, electroreflectance and photoluminescence 2-2353  
 InSb, material energy flow in solid state plasma 2-46048  
 Si (111)(1×1):As(B) surfaces, highly doped, laser annealing prep., electronic props., photoemission study 2-8847  
 n-Si, band-gap narrowing, impurity conc. depend. 2-1821  
 Si, conduction and valence bands, donor impurities effect, partial wave anal. 2-51081  
 Si, density of states near bound edge, donor impurities effect 2-17008  
 n-Si, elec. resist., partial wave theory 2-13077  
 a-Si films, heavily doped, glow discharge, AC conduction 2-45989  
 Si, heavily doped, electron irradiated, defect formation 2-21180  
 p-Si, heavily doped, thermal breakdown 2-36524  
 Si, nondegenerate minority-carrier concentration and recombination current 2-8805  
 Si, optical absorption meas. for pure and heavily-doped materials, 1.24 to 4.63 eV, polarization modulation ellipsometry solar cell performance 2-37385  
 Si p-n junction solar cell, effective elec. field in n-type heavily doped emitter region 2-37213  
 Si solar cells, heavily doped regions, modelling techniques, transport eqns. formulation 2-37269  
 Si:As(B) (111)(1×1) surfaces, electronic props., photoemission study 2-17136  
 Si:B(AI), junction solar cell, emitter layer minority carrier lifetime photovoltaic obs. 2-52339  
 Si:B<sup>+</sup>(P<sup>+</sup>)(As<sup>+</sup>), solar cells, prep. by ion implantation and pulsed laser annealing, optical and elec. characterisation 2-14080  
 Si:Ga(Sb), MBE grown, sharp profiles with high and low doping levels 2-16670  
 Si:Gd, heavily doped, optical nuclear polarisation 2-36453  
 Si:H,B amorphous film, elec. props., optical props. 2-46176  
 Si:P, magnetisation meas. down to 1.5K 2-26578  
 Si:P, sp. ht. and elec. cond. near metal-insulator transition 2-30936  
 Si-Ge:P, thermal cond. change by precip. of dopant 2-45967  
 n-Si<sub>63</sub>Ge<sub>36.5</sub>, thermal cond. and thermoelec. conversion, phonon-grain boundary scatt. effect 2-40947  
 ZnS:Cu single crystals, solubility of Cu<sub>2</sub>S, struct. characts. and mech. prop. anisotropy 2-12674  
 ZnSe, doped, luminescence centres, activation energy of form. 2-41392  
 ZnSe:Al, formation of low resist. in contacts 2-21673

**Heaviside layer** see E-region**heavy ion excited X-ray emission** see ion microprobe analysis**heavy ion-nucleus reactions**

for inelastic heavy ion-nucleus scattering, see "heavy ion-nucleus scattering"

- <sup>12</sup>C(<sup>16</sup>O,X), 100-315 MeV, unification for ang. distrib. 2-34082  
<sup>20</sup>Ne 8p-4h state, J<sup>π</sup>, α-branching ratios 2-38949  
 A=4-40 projectile induced fusion cross sections, empirical description 2-24279  
 atom-ion collisions, inner-shell excitation, atomic and nuclear processes 2-15875  
 book, elementary excitations in elastic and inelastic collisions 2-48411  
 C<sup>13</sup>(<sup>14</sup>N, xn), n=5,6, backbending in <sup>167</sup>,<sup>168</sup>Hf and band-crossing picture 2-24086  
 collective coordinates as open systems, existence conditions for frictional hamiltonians 2-39049  
 compound cross section, statistical windows in ang. momentum space 2-29247  
 compound nucleus reactions, resulting nuclear alignment calc. 2-24254  
 compressed density formation, classical many-body calc. 2-24256  
 conference, nuclear physics topics, Peking, China (Dec. 1980-Jan. 1981) 2-23380  
 cosmic-ray related aspects, independent collision model 2-356  
 damped nuclear reactions, charge equilibration, quantum treatment 2-39046  
 deep inelastic, anticorrelated ang. momentum distrib., transport model 2-7116  
 deep inelastic collisions, charge distrib. dispersion (Russian) 2-3956  
 deep inelastic collisions, mass diffusion coeff. microscopic calc. using linear response theory 2-24267  
 deep inelastic collisions, N-Z distrib., two-dimens. random walk model 2-3948  
 deep inelastic reactions, fluctuations influence 2-39069  
 deep-inelastic transfer reactions, isovector modes excitation (Russian) 2-29292  
 deviations from Fermi and Bose statistics 2-29246  
 direct reactions, review 2-24273  
 dissipative process, dynamics and equilibration description 2-7084  
**heavy ion-nucleus reactions continued**  
 dual parton model anal., at high-energy 2-39060  
 dynamical similarity in heavy-ion induced reactions 2-29282  
 energy dissipation in potential model, compound nucleus formation 2-34064  
 excitation functions for near and below barrier fusion, for <sup>12</sup>C, <sup>16</sup>O, <sup>40</sup>Ar, <sup>86</sup>Kr 2-29281  
 fast neutron emission in wide ang. range, Fermi jet theory 2-7113  
 fission fragments mass distrib. within dynamical treatment 2-39079  
 Fokker-Planck eqns. soln., path integral approach 2-24216  
 fragmentation-spallation reaction, two-step model 2-29245  
 frontiers of nuclear physics, review 2-38959  
 fusion cross section, temp. depend. friction force effect 2-39081  
 fusion cross-sections energy depend. 2-19592  
 fusion process with heavy ions, macroscopic dynamics 2-43517  
 fusion reactions for superheavy element synthesis, status report 2-19591  
 fusion-fission, adiabatic and sudden interaction pots., asymmetric target-projectile combinations 2-24255  
 gamma-ray multiplicity moments for heavy ion-massive transfer reactions 2-43499  
 high energy α-escape reactions, prod. mech. 2-34063  
 high energy heavy ion collisions, pre-equilib., and shadow effects 2-24269  
 high energy heavy ion fragmentation, nuclei far from stability prod. cross section 2-19572  
 intermediate energy reactions, nuclear emission and heavy recoil spectra from 'hot zones' 2-34066  
 light particle emission, reaction mechanisms and excited states (Russian) 2-29276  
 light particle emission expts. (French) 2-3957  
 light particle jettison reactions as direct processes 2-33992  
 limiting fragmentation, pre-equilibrium 2-3953  
 molecular resonance effects in heavy ion excitation functions 2-19566  
 molecular states, study with simple interaction pot. 2-39045  
 neutron and proton diffusion, statistical theory 2-34069  
 neutron deficient nuclei, neutron multiplicity technique for in-beam γ-spectroscopy 2-19839  
 non-Markovian Langevin eqn. appl. 2-33999  
 nonrelativistic imperfect fluid model, expanding fireballs viscous heating 2-43003  
 nuclear fusion, energy depend. of cross section (German) 2-19589  
 nuclear matter, shock front struct., hadron chemistry approach 2-11106  
 nucleus-nucleus imaginary optical pot., shell model description 2-3946  
 positron production in heavy ion collisions, QED test (German) 2-19316  
 potential model for heavy-ion fusion and ang. momentum localisation 2-7126  
 quarkochemistry in relativistic heavy ion collisions 2-15419  
 quasielastic and deep-inelastic heavy ion collisions, neutron and proton exchange, statistical model 2-34076  
 quasielastic reactions, ang. momentum quantum fluctuations, microscopic derivation 2-39050  
 random matrix model for low energy heavy ion collisions 2-15393  
 reaction parameters 2-14985  
 relativistic collisions, global anal., hydrodynamic model 2-24263  
 relativistic heavy ion collisions models, geometrical assumptions 2-29283  
 relativistic heavy-ion collisions, very hot nuclear matter and pion prod. 2-39051  
 relativistic nuclear collisions, temp. meas. significance for probing hadronic matter props. 2-39067  
 resonant behaviour in heavy ion systems, review 2-39063  
 review 2-24274  
 statistical deep inelastic collisions, quasi-linear response theory, transport eqns. 2-24258  
 stochastic transfer of nucleons for ang. momentum misalignment 2-39059  
 strongly overlapping resonances, compound cross-sections, level parameters, statistical effects 2-34002  
 summed residual projectile mass, meas. in relativistic collisions 2-3951  
 superheavy elements, search using deep inelastic nuclear reactions 2-29304  
 thermal model for kaon production in relativistic heavy-ion collisions 2-3889  
 transfer reactions, optical model depend. 2-3945  
 transport coefficients in high energy nuclear collisions 2-19526  
 Z=100-107 nuclei, prod. and detection in heavy ion fusion (German) 2-49078  
 pn and d evaporation, systematics of competition 2-24268  
 pp correlations in heavy ion reaction statistical theory 2-43472  
 Ag(<sup>40</sup>Ar, X), 285 MeV, multinucleon transfer reactions and light charged particle formation 2-39065  
 Ag(<sup>12</sup>C, X), 84 MeV/N, quasi-compound nucleus formation, heavy fragments ang. and mass distrib. 2-39066  
 Ag(<sup>12</sup>C, X), 86 MeV/N, projectile fragments, energy spectra, fragmentation model 2-7114  
 Ag(<sup>20</sup>Ne, X), 860 MeV, H and He isotope emission from projectile fragmentation 2-34068  
 Ag(<sup>40</sup>Ar,αX), 285 MeV, A=107, 109, α-channel dominance in deeply inelastic transfer reactions 2-34062  
 Ag(<sup>32</sup>Kr,X), A=107, 109, 664 MeV, deep-inelastic reaction, ang. momentum transfer and partition 2-24262  
 Al(Fe,X), 1.88 GeV/N, central collisions, one- and two-particle ang. distrib. 2-24266  
 Al(Ne,nx), 337 MeV/nucleon, prod. mechanism 2-34070  
 Al(<sup>16</sup>N,X), X=Li,Be,B,C, 62 MeV, projectile absorptive breakup 2-34077  
 Al(<sup>16</sup>O,X), 310 MeV, in-plane correlations between protons and deuteron 2-43504  
 Al(<sup>16</sup>O,X), 100 MeV, direct transfer, DWBA and diffraction anal. 2-29291  
 Al(<sup>19</sup>F, X), 34-75 MeV, complete fusion cross sections determ. 2-34100  
 Al(<sup>19</sup>F,X), 47-108 MeV, <sup>40</sup>K, <sup>42</sup>Ca high spin states and γ-transitions 2-38927  
 Al(<sup>19</sup>F,2p2nγ), 47-108 MeV, <sup>42</sup>Ca yrast line structure and feeding 2-24085  
 Al(<sup>32</sup>S, X), 135, 190 MeV, light-particle emission study 2-24259  
 Al(<sup>32</sup>S,X), 160 MeV, evaporation pre-equilibrium, alpha emission 2-34071  
 Al(<sup>35</sup>S,X), product position energy spectra, (French) 2-15385  
 Al(<sup>35</sup>S,X), deep inelastic reaction, Hartree-Fock anal. 2-29278  
 Al(<sup>86</sup>Kr,X), 490 MeV, evaporation residues from fusion, time-of-flight meas. 2-24261  
 (Ar,X), 800 MeV/N, π<sup>±</sup>, p, d, t, <sup>3</sup>He, α inclusive cross sections for large angle prod. 2-430



**Heisenberg model continued**

- ferromagnetic chain, solitons and bound magnon states 2-21815  
ferromagnetic Heisenberg chain, classical isotropic, dynamical response functions due to pulse solitons, in external mag. field 2-21751  
field theoretic method for calc. of crossover exponent from Heisenberg to Ising behaviour 2-10730  
graphite, adsorbed  $N_2$ , fluctuation induced phase transition 2-40686  
Heisenberg ferromagnet, HCP lattice, spin wave spectrum and crit. temp. 2-41156  
Heisenberg spin chain, classical anisotropic, eqn. of motion 2-51391  
linear chain antiferromag., renormalisation group method failure in semi-classical limit 2-8948  
magnetic sine-Gordon system, dynamic damping 2-5561  
magneto-ordered system, acoustic self-induced transparency 2-26720  
mixed Heisenberg and Ising-like model, critical temp. 2-5554  
O(3) Heisenberg model, two-dimens., correlation length 2-33728  
O(3) Heisenberg model, two-dimens., low temp. behaviour 2-33727  
on the one-dimensional spin- $1/2$  chain and its related fermion models 2-21753  
one-dimensional planar antiferromag., spin dynamics, quantum effects 2-21756  
one-dimensional antiferromag., new high-field phenomena in spin-Peierls systems 2-21757  
one-dimensional antiferromagnet, anisotropic, with magnetoelastic coupling, solitary waves 2-2066  
one-dimensional antiferromagnetic chain, boson Bogoliubov transform., magnon states 2-51428  
one-dimensional classical helimagnet, solitons 2-31120  
one-dimensional easy-axis magnet, static correlations 2-17308  
one-dimensional easy-plane magnet, dynamic correlations 2-8994  
one-dimensional Heisenberg model continuum limit, Brownian motion on sphere surface 2-33429  
one-dimensional Heisenberg random antiferromag. model, quantum case, universality 2-13268  
one-dimensional magnets, anomalous relaxation, long-time  $t^{-1/2}$  tail and cutoff 2-5515  
one-dimensional paramagnets, anomalous relaxation, EPR line shape satellite structure 2-51450  
poly(chromium phosphinate) one-dimensional Heisenberg antiferromag., static and dynamic susceptibility 2-13279  
quantum Ising-Heisenberg chain, spin wave damping 2-21799  
quantum spin chains, low temp., thermodynamics 2-46330  
quenched, mag. states, random lattice sites and competing exchange interactions (Russian) 2-5527  
random exchange Heisenberg antiferromag. chains 2-13267  
random Heisenberg magnet, magnetic states with partial spin-glass ordering (Russian) 2-13309  
random magnetic atom distrib., Ising- and Heisenberg-like spins, critical temp. 2-31194  
random site Heisenberg model, nearest neighbour competitive exchange interactions, mag. phase diag. 2-31228  
spin glass, magnetic susceptibility and sp. ht. in external mag. field 2-41155  
spin-Peierls and Peierls distortions, metallic and insulating states, electronic props., pairing-distortion effect 2-21502  
spin-Peierls transition, mean field theories 2-21814  
standard basis operator Green's functions, self-consistent many-body theory, anisotropic Heisenberg model appl. 2-5560  
stochastic Heisenberg model, convergence to equilib. 2-2048  
thin ferromagnetic film, ellipticity effects in spin-wave spectrum 2-26694  
TMMC, one dimens. antiferromag., soliton excitations 2-21790  
TMMC, one-dimensional antiferromagnet, one- and two-magnon excitations 2-8966  
triangular lattice, quantum frustration, renormalisation group approach 2-2086  
 $Cd_{1-x}Mn_xTe$ , Heisenberg spin glass, high field Faraday rotation, mag. phases 2-46548  
 $CoMg_{1-x}O$ , single cryst., mag. susceptibility (Russian) 2-2059  
 $CsCuCl_3$ , magnetic susceptibility study 2-41114  
 $CuWO_4$ , antiferromag. zigzag chains of spin  $1/2$  (French) 2-5559  
 $EuSr_{1-x}S$ , dil. Heisenberg ferromag. and spin-glasses, NMR and Mossbauer effect studies 2-31357  
Fe, BCC, mag. props. and local moments above Curie temp. 2-31121  
Fe, cubic ferromagnet, pseudoquadrupole effect 2-36375  
Fe, thermodynamic excitations, spin waves and Curie temp., d-band model 2-36301  
Fe-Mn quenched Heisenberg material with random sites, spin-glass state (Russian) 2-51427  
 $Fe_{50}Ni_{40}P_{14}B_6$ , amorphous ferromagnet, magnetisation study 2-46347  
Gd, thermal expansion near Curie temp. 2-46305  
 $GdAl_3$ , cubic ferromagnet, pseudoquadrupole effect 2-36375  
 $KMnF_3$ , specific heat capacity, cross-over from 3-D Heisenberg to Ising behaviour near Neel temp. 2-8980  
 $MnF_2$ , specific heat capacity, cross-over from 3-D Heisenberg to Ising behaviour near Neel temp. 2-8980  
 $(NH_4)_2CuBr_4 \cdot 2H_2O$ , 3-D Heisenberg ferromag., direct expt. determ. of gap exponent 2-26646  
Ni, cubic ferromagnet, pseudoquadrupole effect 2-36375  
Ni-Mn quenched Heisenberg material with random sites, spin-glass state (Russian) 2-51427  
O adsorbed on Ni(111), transition of the Heisenberg model with cubic anisotropy 2-12909  
 $PdMnSn$ , localised metallic ferromag. paramag. response 2-17260  
 $Rb_2CuBr_4 \cdot 2H_2O$ , 3-D Heisenberg ferromag., direct expt. determ. of gap exponent 2-26646  
 $RbMnF_3$ , critical exponent  $\beta$  meas. by means of optical birefringence 2-8972

**Heising modulation** see amplitude modulation**helical dislocations** see screw dislocations**helicity (elementary particles)**

- elastic scatt., large-angle, spin effects (Russian) 2-23877  
exclusive QCD processes, helicity selection rules and gluon spin tests 2-43298  
exotic baryon reson. with isospins  $\geq 5/2$ , props. study (Russian) 2-48963  
sum rules for partial waves in prod. processes 2-33766  
 $e^+e^- \rightarrow \gamma X$ ,  $X$ =Higgs particle or pseudo-Goldstone boson, ang. distrib. and polarisation effects 2-43322  
 $e^+e^- \rightarrow \gamma \gamma X$ ,  $X$ =Higgs particle or pseudo-Goldstone boson, ang. distrib. and polarisation effects 2-43322

**helicity (elementary particles) continued**

- $ep \rightarrow \pi^+ \pi^- p$ , 11.5 GeV, exclusive  $\rho^0$ ,  $\omega$  and  $\phi$  electroproduction meas. 2-43363  
 $\gamma^* \rightarrow \pi^+ \pi^-$ , meson, exclusive two-photon process, higher order QCD corrections 2-38917  
 $\gamma d \rightarrow \pi^0 d$ , polarisation phenomena (Russian) 2-335  
 $\gamma \gamma \rightarrow MM$ ,  $M$ =mesons, scaling, ang., helicity depend., QCD calc. 2-29169  
 $\gamma N \rightarrow Z^0 X$ , quark-parton mechanism (Russian) 2-3791  
 $K^+ p \rightarrow \rho^+ Z^0$  ( $\Omega^0$ ), 4.2 GeV/c, helicity amplitude structure 2-29128  
 $pp(\bar{p}p)$ , high-mass dileptons ang. distrib. 2-43395  
 $\nu d \rightarrow \nu np$ , nucleon energy correl. 2-43329

**helicons**

- see also solid-state plasma  
metals, radio wave spontaneous emission in mag. field in presence of temp. gradient (Russian) 2-26429  
semiconductors, surface helicons in presence of quantising mag. field 2-36080  
Bi, helicon waves, Vlasov eqn. 2-46047  
Ge, surface helical instability, nonlinear props. 2-40993  
In, anisotropic helicon damping during localised electron-phonon U process (Russian) 2-13112  
n-InSb, surface magnetoplasma waves, non-existence in Faraday geometry 2-26428  
TI, helicon resonance, carrier conc., magnetoresistivity, Fermi surface model 2-8748

**helicopters**

- aerodynamic research, laser velocimetry for a large wind tunnel 2-40013  
flow meas. over helicopter rotor blades, using boundary layer transducer 2-20788  
rotating blade noise, linear acoustic formulas 2-20461  
rotor impulsive noise, anechoic wind tunnel expts. 2-34992

**heliotron** see plasma devices**heliports** see airports**helium**

- see also nuclei with .....  
see also helium atoms; helium films; liquid helium; solid helium  
abundance radio meas., radioastronomy and elementary particle cosmology 2-3317  
adsorbed on graphite, selective adsorption intensity features, perturbative calcs. 2-41480  
atmosphere,  $He^+$  ionisation of thermosphere due to variable solar flux 2-52971  
channelled microbeam for semicond. anal. 2-45299  
cryogenic two phase upward flow, meas. of void factor 2-8211  
desorption from W single cryst. 2-1739  
diffusion, quasi-one-dimensional, in solid  $H_2$ , NMR meas. 2-45673  
diffusion and permeability in alkali gallosilicate glasses 2-12852  
diffusion in sintered  $\alpha-Al_2O_3$ , mass spectrometric study 2-40604  
(e,2e) spectroscopy, reaction mechanism 2-44116  
electronic and ionic discharges, cylindrical geometry effects (French) 2-44921  
evacuated tubular glass, He permeation constants determ. 2-9681  
gas, positron mobility edge study 2-16417  
gas, strong shock waves at normal density 2-44761  
gas chromatography, He microwave induced plasma appl. as element sensitive detector 2-17945  
gas content of soil as central Californian earthquake precursor 2-22908  
gas film, oscillations leading to ballistic phonon flux modulation in Ge at solid/superfluid interface 2-50981  
gas in various solvents, Gibbs free energies of solute solvent interactions 2-41920  
gas purity monitor for reliquification installation, sound wave vel. meas. 2-33551  
gas recovery, in high density PVC pipes 2-3584  
gas-jet coupled ion source for ISOL on-line mass separator 2-19694  
 $He-Ne/I_2$  laser as a frequency standard in the visible spectrum 2-44370  
high frequency capacitive discharges, relationship between maximum plasma temp. and current 2-40199  
hot cathode discharge, positive column, response to current perturbation, elec. field, electron density and drift vel. relax. 2-16527  
interplanetary  $He^+$  304 Å emission, obs. of Earth antisolar direction 2-42648  
ion implantation in  $LiNbO_3$ , fabrication of single mode optical waveguides 2-20407  
ionisation detector, appl. to gas chromatography 2-2755  
Jupiter He abundance, Voyager IR spectral and radio occultation obs. 2-32936  
liquefier, ADL-Collins type, with activated charcoal 2-10813  
liquid, AC breakdown strength in millimetre gap range, low-loss He cryostat appl. 2-5635  
liquid, dielectric breakdown, influence of electrode materials, cryogenic equipment for spark gap cooling 2-5634  
liquid, dielectric breakdown rel. to press., voltage polarity, pulse width and impurity 2-5636  
magnetosphere ring current ion composition 2-3160  
metals: He, implanted, self-trapping study 2-40427  
mineral spring in fault zone, gas bubble emission, Ar/He ratio as earthquake precursor 2-6334  
molecule, excited state, dissociation and ionisation energies, pot. energy curves, CEPA-PNO, PNO-CI calcs. 2-11411  
E Pacific Rise, He in hydrothermal vent plume 2-32543  
penetration in evacuated solar collectors, theory and effect on performance 2-6181  
plasma, cylindrical, Abel's inversion, stigmatic spectrograph prod. using vidicon detector 2-44907  
plasma, low density,  $CO_2$  laser radiation absorpt. effects 2-12361  
plasma, prod. by microwave pulsed surfaguide, thermodynamic equilib. 2-44827  
plasma electron temp., He I 3889 Å and 5016 Å line intensities 2-35270  
plasma hydrodynamic r-wave amplification, electron energy distrib. depend. 2-16443  
plasma leak width of line- and point-cusp mag. fields 2-25656  
plasma produced by linear focusing of TEA  $CO_2$  laser beam, spectroscopic investig. 2-44906  
pressurised coolant in HTGR, O and C pot., thermodynamic anal. 2-6055  
primordial He, formation and predicted abundance 2-33193  
singly charged ion source 2-4158  
solar cosmic rays diffusion coeff. radial depend. in heliosphere 2-28301



## helium continued

- space refrigerator at 4.4K, for Salyut-6 2-19111  
 supercritical, turbulent flow in small tubes, heat transfer nomograms 2-25447  
 thermal He desorption spectrometry, defect chemistry of metals 2-45719  
 two phase flow in vertical pipe, hydraulic resistance calc. 2-4876  
 vapour, positive ion droplet size comparison with Thomson eqn. 2-35657  
 Ar+He, excess enthalpy, direct determ. 2-16415  
 Au:He, spontaneous precipitation of He 2-13727  
 CO-He, gas, IR absorpt. band shapes 2-49414  
 CO-He-Xe CW laser discharge, O<sub>2</sub> addition effect on plasma kinetics 2-11716  
 CO<sub>2</sub>-He(N<sub>2</sub>) high freq. capacitive discharge 10.6  $\mu$ m gain 2-44242  
 CO<sub>2</sub>-N<sub>2</sub>-He, mixing laser, performance using rapid mixing technique 2-885  
 CO<sub>2</sub>-N<sub>2</sub>-He laser mixture, supersonic flow, dynamic parameters calc. 2-4481  
 CO<sub>2</sub>-N<sub>2</sub>-He-CO high-power electronic discharge convection laser, ionic and thermal instability 2-15980  
 CO<sub>2</sub>-N<sub>2</sub>-He-O<sub>2</sub> electron beam sustained discharge, elect. field distrib. 2-44942  
 D-<sup>3</sup>He reactor, alternate fusion fuel cycle research 2-24411  
 ErT<sub>32</sub>:He films, He release rate, temp. depend. 2-5300  
 F<sub>2</sub>-D<sub>2</sub>-He mixtures, detonation investig. 2-22451  
 H-He mixture, fully ionised, strongly coupled, electronic transport 2-8272  
 H<sub>2</sub>-air flame, aspirated at. Na distrib. study using spatially resolved saturated absorpt. spectroscopy 2-22512  
 HCl-He discharge, mixture, limiting charact. (Russian) 2-40193  
 He D<sub>3</sub> line in solar prominences, obs. and anal. 2-38151  
 He<sup>+</sup> 304 Å solar line and ionosphere photoelectron flux 2-28225  
 He<sup>+</sup> ions in Ni, Ag, Au, 20-140 keV, stopping power meas. 2-43734  
 He/Cl<sub>2</sub> laser, electron beam pumped, 258 nm 2-44254  
 He/N<sub>2</sub> mixtures, mass-filter probe, rarefied gasdynamical problems appl. (Japanese) 2-4905  
 He-<sup>21</sup>Ne laser, freq. stabilisation by CH<sub>4</sub> intracavity polarisation spectroscopy 2-925  
 He-Ar, electrically excited, electron energy distrib. and transport coeffs., Boltzmann stability eqn. calc. (Chinese) 2-25665  
 He-Ar, lineshapes and dipole moments in collision-induced absorption 2-29574  
 He-Ar mixture, thermal diffusion factor, pressure and conc. depend. 2-30267  
 He-Ar mixtures, acoustic vel. and density 2-35264  
 He-Ar-Xe, IR laser excited by UV preionised discharge 2-44246  
 He-CO binary gas mixtures, thermal cond. 2-50357  
 He-CO discharge, electron energy distrib. and vibr. population 2-30349  
 He-CO<sub>2</sub> mixture, thermal diffusion factor, pressure and conc. depend. 2-30267  
 He-CO<sub>2</sub>(N<sub>2</sub>), mixing temp. meas. and excess enthalpy 2-35259  
 He-Cd II hollow cathode metal vapour lasers, oscill. spectra, 533.7 and 537.8 nm lines 2-44255  
 He-Cd laser, longevity problem investigation 2-25032  
 He-Cd laser operation in nonuniform mag. field (Chinese) 2-16011  
 He-Cd laser with RF pumping, quasi-CW operation 2-44257  
 He-Co<sub>2</sub>-N<sub>2</sub> 2-12266  
 He-D<sub>2</sub>-HCl, gasdynamic laser, thermally pumped, gain and energy parameters 2-29296  
 He-Kr, electrically excited, electron energy distrib. and transport coeffs., Boltzmann stability eqn. calc. (Chinese) 2-25665  
 He-N<sub>2</sub> laser, UV preionisation, laser discharge homogeneity improvement (Chinese) 2-44252  
 He-N<sub>2</sub> radiative-collision high-efficiency UV laser amplifier 2-39626  
 He-N<sub>2</sub>-CO<sub>2</sub> oscillatory population inversion behind nonstationary shock waves 2-25393  
 He-Ne <sup>127</sup>I<sub>2</sub> stabilised lasers at 633 nm, international comparison 2-34726  
 He-Ne cascade laser, two-photon amplification 2-11681  
 He-Ne frequency stabilised laser, optical feedback effects 2-16031  
 He-Ne gas discharge laser, volt-ampere charact. investig. 2-11680  
 He-Ne laser, gas press. and gas partial press. ratio determ. by intensity ratio meas. (Chinese) 2-24990  
 He-Ne laser, high power, single freq. operation anal., resonant cavities 2-893  
 He-Ne laser, interferometric dilatometer for thermal expansion coeffs. meas. (Japanese) 2-19081  
 He-Ne laser, inverted Lamb dip, expt. and strong signal formalism calc. 2-44247  
 He-Ne laser, methane-stabilised, rel. to third harmonic of 10.2  $\mu$ m R(30) transition of CO<sub>2</sub> laser, freq. difference (Japanese) 2-4486  
 He-Ne laser, photoelec. counting meas., detuning effect on fluctuation props. 2-49725  
 He-Ne laser, simple method for single-freq. operation and stabilisation 2-11712  
 He-Ne laser line profile and width meas. at 6328 Å using optogalvanic spectroscopy (Chinese) 2-24991  
 He-Ne laser power stabilisation (Russian) 2-4485  
 He-Ne laser radiation wavefront reversal by light-induced shaping of an absorbing material surface 2-4549  
 He-Ne laser stabilised with I<sub>2</sub> vapour, absorpt. cell evaluation (Slovak) 2-44347  
 He-Ne laser with hollow cathode and limited discharge (Chinese) 2-24989  
 He-Ne laser with planospherical resonator, output-power instability investigation 2-49731  
 He-Ne laser with transverse microwave pumping, unsaturated gain determ. 2-4488  
 He-Ne laser-light scatt. in atm. turbulence, measured statistics 2-42466  
 He-Ne plasma, discharge noise relation to light output 2-44929  
 He-Ne two-mode ring laser, two-time correl. meas. 2-29843  
 He-Ne Zeeman lasers, mirror anisotropy effects, Jones matrix representation 2-39623  
 He-Ne/methane laser with periodically varying optical length, nonlinear absorber influence on radiation parameters 2-7752  
 He-Ne/methane stabilised laser, freq. meas. (Russian) 2-7745  
 He-SF<sub>6</sub> interdiffusion coeffs., temp. effects 2-20805  
 He-SF<sub>6</sub> mixture, thermal diffusion factor, pressure and conc. depend. 2-30267  
 He-Se<sup>+</sup> cathaphonic laser, props. and design feature 2-49783  
 He-Sr recombination laser, freq. tuning and mode self-locking, 430.5 nm 2-44263

## helium continued

- He-Te positive column laser transitions, excitation mechanism 2-7744  
 He-Xe, IR laser excited by UV preionised discharge 2-44246  
 He-Xe 3.51  $\mu$ m laser CW amplified spontaneous emission output, orthogonally polarised component intensity fluctuations, anticorrels. 2-4487  
 He-Xe frequency offset locked laser, performance at 3.51  $\mu$ m 2-11679  
 He-Xe(H<sub>2</sub>)(D<sub>2</sub>), moderately dense gas mixtures, light scatt. in hydrodynamic regime 2-35268  
 He-Zn, hollow cathode laser discharge, excitation processes (Japanese) 2-49733  
 He-Zn hollow cathode laser discharge, He<sup>+</sup> density, intensity ratio method meas. 2-24999  
 He-Zn II, hollow cathode metal vapour lasers, oscill. spectra, 492.4 nm line 2-44255  
 He-Zn II laser using natural Zn, single-mode operation, 492.4 nm 2-44331  
 He+Ag, L-shell X-ray cross section meas. in energy range 0.125-4 MeV/amu 2-39487  
 He+K collisions, K P<sub>3/2</sub>-P<sub>1/2</sub> fine struct. transition, polarisation effects 2-49547  
 He+Ta, L-shell X-ray cross section meas. in energy range 0.125-4 MeV/amu 2-39487  
 He<sup>+</sup>+He, ionisation, autoionising states, electron spectra 2-44077  
 He<sub>2</sub><sup>+</sup>, ground state, pot. energy curves, CEPA-PNO and PNO-CI calcs. 2-11411  
 He<sub>2</sub><sup>2+</sup>, excited states, prolate-spheroidal wave functions 2-11415  
 He<sub>2</sub><sup>2+</sup>, interelectronic distance, ground and excited states, prolate spheroidal wave function 2-15714  
 HeII lines in plasma, electron scatt. contrib. to red shift 2-15746  
 He atoms, reflection coeffs. from W (110), atom probe FIM study 2-27043  
 He counting tubes for neutron detection in intensive  $\gamma$ -ray background fields (German) 2-11348  
 He spectrometer calibration and neutron spectrum meas. from Am/Li source 2-15662  
 He-<sup>3</sup>He solutions, phase transitions with coupled order parameters 2-48663  
 He-<sup>4</sup>He vapour mixture, sound absorpt. 2-30270  
 He-Ne laser, CW nuclear pumped, lasing transition theory 2-24992  
 He-Xe laser, nuclear pumped, lasing at 2.63  $\mu$ m 2-4484  
 He-Xe laser amplifier, direct nuclear pumped 2-39620  
 He-Xe proportional scintillation detector for neutron detection 2-15672  
 He<sup>+</sup>(He<sup>+</sup>)(He<sup>2+</sup>) ions stopping power in solid Ar 2-15684  
 He atomic clusters, binding energy 2-34612  
 He atoms, reflection coeffs. from W (110), atom probe FIM study 2-27043  
 He, sorption on vitreous SiO<sub>2</sub>, effect on anomalous low temp. thermal props. 2-12772  
 He energy straggling meas. in Au foil, foil nonuniformity correction 2-4181  
 He<sub>2</sub><sup>\*</sup>, metastable excimers, electron impact ionisation, cross sections 2-4400  
 He<sub>2</sub><sup>\*</sup>, quenching reaction cross sections, triplet state, dissoci., IR obs. 2-7555  
 LiNbO<sub>3</sub>:He<sup>+</sup>, propag. of SAW during ion implantation 2-35875  
 N<sub>2</sub>-He mixture, room temp. thermal cond., rel. to kinetic theory 2-30269  
 Ni:He,C, ion irradiated, void formation and denudation 2-45298  
 Si:He, ion implanted, radiative recomb. centres, photoluminesc. study 2-9194  
 Si:He<sup>+</sup> ion implanted, range distrib. charact., Monte Carlo calc. 2-45302  
 V<sub>2</sub>Si:He, ion implanted, strain study, divergent beam X-ray diff. obs. 2-16684  
 Xe-He plasma charact., through excitation by transverse HF discharge 2-35344
- helium, liquid** see liquid helium  
**helium, solid** see solid helium  
**helium-3 interactions** see helium 3-nucleus reactions  
**helium 3-nucleus reactions**  
 for inelastic helium 3-nucleus scattering, see "helium 3-nucleus scattering"  
<sup>36</sup>Ar(<sup>3</sup>He,n), <sup>38</sup>Ca O<sup>+</sup> wave functions, excitation functions and cross sections 2-11094  
<sup>9</sup>Be(<sup>3</sup>He, <sup>4</sup>He)<sup>4</sup>He, pole approx. test for Treiman-Yang criterion 2-19555  
<sup>9</sup>Be(<sup>3</sup>He,p), pol. p. rel. to inverse, analysing power, T invariance 2-29249  
<sup>48</sup>Br(<sup>3</sup>He,t), A=79.81, lowest isobaric analogue state study 2-33986  
<sup>12</sup>C(<sup>3</sup>He, $\alpha$ ), 100-140 MeV, DWBA anal., reaction mechanism, <sup>11</sup>C transitions 2-39039  
<sup>13</sup>C(<sup>3</sup>He,t), 43.6 MeV, isoscalar and isovector transition amplitudes in A=13, high spin state excitations 2-372  
<sup>14</sup>C(<sup>3</sup>He,n)<sup>16</sup>O, 25.4 MeV, coexistence model of <sup>16</sup>O 2-15415  
<sup>54</sup>Fe(<sup>3</sup>He,d)<sup>55</sup>Fe, analysing power, <sup>55</sup>Fe spectroscopic factors determ. 2-7110  
<sup>54</sup>Fe(<sup>3</sup>He,d)<sup>55</sup>Co, analysing power, <sup>55</sup>Co spectroscopic factors determ. 2-7110  
<sup>2</sup>H(<sup>3</sup>He,X), 89.4 and 118.9 MeV, deuteron breakup, three and four-body models 2-11143  
<sup>3</sup>H(<sup>3</sup>He, 2n), R-matrix anal. for fusion system 2-3987  
<sup>3</sup>H(<sup>3</sup>He,X), A=12-208, medium energy total cross sections, adiabatic effects 2-39038  
<sup>3</sup>(He,d), A=28, 54, 58, 90, 124, 90 MeV, differential cross sections, optical and DWBA anal. 2-43496  
<sup>3</sup>He(<sup>3</sup>He,  $\pi^+$ )<sup>6</sup>Li, coherent pion prod. 2-24245  
<sup>3</sup>He(<sup>3</sup>He,X), pol. projectile, <sup>6</sup>Be system, microscopic multichannel calcs., levels, J<sup>+</sup>, anal. po. wers 2-3891  
<sup>3</sup>He(<sup>3</sup>He,p), 14 MeV, pol. target, anal. power ang. distrib. 2-39011  
<sup>3</sup>He(<sup>3</sup>He, $\pi^+$ ), 235-283 MeV, coherent prod. near threshold 2-39041  
<sup>3</sup>He(<sup>3</sup>He, $\pi^+$ )<sup>7</sup>Li, 280 MeV, microscopic model, pion exchange 2-29275  
<sup>6</sup>Li(<sup>3</sup>He, $\alpha$ ), pol. <sup>3</sup>He, 33.3 MeV, <sup>6</sup>Li levels, spectroscopic factors, anal. powers, DWBA and CRC anal. 2-19527  
<sup>6</sup>Li(<sup>3</sup>He,d), pol. <sup>3</sup>He, 33.3 MeV, <sup>6</sup>Be levels, spectroscopic factors, anal. powers, DWBA and CRC anal. 2-19527  
<sup>6</sup>Li(<sup>3</sup>He,p), pol. p. rel. to inverse, analysing power, T invariance 2-29249  
<sup>6</sup>Li(<sup>3</sup>He,t), A=6, 7, 33.3 MeV, pol. <sup>3</sup>He, differential cross sections, anal. powers, optical parameters 2-3892  
<sup>92</sup>Mo(<sup>3</sup>He,  $\alpha$ )<sup>91</sup>Mo, 97.3 MeV, inner-hole excitation study 2-7108  
<sup>93</sup>Nb(<sup>3</sup>He,xn), x=2,3, excitation functions and isomer ratios 2-49076  
<sup>4</sup>Ni(<sup>3</sup>He, d), A=62, 64, radiation widths correl. and spectroscopic factors meas. 2-24230



**helium 3-nucleus reactions continued**

- $^{60}\text{Ni}({}^3\text{He}, \text{d})^{61}\text{Cu}$ , J depend. in cross-section 2-19556  
 $^{16}\text{O}({}^3\text{He}, \text{n})$ ,  $^{18}\text{N}$  state prod., structure 2-33914  
 $^{16}\text{O}({}^3\text{He}, \text{p}\gamma)$ , 3.75 MeV,  $^{18}\text{F}$   $3^+$  state g-factor from  $\gamma$ -ray ang. distrib. 2-362  
 $^{208}\text{Pb}({}^3\text{He}, \text{p})$ , 40.8 MeV, double stripping mechanism, DWBA and CCBA predictions 2-39043  
 $^{74}\text{Se}({}^3\text{He}, \text{pn})$ , 28.32 MeV,  $^{75}\text{Br}$  deformed high spin levels,  $J^\pi$ , transitions and  $T_{1/2}$  2-33884  
 $^{28}\text{Si}({}^3\text{He}, \text{d})$ , 52 MeV, inclusive d spectrum, elastic, inelastic and absorptive breakup contribs. 2-7111  
 $^{29}\text{Si}({}^3\text{He}, \text{d})^{30}\text{P}$ , spectroscopic sum components for one-nucleon transfer 2-29188  
 $^{145}\text{Sm}({}^3\text{He}, 2\text{n})^{145}\text{Gd}$ , medium-spin levels and 20.4 ms  $13/2^+$  isomer character in  $^{145}\text{Gd}$  2-38951  
 $\text{Te}({}^3\text{He}, \text{n}\gamma)^{\text{A}}\text{Xe}$ ,  $\text{A}=123, 125, 127, 129$ , low-lying bands in odd-A transitional Xe nuclei 2-7058  
 $^{232}\text{Th}({}^3\text{He}, \text{tf})$ , 81 MeV,  $^{232}\text{Pa}$  isobaric analogue resonance fission probability and width 2-7125  
 $\text{U}({}^3\text{He}, \text{e}^+ \text{x})$ , 890 MeV, alkali elements and Tl comparative yields 2-19547  
 $\text{U}({}^3\text{He}, \text{e}^+ \text{x})$ , 890 MeV, alkali elements and Tl comparative yields 2-24240  
 $\text{U}({}^3\text{He}, \text{xn})\text{Pu}$ , 21.9, 24.5, 27.0 MeV,  $^{236}\text{Pu}$ ,  $^{237}\text{Pu}$  and  $^{238}\text{Pu}$  isotope prod. 2-11142  
 $^{238}\text{U}({}^3\text{He}, \text{f})$ , fission fragments ang. distrib., blocking effect (*Russian*) 2-3974  
 $^{238}\text{U}({}^3\text{He}, \text{tf})$ , 81 MeV,  $^{238}\text{Np}$  isobaric analogue resonance fission probability and width 2-7125  
 $^{90}\text{Zr}({}^3\text{He}, \alpha)^{89}\text{Zr}$ , 97.3 MeV, inner-hole excitation study 2-7108

**helium 3-nucleus scattering**

- $^{13}\text{C}({}^3\text{He}, {}^3\text{He})$ , 43.6 MeV, isoscalar and isovector transition amplitudes in  $\text{A}=13$ , high spin state excitation 2-372  
 $({}^3\text{He}, {}^3\text{He})$ ,  $\text{A}=28, 54, 58, 90, 124, 90$  MeV, differential cross sections, optical and DWBA anal. 2-43496  
 $^{\text{A}}\text{Li}({}^3\text{He}, {}^3\text{He})$ ,  $\text{A}=6, 7, 33.3$  MeV, pol.  ${}^3\text{He}$ , differential cross sections, anal. powers, optical parameters 2-3892  
 $^{208}\text{Pb}({}^3\text{He}, {}^3\text{He})$ , giant reson., Coulomb excitation, coupled channel calc. 2-33990

**helium-3 scattering see helium 3-nucleus scattering****helium atoms**

- 0s orbitals in SCF calcs. 2-24598  
 $1\text{S}-\text{nP}$  excitation, Glauber scatt. amplitude 2-24835  
 $4\text{s}^2-\text{P}$  interval, precision determ. by laser mag. reson. 2-34454  
absorption line shape inside dye laser cavity, super-regen model 2-680  
abundance in solar corona, expt. on Spacelab 2 (CHASE) 2-32849  
adsorbed on graphite, anisotropic pair pot. and band struct. effects 2-1772  
adsorption on W at low energy, quantum theory 2-26228  
atom, ejected-electron scattering cross sections, Compton diffusion (*French*) 2-39492  
Clementi Roetti atomic HF wave functions, improved local accuracy using global constraints 2-39300  
collisions with nuclei, ionisation processes, electron approx. 2-24839  
Compton profiles for ejected electrons, momentum densities determ. 2-24864  
Compton scattering, incoherent factors, density matrix approach 2-43863  
correlated CI wave functions using corr. Gaussians 2-11408  
coupled states, cross sections rotational rainbows, power gap model validity 2-15884  
decay rates of the helium  $3^1\text{D}$  level excited by a nanosecond discharge 2-4367  
elastic electron scattering, high energy high order Born approx. 2-29716  
elastic electron scattering, model pot. approach 2-24856  
elastic low energy electron scatt., cross sections calc. using extended HF theory 2-11572  
electron correl. functions, Fermion Monte Carlo variational method appl. 2-24619  
electron elastic scatt. by  $2\text{s}$  state 2-791  
electron elastic scattering, cross sections, free fall model 2-49574  
electron impact excitation of  $3^1\text{P}$ , electron-photon coincidence meas. 2-39483  
electron impact ionisation, coincidence cross sections meas. 2-7650  
electron impact ionisation, cross sections, Coulomb-projected Born approxs., calcs. 2-24869  
electron impact ionisation, differential cross sections, Born approx. 2-4390  
electron scatt. and charge cloud polarisation 2-7643  
electrons elastic scatt., elastic and momentum transfer cross section meas. 2-7641  
excitation transfer of  $3^1\text{P}$ ,  $\text{D}-3^3\text{D}$  by atomic collisions, violation of Wigner's spin conservation rule 2-15751  
excited state,  $1\text{s}3\text{d}$   $^1\text{D}$  non-relativistic total energy 2-43817  
excited states,  $3^1\text{D}$ ,  $4^1\text{D}$ ,  $5^1\text{D}$ ,  $4^1\text{D}$ ,  $5^1\text{D}$  and  $6^1\text{F}$ , variational calc. 2-43816  
expectation values in equalities, momentum density monotonicity, HF calcs. 2-39302  
fine and hyperfine struct. 2-19966  
fine structure transitions, IR diode laser spectroscopy obs. 2-43826  
ground state, Coulomb integral, local density functional theory 2-11371  
homonuclear diatoms, collision-induced Raman spectra and diatom polarisability 2-29598  
in elec. field, generator coord. method calcs. 2-19957  
intrinsic divergence in closed shell SCF calcs. 2-640  
ions, backscattering from solid targets, empirical formulas 2-17587  
isoelectronic sequence, electron impact excitation, oscillator strengths calc. 2-20192  
isoelectronic spectra, Na X through to Ar XVII, series formulae 2-24633  
isoelectronic structure, limiting behaviour of  $\langle r_{12}^{-1} \rangle / \langle r_1^{-1} \rangle$  in HF framework 2-11391  
L-limit energy, interference effects 2-639  
line absorption calculations for Voigt profile, 294.5 and 667.8 nm lines 2-49334  
metastable beam, intensity control 2-49601  
mixtures, self-focusing of pulsed electron beam, ionisation 2-7648  
momentum space properties of various orbital basis sets used in quantum chemical calculations 2-49278  
multipole polarisabilities, spectral sums, dispersion coeffs., perturbation theory, GCM appl. 2-7660  
one-dimens. model, Roothaan's method calcs. 2-14997  
pair polarisability, direct CI calcs. 2-49302

**helium atoms continued**

- perturbation of  $253.7$  Hg line exptl. shape (*French*) 2-39360  
photoionisation, partial cross section meas. and autoionisation to  $\text{He}^+(\text{N}=2)$  2-49349  
plasma, electron collisions, EM wave propagation, high-power cross-modulation diagnostics 2-12404  
plasma, fluctuating elec. field meas. using He forbidden transition 2-16509  
positron excitation cross sections at intermediate energies, pseudostate effects 2-34576  
rational orbitals for two-electron  $^1\text{S}$  states, CI calc. 2-15729  
spectra, nonlinear broadening obs. at moderate densities 2-34352  
spectra of He like systems in superstrong mag. field 2-34334  
in stellar atmospheres, diffusion and viscosity coeffs. 2-53070  
thermal conductivity data correl. 2-40021  
V-T collisional relax., ab initio pots. calcs. 2-39478  
viscosity meas. by transient flow method 2-40020  
wave functions, relativistic HF-Dirac SCF calc. (*Russian*) 2-15720  
wave functions in momentum space, iterative computations in HF approx. 2-24597  
 $\text{Z}=6$  to 33, dielectronic satellite spectra for  $(1\text{s}2\text{l}'3\text{l}'=1\text{s}2\text{l})$ ,  $1\text{s}2\text{l}'3\text{l}'=1\text{s}3\text{l}'$  transitions 2-34344  
 $\text{CO}_2\text{-N}_2\text{-He}$  mixture, transverse discharge, laser radiation amplification (*French*) 2-24988  
H-like ions,  $2\text{s}-2\text{p}$  transitions, wavelength meas. 2-11423  
 $\text{H}^+ + \text{He}$ , electron detachment, differential elastic cross section, detachment cross section 2-20170  
He II  $4686\text{-}\text{\AA}$  emission rel. to quasars and Seyfert galaxy reddening 2-38331  
He methane system, collision anisotropy, IR spectra study 2-15911  
He, triple differential ionisation cross sections in second Born approximation 2-49579  
 $\text{He}^+$  468.6 nm emission from hollow cathode discharge by restricting inner cathode wall 2-5013  
 $\text{He}^+$  beam-foil excited state formation, surface interaction effects 2-785  
 $\text{He}^+$  concentration profile and diffusion coeff. for topside ionosphere 2-3141  
 $\text{He}^+$ , electron impact autoionisation reson., complex coord. calcs. with complex basis sets 2-4394  
 $\text{He}^+$  in magnetosphere, trapped and injected fluxes during magnetic storm 2-10260  
 $\text{He}^+$  in Venus atm. picked up by solar wind, detect. at 1 AU 2-14750  
 $\text{He}^+$  ions in solar wind, rel. to chromospheric plasma ejection (*German*) 2-3176  
 $\text{He}^+$  neutralisation in low energy scatt. from Ni 2-51759  
 $\text{He}^+$  rich plasma, ion cyclotron waves propag. in magnetosphere 2-18640  
 $\text{He}^+$ , spin-polarised  $2\text{s}_{1/2}$  ion, E1-E1 damping interference in elec. field quenching 2-49325  
He-Be string, interaction pot., ab initio calc. 2-44026  
He-H flow, over flat plate, laminar boundary layer, effect of C blowing, heat transfer 2-35131  
He-He interaction pot., Van der Waals forces, scatt. functions and charge density functions 2-29681  
He-isoelectronic series, lower bound of ground states, HF functions 2-19950  
He-like ions, electron impact ionisation, cross section and rates, appl. to plasmas 2-7651  
He-like ions, electron impact excitation, coupling collision strengths, fine struct. transitions 2-29718  
He-like ions, electron-ion scatt., cross sections, weak-coupling approx. 2-44115  
He-like ions, lifetime meas., cascade model, X-ray obs. 2-4243  
He-like ions, Tokamak plasma, UV spectra 2-672  
He-like ions line ratios used for X-ray source density and temp. diagnostics 2-10528  
He-methane, energy transfer collisions, photoacoustic study 2-44062  
He- $\text{N}_2$ , anisotropic van der Waals pot. calcs. 2-39460  
He- $\text{N}_2(\text{CO}_2)(\text{N}_2\text{O})(\text{methane})(\text{SF}_6)$ (carbon tetrafluoride), excess and interaction second virial coeff. 2-30263  
He-Xe, interaction pots., IR spectra, line shift, and broadening 2-20004  
He-Xe ( $\text{H}_2$ ) ( $\text{D}_2$ ), Rayleigh Brillouin spectra meas. 2-43926  
 $\text{He}^3+$ , elastic scatt. by charged particles, Glauber approx. 2-24811  
 $\text{He}^+/\text{B}_2$ , toluene ( $\text{B}_2$  fluorobenzene), low energy collision, vibr. relax. cross sections 2-24813  
 $\text{He} + \text{Ar}^+$ ,  $q=1,2,3$ , projectile excitation, radiative emission cross sections 2-44073  
 $\text{He} + \text{Ar}^+$  charge exchange cross sections 2-11569  
 $\text{He} + \text{Ar}(\text{Kr})(\text{N}_2)(\text{CO})(\text{O}_2)$ , He metastable states; chemi-ionisation velocity depend. 2-44069  
 $\text{He} + \text{BH}$ , rot. states, energy transfer, cross sections, lifetime meas. 2-44065  
 $\text{He} + \text{C}^+$ , integral elastic scatt. cross sections meas. 2-34524  
 $\text{He} + \text{CO}_2$ , vibr. modes decoupling, vibr. close coupling infinite order sudden 2-20161  
 $\text{He} + \text{C}(\text{N})(\text{O})(\text{F})$  ions, one-electron ions ionisation and capture 2-7636  
 $\text{He} + \text{Ca}$ , Ca atomic spectra, principal series lines, collision broadening meas. 2-49335  
 $\text{He} + \text{Cd}$  II, Penning excitation cross-sections determ. 2-34546  
 $\text{He} + \text{H}_2$ , inelastic scatt., energy-adjusted sudden approx. 2-39481  
 $\text{He} + \text{H}_2$ , ro-vibr. transitions, cross sections and relax. rates, close coupling calc. 2-15869  
 $\text{He} + \text{H}_2$ , rovibrational excitation cross sections, close coupling calcs. 2-34531  
 $\text{He} + \text{H}_2^+$ , quasiclassical trajectory study using HF and CI pot. energy surfaces 2-24815  
 $\text{He} + \text{H}^+$ , electron detachment, cross sections, form. of excited H atoms 2-24841  
 $\text{He} + \text{H}^+(\text{Br}^-)$ , tests of interaction pots., ion mobility and diffusion coeff. calcs. 2-34539  
 $\text{He} + \text{H}^+$ , impact excitation, differential cross sections calcs., Glauber approx. 2-24844  
 $\text{He} + \text{H}^+$ , resolution dependence and asymmetry of electron capture to the continuum spectra 2-20182  
 $\text{He} + \text{He}$ , simultaneous excitation cross-sections 2-20167  
 $\text{He} + \text{He}^+$ , ionisation, autoionising states, electron spectra 2-44077  
 $\text{He} + \text{He}^+$ , photon-ion ang. correls. invest. 2-49549  
 $\text{He} + \text{He}(^1\text{S})$ , excitation of autoionising states, electron spectra 2-24838  
 $\text{He} + \text{Hg}$ , collisional perturbation of  $6\text{s}6\text{d}$  levels of Hg 2-39471  
 $\text{He} + \text{H}_2(\text{Cl}_2)$ , pseudochannels, converging coupled-channel scatt. calcs. 2-44066



**helium atoms continued**

- He+I<sub>2</sub>, very low energy collision, adiabatic and effective pot. approx. calcs. 2-39469  
 He+Li, Li excitation, time of flight spectra vector polarisation anal. 2-784  
 He+Li<sup>2+</sup>(Li<sup>3+</sup>), electron capture cross-sections 2-20176  
 He+Mg (Al) (Cs) (Pb) (Bi) ions, charge transfer cross sections involving electron capture processes 2-7631  
 He+NH<sub>3</sub>, bending mode and inversion motion interaction pot., vibr. depend. 2-20159  
 He+Na, broadening of NaD lines model pots., temp. depend. 2-24650  
 He+Na<sub>2</sub>, rot. inelastic integral cross sections, energy depend., dynamic thresholds and quantum undulations 2-24818  
 He+Ne, interaction pots. and energy transfer cross-sections 2-49548  
 He+Ne<sup>+</sup>(Kr<sup>+</sup>), ion mobility meas. at 294K 2-50361  
 He+positron, low energy total cross section anal. 2-49542  
 He+Rb, atomic fine struct. transitions nonadiabatic coupling 2-34535  
 He+Rb, collision broadening and shift of Rb S and D Rydberg levels 2-49337  
 He+S<sub>2</sub>Cl<sub>2</sub>, energy transfer reactions, UV and visible emission 2-27426  
 He+SF<sub>6</sub>, vibr. excitation, integral and differential cross section 2-44044  
 He+SO<sub>2</sub>, vibr. excitation, pot. energy surfaces, quantum calcs. 2-11565  
 He+SiO<sub>2</sub>, pot. hypersurface for vibr.-rot. excitations through collisions 2-39342  
 He+toluene, collisional deactivation obs. using time-resolved UV spectroscopy 2-24814  
 He+Xe, recombination luminesc., applied elec. field effect 2-50369  
 He+Zn(II), He 2<sup>1</sup>S(2<sup>3</sup>S) metastable atoms, Zn(II) Penning excitation cross-section meas. 2-49563  
 He<sup>+</sup>+H<sub>2</sub>(O<sub>2</sub>)(ethylene), He<sup>+</sup> stopping powers at 40-200 keV 2-34536  
 He<sup>+</sup>+H<sup>+</sup>, charge exchange excitation cross sections, mol. state study 2-34563  
 He<sup>+</sup>+H<sup>+</sup>, electron transfer collisions, cross sections, Sturmian basis 2-44088  
 He<sup>+</sup>+He reson. charge transfer collision, diabatic mol. representation 2-34553  
 He<sup>+</sup>+Li, electron capture cross sections 2-34559  
 He<sup>+</sup>+N<sub>2</sub>(O<sub>2</sub>), vibr. excitation, electron capture, energy-loss meas. 2-24833  
 He<sup>+</sup>+Na, Rydberg atom l-change near matching vel. region 2-4374  
 He<sup>+</sup>+H, laser-induced charge transfer, photon-induced cross section 2-4379  
 He<sup>2+</sup>+H, charge exchange excitation cross sections, mol. state study 2-34563  
 He<sup>2+</sup>+H, electron capture, close-coupling calcs. 2-20175  
 He<sup>2+</sup>+H, electron capture into excited s and p states 2-24846  
 He<sup>2+</sup>+H, electron transfer collisions, cross sections, Sturmian basis 2-44088  
 He<sup>2+</sup>+H, translation factors for approx. mol. wavefunctions, charge exchange cross section calc. 2-34558  
 He<sup>2+</sup>+Li, electron capture cross sections 2-34559  
 He<sup>+</sup>+CO, vibr. relax., semiclassical calcs., deactivation rate const. determ. 2-49544  
 He<sup>+</sup>+CO, vibr. relax., semiclassical calcs., deactivation rate const. determ. 2-49544  
 He<sub>2</sub>, interaction energy, fourth order diagrammatic MB-RSPT calc. 2-11560  
 HeH<sup>+</sup>, IR fundamental band, vibr.-rot. transitions 2-29596  
 HeI, 1s4f<sup>1</sup>F and 1s5f<sup>1</sup>F level, polarisabilities 2-24657  
 He<sup>+</sup>(<sup>4</sup>P<sup>0</sup>), metastable state, photodetachment cross section, CI wave functions 2-20016  
 He clusters, electron bombard., positive cluster ion ejection 2-29719  
 He, muonic atom, hyperfine struct. calcs. 2-20209  
 He, n=6, 7<sup>1</sup>-D states, anticrossing spectroscopy 2-49357  
 He-He gas mixture, spin polarised, transport props. 2-50351  
 He-He isotope mixture, metastability exchange (*Russian*) 2-11564  
 He clusters, electron bombard., positive cluster ion ejection 2-29719  
 He, primordial abundances, hot big-bang nucleosynthesis calcs. 2-42762  
 He-isotope, nonrelativistic energies for lowest singlet and triplet S-states 2-24877  
 He<sup>+</sup>+He low energy cross section, interatomic pot. and vel. depend. 2-49545  
 He<sup>+</sup>+Ar, total integral collision and ionisation cross sections in thermal energy region (*German*) 2-7624  
 He<sup>+</sup>+Ar, total ionisation cross section, mass anal. 2-34544  
 He<sup>+</sup>+D<sub>2</sub>(H<sub>2</sub>), collisional disoc., metastable atom prod. 2-37068  
 He<sup>+</sup>+NO(O<sub>2</sub>), dissociative excitation, O(3s<sup>2</sup>S) translational energy determ. 2-29537  
 He<sup>+</sup>+O<sub>2</sub>, Penning ionis., electron spectrosc. obs. 2-49567  
 He<sup>+</sup>, electron correl. and Kellman-Herrick quantisation 2-661  
 He<sup>2</sup>(2S)+H, Penning ionisation, H<sup>+</sup> vel.-angle distrib., crossed beam meas. 2-29702  
 He<sup>+</sup>(2s<sub>1/2</sub>), spin-polarised, electric field quenching, E1-M1 interference effect meas. 2-43839  
 He-He, perturbation theory approach to intermolecular interactions 2-7622  
 Rb+He, collisional quenching of Rb Rydberg levels 2-34530

**helium compounds**

- He-Ar, interaction energies, modified statistical methods calcs. 2-15864  
 He-Ar<sup>+</sup>, charge transfer spectrum, rot. struct. 2-11504  
 HeBe, pot. energy curves, SCF calcs. 2-39344  
 HeBe<sup>+</sup>-like system, autoionising quasi-molecular states, decay rates 2-24660  
 HeH<sup>+</sup> bound-quasibound vibr.-rot. transitions obs. 2-34603  
 HeH<sup>2+</sup>, comparative test of multiple versus single centered spherical Gaussian 2-39304  
 HeH<sup>2+</sup>, photodisoc. cross section calc. 2-44015  
 HeI\*, van der Waals mol. vibr. predissoc. dynamical effects near I<sub>2</sub> disoc. limit 2-29665  
 HeMg, pot. energy curves, SCF calcs. 2-39344

**helium films**

- adsorption of atomic H, motion and effective mass 2-30706  
 electronenergy spectrum above liq. film in compressing elec. field (*Russian*) 2-40646  
 film dynamics, exact soliton soln. 2-26159  
 Kosterlitz-Thouless phase transition, disorder effects 2-36363  
 monolayers on grafoil, dislocation-mediated two-dimens. melting, thermodynamic manifestations 2-1700  
 phonon induced desorption, time const. 2-45665  
 phonon induced desorption at low temp., polarisation depend. 2-45666

**helium films continued**

- solid He film,  $\sqrt{3}$  phase, vacancies 2-40639  
 spatial orderings and elementary excitations 2-1697  
 superfluid <sup>4</sup>He film, thermal transport at the Kosterlitz-Thouless transition 2-30677  
 superfluid <sup>4</sup>He films, adsorbed on Mylar, superfluid flow onset 2-30676  
 He II, saturated, film boiling heat transfer, correl. of time depend. recovery 2-26170  
 He II, saturated, recovery heat flux from film boiling calc. 2-26169  
 He adsorbed layers on fluorocarbons, nuclear relax. study 2-35838  
 He, adsorbed on exfoliated graphite, ferromag. ordering, susceptibility and NMR study 2-35837  
 He, adsorbed on graphite, second layer and nucleation, neutron diff. study 2-40637  
 He, adsorbed submonolayer on solid Ne, sp. ht. anomalies 2-40642  
 He film on <sup>3</sup>He-He mixtures, superfluid transition temperature 2-35839  
 He film on small fluorocarbon particles, nucl. mag. polarisation, surface relax. 2-5598  
 He monolayer, incommensurate solid, on graphite, orientational ordering 2-12876  
 He, sticking probabilities and binding energy of H 2-1694  
 He, submonolayers on grafoil, melting in two-dimensions 2-1698  
 He, two-dimens. layers, mag. struct., vacancy interactions effect 2-40638  
 He-He mixture, heat capacity 40 to 350 mK, doubly two-dimens. behaviour, bound state 2-1695  
 He-He mixture, unsaturated, superfluid onset, third sound and mass transport obs. 2-1693  
 He-He mixture film, phase separation 2-30705  
 He adsorbed film, attenuation of static polarisation echo 2-45667  
 He, adsorbed layer, heat transmission from substrate, film thickness depend. 2-50954  
 He, adsorbed on Grafoil, excitations, neutron diff. study 2-40641  
 He, adsorbed on grafoil, solid layer struct. 2-1698  
 He, adsorbed on graphite, second layer, neutron diff. study 2-40640  
 He, adsorbed on pyrolytic graphite superfluid onset, third sound and vapour press. study 2-40644  
 He, adsorbed submonolayer on solid Ne, sp. ht. anomalies 2-40642  
 He film, Helmholtz resonator of very LF used to study onset phenomena 2-40628  
 He, film, sticking probability of H, mag. reson. study 2-1694  
 He film, thermal transport and Kosterlitz-Thouless transition 2-40630  
 He film, two dimensional, three phonon coupling, third sound meas. 2-35833  
 He film, two dimensional, nonlinear superflow dissipation in third sound reson. 2-35834  
 He film dynamics, boundary and screening effects 2-40626  
 He film freq.-depend. dissipation onset 2-40625  
 He film on Mylar substrate, thermal cond. meas. 2-35832  
 He films, phonon induced desorp. 2-40645  
 He monolayer, incommensurate solid, on graphite, orientational ordering 2-12876  
 He, on Grafoil ribbon, superflow onset, thermal conductance obs. 2-1689  
 He, solidon excitations 2-1696  
 He, submonolayer on large graphite crystals, heat capacity, two-dimens. transitions 2-1699  
 He, superfluid, adsorbed in porous Vycor glass, superfluid density, Landau elementary excitations 2-26171  
 He, superfluid, adsorbed on Vycor glass, superfluid transition above bulk solidification press. 2-35836  
 He, superfluid, renormalisation of vortex diffusion const. 2-1701  
 He, superfluid, rotons, solidon model 2-45654  
 He, superfluid, step-wise solid layer nucleation on Grafoil, fourth sound vel. study 2-40643  
 He, superfluid, viscosity, quartz cryst. resonator study 2-40621  
 He, superfluid film, large-amplitude quasi-solitons 2-12867  
 He superfluid film, quasi-solitons and their collisions 2-40629  
 He, superfluid film, vortex motion 2-40617

**helium nuclei** *see nuclei with mass number 1 to 5; nuclei with mass number 6 to 19***Hellman-Feynman theorem** *see quantum theory***Helmholtz free energy** *see free energy***Hertzsprung-Russell diagram** *see stellar evolution***heterodyne detection** *see demodulation***heterodyne wavemeters** *see wavemeters***HF calculations***see also Xalpha calculations*

- A=180-200, deformation and spectroscopic props. from self-consistent calcs. 2-15363  
 acetamide, alkyl substituted, cation interactions, HF SCF mode calcs. 2-633  
 acetone, energy hypersurfaces, inversion barrier, geometry optimisation, UHF calcs. 2-34271  
 adiabatic time depend. HF theory, optimal path evaluation 2-38963  
 aldehydes, energy hypersurfaces, inversion barrier, geometry optimisation, UHF calcs. 2-34271  
 alkali metal atoms, core polarisation and relativistic effects, fine struct., oscillator strengths, HF calcs. 2-24601  
 atomic electron scatt. with polarisation, Schwinger var. calcs. 2-20185  
 atomic fine struct. inversions explained as first order relativistic corrections to HF energy 2-49259  
 atoms, ionisation pots., total Hartree-Fock energy-eigenvalue sum calcs. 2-11385  
 atoms, metastable state,  $|1s2s2p^3P^J=5/2\rangle$ , lifetimes, transition energies and line fluores. calc. 2-24629  
 atoms, photoionisation cross section calc. at sub keV 2-29555  
 atoms and ions, interelectronic interaction and electrostatic pot. at nucleus, HF calc. 2-19942  
 atoms and ions, second differences in Hartree Fock SCF energies 2-49258  
 atoms with open shells, bound perturbation theory method, dipole polarisability calc. appl. 2-7662  
 Brillouin's theorem, constrained orbital variation, SCF and HF calcs. 2-24568  
 carbonyllyde, rot. energy barrier, ab initio RHF CI calcs. 2-24614  
 chloride ion, polarisability computed using HF method and many body perturbation theory 2-39505  
 closed electron shell molecules, diamag. susceptibility, paramag. contrib., Hartree-Fock calcs. 2-34290



## HF calculations continued

- closed shell systems, quadratically convergent HF (QC-SCF) method appl. 2-15711
- closed-shell molecules, LCAO-MO method, var. perturbation theory 2-49291
- cobaltocene, electronic struct., LCAO HFS calc., UV photoelectron and optical absorpt. spectra 2-29510
- collective states, schematic model, isoscalar quadrupole and rotational modes 2-24080
- conjugated heterocyclic systems, Hartree-Fock solutions instability 2-15717
- covalent crystals, lattice energy, electron-gas functional theory 2-1446
- covalent solids, tight-binding parameters by Louie peripheral states 2-40754
- cyclobutanes, monosubstituted, equilb. geometries, ab initio Hartree-Fock gradient technique calcs. 2-15704
- deformation props. from self-consistent calcs. 2-15362
- deformed nuclei, anomalies in rotational spectra 2-38936
- diametric and polyatomic molecules, reassessment of RHF limit energies from SCF values 2-19961
- diametrics and molecular fragments, exponential transformation of molecular orbitals, general formulation for UHF calcs. 2-39298
- electron gas, two-dimensional, CDW patterns in high mag. field, HF approx. 2-45858
- electron interactions, spin-density wave state selection 2-41144
- electron-hole liquid, ground-state energy in strong mag. field 2-12979
- electrosorption bond theory, Hartree-Fock approx. calcs. 2-26210
- excited states, orthogonality-constrained SCF method calcs. 2-34289
- FCC crystal, surface (001), electronic struct., atom absorption, SCF calcs. 2-40986
- Fe group atoms,  $3d^4 4p$ ,  $3d^{n-1} 4s 4p$ ,  $3d^{n-2} 4s^2 4p$  configs. first spectra calcs. 2-670
- fluoromethane gas, elect. and mag. props. 2-50362
- forces in molecules, algorithm and program for calcs. 2-15700
- generalised coherent-state, classical quantisation condition, appl. to many-body systems 2-42892
- germylmethylene and its cation, restricted HF calc., geometry, proton affinity and thermodynamic stability 2-39294
- half projected method, density matrix, second order calc. (*Spanish*) 2-29492
- heated rotating nuclei, isentropic vs. isothermal energy bands, HFB cranking approx. 2-19420
- Heisenberg spin Hamiltonian, commutator Green's function calc. in HF approx. 2-5513
- hexamethylsilane, intramol. electron localisation and local density, Hartree-Fock Slater calc. 2-24591
- inert gas crystals., binding energy and interat. pot. 2-45875
- invariance principle for exact collective motion equation TDHF approach 2-24145
- ionic crystals, dipole polarisabilities, density functional theory 2-12535
- isovector mode, schematic model for collective states including nonlocality effects 2-24081
- knock-on type exchange and effective interaction density depend. 2-11098
- low density crystals, antiferromag. and paramag. states, correlation energy, Hartree-Fock method 2-17007
- magnetic materials, electronic struct. calc. developments 2-8747
- many body system, bound states and periodic trajectories in Hilbert space 2-33356
- matrix element reduction, overlap integrals, Hartree-Fock-Roothaan method approx. 2-39292
- mean-field approximation, appl. to nucl. dynamics 2-29248
- metallocenes, non-validity of HF picture, INDO calcs. 2-24607
- metals, Auger effect, nonradiative transitions, electron binding energy (*Flemish*) 2-13597
- methane, INDO CHF calcs. of spin-spin coupling const. involving  $H^+$  2-11404
- methanes, monosubstituted, nuclear spin-spin coupling const., finite perturbation CI calc. 2-20081
- methylene, pot. energy hypersurfaces, wave functions, CI calcs. 2-11418
- mixed valence compounds, elec. resist., band model, HF calc. 2-30851
- molecular electron scatt. with polarisation, Schwinger var. calcs. 2-20185
- molecular X-ray spectra, re-emission transitions 2-49454
- molecules, correlation energy and size relationship 2-11388
- molecules, nuclear electric shielding theory 2-19980
- molecules, pseudo-Jahn-Teller distortion, vibr. mode, HF instability 2-4230
- multiconfigurational Hartree-Fock theory, Newton-Raphson generalisations and multiplicity independent approaches 2-24600
- neutron-rich nuclei, like-particle effective interactions, deformation-producing tendency 2-33897
- non-trivial Hartree-Fock studies in the thermodynamic limit 2-28758
- nuclear bulk properties from Skyrme Hartree Fock calcs. 2-24146
- nuclear collective excitations, periodic time depend. HF orbits, quantum corrections 2-3864
- nuclear collective motion damping in extended mean-field theory 2-15374
- nuclear high spin states and rot. bands in single particle model 2-3826
- nuclear matter, pion-nuclear interaction in relativistic HF theory 2-43436
- nuclear matter, single-particle pot., density depend. 2-19469
- nuclear quadrupole vibr. inertial function, adiabatic time depend. HFB approx. 2-7059
- nuclear rotation in the quantized TDHF theory, cranking model solns. 2-15359
- nuclear structure, relativistic many-body theory 2-33935
- nuclei, EM transitions and intrinsic shape anal. in anisotropic-oscillator model with projection 2-24169
- nuclei, spherical, self-consistent Hartree description in relativistic quantum field theory 2-3863
- one-phonon strength function and its moments calc. 2-33932
- open-shell systems, restricted Hartree-Fock method 2-34288
- organic superconductors, anisotropic, spin density waves and supercond. 2-36193
- path integral over branching paths 2-10978
- polyacetylene:Li, charge transfer and bond alternation calcs. 2-808
- polyacetylene, eigenspectrum, nearly SCF LCAO HF calc., negative factor counting and inverse iteration technique 2-29734
- polyacetylene, soliton excitations, ab initio calc. 2-45903
- polyacetylene, solitons, bond alternation and on-site Coulomb correlations effect 2-5359
- polyatomic molecule, internal forces, algorithm and program for calcs. 2-15700

## HF calculations continued

- polyenes, struct. isomerism, PPP investigation 2-49297
- polymers, disordered, eigenspectrum, nearly SCF LCAO HF calc., negative factor counting and inverse iteration technique 2-29734
- polymers, exact-exchange asymptotics in Hartree-Fock calcs. 2-26287
- polymers, Hartree-Fock results, extrapolation from moderate to long chain length 2-809
- polypeptide chains, electronic struct., SCF LCAO calcs., density of electronic states 2-24901
- porphyrin,  $\pi$ -electron system, screened pot. MO calcs. 2-641
- positive ions, ionisation pots., total Hartree-Fock energy-eigenvalue sum calcs. 2-11385
- projected HF and HF schemes, conditions for instability of solutions 2-43769
- random matrix model for low energy heavy ion collisions 2-15393
- relativistic Hartree-Fock calcs., use of contracted basis functions for atoms and mol. 2-34276
- relativistic Hartree-Fock theory, interelectronic mag. and retardation effects 2-34277
- relativistic quantum field theoretical model for nuclear slab collision dynamics 2-38969
- rotating nuclei at finite temp., critical crossing freq. curve, HFB cranking approx. 2-15357
- scaling, Padé approximants and variation principles in the many-body perturbation theory of atomic and molecular properties 2-11376
- semi-microscopic optical pot. calc. by nuclear matter approach 2-38998
- semiclassical nuclear Hartree-Fock fluid, dynamics and collective motions 2-38925
- single-particle states and giant reson. damping, nuclear surface role 2-24211
- spherical model-potentials, in quantum chem. (*German*) 2-43822
- spin-Peierls and Peierls distortions, metallic and insulating states, electronic props., pairing-distortion effect 2-21502
- spin-spin coupling consts., UHF instabilities in semiempirical CNDO/S and INDO/S calcs. 2-24753
- ten electron atoms, scaled atomic number expansion of HF energies 2-621
- tetraazoporphyrins, free base and transition metal, struct., optical transition, binding energies, hyperfine fields 2-34282
- tetramethylsilane, intramol. electron localisation and local density, Hartree-Fock Slater calc. 2-24591
- third-row elements,  $(3d+4s)^2 4p$  at. configs., energy levels, first spectra 2-10555
- time dependent HF theory, introduction in nuclear physics 2-366
- time dependent mean field theory extension through time smoothing, TDHF 2-19464
- transition amplitudes, variational principle, TDHF eqn. derivation 2-7076
- transition metal atoms and ions, excitation energies, ionisation pots., HF calcs., relativistic contrib. 2-7509
- transition metals, mag. at finite temp., one-electron-like Hartree-Fock-like model 2-36300
- transition to anharmonic CDW of two-dimensional electron gas 2-1847
- two-electron systems, dipole transitions from excited S-states, time-depend. Hartree-Fock theory 2-29498
- unrestricted Hartree-Fock theory and its applications to molecules and chemical reactions 2-24582
- vinoxy radical, electronic struct., ab initio multiconfig. HF wave functions 2-39299
- wave function orthogonality, Brillouin theorem of electron configuration 2-11383
- Wigner transition temperature of a two-dimensional electron gas in a strong magnetic field 2-17002
- AgH, relativistic effects on Re and De from all-electron Dirac-Hartree-Fock calcs. 2-39338
- Al, Clementi Roetti atomic HF wave functions, improved local accuracy using global constraints 2-39300
- $^{27}\text{Al}(^{35}\text{S}, X)$ , deep inelastic reaction, Hartree-Fock anal. 2-29278
- Ar, slow-electron elastic scatt. cross section calc. 2-44094
- Ar, XPS shake up studies 2-43870
- ArH, Rydberg states and visible spectrum 2-29618
- AuH, relativistic effects on Re and De from all-electron Dirac-Hartree-Fock calcs. 2-39338
- B isoelectronic series oscillator strengths, polarised frozen-core approx. 2-43851
- $\text{B}_2\text{H}_{10}$ , optimised geometry, restricted HF level MO CI calcs. 2-19974
- BN, band and cryst. struct., LCAO SCF ab initio HF calc. 2-35935
- BO, multiconfigurational Hartree-Fock studies of avoided curve crossing using the Newton-Raphson technique 2-39451
- $^{11}\text{B}$  magnetic moment from shell model, projected HF calc. 2-38944
- Ba, 3d electron excitation energies, relativistic HF calc. 2-12991
- Ba isotopes, neutron separation energies, charge radii 2-29187
- Be, integrals from atomic spinors, Dirac HF calcs. 2-39295
- Be, localised electronic interactions, density matrix treatment 2-7499
- Be, integrals from atomic spinors, Dirac HF calcs. 2-39295
- $\text{BeF}_2$ , ground state, geometry, force consts, ab initio HF calcs. 2-646
- $^{205}\text{Bi}(^{86}\text{Kr}, X)$ , fusion behaviour in time-dependent HF calcs. 2-34102
- C I, energies and oscillator strengths, polarised frozen core approx. 2-43852
- CO gas, elect. and mag. props. 2-50362
- CO low lying valence states, excited state props., MC time depend. HF and MC RPA calcs. 2-39297
- $\text{CO}_2$ , small-angle electron scatt. and electron density 2-49584
- CXYZ, (X, Y, Z=H, F, OH, CN), free radicals, struct. and reactivity, HF calcs. 2-4204
- $^{12}\text{C}$  spectrum in multi-configuration HF basis 2-24073
- $^{40}\text{Ca}$ ,  $A=40, 48$ , ground state props. in relativistic Hartree theory of nuclear matter 2-38968
- $^{40}\text{Ca}(^{16}\text{O}, X)$ ,  $A=40, 48$ , charge equilibration, giant dipole resonance, TDHF description 2-7063
- $^{40}\text{Ca}$ , collective excitations, TDHF calc. (*Russian*) 2-11084
- $^{40}\text{Ca}(^{40}\text{Ca}, ^{40}\text{Ca})$ , 400 MeV, deuteron excitations, TDHF high freq. components 2-7112
- $^{248}\text{Cm}$ , cranking-HFB calcs. of yrastline 2-24119
- Cn clusters,  $n=2$  to 6, struct. and props., HF calc. 2-49617
- Co, atom level structure calcs. 2-29516
- Cr, atom level structure calcs. 2-29516
- Cr I, 3d and 4s spectra, spectator electrons approx., ab initio HF calcs. 2-4244
- $^{48}\text{Cr}$ ,  $A=48, 50, 52, 54$ , energy levels, electric moments, transition probabilities, Hartree-Fock calcs. 2-33912
- Cs isotopes, neutron separation energies, charge radii 2-29187



## HF calculations continued

- $\text{Cs}_2$ , equilib. separation and electron affinity calc. using Xalpha discrete-variation method 2-29524  
 Cu, atom level structure calcs. 2-29516  
 Cu clusters, electronic struct., HF and LCAO Xalpha calcs. 2-49287  
 Cu<sub>2</sub>, electronic struct., Hartree-Fock-Slater calcs. 2-43798  
 CuCl, energy levels, ab initio HF MO calcs. 2-11402  
 (CuCl)<sub>2</sub>, energy levels, ab initio HF MO calcs. 2-11402  
 CuF, energy levels, ab initio HF MO calcs. 2-11402  
 DCN, pot. and dipole moment surfaces, force const., HF SCF CI calcs. 2-29512  
 Fe atom, internal conversion coeff. depend. on state 2-34364  
 Fe, atom level structure calcs. 2-29516  
 Fe-Cr, mag. moments for different local at. configs. 2-46255  
 Gd<sub>1-x</sub>Re<sub>x</sub>Al<sub>2</sub> (Re=Dy, Ho, Er), Curie temp., theoretical calc. 2-21793  
 H atom, one-config. Hartree-Fock type calcs. in arbitrary mag. fields 2-7502  
 H<sub>2</sub>, two-photon ionisation, HF Green's function calcs. 2-20017  
 H<sub>2</sub>+A, (A=Li-F), exchange reactions, pot. surfaces, nonempirical calcs. 2-22435  
 HCN, pot. and dipole moment surfaces, force const., HF SCF CI calcs. 2-29512  
 HCl, gas, elect. and mag. props. 2-50362  
 HF gas, elect. and mag. props. 2-50362  
 (HF)<sub>2</sub>, susceptibilities and nuclear mag. shielding const., intermol. effects 2-29627  
 (H<sub>2</sub>O)<sub>2</sub>, susceptibilities and nuclear mag. shielding const., intermol. effects 2-29627  
 H<sub>2</sub>S, absolute proton affinity, ab initio mol. orbital theory 2-44138  
 H<sub>3</sub>, wave functions in momentum space, iterative computations in HF approx. 2-24597  
 He, Os orbitals in SCF calcs. 2-24598  
 He, correlated CI wave functions using corr. Gaussians 2-11408  
 He, elastic low energy electron scatt., cross sections calc. using extended HF theory 2-11572  
 He isoelectronic structure, limiting behaviour of  $\langle r_1^{-1} \rangle / \langle r_1^{-1} \rangle$  in HF framework 2-11391  
 He, momentum space properties of various orbital basis sets used in quantum chemical calculations 2-49278  
 He to Ar, wave functions, relativistic HF-Dirac SCF calc. (Russian) 2-15720  
 He to Ne, expectation values in equalities, momentum density monotonicity, HF calcs. 2-39302  
 He, Z 2-39300  
 He-isoelectronic series, lower bound of ground states, HF functions 2-19950  
 He+H<sub>2</sub><sup>+</sup>, quasiclassical trajectory study using HF and CI pot. energy surfaces 2-24815  
<sup>139</sup>La-(<sup>89</sup>Kr,X), fusion behaviour in time-dependent HF calcs. 2-34102  
 Li, Clementi Roetti atomic HF wave functions, improved local accuracy using global constraints 2-39300  
 Li clusters, multibody effects, unrestricted HF study and their relevance to atom-surface interactions 2-11610  
 Li isoelectronic sequence, electron impact excitation 2-7653  
 Li-CO<sub>2</sub> complexes, geometries and stabilities, self consistent field HF method 2-39293  
 MgO, positron states and electron energy bands, restricted Hartree-Fock method 2-8775  
 Mn, atom level structure calcs. 2-29516  
 Ni II, energies and oscillator strengths, polarised frozen core approx. 2-43852  
 N<sub>2</sub>, reson. 3 $\sigma_g$  photoionisation, Hartree-Fock vibr. branching ratios 2-20142  
 NH<sub>3</sub>, INDO CHF calcs. of spin-spin coupling const. involving H<sup>+</sup> 2-11404  
 NH<sub>3</sub>+He, bending mode and inversion motion interaction pot., vibr. depend. 2-20159  
 Na-CO<sub>2</sub> complexes, geometries and stabilities, self consistent field HF method 2-39293  
 Na+H<sub>2</sub>, quenching process, energy transfer, ab initio RHF-SCF and PNO-CEPA calcs. 2-29699  
 NaF, electronic struct. of F-centre 2-17010  
 NaF, positron states and electron energy bands, restricted Hartree-Fock method 2-8775  
<sup>93</sup>Nb(<sup>16</sup>O,X), 204 MeV, prompt nucleon jets emission in time-dependent HF collision s 2-34075  
 Ne, expectation values, momentum density, inequalities, comment 2-39301  
 Ne, XPS shake up studies 2-43870  
 Ne+Na, scatt., rot. rainbow struct., CI pot. surface calcs. 2-39468  
 Ne<sup>q+</sup>(Ne), q=1-4, autoionising states calc. 2-11414  
<sup>20</sup>Ne, giant multipole resonances, levels and transitions, HF calcs. 2-3883  
<sup>20</sup>Ne rotational energy spectrum from constrained HF approach 2-33885  
 Ni (100) surface, chemisorption of H, Cl, Na, O and S, bonding calcs. 2-12905  
 Ni alloys, FCC, disordered, ferromag., ground state, causes of instability 2-31218  
 Ni atom level structure calcs. 2-29516  
 Ni, chemisorpt. of H on (100) surface, transfer matrix calcs. 2-26222  
 Ni complex, (dithiocyanate tetraamine)nickel(II), geometry, struct., pot. surface, CNDO-UHF, MO-LCAO-SCF calcs. 2-34297  
 Ni complex, cyclopentadienyl-allyl-cyclobutadiene-dinickel, struct., INDO and HF calcs. 2-19975  
 Ni-Ru, ferromagnetic, electronic struct., multi-band CPA calc. 2-5344  
 NiFe electronic states, ab initio HF-CI calcs. 2-24623  
 NiO, chemisorption of O, Hartree-Fock calcs. 2-35894  
 NiO, positron states and electron energy bands, restricted Hartree-Fock method 2-8775  
 O, transition probability of <sup>1</sup>S<sub>0</sub>-<sup>1</sup>D<sub>2</sub> emission 2-39358  
 O<sub>2</sub>, multiconfigurational Hartree-Fock studies of avoided curve crossing using the Newton-Raphson technique 2-39451  
 O<sub>2</sub><sup>+</sup>, 1s core level ions, symm. adapted vs. symm. broken wavefunctions 2-631  
 O<sub>3</sub>, ionisation pots., comparison of HF calcs. with LCAO X $\alpha$  calcs. 2-39313

## HF calculations continued

- OH<sub>2</sub>, INDO CHF calcs. of spin-spin coupling const. involving H<sup>+</sup> 2-11404  
 O(P)+ethylene, ab initio HF and multiconfig. HF calcs. 2-41875  
<sup>16</sup>O ground state props. in relativistic Hartree theory of nuclear matter 2-38968  
<sup>16</sup>O(<sup>16</sup>O\*), E<sub>CM</sub>=32.1 MeV, deep inelastic scatt., search for low-l window 2-34080  
<sup>16</sup>O(<sup>16</sup>O,X), nucleon exchange, TDHF calc. 2-429  
<sup>16</sup>O(<sup>24</sup>Mg,X) fusion cross section from Skyrme interactions, TDHF approx. 2-3986  
<sup>A</sup>Os, A=184-196, deformation props. from self-consistent calcs. 2-15362  
 P<sup>+</sup>+C foil, Auger electron spectra 2-49355  
 PH<sub>3</sub>, absolute proton affinity, ab initio mol. orbital theory 2-44138  
 Pr<sup>3+</sup>, electron correlations, ab initio and multiconfiguration HF calcs. 2-660  
<sup>A</sup>Pt, A=182-196, deformation props. from self-consistent calcs. 2-15362  
 Rb isotopes, neutron separation energies, charge radii 2-29187  
 Rb<sub>2</sub>CrCl<sub>4</sub>, spin wave temp. depend. 2-26609  
 Si, band structure and cryst. struct., LCAO SCF ab initio HF calc. 2-35929  
 Si, directional Compton profiles in impulse approx., exact exchange Hartree-Fock calcs. 2-2364  
<sup>28</sup>Si, giant multipole resonances, levels and transitions, HF calcs. 2-3883  
<sup>28</sup>Si, oblate state, alpha cluster structure and point symmetry 2-19463  
 Sr isotopes, neutron separation energies, charge radii 2-29187  
 ThO<sub>2</sub>, geometries calc. using relativistic effective core pot. 2-34281  
<sup>232</sup>Th, cranking-HFB calcs. of yrastine 2-24119  
 UO<sub>2</sub><sup>+</sup>, geometries calc. using relativistic effective core pot. 2-34281  
<sup>A</sup>U, A=234, 236, 238, cranking-HFB calcs. of yrastine 2-24119  
 W, surface (100), chemisorption of H, localised electronic interactions, density matrix treatment 2-7499  
 Xe isotopes, neutron separation energies, charge radii 2-29187  
 Xe, two-photon excitation, Dirac-Fock and HF calc. 2-34371  
 Xe XLIV-XLVII, spectral line obs. in 2.5-3.0 Å range from laser-implanted targets 2-15737  
 Zn and Zn<sup>2+</sup>, second order electron correl. energies 2-39333  
 Zn, double-vacancy excitations, X-ray absorpt. spectrum 2-11429  
<sup>66</sup>Zn, collective band structure 2-33887
- hierarchical systems**  
 cosmology, qualitative discussion 2-14956  
 cosmology, total number of levels 2-14957
- high-energy cosmic ray interactions**  
 air showers, subcore formation, high P<sub>1</sub> effects 2-304  
 Centauro hadron-hadron event, 10<sup>12</sup>-10<sup>15</sup> eV, high mass particle prod. cross section, parton model 2-24035  
 extensive air showers, elongation rate, rel. to composition, origin 2-3170  
 Feynman scaling breakdown,  $\gamma$ -ray families in fragmentation region 2-23843  
 fireball model anal. 2-49023  
 fractional charge states, astrophysical prod. in broken QCD 2-23939  
 hadronic interactions, 10<sup>3</sup> TeV, obs. in Mt. Fuji 2-24052  
 high energy hadron-nucleus reactions, recoil proton distrib., Monte Carlo simulation 2-19410  
 highly ionising particles at Mountain altitude 2-28305  
 mini-Centauro events, extensive air shower component fluctuation explanation 2-28306  
 muon photonuclear energy loss of high energy, model calcs. 2-42560  
 neutron oscillation, as source of cosmic ray antineutrons 2-10291  
 nucleus-nucleus interaction models, independent collision model 2-356  
 photons, high-energy, interactions in Earth's mag. field 2-28304  
 pion inelasticity, energy depend. in cosmic-ray interactions, rel. to fireball model 2-49022  
 pure multiphoton events, monopole explanation 2-24053  
 super high energy cosmic ray nuclear interactions 10<sup>12</sup>-10<sup>14</sup> eV 2-23199  
 ultra-high energy nuclear interaction event, 800 TeV (Chinese) 2-33873  
 e<sup>+</sup>e<sup>-</sup> → I<sup>+</sup>, possible visible I<sup>+</sup> tracks in cosmic ray events 2-33823  
 lp → I<sup>+</sup>X, possible visible I<sup>+</sup> tracks in cosmic ray events 2-33823  
 NN interaction models, independent collision model 2-356
- high energy electron diffraction**  
 see also reflection high energy electron diffraction  
 scanning, electron intensity measurement in a diffraction camera 2-8400  
 Ti/Au thin films, interdiffusion and phase formation, expt. study 2-45749
- high-energy nuclear reactions and scattering** see nuclear reactions and scattering
- high field effects**  
 see also Gunn effect; hot carriers; impact ionisation; limited space charge accumulation; Poole-Frenkel effect; Schottky effect; Zener effect  
 chalcogenide thin films, amorphous, high field short pulse behaviour, band model 2-13084  
 dielectric liquids, high field behaviour of moderately pure liquids, complexities 2-5412  
 dielectric liquids, voltage-current charact. at high fields, electrochemical cond. explanation 2-1921  
 disordered semiconductor, in strong field and random field 2-13085  
 electron capture at screened Coulomb centres, elec. field effect 2-21592  
 electron distribution function, gauge treatment 2-51186  
 FET, ballistic transport obs. by noise meas. 2-51249  
 high-viscosity dielectric liquids, prebreakdown phenomena 2-2187  
 hot electron kinetics, field dependent scatt. 2-51187  
 liquid dielectric triggered breakdown, shadowgraph optical system for determ. of proportion of gap affected by discharge 2-5641  
 molecular crystals, influence of patch effect and near contact trapped charge on electrode limited current flow 2-1918  
 monopole antenna, response to EM pulse with corona, transmission line model 2-44191  
 nonlinear transport props. calc., nonperturbative Green's function technique 2-51189  
 organic molecular solid, dark cond., photocond. and photovoltaic conversion, linear and rectification regimes 2-36094  
 organic quasi-one dimensional conductors, nonlinear conductivity 2-51155  
 polyacetylene, doped, elec. field depend. conc., disorder role in insulator-metal transition 2-30868  
 polyacetylene, I doped, galvanomag. effects and nonohmic behaviour interpret. 2-30867  
 polyethylene, influence of elec. field and press. on cond. 2-8804  
 semiconductor, intrinsic, with non-injecting contacts, field and temp. heating effects 2-51193  
 semiconductor, transit reson., subharmonic 2-21593



**high field effects continued**

- semiconductor critical thickness layers, field effect, electrostatic characts. 2-4612  
 semiconductor devices, collisional broadening effect on Monte Carlo simulation of high-field transport 2-17078  
 semiconductors, 1/f noise of hot carriers 2-51265  
 semiconductors, carrier energy distrib. function quasidrift asymptotics 2-40880  
 semiconductors, hot carriers, conf., Montpellier, France (July '81) 2-42780  
 semiconductors, transport processes in strong elec. field nonequilibrium distrib. function determ. from nonlinear fluctuation-dissipation relations 2-1919  
 semiconductors in strong variable EM wave field, Kanen model two band eqn. soln. 2-21595  
 thin metal conductors, current-carrying, thermal instability 2-51142 (TMTSF)<sub>2</sub>PF<sub>6</sub>, nonlinear cond. near metal-semicond. transition 2-30876  
 two-dimensional random system, nonmetallic part of current, alternating elec. field nonlinear effects 2-30856  
 As<sub>2</sub>Se<sub>3</sub>-As<sub>2</sub>Te<sub>3</sub>, glassy semicond. elec. cond. in high elec. fields 2-51195  
 B,  $\beta$ -rhombohedral, hopping cond. in strong elec. field 2-40923  
 Bi<sub>2</sub>GeO<sub>20</sub>, wide-gap semicond., free carrier exclusion in current-voltage characts. 2-36050  
 Bi, galvanic- and thermo-magnetic props., SQUID meas. 2-36064  
 CdS, microstructural changes in high electric fields 2-26066  
 CuInSe<sub>2</sub> single crystal, carrier heating by microwave elec. field 2-8834  
 Ga<sub>1-x</sub>Al<sub>x</sub>Sb<sub>1-y</sub>Te<sub>y</sub>, high field magnetotransport props. under hydrostatic press., direct-indirect band transition 2-8828  
 GaAs, ballistic transport with collisions 2-1917  
 GaAs, collisional broadening effect on Monte Carlo simulation of high-field transport 2-17078  
 GaAs, impact ionisation, band struct. depend. 2-45994  
 n-GaAs near-ballistic electron transport device, AC impedance 2-51181  
 n-GaAs, photoconductivity, far-IR two-photon transitions and two-photon cyclotron resonance 2-40973  
 GaAs semiconductor devices, collisional broadening effect on Monte Carlo simulations of high-field transport 2-17079  
 GaSe, slowly relaxing cond. and elec. memory effect 2-26404  
 p-Ge, hot holes, noise, inelastic scatt., meas. at microwave freqs. 2-46088  
 Ge, thermal gradient-drift domain rel. to sample shape change 2-36051  
 Ge, thermal gradient-drift domains in electron-hole plasma 2-17106  
 Ge-P, photoconductivity spectrum of shallow donors, elec. field effect 2-26443  
 n-In<sub>0.53</sub>Ga<sub>0.47</sub>As, electron drift velocity meas. at 300K using microwave time-of-flight technique 2-30916  
 p-In<sub>0.53</sub>Ga<sub>0.47</sub>As, photoexcited minority electrons, velocity field characts. 2-5432  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, lattice matched to InP, comp. depend. of mobility, peak vel. and threshold field 2-5479  
 InSb dielectric response function for sub-MM radiation interacting with quasi-free carrier gas, high mag. field 2-36070  
 n-InSb, high elec. field Hall effect meas. 2-51214  
 InSe, slowly relaxing cond. and elec. memory effect 2-26404  
 LiF, microstructural changes in high electric fields 2-26066  
 Nb<sub>3</sub>Sn/Nb-Ti composite-processed superconductor, high field props. 2-17241  
 PbS, at 1.4K, Kondo-Toyozawa theory 2-45990  
 Si, electron diffusion coeff. 2-21599  
 Si, impact ionisation, band struct. depend. 2-45994  
 Si, microstructural changes in high electric fields 2-26066  
 n-Si, multivalley semicond., transverse field stratification, elec. field distrib. and current meas. (Russian) 2-26416  
 Si surface, nonequilib. depletion relax. acceleration in strong elec. fields 2-30952  
 a-Si:H films, reversible field-induced doping effect 2-51192  
 Si-Ge-As-Te-(Mn), glassy semicond. elec. cond. in high elec. fields 2-51195  
 TlInTe<sub>2</sub> single cryst., elec. cond. in strong elec. field, 77 to 300K 2-40921

**high-frequency discharges**

- capacitive discharges, relationship between maximum plasma temp. and current 2-40199  
 modulated discharge resonance emission line, redistribution of intensities 2-8383  
 molecular-gas discharge, electrons distrib. function and mean energy 2-20946  
 non-self sustaining discharge in a gas (Russian) 2-40196  
 plasma MIG welding, new torch and starting method (Dutch) 2-16520  
 polyphase secondary-emission discharge, threshold secondary-electron yield 2-16537  
 RF discharge, optogalvanic spectroscopy 2-5012  
 RF-glow discharge, H plasma, cleaning and conditioning of plasma device walls 2-8387  
 RF-glow discharge, ignition and arcing appl. to fusion devices 2-20960  
 stability of an HF induction discharge in a dense plasma 2-5010  
 CO<sub>2</sub> dissociation in nonequilib. plasma microwave discharge, discharge propag. mechanism 2-35346  
 CO<sub>2</sub> static CW waveguide laser with high-freq. excitation 2-34724  
 H, RF discharge beam source 2-23772  
 H/D isotopic comp., spectrosc. determ. 2-50470  
 He-Cd laser with RF pumping, quasi-CW operation 2-44257  
 He-Ne laser with transverse microwave pumping, unsaturated gain determ. 2-4488  
 Xe-He plasma characts., through excitation by transverse HF discharge 2-35344

**high-frequency effects**

- see also *helicons; hot carriers; skin effect; solid-state plasma*  
 4-dimethylamino-4'-nitrosobenzene, dipole moment changes in excited states, ns microwave cond. meas. 2-49382  
 ferroelectric semiconductor, tricritical point in strong EM wave field 2-9103  
 ferroelectric thin films, UHF dielectric props. 2-41284  
 harmonic microwave mixing in sinusoidal port., asymptotics 2-5431  
 hot carrier, impedance 2-17151  
 hot carrier p-n junction, elec. signal amplification kinetics 2-21667  
 ionosphere, artificial discontinuity excitation of HF radiation with oblique beam radiowave scatt. (Russian) 2-48087  
 metal bicrystals, high freq. props., effects of planar defects (Russian) 2-17105  
 metals, dopplerons and Gantmakher-Kaner effect (Russian) 2-46054

**high-frequency effects continued**

- metals, multichannel electron boundary reflection, high freq. effects 2-36076  
 metals, radio wave spontaneous emission in mag. field in presence of temp. gradient (Russian) 2-26429  
 narrow-gap semiconductors, Auger recomb. and ionisation rates, Lax band struct. 2-8813  
 nonlinear effects caused by two VHF pulses (Russian) 2-48086  
 semiconductor superlattice, Stark-cyclotron longitudinal waves 2-5430  
 semiconductor, high freq. photoresponse with modulated carrier diffusion coeff. 2-26442  
 semiconductor, inhomogeneous, electroacoustic absorpt., coeff. and sound vel., DC cond. depend. 2-17119  
 semiconductor, lightly doped, high freq. hopping cond. 2-36078  
 semiconductor, narrow band gap, submillimeter radiation generations, quantising mag. field influence 2-36079  
 semiconductor containing impurity recomb. centres, strong applied EM wave, carrier distrib. functions 2-13011  
 semiconductor layer structures, high-freq. characts. 2-17149  
 semiconductor plasma, magnetised, hybrid mode excitation due to laser beam modulation 2-1937  
 semiconductor superlattice, cyclotron reson., high freq. cond. tensor 2-5585  
 semiconductor superlattice, galvanomagnetic and high freq. phenomena 2-13106  
 semiconductor superlattice, non-linear high freq. cond. 2-8833  
 semiconductors, EM wave propag., inhomogeneous high freq. current effect 2-21618  
 semiconductors, hot electron effects in crossed mag. and static microwave elec. fields 2-46036  
 semiconductors, hot electron studies, microwave experiments including avalanche 2-46049  
 superconducting film, dielectric response functions and collective oscill. spectrum (Russian) 2-2032  
 TCNQ salts, freq. depend. cond. and permittivity, localised states, investig. (French) 2-5617  
 two-dimensional random system, nonmetallic part of current, alternating elec. field nonlinear effects 2-30856  
 $\alpha$ -AgI, ionic cond. and dielec. const. in microwave region, 420 to 550K 2-30646  
 Bi thin film resistivity, air-exposure 2-41026  
 Cd, RF surface impedance, low-field anomaly 2-13162  
 p-Cd<sub>1-x</sub>Hg<sub>x</sub>Te, elec. cond. in strong microwave elec. field, 77 to 300K 2-30921  
 CuInSe<sub>2</sub> single crystal, carrier heating by microwave elec. field 2-8834  
 Ga, superconducting, high freq. cond., US propag. meas. (Russian) 2-5495  
 Ge, hole response to static elec. and microwave elec. field, temp. depend., Monte Carlo method 2-13113  
 n-In<sub>0.53</sub>Ga<sub>0.47</sub>As, electron drift velocity meas. at 300K using microwave time-of-flight technique 2-30916  
 n-InSb, influence of geometric factors on radioelectric effect 2-17107  
 Mn<sub>0.5</sub>Zn<sub>0.5</sub>Fe<sub>2</sub>O<sub>4</sub>, polycrystalline, permittivity, conductivity and dielectric relax. 2-5625  
 NbSe<sub>2</sub>, quasi-one-dimens. cond., freq. and field depend. transport 2-30872  
 NbSe<sub>2</sub>, microwave harmonic mixing by pinned CDW 2-40877  
 Se, single crystal, freq. depend. of cond., noise and photoresponse 2-13080  
 n-Si, cond. in strong alternating elec. fields 2-30903  
 Si, inversion layer, velocity overshoot, hot electron submm wave cond. study 2-46141  
 Si inversion layers, small-signal velocity overshoot obs. by broadband sub-MM wave spectroscopy 2-36148  
 Si inversion layers, two-dimens. electron system, mag. field induced Wigner glass 2-40988  
 Si, spontaneous oscils. under impurity centre breakdown conditions 2-51223  
 TaS<sub>3</sub>, CDW semiconductor, high freq. cond. 2-5429  
 TiSe<sub>2</sub>, resist. anomaly suppression at microwave freq. 2-1939  
 W, dopplerons and Gantmakher-Kaner effect (Russian) 2-46054
- high-frequency electronic transport** see *high-frequency effects*  
**high-frequency heating** see *radiofrequency heating*  
**high-frequency transmission line measurement**  
 impedance measurement using a sinusoidal signal generator, demonstration 2-48465
- high level languages**  
 see also *PASCAL; simulation languages*  
 geodetic requirements for DBMS 2-52700
- high-pass filters**  
 metallic mesh interference filters, high freq. pass 2-4577
- high-pressure effects in solids**  
 see also *high-pressure solid-state phase transformations; piezo-optical effects*  
 alkali metals, elastic stiffness const., press. depend. 2-35567  
 alkali metals, melting curve eqn. under high press., Simon's eqn. 2-45537  
 alkali metals, melting thermodynamics under high press., Simon eqn. 2-5208  
 diamond-Co system, sintering behaviour at high temp. and press. 2-51864  
 equation of state for shock compressed matter 2-50824  
 exchange interaction decrease with increasing press. 2-35979  
 ferrites, soft, press. effect on magnetisation mechanisms 2-26714  
 hyperfine magnetic fields at <sup>57</sup>Fe nuclei, press. depend. regularities 2-51485  
 II-V compounds, phase diagrams, transport props., pressure investigations 2-27161  
 ionic crystals, Yamashita-Kurosawa dielec. theory, optic mode frequencies and Gruneisen parameters 2-25994  
 minerals of Earth's interior, decade of progress in high press. mineralogy 2-10001  
 mode Gruneisen parameters and general eqns. of state, press. induced changes 2-50817  
 noble metals, eqn. of state and elastic const. under press. 2-30563  
 non-transition metals, supercond. parameters and press. effects calc. 2-26534  
 PMMA, mechanochem. reactions at high press. (Japanese) 2-35590  
 PMMA, static compression to 100 GPa 2-8571  
 polyethylene, high-density, cryst., mech. props., hydrostatic pressure effect 2-51998



**high-pressure effects in solids continued**

- polymers, cryst., mech. props., hydrostatic pressure effect 2-51998  
 polystyrene, mechanochem. reactions at high press. (*Japanese*) 2-35590  
 polyurethane elastomer, viscoplastic behaviour at high press. 2-16710  
 o-pyroxene, Fe-rich, geochrometry, reaction reversal expts. and geological implications 2-37858  
 quartz, shock-loaded, XPS obs. of binding energies and interpret. 2-36760  
 rare earth compounds,  $R(Rh_{1-x}Ru_x)_2B_4$ , pressure effects on superconducting and mag. transition temp. 2-17204  
 $SnS_2$ , electron-phonon mechanism of semiconductor phase instability under press. 2-30801  
 stressed solid, equilib. vacancy conc. near free surface and healing of pores by self-diffusion 2-35493  
 TCNQ salts,  $Py(TCNQ)_2$  and  $Adn(TCNQ)_2$ , quasi-one-dimens. cond., elec. resist. under high press. and low temp. 2-21571  
 tetrahydrofuran, thermal cond., heat capacity and phase diagram under press. 2-50945  
 TGS, ferroelec. transition, uniaxial stress effects 2-46495  
 $(TMTSF)_2PF_6$ , quasi-one-dimens. cond., supercond. state existence 2-21708  
 Ag, pressure-volume relations and elastic consts. under press. 2-1545  
 $Ag_2HgI_4$ , high press. phase, phase boundaries 2-16753  
 $Ag_{1-x}Sn_{1+x}Se_2$ , supercond. props., hydrostatic press. effects 2-5486  
 Al, equation of state in intermediate press. region, 0.5 to 10 TPa 2-1583  
 Al, specific heat press. depend. 2-1634  
 Ar, crystalline, struct. and compression at high press. and room temp. 2-21063  
 Ar, solid, melting curve eqn. under high press., Simon's eqn. 2-45537  
 Ar, solid, transition to metallic state, band struct. 2-26300  
 Au, pressure-volume relations and elastic consts. under press. 2-1545  
 $\beta$ -B, rhombohedral, isothermal changes of entropy at high press. 2-40571  
 $BaMoO_4(WO_4)(CrO_4)$ , Raman spectra, high press. effects 2-2258  
 C, non-graphitising, graphitisation and densification under high press. (*Japanese*) 2-22411  
 $CaMoO_4(WO_4)$ , Raman spectra, high press. effects 2-2258  
 CaO, electronic band struct. at lower mantle press. 2-52831  
 Ca-Mg-O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-H<sub>2</sub>O, quartz eclogite comp., phase relationships at 30 kbar, subduction zone magma implications 2-37849  
 Cd, magnetic props. and energy spectrum, homovalent impurities and press. effects (*Russian*) 2-5523  
 $Cd_3P_2$ , resist., Hall coeff., thermoelec. power, band gap, pressure effects 2-26401  
 $(CeO_2)_{0.82}(GdO_{1.5})_{0.18}$ , sintered, density and ionic cond. 2-5261  
 CsI, high press. effect on optical absorpt. spectra 2-36665  
 Cu, pressure-volume relations and elastic consts. under press. 2-1545  
 Cu, specific heat press. depend. 2-1634  
 $Cu_{25}Au_{10}Te_{70}$ , amorphous, elec. resist. at high press., time depend. 2-30888  
 CuCl, band struct. at high press., disproportionation effects 2-35938  
 CuCl, diamagnetic susceptibility anomaly, theoretical model 2-51393  
 CuCl, volume compression study up to 7 GPa 2-40485  
 $Cu_2VS_4$ , Raman linewidth of phonon modes induced by hydrostatic press., resonant enhancement 2-46590  
 $\alpha$ -DIO<sub>3</sub>, manifestation of H bond in NQR spectra (*Russian*) 2-41228  
 Dy, hydrostatic press. derivatives of elastic consts. 2-40465  
 Eu, high press. search for superconductivity, elec. resistance meas. 2-2025  
 $EuMo_2S_8$ , high press. search for superconductivity, elec. resistance meas. 2-2025  
 $Eu_{1-x}Mo_xS_8$ , supercond. props. under press. 2-17198  
 $EuMoSe_4$ , high press. search for superconductivity, elec. resistance meas. 2-2025  
 $EuPt_3$ , valence instability effect on mag. hyperfine interaction at very high press., Mossbauer study 2-2166  
 $Eu_{1-x}Sm_xO$ , mag. quasimolecules, mag. props. 2-17275  
 Fe-B, amorphous, mag. behaviour under press., invar-like prop. 2-9016  
 $Fe_{90}Zr_{10}$  amorphous ribbon, Curie temp. press. depend. 2-13297  
 Ga, RF size effect resonances, press. depend. 2-35925  
 GaAs, energy levels of deep traps 2-45889  
 GaAs, exciton energy spectra, uniaxial press. effect, photo EMF meas. 2-35949  
 GaAs, p-n junction, pressure effects on avalanche breakdown voltage 2-26481  
 GaP, p-n junction, pressure effects on avalanche breakdown voltage 2-26481  
 GaSb band structure, from tunnel diode pressure effect 2-26290  
 GaSb, p-n junction, pressure effects on avalanche breakdown voltage 2-26481  
 GaSb:Te, pressure induced alteration of energy spectrum (*Russian*) 2-5368  
 GaTe, Raman scatt. under press. 2-2255  
 GeS<sub>2</sub>, glass, high-press. optical studies 2-46574  
 $Ge_2S_3Ag$ , glasses, DC electrical cond. at high hydrostatic pressure 2-1902  
 H<sub>2</sub>, solid, melting curve eqn. under high press., Simon's eqn. 2-45537  
 $\alpha$ -HIO<sub>3</sub>, crystal, NWR under press., H bond influence on internal field 2-46423  
 $\alpha$ -HIO<sub>3</sub>, manifestation of H bond in NQR spectra (*Russian*) 2-41228  
<sup>4</sup>He cryst., heat conduction study (*Russian*) 2-45677  
<sup>4</sup>He, equation of state and melting curve to very high press. 2-26176  
 HgI<sub>2</sub>, phonon spectrum anomalous behaviour under uniaxial press., Raman scatt. meas. 2-36632  
 $Hg_{80}Mn_{20}Te$ , semimag. semicond., elastic moduli, temp. and press. depend., US vel. study 2-50738  
 HgSe, press. effects on elastic consts. up to phase transition 2-45317  
 In, specific heat at high press. 2-30620  
 n-InP, photoluminescence press. depend. 2-46686  
 n-InP:Cr, piezoelectric attenuation under hydrostatic press. 2-40491  
 n-InSb, low conc., mag. freeze-out and high press. induced metal-nonmetal transition 2-21611  
 $In_{30}Te_{70}$ , amorphous, elec. resist. at high press., time depend. 2-30888  
 K-graphite intercalates, press. induced anomaly in c-axis resistivity 2-51141  
 $KH_2PO_4$ , ferroelec. transition, uniaxial stress effects 2-46495  
 Kr, solid, transition to metallic state, band struct. 2-26300  
 $La_{80}Al_{20}$ , amorphous, press. depend. of supercond. transition temp. 2-36176  
 $La_{75}Al_{10}In_{15}$ , amorphous, press. depend. of supercond. transition temp. 2-36176

**high-pressure effects in solids continued**

- $La_{80}Ga_{20}$ , amorphous, press. depend. of supercond. transition temp. 2-36176  
 $La_2S_4$ , thermal expansion at low temps., rel. to supercond. props. 2-12787  
 $LaSn_3$ , thermodynamic and mag. props. 2-1643  
 LiF crystal, dislocation motion damping const., press. depend. 2-45193  
 $LiVO_2$ , high-pressure form,  $2 \times 2 \times 2$  NaCl superstruct. 2-12544  
 $Lu_{1-x}R_xRh_2B_4$ ,  $R = Ce, Yb, Gd, Sm$ , superconducting transition temp. press. depend. 2-17201  
 Mg:H, H<sub>2</sub> dissolution enthalpy, high press. anal. 2-45586  
 MgO, thermal press. at high compression and high temp. 2-32493  
 $Mn(Br_{1-x}Cl_x)_2 \cdot 4H_2O$ , press. depend. of Neel temp. 2-8977  
 MnSb alloy, mag. props. depend. on press. and temp. (*Russian*) 2-13298  
 Mo, equation of state in intermediate press. region, 0.5 to 10 TPa 2-1583  
 $(Mo_{80}Ru_{20})B_{14}$  metallic glass, supercond. transition temp., press. depend. 2-36200  
 $MoS_2(Se_2)(Te_2)$ , Raman scatt. at high press. 2-51582  
 $NH_4HSeO_4$ , influence of hydrostatic press. on phase transition 2-36571  
 Na, de Haas-van Alphen effect under press. 2-45808  
 NaCl crystal, dislocation motion damping const., press. depend. 2-45193  
 Nb, Fermi surface, press. effect, de Haas-van Alphen meas. 2-45811  
 NbSe<sub>3</sub>, anisotropic supercond. props. under press. 2-36285  
 Nb<sub>2</sub>Si, bulk A15, supercond. transition temp., press. depend. 2-36169  
 Ne, crystalline, struct. and compression at high press. and room temp. 2-21063  
 Ne, solid, transition to metallic state, band struct. 2-26300  
 $NpCo_2Si_2$ , antiferromagnet, high press. Mossbauer study 2-46442  
 P, black, electronic struct., tight binding approach 2-16985  
 $\beta$ -PbF<sub>2</sub>:NaF(TbF<sub>3</sub>)(UF<sub>6</sub>), ionic cond., high press. effects 2-45617  
 $PbMoO_4(WO_4)$ , Raman spectra, high press. effects 2-2258  
 $Pb_{1-x}Sn_xTe$ :Ga, elec. prop. press. depend. 2-17067  
 $Pb(Zr,Ti)O_3$ , high press. dielectric props. 2-41262  
 PrP, induced moment spin glass system, mag. props. 2-21800  
 $RbD_2H_{12}PO_4$ , polarisation meas., Landau free energy expansion coeffs. 2-41260  
 Se, band edges, press. depend., relativistic ab initio calc. 2-45824  
 $Si_3N_4$ , thermal cond. and microhardness, effect of additives 2-52006  
 $SnS_2$ , collapsed, press. induced transition from intermediate valence to metallic behaviour 2-26453  
 $SnS_2$ , semiconducting, cond. band deformation pot. and semicond.-metal transition 2-1824  
 $Sn_{0.12}Eu_{0.08}Mo_2S_8$ , Hall coeff. and resistivity, low temp. and high press. 2-30910  
 $SrMoO_4(WO_4)$ , Raman spectra, high press. effects 2-2258  
 $(TMTSF)_2PF_6$ , spin density wave supercond., energy gap struct., tunneling expt. under press. 2-41071  
 Te, band edges, press. depend., relativistic ab initio calc. 2-45824  
 Te, impurity lines, anomalous stress shift under high press. 2-36103  
 $Th_{1-x}Y_xRh_2B_4$ , superconducting transition temp. press. depend. 2-17200  
 TmS<sub>2</sub>, press. effects on resistivity 2-30892  
 V, superconducting transition temperature, press. depend. calc. 2-31008  
 Xe, solid, transition to metallic state, band struct. 2-26300  
 Y, Fermi surface cross-sections under press., mag. struct. (*Russian*) 2-26274  
 $ZnS:Cr(Mn)(Fe)(Co)(Ni)$ , Raman scatt., local force variations, press effects 2-41358  
 $ZrS_2$ , Raman linewidth of phonon modes induced by hydrostatic press., resonant enhancement 2-46590

**high-pressure phenomena and effects**

- see also high-pressure effects in solids  
 biophysical chemistry at high pressure 2-2983  
 bis-(4,4'-n-alkoxybenzylidene)-1,4-phenylenediamines, smectic polymorphism at press. up to 3 kbar, DTA study 2-12751  
 bis-(4,4'-n-alkoxybenzylidene)-1,4-phenylenediamines, smectic polymorphism, up to 3 kbar, DTA meas. 2-21017  
 condensed matter, equation of state in intermediate press. region, 0.5 to 10 TPa 2-1583  
 copolyamides, crystn. under elevated press. 2-12513  
 Earth upper mantle, fractional crystallisation rel. to geochemistry of thersolite-bearing phonolitic lavas 2-22978  
 n-p-ethoxy-benzyliden-p-n-butylaniline, isotropic phase, Brillouin scatt. under high press. 2-51619  
 n-heptane, thermal cond. meas. at pressures up to 500 MPa 2-8679  
 n-hexyl alcohol, thermal heat capacity rel. to press. and temp. (*Russian*) 2-12767  
 4'-n-hexyloxy-4-cyanobiphenyl-4'-n-octyloxy-4-cyanobiphenyl, reentrant nematic mixtures, mol. ordering effect on nematic-isotropic transition 2-40544  
 indole, substituted, high press. luminesc. in solns. 2-2326  
 inorganic materials, high press. phase diagrams 2-1588  
 lattice contraction under high press., X-ray diffr. obs., lattice strain 2-45376  
 liquids, chamber for high press. US investigations 2-44612  
 liquids at high pressure, viscosities and glass transitions 2-1559  
 luminescence, high pressure, review 2-5746  
 lunar soil, press. depend. of seismic vel. rel. to vel./depth var. in shallow lunar crust 2-32876  
 lower mantle material thermodynamic property meas. apparatus 2-32505  
 MBBA, isotropic phase, Brillouin scatt. under high press. 2-51619  
 melting temperature, pressure dependence eqn. 2-45535  
 metal alloy systems, high press. phase diagrams 2-1588  
 micelles, press. effects, review 2-2742  
 NMR, high pressure, review 2-2148  
 n-paraffins, superheated binary liq. mixtures, high press. homogeneous bubble nucleation 2-8149  
 polypropylene, isotactic, melting and crystallisation, high press. DTA obs. 2-45538  
 San Andreas fault gouge, permeability and strength under high press. conditions 2-28072  
 small molecules, press. effects 2-7670  
 superheated binary liq. mixtures, high press. homogeneous bubble nucleation 2-8149  
 thermal conductivity of liqs. measurement by transient hot-wire method under high press. 2-1682  
 trans-1,2-dichloroethylene, novel liq. places at high press., spin-lattice relax. time and sp. vol. 2-9050  
 transport properties at high press., review 2-1651  
 Ukrainian Shield rocks, thermal diffusivity (*German*) 2-37851



**high-pressure phenomena and effects continued**

- water struct. and proton cond. at high press., review 2-1386  
 water supercritical dense fluid solns., at high press., sub- and supercrit. temps. 2-9154  
 water/ice melting curve, press. meas. by diamond anvil cell 2-6865  
 Ar, gas, thermal cond. at high press. and temp. 2-40024  
 B-Pb glasses, types OF4 and OF5, chem. stability under high humidity and temp. conditions (1) 2-39707  
 CO<sub>2</sub> laser, high pressure sealed-off condition, power characteristics (Japanese) 2-4521  
 CO<sub>2</sub>, speed of sound at high press. 2-44819  
 Cs gas, thermodynamic props. at high press. and temps. 2-35249  
 H<sub>2</sub> gas, thermal cond. at high press. and temp. 2-40024  
 H<sub>2</sub> mol. in rigid spheroidal box, electronic and vibr. props. at high press. 2-34285  
 H<sub>2</sub> solid, melting curve up to 52 kbars and 20-300K 2-1703  
<sup>4</sup>He, equation of state and melting curve to very high press. 2-26176  
<sup>4</sup>He, liquid phase existence above melting curve press. in small glass pores, sp.ht. obs. 2-35770  
<sup>4</sup>He, superfluid, adsorbed on Vycor glass, superfluid transition above bulk solidification press. 2-35836  
 K gas, thermodynamic props. at high press. and temps. 2-35249  
 Mg<sub>3</sub>Al<sub>2</sub>Si<sub>2</sub>O<sub>12</sub>, pyrope, fusion at high press. and rapid cryst. growth from melt 2-16760  
 Mg<sub>2</sub>SiO<sub>4</sub>, (forsterite), melting curve up to 15 GPa 2-10042  
 N<sub>2</sub>, CARS, high press., collisional narrowing 2-11499  
 N<sub>2</sub>, gas, thermal cond. at high press. and temp. 2-40024  
 N<sub>2</sub>, speed of sound at high press. 2-44819  
 N<sub>2</sub>-n-hexadecane, gas-liquid equilibria at elevated temps. and press. 2-21282  
 Se-Te liquid mixtures, sound vel. meas. under high press. 2-35594  
 Si polycrystalline ribbon, high press. plasma deposition 2-41529

**high-pressure solid-state phase transformations**

- amorphous semiconductors, pressure-induced effects and phase transitions 2-45044  
 CCTaSe<sub>2</sub> (2H), discommensuration splitting in CDW state 2-30594  
 cyclohexane, PVT data for solid and liquid under press. 2-35673  
 cyclohexanone, PVT data for solid and liquid under press. 2-35673  
 cyclopentanol, PVT data for solid and liquid under press. 2-35673  
 p-dibromobenzene, Raman vibr. spectrosc. at very high press. 2-5677  
 p-dichlorobenzene, Raman vibr. spectrosc. at very high press. 2-5677  
 4,4-dichlorobenzophenone, pressure-induced phase transition, low freq. Raman spectrum 2-46557  
 p-diodobenzene, Raman vibr. spectrosc. at very high press. 2-5677  
 forsterite (Mg<sub>2</sub>SiO<sub>4</sub>), single-crystal, shock compression meas. in 15-93 GPa range 2-22974  
 granite, S-type, phase relationships with H<sub>2</sub>O to 35 kbar, results for muscovite granite 2-42360  
 II-VI semiconductors, dielectric to metal transitions and supercond. at high press. 2-1853  
 III-V semiconductors, dielectric to metal transitions and supercond. at high press. 2-1853  
 majorite ((Mg,Fe)SiO<sub>3</sub>), vibrational and compressional props. of mineral high-pressure phase 2-22973  
 metals, dielectric to metal transitions and supercond. at high press. 2-1853  
 olivine to spinel cryst. struct. transition at high-pressure 2-14462  
 polyethylene, extended-chain crystals, behaviour under high temp. and press., DTA and X-ray obs. 2-45066  
 polyethylene, extended-chain crystals, phase transitions at high temp. and press., direct obs. using PSCP X-ray system 2-45065  
 polyethylene, integral eqn. method for entropy calc. of confined chain 2-16819  
 quartz, shock-loaded, XPS obs. of binding energies and interpret. 2-36760  
 shock loaded materials, compressibility in mixed phase region 2-30526  
 tetracene, luminescence spectra, press. and temp. induced modification 2-13541  
 TGS:  $\alpha$ -alanine near phase transition, thermal capacity and dielectric props., hydrostatic press. effect (Russian) 2-16811  
 TGSe, ferroelectric transition, tetracritical point, topological aspect 2-36563  
 transition metal complexes, bis(1,2-diondioximate)metal(II), elec. resist. at high press. and IR spectra 2-40892  
 tris-sarcosine calcium chloride:Mn<sup>2+</sup>, ferroelec., press. and temp. depend. of local order parameter 2-9106  
 AgI, optical props. and band struct., press. depend. 2-13448  
 AgI, phase transitions at high press., differential scanning calorimetry 2-21302  
 BN, phase transition mechanism at high temp. and press., Al catalytic action 2-41603  
 Ba<sub>0.4</sub>Sr<sub>0.6</sub>Nb<sub>2</sub>O<sub>6</sub>, dielec. anomalies 2-26813  
 Bi<sub>1-x</sub>Sb<sub>x</sub>SI solid-solution ferroelectric semiconds., free energy and singularity 2-5649  
 CaO, electronic band struct. at lower mantle press. 2-52831  
 CdAs, high pressure phase, thermodynamic props. 2-26083  
 CdTe:Co<sup>2+</sup>, cryst. field splitting, press. induced changes, IR spectra study 2-26944  
 Ce, polymorphism under hydrostatic press. up to 8 GPa 2-41590  
 CsCl(Br)(I):ReO<sub>4</sub><sup>-</sup>, IR and Raman spectra, ReO<sub>4</sub><sup>-</sup> ion orientation 2-13517  
 CsLiSO<sub>4</sub>, structural and physical props. 2-1613  
 CuCl, volume compression study up to 7 GPa 2-40485  
 CuCl(Br)(I), optical props. and band struct., press. depend. 2-13448  
 CuI, phase transitions at high press., differential scanning calorimetry 2-21302  
 Cu<sub>2</sub>Mo<sub>2</sub>Se<sub>4</sub>, superconducting, T<sub>c</sub> and press. induced phase transition 2-36181  
 Fe-B (17 at.%), amorphous, high press. crystn. and struct. transitions 2-30409  
 Fe-Rh, pressure-temp. mag. phase diagram 2-36347  
 Fe<sub>51</sub>Rh<sub>48.5</sub>, ferromagnetic, press. induced antiferromagnetism 2-46282  
 Ga, polymorphic transformation, hysteresis under press., low temp. (Russian) 2-21291  
 Ge, amorphous, press. induced metal-semiconductor transitions 2-40790  
 Ge, superconductivity transition temp. rise with press. reduction 2-13215  
 GeO<sub>2</sub>,  $\alpha$ -quartz to rutile transform. kinetics under high press. 2-50840  
 H<sub>2</sub>, induced near IR spectra of p- and normal solid phases up to 12 kbar 2-30708  
 HfSiO<sub>4</sub>, high-pressure phase transitions at Earth mantle conditions 2-52822

**high-pressure solid-state phase transformations continued**

- Hg<sub>0.8</sub>Mn<sub>0.2</sub>Te, semimag. semicond., elastic moduli, temp. and press. depend., US vel. study 2-50738  
 HgSe, press. effects on elastic const. up to phase transition 2-45317  
 In-Bi(Sb), cryst. struct. and supercond. after high press. treatment 2-45118  
 K halides, B1→B2 transition, B2 preferred orientation 2-12534  
 K halides, phase transitions rel. to hydrostatic compression 2-12726  
 KCl, polymorphic transitions, mol. dynamics study 2-45562  
 KCl, press.-induced B1-B2 phase transform. kinetics at room temp. 2-50841  
 KCl(Br)(I), polymorphic press. induced phase transition hysteresis, cold working, plastic deform., and impurities effect 2-50853  
 KD<sub>2</sub>PO<sub>4</sub>, cryst. struct., temp. and press. depend. 2-50595  
 KH<sub>2</sub>PO<sub>4</sub>, cryst. struct., temp. and press. depend. 2-50595  
 KMnF<sub>3</sub>, cubic-to-tetragonal phase transition under uniaxial press., tricit. points 2-30591  
 K<sub>2</sub>SeO<sub>4</sub>, ferroelectric transitions and quantum effects, high press. effect 2-41293  
 LaP<sub>2</sub>O<sub>4</sub>, coupled optic and acoustic modes, press. depend. near ferroelastic transitions 2-45511  
 LaP<sub>2</sub>O<sub>4</sub>, ferroelastic transition, under high hydrostatic press., Raman and Brillouin scatt. study 2-30585  
 ND<sub>4</sub>Cl, effect of press. on  $\lambda$ -transitions 2-5219  
 NH<sub>4</sub>Cl, effect of press. on  $\lambda$ -transitions 2-5219  
 NH<sub>4</sub>HSeO<sub>4</sub>, influence of hydrostatic press. on phase transition 2-36571  
 Nb-Si (19 at.%), amorphous, high press. crystn. and struct. transitions 2-30409  
 NbO<sub>3</sub>, press. induced phase transition and elec. resist. meas. 2-26038  
 Nb<sub>2</sub>Si, mechanism of rapid phase transformation from Ti<sub>3</sub>P struct. to Cr<sub>2</sub>Si struct. 2-45549  
 Nb<sub>3</sub>Sn filamentary superconductor, bronze processed, microstruct. effects under strain 2-8918  
 P, lattice, orthorhombic and rhombohedral structures, press. depend. of lattice vibr., Raman scatt. study 2-16730  
 PLZT, influence of press. on phase transitions 2-2206  
 Pb-Sn system, high press. intermediate phases 2-27147  
 PbF<sub>2</sub>, high press. phase transitions, effect of Frenkel defects. 2-12736  
 PbSnTe, phonon-induced anomalous elec. resist. in struct. phase transition 2-45954  
 Pd-Si (20 at.%), amorphous, high press. crystn. and struct. transitions 2-30409  
 Rb halides, B1→B2 transition, B2 preferred orientation 2-12534  
 Rb halides, phase transitions rel. to hydrostatic compression 2-12726  
 RbCl, polymorphic press. induced phase transition hysteresis, cold working, plastic deform., and impurities effect 2-50853  
 RbCl(Br)(I):ReO<sub>4</sub><sup>-</sup>, IR and Raman spectra, ReO<sub>4</sub><sup>-</sup> ion orientation 2-13517  
 Sb<sub>2</sub>Te<sub>3</sub>, pressure induced phase transition, elec. resist. and X-ray diffr. study 2-30599  
 Se-Ga, high-pressure phases 2-9330  
 Si, amorphous, press. induced metal-semiconductor transitions 2-40790  
 Sm<sub>0.45</sub>Gd<sub>0.55</sub>S, temperature-press. phase diagram up to 30 kbar at 300-750K 2-45572  
 SrCl<sub>2</sub>, high press. phase transitions, effect of Frenkel defects. 2-12736  
 SrO, high-pressure phase transition at 36 GPa 2-50843  
 TaSe<sub>2</sub>(2H), striped-to-hexagonal CDW transition, press. depend. 2-26041  
 ThSiO<sub>4</sub>, high-pressure phase transitions for Earth mantle conditions 2-52822  
 USiO<sub>4</sub>, high-pressure phase transitions for Earth mantle conditions 2-52822  
 V<sub>2</sub>O<sub>5</sub>, elastic const., hydrostatic press. effects, high press. struct. transition 2-12663  
 V<sub>3</sub>Si, uniaxial press. effect on struct. and supercond. transitions 2-46183  
 Y, structural phase transitions under press., X-ray study 2-5223  
 Y<sub>2</sub>[Pt(CN)<sub>4</sub>]<sub>3</sub>·21H<sub>2</sub>O, press. induced phase transition 2-30598  
 YbRh<sub>2</sub>Sn<sub>2</sub>, high press. synthesis 2-35676  
 YoF, phase equilibrium at high pressure 2-13705  
 ZnTe, vol. reductions and resist. changes under press. 2-45555  
 ZrSiO<sub>4</sub>, high-pressure phase transitions for Earth mantle conditions 2-52822
- high-pressure techniques**  
 Bridgman anvil assembly for resistivity meas. to 100 Kbar 2-23672  
 Bridgman anvil system, gasket thickness optimization 2-6866  
 creep rupture testing in H<sub>2</sub> at high pressures and temps. 2-43007  
 crystallography, at high pressure, review 2-48721  
 diamond, sintering, for use as a high pressure anvil 2-23659  
 diamond-anvil pressure cell, Raman scattering and X-ray diffraction meas. to 10 GPa (Japanese) 2-19127  
 ESR of fluids under high pressure flowing at high temp. 2-3606  
 film-oscillation method for X-ray diffr. with diamond cell 2-25683  
 hexagonal anvil apparatus, flow pattern on compression (Japanese) 2-10819  
 hexagonal anvil apparatus, high press. generation, effects of pressure medium (Japanese) 2-43040  
 high-temperature high-pressure apparatus with large reaction vol. for 50000 ton press 2-19129  
 isothermal calorimeter for the direct measurement of enthalpy of vaporization at high pressure and high temperature 2-43020  
 magnetic displacement follower for moving part in high-pressure fluid 2-48733  
 Manganin gauges, use in shock reverberation expts. 2-2648  
 lower mantle material thermodynamic property meas. apparatus 2-32505  
 neutron scattering experiments, comparative tests on press. cells 2-50486  
 quartz spiral gauge, appln. to interaction second virial coeff. meas. 2-43039  
 quenching, vacuum furnace, hardening of high speed steels 2-48706  
 rock sample testing, design and manufacture of high press. and high temp. triaxial cells 2-32669  
 seal design, end packing of high-pressure apparatus 2-192  
 solidified waste, leach testing rig for high press. 2-43548  
 solubility of gases in liquids at pressures 0.1 to 3.0 MPa, meas. apparatus 2-33562  
 CO<sub>2</sub> laser, RF excited, high repetition rate at 10 atm operation 2-49768  
 GaN, high pressure vapour growth 2-27098  
 ZnSe window for CO<sub>2</sub> laser radiation transmission into moist gas at high pressures 2-49883
- high-temperature phenomena and effects**  
 see also refractories  
 diamond-Co system, sintering behaviour at high temp. and press. 2-51864



**high-temperature phenomena and effects continued**

- forsterite ( $\text{Mg}_2\text{SiO}_4$ ) single crystals, high-temp. creep meas. 2-28068  
 paper, AES analysis, method to minimize charging and thermal damage 2-51751  
 PMMA, destruction by unsteady convective heating (*Russian*) 2-9362  
 polyacrylonitrile fibre, oxidatively stabilized, elec. cond. and ESR at high temp. 2-21584  
 PTFE, destruction by unsteady convective heating (*Russian*) 2-9362  
 Al, interfacial transfer to steels and ceramics, loaded contact, large temp. difference between contact surfaces 2-47193  
 Al, interfacial transfer to steels and ceramics, in loaded contact, both surfaces at high temps. 2-47194  
 Ar, gas, thermal cond. at high press. and temp. 2-40024  
 B-Pb glasses, types OF4 and OF5, chem. stability under high humidity and temp. conditions (*t*) 2-39707  
 $\text{CO}_2$ , gas, thermal cond. at high temps., calcs. 2-40023  
 $\text{CO}_2$ , high-temp. Raman spectra for combustion diagnostics 2-24706  
 Fe-Cr-Al, high temp. props. improvement by rare earth additions, internal friction study 2-45355  
 $\text{Gd}_2\text{O}_3$ , elec. conductivity and heats of high-temp. phase transitions 2-1905  
 H-O-Ar mixtures, transport props. at high temps. 2-8256  
 $\text{H}_2$ , gas, thermal cond. at high temps., calcs. 2-40023  
 $\text{H}_2$ , gas, thermal cond. at high press. and temp. 2-40024  
 $\text{H}_2\text{O}$ , high-temp. Raman spectra for combustion diagnostics 2-24706  
 KCl crystal, optical breakdown threshold at high temp. 2-46839  
 $\text{K}(\text{D}_2\text{H}_{1-x})_2\text{PO}_4$  crystals, high-temp. phase transition 2-21298  
 $\text{La}_2\text{O}_3\text{-Cr}_2\text{O}_3$  system, effects of  $\text{O}_2$  pressure on phase rels. at high temp. 2-5859  
 $\text{La}_2\text{O}_3\text{-Cr}_2\text{O}_3\text{-CaO}$  system, effects of  $\text{O}_2$  pressure on phase rels. at high temp. 2-5859  
 MgO, thermal press. at high compression and high temp. 2-32493  
 $\text{N}_2$ , gas, thermal cond. at high temps., calcs. 2-40023  
 $\text{N}_2$ , gas, thermal cond. at high press. and temp. 2-40024  
 $\text{N}_2$ -n-hexadecane, gas-liquid equilibria at elevated temps. and press. 2-21282  
 NaCl crystal, optical breakdown threshold at high temp. 2-46839  
 $\text{O}_2$ , gas, thermal cond. at high temps., calcs. 2-40023  
 $\text{SiO}_2$ , vitreous, struct. at high temps. 2-25751  
 $\text{ThO}_2\text{-ThC}_2\text{-C}$  equilib., 1328-1976K 2-2709  
 Zr binary alloys, new ceramics with high thermomech. performance (*French*) 2-27139
- high-temperature techniques**  
 see also *pyrometers; refractories*  
 brightness pyrometer, calibration, mounted in heliostat type solar furnace (*Japanese*) 2-33533  
 complex thermal analysis apparatus use in field of ceramics (*Czech*) 2-28855  
 creep rupture testing in  $\text{H}_2$  at high pressures and temps. 2-43007  
 differential mass spectrometry, applied to liq. oxide thermodynamics 2-10917  
 encapsulated strain gauges for use at temps. up to 315°C, practical appls. (*German*) 2-19093  
 ESR of fluids under high pressure flowing at high temp. 2-3606  
 graphite electrode of electric arc, use as high temperature standard 2-23606  
 heat treatment of steel, maintenance of constant C conc. 2-43021  
 high temperature ultrahigh vacuum infrared window seal 2-33532  
 high-pressure high-temp. apparatus with large reaction vol. for 50000 ton press 2-19129  
 isothermal calorimeter for the direct measurement of enthalpy of vaporization at high pressure and high temperature 2-43020  
 jets, heterogeneous, contact methods for mass flow meas. (*Russian*) 2-35240  
 liquids, at high temperatures, device for meas. optical characteristics 2-23700  
 neutron diffraction and quasielastic scatt. above 2000K, high-temp. cell (*French*) 2-50485  
 pyrometer calibration, using standard radiator with automatic temp. controller 2-23644  
 pyrometry, integral equation numerical solution 2-15174  
 rock melt ultrasonic vel. and attenuation meas. method 2-52947  
 rock sample testing, design and manufacture of high press. and high temp. triaxial cells 2-32669  
 synthetic fuel production using HYFIRE commercial fusion Tokamak reactor high-temp. electrolysis sys-tem 2-7365  
 thermionic emission analysis, of high-melting metals 2-19219  
 translucent materials, thermal diffusivity at high temps., meas. method 2-33473  
 viscometer, liquid NaCl viscosity meas. 2-16837  
 Au freezing point, cavities emissivity and temp. evaluation 2-15170

**high vacuum gauges** see *vacuum gauges***high-voltage engineering**see also *high-voltage techniques*

ELF EM fields and health risks from HV transmission lines 2-32259

**high-voltage techniques**

- 120 channel HV regulator, DATEP, for gamma detector photomultipliers 2-24525  
 absolute electrometer for measuring voltages from 50 to 150 kV (*French*) 2-19133  
 nuclear structure facility at Daresbury 2-11295  
 square-pulse generator with enhanced pulse top stability 2-49235  
 stepped HV pulse generator for plasma probe trajectory sweep 2-50452

**history**

- Abbe image formation theory in the microscope 2-24963  
 Albert Einstein's visit to Japan, 1922 2-10566  
 Arabic astronomy, history (*Japanese*) 2-23400  
 astronomy in the 14th century (*Italian*) 2-53119  
 bioengineering, heat and mass transfer 2-15003  
 blood flow mechanics 2-15004  
 breast cancer diagnosis, use of computerised tomography, historical sketch 2-47686  
 broad-range particle spectrograph, historical review 2-587  
 capillary flow: history, experiments and theory 2-37595  
 Chinese and European science, Dr Needham's survey 2-38398  
 colour vision theory including defective or anomalous responses, progress in nineteenth century (*Italian*) 2-15000  
 Compton effect, historical review 2-33264  
 conjugation-charge parity asymmetry, discovery (*Chinese*) 2-10576  
 cosmic ray research at Florence (1928-32) 2-18856

**history continued**

- crystal growth, historical development (*German*) 2-10562  
 cultural history, X-ray appls. 2-23800  
 cyclotron, historical development, 1930-80 2-48478  
 Deutsches Museum, Munchen, science, technology and history in education 2-48469  
 Dirac electron, quantum mechanics generalisation, leading to electron theory 2-10568  
 earthquake seismograph development, modern history 2-6445  
 earthquake seismograph development, modern history 2-10186  
 Eastman Color motion picture films, evolution 2-10900  
 eddy current testing, history, present status and future development 2-10560  
 Fifty Years of Electron Diffraction, book 2-28616  
 gamma camera tomography 2-10577  
 holography, historical development, overview (*Czech*) 2-44215  
 ion implantation systems, historical perspective and future trends 2-3353  
 ionising radiations, historical review (*German*) 2-15001  
 Jai Singh observatory, naked-eye instruments 2-48145  
 Jan de Boer, contrib. to quantum statistical mech. (*Dutch*) 2-48608  
 lasers, physical principles and historical review 2-16008  
 Le Blon, J.C., discoverer of red-yellow-blue principle of colour printing and mixture 2-10575  
 lung, perspective of biomechanics development 2-15002  
 magnetic monopoles, history and philosophy 2-6725  
 metallurgy at Los Alamos, 1943-45 2-18850  
 metals, amorphous, general introduction 2-6724  
 moyer, D.F. 2-18838  
 North Magnetic Pole location 2-25  
 nuclear isomerism, history 2-18857  
 nuclear materials, corrosion and cladding expts., 1942-45 2-18855  
 one hundred years of electricity supply 2-48477  
 optical radiation receivers, historical development (*Russian*) 2-48783  
 photographic base papers, historical development 2-23753  
 photographic paper, chem. formulations and requirements, historical perspective 2-6911  
 Plutonium Project, protection programs 2-18804  
 quartz, light scattering studies, historical review 2-28638  
 radiotherapy, 1895-1939 2-23399  
 soft modes, history of the concept 2-28637  
 solar activity during Maunder minimum (1645-1715), direct and indirect evidence 2-48201  
 steel industry, eddy current testing, present, past and future 2-10561  
 test plate rulings for microscopy, comparison of works of Nobert, Fasoldt and Grayson 2-28639  
 time ball services 2-38399  
 Vavilov, S.I., and development of physics 2-33262  
 vibrational spectroscopy, history 1800-1960 2-24  
 wind energy utilisation, current trends and future prospects 2-2764  
 zoom lenses, development 2-10898  
 Pu studies at Harwell in the early 1950s 2-18852  
 U fabrication techniques for Pu production piles, 1942-45 2-18854  
 U metallurgy in Chicago, 1942-45 2-18853  
 $\text{UH}_3$ , processing at Los Alamos for the Manhattan Project 2-18851
- HIXE** see *ion microprobe analysis; X-ray chemical analysis*
- HMO calculations**  
 adsorption of  $\text{H}_2$  on Pt clusters, EHMO calcs. 2-17916  
 alkali halides, F-centres, surface, quantum chem. models (*German*) 2-46654  
 allene, two-dimensional Huckel molecular orbital theory, appl. 2-49296  
 annulenes, conditions for appearance of local states 2-39327  
 annulenes, homologous linearity rule for orbital energies 2-7500  
 aromatic compounds, twisted nitro groups, NQR spectra, HMO anal. 2-11509  
 borosilicates, clusters, quantum chem. calc. (*German*) 2-43808  
 boroxides, clusters, quantum chem. calc. (*German*) 2-43808  
 butatriene, two-dimensional Huckel molecular orbital theory, appl. 2-49296  
 chemisorbed atoms, indirect interaction, Green's operator method (*German*) 2-45734  
 conjugated systems, graphical factorization of Huckel charact. eqns. 2-49271  
 diacetylene, two-dimensional Huckel molecular orbital theory, appl. 2-49296  
 divinylacetylene, two-dimensional Huckel molecular orbital theory, appl. 2-49296  
 hydroxycoumarins, half-wave pots. and acid dissoc. consts. 2-4226  
 local orbital extended Huckel calculations of rotational barriers (*Italian*) 2-34310  
 Mobius annulenes, expressions for pi-electron energies and charge bond energies, HMO approx. appl. 2-19941  
 oxides, surface clusters, adsorption (*German*) 2-45736  
 partition coeffs. calcs. by charge density method 2-648  
 plasma etching, quantum chem. calcs. (*German*) 2-47220  
 polyacetylene, phase kink trapping, microscopic mechanism 2-45904  
 polyenes, conditions for appearance of local states 2-39327  
 quartz, clusters, quantum chem. calc. (*German*) 2-43808  
 resonance integrals between second neighbours introduction for failures correction (*French*) 2-4199  
 vinylacetylene, two-dimensional Huckel molecular orbital theory, appl. 2-49296  
 $\text{CoO}$ , surface clusters, adsorption (*German*) 2-45736  
 $\text{MgO-CoO}$ , surface clusters, adsorption, quantum chem. calc. (*German*) 2-45736  
 $\text{SiO}_2$ , surface clusters, adsorption (*German*) 2-45736  
 $\text{Si}_2\text{O}_7$ , clusters, quantum chem. calc. (*German*) 2-43808
- $\text{H}_3\text{O}^+$**  see *hydroxonium ion*
- hodoscopes** see *cosmic ray apparatus*
- hole mobility** see *carrier mobility*
- hole theory of liquids** see *liquid theory*
- hole traps**  
 see also *electron traps*  
 anthracene, doping influence on charge carrier transport 2-30885  
 avalanche photodiodes, triggered avalanche detection of IR photons 2-23724  
 chlorophyll-a, photocond. modulation in applied mag. field, non-equilib. spin processes 2-17110  
 copper phthalocyanine binder photoreceptor, trapping levels, TSC study 2-17086



## hole traps continued

- disordered semiconductors, microscopic theory of dispersive transport 2-13078  
ferroelectric ceramics, transparent, semicond. props., electron-hole processes, hologram forming 2-46013  
n-Ga<sub>1-x</sub>Al<sub>x</sub>, grown by organometallic vapour phase epitaxy, hole traps 2-51112  
insulating polymers, carrier trapping, thermoluminesc. and TSC obs. (*Japanese*) 2-9076  
insulator, trap filling by ionising radiation, kinetic eqns. 2-30824  
insulators, photoinjection and cond., theory 2-1952  
luminescence band profile, exciton capture probability depend. on trap depth and temp. 2-2343  
MNOS structure, degradation props. 2-13187  
MOS structures, trap conc. determ. in bulk of dielec. from charge accumulation characts. 2-51327  
MOS system, equilib. and non-equilib. C-V curves in time and freq. domain 2-46151  
organic solids with diagonal disorder, localised states and electronic transport, review 2-8774  
poly-p-xylylene thin films, carrier traps, TSC meas. 2-40928  
polymer, conducting, Peierls state, polarons and domain walls 2-30805  
quartz, thermoluminescence, radiation sensitisation of first peak 2-31569  
recombination effects on trap-limited dispersive transport, Monte Carlo simulation 2-26409  
ruby, <sup>1</sup>cryst., radioluminesc. and colour centre conc., temp. effects 2-13568  
S, crystal, photoinjection and cond., theory 2-1952  
scheelite, thermoluminescence polarisation, rel. to thermal decay of intrinsic hole centres 2-13576  
semiconductor, carrier mobility under controlled trap-filling conditions, transit time method 2-21591  
semiconductor, polycrystalline, carrier mobility, grain boundary barrier model 2-21580  
semiconductor dopant and trap conc. profiles meas. method junction capacitance techniques 2-50688  
semiconductor junctions with deep impurity levels, admittance, space charge anal. 2-13169  
semiconductor nuclear radiation detectors, carrier trapping, current transport 2-13095  
semiconductors, compensated, localised charge carriers, particle statistics and transport 2-17085  
semiconductors, controlled trap occupation, effective mobility, time-of-flight techniques 2-26327  
semiconductors, dispersive electronic transport, multiple trapping, computer simulation 2-51198  
semiconductors, inhomogeneous, photoconductivity theory 2-36096  
small polaronic solid, photoluminescence decay rates, excitation energy and temp. depend. 2-46733  
SOS, heteroepitaxial, electronic characterization by surface photovoltage spectroscopy 2-41030  
thermally stimulated processes, kinetic eqn., mixed first and second order form. 2-27003  
Ag halide:Cu photochromic glasses, effects of electron-hole separation on recomb. probability 2-5415  
AgCl<sub>1-x</sub>Br<sub>x</sub> crystals, ODMR studies 2-46429  
AlGaAs-GaAs solar cells, deep-level defects, low temp. periodic annealing effects 2-32066  
Al<sub>2</sub>O<sub>3</sub> thin films, electrical cond. meas., Poole Frenkel cond. mechanism 2-17178  
As-Se, glassy, hole drift mobility, composition and struct. depend. 2-46021  
As<sub>2</sub>S<sub>3</sub>-Sb<sub>2</sub>S<sub>3</sub> and As<sub>2</sub>S<sub>3</sub>-Sn, glassy, hole drift mobility, composition and struct. depend. 2-46021  
β-B, rhombohedral, photocurrent instabilities, low freq., at low temp. 2-40957  
CaSO<sub>4</sub>:Dy, phosphorescence and thermoluminescence study 2-46746  
n-CdTe:Al, deep centres, charact. 2-51115  
GaAs, MO-CVD grown under different Ga/As mol fractions, deep levels 2-5832  
GaAs MOS structures, charge trapping in anodic native oxide under pulsed laser illum. 2-41016  
n-GaAs, spectroscopic line fitting to DLTS data 2-26326  
GaAs, VPE layers, implanted and annealed, elec. and optical props. 2-46164  
GaAs-Al<sub>2</sub>O<sub>3</sub> devices I-V characts., hopping cond., space-charge-limited currents 2-51329  
GaAs-metal-semiconductor FET, transient radiation study 2-21658  
GaAs<sub>0.6</sub>P<sub>0.4</sub>:Fe(Ni), impurity centre characts., thermal and optical capacitance transients study 2-5362  
n-Ge, neutron bombarded, minority carrier injection and extraction 2-46027  
Ge-Se-Ga thin film, amorphous, trap distrib., SCLC obs. 2-30908  
p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, deep levels, correlation with photodiode performance 2-1856  
In<sub>1-x</sub>Ga<sub>x</sub>As<sub>y</sub>P<sub>1-y</sub>, laser transitions, Auger recombination mechanisms 2-44295  
InP:Fe, thermally stimulated cond. investigation 2-26407  
InP:Zn, p<sup>+</sup>n junction diodes and Schottky barriers, deep levels, Zn diffusion effects, DLTS study 2-12994  
Se, amorphous, deep traps, activation energy, TSC meas. 2-13014  
Si, gamma-ray irradi., uniaxial deform. influence on nonequilibrium carrier recombination 2-26410  
p<sup>+</sup>-Si, ion implanted, isothermally annealed, carrier mobility and conc. profiles 2-51170  
Si, ion implanted, laser and electron beam annealed, deep levels, DLTS study 2-51105  
Si, polycrystalline, conduction model, comparison between theory and expt. 2-5400  
Si, polycrystalline, model for conduction using grain boundary mechanisms 2-5399  
Si:H, amorphous, dispersive electronic transport, multiple trapping, computer simulation 2-51198  
Si:In(Ga), trap population and free hole conc. with IR photoexcitation 2-51211  
SiO<sub>2</sub> films, reactive ion etching induced radiation damage 2-35549  
Si:H, amorphous, sputtered coating, density of states, impurity effects 2-45898

hollow cathodes *see cathodes*

## holmium

- see also nuclei with .....*  
atoms, bombarded with 9-155 MeV alpha particles, K-shell ionisation cross section and XES 2-777  
helical magnetic structures, commensurate-incommensurate transition 2-46279  
magnetic struct., mag. hysteresis effect Mossbauer study 2-36328  
phonon dispersion 2-21252  
point contact spectroscopy of magnons 2-36334  
thermophysical props. at high temps. 2-35709  
CdF<sub>2</sub>:Ho<sup>3+</sup> semiconductor, growth, IR spectra and elec. cond. 2-13638  
Er<sub>2</sub>Al<sub>2</sub>O<sub>7</sub>:Ho<sup>3+</sup>, cross-cascade stimulated ion emission 2-25019  
Ho<sup>3+</sup>:BaYb<sub>2</sub>F<sub>8</sub> crystal energy transfer mechanism to 2-μ laser channel 2-34771  
<sup>163</sup>Ho internal bremsstrahlung electron capture, neutrino mass 2-4383  
LaCl<sub>3</sub>:Eu<sup>2+</sup>, Ho<sup>3+</sup>, energy transfer from <sup>3</sup>D<sub>1</sub> and <sup>5</sup>D<sub>0</sub> levels, temp. depend. 2-26978  
LiYF<sub>4</sub>:Ho<sup>3+</sup>, multiphonon transport of excitations between impurity ions 2-17027  
Si:Ho:P, grown from melt, second phase inclusion impurity conc. 2-5150  
SrF<sub>2</sub>:Ho<sup>3+</sup> single cryst., laser excited fluoresc. study 2-36678  
ThGeO<sub>2</sub>:Ho<sup>3+</sup>, crystal field, EPR and optical absorption spectra study 2-26943

## holmium alloys

- magnetic state of the intermetallic compound HoCo<sub>5</sub> over a wide range of temperatures 2-51397  
Al-Mg-Ho, mech. props., Ho effect 2-27242  
Gd<sub>1-x</sub>Re<sub>x</sub>Al<sub>2</sub> (Re=Dy, Ho, Er), Curie temp., theoretical calc. 2-21793  
Ho-Co sputtered thin films, bubble and stripe domains, wall structures, electron microscopy obs. 2-26701  
Ho-Er, elec. cond., thermoelectric power, mag. struct. effects (*Russian*) 2-51144  
Ho-Ga system, phase diagram, DTA, X-ray diffr. and SEM study 2-51874  
Ho-Pr, HCP alloys, mag. struct. transitions 2-2055  
Ho-Tb, mag. struct., neutron diffraction study (*Bulgarian*) 2-17262  
HoCo film, amorphous, annealing effect on elec. resist. temp. depend., mag. compensation pt. and Hall parameters 2-9008  
HoCo<sub>2</sub> cryst. struct. distortion and magnetostriction 2-45119  
HoCo<sub>2</sub> Laves phase, <sup>59</sup>Co NMR study 2-17349  
HoCo<sub>2</sub> mag. excitations, neutron scatt. study 2-51396  
HoCo<sub>5-x</sub>Ni<sub>x</sub>(Cu<sub>y</sub>), magnetisation reorientation and anisotropy 2-26670  
HoCu<sub>2</sub>Si<sub>2</sub>, mag. disorder resist. 2-17058  
HoCu<sub>2</sub>Si<sub>2</sub>, magnetisation and mag. susceptibility meas. 2-46259  
(Ho<sub>1-x</sub>Er<sub>x</sub>)Rh<sub>2</sub>B<sub>4</sub>, mag. transitions 2-51406  
HoFe<sub>2</sub>, heat capacity, crystal-field effects, mag. props. 2-8985  
HoFe<sub>2</sub>, magnetisation meas. of magnetostriction, mag. moments and anisotropy (*Russian*) 2-21835  
HoFe<sub>2</sub>, NMR study of hyperfine field parameters and mag. moments 2-31324  
HoFe<sub>23</sub>, influence of H on struct. and mag. props. 2-2063  
δ-HoGa<sub>3</sub>, cryst. struct. refinement 2-8480  
HoNi<sub>2</sub>, thermal expansion and magnetostriction, 5 to 290K 2-26086  
HoNi<sub>2</sub>D<sub>1.8</sub>, cryst. struct., neutron diffr. study 2-25815  
HoRh<sub>2</sub>B<sub>4</sub>, mean-field ferromag., sp. ht., magnetisation, elec. resist., and thermal expansion meas. 2-51408  
Ho<sub>1-x</sub>Sm<sub>x</sub>, mag. props. study 2-31146  
Ho<sub>1-x</sub>Tb<sub>x</sub>Fe<sub>2</sub>, crystal struct. distortion and thermal expansion (*Russian*) 2-5077  
U<sub>0.15</sub>Ho<sub>0.5</sub>Ga<sub>2</sub>, mag. behaviour and dominant interactions 2-8962

## holmium compounds

- see also holmium alloys*  
CaHoAl<sub>3</sub>O<sub>7</sub>, synthesis and characterization 2-41515  
Ca<sub>2</sub>Ho<sub>1-x</sub>CrO<sub>3</sub>, solid soln., distorted perovskite struct. (*French*) 2-50590  
Er<sub>0.43</sub>Ho<sub>0.57</sub>Rh<sub>2</sub>B<sub>4</sub>, supercond. and mag. transition temp., α-particle effect 2-31026  
Er<sub>0.58</sub>Ho<sub>0.42</sub>Rh<sub>2</sub>B<sub>4</sub>-Nb oxide-Nb point contact junction, temp. depend. of Josephson current 2-2037  
Er<sub>1-x</sub>Ho<sub>x</sub>Rh<sub>2</sub>B<sub>4</sub>, neutron scatt. study of mag. transitions 2-17285  
Er<sub>1-x</sub>Ho<sub>x</sub>Rh<sub>2</sub>B<sub>4</sub>, reentrant ferromagnetic superconductor, magnetisation 2-17210  
Er<sub>1-x</sub>Ho<sub>x</sub>Rh<sub>2</sub>B<sub>4</sub>, solitons and supercond. phase occurrence 2-31025  
Fe<sub>0.05</sub>HoMo<sub>0.95</sub>S<sub>8</sub>, Chevrel phase supercond., high temp. Mossbauer study 2-17379  
Ho complex, Ho(oxydiacetate)<sub>3</sub><sup>3-</sup>, f-f transition, optical props. calcs. 2-51545  
Ho complex, Tb<sup>3+</sup>Ho<sup>3+</sup> (ammoniaisopropiondiacetato)4H<sub>2</sub>O, luminesc., circular dichroism, energy transfer 2-46722  
HoB<sub>4</sub>, anisotropy and mag. transitions 2-41131  
HoB<sub>4</sub>, multiple mag. phase transitions at low temps. 2-2081  
HoB<sub>2</sub>C<sub>2</sub>, mag. props. 3-300K 2-41116  
Ho<sub>2</sub>Ce<sub>1-x</sub>Na<sub>x</sub>(SO<sub>4</sub>)<sub>2</sub>H<sub>2</sub>O, excitation and emission spectra, decay kinetics, and energy transfer 2-26963  
HoCu<sub>2</sub>Ge<sub>2</sub>, mag. susceptibility meas., 4.2 to 200K (*French*) 2-31150  
HoFe<sub>1-x</sub>Ni<sub>x</sub>/Ti<sub>2</sub>O<sub>3</sub>, orthoferrite, mag. props. 2-13319  
Ho<sub>2</sub>Fe<sub>2</sub>O<sub>7</sub>, ferrogarnet form. from metal hydroxides, prep. conditions and mechanism, characts. 2-41536  
Ho(Ir<sub>0.7</sub>Rh<sub>0.3</sub>)<sub>4</sub>B<sub>4</sub>, antiferromagnetic ordering above superconducting T<sub>c</sub> 2-31011  
HoMo<sub>0.5</sub>S<sub>8</sub>, reentrant ferromag. supercond., mag. and supercond. phase transitions 2-17281  
HoMo<sub>0.5</sub>S<sub>8</sub>, reentrant supercond. transition, oscillatory magnetisation, neutron diffr. study 2-36215  
HoO, electronic spectra, rot. and vibr. anal. 2-39416  
Ho<sub>2</sub>O<sub>3</sub>, cathodoluminescence spectra 2-46759  
Ho(OH)<sub>3</sub> crystal, mag. thermal and optical absorpt. props. 2-8963  
Ho(OH)<sub>3</sub> crystals, mag. and thermal props. 2-26596  
Ho(OH)<sub>3</sub>, heat capacity, 11 to 350K, lattice and Schottky contribs., thermophys. functions 2-35712  
HoOs<sub>1.2</sub>Sn<sub>2.5</sub>, superconducting and mag. props. 2-46191  
Ho(Rh<sub>1-x</sub>Ir<sub>x</sub>)<sub>4</sub>B<sub>4</sub>, antiferromag. order and supercond. 2-36323  
Ho(Rh<sub>1-x</sub>Ku<sub>1-x</sub>)<sub>4</sub>B<sub>4</sub>, superconductivity study 2-17202  
HoRh<sub>2</sub>Si<sub>2</sub>, new ternary silicides, cryst. struct. and mag. props. 2-16625  
Ho(Ru<sub>1-x</sub>Rh<sub>x</sub>)<sub>4</sub>B<sub>4</sub>, mag. order, superconductivity 2-31187  
HoVO<sub>4</sub>, Van Vleck paramag., Davydov splitting 2-45923  
Ho<sub>2</sub>Y<sub>3</sub>Fe<sub>2</sub>O<sub>12</sub> ferrite garnet, mag. transition, phase diagram 2-31178  
KHo(MoO<sub>4</sub>)<sub>2</sub>, orthorhombic crystals, polarised IR and Raman spectra 2-41362



**holmium compounds** continued

- LiTb<sub>0.51</sub>Ho<sub>0.49</sub>F<sub>4</sub>, random Ising dipole coupled ferromag., mag. susceptibility 2-46261  
 TiHo<sub>3</sub>F<sub>10</sub>, crystal chem. study (*French*) 2-16622

**holographic gratings**

- aberration correction for a Rowland circle mount 2-24975  
 aberration correction for a Rowland circle mount 2-24976  
 bichromated gelatin layer Al coated reflection grating 2-49712  
 chirped waveguide diffraction gratings, improved holography 2-4581  
 concave gratings, precalc. and automatic correction 2-20401  
 concave type 3 diffraction gratings, aberrations in UV 2-49711  
 copying of holograms with partially coherent light (*Spanish*) 2-49705  
 crossed gratings, diffr. efficiencies, aberration theory, ray tracing 2-39588  
 dichromated gelatin film, hologram formation mechanism 2-11665  
 echelle and holographic grating comparison for scatt. and spectral resolution 2-864  
 evanescent, wave holography, recording medium deformation effects 2-49702  
 evanescent-wave holograms, diffr. efficiency charact. features for TM polarisation of reconstructing wave 2-44225  
 focusing light into specified volume by computer-synthesized holograms 2-49715  
 generalised ray-tracing for diffraction gratings of arbitrary form 2-11802  
 phase gratings in intermediate diffr. regime 2-16093  
 photoresists, formation of holographic diffr. gratings 2-11801  
 plane waves, diffraction at transmission volume hologram 2-49698  
 recording process, analytical description (*German*) 2-29799  
 stigmatic mounting of holographic concave transmission grating for X-ray and XUV spectroscopy 2-29871  
 strain analysis of deflected plate using holographic modulated diffraction gratings (*Japanese*) 2-4778  
 transient gratings in a nonlinear medium 2-39592  
 volume holograms dynamic theory, Hunter-Driffeld curve characts. 2-24978  
 volume phase holograms in photorefr. crystals, selective props. 2-44221  
 wavefront reversal of parallel beams due to intermode scatt. in holographic gratings 2-44406  
 wavelength scaling holographic element generation 2-869  
 X-ray gratings produced at synchrotron radiation facilities 2-28967  
 As-Se-Ge, amorphous film, anal. of relief-type gratings (*Japanese*) 2-39589  
 BaTiO<sub>3</sub>, photorefractive-index gratings formed by nanosec. optical pulses 2-4468  
 KCl, holograms recorded through F→X conversion, diffr. efficiency, X-centre anisotropy effect 2-39596  
 LiNbO<sub>3</sub>:Fe, dynamic gratings, phase transformation of coherent light beams meas. 2-11804  
 LiNbO<sub>3</sub>:Fe, optical erasure dynamics of one- and two-photon holograms 2-29795  
 Mg mirror surface, dynamic hologram recording, wavefront inversion 2-872

**holographic instruments**

- see also *holography*  
 attachment, for machine for field of displacements determ. 2-2644  
 Dennis Gabor memorial symposium, Haifa, Israel (Mar. 1980) 2-33216  
 holocamera, miniature, using multiple-pulse Q-switched ruby laser, aerosol anal. 2-49707  
 holocameras, types 35 and 9×12, easy-to-handle 2-34693  
 intensity correlator using a laser cathode-ray tube 2-44219  
 interferometer, aberration and technological requirements calc. 2-49710  
 interferometer, three-dimens. gas flow visualisation along aeroballistic trajectory 2-1277  
 laser scanner for nonimpact printing, hologon beam deflector design 2-4466  
 plane grating holographic laser scanner for high resolution imaging appls. 2-11672  
 projectors for three-dimens. static images 2-49704

**holographic interferometry**

- aberration and technological requirements calc. in holographic interferometer 2-49710  
 aeroballistic trajectory, holographic interferometer for three-dimens. gas flow visualisation 2-1277  
 aerospace turbomachinery flow diagnostics 2-20790  
 artificial hip joint components, cement hardening action, holographic interferometric obs. 2-22859  
 aspheric surfaces, testing by computer-generated holograms 2-7904  
 aspherical surfaces, testing by in-line computer-generated holograms 2-7905  
 colour encoding of holographic interferometric fringe patterns with white-light processing 2-863  
 compound holographic interference and conventional microscopy, cryst. growth from soln. study 2-10864  
 contact surface determ. 2-871  
 crack parameters measurement, by method of holography and speckle interferometry 2-4471  
 crystal, growing or dissolving, holographic studies of surrounding soln. 2-25778  
 cylindrical surface under axial load, deformation meas. appl. (*Japanese*) 2-15146  
 deformation and vibr. anal. using holography and speckle techniques 2-12115  
 deformation measurement, in-plane, using holographic moiré 2-24970  
 Dennis Gabor memorial symposium, Haifa, Israel (Mar. 1980) 2-33216  
 depth contour generation by improved two-beam interference method, two methods (*Japanese*) 2-866  
 diffuse object spatial displacement meas. accuracy using holographic interferogram data 2-33496  
 displacement field around crack tip of Al alloy strip, holographic and speckle interferometry obs. (*Chinese*) 2-8101  
 displacement measurement, three-dimens., incoherent superposition of interferograms 2-34694  
 displacement measurement, three-dimens., sandwich holography and regulated path length interferometry 2-48753  
 flaw detection, real-time 2-17792  
 fringe localisation for transparent object with nonuniformly varying refr. index 2-49708  
 gas-liquid diffusion exam., holographic interferometry method of enhanced sensitivity 2-20775

**holographic interferometry** continued

- high-precision optoelectronic picture scanning by means of a precision mechanical instrument (*Hungarian*) 2-11663  
 intensity correlation metrology, comparative study 2-34667  
 interferometer, design for strain-determ. using C-optimality criterion 2-39595  
 lens aberration determination using holographic interferograms of pupils recorded for two points on image plane (*French*) 2-44217  
 liquid diffusion studies, review (*Rumanian*) 2-16831  
 multiplexing using multiple reference beams 2-24977  
 optical holography, sensitivity for imaging of US fields (*German*) 2-41842  
 order determination problems (*German*) 2-49703  
 photoelasticity, static and dynamic, appl. of Faraday's effect 2-50214  
 plate bending, whole-field strain determ. 2-50218  
 recording interferograms on single-layer photothermoplastic carriers with flexible base (*Russian*) 2-11671  
 rotating component vibration analysis, image derotated holographic interferometry appl. 2-15973  
 rotating objects in oppositely directed beams 2-20278  
 rotation-shearing interferometry, appl. to holograms wavefront errors correction 2-53111  
 semiconductor device behaviour investigation using lens-assisted hologram interferometry 2-20273  
 sequential hologram interferometry with diffusely illuminated objects, multiplexing techniques 2-868  
 sprayed coatings, US and optical nondestructive testing 2-17812  
 strain analysis of deflected plate using holographic modulated diffraction gratings (*Japanese*) 2-4778  
 strain measurement, of ceramic wave (*Japanese*) 2-47292  
 strain measurement on rotating structures by electronic speckle pattern interferometry 2-12114  
 stress meas., acoustic holographic interferometry appl. 2-17838  
 supersonic plasma jet in pulsed discharge, holographic interferometry 2-20840  
 temperature meas. appl. (*Spanish*) 2-29794  
 thermally sprayed coatings, NDT by US combined with holographic interferometry (*German*) 2-52148  
 thermoplastic pipe joint, holographic NDT technique for quality control 2-41859  
 theta-pinch plasma diagnostics anal. by side-on holographic interferometry 2-8357  
 triangulation technique for distance and surface contour meas. (*German*) 2-24973  
 universal apparatus for holographic interferometry (*ti*) 2-39594  
 US wavefronts visualisation, with phase-modulated reference beam 2-7998  
 vibration analysis of rotating objects using reflective image derotator 2-1154  
 Bi<sub>2</sub>SiO<sub>3</sub> crystals phase conjugation, real-time nondestructive testing appl. (*French*) 2-44224  
 GaAs (100) planes, grating corrugation form (*Chinese*) 2-20400  
 MnBi magneto-optic interferograms, spectral investigation, recording problems, binary threshold model (*Russian*) 2-11670
- holographic storage**  
 aspheric surfaces in optical systems, spherical aberration correction 2-7848  
 automatic hologram recording, using thermoplastic carrier with flexible celluloid base (*Russian*) 2-11660  
 document holographic storage (*Chinese*) 2-20269  
 multicolor holographic readout systems 2-34691  
 supermicrofiche, appl. of chalcogenide amorphous films 2-44492  
 thermoplastic recording media, in two-loop data retrieval systems (*Russian*) 2-4464
- holography**  
 see also *acoustic holography*; *computer-generated holography*; *holographic gratings*; *holographic instruments*; *holographic interferometry*; *holographic storage*; *microwave holography*  
 aberration correction, entrance pupil position influence 2-34704  
 achromatic Fourier transform holography in temporally broadband light 2-4465  
 acousto-optic multichannel modulator, US divergence compensation, holographic method 2-49713  
 active mirror shaping, use of synthesized holograms as compensators 2-1004  
 alkali halides, hologram formation, Gaussian type complex refractive index props. 2-2212  
 amplitude holograms, integral diffr. efficiency 2-34703  
 amplitude holography, optical noise effects rel. to recording media nonlinear props. 2-870  
 aspherical surface testing using axial synthesized holograms as optical compensators 2-1005  
 astigmatic rainbow holography, aperture conjugation technique 2-20266  
 astigmatic ray pencil reconstruction from holograms 2-34692  
 automated gelatin films, volume phase hologram image formation, expt. study (*Russian*) 2-44226  
 bench, holographic, with air-supported absorber (*Chinese*) 2-24971  
 biomedical engineering, coherent optics and holography appl., review 2-37644  
 bleached Ag-halide holography, high SNR 2-49700  
 camera shake evaluation by hand-held speckle photography 2-33656  
 cinematography of time-varying reflecting and phase objects using Nd:YAG laser 2-49709  
 coherence requirements, optical holography with partially coherent radiation 2-29791  
 colour holography, improved integrating exposure-control system 2-7733  
 coloured shadow pattern from hologram, of gas-dynamic flow, anal. 2-24980  
 coloured white light holograms 2-11666  
 composite matched filters 2-34696  
 copying of holograms with partially coherent light (*Spanish*) 2-49705  
 correcting system, two-component, for synthesised interf. field form. in multimode fibres 2-34926  
 correlator, coherent, emitter spectrum width influence on output signal (*ti*) 2-39725  
 coupler for single-mode optical fibres and cables 2-7732  
 damping platform investigation for laser holography (*Chinese*) 2-20270  
 deflection measurement, by dual-beam holography 2-50211  
 Dennis Gabor memorial symposium, Haifa, Israel (Mar. 1980) 2-33216  
 dichromated gelatin film, hologram formation mechanism 2-11665



**holography continued**

- displacement analysis with multimode fibre optics 2-24972  
 dynamic hologram, stimulated light scatt., wavefront reconstruction, phase conjugation and diff. efficiency 2-49714  
 Earth holography, appl. to lithospheric studies 2-37780  
 electro-optic cryst., hologram superlattices, radiation defects kinetic parameters determ. 2-2219  
 emulsion relief-characteristics due to bleaching effect, phase filter prep. (Chinese) 2-20268  
 evanescent, wave holography, recording medium deformation effects 2-49702  
 evanescent-wave holograms, diff. efficiency charact. features for TM polarisation of reconstructing wave 2-44225  
 ferroelectric ceramics, transparent, semicond. props., electron-hole processes, hologram forming 2-46013  
 filter recording and positioning using microprocessor-controlled photo-thermoplastic device 2-20276  
 fission reactor fuel examination, holography appls. 2-24324  
 Fourier optics and holography, wavelength var., operator algebra description 2-34690  
 Gabor, Dennis, biographical memorial lecture 2-33263  
 heavy atom holography in electron microscopy 2-34688  
 historical development, principles, hologram formation, overview (Czech) 2-44215  
 holographic laser beam dynamic correction method 2-29793  
 holographic lenses (Chinese) 2-11669  
 holographic optical elements for laser radiation spectral and ang. charact. control 2-44212  
 hypersonic hologram, angular and spectral selectivity, Mandelstam-Brillouin stimulated scatt. 2-49706  
 image plane holograms, interferometric spatial carrier formation with an extended source 2-20267  
 image plane holography, speckle reduction 2-24974  
 image reconstruction system (t) 2-39593  
 image recording at wavelength that is absent in source emission spectra 2-11668  
 inhomogeneous media, Bojarski exact inverse scatt. theory 2-49636  
 intensity correlation based holography 2-34701  
 interference copying of Denisyuk holograms, shrink-free photographic processing 2-34700  
 inverse scattering and holography 2-34689  
 kinoform production, polarisation-holography method 2-29802  
 laser optics, conf., Leningrad, USSR (Jan. 1980) 2-28594  
 laser target interaction obs., high-speed cinematography and interferometry developments 2-20354  
 lens, off-axis, vol. holographic, conjugate diff. order 2-15969  
 lens, optical transformation theory (Chinese) 2-29792  
 lens, wavelength shifted, design procedure using coupled multiwave efficiency analysis 2-867  
 lenses, holographic, image quality estimate, classical intensity MTF 2-39591  
 low-noise hologram copying process using narrow-band, non-laser light source 2-34699  
 micrat plates ORWO LP 2, bleaching efficiency meas. (German) 2-29800  
 microholography in bubble chambers (French) 2-43700  
 mirror, paraboloidal concave, for image hologram prod., object field transform 2-34678  
 moving object upper-limit speed in front-surface holography using Q-switched ruby laser 2-49701  
 multicolor holographic readout systems 2-34691  
 multiplexure, using AgCl emulsion films, diffraction efficiency obs. (Russian) 2-11659  
 multiplexing using multiple reference beams 2-24977  
 near real-time holographic displays using electronic recording 2-11667  
 nonlinear echoes, phase conjugation, time reversal, and electronic holography, review of expts. 2-42808  
 one-dimensional hologram recording and playback, using moving carrier (Russian) 2-11658  
 optical coin acceptor based on holography (German) 2-44218  
 optical memories, large capacity, correlator appls. 2-862  
 optical wavefront reversal possibility with aid of liq. cryst. transparencies 2-4558  
 OTF of objectives and photographic materials, holographic meas. method (Czech) 2-865  
 pattern recognition methods 2-34695  
 phase hologram nonlinear noise (German) 2-29797  
 photogelatin films, sensitised, climatic protection with varnish 2-24981  
 photographic material OTF meas. using holographic technique (Czech) 2-44216  
 plane holography, effective pupil model 2-39590  
 plasma, human, bubble dissolution following recompression, holographic obs. 2-22785  
 Pockels readout modulator transparency, use in real time hologram recording system 2-20277  
 pseudostereoscopic holographic imaging system for underwater mapping 2-11662  
 rainbow holography, one step, astigmatic technique 2-44220  
 rainbow holography multiplexing 2-20272  
 real-time holography, amplified refl., transmission and self-oscill. 2-15972  
 recording and reconstructing holograms in white-light source spectrum 2-11661  
 recording of one-dimensionally dispersed holograms in white light 2-34687  
 recording of TGS ferroelectric cryst. growth on Space Shuttle 2-15974  
 recording process, analytical description (German) 2-29799  
 review 2-15970  
 scanners, improved collection of reflected beam when scanning specular surfaces 2-29796  
 screens, holographic, high-gain 2-15971  
 single-beam holographic technique on sinusoidal vibration 2-48464  
 single-beam holography, student laboratory apparatus 2-48463  
 speckle hologram recording in multimode laser emission 2-44222  
 stimulated Raman scatt., superradiation regime, wave-front registration and reconstruction 2-11759  
 sub-master holograms production method 2-34698  
 thermoplastic photoconductor hologram medium, solvent vapour method and heating method (Japanese) 2-20271  
 thermoplastic recording for sinusoidal exposure struct., elec. field calc. (German) 2-29801

**holography continued**

- thick lens-hologram refr.-diff. optical system, aberration compensation 2-39719  
 total-internal-reflection selector in LiF  $F_2^+$  colour centre laser 2-4529  
 uniaxial crystals, interference field of plane EM waves 2-49665  
 vibration analysis using holography combined with speckling 2-34697  
 volume phase holograms in photorefr. crystals, selective props. 2-44221  
 wavelength scaling holographic element generation 2-869  
 wavelength shifted holographic optical lenses, thermoplastic material diff. efficiency property appls. 2-4467  
 weak scatterer structure determ. from holographic images 2-20274  
 white light reconstructed hologram fabrication using dichromated gelatin (Chinese) 2-44214  
 Ag halide light-sensitive plates HP-490 and developer FHP-3 for holographic appls. 2-29798  
 Au transmission gratings with submicrometre spatial periods, fabrication, holographic lithog., X-ray lithog. and microplating 2-39728  
 Bi<sub>12</sub>SiO<sub>20</sub> crystals, two-wave mixing and energy transfer, image amplification and vibr. anal. appls. 2-34702  
 Bi<sub>12</sub>SiO<sub>20</sub>, photorefractive electrooptic cryst. with vol. phase hologram, light diff. 2-11664  
 Bi<sub>12</sub>SiO<sub>20</sub> photorefractive crystal, phase conjugation by real-time holography and degenerate four wavemixing 2-25078  
 CdS single cryst., refractive index, optically induced changes 2-51543  
 Fe fine particles, polyhedral, mag. struct. obs. by Lorentz microscopy and electron holography 2-36313  
 He-Ne laser radiation wavefront reversal by light-induced shaping of an absorbing material surface 2-4549  
 KNbO<sub>3</sub>/Fe<sup>2+</sup>, volume phase holograph form., coherent light amplification and optical phase conjugation 2-34830  
 LiNbO<sub>3</sub>, optical nonlinearity and hologram recording (Russian) 2-11742  
 LiNbO<sub>3</sub>/Fe, one- and two-photon holograms, optical erasure 2-7730  
 LiNbO<sub>3</sub>/Fe, photorefractive electrooptic cryst. with vol. phase hologram, light diff. 2-11664  
 LiNbO<sub>3</sub>/Fe, thermal fixing of holograms, evidence for mobile H<sup>+</sup> ion mechanism 2-24979  
 (Sr<sub>1-x</sub>Ba<sub>x</sub>)<sub>1-y</sub>(Nb<sub>2</sub>O<sub>6</sub>)<sub>y</sub>Ce, holographic sensitivity depend. on Ce conc. 2-4469

**homopolymers see polymers****hopping conduction**

- AC conductivity in multiple hopping regime 2-40915  
 amorphous chalcogenides, single polaron hopping contrib. to AC cond. 2-40903  
 amorphous material, hopping transport, dielec. polarisation 2-5407  
 amorphous semicond., Hall effect due to hopping cond. in localised states 2-40935  
 amorphous semiconductor, hopping and AC cond., Hall mobility, master eqn. 2-40878  
 amorphous semiconductors, DC hopping cond., Mott T<sup>-1/4</sup> law from rate eqn. formalism 2-13071  
 amorphous solids exhibiting semicond.-insulator transition, hopping cond., freq. depend. 2-40894  
 bovine serum albumin, hydrated, elec. charge mobility 2-52476  
 chalcogenides and pnictides, cond. band gap, chemical bond approach 2-35936  
 chlorophyll-a films, charge transport, temp. depend. and gas effects 2-51365  
 diamond:B, heavily doped, elec. cond. mechanisms, 2 to 700K 2-45986  
 dicalcium lead propionate, monocryst., electrical cond., stimulated thermocurrent 2-30891  
 disorder system, scaling theory for hopping conduction 2-40864  
 disordered semiconductors, microscopic theory of dispersive transport 2-13078  
 disordered solid, carrier recombination 2-46017  
 disordered solid, energy and electron transport, generalised master eqn. and continuous time random walk model 2-36033  
 disordered system, high-temp. small polaron hopping cond., percolation calcs. 2-13069  
 disordered system, hopping cond. freq. depend., dielec. loss-angle tangent study 2-36048  
 disordered system, pair approx. calcs. 2-35982  
 dispersive hopping transport from an exponential energy distribution of sites, Monte Carlo simulation 2-51174  
 dispersive transport in R-hopping systems, computer simulation 2-40862  
 extended and localised electron states in a one-dimensional system with bond distortion 2-8788  
 fermi glass, cond. activation energy and Seebeck coeff. in nearest-neighbour hopping regime, effective medium theory 2-8829  
 granular metals, elec. resist., temp. depend., percolation model 2-30857  
 Hall mobility in hopping conduction 2-30909  
 Hall mobility of carriers hopping in impurity band, r-percolation model 2-21551  
 Holstein 3-site hopping process, Hall mobility, r-percolation case 2-40936  
 impurity bands, 2D, elec. cond., importance of Coulomb interaction 2-51122  
 intervalence mixtures and charge transfer adducts, site-transfer electronic cond., dielectric relax., hopping mechanism 2-13073  
 kinetic coefficients for hopping with Hubbard repulsion 2-45957  
 low-mobility cryst., photogalvanic effect 2-1960  
 metals, one-dimensional, cond. freq. depend. for variable range rate hopping 2-30853  
 molecular complexes, conduction and dielectric polarisation 2-14186  
 molecular crystal, exciton or charge carrier diffusion coeff., band and hopping limits 2-40798  
 molecular crystals, interaction between excitons and free charge carriers, hot and complex charge carriers generation 2-8806  
 MOSFET, conductance in restricted-dimensionality accumulation layers 2-41019  
 non-ohmic hopping cond., directed percolation theory 2-40865  
 one-dimensional box model, effect of weak hopping on behaviour 2-21957  
 one-dimensional systems, random, classical hopping cond., limit theorems, quasilocalisation effects 2-30874  
 organic semiconductor, model of photogeneration of carriers 2-30930  
 perfect dielectric crystal, low-mobility transport, review 2-8801  
 poly-N-vinyl carbazole, model of photogeneration of carriers 2-30930  
 polyacetylene, anomalous freq. depend. cond. 2-30890  
 polyacetylene, doped, elec. cond. freq. depend., soliton model 2-45978  
 polyacetylene, elec. transport, mag. and struct. props., review 2-45976  
 polyacetylene, electron hopping cond., soliton model 2-45977



**hopping conduction continued**

- trans-polycarbonate, intersoliton electron hopping transport, cond. and thermopower meas. 2-30894  
 polyvinylidene fluoride, drift mobility determ., surface charge decay method, dopant effects 2-45983  
 proteins, conduction and dielectric polarisation 2-14186  
 random media, coherent medium approx. in stochastic transport theory 2-21552  
 semiconductor, lightly doped, excess low-frequency noise in hopping conduction 2-46086  
 semiconductor, lightly doped, high freq. hopping cond. 2-36078  
 semiconductors, amorphous, cond., drift and diffusion 2-5410  
 semiconductors, amorphous, dispersive transport theory 2-40900  
 silicate glasses containing Sb oxide or As oxide, elec. props. 2-16897  
 simulation of carrier transport and energy relaxation in a macroscopic hopping system of sites with a Gaussian energy distribution 2-1911  
 small-polaron hopping between inequivalent sites, chemical rate treatment, pair recomb. appl. 2-1910  
 solid electrolytes, framework, charge carrier correlations 2-26106  
 spatially and energetically disordered systems, hopping Hall mobility, temp. depend. percolation theory 2-40895  
 spatially random systems, Hall effect in variable-range-hopping regime 2-1931  
 superionic conductor, ionic conductivity theory 2-16840  
 superionics, AC conductivity, classical hopping cond. 2-26105  
 TCNQ salt,  $\text{Qn}(\text{TCNQ})_2$ , quasi-one-dimens. cond., freq. and field depend. transport 2-30872  
 TCNQ salts, freq. depend. cond. and permittivity, localised states, investig. (French) 2-5617  
 thick films, elec. props. and cond. mechanism 2-13192  
 transition metal oxides, amorphous, elec. cond. and electrochromic props., review 2-45973  
 two-dimensional hopping cond., semiclassical theory 2-5409  
 Ag<sub>2</sub>Te, amorphous semicond. film, prep. by diffusion and elec. cond. 2-45772  
 Ag<sub>2</sub>HgI<sub>4</sub> superionic conductor, ionic cond. and dielec. relaxation 2-16853  
 AgI,  $\beta$ -phase, far IR phonon absorpt. spectrum, model calc., hopping term 2-46555  
 $\alpha$ -AgI, DC cond. and disorder entropy 2-21367  
 As amorphous film, UHV sublimed, elec. and optical props. 2-46172  
 As<sub>2</sub>Se<sub>3</sub> glass, AC transport and struct. relax. 2-40904  
 As<sub>2</sub>Te<sub>3</sub>(Se<sub>3</sub>), single polaron hopping contrib. to AC cond. 2-40903  
 B,  $\beta$ -rhombohedral, hopping cond. in strong elec. field 2-40923  
 Bi<sub>2</sub>O<sub>3</sub>-PbO Fe<sub>2</sub>O<sub>3</sub> glasses, struct., elec. and mag. props. 2-45054  
 C:H:B(P), amorphous films, thermopower, elec. cond. 2-46178  
 CdF<sub>2</sub>·H<sup>+</sup>, semiconductor, growth, IR spectra and elec. cond. 2-13638  
 Cd<sub>1-x</sub>Hg<sub>x</sub>Te, resist. and Hall coeff., 4.2 to 30K 2-30897  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te(Se), elec. and mag. props. in mag. fields 2-30799  
 Co<sub>2</sub>O<sub>3</sub>·Li<sub>2</sub>O, pure and doped, elec. cond. and thermoelec. power meas. 2-36041  
 cubic lattice, variable range hopping at Fermi level, Monte Carlo simulation 2-40863  
 DTaWO<sub>6</sub>, D site location from neutron powder diff. data 2-21118  
 GaAs:Cr amorphous film, hopping conduction 2-41032  
 GaAs-Al<sub>2</sub>O<sub>3</sub> devices I-V characts., hopping cond., space-charge-limited currents 2-51329  
 GaS, Hall effect and TSC study 2-26414  
 GdBi<sub>6</sub>, elec. props., hopping cond., thermoelec. power 2-40887  
 Ge, amorphous, hopping cond. mechanism in strong elec. field 2-26387  
 p-Ge, hopping transport at large uniaxial stress and high mag. field 2-36047  
 n-Ge, impurity band cond. study 2-40919  
 Ge:H, amorphous, AC loss at audio freq., electron tunnelling model 2-40897  
 Hg<sub>0.9</sub>Cd<sub>0.1</sub>Te, electron freezeout and hopping cond., magnetoresist. and Hall effect meas. 2-5423  
 Hg<sub>1-x</sub>Mn<sub>x</sub>Te, acceptor-state cond. in mag. fields 2-8824  
 Hg<sub>1-x</sub>Mn<sub>x</sub>Te(Se), elec. and mag. props. in mag. fields 2-30799  
 Li<sub>2</sub>Co<sub>1-x</sub>Co<sub>2</sub>O<sub>4</sub> spinels, cation distrib. and elec. props. 2-26423  
 Li<sub>2</sub>Zn<sub>1-x</sub>Co<sub>2</sub>O<sub>4</sub> spinels, cation distrib. and elec. props. 2-26423  
 Mn-Zn ferrosilicates, elec. cond., comp. depend. 2-1909  
 MnO, undoped single cryst., elec. and thermoelec. props. 2-26386  
 N<sub>2</sub>, liquid, prebreakdown phenomena study using modified schlieren system, hopping transport mechanism 2-5630  
 Na<sub>2</sub>YSiO<sub>4</sub>, ionic conductivity and conduction path struct. 2-16869  
 Ni<sub>1-x</sub>Cu<sub>x</sub>S<sub>2</sub>, elec. cond., Hall effect, thermoelectric power 2-26388  
 RbAg<sub>4</sub>I<sub>5</sub>, interdependence of mobile and stationary ions, NMR study 2-21912  
 Se, amorphous, single polaron hopping contrib. to AC cond. 2-40903  
 Si, amorphous, electrical cond. and thermoelec. power 2-40917  
 Si, amorphous, hopping cond. mechanism in strong elec. field 2-26387  
 Si:H, amorphous film, elec. cond., thermopower temp. depend. 2-40896  
 Si:H,P, amorphous Schottky barrier, two-channel cond. obs. 2-51280  
 SiO<sub>2</sub> RF sputtered films, DC current transport, 77 to 357K 2-30902  
 SmBi<sub>6</sub>, elec. props., hopping cond., thermoelec. power 2-40887  
 (Sm<sub>1-x</sub>Gd<sub>x</sub>)<sub>2</sub>S<sub>4</sub>, elec. and mag. props. 2-1908  
 Ta<sub>2</sub>O<sub>5</sub>, amorphous, hopping cond. freq. depend., dielec. loss-angle tangent study 2-36048  
 TaS<sub>2</sub>(1T) intercalation complexes with hydrazine, transport and optical props. 2-45966  
 V<sub>2</sub>O<sub>5</sub> amorphous layers, hopping cond., disorder energy 2-45981  
 YbBi<sub>6</sub>, elec. props., hopping cond., thermoelec. power 2-40887  
 n-ZnSe organometallic CVD layer, cond. mechanism 2-51355

**horology see time measurement****hospital administration see medical administrative data processing****hot carrier conduction see hot carriers****hot carriers**

- amorphous semiconductors, hot carrier thermalization, deep trapping and recombination 2-46016  
 E and F-regions, thermal electron behaviour near Sq current focus (Japanese) 2-32704  
 electroluminescence and hot electron phenomena 2-13571  
 electron kinetics, field dependent scatt. 2-51187  
 ferromagnetic semiconductors, I-V characts. in phase transition region (Russian) 2-21606  
 field effect cond. at enriching voltages (Russian) 2-46150  
 hot carrier, impedance 2-17151  
 hot carrier cond., transient regime, Monte Carlo and Boltzmann eqn. iterative solns. 2-46003  
 hot electron semiconductor, electron temp. superlattice theory 2-13433

**hot carriers continued**

- layered semiconductor structures and heterostruct., hot electron and phonon effects 2-26482  
 liquid, nonpolar, hot electron scatt. 2-30941  
 many-layered heterostruct., hot electron vel. correl. and diffusion 2-46118  
 many-valley semiconductor, intervalley diffusion of hot-electrons 2-45999  
 molecular crystals, interaction between excitons and free charge carriers, hot and complex charge carriers generation 2-8806  
 MOS structures, characts. of slow interface traps created during electron avalanche injection 2-46153  
 narrow packet dispersion, hot electron diffusion coeff. determ. 2-13087  
 noise in physical systems, conf., Gaithersburg, MD, USA (Apr. 1981) 2-42793  
 noise sources in space-charge regimes 2-26454  
 organic molecular crystals, charge carrier photogeneration mechanisms (Russian) 2-36092  
 organic quasi-one dimensional conductors, nonlinear conductivity 2-51155  
 organic superconductors, hot donors prep., Meissner effect obs. in org. supercond. 2-21719  
 p-n junction, elec. signal amplification kinetics 2-21667  
 p-n junction, hot carrier thermo-EMF under strong forward bias conditions 2-5454  
 panel electroluminescence, book contrib. 2-51714  
 piezoelectric semiconductor, solid state plasma interacting with acoustic waves 2-21614  
 quartz, cryst. and glassy, hot carrier ambipolar diffusion length, ultrasoft X-ray range 2-9198  
 relaxation, picosecond laser pulse studies, review 2-46528  
 retarded transport, quantum physics 2-51184  
 semiconductor, current controlled negative resist. and generation-recomb. induced nonequib. phase transitions, impact ionisation model 2-45993  
 semiconductor, electron-phonon coupling determ. from warm carrier coeff. 2-40879  
 semiconductor, frequency and wavevector dependent diffusion coefficient of electrons from Monte Carlo calculations 2-46000  
 semiconductor, hot electron noise props. in nonzero collision duration regime 2-51248  
 semiconductor, hot electrons and phonons, mutual drag in elec. and temp. fields 2-17082  
 semiconductor, inhomogeneous, hot electron-phonon transport, quantum theory 2-51188  
 semiconductor, intrinsic, with non-injecting contacts, field and temp. heating effects 2-51193  
 semiconductor, non-equilib. hot-carrier diffusion phenomenon, theoretical non-Markovian approach 2-45996  
 semiconductor thin plates, elec. cond. under heating elec. fields, size effect, carrier cooling 2-51359  
 semiconductors, 1/f noise of hot carriers 2-51265  
 semiconductors, ferromagnetic, electron and magnon heating, magnetisation 2-46010  
 semiconductors, hot carriers, conf., Montpellier, France (July '81) 2-42780  
 semiconductors, hot carrier ballistic transport, displaced Maxwellian formulation 2-46002  
 semiconductors, hot electron effects in crossed mag. and static microwave elec. fields 2-46036  
 semiconductors, hot electron-phonon interactions, phonon transport and decay 2-45480  
 semiconductors, many-valley, Faraday effect in crossed elec. and mag. fields 2-17453  
 semiconductors, many-valley, hot electron elec. cond., nodal point calc. 2-40925  
 semiconductors, microwave experiments including avalanche 2-46049  
 semiconductors, non-equilib., hot-carrier diffusion phenomenon, Monte Carlo approach 2-45997  
 semiconductors, S-type current-voltage characteristics in classically strong mag. fields 2-40937  
 semiconductors at IBM: physics, novel devices, and materials science, review 2-36031  
 superlattices, lateral transport 2-46116  
 surface plasmon light emitter, electrically tunable, proposal 2-5754  
 thermalisation, effect of Ramsauer min. 2-4916  
 (TMTSF)<sub>2</sub>PF<sub>6</sub>, quasi-one-dimens. cond., freq. and field depend. transport 2-30872  
 As<sub>2</sub>S<sub>3</sub>, amorphous, hot carrier relax., optical picosecond study 2-46529  
 BiI<sub>3</sub>, indirect exciton secondary emission, resonant Raman and hot luminesc. studies 2-45842  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, semiconducting, hot carriers, interband recombination time 2-21605  
 p-Cd<sub>1-x</sub>Hg<sub>x</sub>Te, elec. cond. in strong microwave elec. field, 77 to 300K 2-30921  
 Cd<sub>1-x</sub>Hg<sub>x</sub>Te, magnetophonon reson. of nonequib. carrier density 2-8825  
 Cd<sub>1-x</sub>Hg<sub>x</sub>Te, semimetallic, magnetophonon reson. of hot carriers at 4.2K 2-40940  
 CdS, anisotropic heating of photoexcited electrons (Russian) 2-9251  
 CdSe, hot electron-hole plasma, spatial expansion, time resolved photoluminesc. study 2-46051  
 CdTe, cold semicond., hot electrons, luminesc. expts. 2-51676  
 CdTe, transient hot-carrier phenomena, method of moments for anal. 2-45998  
 CuInSe<sub>2</sub>, single crystal, carrier heating by microwave elec. field 2-8834  
 EuO, ferromagnetic, electron and magnon heating, magnetisation 2-46010  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, hot electron transport, expt. and Monte Carlo simulation 2-46001  
 GaAs, cold semicond., hot electrons, luminesc. expts. 2-51676  
 GaAs crystals and solid solns., hot electron luminescence 2-46712  
 n-GaAs, epilayers, phonon generation and electron-phonon scattering 2-21257  
 p-GaAs epitaxial films, Hall effect of hot electrons 2-36162  
 p-GaAs, heavily doped, hot carrier relax., picosecond luminesc. study 2-46742  
 GaAs, hot carrier ballistic transport, displaced Maxwellian formulation 2-46002  
 GaAs, hot carrier photoluminescence, picosecond correlation effects 2-46713  
 GaAs, hot carrier relax., picosecond laser pulse studies, review 2-46528  
 GaAs, hot electron nonMaxwellian distrib. function in mag. field, cyclotron emission study 2-46038



**hot carriers continued**

- GaAs, hot photoexcited electrons, effect of electron-electron scatt. 2-4606  
GaAs, inhibited relaxation of nonresonantly excited electrons in a cold lattice, photolum. meas. 2-46741  
n-GaAs, magnetophonon effect of hot electrons 2-26417  
n-GaAs, Monte Carlo modelling of hot electron behaviour 2-40926  
n-GaAs, periodic oscills. and turbulence of hot-carrier plasma at 4.2K 2-46050  
GaAs-AlGaAs interface, hot electron effects in 2D electron gas 2-51291  
GaAs-GaAlAs heterojunction, localisation and interaction effects in electron gas 2-21664  
Ge containing  $Hg^0$ ,  $Zn^+$  and  $Cd^0$  centres, impurity photoconductivity spectra, photoimpact ionization mechanism and oscills. 2-1953  
p-Ge, far IR emission from population-inverted hot-carrier system 2-46771  
Ge, hole response to static elec. and microwave elec. field, temp. depend., Monte Carlo method 2-13113  
p-Ge, hot carrier population inversion, Hall effect study 2-46037  
p-Ge, hot electron population inversion in mag. field., expt. and Monte Carlo simulation 2-46039  
p-Ge, hot holes, noise, inelastic scatt., meas. at microwave freqs. 2-46088  
p-Ge, light-hole band overpopulation in strong crossed elec. and mag. fields 2-40924  
Ge MM-wave detector using hot carriers, performance 2-36081  
Ge, photoexcited hot carriers, picosecond interband saturation and intraband relax. 2-46004  
Ge, transient hot-carrier phenomena, method of moments for anal. 2-45998  
n-InAs, magnetoresist. hysteresis in elec. field 2-21610  
InP, cold semicond., hot electrons, luminesc. expts. 2-51676  
InP, inhibited relaxation of nonresonantly excited electrons in a cold lattice, photolum. meas. 2-46741  
InSb, hot electron energy relaxation, screening by shallow donor impurities 2-40950  
InSb, hot electrons, auto-correlation of vel. fluctuations and freq. depend. diffusion const. 2-13081  
n-InSb, hot electrons, energy loss mechanisms 2-30901  
n-InSb, hot electrons, noise and diffusivity 2-51182  
n-InSb, magnetophonon effect of hot electrons 2-26417  
InSb, photoexcited hot carrier lifetime, magnetophonon oscillations 2-46068  
InSb, photoexcited hot carriers, far IR cyclotron reson. and emission 2-46384  
InSn,  $O_x$ -Ta $_2$ O $_5$ -ZnS:Mn-Ta $_2$ O $_5$ -Al thin film struct., DC electrolum. 2-46764  
KBr:Ti, surface recombination luminescence 2-36698  
Kl:Ti, surface recombination luminescence 2-36698  
NaCl:Ag, surface recombination luminescence 2-36698  
semiconductors, laser cyclotron resonance, Zeeman absorpt. 2-41205  
Si, 1/f noise of thermal and hot charge carriers 2-26456  
Si, amorphous, hot carrier relax., optical picosecond study 2-46529  
n-Si, cond. in strong alternating elec. fields 2-30903  
Si, electric carriers and heat at high electronic temp. 2-8809  
Si, hot carrier ballistic transport, displaced Maxwellian formulation 2-46002  
Si hot carrier p-n junction, current oscills. 2-17154  
Si, hot electron emission under pulsed laser excitation 2-46873  
Si, hot-electron noise calc. at 77K, Monte Carlo method 2-46089  
Si, intervalley diffusion of hot-electrons 2-45999  
Si, inversion layer, velocity overshoot, hot electron submm wave cond. study 2-46141  
Si inversion layers, remote polar phonon scatt. for hot electrons 2-30972  
Si inversion layers, small-signal velocity overshoot obs. by broadband sub-MM wave spectroscopy 2-36148  
Si, laser annealing, computer model of lattice temp., carrier conc. and temp. 2-45259  
Si MOSFET, energy loss of warm electrons at interface 2-46140  
n-Si, multivalued distribution of electrons between equivalent valleys 2-51190  
n-Si, non-equilib., hot-carrier diffusion phenomenon, theoretical non-Markovian approach 2-45996  
n-Si, non-equilib. hot-carrier diffusion phenomenon, Monte Carlo approach 2-45997  
Si p-i-n structure, homogeneously heated, injection effects 2-13177  
p-Si, SCL current flow, hot holes and noise 2-51183  
Si, transient hot-carrier phenomena, method of moments for anal. 2-45998  
p-Si, transient regimes of hot carriers 2-51197  
Si, two-component electron hole liquid, phase separation under tensile stress 2-26302  
Si:H, amorphous, glow discharge deposited, photoinduced absorpt., time resolved spectra 2-46801  
Si:H, amorphous, hot carrier relax., optical picosecond study 2-46529  
Si-SiO $_2$  interface, hot electron induced defects 2-46152  
SiO $_2$ , electron trapping, reduction by high temp. N $_2$  annealing 2-26405  
Si(100) inversion layer, hot electrons at low lattice temps. 2-46137  
Te single crystal, electron transfer effect 2-51191  
ZnS:Er thin film, DC electrolum., spectral intensity 2-46766  
ZnS(F $_2$ ):Mn, collision excitation cross-sections and energy levels of deep and very deep centers in electroluminescence 2-46762

**hot cathode tubes** see *thermionic tubes*

**hot cathodes** see *thermionic cathodes*

**hot electrons** see *hot carriers*

**hot pressing**

- ceramic microstructure orientation by hot-forming methods 2-46988  
ceramics, hot pressing 2-9324  
ceramics, hot-pressing techniques development, at Springfield's nuclear labs. 2-9305  
ferroelectric ceramics, research in China 2-46490  
granules, capsule deformation during hot isostatic pressing of discs 2-17643  
isostatic, development and appl. 2-2474  
metallic glasses, devitrification/hot consolidation, prep. of high strength cryst. alloys 2-9312  
piezoelectric ceramics, recent developments in Japan 2-46480  
powder densification in pressing, differential eqns. 2-13669  
powdered materials, dynamic pressing, cumulation effect 2-13668  
Sialon, effect of additives on sintering and mech. props. 2-17657  
sialons, densification, role of Sc $_2$ O $_3$  2-9319

**hot pressing continued**

- steel, Mo-V-Cr-W, high-speed, high-temp. ductility, hot gasostatic pressing parameters influence 2-41698  
steel, stainless, ferritic, oxide dispersion strengthened, prep. and mech. props. 2-41548  
AgNbO $_3$ , hot pressing prep., elec. and photoelec. props. 2-13689  
AgTaO $_3$ , hot pressing prep., elec. and photoelec. props. 2-13689  
AlN, densification kinetics during hot pressing 2-27125  
 $\beta$ -Al $_2$ O $_3$ -Na $_2$ O-AlN ceramics, form. and ionic cond. 2-12836  
Al $_2$ O $_3$ -talc compositions, hot-pressing 2-46971  
BN-SiO $_2$  ceramics, hot pressing, props. 2-31673  
BaFe $_2$ O $_9$ :SiO $_2$ , coprecipitated, uniaxially hot pressed, coercivity and texture 2-21838  
C-LaB $_6$  system, powder, hot-pressing 2-51845  
cc Al $_2$ O $_3$ -ZrO $_2$  composites, transform. toughening, fabrication and fracture toughness 2-51925  
Cr $_3$ C $_2$ -Ni(15 wt.%), hot pressing conditions effect on densification and struct. 2-41553  
EuB $_6$ , prep. by hot pressing 2-5844  
Fe-(Cu)-graphite, dynamic hot pressing, antifriction characts. 2-17648  
H $_2$ BO $_3$ -ZnO bonding material, composite form. under hot pressing and heat treatment 2-36826  
K $_2$ Ti $_2$ O $_7$ , sintered, mech. props. 2-22264  
MnZn ferrites, phys. props., pressing press. effect 2-17654  
Na $_2$ F $_2$ B $_2$ O $_7$  (Na $_3$ F $_4$ B $_2$ O $_7$ ) glass, superionic cond., densification effect 2-16889  
Na $_3$ Zr $_2$ Si $_2$ PO $_4$  Nasicon electrolyte, fabrication and characterisation 2-17656  
Ni-Cr-Al-Co, anisotropic fatigue hardening of single cryst. at elevated temps. 2-13814  
SBSE, textured ceramic, processing and characterisation techniques 2-9318  
Si, hot-pressed, tilt boundary, TEM and electron diffr. study 2-30470  
 $\beta$ -SiC, effects of applied pressure on hot-rolling 2-27130  
SiC-AlN, hot-pressed, fabrication and charact. 2-36817  
SiN ceramics, kinetics of densification and phase transformations 2-9349  
Si $_3$ N $_4$  ceramic materials, comp., fabrication, and props. 2-51862  
Si $_3$ N $_4$ , classification, Cl $_2$  impurity effects 2-51860  
Si $_3$ N $_4$  powders, hot pressing behaviour, effect of different sintering agents 2-22187  
Si $_3$ N $_4$ -BN composite, anisotropy effects in thermal diffusivity 2-17658  
Ta-N-Zr $_2$ -ZrN(WC) comps., densification and wear resist. 2-31661  
Ti-Al-V (6.4 wt.%), isostatically hot pressed, powder purity problems 2-13677  
Ti-Al-V-Ni(Fe), blended elemental powder processing 2-46982  
Ti-Al-Zr-Mo, blended elemental powder processing 2-46982  
TiC-Ni-Mo, hot pressing, conditions effect on coercive force and grain size 2-17647  
UO $_2$ , isostatic hot-pressing 2-5850  
WC-Co hard alloys, hot-pressed, thermophys. props. 2-30671  
ZnO:K, hot-pressed, microstructural defects, TEM study 2-5132

**hot rolling**

- anisotropic materials, plastic deform. behaviour, study using Taylor model (Japanese) 2-5910  
metals and alloys, deformation behaviour, elevated temps. controlled rolling (Japanese) 2-9373  
nylon 6, drawn and phase, anisotropic mechanical props., compliance const. 2-17694  
steel, austenitic stainless, mech. props., influence of controlled hot transformation (German) 2-31718  
steel, C, multilayer material, impact strength and damping props. 2-17706  
steel, dual-phase, commercially produced, mech. props. and microstruct. 2-17707  
steel, mild, hot rolled sheet, MnS inclusion effect on mech. props. 2-51959  
steel, stainless, type 304, hot rolled, pitting corrosion and pickling treatment 2-47237  
steel, structural, hot-rolled, elec. and mag. props. after quenching and tempering 2-21560  
Fe, Armco, dynamic recrystn. during hot rolling (Russian) 2-36878  
Fe-Ni-C alloy, TEM study of strain rate influence and deform. mode on substruct. 2-5904  
W, hot rolled, struct. form., impurities role 2-41643  
 $\alpha$ -Zr, creep behaviour in vicinity of 0.5 T $_m$  2-17714

**hot shortness** see *brittleness*

**hot strength** see *tensile strength*

**hot working**

see also *hot rolling*

- deformation mechanism diagrams, coords. and modifications 2-41676  
dynamic restoration mechanisms in hot working 2-41641  
metals, coupled thermal flow, general formulation using finite elements 2-22249  
metals, fracture modes, creep and hot working 2-41731  
metals, hot working, friction, influence of scale thickness and comp. 2-31805  
metals, refractory, stability of substructurally strengthened states under thermal shock conditions (Russian) 2-36884  
recrystallisation, dynamic, during creep and hot working 2-41624  
steel, austenite recrystallisation, retardation by solutes 2-41625  
steel, eutectoid, pearlite spheroidisation kinetics during static annealing and hot deform. 2-36908  
steel, martensitic, austenite grain growth, during repeated austenitising, effect of hot working temp. (Polish) 2-2532  
steel, stainless, ferritic, oxide dispersion strengthened, prep. and mech. props. 2-41548  
steel wire reinforced Al, continuous casting, prod. and props. 2-46985  
Al, dynamic recrystallisation during hot deform. in torsion (Russian) 2-22233  
Al-Mg, hot forming, lubricants action 2-27292  
Al-Zn-Mg-Cu, alloy 7075-T651, effects of warm working 2-47064  
Cu-Sn (12 and 15 wt.%), deformability improvement by hot extrusion and boride grain refining additions (German) 2-13755  
Si, polycryst., deform. and recryst. 2-17709  
Ti-Al-Sn-Zr-Mo-Si, hot forging, deform. and unstable flow 2-17712  
Ti-Al-Sn-Zr-Mo-Si, hot torsion, deform. and unstable flow 2-17713

**household appliances** see *domestic appliances*

**Hubbard model**

- Anderson localization effects associated with disorder and electron-electron interactions 2-30834



**Hubbard model** continued

- band models with Coulomb interaction, cluster approx. and perturbation theory 2-40753
- charge ordering in extended Hubbard model, Caron-Pratt cluster approx. 2-45862
- density fluctuations, quantum renormalisation group approach 2-45797
- electron correlation in the small Hubbard model 2-31133
- electron-hole liquid, ground-state energy in strong mag. field 2-12979
- extended attractive Hubbard model, ground state phase diagram 2-35916
- FCC lattice, mag. ordering in Hubbard model with almost half-filled band 2-26576
- ferromagnet, surface spin waves, RPA calc. 2-46265
- finite temperature magnetism, single-site spin fluctuation theory 2-2050
- four-atom generalised Hubbard model, ground-state behaviour 2-21482
- Green function solution for two hybridised electronic bands 2-30788
- half filled one-dimens. model, renormalisation approach 2-31123
- half-filled chain, soliton-like doping 2-45796
- hopping model, kinetic coeff. matrix, effect of Hubbard-type repulsion 2-45957
- localised electron states, rel. to ferromagnetism theory 2-1865
- magnetic phases, self consistent binary alloy approx. 2-2049
- magnetic structure at ground state 2-8949
- negative U-extended model, ground state Hartree theory 2-8744
- one dimensional, exchange interaction, perturbation theory 2-30783
- one-band model, antiferromagnetism and electron correlation 2-21758
- one-dimensional chain, excited states with several pairs of complex wave-numbers 2-51071
- one-dimensional chain, half-filled, excited states with one pair of complex wavenumbers 2-51070
- particle-like excitations in systems described by the Hubbard model without the chirality condition 2-30782
- polarizing medium, impurity centres of negative Hubbard energy, electron pairing 2-40832
- quasi one-dimens., nucl. spin relax. 2-46416
- single-band Hubbard model, magnetism in strong correl. limit 2-21762
- standard basis operator Green's functions, self-consistent many-body theory, Hubbard model appl. 2-5560
- strongly correlated, mag. susceptibility 2-31132
- TCNQ salts, highly correlated 1:2 salts, fractionally charged solitons 2-45853
- transition metals, ferromagnetism, many-body effect 2-31130
- transition metals, magnetic props., method of localised fluctuations (*Russian*) 2-21759
- $\text{Co}_x\text{Ga}_{100-x}$ , electronic band struct. and localised states, rel. to elec. props. 2-40813
- Ni, Coulomb correlations in nickel within the alloy analogy of the Hubbard model 2-35928
- Ni, d-hole excess, screening by s and p-electrons 2-31129
- $\text{NiS}_{2-x}\text{Se}_x$ , phase diagram, doubly degenerate Hubbard model 2-41128
- Si surface, (111), correlation in surface state bands 2-26467

**Hubble model** *see cosmology***Huckel molecular orbital calculations** *see HMO calculations***hue** *see colour***Hugoniot diagrams** *see equations of state***human engineering** *see ergonomics***human factors**

- see also biocybernetics; ergonomics; man-machine systems*
- environmental crisis, quantification of geosphere interactions 2-9696
- French nuclear safety policy, human factors significance, lessons learned from Three Mile Island (*French*) 2-39198
- nuclear installations, incidents due to human errors, anal. method 2-15587
- nuclear power plant, human error understanding and aiding of human diagnostic behaviour 2-34194
- nuclear power plant safety, human factor considerations (*French*) 2-39175
- nuclear power plant safety parameter display systems evaluation 2-49170
- nuclear power plants, human factors engineering 2-11240
- PWR design for optimum safety incorporating the human factor (*French*) 2-39104
- Pb pollution, effects on human health, book 2-38376

**human-machine systems** *see man-machine systems***human relations** *see social and behavioural sciences***humidity**

- see also atmospheric humidity; hygrometers*
- balance sensitivity influence, double knife-edge type 2-42989
- optical structures prep. by RF biased RF sputtering, humidity sensitivity 2-39764
- plastics, humid ageing, long term 2-31716
- salt-water vapour interactions on Au surface, study using piezoelectric effect 2-36539

**humidity measurement**

- see also hygrometers*
- atmosphere boundary layer, ruby lidar meas. system 2-14622
- atmospheric boundary layer, lidar determine technique (*Russian*) 2-37935
- atmospheric humidity determin. by IR light propag. method 2-28244
- atmospheric humidity profile, description of microwave radiometry technique (*Chinese*) 2-18586
- humidity effects on optocouplers 2-28858
- microprocessor-based transducer characts. (*German*) 2-10807
- multifunctional ceramic sensors: humidity-gas sensor and temperature-humidity sensor 2-33557
- Piche evaporimeter as simple integrating mass transfer meter 2-32651
- psychrometer, without ventilation (*Japanese*) 2-28239
- psychrometric formula, functional form (*Japanese*) 2-10816
- relative humidity monitoring using microcomputer and thermistor transducers 2-23650
- sensor, using  $\text{Al}_2\text{O}_3$  dielectric (*German*) 2-19115
- solid-state dew-point sensors 2-15179
- transducer types, based on meas. solution resistance, dielectric or dew point changes (*Dutch*) 2-19094
- transducer using HF quartz piezoelements with sorption coating, non-linearity control 2-6859
- $\text{AlO}_3$  capacitor type humidity transducer, technical details and performance (*German*) 2-28857
- $\text{Ba}_0.5\text{Sr}_{0.5}\text{TiO}_3$  multifunctional ceramic temp.-humidity sensors 2-33557

**h.v. engineering** *see high-voltage engineering***hybrid computer methods** *see hybrid simulation***hybrid integrated circuits**

- see also flip-chip devices; microwave integrated circuits*
- 120 channel HV regulator, DATEP, for gamma detector photomultipliers 2-24525
- metallised ceramic polyimide 2-52098
- Tencor Instruments Sigmascan, surface and film thickness profiler for hybrid IC production 2-10785
- Ti-Cu film, elec. resist. and impedance 2-36160

**hybrid reactors**

- accelerator breeder reactors, present status (*Japanese*) 2-11206
- alternative fusion power concepts for fission-based energy economy 2-4119
- fast hybrid thermionic reactor, neutron anal. 2-11275
- fusion breeder reactor, status report 2-557
- fusion hybrid reactor for nuclear fission power station fuel prod. 2-11277
- fusion-fission hybrid blanket, potential for critical configuration achievement 2-4126
- fusion-fission hybrids, environmental aspects 2-11278
- fusion-fission systems, batch-fueled, inventory dynamics 2-15635
- gas-cooled fusion-fission hybrid reactor system 2-11276
- molten salt breeding blanket, inherent safety improvement 2-7327
- molten salt hybrid, a short cut to fusion economy 2-7367
- parent reactor for fusion and fission satellites, energetics 2-7369
- secondary neutron spectra perturbations, sensitivity of reactor characteristics 2-11163
- syntactic energy systems, sensitivity to  $^3\text{H}$  prod. data 2-7370
- synthetic fusion-fission-spallation systems 2-19770
- $\text{Bi}(n,n)$ , total and scatt. cross sections for hybrid and electro-nuclear breeding appl. 2-417
- $\text{Th}(n,X)$ , nuclear data uncertainties influence on fusion-fission blanket nucleonics 2-418

**hybrid simulation**

- solar water heating system, hybrid model 2-52393

**hydrated electrons** *see solvated electrons***hydraulic amplifiers**

- No entries

**hydraulic control equipment**

- see also hydraulic amplifiers*
- electron beam exposure system, positioning stage driven by hydraulic cylinder 2-28930

**hydraulic systems**

- LF fluidborne noise mufflers, computer-aided design and evaluation 2-14161
- servomechanism, step response, oil compressibility effects 2-40456
- servomechanism, step response without inertia loading, oil compressibility effects 2-40457
- hydraulic turbines
- flowmeter with turbine transducers, well-type 2-25466
- reversible multistage pump-turbine bladed diffuser conveyor flow behaviour anal. (*Italian*) 2-35227
- tidal power, turbine caissons for the Severn barrage 2-37161

**hydroacoustics** *see underwater sound***hydrodynamics**

- see also jets; liquid waves; viscosity of liquids*
- acoustic radiation force, application in ultrasonic power measurements 2-7914
- Arctic Ocean, shelf water lateral advection rel. to maintenance of cold upper halocline 2-6370
- astronomical sources, collimation of particle beams from thick accretion discs 2-14765
- asymptotic solution to the problem of drag of a fluid by a moving plate 2-20714
- N Atlantic Ocean, features of water circulation 2-23019
- axisymmetric body impact against compressible liq. surface (*Ukrainian*) 2-23420
- bottom convection flow, two and three-core struct. generation and degeneration 2-32534
- boundary layer on continuous axisymmetric elastic surface, hydrodynamic characts. 2-30096
- breakaway flows, convergence and regularisation of discrete eddy method (*Ukrainian*) 2-1233
- 3C 449 radiogalaxy, jets fluid dynamical twisting 2-23343
- canonical transformation relating the Lagrangian and Eulerian description of ideal hydrodynamics 2-30090
- Caribbean Sea, relation between distrib. of optical props. and water dynamics (*Russian*) 2-10073
- cavitating liquid models in nonsteady hydroelastic plasticity 2-30194
- Celtic Sea, tidal amphidrome movement rel. to anomalously weak Spring tidal currents 2-10046
- convection to turbulence transition thermal fluctuation effect 2-30136
- Czochralski crystal growth, hydrodynamics, heat and mass transfer 2-35419
- Dedekind and Jacobi ellipsoids, inhomogeneous analogues 2-28328
- 3,3'-diethyloxadicarbocyanine iodide rot. reorientation, viscosity and temp. effects, anisotropic absorpt. study 2-20991
- diffraction problems in unbounded domains, finite element soln. 2-25346
- discrete hydrodynamics, critical fixed points 2-3382
- disordered solid, entropy at low temp., hydrodynamic theory 2-30632
- drag on sphere as function of density, appl. to Peralta and Zwanig method 2-20628
- egg albumen aq. soln., hydrodynamic resist. in turbulent flow 2-2890
- elastic wedge penetration into incompressible liquid 2-4779
- Enskog kinetic theory and hydrodynamic transport coeff. 2-25479
- equilibrium of rotating gaseous disc of finite thickness, anal. 2-28339
- Eulerian hydrodynamic eqns., convective terms, nonlinear filtering soln. method 2-39906
- flame propagation hydrodynamics and principles in a planar slit in condensed matter 2-52209
- flexible supercavitating hydrofoils, hydroelastic characts., 2-dimens. theory 2-39873
- flexible supercavitating hydrofoils, hydroelastic instabilities, 2-dimens. theory 2-39874
- fluid boundary problems, discrete vortices method 2-1162
- fluid-structure interaction in three-dimensional space, finite element formulation 2-19749
- forces and moments on moving ship in shallow water studied using uniform-slender-body theory 2-44697



**hydrodynamics continued**

- forces produced when blunt bodies strike surface of compressible fluid 2-20793  
galactic disc, hydrodynamic interaction with halo rel. to origin of warping gaseous discs. 2-33147  
galaxies, barred, effect of resonances near corotation 2-18794  
galaxies, equilib. and bifurcation of rotating stellar systems 2-48321  
galaxies, gas flows fuelled by stellar mass loss 2-33151  
galaxies gaseous protoclusters, stability of contracting pancakes 2-14928  
glass, molten, flow modelling methods 2-12148  
glass melting processes, intensification by thermohydrodynamic methods 2-25235  
gravitating disc, nonlinear instability 2-28570  
gravitational scale covariant kinetic theory for particles and photons 2-10305  
gravitational scale covariant theory appl. to stellar structure and evolution 2-10306  
Gulf Stream, global circulation rel. to ocean dynamic topography vars. west of Mid-Atlantic Ridge (*French*) 2-6368  
hydraulic resonance in hydropower plants with surge tanks, computing technique 2-52289  
hydrodynamical model of the Lancaster flexible bag wave energy device 2-37159  
ice-covered Arctic Ocean,  $M_2$  tide study 2-47901  
ideal nonuniform liquid, stationary flow stability 2-20643  
incompressible Navier-Stokes fluid, hydrodynamic stability, bifurcation 2-25356  
N Indian Ocean, currents during southwest monsoon season from satellite derived sea surface temp. distrib. 2-3026  
intergalactic gas in clusters of galaxies, problems with dynamical evolution 2-6668  
interstellar adiabatic rotating clouds, collapse and fragmentation 2-28529  
interstellar cloud collapse, theory for rotating non-axisymmetric isothermal cloud 2-14847  
interstellar clouds, gravitationally driven instabilities in shock compressed gas layers 2-48299  
E Irish Sea, intercomparison of AMF VACM and Aanderaa current meters moored in fast tidal currents 2-6444  
kinetic corrections to lineshape predictions, approx. methods comparison 2-3533  
liquid crystals, hydrodynamics, nonlinear dissipative effects 2-50537  
liquid ohms, unit of flow resistance 2-35105  
lubrication problems, effect of rotation 2-8099  
Maclaurin spheroids, nonlinear pulsation modes of oscillation 2-28337  
marine currents, assoc. geomag. field disturbances 2-6311  
moderately dense gas mixtures, light scatt. in hydrodynamic regime 2-35268  
molecular rotational relaxation in liqs., mol. quasi-hydrodynamic free space model 2-35361  
n-dimensional hypersphere translational and rot. motions through viscous fluid at small Reynolds numbers 2-16326  
nematic liquid cryst., biaxial, hydrodynamic eqns., free energy density, sound wave attenuation 2-50535  
neutron stars in X-ray binaries, thick H-rich envelopes thermonuclear runaways 2-53310  
non-linear free-surface flows about blunt bodies 2-30154  
nonlinear hydrodynamic fluctuations around equilibrium 2-48509  
nucleosomes hydrodynamical props. 2-37485  
ocean, adaptation of axisymmetric disturbances in stratified ocean (*Russian*) 2-10067  
ocean, dynamics of turbulence rough surface layer (*Russian*) 2-10065  
ocean, non-stationary quasi-plane weakly nonlinear long waves in stratified currents (*Russian*) 2-10068  
ocean, water movements and oceanic fronts around southern New Zealand 2-6371  
ocean hydrodynamics, numerical simulation using splitting procedures 2-47900  
Pacific Ocean, simulation of seasonal variability of equatorial currents (*Russian*) 2-10069  
physical interpretation and solvability (*Russian*) 2-23447  
polyamide benzimidazole in DMMA and  $H_2SO_4$ , hydrodynamic props. and equilib. rigidity (*Russian*) 2-21346  
protostellar cloud collapse, re-examination of fragmentation in rotating protostar 2-14848  
quantum liquid, hydrodynamic eqns. in presence of continuously distributed singular solitons 2-21415  
quasigeostrophic flows, two dimens., incompressible hydrodynamics, var. principle 2-10617  
raining packed-bed gas-solid heat exchanger hydrodynamics 2-4885  
rubber surface squeeze film 2-25329  
shock wave emergence at gas boundary, self-similar soln. 2-6535  
shock waves local props. determ. in mol. dynamics simulation 2-39948  
single-phase medium flow in narrow channels with injection, hydrodynamical study 2-1265  
solar atmosphere, numerical hydrodynamics of jet phenomena rel. to spicules 2-48214  
solar chromosphere, hydrodynamic response to elementary flare burst 2-6582  
solar flares, hydrodynamic model of coronal loops stability and uniqueness 2-53237  
solar transition region, steady flows obs. with Solar Maximum Mission 2-32972  
solar wind flow structures inverse mapping, numerical models appl. 2-18671  
solar wind two fluid equations, adiabatic and conduction dominated solns. 2-23202  
spherical geometry, shallow water eqns., hydrodynamic soln. 2-15036  
square and hexagonal cylinder vibr. in liquid 2-20695  
star, rotating core collapse, dynamical evolution and two dimens. hydrodynamic code 2-32991  
star interiors, fluid shear motions effect on diffusion and heat conductivity 2-10390  
stars, instability of a turning point, onset criterion 2-10391  
steel, melt solidification under layer of heat insulation (*Russian*) 2-31690  
stellar convection theory, dynamical coupling of two convection zones in A-type stars 2-10404  
stellar core graitational collapse, infall epoch 2-10392  
stellar degenerate cores, hydrodynamic calc. of struct. of C burning deflagration front (*Russian*) 2-53252  
stochastic methods appl. 2-23845

**hydrodynamics continued**

- Stokes flow, axisymmetric, due to stokeslet near hole in plane wall 2-39955  
stratified liquid, radiation of internal waves by rapidly moving sources 2-20725  
Sun, global hydrodynamics 2-10386  
superfluid  $^3He$  neutron star matter, broken symm. and hydrodynamics 2-33061  
supernova remnant hydrodynamical evolution boundary conditions arbitrary form 2-10499  
supernova remnants in pre-blast wave phase 2-10495  
supernovae from degenerate core stars, explosion hydrodynamic behaviour 2-6607  
swarms, short-time development, hydrodynamic regime, charged articles in neutral gases 2-28801  
thin rectangular wing, hydrodynamic coeff., transverse slit influence 2-20794  
tornado hydrodynamics and thermodynamics 2-14547  
transverse oscillations of a cylindrical shell with compartments partially filled with fluid 2-25293  
two layer viscous fluid, small scale front dynamics, time depend. model (*Russian*) 2-18444  
two phase fluid, one-component, microscopic theory of interfacial hydrodynamics 2-25418  
unsteady flow around oscil. sphere with periodic oscil. 2-44695  
vapour-liquid flows, bubble interaction on hydrodynamics, heat and mass transfer 2-4877  
vessel wall effect on floating bodies stability 2-38442  
viscoelastic systems, hydrodynamics and VH light scatt., statistical mech. approach 2-30081  
viscous incompressible fluid in planar channel, hydrodynamic and heat exchange calc., Navier-Stokes eqn. 2-4814  
waterspout hydrodynamics and thermodynamics 2-14547  
wave diffraction and radiation, two-dimens. problems, comparison of localised finite element methods 2-57  
wave energy device, some hydrodynamic characteristics of the Bristol Cylinder 2-37165  
X-ray burster, neutron star magnetospheric gate model with impacting gas cloud, simulation 2-53390  
Be, shock wave profile, elastic-viscoplastic constitutive model 2-1558  
He-Xe( $H_2$ )( $D_2$ ), moderately dense gas mixtures, light scatt. in hydrodynamic regime 2-35268  
 $^3He$ , superfluid, hydrodynamic flow, Rayleigh disc meas. 2-40620  
 $^3He$ , superfluid, nonlinear reversible hydrodynamics 2-45664  
 $^3He$ , superfluid A, phase, linearised hydrodynamics 2-50951  
 $^3He$ , superfluid A-phase, hydrodynamic theory of sine-Gordon soliton lattice and soliton propag. 2-21417  
 $^3He$ - $^4He$ , superfluid, shear viscosity and phonon gas flow kinetic processes 2-35763  
 $^3He$ -A, hydrodynamic order parameter variables, static susceptibilities 2-35810  
 $^3He$ -A, hydrodynamic order-parameter, static susceptibility 2-45662  
 $^3He$ -A, Mermin-Ho texture, hydrodynamic response to rotational perturbation 2-30694  
 $^3He$ -A, viscous penetration depth 2-35812  
 $^3He$ -A<sub>1</sub>, spin-temperature wave damping 2-35815  
 $^3He$ -B, superfluid compressibility 2-35813  
 $^3He$ -B, vibrating wire expts. to 0.6 mK 2-35799  
 $^4He$ , superfluid, flow properties in narrow tubes, heat-current effects 2-26164  
 $^4He$ , superfluid, hydrodynamic flow, Rayleigh disc meas. 2-40620  
 $^4He$ , superfluid, pair fluctuations and superfluid mass density, sum rule 2-35793  
 $^4He$ , superfluid, quantum hydrodynamics, fluctuational corrections 2-40624  
 $^4He$ , superfluid, shear viscosity and phonon gas flow kinetic processes 2-35763  
 $^4He$ , superfluid, slow mode non-Doppler shift in superleak 2-30680  
 $^4He$ , superfluid, viscosity, quartz cryst. resonator study 2-40621  
U, shock wave profile, elastic-viscoplastic constitutive model 2-1558

**hydroelectric power stations**

- see also dams; hydraulic turbines; pumped-storage power stations; tidal power stations; water supply; wave power generation  
analysis of a small scale rural hydropower unit 2-6121  
development of low power hydroelectric sites 2-6118  
environmental effects assessment 2-42053  
existing water retaining dams as giant energy reserves (*German*) 2-17988  
future of hydropower in the United States 2-6116  
hydraulic resonance in hydropower plants with surge tanks, computing technique 2-52289  
hydropower planning in USA, ecological aspects 2-27742  
low head hydroelectric power generating systems, cost effectiveness 2-6120  
Nepal energy planning 2-32021  
small hydro engineering technology, 'current status and future developments, USA 2-6117  
small hydropower resources, environmental and ecological issues 2-2768  
small scale, for developing countries 2-17989  
small scale hydroelectric power development, institutional and regulatory relationships 2-6119  
South America, utilisation of water-power (*German*) 2-17987  
Thailand's national energy plan 2-32002  
village microhydro development trends 2-17990  
 $H_2$  storage, biomass, solar energy system for agriculture, drinking water and hydroelectric power 2-27736

**hydrogen**

- see also nuclei with .....  
see also deuterium; hydrogen ions; hydrogen neutral atoms; hydrogen neutral molecules; protons; solid hydrogen; tritium  
absorbed on  $C_8K$  and  $C_{24}K$  intercalation compounds, CESR spectra 2-46383  
absorption, by amorphous alloys, review (*Japanese*) 2-26354  
absorption by  $HoFe_{23}$  and  $ErFe_{23}$ , effect on struct. and mag. props. 2-2063  
absorption by  $LaCo_5$ , thermodynamic and kinetic characts., diffusion coeff. determ. 2-41926  
absorption by  $Y(Ni,Al)_5$ ,  $La(Ni,Al)_5$ ,  $La(Ni,Cu)_5$ , and  $Th(Ni,Al)_5$ , electron conc. effect 2-35697  
absorption in Al-Ca, thermodynamics,  $H_2$  titration method 2-8706



**hydrogen continued**

absorption in C steel and Armco Fe in acid pickling, inhibitors influence 2-27349  
 absorption in FeTi, phase comp. and struct., X-ray diffr. study 2-45114  
 absorption on LaNi<sub>5</sub> films, effect on elec. resist. 2-26520  
 absorption-desorption characts. on Ti-Co-Fe 2-8703  
 absorption-desorption on LaNi<sub>5</sub>, thermodynamics, differential heat flow calorimetry 2-8704  
 absorption-desorption on LaNi<sub>5</sub>, thermodynamics for single-phase regions, differential heat flow calorimetry 2-8705  
 adsorbed on Ag, inelastic electron scatt. 2-2389  
 adsorbed on Cu (100), rot. transitions, EELS study 2-46843  
 adsorbed on W(100), EELS, impact scatt. calc. 2-2388  
 adsorbed on W (001), optical phonons, book contrib. 2-40665  
 adsorbed on W (110) plane, field emission current fluctuation method obs., surface diffusion and phase transition 2-1769  
 adsorption and dissolution in Ti, digital simulation 2-50866  
 adsorption isotherms and heats of adsorption on zeolite 13X and charcoal 2-35889  
 adsorption of H<sub>2</sub> on Pt clusters, EHMO calcs. 2-17916  
 adsorption on CdS thin films, effects on elec. props. 2-30986  
 adsorption on Fe, K preadsorpt. effect 2-26224  
 adsorption on LaNi<sub>5</sub>, electrochem. oxidation kinetics 2-30754  
 adsorption on LiF, mol. parametrised CNDO and ab initio calcs. 2-16944  
 adsorption on Ni and Pd, ordered struct. form., role of H-H interactions 2-1744  
 adsorption on Pt, electron stimulated and thermal desorption spectra study 2-26223  
 adsorption on Pt, visible optical reflectance study 2-40669  
 adsorption on W (100), surface reconstruction, surface core level spectroscopy study 2-5798  
 adsorption-desorption kinetics on Nb(110) 2-35893  
 alloys, pseudobinary AB<sub>2</sub>-type, H<sub>2</sub> absorpt. 2-41929  
 atmosphere midlatitude vertical profile (obs. made in 1977, 8, 9) 2-10131  
 binary star white dwarf accreting interstellar matter, H burning 2-33069  
 bubble chambers, narrow bubble track formation by laser beam 2-15667  
 C Si:H, amorphous, MOS solar cell, fundamental tunnelling process 2-46139  
 C Si:H, amorphous, photoluminesc. and photocond., fatigue and Staebler-Wronski effects, irreversibility 2-46731  
 cathodic charging of Fe, Rayleigh wave attenuation study 2-40662  
 CCl Si:H, amorphous, struct. and electronic states, review 2-25744  
 chemisorbed on Ni, vibr. bands, Raman spectra study 2-29606  
 chemisorbed on W(100), IR study by surface EM wave spectroscopy 2-26220  
 chemisorption on Ti, embedding theory and small cluster calc. 2-45729  
 chemisorption on transition metals, embedded cluster model 2-12915  
 chemisorption on W (110), angle-resolved photoemission study 2-2417  
 chemisorption on W (001) and Mo (001) surfaces, substrate rearrangement and 2D ordering 2-1755  
 chemisorption on ZnO polar surface, electronic struct., DV-X $\alpha$  cluster calc. 2-8843  
 chemisorption reactivity on Si(111), thermally annealed, defect model 2-1986  
 coadsorption with CO on small Ni particles, Raman scatt. enhancement 2-5712  
 coadsorption with N<sub>2</sub> on Ir (110), thermal desorption, XPS, UPS, AES, and LEED meas. 2-12914  
 coked catalyst pellets, H content microbeam anal. 2-47396  
 compression ignition engines, H<sub>2</sub> fueled, experimental study 2-47530  
 creep rupture testing in H<sub>2</sub> at high pressures and temps. 2-43007  
 crystalline atomic phase, eqn. of state 2-1705  
 desorption from Pt surface, He beam diffr. Debye-Waller effect, surface vibr. 2-51001  
 desorption from transition metal surfaces, ang. distrib. and desorption intensity (*Japanese*) 2-1737  
 desorption induced, from stainless steel, influence of O<sub>2</sub> and water vapour 2-8710  
 desorption isotherms from TbCo<sub>3</sub> and YCo<sub>3</sub> hydrides 2-26060  
 diamond powders, H chemisorption, effect of preceding heat treatment 2-5298  
 diffusion in hydride phase of Ti and Hf 2-16900  
 diffusion in Pd<sub>80</sub>Si<sub>20</sub> metallic glass, Gorský relaxation 2-5278  
 diffusion in PTFE 2-30656  
 diffusion in transition metals, activation energy 2-12810  
 diffusivity in amorphous and crystallised Pd-Si alloys 2-12856  
 dilute solution in Pd, thermodynamic props., 500 to 909K 2-40554  
 dilute solutions in Mn thermodynamics, 555 to 700K 2-1637  
 dissolution in Ni-Zr and Pd-Zr metallic glasses, internal friction peaks 2-47086  
 dissolved in aqueous cooling systems, in situ Pd resistance probe meas. 2-22509  
 electrochemical H-Cl energy storage system operating parameter optimisation for minimum capital investment 2-22461  
 electron cyclotron resonance plasma discharge cleaning in JFT-2 Tokamak (*Japanese*) 2-30342  
 equilibrium isotopes, triple point temp. 2-35650  
 field adsorption on Rh, surface distrib., imaging atom-probe study 2-8711  
 gas, effect on PbTe epitaxial film, elec. props. 2-8900  
 gas, first order stimulated Stokes emission generation using XeCl laser 2-11765  
 gas, thermal cond. at high press. and temp. 2-40024  
 gas, thermal cond. at high temps., calcs. 2-40023  
 gas in various solvents, Gibbs free energies of solute solvent interactions 2-41920  
 generator end bells made from non-magnetic steel, resistance to H embrittlement (*German*) 2-5976  
 glow discharge, anode transition 2-12412  
 glow discharge, Langmuir probe, cleaning of vacuum chambers 2-50475  
 high frequency capacitive discharges, relationship between maximum plasma temp. and current 2-40199  
 ingress and egress during electrolytic charging of stainless alloys, surface wave study 2-45701  
 interaction, with NiO (001) surface, SIMS investigation 2-14004  
 interaction with Pt(111) studied by He beam diffr. 2-41941  
 internal combustion engine backfire control 2-9614  
 interstellar gas L $\alpha$  radiation, effect of neutral component of solar wind (*Russian*) 2-53041

**hydrogen continued**

ion microprobe mass anal., ultrahigh vacuum, appl. to H detection 2-15263  
 lattice, metal-insulator and mag. transitions, self consistent band struct. theory 2-30802  
 levitated octupole, cross field diffusion and fluctuation spectra 2-8347  
 liquid, excess electrons, photoinjection and mobility 2-1976  
 liquid metals, state of H 2-30606  
 liquid vertical flow in rough tubes, heat transfer 2-30124  
 Lyman- $\beta$  lamp with cooled LiF window 2-4569  
 maser, CSIRO atomic clock development 2-34709  
 metal:H(D), saturation and isotope mixing during low temp. implantations 2-50671  
 metal-H systems, isotope effect on electronic struct. of H, review 2-41224  
 metallisation as heat output mechanism for Saturn 2-23253  
 metals:H, neutron scatt. from impurity, transitions to excited tunnel-split states 2-30368  
 microtor/microtor Tokamak, mag. excitation of electrostatic slow modes at ICRF 2-12341  
 MOS gas detectors using transition metal-gate 2-33508  
 neutron total cross-sections from 0.5 to 60 MeV 2-4123  
 Norwegian Sea, dissolved H<sub>2</sub>, mesoscale surface variability and deep water distrib. 2-37890  
 ortho-H<sub>2</sub> quantum liquid crystals 2-16924  
 passivation of Ge:Cu defect levels, DLTS study 2-51108  
 permeation into Al-Mg alloy 2-50933  
 permeation through Ni membrane type detector, deuterium behavior in Na loop 2-484  
 physisorption on Al and Al<sub>2</sub>O<sub>3</sub>, EELS study 2-27039  
 plasma, high density, screening effect of degenerate electron background, thermodynamic props. 2-25495  
 plasma, high density, screening effect of degenerate electron background, elec. resist. 2-25498  
 plasma, laser radiation, stimulated Brillouin scatt. f number, target material and impurity effects 2-40120  
 plasma, mag. field determ. by reson. Faraday rotation 2-30338  
 plasma, recombining plasma, population inversion between ground and excited states 2-30281  
 plasma column, stimulated Brillouin backscatter level obs. 2-25558  
 positive column, of glow discharge, forward ionisation waves externally excited 2-8382  
 positive column of glow discharge in flowing H props. 2-16529  
 preferential adsorption on Ir(332) rel. to intrinsic step related surface states 2-13158  
 quartz:H<sup>+</sup>, electronic method for detection of H conc. 2-12629  
 Raman scattered Stokes pulses, autosynchronized pulse generation at multiple wavelengths 2-24993  
 RF-glow discharge cleaning and conditioning of plasma device walls 2-8387  
 semiconductor thin films, H profiling, <sup>1</sup>H(p,p) appl. 2-45232  
 semiconductors, amorphous hydrogenated film, optical recording 2-49681  
 a-Si:H photovoltaic cells conversion efficiency limiting parameters anal. 2-27639  
 solubility in Fe ternary and multicomponent melts, alloying element effect on temp. and conc. depend. (*German*) 2-27138  
 solubility in metals, interstitial impurity atoms equilibrium positions calc. 2-1474  
 sorption into metals during charging, SAW technique 2-45702  
 stars, luminous, IR H lines form. in stellar winds, IR source implications 2-10393  
 steel, stainless, exposed to liq. Li, trapping and radiation-induced detrapping of H 2-45272  
 thermal desorption spectra from bulk ZrV<sub>2</sub>H<sub>2</sub> 2-16945  
 transport and reactivity in glass-ceramic CGW-9658 2-22488  
 ultracold neutron storage, H<sub>2</sub> surface content reduction 2-19811  
 Venus, upper atmosphere hot H atoms in exosphere of ionospheric origin 2-23244  
 X-ray coherent diffraction expts., numerical appl. of quantum model 2-44954  
 As-S:H, amorphous plasma deposited coating, optical props. and EPR 2-40734  
 As-Se:H, amorphous plasma deposited coating, optical props. and EPR 2-40734  
 B:H, amorphous plasma deposited film, PMR 2-46398  
 B:H, mech. props., impurity effects 2-41723  
 BaTiO<sub>3</sub>:H, impurity IR-absorpt. study 2-46639  
 C:H, amorphous, elec. and optical props. 2-40912  
 C:H, amorphous plasma deposited film, PMR 2-46398  
 C:H(B), amorphous films, thermopower, elec. cond. 2-46178  
 C-H spin-spin coupling const., review 2-736  
 CO+H<sub>2</sub>, interaction on Ni monocryst. surfaces (*French*) 2-41927  
 CaO:H<sup>+</sup>, vibr. due to H<sup>+</sup> ion, IR absorpt. spectra 2-46606  
 Co<sub>7</sub>Si<sub>13</sub>B<sub>10</sub>P<sub>10</sub>H, H effect on coercive field 2-46348  
 Fe:H, dislocation solute atmospheres, influence of thermodynamic soln. props. 2-1511  
 Fe-H, thermocycled, anomalous spontaneous plastic deformation (*Ukrainian*) 2-13773  
 Fe-Ni:H, Invar alloys, Mossbauer spectroscopy study 2-9064  
 Fe-Ni-C-H alloy,  $\gamma$ -phase, internal friction and cathodic H charging 2-47076  
 Fe-Ti-H system, theory of H absorpt., mean-field approx. calcs. 2-5303  
 GaAs:H, amorphous, RF sputtering and optical props., H<sub>2</sub> partial press. effect 2-40730  
 Ge:H, amorphous film, interaction of US phonons with defects 2-26011  
 Ge:H, P, amorphous, US phonon interaction with donor impurities 2-45482  
 Ge:O, amorphous, press. induced metal-semiconductor transitions 2-40790  
 H/D isotopic comp. in high-freq. discharge, spectrosc. determ. 2-50470  
 H-D isotope exchange in ion-neutral reactions, laboratory studies and interstellar implications 2-53350  
 H-He mixture, fully ionised, strongly coupled, electronic transport 2-8272  
 H-O-Ar mixtures, transport props. at high temps. 2-8256  
 H+D, excitation transfer rate 2-44825  
 H<sub>2</sub> electron-beam-controlled discharge laser, kinetics and energy characts. 2-34730  
 o-H<sub>2</sub> quantum liquid cryst. adsorbed on graphite 2-45668  
 H<sub>2</sub> release by Clostridium butyricum, reversible effect of light 2-14287



## hydrogen continued

- H<sub>2</sub>-Ar-N<sub>2</sub>, combined discharges, suppression of spiral instability at atmospheric press. in longitudinal mag. field 2-40198  
 H<sub>2</sub>-HCl gasdynamic laser characts. 2-34734  
 H<sub>2</sub>-He, moderately dense gas mixtures, light scatt. in hydrodynamic regime 2-35268  
 H<sub>2</sub>-N<sub>2</sub> binary gas mixtures, thermal cond. 2-50357  
 H<sub>2</sub>-O<sub>2</sub> flame temperature distrib. meas. by moiré deflectometry 2-33602  
 H<sub>2</sub>-O<sub>2</sub> fuel cells, review of development (*Czech*) 2-18047  
 H<sub>2</sub>-SF<sub>6</sub>, interdiffusion coeffs., temp. effects 2-20805  
 H<sub>2</sub>-SF<sub>6</sub> mixtures, HF<sup>+</sup> fluoresc. at 2.8 μm induced by pulsed CO<sub>2</sub> laser radiation 2-20119  
 H<sub>2</sub>+CO<sub>2</sub>, interaction on supported Rh surface, IR obs. 2-41931  
 H<sub>2</sub>+He<sup>+</sup>(N<sup>+</sup>), stopping powers at 40-200 keV 2-34536  
 3H<sub>2</sub>+N<sub>2</sub> → 2NH<sub>3</sub>, catalysis on Fe surface, AES and thermal desorp. study 2-41922  
 H<sub>0.067</sub>MoS<sub>2</sub>, vibr. spectrum of hydrogen 2-8583  
<sup>3</sup>H, dual label determ. by liq. scintillation counting 2-43661  
 H $\alpha$  emission from T Tauri stars, correl. with polarisation 2-33008  
 He-H<sub>2</sub> mixture in liq. gas phase equil. region, enthalpy calc. and Joule-Thomson coeff. 2-20806  
 KBr:H, charged substitutional and interstitial impurities, crystal electrostatic energy, Ewald method 2-16618  
 KCl:H, charged substitutional and interstitial impurities, crystal electrostatic energy, Ewald method 2-16618  
 KIO<sub>3</sub>:H, NQR study of impurity effects on phase transition (*Russian*) 2-21914  
 LaNi<sub>5</sub>-H, plateau press. and hysteresis, annealing effect 2-41928  
 LaNi<sub>4.9</sub>Al<sub>0.1</sub>-H<sub>2</sub> system, form. and decomp. kinetics, press. depend. 2-26059  
 Li<sub>3</sub>N:H, ionic conductivity, complex least squares fitting, admittance data 2-50919  
 LiNbO<sub>3</sub>:H<sup>+</sup>, propag. of SAW during implantation 2-35875  
 Lu-H, solid solution, anelastic effects 2-45365  
 Mg:H, H<sub>2</sub> dissolution enthalpy, high press. anal. 2-45586  
 MgO:H<sup>+</sup>, vibr. due to H<sup>+</sup> ion, IR absorpt. spectra 2-46606  
 NH<sub>4</sub>HSeO<sub>4</sub>, partly deuterated, ferroelectric props. 2-31425  
 Nb:H, localised vibr. spectra of light interstitials 2-26010  
 Nb:H, ultrasonic attenuation and velocity study of  $\alpha$ - $\alpha'$  phases 2-45559  
 Nb:N,H, influence of N impurities on diffusion coeff. 2-45626  
 Nb-H solution, sound attenuation due to density wave decay (*Russian*) 2-12691  
 Nb-Ti-H, internal friction study 2-45364  
 Nb-Ti-H, mechanical relax. of substitutional-interstitial atom complexes 2-45151  
 Nb-Ti-H system, relax. peaks at liq. He temps. due to H motion in trap sites 2-22254  
 Ni:H, cold-worked, internal friction peaks 2-8568  
 Ni-H<sub>2</sub> battery for spacecraft, real life test performance 2-27599  
 Ni-H<sub>2</sub> battery system, historical overview 2-27602  
 Ni-H<sub>2</sub> prototype cell evaluation tests 2-27601  
 Ni-Hz battery for NTS-2 spacecraft, update 2-27600  
 NiH<sub>x</sub>, ion implanted, resistivity annealing and TDPAC study 2-46180  
 Pb:H, ion implanted, supercond. transition temp. 2-31000  
 Pb:H, localised modes, tunnelling study 2-35625  
 Pd-H system, theory of H absorpt., mean-field approx. calcs. 2-5303  
 PtH<sub>x</sub>, ion implanted, search for superconductivity 2-36202  
 Si amorphous p-i-n junction, drift time photovoltaic effect 2-46107  
 Si:B, H amorphous CVD film, hydrogenation effect, elec. cond. and ESR meas. 2-40906  
 Si:F, H, amorphous, annealing effects, NMR and ESR studies 2-41214  
 Si:F, H, amorphous, vibr. excitations 2-45495  
 Si:F, H amorphous CVD film, hydrogenation effect, elec. cond. and ESR meas. 2-40906  
 Si:F,H,P films, optical study of intermediate order, elec. cond. 2-46797  
 a-Si:F:H, electrical, spectral and doping properties 2-45790  
 a-Si:H, a-Si:F:H, Schottky-barrier diodes, elec. props. using new techniques 2-46104  
 Si:H, amorphous, <sup>1</sup>H NMR spin-lattice relaxation time, temp. and freq. depend. 2-46412  
 Si:H, amorphous, <sup>29</sup>Si NMR 2-46402  
 Si:H, amorphous, AC field and freq. depend. of elec. cond. 2-40901  
 Si:H, amorphous, absorpt. and excitation spectra 2-22053  
 Si:H, amorphous, annealing effects, NMR and ESR studies 2-41214  
 Si:H, amorphous, bonding struct. and H distrib. IR absorpt. and NMR meas. 2-40276  
 Si:H, amorphous, chem. bonding environment of Si and dopant 2-40275  
 Si:H, amorphous, chem. bonding and H diffusion, <sup>1</sup>H NMR study, 20 to 530°C 2-41221  
 Si:H, amorphous, dangling bond state within mobility gap, identification by ESR spectroscopy 2-41196  
 Si:H, amorphous, density of states, dangling bond state, tight binding calc. 2-40750  
 Si:H, amorphous, disorder and optical absorption edge 2-13440  
 Si:H, amorphous, dispersive electronic transport, multiple trapping, computer simulation 2-51198  
 Si:H, amorphous, dopant level depths 2-40845  
 Si:H, amorphous, effect of annealing on optical gap 2-2211  
 Si:H, amorphous, electroabsorpt., polarised light anisotropy 2-46544  
 Si:H, amorphous, electron bombardment induced conductivity 2-13062  
 Si:H, amorphous, electron irradi. effect on dark and photocond. and defect removal 2-45279  
 Si:H, amorphous, electron irradi., effect on photoconductivity 2-51233  
 Si:H, amorphous, electronic struct. of model defect 2-40820  
 Si:H, amorphous, electronic struct., electrorefl. study 2-41329  
 Si:H, amorphous, glow discharge deposited, photoinduced absorpt., time resolved spectra 2-46801  
 Si:H, amorphous, H<sub>2</sub> exodiffusion, comparison with elec. cond. meas. 2-45623  
 Si:H, amorphous, Hall mobility in presence of long range pot. fluctuations 2-1930  
 Si:H, amorphous, homogenous CVD 2-41526  
 Si:H, amorphous, hot carrier relax., optical picosecond study 2-46529  
 Si:H, amorphous, ion microprobe mass anal., ultrahigh vacuum, appl. to H detection 2-15263  
 Si:H, amorphous, laser beam defect creation, luminesc. and ODMR study 2-35533  
 Si:H, amorphous, light induced changes, computer modelling of admittance and DLTS 2-36090  
 Si:H, amorphous, light induced changes, field effect meas. 2-45813  
 Si:H, amorphous, luminesc. and recomb., review 2-5733

## hydrogen continued

- Si:H, amorphous, luminescence props. 2-46730  
 Si:H, amorphous, MIS solar cell, interface state of oxidation effects 2-47487  
 Si:H, amorphous, midgap density of states, space charge limited cond. study 2-45897  
 Si:H, amorphous, modulated photocurrent meas. 2-1946  
 Si:H, amorphous, molecular H<sub>2</sub> as proton spin-lattice relaxation centres 2-2157  
 Si:H, amorphous, multiphase description, photoluminesc., TSC, optical absorpt. and elec. cond. meas. 2-41412  
 Si:H, amorphous, non-dispersive and dispersive transport 2-46019  
 Si:H, amorphous, optically detected mag. resonance study of recombination processes 2-21919  
 Si:H, amorphous, p-i-n junctions, photoacoustic emission 2-46113  
 Si:H, amorphous, phonon densities of states and eigenvectors 2-35627  
 Si:H, amorphous, photoconductivity, spectral and temp. depend. 2-1958  
 Si:H, amorphous, photoconductivity and negatively correlated defect effects 2-40962  
 Si:H, amorphous, photoelectrochem. cell, polypyrrole coated photoanodes, cell stability 2-52371  
 Si:H, amorphous, photoluminescence, no-Stokes shift model 2-36683  
 Si:H, amorphous, plasma deposited, photocond., temp. depend. 2-1943  
 Si:H, amorphous, plasma deposition, impurity doping, substrate pot. effect 2-40724  
 Si:H, amorphous, positron annihilation studies using Doppler broadening techniques 2-51739  
 Si:H, amorphous, prep. by reactive sputtering, characteristic props. 2-17625  
 Si:H, amorphous, prep. from higher silanes with high growth rate 2-2462  
 Si:H, amorphous, press. induced metal-semiconductor transitions 2-40790  
 Si:H, amorphous, proton NMR spin-lattice relax. time charact. 2-31319  
 Si:H, amorphous, RF sputtered, transport props. 2-1913  
 Si:H, amorphous, RF sputtered, H distrib. PMR study 2-17346  
 Si:H, amorphous, reactively sputtered, solar cell, electron-hole recombination 2-42002  
 Si:H, amorphous, role of dangling bond as radiative center, ODMR 2-41233  
 Si:H, amorphous, solar cell, transparent conducting coating 2-14077  
 Si:H, amorphous, solar cell appl., spectral response and capacitance meas. 2-37346  
 Si:H, amorphous, solar cells, electronic props., review 2-45970  
 Si:H, amorphous, solar cells, p-i-n and Schottky-barrier structs., comparison 2-52350  
 Si:H, amorphous, solar cells, p-i-n struct. field nonuniformity rel. to photo-generated carriers 2-52351  
 Si:H, amorphous, spin-lattice relaxation and spin diffusion 2-31307  
 Si:H, amorphous, sputtering conditions effect on H content and Si-H bonding 2-2444  
 Si:H, amorphous, time resolved luminesc. and fatigue effects 2-9179  
 Si:H, amorphous, transport props., CPA calc. 2-40907  
 Si:H, amorphous, ultrashort laser pulse annealing, expt. study 2-21170  
 Si:H, amorphous, vibr. excitations 2-45495  
 Si:H, amorphous DC sputtered coating, doping and elec. props. 2-40726  
 Si:H, amorphous film, AC conductivity and optical props. 2-41040  
 Si:H, amorphous film, electronic struct. study 2-40768  
 Si:H, amorphous film, elec. cond., thermopower temp. depend. 2-40896  
 Si:H, amorphous film, electron drift mobility meas. 2-41036  
 Si:H, amorphous film, large area plasma deposition and elec. props. 2-40728  
 Si:H, amorphous film, plasma deposited, microstruct., PMR study 2-13358  
 Si:H, amorphous film, struct. evolution during annealing 2-45035  
 Si:H, amorphous film, X-ray study of atomic struct. 2-45034  
 Si:H, amorphous film deposition parameters from Si-H discharge plasmas 2-46944  
 Si:H, amorphous film growth, plasma diagnostics 2-45770  
 Si:H, amorphous films, optical props. 2-36727  
 Si:H, amorphous hydrogenated, reactive laser evaporation 2-2456  
 Si:H, amorphous ion beam deposited coating, prep. and props. 2-40723  
 Si:H, amorphous plasma deposited coating, field effect cond., illumination and annealing effects 2-45969  
 Si:H, amorphous plasma deposited film, PMR 2-46398  
 Si:H, amorphous RF magnetron sputtered coating, elec. and optical props. 2-40727  
 Si:H, amorphous RF sputtered coating, IR 2000 cm<sup>-1</sup> absorpt. band and photoelectronic props. 2-41353  
 Si:H, amorphous Schottky barrier solar cells, prep. by plasma decomp. and sputtering, carrier generation efficiency 2-14079  
 Si:H, amorphous thin films electrical and optical props. optimisation using RF bias-sputtering, solar cells 2-37226  
 Si:H, amorphous vacuum deposited films, theta pinch hydrogenation 2-40421  
 Si:H, amorphous-microcryst. mixed phase film, photoluminesc. 2-26960  
 a-Si:H, Ar sputtered films, interaction between Ar and dopants 2-40738  
 p-Si:H, B amorphous film, high cond., prep. by Penning discharge 2-41530  
 Si:H, Cl amorphous films, IR vibr. spectra 2-36630  
 Si:H, Cl glow discharge films, amorphous, optical characts. and photoluminesc. 2-31546  
 Si:H, crystalline, reactive sputtering fabrication, struct. study by X-ray diffr. and optical spectra 2-1792  
 a-Si:H, defect creation by optical excitation, ODMR study 2-45255  
 a-Si:H, gap states study, appl. of isothermal capacitance transient spectroscopy 2-45901  
 Si:H, implanted, vibrational spectra 2-41354  
 Si:H, intrinsic, amorphous, dual light beam modulation of photocarrier lifetime 2-46063  
 $\alpha$ -Si:H, large-area low-freq. discharge-produced 2-51019  
 Si:H, Li amorphous film, DC glow discharge deposited, photovoltaic effect 2-46170  
 a-Si:H, meas., and anal. of current transients, DLTS and TSC obs. 2-46020  
 Si:H, microcryst. plasma deposited coating, elec. cond. and optical absorpt. 2-46165  
 Si:H, microcrystalline and amorphous films, Raman scatt. 2-46564  
 a-Si:H, Ne, chemical sites of Ne, XPS study 2-40277  
 Si:H, O sputtered films, amorphous, optoelectronic props., effect of O 2-41443  
 a-Si:H, optical absorption edge, electronic struct., thermal and struct. disorder effects 2-36719



## hydrogen continued

- a-Si:H, optically detected mag. resonance 2-36481  
 Si:H, P, amorphous, dispersive transport and electronic struct. 2-26408  
 a-Si:H, photoreponse time and density of localised states in mobility gap 2-46064  
 Si:H, plasma deposited amorphous film, density 2-35912  
 a-Si:H, recomb. processes and gap states, time-resolved luminesc. meas. 2-46736  
 a-Si:H, Schottky barrier structures, capture cross-section and density of deep gap states 2-41013  
 Si:H, sputtered, amorphous, time resolved photolum. spectra 2-46737  
 Si:H, sputtered coating, H effusion, ion beam nuclear analysis (*French*) 2-1799  
 Si:H, sputtered coatings, nuclear microanalysis and Rutherford backscattering (*French*) 2-5331  
 a-Si:H, thermal and optical space charge spectroscopy of gap states 2-45900  
 Si:H,B, Li-diffused, amorphous compensated, dark and photocond. 2-46065  
 Si:H,B amorphous film, elec. props., optical props. 2-46176  
 Si:H,B amorphous films, boron impurity conc. determ. 2-35527  
 Si:H,B(P), amorphous, IR and far IR absorpt., annealing effect 2-36628  
 a-Si:H,B(P), luminesc. spectrum, effect of dangling bond states 2-46670  
 Si:H,Cl amorphous film, photolum. studies 2-46738  
 Si:H,N(O), amorphous glow discharge film, elec. cond. and photocond.,  $N_2(O_2)$  doping effect 2-40733  
 $\alpha$ -Si:H,O, RF sputtered,  $^{15}N$  ion irradiat., H effusion 2-5161  
 Si:H,P, amorphous, photogenerated carrier recombination 2-46018  
 Si:H,P, amorphous Schottky barrier, two-channel cond. obs. 2-51280  
 Si:H,P amorphous, transport props. 2-45984  
 Si:H,P films, elec. props., transition to amorphous phase, solar cell props. 2-46167  
 Si:H,P(B), amorphous, temp. depend. of ESR spectra, elec. cond. 2-5575  
 Si:H,P(B) amorphous film, photoconductivity mag. field depend. 2-41033  
 Si:H amorphous, electron and laser beam induced centres, photoluminescence study 2-36682  
 Si:H amorphous, interface with noble metals, struct. and elec. props. 2-41012  
 Si:H amorphous film, electron drift mobility study 2-41034  
 Si:H amorphous film, field effect studies, density of localized gap states 2-46169  
 Si:H amorphous film, light absorption 2-40838  
 Si:H amorphous film, photoacoustic spectroscopy, optical consts. determ. 2-2355  
 Si:H amorphous film, photoconductivity threshold and optical gap 2-36097  
 Si:H amorphous film deposition from  $SiH_4$ -Ar plasma 2-35274  
 Si:H amorphous film deposition by Penning glow discharge of  $SiH_4$  2-41528  
 Si:H amorphous film solar cell, Tandem type 2-47488  
 Si:H amorphous films, evaporated and sputtered, annealing and hydrogenation 2-45771  
 Si:H amorphous films, gas phase doped or ion implanted 2-40735  
 Si:H amorphous films, luminesc. spectra, defect induced red shift 2-17536  
 Si:H amorphous films, NMR study 2-41213  
 Si:H amorphous films, photocreation of defects, light-induced cond. changes, doping depend. 2-36091  
 Si:H amorphous films, photocond. and photolum. 2-40959  
 Si:H amorphous films, surface props., photoelectron spectra study 2-41491  
 Si:H amorphous films for electrophotographic appl., photoelec. props. 2-46168  
 Si:H amorphous multijunction solar cells, conversion efficiency and interference effects in spectral response 2-37224  
 Si:H amorphous n-i-p solar cell, minority carrier transport in depletion layers 2-47489  
 Si:H amorphous p-n junctions, elec. transport, doping effects 2-46115  
 Si:H amorphous plasma deposited coating, elec. and optical props., RF power and growth temp. depend. 2-40729  
 Si:H amorphous plasma deposited coating, IR spectra, temp. depend. 2-41352  
 Si:H amorphous Schottky barrier diode characts., mathematical model 2-46102  
 Si:H amorphous Schottky barrier and PIN diodes, I-V characts., density of localised states 2-51281  
 Si:H amorphous Schottky diode, electron transport and deep localized state kinetics 2-46101  
 Si:H amorphous solar cell, carrier collection, image force effects 2-2785  
 Si:H amorphous solar cell, plasma deposited, impurity effects 2-14081  
 Si:H amorphous solar cell, large area, conversion efficiency under AM1 illumination 2-37347  
 Si:H amorphous solar cells, n-i-p and p-i-n structs., Dember effects 2-52365  
 Si:H and Si:H,B, amorphous, photoluminesc. spectrum, B doping and prep. conditions effect 2-36684  
 Si:H evaporated amorphous films, DC cond., impurities effect 2-13070  
 Si:H film, amorphous, optical emission spectroscopy during growth (*Japanese*) 2-22174  
 Si:H film, amorphous plasma deposited, RF power and reactant gas press. effect 2-21458  
 a-Si:H film, low optical absorption, annealing studies, photoacoustic spectroscopy meas. 2-36718  
 a-Si:H film, optical absorption spectra, photocurrent signal, waveguiding technique 2-36720  
 a-Si:H film, photocond. anal. luminesc. meas. of cond. band tail 2-46062  
 Si:H films, amorphous n-type and p-type, primary and secondary photocurrents 2-46061  
 a-Si:H films, impurity doping, morphological study, electrical and optical properties 2-45789  
 Si:H films, Raman and XPS study of transition from amorphous to crystalline phases 2-46796  
 a-Si:H films, reversible field-induced doping effect 2-51192  
 a-Si:H films, sub-gap and band edge optical absorption, photothermal deflection spectroscopy 2-36717  
 Si:H films, vibr. props. study 2-46798  
 a-Si:H glow-discharge films, evolution of  $H_2$  2-40682  
 Si:H multilayer structs., comp. profiles, nucl. scatt. and Rutherford backscatt. meas. 2-40737  
 $\alpha$ -Si:H preparation by CVD 2-22170

## hydrogen continued

- Si:H Schottky barrier diodes, amorphous, electrical characterisation 2-37225  
 a-Si:H solar cells, impurity effects 2-42019  
 Si:H/Si:C:H amorphous solar cell 2-46058  
 Si:H/Pd interface, interference enhanced Raman scatt. study of interfacial reaction 2-9147  
 Si:H-Pd(Pt), amorphous Si:H, interface phonons, interference enhanced Raman scatt. study 2-51592  
 Si:H $^+$ , ion implanted, range distrib. characts., Monte Carlo calc. 2-45302  
 Si:H(H,F), amorphous, plasma deposition kinetics model 2-40731  
 Si:P,H, deformed, hydrogen passivation of defects 2-13004  
 Si-F-H amorphous film, Schottky-barrier and MIS solar cell appls. 2-37344  
 Si-SiO $_2$  systems, physico-chemical processes, behaviour of H and H-containing structs. (*Russian*) 2-2008  
 Si+H, amorphous, transient photocond. and Schottky barrier profile determ. 2-46060  
 Si:C:H, amorphous, plasma deposited coating, photocond. and optical gap, valence electron control 2-46058  
 Si:C:H, amorphous plasma deposited film, PMR 2-46398  
 Si:C:H, ion implanted, defect luminescence spectra 2-36712  
 Si:C:H/Si:H amorphous solar cell 2-46058  
 Si $_x$ C $_{1-x}$ :H, amorphous films, photocond. and photolum. 2-40959  
 SiGe:H amorphous film solar cell, Tandem type 2-47488  
 Si $_x$ -Ge $_x$ :H, amorphous, photoconductivity, dark cond. 2-36104  
 Si $_x$ -Ge $_x$ :H film, amorphous, ESR and IR studies 2-26740  
 Si $_x$ Ge $_{1-x}$ :H alloy amorphous films, optical and elec. props., solar cell appls. 2-37345  
 Si $_3$ N $_4$ :H, amorphous plasma deposited film, PMR 2-46398  
 a-Si $_x$ Ni $_{1-x}$ :H, wide optical-gap, photoconductive, elec. and optical props. 2-26439  
 SiO $_2$ /Si interface, H and Cl depth profiles 2-45233  
 Si:H, amorphous, sputtered coating, density of states, impurity effects 2-45898  
 Sn:H, ion implanted, supercond. transition temp. 2-31000  
 SrO:H $^+$ , vibrs. due to H $^+$  ion, IR absorpt. spectra 2-46606  
 Ta:H, localised vibr. spectra of light interstitials 2-26010  
 Ta:H, localised vibrs., rel. to H(D) pot. 2-21258  
 Ta:N,H, influence of N impurities on diffusion coeff. 2-45626  
 TaV-H $_2$ , mag. susceptibility study 2-46263  
 Ti-Al-V-H, internal friction study 2-45362  
 V:H, localised vibr. spectra of light interstitials 2-26010  
 V:H, internal; friction study of twist effect, precipitation 2-45372  
 V-M-H, M = Ti, Zr, Mo, Nb, Cr, Fe, Cu, internal friction study 2-45363  
 V-Ti-H, mechanical relax. of substitutional-interstitial atom complexes 2-45151

## hydrogen bonds

- $^2H$  and  $^{17}O$  nuclear quadrupole coupling const., H bonding effect 2-39422  
 acetone solvation in fluid and aq. systems, IR spectra study 2-8407  
 acetophenone + HCl(HBr), interactions, form. consts., IR obs. 2-31901  
 aerosol OT, water-solubilising props., rot. isomerism, PMR spectroscopy 2-22494  
 alcohols, assoc. liq., limiting shear modulus, H bonds 2-12656  
 alcohols, hydrogen bonding with mono- and di-carbonyls, IR spectra 2-29727  
 bis-(alkylammonium) tetrahalogen metallates(II), phase transition, IR spectra 2-29592  
 alkylammonium halides, phase transition, IR spectra 2-29592  
 aminoanthraquinone dyes, radiation damage and H bonding 2-52227  
 2-aminoethanol, mol. struct. and conformational anal., ab initio studies, hydrogen bonds 2-43777  
 analcime, Raman spectra, up to 9.4 kbar 2-2236  
 aromatic esters adsorption on silica immersed in carbon tetrachloride, IR spectra study 2-2231  
 azaromatics, excited, protonation and strong H-bonding as factors controlling struct. changes 2-49497  
 azomethine compounds, ground and ionised state intramol. hydrogen bonds 2-29514  
 benzophenone + HCl (HBr), interactions, form. consts., IR obs. 2-31901  
 N-benzylaniline NMR, IR spectra, molecular flexibility, H bonding study (*Japanese*) 2-24752  
 biophysical chemistry at high pressure 2-2983  
 bis(triethylammonium)hexachlorostannate, struct., H-bonds, IR spectra 2-21125  
 butylamine-isocaproic alcohols, mixtures, excess volumes, compressibilities, ultrasonic and IR study 2-26893  
 para-di-t-butylbenzene, intramol. reorientation and thermal history H-bonds,  $^1H$  spin-lattice relax., IR spectra 2-36461  
 n,n'-di-t-butylphenol (n,n')=(3,5), (2,6) or (2,5), intramol. reorientation and thermal history H-bonds,  $^1H$  spin-lattice relax., IR spectra 2-36461  
 carbonyl compounds, monosubstituted, harmonic and anharmonic stretching force const., ab initio calc., H-bonds 2-29729  
 carboxylic acid, dimers, H bond exchange, ab initio calcs. 2-11394  
 carboxylic acid dimers, intramol. H bonds struct. and dynamics in solid state, NMR spectra 2-41207  
 cellulose, isolated helix conformation calcs. (*Russian*) 2-29737  
 chloroform-aliphatic nitrile complexes, IR absorpt. integrated intensities, ab initio and MO calcs. 2-29591  
 chloroform-ether complexes, Raman linewidth study 2-49523  
 complexes, H-bonded, IR stretching absorption bands 2-26878  
 copper formate tetrahydrate, H bonded ferroelec., neutron scatt. studies 2-31389  
 crystals, H bonded, ferroelectric transitions 2-36551  
 cyclohexanone + HCl(HBr), interactions, form. consts., IR obs. 2-31901  
 di-*p*-methylphenylphosphoric acid, solid state struct. 2-5103  
 di-*p*-phenolate-thianium dihydrate, X-ray cryst. struct. study and IR spectroscopy 2-25861  
 3,5-dichloro-2-hydroxythiophenol in soln., conformational study 2-43938  
 diglycine nitrate, transition temp. isotope shift 2-41299  
 2,3-dimethylaniline, Raman and IR spectra 2-11491  
 N,N-dimethylpyrrolidinium fluoride dihydrate, H-bonds, low temp. IR spectra 2-43904  
 2,4-dinitrophenol-electron donor,  $^1H$  transfer, solvent effects, thermodynamic props. visible UV study 2-2312  
 DMSO-HCl interaction, hydrogen bonding, biological props. and protonation, IR and Raman study 2-29607



## hydrogen continued

- H<sub>2</sub>-Ar-N<sub>2</sub>, combined discharges, suppression of spiral instability at atmospheric press. in longitudinal mag. field 2-40198  
 H<sub>2</sub>-HCl gasdynamic laser charact. 2-34734  
 H<sub>2</sub>-He, moderately dense gas mixtures, light scatt. in hydrodynamic regime 2-35268  
 H<sub>2</sub>-N<sub>2</sub> binary gas mixtures, thermal cond. 2-50357  
 H<sub>2</sub>-O<sub>2</sub> flame temperature distrib. meas. by moiré deflectometry 2-33602  
 H<sub>2</sub>-O<sub>2</sub> fuel cells, review of development (*Czech*) 2-18047  
 H<sub>2</sub>-SF<sub>6</sub>, interdiffusion coeffs., temp. effects 2-20805  
 H<sub>2</sub>-SF<sub>6</sub> mixtures, HF\* fluoresc. at 2.8 µm induced by pulsed CO<sub>2</sub> laser radiation 2-20119  
 H<sub>2</sub>+CO<sub>2</sub>, interaction on supported Rh surface, IR obs. 2-41931  
 H<sub>2</sub>+He<sup>+</sup>(N<sup>+</sup>), stopping powers at 40-200 keV 2-34536  
 3H<sub>2</sub>+N<sub>2</sub> → 2NH<sub>3</sub>, catalysis on Fe surface, AES and thermal desorp. study 2-41922  
 H<sub>0.067</sub>MoS<sub>2</sub>, vibr. spectrum of hydrogen 2-8583  
<sup>3</sup>H, dual label determ. by liq. scintillation counting 2-43661  
 Hα emission from T Tauri stars, correl. with polarisation 2-33008  
 He-H<sub>2</sub> mixture in liq-gas phase equil. region, enthalpy calc. and Joule-Thomson coeff. 2-20806  
 KBr:H, charged substitutional and interstitial impurities, crystal electrostatic energy, Ewald method 2-16618  
 KCl:H, charged substitutional and interstitial impurities, crystal electrostatic energy, Ewald method 2-16618  
 KIO<sub>3</sub>:H, NQR study of impurity effects on phase transition (*Russian*) 2-21914  
 LaNi<sub>5</sub>-H, plateau press. and hysteresis, annealing effect 2-41928  
 LaNi<sub>4.9</sub>Al<sub>0.1</sub>-H<sub>2</sub> system, form. and decomp. kinetics, press. depend. 2-26059  
 Li<sub>3</sub>N:H, ionic conductivity, complex least squares fitting, admittance data 2-50919  
 LiNbO<sub>3</sub>:H<sup>+</sup>, propag. of SAW during implantation 2-35875  
 Lu-H, solid solution, anelastic effects 2-45365  
 Mg:H, H<sub>2</sub> dissolution enthalpy, high press. anal. 2-45586  
 MgO:H<sup>+</sup>, vibr. due to H<sup>+</sup> ion, IR absorpt. spectra 2-46606  
 NH<sub>4</sub>HSO<sub>4</sub>, partly deuterated, ferroelectric props. 2-31425  
 Nb:H, localised vibr. spectra of light interstitials 2-26010  
 Nb:H, ultrasonic attenuation and velocity study of α-α' phases 2-45559  
 Nb:N,H, influence of N impurities on diffusion coeff. 2-45626  
 Nb-H solution, sound attenuation due to density wave decay (*Russian*) 2-12691  
 Nb-Ti-H, internal friction study 2-45364  
 Nb-Ti-H, mechanical relax. of substitutional-interstitial atom complexes 2-45151  
 Nb-Ti-H system, relax. peaks at liq. He temps. due to H motion in trap sites 2-22254  
 Ni-H, cold-worked, internal friction peaks 2-8568  
 Ni-H, battery for spacecraft, real life test performance 2-27599  
 Ni-H<sub>2</sub> battery system, historical overview 2-27602  
 Ni-H<sub>2</sub> prototype cell evaluation tests 2-27601  
 Ni-Hz battery for NTS-2 spacecraft, update 2-27600  
 NiH<sub>x</sub>, ion implanted, resistivity annealing and TDPAC study 2-46180  
 Pb:H, ion implanted, supercond. transition temp. 2-31000  
 Pb:H, localised modes, tunnelling study 2-35625  
 Pd-H system, theory of H absorpt., mean-field approx. calcs. 2-5303  
 PtH<sub>x</sub>, ion implanted, search for superconductivity 2-36202  
 Si amorphous p-n junction, drift type photovoltaic effect 2-46107  
 Si:B, H amorphous CVD film, hydrogenation effect, elec. cond. and ESR meas. 2-40906  
 Si:F, H, amorphous, annealing effects, NMR and ESR studies 2-41214  
 Si:F, H, amorphous, vibr. excitations 2-45495  
 Si:F, H amorphous CVD film, hydrogenation effect, elec. cond. and ESR meas. 2-40906  
 Si:F,H,P films, optical study of intermediate order, elec. cond. 2-46797  
 a-Si:F,H, electrical, spectral and doping properties 2-45790  
 a-Si:H, a-Si:F,H, Schottky-barrier diodes, elec. props. using new techniques 2-46104  
 Si:H, amorphous, <sup>1</sup>H NMR spin-lattice relaxation time, temp. and freq. depend. 2-46412  
 Si:H, amorphous, <sup>29</sup>Si NMR 2-46402  
 Si:H, amorphous, AC field and freq. depend. of elec. cond. 2-40901  
 Si:H, amorphous, absorpt. and excitation spectra 2-22053  
 Si:H, amorphous, annealing effects, NMR and ESR studies 2-41214  
 Si:H, amorphous, bonding struct. and H distrib. IR absorpt. and NMR meas. 2-40276  
 Si:H, amorphous, chem. bonding environment of Si and dopant 2-40275  
 Si:H, amorphous, chem. bonding and H diffusion, <sup>1</sup>H NMR study, 20 to 530°C 2-41221  
 Si:H, amorphous, dangling bond state within mobility gap, identification by ESR spectroscopy 2-41196  
 Si:H, amorphous, density of states, dangling bond state, tight binding calc. 2-40750  
 Si:H, amorphous, disorder and optical absorption edge 2-13440  
 Si:H, amorphous, dispersive electronic transport, multiple trapping, computer simulation 2-51198  
 Si:H, amorphous, dopant level depths 2-40845  
 Si:H, amorphous, effect of annealing on optical gap 2-2211  
 Si:H, amorphous, electroabsorpt., polarised light anisotropy 2-46544  
 Si:H, amorphous, electron bombardment induced conductivity 2-13062  
 Si:H, amorphous, electron irradi. effect on dark and photocond. and defect removal 2-45279  
 Si:H, amorphous, electron irradi., effect on photoconductivity 2-51233  
 Si:H, amorphous, electronic struct. of model defect 2-40820  
 Si:H, amorphous, electronic struct., electrodeposited, study 2-41329  
 Si:H, amorphous, glow discharge deposited, photoinduced absorpt., time resolved spectra 2-46801  
 Si:H, amorphous, H<sub>2</sub> exodiffusion, comparison with elec. cond. meas. 2-45623  
 Si:H, amorphous, Hall mobility in presence of long range pot. fluctuations 2-1930  
 Si:H, amorphous, homogeneous CVD 2-41526  
 Si:H, amorphous, hot carrier relax., optical picosecond study 2-46529  
 Si:H, amorphous, ion microprobe mass anal., ultrahigh vacuum, appl. to H detection 2-15263  
 Si:H, amorphous, laser beam defect creation, luminesc. and ODMR study 2-35533  
 Si:H, amorphous, light induced changes, computer modelling of admittance and DLTS 2-36090  
 Si:H, amorphous, light induced changes, field effect meas. 2-45813  
 Si:H, amorphous, luminesc. and recomb., review 2-5733

## hydrogen continued

- Si:H, amorphous, luminescence props. 2-46730  
 Si:H, amorphous, MIS solar cell, interface state of oxidation effects 2-47487  
 Si:H, amorphous, midgap density of states, space charge limited cond. study 2-45897  
 Si:H, amorphous, modulated photocurrent meas. 2-1946  
 Si:H, amorphous, molecular H<sub>2</sub> as proton spin-lattice relaxation centres 2-2157  
 Si:H, amorphous, multiphase description, photoluminesc., TSC, optical absorpt. and elec. cond. meas. 2-41412  
 Si:H, amorphous, non-dispersive and dispersive transport 2-46019  
 Si:H, amorphous, optically detected mag. resonance study of recombination processes 2-21919  
 Si:H, amorphous, p-i-n junctions, photoacoustic emission 2-46113  
 Si:H, amorphous, phonon densities of states and eigenvectors 2-35627  
 Si:H, amorphous, photoconductivity, spectral and temp. depend. 2-1958  
 Si:H, amorphous, photoconductivity and negatively correlated defect effects 2-40962  
 Si:H, amorphous, photoelectrochem. cell, polypyrrole coated photoanodes, cell stability 2-52371  
 Si:H, amorphous, photoluminescence, no-Stokes shift model 2-36683  
 Si:H, amorphous, plasma deposited, photocond., temp. depend. 2-1943  
 Si:H, amorphous, plasma deposition, impurity doping, substrate pot. effect 2-40724  
 Si:H, amorphous, positron annihilation studies using Doppler broadening techniques 2-51739  
 Si:H, amorphous, prep. by reactive sputtering, characteristic props. 2-17625  
 Si:H, amorphous, prep. from higher silanes with high growth rate 2-2462  
 Si:H, amorphous, press. induced metal-semiconductor transitions 2-40790  
 Si:H, amorphous, proton NMR spin-lattice relax. time charact. 2-31319  
 Si:H, amorphous, RF sputtered, transport props. 2-1913  
 Si:H, amorphous, RF sputtered, H distrib. PMR study 2-17346  
 Si:H, amorphous, reactively sputtered, solar cell, electron-hole recombination 2-42002  
 Si:H, amorphous, role of dangling bond as radiative center, ODMR 2-41233  
 Si:H, amorphous, solar cell, transparent conducting coating 2-14077  
 Si:H, amorphous, solar cell appl., spectral response and capacitance meas. 2-37346  
 Si:H, amorphous, solar cells, electronic props., review 2-45970  
 Si:H, amorphous, solar cells, p-i-n and Schottky-barrier structs., comparison 2-52350  
 Si:H, amorphous, solar cells, p-i-n struct. field nonuniformity rel. to photogenerated carriers 2-52351  
 Si:H, amorphous, spin-lattice relaxation and spin diffusion 2-31307  
 Si:H, amorphous, sputtering conditions effect on H content and Si-H bonding 2-2444  
 Si:H, amorphous, time resolved luminesc. and fatigue effects 2-9179  
 Si:H, amorphous, transport props., CPA calc. 2-40907  
 Si:H, amorphous, ultrashort laser pulse annealing, expt. study 2-21170  
 Si:H, amorphous, vibr. excitations 2-45495  
 Si:H, amorphous DC sputtered coating, doping and elec. props. 2-40726  
 Si:H, amorphous film, AC conductivity and optical props. 2-41040  
 Si:H, amorphous film, electronic struct. study 2-40768  
 Si:H, amorphous film, elec. cond., thermopower temp. depend. 2-40896  
 Si:H, amorphous film, electron drift mobility meas. 2-41036  
 Si:H, amorphous film, large area plasma deposition and elec. props. 2-40728  
 Si:H, amorphous film, plasma deposited, microstruct., PMR study 2-13358  
 Si:H, amorphous film, struct. evolution during annealing 2-45035  
 Si:H, amorphous film, X-ray study of atomic struct. 2-45034  
 Si:H, amorphous film deposition parameters from Si-H discharge plasmas 2-46944  
 Si:H, amorphous film growth, plasma diagnostics 2-45770  
 Si:H, amorphous films, optical props. 2-36727  
 Si:H, amorphous hydrogenated, reactive laser evaporation 2-2456  
 Si:H, amorphous ion beam deposited coating, prep. and props. 2-40723  
 Si:H, amorphous plasma deposited coating, field effect cond., illumination and annealing effects 2-45969  
 Si:H, amorphous plasma deposited film, PMR 2-46398  
 Si:H, amorphous RF magnetron sputtered coating, elec. and optical props. 2-40727  
 Si:H, amorphous RF sputtered coating, IR 2000 cm<sup>-1</sup> absorpt. band and photoelectronic props. 2-41353  
 Si:H, amorphous Schottky barrier solar cells, prep. by plasma decomp. and sputtering, carrier generation efficiency 2-14079  
 Si:H, amorphous thin films electrical and optical props. optimisation using RF bias-sputtering, solar cells 2-37226  
 Si:H, amorphous vacuum deposited films, theta pinch hydrogenation 2-40421  
 Si:H, amorphous-microcryst. mixed phase film, photoluminesc. 2-26960  
 a-Si:H, Ar sputtered films, interaction between Ar and dopants 2-40738  
 p-Si:H, B amorphous film, high cond., prep. by Penning discharge 2-41530  
 Si:H, Cl amorphous films, IR vibr. spectra 2-36630  
 Si:H, Cl glow discharge films, amorphous, optical charact. and photoluminesc. 2-31546  
 Si:H, crystalline, reactive sputtering fabrication, struct. study by X-ray diffr. and optical spectra 2-1792  
 a-Si:H, defect creation by optical excitation, ODMR study 2-45255  
 a-Si:H, gap states study, appl. of isothermal capacitance transient spectroscopy 2-45901  
 Si:H, implanted, vibrational spectra 2-41354  
 Si:H, intrinsic, amorphous, dual light beam modulation of photocarrier lifetime 2-46063  
 α-Si:H, large-area low-freq. discharge-produced 2-51019  
 Si:H, Li amorphous film, DC glow discharge deposited, photovoltaic effect 2-46170  
 a-Si:H, meas., and anal. of current transients, DLTS and TSC obs. 2-46020  
 Si:H, microcryst. plasma deposited coating, elec. cond. and optical absorpt. 2-46165  
 Si:H, microcrystalline and amorphous films, Raman scatt. 2-46564  
 a-Si:H, Ne, chemical sites of Ne, XPS study 2-40277  
 Si:H, O sputtered films, amorphous, optoelectronic props., effect of O 2-41443  
 a-Si:H, optical absorption edge, electronic struct., thermal and struct. disorder effects 2-36719



**hydrogen continued**

- a-Si:H, optically detected mag. resonance 2-36481  
 Si:H, P, amorphous, dispersive transport and electronic struct. 2-26408  
 a-Si:H, photoresponse time and density of localised states in mobility gap 2-46064  
 Si:H, plasma deposited amorphous film, density 2-35912  
 a-Si:H, recomb. processes and gap states, time-resolved luminesc. meas. 2-46736  
 a-Si:H, Schottky barrier structures, capture cross-section and density of deep gap states 2-41013  
 Si:H, sputtered, amorphous, time resolved photolum. spectra 2-46737  
 Si:H, sputtered coating, H effusion, ion beam nuclear analysis (*French*) 2-1799  
 Si:H, sputtered coatings, nuclear microanalysis and Rutherford backscattering (*French*) 2-3331  
 a-Si:H, thermal and optical space charge spectroscopy of gap states 2-45900  
 Si:H,B, Li-diffused, amorphous compensated, dark and photocond. 2-46065  
 Si:H,B amorphous film, elec. props., optical props. 2-46176  
 Si:H,B amorphous films, boron impurity conc. determ. 2-35527  
 Si:H,B(P), amorphous, IR and far IR absorpt., annealing effect 2-36628  
 a-Si:H,B(P), luminesc. spectrum, effect of dangling bond states 2-46670  
 Si:H,Cl amorphous film, photolum. studies 2-46738  
 Si:H,(N,O), amorphous glow discharge film, elec. cond. and photocond.,  $N_2(O_2)$  doping effect 2-40733  
 $\alpha$ -Si:H,O, RF sputtered,  $^{15}N$  ion irradi., H effusion 2-5161  
 Si:H,P, amorphous, photogenerated carrier recombination 2-46018  
 Si:H,P, amorphous Schottky barrier, two-channel cond. obs. 2-51280  
 Si:H,P amorphous, transport props. 2-45984  
 Si:H,P films, elec. props., transition to amorphous phase, solar cell props. 2-46167  
 Si:H,P(B), amorphous, temp. depend. of ESR spectra, elec. cond. 2-5575  
 Si:H,P(B) amorphous film, photoconductivity mag. field depend. 2-41033  
 Si:H amorphous, electron and laser beam induced centres, photoluminescence study 2-36682  
 Si:H amorphous, interface with noble metals, struct. and elec. props. 2-41012  
 Si:H amorphous film, electron drift mobility study 2-41034  
 Si:H amorphous film, field effect studies, density of localized gap states 2-46169  
 Si:H amorphous film, light absorption 2-40838  
 Si:H amorphous film, photoacoustic spectroscopy, optical consts. determ. 2-2355  
 Si:H amorphous film, photoconductivity threshold and optical gap 2-36097  
 Si:H amorphous film deposition from  $SiH_4$ -Ar plasma 2-35274  
 Si:H amorphous film deposition by Penning glow discharge of  $SiH_4$  2-41528  
 Si:H amorphous film solar cell, Tandem type 2-47488  
 Si:H amorphous films, evaporated and sputtered, annealing and hydrogenation 2-45771  
 Si:H amorphous films, gas phase doped or ion implanted 2-40735  
 Si:H amorphous films, luminesc. spectra, defect induced red shift 2-17536  
 Si:H amorphous films, NMR study 2-41213  
 Si:H amorphous films, photocreation of defects, light-induced cond. changes, doping depend. 2-36091  
 Si:H amorphous films, photocond. and photolum. 2-40959  
 Si:H amorphous films, surface props., photoelectron spectra study 2-41491  
 Si:H amorphous films for electrophotographic appl., photoelec. props. 2-46168  
 Si:H amorphous multijunction solar cells, conversion efficiency and interference effects in spectral response 2-37224  
 Si:H amorphous n-i-p solar cell, minority carrier transport in depletion layers 2-47489  
 Si:H amorphous p-n junctions, elec. transport, doping effects 2-46115  
 Si:H amorphous plasma deposited coating, elec. and optical props., RF power and growth temp. depend. 2-40729  
 Si:H amorphous plasma deposited coating, IR spectra, temp. depend. 2-41352  
 Si:H amorphous Schottky barrier diode characts., mathematical model 2-46102  
 Si:H amorphous Schottky barrier and PIN diodes, I-V characts., density of localised states 2-51281  
 Si:H amorphous Schottky diode, electron transport and deep localized state kinetics 2-46101  
 Si:H amorphous solar cell, carrier collection, image force effects 2-2785  
 Si:H amorphous solar cell, plasma deposited, impurity effects 2-14081  
 Si:H amorphous solar cell, large area, conversion efficiency under AM1 illumination 2-37347  
 Si:H amorphous solar cells, n-i-p and p-i-n structs., Dember effects 2-52365  
 Si:H and Si:H,B, amorphous, photoluminesc. spectrum, B doping and prep. conditions effect 2-36684  
 Si:H evaporated amorphous films, DC cond., impurities effect 2-13070  
 Si:H film, amorphous, optical emission spectroscopy during growth (*Japanese*) 2-22174  
 Si:H film, amorphous plasma deposited, RF power and reactant gas press. effect 2-21458  
 a-Si:H film, low optical absorption, annealing studies, photoacoustic spectroscopy meas. 2-36718  
 a-Si:H film, optical absorption spectra, photocurrent signal, waveguiding technique 2-36720  
 a-Si:H film, photocond. anal. luminesc. meas. of cond. band tail 2-46062  
 Si:H films, amorphous n-type and p-type, primary and secondary photocurrents 2-46061  
 a-Si:H films, impurity doping, morphological study, electrical and optical properties 2-45789  
 Si:H films, Raman and XPS study of transition from amorphous to crystalline phases 2-46796  
 a-Si:H films, reversible field-induced doping effect 2-51192  
 a-Si:H films, sub-gap and band edge optical absorption, photothermal deflection spectroscopy 2-36717  
 Si:H films, vibr. props. study 2-46798  
 Si:H glow-discharge films, evolution of  $H_2$  2-40682  
 a-Si:H multilayer structs., comp. profiles, nucl. scatt. and Rutherford backscatt. meas. 2-40737  
 $\alpha$ -Si:H preparation by CVD 2-22170

**hydrogen continued**

- Si:H Schottky barrier diodes, amorphous, electrical characterisation 2-37225  
 a-Si:H solar cells, impurity effects 2-42019  
 Si:H/SiC:H amorphous solar cell 2-46058  
 Si:H-Pd interface, interference enhanced Raman scatt. study of interfacial reaction 2-9147  
 Si:H-Pd(Pt), amorphous Si:H, interface phonons, interference enhanced Raman scatt. study 2-51592  
 Si:H<sup>+</sup>, ion implanted, range distrib. characts., Monte Carlo calc. 2-45302  
 Si:H(H,F), amorphous, plasma deposition kinetics model 2-40731  
 Si:P,H, deformed, hydrogen passivation of defects 2-13004  
 Si-F-H amorphous film, Schottky-barrier and MIS solar cell appls. 2-37344  
 Si-SiO<sub>2</sub> systems, physico-chemical processes, behaviour of H and H-containing structs. (*Russian*) 2-2008  
 Si+H, amorphous, transient photocond. and Schottky barrier profile determ. 2-46060  
 SiC:H, amorphous, plasma deposited coating, photocond. and optical gap, valence electron control 2-46058  
 SiC:H, amorphous plasma deposited film, PMR 2-46398  
 SiC:H, ion implanted, defect luminescence spectra 2-36712  
 SiC:H/Si:H amorphous solar cell 2-46058  
 Si<sub>3</sub>C<sub>1-x</sub>H<sub>x</sub>, amorphous films, photocond. and photolum. 2-40959  
 SiGe:H amorphous film solar cell, Tandem type 2-47488  
 Si<sub>1-x</sub>Ge<sub>x</sub>H, amorphous, photoconductivity, dark cond. 2-36104  
 Si<sub>1-x</sub>Ge<sub>x</sub>H film, amorphous, ESR and IR studies 2-26740  
 Si<sub>1-x</sub>Ge<sub>x</sub>H alloy amorphous films, optical and elec. props., solar cell appls. 2-37345  
 Si<sub>3</sub>N<sub>4</sub>:H, amorphous plasma deposited film, PMR 2-46398  
 a-Si<sub>3</sub>N<sub>4</sub>:H, wide optical-gap, photoconductive, elec. and optical props. 2-26439  
 SiO<sub>2</sub>/Si interface, H and Cl depth profiles 2-45233  
 Si:H, amorphous, sputtered coating, density of states, impurity effects 2-45898  
 Sn:H, ion implanted, supercond. transition temp. 2-31000  
 SrO:H<sup>-</sup>, vibrs. due to H<sup>-</sup> ion, IR absorpt. spectra 2-46606  
 Ta:H, localised vibr. spectra of light interstitials 2-26010  
 Ta:H, localised vibrs., rel. to H(D) pot. 2-21258  
 Ta:N,H, influence of N impurities on diffusion coeff. 2-45626  
 TaV<sub>2</sub>H<sub>2</sub>, mag. susceptibility study 2-46263  
 Ti-Al-V-H, internal friction study 2-45362  
 V-H, localised vibr. spectra of light interstitials 2-26010  
 V-H, internal; friction study of twist effect, precipitation 2-45372  
 V-M-H, M=Ti, Zr, Mo, Nb, Cr, Fe, Cu, internal friction study 2-45363  
 V-Ti-H, mechanical relax. of substitutional-interstitial atom complexes 2-45151
- hydrogen bonds**  
<sup>2</sup>H and <sup>17</sup>O nuclear quadrupole coupling const., H bonding effect 2-39422  
 acetone solvation in fluid and aq. systems, IR spectra study 2-8407  
 acetophenone+HCl(HBr), interactions, form. consts., IR obs. 2-31901  
 aerosol OT, water-solubilising props., rot. isomerism, PMR spectroscopy 2-22494  
 alcohols, assoc. liq., limiting shear modulus, H bonds 2-12656  
 alcohols, hydrogen bonding with mono- and di-carbonyls, IR spectra 2-29727  
 bis-(alkylammonium) tetrahalogen metallates(II), phase transition, IR spectra 2-29592  
 alkylammonium halides, phase transition, IR spectra 2-29592  
 aminoanthraquinone dyes, radiation damage and H bonding 2-52227  
 2-aminoethanol, mol. struct. and conformational anal., ab initio studies, hydrogen bonds 2-43777  
 analcime, Raman spectra, up to 9.4 kbar 2-2236  
 aromatic esters adsorption on silica immersed in carbon tetrachloride, IR spectra study 2-2231  
 azaaromatics, excited, protonation and strong H-bonding as factors controlling struct. changes 2-49497  
 azomethine compounds, ground and ionised state intramol. hydrogen bonds 2-29514  
 benzophenone+HCl(HBr), interactions, form. consts., IR obs. 2-31901  
 N-benzylaniline NMR, IR spectra, molecular flexibility, H bonding study (*Japanese*) 2-24752  
 biophysical chemistry at high pressure 2-2983  
 bis(triethylammonium)hexachlorostannate, struct., H-bonds, IR spectra 2-21125  
 butylamine-isocarbons, mixtures, excess volumes, compressibilities, ultrasonic and IR study 2-26893  
 para-di-t-butylbenzene, intramol. reorientation and thermal history H-bonds, <sup>1</sup>H spin-lattice relax., IR spectra 2-36461  
 n,n'-di-t-butylphenol (n,n')=(3,5), (2,6) or (2,5), intramol. reorientation and thermal history H-bonds, <sup>1</sup>H spin-lattice relax., IR spectra 2-36461  
 carbonyl compounds, monosubstituted, harmonic and anharmonic stretching force const., ab initio calc., H-bonds 2-29729  
 carboxylic acid, dimers, H bond exchange, ab initio calcs. 2-11394  
 carboxylic acid dimers, intramol. H bonds struct. and dynamics in solid state, NMR spectra 2-41207  
 cellulose, isolated helix conformation calcs. (*Russian*) 2-29737  
 chloroform-aliphatic nitrile complexes, IR absorpt. integrated intensities, ab initio and MO calcs. 2-29591  
 chloroform-ether complexes, Raman linewidth study 2-49523  
 complexes, H-bonded, IR stretching absorption bands 2-26878  
 copper formate tetrahydrate, H bonded ferroelec., neutron scatt. studies 2-31389  
 crystals, H bonded, ferroelectric transitions 2-36551  
 cyclohexanone+HCl(HBr), interactions, form. consts., IR obs. 2-31901  
 di- $\rho$ -methylphenylphosphoric acid, solid state struct. 2-5103  
 di-p-phenolate-thianium dihydrate, X-ray cryst. struct. study and IR spectroscopy 2-25861  
 3,5-dichloro-2-hydroxythiophenol in soln., conformational study 2-43938  
 diglycine nitrate, transition temp. isotope shift 2-41299  
 2,3-dimethylaniline, Raman and IR spectra 2-11491  
 N,N-dimethylpyrrolidinium fluoride dihydrate, H-bonds, low temp. IR spectra 2-43904  
 2,4-dinitrophenol-electron donor, <sup>1</sup>H transfer, solvent effects, thermodynamic props. visible UV study 2-2312  
 DMSO-HCl interaction, hydrogen bonding, biological props. and protonation, IR and Raman study 2-29607



## hydrogen bonds continued

- DNA, H-bonded and complimentary base pair systems, pot. energy curves 2-635
- DNA adenine-thymine base pair, electronic struct., semiempirical calcs. 2-37487
- ethanols, 2-substituted, H-bonding and conformation,  $^1\text{H}$  NMR and IR spectra 2-34441
- ethene-HF(HCl), H-bonded complex, mol.-struct., dissoc. energy, ab initio SCF MO calcs. 2-43779
- ethyl cyanoacetate adsorption on silica in carbon tetrachloride, IR spectra study 2-706
- ethylene glycol conformation, nontunnelling O-monodeuterated species from microwave rot. spectra 2-39388
- ethyne-HF(HCl), H-bonded complex, mol.-struct., dissoc. energy, ab initio SCF MO calcs. 2-43779
- ferroelectric, H bonded, dynamical modes 2-36544
- ferroelectric, H bonded system, coupled phonon mode-damped proton tunnelling mode, dynamics 2-35610
- ferroelectrics, soft modes, damping and overdamping (*Russian*) 2-1581
- fluorocarbons gas phase basicities, mass spectra investig. 2-44139
- formamide- $\text{H}_2\text{O}$  complex,  $\text{Li}^+$  influence on H bonds, ab initio calcs. 2-39519
- formic acid,  $^2\text{H}$  and  $^{17}\text{O}$  nuclear quadrupole coupling const., H bonding effect 2-39422
- formic acid ( $-d_2$ ), gaseous, Raman spectra 2-39412
- glycolic acid rotamers, geometry optimisation, gradient techniques calcs. 2-15703
- graphite- $\text{H}_2\text{SO}_4$  intercalation cpd., electronic and chem. struct., XPS study 2-27051
- guaiacol ( $-d_0(-d_1)(-d_3)$ ),  $\alpha$  and  $\beta$  phases, vibr., H band, Raman obs. 2-31486
- guanidine, rot. barriers, ab initio SCF calcs. 2-645
- guanidine, substituted, rot. barriers, ab initio SCF calcs. 2-645
- o-hydroxy benzaldehyde, IR absorpt. and electronic vapour absorpt. spectra 2-29586
- ice, structure prediction, tests of effective pair pots. 2-40332
- ice Ih, bond angles, bond lengths, transition barrier, from neutron scatt. 2-21056
- ice Ih, H distrib., neutron scatt. study 2-50594
- imidazole crystals, H bonding, isotope effects, IR spectrosc. investig. (*French*) 2-5672
- Ising model in transverse field coupled to acoustic phonons, longitudinal spin dynamics 2-36546
- isotopic effect on position and integrated intensity of H-bonded system 2-29581
- ketones, hydrogen bonding with mono- and di-carbonyls, IR spectra 2-29727
- lactams, H-bond assoc., solvent and conc. study, IR obs. 2-4285
- lignocohols with some polar groups of cellulose and hemicellulose, intermol. H-bonds, nonempirical PCILO calc. 2-39325
- lignophenols with some polar groups of cellulose and hemicellulose, intermol. H-bonds, nonempirical PCILO calc. 2-39325
- liquid-air interface, aq.-nonelectrolyte soln., surface activity, H bond form. theory 2-1709
- liquids, hydrogen stretching IR bands with strong H bonds, stochastic theory 2-34398
- malonaldehyde, H-bonded tunnelling mol., 3540 Å electronic transition 2-7676
- malonaldehyde, struct., dipole moment and tunnelling, microwave spectral study 2-43890
- mercaptobenzothiazole, IR spectra, effect of coupling between vibr. and H-bonds, isotope effect 2-26885
- methane, disulphoryl chloride- $\text{d}_0(-d_2)$ , liq. and solid phase, rot. isomerism, vibr., IR and Raman obs. 2-2242
- methanol, liq., OH stretching vibr. temp. depend., IR and Raman study 2-41348
- methanol, O-H bond, dipole moment derivatives, H bonding effects 2-4215
- methanol- $\text{H}_2\text{O}$  mixtures, thermal cond. anal MO calcs., enthalpy, entropy of association, H-bonds 2-35258
- m-methoxybenzaldehyde, internal rot., H-bond, pot. function, CNDO/2 calcs. 2-39319
- methyl alcohol- $\text{d}_4$  liq. struct., neutron diff. meas. 2-35375
- methyl salicylate, free jet, dual fluoresc. excitation, visible. UV obs. 2-15846
- methyl-N-methylcarbamate, assoc. by H bonds, vibr. spectra and anal. 2-43912
- N-methylacetamide ( $-d_1$ ), IR spectra, conformational dynamics, NH splitting and barrier height 2-29580
- N-methylacetamide and its N-deuterated derivatives, IR and Raman spectra 2-31470
- methylamine, association by H bonding, empirical pot. calcs. 2-15707
- N-methylformamide, aq. solns., dielectric relax., losses and consts. 2-21940
- monohydric alcohols, dielectric relaxation, mechanism of dipolar orientation (*Japanese*) 2-21938
- naphthalene- $\beta$ -naphthol mixed mol. cryst., manifestation of intermol. H bond, IR spectra 2-51598
- p-n-nonyloxy benzoic acid, molecular ordering EPR study, phase transitions 2-45026
- organic compounds,  $^{17}\text{O}$  NQR obs. of H bonding 2-36473
- oxalic acid dihydrate, joint X-ray and neutron data refinement 2-25680
- pentafluoroaniline, solid and soln. in  $\text{CCl}_4$ , mol. vibrs., Raman and IR spectra study 2-31495
- pentafluorobenzene-pyridene- $\text{d}_5$ , hydrogen bonding, NMR and IR spectra obs. 2-43761
- perfluoro-tert-butanol, interactions with nitroxide radical, interspecies H-bonding,  $^1\text{H}$  and  $^{19}\text{F}$  relax. and DNP meas. 2-20093
- phenol, interactions with nitroxide radical, interspecies H-bonding,  $^1\text{H}$  and  $^{19}\text{F}$  relax. and DNP meas. 2-20093
- phenol complexes, intermol. H bond enthalpy, spectrosc. determ. 2-37096
- phenolic hydroxyl groups in phenol and catechol, torsional barrier, partition of energy methods and MO calcs., H-bonds 2-7497
- phenols, substituted, intramol. H bonded, dielec. relax. processes 2-2183
- polydiacetylene soln., struct., conjugation lengths, Raman photoselection study 2-45010
- potassium hydrogen dichloromaleate, vibr. H-bonds, neutron scatt. study 2-40498
- potassium hydrogen maleate and derivatives, H bonding, inelastic neutron scatt. spectroscopy 2-40313

## hydrogen bonds continued

- potassium tetraoxalate, hydrogen bonds, X-ray redeterm. of cryst. struct. 2-45142
- proline dipeptide, struct. and bonding, ab initio calcs. 2-18171
- propyne, reorientational relax. in hydrogen bonded complexes, press. and temp. Raman study 2-22014
- protein central residues,  $\text{C}_{10}$  H bonds and  $\beta$  bands, struct. and bonding calcs. 2-18172
- pyridine trifluoroacetates, benzene solvent, isotope effects, IR study 2-29571
- pyridinium cations, in organic solvents, H-bonded ion-pairs, chemical shift,  $^{13}\text{C}$  NMR 2-11523
- quinone derivatives gas monolayers, virial coeff. 2-50348
- Rochelle salt, dynamical study including proton-optical phonon interaction 2-36547
- salicylic acid and acetylsalicylic acid, H-bonded, IR spectra 2-22007
- squaric acid, ferroelastic phase transition, theory 2-35572
- squaric acid, phase transition, neutron study 2-41298
- TCNQ salts, OPh(TCNQ) $_2$  and BIPA(TCNQ) $_2$ , quasi-one-dimens. cond., synthesis, intramol. H bond stabilising role 2-25803
- 3,3',7,7'-tetraphenylcyclotetrasiloxane-1,1,5,5'-tetrol-pyridine, H-bonds, cryst. struct. determ. 2-40368
- thymine- $\text{H}_2\text{O}$  complex hydrogen bond, ab initio SCF and SCF-CI calcs. 2-39335
- trimethylamine oxide dihydrate, H-bonds, low temp. IR spectra 2-43904
- valinomycin [ $\text{MeAla}^+$ ], cryst. struct. anal. 2-40371
- vanillin, internal rot., H-bond, pot. function, CNDO/2 calcs. 2-39319
- water, computer simulation study using 2D model, mol. distrib. functions, equations of state 2-35360
- water, ice like struct. and radial distrib. function, H-bonds 2-12447
- water, liq., random network model 2-1384
- water, shear viscosity, influence of pressure 2-26099
- water, vibrational band width, effect of dissolving nonelectrolytes 2-49452
- xanthene dyes in anionic micelles in  $\text{H}_2\text{O}$  and reverse micelles in heptane, picosecond fluoresc. study 2-43977
- xenylons in nonpolar and H-bond acceptor solvents at different temp., fluoresc. spectra 2-43959
- $[(\text{C}_6\text{H}_5)_3\text{P}^+\text{CH}(\text{COC}_6\text{H}_5)_2]\text{Br}^- \cdot \text{C}_2\text{H}_5\text{OH}$ , cryst. struct., X-ray study 2-5105
- CO-HF, H-bonded complex, ab initio SCF-MO calcs. 2-29496
- CO-HF, H-bonded complex, ab initio SCF-MO calcs. 2-29496
- $\text{Ca}(\text{ClO}_4)_2 \cdot 4\text{H}_2\text{O}$ , liq. and glassy states, OH stretching Raman spectra, H-bonds 2-22006
- Co III complexes, cis-bis(ethylenediamine)-Co(III) soln., PMR 2-43944
- CSF, soln. in formic, acetic and propionic acids, heat of soln., H-bonds 2-2725
- $\text{CSH}_3\text{PO}_4$ , H bonded ferroelec., neutron scatt. studies 2-31389
- $\text{CSHSO}_4$ , cryst. struct. refinement, H bonded chains of  $\text{SO}_4$  groups 2-12548
- $\text{CSH}_3(\text{SeO}_3)_2$ , hydrogen bond network, antiferroelectric phase transition  $^2\text{D}$  and  $^{133}\text{Cs}$  NMR study 2-51481
- $\text{Cs}_2[\text{Pt}(\text{CN})_4](\text{N}_3)_{0.25} \cdot 0.5\text{H}_2\text{O}$ , quasi-one-dimensional cond., phys. props. rel. to chem. composition 2-13045
- $\alpha\text{-DIO}_3$ , manifestation of H bond in NQR spectra (*Russian*) 2-41228
- DOF, vibrs., H bonds, Raman study 2-51570
- DOF-HOF, vibrs., H bonds, Raman study 2-51570
- F, Van der Waals radius, mean statistical value 2-4364
- F-C...NCH H-bonded complex, stretching force const. and dipole moment at SCF level 2-29728
- F-H...OH $_2$ , stretching force consts., correl. effects 2-39328
- $(\text{Gd}(\text{HCO}_3)_3(\text{H}_2\text{O})_4 \cdot \text{H}_2\text{O})$ , cryst. struct. determ. 2-21107
- H, frozen aq. solns. of acid., hyperfine interaction, INDO calcs. 2-49293
- H-bonded Van der Waals mol., 3-21G intermol. interaction energies appl. 2-764
- HCN,  $^1\text{H}$ ,  $^{13}\text{C}$ , and  $^{15}\text{N}$  nuclear mag. shielding, intermol. effects 2-34321
- HCN, dimer, H bonds, electric dipole moment, microwave obs. 2-20043
- $((\text{HCN})_3)$  polymers, electronic and mol. struct. 2-7687
- $\text{HCl}_2$ , vibr. struct. and equilib. geometry, ab initio MO-SCF calc. 2-4206
- HF, intermol. pot. energy functions, second virial props. and H-bond energies calc. 2-15865
- HF molecules, bent chain, equilib. geometry and vibr. spectra, ab initio studies 2-43783
- $(\text{HF})_n$ ,  $n=2-6$ , vibr. predissoc. spectra 2-7556
- $\alpha\text{-HIO}_3$ , crystal, NWR under press., H bond influence on internal field 2-46423
- $\alpha\text{-HIO}_3$ , manifestation of H bond in NQR spectra (*Russian*) 2-41228
- $\text{H}_{0.067}\text{MoS}_2$ , vibr. spectrum of hydrogen 2-8583
- $\text{H}_2\text{O}$ , liquid, OH stretching vibr. temp. depend., IR and Raman study 2-41348
- $(\text{H}_2\text{O})_2$ ,  $\text{H}^+$  chemical shift in neutral and ionic O-H...O hydrogen bonds 2-51486
- $(\text{H}_2\text{O})_3^+$ ,  $\text{H}^+$  chemical shift in neutral and ionic O-H...O hydrogen bonds 2-51486
- $(\text{H}_2\text{O})_4^+$ ,  $\text{H}^+$  chemical shift in neutral and ionic O-H...O hydrogen bonds 2-51486
- HOF, vibrs., H bonds, Raman study 2-51570
- $\text{In}^{3+}$  in  $\text{In}_2(\text{SO}_4)_3 \cdot x\text{H}_2\text{O}$  soln., X-ray diff. study 2-1380
- KF, in carboxylic acid solns., ab initio calcs., solvation, IR obs. 2-29501
- KF, soln. in formic, acetic and propionic acids, heat of soln., H-bonds 2-2725
- $\text{KH}_2\text{PO}_4$ , proton potential from spectroscopic and crystallographic data 2-36618
- $\text{KH}_2\text{PO}_4$ , Raman spectra and lattice dynamics 2-41338
- $\text{KH}_2\text{PO}_4$  type cryst., ferroelectric resonance and nonlinear effect 2-36545
- $\text{KH}_2\text{PO}_4$  type cryst., first order ferroelec. phase transition theory 2-36553
- $\text{K}^+[\text{HOC}(\text{CH}_3)_2\text{C}(\text{CH}_3)_2\text{OPHO}]^- \cdot \text{H}_2\text{O}$ , cryst. struct., X-ray diff. study 2-5104
- $\text{LuH}_2\text{Er}^{3+}$ , EPR study 2-46373
- NH-N, H bonds, pot. functions, vibr. anal., SCF calcs. 2-19953
- NH-O, H bonds, pot. functions, vibr. anal., SCF calcs. 2-19953
- $(\text{N}_2\text{H}_7)^+$ , H-bonded system,  $\text{H}^+$  transfer and electronic redistrib., ab initio MO calcs. 2-24848
- $\text{N}_2\text{H}_4\text{F}_2 \cdot 2\text{HF}$ , H-bonds,  $^1\text{H}$  and  $^{19}\text{F}$  NMR spectra, numerical anal., crystal struct. 2-13354
- $\text{NH}_4\text{HSeO}_4$ , cryst. struct. at room temp. 2-35473
- $\text{NH}_4\text{NH}_4\text{SO}_4$ , single cryst., Raman spectra study 2-51576
- OH-O, H bonds, pot. functions, vibr. anal., SCF calcs. 2-19953



**hydrogen bonds continued**

- (O<sub>2</sub>H<sub>2</sub>)<sup>+</sup>, H-bonded system, H<sup>+</sup> transfer and electronic redistrib., ab initio MO calcs. 2-24848  
 PbHPO<sub>4</sub>, ferroelectric, order onset, struct. study 2-35667  
 Pt complexes, H-bonding behaviour of 9-ethylguanine, Pt binding effects, <sup>1</sup>H NMR study 2-51478  
 RbF, soln. in formic, acetic and propionic acids, heat of soln., H-bonds 2-2725  
 Si:H, amorphous, prep. by reactive sputtering, characteristic props. 2-17625  
 SnCl<sub>2</sub>·2H<sub>2</sub>O, phase transition, effects of elastic vibration and compressibility, dimer model 2-21290  
 SnCl<sub>2</sub>·2H<sub>2</sub>O crystals, H bonded, ferroelec. transitions, pseudo-spin lattice coupled mode model 2-36552  
 SnCl<sub>2</sub>·2H<sub>2</sub>O, H bonded ferroelec., neutron scatt. studies 2-31389  
 SnCl<sub>2</sub>·2H<sub>2</sub>O, protonic conductivity, crit. fluctuations contrib. 2-16854  
 SnF<sub>3</sub><sup>-</sup>, frozen aq. soln., Mossbauer spectrosc. obs. 2-29637

**hydrogen compounds**

see also *deuterium compounds; hydroxonium ion; ice; steam; tritium compounds; water*

- air-H<sub>2</sub>S equilibria under Claus furnace conditions 2-31943  
 BWR startups, dissolved O<sub>2</sub> and H<sub>2</sub>O<sub>2</sub> concentration control procedures 2-4066  
 CCH<sub>4</sub>+Ar, vibr. and rot. energy transfer 2-39475  
 graphite-H<sub>2</sub>SO<sub>4</sub> intercalation cpd., electronic and chem. struct., XPS study 2-27051  
 halides, dissoc. energy, overlap integral rel. to atomic ionisation pots. 2-11582  
 halides, far IR absorpt., blue shift, phase transition effects 2-49399  
 halides, mol. ionisation potential and dissoc. energies related to atomic ionisation pot. 2-24599  
 HBr+D, reactive cross section, classical trajectory study 2-41877  
 HCN laser, far-IR, CW, cavity length stabilization system 2-34803  
 HF, oscillator strengths, photoabsorption and photoionisation, PES 2-24790  
 HF-HCl-H<sub>2</sub>O dislocation etchant for Czochralski grown forsterite Mg<sub>2</sub>SiO<sub>4</sub> 2-12598  
 hydrides, rot. const. vibr. const. and binding energies calc. using Born-Mayer interaction pot. model 2-15766  
 metal hydrides, H coordination, isotopic effect 2-45155  
 metallic hydrides, rechargeable, energy storage appl. 2-52395  
 polyamide, H<sub>2</sub>SO<sub>4</sub> penetration, <sup>35</sup>S autoradiographic study 2-2652  
 polyantimonic acid, ion exchanger, thermodynamic props. (*Russian*) 2-13945  
 pulsed HCl chemical laser, analysis 2-7753  
 β"-Al<sub>2</sub>O<sub>3</sub>·H<sub>2</sub>O<sup>+</sup> (-K<sup>+</sup>), protonic motion, NMR study 2-16856  
 β"-Al<sub>2</sub>O<sub>3</sub>·NH<sub>4</sub><sup>+</sup>·H<sub>2</sub>O<sup>+</sup>, proton motion and relaxation times 2-16855  
 CO-HCl, H-bonded complex, ab initio SCF-MO calcs. 2-29496  
 CO-HF, H-bonded complex, ab initio SCF-MO calcs. 2-29496  
 CO<sub>2</sub>-HF complex, energy hypersurface, stationary points, form. thermodynamics 2-15862  
 D+HCl(v=0,j)→DCl(v≤1,j')+H light-heavy-light reaction, quantum dynamical approx. 2-37065  
 EuS-H<sub>2</sub>S-H<sub>2</sub>-CO<sub>2</sub>, chem. equilib. study 2-41919  
 H-bonded Van der Waals mol., 3-21G intermol. interaction energies appl. 2-764  
 H<sub>2</sub>-HCl gasdynamic laser characts. 2-34734  
 HABC mols. with 16 valence electrons, mol. configs., MO study 2-4202  
 H<sub>2</sub>AlP<sub>3</sub>O<sub>10</sub>·2H<sub>2</sub>O, IR spectroscopic investigation of proton-containing groups 2-13464  
 H<sub>2</sub>Al<sub>2</sub>Si<sub>40</sub>O<sub>36</sub>·24H<sub>2</sub>O, H-mordenite, proton conduction 2-21376  
 HAT+Br, reactive scatt., H transfer, cross section meas., pot. hypersurfaces 2-47317  
 HAuCl<sub>4</sub>-polyvinyl alcohol layered medium for optical information recording 2-16080  
 H<sub>3</sub>BO<sub>3</sub> in formate baths, for electrodeposition of black Cr-Co alloy 2-51834  
 H<sub>3</sub>BO<sub>3</sub>·Na<sub>2</sub>B<sub>4</sub>O<sub>7</sub> glasses, thermal stability and film protective props. 2-40579  
 H<sub>3</sub>BO<sub>3</sub>-ZnO bonding material, composite form. under hot pressing and heat treatment 2-36826  
 HBr, adsorption on Pt (111) and (100), superlattice formation, expt. study 2-45726  
 HBr, aq. solns., depolarised Rayleigh scatt. 2-46618  
 HBr, electronic spectra and struct. in UV region above X'S<sup>+</sup> 2-24722  
 HBr, polymer, IR and Raman spectra, struct. in nitrogen matrix 2-15867  
 HBr+carbonyl bases, interactions, form. const., IR obs. 2-31901  
 HBr+Cl<sub>2</sub>, gas phase chem. chain reactions pulse laser photolysis, IR chemiluminescence 2-31914  
 HBr+F, nonadiabatic reactions, dynamics, isotope effect, pot. energy surface 2-9538  
 HBr+F, time resolved vibr. chemiluminesc., reaction rate const. 2-37049  
 HBr+F<sup>-</sup>→HF+Br<sup>-</sup>, HF vibr. state distrib., IR chemiluminesc. 2-17883  
 HBr+HF 2-37049  
 HCL-DCL mixed crystals, far IR and Raman spectra investigated in lattice mode region 2-36616  
 HCN, 'A' ground state, pot. surface, diatomic fragment method 2-39348  
 HCN, <sup>1</sup>H, <sup>13</sup>C, and <sup>15</sup>N nuclear mag. shielding, intermol. effects 2-34321  
 HCN CW subMM laser construction, output wavelength meas. (*Chinese*) 2-44327  
 HCN CW submillimetre wave laser (*Chinese*) 2-11709  
 HCN, dimer, H bonds, electric dipole moment, microwave obs. 2-20043  
 HCN laser, highly stable long-lasting 2-20320  
 HCN, multipole polarisabilities, coupled and finite perturbation theory using SCF MO LCAO CNDO density matrix appl. (*Russian*) 2-15721  
 HCN, ν<sub>3</sub> band photoacoustic spectroscopy 2-38699  
 HCN, pot. and dipole moment surfaces, force const., HF SCF CI calcs. 2-29512  
 HCN search in Comet Bradfield (1979 X), EHF obs. 2-38127  
 HCN stabilised laser with HF pumping 2-49780  
 HCN, stratosphere composition, IR spectra obs. 2-37964  
 HCN, stratospheric, absorption near 14 μm 2-23104  
 HCN, stretching vibr., higher-order electron correl. effects in pot. energy surfaces 2-19976  
 HCN sub-MM wave laser, intensity modulation with Schottky barrier diode 2-39679

**hydrogen compounds continued**

- HCN+O<sub>2</sub>(N<sub>2</sub>)(CO)(inert gases), vibr. relax., time resolved IR fluoresc. study 2-11566  
 ((HCN)<sub>n</sub>) polymers, electronic and mol. struct. 2-7687  
 HCN...HF, 3-21G intermol. interaction energies appl. 2-764  
 HCO<sup>+</sup>, rot. const., isotope effects, MW obs. 2-4264  
 HCOOLi<sub>2</sub>D<sub>2</sub>O, expt. and theoretical determ. of electron density 2-25836  
 HCO(SO<sub>2</sub>F)<sub>3</sub>, mol. struct., electron diff. obs. 2-49572  
 HCl, 2π and 5σ orbitals, photoionisation cross section calcs. 2-39452  
 HCl abundance in stratosphere from IR spectral obs. 2-37931  
 HCl, adsorption on Pt (111) and (100), superlattice formation, expt. study 2-45726  
 HCl and HCl-DCI, pretransitional clusters and heterophase fluctuations at ferroelec. transition, <sup>35</sup>Cl NQR study 2-26836  
 HCl, aq. solns., depolarised Rayleigh scatt. 2-46618  
 HCl, diamagnetic shielding tensor, struct. depend., MNDO and INDO calcs. 2-34300  
 HCl, dynamic polarisabilities and Raman intensities calc. 2-43916  
 HCl electron attachment rate rel. to XeCl laser kinetics 2-789  
 HCl electron attachment rate rel. to XeCl laser kinetics 2-7640  
 HCl, electronic spectra and struct. in UV region above X'S<sup>+</sup> 2-24723  
 HCl gas, elect. and mag. props. 2-50362  
 HCl in upper stratosphere, mixing ratios from near IR spectra 2-32561  
 HCl, inert gas perturbers, rot. vibr. line intensity modification at moderate press. 2-39371  
 HCl, liquid, depolarised rovibrational Raman spectra, mol. reorientation, second order spectral moments 2-13477  
 HCl, photoionisation, HCl<sup>+</sup> UV emission spectra 2-39417  
 HCl, polymer, IR and Raman spectra, struct. in nitrogen matrix 2-15867  
 HCl, press, broadening spectroscopy of pure rot. lines with far-IR optically pumped laser 2-24793  
 HCl pretreatment of n-GaAs, passivation and interface state studies 2-17747  
 HCl, rot. const. vibr. const. and binding energies calc. using Born-Mayer interaction pot. model 2-15766  
 HCl, thermodynamics of transfer from pure water to glycerol at 25°C 2-50883  
 HCl, vacuum UV photolysis, role of hot H atoms 2-22478  
 H<sup>35</sup>Cl, vibr.-rot. lines, rare gas broadening and shifting, temp. depend. 2-20132  
 HCl/Ar, matrix isolated, role of local translation in vibr. relax. 2-7632  
 HCl-D<sub>2</sub>-Ar(He), gasdynamic laser, thermally pumped, gain and energy parameters 2-20296  
 HCl-ethene(ethyne), H-bonded complex, mol.-struct., dissoc. energy, ab initio SCF MO calcs. 2-43779  
 HCl-He discharge, mixture, limiting charact. (*Russian*) 2-40193  
 HCl+Ca(P<sub>3</sub>), chemiluminesc. reaction, atomic reagent approach geom. effect on electronic branching 2-2707  
 HCl+carbonyl bases, interactions, form. const., IR obs. 2-31901  
 HCl+D, exchange reactions barrier heights, generalized reson. VB calc. 2-2708  
 HCl+Eu, laser induced 2-4377  
 HCl+F<sup>-</sup>→HF+Cl<sup>-</sup>, HF vibr. state distrib., IR chemiluminesc. 2-17883  
 HCl+K, endothermic reactions, vibr. and translational enhancement 2-47309  
 HCl+Yb, laser induced 2-4377  
 (HCl)<sub>2</sub>, 3-21G intermol. interaction energies appl. 2-764  
 HCl<sub>2</sub>, vibr. struct. and equilib. geometry, ab initio MO-SCF calc. 2-4206  
 HClO<sub>4</sub>, thermodynamics of transfer from pure water to glycerol at 25°C 2-50883  
 H<sup>35</sup>Cl(2)+H<sup>37</sup>Cl(0)→H<sup>35</sup>Cl(0)+H<sup>37</sup>Cl(2) vibr.-vibr. energy exchange probabilities 2-34541  
 HD, solid, Stark shift radiation-induced IR spectra 2-36612  
 HD VV 2-34730  
 HD<sup>+</sup> near dissoc. limit, vibr.-rot. spectra, proton hyperfine interaction 2-11452  
 HD(J'<sub>2</sub>Δ<sub>2</sub>), vibr., rot. const., ab initio pot. energy curve 2-49311  
 HDO, local mode behaviour, mol. vibr., Morse oscillator model 2-11559  
 HF abundance in stratosphere from IR spectral obs. 2-37931  
 HF amplified multiline laser beam coherent recomb., phase control 2-16052  
 HF, Auger electron spectrum, semi-empirical HAM/3 MO calc. 2-632  
 HF chain-reaction laser, energetics anal. allowing for rot. nonequilib. 2-34741  
 HF chemical laser driver for inertial confinement fusion, conceptual design 2-4518  
 HF electric-discharge chem. laser operating at high pulse repetition freq. 2-34799  
 HF, electron impact K-shell excitation, energy loss spectra 2-15909  
 HF, electrons forward inelastic scatt., electron energy loss spectrum, Rydberg struct. 2-15905  
 HF, exchange dispersion effect calc. 2-49538  
 HF gas, elect. and mag. props. 2-50362  
 HF gaseous concentration meas., CW He-Ne laser appls. 2-44368  
 HF high-gain 1.7 kJ laser amplifier, pulse compression using angular multiplexing 2-947  
 HF, in H<sub>2</sub>O, solute-solvent interactions, electrostatic model calcs. (*German*) 2-4235  
 HF in nozzles beam, vibr. excitation by CW HF laser in antiparallel coaxial arrangement, mass spectra 2-6038  
 HF in upper stratosphere, mixing ratios from near IR spectra 2-32561  
 HF, intermol. pot. energy functions, second virial props. and H-bond energies calc. 2-15865  
 HF, ion structures and proton affinities calc. using FOGO method 2-43784  
 HF, magnetic shielding tensors temp. dependence 2-29531  
 HF, mol. electrostatic pots., net atomic charge model 2-19960  
 HF, mol. multipole polarisabilities calc. by variational method using atom centred extended trial functions 2-4415  
 HF molecules, bent chain, equilib. geometry and vibr. spectra, ab initio studies 2-43783  
 HF, multiphoton and overtone absorpt., classical trajectory studies 2-34517  
 HF, rot. const. vibr. const. and binding energies calc. using Born-Mayer interaction pot. model 2-15766  
 HF, rot. relax. rates from direct inversion of press. broadened linewidths 2-15882  
 HF small scale CW laser, freq. stability 2-44333



## hydrogen compounds continued

- HF, trace gas minimum detectable quantities using high resolution spectroscopy 2-27758  
 HF, vertical ionisation pot. calc. using Rayleigh Schrodinger perturbation theory 2-49597  
 HF, vibr. level, rot. states, linewidths, two-photon spectra 2-4359  
 HF, vibr. relax., shock wave induced  $H_2 + F_2$  reaction 2-13940  
 HF, vibr. relax. between 300 and 700K, laser excited vibr. overtone fluoresc. meas. 2-7592  
 HF<sup>+</sup>, electronic states, A type doubling, summations over vibr. levels 2-7681  
 HF/DF pulsed chemical laser, UV prescribed,  $H_2/D_2$  donor and driving circuit parameter effects 2-44335  
 HF-(HCl) treatment of  $Al_2O_3 \cdot SiO_2$  refractories, for chem. phase anal. 2-41957  
 HF-acetonitrile dimer, microwave rot. spectra,  $^{14}N$  nucl. quadrupole coupling, spin-spin coupling 2-43892  
 HF-ClF, minima on 4-31G and 4-31G\* energy hypersurfaces and thermodynamics of form. 2-668  
 HF-DF chemical laser, pulsed, magnetically confined electron beam initiation 2-49770  
 HF-ethene(ethyne), H-bonded complex, mol.-struct., dissociation energy, ab initio SCF MO calcs. 2-43779  
 HF-HCl CW chain-excited self-contained chem. laser utilising an F- $H_2$ -ClF-He mixture 2-34738  
 HF-Li<sup>+</sup>(Na<sup>+</sup>)(Be<sup>2+</sup>)(Mg<sup>2+</sup>), complex form., electronic struct., FSGO method 2-41918  
 HF+Ar, rot. relax. rates from direct inversion of press. broadened linewidths 2-15882  
 HF+Ar, state to state cross sections for energy transfer, modified infinite-order sudden theory 2-29698  
 HF+CN $\rightarrow$ FH, CN $\rightarrow$  reaction, quantum chem. study 2-22433  
 HF+ClF, association reaction, thermodynamics, isomerism, energy hypersurfaces 2-27418  
 HF+D, exchange reactions barrier heights, generalized reson. VB calc. 2-2708  
 HF+HBr(HI)(CO<sub>2</sub>)(N<sub>2</sub>O)(CO)(N<sub>2</sub>)(O<sub>2</sub>), collisional relax., rate consts. 2-37049  
 HF+HF, inelastic dipole-dipole scatt., cross sections, sudden approx. 2-4369  
 HF+K, endothermic reactions, vibr. and translational enhancement 2-47309  
 HF+Li $\rightarrow$ LiF+H, vibr. distrib., pot. energy surfaces, collinear quasiclassical study 2-2426  
 HF+Ne(Ar)(Kr), rot. to translational energy transfer, state-to-state cross sections 2-39480  
 (HF)<sub>2</sub>, 3-21G intermol. interaction energies appl. 2-764  
 (HF)<sub>2</sub>, susceptibilities and nuclear mag. shielding consts., intermol. effects 2-29627  
 (HF)<sub>n</sub>, n=2-6, vibr. predissoc. spectra 2-7556  
 $H_2F^+$ , A' state, semiempirical VB pot. energy surfaces 2-34312  
 $H_2F_2^{+}$ , anions, mol. struct., MNDO calcs. 2-15726  
 HF\* fluorescence at 2.8  $\mu m$  in  $SF_6 \cdot H_2$  mixtures induced by pulsed CO<sub>2</sub> laser radiation 2-20119  
 HF...HCl, 3-21G intermol. interaction energies appl. 2-764  
 (H(H<sub>2</sub>O))<sub>n</sub>, Sb<sub>2</sub>O<sub>3</sub>, new proton conductor 2-16847  
 HI+F, time resolved vibr. chemiluminesc., reaction rate const. 2-37049  
 HI+F $\rightarrow$ HF+I<sup>+</sup>, HF vibr. state distrib., IR chemiluminesc. 2-17883  
 HI+HF, collisional relax., rate consts. 2-37049  
 HIF structure study 2-39503  
 $\alpha$ -HIO<sub>3</sub> crystal, NWR under press., H bond influence on internal field 2-46423  
 $\alpha$ -HIO<sub>3</sub>, manifestation of H bond in NQR spectra (Russian) 2-41228  
 HIO<sub>3</sub>-RbIO<sub>3</sub>(CsIO<sub>3</sub>), phase equilibria, X-ray and thermal anal. (Chinese) 2-31684  
 HN<sub>2</sub><sup>+</sup>, millimeter and submillimeter rot. transitions 2-29567  
 H<sub>2</sub>N-OH, conformational stability, ab initio SCF-MO calcs. 2-34273  
 H<sub>2</sub>N-SH, conformational stability, ab initio SCF-MO calcs. 2-34273  
 HNC and HCN abundance ratios in giant mol. clouds, implications, EHF obs. 2-14897  
 HNC, stretching vibr., higher-order electron correl. effects in pot. energy surfaces 2-19976  
 HNC-HCN equilb. system, high temp., high resolution IR spectral meas. 2-20056  
 HNCO, basis set depend. of calc. geom. 2-49276  
 HNF+F, IR chemiluminesc. obs., heat of form., ab initio and statistical calcs. 2-37077  
 HNO, electronic states, equilibrium geometry, vibr., complete active space SCF 2-43780  
 HNO<sub>3</sub>, aq. solns., depolarised Rayleigh scatt. 2-46618  
 HNO<sub>3</sub>, atm. conc., interferometric spectra study 2-14571  
 HNO<sub>3</sub> in rain of NE. USA, 1964-1979 period 2-2823  
 HNO<sub>3</sub>, microwave spectrum, centrifugal distortion anal., harmonic force field, ab initio calc. 2-4267  
 HNO<sub>3</sub> solvent with Pu(NO<sub>3</sub>)<sub>3</sub>, self-radiolysis 2-27464  
 HNO<sub>3</sub>, stratosphere altitude distrib., photochem. model 2-42418  
 HNO<sub>3</sub> synthetic spectra around 11.5  $\mu m$  (French) 2-48008  
 H(NO<sub>2</sub>)<sub>2</sub><sup>+</sup>, C<sub>2</sub> and C<sub>2h</sub> symm., force const. and pot. energy distrib., normal coord. anal. 2-29562  
 H<sub>2</sub>NO radical in Xe matrix, ESR spectrum 2-41200  
 HN(SO<sub>2</sub>)<sub>2</sub><sup>+</sup> derivatives, S-N and S-O vibr., Raman spectra study (French) 2-49427  
 H<sub>2</sub>NSO<sub>2</sub>F, mol. struct., electron diff. obs. 2-49572  
 HNSi ionisation pot., MSW SCF Xalpha calc. 2-11403  
 HNb<sub>6</sub>I<sub>11</sub>, cluster compound, spin-cross-over transition 2-2053  
 H<sub>2</sub>Nb<sub>6</sub>O<sub>19</sub>, niobic acid, <sup>1</sup>H NMR, IR spectra, conductivity and ion exchange studies 2-2145  
 HO<sub>2</sub>,  $\nu_2$  bending fundamental band, vibr.-rot. spectrum obs. using diode laser spectroscopy, rot. const. 2-11450  
 HO<sub>2</sub><sup>+</sup>, X<sup>3</sup>A' state, VUV PES of transient species 2-34493  
 HO<sub>2</sub>+H, reaction rate consts., LMR spectrosc. determ. 2-15821  
 HO<sub>2</sub>+OH, rate coeff. at 1 atmosphere press. and 308K 2-27419  
 H<sub>2</sub>O fluorescence, Nimbus 7 SAMS meas. in 2.7  $\mu m$  band in mesosphere 2-23071  
 H<sub>2</sub>O radial profile, 1.35 cm obs. of nebulae (Russian) 2-33175  
 H<sub>2</sub>O-H<sub>2</sub>PO<sub>4</sub>-AlPO<sub>4</sub> system, pressure-vol.-temp. behaviour, rel. to hydrothermal growth of AlPO<sub>4</sub> 2-25783  
 (H<sub>2</sub>O)<sub>2</sub>, 3-21G intermol. interaction energies appl. 2-764  
 H<sub>2</sub>O<sub>2</sub>, ion structures and proton affinities calc. using FOGO method 2-43784  
 H<sub>2</sub>O<sub>2</sub>, stratosphere vertical profile obs. 2-32618

## hydrogen compounds continued

- H<sub>2</sub>O<sub>2</sub>-NaOH solution+Cl<sub>2</sub>, O<sub>2</sub>(<sup>1</sup> $\Delta$ ) generation for I laser pumping 2-2700  
 H<sub>2</sub>O<sub>2</sub>+OH, laser flash photolysis, reaction rate const., reson. fluoresc. 2-17880  
 H<sub>2</sub>O<sup>+</sup>, nonplanarity evidence 2-11393  
 H<sub>2</sub>O<sup>+</sup>, the real ions in aq. soln. and bases 2-5034  
 (H<sub>2</sub>O)<sub>2</sub><sup>+</sup>, H<sup>+</sup> chemical shift in neutral and ionic O-H...O hydrogen bonds 2-51486  
 (H<sub>2</sub>O)<sub>2</sub><sup>+</sup>, H<sup>+</sup> chemical shift in neutral and ionic O-H...O hydrogen bonds 2-51486  
 HOCl+Cl, product channels, reaction rate consts. 2-9537  
 HOF, vibr., H bonds, Raman study 2-51570  
 HOF-DOF, vibr., H bonds, Raman study 2-51570  
 HO<sub>2</sub>NO<sub>2</sub>+OH, reaction rate const. determ. by FTIR spectroscopy and relative rate method 2-22412  
 H<sub>2</sub>O...HF, 3-21G intermol. interaction energies appl. 2-764  
 H<sub>2</sub>O<sub>2</sub> $\nu_6$ (b) band intensity around 1266 cm<sup>-1</sup> 2-24685  
 H<sub>2</sub>PNH<sub>2</sub>, mol. struct. pseudopot. calcs. (French) 2-15708  
 H<sub>2</sub>PNHCl, mol. struct. pseudopot. calcs. (French) 2-15708  
 H<sub>2</sub>PO<sub>4</sub>, 4.5 MW fuel cell power plant urban demonstration 2-32061  
 H<sub>2</sub>PO<sub>4</sub> fuel-cell power system, 500 W capacity, operating characts. (Japanese) 2-22599  
 H<sub>2</sub>PO<sub>4</sub>, solutions, electropolishing of Cu:P (Russian) 2-22371  
 H<sub>2</sub>PtCl<sub>6</sub>, polyvinyl alcohol layered medium for optical information recording 2-16080  
 HS<sup>+</sup>+SF<sub>6</sub>, reactions charge exchange, electron affinity 2-31913  
 H<sub>2</sub>S, absolute proton affinity, ab initio mol. orbital theory 2-44138  
 H<sub>2</sub>S bent triatomic, rot. distrib. in photodissoc. 2-39369  
 H<sub>2</sub>S, chemisorption on Si(111)7 $\times$ 7, electron orbital energies, photoemission spectra 2-30946  
 H<sub>2</sub>S, He-Xe laser radiation, absorpt. coeffs. 2-11637  
 H<sub>2</sub>S in Black Sea, mathematical simulation of distrib. 2-23024  
 H<sub>2</sub>S, liq., proton and deuteron spin-lattice relax. times, press. and temp. depend. 2-26776  
 H<sub>2</sub>S metal oxide sensor history and performance, repeatability improvement 2-31984  
 H<sub>2</sub>S molecule, electron scatt. at 0-10 eV, total cross sections 2-49577  
 H<sub>2</sub>S, multiphoton ionisation mass spectrum, dissociation 2-15859  
 H<sub>2</sub>S, Rydberg transitions, ionisation pot., vacuum UV PES 2-15849  
 H<sub>2</sub>S, tritium activity, Geiger internal counting method 2-11352  
 H<sub>2</sub>S<sup>+</sup>, A<sup>+</sup> state, predissociated levels, electronic transition obs. 2-49534  
 H<sub>2</sub>S<sup>+</sup>, Renner effect studied using adiabatic approach, vibronic levels calc. 2-20029  
 H<sub>2</sub>S-D<sub>2</sub>S system, photoacoustic detection of H-D exchange 2-47302  
 (H<sub>2</sub>S)<sub>n</sub>, n=1 to 7, mol. beam photoionisation 2-20141  
 HSCN, geometric and electronic struct. studied by non-empirical and MNDO methods 2-43805  
 HSO, microwave spectra, hyperfine coupling, rot., centrifugal distortion and spin-rot. const. 2-15777  
 H<sub>2</sub>SO, aerosols, 1  $\mu m$  extinction of solar radiation 2-23106  
 H<sub>2</sub>SO<sub>4</sub>, aq., mean activity and osmotic coeffs., data collection 2-33248  
 H<sub>2</sub>SO<sub>4</sub>, aq., resolution of Raman spectra using principal factor anal. 2-22005  
 H<sub>2</sub>SO<sub>4</sub> hybrid cycle electrolytic cell separators resistivity and chemical stability 2-47349  
 H<sub>2</sub>SO<sub>4</sub>, microwave spectra, struct., and dipole moment 2-11463  
 H<sub>2</sub>SO<sub>4</sub> production by electrogenerative oxidation of SO<sub>2</sub> 2-22455  
 H<sub>2</sub>SO<sub>4</sub> vapour concentration in stratosphere, extended meas. 2-32564  
 H<sub>2</sub>SO<sub>4</sub>-H<sub>2</sub>O droplets, nucleation and growth, expansion cloud chamber observations 2-26030  
 H<sub>2</sub>SO<sub>4</sub>-H<sub>2</sub>O, oxonium ion nucl. quadrupole double reson. 2-24740  
 HSiCl<sub>3</sub>, liq. and solns., mol. motion, relax. times, Raman bandwidths study 2-31461  
 H<sub>2</sub>SiF<sub>6</sub> treatment of Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> refractories, for chem. phase anal. 2-41957  
 H<sub>2</sub>SiOSiH<sub>3</sub>, ground state, conformations, relative energies, STO-3G calcs. 2-20203  
 HTO+H<sub>2</sub>S, exchange reaction equilibrium const. for tritiated water enrichment 2-47336  
 H<sub>2</sub>(UO<sub>2</sub>)<sub>2</sub>(AsO<sub>4</sub>)<sub>2</sub>·8H<sub>2</sub>O, phase II, ferroelastic character, point groups 2-35571  
 HVO<sub>2</sub>·AsO<sub>4</sub>·4H<sub>2</sub>O and HUO<sub>2</sub>PO<sub>4</sub>·4H<sub>2</sub>O, proton cond., activation enthalpy 2-12829  
 H<sub>2</sub>WO<sub>3</sub>, electronic struct., SCF MS Xalpha calcs. 2-49286  
 H<sub>2</sub>WO<sub>3</sub>·H<sub>2</sub>O, electrochem. reduction prep., cryst. struct., and proton diffusion rates 2-30650  
 HX (X=Cl<sub>2</sub>, Br<sub>2</sub>, I<sub>2</sub>) efficient two-reaction splitting 2-9690  
 Hcl+Sr<sup>+</sup>, SrCl (A-X, B-X) bands chemiluminesc. 2-41903  
 LaNi<sub>4</sub> metal hydrides, mechanically stable, designed for rapid cycling, preparation and characts. 2-32130  
 Na<sub>2-x</sub>(H<sub>2</sub>O)<sub>x</sub>·Al<sub>2</sub>Si<sub>2</sub>O<sub>10</sub>·2H<sub>2</sub>O, H-natrolite, proton conduction 2-21376  
 NiSO<sub>4</sub>·7H<sub>2</sub>O-MgSO<sub>4</sub>·H<sub>2</sub>BO<sub>3</sub> electrolyte, stable operation conditions for Ni plating Fe powder 2-41807  
 Pb/H<sub>2</sub>SO<sub>4</sub> secondary cells, negative plate active mass structure anal. 2-52324

## hydrogen distribution see hydrogen economy

## hydrogen economy

- advanced unipolar electrolysis of H<sub>2</sub>O 2-32128  
 alloys, pseudobinary AB<sub>2</sub>-type, H<sub>2</sub> absorpt. 2-41929  
 alternative H<sub>2</sub> storage methods costs estimation for large storage facilities 2-42051  
 bibliography, overview of variety of aspects 2-47532  
 biomass, photocatalytic prod. of H<sub>2</sub> 2-6192  
 biomass depolarised water electrolysis 2-27739  
 catalytic combustion of H<sub>2</sub>, role in future H<sub>2</sub> energy systems 2-32129  
 catalytic combustion of hydrogen in model appliances 2-47506  
 cathodic H<sub>2</sub> evolution on surface Ni catalyst in KOH solutions 2-37463  
 differential heat flow calorimetry 2-8704  
 Dorrance two-reaction thermochemical cycles, solid-solid heat exchange system using intermediate fluid medium, effectiveness 2-27735  
 energy conversion and storage in polytype materials 2-6191  
 energy storage systems, electrolytic production, appls., ecological and climatic effects (Italian) 2-42047  
 environmental impact of thermochemical processes for H<sub>2</sub> prod., preliminary assessment 2-9691  
 EPRs H<sub>2</sub> program, status 2-32131  
 heterogeneous redox catalysts for photochem. H<sub>2</sub> prod. 2-6193  
 high temp. reactors, thermochemical water splitting appls. 2-6132



**hydrogen economy continued**

- high temp. water vapour electrolysis for  $H_2$  production, concepts and design for scaling up 2-47529
- high temperature  $H_2$  production processes interfacing with conc. solar radiation 2-27555
- HYFIRE II fusion reactor system characts. and design for  $H_2$  and  $O_2$  production 2-15629
- liquid  $H_2$  as automotive fuel, storage and refueling 2-6196
- liquid  $H_2$  worldwide production prospects for utilisation as aircraft fuel 2-37461
- microcavity  $H_2$  storage using hollow glass microspheres, two grades assessment 2-9692
- military-vehicles using  $H_2$  fuel cells 2-32132
- on-board fuel storage systems of hydrogen powered vehicles, comparison of expenses 2-37464
- optimisation from tris(2,2'-bipyridyl)Ru(II) photosensitised reduction of methyl viologen 2-47533
- OTEC fed fuel cells and hydrogen technology 2-9670
- photoelectrochemical conversion/storage cell for solar energy conversion and simultaneous storage of  $H_2$  2-52372
- porous Ni electrodes preparation, physical characts. and polarisation in strong alkali for water electrolysis 2-9550
- porous Ni electrodes use in multicell water electrolysis modules 2-9551
- production by photoelectrolysis with powder semiconductor anode 2-32124
- production methods and costs 2-22675
- ships fueled by  $H_2$ , United States Navy studies review 2-6195
- small-scale uses and costs of hydrogen derived from OTEC ammonia 2-9695
- solar hydrogen plantations for hydrogen production, feasibility and economics for replacing fossil fuels 2-42048
- solar hydrogen system design considerations 2-9694
- solid polymer electrolyte water electrolysis 2-9693
- storage, rechargeable metallic hydrides prospects 2-52395
- technologies utilising solar energy, review and assessment for 1985-2000 2-37460
- technology developments, production, storage and transportation 2-22676
- thermochemical  $H_2$  prod.  $CaSO_4 + WO_3$  reaction kinetics 2-27734
- thermochemical  $H_2$  production, technology review 2-32125
- thermodynamics for single-phase regions, differential heat flow calorimetry 2-8705
- three-compartment electrolytic cell for anodic oxidation of sulfur dioxide and cathodic production of hydrogen 2-37462
- UT-3 thermochemical  $H_2$  production process reactor design 2-32126
- water electrolysis by high pressure and medium temp. technique 2-17903
- water electrolysis for hydrogen production using reactively sputtered polycrystalline thin film  $TiO_2$  electrodes 2-6043
- world conference on hydrogen energy 2-47534
- Al-Ca, absorption of  $H_2$ , thermodynamics,  $H_2$  titration method 2-8706
- $H_2$  fueled automotive vehicles, fuel cell substitution for internal combustion engines 2-6194
- $H_2$  production by  $H_2O$  electrolysis 2-32123
- $H_2$  production by water electrolysis with photovoltaic solar energy conversion 2-47528
- $H_2$  storage, biomass, solar energy system for agriculture, drinking water and hydroelectric power 2-27736
- $H_2-O_2$  fuel cells hydrogen supply generation by Mg-Al hydrolysis catalysed by  $C_2O_4$  and  $MoO_3$  2-2816
- HCl/HBr electrolysis in solid polymer electrolyte cells 2-32127
- $H_2O$ , dissociation in thermoelectrochem. cycles, max. ballast (Russian) 2-9689
- $H_2O$  electrolysis, gas evolution, bubble behaviour, gas fracture and electrolyte resist. 2-27737
- $H_2O$  electrolysis using polyethylene-based solid polymer electrolyte membranes 2-42049
- $H_2O$  photoelectrolysis using composite semiconductor photoanode 2-47553
- $H_2PO_4^-$  inert gas mixtures laminar burning velocities 2-27738
- $H_2SO_4$  hybrid cycle electrolytic cell separators resistivity and chemical stability 2-47349
- HX ( $X=Cl_2, Br_2, I_2$ ) efficient two-reaction splitting 2-9690
- $LaCo_5$ , absorption of  $H_2$ , thermodynamic and kinetic characts., diffusion coeff. determ. 2-41926
- $LaNi_5$  metal hydrides, mechanically stable, designed for rapid cycling, preparation and characts. 2-32130
- $LaNi_5$  hydride device for minimising laboratory  $H_2$  hazards 2-6197
- $LaNi_5-H$ , plateau press. and hysteresis, annealing effect 2-41928
- Mg-Ni hydrides effective thermal conductivity measurements under conditions of 200°C and 40 atm. press. 2-42050
- $Mg_2Cu-H_2$  system for hydrogen storage, influence on props. of Al addition 2-37465
- $NH_3$  synthesized from  $H_2$  produced using nuclear process heat, use as multipurpose energy vector 2-47531
- $O+H_2 \rightarrow OH+H$ , reaction path calcs. 2-9544
- $SO_2$  oxidation in  $H_2SO_4$  solutions for  $H_2$  production (French) 2-47535
- $SrCeO_3$ -based sintered oxides, proton cond., appl. to steam electrolysis for  $H_2$  prod. 2-12830
- Ti-Co-Fe, absorption-desorption characts. of  $H_2$  2-8703
- ZrMn<sub>2</sub>H, nonstoichiometric, stability, mag. props. 2-41126

**hydrogen embrittlement**

- cyclic delayed failure, crack propag. rel., effect of stress wave shape 2-12668
- metal-H interatomic potential calc. 2-40479
- metals, H embrittlement eval. using fracture mechanics criteria 2-41852
- metals, hydride-forming, terminal solid solubility, effects of misfit and external stresses 2-12759
- metals, Nelson curves for H attack, model calc. 2-50751
- nuclear reactor pressure vessels, influence of austenitic stainless steel internal cladding on H embrittlement resistance 2-19633
- plastically twisted, H-induced cracking 2-22321
- steel, AISI 4340, H-induced cracking eval. by acoustic emission technique (Japanese) 2-52134
- steel, alloy, shear banding, effect of low fugacity  $H_2$  2-36969
- steel, ASE 4340, external stress effect on H blistering 2-2585
- steel, C, H attack cavity growth mode 2-47177
- steel, C, high strength wire, stress corrosion cracking 2-13840
- steel, C, hydrogen embrittlement, high temp. 2-13799
- steel, C-Mn, exposed to NaCl acidified solns., H absorpt. and evolution kinetics 2-31826
- steel, dual-phase, H embrittlement phenomena, SEM study 2-9407

**hydrogen embrittlement continued**

- steel, fatigue crack propagation of SNCM8 in rotating bending, effect of environment (Japanese) 2-9402
- steel, fracture at different stages of H embrittlement 2-41726
- steel, H attack, kinetics 2-17734
- steel, H embrittlement, gaseous, rate controlling process 2-12675
- steel, H traps, coverage in diffusion 2-45627
- steel, H-charged, ductility determ. 2-5959
- steel, high strength impact, hydrogen induced crack propagation (Chinese) 2-52035
- steel, high-strength, H embrittlement eval. using fracture mechanics criteria 2-41852
- steel, high-strength reinforcing, resist. to H embrittlement, surface condition influence 2-27282
- steel, hydrogen corrosion, Mo additions influence 2-41806
- steel, low alloy, H absorpt. phenomenon in  $H_2S$  soln. (Japanese) 2-22313
- steel, low C, H conc. in samples exposed to geothermal fluids 2-17766
- steel, low strength, H embrittlement, fracture topographical feature 2-52012
- steel, mild, H diffusion, effect of sulphide inclusions 2-41730
- steel, stainless, H content and diffusion coefficient, meas. by electrochem. technique (Japanese) 2-21391
- steel, stainless, hydrogenated, struct. and resist. to deform. 2-27239
- steel, stainless, precip. hardening, H embrittlement 2-47179
- steel, stainless, weld overlay, H-induced cracking in heat-affected zone of steam generator forging 2-4015
- steel, yield stress, apparent, effect of H on delayed plasticity 2-52011
- steel wires, HSLA, hydrogen induced delayed failure 2-27262
- void sheets nucleation, in creep and hydrogen attack 2-27217
- Zircaloy-4, cladding embrittlement due to inner surface oxidation 2-43529
- Al alloy, stress corrosion cracking and corrosion fatigue, specimen thickness effects 2-41711
- Al-Mg (8 wt.%), effect of temp. and strain rate on hydrogen embrittlement (Japanese) 2-9400
- Fe, hydrogen embrittlement, microscopic process of failure and mechanism (Japanese) 2-52032
- Ti, H diffusion coeffs., determ. by nuclear physics method 2-12845
- Ti-Al-Mo-V, H embrittlement and stress corrosion cracking 2-17736
- Ti-Al-V, H diffusion coeffs., determ. by nuclear physics method 2-12845
- Ti-Ni, H diffusion coeffs., determ. by nuclear physics method 2-12845
- V, H embrittlement, electron microscopy study 2-13815
- Zn coating on steel 2-9467
- hydrogen energy** see *hydrogen economy*
- hydrogen ion activity** see *pH*
- hydrogen ion concentration** see *pH*
- hydrogen ions**
- backscattering from solid targets, empirical formulas 2-17587
- $H^-$  eigenstates, analytically derived switching functions 2-19964
- $H^+$  photon stimulated ion desorption from GaAs (110)/ $H_2O$  2-1740
- hydrogenic ions, 1s ground state, Compton defect theory appl. (French) 2-11553
- hydrogenic ions, stark broadening of Lyman- $\beta$  line by low freq. fields in dense plasmas 2-49331
- hydrogenlike ions, metastable  $2s_{1/2}$  level, lifetime meas. 2-34354
- inner shell ionisation by light ions, conference, Linz, Austria (March 1981) 2-42774
- interdiffusion of hydronium and alkali ions in leached glasses, evidence 2-12844
- K-shell ionisation by protons and deuterons, Coulomb deflection factors, role of dipole amplitudes 2-44040
- in LMC, hot stars and interstellar H distrib. 2-6660
- in M101, giant spiral galaxy, assoc. of H I concentrations and H II complexes from radio obs. 2-33146
- M16 (NGC 6611), investigation of neutral and ionised gas 2-6648
- magnetosphere ring current ion composition 2-3160
- multicusp H ion source, effect of magnetic filter 2-10920
- Stark effect appl. 2-49330
- $Z=6$  to 33, dielectronic satellite spectra for ( $2l'1s-1s2l$ ), ( $2l'3l'-1s3l$ ) transitions 2-34344
- $Be+H^+$ , quasifree electron bremsstrahlung 2-19990
- $H^-$ , Feshbach-Rubinov single variable var. method, generalised symmetrisation 2-39303
- $H^-$ , form. from electron impact dissociation of  $H_2^-$ , decay to ground state 2-4398
- $H^-$  ion formation from a surface conversion type ion source 2-8331
- $H^-$  ion source, charge exchange, conversion coeff. and scatt. angle 2-4382
- $H^-$  polarised ions production by electron transfer from atoms 2-24469
- $H^-$ , UV transitions and struct. investig. using relativistic doppler effect 2-7517
- $H^+$  and  $OH^-$  permeability, of phospholipid vesicles 2-27797
- $H^+$  concentration profile and diffusion coeff. for topside ionosphere 2-3141
- $H^+$  flow velocities in ionosphere polar regions 2-23172
- $H^+$  high energy beam, non- $H_2$  neutralisation, appl. to plasma heating 2-40128
- $H^+$  ions in Ni, Ag, Au, 20-140 keV, stopping power meas. 2-43734
- $H^+$ , stopping power, test of Brandt theory 2-25490
- H-like ions, electron impact ionisation, cross section and rates, appl. to plasmas 2-7651
- H-like ions, spectral broadening in intense mag. field 2-43846
- H+Ta, L-shell X-ray cross section meas. in energy range 0.125-4 MeV/amu 2-39487
- $H^+ + CO(D_2)(N_2)$ , electron detachment, direct coupling, charge exchange, shape resonances 2-44070
- $H^+ + H(H_2)(He)(Ne)(Ar)(N_2)$ , electron detachment, cross sections, form. of excited H atoms 2-24841
- $H^+ + He$ , electron detachment, differential elastic cross section, detachment cross section 2-20170
- $H^+ + He$ , tests of interaction pots., ion mobility and diffusion coeff. calcs. 2-34539
- $H^+ + ^{12}C$ , K-shell ionisation theory 2-49565
- $H^+ + Ag$ , L-shell X-ray cross section meas. in energy range 0.125-4 MeV/amu 2-39487
- $H^+ + Ar$ , H(2p) charge exchange excitation, alignment tensor components 2-49570
- $H^+ + Ar$ , K-shell ionisation probability meas. 2-24840
- $H^+ + C$ -foil collisions, K-Auger emission meas. 2-44078
- $H^+ + CO_2$ , vibr. excitation, mode selectivity and time effects 2-44051



## hydrogen ions continued

- $H^+ + C(N)(O)(Ne)(Ar)$ , K-shell electron capture calcs. 2-24847  
 $H^+ + Cu(Ag)(Au)$ , K-shell ionisation, impact parameter depend. 2-44042  
 $H^+ + H$ , 1s-1s electron capture, exact second Born calcs. 2-15893  
 $H^+ + H$ , charge transfer and ionisation cross sections, quantum study, finite-elemental 2-39485  
 $H^+ + H$ , classical trajectory calcs. using Wigner function 2-20160  
 $H^+ + H$ , differential charge transfer cross sections calc. using classical trajectory Monte Carlo method 2-34557  
 $H^+ + H$ , electron capture, cross sections, eikonal calcs. 2-34560  
 $H^+ + H$ , electron capture into excited s and p states 2-24846  
 $H^+ + H$ , ionisation, excitation and charge transfer cross section calcs. 2-44089  
 $H^+ + H$ , laser-induced charge transfer, photon-induced cross section 2-4379  
 $H^+ + H$ , total charge transfer cross-section calc. 2-788  
 $H^+ + H$  scatt. at low energies, phase shifts and differential cross sections 2-34551  
 $H^+ + H^-$  collisions, one-electron treatment 2-11570  
 $H^+ + H(1s)$ , collisions at 1 to 7 keV, direct and charge exchange excitation processes 2-20181  
 $H^+ + H(1s)$ , evaluation of second Born amplitude as two dimensional integral 2-49546  
 $H^+ + He$ , impact excitation, differential cross sections calcs., Glauber approx. 2-24844  
 $H^+ + He$ , resolution dependence and asymmetry of electron capture to the continuum spectra 2-20182  
 $H^+ + He^+$ , charge exchange excitation cross sections, mol. state study 2-34563  
 $H^+ + He^+$ , electron transfer collisions, cross sections, Sturmian basis 2-44088  
 $H^+ + He^{2+}$ , laser-induced charge transfer, photon-induced cross section 2-4379  
 $H^+ + NH_3(H_2O)$ , protonation energies, correl. corrections, basis set depend. 2-9528  
 $H^+ + Ph(Dy)$ , L-shell X-ray prod. cross sections meas. 2-44043  
 $H^+ + Ta$ , L-X-ray prod. at 280 to 400 keV 2-20172  
 $H^+ + Ti(Cr)(Co)(Ni)(Cu)(Zn)$ , K-shell ionisation, total and differential cross sections meas. 2-44039  
 $H^+ + X^{(Z-1)+} \rightarrow H^+ + X^{Z+}$ , modified Coulomb-Born approx. and charge transfer 2-34554  
 $H_2^+$ , electron impact dissociation, unstable  $H^-$  form. 2-4398  
 $H_2^+$ ,  $1s\sigma$ , and  $2p\sigma_u$  states, diatomic interactions in momentum space 2-24604  
 $H_2^+$ , double wells pots. 2-49268  
 $H_2^+$ , in external field, interaction parameters calcs. 2-44125  
 $H_2^+$ , internal stresses and chemical binding 2-39279  
 $H_2^+$  ion collision induced dissociation,  $H+H(2p)$  and  $H^+ + H(2p)$  fragmentations 2-24845  
 $H_2^+$ , Lyman- $\alpha$  radiation enhancement following foil-induced dissociation 2-44075  
 $H_2^+$ , molecular shape effects and quantum theory 2-11379  
 $p-H_2^+$ , neutron collisions, elastic and rotationally inelastic cross sections 2-34592  
 $H_2^+$ , single centre expansions, implications and improvements 2-43791  
 $H_2^+$ , Sturmian techniques for calc. energy eigenvalues 2-39289  
 $H_2-H_2^+(H_2-H_2^+)(O^2-H_2^+)(S^2-H_2^+)$ , electron transfer, quantum chemical approach 2-39490  
 $H_2^+ + Ar$ , vibr. effects in proton and charge transfer 2-2695  
 $H_2^+ + H_2O(D_2O)$ , proton transfer, unimolecular decay and isotope scrambling, crossed mol. beam studies 2-13936  
 $H_2^+ + He$ , quasiclassical trajectory study using HF and CI pot. energy surfaces 2-24815  
 $H_3^+$  cluster, electronic states, ab initio CI calcs. 2-24910  
 $H_3^+$ , collisional dissociation and binding energy, translational spectrosc. meas. 2-34537  
 $H_3^+$  ground state, superposition of correl. config. method 2-49300  
 $H_3^+$ , interstellar, search in IR sources 2-53074  
 $H_3^+$ , Lyman- $\alpha$  radiation enhancement following foil-induced dissociation 2-44075  
 $H_2^+(v) + Ar \rightarrow ArH^+ + H$ ,  $Ar^+ + H_2$ , reactions, CT cross sections near reson., TESICO study 2-17886  
 $^{88}Sr + H^+$ , K-shell ionisation probability across nuclear elastic scatt. reson. 2-7635

## hydrogen neutral atoms

- absorption in H II region W31, distance determ. 2-48304  
 adsorbed on He film surface, motion and effective mass 2-30706  
 adsorbed on solid  $H_2$  and superfluid  $^4He$ , EPR study 2-29541  
 adsorption on  $WO_3(001)$ , UPS study 2-17605  
 atmospheric dynamics, total mixing ratio rel. to global escape flux (Rumanian) 2-23152  
 atomic spin polarised Bose Gas, collective excitations (Russian) 2-12880  
 atoms + H collisions, charge transfer and ionisation, review 2-24851  
 Balmer  $\alpha$  and  $\beta$  emissions in polar cusp, model calc. 2-23154  
 Balmer  $\alpha$  line profiles during impulsive phase solar flare 2-53209  
 Balmer beta line, Stark broadening, spectra 2-4245  
 beam-foil interaction, formation of highly excited H atoms 2-44074  
 Brackett  $\gamma$  line emission from interstellar molecular clouds 2-38262  
 in Centaurus A (NGC 5128), H I obs. 2-3307  
 chemisorption, on Ni(100) surface, transfer matrix calcs. 2-26222  
 chemisorption on diamond face (100), ab initio SCF model calcs. 2-21440  
 chemisorption on Ni (100) surface, bonding calcs. 2-12905  
 chemisorption on W (100) surface, localised electronic interactions, density matrix treatment 2-7499  
 classical charged nonlinear Dirac field in Coulomb pot., bound states 2-28677  
 cold atoms in gas phase and surface, at. processes 2-49543  
 Compton profiles for ejected electrons, momentum densities determ. 2-24864  
 confined atom, Stark effect, finite element anal. 2-24643  
 depolarisation of negative muons in H (Russian) 2-49611  
 diffractive scattering from Xe adsorbed layer on graphite 2-2400  
 elastic and inelastic scatt., close coupling calcs. 2-49576  
 elastic positron scattering, and annihilation trial 2-15897  
 electric field ionisation rate 2-4418  
 electron and positron collisions, elastic scatt., impact excitation, eikonal-Born approx. 2-4386  
 electron collisions in mag. field (Russian) 2-20189

## hydrogen neutral atoms continued

- electron cyclotron resonance plasma, H atom flux meas. using quadrupole mass analyser 2-1344  
 electron impact excitation, multichannel free-free transitions, resonance effects 2-24868  
 electron impact ionisation in reson. EM field 2-44102  
 electron inelastic scattering, static exchange approx., Schwinger variational principle 2-24871  
 electron momentum probability distrib. meas. 2-15719  
 emission/absorption in active Irr II galaxies 2-38292  
 EPR study 2-29541  
 ESR of trapped atom in  $H_2SO_4$  at 77K 2-4240  
 exact-path-integral treatment 2-43764  
 excitation by electron and photon joint collision 2-7647  
 excited bound states, 3-dimens. reduced Coulomb Green's function 2-625  
 excited state translational energy distrib., prod. from  $CH_4$ -electron dissociation 2-29535  
 excited states, radiative cascades 2-43825  
 exosphere, vel. and temp. distrib., effect of charge exchange source 2-23150  
 fluorescence excitation by excimer lasers 2-43841  
 galaxies in Virgo cluster area, H I obs. 2-38304  
 gas vel. dispersion in nearly face-on Scl galaxy 2-42742  
 ground state energy correlation in superintense laser fields 2-24658  
 $H + F \rightarrow HF(v) + e$  assoc. detachment reaction, HF vibr. state distrib. 2-17884  
 $H(1s) + H^+$ , collisions at 1 to 7 keV, direct and charge exchange excitation processes 2-20181  
 hot, role in vacuum UV photolysis of HCl 2-22478  
 hot atom prod. by laser photolysis of hydrides, energy transfer collisions 2-24830  
 hydrogenic atoms, radial probability density and normalisation, theory 2-14996  
 hyperfine freq. shift of H in presence of He buffer gas 2-49596  
 in elec. field, generator coord. method calcs. 2-19957  
 inelastic scattering, electron excitation of 2p state, use of local exchange pots. 2-39493  
 integral of motion in mag. field (Russian) 2-4234  
 interstellar H I, absorpt. line distances to point radio sources near supernova remnants 2-48346  
 interstellar H I absorpt. towards pulsars, statistics 2-6609  
 interstellar H I distrib. in region  $l^{III}=301^\circ$ ,  $b=-18^\circ$  to  $-31^\circ$ , correl. with dust distrib. 2-38277  
 interstellar high velocity cloud (HVC A1), H I fine struct. obs. 2-6656  
 intrinsic divergence in closed shell SCF calcs. 2-640  
 isoelectronic series in arbitrary mag. field, sum rules 2-7496  
 laser photolysis, prod. of 'hot' H atoms, energy transfer collisions 2-24831  
 in LMC, hot stars and interstellar H distrib. 2-6660  
 Lyman  $\alpha$  absorption in QSO spectra, cosmological evolution 2-38332  
 Lyman  $\alpha$  and white light coronagraphs program for Spacelab obs. of Sun 2-32847  
 Lyman  $\alpha$ /Balmer  $\beta$  ratio in N-galaxy spectrum and H line problem 2-48331  
 in M101, giant spiral galaxy, assoc. of H I concentrations and H II complexes from radio obs. 2-33146  
 M16 (NGC 6611), investigation of neutral and ionised gas 2-6648  
 microwave multiphoton processes in highly excited atoms 2-15763  
 molecular shape effects and quantum theory 2-11379  
 multiphoton emission during UV and X-ray absorption in intense laser fields 2-24666  
 multiphoton ionisation, non-Hermitian Schrodinger eqn., time depend. theory 2-4250  
 multiphoton ionisation probabilities, calcs, perturbative treatment 2-4249  
 multiphoton processes, four Euclidean conformal group approach 2-34266  
 nlm-n'l'm' transition amplitude 2-39339  
 one-configuration Hartree-Fock type calcs. in arbitrary mag. fields 2-7502  
 one-dimensional atom, potentials, comments and reply 2-18843  
 partial wave components of the reduced Coulomb Green's function 2-626  
 perturbation theory via the Riccati equation 2-48539  
 positron elastic scattering, low energy P-wave phaseshifts, adiabatic approx. 2-24859  
 positron impact cross sections calc. for n=2 levels 2-34575  
 quasars, detectability of H radio recomb. lines in compact sources 2-42757  
 quasars H I line spectrum, approximation procedures for line transfer versus exact treatment 2-38338  
 radio galaxies, detectability of H radio recomb. lines in compact sources 2-42757  
 relativistic atom, Dirac and EM fields interaction 2-48519  
 RF discharge beam source 2-23772  
 Rydberg const. determ. by crossed laser beam spectroscopy 2-11416  
 solar corona, H I density and temp. from  $La$  filtergrams 2-48217  
 solid surface interaction, surface states 2-26464  
 spectra, Stark effect in crossed static and dynamic fields 2-15740  
 spectral line red-shift in strong mag. field 2-39361  
 spin alignment on high mag. fields 2-30713  
 spin polarised, cryostat apparatus 2-34605  
 spin polarised, metastable phase decay kinetics (Russian) 2-12882  
 spin polarised, physisorbed on liq.  $^4He$ , dynamic props., third sound study 2-30707  
 spin polarised, total and superfluid density profiles in an inhomogeneous mag. field 2-35860  
 spin polarised mag. reson., longit. and transverse relax. 2-35862  
 spin-orbit interaction and single-electron excitation 2-6755  
 spin-polarised, adsorpt. isotherms and exchange interactions on  $^4He$  2-35835  
 spin-polarised, ground state props., Ursell-Meyer method 2-35861  
 spin-polarised, nuclear polarisation 2-11521  
 spin-polarised, static magnetisation, SQUID magnetometer meas. 2-34596  
 Stark effect, high-order perturbation theory of imaginary part of resonance eigenvalues 2-11434  
 Stark effect, logarithmic perturbation theory calcs. (Russian) 2-49333  
 Stark effect, wave functions props. calcs. 2-19998  
 Stark effect and negatively anharmonic oscill., perturbation series 2-49265  
 Stark eigenvalues, real and imaginary parts, Pade summations 2-49266  
 sticking probabilities on  $^3He$  and  $^4He$  and binding energy on  $^3He$  2-1694



**hydrogen neutral atoms continued**

- third integral of motion in strong mag. field 2-34256  
 transition probabilities in electric field, relativistic Coulomb Green's function appl. 2-24655  
 tunnelling phenomena estimation 2-49269  
 upper atmosphere, theoretical distrib. of conc. based on kinetic theory (*Rumanian*) 2-23151  
 X-ray spectra of H atom and H-like ions in mag. field of neutron star 2-28490  
 H, frozen aq. solns. of acid., hyperfine interaction, INDO calcs. 2-49293  
 H I 21 cm line studies of spiral galaxies 2-48310  
 H I distrib. and kinematics rel. to morphology of spiral galaxies 2-48311  
 H to Br, CNDO/INDO molecular orbital formalism appl. 2-4225  
 H to Br atom combination, CNDO and INDO formalism 2-4224  
 H, triple differential ionisation cross sections in second Born approximation 2-49579  
 H-H<sub>2</sub>, binary diffusion coeff. calc. from spherically averaged interaction pot. 2-50355  
 H-like atom + bare charge, electron capture to continuum states, distrib. anisotropies 2-786  
 H-like atoms, ionisation by slow ions (*Russian*) 2-24828  
 H-like atoms, Moore's new method of obtaining approximate solns. 2-19939  
 H-like ions, elastic scatt., by charged particles, Glauber approx. 2-24811  
 H-like ions, electron-ion scatt., cross sections, weak-coupling approx. 2-44115  
 H-like ions in dense plasmas, electron impact excitation and ionisation 2-50381  
 H-like systems, s states, transition polarisabilities, Raman intensities 2-15735  
 H + A<sup>2+</sup> electron capture collisions, nl distrib. 2-20178  
 H + alkali metal atoms, interaction pots. and collision integrals 2-34533  
 H + Be(B)(C) ions, charge exchange cross sections calc. by fully quantal perturbation stationary state method 2-49568  
 H + CO<sub>2</sub>(N<sub>2</sub>O), laser photolysis of hot H, vibr. excitation collisions, IR obs. 2-24830  
 H + Cl<sub>2</sub>, evaluation of classical phase for reactive molecular collisions in semiclassical collision theory 2-13939  
 H + D<sub>2</sub>, interaction pot. determ. from absolute integral cross section meas. 2-15871  
 H + DBr, reactive cross section, classical trajectory study 2-41877  
 H + e<sup>-</sup> + H<sup>+</sup> + 2e, nonrelativistic many-particle scattering theory for stripping reactions 2-33993  
 H + F<sub>2</sub>, distorted wave method, vibr.-rot. product distrib. 2-47314  
 H + F<sub>2</sub>, exoergic reactions, mass variation invest., rate const. 2-22430  
 H + FH(H<sub>2</sub>)(MuH), stabilisation calcs. of resonance energies using SCF and CI trial functions 2-47324  
 H + H<sub>2</sub>, cross sections, rotationally averaged quantum calcs. 2-15872  
 H + H<sub>2</sub>, fine struct. in depend. of final conditions on initial conditions 2-44045  
 H + H<sub>2</sub>, isotopic substitution, classical anal. of quantum reson. 2-52177  
 H + H<sub>2</sub>, reactive differential cross sections obtained from high averaged trajectory data 2-52178  
 H + H<sup>+</sup>, electron detachment, cross sections, form. of excited H atoms 2-24841  
 H + H<sup>+</sup>, 1s-1s electron capture, exact second Born calcs. 2-15893  
 H + H<sup>+</sup>, classical trajectory calcs. using Wigner function 2-20160  
 H + H<sup>+</sup>, differential charge transfer cross sections calc. using classical trajectory Monte Carlo method 2-34557  
 H + H<sup>+</sup>, scatt. at low energies, phase shifts and differential cross sections 2-34551  
 H + H<sup>+</sup>, total charge transfer cross-section calc. 2-788  
 H + H<sup>+</sup>(C<sup>6+</sup>), charge transfer and ionisation cross sections, quantal study, finite-elemental 2-39485  
 H + H<sup>+</sup>(C<sup>6+</sup>)(O<sup>8+</sup>)(Fe<sup>24+</sup>), electron capture, cross sections, eikonal calcs. 2-34560  
 H + H<sup>+</sup>(He<sup>2+</sup>), electron capture into excited s and p states 2-24846  
 H + H<sup>+</sup>(Li<sup>3+</sup>)(B<sup>5+</sup>)(C<sup>6+</sup>)(Si<sup>14+</sup>), ionisation, excitation and charge transfer cross section calcs. 2-44089  
 H + HO<sub>2</sub>, reaction rate const., LMR spectrosc. determ. 2-15821  
 H + H + He, H<sub>2</sub> + He three body recombination, quantum theory 2-6023  
 H + He<sup>2+</sup>(H<sup>+</sup>), laser-induced charge transfer, photon-induced cross section 2-4379  
 H + He<sup>2+</sup>, electron capture, close-coupling calcs. 2-20175  
 H + He<sup>2+</sup>, electron transfer collisions, cross sections, Sturmian basis 2-44088  
 H + He<sup>2+</sup>, translation factors for approx. mol. wavefunctions, charge exchange cross section calc. 2-34558  
 H + He<sup>5+</sup>, charge exchange excitation cross sections, mol. state study 2-34563  
 H + He\*(2S), Penning ionisation, H<sup>+</sup> vel.-angle distrib., crossed beam meas. 2-29702  
 H + highly charged ions, single electron capture, cross section;  $\sigma(H_2)/\sigma H$  ratio 2-20183  
 H + Li<sup>3+</sup>, charge transfer and excitation cross-section calcs. 2-44085  
 H + Li<sup>3+</sup>(N<sup>7+</sup>)(Ne<sup>9+</sup>), electron capture cross section meas. 2-787  
 H + Li<sup>9+</sup> → Li<sup>10+</sup> + H<sup>+</sup> + e, crossed beam obs. 2-44072  
 H + molecule, 'hot' H + atom, energy transfer, time resolved IR fluoresc. obs. 2-24831  
 H + NH<sub>2</sub>, polarised fluoresc., inelastic energy transfer, reorientation, spin correl. interaction 2-49554  
 H + Ne, interaction pot. determ. from absolute integral cross section meas. 2-15871  
 H + S<sup>2+</sup>, charge transfer, pot. energy curves, ab initio MO calcs. 2-20177  
 H<sub>2</sub> + O, ang. and vel. distrib. determ. by crossed mol. beam study 2-773  
 H(1s) + H<sup>+</sup>, evaluation of second Born amplitude as two dimensional integral 2-49546  
 Li<sup>3+</sup> + H collisions, CT. cross sections 2-34564

**hydrogen neutral molecules**

- adsorbed on Ag, rotational excitation obs. 2-40687  
 AFGL 618, planetary nebula precursor, H<sub>2</sub> lines obs. in near-IR spectrum 2-3288  
 anisotropic molecules, collision induced scatt. near vibr. Raman bands 2-725  
 arc discharge, high-pressure 2-8384  
 B<sup>1</sup>Σ<sub>u</sub><sup>+</sup> states, adiabatic correction and pot. energy curve 2-7535  
 cooperative Raman light scatt. (*Russian*) 2-15796  
 dense gas, Rayleigh Brillouin spectra meas. 2-43926

**hydrogen neutral molecules continued**

- diamagnetic shielding tensor, struct. depend., MNDO and INDO calcs. 2-34300  
 electron correl. functions, Fermion Monte Carlo variational method appl. 2-24619  
 electron elastic scatt. angular distrib., crossed-beam study 2-20186  
 electron impact, rot. excitation, validity of adiabatic nuclear rot. approx. 2-44120  
 electron impact, rot. excitation 2-797  
 electron impact, separable exchange approx., linear algebraic approach 2-34586  
 electron impact dissociative ionisation in threshold region by monoenergetic beam 2-7655  
 electron impact exchange interactions, separable approx. 2-4401  
 electron impact excitation, rotational line polarisations 2-4399  
 electron impact excitation, vibro-rot. cross sections, semi-empirical approach 2-24873  
 electron scattering, elastic and inelastic cross sections, pot. model calcs. 2-24858  
 electron scattering, exchange interactions, linear algebraic approach 2-24862  
 excited states, prolate-spheroidal wave functions 2-11415  
 forces, virial theorem in density-functional formalism 2-43794  
 gas, viscosity meas. by transient flow method 2-40020  
 Gaussian MO ab initio calcs. including configuration interaction 2-7511  
 ground state, atoms-in-molecules method, energy partitioning 2-19954  
 O-H<sub>2</sub> regenerative Raman amplifier utilizing rot. transitions 2-49740  
 hyperpolarisabilities distance depend., finite field CI calcs. 2-34317  
 interelectronic distance, ground and excited states, prolate spheroidal wave function 2-15714  
 interstellar absorption in solar neighbourhood from Lick galaxy counts 2-48297  
 interstellar H<sub>2</sub>, detect. of S(8), S(12), S(13), S(14) and S(15) v=0-0 lines in Orion 2-10503  
 interstellar H<sub>2</sub>, high velocity line emission obs. in NGC 2071 region 2-33114  
 interstellar H<sub>2</sub>, prod. in dense mol. clouds 2-28533  
 interstellar medium, rate coeffs. for positive ion reactions with H<sub>2</sub> 2-6530  
 ion structures and proton affinities calc. using FOGO method 2-43784  
 ionisation potential and dissociation energies related to atomic ionisation pot. 2-24599  
 IR emission spectrum from H and H<sup>+</sup> associative detachment 2-4270  
 lifetime meas. of laser excited excited n=3 levels 2-11551  
 magnetic shielding tensors temp. dependence 2-29531  
 multipole polarisabilities calc. by variational method using atom centred extended trial functions 2-4415  
 NMR coupling constant 2-34433  
 ortho-para mixtures, vibr. relax. theory 2-690  
 plasma, prod. by laser heated gas jet, soft X-ray source 2-28960  
 positron scattering, total cross sections, optical theorem 2-795  
 in protogalactic gas, influence of H<sub>2</sub> on thermal evolution of gas in gravit. contraction 2-3309  
 proton spin-lattice relaxation centres in amorphous Si:H 2-2157  
 quenching rate const. for excited rot. levels 2-44004  
 In rigid spheroidal box, electronic and vibr. props. at high press. 2-34285  
 supersonic free jet, rot. relax. CARS spectra 2-43919  
 thermodynamic props., perturbation theory 2-20807  
 time resolved study of transitions excited by electron beam, radiative lifetime and quenching rate const. 2-49491  
 two-photon ionisation, HF Green's function calcs. 2-20017  
 F+H<sub>2</sub>S-H<sub>2</sub>-CO<sub>2</sub>, chem. equilb. study 2-41919  
 F+H<sub>2</sub> reaction, approx. quantum differential cross sections 2-52182  
 F+H<sub>2</sub> → H+HF reaction, quantum mech. state-to-state differential cross section calc. 2-37069  
 H + H<sub>2</sub>, stabilisation calcs. of resonance energies using SCF and CI trial functions 2-47324  
 H<sub>2</sub> formation, catalysis by photochemically produced 1-hydroxyl-1-methylethyl radical on colloidal metals 2-13983  
 H<sub>2</sub>, model chains, electronic band structures, a posteriori symmetry anal. 2-39514  
 H<sub>2</sub>-Ag(Ne), gas mixtures, intermol. pot. from H<sup>+</sup> spin-lattice relax. 2-20152  
 H<sub>2</sub>-H, binary diffusion coeff. calc. from spherically averaged interaction pot. 2-50355  
 H<sub>2</sub>-H<sub>2</sub><sup>+</sup>(H<sub>2</sub>-H<sub>2</sub><sup>+</sup>)(O<sub>2</sub><sup>-</sup>-H<sub>2</sub><sup>+</sup>)(S<sub>2</sub><sup>-</sup>-H<sub>2</sub><sup>+</sup>), electron transfer, quantum chemical approach 2-39490  
 H<sub>2</sub>-He, Rayleigh Brillouin spectra meas. 2-43926  
 H<sub>2</sub>-He flow, over flat plate, laminar boundary layer, effect of C blowing, heat transfer 2-35131  
 H<sub>2</sub>-methane mixture, thermodynamic props., perturbation theory 2-20807  
 H<sub>2</sub>-methane-air, combustion, quenching distance determ. 2-22447  
 H<sub>2</sub>-N<sub>2</sub>(Ar)(Kr) dimers, Z 2-34385  
 H<sub>2</sub>-Ne(Ar)(Kr), hyperfine spectrum meas. using mag. beam reson. technique 2-34520  
 H<sub>2</sub>-Ne(Ar)(Kr) mixture, viscosity meas. 2-1285  
 H<sub>2</sub> + A, (A=Li-F), exchange reactions, pot. surfaces, nonempirical calcs. 2-22435  
 H<sub>2</sub> + air ignition, time-resolved anal. by multichannel Raman spectroscopy 2-6037  
 H<sub>2</sub> + Ar(Kr)(Xe), metastable atoms, collisional de-excitation cross sections expt. 2-24822  
 H<sub>2</sub> + BH, rot. states, energy transfer, cross sections, lifetime meas. 2-44065  
 H<sub>2</sub> + C<sup>+</sup>, chemiluminescence spectra, product state distrib. 2-47327  
 H<sub>2</sub> + C<sup>+</sup> → CH<sup>+</sup> + H, pot. energy surfaces, chemiluminescence, ab initio MCSCF-POLCI calcs. 2-27427  
 H<sub>2</sub> + Cl, rate const., fluoresc.-flash photolysis, kinetics study 2-27423  
 H<sub>2</sub> + Cl<sub>2</sub>, gas phase chem. chain reactions pulse laser photolysis, IR chemiluminescence 2-31914  
 H<sub>2</sub> + Cs, Cs second reson. doublet broadening 2-20002  
 H<sub>2</sub> + Cs, excitation transfer and quenching, temp. depend. of cross sections, fluoresc. 2-49553  
 H<sub>2</sub> + Cs, form. of H<sup>+</sup>, dissociation and dissociative attachment 2-34528  
 H<sub>2</sub> + Cs(7P), laser fluoresc., reaction rate coeff. 2-9540  
 H<sub>2</sub> + ethynyl radical, time resolved chemiluminesc., rate coeff. 2-31923  
 H<sub>2</sub> + F<sub>2</sub> → HF, shock wave induced reaction, vibr. relax. of HF 2-13940  
 H<sub>2</sub> + H, cross sections, rotationally averaged quantum calcs. 2-15872  
 H<sub>2</sub> + H, fine struct. in depend. of final conditions on initial conditions 2-44045  
 H<sub>2</sub> + H, isotopic substitution, classical anal. of quantum reson. 2-52177



**hydrogen neutral molecules continued**

- $H_2 + H$ , reactive differential cross sections obtained from high averaged trajectory data 2-52178  
 $H_2 + H_2$ , mol. collisions, stochastic theory in the perturbed stationary state formulation 2-39466  
 $H_2 + H_2$ , vibr. energy transfer, master eqn. calcs. 2-39477  
 $H_2 + H_2$ , intermol. interactions, bond orbital calcs., polarisation and delocalisation effects 2-29499  
 $H_2 + H_2 + C^+$ , rate coeff. calc. from statistical theories compared with expt. data 2-17882  
 $H_2 + H^+$ , electron detachment, cross sections, form. of excited H atoms 2-24841  
 $H_2 + He$ , ro-vibr. transitions, cross sections and relax. rates, close coupling calc. 2-15869  
 $H_2 + He$ , rovibrational excitation cross sections, close coupling calcs. 2-34531  
 $H_2 + He^*$ , collisional dissociation, metastable atom prod. 2-37068  
 $H_2 +$  highly charged ions, single electron capture, cross section,  $\sigma(H_2)/\sigma H$  ratio 2-20183  
 $H_2 + K$ , (4P) fine struct. transition 2-44054  
 $H_2 + Li$  surface interaction, diatomics in-molecules calcs., Li cluster simulation 2-45713  
 $H_2 + Li^{2+}$  ( $Li^{3+}$ ), electron capture cross-sections 2-20176  
 $H_2 + Mg$  (Al) (Cs) (Pb) (Bi) ions, charge transfer cross sections involving electron capture processes 2-7631  
 $H_2 + Mg(3s3p\ ^1P_1)$ , rot. quantum state distrib., microscopic branching, fluorescence obs. 2-6027  
 $H_2 + Na$ , quenching process, energy transfer, ab initio RHF-SCF and PNO-CEPA calcs. 2-29699  
 $H_2 + NiO(Fe_2O_3)(Co_3O_4)$ , reduction, external mag. field effects 2-9539  
 $H_2 + O$ , rate consts. meas., O conc., resonant absorpt. meas. 2-47316  
 $H_2 + O^{6+}(C^{6+})$ , X-ray emission during electron capture (*Russian*) 2-11430  
 $H_2 + OH$ , reaction rate, vibr. excitation effect, EPR spectra 2-2701  
 $H_2 + OH$ , variational transition state theory and semiclassical vibr. adiabatic transmission coeff appl. 2-47319  
 $H_2 + O(^3P)$ , high energy classical trajectory study, cross sections and rate const., exchange and dissociation processes 2-37048  
 $H_2 + O(F)$ , exchange reaction, reaction path calcs. 2-9544  
 $H_2 + Rb$ , atomic fine struct. transitions nonadiabatic coupling 2-34535  
 $(H_2)_2$ , mol. beam mag. reson. meas., hyperfine struct. 2-34519  
 $H_2$ , 3D pot. energy surface generation 2-39347  
 $H_2$ , Van der Waals mols., nuclear dynamical calcs., anisotropic and isotropic potentials 2-49539  
 $H_2$ , ab initio and nonorthogonal bond orbital SCF calcs., rel. to  $H_2-H_2$  interaction 2-29499  
 $H_2$ , intrinsic convergence in closed shell SCF calcs. 2-24596  
 $H_2$ , pot. surface, semi-empirical calc. method (*Japanese*) 2-11421  
 $HD$ ,  $B^1\Sigma_u^+$  states, adiabatic correction and pot. energy curve 2-7535  
 $HD$ , dipole moment, adiabatic description of nonadiabatic isotope asymmetry effects (*Russian*) 2-11457  
 $H_2(J^1\Delta_g)$ , vibr., rot. consts., ab initio pot. energy curve 2-49311  
 $HD$ , collisional relaxation obs. by overtone pumping and photoacoustic detection 2-15879  
 $He + H_2$ , inelastic scatt., energy-adjusted sudden approx. 2-39481  
 $H_2 + He$ , pseudochannels, converging coupled-channel scatt. calcs. 2-44066

**hydrogen power** see *hydrogen economy*

**hydrogen production** see *hydrogen economy*

**hydrogen storage** see *hydrogen economy*

**hydrogen transmission** see *hydrogen economy*

**hydrological techniques**

- aquifer flow routes and residence time, determination by dual radiotracer method 2-10198  
autocorrelation and spectral analysis, struct. description of rainfall and discharge series (*French*) 2-42407  
boundary integral eqn. method for aquifer problems 2-37911  
boundary integral eqn. method for fluid interface problems 2-37912  
chemical anal. method for Cd, Pb and Ag (at. absorpt. spectrosc.) 2-48039  
EM probing, appl. to injected fluid flow monitoring 2-10192  
evaporimeters for estimation of potential transpiration 2-3105  
evapotranspiration, estimation in Sonoita Creek, watershed near Patagonia, Arizona 2-23033  
forecasting using entropy minimax technique 2-28111  
geothermal models identification and validation, theory 2-22948  
geothermal systems modelling, identification of Wairakei geothermal system, New Zealand 2-22947  
glacier beds sounding, detailed study using radio-echo techniques 2-10085  
groundwater  $^{14}C$  dating in confined aquifers, implications of aquitard diffusion 2-23036  
groundwater contamination in carbonate terrain, principal source diagnosis and chemical transport characts. 2-9703  
groundwater exploration in Sudan, via combination of elec. resistivity, seismic refr. and gravity meas. 2-28108  
groundwater exploration in Taoyuan-Chungli area, N Taiwan, geoelectrical investigation 2-23027  
groundwater flow, integral transform method for linearised Boussinesq eqn. 2-23030  
groundwater in Bara Basin, Sudan, appl. of gravity exploration 2-37898  
Group V elements, determ. in luke water using hydride at. absorpt., valence state effects 2-17931  
heavy metal contamination sediments investigation (*German*) 2-10093  
hydraulic conductivity determ. at Brantley damsite, New Mexico, appl. of geophysical meas. 2-37897  
hydrometeorological data, remote transmission and processing (*Italian*) 2-28211  
ice, bubble-free, preparation technique rel. to absorpt. coeffs. meas. from 400 to 1400 nm 2-18474  
ice cores, dating, appl. of annual var of nitrate conc. 2-37901  
ice cores sulphate content from static elec. cond. obs. 2-28223  
irregular water flow in nonprismatic bed, upthrust curve calc. algorithm (*Bulgarian*) 2-18476  
lake currents, objective anal. method, appl. to Lake Ontario 2-52950  
nitrates determ. in sea and fresh water, improved reduction column method 2-6468  
oil film thickness measurement technique, optical method 2-27756  
permittivity of solid and water mixtures, using evanescent waveguide technique at 9 GHz 2-43045  
**hydrological techniques continued**  
potential transpiration measurement with atmometers and evaporation pans 2-3105  
precipitation analysis, stochastic cluster model of daily rainfall sequences 2-23099  
probability weighted moments method, appl. to regional flood freq. estimation and network design 2-23039  
remote sensing of snow, effect of grain size and snowpack water equivalence on satellite visible and near IR obs. 2-23040  
river floods prediction, statistical forecasting of heavy rain and floods in River Teesta, NE. India 2-3044  
river flow measurement using tracer method 2-42483  
river water neutron activation anal. for soluble and particulate fractions 2-32153  
sedimentation dynamics from  $^{7}Be$  content determ. 2-10184  
sediments anoxic interstitial waters, handling and measurement techniques 2-52952  
snow cover meas. in mountainous area by gamma-ray surveying 2-28246  
snow cover water equivalent determ. 2-37915  
soil moisture microwave remote sensing, dielec. const. depend. on  $H_2O$  content 2-23671  
soil moisture remote sensing by microwave brightness temp. method 2-10197  
soil moisture remote sensing using side looking radar 2-18606  
solute source tracing in semiarid zone using Na/Cl ratios 2-10098  
streamflows forecasting, selection of seasonal streamflow models 2-23034  
submersibles of Pisces type, applications to deep lake research 2-48037  
trace element determination in suspended matter and in sediments by instrumental neutron activation analysis 2-32152  
water pollution modelling, simulation of dissolved Cd distrib. in Severn Estuary 2-2818  
water runoff from snow, prediction using LANDSAT MSS imagery 2-10084  
 $NO_3^-$  ion concentrations in Antarctic firn, appl. as marker for solar activity 2-18473  
Ra and Ba particulate forms in water, determination by selective dissolution method 2-32689  
 $^{226}Ra$  determination in water sample, by alpha spectroscopic method 2-18160  
**hydrology**  
see also *groundwater; lakes; rivers*  
air carried along by an overspill wave, flow conditions (*French*) 2-3039  
SE. Alaska, natural acidity of unpolluted waters and potential impacts of acid rain 2-10095  
analysis of hydrological records 2-28118  
Andhra Pradesh, storm surge of Nov. 1977 cyclone 2-23017  
annual station precipitation, Poisson distrib. 2-10101  
aqueducts, open channel, response of water levels to local and regional tilt fields 2-28058  
aquitard diffusion, effects on  $^{14}C$  dating of groundwater in confined aquifers 2-23036  
Black River, New York, flood boundaries from Landsat, manual versus digital anal. 2-22982  
Brantley damsite, New Mexico, relation of geophysical meas. to hydraulic conductivity 2-37897  
California, forecasting using entropy minimax technique 2-28111  
direct and inverse problems, optimal numerical methods 2-47930  
dissolved salts, convective diffusion during filtration into drainage (*Russian*) 2-32138  
drainage basin average slope formula 2-28117  
drainage net maps of fourth magnitude, polynomials and topological matrices 2-28107  
drought-prone areas, delimiting criteria, appl. to Karnataka State (India) 2-10094  
environmental fluid mechanics 2-18558  
evaporation of soil moisture, theoretical relations (*Chinese*) 2-18471  
flood control on the Parana and Paraguay rivers 2-10087  
flood discharges, meas. error effects on probability distrib. 2-37917  
floods, regional frequency estimation and network design using probability weighted moments 2-23039  
forest evapotranspiration, meas. and modelling 2-6409  
geothermal models identification and validation, theory 2-22948  
geothermal systems, vapour-dominated, one-dimensional model 2-32546  
Grimsvoth geothermal area, Iceland, penetration of water into hot rock boundaries of magma 2-52781  
groundwater flow around lakes, seasonal reversals rel. to stagnation points and lake budgets 2-23038  
hydrothermal activity, submarine, off N Baja California, evolution and isotope geochemistry 2-37899  
hydrovolcanic explosions, water-pyroclast equilibration systematics 2-6352  
injected fluids, flow monitoring using EM probing 2-10192  
Ispra area, Italy, T concs. in natural waters (*Italian*) 2-9704  
Lake Donjek, Yukon Territory, Canada, estimates of magnitude of glacier outburst floods 2-37894  
Leine river, Germany, flooding and related rainfall, synoptic situation 2-32548  
microearthquakes rel. to high pore press. in low permeability granitic rock 2-42267  
modelling, real time information system and interface 2-23042  
Mount St. Helens region, effect of 1980 eruptions on sedimentation and hydrology 2-22949  
northern Hemisphere, atmos. water vapour exchange between land and ocean 2-42427  
obsidian hydration, appl. to dating of volcanic events 2-14435  
rainfall, point process theory appl. 2-37906  
rainfall, point processes review 2-37905  
rainfall duration statistics for rain-out models from daily records 2-10096  
rainfall runoff modelling, distrib. function approach 2-37907  
rivers, flow, monthly modulus, statistical struct., factor anal. (*Russian*) 2-3036  
rock glacier, talus-derived, internal struct. deduced from hydrological parameters 2-37893  
runoff from wet headland catchment, effect vegetation 2-52874  
salination of agricultural land in western USA 2-6198  
NW Siberian platform, evidence for regional hydrothermal activity 2-52843  
snow, effect of grain size and snowpack water equivalence on satellite visible and near IR obs. 2-23040



**hydrology continued**

- soil, flow of nonfreezing water interlayers and frost damage 2-18472  
 Sonoita Creek watershed near Patagonia, Arizona, evapotranspiration estimation 2-23033  
 stochastic hydrology, wet statistics for dry statisticians 2-14502  
 stochastic rainfall models, review 2-37904  
 surface runoff nonlinearity, geomorphological approach 2-10097  
 system evolution (book) 2-23388  
 Thailand, daily rainfall max. depths, stochastic model 2-6404  
 upwelling radiance over water, meas. and calc. as function of altitude 2-18576  
 Uruguay, rainfall probability distribution statistics (*Spanish*) 2-37892  
 Visakhapatnam Basin, India, quality of groundwater 2-37903  
 Wairakei geothermal system, New Zealand, identification of model 2-22947  
 water level changes accompanying fault creep, implications for earthquake prediction 2-32439

**hydromagnetic waves** see *magnetohydrodynamic waves*

**hydromagnetics** see *magnetohydrodynamics*

**hydrometers**

see also *density measurement*

No entries

**hydrophones**

see also *sonar*

- calibration at low frequency, under hydrostatic pressures 2-25204  
 continuous waves generated by focused radiators 2-34958  
 cyclonic rings, underwater sound speed distributions 2-37883  
 digital deep-towed hydrophone array 2-29969  
 fibre-optic accelerometer with hydrophone appls. 2-11823  
 fishing gear computerised instrumentation 2-44526  
 interdigital transducer for operation at liquid-solid interface 2-29979  
 line array in shallow water for range and depth estimation 2-7955  
 matched impedance, electrostatic approach to hydrophone design 2-20509  
 miniature ceramic ultrasonic probes, design, construction and performance 2-29981  
 piezoelectric polymer flexural plate hydrophone, mathematical model 2-29978  
 polymer-ceramic composites for hydrophones, fabrication and interphase connectivity 2-36834  
 polyvinylidene fluoride membrane, for use in 1-100 MHz range, characts. 2-29973  
 pulsed US field intensity meas. using miniature hydrophone calibrated by simplified technique 2-20499  
 seismology, device for calibration of seismic streamers and air guns 2-37983  
 seismometer operating on sea floor, S/N ratio at low freqs. 2-28216  
 sonar array transducer and hydrophone design and construction 2-44531  
 US hydrophone probes, piezoelec. polymer sensitive element, design and calibration 2-16217

**hydrophotometers** see *photometers*

**hydrostatics**

- H, spin polarised, total and superfluid density profiles in an inhomogeneous mag. field 2-35860

**hydrothermal crystal growth** see *crystal growth from solution*

**hydroxonium ion**

- $\text{Al}_2\text{O}_3\cdot\text{H}_2\text{O}^+$ ,  $\beta^-$  and  $\beta^+$  phases protonic species, cond., and vibr. spectra 2-26923  
 $\beta^+-\text{Al}_2\text{O}_3\cdot\text{NH}_4^+\cdot\text{H}_3\text{O}^+$ , paramag. impurities and proton motion, EPR and NMR 2-31275

**hydroxyl group** see *oxygen compounds*

**hygiene**

see also *medicine*

No entries

**hygrometers**

see also *humidity measurement*

- atmospheric IR spectral absorpt. hygrometer (*French*) 2-42482  
 Piche evaporimeter as simple integrating mass transfer meter 2-32651  
 psychrometer, without ventilation (*Japanese*) 2-28239

**hyperfine field interactions (condensed matter)**

- see also *crystal hyperfine field interactions; nuclear screening*  
 $^{177}\text{Ta}$ ,  $7/2^+$  [404] ground state, g-factor from NMR meas. on oriented nucleus 2-11091  
 amorphous mag. alloys, Fourier analysis of Mossbauer spectra 2-26803  
 metallic glasses, NMR study, review 2-9045  
 $\text{B}_2\text{O}_3\cdot\text{PbO}$   $\text{Fe}_2\text{O}_3$  glasses, struct., elec., and mag. props. 2-45054  
 Cu-complex, 2,2'-bipyridine copper(II), IR and EPR study 2-49465  
 Fe-Co-B amorphous hyperfine field  $^{57}\text{Fe}$  NMR 2-46407  
 $\text{Fe}_{100-x}\text{B}_x$  amorphous, Mossbauer spectra asymmetry 2-31332  
 $\text{Fe}_2\text{B}_{18-x}\text{Be}$  metallic glasses,  $^{57}\text{Fe}$  Mossbauer spectra study 2-17375  
 $\text{FeF}_3$  amorphous, elec. field gradient, random packing model 2-30847  
 NO spin labels/probes slow tumbling motions from second derivative ESR powder spectra 2-41201  
 $\text{Se}_2\text{Te}_{1-x}$ , liq. semicond., NMR study 2-31320  
 $\text{SiO}_2$  glass, defect centres,  $^{29}\text{Si}$  hyperfine struct. of nonbridging O hole centre and peroxy radical 2-31283  
 $(\text{Sn}_{0.5}\text{Se}_{0.5})_x(\text{As}_{0.1}\text{Ge}_{0.3}\text{Se}_{0.6})_{100-x}$  glasses and glass-ceramics, Mossbauer study 2-21923

**hyperfine field interactions in crystals** see *crystal hyperfine field interactions*

**hyperfine structure, atomic** see *atomic hyperfine structure*

**hyperfine structure, molecular** see *molecular hyperfine structure*

**hyperfragments** see *hypernuclei*

**hypernuclei**

- $^8\text{Be}$ , hypernuclei, microscopic cluster model 2-49050  
 Coulomb energies and AN force charge depend. (*Russian*) 2-38974  
 hyperons in nuclear matter—an impurity problem 2-29222  
 light hypernuclear system study using one-boson exchange pot. and SU(4) symmetry 2-38973  
 light supernuclei and SU(4) symmetry 2-19473  
 medium energy, overview 2-38900  
 $S=-2$  hypernuclei formation in kaon-nucleon reactions 2-11149  
 supernuclei, energy levels, binding energy, forces (*Russian*) 2-11109  
 $^2$  hypernuclear states, optical pot. study 2-33942  
 $^8\text{Be}_\Lambda$ , bound state in  $\alpha$ -cluster model 2-3867  
 $^9\text{Be}(K^-, \pi^-)^9\text{Be}_\Lambda$ ,  $^9\text{Be}_\Lambda$  neutron hole states 2-29224  
 $^{12}\text{C}(K^-, \pi^-)^{12}\text{C}_\Lambda$ ,  $^{12}\text{C}_\Lambda$  neutron hole states 2-29224  
 $^{13}\text{C}_\Lambda$ , energy spectra, prod. probability, SU(3) group classification, supersymm. states 2-43441

**hypernuclei continued**

- $^{13}\text{C}_\Lambda$ , levels and spins from shell model and DW anal. of spectroscopy 2-368  
 $^{12}\text{C}_\Lambda$ , Ap scatt. cross sections, binding energies 2-43438  
 $^{13}\text{C}_\Lambda(K^-, \pi^-)$ , 800 MeV/c, hypernuclear levels 2-367  
 $^{14}\text{Ca}_\Lambda$ , A single particle pot. by OBE hyperon-nucleon interaction 2-43440  
 $^3\text{H}_\Lambda$ , A separation energy from hyperspherical harmonics calc. with realistic np pot. 2-38972  
 $^3\text{H}_\Lambda$ , Ap scatt. cross sections, binding energies 2-43438  
 $^4\text{He}_\Lambda$ , energy spectra and A-separation energy using  $\Lambda$ -N meson exchange pot. (*Chinese*) 2-33943  
 $^4\text{He}_\Lambda$ , A single particle pot. by OBE hyperon-nucleon interaction 2-43440  
 $^4\text{He}_\Lambda$ , energy spectra and A-separation energy using  $\Lambda$ -N meson exchange pot. (*Chinese*) 2-33943  
 $^5\text{He}_\Lambda$ , Ap scatt. cross sections, binding energies 2-43438  
 $^5\text{He}_\Lambda \rightarrow ^4\text{He}$ , pn $^-$  proton polarisation ang. depend. (*Russian*) 2-11108  
 $^6\text{He}_\Lambda$ , hypernuclei cluster struct., rotational bands 2-43439  
 $^6\text{He}_\Lambda$ , Ap scatt. cross sections, binding energies 2-43438  
 $^A\text{He}_\Lambda$  (A=4,5), A single particle pot. by OBE hyperon-nucleon interaction 2-43440  
 $^6\text{Li}(K^-, \pi^-)^{6,7}\text{Li}_\Lambda$ , neutron hole states 2-29224  
 $^{14}\text{N}_\Lambda(K^-, \pi^-)$ , 800 MeV/c, hypernuclear levels 2-367  
 $^{17}\text{O}_\Lambda$ , A single particle pot. by OBE hyperon-nucleon interaction 2-43440  
 $^{18}\text{O}_\Lambda(K^-, \pi^-)$ , 800 MeV/c, hypernuclear levels 2-367

**hyperon absorption**

No entries

**hyperon capture**

see also *hypernuclei*

No entries

**hyperon decay**

- baryons semileptonic decays, radiative corrections 2-43341  
 nonleptonic decays, in weak interaction theories 2-48983  
 nonleptonic decays, quark decay topologies, factorisation with vacuum insertion 2-43336  
 semileptonic decays, asymmetry coeffs., radiative correction independent form 2-7029  
 $\Lambda \rightarrow n \pi$  in  $^3\text{He}_\Lambda$  decay, proton polarisation (*Russian*) 2-11108  
 $\Lambda$ -decay, strong isospin violation and  $\eta$ - $\pi$  mixing in  $|\Delta S|=1$  weak transition 2-33832  
 $\Lambda_b$ , two body weak non-leptonic decays 2-19373  
 $\Lambda_b \rightarrow p \pi^- K^+$ , observation in pp. at 63 GeV 2-38914  
 $\Lambda_c \rightarrow \Lambda e^+ \gamma$ , decay rate in quark model 2-33835  
 $\Lambda_c^+$  baryons lifetimes from meson and baryon mass splittings 2-33834  
 $\Lambda_c^+ \rightarrow \Sigma^0 \pi^+$ , decay mode in neutrino-induced events 2-48984  
 $\Omega \rightarrow \Xi^0 \pi^0 (\Xi^0 \pi^0) (\Lambda K^-)$ , branching ratios calc. from gravitational model of baryons 2-43340  
 $\Sigma$ -decay, strong isospin violation and  $\eta$ - $\pi$  mixing in  $|\Delta S|=1$  weak transition 2-33832  
 $\Sigma^+$   $\rightarrow p \gamma$ , decay amplitude, baryon reson. contrib. calc. in bag model framework (*Russian*) 2-23979  
 $\Sigma^+$   $\rightarrow \Lambda e^+$ , axial-vector to amplitude ratio 2-33835  
 $\Xi$ -decay, strong isospin violation and  $\eta$ - $\pi$  mixing in  $|\Delta S|=1$  weak transition 2-33832  
 $\Xi^0 \rightarrow \Sigma^+ e^- \nu$ , axial-vector to vector amplitude ratio 2-33835  
 $\Xi^- \rightarrow \Lambda e^- \gamma (\Xi^- e^- \nu)$ , axial-vector to vector amplitude ratio 2-33835  
 $Y \rightarrow ggg$  from  $e^+e^-$ , QCD calc., strong coupling const. 2-3781

**hyperon detection and measurement**

- Z=100-107 nuclei, prod. and detection in heavy ion fusion (*German*) 2-49078

**hyperon-deuteron interactions**

see also *hyperon-deuteron scattering*

No entries

**hyperon-deuteron scattering**

see also *hyperon-deuteron interactions*

No entries

**hyperon effects**

No entries

**hyperon interactions** see *hyperon-nucleon interactions; hyperon-nucleus reactions; kaon-hyperon interactions; lepton-hadron interactions; photon-hadron interactions; pion-hyperon interactions*

**hyperon magnetic moment**

- nucleon octet mag. moments in cloudy bag model 2-48994  
 $\Xi^-$  anomalous mag. moment anal. 2-43351

**hyperon mass**

No entries

**hyperon-nucleon interactions**

see also *hyperon-nucleon scattering*

$\Sigma^- p \rightarrow \Sigma^0 n(\Lambda n)$ , production ratios at rest 2-11066

**hyperon-nucleon scattering**

see also *hyperon-nucleon interactions*

Ap scatt. cross sections, binding energies 2-43438

**hyperon-nucleus reactions**

for inelastic hyperon-nucleus scattering, see "hyperon-nucleus scattering"  
 see also *hyperon capture; hyperon-nucleon interactions*  
 $\Lambda$ -nucleus optical potential, spin-orbit component 2-24206

**hyperon-nucleus scattering**

see also *hyperon-nucleon scattering*

$\Lambda$ -nucleus optical potential, spin-orbit component 2-24206

**hyperon production**

- hadron-hadron interactions, inclusive and exclusive processes at high energies, hyperon polarisation 2-7041  
 inclusive processes, polarisation phenomena quark dynamics (*Russian*) 2-33814  
 quark-parton model framework appl. in hyperons hadroproduction 2-19349  
 $e^+e^-$ , 33 GeV,  $\Lambda$ ,  $\bar{\Lambda}$ ,  $K^0$ ,  $\bar{K}^0$  prod., differential and scaling cross sections 2-7039  
 $\gamma N$ ,  $\Lambda_c^+$  inclusive photoproduction cross section 2-29116  
 $\gamma N \rightarrow FX$ , 75-200 GeV, inclusive prod. cross-section 2-326  
 $hh \rightarrow \Lambda^0 X$ , scaling in the mean hypothesis test 2-49017  
 $K^0 \alpha \rightarrow \Lambda n(\Lambda t)$ ,  $\Lambda n$  final state from K NN interactions 2-33856  
 $K^- d \rightarrow \pi^- \Lambda p$ , strangeness exchange reaction 2-343  
 $K^- p$ , 110 GeV/c,  $\gamma$ ,  $K^0$ ,  $\Lambda^0$  and  $\bar{\Lambda}^0$  inclusive prod. 2-11074  
 $K^- p$ , 4 GeV/c, exotic exchange processes, hyperon prod., Regge cut, quark and exchange models 2-43374  
 $K^- p$ , 6.5 GeV/c,  $S=-2$  and  $-3$  baryon states prod. 2-11061



hyperon production continued

- K<sup>+</sup> p, 8.25 GeV/c, inclusive  $\Xi^-$ ,  $\Xi(1530)$ ,  $\Omega^-$  prod., triple Regge anal. 2-24025  
 K<sup>+</sup> p, <300 MeV/c, elastic scatt., charge exchange and  $\Sigma^\pm$  prod.,  $\Sigma^+$  polarisation 2-38899  
 K<sup>+</sup> p- $\bar{p}$  A, 8.25 GeV/c, cross sections, polarisation, parity exchange contr. 2-19397  
 K<sup>+</sup> p-K<sup>+</sup> p( $\bar{K}^0$ n)( $\pi^0$ A)( $\pi^+\pi^+$ ), 1.720-1.796 GeV, cross sections, pol. distrib., high stats. data 2-49008  
 K<sup>+</sup> p- $\Delta$ X, 70 GeV/c, longit. distrib. in quark-parton model 2-15353  
 K<sup>+</sup> p- $\Delta$ X( $\Sigma^0$ ,  $\Sigma^+$ ), production ratios at rest 2-11066  
 K<sup>+</sup> p, 70 GeV/c, inclusive  $\Lambda$  and  $\bar{\Lambda}$  prod. cross-section and single particle distrib. 2-3820  
 $\Lambda(1405)$ , in  $\bar{K}N$  interaction at low energies, CDD pole 2-11068  
 $\nu_\mu(\bar{\nu}_\mu)N \rightarrow \mu Y \pi$  ( $Y = \Lambda, \Sigma$ ), cross-section calc. 2-23969  
 $\nu_p$ , 43 GeV, inclusive neutral strange particle prod.,  $K^0$ ,  $\Lambda$ ,  $\bar{\Lambda}$ ,  $K^*$  and  $\Sigma$  2-38873  
 pd- $\Lambda$ X, prod. at rest 2-24033  
 pN- $\Xi$ X, 400 GeV, inclusive  $\Xi^0$  prod. and quark fragmentation functions 2-29140  
 pp, 32.1 GeV, inclusive prod. of neutral strange particles  $K^0\bar{K}^0\Lambda$  and  $\bar{\Lambda}$ , struct. functions 2-29154  
 pp, hadron prod. of hyperons, quark-parton model calc. (Russian) 2-7055  
 pp-e<sup>+</sup> $\Lambda$ <sub>s</sub>X, 62 GeV, leading baryon effect, long. momentum distrib. 2-24038  
 pp- $\Lambda_b$ , 63 GeV, beauty baryon prod. and decay 2-38914  
 pp- $\Lambda_b$ M<sub>s</sub>X ( $\Lambda_c^+\bar{D}X$ ), charm and beauty prod. cross section comparison 2-24036  
 pp- $\Lambda_c^+$ X, diffractive production of charm, parton distrib., QCD evolution role 2-29073  
 pp- $\Lambda$ A, Regge pole model anal. 2-24014  
 pp- $\Sigma^\pm$ X, 12 GeV/c, inclusive  $\Sigma^\pm(1385)$  prod. cross section 2-3819  
 pp- $\gamma K^0$ X, 40 GeV/c,  $\gamma$  quanta prod. with strange particles, multiplicity and inclusive spectra (Russian) 2-29151  
 $\pi$  p, 4 GeV/c, exotic exchange processes, hyperon prod., Regge cut, quark and exchange models 2-43374  
 $\pi$  p, 40 GeV/c,  $K^0$  mesons,  $\Lambda$  and  $\bar{\Lambda}$  hyperons prod. (Russian) 2-29150  
 $\pi$  p- $\Lambda^0 K^0$ , hyperon exchange, Regge model in SU<sub>2</sub> 2-29135  
 $\pi$  p-n $\Lambda$ A, 6.0, 7.0 GeV, baryonium state search 2-24022  
 $\Sigma^+$  p- $\Lambda$ n, production ratios at rest 2-11066  
 $^3\text{He}(K^-, \text{Adn})$ , Adn final states from K NN interactions 2-33856

hyperon resonances

- e<sup>+</sup>e<sup>-</sup> → YX, 10-30 GeV, three gluon decay model, QCD prediction, strong coupling const. 2-3781  
 KN, low and intermediate energy physics, conf., Rome, Italy, (Mar. 1980) 2-10551  
 K<sup>+</sup> p, 6.5 GeV/c, S=-2 and -3 baryon states prod. 2-11061  
 $\Lambda(1405)$ , interpretation as 3 quark state or unstable  $\bar{K}N$  state 2-19341  
 $\Lambda(1405)$  presence in  $\bar{K}N$  interaction near threshold; dispersion relations 2-11062  
 $\Lambda(1405)$  production in  $\bar{K}N$  interaction at low energies, CDD pole 2-11068  
 $\Lambda_b$ , two body weak non-leptonic decays 2-19373  
 $\Lambda_c^+$ , baryons lifetimes from meson and baryon mass splittings 2-33834  
 $\Lambda_c^+$  charmed hadrons lifetime meas. review 2-15336  
 pp- $\Sigma^\pm$ X, 12 GeV/c, inclusive  $\Sigma^\pm(1385)$  prod. cross section 2-3819  
 $\Xi^-$ , anomalous mag. moment anal. 2-43551  
 Y-eggs from e<sup>+</sup>e<sup>-</sup>, QCD calc., strong coupling const. 2-3781

hyperon scattering see hyperon-nucleon scattering; hyperon-nucleus scattering; kaon-hyperon scattering; lepton-hadron scattering; photon-hadron scattering; pion-hyperon scattering

hyperon spin and parity

No entries

hyperons

- see also hyperon resonances  
 $\Lambda_c^+$ , two mass levels as cu and cd diquark structs. 2-7011  
 $\Sigma$  and  $\Xi$  hyperfine splittings difference 2-19344

hypersonic flow

- air hypersonic flow, blunt body radiative-convective heat transfer, ablation product effect 2-4855  
 blunt body, vorticity, boundary layer, heat transfer calcs. 2-35134  
 conical body in hypersonic flow, boundary layer transition effect on static stability 2-8180  
 expanding bodies, flow visualisation 2-12178  
 flow around three-dimensional body 2-44758  
 gas flow around quasi-two-dimens. bodies under different surface boundary conditions (Ukrainian) 2-25390  
 heat transfer to blunt bodies in hypersonic flight, vorticity effect 2-50255  
 laminar separated flow, numerical soln. (Chinese) 2-25388  
 low-density gas hypersonic flow similitude over blunt bodies 2-50294  
 re-entry vehicles, miniaturized differential temp. gauge for boundary-layer transition onset detection 2-38651  
 separation, at spherically blunted cone, streamline method calcs. 2-39916  
 steady hypersonic flow, MHD wave propag. 2-50291  
 viscous flow over hemisphere cones (Chinese) 2-25389  
 vorticity determ. in direction of flow on using of small aspect ratio in hypersonic stream 2-39918  
 wind tunnel, boundary layer transition sensors evaluation 2-35246  
 wind tunnel, hot-film static-pressure probe for surveying flow fields 2-35247  
 CO<sub>2</sub>, hypersonic flow over blunt bodies, nonequilibrium ionisation, effect of addition of N<sub>2</sub> and Na 2-30174

hypersorption see sorption

hypertrons see hypernuclei; tritons

hypervirial theorem see quantum theory

hypochromism see light absorption

hypothetical particles

- see also charm particles; heavy leptons; intermediate bosons; magnetic monopoles; quarks; tachyons  
 arrow scheme model for leptons, quarks, bosons 2-23955  
 axions and second class currents, common basis in chiral U1 symmetry 2-38819  
 colour-bearing scalar quanta, dynamic effects, in baryons 2-23929  
 diquark states, fractional charge generation from broken QCD 2-294  
 Dirac singletons, SO(3,2) invariant scatt. 2-38741  
 fractionally charged colour singlet fermions in SU(7) grand unified theory 2-11005  
 gluonia, effective masses, QCD approach 2-38863  
 gluons, correl. with quarks in hard jets 2-11028

hypothetical particles continued

- gluons, existence, QCD theory (Czech) 2-29066  
 gluons, review 2-11033  
 heavy photon, postulated existence in elementary particle theory review (Dutch) 2-301  
 large mass possibly fractionally charged particle obs. 2-38919  
 massive photinos from spontaneously broken supersymmetry 2-6970  
 N=8 supergravity, supersymmetry breaking hierarchy and light gravitino mass 2-33410  
 Poincare gauge theory of gravitation, axial vector particle 2-48585  
 rhichon model 2-299  
 superstrong force with a heavy axion 2-23885

hysteresis

- see also coercive force; dielectric hysteresis; elastic hysteresis; magnetic hysteresis; remanence  
 bistable optical device using semiconductor laser diode and photodetector 2-957  
 circular cylindrical shells, modal response with structural damping 2-20579  
 fatigue effects analysis and obs. 2-1147  
 lithium iodide-based solid electrolytes 2-21643  
 magneto-optical effect, meas. techniques (Japanese) 2-19149  
 mercury porosimetry, penetration and retraction hysteresis in closely packed spheres 2-26187  
 mercury porosimetry, wetting angle hysteresis 2-27397  
 porosimetry, hysteresis 2-26186  
 semiconductor buried heterostruct. laser with segmented contact, bistability and neg. resist. 2-44284  
 solid electrolytes, hysteresis in ionic cond. and excess heat capacity, phenomenological theory 2-50915  
 steel, stainless, Type 316, nonelastic deform., unified phenomenological model 2-41671  
 stellar pulsations, existence of hysteresis effects 2-32992  
 TE ion chambers model IC-17 for dose meas., calibration constancy 2-19886  
 US attenuation and dispersion, critical, general dynamic scaling theory 2-21239  
 BaPb<sub>0.7</sub>Bi<sub>0.3</sub>O<sub>3</sub> film, grain boundary Josephson current 2-2035  
 Bi, polymorphic transformation, plastic deform. influence (Russian) 2-21292  
 Ce, polymorphic transformation, plastic deform. influence (Russian) 2-21292  
 Ga, polymorphic transformation, hysteresis under press., low temp. (Russian) 2-21291  
 GaAs-GaAlAs diode laser, multiple segment stripe contact, effect of non-uniform current 2-935  
 Ge, laser thermal breakdown, hysteresis effects 2-16678  
<sup>3</sup>He, solid, sound vel. and attenuation 2-40648  
<sup>3</sup>He-A, flow dissipation and superfluid density, temp. hysteresis effects 2-35818  
<sup>4</sup>He film, persistent current meas. in rotating superleak 2-40627  
 Hg porosimetry, hysteresis, entrapment and wetting angle 2-25460  
 n-InAs, magnetoresist. hysteresis in elec. field 2-21610  
 K<sub>2</sub>HPO<sub>4</sub>, temp. depend. of refractive indices 2-26851  
 K<sub>2</sub>ZnCl<sub>4</sub>, incommensurate-commensurate transition, impurity effects 2-41295  
 LaNi<sub>5</sub>-H, plateau press. and hysteresis, annealing effect 2-41928  
 Li<sub>0.5</sub>Fe<sub>2.5</sub>O<sub>8</sub>, order-disorder transition, first order 2-30589  
 NbTi supercond. ribbons, reduction of hysteresis losses 2-41058  
 Pr<sub>2</sub>O<sub>3</sub>, oxidation, kinetic and thermodynamic studies 2-41892  
 Rb<sub>2</sub>ZnCl<sub>4</sub>(Br<sub>4</sub>), incommensurate-commensurate transition, impurity effects 2-41295  
 Tb<sub>2</sub>O<sub>3</sub>, oxidation, kinetic and thermodynamic studies, O<sub>2</sub> press. depend. 2-41890  
 ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub>, thermal barrier coatings, charact. by Raman spectroscopy 2-31510  
 I-II-VI<sub>2</sub> semiconductors see ternary semiconductors  
 I-III-VI<sub>2</sub> semiconductors see ternary semiconductors  
 I/O programs see input-output programs  
 IC see integrated circuits  
 IC engines see internal combustion engines  
 ice  
 see also glaciology; sea ice; snow  
 Antarctic firn, nitrate ion concs. as marker for solar activity 2-18473  
 Antarctica, ice core sample meas. rel. to atmosphere CO<sub>2</sub> concentration during past 40000 yr 2-37958  
 Atlantic Canada Late Wisconsin ice cover rel. to postglacial sea level 2-14608  
 columnar grained, rate sensitivity of compressive strength 2-13875  
 Comet Bradfield (1979 XJ), water prod. models 2-38113  
 comet coma, icy grains detect. by IR astronomy 2-38120  
 comet nuclei, heat balance, effect of water ice phase transition 2-38118  
 comets, JHK<sub>L</sub> photometry, ice mantles on reddish refractory cores 2-10358  
 concentration during past 40000 yr 2-37958  
 correlation function studies 2-3042  
 crystal growth kinetics, from vapour phase, growth forms 2-25786  
 crystals, grown from vapour phase, growth rates and growth forms 2-46892  
 density, lattice energies and bulk moduli 2-39461  
 dielectric constant, theory 2-9071  
 dielectric relax. by charged dislocation process 2-31374  
 electron and proton conductivity 2-1971  
 formation in pipe, transition and turbulent regimes 2-12225  
 formation temperature variation with latitude 2-14599  
 freeze-fractured model membranes, ice crystals, specifically decorate hydrophilic sites 2-27959  
 frost layer growth and densification under forced convection and densification 2-4704  
 frost reflectance spectra, astron. appl. 2-38122  
 frozen ground thermo-physical props. measuring instrument (Russian) 2-23133  
 Greenland and Antarctic ice cores, natural concs. of Pb 2-52896  
 Greenland Ice Sheet, no correl. between nitrate concs. and supernova 2-37901  
 growth on Pt (111) and Ag (111) surfaces 2-51006  
 hail patterns and kinetic energy characts. obs. in Swiss experiment 2-14562  
 hailstone embryo types, classification 2-28166



## ice continued

- $I_h$ , ageing phenomena, internal friction, X-ray topography meas. (*French*) 2-12680  
 $I_h$  single cryst. translational spectra, interaction induced light scatt. 2-36584  
 ice:Ag, presolvated to solvated conversion kinetic study, activation energy of mol. rot. and D-defect annihilation 2-37056  
 ice accretion at mountain top site in Czechoslovakia (*German*) 2-14504  
 ice crystals, grown from vapour phase, growth rates and growth forms 2-46892  
 ice-salt water boundary layers, convection and turbulent flows 2-18454  
 $I_h$ , bond angles, bond lengths, transition barrier, from neutron scatt. 2-21056  
 $I_h$ , D distrib., neutron scatt. study 2-50594  
 $I_h$  phase, ferroelec. phase transition and dielec. const. anisotropy 2-26832  
 internal friction, very low freq. meas. 2-45359  
 interstellar medium, meas. of ice content of Kleinmann-Low nebulae in Orion 2-33110  
 IV metastable high pressure phase, struct. obs. by X-ray diffr. 2-35450  
 Lake Suwa ice plate, icequake activity and thermal stresses 2-14500  
 lakeshore ice action, Schefferville, Canada examination 2-37896  
 localised excess electrons 2-5370  
 microwave COMSTAR beacon, ice depolarization at 28.56 GHz during low fades, radar backscatter correl. 2-52899  
 noctilucent clouds, nucleation and growth of ice in mesosphere 2-14575  
 northern hemisphere ice cover rel. to climate and temp. 2-14598  
 nucleation, in biological materials, modification by water soluble polymers 2-32169  
 nucleation rate of rain shells used in weather modification expts. 2-32628  
 OH 0739-14, OH maser IR source,  $H_2O$  ice existence, spectral obs. 2-28440  
 permafrost area, Garry Island, active layer slope movement 2-52846  
 polycrystalline ice, radiation absorpt. coeffs. from 400 to 1400 nm 2-18474  
 RF, microwave, visible and IR spectra, review 2-31587  
 rock glacier, talus-derived, ice content determ. from hydrology 2-37893  
 sheet dynamics 2-47928  
 soil, flow of nonfreezing water interlayers and frost damage 2-18472  
 stacking faults in pure ice single crystals, formation by cooling 2-16661  
 struct. and proton cond. at high press., review 2-1386  
 structure prediction, tests of effective pair pots. 2-40332  
 sulphate content as measure of past atm. sulphate 2-28223  
 troposphere ice forming nuclei concentration (*German*) 2-32612  
 US attenuation near melting point 2-45389  
 vertical ice wall, melting into fresh water by free convection, finite difference calc. 2-4706  
 vitrified, for electron microscope obs. 2-48691  
 Volga river, USSR, ice dam levels 2-23028  
 Walden Reservoir, freshwater ice thickness from passive microwave sensors 2-3041  
 $D_2$  ice, total neutron cross sections at 77 and 15K for  $E_n=0.3$  and 100 meV 2-43520

iconoscopes see television camera tubes

## identification

- see also correlation methods; frequency response; modelling; parameter estimation; simulation; state estimation  
 drop forge hammer noise source identification by residual spectrum modelling 2-9742  
 nuclear safety anal., response surface methodology handbook, state of art 2-19754  
 parameter identification from impedance measurements on electrochemical reactions 2-37134  
 plasma etching for semiconductor masking 2-41819  
 IETS see tunnelling spectra; tunnelling spectroscopy  
 IEXE see ion microprobe analysis; X-ray chemical analysis  
 i.g.f.e.t. see insulated gate field effect transistors  
 ignition  
 see also electric ignition  
 explosive, high vaporisation flux effect 2-13953  
 thin explosive layers, ignition by impact, effect of polymer particles 2-41902  
 $NH_3-O_2$  catalyst system, pre-ignition/pre-extinction phenomena detection by modified DTA 2-6079

II-III-2-VI semiconductors see ternary semiconductors

II-IV-V<sub>2</sub> semiconductors see ternary semiconductors

## II-VI semiconductors

- CdS/NaI<sub>3</sub>.3NH<sub>3</sub> junction, photoelectrochem. behaviour, solar energy conversion utilisation 2-6155  
 chalcogenide crystals, II-VI, cohesive energy evaluation 2-1436  
 compressibilities, Debye-Waller factors and melting criteria 2-1580  
 covalent solids, tight-binding parameters by Louie peripheral states 2-40754  
 Debye temperature estimation using Lindemann rule 2-35629  
 defect formation, combined method of determining mode and energy of activation 2-8508  
 dielectric to metal transitions and supercond. at high press. 2-1853  
 excited states at deep centres, nonradiative recomb. processes 2-8770  
 film, elastic props. and defects, lattice mismatch of film-substrate systems 2-12946  
 film, vacuum evaporated, optical consts. determ. with optical waveguides 2-17560  
 intrinsic defects and luminescence 2-46684  
 MBE, review of European developments, 1979-80 2-22168  
 organometallic growth, of II-VI compounds 2-5826  
 panel electroluminescence, book contrib. 2-51714  
 photoplastic memory due to long-lived excitations 2-45325  
 physicochemical interaction, in II-VI-II-VI systems 2-5861  
 polar semiconductor, hot photoelectron density estimation 2-13130  
 polarons, Frohlich operator, shell model, generalisation 2-45849  
 pyroelectricity, primary and secondary components 2-31386  
 self-compensation, review 2-16672  
 solar cells, physics, book contrib. 2-52357  
 solid solution, X-ray analysis of comp. nonuniformity 2-5025  
 $V^{2+}$  photoluminescence, energy matrix diagonalisation calc. 2-51662  
 zincblende struct., surface vacancies 2-26461  
 (Cd,Zn)S-Cu<sub>2</sub>S thin-film high-efficiency solar cells, development 2-37364  
 CdHgTe photodetector, Shockley-Haynes expt., contact efforts 2-51202  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, anodic surface layer, surface and in-depth anal. 2-51063

## II-VI semiconductors continued

- Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, surface treatment effect on photosensitivity spectral distrib. (*Russian*) 2-21627  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, CESR (*Russian*) 2-26748  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, density of states calcs. 2-21486  
 p-Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, elec. cond. in strong microwave elec. field, 77 to 300K 2-30921  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, elec. props. study 2-40942  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te epitaxial films, optical props., absorption and reflection spectra study 2-13583  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te epitaxial layers, deposited by cathodic sputtering, crystallographic props. 2-26249  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, growth by MOVPE and characterisation 2-5827  
 n-Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, impurity radiative recomb. 2-46752  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, magnetophonon reson. of nonequilib. carrier density 2-8825  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, molecular beam epitaxy on CdTe 2-2451  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te photodiodes, 8-14  $\mu$ m range, doping influence 2-19178  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, photosensitivity spectrum, influence of Gaussian diffuseness 2-5433  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, photothermoelectric effect in mm and submm ranges 2-13132  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, resist. and Hall coeff., 4.2 to 30K 2-30897  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, semimetallic, magnetophonon reson. of hot carriers at 4.2K 2-40940  
 Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, surface recomb. vel. determ. from temp. depend. of minority carrier lifetime 2-51208  
 Cd<sub>0.8</sub>Mn<sub>0.2</sub>Te solid soln., electroluminescence and photocond. spectra 2-26866  
 CdO, valence Auger lineshapes, rel. to photoemission spectra 2-46841  
 CdS, acoustic domains, shock excitation and nonlinear process suppression, Brillouin scatt. meas. 2-17117  
 CdS, acoustoelectric currents, nonlinear, during US carrier injection 2-36107  
 CdS, anisotropic cond. after plastic deform. and cond. along dislocations 2-45980  
 CdS, anisotropic heating of photoexcited electrons (*Russian*) 2-9251  
 CdS based photosensitive sandwich structs., series equivalent circuit parameters (*Russian*) 2-21700  
 CdS, biexciton states, real and virtual, Raman, fluoresc. and radiative recomb. spectroscopy 2-45841  
 CdS, Brillouin scatt. via surface exciton polaritons, theory 2-46622  
 CdS, collinear interaction of acoustic waves 2-35604  
 CdS, comparative optical studies of high density exciton gas 2-51625  
 CdS, conductivity near screw dislocation core 2-26396  
 CdS, contrib. of plasmon to optical gain spectra of high density electron-hole plasma 2-51683  
 CdS, cryst., acoustic shear waves elliptical polarisation 2-36540  
 CdS crystal, degenerate six-photon interaction, optical bistability and hysteresis 2-39690  
 n-CdS crystals, annealed in Cd or In, elec. cond. props. 2-45964  
 CdS crystals, emitted radiation spectral and time dependences 2-51719  
 CdS, defect formation mechanism under thermal neutron irradiation 2-8546  
 CdS, defect struct., high resolution TEM study 2-30473  
 CdS, deformed, absorpt. spectra and birefringent interference pattern 2-46539  
 CdS, dielectric function, renormalization with increasing excitation 2-45867  
 CdS, dislocation energy states, piezo-optical investigation, photoluminescence and absorption spectra obs. 2-51123  
 CdS, electro-acoustical noise 2-51266  
 n-CdS, electrodes, surface-trapped holes, photo- and electroluminesc. 2-41428  
 CdS epitaxial film on InP(111), excitonic luminesc. 2-26986  
 CdS epitaxial layers, exciton spectrum, purity influence 2-41441  
 CdS, evidence of quadrupole transitions to excited states of  $I_2$ -bound exciton 2-2335  
 CdS, excitation mechanisms, excited states of  $I_1$  bound exciton 2-26975  
 CdS, excitonic polariton dispersion, excitation induced renormalisation effects 2-1835  
 CdS film, chemically sprayed, struct. and electronic props., solar cell appl. 2-8732  
 CdS film, elec. props. rel. to struct. and comp. 2-46163  
 CdS film, grain struct. 2-51051  
 CdS film, n-n junction system 2-8893  
 CdS film, reversible switching of residual cond. by a gas-vapour pulse 2-21641  
 CdS film exhibiting residual cond., lux-ampere characts., superlinearity 2-1957  
 CdS films, grown on faceted (111)InP substrates, small angle grain boundaries 2-5130  
 CdS, high press. quenched, semicond., pairing of holes rel. to complex mag. props. 2-31136  
 CdS, highly excited, light scatt. by density fluctuations 2-51612  
 CdS, ionic processes occurring under combined action of illum. and elec. field 2-30927  
 CdS laminar crystals, exciton luminesc., spectral and temporal props. 2-17543  
 CdS laser screen characts., dislocation influence 2-34768  
 CdS, local states US ionization, sonolum. and acoustoelastic current 2-41440  
 CdS, luminescence, time-resolved picosecond, at high excitation 2-46707  
 CdS, luminescence and absorpt. study of plasticity (*Russian*) 2-17545  
 CdS, luminescence study of free exciton lifetime and diffusion length 2-5756  
 CdS, magnetophotovoltaic effects 2-21631  
 CdS, microstructural changes in high electric fields 2-26066  
 CdS, negative photoplastic effect, dislocation motion in basal and prismatic slip systems 2-45326  
 CdS, neutron irradiation, electron-phonon interaction, luminescence study (*Russian*) 2-13559  
 CdS, noncollinear interaction between elastic vol. waves 2-25167  
 CdS,  $p_{44}$  photoelastic coeff. dispersion at 77K 2-36598  
 CdS, phonon echo props. 2-45460  
 CdS, phonon-electron spin interactions, Raman scatt. study 2-46583  
 CdS, photoconductivity and relaxation, barrier model anal., temp. and light intensity depend. 2-36096  
 CdS piezocrystal, surface acoustic waves, nonlinear refl. 2-26201  
 n-CdS, piezoelectric, Brillouin instability 2-21243  
 n-CdS, piezoelectric semicond., acoustic wave propag., electron mass and collision freq. changes 2-46079



## II-VI semiconductors continued

- CdS, polariton spectroscopy, exciton study by thin prism refraction method 2-2209  
 $\alpha$ -CdS preparation by thermal and plasma-conversion of Cd 2-51839  
 CdS, pressed polycryst., photoelec. props. (*Bulgarian*) 2-21619  
 CdS, pressure quenched, supercond., 77K 2-30994  
 CdS, previously laser irradiated crystals, recomb. radiation spectra (*Russian*) 2-41427  
 CdS, RF elec. field excitation in volume elastic waves interaction 2-46082  
 CdS, resonant Brillouin scatt. in opaque region; piezobirefringence theory 2-51616  
 CdS single cryst., refractive index, optically induced changes 2-51543  
 CdS, single cryst., two-phase annealing, elec. resist. meas. 2-8792  
 CdS single crystals, growth by vapour-phase hydrogen transport 2-46891  
 CdS single crystals, semicond., line emission 2-51708  
 CdS single crystals, evaporation and formation of negative whiskers 2-55914  
 CdS single crystals, photoinduced processes, ageing and annealing effects 2-21620  
 CdS, small particles deposited on transparent substrate luminesc. and Raman spectra, size effects 2-51691  
 CdS, small-angle light scatt. by dislocations, green luminescence 2-46628  
 CdS solar cell, polycrystalline thin film, liquid junction, performance eval. 2-9660  
 CdS solar cells, min. photovoltaic module cost projections, realistic comparison 2-37314  
 CdS, solid state plasma interacting with acoustic waves 2-21614  
 CdS, stress birefringence, EM wave coupling, transmission spectra study 2-21976  
 CdS, studies using megagauss fields 2-31290  
 CdS, surface, acoustoconcentration effect due to amplified US wave, elec. cond. obs. 2-51238  
 CdS, surface Brillouin scatt., elasto-optic and ripple mechanisms 2-5725  
 CdS tetrapod-like crystals, growth in smoke prepared by gas evaporation 2-51782  
 CdS thin films, elec. props., effects of  $H_2$  adsorption 2-30986  
 CdS, US luminesc., fine struct. 2-17559  
 CdS, ultrasonic excitation of orange sonoluminescence 2-2350  
 CdS:Al<sub>2</sub>O<sub>3</sub>(SnO<sub>2</sub>) coating prep. by spray pyrolysis, solar cells appl. 2-51042  
 CdS:Cr<sup>3+</sup>, configuration mixing and cryst. field splitting 2-51136  
 CdS:Cu,Cl, activated phosphors, radiative and nonradiative recomb. centre struct. photoluminescence obs. 2-35966  
 CdS:Cu,Cl, elec. props. and imaging characts. in xerographic mode 2-23752  
 CdS:CuCl<sub>2</sub>, baked layers, effects on elec. and photoelectrical props. 2-30983  
 CdS:CuInSe<sub>2</sub>, vacuum deposition of CuInSe<sub>2</sub> on CdS, experimental methods 2-37237  
 CdS:In, anisotropic cond. after plastic deform., cond. along dislocations 2-45982  
 CdS:In layer and whisker, vapor reaction growth, luminesc. spectrum 2-46674  
 CdS:In layers, optical absorpt., spectral depend., dopant effects 2-51622  
 CdS:Li crystal, interstitial electromigration, exciton luminescence study 2-5279  
 CdS:Ni<sup>2+</sup>, optical spectra, fine struct. and isotope splitting, Jahn-Teller centre interpretation 2-51635  
 n-CdS:Te, semiconductor photoelectrodes, luminescence, photocurrent 2-14087  
 -CdS:Te luminesc. photoelectrochem. electrode, multiple emission and excited state communication 2-6153  
 CdS/Cu<sub>2</sub>S sintered solar cells, controlled annealing of sintered CdS layer effects on photovoltaic performance 2-6172  
 CdS/p-Ge junction, admittance with deep impurity levels, space-charge anal. 2-13169  
 n-CdS/p-Si solar cells, heterojunction, characterisation 2-37239  
 CdS-Al, electronic barrier characts., time-resolved charge injection 2-8878  
 CdS-Al contacts, carrier transport, effects of interfacial ambients, time resolved charge injection technique 2-51299  
 CdS-anthracene interface, exciton reflection and luminesc. spectra 2-51091  
 CdS-Au Schottky barrier solar cell, Ta<sub>2</sub>O<sub>5</sub> antireflection coating 2-27613  
 CdS-Cu<sub>2</sub>S photovoltaic cell crystallographic anal. using SEM and EBIC mode 2-27632  
 CdS-CdSe film n-n heterojunction, photovoltaic effect 2-51235  
 CdS-CdSe(CdTe) solid-phase substitutional heterostructs., photoresponse 2-13176  
 CdS-CdTe thin-film backwall illuminated heterojunction solar cells, spray pyrolysis prep. 2-37373  
 CdS-Cu<sub>2</sub>S solar cell prep. by organometallic CVD, preliminary stage 2-37368  
 CdS-Cu<sub>2</sub>S solar cells, window layer deposition 2-37235  
 CdS-Cu<sub>2</sub>S solar cells, CdS film fabrication by chemical spray deposition-exchange process 2-37367  
 CdS-Cu<sub>2</sub>S thin film heterojunctions, photovoltaic properties 2-36135  
 CdS-Cu<sub>2</sub>S thin-film heterostruct. solar cell, struct. and phase studies by X-ray diff. 2-37366  
 CdS-Cu<sub>2</sub>S ungridded solar cell material, defect detect. by laser scanning 2-37365  
 CdS-CuInGa<sub>1-x-y</sub>Se<sub>2</sub>Te<sub>2(1-x-y)</sub> heterojunction solar cells prep., RF sputtering technique, characts. 2-37371  
 CdS-CuInSe<sub>2</sub> thin-film high-efficiency solar cells, development 2-37364  
 CdS-electrolyte junction, flat band pot., electroreflectance study 2-17156  
 CdS-metal interface, reactive interdiffusion and electronic barriers, reactive interlayer control of Schottky barrier height, photoemission study 2-40608  
 CdS-S coevaporated thin film prep. and cryst. props. 2-41531  
 CdS(Se), photoelectrodes, in polysulphide electrolyte, surface crystallinity and morphology 2-8692  
 CdS<sub>1-x</sub>Se<sub>x</sub>, characts. of emitted recombination radiation 2-41425  
 CdS<sub>1-x</sub>Se<sub>x</sub>, localised exciton resonant secondary emission 2-46695  
 CdS<sub>1-x</sub>Se<sub>x</sub>, solid solns., photoluminesc. spectra 2-31554  
 CdS<sub>1-x</sub>Te<sub>x</sub>, preparation and properties for graded band gap solar cells 2-5837  
 CdS<sub>1-x</sub>Te<sub>x</sub> solar cells, graded band gap, numerical model for photo-generated carriers distribution determ. 2-6144  
 CdS<sub>1-x</sub>Te<sub>x</sub> thin film solar cells graded band gap, preparation and props. 2-6145

## II-VI semiconductors continued

- (CdS)<sub>1-x</sub>(ZnS)<sub>x</sub>, Cu, Cl, sintered layers, photocond. and acceptor centre levels 2-13138  
 CdSe, absorption coeff. in region of fundamental absorption edge, strong EM wave effect 2-51600  
 CdSe based photosensitive sandwich structs., series equivalent circuit parameters (*Russian*) 2-21700  
 CdSe crystals, thermal props. by photoacoustic spectroscopy 2-21241  
 CdSe, defect formation mechanism under thermal neutron irradiation 2-8546  
 CdSe, epitaxial film, surface state charging during NO<sub>2</sub> adsorption 2-36163  
 CdSe film, deposited from heteroorganic cpds., exciton absorpt. 2-5761  
 CdSe, film, elec. props. rel. to struct. and comp. 2-46163  
 CdSe, generation-recombination noise and defect levels 2-26455  
 CdSe, high density electron-hole plasma, picosecond luminesc. and relax. 2-51682  
 CdSe, hot electron-hole plasma, spatial expansion, time resolved photoluminesc. study 2-46051  
 CdSe, luminescence, time-resolved picosecond, at high excitation 2-46707  
 CdSe, negative photoplastic effect, dislocation motion in basal and prismatic slip systems 2-45326  
 CdSe, noncritically phase-matched, tunable coherent 16  $\mu$ m radiation by difference freq. mixing 2-11717  
 CdSe, photoanodes, photoelectrochemical cells, energy storage 2-14088  
 n-CdSe photoanodes, protection with photoelectrochemically generated polypyrrole films 2-47203  
 CdSe, polycrystalline layers, effect of annealing on elec. props. 2-30984  
 CdSe single crystals, specific cond. meas. by capacitance probe (*Russian*) 2-43041  
 CdSe solution grown films, optical and photoconducting props. 2-46177  
 CdSe surface potential change as a result of O thermodesorption 2-16956  
 CdSe thin film, chemically deposited, for photoelectrochemical cells 2-36801  
 CdSe thin film, thermal desorption of chemisorbed O<sub>2</sub> and CO, elec. resist. var. obs. 2-35890  
 CdSe thin film anodes, photoelectrochem. characts. 2-8876  
 CdSe thin film electrodes for photoelectrochemical cells, props. 2-14092  
 CdSe thin film electrodes for backwall photoelectrochemical cells 2-14093  
 CdSe thin film MIS solar cell, characterization 2-37374  
 n-CdSe thin film photoelectrodes, Zn surface treatment effect, photoelectrochem. solar cell appl. 2-52373  
 CdSe:Ag, nonequilibrium sensitized, mid IR radiation detector, photocond. 2-8838  
 CdSe:Fe<sup>2+</sup>(Co<sup>2+</sup>)(Ni<sup>2+</sup>), zero-phonon lines in optical spectra 2-46650  
 CdSe:Ni<sup>2+</sup>, optical spectra, fine struct., Jahn-Teller centre interpretation 2-51636  
 CdSe:O films, reactive planar magnetron sputtering prep., expt. study 2-51026  
 n-CdSe/electrolyte interface, electrorefl. spectra, photoelectrochem. solar cell appl. 2-9207  
 CdSe/polysulphide solution Schottky barriers charact., surface treatment effect 2-2000  
 CdSe/S<sub>2</sub>, photoelectrochemical cells, surface etching and morphology effect on stability 2-27711  
 CdSe-Al, electronic barrier characts., time-resolved charge injection 2-8878  
 CdSe-HgSe solid soln., fund. absorpt. and absorpt. by free carriers, lattice disorder influence 2-13465  
 CdTe, bound multiple exciton complex, in luminesc. spectra, Zeeman splitting 2-13553  
 CdTe, cold semicond., hot electrons, luminesc. expts. 2-51676  
 p-CdTe, covered with dielec. films, annealing effects, diffusion phenomena and carrier conc. (*Japanese*) 2-40609  
 CdTe crystals, wavefront inversion in degenerate four-wave interaction 2-39696  
 CdTe, crystals, vapour phase growth 2-27063  
 CdTe, defect formation mechanism under thermal neutron irradiation 2-8546  
 CdTe, defect struct., high resolution TEM study 2-30473  
 CdTe detector characteristics for  $\gamma$  dosimetry 2-43625  
 CdTe, dislocation electronic state calcs. 2-40821  
 CdTe doped with Fe group impurities, mag. susceptibility (*Russian*) 2-26580  
 n-CdTe electrodeposited solar cells evaluation 2-37234  
 CdTe, electronic band struct. calcs. 2-40782  
 CdTe, irradiation induced intrinsic excitonic luminesc. 2-2337  
 CdTe, mag. field induced LT mixing of multicomponent polaritons 2-26872  
 CdTe, molecular beam epitaxy on CdTe (100) and (100) 2-2450  
 CdTe p-n junctions, electrolytically prepared, emission props. 2-2347  
 CdTe, p-n junctions, LPE grown, injection electroluminescence 2-13569  
 CdTe p-n junctions quantum and energy conversion efficiency 2-36134  
 CdTe, photoelectron spectra under cooperative UV and visible excitation 2-9243  
 CdTe, plastic deform., photoplastic effect, dislocation obs. by TEM 2-8556  
 CdTe real surfaces, optical and elec. props. 2-51278  
 CdTe solar cell fabrication by hot wall vacuum evaporation 2-37372  
 CdTe solar cells, high efficiency electrodeposited, development 2-47474  
 CdTe, solubilities in liquid III metals 2-50863  
 CdTe sputtered thin films, photocond. and photovoltaic effects 2-46070  
 CdTe surface, (110), LEED intensities, dynamical anal. 2-12893  
 CdTe, surface polishing by diamond milling 2-41767  
 CdTe thin film appls. to solar cells (*Slovak*) 2-18054  
 CdTe thin films, optical props. 2-46805  
 CdTe, thin films, struct. and elec. props. stoichiometry and prep. condition depend. 2-51353  
 CdTe thin-film Schottky-barrier solar cells, elec. props., limitations 2-37392  
 CdTe, transient hot-carrier phenomena, method of moments for anal. 2-45998  
 CdTe undoped p-type annealed in vacuum, electrical and crystalline props. 2-5750  
 CdTe vacuum deposited films, optical band gap, thickness depend. 2-51731  
 p-CdTe:Ag, impurity acceptor photocond. centres, equilib. and nonequilib. 2-26444  
 n-CdTe:Al, DLTS study of deep levels 2-35962



## II-VI semiconductors continued

- n-CdTe:Al, deep centres, charact. 2-51115  
 CdTe:Al, Li, IR absorpt. of Al-Li defect pairs 2-9169  
 CdTe:Cl crystals, carrier scatt., Hall effect study 2-26383  
 CdTe:Co<sup>2+</sup>, cryst. field splitting, press. induced changes, IR spectra study 2-26944  
 CdTe:Cu high-resolution electron microscopy obs. of defects, coherent precip. and faulted loops 2-5120  
 CdTe:(P,Ga)(P,Al)(P,In), localised vibr. modes, Green's function calc. 2-50814  
 CdTe-CdHgTe heterostructs., equil. band profiles calc., IR appls. 2-51296  
 CdTe-HgTe(MnTe) ternary mixed alloys for tandem solar cell appls. 2-42021  
 CdTe-Langmuir film MIS solar cells photovoltaic props. 2-37211  
 CdTe-TeO<sub>2</sub>, interface struct., high resolution TEM study 2-30473  
 CdTe-ZnSe heterojunction, photo-EMF anomalous mechanism under two-photon excitation 2-26491  
 (CdZn)S/Cu<sub>2</sub>S solar cells, thin-film, polycrystalline 10% conversion efficiency 2-32080  
 CdZnS-Cu<sub>2</sub>S thin film solar cells, Cu<sub>2</sub>S and CdS lattice constants mismatch reduction for cell conversion efficiency optimisation 2-27635  
 CdZnS-Cu<sub>2</sub>S thin film solar cells, 10% conversion efficiency 2-37322  
 Cd<sub>1-x</sub>Zn<sub>x</sub>S film, grain struct. 2-51051  
 Cd<sub>1-x</sub>Zn<sub>x</sub>S/Cu<sub>2</sub>S photovoltaic cells heterojunction energy band lineups anal. 2-27637  
 Cu-CdS Schottky barriers, exciton refl., absorpt., and photoluminesc. spectra 2-36668  
 Cu<sub>2</sub>-CdS polycrystalline heat-treated solar cells, atomic absorption anal. and auger depth profiles 2-37325  
 Cu<sub>2</sub>-CdS heterojunctions, photoeffect props. and manufacturing methods (Russian) 2-1997  
 CuInSe<sub>2</sub>-CdS thin film solar cells, development 2-37326  
 Cu<sub>2</sub>S/Zn<sub>1-x</sub>Cd<sub>x</sub>S heterojunction solar cells formed on sprayed Zn<sub>1-x</sub>Cd<sub>x</sub>S films, properties 2-27636  
 Cu<sub>2</sub>S-CdS solar cells degradation, lateral diffusion effects 2-37324  
 Cu<sub>2</sub>S-CdS sprayed backwall solar cells for terrestrial appls., reliability 2-37321  
 Cu<sub>2</sub>S-CdS sprayed solar cells, losses 2-37320  
 Cu<sub>2</sub>-S-CdS frontwall thin film solar cells, influence of performance of surface props. of Cu<sub>2</sub>-S 2-27631  
 Cu<sub>2</sub>-S-CdS thin film solar cells with dual impurity distrib. in base 2-37214  
 Cu<sub>2</sub>S-CdS solar cells, characterisation by photocapacitance IR quenching 2-22619  
 Cu<sub>2</sub>S-CdS integrated thin film solar panels fabrication technology 2-27638  
 GaAs-ZnSe heterojunction interface, LPE conditions effect 2-45748  
 (GaAs)<sub>1-x</sub>(ZnSe)<sub>x</sub> solid solns., electrophys. props. 2-40927  
 (Hg,Cd)Te photoconductive detector in 3 to 5  $\mu$ m range, UV irr. effect 2-15226  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te crystals, electrically and optically active defects 2-1479  
 HgCdTe, anodic oxide and ZnS passivant films, substrate interaction, XPS and ion sputtering meas. 2-17756  
 HgCdTe IR detector materials, conf., Washington, DC, USA (April 1981) 2-14973  
 HgCdTe IR detector arrays performance, 1 to 14  $\mu$ m wavelength appls. 2-48778  
 HgCdTe, large optical nonlinearities and CW degenerate four-wave mixing 2-16068  
 HgCdTe, luminescence 2-26957  
 HgCdTe photovoltaic detector arrays, backside-illuminated, MTF modelling 2-23722  
 HgCdTe, recombination processes in 3 to 5  $\mu$ m 2-21529  
 Hg<sub>0.4</sub>Cd<sub>0.6</sub>Te, defect struct., Hall effect study 2-46033  
 Hg<sub>0.4</sub>Cd<sub>0.7</sub>Te, photogenerated carrier lifetime meas. using contactless opt. technique 2-17112  
 Hg<sub>0.4</sub>Cd<sub>0.7</sub>Te-anodic oxide interface in MOS structure, charge trapping 2-17165  
 Hg<sub>0.77</sub>Cd<sub>0.23</sub>Te narrow band gap semicond., free and bound magnetopolarons 2-40807  
 Hg<sub>0.4</sub>Cd<sub>0.7</sub>Te, anodic oxide film, surface anal. and capacitance-voltage characterization 2-51366  
 Hg<sub>0.4</sub>Cd<sub>0.7</sub>Te bolometer for mm wave radiation detection 2-19185  
 Hg<sub>0.4</sub>Cd<sub>0.7</sub>Te:Cu, pure and doped, defect struct., Hall effect study 2-46031  
 Hg<sub>0.4</sub>Cd<sub>0.7</sub>Te:In, defect struct., Hall effect study 2-46032  
 Hg<sub>0.4</sub>Cd<sub>0.7</sub>Te-oxide interface, anodic oxide composition and Hg depletion 2-26237  
 Hg<sub>0.4</sub>Cd<sub>0.7</sub>Te, electron freezeout and hopping cond., magnetoresist. and Hall effect meas. 2-5423  
 n-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, bandgap-reson. optical phase conjugation at 10.6  $\mu$ m 2-25075  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, deep levels, correlation with photodiode performance 2-1856  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, detector grade, LPE growth from Te rich solns. 2-17638  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, electron irr. and annealed, carrier lifetime and recomb. props. 2-17090  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te epitaxial layers, slider LPE growth using Hg press. controlled growth solns. 2-31645  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te IR detectors, MIS diode and photoconductive devices, perform. rel. to grain boundary angles 2-48788  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te intrinsic photoconductive IR detectors, two-dimens. effects 2-43082  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, ion-implanted, CW CO<sub>2</sub> and ruby laser annealing, expt. study 2-41457  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, LPE 2-36803  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, low-temp. thermal expansion 2-5250  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, nonequilib. carrier recomb., Auger recomb., carrier lifetime 2-51204  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, obs. of deep levels with optical modulation spectroscopy 2-51109  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, optical phase conjugation in forward and reflective modes 2-16069  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, photogenerated carrier lifetime, deep levels, optical modulation spectroscopy 2-51732  
 (Hg<sub>1-x</sub>Cd<sub>x</sub>)Te RF sputtered thin films, effect of annealing in Hg vapour on props. 2-8896  
 (Hg<sub>1-x</sub>Cd<sub>x</sub>)Te RF triode-sputtering film for IR detector arrays 2-17174  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, recomb. effects, temp. depend. photoresponse meas. 2-36055

## II-VI semiconductors continued

- p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, slider LPE growth on CdTe substrate 2-17639  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te surface, in vac. and under O<sub>2</sub> exposure, stability 2-36991  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, two electron cond., Hall coeff., electron mobility and conc. 2-51216  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te-oxide interface, carrier transport props. 2-51337  
 Hg<sub>0.4</sub>Cd<sub>0.6</sub>Te, undoped and In and Ag doped, interdiffusion study 2-12859  
 $\alpha$ -HgS, electrical and mag. props. 2-21586  
 HgSe, press. effects on elastic consts. up to phase transition 2-45317  
 HgSe:Mn<sup>2+</sup>, magnetospectroscopy, spin doping, band struct. investigation 2-1820  
 HgTe, activity coeff. of Hg point defects 2-8509  
 HgTe, polar zero-gap semicond., surface polaritons 2-1985  
 HgTe-CdTe, pseudobinary phase diagram, DTA meas. 2-31687  
 HgTe-CdTe-Te system, thermodynamic anal. using regular associated soln. model 2-35717  
 In-CdS-In superconducting junction, lack of proximity effect coupling 2-31068  
 InGa-ZnSe-InGa, contact I-V characs. 2-26517  
 In<sub>2</sub>O<sub>3</sub>-CdSe-VO<sub>2</sub> heterojunctions, optical control of spectral characs. 2-36143  
 InSn<sub>2</sub>O<sub>3</sub>-Ta<sub>2</sub>O<sub>5</sub>-ZnS:Mn-Ta<sub>2</sub>O<sub>5</sub>-Al thin film struct., DC electrolum. 2-46764  
 n-Mg<sub>1-x</sub>Cd<sub>x</sub>Te, degenerate, carrier conc. depend. of Auger lifetime 2-36059  
 PbSe crystal, morphology, struct. and microhardness 2-5084  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Se single crystal, photoelectron spectra, rel. to band struct. 2-51765  
 PbSnTe IR photodiodes, role of lattice matching in improving performance 2-48782  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te, hole mobility and band struct. at 77K 2-1923  
 n-PbTe epitaxial layers, interface electron states, IR radioelectric effect study 2-51352  
 p-PbTe:Ag epitaxial layers, elec. cond. and Hall coeff. 2-41039  
 PbTe-InSb struct., epitaxial growth by laser evaporation, pulsed heating of substrate effect 2-46945  
 SnO<sub>2</sub>/CdTe photovoltaic cells, prep. and characterisation 2-18056  
 SnO<sub>2</sub>-AnS-Cu<sub>2</sub>S-ZnS:Mn(Cu)-AP thin film cell, shortwave electrolum. 2-26996  
 SnTe, epitaxial film, electrometer determ. of electron scatt. intensities 2-40708  
 (Zn,Cd)S:Ag,Cl DC electrolum. powder cell, donor-acceptor recombination luminesc. 2-46768  
 Zn<sub>1-x</sub>Cd<sub>x</sub>Te thin-film backwall illuminated heterojunction solar cells, spray pyrolysis prep. 2-37373  
 Zn<sub>1-x</sub>Cd<sub>x</sub>(Se)(Te), solid solution, crystallochemical struct. and phase diagram 2-47016  
 Zn<sub>1-x</sub>Cd<sub>x</sub>Se, resonant Raman scatt. of light 2-36649  
 Zn<sub>1-x</sub>(Hg<sub>1-x</sub>)<sub>2x</sub>Se, Shubnikov-de Haas oscills., band struct. parameters 2-5421  
 ZnO (1010), surface electronic struct., effect of at. relax. 2-8846  
 ZnO, acoustic wave mode conversion coeffs. at cryst.-vacuum interface 2-45706  
 ZnO, adsorbed O influence on luminesc. temp. depend. 2-31542  
 ZnO, biexciton radiative recombination, mechanism and band profile 2-46753  
 ZnO ceramics, non-ohmic, microstruct. TEM, SEM, and X-ray diff. study 2-50875  
 ZnO, coadsorbed p- and n-dyes, spectral sensitivity 2-1945  
 ZnO, dissolution, effect of impurities on surface topography 2-52081  
 ZnO, effects of impurity struct. on brittle fracture 2-45331  
 n-ZnO, electrodes, surface-trapped holes, photo- and electroluminesc. 2-41428  
 ZnO, electron-hole condensate, high exciton binding energy, luminesc. spectra 2-35950  
 ZnO epitaxial film, exciton luminesc. rel. to deposition conditions 2-51698  
 ZnO epitaxial films, on GaP, props. 2-51038  
 ZnO epitaxial growth on oxidation of Zn(0001) 2-41786  
 ZnO, exciton complexes, luminescence and absorpt. spectra, mag. field effect 2-1834  
 ZnO film, absorption edge shift at high carrier densities 2-13582  
 ZnO film, RF sputtering prep. 2-46922  
 ZnO film electrodes spectral sensitisation by J-aggregate of cyanine dyes 2-2016  
 ZnO film prep. by metalorganic CVD from diethyl zinc 2-41525  
 ZnO films prep. by oxidation of diethyl zinc 2-21460  
 ZnO, highly oriented films, by CVD 2-27095  
 ZnO, intrinsic defects, ESR study (German) 2-25867  
 ZnO luminophores, low-temp. studies on grain-size effect on electro-optical effects 2-46540  
 ZnO microcryst., IR spectrum, electronic and vibr. effect under different temp. and environmental conditions 2-46573  
 ZnO optical waveguide material, VPE CVD technique 2-51827  
 ZnO, phosphor, self-activated, electroluminescence 2-46760  
 ZnO, polar semicond., excitons collective properties (Russian) 2-40804  
 ZnO polar surface, electronic struct. DV-X $\alpha$  cluster calc. 2-8843  
 ZnO polycryst. films, selective sputtering and electrophys. and absorpt. props. under 10-300 eV inert-gas ions bombardment 2-21696  
 ZnO powder, adsorbed rosebengal, in situ obs. of semiconductor-dye interface using photoacoustic spectroscopy 2-2722  
 ZnO, single cryst. prep. by soln. slow cooling and flux reaction technique 2-36771  
 ZnO single crystals, photoluminescence of free A-exciton, exchange interactions effect 2-2334  
 ZnO small area MSM thin-film sandwich, high-speed photodetection 2-10869  
 ZnO sputtered thin films, luminesc. props. 2-46673  
 ZnO, stimulated emission obs. at high one-photon excitation level, UV photolum. 2-36669  
 ZnO surface, adsorption of p-nitroso-N,N-dimethylaniline and p-(dimethylamino)azobenzene, reson. Raman excitation profiles 2-34422  
 ZnO surface, high resolution EELS, review 2-27040  
 ZnO surfaces, electronic struct., transfer-matrix method, renormalisation scheme 2-46093  
 ZnO transparent and highly conductive films, prep. by RF reactive magnetron sputtering 2-12924  
 ZnO:Cu, photoluminescence, vibronic struct. 2-41410  
 ZnO:DyAg, phosphors, electrolum. and photolum. obs. 2-5744  
 ZnO-InP heterojunction solar cells, prep. using reactive evaporation, props. 2-6147



## II-VI semiconductors continued

- ZnO(Se)(S), RF sputtered film struct., TEM, X-ray and electron diff. obs. 2-40746
- ZnS, anharmonic interaction in double phonon Raman spectrum 2-46579
- ZnS, cathodoluminescence in TEM 2-41435
- ZnS crystals, active surfaces produced by brittle fracture, AES study 2-41458
- ZnS crystals, growth from interacting colloids in gels 2-9262
- ZnS, crystn. from soln., X-ray anal., luminesc. 2-41507
- ZnS, deform. pot., one-phonon Raman scatt. 2-51586
- ZnS doped phosphors, phosphoresc. using pulsed  $N_2$  lasers 2-36677
- ZnS, effects of impurity struct. on brittle fracture 2-45331
- ZnS, electronic struct., first principles calc. 2-30793
- ZnS film, vac. evap., intrinsic stress determ. using cantilevered plate technique 2-21472
- ZnS, ODMR obs. of quenching centre 2-13376
- ZnS, optical props., calc. using first-principles electronic struct. 2-13442
- ZnS phosphor powder for electrolum. panels, UV light induced ageing, photoacoustic spectroscopy study 2-5775
- ZnS phosphors, luminesc. props., influence of formation temp. 2-46729
- ZnS, pure and doped crysts., surface microstruct., impurities effects 2-30724
- ZnS single cryst., martensitic and diffusional transitions, transition temp. and kinetics 2-5216
- ZnS single crysts., photoluminesc. band intensity, Ne ion irradiation effects 2-31548
- ZnS sintered layers, photoelectric props. (Russian) 2-1951
- ZnS, structural defects, dynamic characts., internal friction method 2-1555
- ZnS, surface (110) electronic band struct., intrinsic 2-40982
- ZnS, thermoluminescence, kinetic order with electron trap activation energy distrib. 2-36714
- ZnS thin electroluminescent epitaxial films, X-ray structural study 2-21466
- ZnS:Ag, Ce phosphors, photoelectroluminesc. 2-13564
- ZnS:Ag, Cu, Cl phosphor powders, prep. and blue electroluminesc. 2-26992
- ZnS:Ag, luminescence decay by laser excitation 2-22085
- ZnS:Al, single cryst., polarisation of electrolum. 2-22094
- ZnS:Ce, Cu(Ag), phosphorescence decay and thermolum. study 2-22099
- ZnS:Co<sup>2+</sup>, spin-lattice relax. and phonon bottleneck 2-2130
- ZnS:Cr<sup>3+</sup>, local centre charging, Hall effect 2-17024
- ZnS:Cr(Mn)(Fe)(Co)(Ni), Raman scatt., local force variations, press effects 2-41358
- ZnS:Cu, Ce phosphors, photoelectroluminesc. 2-13564
- ZnS:Cu, Cl crystal phosphor, localised surface state spectroscopy 2-17131
- ZnS:Cu, yellow emission of Cu centres, band shift, activator conc. depend. (German) 2-31541
- ZnS:Cu, Al lumiphors, energy spectrum of traps 2-46789
- ZnS:Cu,Mn, mechanism of Cu-induced hexagonal-cubic transformation 2-12725
- ZnS:Cu,Nd,Cl film, laser phenomena in direct current electrolum. and cathodolum. 2-13572
- ZnS:Cu phosphor, relation between lattice parameter and particle size 2-22092
- ZnS:Cu single crystals, solubility of  $Cu_2S$ , struct. characts. and mech. prop. anisotropy 2-12674
- ZnS:Er thin film, DC electrolum., spectral intensity 2-46766
- ZnS:Eu crystals, struct. changes following plastic deform. 2-16662
- ZnS:Fe<sup>2+</sup>, impurity triplet to quintet luminesc. 2-51658
- ZnS:Fe<sup>2+</sup>, spin-forbidden transitions, optical absorpt. spectra 2-51633
- ZnS:Gd (Cu,Gd)(Mn,Gd), electroluminescent, obs. props. 2-36708
- ZnS:Mn, collision excitation cross-sections and energy levels of deep and very deep centers in electroluminescence 2-46762
- ZnS:Mn, EPR, photoacoustic detection 2-26753
- ZnS:Mn, ionoluminescence, irradiation enhancement mechanism 2-51716
- ZnS:Mn,Er thin film, electrolum., mutual interaction between Mn and Er centres 2-46765
- ZnS:Mn films, pulsed XeCl laser annealing, photoluminesc. study 2-50693
- ZnS:Mn thin film electrolum. device, electrolum. characts. depend. on device parameters 2-31559
- ZnS:Mn-Al contact as part of multilayer electrolum. element, elec. props. 2-36139
- ZnS:Mn<sup>2+</sup>, <sup>4</sup>E states luminesc., zero-phonon lines, elec. field effects 2-51553
- ZnS:Mn<sup>2+</sup> crystals, plastically deformed, deformation recrystn., ESR study 2-13334
- ZnS:Mn(Co), Raman spectra, impurity induced, press. depend. 2-46645
- ZnS:Mn(TbF<sub>3</sub>) AC thin film device, electrolum. mechanism 2-46763
- ZnS:Pb, photosensitive EPR excitation and quenching meas. A-centre model 2-17336
- ZnS:Se(Ti)(V)(Mn)(Fe)(Co)(Ni), impurity electronic struct., Green's function method 2-40823
- ZnS:Tm<sup>3+</sup>, fluorescence from nonequivalent Tm<sup>3+</sup> centres 2-51665
- ZnS:Y<sub>2</sub>O<sub>3</sub> thin film, electrolum. complex centre characts., fluoresc. and time resolved spectra 2-46672
- ZnS-CdS, synthesis and cocrystn. under hydrothermal conditions, phase form., analysis and struct. 2-41505
- ZnS-Cu<sub>2</sub>-S heterostruct., electroluminescence 2-17552
- Zn(SiSe) transmissive IR materials made by CVD process 2-5836
- ZnS<sub>1-x</sub>Se<sub>x</sub>, crystal, anharmonic interaction, acoustic phonon temp. depend. 2-30551
- ZnS<sub>1-x</sub>Se<sub>x</sub>, polycryst., prepared by CVD, struct. and optical props. 2-45769
- ZnS(Se)(Te), linear thermal expansion coeff. and phonon curves at covalent-ionic transition press. 2-45468
- ZnSe (110), angle-resolved and -integrated photoemission, surface and bulk states 2-9242
- ZnSe (110) oxidation model based on anal. by 21 eV photoemission spectroscopy, contact-potential difference and AES 2-41766
- ZnSe, anomalous mag. props. 2-21763
- ZnSe, bound exciton emission, near-bandgap luminescence spectra 2-17520
- ZnSe, cryst., luminesc. at high excitation levels 2-31547
- ZnSe crystals, as-grown from melt, growth and elec. props. 2-40891
- ZnSe crystals, effect of heat treatment in Zn, Se, Cd vapour on optical and electro-optical props. 2-13450
- ZnSe, deform. pot., one-phonon Raman scatt. 2-51586

## II-VI semiconductors continued

- ZnSe, dislocation mobility and microcrack formation, elec. field effects 2-45182
- ZnSe, doped, luminescence centres, activation energy of form. 2-41392
- ZnSe, electrically active grain boundaries, SEM cathodoluminescence and induced current obs. 2-40417
- ZnSe, electron damage study in TEM 2-21182
- ZnSe, electron irradiation, anisotropic Zn displacement Frenkel defect production 2-45281
- ZnSe, electronic struct., first principles calc. 2-30793
- ZnSe film, chem. and structural characterisation by XPS 2-47415
- ZnSe film, MBE grown, photoluminescence spectra 2-17522
- ZnSe, heteroepitaxial growth from vapour on GaAs substrates, characterisation 2-31636
- ZnSe, local field effects and zone centre phonons 2-26006
- ZnSe, metalorganic chemical VPE growth, photoluminesc. and Raman scatt. obs. 2-31630
- ZnSe monocrystal, bulk I-V characts. with InGa contacts 2-26517
- ZnSe optical element, Gaussian beam distortion by thermal lens 2-34859
- ZnSe, optical props., calc. using first-principles electronic struct. 2-13442
- n-ZnSe organometallic CVD layer, cond. mechanism 2-51355
- ZnSe, phonons, zone centre, ab initio calc., local field effects 2-50797
- ZnSe, resonant exciton photoluminescence and cathodoluminescence 2-2341
- ZnSe, self-activated luminescence anisotropic centre symm. (Russian) 2-13561
- ZnSe, self-activated luminesc., anisotropic centre symm. 2-26983
- ZnSe single cryst., polished and etched, reflectivity and electrorreflectance 2-36604
- ZnSe single crystals subjected to one- and two-photon excitation, luminesc. and lasing 2-34770
- ZnSe single-crystal film laser screens on sapphire, stimulated emission 2-44312
- n-ZnSe, thermoluminesc. and TSC 2-41438
- ZnSe, uncoated, photoacoustic chopping freq. expt., surface and bulk absorpt. coeffs. 2-46553
- ZnSe:alkali metal ion, interstitials energy of form. 2-30459
- ZnSe:Al, formation of low resist. In contacts 2-21673
- ZnSe:Al, Li, IR absorpt. of Al-Li defect pairs 2-9169
- ZnSe:Cr<sup>3+</sup>, local centre charging, Hall effect 2-17024
- ZnSe:Cu, IR absorpt., defect accumulations 2-5667
- ZnSe:Cu, single crystals, luminesc. and photocond. 2-13543
- ZnSe:Cu<sup>2+</sup>, optically detected mag. resonance study 2-36480
- ZnSe:ErF<sub>3</sub> thin films, electrolum. 2-26993
- ZnSe:In, epitaxial thin films, doped and undoped, electron mobility and carrier conc., temp. depend 2-51357
- ZnSe:Li, Na, luminesc. spectra, exciton emission and donor-acceptor pair recomb. 2-46671
- ZnSe:Mn, spin-lattice relax. of Mn<sup>2+</sup>, evidence for optical phonon contrib. (French) 2-51454
- ZnSe:N(P), organometallic CVD growth, shallow acceptor doping, photoluminesc. study 2-51107
- ZnSe:Ni, optical absorpt. spectra and photocapacitance meas. 2-13518
- ZnSe:Ti<sup>3+</sup>, impurity states, Green's function method 2-35969
- ZnSe-electrolyte junction, flat band pot., electrorreflectance study 2-17156
- (ZnSe)<sub>1-x</sub>(CdTe)<sub>x</sub>, luminesc. under one-photon laser pumping, exciton behaviour 2-36697
- ZnTe (110) oxidation model based on anal. by 21 eV photoemission spectroscopy, contact-potential difference and AES 2-41766
- ZnTe amorphous vacuum deposited films, reproducibility, elec. cond. 2-5473
- ZnTe, CVD growth, open tube method 2-27094
- ZnTe, deform. pot., one-phonon Raman scatt. 2-51586
- ZnTe film on Si, epitaxial growth model, chem. comp. and interface struct. 2-40711
- ZnTe, laser induced O diffusion, photoluminesc. study 2-50923
- ZnTe layers on Si, growth by solid-state reactions of Zn and Te layers prep. by ion beam evap., junction props. (Japanese) 2-17627
- ZnTe, phonon-electron spin interactions, Raman scatt. study 2-46583
- ZnTe, photoelastic response 2-31449
- ZnTe, photoelectron spectra under cooperative UV and visible excitation 2-9243
- ZnTe, pulse photoexcited, excitons and electron-hole plasma 2-51681
- ZnTe single-crystal film laser screens on sapphire, stimulated emission 2-44312
- ZnTe, vol. reductions and resist. changes under press. 2-45555
- ZnTe:Be, effect of cation isoelectronic impurity of photoluminescence 2-26969
- ZnTe:O, photolum. and excitation spectra of O<sub>2</sub> centre 2-2328
- ZnTe-CdSe heterojunction, electron-voltaic effect 2-30963
- p-ZnTe-SiO<sub>2</sub>-Si hybrid struct., elec. cond. and capacitance 2-26478

## III-V semiconductors

- (100) superlattice, vacancy induced band gap levels 2-45883
- amorphous and liquid semiconds., conf., Grenoble, France, (July 1981) 2-38359
- Annual Review of Materials Science, book 2-48405
- atomic migration kinetics, self-diffusion, monovacancy and divacancy contribs. 2-26117
- carrier velocities, time depend., Boltzmann eqn., iterative soln. 2-45956
- chemical etching and cleaning procedures 2-2597
- chemical etching and cleaning procedures 2-9437
- compressibilities, Debye-Waller factors and melting criteria 2-1580
- covalent solids, tight-binding parameters by Louie peripheral states 2-40754
- Debye temperature estimation using Lindemann rule 2-35629
- deep levels, ideal-vacancy-induced 2-30823
- dielectric to metal transitions and supercond. at high press. 2-1853
- epitaxial multilayers, vacuum metalorganic CVD 2-27092
- exchange interactions, indirect, random anisotropy and impurity spin ordering (Russian) 2-41107
- n-Ga<sub>1-x</sub>Al<sub>x</sub>As, grown by organometallic vapour phase epitaxy, hole traps 2-51112
- Ga<sub>1-x</sub>In<sub>x</sub>-P-GaAs heterostructures, luminesc., effect of mismatch between lattice const. and thermal expansion coeffs. 2-9195
- p-GaAlAs, non-alloyed ohmic contacts, using MO-CVD contact layers 2-46938
- p-GaAs, photon drag effect, polarisation, spectral and temp. characts. 2-1950



## III-V semiconductors continued

- p-GaAs, semiconductor electrodes, laser induced photoelectrochemistry 2-13962
- GaAs, temp. and frequency dependence of US attenuation coefficient 2-35597
- GaAs shallow-homojunction concentrator solar cells 2-27679
- GaP:Mn, impurity centre struct., positron annihilation study 2-17570
- GaP:ZnO, defect reactions, photolum. studies 2-2333
- III-III-V quaternary layers grown by LPE, thickness calc., appl. to InGaAsP 2-45768
- immiscibility, excess free energy of mixing (*Japanese*) 2-50868
- impact ionisation, alloy clustering effects 2-46008
- indirect exciton ground state Stark shift and splitting 2-21505
- n-InSb, metallic impurity cond. and metal-nonmetal transition at low temp. 2-40976
- integrated optoelectronic devices, recent trends for fibre communications 2-44493
- interfaces with thermal and anodic oxides, chem. comp. and form., review 2-9444
- ionisation potentials and energy barriers estimation at hetero junctions (*German*) 2-12963
- IR detector materials, conf., Washington, DC, USA (April 1981) 2-14973
- lattice defects electronic struct. 2-40829
- layered semiconductor structures and heterostruct., hot electron and phonon effects 2-26482
- liq. phase electroepitaxial growth, new approach 2-17636
- LPE, peculiarities of isothermal contact of liq. and solid phase 2-30763
- material design for electronic devices used under unusual conditions (*Japanese*) 2-8618
- MBE, review of European developments, 1979-80 2-22168
- MBE technology, review 2-27090
- medium deep localised levels, binding mech. 2-35964
- metal-GaAs junctions, transition region, diffusion profile 2-2004
- MO-CVD, in halogen transport systems 2-5819
- MO-CVD process, chem. mechanisms for cryst. growth using coordination compounds 2-5830
- molecular beam epitaxy, of III-V compounds, technology and growth process 2-51055
- monolithic integration of optoelectronic, electronic and passive components 2-49945
- multilayer struct., profiling method, contact resistance meas. along angle lapped surface (*German*) 2-46106
- $n^+/p^+$  tunnel junction, MBE, ohmic contact for cascade solar cell 2-6141
- n-type electrodes, kinetics of stabilisation, appl. to photoelectrochemistry 2-13964
- native oxide reactions 2-52205
- native oxides, chem. bonding model 2-25805
- optoelectronic III-V semiconductor crystal growth in laboratory 2-46961
- TA phonon pulse generation and propag. 2-45643
- photocathode with neg. electron affinity, photoelectron spectra 2-13630
- polaron, Fröhlich operator, shell model, generalisation 2-45849
- quaternary alloys, energy band gap calc. using dielec. theory of electronegativity 2-8755
- Schottky barriers, Fermi level pinning by surface antisite defects 2-8851
- solar cells, physics, book contrib. 2-52357
- solid solutions, films, layerwise spectral anal. 2-9582
- stimulated Mandel'shtam-Brillouin scatt. threshold lowering 2-11753
- structural defects, birefringence study 2-40397
- superlattices obtained by MBE, electronic properties (*French*) 2-21663
- surface (110) reconstruction, ab initio quantum chem. calc. 2-12895
- surface overlayers detection and minimisation using spectroscopic ellipsometry 2-15210
- surface passivation, elemental group V deposits in native oxides, surface refl. Raman scatt. detection 2-17475
- vapour growth and epitaxy, conf., San Diego, CA, USA (July 1981) 2-42778
- VPE, techniques (*Japanese*) 2-51798
- zincblende struct., surface vacancies 2-26461
- AGaAs-GaAs heterojunction, selective dry etching 2-26486
- (Al,Ga)As DH injection laser with asymm. gain distrib., computer model 2-44291
- (Al,Ga)As epilayers, and DH lasers, minority carrier lifetime and luminescence 2-8807
- (Al,Ga)As heterostruct. fabricated by isothermal diffusion of Al, props. 2-12941
- (Al,Ga)As multilayers, efficient luminesc. band created by athermal laser processing 2-9177
- (Al,Ga)As, use of sapphire liners to eliminate edge growth in LPE 2-13661
- (Al,Ga)As/GaAs heterostructures, molecular beam epitaxy growth 2-36789
- (Al, Ga)As-GaAs heterostructures, growth monitoring and characterisation, ellipsometry 2-6890
- (Al,Ga)As-GaAs heterostruct., electron mobility, background doping effect 2-26483
- Al/GaAs, plasma anodisation, composite oxide film formation, AES study 2-52075
- Al-GaAs (110), exchange reaction, angle integrated photoemission study 2-8695
- Al-GaAs interfaces, at. geometry, soft XPS and elastic LEED studies 2-8714
- Al-SiO<sub>2</sub>-GaAs-n<sup>+</sup>-GaP, MIS light modulators using Franz-Keldysh effect 2-4585
- AlAs, crystal binding and density of states, pseudopot. calc. 2-45874
- AlAs, intrinsic defect theory 2-45884
- AlAs, surface reconstruction, angle integrated photoemission study 2-8695
- AlAs-Al<sub>0.4</sub>Ga<sub>0.6</sub>As-GaAs superlattices, absorpt., stimulated emission and clustering 2-46794
- AlAs-GaAs heterojunction stripe geometry lasers, nonlinear power-current characteristics 2-29831
- AlAs-GaAs MBE superlattice, photolum., 0.7 to 0.08  $\mu$ m 2-2329
- AlAs-GaAs solid solns., Al and Ga density profiles determ. by SIMS 2-17950
- AlAs-GaAs superlattice, absorption and stimulated emission 2-31526
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As-GaAs heterojunction FET, magnetoconductance, g-factor, gate voltage 2-41003
- AlGaAs CSP laser, used in optical switch 2-34783

## III-V semiconductors continued

- AlGaAs constricted DH laser, low threshold current temp. sensitivity 2-29819
- AlGaAs constricted double-heterojunction diode lasers, structs. and electrophysical characts. 2-34789
- AlGaAs, DH IR source, luminesc., external quantum efficiency, rough and smooth emitting surfaces 2-51712
- AlGaAs DH laser, highly RF modulated, effect of cavity length on picosecond pulse generation 2-29832
- AlGaAs DH laser amplifiers, signal gain, freq. bandwidth, saturation output power 2-16049
- AlGaAs DH laser diodes, Si optical bench for reproducible optical feedback path 2-29889
- (AlGa)As DH lasers, molecular beam epitaxy for optical communication systems 2-34793
- (AlGa)As DH lasers, MBE grown, CW aging 2-39646
- AlGaAs DH lasers, modulation characts. in 6 to 10 GHz range 2-39651
- AlGaAs DH wavelength multiplexing injection laser source with graded comp. along active layer 2-919
- AlGaAs diode laser, RF modulated, generation of ultrashort optical pulses (*Japanese*) 2-4542
- AlGaAs diode laser, subpicosecond coherent optical pulse generation by passive mode locking 2-44354
- (AlGa)As, graded index waveguide separate confinement heterostruct. laser, MBE grown 2-49773
- AlGaAs high-bandgap solar cell for 10-unit dichroic filter spectral splitter module 2-27571
- (AlGa)As injection laser, metallisation and heat sink problems 2-4519
- AlGaAs injection locked semiconductor laser, optical phase modulation 2-49778
- AlGaAs injection-locked semiconductor laser, optical FM signal amplification and FM noise reduction 2-16039
- AlGaAs lasers, narrow proton-implanted, for audio/video discs, optical communication and recording 2-7802
- AlGaAs lasers with micro-cleaved mirrors suitable for monolithic integration 2-49774
- AlGaAs, layers grown by OM-VPE 2-8723
- AlGaAs mode-locked diode lasers, oscillation characts. of coherent ultrashort optical pulses 2-25012
- AlGaAs, organometallic VPE grown, characterisation for solar cell appls. 2-30762
- AlGaAs oxide stripe CW lasers, spatial mode stability during aging 2-7764
- AlGaAs, short wavelength laser and LEDs, role of buffer layers in reducing degradation 2-934
- AlGaAs stripe-geometry DH lasers with soft turn-on, extinction ratio 2-34753
- AlGaAs window stripe laser, optimum design conditions 2-7787
- n-AlGaAs:Be, p-n junction formation by Be<sup>+</sup> implantation 2-51287
- AlGaAs/GaAs concentrator solar cell array, high efficiency-large area for concentrating photovoltaic array of 1 kWp, construction and performance 2-42017
- AlGaAs/GaAs high efficiency cascade solar cells, efficiencies of 15% at AM0 and 16.4% at AM1 2-32083
- AlGaAs/GaAs solar cells high conc. photovoltaic module, development and testing 2-27574
- AlGaAs/GaAs solar cells, high efficiency with high resist. to radiation damage 2-27696
- AlGaAs-GaAs concentrator solar cells, fabrication by OM-VPE and LPE, performance and durability 2-32085
- AlGaAs-GaAs heterostructures, LPE growth for solar energy conversion 2-46952
- AlGaAs-GaAs laser with external dispersive resonator, bistable operation and spectral tuning 2-34817
- AlGaAs-GaAs lasers, MO-CVD grown, review 2-7765
- AlGaAs-GaAs solar cells, deep-level defects, low temp. periodic annealing effects 2-32066
- AlGaAs-GaAs solar cells, proton irradi., radiation-induced deep-level defects, annealing, DLTS, SEM 2-32084
- AlGaAs-GaAs-AlGaAs struct., phonon scatt. of electron gas 2-36131
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As-Ge LPE film, dislocation clusters, TEM obs. 2-45762
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As-GaAs, superlattice avalanche photodiode, large ionisation rate ratio 2-51289
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As, alloy clustering effects on impact ionisation 2-46008
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As buried heterostruct. laser, single mode operation by loss stabilisation 2-7788
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As, comp. change w.r.t. LPE temp. (*Russian*) 2-16967
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As DH laser, deep level luminesc., spatial distrib. 2-915
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As epilayers, mm thick, Peltier-induced LPE and compositional control 2-5318
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As epilayers, MBE, protection during ambient transfer 2-5815
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As, epitaxial layer, MBE growth 2-21469
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As films, VPE growth in inorganic transport systems 2-13653
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As, grown by MOVPE, luminescence 2-9182
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As grown by MBE, photoluminescence studies 2-13532
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As injection heterojunction laser with high pulsed power 2-20329
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As modified multiquantum well heterostructure lasers, MBE grown, extremely low threshold operation 2-20304
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As, OMVPE growth 2-5820
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As p-n junction solar cells, grown-in deep-level defects 2-37393
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As, photoluminesc. with graded forbidden band under pulsed excitation 2-13545
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As, photoluminescence, carrier mobility and lifetime determ. 2-41424
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As Schottky barriers and p-n junctions, current-voltage characts. 2-5452
- n-Al<sub>0.4</sub>Ga<sub>0.6</sub>As, Schottky barrier, MBE growth, deep levels, substrate growth temp. effects, DLTS study 2-17009
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As solid solns., epitaxial, variable composition, surface recombination (*Russian*) 2-1925
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As solid solution, elec. cond. slow relax. 2-45987
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As:Cr variable gap semicond. solid solns., deep impurity centres and impurity photoluminescence 2-17025
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As:Ge(Sn)(Te) epitaxial layers, photolum. rel. to surface composition (*Russian*) 2-9189
- Al<sub>0.4</sub>Ga<sub>0.6</sub>As:Sn, MBE grown, photolum. spectrum, As/Ga flux ratio effect 2-5734
- n-Al<sub>0.4</sub>Ga<sub>0.6</sub>As:Te, heavily doped, photolum. in indirect energy gap region 2-2324



## III-V semiconductors continued

- Al<sub>1-x</sub>Ga<sub>x</sub>As-AlAs-GaAs quantum well heterostruct., size fluctuations and laser operation 2-20111  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs, V shaped DH laser, metalorganic CVD growth and properties 2-20323  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs heterostructure, modulation doped, MBE grown, electron mobility study 2-8865  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs heterostructures, carrier mobility enhancement 2-36130  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs heterojunction FET, magnetoconductance, g-factor 2-41002  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs heterojunction, selectively doped, cyclotron reson. linewidth 2-51467  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs quantum-well heterostruct. lasers, MBE growth, clustering and phonon effects 2-4510  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs quantum-well heterostructure laser, transient and noise characts. 2-7767  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs quantum-well heterostruct. lasers, MBE grown, alloy clustering, photoluminesc. study 2-44336  
 Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs quantum well heterostruct. laser, photopumped, CW 7270 Å operation at 300K 2-49746  
 AlGaAsSb/GaInAsSb/GaSb laser, light confinement and divergence 2-44364  
 AlGaAsSb/GaSb laser, light confinement and divergence 2-44364  
 AlGaAsSb-GaAsSb cascade solar cells, elec. and spectral response characts. 2-37394  
 Al<sub>1-x</sub>Ga<sub>x</sub>In<sub>1-x-y</sub>Sb, lattice const. and optical energy gap, comp. depend. 2-25818  
 Al<sub>1-x</sub>Ga<sub>x</sub>P solid soln., Raman scatt. by optical phonons 2-17485  
 Al<sub>0.26</sub>Ga<sub>0.74</sub>Sb-GaSb photodetector, LPE growth and photo response (Japanese) 2-2469  
 Al<sub>1-x</sub>Ga<sub>x</sub>Sb heterostructure, reproducible epitaxial layer growth from saturated Ga soln. 2-17634  
 Al<sub>1-x</sub>Ga<sub>x</sub>Sb, LPE (Japanese) 2-2469  
 Al<sub>0.48</sub>In<sub>0.52</sub>As, MBE layers, elec. props. 2-30978  
 Al<sub>0.48</sub>In<sub>0.52</sub>As<sub>0.52</sub>/Ga<sub>0.47</sub>In<sub>0.53</sub>As/Al<sub>0.48</sub>In<sub>0.52</sub>As DH laser, MBE grown 2-7791  
 Al<sub>1-x</sub>In<sub>x</sub>N thin films, RF sputtering deposition 2-36784  
 AlN film grown at low temp. by modified sputter gun 2-13641  
 AlN film prep. by ion implantation, AES and low-energy EELS studies 2-12613  
 AlN on Si SAW devices 2-29953  
 AlSb, epitaxial growth, eval. of triisobutylaluminium rel. to trimethylaluminium 2-9281  
 AlSb, LPE from Sb solns. 2-31643  
 Au/Ni/SnNi/n-GaAs interface, ohmic contact form. 2-41010  
 Au-GaAs Schottky barrier, deep centres, photoionisation cross sections and optical charging rates 2-13012  
 Au-InP Schottky diode, elec. characts. 2-26472  
 Au-InP system, binary cpd. form., 320 to 360°C 2-1680  
 Au-n-Ga<sub>1-x</sub>Al<sub>x</sub>P surface barrier struct., photoelectric effect 2-26500  
 Au-n-GaAs Schottky barrier diodes, ion beam damage during low energy cleaning 2-50721  
 AuGe-GaAs ohmic contact, low temp., sintered 2-51301  
 BN, cubic, growth and characteristics of single crystal (Japanese) 2-36775  
 BP, epitaxial growth on Si(100) substrates, REED 2-35907  
 CC Ga<sub>0.5</sub>In<sub>0.5</sub>P, nuclear spin system reson. cooling, cond. electrons g-factor effect 2-36478  
 CdS, single crystal growth from vapour 2-2425  
 CdS-Cu<sub>2</sub>S solar cells, junction-field and collection efficiency in current saturation range 2-37340  
 Cu<sub>1-x</sub>S-GaAs heterojunction photoconverter 2-22651  
 (Ga,Al)As-GaAs heteroepitaxial layers, stacking faults and substructure 2-35515  
 (Ga,In)As alloys, on InAs substrates, substrate instability during LPE growth 2-2466  
 Ga-InAs, MOCVD 2-5829  
 Ga-Sb-Te system, GaSb-based solid soln. region investig. comp. depend. of carrier conc. 2-12720  
 GaAl As LPE layers, Al profiles, appl. of method for fitting error functions to data 2-8738  
 GaAlAs bistable CW injection heterolaser 2-34756  
 GaAlAs channel-substrate-planar lasers with elevated facet reflectivities, operating characts. 2-910  
 GaAlAs, channelled substrate planar and V-groove lasers, microwave-induced oscillations 2-4507  
 GaAlAs DH diode laser wavefront meas. and anal. 2-25049  
 GaAlAs DH injection laser, coherent reception, multimode effects 2-38688  
 GaAlAs DH laser, strain related degradation phenomena, SEM cathodoluminescence and induced current study 2-39652  
 GaAlAs DH shallow proton stripe laser grown by metalorganic CVD, current threshold uniformity 2-44283  
 GaAlAs, growth by low-pressure MO-CVD, gettering of O<sub>2</sub> 2-5821  
 GaAlAs heterostructure, screening of scatt. fields by carrier space charge, theory 2-13172  
 (GaAl)As injection laser linewidth measurements, CW longit. mode struct. 2-7768  
 (GaAl)As injection lasers, mode locking study 2-11697  
 GaAlAs laser, spectrum-narrowing ratio determ. by optical feedback 2-39647  
 GaAlAs laser frequency stabilisation using automatic freq. control system 2-4527  
 GaAlAs lasers, second-harmonic generation, use of KNbO<sub>3</sub> waveguides 2-29850  
 GaAlAs p-n junction characters., effect of X-ray irradiation (Russian) 2-30965  
 (GaAl)As single-mode injection laser, power-depend. linewidth meas. 2-7769  
 GaAlAs single-mode laser, dynamic wavelength tuning 2-7770  
 GaAlAs substrate, Au-Sn-Al metallisations, interfacial struct. study 2-8713  
 GaAlAs, volume photovoltaic effect in case of high rates of carrier prod. and radiative recomb. 2-27605  
 GaAlAs:Cr<sup>2+</sup>, luminesc. of Cr<sup>2+</sup> internal transition 2-51661  
 GaAlAs:Sn, thin layer emitters, luminescence and Sn-X centres 2-46772  
 GaAlAs/GaAs, DH single-mode injection lasers for optical fibre communication 2-16143  
 GaAlAs/GaAs concentrator solar cells, nonlinear response to solar insolation 2-27698

## III-V semiconductors continued

- GaAlAs/GaAs double heterostructures, for opto-electronic devices, MOCVD growth 2-9283  
 GaAlAs/GaAs multilayer monolithic integration of active and passive components for integrated optics 2-11868  
 GaAlAs-GaAs DH lasers, low threshold narrow stripe, controlled Zn diffusion 2-7790  
 GaAlAs-GaAs heteroface solar cell, window layer thickness, reflection loss minimisation 2-6140  
 GaAlAs-GaAs heterojunction solar cells with different contact materials, thermal stability 2-27653  
 GaAlAs-GaAs oxide stripe laser, low degradation rate, high performance 2-926  
 Ga<sub>0.68</sub>Al<sub>0.32</sub>As:Te(Zn) laser pumped by electron beam, cathodolum. and threshold current density, doping influence 2-7766  
 Ga<sub>0.7</sub>Al<sub>0.3</sub>As-GaAs heterostructure laser, electron-beam-pumped, operating at low accel. voltages 2-34760  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, conduction band structure from Hall mobility measurements at high pressures 2-46030  
 Ga<sub>1-x</sub>Al<sub>x</sub>As DH laser, threshold current temp. depend., 0.74 to 0.9 μm 2-7762  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, deep impurities, cross-section for photoionisation to conduction bands 2-35968  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, disorder activated Raman scatt. 2-2244  
 Ga<sub>1-x</sub>Al<sub>x</sub>As electron-beam-pumped laser, oxide film influence on threshold current density 2-34822  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layers, Hall to drift mobility ratio 2-8821  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layers, electron mobility 2-13076  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>As epitaxial layer, intervalley scatt., Hall mobility study 2-17062  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, epitaxial layers, Raman scatt. study 2-46577  
 Ga<sub>1-x</sub>Al<sub>x</sub>As heteroepitaxial layers, coherent, on-axis layers, characterisation by X-ray multiple diff. technique 2-1783  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, hot electron transport, expt. and Monte Carlo simulation 2-46001  
 Ga<sub>1-x</sub>Al<sub>x</sub>As injection laser, second-harmonic generation by KNbO<sub>3</sub> crystal 2-16062  
 Ga<sub>1-x</sub>Al<sub>x</sub>As injection light source radiation, electron-beam control 2-34759  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, local field effects and IR optical props. 2-22028  
 Ga<sub>1-x</sub>Al<sub>x</sub>As MBE layers, alloy clustering 2-40740  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, MO-CVD growth, quantum well transport structs. 2-9282  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, photocond. storage obs. at low temp. 2-46071  
 Ga<sub>1-x</sub>Al<sub>x</sub>As solid solns., epitaxial film prep. from gas phase, deposition thermodynamics 2-13651  
 Ga<sub>1-x</sub>Al<sub>x</sub>As structs., varying band gap, for solar cells, liquid phase epitaxy 2-21467  
 p-Ga<sub>1-x</sub>Al<sub>x</sub>As:Ge, LPE grown, charge compensation, photoluminescence spectrum 2-17517  
 Ga<sub>1-x</sub>Al<sub>x</sub>As:Se, donor energy levels, elec. cond. and electron conc. study 2-51106  
 Ga<sub>1-x</sub>Al<sub>x</sub>As:Si epitaxial layers, free-to-bound transitions, photoluminesc. study 2-22072  
 Ga<sub>1-x</sub>Al<sub>x</sub>As/Ga<sub>1-y</sub>Al<sub>y</sub>As DH lasers, facet degradations 2-44294  
 Ga<sub>1-x</sub>Al<sub>x</sub>As-GaAs heterojunction lasers, accelerated life tests, temp. interval optimisation 2-44300  
 Ga<sub>1-x</sub>Al<sub>x</sub>As-GaAs heterojunction lasers, reliability forecasting 2-44301  
 Ga<sub>1-x</sub>Al<sub>x</sub>As-GaAs interfaces, nondestructive charact. using nucl. profiling 2-12921  
 Ga,Al<sub>1-x</sub>As epitaxial layers on GaAs, morphology and misfit dislocations 2-5319  
 Ga,Al<sub>1-x</sub>As, heterostructure MESFET devices, LPE 2-1802  
 Ga,Al<sub>1-x</sub>As LPE growth, GaAs substrate dislocation behaviour 2-1480  
 Ga<sub>1-x</sub>Al<sub>x</sub>As MBE growth, volatile metal oxide incorporation 2-12936  
 Ga<sub>1-x</sub>Al<sub>x</sub>As<sub>1-y</sub>Sb<sub>y</sub>, energy band gap calc. using dielec. theory of electronegativity 2-8755  
 Ga<sub>1-x-y</sub>Al<sub>x</sub>In<sub>y</sub>As, energy band gap calc. using dielec. theory of electronegativity 2-8755  
 GaAlP, MO-CVD growth 2-5824  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>P epitaxial films, cathodoluminesc. spectra 2-22097  
 Ga<sub>1-x</sub>Al<sub>x</sub>P variable-gap surface barrier UV photodetectors 2-43089  
 Ga<sub>1-x</sub>Al<sub>x</sub>Sb epitaxial layer, Raman selection rules, resonance and inhomogeneity 2-2362  
 Ga<sub>1-x</sub>Al<sub>x</sub>SbTe, high field magnetotransport props. under hydrostatic press., direct-indirect band transition 2-8828  
 GaAr:Cr, π-type, semi-insulating, Cr concentration determ. on basis of temp. dependencies of electron mobility and carrier concentration ratio (Slovak) 2-51200  
 GaAs, ion implanted, capless annealing, for microwave devices 2-2531  
 GaAs 2-47217  
 GaAs, 0.82 eV electron trap, origin and annihilation by shallow donors 2-51110  
 GaAs (001), MBE growth, valence bands, angle-resolved photoemission study 2-36761  
 GaAs (001)c(4×4), submonolayer growth of Au, AES and RHEED study 2-1793  
 GaAs (100), low energy Ar ion bombard. damage, Rutherford backscatt. study 2-36750  
 GaAs (100) planes, grating corrugation form (Chinese) 2-20400  
 GaAs (100) surface, cathodoluminesc. lifetime pattern meas. 2-31563  
 GaAs (100) surface, mosaic blocks dimensions, determ. by LEED 2-50973  
 GaAs (100)-Al, interface behaviour and crystallographic relationships 2-8715  
 GaAs (110), bonding of column 3 and 5 atoms 2-30728  
 GaAs (110), H<sub>2</sub>O dosed, photon stimulated ion desorption of H<sup>+</sup> ions 2-1740  
 GaAs (110), models of column III and V element overlayers, appl. to MBE 2-12935  
 GaAs (110), surface band bending, phonon-plasmon coupled modes, Raman scatt. study 2-9146  
 GaAs (110), surface core excitons, binding energies and oscill. strengths 2-8852  
 GaAs (110) surface core excitations, ab initio calc. 2-8850  
 GaAs (110)-Al interface, initial stage of formation 2-8881  
 GaAs (110)-In(Ge), interface form., surface reconstruction 2-46112  
 GaAs, amorphous, disorder effects and optical props. 2-2357  
 GaAs amorphous films, EXAFS, optical and cond. meas. (French) 2-46826  
 GaAs, anion antisite defects, electronic props. 2-17017



## III-V semiconductors continued

- GaAs, anodic oxide film, comp. and dielec. strength, SIMS study 2-47214  
 GaAs, anomalously rapid thermal oxidation 2-52084  
 GaAs, antisite defect 2-26321  
 GaAs, Au-Ge laser-annealed ohmic contacts, microstruct. and resistivity 2-21675  
 GaAs,  $\alpha$ -particle irradiation, primary defects migration 2-16690  
 GaAs, Bragg diffraction, ion implantation effects 2-21114  
 GaAs, bulk, deform. pots. 2-35622  
 GaAs buried optical guide laser, passively mode-locked, subpicosecond pulses 2-4539  
 GaAs, cathodoluminescence lifetime patterns of surface near dislocations 2-46780  
 GaAs, cleaning by exposure to  $O_2$  and UV light, for MBE 2-52079  
 GaAs, cold semicond., hot electrons, luminesc. expts. 2-51676  
 GaAs, collective coordinates of tetrahedral cluster, inner displacement effect 2-13028  
 GaAs, collisional broadening effect on Monte Carlo simulation of high-field transport 2-17078  
 GaAs, compensation mechanisms related to deep B implantation 2-50678  
 GaAs, core exciton binding energies 2-40800  
 GaAs, core excitons, energy calc. 2-1832  
 GaAs, crystal binding and density of states, pseudopot. calc. 2-45874  
 GaAs crystals, selective corrosion and selective growth (*Chinese*) 2-9438  
 GaAs crystals and solid solns., hot electron luminescence 2-46712  
 GaAs, cyclotron emission investig. as function of doping 2-5586  
 GaAs, Czochralski grown, liq. encapsulated technique, elec. compensation, melt stoichiometry effect 2-51164  
 n-GaAs,  $D^+$  irradiated, carrier removal 2-1533  
 GaAs DFB laser, optically pumped, with variable grating period, mode selectivity and threshold gain 2-4509  
 GaAs, damaged surface layer, X-ray diffr. and photoemission struct. study 2-21435  
 GaAs, deep charged centres, ground state energy, photoionization cross section, model electron pot. calc. 2-17014  
 GaAs, deep levels, electron trap and hole trap discharge ratio, temp. dependence (*Japanese*) 2-30818  
 GaAs, deep levels, ideal-vacancy-induced 2-30823  
 p-GaAs, degenerate, low temp. luminesc., doping effect 2-36695  
 GaAs dendritic web, grown by liq. encapsulation, characterisation 2-2427  
 GaAs, dielectric functions, impurity scatt., Thomas-Fermi theory 2-51097  
 GaAs, difference freq. generation with pulsed  $CO_2$  laser freq. nonlinear mixing (*Russian*) 2-34831  
 n-GaAs, dislocation observation by new anodic etch 2-16649  
 GaAs doping during low press. VPE growth 2-51830  
 GaAs doping superlattices, photoexcited carrier conc. and mobility, Hall effect meas. 2-51226  
 GaAs, dynamic effective charges and piezoelec. consts. 2-2190  
 GaAs, electron energy deposition profile, calc. by Monte Carlo method (*French*) 2-50726  
 GaAs electron irradiated, anisotropic defect introduction 2-12641  
 GaAs electron mobility, space-charge and central-cell scatt. contrib. reassessment 2-13092  
 GaAs, electron mobility and compensation ratio at 77K, variational calc. 2-51169  
 GaAs, electron trap outdiffusion due to thermal treatment 2-51104  
 GaAs, electron-hole plasmas and excitons, picosecond luminesc. spectroscopy 2-51677  
 GaAs, electronic band struct. calcs. 2-40782  
 GaAs, electronic struct., first principles calc. 2-30793  
 GaAs, electrostatic energy and lattice vibrs. 2-50782  
 GaAs, energy levels of deep traps 2-45889  
 GaAs, epilayers, growth by MOCVD, appl. to microwave MESFETs 2-3834  
 n-GaAs, epilayers, phonon generation and electron-phonon scattering 2-21257  
 GaAs epitaxial film based, defect and conc. nonuniform effects on IMPATT diode avalanche breakdown (*Russian*) 2-2018  
 GaAs, epitaxial film growth, CLEFT process 2-2463  
 p-GaAs epitaxial films, Hall effect of hot electrons 2-36162  
 GaAs, epitaxial growth by MO-VPE, growth mechanism 2-5831  
 GaAs, epitaxial layer, MBE growth 2-21469  
 GaAs epitaxial layer photoelastic electro-optical directional couplers, 1.15  $\mu$ m, strain-induced waveguides 2-7889  
 GaAs, epitaxial layer thickness, dependence of electrophysical parameters (*Russian*) 2-13200  
 GaAs epitaxial layers, by low pressure MOVPE, using triethylgallium as Ga source 2-5817  
 GaAs epitaxial layers, screw and circular structures 2-8521  
 GaAs epitaxial layers, CVD on Ge heteroepitaxial films 2-12932  
 GaAs epitaxial layers, impurity luminescence study (*Chinese*) 2-13563  
 GaAs epitaxial layers, breakdown characts. 2-17080  
 GaAs epitaxial layers, soln. grown, steps on facets 2-30761  
 GaAs epitaxial layers doping with O and Si 2-5141  
 GaAs epitaxial thin film, persistent photocond. 2-26435  
 GaAs epitaxial thin film solar cell fabrication using organometallic CVD, single-crystal Si substrates 2-37369  
 n-GaAs, epitaxially grown, p-type buffer layer, evaluation using Hall meas. 2-17095  
 GaAs etalon, intrinsic bistable optical device, regenerative pulsations 2-44372  
 GaAs, exciton energy spectra, uniaxial press. effect, photo EMF meas. 2-35949  
 GaAs, expt. determ. of bonding of III and V elements 2-35871  
 GaAs FET, magnetoresistance oscills. and transition from 3-D to 2-D cond. low temps. 2-46129  
 GaAs FET, short-gate, ballistic transport 2-51185  
 GaAs, fast neutron irradiated,  $As_{Ga}^{4+}$  antisite defect, ESR spectra 2-46376  
 GaAs film, chemical thinning by etching 2-17763  
 GaAs film growth in Cl gas transport systems, supersaturation effects 2-35911  
 GaAs films, epitaxial growth simulation 2-5322  
 GaAs, force consts., phonon dispersion curves, and dielec. const., ab initio calc. 2-50820  
 GaAs, growth rate anisotropy and growth in gas transport systems 2-27065  
 GaAs, growth rate anisotropy analysis in CVD system 2-35901  
 GaAs Hall devices, highly linear, fabricated by ion implantation 2-33581

## III-V semiconductors continued

- GaAs, heat treatment in controlled atmos., role of S, thermal cond. meas. (*French*) 2-1687  
 p-GaAs, heavily doped, hot carrier relax., picosecond luminesc. study 2-46742  
 GaAs heteroepitaxial layer deposited by laser pulse, condensation mechanism 2-35904  
 GaAs high concentration photovoltaic cells, thermal impedance effects 2-27683  
 n-GaAs, high power far IR photocond. meas., photoresponse tail 2-5434  
 GaAs, high purity, LPE growth conditions and elec. props. 2-46958  
 GaAs, high purity prepared from trimethylgallium and arsine 2-5816  
 GaAs, hot carrier ballistic transport, displaced Maxwellian formulation 2-46002  
 GaAs, hot carrier photoluminescence, picosecond correlation effects 2-46713  
 GaAs, hot carrier relax., picosecond laser pulse studies, review 2-46528  
 GaAs, hot electron nonMaxwellian distrib. function in mag. field, cyclotron emission study 2-46038  
 GaAs, hot photoexcited electrons, effect of electron-electron scatt. 2-46066  
 GaAs hyperabrupt junctions, avalanche breakdown voltage calc. 2-30961  
 p-GaAs, IR transmission characteris. of impurities 2-17508  
 GaAs, impact ionisation, band struct. depend. 2-45994  
 GaAs, impurity luminescence decay kinetics 2-41423  
 GaAs, impurity spectra, cyclotron resonance in high mag. fields 2-22054  
 GaAs, inhibited relaxation of nonresonantly excited electrons in a cold lattice, photolum. meas. 2-46741  
 GaAs injection amplifier, dynamic characts. 2-34758  
 GaAs, intrinsic defect theory 2-45884  
 GaAs, ion implantation and low temp. epitaxial regrowth 2-8532  
 GaAs, ion implanted, defects produced by laser annealing 2-1523  
 GaAs, ion implanted, Raman scatt. characteris. of changes induced by encapsulation and thermal annealing 2-17477  
 GaAs, ion implanted and laser annealed, residual damage, TEM study 2-30502  
 GaAs ion implanted layers, mobility and carrier conc. profiles determ. at 299 and 105K 2-51167  
 GaAs, irradiated, point defect mobility 2-12586  
 GaAs, LO-phonon-plasmon dispersion, IR and Raman spectra, hydrodynamic model 2-21521  
 GaAs, LPE, mass transfer processes influence 2-5838  
 GaAs LPE layers, on GaAs substrate, terrace formation, dynamical X-ray refl. 2-21452  
 GaAs large diameter bulk crystals for microwave device technology 2-17619  
 GaAs large refractive index nonlinearities and optically bistable devices 2-11745  
 GaAs laser, actively mode locked, subpicosecond pulse generation in external ring cavity 2-25038  
 GaAs laser, broadening ratio calc. from multimode oscillation threshold 2-24985  
 GaAs laser, dye-in-polymer films for ablative optical recording 2-39708  
 GaAs, laser annealed, pulsed, and ion implanted, photoluminesc. spectrum 2-51643  
 GaAs, laser annealing induced defects 2-40433  
 GaAs laser cyclotron resonance, Zeeman absorpt. 2-41205  
 GaAs, laser induced Pt thin film deposition, Auger electron anal. 2-51836  
 GaAs, laser oxidation, expt. study 2-17751  
 GaAs lasers, longitudinal mode control using three mirror active passive cavity 2-20333  
 GaAs, lattice defects electronic struct. 2-40829  
 GaAs layers, vapour phase growth rate and morphology, elec. field effect 2-36792  
 GaAs, layers growth by OM-VPE 2-8723  
 n-GaAs, lightly doped, nonequilib. carrier transport transient processes, reemission effect 2-36061  
 p-GaAs, linear photogalvanic effect (*Russian*) 2-40972  
 GaAs, local field effects and zone centre phonons 2-26006  
 GaAs, low-dose Si ion implantation into semi-insulating LEC grown wafers, elec. props. obs. 2-8530  
 GaAs, low-temperature electron mobility calcs. 2-46028  
 GaAs MBE growth, volatile metal oxide incorporation 2-12936  
 GaAs, MIS solar cell, degradation, metal-oxide interfacial reaction, AES study 2-52343  
 GaAs MIS struct. with plasma anodized  $Al_2O_3$  film 2-51340  
 GaAs, MO-CVD, p-type, diffusion lengths 2-8808  
 GaAs, MO-CVD grown under different Ga/As mol fractions, deep levels 2-5832  
 GaAs MOS solar cell, open circuit voltage enhancement mechanism 2-52333  
 GaAs MOS structures, charge trapping in anodic native oxide under pulsed laser illum. 2-41016  
 n-GaAs, magnetophonon effect of hot electrons 2-26417  
 GaAs, melt grown, physical props. 2-22158  
 GaAs, metallorganic CVD in a molecular beam system 2-5818  
 GaAs metallorganic epitaxial layers, Be doping 2-50679  
 GaAs, minority carrier lifetime, electron beam induced current study 2-46014  
 GaAs, model, ballistic transport with collisions 2-1917  
 GaAs monolithic integration of electro-optical bistable device 2-49949  
 GaAs monolithic solar cell arrays 2-37403  
 n-GaAs, Monte Carlo modelling of hot electron behaviour 2-40926  
 GaAs multilayer struct., carrier conc. and mobility, rapid determ. method 2-8815  
 GaAs  $n^+/p^+$  tunnel junction, MBE, ohmic contact for cascade solar cell 2-6141  
 n-GaAs near-ballistic electron transport device, AC impedance 2-51181  
 GaAs, neutral acceptor bound exciton ground state, electron-hole exchange interaction effect 2-26304  
 p-GaAs, non-alloyed ohmic contacts, using MO-CVD contact layers 2-46938  
 GaAs, nuclear electric resonance, dielectric loss meas. (*Russian*) 2-13429  
 n-GaAs, ohmic contacts using graded band gap  $Ga_{1-x}In_xAs$  layers by MBE 2-13174  
 GaAs, optical detection of NMR under optical pumping, spin-exchange averaging between electronic states 2-17369  
 GaAs optical element, Gaussian beam distortion by thermal lens 2-34859  
 GaAs, optical props., calc. using first-principles electronic struct. 2-13442



## III-V semiconductors continued

- GaAs, organometallic VPE grown, characterisation for solar cell appls. 2-30762
- GaAs, oxidation, optically enhanced with visible laser light 2-27316
- GaAs  $p^+-n$  junction, impact ionisation coeffs. determ. 2-17083
- GaAs  $p^+-n$  structs., nonequilib. minority carriers, effective lifetime in lightly doped  $n$ -type region 2-17155
- GaAs,  $p$ - $n$  junction, pressure effects on avalanche breakdown voltage 2-26481
- GaAs  $p$ - $n$  junction characts., effect of X-ray irradiation (*Russian*) 2-30965
- $n$ -GaAs, passivation and interface state studies 2-17747
- GaAs periodic doping structures grown by MBE, space charge field of impurities, cond. modulation 2-8870
- $n$ -GaAs, periodic oscils. and turbulence of hot-carrier plasma at 4.2K 2-46050
- GaAs, phonon optics and propagation in epitaxial or thin-film superlattice material 2-30543
- GaAs, phonons, near zone-edge non-thermal, ballistic transport and decay 2-45448
- GaAs, phonons, zone centre, ab initio calc., local field effects 2-50797
- GaAs, photo-excited, far IR magnetoabsorption (*Japanese*) 2-36609
- GaAs, photoacoustic spectroscopy near fund. absorpt. edge (*Japanese*) 2-35599
- GaAs, photoanodes, photoelectrochemical cells, energy storage 2-14088
- GaAs photoanodes, protection with photoelectrochemically generated polypyrrole films 2-47203
- GaAs photocathodes, for low light level imaging, MOCVD 2-9284
- $n$ -GaAs, photoconductivity, far-IR two-photon transitions and two-photon cyclotron resonance 2-40973
- $n$ -GaAs, photocurrent noise caused by impact ionization of neutral donors and free/bound excitons 2-46078
- $n$ -GaAs, photoelectrochem. corrosion, kinetic anal. 2-30966
- $n$ -GaAs, photoelectrochemical corrosion, effect of Au monolayer 2-13181
- GaAs photoexcited electron-hole plasmas, collective modes 2-12983
- GaAs, photogenerated degenerate electron distribs., spin relax. time 2-17528
- GaAs photoluminescence analysis, review 2-22089
- GaAs, photoluminescence spectra, obs. of emission band at  $\sim 1.40$  eV 2-36676
- GaAs, photoluminescence of UHV cleaved crystals 2-51642
- GaAs, piezoelectric, photogalvanic effect for interband transitions 2-1949
- GaAs, plasma anodisation kinetics 2-13830
- GaAs, plasma anodisation kinetics using multipole plasma source 2-47218
- $p$ -GaAs, polarisation of hot photoluminescence spectra, role of split-off subband 2-17542
- $n$ -GaAs, positron annihilation study of radiation defects due to proton irradiation 2-2366
- GaAs post-implant annealing, encapsulation of semiconductor with CVD  $\text{Si}_3\text{N}_4$  to prevent decomposition 2-41634
- GaAs precoated with Al, composite oxide film formation by DC plasma anodisation 2-17762
- GaAs, proton bombarded and annealed, photolum. 2-22074
- $n$ -GaAs, proton implanted, IR absorpt. 2-34886
- GaAs, proton implanted, damage profile, cathodoluminescence, SIMS, chemical staining and C-V meas. 2-40449
- GaAs, proton implanted, cathodolum., Rutherford backscatt. and SIMS studies 2-46778
- GaAs, pulsed UV laser photochemical doping, solar cell prod. 2-12620
- GaAs, radiation defect annealing, redistrib. of point defects 2-45152
- GaAs, Raman active modes, stress depend. 2-2256
- GaAs, Raman scatt. by two LO-phonons near  $\Gamma$  2-36642
- $n$ -GaAs, Raman scatt. from ion implanted carriers 2-46607
- GaAs, rectifying variable planar-doped-barrier structures, MBE fabrication and characts. 2-5455
- GaAs, redistribution of implanted O 2-50687
- $p$ -GaAs, reemission effect on carrier transport 2-8814
- GaAs,  $S$ -type diode, negative photocond. 2-41004
- GaAs Schottky contacts, light emission behaviour, exptl. data 2-41429
- GaAs, selective carrier removal using O implantation 2-21162
- GaAs, self-diffusion of Ga, radiotracer study 2-16841
- GaAs, semi-insulating, deep donor, near IR optical absorpt. 2-17507
- GaAs, semi-insulating bulk-grown, selective excitation luminesc. 2-51641
- GaAs semiconductor devices, collisional broadening effect on Monte Carlo simulations of high-field transport 2-17079
- GaAs, semiconductor electrodes in photoelectrochemical cells, surface state role 2-14086
- $n$ -GaAs, semiconductor-electrolyte interface, surface modification, photoelectrochemical cells 2-14089
- GaAs, shallow diffusion of Zn for optical waveguide modulators 2-49896
- GaAs shallow-homojunction solar cells on epitaxial Ge grown on Si substrates, CVD technique 2-37370
- GaAs single cryst. film growth, by sputter deposition, ion-surface interaction effects 2-46921
- GaAs, single cryst. growth, heat pipe assisted zone melter 2-27078
- GaAs single crystals, helicoidal twisting of dislocations, projection etching, SEM and TEM obs. 2-45174
- GaAs, single step selective implantation technology using proximity annealing, 10 GHz FET fabrication 2-16666
- GaAs single-mode DH lasers using three-mirror active-passive cavity, longit.-mode control 2-11700
- GaAs solar cell radiation damage, annealing, thermally and by minority carrier injection 2-27660
- GaAs solar cell radiation damage and thermal annealing, conc. of vacancies, divacancies, thermochem. model 2-27661
- GaAs solar cells, electron and proton damage coefficients and thermal annealing 2-37284
- GaAs solar cells, optical characterization, computer-controlled instrumentation, spectral photoresponse, reflectivity, transmissivity 2-37388
- GaAs solar cells, optimum sunlight conc. in space, determ. 2-27663
- GaAs solar cells, status and prospects for space appls. 2-27650
- GaAs solar cells for space applications 2-27651
- GaAs solar cells for space missions, technology requirements 2-37291
- GaAs solar cells with distributed parameters, I-V characts. effect of ohmic losses 2-18055
- GaAs, spatial expansion of electron-hole plasma, luminesc. meas. 2-51680
- $n$ -GaAs, spectroscopic line fitting to DLTS data 2-26326

## III-V semiconductors continued

- GaAs, striated impurity inhomogeneity obs. by phase-contrast defocusing method 2-35525
- GaAs, structural defects, dynamic characts., internal friction method 2-1555
- GaAs sub-micron epilayers, near-MM-wave optical props. 5-100  $\text{cm}^{-1}$  region 2-36728
- GaAs substrate, dislocation behaviour during LPE of  $\text{Ga}_x\text{Al}_{1-x}\text{As}$  2-1480
- GaAs, substrate for InSb sputtered coating, elastic stress, X-ray diffr. study 2-16974
- GaAs substrates, Cr, Si, Mn, and Fe distrib. after annealing with and without  $\text{SiO}_2$  encapsulation 2-30478
- GaAs substrates, monolayer-Sn technique for solving substrate film interface high resist. problem in MBE 2-26243
- GaAs superlattice, obs. of tunable band gap and 2-D subbands, luminesc. and Raman meas. 2-2232
- GaAs superlattice, simultaneous modulation of electron and hole conductivity 2-51297
- GaAs surface, (110), chemisorption of Cl (*Chinese*) 2-26205
- GaAs surface, (110), tight binding calc. (*Chinese*) 2-30943
- GaAs surface, (111), Ga adsorpt., total-current spectra fine struct. 2-17583
- GaAs surface, (111), pulsed laser annealing, LEED study 2-45267
- GaAs surface, (100), condensed Pb films, thermal desorption spectra 2-21437
- GaAs surface, Al MBE growth, TEM and Rutherford backscatt. study 2-45760
- GaAs surface, high resolution EELS, review 2-27040
- GaAs surface, ion bombarded channelling-backscatt. study, dechannelling correction 2-16697
- $n$ -GaAs surface, light-induced changes of oxidation potential for temps. between 150 and 410K 2-1991
- GaAs surface, thin native oxide covered, interfacial chemical reactivity of metal contacts 2-8879
- $n$ -GaAs, surface (100) exposed to  $\text{O}_2$  and electron irradiated, energy band bend shifts, UPS 2-40984
- GaAs surface (110), MBE growth of Al film 2-51812
- GaAs surface (110), O and metal overlayers, synchrotron radiation study, book contrib. 2-36766
- GaAs, surface chemistry and interface Fermi level position, single defect model 2-26460
- GaAs, surface core level shifts, Madelung pot. effect 2-30949
- GaAs, surface EM waves in far IR 2-4615
- GaAs, surface electron scatt., diffusivity and mean free path (*Russian*) 2-13127
- GaAs, surface oxidation, composition changes 2-52086
- GaAs, surface potential, Kelvin probe method, photoemission (*French*) 2-5449
- GaAs, surface reconstruction, angle integrated photoemission study 2-8695
- GaAs, TA phonon pulse generation and propag. 2-45643
- GaAs, thermal conditions effect on large-diameter growth of single crystals. 2-2432
- GaAs thin film homojunction solar cells, characts. 2-22614
- GaAs thin film solar cells by OM-CVD growth, high efficiency 2-27652
- GaAs thin-film MOS solar cells, 10  $\mu\text{m}$  film thickness, characts. 2-37398
- GaAs thin-film solar cells 2-37308
- GaAs, time-resolved reflectivity and transmission under intense laser excitation 2-17435
- $n$ -GaAs, transient transport phenomena 2-17092
- $n$ -GaAs tunnel diode, excess current behaviour, electron irradiation effects 2-36062
- GaAs ultrathin films, used for solar cell construction 2-47490
- GaAs, undoped, background Cr determ. using SIMS 2-1509
- GaAs, undoped semi-insulating, growth by liquid encapsulated Czochralski method 2-12622
- $n$ -GaAs unidimensional particle model of cond. at low temps., contacts influence 2-45955
- GaAs, VPE growth in low press. halogen transport system 2-17632
- GaAs, VPE layers, implanted and annealed, elec. and optical props. 2-46164
- GaAs, vapour phase epitaxy, flow channel reactor 2-46934
- $n$ -GaAs wafer, proton implanted, IR reflectivity characteris. 2-17478
- GaAs, XPS, angle-resolved, for solid surface characterisation 2-5794
- $p$ -GaAs,  $Z$  2-17114
- GaAs $^+$ , ion implanted layers, solid phase epitaxial regrowth 2-16960
- GaAs:B(Si)(Se), ion implanted, stoichiometric disturbances 2-1501
- GaAs:Be MBE layers, photoluminescence study 2-31543
- GaAs:Be(Zn) MBE and LPE layer photocathode struct., photoelectron spin polarisation 2-46867
- GaAs:C, implanted, IR localised mode vibr. spectroscopy, annealing temp. depend. 2-17509
- GaAs:C, ion implanted, photolum. study 2-17512
- GaAs:C, metal-organic VPE, elec. and optical props. of deep levels 2-8768
- GaAs:Cd $^{2+}$ , ion-doped films, elec. props. 2-21701
- GaAs:Cr, compensated, nonequilib. carrier recomb., Cr impurity centre role, photoelec. props. and luminesc. 2-30928
- GaAs:Cr, defects in III-V semiconds., EPR studies, review 2-31285
- GaAs:Cr, diffused, photoluminescence study 2-36694
- GaAs:Cr, dislocation density variation 2-30468
- GaAs:Cr, intrinsic density, band gap and effective mass parameters, Cr acceptor capture coeff. 2-51203
- GaAs:Cr, ion implanted, stoichiometric disturbances and Cr redistrib. during annealing 2-21161
- GaAs:Cr, ion-implanted, depth distrib., range-energy data and shape factors 2-1500
- GaAs:Cr, luminescence, no phonon at 0.84 eV, Zeeman and axial stress splitting calc. 2-51659
- GaAs:Cr, phonon scatt. by impurities, thermal cond. meas. 2-8584
- GaAs:Cr, phonon scatt. by Cr ions, uniaxial stress effect, thermal cond. meas., 50 mK to 100K 2-45648
- GaAs:Cr, phonon spectra, supercond. tunnel junction meas. 2-50798
- GaAs:Cr, photoluminescence anisotropy, high mag. field Zeeman splitting 2-22090
- GaAs:Cr, subMM EPR obs. of impurity centres 2-2131
- GaAs:Cr, symmetric struct., impurity carrier traps, electroluminescence study 2-26995
- GaAs:Cr amorphous film, hopping conduction 2-41032



## III-V semiconductors continued

- GaAs:Cr in metal-semiconductor-metal structures I-V characts. (*Slovak*) 2-40920  
 GaAs:Cr  $n^+-n^+$  diode struct., magnetosensitivity, effect of strong carrier accumulation 2-46119  
 GaAs:Cr S-type diode, photoelec. props., neg. resistance under reverse bias 2-1959  
 GaAs:Cr S-type diodes, impedance under double injection conditions, switching mechanism 2-30962  
 GaAs:Fe, heat treated substrate, photoluminescence props. studies 2-13531  
 GaAs:Fe, impurity redistrib. on annealing, saturation density 2-1508  
 GaAs:Fe  $p$ - $n$ - $n$  struts, current-voltage characts. and electrom. study 2-13178  
 GaAs:Ge LPE film, dislocation clusters, TEM obs. 2-45762  
 GaAs:Ge MBE layers, elec. behaviour obs., autocompensation mechanism 2-51361  
 GaAs:Ge(Se), epitaxial, study of donors, far IR photoconductivity and high mag. fields 2-1864  
 GaAs:Ge(Se), neutron transmutation doping, elec. and physical props. 2-12619  
 GaAs:H, amorphous, RF sputtering and optical props.,  $H_2$  partial press. effect 2-40730  
 GaAs:Mn, heat treatment below  $Si_3N_4$  encapsulant of Mn implant, dopant profiles and diffusion mechanism (*French*) 2-5897  
 GaAs:Mn, photoresistive detector, elec. and photoelec. props. 2-36101  
 GaAs:Mn,Fe, heat treatment effects on surfaces, thermal redistrib. of impurities 2-5151  
 GaAs:Nb, impurity luminesc., intracenter transitions 2-51703  
 GaAs:O(C), crystal microstruct., impurities effect, TEM study 2-40419  
 n-GaAs:S, electron irradi., As anti-site defects, EPR study 2-36429  
 n-GaAs:S, MBE layers, electrochem. S doping 2-45222  
 GaAs:Sb, reson. Sb level, photocond. study 2-21537  
 GaAs:Se, electron beam annealing, multiply-scanned beam method 2-1526  
 GaAs:Se, electron beam annealing, multiply-scanned beam method 2-8542  
 GaAs:Se, ion implantation, substrate orientation effects 2-25915  
 GaAs:Se(S), impurity profile, implantation temp. and crystallinity depend. 2-40423  
 GaAs:Si, heavily doped, annealing-induced changes, Si defect conc. depend. 2-30889  
 GaAs:Si, implanted, multiply scanned electron beam annealing 2-45211  
 GaAs:Si, ion implanted and annealed, carrier conc. profiles, C-V meas. techniques 2-12623  
 GaAs:Si, MBE growth, effect of growth conditions on Si doping 2-21449  
 GaAs:Si (Te), cathodoluminescence and dislocation struct. 2-31566  
 GaAs:Si epitaxial  $p$ - $n$  junctions, injection luminesc. 2-46773  
 GaAs:Si MBE layer, doping 2-12616  
 GaAs:Sn, laser implantation, impurity distrib. 2-35518  
 n-GaAs:Sn, laser-assisted doping from Sn evaporated films, ohmic contact form. 2-35521  
 GaAs:Te, heavily doped, degenerate, photoluminescence 2-26979  
 GaAs:Te,Zn, heavily doped material with  $p$ - $n$  junction, SEM local cathodolum. obs. 2-46776  
 GaAs:Te(Si),  $Cr^{2+}$ , surface (110) photovoltage spectroscopy of  $Cr^{2+}$  2-26462  
 GaAs:Zn, annealed, diffusion profiles meas. 2-26139  
 GaAs:Zn, nonequil. substitutional-interstitial Zn diffusion, photoluminesc. study 2-16899  
 GaAs:Zn, polycrystalline, optoelectronic props. rel. to grain boundary features, cathodoluminesc. anal. 2-36713  
 GaAs:Zn $^{2+}$ , implanted layers, photoluminescence study 2-41422  
 GaAs:Zn(Mg)(Si)(Se) ion-implanted homojunction solar cells, pulsed ruby laser annealing, SEM, TEM and SIMS meas. 2-27662  
 GaAs/AlGaAs TJS lasers, gain suppression 2-7759  
 GaAs/Au-Ge ohmic contacts, laser annealed, resistivity and SIMS profile 2-26497  
 GaAs/GaAlAs curved rib waveguides, loss value meas. 2-11867  
 GaAs/GaAlAs injection lasers, grown by MOCVD 2-7801  
 GaAs/GaAlAs lasers, MO-CVD grown, props. as function of stripe width 2-34790  
 GaAs/n-AlGaAs heterostructures, selectivity doped, high mobility electrons, high-speed devices appl. 2-36790  
 p-GaAs/P-Ga $_{1-x}$ Al $_x$ As isotype heterojunction in DH laser materials 2-46111  
 n-GaAs/propylene carbonate electrochem. photovoltaic cells 2-27712  
 GaAs-(Al,Ga)As heterostructure growth, qualitative and quantitative assessments by fast ellipsometers 2-8730  
 GaAs-(Al,Ga)As heterostructs., light scatt. spectroscopy of electrons, rel. to transport props. 2-13500  
 GaAs-(Al,Ga)As heterojunction interfaces, modulation doped, electron mobility depend. on electron density and Al conc. 2-21662  
 GaAs-(Al,Ga)As heterostructure, coupled electron-LO phonon excitation 2-50808  
 GaAs-Al interface, chemical reaction study 2-12857  
 GaAs-Al $_{0.25}$ Ga $_{0.75}$ As multiquantum well struct., resonant degenerate four-wave mixing 2-44401  
 GaAs-Al $_{0.2}$ Ga $_{0.8}$ Sb non-lattice matched stacked solar cells, laser bonding 2-37407  
 GaAs-Al $_2$ O $_3$  devices I-V characts., hopping cond., space-charge-limited currents 2-51329  
 GaAs-Al $_x$ Ga $_{1-x}$ As, heterojunctions and superlattices, band struct., effective mass approx. tight binding calc. 2-51292  
 GaAs-Al $_x$ Ga $_{1-x}$ As DH laser, basic props. 2-4508  
 GaAs-Al $_x$ Ga $_{1-x}$ As diode struct. elec. charact., gamma radiation effect 2-46125  
 GaAs-Al $_x$ Ga $_{1-x}$ As heterostructure, modulation doped surface and interface proximity effect on quantum melt electron mobilities 2-13170  
 GaAs-Al $_x$ Ga $_{1-x}$ As heterojunctions, exciton excited levels 2-13551  
 GaAs-Al $_x$ Ga $_{1-x}$ As heterostruct., Hall effect, fine struct. const. determ. 2-28831  
 GaAs-Al $_x$ Ga $_{1-x}$ As multiquantum well structures, opt. props. and interface disorder, growth-temp. optimization 2-8869  
 GaAs-Al $_x$ Ga $_{1-x}$ As superlattice, energy levels and cond. in appl. mag. field 2-8866  
 GaAs-Al $_x$ Ga $_{1-x}$ As submicron heterostructs., IR optical characterisation 2-17565  
 GaAs-Al $_x$ Ga $_{1-x}$ As superlattices, as sources of polarised photoelectrons 2-17595  
 GaAs-Al $_x$ Ga $_{1-x}$ As superlattice, mag. quantisation and transport 2-26492

## III-V semiconductors continued

- GaAs-Al $_x$ Ga $_{1-x}$ As selectively doped multilayer systems, reson. inelastic light scatt., single particle and collective excitons 2-26493  
 GaAs-Al $_x$ Ga $_{1-x}$ As:Si interface, far IR emission from 2D electrons 2-2336  
 GaAs-AlAs (100) superlattice, vacancy induced band gap levels 2-45883  
 GaAs-AlAs heterojunction band discontinuities, XPS meas., growth sequence depend. 2-13619  
 GaAs-AlAs interface, antisite defect 2-26321  
 GaAs-AlAs superlattice, phonons, Raman scatt. study 2-51587  
 GaAs-AlGaAs DH injection laser, active layer radiative processes in strong mag. field 2-49751  
 GaAs-AlGaAs DH laser with  $p$ -type active layer, operation in mag. field 2-7761  
 GaAs-AlGaAs DH system, monolithic integration of optical sources and detectors, processing techniques 2-4611  
 GaAs-AlGaAs heterojunction interface, backside-gated modulation-doped 2-8862  
 GaAs-AlGaAs interface, hot electron effects in 2D electron gas 2-51291  
 n-GaAs-anodic oxide interface, props., anal. using MOS theory 2-41015  
 n-GaAs-Au Schottky barrier height increase, Fermi energy pinning behaviour 2-5451  
 GaAs-AuGe/Pt pulsed electron beam alloyed ohmic contacts, reliability 2-5458  
 GaAs-Cu(Ag)(Zn)(Sn)(Al) contacts, metal diffusion, penetration depth, SEM and microprobe anal. 2-40701  
 GaAs-electrolyte junction, flat band pot., electroreflectance study 2-17156  
 GaAs-Ga $_{1-x}$ Al $_x$ As channel injection heterojunction laser characts. 2-4511  
 GaAs-Ga $_{1-x}$ Al $_x$ As multilayer epitaxial heterocomps., elec. active defects, combined SEM and TEM obs. 2-50620  
 GaAs-Ga $_{1-x}$ Al $_x$ As stripe geometry DH laser, threshold current, self-consistent calc. 2-44296  
 GaAs-Ga $_{1-x}$ Al $_x$ As V-groove lasers for fibre-optic communications 2-7881  
 GaAs-Ga $_{1-x}$ Al $_x$ As DH and multiple quantum well superlattices, luminesc. props. and struct. 2-46779  
 GaAs-GaAlAs, DH laser grown by metalorganic CVD process 2-937  
 GaAs-GaAlAs, selective MOCVD epitaxy for optoelectronic devices 2-5833  
 GaAs-GaAlAs, stripe DH laser, Zn-diffused, metalorganic CVD grown 2-49772  
 GaAs-GaAlAs DH lasers, nonradiative lifetime and leakage losses 2-7763  
 GaAs-GaAlAs diode laser, multiple segment stripe contact, effect of non-uniform current 2-935  
 GaAs-GaAlAs flat-band semicond. heterostructures, electronic props. 2-1994  
 GaAs-GaAlAs heterojunction, localisation and interaction effects in electron gas 2-21664  
 GaAs-GaAlAs heterostructure, Gunn oscillation optically triggered by 1.06 micron radiation 2-17077  
 GaAs-GaAlAs injection lasers, state of the art, operating parameters and limitations rel. to apps. 2-4525  
 GaAs-GaAlAs integrated optical devices fabricated by MBE and metalorganic CVD 2-49947  
 GaAs-GaAlAs interface, cyclotron emission, two-dimens. character of electron gas 2-5586  
 GaAs-GaAlAs modulation doped multilayer struct., optimum cond. and effective mobility conditions, LPE grown struct. 2-5456  
 GaAs-GaAlAs stripe laser, proton-isolated, with tilted facet reflectors 2-25035  
 GaAs-GaAlAs superlattices, band struct. calcs. 2-40784  
 GaAs-GaAlAs:Zn CVD layers, cryst. defect incorporation during growth 2-31635  
 GaAs-GaAlAsP heterojunctions, lattice strain and misfit dislocations 2-26254  
 GaAs-GaSb  $n$ - $p$  heterojunction intercell Ohmic contact, laser bonded, for monolithic multicolour solar converter 2-13168  
 GaAs-Ge abrupt (110) interface, geometry 2-12920  
 GaAs-Ge interface, atomic and elec. struct. 2-12923  
 GaAs-Ge superlattice, MBE growth 2-8728  
 GaAs-metal contact interface, metallurgical and elec. props., heat treatment effects (*Chinese*) 2-21672  
 GaAs-metal ohmic contacts, microstructure, correl. with elec. characts., electron microscopy obs. 2-40700  
 GaAs-metal-semiconductor FET, transient radiation study 2-21658  
 n-GaAs-molten salt electrolyte interface, mech. of charge transfer 2-8874  
 GaAs-n-AlGaAs heterostructure grown by MBE, growth temp. effect on two-dimens. electron gas mobility 2-8867  
 GaAs-n-AlGaAs heterostructure, MBE gram. effect of annealing on elec. props. 2-26485  
 GaAs-oxide interface, ion beam channelling characterisation 2-26236  
 GaAs-oxide interface states: gigantic photoionization via Auger-like process 2-26510  
 n-GaAs-oxide layer, interface defect states effect on electronic props. 2-26509  
 n-GaAs-oxide-Au struct., forward biased, electroluminesc. 2-17553  
 GaAs-Pd/Ni contact, electrical characts., interphase interaction, heat treatment effect 2-51303  
 GaAs-Pd/Ni Schottky barrier, phase interactions, SIMS study 2-51304  
 n-GaAs-room temperature molten salt electrolyte interface, photoelectrochemical device operation 2-9659  
 GaAs-Si $_3$ N $_4$ , RF sputtered, characterization of intermediate layer 2-51062  
 GaAs-Si $_3$ N $_4$  interface, trap studies 2-26507  
 GaAs-Sn layers, laser annealed, interface struct. and diffusion 2-30757  
 GaAs-SnO $_2$  MIS solar cell, interface, Auger study 2-14084  
 GaAs-strained GaAsP-GaAs (100) heterostructure, electron transmission probabilities 2-13171  
 GaAs-thermally grown sulphide films, C-V and current leakage meas. on MIS diodes 2-51332  
 GaAs-type semiconds., electron-nucleus spin system, optical orientation in inclined mag. field 2-35981  
 n-GaAs-YIG thin film struct., electron drag by surface spin waves 2-46350  
 GaAs-ZnSe heterojunction interface, LPE conditions effect 2-45748  
 GaAs+As $_2$ O $_3$ , interfacial reaction, Raman scatt. detection 2-6086  
 GaAsP, composition modulated, electron microscopy images 2-44983  
 GaAs $_0$ P $_{0.4}$ Fe(Ni), impurity centre characts., thermal and optical capacitance transients study 2-5362



## III-V semiconductors continued

- GaAs<sub>1-x</sub>P<sub>x</sub> (110), intrinsic electronic surface states 2-13159  
 GaAs<sub>1-x</sub>P<sub>x</sub>, direct gap, high excitation luminesc., electron-hole plasma expansion effects 2-51679  
 GaAs<sub>1-x</sub>P<sub>x</sub>, direct-gap, electron-hole plasma expansion, photoluminesc. study 2-21617  
 GaAs<sub>1-x</sub>P<sub>x</sub> layers, mixed cryst. comp. rel. to vapour phase comp. in Ga-HCl-PH<sub>3</sub>-AsH<sub>3</sub>-(NH<sub>3</sub>)<sub>2</sub>-H<sub>2</sub> system 2-36791  
 GaAs<sub>1-x</sub>P<sub>x</sub>:N, cathodoluminescence spectra 2-2348  
 GaAs<sub>1-x</sub>P<sub>x</sub>:N, photoluminescence spectra 2-41421  
 GaAs<sub>1-x</sub>P<sub>x</sub>:Zn(N), ion implanted, optical and elec. props. (*Chinese*) 2-8800  
 GaAs<sub>1-x</sub>P<sub>x</sub>-GaAs, partial misfit dislocation formation during heteroepitaxy 2-21465  
 GaAs<sub>1-x</sub>P<sub>x</sub> solid soln., static bond charge props., X-ray study 2-1442  
 GaAs<sub>1-x</sub>P<sub>x</sub>Sb<sub>y</sub>, energy band gap calc. using dielec. theory of electronegativity 2-8755  
 GaAs<sub>1-x</sub>Sb<sub>x</sub> n-n heterojunctions on GaAs, internal electroabsorpt. obs. 2-17444  
 GaAs<sub>1-x</sub>Sb<sub>x</sub> p-n heterojunction, impact ionisation coeffs. for electrons and holes 2-41006  
 GaAs<sub>1-x</sub>Sb<sub>x</sub> Schottky barrier quadrant detector development for 1  $\mu$ m appl. 2-15225  
 GaAs<sub>1-x</sub>Sb<sub>1-x</sub> electron effective mass values 2-5345  
 GaAs<sub>1-x</sub>Sb<sub>x</sub>GaAs heterojunction cascade solar cell, LPE growth and photocurrent spectra 2-37215  
 GaAs(Sb)(P):Te, ion implanted, laser annealing, Mossbauer spectroscopy study 2-30481  
 (GaAs)<sub>2</sub>(ZnSe)<sub>1-x</sub> solid solns., electrophys. props. 2-40927  
 GaAs(110), Cl chemisorption config. study, cluster model and EHT method 2-8708  
 GaAs(111)-In<sub>0.1</sub>Ga<sub>0.9</sub>As<sub>1-x</sub>P<sub>x</sub> heteroepitaxial system, formation of discrepancy dislocations 2-45754  
 GaInAs, grown by MOCVD, for microwave and optoelectronic appls. 2-5822  
 GaInAs heteroepitaxial layer, X-ray meas. of lattice mismatch 2-30367  
 GaInAs layer growth by vapour phase heteroepitaxy, thermodynamic delineation 2-46941  
 GaInAs VPE growth, hydrides and organometallics methods (*French*) 2-17629  
 GaInAs-AlInAs structures grown by molecular beam epitaxy 2-21456  
 Ga<sub>0.47</sub>In<sub>0.53</sub>As LPE, CVD and VPE layers, electron and hole mobilities of n- and p-type films 2-5480  
 Ga<sub>0.47</sub>In<sub>0.53</sub>As, LPE growth, baking temp. effect on purity, photoluminesc. and elec. props. 2-27106  
 Ga<sub>0.47</sub>In<sub>0.53</sub>As, low temp. LPE growth 2-17637  
 Ga<sub>0.47</sub>In<sub>0.53</sub>As uniform, MBE growth with rotating sample holder 2-17266  
 Ga<sub>0.47</sub>In<sub>0.53</sub>As:Sn, MBE layers, elec. props. 2-30978  
 Ga<sub>0.47</sub>In<sub>0.53</sub>As photocathode with neg. electron affinity, photoelectron spectra 2-13630  
 Ga<sub>1-x</sub>In<sub>x</sub>As, epitaxial layers, Raman scatt. study 2-46577  
 Ga<sub>1-x</sub>In<sub>x</sub>As epitaxial layers preparation and properties for photoelectric applications (*Slovak*) 2-51228  
 Ga<sub>1-x</sub>In<sub>x</sub>As MOS structures, plasma anodisation and interface props. 2-46133  
 Ga<sub>1-x</sub>In<sub>x</sub>As solid soln., static bond charge props., X-ray study 2-1442  
 Ga<sub>1-x</sub>In<sub>x</sub>As uniform epitaxial layers, organometallic VPE growth, elec. characts. 2-31638  
 Ga<sub>1-x</sub>In<sub>1-x</sub>As, electron drift, electric field depend., Monte Carlo calc. 2-51196  
 Ga<sub>1-x</sub>In<sub>1-x</sub>As, Sb<sub>1-y</sub>, epitaxial layers, defect formation characts. 2-51039  
 GaInAsP buried crescent laser emitting at 1.52  $\mu$ m, dispersion effects 2-44289  
 GaInAsP, grown by MOCVD, for microwave and optoelectronic appls. 2-5822  
 GaInAsP heteroepitaxial layer, X-ray meas. of lattice mismatch 2-30367  
 GaInAsP laser diode freq. doubling in LiNbO<sub>3</sub>:Ti waveguide, coherent green radiation source 2-7833  
 GaInAsP, proton bombard., optical props. 2-9206  
 GaInAsP single-mode optical waveguides 2-49911  
 GaInAsP VPE growth, hydrides and organometallics methods (*French*) 2-17629  
 GaInAsP/InP DH lasers, optical gain spectra, temp. depend. 2-911  
 GaInAsP/InP integrated twin-guide lasers for single-mode operation, fabrication techniques 2-7888  
 GaInAsP/InP surface emitting injection laser with buried heterostructures 2-16017  
 GaInAsP-InP BH distributed-Bragg-reflector integrated-twin-guide lasers, 1.58  $\mu$ m wavelength 2-29814  
 GaInAsP-InP BH distributed Bragg reflector integrated-twin-guide laser emitted at 1.5 to 1.6  $\mu$ m 2-29830  
 GaInAsP-InP chip, laser-polyimide/SiO<sub>2</sub> slab waveguide interconnection 2-49946  
 GaInAsP-InP DFB buried heterostruct. lasers, CW operation in 1.5  $\mu$ m wavelength region 2-34787  
 GaInAsP-InP DH CW operated laser diodes, current dependence of temp. rise 2-29817  
 GaInAsP-InP DH laser material, nonradiative regions correlation with dislocation clusters 2-34751  
 GaInAsP-InP DH diode lasers emitting at 1.5  $\mu$ m grown by LP-MO CVD 2-44290  
 GaInAsP-InP injection laser, fabrication and output characteristics 2-4517  
 GaInAsP-InP laser transmitter module, external cavity controlled single longitudinal mode 2-25030  
 GaInAsP-InP mode-controlled long wavelength lasers, BH, MSB and TS types 2-4526  
 GaInAsP-InP p-i-n and avalanche photodiode detectors for 1.1 to 1.6  $\mu$ m operation, state of the art 2-3622  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, energy band gap calc. using dielec. theory of electronegativity 2-8755  
 (GaInAsP) lasers, temp. sensitivity 2-49754  
 Ga<sub>1-x</sub>In<sub>1-x</sub>As<sub>1-y</sub>P<sub>y</sub> electron Hall mobility calc. with two longitudinal optic phonon model 2-17094  
 Ga<sub>1-x</sub>In<sub>1-x</sub>As<sub>1-y</sub>P<sub>y</sub> IR refl. spectra, free carrier parameters and lattice vibrs. 2-5678  
 Ga<sub>1-x</sub>In<sub>1-x</sub>As<sub>1-y</sub>P<sub>y</sub>/InP terraced substrate single-mode laser 2-16016  
 Ga<sub>1-x</sub>In<sub>1-x</sub>As<sub>1-y</sub>P<sub>y</sub>/InP stripe lasers with chemically etched-mirrors, review 2-44332

## III-V semiconductors continued

- Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> laser, 1.3  $\mu$ m, index-guiding struct. grown on terraced substrate 2-936  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> heterostruct., thermal expansion coeff. difference determ. 2-45601  
 Ga<sub>1-x</sub>In<sub>x</sub>P mixed cryst., Raman scatt. and IR absorpt. spectra 2-2235  
 Ga<sub>1-x</sub>In<sub>1-x</sub>P MBE film, struct. and photolum. props. 2-45758  
 Ga<sub>1-x</sub>In<sub>1-x</sub>P:N, luminescence study of exciton radiation transitions 2-46693  
 Ga<sub>1-x</sub>In<sub>1-x</sub>P-GaAs MBE DH, interface recombination vel. and misfit strain, photoluminescence study 2-22073  
 GaInPAs lasers, transient freq. and temp. variation, Michelson interferometric study 2-49748  
 Ga<sub>1-x</sub>In<sub>1-x</sub>P<sub>1-y</sub>As<sub>y</sub>, thin epitaxial layers, refl. spectra 2-17563  
 GaN epitaxial film on sapphire, SEM and electron diffr. obs. 2-45753  
 GaN epitaxial layers, photoluminescence 2-46663  
 GaN epitaxial layers, refl. 5 to 30 eV, dielec. function and electron energy loss function 2-22045  
 GaN film, RF reactively sputtered, dielec. props. 2-13422  
 GaN, high pressure vapour growth 2-27098  
 GaN:Zn, photoluminesc. and electroluminesc., light polarisation 2-26980  
 GaP (110), surface core excitons, binding energies and oscill. strengths 2-8852  
 GaP (110) and (111) surfaces, atomic struct., LEED study 2-8693  
 GaP (110) surface struct., elastic LEED intensities, dynamic anal. 2-12891  
 GaP, amorphous, disorder effects and optical props. 2-2357  
 GaP amorphous films, EXAFS, optical and cond. meas. (*French*) 2-46826  
 GaP amorphous thin films, struct. and optical props. 2-5329  
 GaP, anion antisite defects, electronic props. 2-17017  
 GaP, bond charge study by X-ray data 2-45109  
 GaP, core exciton binding energies 2-40800  
 GaP, core excitons, energy calc. 2-1832  
 GaP cryst., morphology and mechanism of growth from gas phase 2-27064  
 GaP, cryst. defects, correlation between light and electron microscopy images 2-25880  
 GaP crystal, bound state in Raman spectra 2-22034  
 GaP, deep level defect, thermochem. model 2-51119  
 GaP, deep levels in light-emitting devices, electron trap and hole trap discharge rates temp. dependence (*Japanese*) 2-30818  
 GaP, defects in III-V semiconds., EPR studies, review 2-31285  
 GaP, deform. pot., one-phonon Raman scatt. 2-51586  
 n-GaP, deformation pots., far IR spectra study (*Ukrainian*) 2-13463  
 GaP diodes, deep recombination centre parameters, TSC study 2-35972  
 GaP, ESR of deep double donor P<sub>Ga</sub> 2-13337  
 p-GaP electrode, photoelectrochem. reaction mechanisms 2-22417  
 n-GaP, electrodes, surface-trapped holes, photo- and electroluminesc. 2-41428  
 GaP, electronic struct., first principles calc. 2-30793  
 GaP films, amorphous and cryst., core levels, disorder effects, XPS and AES 2-46173  
 GaP first dynode photomultiplier tubes, anomalous variations in dark pulse rate 2-39272  
 GaP, IR absorption induced by impurities and radiation damage 2-46644  
 GaP, impurity-doped, efficient linear IR to visible upconversion, IR detect. using NEA photocathode 2-17532  
 GaP, intrinsic defect theory 2-45884  
 GaP, lanthanide doping influence on elec. and photolum. props., LED material 2-41391  
 GaP layers, deposited on GaAs substrate, initial growth and defect struct. 2-51017  
 GaP, MO-CVD growth 2-5824  
 GaP, nuclear spin system reson. cooling, cond. electrons g-factor effect 2-36478  
 GaP, optical props., calc. using first-principles electronic struct. 2-13442  
 GaP p-n junction, avalanche multiplication and impurity profile, SEM study 2-51194  
 GaP, p-n junction, pressure effects on avalanche breakdown voltage 2-26481  
 GaP, phase-conjugate refl. through degenerate four-wave mixing, 530 nm 2-39697  
 GaP, prep. by MO-CVD 2-46939  
 GaP, Raman scatt. by bound two-phonon states, polariton Fermi resonance (*Russian*) 2-13492  
 GaP, recombination-enhanced defect reactions, cathodoluminesc. and photoluminesc. study 2-46783  
 p-GaP, saturable absorption of high intensity CO<sub>2</sub> laser light 2-975  
 p-GaP, semiconductor electrodes, laser induced photoelectrochemistry 2-13962  
 GaP semiconductor photoelectrodes, current doubling reaction study 2-9557  
 GaP semiconductor Raman laser for far IR generation 2-39657  
 GaP, solubility and distrib. ratios of transition metal impurities in melt-cryst. system 2-5146  
 GaP, struct.-energy calcs. using pseudopot. and localised Gaussian orbitals 2-30815  
 GaP, studies using megagauss fields 2-31290  
 GaP substrates, LEC, microdefects study by TEM and etching 2-45176  
 GaP, surface EM waves in far IR 2-4615  
 GaP, surface oxidation, composition changes 2-52086  
 GaP, vacancy electronic struct. 2-45882  
 GaP:Ag(Au), influence of heat treatment on distrib. of diffused impurities 2-26141  
 GaP:Bi p-n struct., electrolum. and photoresponse spectra 2-36709  
 GaP:Co<sup>2+</sup>, IR luminesc., temp. depend. 2-51654  
 GaP:Cr, photoluminesc., near IR-visible up conversion 2-49819  
 GaP:Cr<sup>3+</sup>, EPR signals of multiples of classical reson. mag. field 2-31269  
 GaP:Cu, photoluminescence spectrum 2-46694  
 GaP:Cu, TSC trace, estimation of capture cross sections 2-13007  
 GaP:Cu, triplet exciton recombination at 1.91 eV, ODMR study 2-46433  
 GaP:Fe, hole localization and charge transfer excitation by time depend. photolum. meas. 2-51702  
 GaP:Fe(Ni), doubly charged donors, IR spectra 2-21538  
 GaP:Ge and GaP:Ge, Cr epitaxial films, behaviour of Ge, elec. props. and photoluminesc. 2-13008  
 GaP:Mg, ion implanted, minority carrier diffusion length meas. 2-26411  
 GaP:N, Al<sup>3+</sup> postimplantation gettering effects in p-n junctions 2-12627  
 GaP:N, dense carrier system, decay kinetics and phase behaviour 2-51678



## III-V semiconductors continued

- GaP:N, luminescence study of exciton radiation transitions 2-46693  
 GaP:N, model calcs. for excitons and biexcitons 2-45840  
 GaP:N, pure and doped, absorption edge, fine structure of the zero phonon component 2-22046  
 GaP:Nb, impurity luminesc., intracenter transitions 2-51703  
 GaP:Ni, optical absorpt. spectra and photocapacitance meas. 2-13518  
 GaP:Ni<sup>2+</sup>, <sup>31</sup>P absorpt. band, Jahn-Teller anal. 2-5732  
 GaP:Pr,Y, heat treated, photoluminescence 2-17541  
 GaP:S, donor state valley-orbit splitting 2-40826  
 GaP:S,Zn, donor-acceptor spin-spin interaction, optically detected EPR study 2-5605  
 GaP:Sb, In, impurity location by asymmetry of channelling dips 2-16693  
 GaP:Te, kinetic model for dopant incorporation during VPE 2-45766  
 GaP:Zn,O, epitaxial films deep level parameters by fabrication of double surface-barrier diodes 2-51126  
 p-GaP/Au-Zn contact system, out-diffusion process, barrier metals effect 2-46128  
 GaP/Si interface, impurity deep traps 2-51267  
 n-GaP/stearic acid, surface pot. studies on Langmuir-Blodgett films 2-26511  
 GaP-Au surface barrier strucls., elec. breakdown mechanisms 2-17159  
 n<sup>+</sup>-GaP-p-Si heterojunctions, elec. and photoelec. props. 2-41005  
 GaP,As<sub>1-x</sub>, band gaps, direct and indirect, conc. depend. 2-51082  
 GaP,As<sub>1-x</sub>,/GaP film structures, layerwise spectral anal. 2-9582  
 GaP(110), surface electronic struct., self-consistent pseudopot. technique 2-40989  
 GaSb (110), surface core excitons, binding energies and oscill. strengths 2-8852  
 GaSb amorphous film, flash evaporated, electronic props. 2-46174  
 GaSb amorphous films, EXAFS, optical and cond. meas. (French) 2-46826  
 GaSb band structure, from tunnel diode pressure effect 2-26290  
 GaSb, core exciton binding energies 2-40800  
 GaSb, core excitons, energy calc. 2-1832  
 p-GaSb, degenerate, low temp. luminesc., doping effect 2-36695  
 GaSb, electron transport and conduction band struct. 2-46012  
 GaSb epitaxial layer growth, on InAs substrates 2-46953  
 GaSb, interband Auger recombination lifetimes (Russian) 2-13096  
 GaSb on TTF-TCNQ and (TMTSF)<sub>2</sub>PF<sub>6</sub>, tunnelling props. and gap opening 2-26476  
 GaSb, p-n junction, pressure effects on avalanche breakdown voltage 2-26481  
 GaSb single crystals, with low dislocation density, LEC growth technique 2-27072  
 GaSb surface (110), substitutional defect deep levels 2-51271  
 GaSb thin film, thermal treatment effect on elec. cond. and struct. 2-21697  
 GaSb, undoped single crystals, obs. of growth striations 2-35421  
 n-GaSb:S, minority carrier diffusion length, photoconductivity study 2-21604  
 GaSb:S MBE film, S doping with H<sub>2</sub>S gas 2-40718  
 GaSb:Te, Czochralski grown, impurity distrib., cathodoluminesc. study 2-51715  
 GaSb:Te, pressure induced alteration of energy spectrum (Russian) 2-5368  
 GaSb:Te and GaSb:Te,Zn, charge transport characts., 80 to 700K 2-30895  
 p-GaSb:Zn, Auger recombination nonradiative lifetimes 2-46840  
 GaSb-AlSb-InAs polytype superlattices and multi-heterojunction characts. 2-1993  
 GaSb-InAs, heterojunctions and superlattices, band struct., effective mass approx., tight binding calc. 2-51292  
 GaSb+Sb<sub>2</sub>O<sub>3</sub>, interfacial reaction, Raman scatt. detection 2-6086  
 GaSe, slowly relaxing cond. and elec. memory effect 2-26404  
 n-ga methodic error in carrier conc. meas. by far IR absorpt. 2-5414  
 Ge-GaAs eutectic alloy, thermo-EMF and thermal cond., temp. depend. thermal quality factor 2-13108  
 Ge-GaAs n-n heterojunction, electron transport 2-8864  
 Ge<sub>3</sub>N<sub>4</sub>-n-GaAs MIS devices, interface characts. determ. 2-30970  
 In-Ga:Cr-In struct. with S-type I-V characts., field distrib., switching mechanism 2-36153  
 In-Ga-P-As, LPE growth in vertical furnace 2-46954  
 InAlAs/InGaAs MBE layer strucls., ion beam anal. 2-35906  
 InAlAs-InGaAs interface, MBE, channelling anal. 2-12922  
 n-InAs accumulation layers, far IR cyclotron reson. and Shubnikov-de Haas oscills. 2-41020  
 InAs, anisotropy effects in vapour epitaxy, growth rate and surface microrelief 2-1795  
 InAs, anodic oxide films, Auger spectroscopic anal. 2-9586  
 InAs, homogeneity region calc. 2-50876  
 n-InAs, magnetoresist. hysteresis in elec. field 2-21610  
 InAs, narrow band gap semicond., free and bound magneto-polarons 2-40807  
 InAs:N<sub>2</sub><sup>+</sup> ion-implanted amorphous and crystalline film prep., electrical conductivity and Hall mobility 2-8533  
 InAs-GaSb flat-band semicond. heterostructures, electronic props. 2-1994  
 InAs-GaSb superlattices, spatial separation of carriers, optical absorption meas. 2-9208  
 InAs-GaSb superlattices in high magnetic fields, band struct., elec. and optical props. 2-21669  
 InAs-GaSb superlattices, band struct. calcs. 2-40784  
 n-InAs-SiO<sub>2</sub>-Si hybrid struct., elec. cond. and capacitance 2-26478  
 (InAs)<sub>1-x</sub>(GaAs)<sub>x</sub>-(GaSb)<sub>1-x</sub>(GaAs)<sub>x</sub> superlattices, electronic and at. struct., phase separation effects 2-16696  
 n-InAs<sub>0.65</sub>P<sub>0.35</sub>, transverse magnetoresist., Boltzmann equation calc. 2-21607  
 InAs(P)(Sb) inversion layer transport, insulator properties 2-2012  
 InAs<sub>1-x</sub>As<sub>x</sub>P<sub>1-y</sub>Sb<sub>y</sub>, LPE growth on InAs substrates 2-40717  
 InAs<sub>1-x</sub>Sb<sub>x</sub> alloys, epitaxial growth by MOCVD 2-5825  
 InGaAs, reduction in dislocation densities in MBE step graded growth 2-21450  
 InGaAs/InP, MBE, double heterostructure laser (Japanese) 2-49781  
 InGaAs-InP BH lasers, with LPE burying layers, CW operation at 1.65 μm 2-44328  
 InGaAs-oxide, native grown plasma oxides and inversion layers 2-41014  
 In<sub>0.05</sub>Ga<sub>0.95</sub>As-InGa<sub>1-x</sub>As<sub>x</sub>P<sub>1-y</sub>-GaAs heteroepitaxial system, dislocation struct., buffer layer effect 2-35504  
 n-In<sub>0.53</sub>Ga<sub>0.47</sub>As, electron drift velocity meas. at 300K using microwave time-of-flight technique 2-30916  
 In<sub>0.53</sub>Ga<sub>0.47</sub>As, Hall factor, temp. and elec. conc. depend. meas. 2-51212

## III-V semiconductors continued

- In<sub>0.53</sub>Ga<sub>0.47</sub>As, near-band-gap absorpt. and photolum. 2-41394  
 In<sub>0.53</sub>Ga<sub>0.47</sub>As on InP substrate, Mn as p-type dopant, distrib. coeff., room temp. mobility and diffusion coeff. 2-25914  
 p-In<sub>0.53</sub>Ga<sub>0.47</sub>As, photoexcited minority electrons, velocity field characts. 2-5432  
 In<sub>0.53</sub>Ga<sub>0.47</sub>As-InP FET, short-gate, ballistic transport 2-51185  
 InGa<sub>1-x</sub>As epitaxial layers, electron mobility (Czech) 2-8897  
 InGaAsP alloys, VPE growth by single flat temp. method 2-2461  
 InGaAsP DH, electroluminescence, efficiency and kinetics 2-13573  
 InGaAsP DH layers, laser characts., nonradiative recomb. effect 2-29820  
 InGaAsP, deep level centre photolum., comp. depend. 2-5751  
 InGaAsP diode to single-mode fibre efficient coupling using two lens combination in confocal condition 2-16122  
 InGaAsP epitaxial layers, near-band-gap absorpt. at 1.3 μm wavelength 2-46803  
 InGaAsP grown by LPE, layer thickness calc. 2-45768  
 InGaAsP heterostructures, nonequilibrium carrier lifetime and edge luminesc. reemission 2-13554  
 InGaAsP, high purity grown by liq. phase epitaxy 2-36802  
 InGaAsP high T<sub>0</sub> low threshold crescent-shape mesa substrate buried heterostruct. laser fabrication 2-44330  
 InGaAsP injection laser, metallisation and heat sink problems 2-4519  
 InGaAsP inverted rib-wavelength lasers, fabrication and operation characteristics 2-20318  
 InGaAsP lattice, matched to InP, growth and charact. review 2-13662  
 InGaAsP long-wavelength laser devices, recent developments 2-11726  
 InGaAsP low threshold DH lasers double clad with InGaAsP confining layers 2-29815  
 InGaAsP, material requirements for near IR photodetectors, LPE and VPE growth techniques 2-15224  
 InGaAsP modulated single-longitud. mode semicond. laser and fibre transmission characts. at 1.55 μm 2-16047  
 InGaAsP, monolithic integration of optical sources and detectors 2-4611  
 InGaAsP n-channel inversion mode MISFET with low interface state density 2-13188  
 InGaAsP, ohmic contacts, low specific contact resistance, metallisation 2-2005  
 InGaAsP planar layer optical strip waveguides by metal diffusion 2-49910  
 InGaAsP ridge waveguide laser performance at 1.3 μm 2-11698  
 InGaAsP short cavity single-mode 1.3 μm lasers with evaporated high-reflectivity mirrors 2-29816  
 InGaAsP/InP 1.3 μm laser material, meltback and pullover as causes of LPE growth disturbances 2-46956  
 InGaAsP/InP diode, 1.5 μm wavelength laser light emission, detection by IR excitable phosphors 2-15219  
 InGaAsP/InP Z 2-16143  
 InGaAsP/InP:Cd DH lasers, LPE growth 2-22178  
 InGaAsP-InP buried heterostructure lasers, fabrication and application to fault location measurement 2-4516  
 InGaAsP-InP buried DH lasers with chemically etched mirrors 2-11714  
 InGaAsP-InP CW lasers, low-threshold-current, distributed feedback 2-49776  
 InGaAsP-InP DH laser, elec., threshold and temp. characts. analysis 2-913  
 InGaAsP-InP DH laser Gbit/sec pulse generation, gating with LiNbO<sub>3</sub> waveguide modulator 2-7811  
 InGaAsP-InP DH laser, degradation obs. by electron probe microanal. 2-44282  
 InGaAsP-InP DH lasers, gain meas. in 1.3 μm 2-44292  
 InGaAsP-InP DH laser, degraded, lattice defect struct., SEM and TEM study 2-49769  
 InGaAsP-InP diode lasers, intrinsic saturable absorption anal. 2-977  
 InGaAsP-InP distributed-feedback BH lasers emitting at 1.57 μm, room-temp. CW operation 2-29818  
 InGaAsP-InP dual wavelength lasers emitting at 1.2 μm and 1.3 μm wavelengths 2-34785  
 InGaAsP-InP dual wavelength transverse junction stripe lasers emitting at 1.17 μm and 1.3 μm 2-34786  
 InGaAsP-InP integrated LED-detector device 2-44489  
 InGaAsP-InP laser, current injection induced acoustic signals 2-950  
 InGaAsP-InP laser, Sn doping of active region 2-45210  
 InGaAsP-InP plano-convex waveguide 1.3 μm laser, transverse mode stabilisation 2-921  
 InGaAsP-InP planar buried heterostruct. laser diode with low threshold current fabrication by LPE technique 2-34784  
 p-In<sub>0.7</sub>Ga<sub>0.25</sub>As<sub>0.55</sub>P<sub>0.45</sub>Cd LPE layer, doping characts. and elec. props. 2-41031  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> laser and LED reliability for fibre-optic communications 2-4610  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>-InP buried-crescent laser diode 1.3 μm fundamental transverse mode and life test 2-4532  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> LPE thin films, simultaneous Bragg diffraction of X-rays 2-30759  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> laser transitions, Auger recombination mechanisms 2-44295  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> lattice matched to InP, comp. depend. of mobility, peak vel. and threshold field 2-5479  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> temp. depend. of transferred electron threshold current 2-17076  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> ultrashort cavity lasers, optically pumped, picosec. operation, 0.83-1.59 μm 2-16001  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, deep vacancy levels theory (French) 2-40818  
 InGa<sub>1-x</sub>As<sub>x</sub>P<sub>1-y</sub>GaAs(111) heteroepitaxial system, formation of discrepancy dislocations 2-45754  
 InGa<sub>1-x</sub>As<sub>x</sub>P<sub>1-y</sub>, stabilisation by InP substrate inside unstable region in LPE 2-51833  
 InGa<sub>1-x</sub>As<sub>x</sub>P<sub>1-y</sub>Sb<sub>y</sub> LPE growth with enriched composition on InAs substrate 2-27107  
 InGaP-InGaAlP double heterostructures, optically pumped laser action at 77K, MBE prep. 2-49750  
 In<sub>1-x</sub>Ga<sub>x</sub>P, disorder induced Raman scatt. 2-22032  
 In<sub>1-x</sub>Ga<sub>x</sub>P, metallorganic VPE 2-5823  
 InGa<sub>1-x</sub>P, Brillouin scatt. study, comp. depend. 2-5724  
 InGa<sub>1-x</sub>P, MBE growth on GaAs, at high substrate temps. 2-26251  
 InGaPAs DH diode laser on GaAs substrate, fabrication and visible light emission 2-16019  
 InP (100), low energy Ar ion bombard. damage, Rutherford backscatt. study 2-36750



## III-V semiconductors continued

- InP (110), surface core excitons, binding energies and oscill. strengths 2-8852  
 InP, AES study 2-9229  
 InP, amorphisation and low temp. recrystallisation 2-16665  
 p-InP based photocathodes, solar to  $H_2$  conversion, polycryst. films improvement by reacting Ag with grain boundaries 2-42033  
 InP, cold semicond., hot electrons, luminesc. expts. 2-51676  
 InP crystals, electron irradiat., near-edge absorption 2-17483  
 InP, cyclotron emission investig. as function of doping 2-5586  
 InP, Czochralski grown, defects, etching obs. 2-40395  
 InP, deep levels prod. by pairs of impurities 2-1857  
 InP, defects, birefringence study, comparison with electrochemical etching 2-40397  
 InP, deposition of  $SiO_2$  and  $Si_3N_4$  films by plasma enhanced CVD 2-41527  
 InP, diffusion of Cd at  $680^\circ C$ , p-n junction formation 2-12850  
 InP, directional reactive ion-etching, with  $Cl_2$  containing gases 2-2605  
 InP, electronic band struct. calcs. 2-40782  
 InP epitaxial film, metalorganic CVD, elec. props. 2-21698  
 InP epitaxial layer, defect obs. and correl. with device performance 2-5533  
 InP films, grown on faceted (0001)CdS substrates, small angle grain boundaries 2-5130  
 InP, growth and cryst. quality by liq. encapsulated Czochralski technique 2-5809  
 InP growth melts, Cd evaporation 2-8601  
 n-InP,  $\gamma$ -irradiated, homogeneously compensated, electron mobility at low electron density 2-26390  
 InP, high purity grown by liq. phase epitaxy 2-36802  
 InP, impurity spectra, cyclotron resonance in high mag. fields 2-22054  
 InP, inhibited relaxation of nonresonantly excited electrons in a cold lattice, photolum. meas. 2-46741  
 InP inversion-mode MISFET, pyrolytic  $Al_2O_3$  deposition temp. effect 2-13189  
 InP, ion implanted, damage profile, cathodoluminescence, SIMS, chemical staining and C-V meas. 2-40449  
 InP, ion implanted, pulse annealing 2-2383  
 InP, ion-implanted, CW laser annealing, amorphous layer recrystallisation 2-5143  
 InP, LPE film growth for MESFET appl. 2-9293  
 n-InP LPE layer, donor-acceptor pair recomb. from donor ground and first excited states 2-5752  
 InP, LPE-grown, effect of substrate orientation on electrical properties 2-26522  
 InP, laser induced Pt, Au and Ni thin film deposition, Auger electron anal. 2-51836  
 InP, liq. encapsulated Czochralski growth, B contamination and precipitation 2-5802  
 InP MIS struct. with plasma anodized  $Al_2O_3$  film 2-51340  
 InP, MOCVD 2-5829  
 n-InP, MOS and Schottky barrier devices, elec. and photovoltaic props. 2-51309  
 InP, ohmic contact formation using ion implantation 2-50677  
 InP, ohmic contacts, low specific contact resistance, metallisation 2-2005  
 InP, oxidation, optically enhanced with visible laser light 2-27316  
 InP, phonons, near zone-edge non-thermal, ballistic transport and decay 2-45448  
 n-InP, photoluminescence press. depend. 2-46686  
 InP planar layer optical strip waveguides by metal diffusion 2-49910  
 p-InP, polarisation of hot photoluminescence spectra, role of split-off sub-band 2-17542  
 InP, polycrystalline, low temp. growth, elec. props. meas. 2-22155  
 InP, props., prep. and device appls., review 2-51087  
 InP, proton bombard., optical props. 2-9206  
 InP, proton implanted, cathodolum., Rutherford backscatt. and SIMS studies 2-46778  
 InP, proton implanted, range determ. by SIMS analysis 2-5166  
 p-InP, saturable absorption of high intensity  $CO_2$  laser light 2-975  
 InP, semi-insulating, Fe and Cr redistrib. 2-8537  
 n-InP single cryst., electron mobility and minority carrier lifetime 2-13093  
 InP single crystal, lateral growth over dielec. films by orientation-depend. VPE 2-36793  
 InP single crystals, n- and p-type, phototransport parameters, application in solar cells 2-5439  
 InP, sputter deposition of InP oxide films for MOSFET appls. 2-36141  
 InP surface, n- and p-type, lightly doped, ohmic contacts 2-13173  
 InP, surface oxidation, composition changes 2-52086  
 InP, surface oxide film, composition and thermal stability 2-26252  
 InP, undoped single cryst., identification of faulted prismatic dislocation loops 2-8520  
 InP, use of  $SiO_2$  boats for LPE 2-2468  
 InP, VPE deposition on GaAs substrate in  $InP-PCl_3-H_2$  system, layer quality and elec. props. 2-27091  
 InP, VPE on InGaAs, growth for photodiode appl. 2-46940  
 InP, X-ray dispersive double cryst. topography 2-28840  
 InP:B(Si)(Se), ion implanted, stoichiometric disturbances 2-1501  
 InP:Co, EPR study 2-2125  
 InP:Co, single cryst. growth and elec. props. 2-9264  
 InP:Co<sup>2+</sup>, impurity levels, photoluminesc. study 2-51655  
 InP:Cr, deep level states, press. depend. and k-space localisation 2-35967  
 n-InP:Cr, piezoelectric attenuation under hydrostatic press. 2-40491  
 InP:Cr(Fe), thermal and optical studies of deep levels, DLTS and DLOS techniques 2-51127  
 n-InP:Cu, homogeneously compensated, electron mobility at low electron density 2-26390  
 InP:Fe, deep-level photocond., energy scheme 2-30924  
 InP:Fe, Mg(Zn), ion implanted, struct. and elec. props. 2-21163  
 InP:Fe, optical and capacitance spectroscopy 2-30925  
 InP:Fe, thermally stimulated cond. investigation 2-26407  
 InP:Fe photoconductive detector, sub-100 ps bulk-recombination limited 2-48787  
 InP:Fe<sup>2+</sup>, deep impurity centres, photoluminesc. and DLTS study 2-51656  
 InP:O, horizontal Bridgman growth, O doping effect, Hall effect meas. 2-16667  
 InP:S VPE layers, effect of doping on mobility, Hall effect and magnetoresistance meas. 2-46044  
 InP:Se, backscattering spectrum, channelling meas. using automatic beam alignment 2-19815

## III-V semiconductors continued

- InP:Se, ion implanted, pulsed laser annealing 2-30489  
 InP:Se epitaxial layer, heavily doped, electroreflectance and photoluminescence 2-2353  
 InP:Se<sup>+</sup>, ion implanted, Rutherford backscatt. and ellipsometry 2-12617  
 InP:Si, capless annealing, for microwave devices 2-2531  
 InP:Si, ion implanted, electron pulse annealing with minimal P loss 2-30475  
 InP:Sn(Ge)(S), etched and unetched, dislocation obs. and Huber etching assessment 2-40396  
 InP:Te, ion implanted, laser annealing, Mossbauer spectroscopy study 2-30481  
 InP:Yb epitaxial films; photoluminescence spectra, fine struct. intracentric transitions 2-51704  
 InP:Zn, diffusion profiles of Zn determ. using SIMS with primary Cs ion bombardment (French) 2-5148  
 InP:Zn, p<sup>+</sup>n junction diodes and Schottky barriers, deep levels, Zn diffusion effects, DLTS study 2-12994  
 InP-based, fundamental physics and feasibility of efficient cell fabrication 2-37235  
 InP-In<sub>x</sub>Ga<sub>1-x</sub>As<sub>1-y</sub>P<sub>y</sub> V-groove lasers for fibre-optic communications 2-7881  
 InP-In<sub>x</sub>Sn<sub>1-x</sub>O<sub>3-y</sub> solar cell fabrication, appl. of RF and ion-beam sputtering 2-37375  
 InP-InGaAsP, DH laser wafer, LPE growth and struct. 2-45744  
 InP-InGaAsP DH lasers, bistable operation by optical injection 2-25029  
 InP-InGaAsP heterostructure, electrolum. polarization due to internal strain 2-41432  
 p-InP-liq. electrolyte interface, Fermi level pinning rel. to photoelectrochem. energy conversion 2-8871  
 InP-metal interfaces, atomic and electronic struct., XPS and elec. meas. 2-8880  
 InP-metal ohmic contacts, microstructure, correl. with elec. characts., electron microscopy obs. 2-40700  
 InP-SiO<sub>2</sub>(Si<sub>3</sub>N<sub>4</sub>) MIS capacitors, interface props., C-V meas. 2-8884  
 n-InP-Sn-Al alloyed ohmic contact formation, contact resistance depend. on annealing temp. 2-5463  
 InP-thermal nitride, interface in MIS diodes and MISFETs, interface props. annealing effects, device prop. 2-51308  
 InP-thermally grown sulphide films, C-V and current leakage meas. on MIS diodes 2-51332  
 InP-ZnO heterojunction solar cells prep. using reactive evaporation, props. 2-6147  
 InP(As), intrinsic defect theory 2-45884  
 n-InSb, 1/f noise, mag. field effect 2-26458  
 InSb (110) surfaces, ideal and relaxed, electronic struct. 2-30950  
 n-InSb, acoustic wave multitransit generation in elec. field 2-5442  
 p-InSb, acoustoelec. interaction, US relax. and magnetoresist. study 2-45413  
 InSb, anal. and control of solidification by differential dilatometry 2-1424  
 InSb, anodic oxide film, comp. and dielec. strength, SIMS study 2-47214  
 InSb, Auger recombination rate 2-40930  
 InSb, band-tail optical absorption saturation 2-21983  
 InSb, CESR of free and bound electrons, photoconductivity, impurity conc. depend. 2-21879  
 InSb, conduction electron effective g-factor, Raman scatt. study 2-46610  
 InSb, conductivity fluctuations in crossed elec. and mag. fields 2-5445  
 InSb, deep acceptors, M<sub>1</sub> defect accumulation kinetics after electron irradiat. 2-40831  
 InSb, deformation pots. pseudopot. calc. 2-21256  
 n-InSb, degenerate, US propag., magnetoacoustic phenomena 2-51241  
 InSb dielectric response function for sub-MM radiation interacting with quasi-free carrier gas, high mag. field 2-36070  
 n-InSb, electron drift vel. under impact ionisation conditions at 77K 2-8802  
 InSb, electronic struct. in zinc-blende and rocksalt phases 2-12968  
 InSb, epitaxial growth by laser evaporation, pulsed heating of substrate effect 2-46945  
 p-InSb, extrinsic semicond., magnetoconc. effect 2-8823  
 p-InSb film, hydrogenated, elec. transport props. 2-8895  
 InSb film, multi-pass zone melting 2-46911  
 InSb, free carrier cyclotron resonance linewidth due to ionised impurities 2-31289  
 n-InSb, high elec. field Hall effect meas. 2-51214  
 InSb, hot electron energy relaxation, screening by shallow donor impurities 2-40950  
 InSb, hot electrons, auto-correlation of vel. fluctuations and freq. depend. diffusion const. 2-13081  
 n-InSb, hot electrons, energy loss mechanisms 2-30901  
 n-InSb, hot electrons, noise and diffusivity 2-51182  
 InSb hot-electron bolometers for TFR diagnostics,  $\gamma$ -ray and neutron effects 2-35329  
 n-InSb, IR emission under crossed elec. and mag. fields 2-916  
 InSb, impact ionisation threshold at 77K 2-13082  
 InSb, impurity spectra, cyclotron resonance in high mag. fields 2-22054  
 n-InSb, influence of geometric factors on radioelectric effect 2-17107  
 n-InSb, Landau levels nonthermal broadening, transverse magnetoresist. and photomag. effect 2-8822  
 InSb, large refractive index nonlinearities and optically bistable devices 2-11745  
 InSb, laser beam self-focusing, mag. field enhancement, kinetic approach 2-49836  
 InSb laser cyclotron resonance, Zeeman absorpt. 2-41205  
 InSb, laser induced interband Faraday rotation 2-11773  
 p-InSb, light and heavy hole mobility and conc., effect of dislocations (Russian) 2-26395  
 n-InSb, light diff. by sound, photoelasticity mechanisms 2-36599  
 n-InSb, low conc., mag. freeze-out and high press. induced metal-nonmetal transition 2-21611  
 InSb, MBE, RHEED study of free Sb surface lifetime on InSb 2-40713  
 InSb MIS structure, optical tunnel trap charging of anodic oxide 2-36142  
 InSb MOS structure, capacitance, I-V characts. 2-51324  
 n-InSb, magnetised piezoelectric, laser beam interaction with acoustic wave 2-21242  
 n-InSb, magnetophonon effect of hot electrons 2-26417  
 n-InSb, magnetophonon oscill. of thermoelec. power, anomaly in p-type to intrinsic transition region 2-30914  
 InSb, material energy flow in solid state plasma 2-46048  
 InSb, microwave breakdown, nonlinear effects 2-41269



**III-V semiconductors continued**

- InSb, narrow band gap semicond., space charge layer, multiband effective Hamiltonian anal. 2-51313  
 InSb, nonradiative transitions in donor centers in a strong magnetic field 2-26328  
 n-InSb, nonreciprocal semiconductor devices employing the magnetoplasma reflection minimum effect at MM-wave 2-1938  
 InSb, optical bistability and trasphasor action 2-11743  
 InSb optical const. meas. at 4.2K and 1.5K in spectral region below 40 cm<sup>-1</sup> 2-38679  
 InSb, photo-excited, far IR magnetoabsorption (*Japanese*) 2-36609  
 InSb, photoexcited hot carrier lifetime, magnetophonon oscillations 2-46068  
 InSb, photoexcited hot carriers, far IR cyclotron reson. and emission 2-46384  
 n-InSb, piezoelectric semicond., degenerate, magnetoacoustic phenomena, transverse US propag. effects 2-51240  
 InSb, Raman active modes, stress depend. 2-2256  
 InSb ring-channel waveguide, bistability anal. 2-25112  
 InSb, spin-flip Raman gain, effective g-value and radiation absorption under transient elec. field conditions 2-11746  
 InSb, sputtered coating on GaAs, elastic stresses, X-ray diffr. study 2-16974  
 n-InSb, surface magnetoplasma waves, non-existence in Faraday geometry 2-26428  
 InSb, two-dimensional electron spectrum spin splitting in mag. field 2-46095  
 InSb type narrow band gap semicond., free and bound magneto polarons 2-40807  
 n-InSb, US attenuation, transverse mag. field effect 2-26451  
 InSb, wavelength modulation reflectance spectroscopy, band struct. study 2-51623  
 InSb:Ge, effect of nonmetal-metal transition due to doping in lattice thermal cond. 2-50939  
 InSb:N<sub>2</sub><sup>+</sup> ion-implanted amorphous and crystalline film prep., electrical conductivity and Hall mobility 2-8533  
 InSb:Te,Se,S epitaxial layers conc. profiles rel. to crystn. conditions 2-5144  
 n-InSb-metal contacts, asymmetric current effects of 1/f noise with appl. mag. field 2-5459  
 InSb-NiSb, intraband magneto-optical studies 2-41332  
 n-InSb-SiO<sub>2</sub>-Si hybrid struct., elec. cond. and capacitance 2-26478  
 InSb-type unipolar semicond. with nonstandard band structure, acousto-magnetolectric effect 2-5443  
 InSe, slowly relaxing cond. and elec. memory effect 2-26404  
 In-SnO<sub>3</sub>-InP solar cells fabrication and characts. 2-37236  
 LiNbO<sub>3</sub>-InSb film struct., acoustoelectronic interaction, quantum size effect 2-46081  
 n-GaAs, far IR two-photon transitions, magnetophotocond. 2-13126  
 Pd-GaAs Schottky diodes, current-voltage and capacitance-voltage characts., electron irradi. effects 2-13165  
 SiO<sub>2</sub>-GaAs interface, props. of spin-on interfaces 2-2013  
 SiO<sub>2</sub>-InSb interface form., XPS study 2-26235  
 T 2-29829  
 T 2-49777

**III-VI semiconductors**

- rare earth Ga(In,Tl)-chalcogen system, reactions and phase diagrams 2-9335  
 As<sub>2</sub>Te<sub>3</sub>-InSe, thermoelectrical props. 2-5428  
 CdS semiconductor photoelectrodes, current doubling reaction study 2-9557  
 Ga chalcogenides, electronic props. 2-40316  
 Ga-Sb-Te system, GaSb-based solid soln. region investig. comp. depend. of carrier conc. 2-12720  
 Ga<sub>2</sub>In<sub>1-x</sub>Se, layer compound, lattice instability, ionicity and phase diag. 2-50800  
 GaS, Hall effect and TSC study 2-26414  
 GaS, layer semicond., inelastic neutron scatt. and lattice dynamics 2-50788  
 GaS, opto-electronic props. 2-36587  
 GaS(Se)(Te), Debye temp. study (*Russian*) 2-21264  
 GaS(Se)(Te), elastic moduli, pulse US method obs. 2-5169  
 GaSe, diodes, Schottky barrier study, photo-EMP 2-17142  
 GaSe, down conversion improvement of LiNbO<sub>3</sub> optical parametric oscillator output 2-11752  
 GaSe electrodes photocurrents, crystallographic anisotropy effect 2-36082  
 GaSe, excitonic spectra, phase transitions (*Russian*) 2-31557  
 GaSe, excitons, magneto-optical effects 2-26873  
 GaSe,  $\gamma$ -neutron and electron irradi., photosensitivity 2-21633  
 GaSe, injection-induced impurity breakdown, low freq. current oscills. 2-13086  
 GaSe, intercalated, exciton photoluminescence and reflection spectra 2-17540  
 GaSe, intercalated with Ba or anthracene, electroreflection spectra 2-13453  
 GaSe, optical dielectric function, band struct. calcs. 2-17387  
 GaSe, opto-electronic props. 2-36587  
 GaSe, photocurrent oscills. due to internal interf. of light 2-40966  
 GaSe, polarised luminescence in mag. field 2-9197  
 GaSe, polymorphic stability, band struct. and phonon spectra study 2-40786  
 p-GaSe single crystal, photoconduction measurements 2-46055  
 GaSe, single crystals, IR quenching of photoelectrical memory (*Russian*) 2-40953  
 GaSe, studies using megagauss fields 2-31290  
 GaSe:Cu, defect level analysis, photoluminescence spectra 2-9184  
 GaSe:O, edge luminesc. spectrum, 4.2K, isoelectronic impurity, effect 2-9196  
 GaSe:Sn, photocurrent interference oscills. 2-40970  
 p-GaSe-n-CuInSe<sub>2</sub> heterojunction, photoelec. and elec. props. 2-17152  
 Ga<sub>2</sub>Se<sub>3</sub>-In<sub>2</sub>Se<sub>3</sub> thin films, elec. and optical props. 2-5477  
 GaSe<sub>1-x</sub>S<sub>x</sub>, edge luminesc. spectra, optical and microwave study 2-46751  
 GaSe<sub>1-x</sub>S<sub>x</sub>, polarised luminescence in mag. field 2-9197  
 GaSe<sub>0.95</sub>Te<sub>0.05</sub>:Sn, photocurrent interference oscills. 2-40970  
 GaSe,Te<sub>1-x</sub>S<sub>x</sub>:Sn, photoelectric props. 2-21629  
 GaTe, opto-electronic props. 2-36587  
 GaTe, phonon modes and optical const., far IR complex refl. meas. 2-5669  
 GaTe, Raman scatt. under press. 2-2255  
 GeTe, plasma IR reflection, conc. phase heterogeneity 2-46612

**III-VI semiconductors continued**

- $\beta$ -HgS, optical const. calc. technique (*French*) 2-26852  
 In-Se system, phase diagram 2-2492  
 InS heat capacity meas., rapid method 2-43011  
 In<sub>2</sub>S<sub>3</sub> polycrystalline and amorphous film, manufacture and appls. (*Russian*) 2-1790  
 In<sub>2</sub>S<sub>3</sub> thin film, growth and struct. (*Russian*) 2-21471  
 InSb-based MIS struct., carrier generation processes under nonequilib. depletion conditions 2-17167  
 InSe, cryst. and amorphous, elec. and photoelectrical props. 2-51225  
 InSe, cryst. growth 2-2492  
 InSe, excitons, magneto-optical effects 2-26873  
 InSe film, amorphous, short-range order, elec. cond. and opt. absorpt. edge 2-40712  
 InSe, interband illumination induced impurity photoconductivity 2-40968  
 InSe, photocurrent oscills. due to internal interf. of light 2-40966  
 InSe, single crystal, IR quenching of photoelectrical memory (*Russian*) 2-40953  
 InSe solar cells transport and photovoltaic props. 2-37238  
 InSe, thin film, trap states in forbidden gap (*Russian*) 2-13091  
 InSe, two-exciton process reson. Raman scatt. 2-51584  
 In<sub>2</sub>Se<sub>3</sub>, Raman and X-ray studies of cryst. struct. 2-1467  
 In<sub>2</sub>Se<sub>3</sub> layered cryst., transport props. 2-36069  
 TlInSe<sub>2</sub>, heat cond., influence of Ge, Si and Sn doping (*Russian*) 2-12862  
 TlS crystals, specific heats at low temps. 2-35708  
 TlS, Raman spectra at 4.2 and 300K, vibr. anal. 2-51603  
 TlSe crystals, specific heats at low temps. 2-35708  
 TlSe, energy band struct. 2-40788  
 TlSe, lattice dynamics and sp. ht. 2-16745  
 TlSe, optical refl. spectra inside fundamental absorpt. region 2-31525  
 TlTe crystals, specific heats at low temps. 2-35708  
 Ti<sub>2</sub>Te<sub>3</sub>(S(Se)), electrophys. props. over solid and liq. range, added S and Se effect 2-40883  
 ZnO semiconductor photoelectrodes, current doubling reaction study 2-9557  
 ZnSe:N<sup>+</sup> ion implanted, shallow N acceptor, bond exciton line and phonon relics obs. 2-51630
- illumination** see lighting  
**image amplifiers** see image intensifiers  
**image converters**  
 see also fluorescent screens; image intensifiers  
 fluids interface deflections induced by Marangoni effect, IR-visible image conversion appl. 2-23701  
 high voltage magnetically focused, aberrations and transverse field effects 2-34648  
 high-speed camera development trends in USSR and PRC 2-6913  
 high-speed image converter camera for time resolved image sequence recording in liquid dielec. prebreakdown gas phase 2-5629  
 high-speed image converter camera with laser illum. for obs. of prebreakdown and breakdown phenomena in hydrocarbons 2-5632  
 liquid crystal light valve using photocond. Bi<sub>12</sub>SiO<sub>20</sub>, incoherent to coherent image conversion appl. 2-7856  
 X-ray stereoscopic image display (*Chinese*) 2-19225  
 Bi<sub>12</sub>SiO<sub>20</sub> optical image converter, effect of electron-hole recomb. on performance 2-39732
- image iconoscopes** see television camera tubes  
**image intensifiers**  
 autodiagraphic intensification of electronographic imagery 2-32857  
 electrographic camera, superconducting magnet homogeneity, stabilisation (*Chinese*) 2-19138  
 quantum, dye-laser based, using rhodamine 6G solution in ethanol (*Russian*) 2-11848  
 radiography,  $\gamma$ - and X-ray, intensifying screen material, atomic mass effects (*German*) 2-31894  
 UV imaging detectors, review 2-15218  
 X-ray stereoscopic image display (*Chinese*) 2-19225
- image orthicons** see television camera tubes  
**image processing** see picture processing  
**image sensors**  
 see also television camera tubes  
 C-CD, use for domain pattern obs. 2-36379  
 microscope with photoelectric sighting of object's edges, for components dimensions meas. 2-6832  
 MM-wave forward-looking imaging radiometers, appls. near Earth's surface, multibeam sensors 2-10203  
 optical field phase struct. recording feasibility by acoustooptic method 2-34936  
 pyrovidicons using infrared imaging sensors (*Japanese*) 2-15220  
 robot vision algorithms formation, based on human visual system 2-14239  
 spectral measurement, multichannel, for weak light 2-23738  
 X-ray projector, real-time TV images formation 2-38728  
 PbTiO<sub>3</sub> ferroelectric thin film, prep. by sputtering and laser annealing, device appls. 2-2199
- image storage tubes**  
 No entries
- images, optical** see optical images  
**imaging, acoustic** see acoustic imaging  
**imaging, infrared** see infrared imaging  
**IMMA** see ion microprobe analysis  
**immiscibility** see solubility  
**immittance, electric** see electric immittance  
**impact (mechanical)**  
 see also ballistics; impact strength  
 abrasive wear testing method 2-2643  
 asteroids, impact origin for rapidly rotating asteroid 201 Penelope rel. to UVB photometry 2-38096  
 axisymmetric body impact against compressible liq. surface (*Ukrainian*) 2-23420  
 axisymmetric contact problem with given region of adhesion 2-50196  
 brittle bodies, nature of 'dynamic' strength 2-5930  
 columnar objects, collision between 2, repulsion coeff. and impact force 2-35048  
 composite materials, reinforced, solid particle erosion 2-36977  
 constructions, identification of mech. oscillatory systems (*Russian*) 2-30001  
 corrugated metal skid box impact noise control 2-9747



**impact (mechanical) continued**

- drop force hammer noise source identification by residual spectrum modelling 2-9742
- drop-weight impact tests with the use of laser-Doppler velocimetry 2-20618
- fluid-structure impact, two-dimens., computations with regularisation 2-8096
- forge hammer impact noise and overall plant noise control 2-9740
- Grier(b), New Mexico, meteorite, identification as monomict multiple impact breccia 2-14825
- half plane under impact load, transient response of finite crack 2-50192
- hardness indentations, elastic recovery 2-5945
- instrumented falling weight impact tester, design and appl. 2-27375
- local heating detection by heat sensitive films 2-25988
- machine noise diagnostic rules and energy accountancy laws 2-9749
- membrane, transversal stroke of adjoining core, case of break (*Russian*) 2-12104
- metal, temp. relationship of mech. props. using explosive loading and impulse elec. heating 2-52161
- metal rod, elastoplastic, strain waves in under longit. impact 2-50163
- metal targets, melting, during erosion by hard particles 2-30571
- metals, crack resistance determination, under high strain rates 2-37008
- metals, ductile, solid particle erosion mechanisms anal. 2-25325
- metals, dynamic tensile testing by rot. hammer (*Polish*) 2-9503
- Moon, impact cratering and regolith dynamics 2-42614
- Moon, planetismal impact rel. to crust form., implications of Sm-Nd age of the zirconite (67667) 2-38076
- Moon, seismic codas from impact events rel. to distrib. of elastic inhomogeneities in lunar crust 2-6549
- penetration of a cylindrical body into a compressible fluid (*Russian*) 2-12105
- plastic composite structures, strain hardened, rupture under striker impact 2-35089
- polymers, impact resist., electron microscopic study of struct.-prop. rels. (*German*) 2-9354
- polystyrene, erosion under glass bead impingement 2-22334
- projectile mushrooming, force calc. in one-dimens. finite difference model 2-16270
- random repeated impact process, ball bouncing on randomly vibrating surface 2-35093
- rectangular bar and rectangular beam, collision, impact force and kinematics 2-35049
- shell, cylindrical, two-layer, interacting with acoustic medium, three-dimens. wave processes 2-50162
- shells and plates, elastoplastic, with large deflections, impact loading, numerical soln. (*Russian*) 2-35067
- silent handling equipment for round bars and tubes 2-9748
- steel, Cr-Mo, with different grain sizes, test temp. influence on impact fatigue crack growth 2-5996
- steel, low C, sheet forming using impact loading through water columns 2-27185
- steel, low-alloy, ductile-brittle transition temp., comparison for DWTT and impact specimens 2-13795
- steel reinforced concrete, impact bending stress (*German*) 2-47117
- steels, temperature rise on cryogenic impact test, in austenite, Al, 45 C, and 15Mn26Al4 (*Chinese*) 2-17794
- testing, samples flexing simulation 2-9480
- two-dimensional contact problem with given region of adhesion 2-50195
- wear debris, characts. in impact sliding 2-2592
- wedge, inclined penetration by solid body approx. method (*Russian*) 2-23430
- Al alloys, resistance to piercing, temp. effect 2-27283
- Cu alloys, resistance to piercing, temp. effect 2-27283
- Cu cylindrical projectile, normal impact against massive steel anvil at low velocity 2-27225
- Cu rods, impact on target, plastic deformation and microstruct. 2-51982
- Fe {100}-surfaces, single cryst., delayed dislocation emission from hardness indentations 2-12597
- Fe<sub>3</sub>B<sub>2</sub>, metallic glass, microhardness and porosity investigation (*Russian*) 2-2577
- Fe<sub>3</sub>Co<sub>10</sub>Ni<sub>2</sub>Cr<sub>10</sub>Si<sub>5</sub>B<sub>2</sub>, metallic glass, microhardness and porosity investigation (*Russian*) 2-2577
- Fe<sub>70</sub>Cr<sub>10</sub>P<sub>13</sub>C<sub>7</sub> (*Russian*) 2-2577
- InBi, impact-induced fracture 2-27272
- NaCl, impact loading, local heating detection by heat sensitive films 2-25988
- Si<sub>3</sub>N<sub>4</sub>, solid particle erosion 2-9431
- Ti alloys, resistance to piercing, temp. effect 2-27283
- Zn single cryst., internal friction under impact loading 2-45347

**impact avalanche transit-time diodes** *see IMPATT diodes***impact ionisation**

- electron-avalanche breakdown in solids 2-13409
- hot carriers in semiconductors, conf., Montpellier, France (July '81) 2-42780
- III-V semiconductors, alloy clustering effects 2-46008
- laser breakdown, electron-avalanche ionisation, statistical approach to theory 2-9223
- laser damage, electron-avalanche ionisation induced by EM waves, theory 2-9222
- optical thin-film coating, pulsed laser-induced damage, theory 2-7815
- organic quasi-one dimensional conductors, nonlinear conductivity 2-51155
- p-n junctions, impact ionisation parameters determ. from current multiplication coeff. 2-13179
- PMMA, electron avalanche, acoustic emission meas. 2-51239
- PTEF, electron avalanche, acoustic emission meas. 2-51239
- semiconductor, current controlled negative resist. and generation-recomb. induced nonequib. phase transitions, impact ionisation model 2-45993
- semiconductor, direct band gap, effect of electroabsorption on ionisation coeff. determ. 2-21597
- semiconductors, impact ionisation coeffs. determ. 2-17083
- semiconductors, submillimeter-range plasma oscils. 2-26427
- Al<sub>1-x</sub>Ga<sub>x</sub>As-GaAs, superlattice avalanche photodiode, large ionisation rate ratio 2-51289
- Al<sub>1-x</sub>Ga<sub>x</sub>As, alloy clustering effects on impact ionisation 2-46008
- Bi<sub>1-x</sub>Sb<sub>x</sub>, semiconducting, impact ionisation rate, elec. field depend. 2-21594
- GaAs hyperabrupt junctions, avalanche breakdown voltage calc. 2-30961
- GaAs, impact ionisation, band struct. depend. 2-45994
- GaAs p<sup>+</sup>-n junction, impact ionisation coeffs. determ. 2-17083

**impact ionisation continued**

- n-GaAs, periodic oscils. and turbulence of hot-carrier plasma at 4.2K 2-46050
- n-GaAs, photocurrent noise caused by impact ionization of neutral donors and free/bound excitons 2-46078
- GaAs<sub>1-x</sub>Sb<sub>x</sub> p-n heterojunction, impact ionisation coeffs. for electrons and holes 2-41006
- GaN:Zn, electroluminescence, light polarisation 2-26980
- GaP p-n junction, avalanche multiplication and impurity profile, SEM study 2-51194
- GaP-Au surface barrier structs., elec. breakdown mechanisms 2-17159
- Ge containing Hg<sup>2+</sup>, Zn<sup>2+</sup> and Cd<sup>0</sup> centres, impurity photoconductivity spectra, photoimpact ionization mechanism and oscils. 2-1953
- Ge, p-n junctions, second breakdown patterns 2-13180
- n-InSb, electron drift vel. under impact ionisation conditions at 77K 2-8802
- InSb, impact ionisation threshold at 77K 2-13082
- MOSFET, impact ionisation through surface states 2-17129
- NaCl, focused laser beam deform., multiphoton polaron and avalanche optical breakdown models 2-7813
- NaCl, optical breakdown, laser-induced primary defect form. role 2-8539
- Si extrinsic focal plane arrays, influence of material props. 2-15227
- Si, impact ionisation, band struct. depend. 2-45994
- SiO<sub>2</sub> breakdown detector, impact ionisation model, fission product detection 2-19849
- SiO<sub>2</sub> film, thermal, bulk and interface trapped charge generation, H<sub>2</sub>O diffusion effect 2-26526
- SiO<sub>2</sub>, thermal, oxide charges induced by scanning electron and laser beam annealing 2-50711
- SiO<sub>2</sub>-Si, avalanche electron injection, interface states generation 2-17162
- (Zn,Cd)S:Ag,Cl DC electrolum. powder cell, donor-acceptor recombination luminesc. 2-46768

**impact phenomena** *see collision processes***impact strength**

- see also fracture toughness; notch strength*
- ABS terpolymer, impact strength, effect of thermal ageing 2-31784
- glass fibre reinforced plastic, toughness assessment, comparison of impact test methods 2-13906
- graphite reinforced laminated composite plate subject to low velocity impact, structural integrity 2-13812
- Hertzian contact stress, effect of thin compliant protective coating 2-47207
- polyamides, constructional, natural ageing, effect on mech. props. 2-17758
- polycarbonate, biaxial impact fatigue 2-52023
- polycarbonate, impact strength, effects of internal stress, ageing and thickness 2-52024
- polyethylene terephthalate fibre reinforced polypropylene, fracture toughness 2-31786
- polyolefines, mixing amorphous-crystalline with amorphous types, effect on mech. props. (*Russian*) 2-41578
- polystyrene reinforced polycarbonate, reinforcement mechanism (*Chinese*) 2-41715
- polystyrene-polybutadiene blend, struct. and impact strength (*Chinese*) 2-41714
- rubber-polystyrene composites, reinforcement mechanism 2-47001
- sample size effect on low temp. impact testing (*Chinese*) 2-41829
- steel, alloy, microstruct. and mech. props., effect of thermal cycling (*Korean*) 2-5946
- steel, austenitic stainless, N strengthened, props., for cryogenic magnet structs. 2-22331
- steel, C, multilayer material, impact strength and damping props. 2-17706
- steel, CrNiMo, medium-C, correlations between numerical fracture characts. and fracture toughness (*Chinese*) 2-22301
- steel, impact strength and critical brittleness temperature, sample dimens. influence 2-37021
- steel, low C, brittle-ductile state diagram in impact bending 2-52044
- steel, low C, impact loading, initial microstruct. effect (*Czech*) 2-31781
- steel, low pearlite high strength plate, laminated fracture (*Ukrainian*) 2-13792
- steel, low-alloy, laminated pipes, impact strength and cold brittleness threshold, effect of number of layers 2-13796
- steel, structural, brittle fracture tendency eval. 2-22327
- steels, martensitic, ultra-high strength, fracture behaviour 2-47156
- sulphone polymers, high performance, fracture energy and surface topology in cracking 2-13801
- thermoplastic foams, shock mitigating props., predicted from stress-strain data 2-31782
- Cu, wear of single crystal under 90° impact 2-22341
- Fe-Cr-Si, deform., embrittling  $\sigma$ -phase precipitate effects 2-47046
- Si<sub>3</sub>N<sub>4</sub>, energy-absorbing reaction-sintered surface layers on hot-pressed substrates 2-52007
- SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO-MgO-Na<sub>2</sub>O-ZnO glasses, impact resist. and Young's modulus, effect of ZnO 2-36946
- Zn-Al alloy castings, damping capacity and mech. props. 2-47170

**IMPATT diodes**

- avalanche breakdown, effect of GaAs epitaxial film defects and conc. nonuniform. (*Russian*) 2-2018
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As diode struct. elec. charact., gamma radiation effect 2-46125

**impedance, acoustic** *see acoustic impedance***impedance, electric** *see electric impedance***impedance, electric, measurement** *see electric impedance measurement***impedance, measurement, electric** *see electric impedance measurement***impedance matching**

- hydrophone design, matched impedance, electrostatic approach 2-20509

**imperfections, crystal** *see crystal defects***impermeability** *see permeability***impulse amplifiers** *see pulse amplifiers***impulse generators** *see pulse generators***impulse testing**

- metal, temp. relationship of mech. props. using explosive loading and impulse elec. heating 2-52161
- polyethylene terephthalate electrolum. with impulse voltage 2-9203



impulse voltages *see* transientsimpulse welding *see* resistance welding

## impurities

for impurity vibrations *see* "lattice localised modes" or "molecular vibrations in solids"  
*see also* chemical analysis; crystal inclusions; crystal purification; diffusion in solids; impurity-defect interactions; impurity distribution; impurity electron states; interstitials; magnetic impurity interactions; phonon-impurity interactions; segregation; semiconductor doping  
 AC current arc, break, convective air flow effect on admixture atoms behaviour 2-16532  
 alkali halides, F-colouring, role of impurities on primary process 2-12591  
 alloys, dil., impurity host-force const. ratios, method for determ. 2-40508  
 biomolecules in solid state, paramag. doping, high resolution  $^{13}\text{C}$  NMR spectra 2-37498  
 biphonons, localised at cryst. impurities, dispersion relations 2-45491  
 cadmium oxalate trihydrate:  $\text{Mg}^{2+}(\text{Zn}^{2+})(\text{Fe}^{2+})(\text{Ca}^{2+})(\text{Ni}^{2+})(\text{Zr}^{4+})$  thermal decomp. kinetics, impurity effects 2-6029  
 CDW, one-dimensional, pinned by impurities, Q-vector metastability 2-30810  
 chalcogenide glasses, review of studies at Ioffe Physical-Technical Institute, USSR 2-45050  
 conducting films, impurities, topological struct., cond. 2-51349  
 coumarin 1-uranine energy transfer dye laser, characts. 2-15998  
 creep cavitation, influence of impurity segregation 2-41612  
 crystal growth from impure soln. using monolayer adsorption mechanism, theory 2-12524  
 crystallisation front of melt, impurities conc. at boundary 2-50568  
 CVD, growth processes and impurity capture 2-45777  
 diamond:Fe, ion implanted, Mossbauer effect evidence of high internal press. 2-2168  
 diamond, defects, unrelaxed neutral vacancy and substitutional N, energy levels 2-26324  
 diamond, ion beam analyses 2-45231  
 diatomic linear lattice, impurity vibr. modes 2-30555  
 dilute alloys, impurity binding energy, correlation with heat of formation 2-1497  
 diphenylpyrene, adsorpt. and fluoresc. spectra 2-31551  
 dislocation solute atmospheres, influence of thermodynamic soln. props. 2-1511  
 durenepyrene, adsorpt. and fluoresc. spectra 2-31551  
 excitonic insulator, phase domain nucleation at impurities 2-2083  
 fast impurity transport, in some group III and IV host metals 2-1673  
 FCC crystal, vibrational motion of interstitial impurity atom 2-8589  
 ferromagnetic metals, hyperfine fields at impurities 2-51139  
 gas impurity diffusion through plane surface into a melt, math. soln. 2-35721  
 glass, sputtered etched, contamination, Rutherford backscatt. study 2-45787  
 graphite, HTGR struct. components, material characts. and eval. 2-41831  
 graphite, neutron irradiation damage, substitutional B effect 2-25938  
 n-heptane:coronene single cryst., luminesc. polarization, 4.2K 2-4348  
 incommensurate one-dimensional system, cond. study, impurity effects (Russian) 2-45949  
 inorganic solids, luminesc., non-radiative relaxation 2-46757  
 ion bombarded, emission spectra, contamination induced changes 2-46777  
 Ising model, critical behaviour 2-42964  
 Jahn-Teller impurity centre spectrum moments for parity-forbidden transition 2-45922  
 lattice with dislocation core, nonlinear heat transfer 2-12001  
 lactic acid, dielec. permittivity and loss, anomalous behaviour due to defect and impurity centres 2-9070  
 layered compounds, effect of non-mag. impurities on Raman scatt. by supercond. gap excitations 2-51581  
 liquid crystal, induced cholesteric mesophase, helical pitch, temp. and conc. depend. 2-16571  
 MBE, growth processes and impurity capture 2-45777  
 metal hydrides:Er, ESR study of H ions 2-31280  
 metal-H systems, isotope effect on electronic struct. of H, review 2-41224  
 metallic glass, anelasticity due to H, vibrating reed technique 2-45792  
 metallic surface, impurity detect. by EELS 2-13602  
 metals, deformation, rel. to heterodiffusion of charged impurity particles 2-21217  
 metals, electrical conductivity, mixing of electron and impurity states (Russian) 2-45938  
 metals, impurities and lattice defect studies by muon spin rotation technique 2-31359  
 molecules, ODMR investig. 2-24763  
 naphthalene crystal, near melting point, movement of foreign impurity 2-30659  
 naphthalene-chrysene, mixed cryst., impurities and defects, delayed luminesc. obs. 2-5738  
 nematic liquid cryst. orientation on various surfaces 2-16569  
 p-nonyloxybenzoic acid, doped, smectic C phase, electrooptical props. 2-9130  
 one-dimensional conductor, organic supercond., upper crit. field and impurity effects 2-26565  
 p-n junction, dielectric constant, position depend., elec. field and charge density effect 2-26484  
 periclae-chromite fused materials, prod. in elec.-arc furnace 2-41566  
 polyacetylene, n-doped and undoped, IR photoacoustic spectrosc. 2-26877  
 polyacrylonitrile fibre, oxidatively stabilized, elec. cond. and ESR at high temp. 2-21584  
 polystyrene film, undoped and doped with acrylic acid, elec. cond. 2-8902  
 polyvinylacetate:  $\text{I}_2$  film, unpoled, thermally stimulated discharge currents 2-41264  
 Potts model, three-component, phase transition, effect of impurities 2-23592  
 prussian blue, and several kinds of additives, thermal decomp. products (Japanese) 2-2754  
 quartz:  $\text{H}^+$ , electronic method for detection of H conc. 2-12629  
 quartz, ionic conductivity, interstitial defects, complex impedance anal. 2-50909  
 (rare-earth):  $\text{O}_3$ , reactive atmosphere processing 2-37061  
 rare-earth ion to ligand spin-density transfer, theory 2-51132

## impurities continued

relativistic surface states in presence of surface impurity and distortion 2-30948  
 relaxing systems, emission spectra calcs. 2-22081  
 S-N-I-N-S junction, external field and impurity effect on Josephson current (Russian) 2-46212  
 semiconductor, interband absorpt. of long-wave radiation, impurity influence 2-2378  
 semiconductor, ionisation mech. of defect production 2-45249  
 semiconductor surface, refl. spectroscopy analysis of surface layers and coatings, absorbing impurities obs. 2-22105  
 semiconductors, charged impurity diffusion, analytic expression 2-21395  
 solar cells, effect of  $\text{O}_2$  impurities 2-42024  
 solids, elec. conducting, deformation, rel. to heterodiffusion of charged impurity particles 2-21217  
 soliton interaction with impurity in nonlinear lattice, computer simulation study 2-16737  
 soliton-impurity interaction in nonlinear lattice, expt. using LC circuit 2-16738  
 steel, Cr-Mo-V, tensile ductility, effects of autenitization temp. and impurities 2-51993  
 steel, stainless, Cr-Ni, interactions between rare earth metals and harmful impurities 2-27178  
 STEM contamination, beam focusing effects 2-23792  
 stress concentration near liquid filled cavity 2-39809  
 substitutional alloy, with interstitial impurity, equilibrium vacancy conc. 2-50631  
 superconductivity induced by impurities (Russian) 2-46193  
 superconductor, anisotropic, with repulsive average interaction, impurity effects 2-21714  
 superconductor, nonlinear acoustic phenomena, paramag. impurities effect (Russian) 2-8914  
 superconductor, with paramag. impurities, acoustic harmonic generation (Russian) 2-26553  
 superconductor-normal metal system, resist. states, excess current, mag. field and impurity effects 2-21728  
 superconductors with impurities, Cooper electron pairing (Russian) 2-51370  
 temper embrittlement, impurity-induced, simplified model 2-50753  
 TGS, doped with metal ions, pyroelec. props. 2-2191  
 TGS, sp. ht. and permittivity, effect of impurities 2-8633  
 thin films, surface chemical phenomena and growth 2-51048  
 transition metals, hyperfine interaction studies of He trapping 2-31342  
 triglycine sulfate, doped with substitutional and interstitial impurities, elec. props. and domain struct. 2-21951  
 two-band superconductors with Anderson impurities, sp. ht. discontinuity 2-13237  
 vapour concentration measurement, transpiration-gas chromatograph apparatus 2-6864  
 $\text{Ag}^+\text{CKI}$ , outward relax., isotropic superhyperfine tensor 2-40857  
 Ag/Si(111) system, Stranski-Krastanov growth, surface contamination effect 2-36797  
 AgBr, evaporated layers, struct. rel. to evaporation-substrate arrangement (Russian) 2-21455  
 Al-Mg-Ti-Cu, castings, struct. and mech. props., Na impurity effect 2-27241  
 $\text{Al}_2\text{O}_3$ , anodic film, corrosion resistance evaluation, Hunter's method 2-27368  
 $\text{Al}_2\text{O}_3$ , fused, anomalous expansion, causes 2-50889  
 $\text{Al}_2\text{O}_3$ , irradiated, tritium trapping release 2-4117  
 $\text{Al}_2\text{O}_3$ , surface, plasma interaction with C impurities, surface defects, EPR, mass and emission spectroscopy 2-16933  
 $\text{Al}_2\text{O}_3\text{-Na}_2\text{O}$ , synthetic Bayer liquor, elec. cond., effect of Al content, temp. and impurities 2-8651  
 $\text{Al}_2\text{O}_3\text{-Na}_2\text{O:K}^+(\text{Ca}^{4+})$ ,  $\beta$  and  $\beta''$  phases, grain boundary and bulk cond., impurities effect 2-12834  
 $\text{As}_2\text{Se}_3\text{:Ag}$ , fused, impurity cond., temp. depend. 2-17126  
 B, growth and dissolution in nitric acid, impurity effects 2-40303  
 $\beta\text{-BiCl}_3$ , rhombohedral, C centres, photoinduced ESR investig. 2-40819  
 B:O(H)(N) zone melting prep., mech. props., impurity effects 2-41723  
 B-C phases, C rich, stoichiometric limits 2-41595  
 $\text{Ba}_2\text{NaNb}_2\text{O}_7\text{:Fe(Mo)}$ , photoelec. and photorefractive props. 2-36102  
 $\text{BaTiO}_3$ , pure and doped, symm. problems on Raman scatt. 2-46558  
 $\text{CaF}_2$ , natural, X-ray excited luminesc., temp. depend. rel. to thermoluminesc. 2-26966  
 $\text{CaF}_2$ , rare earth oxyfluoride impurity effect on elec., mech. and optical characts. 2-26880  
 $\text{CaF}_2\text{:YF}_3$  single crystals,  $\text{Ca}^{45}$ ,  $\text{Y}^{88}$  self-diffusion 2-30657  
 $\text{CaF}_2\text{:Sm}^{2+}$ , Raman scatt. 2-2282  
 $\text{CaO:P}_2\text{O}_5$ , vitreous, viscosity, impurity water conc. effect 2-12804  
 $^{11}\text{Cd}$  dilute impurities in Se-rich Se-Te alloys, motional correl. time, TDPAC meas. 2-31348  
 $\text{CeO}_2\text{-ZrO}_2$  solid solns., doping by  $\text{CaO}$ ,  $\text{Y}_2\text{O}_3$ ,  $\text{Sm}_2\text{O}_3$ ,  $\text{Ta}_2\text{O}_5$  and  $\text{Nb}_2\text{O}_5$ , elec. cond. 2-5964  
 $\text{CsBr:S}_2(\text{S}_3^-)$ , molecular ion centres, optical and IR absorpt. studies 2-46556  
 CsI, charge transport, yield point and microhardness, influence of crystal growth method and impurities 2-21208  
 Cu, conduction electron spin flip scatt. by impurities 2-51462  
 Cu, interstitial atom trapping and D localisation at  $^{57}\text{Co}$  impurities 2-30484  
 Cu, liq. deoxidation, electrocond. increase by Mg and Ar injection, inclusion obs. (Rumanian) 2-47197  
 F contamination detection using  $^{19}\text{F}(\text{p},\text{p}')^{19}\text{F}$  reaction 2-47391  
 Fe, ion implanted, trapping of Sb by TaC and Cu precipitates 2-2513  
 Fe, phase transform, impurity effects (Slovak) 2-47024  
 $\alpha\text{-Fe-C}$ , dil., with substitutional atoms, mag. permeability disaccommodation, model (Polish) 2-36392  
 GaAs electron mobility, space-charge and central-cell scatt. contrib. reassessment 2-13092  
 GaAs epitaxial layers, soln. grown, steps on facets 2-30761  
 GaAs, radiation defect annealing, redistrib. of point defects 2-45152  
 GaAs, undoped, background Cr determ. using SIMS 2-1509  
 GaAs:Cr, defects in III-V semiconds., EPR studies, review 2-31285  
 GaAs:O(C), crystal microstruct., impurities effect, TEM study 2-40419  
 $\text{Ga}_{40}\text{In}_{50}\text{As}$ , LPE growth, baking temp. effect on purity, photoluminesc. and elec. props. 2-27106  
 GaP, IR absorption induced by impurities and radiation damage 2-46644  
 GaSe, injection-induced impurity breakdown, low freq. current oscils. 2-13086  
 $\text{Gd}_2\text{O}_3\text{-(CaO):Li}_2\text{O}$ , reversible polymorphic transitions 2-50842



## impurities continued

- Ge, energy gap, impurity depend. 2-12964  
 Ge, IR laser radiation scatt. study of local inhomogeneities 2-22033  
 GeO<sub>2</sub>-Na<sub>2</sub>O glasses, transport props., impurity OH effect 2-8668  
 H<sub>2</sub>, single crystals, NMR studies, HD impurity spectrum 2-26174  
 H<sub>2</sub>, solid, diffusion of <sup>3</sup>He, quasi-one-dimensional, NMR meas. 2-45673  
 H<sub>2</sub>-tetra-4-tris-butylphthalocyanine, impurity mols., inhomogeneous spectral parameters 2-24675  
<sup>3</sup>He, BCC, with <sup>4</sup>He impurities, amplitude depend. sound attenuation 2-40647  
<sup>4</sup>He crystals, thermal cond., effect of Ne impurities 2-35858  
<sup>4</sup>He, superfluid, vortex nucleation, <sup>3</sup>He isotropic impurity effects 2-35773  
<sup>4</sup>He-<sup>3</sup>He, solid, isotopic impurities, vol. misfit, NMR and thermal cond. study 2-40649  
 HgI<sub>2</sub>, stoichiometry and purity 2-35704  
 InP, growth and cryst. quality by liq. encapsulated Czochralski technique 2-5809  
 InP, liq. encapsulated Czochralski growth, B contamination and precipitation 2-5802  
 InSb, hot electron energy relaxation, screening by shallow donor impurities 2-40950  
 K halides, NO<sub>3</sub><sup>-</sup> centres, thermally stimulated depolarisation study 2-21934  
 KCl:Ca<sup>2+</sup>, linear crystn. rate of KCl, Cd ions influence, adsorption role (*Russian*) 2-31615  
 KCl:OH<sup>-</sup>, dipolar polarisation (*Russian*) 2-17394  
 KCl:Pb, laser damage morphology, impurity state influence 2-45256  
 KCl:Pb, optical breakdown threshold, temp. depend., effect of impurities 2-25924  
 KCl(Br)(I), polymorphic press. induced phase transition hysteresis, cold working, plastic deform., and impurities effect 2-50853  
 KI, purity for use in phasers, phonon scattering by natural isotopes and impurities 2-12626  
 KI:Na<sup>+</sup>, photoluminescence 3 eV emission band, excitons state annihilation by impurity 2-17531  
 KI:Ti, impurity luminesc. decay, 336 nm, excitation in A-absorption band (*Russian*) 2-2331  
 K<sub>1-x</sub>Li<sub>x</sub>Ta<sub>1-x</sub>Nb<sub>x</sub>O<sub>5</sub>, ferroelec. phase transition, symm. breaking impurity effect, Raman scatt. study 2-26837  
 KTaO<sub>3</sub>:Li<sup>2+</sup>, Mn<sup>2+</sup>(Fe<sup>3+</sup>)(Gd<sup>3+</sup>), ESR spectra, effect of off-centre Li impurity 2-26737  
 K<sub>2</sub>ZnCl<sub>4</sub>, incommensurate-commensurate transition, impurity effects 2-41295  
 Li<sup>+</sup> ionic conductors, decomp. mechanisms 2-41897  
 α-LiIO<sub>3</sub> crystal, X-ray irradiated, ESR spectra 2-46380  
 Li<sub>2</sub>N, amorphous ionic conductor, sound vel. temp. depend., H impurity tunnelling 2-30534  
 LiNbO<sub>3</sub>:Fe(Ni), refr. index temp. depend. meas., impurity induced optical anomaly 60 to 120°C 2-26848  
 α-Lu<sub>2</sub>O<sub>3</sub>, ion implanted and thermally diffused, D lattice location, channelling study 2-35517  
 α-Lu(H, D)<sub>n</sub>, elec. resist. due to H, 4.4 to 170K, Manninen-Jena effect 2-17046  
 Mg, dislocation-point defect interactions 2-45243  
 MgO:C, depth profiling, temp. and time-dependent behaviour 2-35524  
 Mo<sub>2</sub>BC:Zr(Nb)(Rh)(Hf)(Ra)(W), supercond. props. 2-41048  
 N, proton activation analysis in Ta and Nb (*Chinese*) 2-37114  
 (NH<sub>4</sub>)<sub>2</sub>Al(SO<sub>4</sub>)<sub>2</sub> alum, crystn. spectroscopic determ. of trace contaminants 2-9584  
 Na halides, NO<sub>2</sub><sup>-</sup> centres, thermally stimulated depolarisation study 2-21934  
 Na-S battery, hollow fibre, recent developments and progress 2-22592  
 NaCl, energy stored during plastic deform., influence of point defects and struct. 2-35576  
 NaCl single cryst., effects of surface impurities on elementary step motion in evaporation 2-45691  
 NaCl:Ca<sup>2+</sup>(Pb<sup>2+</sup>), impurity influence on mech. props. change during quenching 2-5895  
 Na<sub>2</sub>O.2SiO<sub>2</sub>, vitreous, viscosity, impurity water conc. effect 2-12804  
 Nb film, O contamination, vibrating reed technique 2-45792  
 Nb-Ti (5 at.%), relax. peaks at liq. He temps. due to H motion in trap sites 2-22254  
 (NiMoO<sub>4</sub>.xH<sub>2</sub>O) crystals, effect of impurity on habit in SiO<sub>2</sub> gel 2-51785  
 PbO-SiO<sub>2</sub> (61.8 mol.%), glass, first row transition element impurities, optical and mag. props. 2-41383  
 PbO.2B<sub>2</sub>O<sub>3</sub>, vitreous, viscosity, impurity water conc. effect 2-12804  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te epitaxial films, photoluminesc., effect of impurities 2-36696  
 Pd<sub>77.5-x</sub>Cu<sub>6</sub>Si<sub>16.5</sub>Fe<sub>2</sub>(Mn<sub>x</sub>), amorphous, phonon thermal cond., 0.3 to 10K effect of impurities 2-12865  
 PtSb<sub>2</sub>:Te, impurity conduction 2-1915  
 RbBr:PO<sub>2</sub><sup>-</sup>, PO<sub>2</sub><sup>-</sup> centres, thermally stimulated depolarisation study 2-21934  
 RbCl, polymorphic press. induced phase transition hysteresis, cold working, plastic deform., and impurities effect 2-50853  
 Rb<sub>2</sub>ZnCl<sub>4</sub>(Br<sub>4</sub>), incommensurate-commensurate transition, impurity effects 2-41295  
 Rh electrodeposition, appls. 2-2470  
 Si crystal, N<sup>+</sup> bombardment, Si<sub>3</sub>N<sub>4</sub> buildup kinetics study 2-45229  
 Si Czochralski crystal, elec. characterisation of cryst. defects and O<sub>2</sub> using gate controlled diode 2-26488  
 Si, Czochralski grown, heat treated, O precipitation, C-O nucleation centres, IR spectra study 2-50861  
 Si, energy gap, impurity depend. 2-12964  
 Si, IR laser radiation scatt. study of local inhomogeneities 2-22033  
 Si, impurities and defects, effect on semicond. technology, book 2-15  
 Si, impurity contents analysis using neutron activation (*Rumanian*) 2-27504  
 Si, impurity diffusion, kick-out mechanism, analytical soln. 2-26138  
 Si layers, grown in vac. stacking fault generation 2-50669  
 Si, neutron activation anal. of metal contamination 2-50690  
 Si solar cells, thermal stability of impurities 2-37289  
 Si surface (111), Ag deposited, (√3×√3) surface phase form., impurity effect 2-40656  
 Si, X-centres (C-acceptor pair centres) 2-1475  
 Si:H, amorphous, ion microprobe mass anal., ultrahigh vacuum, appl. to H detection 2-15263  
 α-Si:H<sub>2</sub>O, RF sputtered, <sup>15</sup>N ion irradiated, H effusion 2-5161  
 n-Si:Mn, residual cond., degree of compensation and impurity conc. effects 2-8797  
 Si:O, obs. of impurities by internal friction 2-12681

## impurities continued

- Si:O(H)(F) evaporated amorphous films, DC cond., impurities effect 2-13070  
 Si:P, impurity effect in stacking fault energy 2-45209  
 Si-Ni interface, formation of Si oxides at Ni/Ni<sub>2</sub>Si interface 2-30968  
 Si<sub>3</sub>N<sub>4</sub>, hot-pressed, with CeO<sub>2</sub> additions, oxidation 2-9448  
 Si<sub>3</sub>N<sub>4</sub>, classification, Cl<sub>2</sub> impurity effects 2-51860  
 Si<sub>3</sub>N<sub>4</sub>:(CeO<sub>2</sub>+SiO<sub>2</sub>), hot-pressed, oxidation 2-52070  
 Si<sub>3</sub>N<sub>4</sub>:CeO<sub>2</sub>, hot-pressed, oxidation 2-31811  
 SiO<sub>2</sub>, irradiated, tritium trapping release 2-4117  
 SiO<sub>2</sub>, surface, plasma interaction with C impurities, surface defects, EPR, mass and emission spectroscopy 2-16933  
 SiO<sub>2</sub>:Na thermally grown film, role of cations in struct. formation (*Russian*) 2-40745  
 Sr<sub>0.6</sub>Ba<sub>0.4</sub>Nb<sub>2</sub>O<sub>6</sub>:Pr<sup>3+</sup>, diffuse ferroelec. transition, X-ray diffraction study 2-9100  
 SrTiO<sub>3</sub>, nonstoichiometry study 2-8510  
 SrTiO<sub>3</sub>:La, self-compensation 2-25909  
 Ti, creep behaviour, effect of cooling from α range (*French*) 2-51980  
 TiO<sub>2</sub> film, sputtered, contamination, Rutherford backscatt. study 2-45787  
 U refining, change of C-contamination (*Chinese*) 2-22152  
 V, superconductivity and upper crit. field anisotropy 2-46217  
 W, hot rolled, struct. form., impurities role 2-41643  
 YIG epilayers, SIMS anal. of Pb and B content 2-27497  
 Zn, electrowinning, effect of Cd impurities 2-27104  
 ZnO, dissolution, effect of impurities on surface topography 2-52081  
 ZnO, effects of impurity struct. on brittle fracture 2-45331  
 ZnS, effects of impurity struct. on brittle fracture 2-45331  
 ZnS phosphor powder for electrolum. panels, UV light induced ageing, photoacoustic spectroscopy study 2-5775  
 ZnS, pure and doped crystals, surface microstruct., impurities effects 2-30724  
 ZnS single crystals, photoluminesc. band intensity, Ne ion irradiated effects 2-31548  
 ZnSe:Cu, IR absorpt., defect accumulations 2-5667  
 ZrRuP, superconducting props. and lattice parameters, effect of O impurities 2-13226
- impurity and defect absorption spectra of inorganic solids**  
 alkali halide crystals, anharmonic relax. times of mol. vibr. modes 2-5731  
 alkali halide optical spectra, F-centre absorpt., vibr. props. 2-9170  
 alkali halides, F-centres, spin-mixing parameter, light absorpt. effect 2-51632  
 alkali halides, F-centres, surface, quantum chem. models (*German*) 2-46654  
 alkali metal halides, F band thermal shift, model based on cryst. thermal expansion (*Spanish*) 2-41387  
 alkali metal halides, surface F centre, F band, absorpt. spectra position 2-40380  
 chalcogenide glasses, time resolved optical spectroscopy, review 2-46732  
 Cs halides, additively doped, Cs colloids, precip. and growth kinetics 2-25874  
 diamond, electron irradiated, TR12 vibronic band, uniaxial stress effects 2-13519  
 diamond, natural, vibronic bands, luminesc. and absorpt. spectra 2-51653  
 diamond, optical absorption spectrum, 1.71 eV phonon sideband of GR1 centre 2-46643  
 ethylene glycol-water glasses, visible absorpt. band of trapped electrons between 4 and 100K 2-13526  
 F-centres, impurity, ground state and optical props. 2-21530  
 fluoride glass, 3d transition element doped, IR impurity absorpt. losses 2-25089  
 fluorophosphate crown glass OK1, dye addition, absorpt. spectra 2-29858  
 glass:Nd, nonradiative energy transfer processes 2-31555  
 glasses, highly conc., spectroscopic and lasing props. 2-44302  
 IV-VI semiconductor, defect states, optical and magneto-optical meas. 2-17510  
 naphthalene with d(β-naphthyl)-1,2-ethylene, pure electronic transition band in absorpt. and fluorescence spectra (*Russian*) 2-13562  
 1,5-naphthyridine-d<sub>6</sub>(-d<sub>8</sub>), organic hosts, UV spectra, vibronic coupling 2-2319  
 semiconductors, lightly doped, compensated, Stark broadening of hydrogenic impurity spectral lines 2-26947  
 silicate glass: Cu, high SiO<sub>2</sub> content, nature of colour centres of Cu-ruby type 2-9199  
 silicate glasses, containing S, Se, and Cd compound additions, colour centres 2-9173  
 Ag halide material compositional and distributional anal. by secondary ion mass spectrometry 2-52263  
 AgBr:Li, near band-gap optical absorpt. 2-13515  
 α-Al<sub>2</sub>O<sub>3</sub>, charge trapping, optical absorpt., photocond., and luminesc. meas. 2-40963  
 As-Si, amorphous plasma deposited coating, optical props. and EPR 2-40734  
 As-Se glasses, IR absorpt. spectra 2-26905  
 As-Se:H, amorphous plasma deposited coating, optical props. and EPR 2-40734  
 As<sub>2</sub>S<sub>3</sub>, glass, electron beam induced defects, elec. and optical props. 2-45280  
 As<sub>2</sub>Se<sub>3</sub>, glass, electron beam induced defects, elec. and optical props. 2-45280  
 BaF<sub>2</sub>, undoped and U doped, neutron irradiated, F-aggregate centres 2-35548  
 BaF<sub>2</sub>:Y<sup>3+</sup>, induced IR absorpt. (*French*) 2-46648  
 BaTiO<sub>3</sub>:Co, optical absorpt., elec. cond., electronic struct. 2-46640  
 BaTiO<sub>3</sub>:Fe, dielectric and optical props. 2-46457  
 BaTiO<sub>3</sub>:H(D), impurity IR-absorpt. study 2-46639  
 BaTiO<sub>3</sub>:Nb, elec. and optical props. 2-45961  
 BeAl<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, alexandrite, ground-state and excited-state absorpt. meas. in lasing region 2-7776  
 BeAl<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, spectroscopic and lasing props. 2-17538  
 C:H, amorphous, elec. and optical props. 2-40912  
 CaCO<sub>3</sub>, calcite single cryst., quenching and X-ray effects on absorpt. and luminesc. 2-51720  
 CaF<sub>2</sub>:Sm<sup>2+</sup>, optical absorpt. and mag. circular dichroism spectra 2-13455  
 CaMoO<sub>4</sub>, dipole centres, thermally stimulated depolarisation currents and optical absorpt. spectra 2-46466  
 CaO:C, IR spectrum of OH-compensated defect 2-51634



**impurity and defect absorption spectra of inorganic solids continued**

- CaO-Mn(Fe)(Co)(Ni), charge transfer transitions, energies of optical absorption and emission 2-22052  
 CdBi: $\text{Ni}^{2+}$ , impurity ion absorpt., emission and excitation spectra 2-2321  
 CdBr: $\text{Co}^{2+}$  single cryst., spin exchange interaction optical spectra 2-46653  
 CdCl: $\text{Co}^{2+}$  single cryst., spin exchange interaction optical spectra 2-46653  
 CdCl: $\text{Ni}^{2+}$ , impurity ion absorpt., emission and excitation spectra 2-2321  
 CdF: $\text{Eu}^{3+}$ , optical study of  $\text{Eu}^{3+}$  centres 2-9185  
 CdI: $\text{Ni}^{2+}$ , crystal field and spin-orbit coupling, near IR d-d transitions study 2-22022  
 CdP: $\text{Bi}$ , absorpt. spectra and energy levels in band gap 2-13490  
 CdS, luminescence and absorpt. study of plasticity (*Russian*) 2-17545  
 CdS: $\text{Ni}^{2+}$ , optical spectra, fine struct. and isotope splitting, Jahn-Teller centre interpretation 2-51635  
 CdSe: $\text{Fe}^{2+}$  ( $\text{Co}^{2+}$ ) ( $\text{Ni}^{2+}$ ), zero-phonon lines in optical spectra 2-46650  
 CdSe: $\text{Ni}^{2+}$ , optical spectra, fine struct., Jahn-Teller centre interpretation 2-51636  
 CdTe:Al, Li, IR absorpt. of Al-Li defect pairs 2-9169  
 CdTe: $\text{Co}^{2+}$ , cryst. field splitting, press. induced changes, IR spectra study 2-26944  
 Cr halides, lattice static calc. of F-centre absorption energy 2-46642  
 $\text{Cr}^{3+}$  ions in crystals, optical spectra, covalency effects 2-22050  
 CsCdCl: $\text{Co}^{2+}$ , optical absorpt. spectra 2-26946  
 $\text{Cs}_2\text{CdCl}_4$ : $\text{Co}^{2+}$ , polarised absorpt. spectra, 300 and 77K 2-46641  
 CsCl crystal, IR absorpt. spectra of impurity tetrahedral anions, vibr. bands 2-51638  
 CsCl(Br)(I): $\text{ReO}_4^-$ , IR and Raman spectra,  $\text{ReO}_4^-$  ion orientation 2-13517  
 CsI: $\text{Cu}^{2+}$ ,  $\text{CrO}_4^{2-}$  (*Russian*) 2-46614  
 CuAlS<sub>2</sub>, blue crystals, growth and impurity characts. 2-31614  
 CuInS<sub>2</sub>:Fe, low freq. B<sub>1</sub> mode, IR absorption and Fourier transform spectroscopy 2-31529  
 CuInS<sub>2</sub>:Fe, vibrational modes, impurity effects, IR spectra study 2-16735  
 $\text{Eu}^{3+}$  in glasses,  $^5\text{D}_0$ - $^7\text{F}_0$  transition, homogeneous and inhomogeneous linewidths 2-13534  
 p-GaAs, IR transmission characteris. of impurities 2-17508  
 GaAs, impurity spectra, cyclotron resonance in high mag. fields 2-22054  
 GaAs laser cyclotron resonance, Zeeman absorpt. 2-41205  
 GaAs, semi-insulating, deep donor, near IR optical absorpt. 2-17507  
 GaAs, time-resolved reflectivity and transmission under intense laser excitation 2-17435  
 GaAs:Cr, implanted, IR localised mode vibr. spectroscopy, annealing temp. depend. 2-17509  
 GaAs:Si, heavily doped, annealing-induced changes, Si defect conc. depend. 2-30889  
 GaInAsP, proton bombard., optical props. 2-9206  
 $\text{Ga}_{1-x}\text{In}_x\text{P}$  mixed cryst., Raman scatt. and IR absorpt. spectra 2-2235  
 GaP, IR absorption induced by impurities and radiation damage 2-46644  
 GaP:Fe(Ni), doubly charged donors, IR spectra 2-21538  
 GaP:N, pure and doped, absorption edge, fine structure of the zero phonon component 2-22046  
 GaP:Ni, optical absorpt. spectra and photocapacitance meas. 2-13518  
 GaP: $\text{Eu}^{3+}$ ,  $^3\text{T}_1(\text{P})$  absorpt. band, Jahn-Teller anal. 2-5732  
 Gd(Eu)Al<sub>2</sub>(BO<sub>3</sub>)<sub>4</sub>, cryst. struct., f-f transition probabilities, anisotropic ligand polarisability 2-45134  
 Ge, amorphous, press. induced metal-semiconductor transitions 2-40790  
 Ge containing Hg<sup>0</sup>, Zn<sup>0</sup> and Cd<sup>0</sup> centres, impurity photoconductivity spectra, photoimpact ionization mechanism and oscills. 2-1953  
 Ge laser cyclotron resonance, Zeeman absorpt. 2-41205  
 Ge:As, 1s and 2p states, quantitative piezospectroscopy 2-26863  
 Ge:As(P), four-wave spectroscopy of shallow donors 2-22055  
 Ge:Li film, amorphous, electret effect 2-17395  
 Ge:Si, impurity states, optical spectra and microhardness meas. 2-35971  
 GeO<sub>2</sub>-SiO<sub>2</sub> glass preforms, pure and codoped, UV absorpt. obs. 2-39705  
 In<sub>0.53</sub>As<sub>0.47</sub>As, near-band-gap absorpt. and photolum. 2-41394  
 InP crystals, electron irradi., near-edge absorption 2-17483  
 InP, impurity spectra, cyclotron resonance in high mag. fields 2-22054  
 InP, proton bombard., optical props. 2-9206  
 InSb, impurity spectra, cyclotron resonance in high mag. fields 2-22054  
 InSb laser cyclotron resonance, Zeeman absorpt. 2-41205  
 InSb-NiSb, intraband magneto-optical studies 2-41332  
 K halides, vibration-induced absorpt., MCD spectra line shape anal. 2-21997  
 KBr, F-centre<sup>+</sup> excited state spectroscopy and picosecond relax. (*Russian*) 2-22051  
 KBr, optically pumped F centre, spin-memory loss, luminesc. obs. 2-46716  
 KBr, X<sub>2</sub><sup>-</sup> centre generation by pulsed electron irradi., absorpt. spectra study 2-25936  
 KBr:Ca<sup>2+</sup>,  $\text{CrO}_4^{2-}$  ( $\text{SO}_4^{2-}$ ), Raman spectra of guest ions (*Russian*) 2-46614  
 KBr:Li(Na), X-irrad., F-H<sub>A</sub> pair conversion into  $\alpha$ -I<sub>A</sub> pairs 2-40375  
 KBr:SO<sub>4</sub><sup>2-</sup>, plastically deformed, impurity centre orientation, absorpt. spectra study 2-36671  
 KBr:Sr, electron irradi., interstitial trapping by divalent impurities (*French*) 2-16646  
 KClO<sub>3</sub>, paramag. defects, optical absorpt. and photochem. conversions at 26K 2-31528  
 KCl, holograms recorded through F $\rightarrow$ X conversion, diffr. efficiency, X-centre anisotropy effect 2-39596  
 KCl, R-centres, optical absorpt. R<sub>2</sub> band, lineshape calc. 2-2320  
 KCl:Br, doped and undoped, exciton decay into Frenkel pairs, optical absorption study 2-45846  
 KCl:Ca<sup>2+</sup>,  $\text{SO}_4^{2-}$ , Raman spectra of guest ions (*Russian*) 2-46614  
 KCl:Cu<sup>+</sup>, absorption spectrum, MS-X<sub>u</sub> method 2-31531  
 KCl:KH, ground, excited state absorption, emission and Raman props. of F<sub>1</sub>(H<sup>+</sup>) centre 2-36643  
 KCl:Li, Ag<sup>+</sup> and KCl:Na, Ag<sup>+</sup>, interstitial Ag centre form. by optical destruction of Ag<sup>+</sup> centres, absorpt. spectra study 2-41386  
 KCl:TI crystals and aq. solns., absorpt. spectra, MO calc. 2-41382  
 KCl-KBr mixed crystals, gamma-ray induced F-bands study 2-40379  
 KCl(Br)(I):Pb<sup>2+</sup>, A band spectral line shape 2-41420  
 KClO<sub>4</sub>, paramag. defects, optical absorpt. and photochem. conversions at 26K 2-31528  
 KCr(SO<sub>4</sub>)<sub>2</sub>.12H<sub>2</sub>O-KAl(SO<sub>4</sub>)<sub>2</sub>.12H<sub>2</sub>O mixed cryst., Cr ion crystal field spectra, absorpt. spectra 2-41385  
 KI:Ca<sup>2+</sup>,  $\text{CrO}_4^{2-}$ , Raman spectra of guest ions (*Russian*) 2-46614

**impurity and defect absorption spectra of inorganic solids continued**

- KI:TI, colour centre production, by excitons (*Russian*) 2-35494  
 KBr, F-centre absorpt. bands 2-26941  
 LaCl<sub>3</sub>:Pb<sup>3+</sup> ( $\text{Eu}^{3+}$ ), f<sup>n</sup> systems, forced electric dipole transition probabilities, electron correl. effects, hypersensitive transitions 2-21519  
 LiCl glasses, visible absorpt. band of trapped electrons between 4 and 100K 2-13526  
 LiF,  $\gamma$ -irrad., refr. index dispersion in impurity absorpt. band region using deform. induced birefr. 2-36595  
 LiF, spectra and lasing props. of colour centres (*Chinese*) 2-9174  
 LiF:Mg, colour centres at 3.5 and 5 eV, optical absorpt. and thermoluminesc. studies 2-46649  
 LiF: $\text{Eu}^{3+}$ , cryst., vac. UV absorpt. spectra 2-31530  
 LiNaSO<sub>4</sub>, X-irradiated single crystals, EPR and optical absorpt. spectra of paramag. centres 2-26749  
 LiNbO<sub>3</sub>:Fe, thermal fixing of holograms, evidence for mobile H<sup>+</sup> ion mechanism 2-24979  
 MgAl<sub>2</sub>O<sub>4</sub> crystals exposed to  $\gamma$ -rays, optical spectra 2-51631  
 MgAl<sub>2</sub>O<sub>4</sub>, UV-irradiated, absorpt. and thermoluminesc. spectra 2-13516  
 MgO:2Al<sub>2</sub>O<sub>3</sub> crystals, defects, spectrosc. investig. 2-2323  
 MgO:C, IR spectra, effect of C surface layer (*German*) 2-26942  
 MgO:C, IR spectrum of OH-compensated defect 2-51634  
 MgO:Mn(Fe)(Co)(Ni), charge transfer transitions, energies of optical absorption and emission 2-22052  
 NaBr, F-centres, radiative and non-radiative processes 2-9193  
 NaCl, natural Galile, proton irradi., dislocation decoration 2-45287  
 NaCl:Pb<sup>2+</sup>, A band spectral line shape 2-41420  
 NaCl:Yb<sup>2+</sup>, IR luminesc. and absorpt. spectra of 4f<sup>14</sup>-4f<sup>13</sup>5d transition 2-51668  
 NaI, F-centres, radiative and non-radiative processes 2-9193  
 Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>:Pb<sup>2+</sup> glass, UV transparency, Pb<sup>2+</sup> ions effect 2-9171  
 Na<sub>2</sub>O-K<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub> glasses, mixed alkali effects, Ti<sup>3+</sup> probe ion spectroscopy 2-9172  
 Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>:Ce, gamma-ray irradi., absorpt. bands, optical density variation 2-31527  
 Nd<sup>3+</sup>, optical homogeneous linewidth in crystals, composition dependence 2-46651  
 Ni<sup>2+</sup> ions in crystals, optical spectra, covalency effects 2-22050  
 Pb chalcogenides, strongly compensated, Hall effect and absorpt. spectra 2-5422  
 Pbl: $\text{Bi}^{3+}$  films, exciton-impurity interaction, Verdet const. and absorpt. spectra study 2-26305  
 PbO-SiO<sub>2</sub> (61.8 mol.%) glass, first row transition element impurities, optical and mag. props. 2-41383  
 PbTe:Ti, elec. and optical props. at high impurity conc. 2-40948  
 Pd-H system, H induced charges in electronic struct. thermorefectance meas. 2-41337  
 RbBr:Eu<sup>2+</sup>, thermoluminesc., fluoresc., and optical absorpt. meas., luminesc. mechanism 2-27002  
 RbCl:Pb<sup>2+</sup>, A band spectral line shape 2-41420  
 RbCl(Br)(I): $\text{ReO}_4^-$ , IR and Raman spectra,  $\text{ReO}_4^-$  ion orientation 2-13517  
 Si (100) inversion layer, infrared conductivity of electrons, impurity effects 2-51315  
 Si, amorphous, press. induced metal-semiconductor transitions 2-40790  
 Si, amorphous, time resolved optical spectroscopy, review 2-46732  
 Si, Czochralski grown, heat treated, O precipitation, C-O nucleation centres, IR spectra study 2-50861  
 Si laser cyclotron resonance, Zeeman absorpt. 2-41205  
 Si, optical absorption meas. for pure and heavily-doped materials, 1.24 to 4.63 eV, polarization modulation ellipsometry, solar cell performance 2-37385  
 Si, proton bombarded, annealing IR spectroscopy and X-ray topography study 2-1531  
 Si:As<sup>+</sup> (P<sup>+</sup>) ion implanted, laser annealing effects, refl. study 2-16677  
 Si:B<sup>+</sup> (P<sup>+</sup>) (As<sup>+</sup>), solar cells, prep. by ion implantation and pulsed laser annealing, optical and elec. characterisation 2-14080  
 Si:B(P), neutron irradi., optical props. of defects 2-13521  
 Si:C, O, role of C in precipitation of O, IR and DLTS studies 2-21315  
 Si:F, sputtered amorphous coating, struct. model, expt. study 2-16593  
 Si:F,H,P films, optical study of intermediate order, elec. cond. 2-46797  
 n-Si:Gd,  $\gamma$ - and electron-irrad., defect formation; elec. and optical study 2-21175  
 Si:H, amorphous, absorpt. and excitation spectra 2-22053  
 Si:H, amorphous, disorder and optical absorption edge 2-13440  
 Si:H, amorphous, plasma deposition, impurity doping, substrate pot. effect 2-40724  
 Si:H, amorphous, ultrashort laser pulse annealing, expt. study 2-21170  
 Si:H, amorphous film, X-ray study of atomic struct. 2-45034  
 Si:H, amorphous hydrogenated, reactive laser evaporation, elec. and optical props. 2-2456  
 Si:H, amorphous ion beam deposited coating, prep. and props. 2-40723  
 Si:H, amorphous RF sputtered coating, IR 2000 cm<sup>-1</sup> absorpt. band and photoelectronic props. 2-41353  
 Si:H, crystalline, reactive sputtering fabrication, struct. study by X-ray diffr. and optical spectra 2-1792  
 Si:H,B amorphous film, elec. props., optical props. 2-46176  
 Si:H,N(O), amorphous glow discharge film, elec. cond. and photocond., N<sub>2</sub>(O) doping effect 2-40733  
 $\alpha$ -Si:H,O, RF sputtered, <sup>15</sup>N ion irradi., H effusion 2-5161  
 Si:H amorphous film, photoconductivity threshold and optical gap 2-36097  
 a-Si:H films, sub-gap and band edge optical absorption, photothermal deflection spectroscopy 2-36717  
 Si:In, IR absorpt. calibration using neutron transmutation 2-26939  
 Si:B amorphous film, elec. and optical props. 2-17074  
 Si:Se, diffused and mass transported, IR absorpt. spectra 2-1854  
 Si:Te, donor levels, excited states, junction space-charge, IR absorption and ESR meas. 2-26323  
 Si-SiO<sub>2</sub> interface, Na<sup>+</sup>-bound electrons, IR absorption study 2-51273  
 Si:C(B, 6H), bound excitons, electroabsorpt. spectra 2-9132  
 Si:C(N, 6H) IR photoexcitation spectra of donor centres, effective masses 2-51639  
 Si<sub>1-x</sub>Ge<sub>x</sub>:H film, amorphous, ESR and IR studies 2-26740  
 a-Si<sub>3</sub>N<sub>4</sub>:H, wide optical-gap, photoconductive, elec. and optical props. 2-26439  
 SiO<sub>2</sub>, vitreous, accumulation kinetics of radiation defects, for fibre light guides appl. 2-8541  
 SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-K<sub>2</sub>O:Cu<sup>2+</sup> glasses, diffusion layers prod. by ion exchange, EPR and optical study 2-13332  
 SrF<sub>2</sub>:Co, optical absorpt. spectrum, X-ray excited emission 2-13520



**impurity and defect absorption spectra of inorganic solids continued**

- SrO:Ni<sup>2+</sup> crystal optical absorpt. lines, Stark effect, evidence of dynamic props. 2-2166  
 SrTiO<sub>3</sub>, single crystals, 3d and 4f ion activated, absorpt. spectra and  $\gamma$ -radiation stability 2-46646  
 SrTiO<sub>3</sub>:Fe, electronic struct. and charge transfer bands 2-17016  
 ThGeO<sub>4</sub>:Er<sup>3+</sup>(Nd<sup>3+</sup>)(Ho<sup>3+</sup>) crystal field, EPR and optical absorption spectra study 2-26943  
 WO<sub>3</sub>, amorphous film, charact. by optical absorpt. spectra (*Japanese*) 2-41442  
 YAG:Cr, antiferromag., fine struct. of R absorption lines of Cr<sup>3+</sup> 2-26940  
 YAG:Nd, transient absorpt. and laser output 2-20307  
 YAG:Nd, transient colour centre form. on near UV irradi. rel. to laser efficiency 2-21143  
 ZnC<sub>2</sub>(SO<sub>4</sub>)<sub>2</sub>·6H<sub>2</sub>O:Ni<sup>2+</sup>, vibr., spin-orbit interactions, IR study 2-2322  
 ZnC<sub>2</sub>(SO<sub>4</sub>)<sub>2</sub>·6H<sub>2</sub>O:Cr<sup>3+</sup>, optical absorption spectrum, cryst. field parameters 2-26945  
 ZnO, exciton complexes, luminescence and absorpt. spectra, mag. field effect 2-1834  
 ZnS:Cu, Cl crystal phosphor, localised surface state spectroscopy 2-17131  
 ZnS:Fe<sup>2+</sup>, spin-forbidden transitions, optical absorpt. spectra 2-51633  
 ZnS:Mn(Co), Raman spectra, impurity induced, press. depend. 2-46645  
 ZnSe crystals, effect of heat treatment in Zn, Se, Cd vapour on optical and electro-optical props. 2-13450  
 ZnSe:Al, Li, IR absorpt. of Al-Li defect pairs 2-9169  
 ZnSe:Cu, IR absorpt., defect accumulations 2-5667  
 ZnSe:Ni, optical absorpt. spectra and photocapacitance meas. 2-13518  
 ZrO<sub>2</sub>:Y, IR multiphonon absorpt. 2-46578

**impurity and defect absorption spectra of solids**

- see also impurity and defect absorption spectra of inorganic solids*  
 anthracene, charge transfer excitons, optical absorpt. and thermal dissoc. 2-35943  
 cubic crystal, refr. index dispersion in impurity absorpt. band region using deformed. induced birefr. 2-36595  
 deep levels, optical transitions in elec. field,  $\delta$ -pot. model calc. 2-51637  
 diphenylpyrene, adsorpt. and fluoresc. spectra 2-31551  
 durene:pyrene, adsorpt. and fluoresc. spectra 2-31551  
 electronic centres, optical spectroscopy, book contrib. 2-17546  
 ethanol-water glasses, electron trapping at ultra-low temps. 2-13525  
 gas hosts, impurities dephasing, temp. depend. 2-51128  
 insulator crystals containing optically active ions, laser spectroscopy, book contrib. 2-17548  
 insulators, laser spectroscopy, book 2-14989  
 layered compounds, effect of non-mag. impurities on Raman scatt. by supercond. gap excitations 2-51581  
 methanol-n-butanol glassy mixtures, trapped electron absorpt. spectrum, temp. effect 2-13524  
 3-methylpentane-1-propanol glass mixtures, electron transfer and solvation, gamma ray irradi. at 77 and 4K 2-13523  
 molecular crystals, spectroscopy, bibliography for 1979 2-10563  
 naphthalene N-h<sub>2</sub> and N-d<sub>2</sub>, triplet T<sub>1</sub> Davydov components, high resolution excitation spectra 2-46655  
 naphthalene-chrysene, mixed cryst., impurities and defects, delayed luminesc. o. bs. 2-5738  
 phonon pulses from a relaxing system following defect optical absorpt. 2-45487  
 polyacetylene, solitons domination of electronic props. 2-22056  
 polymers, electron irradiated in TEM, spectroscopic study 2-35542  
 Rochelle salt: Cu single crystals, optical props. 2-46652  
 semiconductor, intermediate exciton state, Coulomb attraction effect on impurity absorption and optical recomb. 2-17511  
 semiconductor, two photon optical edge absorption involving deep impurity levels, electroabsorpt. and magnetoabsorpt. 2-13527  
 semiconductor, two-photon ionisation of deep impurity centres 2-30829  
 semiconductors, deep level thermal and optical spectroscopy 2-40835  
 semiconductors, irradiated, optical props. (*Japanese*) 2-41384  
 strontium tartrate tetrahydrate:Fe<sup>3+</sup>, electronic absorpt. spectra 2-46647  
 tolane crystal, carbazole (anthracene) (naphthalene) doped, host-guest interaction, polarised spectra 2-22049  
 UV absorption due to off-centre impurity ions 2-13522  
 CaF<sub>2</sub>:Pr<sup>3+</sup>, optical hole burning by superhyperfine interactions 2-36691  
 CdS, dislocation energy states, piezo-optical investigation, photoluminescence and absorption spectra obs. 2-51123  
 Ti<sup>3+</sup>-type ions in cubic field, Jahn-Teller effect of B absorption band 2-2318

**impurity clustering** *see segregation***impurity-defect interactions**

- see also impurity-dislocation interactions; impurity-vacancy interactions*  
 II-VI semiconductors, self-compensation, review 2-16672  
 semiconductors, structural defects, dynamic characts., internal friction method 2-1555  
 steel, stainless, point defect trapping effect on void growth during neutron or electron irradi. 2-50692  
 Ag, geometrical structure of lattice defect-impurity config., TDPAC study 2-31354  
 Ag-Cu(Ni), dil. alloys, electron irradiated, free migration of interstitials 2-35544  
 Al, electron irradiated, interstitial trapping by Ga or Si atoms 2-35543  
 Al-Be(Ca)(K)(Li)(Mg), irradi., interstitial-solute complexes, configs. and binding energies 2-30483  
 Au, geometrical structure of lattice defect-impurity config., TDPAC study 2-31354  
 BaF<sub>2</sub>:R (R=rare earth), dopant-interstitial binding energies, lattice simulation calc. 2-40428  
 CaF<sub>2</sub>:R (R=rare earth), dopant-interstitial binding energies, lattice simulation calc. 2-40428  
 CaO:Cr, IR spectrum of OH-compensated defect 2-51634  
 Cu, geometrical structure of lattice defect-impurity config., TDPAC study 2-31354  
 Cu, interstitial atom trapping and D localisation at <sup>57</sup>Co impurities 2-30484  
 Cu, point defect-impurity interactions 2-21165  
 $\alpha$ -Fe-V-C, magnetic permeability disaccommodation in alloys containing substitutional-interstitial pairs 2-2107  
 Ge:Au, gamma irradi., radiation defects interaction with impurity 2-12633  
 Ge:Li,  $\gamma$ -irradi., radiation defect interaction with impurity atoms 2-25918

**impurity-defect interactions continued**

- KBr:H, charged substitutional and interstitial impurities, crystal electrostatic energy, Ewald method 2-16618  
 KBr:Sr, electron irradi., interstitial trapping by divalent impurities (*French*) 2-16646  
 KCl:H, charged substitutional and interstitial impurities, crystal electrostatic energy, Ewald method 2-16618  
 MgO:Cr, IR spectrum of OH-compensated defect 2-51634  
 Pb-Au, dil. alloy, electron irradi., dipole formation, resistivity annealing spectra study 2-36880  
 Si, Czochralski grown, stacking faults and oxide microdefects 2-16660  
 Si, Czochralski-grown, thermally induced luminesc. centres 2-46666  
 p-Si:B,  $\gamma$ -irradi., impurity-point radiation defects interactions 2-25928  
 p-Si:B, heavily doped, defect profiles formed by light ion irradi., B distrib. effect 2-16691  
 Si:B(P), amorphous, defect-dopant atom interaction 2-40274  
 SrF<sub>2</sub>:R (R=rare earth), dopant-interstitial binding energies, lattice simulation calc. 2-40428  
 ZnS:Mn, ionoluminescence, irradi. enhancement mechanism 2-51716

**impurity-dislocation interactions**

- see also dislocation locking; dislocation pinning*  
 dislocation images due to impurity atmos., electron micrographs 2-45172  
 grain boundary structure and sliding, role of impurities 2-40410  
 kink model of dislocation mobility and dislocation-point defect interactions 2-45161  
 kinks on moving dislocations, impurity atoms interaction 2-1514  
 metals, H entry during charging, SAW technique 2-45702  
 MOS capacitor, improved oxide from backsurface Ar implantation 2-2006  
 semiconductor, tetravalent, single charged dislocation 2-45165  
 semiconductors, bound electron states influence on dislocation kink mobility 2-35496  
 semiconductors, structural defects, dynamic characts., internal friction method 2-1555  
 thermodynamic solution props., influence on solute atmospheres at dislocations 2-1511  
 Ag, recryst. temp., effect of trace elements (*Japanese*) 2-9360  
 Al, internal friction of cyclic deformation, impurity conc. and annealing effects 2-45340  
 Cu crystal, bent, elec. resistivity, annealing effect 2-13827  
 Fe alloys containing O, high temp. mag. aftereffect 2-21843  
 Fe, cold worked, internal friction spectrum 2-41654  
 $\alpha$ -Fe-H, deformed, internal friction peaks 2-41656  
 Mg, internal friction spectrum after plastic deform., impurities effect 2-41659  
 NaCl, influence of temp. and impurities on mean free path of mobile dislocations, nucl. spin relax. study 2-40430  
 NaCl single crystals, elec. pulses influence on distance travelled by dislocations 2-1491  
 NaCl:Ca crystal, defect struct. and dislocation obstacles, yield point at different strain rates 2-25896  
 Nb, H-dislocation interactions and intrinsic dislocation relax. 2-40403  
 Ni, internal friction peak due to H-dislocation interaction 2-41658  
 Ni-Cu alloys, solid solns., internal friction (*Russian*) 2-36862  
 NiAl, creep props., high temp., effect of graphite impurity 2-13775  
 Pb:Ti(Sn)(Bi)(Cd)(Sb), normal and supercond., dislocation-impurity interactions, US absorpt. study 2-45410  
 Ta, dislocation relax. peaks, intrinsic and impurity depend. effects 2-40404

**impurity distribution**

- see also doping profiles; segregation*  
 amorphous thin films, study by ion beam nuclear analysis (*French*) 2-1799  
 autoradiography, depth profile determ. using sloping cuts 2-2651  
 carbon steel, borated layers, track autoradiography study (*Russian*) 2-2653  
 corundum single crystals, possibility of controlling impurity inhomogeneity 2-30479  
 crystallisation, influence of electric current on impurity distrib. 2-8455  
 crystallisation front, open inclusions role of supercooled melt in gas bubbles formation 2-50569  
 crystallisation front of melt, impurities conc. at boundary 2-50568  
 doped, mech. props. and microheterogeneity (*Russian*) 2-21477  
 granite glasses containing Sn, Mossbauer spectra (*Czech*) 2-31337  
 II-VI semiconductor solid solution, X-ray analysis of comp. nonuniformity 2-5025  
 implants diffusion, with position depend. diffusion coeff. 2-16903  
 ion implantation profile evolution, atomic mixing influence 2-45225  
 ionic crystals, melt-grown, foreign ion distrib. coeff. as function of ionic radius 2-12621  
 light-scattering tomography, lattice defects, characterisation of crystals (*Japanese*) 2-17499  
 low energy implant simulation using target tilt 2-5135  
 measurement using computerised IR microspectrophotometer 2-19195  
 metal:H(D), saturation and isotope mixing during low temp. implantations 2-50671  
 metals, high-purity, spectrochem. anal. 2-9583  
 rare earth gallium garnets, Czochralski grown, lattice parameters and distrib. coeffs. as function of Ca, Mg and Zr concs. 2-45091  
 semiconductor, high-resolution optical spectroscopy characteris., review 2-17534  
 semiconductor, impurity redistribution by strong EM wave, donor-acceptor transitions 2-45240  
 semiconductor crystals, phase-contrast defocusing method for impurity inhomogeneity obs. 2-35525  
 semiconductors, photoluminescence analysis, review 2-22089  
 semiconductors, X-ray topographic anal. 2-30366  
 SIMS, surface analysis, trace anal. and depth profiling 2-31981  
 simultaneous deposition and ion implantation technique 2-8529  
 steel, boronizing in liq. bed, B distrib. and layer composition, Si content influence 2-41789  
 steel, heat-treated, B and N impurity distrib., neutron radiography study 2-1505  
 steel sheet, uncoated and galvanised, depth profiling 2-45235  
 transition metal dil. alloys, trace elements depth profiles, AES spectrum subtraction method 2-41949  
 ultracold neutron storage, H<sub>2</sub> surface content 2-19811  
 vacancy and pore profiles during bulk evaporation 2-8514  
 zircon, natural, trace element distrib., PIXE meas., proton microprobe dating 2-48018



**impurity distribution continued**

- Al, liquid layer, freezing after laser pulse irradiation, non-equilib. Pb segregation effects 2-35699  
 Al, SIMS analysis of precipitates (*French*) 2-5879  
 Al substrate, vacuum deposited Cr film, laser treatment at high power densities, Al depth profiles 2-51750  
 Al:Cu, ion implanted, pulsed laser irradiation, Cu redistrib., thermal diffusion role 2-45250  
 Al-Al interface, impurity content, secondary ion mass spectrometry (*Russian*) 2-5310  
 Al-Mg alloys, H<sub>2</sub> permeation 2-50993  
 Al-Zn(Sb), pulsed laser annealing ion beam and TEM anal. 2-50700  
 AlN ceramic with added Y<sub>2</sub>O<sub>3</sub> or Ni, structural characteristics 2-46989  
 Al<sub>2</sub>O<sub>3</sub>, dense, aged in water and physiological media, Ca migration 2-50686  
 Al<sub>2</sub>O<sub>3</sub>:Cr<sup>3+</sup>, ion distrib. coeff. and localisation by EPR studies (*Russian*) 2-1507  
 As-S:H, amorphous plasma deposited coating, optical props. and EPR 2-40734  
 As-Se:H, amorphous plasma deposited coating, optical props. and EPR 2-40734  
 Au/Ni/Sn/Ni/n-GaAs interface, ohmic contact form. 2-41010  
 BaTiO<sub>3</sub>:Fe<sup>3+</sup>, effect of Fe content on resistivity anomaly (*Czech*) 2-30898  
 Bi, high-purity, spectrochem. anal. 2-9583  
 CaF<sub>2</sub>:Pr<sup>3+</sup>, dimers and clusters, laser selective excitation and time-resolved spectroscopy 2-31545  
 (CdS)<sub>1-x</sub>(ZnS)<sub>x</sub>-Cu, Cl, sintered layers, photocond. and acceptor centre levels 2-13138  
 Ce, zone refining, evaluation as purification technique 2-27079  
 Cr film, evaporated on Cu foil, atm. O<sub>2</sub> effect, SIMS study 2-1786  
 CsI crystals, determ. of distrib. coeffs. from mean absorpt. coeffs. meas. of complex ions 2-45230  
 Cs:Na, ESR, magnetic circular dichroism study 2-51502  
 Cu-Pd (9-86 at.%) sputter-induced surface composition change, Auger study 2-46849  
 Cu<sub>2-x</sub>S-CdS thin film solar cells with dual impurity distrib. in base 2-37214  
 Fe: rare earth, dopant distrib. studied by internal friction 2-45238  
 p-GaAs, IR transmission characteris. of impurities 2-17508  
 GaAs substrates, Cr, Si, Mn, and Fe distrib. after annealing with and without SiO<sub>2</sub> encapsulant 2-30478  
 GaAs, undoped semi-insulating, growth by liquid encapsulated Czochralski method 2-12622  
 GaAs:B(Si)(Se), ion implanted, stoichiometric disturbances 2-1501  
 GaAs:Fe, impurity redistrib. on annealing, saturation density 2-1508  
 GaAs:H, amorphous, RF sputtering and optical props., H<sub>2</sub> partial press. effect 2-40730  
 GaAs:Mn,Fe, heat treatment effects on surfaces, thermal redistrib. of impurities 2-5151  
 GaAs:Si (Te), cathodoluminescence and dislocation struct. 2-31566  
 GaAsP, composition modulated, electron microscopy images 2-44983  
 GaP p-n junction, avalanche multiplication and impurity profile, SEM study 2-51194  
 GaP:Ag(Au), influence of heat treatment on distrib. of diffused impurities 2-26141  
 GaP:Ge and GaP:Ge, Cr epitaxial films, behaviour of Ge, elec. props. and photoluminesc. 2-13008  
 GaP:Sn, In, impurity location by asymmetry of channelling dips 2-16693  
 Gd, zone refining, evaluation as purification technique 2-27079  
 Ge single crystals, grown in different directions, radial distrib. of dopant 2-1498  
 Ge single crystals, grown in batches by Stepanov method, impurity distrib. 2-1504  
 Hg<sub>0.8</sub>Cd<sub>0.2</sub>:Te:Cu, pure and doped, defect struct., Hall effect study 2-46031  
 Hg<sub>0.8</sub>Cd<sub>0.2</sub>:Te:In, defect struct., Hall effect study 2-46032  
 In, high-purity, spectrochem. anal. 2-9583  
 InP:B(Si)(Se), ion implanted, stoichiometric disturbances 2-1501  
 InSb film, multi-pass zone melting 2-46911  
 InSb:Te,Se,S epitaxial layers conc. profiles rel. to crystn. conditions 2-5144  
 KH<sub>2</sub>PO<sub>4</sub>:Cr, laser damage threshold, Cr impurities effect 2-25051  
 La, zone refining, evaluation as purification technique 2-27079  
 MgAl<sub>2</sub>O<sub>4</sub>, UV-irradiated, absorpt. and thermoluminesc. spectra 2-13516  
 Mo-B alloy, B segregation, nuclear reactions study (*Russian*) 2-13725  
 Nb films, impurity distrib., AES and photon simulated ion desorpt. study 2-35526  
 Nb-Ge sputtered coating, supercond. transition temp., composition and struct. depend. 2-30998  
 NbC, rods, distrib. of components and impurities, zone refining prep. 2-9267  
 Nb<sub>3</sub>Sn 2-35526  
 Ni, oxidation parabolic rate constants, NiO defect struct. model 2-52115  
 O<sub>2</sub> ion distrib. in glass microshell laser imploded target, X-ray emission spectra (*Chinese*) 2-9218  
<sup>18</sup>O depth profiling in single crystals using nuclear reaction and RBS technique 2-47394  
 Pb, high-purity, spectrochem. anal. 2-9583  
 Si, Czochralski grown, internal gettering centres and SiO<sub>x</sub> precip. nucleation 2-40424  
 Si, diffusion mechanism of group V impurities, review (*Japanese*) 2-5262  
 Si, diffusivity of O during steam oxidation 2-45621  
 Si, epitaxial layer, impurities, photoluminescence study 2-17521  
 Si, gettering and redistrib. of O, 300 to 500°C 2-8536  
 Si, ion implanted, pulsed electron beam apparatus and annealing 2-12625  
 Si, ion implanted wafer, impurity and local damage distrib. using channelled He microbeam 2-45299  
 Si, model of impurity diffusion from oxide source 2-12846  
 Si, out-diffusion of O, diffusion coeffs., O profiles, heat treatment effects 2-35740  
 Si p-n junction, alpha particle irradiation, radiation defects 2-12647  
 Si, surface composition, pulsed laser irradiation effects, AES 2-50968  
 Si wafer, Czochralski grown, photolum. characteris. of thermally-induced defects 2-17535  
 Si:B, impurity diffusion and distrib. in surface layer during sublimation 2-26142  
 Si:B, impurity redistrib. under proton irradiation 2-1506  
 Si:B, radiation-stimulated diffusion influence on sputtering 2-36785

**impurity distribution continued**

- Si:BF<sub>3</sub><sup>-</sup>, amorphous, elec. activation and impurity redistribution during pulsed laser annealing 2-45254  
 Si:B(P)(As), thermally evaporated, near-surface layer impurities, luminescence anal. 2-17526  
 Si:Co, implanted, laser and thermal annealing studied by Mossbauer spectroscopy 2-31346  
 Si:F amorphous film, glow discharge plasma deposition from SiF<sub>2</sub> gas 2-40725  
 Si:H, amorphous, RF sputtered, H distrib. PMR study 2-17346  
 Si:H, amorphous film, plasma deposited, microstruct., PMR study 2-13358  
 Si:H, amorphous ion beam deposited coating, prep. and props. 2-40723  
 Si:H, amorphous RF magnetron sputtered coating, elec. and optical props. 2-40727  
 Si:H, amorphous vacuum deposited films, theta pinch hydrogenation 2-40421  
 a-Si:H, Ar sputtered films, interaction between Ar and dopants 2-40738  
 a-Si:H, Ne, chemical sites of Ne, XPS study 2-40277  
 Si:H, sputtered coatings, nuclear microanalysis and Rutherford backscattering (*French*) 2-5331  
 Si:H,B amorphous films, boron impurity conc. determ. 2-35527  
 a-Si:H multilayer structures, comp. profiles, nucl. scatt. and Rutherford backscatt. meas. 2-40737  
 Si:In,Sb (100), ion implanted, solid phase epitaxy, solid solubility, channelling study 2-50862  
 Si:O, p-n junction characters, O conc. influence 2-36129  
 Si:O thin film, amorphous, ion beam profiling of gettered O 2-8538  
 Si:P film, microstructure and sheet resistance 2-30480  
 Si:P(B), diffusant influence on O<sub>2</sub> distrib. 2-35528  
 Si-Si thin film interface, buried Ag layers quantitative anal. 2-45743  
 SiC ceramic, inclusions of grain boundaries, EELS (TEM study) 2-35511  
 SiC, film, composition and surface morphology, prepared by magnetron reactive sputtering (*Japanese*) 2-35908  
 SiC:B(Si)(Se), ion implanted, stoichiometric disturbances 2-1501  
 SiO<sub>2</sub>, hydroxyl-free vitreous, threshold of light breakdown 2-26855  
 SiO<sub>2</sub> low press. CVD film, deposited by SiH<sub>2</sub>Cl<sub>2</sub>-N<sub>2</sub>O mixture, Cl distrib. and surface roughness 2-45761  
 SiO<sub>2</sub>, surface composition, pulsed laser irradiation effects, AES 2-50968  
 SiO<sub>2</sub> thin films, enhanced low temp. diffusion of electron-beam evaporated Al 2-50925  
 SiO<sub>2</sub>, vitreous, effect of alkali metal oxide impurities on viscosity 2-25966  
 SiO<sub>2</sub>:D film, D conc. meas. by SIMS, charact. of wet thermal oxidation of Si 2-17746  
 SiO<sub>2</sub>/Si interface, H and Cl depth profiles 2-45233  
 SrO:Fe<sup>3+</sup>(Cr<sup>3+</sup>), off-centre effects and lattice energy calc. 2-45237  
 Ta, thin films, ion irradiation, impurity distrib., Rutherford backscattering 2-12631  
 Ti, H diffusion coeffs., determ. by nuclear physics method 2-12845  
 Ti-Al-V, H diffusion coeffs., determ. by nuclear physics method 2-12845  
 Ti-H, α- and β-phases, H site occupation, inelastic neutron scatt. study 2-35440  
 Ti-Ni, H diffusion coeffs., determ. by nuclear physics method 2-12845  
 TiO<sub>2</sub>, surface composition, pulsed laser irradiation effects, AES 2-50968  
 YIG:Ga<sup>3+</sup>(Al<sup>3+</sup>), nonmag. ion doped, optical consts., ellipsometric parameters 2-46531  
 YIG:(Ga), PbO-PbF<sub>2</sub> flux-grown crystals, lattice distortions caused by growth striations near surface 2-45089  
 ZnO:Mg<sup>2+</sup>(Ca<sup>2+</sup>)(Sr<sup>2+</sup>), crystalline state, effect of alkali-earth metal ions 2-16623  
 α-Zr-H, H site occupation, inelastic neutron scatt. study 2-35440  
 ZrC, rods, distrib. of components and impurities, zone refining prep. 2-9267

**impurity electron states**

- see also A-centres; Anderson model; charge compensation; deep levels; electron traps; heavily doped semiconductors; impurity scattering; OH<sup>-</sup> centres; U-centres; Z-centres  
 Anderson asymmetric model, local quasiparticle density of states 2-35917  
 Anderson impurity clusters, sp.-ht. and susceptibility Fermi liq. relations 2-26325  
 Anderson model, density of states, intermediate valence case and Kondo limit 2-13000  
 anthracene, doping influence on charge carrier transport 2-30885  
 benzophenone, α-modified, phosphorescence spectra, impurity states (*Russian*) 2-13558  
 chalcogenide glasses, defect and impurity effects 2-45906  
 charged acceptor-donor complex, recombination luminescence 2-17539  
 corundum:Cr, influence of impurity on defect struct. (*Russian*) 2-17029  
 crystal, single impurity, Wolff-Clogston model, Auger spectrum 2-41459  
 crystals, uniaxial deformation, piezospectroscopy, spectral line shift, appl. to impurity study 2-9127  
 cubic perovskites, impurity levels associated with Fe<sup>3+</sup>-V<sub>0</sub>, Fe<sup>4+</sup>-V<sub>0</sub>, Ti<sup>4+</sup>-V<sub>0</sub> centres 2-45879  
 deep levels, optical transitions in elec. field, δ-pot. model calc. 2-51637  
 deep levels due to nonsubstitution impurity cluster, MTO calc. 2-30820  
 diamond:B, semicond., excited states of shallow acceptor from photocond. 2-51118  
 diamond, defects, unrelaxed neutral vacancy and substitutional N, energy levels 2-26324  
 dilute alloys, impurity exciton band, density of states and absorpt. line profile 2-5353  
 dipole disorder containing crystals, and highly doped mixed crystals, model systems for exciton and charge transport investig. 2-35944  
 disordered systems, electronic states 2-40770  
 disordered systems, excitation spectra calcs. 2-1867  
 donor-acceptor compounds, Coulomb shift of charge transfer bond 2-40822  
 electroluminescence, high field, review 2-13570  
 free-electron gas, inhomogeneous diamagnetism at impurity 2-46233  
 GaP:Mn, impurity centre struct., positron annihilation study 2-17570  
 glass hosts, impurities dephasing, temp. depend. 2-51128  
 heavily doped semiconductors, strongly compensated, with correlated impurity distrib., density of states 2-1809  
 heavily doped strongly compensated semiconductors, density of states in mag. field, path integral calc. 2-21485  
 hole burning, effect on selectively excited spectra 2-36702  
 hopping conductivity, two-dimens., semiclassical theory 2-5409



## impurity electron states continued

- hydrogenic atoms, polarisabilities in mag. fields, implications for impurity atoms in semiconductors, white dwarfs and neutron stars 2-34595
- II-VI semiconductors,  $V^{2+}$  photoluminescence, energy matrix diagonalisation calc. 2-51662
- III-V semiconductor, medium deep localised levels, binding mech. 2-35964
- impurity centre luminesc. spectrum, config. curves model 2-36688
- impurity centres, absorpt. and fluoresc. spectra 2-26949
- ionic crystals with paramagnetic impurities, nuclear quadrupole spin-lattice relax. 2-5600
- IV-VI narrow gap semiconductors, impurity levels, four-band isotropic model 2-5366
- Jahn-Teller local and pseudolocal states of crysts. with T-level impurity 2-45921
- luminescence, conference, Berlin, Germany (July 1981) 2-42779
- magnetic semiconductor, bound mag. polarons, effect of magnetisation fluctuations 2-51093
- metal, BCC, localized impurity, density of non-Bloch electron states 2-1855
- metal, cubic, electron density change near impurities, tight-binding method, phase-shift approach 2-21533
- metal, narrow-band, with impurities, intraatomic CVV Auger spectrum 2-41461
- metal host, impurity problem generalisation, Green function, impurity-impurity interactions 2-45885
- metal-H systems, isotope effect on electronic struct. of H, review 2-41224
- metals, electrical conductivity, mixing of electron and impurity states (*Russian*) 2-45938
- metals, local electron mobility edge, supercond. transition temp. press depend. study 2-26284
- metals, single energy band, density of states, substitutional impurity cluster effect, MTO calc. 2-30785
- molecular crystals, excitation trapping dynamics 2-12995
- molecular crystals, theory of impurity centres, effects of interband coupling 2-30831
- molecular crysts., energy transfer, random walk problem with variable step length 2-51687
- naphthalene, pure and impure cryst., exciton-phonon luminesc. 2-22058
- naphthalene crystal, impurity centres, effects of interband coupling 2-30831
- neutron scatt. from impurity, transitions to excited tunnel-split states 2-30368
- nonradiative energy transport, non-Markoffian character in medium with random distrib. of impurity centres 2-26981
- optical, bound in Coulomb pot., phase diagram 2-8762
- photoeffect, spectral sensitisation, by dyes (*Russian*) 2-36093
- polarizing medium, impurity centres of negative Hubbard energy, electron pairing 2-40832
- polyacetylene, impurities and interchain coupling effects on electronic density of states 2-45905
- semiconductor, compensated, impurity band electron specific heat and energy (*Russian*) 2-45594
- semiconductor, compensated, screening of minority ions 2-17060
- semiconductor, direct gap, with zinc-blende struct., neutral acceptor bound exciton ground state, electron-hole exchange interaction effect 2-26304
- semiconductor, donor pair, mag. interaction, effect of pot. fluctuations 2-45881
- semiconductor, electronic energy levels, statistical mechanical treatment 2-35931
- semiconductor, exchange scattering of photocarriers, involving localised mag. moments, influence of effective exchange field (*Russian*) 2-26348
- semiconductor, exciton and shallow impurity states in arbitrary mag. field 2-26306
- semiconductor, excitons bound to neutral donors, props. 2-1838
- semiconductor, high-resolution optical spectroscopy characteris., review 2-17534
- semiconductor, impurity redistribution by strong EM wave, donor-acceptor transitions 2-45240
- semiconductor, intermediate exciton state, Coulomb attraction effect on impurity absorption and optical recomb. 2-17511
- semiconductor, optically excited donor impurity atoms, ionisation in elec. field (*Russian*) 2-45892
- semiconductor, photolum. and photolum. excitation spectroscopy characteris., review 2-17533
- semiconductor, point-defect energy levels, impurity environment effect 2-26322
- semiconductor alloys, local order dependent impurity levels 2-26335
- semiconductor containing impurity recomb. centres, strong applied EM wave, carrier distrib. functions 2-13011
- semiconductor quantum well, hydrogenic impurity states, optical props., variational calc. 2-51121
- semiconductor structure, space charge model 2-36522
- semiconductor superlattice, hydrogenic impurity states in quantum well, luminescence spectra 2-21535
- semiconductors, Auger recombination with deep impurities 2-40929
- semiconductors, conference, Hakone, Japan (Sept. 1980) 2-18813
- semiconductors, deep impurity centre model (*Russian*) 2-45893
- semiconductors, defects, electronic struct. 2-40833
- semiconductors, donor and acceptor spectroscopy 2-51120
- semiconductors, doped, dielectric function model 2-35957
- semiconductors, heavily doped, screened impurity band theory 2-30821
- semiconductors, impurity states, spontaneous dissociation of neutral states 2-30828
- semiconductors, lightly doped, compensated, Stark broadening of hydrogenic impurity spectral lines 2-26947
- semiconductors, multicharge centre electron occupation numbers 2-40827
- semiconductors, nonradiative transitions in donor centers in a strong magnetic field 2-26328
- semiconductors, photoluminescence as a diagnostic 2-51700
- semiconductors, statistical mechanics of band states and impurity states 2-12967
- semiconductors, tunnel current depend. on impurities 2-36052
- semiconductors with deformable lattice, electron correlation in pair of impurities 2-45864
- single energy band, density of states, substitutional impurity cluster effect, MTO calc. 2-30785
- transition metal, electronic structure of impurities, review 2-26333
- two dimensional impurity bands, elec. cond., importance of Coulomb interaction 2-51122

## impurity electron states continued

- UV absorption due to off-centre impurity ions 2-13522
- Ag halide:Cu photochromic glasses, effects of electron-hole separation on recomb. probability 2-5415
- Al: $^{57}\text{Fe}$ , interstitial  $^{57}\text{Fe}$  sites, struct. and oscillational motion 2-51116
- $\text{Al}_2\text{O}_3:\text{Mo}^{3+}$ , corundum,  $\text{Mo}^{3+}$  zero field splitting, EPR study 2-17332
- $\alpha\text{-Al}_2\text{O}_3:\text{Ti}^{3+}$ , impurity energy states 2-17000
- $\text{BaO}\cdot\text{V}_2\text{O}_5:\text{Mn}(\text{Fe})(\text{Co})(\text{Cr})(\text{Cu})$  glass, elec. cond. and EPR spectra 2-46365
- $\text{BaTiO}_3:\text{Co}$ , optical absorpt., elec. cond., electronic struct. 2-46640
- $\text{BaTiO}_3:\text{Mn}$ , EPR study of Mn oxidation states, elec. cond. 2-45880
- $\text{BaTiO}_3:\text{Nb}$ , elec. and optical props. 2-45961
- $\text{Bi}_2\text{SiO}_{20}$ , illumination-induced impurity photoconductivity 2-46075
- $\text{CaF}_2:\text{Sm}^{2+}$ , optical absorpt. and mag. circular dichroism spectra 2-13455
- $\text{CaO}:\text{Cu}$ ,  $\text{Cu}^{2+}$  ion pairs, EPR study 2-46369
- Cd, magnetic props. and energy spectrum, homovalent impurities and press. effects (*Russian*) 2-5523
- $\text{CdCr}_2\text{Se}_4$ , cathodolum., band struct., impurity states 2-31562
- $\text{CdF}_2:\text{Eu}^{3+}$ , optical study of  $\text{Eu}^{3+}$  centres 2-9185
- $\text{CdF}_2:\text{Ho}^{3+}$ , semiconductor, growth, IR spectra and elec. cond. 2-13638
- $\text{Cd}_{1-x}\text{Ga}_x\text{Cr}_2\text{Se}_4$ , cathodolum., band struct., impurity states 2-31562
- n-Cd,  $\text{Hg}_{1-x}\text{Te}$ , impurity radiative recomb. 2-46752
- $\text{CdI}_2:\text{Ni}^{2+}$ , crystal field and spin-orbit coupling, near IR d-d transitions study 2-22022
- $\text{Cd}_{1-x}\text{In}_x\text{Cr}_2\text{Se}_4$ , cathodolum., band struct., impurity states 2-31562
- $\text{Cd}_{1-x}\text{Mn}_x\text{Te}(\text{Se})$ , elec. and mag. props. in mag. fields 2-30799
- $\text{CdP}_2\text{Bi}$ , absorpt. spectra and energy levels in band gap 2-13490
- $\text{CdP}_2\text{Zn}(\text{Bi})(\text{Sb})(\text{Ga})$ , cathodoluminescence spectrum 2-46784
- $\text{CdS}:\text{Cu},\text{Cl}$ , activated phosphors, radiative and nonradiative recomb. centre struct. photoluminescence obs. 2-35966
- $\text{CdS}:\text{Ni}^{2+}$ , optical spectra, fine struct. and isotope splitting, Jahn-Teller centre interpretation 2-51635
- $(\text{CdS})_x(\text{ZnS})_{1-x}:\text{Cu},\text{Cl}$ , sintered layers, photocond. and acceptor centre levels 2-13138
- $\text{CdSe}:\text{Ag}$ , nonequilibrium sensitized, mid IR radiation detector, photocond. 2-8838
- $\text{CdSe}:\text{Fe}^{2+}(\text{Co}^{2+})(\text{Ni}^{2+})$ , zero-phonon lines in optical spectra 2-46650
- $\text{CdSe}:\text{Ni}^{2+}$ , optical spectra, fine struct., Jahn-Teller centre interpretation 2-51636
- CdTe doped with Fe group impurities, mag. susceptibility (*Russian*) 2-26580
- CdTe p-n junctions, electrolytically prepared, emission props. 2-2347
- p-CdTe:Ag, impurity acceptor photocond. centres, equilib. and nonequilib. 2-26444
- n-CdTe:Al, DLTS study of deep levels 2-35962
- CdTe:Co $^{2+}$ , cryst. field splitting, press. induced changes, IR spectra study 2-26944
- n-CdTe:Pb films, vapour deposited, elec. anal. optical props. 2-30985
- $\text{Cd}_{1-x}\text{Zn}_x\text{As}_2$ , conduction and valence band struct., Hall effect, resistivity and magnetoresistance meas. 2-26421
- $\text{Cr}^{3+}$  ions in crystals, optical spectra, covalency effects 2-22050
- Cu, electronic struct. of non-mag. impurities 2-35963
- $\alpha\text{-Cu-Ge}$  alloys, Fermi surface dimensions, nonlinear composition depend. 2-40758
- Cu-H, electronic struct. of interstitial H 2-21526
- $\text{Cu}_x\text{S}/\text{CdS}$  solar cells, characterisation by photocapacitance IR quenching 2-22619
- GaAlAs: $\text{Cr}^{2+}$ , luminesc. of  $\text{Cr}^{2+}$  internal transition 2-51661
- GaAlAs:Sn, thin layer emitters, luminescence and Sn-X centres 2-46772
- $\text{Ga}_{0.68}\text{Al}_{0.32}\text{As}:\text{Te}(\text{Zn})$  laser pumped by electron beam, cathodolum. and threshold current density, doping influence 2-7766
- $\text{Ga}_{1-x}\text{Al}_x\text{As}$ , deep impurities, cross-section for photoionisation to conduction bands 2-35968
- p-Ga $_{1-x}\text{Al}_x\text{As}:\text{Ge}$ , LPE grown, charge compensation, photoluminescence spectrum 2-17517
- $\text{Ga}_{1-x}\text{Al}_x\text{As}:\text{Se}$ , donor energy levels, elec. cond. and electron conc. study 2-51106
- $\text{Ga}_{1-x}\text{Al}_x\text{As}:\text{Si}$  epitaxial layers, free-to-bound transitions, photoluminesc. study 2-22072
- GaAs, 0.82 eV electron trap, origin and annihilation by shallow donors 2-51110
- p-GaAs, degenerate, low temp. luminesc., doping effect 2-36695
- GaAs, dielectric functions, impurity scatt., Thomas-Fermi theory 2-51097
- n-GaAs, high power far IR photocond. meas., photoresponse tail 2-5434
- p-GaAs, IR transmission characteris. of impurities 2-17508
- GaAs, impurity spectra, cyclotron resonance in high mag. fields 2-22054
- GaAs periodic doping structures grown by MBE, space charge field of impurities, cond. modulation 2-8870
- GaAs, semi-insulating bulk-grown, selective excitation luminesc. 2-51641
- GaAs:C, metal-organic VPE, elec. and optical props. of deep levels 2-8768
- GaAs:Cr, compensated, nonequilib. carrier recomb., Cr impurity centre role, photoelec. props. and luminesc. 2-30928
- GaAs:Cr, diffused, photoluminescence study 2-36694
- GaAs:Cr, luminescence, no phonon at 0.84 eV, Zeeman and axial stress splitting calc. 2-51659
- GaAs:Cr, no-phonon luminescence, ground set of states 2-41402
- GaAs:Cr, symmetric struct., impurity carrier traps, electroluminescence study 2-26995
- GaAs:Ge(Se), epitaxial, study of donors, far IR photoconductivity and high mag. fields 2-1864
- GaAs:Nb, impurity luminesc., intracentre transitions 2-51703
- GaAs:Sb, reson. Sb level, photocond. study 2-21537
- GaAs-AlGaAs DH injection laser, active layer radiative processes in strong mag. field 2-49751
- $\text{GaAs}_{0.6}\text{P}_{0.4}:\text{Fe}(\text{Ni})$ , impurity centre charact., thermal and optical capacitance transients study 2-5362
- GaN:Zn, photoluminesc. and electroluminesc., light polarisation 2-26980
- GaP, impurity-doped, efficient linear IR to visible upconversion, IR detect. using NEA photocathode 2-17532
- GaP, lanthanide doping influence on elec. and photolum. props., LED material 2-41391
- GaP:Ag(Au), influence of heat treatment on distrib. of diffused impurities 2-26141
- GaP:Co $^{2+}$ , IR luminesc., temp. depend. 2-51654
- GaP:Cr, photoluminesc., near IR-visible upconversion 2-49819
- GaP:Cu, photoluminescence spectrum 2-46694
- GaP:Cu, triplet exciton recombination at 1.91 eV, ODMR study 2-46433
- GaP:Fe(Ni), doubly charged donors, IR spectra 2-21538



## impurity electron states continued

- GaP:Ge and GaP:Ge, Cr epitaxial films, behaviour of Ge, elec. props. and photoluminesc. 2-13008  
 GaP:Nb, impurity luminesc., intracenter transitions 2-51703  
 GaP:Ni, optical absorpt. spectra and photocapacitance meas. 2-13518  
 GaP:S, donor state valley-orbit splitting 2-40826  
 GaP:S,Zn, donor-acceptor spin-spin interaction, optically detected EPR study 2-5605  
 p-GaSb, degenerate, low temp. luminesc., doping effect 2-36695  
 GaSb surface (110), substitutional defect deep levels 2-51271  
 GaSb:Te, pressure induced alteration of energy spectrum (*Russian*) 2-5368  
 GaSe, polarised luminescence in mag. field 2-9197  
 GaSe:Cu, defect level analysis, photoluminescence spectra 2-9184  
 GaSe<sub>1-x</sub>S<sub>x</sub>, polarised luminescence in mag. field 2-9197  
 Ge, band-gap narrowing, impurity conc. depend. 2-1821  
 Ge, donor-bound multi-exciton complexes, theory 2-1840  
 Ge, far IR photocond. spectra of quenched in acceptors 2-1956  
 Ge, ground state manifold, off-diagonal Zeman effects 2-21543  
 Ge, muonium depolarisation mechanisms 2-41242  
 Ge, photodiode and photocond. effects, shallow impurities charge state changes effect 2-40965  
 Ge:As, 1s and 2p states, quantitative piezospectroscopy 2-26863  
 Ge:As, luminescence study, exciton excited hole state 2-46691  
 Ge:As(P), four-wave spectroscopy of shallow donors 2-22055  
 Ge:Cu, defect levels, H passivation, DLTS study 2-51108  
 Ge:Ga, impurity band, antiferromag. ordering, photoluminescence study 2-2340  
 Ge:H, P, amorphous, US phonon interaction with donor impurities 2-45482  
 Ge:Li, Hall effect, cyclotron resonance study of converted regions 2-40941  
 Ge:P, photoconductivity spectrum of shallow donors, elec. field effect 2-26443  
 Ge:Sb, shallow traps and D<sup>-</sup> centre, photoconductivity 2-45888  
 Ge:Sb(As)(Ga), electron-hole liq., photoluminesc. polarisation in mag. field study 2-35952  
 Ge:Si, impurity states, optical spectra and microhardness meas. 2-35971  
 Ge:Zn, second impurity level, activation energy, random field effects 2-51124  
 HgCdTe, luminescence 2-26957  
 Hg<sub>1-x</sub>Mn<sub>x</sub>Te, acceptor-state cond. in mag. fields 2-8824  
 Hg<sub>1-x</sub>Mn<sub>x</sub>(Te,Se), elec. and mag. props. in mag. fields 2-30799  
 In<sub>0.53</sub>Ga<sub>0.47</sub>As, near-band-gap absorpt. and photolum. 2-41394  
 p-In<sub>0.75</sub>Ga<sub>0.25</sub>As<sub>0.55</sub>P<sub>0.45</sub>:Cd LPE layer, doping characts. and elec. props. 2-41031  
 InP, deep levels prod. by pairs of impurities 2-1857  
 InP, impurity spectra, cyclotron resonance in high mag. fields 2-22054  
 n-InP LPE layer, donor-acceptor pair recomb. from donor ground and first excited states 2-5752  
 InP:Co<sup>2+</sup>, impurity levels, photoluminesc. study 2-51655  
 InP:Cr, deep level states, press. depend. and k-space localisation 2-35967  
 InP:Fe<sup>2+</sup>, deep impurity centres, photoluminesc. and DLTS study 2-51656  
 InP:O, horizontal Bridgman growth, O doping effect, Hall effect meas. 2-16667  
 InP:Yb epitaxial films; photoluminescence spectra, fine struct. intracenter transitions 2-51704  
 InSb, CESR of free and bound electrons, photoconductivity, impurity conc. depend. 2-21879  
 InSb, impurity spectra, cyclotron resonance in high mag. fields 2-22054  
 n-InSb, low conc., mag. freeze-out and high press. induced metal-nonmetal transition 2-21611  
 InSb, nonradiative transitions in donor centers in a strong magnetic field 2-26328  
 InSb type narrow band gap semicond., free and bound magneto-polarons 2-40807  
 InSb-NiSb, intraband magneto-optical studies 2-41332  
 In<sub>2</sub>Te<sub>3</sub>, impurity centres and stoichiometric vacancies, electron states, positron annihilation obs. 2-46816  
 KBr, F-centre excited state spectroscopy and picosecond relax. (*Russian*) 2-22051  
 KCl:Cu<sup>+</sup>, absorption spectrum, MS-X<sub>1</sub> method 2-31531  
 KCl:OH<sup>-</sup>(OD<sup>-</sup>), dipole-dipole interactions, dielec. const. meas., 0.1 to 250K 2-13392  
 KI-Tl, activator centre ionisation by excitons (*Russian*) 2-5363  
 LiAlO<sub>2</sub>:Cr<sup>3+</sup>, energy levels and wave functions calcs. 2-17033  
 LiAlO<sub>2</sub>:Fe<sup>3+</sup>, fluorescence of octahedral site impurities 2-51657  
 LiF:V<sup>2+</sup>, associated impurity-vacancy defect electronic struct. 2-40830  
 LiGaO<sub>2</sub>:Cr<sup>3+</sup>, energy levels and wave functions calcs. 2-17033  
 LiGaO<sub>2</sub>:Cr<sup>3+</sup>, luminesc. of exchange coupled Cr<sup>3+</sup> pairs 2-51660  
 LiGaO<sub>2</sub>:Fe<sup>3+</sup>, fluorescence of octahedral site impurities 2-51657  
 LiNbO<sub>3</sub>:Fe, ferroelec., photorefractive processes 2-9131  
 LiTaO<sub>3</sub>, single cryst., defective surface, electron emission 2-22142  
 LiYF<sub>4</sub>:Nd<sup>3+</sup>, energy levels, high resolution absorpt. spectra 2-9141  
 LiYF<sub>4</sub>:Yb<sup>3+</sup>(Tm<sup>3+</sup>)(Ho<sup>3+</sup>), multiphonon transport of excitations between impurity ions 2-17027  
 Lu<sub>2</sub>O<sub>3</sub>:Ce<sup>3+</sup>, red luminesc., large Stokes shifts 2-51669  
 MgO:V<sup>2+</sup>, interlevel nonradiative transitions of impurities 2-13550  
 MgS:Mn<sup>2+</sup>, phosphor, luminescence and EPR spectra (*French*) 2-22082  
 n-GaAs, far IR two-photon transitions, magnetophotocond. 2-13126  
 NaCl:Yb<sup>2+</sup>, IR luminesc. and absorpt. spectra of 4f<sup>14</sup>-4f<sup>13</sup>5d transition 2-51668  
 NbSe<sub>3</sub>, quasi-one-dimens. cond., impurity effects, radiation damage, CDWs and supercond. 2-30871  
 Ni<sup>2+</sup> ions in crystals, optical spectra, covalency effects 2-22050  
 Ni-Ru, ferromagnetic, electronic struct., multi-band CPA calc. 2-5344  
 Pb chalcogenides, strongly compensated, Hall effect and absorpt. spectra 2-5422  
 Pb-Mn, dilute, supercond., impurity bands, electron tunnelling obs. 2-2039  
 PbI<sub>2</sub>:Bi<sup>3+</sup> films, exciton-impurity interaction, Verdet const. and absorpt. spectra study 2-26305  
 PbMn dilute alloy, bound states in energy gap 2-30822  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Cd, carrier density, temp. depend. 2-17089  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:In, impurity fluctuation pot. model, photoelec. and galvanomag. effects 2-13009  
 PbTe:In film, impurity states, absorpt. coeff. 2-17021  
 PbTe:Ti, elec. and optical props. at high impurity conc. 2-40948  
 PbTe:Ti, hole scattering and mobility, impurity effects 2-13107  
 α-Pd hydrides, tight binding estimate of dipole force tensor 2-40418

## impurity electron states continued

- SMS, semiconducting phase, elec. props. 2-8799  
 Si, A-centres, field depend. of thermal activation energy, electron captive cross sections and relax. time, using capacitance transient spectroscopy 2-45887  
 Si, amorphous, dopant level depths 2-40845  
 n-Si, band-gap narrowing, impurity conc. depend. 2-1821  
 Si, conduction and valence bands, donor impurities effect, partial wave anal. 2-51081  
 n-Si, conventional and neutron doped, piezoresist. and Hall coeff. meas. 2-30896  
 Si, deep impurity levels, cluster model, EHT calc. 2-8767  
 Si, density of states near band edge, donor impurities effect 2-17008  
 Si, electron-hole droplet nucleation, role of shallow impurities and defects, photolum. study 2-2339  
 Si, epitaxial layer, impurities, photoluminescence study 2-17521  
 Si, extrinsic, elec. parameter calc. using FORTRAN program, Hall effect, dopant states and carrier mobility 2-1903  
 Si, impurity levels, impurity pair effects, 2-D finite element analysis 2-51114  
 p-Si, low resist., minority carrier diffusion length, heat treatment effect 2-46022  
 Si, solar cell, n<sup>+</sup>-p, electron irradi. and annealing effects 2-2786  
 Si, spontaneous oscils. under impurity centre breakdown conditions 2-51223  
 Si surface, (111), point defects, electronic struct., tight binding calc. 2-46094  
 Si, X-centres (C-acceptor pair centres) 2-1475  
 Si:Au, Auger recombination with deep impurities 2-40929  
 Si:Au, Fe, hyperfine interactions of Au-Fe complex, electronic struct., EPR obs. 2-45920  
 Si:Au, photoluminescence, impurity states 2-36692  
 Si:Au, phase shift spectroscopy of modulated photocurrent 2-1947  
 Si:B, impurity bound localised holes antiferromag. ordering, polarised luminesc. in mag. field 2-36701  
 Si:B, luminescence study of excited states in impurity band 2-5367  
 Si:B, recombination radiation of exciton-impurity band 2-2345  
 Si:B(In), acceptor ground state, thermal transport expts. 2-45646  
 Si:C, implanted, photoluminescence study 2-41419  
 Si:Cr, energy levels and degeneracy ratios determ. from Hall coeffs. 2-30825  
 Si:Cr, energy levels and solubility, EPR and Hall effect study 2-40817  
 Si:Cr, Jahn-Teller centre, ER spectrum, isotopic vibronic struct. 2-36419  
 n-Si:Fe, solid soln. precip., capacitance study 2-16804  
 Si:Gd, photoconductivity, induced, with exchange impurity levels 2-21634  
 Si:H, amorphous, dopant level depths 2-40845  
 Si:H,P amorphous, transport props. 2-45984  
 Si:H amorphous solar cell, plasma deposited, impurity effects 2-14081  
 Si:In, excitation spectroscopy of P, Q, R isoelectronic lines 2-2338  
 Si:In, shallow acceptor X-levels, development as IR detector material 2-17015  
 Si:In(Ga), shallow acceptor population and free hole conc. with IR-photoexcitation 2-51213  
 n-Si:Pt, impurity levels, capture cross section, capacitance, hole lifetime and resistivity obs. 2-51125  
 Si:Rh, photoconductivity at 4.2K 2-40969  
 Si:Se, diffused and mass transported, IR absorpt. spectra 2-1854  
 Si:Te, donor levels, excited states, junction space-charge, IR absorption and ESR meas. 2-26323  
 Si:V<sup>2+</sup>(Mn<sup>2+</sup>)(S<sup>2-</sup>)(Zn<sup>2+</sup>), properties of repulsive centres, DLTS steady (*German*) 2-1860  
 Si/GaP interface, impurity deep traps 2-51267  
 Si-SiO<sub>2</sub> interface, electron scatt. at low temp., interface states role 2-51338  
 Si-SiO<sub>2</sub> MOS struct., electron capture at Na<sup>+</sup> sites, 77 to 296K 2-46134  
 SiC, cubic, electron-hole liq., ground state props., valence band masses, exciton and acceptor energies 2-35947  
 SiC, impurity photosensitivity, recomb. centres 2-36099  
 SiC:B, impurity states 2-13013  
 SiC:B (6H), bound excitons, electroabsorpt. spectra 2-9132  
 SiC:N(6H) IR photoexcitation spectra of donor centres, effective masses 2-51639  
 SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-K<sub>2</sub>O:Cu<sup>2+</sup> glasses, diffusion layers prod. by ion exchange, EPR and optical study 2-13332  
 Si:H, amorphous, sputtered coating, density of states, impurity effects 2-45898  
 SMS, semiconducting, cond. band deformation pot. and semicond.-metal transition 2-1824  
 SrTiO<sub>3</sub>:Fe, electronic struct. and charge transfer bands 2-17016  
 Te, impurity lines, anomalous stress shift under high press. 2-36103  
 Te, impurity states in high mag. fields 2-26331  
 TiO<sub>2</sub>, diffusion doped, elec. and optical props. 2-5369  
 Y<sub>2</sub>O<sub>3</sub>:Ce<sup>3+</sup>, red luminesc., large Stokes shifts 2-51669  
 ZnO, exciton complexes, luminescence and absorpt. spectra, mag. field effect 2-1834  
 Zn:P<sub>2</sub>, pair transitions, photolum. meas. 2-22057  
 ZnS:Cr<sup>3+</sup>, local centre charging, Hall effect 2-17024  
 ZnS:Cu, yellow emission of Cu centres, band shift, activator conc. depend. (*German*) 2-31541  
 ZnS:Cu,Al lumiphosphors, energy spectrum of traps 2-46789  
 ZnS:Fe<sup>2+</sup>, impurity triplet to quintet luminesc. 2-51658  
 ZnS:Mn,Er thin film, electrolum., mutual interaction between Mn and Er centres 2-46765  
 ZnS:Mn<sup>2+</sup>, <sup>4</sup>E states luminesc., zero-phonon lines, elec. field effects 2-51553  
 ZnS:Sc(Ti)(V)(Mn)(Fe)(Co)(Ni), impurity electronic struct., Green's function method 2-40823  
 ZnS:Tm<sup>3+</sup>, fluorescence from nonequivalent Tm<sup>3+</sup> centres 2-51665  
 ZnS(Se):Mn, high field electrolum., impact excitation and ionization 2-9201  
 ZnSe, doped, luminescence centres, activation energy of form. 2-41392  
 ZnSe, metalorganic chemical VPE growth, photoluminesc. and Raman scatt. obs. 2-31630  
 ZnSe, self-activated luminesc., anisotropic centre symm. 2-26983  
 ZnSe:Cr<sup>3+</sup>, local centre charging, Hall effect 2-17024  
 ZnSe:Li, Na, luminesc. spectra, exciton emission and donor-acceptor pair recomb. 2-46671  
 ZnSe:N(P), organometallic CVD growth, shallow acceptor doping, photoluminesc. study 2-51107  
 ZnSe:Ni, optical absorpt. spectra and photocapacitance meas. 2-13518



**impurity electron states continued**

- ZnSe:Ti<sup>2+</sup>, impurity states, Green's function method 2-35969  
 ZnTe:O, photolum. and excitation spectra of O<sub>Tc</sub> centre 2-2328

**impurity scattering**

- used for carrier scattering by impurities*  
*see also Kondo effect*  
 anisotropic semiconductor, electron scatt. in mag. field 2-51219  
 conductance oscillations from Coulomb ordering 2-46138  
 dilute alloys, electron-phonon interaction and deviations from Matthiessen's rule at high temperatures 2-13057  
 disordered two-dimens. weakly localised, mutual interactions, intervalley impurity scatt. effect 2-26382  
 electron gas, two-dimensional, disordered thermoelectric power, electron-electron interactions 2-51098  
 electron gas, two-dimensional, momentum distrib. function, impurity scatt. effect 2-12984  
 electron-electron mutual attraction in metastable media 2-17044  
 electron-impurity systems, 2-D, Thomas-Fermi screening and level broadening 2-51099  
 finite disordered system, resistivity fluctuations 2-17043  
 Hall mobility of carriers hopping in impurity band, r-percolation model 2-21551  
 Hubbard model, quasi one-dimens., nucl. spin relax. 2-46416  
 metals, noble and polyvalent, electron-dislocation scatt. relax. time anisotropy 2-45943  
 metals, two-dimensional, nonmetallic behaviours and intervalley impurity scatt. effect 2-21548  
 narrow-gap semiconductors, Auger recomb. and ionisation rates, Lax band struct. 2-8813  
 one-dimensional CDW at weak impurity pinning, cond., and localisation in presence of interactions 2-36027  
 one-dimensional multi-channel localisation scatt. model 2-35973  
 random elastic scatt., long-range correl. and localisation 2-8780  
 random media, coherent medium approx. in stochastic transport theory 2-21552  
 random media, multiple scatt., coherent pot. propagators, fluctuations 2-40861  
 semiconductor, compensated, screening of minority ions 2-17060  
 semiconductor, Kohn variational principle, appl. to particle of effective mass  $m^*$  2-13060  
 semiconductor, nonlinear intraband absorpt. of EM field 2-51162  
 semiconductors, carrier energy distrib. function quasidrift asymptotics 2-40880  
 semiconductors, cyclotron reson. line width due to impurity scatt., theory 2-21883  
 semiconductors, cyclotron resonance lineshape, quantum statistical theories, review 2-46385  
 semiconductors, disordered, band struct. and transport props. 2-45799  
 semiconductors, electron scatt. by ionised impurities, review 2-1880  
 semiconductors, n-type, quantum transport theory of impurity and electron-electron scatt. resistivity 2-26350  
 semimetals and semiconductors, magnetoresistance, transverse, electron resonance scatt. in quantum limit 2-40944  
 superconducting loop, elec. field and heat flux (*Russian*) 2-41056  
 superconductivity, triplet, in thin films and layered compounds 2-46186  
 three dimensional disordered systems, relax. time and cond., logarithmic temp. depend. 2-1875  
 two-dimensional random system, elec. cond., impurity scatt. 2-30854  
 Al-Sc(Ti)(V)(Co)(Ni), dil., low field Hall coeff., virtual bound state effect 2-13044  
 Au-Cu-Fe(Mn) alloys, low temp. elec. cond., scatt. mechanisms 2-35997  
 Bi<sub>2</sub>Te<sub>2.88</sub>Se<sub>0.12</sub> solid soln., halide doping effect on elec. and thermoelec. props. 2-13110  
 p-Cd<sub>2</sub>Hg<sub>1-x</sub>, Te, elec. cond. in strong microwave elec. field, 77 to 300K 2-30921  
 n-CdS crystals, annealed in Cd or In, elec. cond. props. 2-45964  
 CdTe:Cl crystals, carrier scatt., Hall effect study 2-26383  
 Cu, electronic struct. of non-mag. impurities 2-35963  
 Cu-Al, dil., electronic impurity scatt. anisotropy, mag. field induced surface-state resons. meas. 2-13058  
 Cu-Au-Ge, dilute, thermoelec. power, impurity scatt. contrib. 2-5393  
 Cu-Au-Ge (Ni-Ge), Hall coeff. for isotropic electron scatt. 2-36019  
 Cu-Ni(Ge), dilute, thermoelec. power, impurity scatt. contrib. 2-5393  
 Cu-Pd(Pt)(Rh), dilute, Fermi surface and impurity scatt., de Haas-van Alphen meas. 2-12958  
 FeBO<sub>3</sub>, parametric spin wave excitation (*Russian*) 2-46268  
 GaAs, dielectric functions, impurity scatt., Thomas-Fermi theory 2-51097  
 n-Ge, impurity elec. resist. in quantising mag. fields 2-13104  
 n-Ge, impurity elec. resist. anisotropy in quantising mag. fields 2-13105  
 n-Ge, piezoresist. differences, electron scatt. mechanisms 2-17069  
 n-InP single cryst., electron mobility and minority carrier lifetime 2-13093  
 n-InSb, hot electrons, noise and diffusivity 2-51182  
 K-Rb, dilute, low-field magnetoresist. at 4.2K 2-21564  
 Mg, phonon resistivity 2-13039  
 Mg-Yb alloy, phonon resistivity 2-13039  
 Nb, conduction electron scatt. rel. to type of impurity, residual resist. meas. at 20.4K (*Russian*) 2-17057  
 PbTe:Ti, hole scattering and mobility, impurity effects 2-13107  
 n-Si, electron mobility, 5 to 80K, phase shift calc. 2-1914  
 n-Si, heavily doped, elec. resist., partial wave theory 2-13077  
 Si inversion layers, 2D electron gas, freq. depend. memory function elec. cond. meas. 2-51318  
 Si MOS, two-dimens. system, weakly localised, mutual interactions, intervalley impurity scatt. effect 2-26382  
 n-Si, piezoresist. differences, electron scatt. mechanisms 2-17069  
 Si-SiO<sub>2</sub> interface, electron scatt. at low temp., interface states role 2-51338  
 Si-SiO<sub>2</sub> interface, neutral scatt. centres in MOSFET devices prep. by oxidation of trichloroethylene 2-51339  
 Si<sub>1-x</sub>Ge<sub>x</sub> solid soln., hole Hall mobility, compositional fluctuations scatt. 2-45988  
 V, conduction electron scatt. rel. to type of impurity, residual resist. meas. at 20.4K (*Russian*) 2-17057  
 p-ZnSb, carrier kinetics in mixed scatt. region, cond., thermoelec. power, and Hall effect tensors 2-21602

**impurity scattering continued**

- ZnSe:In, epitaxial thin films, doped and undoped, electron mobility and carrier conc., temp. depend 2-51357  
 ZnSnAs<sub>2</sub>, p-type, theoretical evidence for impurity cond., explanation of Hall coeff. temp. depend. 2-1929  
**impurity-vacancy interactions**  
 alkali halides, thermally stimulated depolarisation of Eu<sup>2+</sup>-cation vacancy dipoles 2-36511  
 internal friction, assoc. with stress-gradient induced ordering, elastic quadrupoles of asymm. solute atom-vacancy pairs 2-1490  
 metal, Mossbauer impurity atom, vacancy trapped, second-order Doppler shift, anharmonicity effect 2-21925  
 metals, point defect interactions, positron studies, report 2-27018  
 3d metals, rare gas interaction pair pot., He-vacancy interaction 2-40425  
 semiconductors, influence of rare-gas atoms on defect electron spectrum 2-17020  
 transition metals, hyperfine interaction studies of He trapping 2-31342  
 Ag<sup>11</sup>In foil, quenched, vacancy detrapping, TDPAC study 2-12632  
 AgCl:Cd, low temp. elec. cond. 2-1655  
 Al, positron lifetime in vacancy-impurity complexes 2-41446  
 Al, quenched, vacancy clustering, impurity effects, recovery curves 2-40426  
 Al, quenched, vacancy clustering, Doppler broadening positron study 2-41445  
 Al-Mg, dil. quenched and annealed, vacancy migration energy, positron annihilation meas. 2-13585  
 Al-Mg, dil., quenched, vacancy clustering, impurity effects, recovery curves 2-40426  
 Al-Mg(Zn), dil., vacancy clustering, Doppler broadening positron study 2-41445  
 Al-Na(Mg)(Zn), vacancy-impurity complexes, positron lifetime (*French*) 2-46813  
 Cd, HCP, lattice defects, PAC and distrib. methods study 2-30462  
 Cu, point defect-impurity interactions 2-21165  
 $\alpha$ -Fe, interstitial solute atom influence on self-diffusion and vacancy formation determ. 2-12814  
 $\alpha$ -Fe, Snoek-Koster relax., role of screw dislocations and C-vacancy pairs 2-40407  
 GaP:Ag(Au), influence of heat treatment on distrib. of diffused impurities 2-26141  
 GaP:Pr,Y, heat treated, photoluminescence 2-17541  
 Ge:Pd, Sb,  $\gamma$ - and electron-irrad., complex formation, primary defects charge state effect 2-40436  
 KBr:SO<sub>4</sub><sup>2-</sup>, plastically deformed, impurity centre orientation, absorpt. spectra study 2-36671  
 LiF:Mg<sup>2+</sup>, rapid cooling effect on dispersion of impurity-vacancy pairs 2-21166  
 LiF:V<sup>2+</sup>, associated impurity-vacancy defect electronic struct. 2-40830  
 NaCl:Ca, influence of deform. on mechanical props., defect interactions 2-35532  
 NaCl:Ca, Snoek rearrangement during strain ageing 2-22250  
 PbTe:Cl, self-compensation of donor effect by vacancy-impurity complexes, Hall carrier density meas. 2-36067  
 Si, diffusion mechanism of group V impurities, review (*Japanese*) 2-5262  
 Si,  $\gamma$ -irrad., defect levels, electron thermal emission rate, TSC study 2-21603  
 Si:H, amorphous, electron irrad., effect on photoconductivity 2-51233  
 Si:P, influence of oxygen on radiation-stimulated diffusion 2-26140  
 V-Mn(Fe)(Co)(Ni)(Cu), self-diffusion and impurity diffusion mechanism 2-5268  
 W single cryst., He desorption 2-1739  
 Zn, HCP, lattice defects, PAC and distrib. methods study 2-30462  
 ZrO<sub>2</sub>, anion deficient, defect struct., rel. to ionic cond. 2-21167

**incandescent lamps** *see filament lamps***inclusions in crystalline material** *see crystal inclusions***inclusive reactions, elementary particle** *see elementary particle inclusive interactions***independent particle model** *see nuclear optical model; nuclear shell model indeterminacy*

- $\psi$  collapse-retrocollapse, predictive model 2-18956  
 covariances, rel. to harmonic oscillator formalism 2-33703  
 phase versus the axiom of choice 2-33367  
 quantum interferometry, interfering beams spin directions 2-28707  
 quantum logic and uncertainty principle 2-10647  
 quantum mech. treatment of meas., model with phys. interpretation 2-28703  
 quantum mechanics, strong uncertainty principle (*French*) 2-15049  
 quantum particle, space-time trajectory 2-33326  
 relativity compatibility 2-33321  
 semiconductor devices, collisional broadening effect on Monte Carlo simulation of high-field transport 2-17078  
 signal theory, strong uncertainty principle (*French*) 2-15049  
 time-energy uncertainty principle and some new experiments (*Bulgarian*) 2-18934  
 two-photon problem, in second quantisation formalism 2-33323  
 uncertainty relation between energy and time of meas. 2-38503

**index terms** *see vocabulary***indexing**  
*see also information dissemination; vocabulary*  
 No entries**indicating devices** *see indicators***indicating instruments** *see indicators***indicators**

- see also alarm systems*  
 electronic, meas. devices, input keys requirements, tests and selection (*German*) 2-15158  
 liquid crystal devices appl. 2-38638  
 vacuum deposition shutter position indicator system 2-19096

**indium**

- see also nuclei with .....*  
 adsorbed on Ge (111), surface superstruct., RHEED study 2-26196  
 adsorbed on Si (111), elec. current effect, RHEED obs. (*Japanese*) 2-21653  
 anisotropic helicon damping during localised electron-phonon U process (*Russian*) 2-13112  
 atom, meas. and reassignment of 252.134 nm line with scanning echelle monochromator 2-20007  
 atom, Rydberg series study by two-photon laser spectroscopy 2-29676  
 atom, three-level system, laser-induced polarisation anisotropy 2-49314



## indium continued

- atomic excitation cross-section by low-energy electrons (*Russian*) 2-4393  
 atoms, electron impact excitation, autoionising transitions, ejected electron spectrum 2-44098  
 atoms, excited, diabatic field ionisation, elec. field slew rate 2-43867  
 atoms, magnetic-dipole hyperfine struct. 2-7663  
 atoms and solid, binding energy, Auger and photoelectron spectra 2-34367  
 coating materials of metal hollow O-ring 'Sureket' (*Japanese*) 2-19118  
 core-hole ground state energies, XPS determ. 2-17602  
 critical temperature, influence of plastic deform. 2-17182  
 EELS, low energy, width of plasmon peaks 2-17580  
 electrode, electrorefl. spectra, contrib. of photoemission 2-2218  
 electrode, photoemission quantum yield 2-2419  
 electronic struct., X-ray spectra and XPS 2-40781  
 enhanced electron mass anisotropy 2-1814  
 film, type I supercond., mixed and intermediate states, microwave study 2-41078  
 granular, on CdS, lack of proximity effect coupling 2-31068  
 granular films, electron plasma oscills. 2-13197  
 high-purity, spectrochem. anal. 2-9583  
 impurity in HCP Cd and Zn, lattice defects study 2-30462  
 internal oxidation in Ag TDPAC study 2-31353  
 K-shell fluorescence and photoionisation in elements  $28 \leq Z \leq 53$  2-29549  
 K-shell ionisation,  $H^+$  and deuteron induced, nuclear Coulomb, energy loss and relativistic effects 2-44081  
 liquid, ion source, droplet emission TEM 2-36767  
 Matthiessen rule deviation at low temp. due to surface scatt. 2-26378  
 melting, during erosion by hard particles 2-30571  
 melting of thermally thick and thin samples, photoacoustic effect 2-12723  
 narrow channels, superconducting phase slip centres, charge imbalance waves 2-36245  
 phonon dispersion curves, modified axially symm. model with vol. forces 2-12706  
 photoelectric cross sections anal., attenuation coeff. meas. for 72.1, 123.6 and 279 keV photons 2-43139  
 photoemission, polarisation depend. 2-41493  
 plasma, expanding, recombination laser transitions 2-39627  
 relativistic APW calcs. of X-ray emission spectrum 2-22122  
 seal, leaktight, for large windows and flanges at liq. He temp. 2-19117  
 small particles, supercond. enhancement 2-31024  
 solid-phase spreading over Sn film surface 2-21479  
 specific heat at high press. 2-30620  
 substrate for Zn electrodeposition from zincate solns. 2-26246  
 superconducting film, flux flow vel. and viscosity coeff. 2-41091  
 superconducting film, flux flow vel. meas. using interference effects 2-21742  
 superconducting microbridge, crit. current temp. depend. 2-36263  
 superconducting wire, LF AC response of direct current induced intermediate state 2-41081  
 superconductivity, press. depend. 2-2024  
 surface, (332), intrinsic spin related surface states and 4f core levels, photoemission meas. 2-13158  
 thermopower data anal. 2-51152  
 thin film, superconducting  $T_c$  2-36182  
 ultrathin filaments, heat capacity meas. (*Russian*) 2-17215  
 vapour, polarisation rot. effects, nonlinear optical response theory appl. 2-25065  
 $B_2O_3 \cdot K_2O \cdot In^+$  glass, photoluminescence (*Russian*) 2-26987  
 CdS:In, anisotropic cond. after plastic deform., cond. along dislocations 2-45982  
 CdS:In layer and whisker, vapor reaction growth, luminesc. spectrum 2-46674  
 CdS:In layers, optical absorpt., spectral depend., dopant effects 2-51622  
 CdTe:P,In, localised vibr. modes, Green's function calc. 2-50814  
 Cu: $^{111}In$ , channelling and gamma-ray spectra 2-50730  
 GaP:Sb,In, impurity location by asymmetry of channelling dips 2-16693  
 Ge, $Se_{-y}$ ,In glasses, photocond. and elec. cond., dopant effects 2-36089  
 Hg, In filaments in dielectric matrix, heat capacity peak splitting 2-17212  
 $Hg_{0.8}Cd_{0.2}Te$ :In, defect struct., Hall effect study 2-46032  
 $Hg_{0.9}Cd_{0.1-w}Te$ :In, interdiffusion study 2-12859  
 In IV, config. anal., CI calcs., UV obs. 2-11427  
 In, on Si, impurity distrib. after laser irradi. 2-45252  
 $In^{3+}$  in  $In_2(SO_4)_3 \cdot xH_2O$  soln., X-ray diffr. study 2-1380  
 In-Ga:Cr-In struct. with S-type I-V characs., field distrib., switching mechanism 2-36153  
 In-granular glass composite, structural magnetoresist. and Hall coeff. 2-5388  
 In-granular glass composite, structural magnetoresist. and Hall coeff. 2-8787  
 In-phthalocyanine, metal free x-phase, solar cell, low freq. photocapacitance 2-27612  
 In-Si (GaAs), interface form., surface reconstruction 2-46112  
 In-SiO<sub>2</sub> cermet films for optical recording in metal film ablation memory 2-25087  
 In-W(Mo), interface structure FEM, FIM and atom-probe studies (*Japanese*) 2-26238  
 In-ZnSe:Al low resistance contacts, formation 2-21673  
 $^{111}In$  implanted in Cu brute force oriented, radioactive detected NMR 2-36451  
 $^{113}In$ , abundance in solar system, origin 2-28360  
 $^{113}In$ , internal conversion, double electron ejection 2-49354  
 Ir-Y<sub>2</sub>O<sub>3</sub>, long life, high brightness cathode for electron microscopes (*Chinese*) 2-33682  
 KCl:In, crystal, colour centre form. under intense UV laser radiation 2-45156  
 $\beta$ -LiAl:In, NMR, spin-lattice relaxation time, diffusion coeffs. and vacancy concs. 2-21910  
 NaCl:In, crystal, colour centre form. under intense UV laser radiation 2-45156  
 Ni:In, grain boundary diffusion of In, meas. by SIMS 2-35739  
 (PbSe)<sub>1-x</sub>(SnTe)<sub>x</sub>:In solid soln., elec. props. 2-8796  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:In, impurity fluctuation pot. model, photoelec. and galvanomag. effects 2-13009  
 PbTe:In film, impurity states, absorpt. coeff. 2-17021  
 Se:Ti,In, liq. elec. cond. and thermoelectric power 2-51165  
 Si:In, acceptor ground state, thermal transport expts. 2-45646  
 Si:In, excitation spectroscopy of P, Q, R isoelectronic lines 2-2338  
 Si:In, IR absorpt. calibration using neutron transmutation 2-26939

## indium continued

- Si:In, implanted, solute trapping after laser annealing 2-45262  
 Si:In, low energy implant simulation using target tilt 2-5135  
 Si:In, pulsed laser annealing, melting phenomena 2-46837  
 Si:In, shallow acceptor population and free hole conc. with IR-photoexcitation 2-51213  
 Si:In, shallow acceptor X-levels, development as IR detector material 2-17015  
 Si:In, trap population and free hole conc. with IR photoexcitation 2-51211  
 Si:InSb (100), ion implanted, solid phase epitaxy, solid solubility, channelling study 2-50862  
 Si:In implanted amorphous layers, defect and solubility limit study 2-30477  
 Si:In X-centre, trapping parameters, DLTS studies 2-5361  
 Sn-Ge, In diffusion along interphase twist boundaries 2-35744  
 W-Ir adatom-adatom pair energy meas. on W(110) plane 2-12910  
 YIG:In,  $^{57}Fe$  NMR line splitting, cation distrib. 2-9054  
 ZnMnFe<sub>20</sub>O<sub>4</sub>:In, dielec. props., elec. cond., mag. props., lattice constants, dopant effects 2-51524  
 Zn<sub>3</sub>P<sub>2</sub>-In Schottky barrier solar cells, photo-voltage spectral response 2-27655  
 ZnSe:In, epitaxial thin films, doped and undoped, electron mobility and carrier conc., temp. depend. 2-51357  
 ZnSe:In(Cu,In), luminesc. centres, activation energy of form. 2-41392
- indium alloys**  
*see also indium compounds*  
 electrodeposition 2-27109  
 rare earth alloys, R<sub>3</sub>In, cryst. struct., X-ray powder method 2-8478  
 Ag: $^{111}In$  in foil, quenched, vacancy detrapping, TDPAC study 2-12632  
 Al-In, liq. state, interface tension meas. (*French*) 2-1710  
 Al-Zn(Sn)-(In), sacrificial anodes, sea water testing 2-52093  
 Au-In, search for superconductivity 2-31021  
 Au+50InPb, vertical section of phase diagram 2-47010  
 AuIn<sub>2</sub> thin film, low temp. elec. resist. 2-41027  
 Cu-In, interdiffusion and Kirkendall effect 2-5282  
 Cu-In, self-diffusion of Cu, solute enhancement 2-40590  
 Cu-In (1.7 at%), single crystal growth by Bridgman method 2-46910  
 Cu-Sn-(Ni,Al,Ge,In), phase transforms. 2-51916  
 CuSnIn bronze/Nb single core Al<sub>5</sub> diffusion layers, influence of In on supercond. props. (*German*) 2-13219  
 Hg-In metallic solns., thermodynamic and elec. props. near crit. points 2-1883  
 HgIn, supercond., specific heat, low temp. 2-31050  
 In-Bi, cryst. struct. and supercond. after high press. treatment 2-45118  
 In-Bi liq. alloys, thermodynamic props. 2-5249  
 In-Bi(Tl)(Pb), mag. props. of higher than second order super cond. phase transition 2-17184  
 In-Cd (4-5.5 wt.%), solid solns., mechanism of phase transformation (*Japanese*) 2-9351  
 In-Cu dispersion-hardening pastes, phase composition 2-5856  
 In-Pb, pinning force study 2-36291  
 In-Pb alloy, ion sputtered, surface comp., AES study 2-26197  
 In-Pb alloy wire, LF AC response of direct current induced intermediate state 2-41081  
 In-Pb superconducting film, surface pot. distrib., resistive state struct. 2-36173  
 In-Pb(Sn)(Ti), liquid, dil., diffusivity, solubility, and activity of O, effect of solute additions 2-26094  
 In-Pb(28-35 wt.%) (12-16 wt.%), solid solns., mechanism of phase transformation (*Japanese*) 2-9351  
 In-rare earth, liq. dilute alloy, elec. cond. and mag. susceptibility 2-26353  
 In-Sb, cryst. struct. and supercond. after high press. treatment 2-45118  
 In-Sb, liq., O activity 2-8644  
 In-Sn alloy, ion sputtered, surface comp., AES study 2-26197  
 In-Sn(13-15 wt.%), solid solns., mechanism of phase transformation (*Japanese*) 2-9351  
 In-Te, liq., reflectance and density of states, metal-semicond. transition 2-9162  
 In-Te, liq. alloys, density and elec. cond. 2-45309  
 In-Tl, elastic phase transition, third-order invariants in Landau theory 2-40536  
 In-Tl(18-30 wt.%), solid solns., mechanism of phase transformation (*Japanese*) 2-9351  
 In-Zn liquid system,  $^{115}In$  spin-lattice relax. and Knight shift 2-21913  
 In<sub>80</sub>Ag<sub>20</sub>, amorphous, elec. field gradients, TDPAC studies 2-31350  
 In<sub>80</sub>Au<sub>20</sub>, amorphous, elec. field gradients, TDPAC studies 2-31350  
 InBi, impact-induced fracture 2-27272  
 In<sub>2</sub>Bi, resistivity saturation, superconducting  $T_c$  2-35993  
 InGa-ZnSe-InGa, contact I-V characs. 2-26517  
 In<sub>1-x</sub>Ga<sub>x</sub> thin film, superconducting  $T_c$  2-36182  
 InTi martensite, thermoelastic, pseudoelastic behaviour and aging effect 2-41681  
 Ir, $^{107}Mn$ , $^{107}Sn$ , $^{108}Sn$ , hyperfine field distrib. meas. 2-31327  
 La<sub>75</sub>Al<sub>15</sub>In<sub>10</sub>, amorphous, press. depend. of supercond. transition temp. 2-36176  
 La<sub>3</sub>In, supercond. transition temp. (*Chinese*) 2-41045  
 LuIn<sub>3</sub>, thermal expansion study 2-30638  
 Mg-In, phase transition, internal friction study 2-45560  
 NaIn film prep. by sandwich-type evaporation method 2-12944  
 Ni-Ir, dil., magnetisation, impurity conc. depend. 2-46254  
 Pb-Bi-In, effect of impurities and press. on electron-phonon interaction 2-21718  
 Pb-Bi-In, supercond. transition temp., comp. depend. 2-36168  
 Pb-In, superelasticity resulting from twinning processes (*Russian*) 2-22257  
 Pb-In films, quasiparticle injected, two-gap states 2-36249  
 Pb-In-Au Josephson junction electrodes, microstruct. and strain, thermal stability 2-51943  
 PbIn, barrier against flux exit 2-21741  
 Pt-Ir, L<sub>10</sub> struct., defects atomic struct., FIM study (*Russian*) 2-12583  
 Sn-In film, nonequilibrium effects in dynamic mixed state 2-31112  
 WSe<sub>2</sub>-In-Ga sputtered film in rolling hertzian contacts, tribological characs. 2-30776  
 YbInAu(Au<sub>2</sub>)(Pd), press. and temp. depend. of mag. susceptibility 2-36308
- indium antimonide**  
 anodic oxide film, comp. and dielec. strength, SIMS study 2-47214  
 anodic oxide films, Auger spectroscopic anal. 2-9586



## indium antimonide continued

- Auger recombination rate 2-40930  
CESR of free and bound electrons, photoconductivity, impurity conc. depend. 2-21879  
compressibilities, Debye-Waller factors and melting criteria 2-1580  
conduction electron effective g-factor, Raman scatt. study 2-46610  
conductivity fluctuations in crossed elec. and mag. fields 2-5445  
covalent solids, tight-binding parameters by Louie peripheral states 2-40754  
deep acceptors,  $M_1$  defect accumulation kinetics after electron irradi. 2-40831  
degenerate magnetoacoustic phenomena, transverse US propag. effects 2-51240  
dielectric response function for sub-MM radiation interacting with quasi-free carrier gas, high mag. field 2-36070  
electronic struct. in zinc-blende and rocksalt phases 2-12968  
epitaxial growth by laser evaporation, pulsed heating of substrate effect 2-46945  
Faraday rotation, laser induced interband 2-11773  
film, multi-pass zone melting 2-46911  
free carrier cyclotron resonance linewidth due to ionised impurities 2-31289  
hot electron energy relaxation, screening by shallow donor impurities 2-40950  
hot electrons, auto-correlation of vel. fluctuations and freq. depend. diffusion const. 2-13081  
hot-electron bolometers for FTIR diagnostics,  $\gamma$ -ray and neutron effects 2-35329  
impact ionisation threshold at 77K 2-13082  
impurity spectra, cyclotron resonance in high mag. fields 2-22054  
laser beam self-focusing, mag. field enhancement, kinetic approach 2-49836  
laser cyclotron resonance, Zeeman absorpt. 2-41205  
light diff. by sound, photoelasticity mechanisms 2-36599  
magnetoabsorption, far IR, photoexcited carriers (*Japanese*) 2-36609  
magnetophonon oscill. of thermoelec. power, anomaly in p-type to intrinsic transition region 2-30914  
material energy flow in solid state plasma 2-46048  
MBE, RHEED study of free Sb surface lifetime on InSb 2-40713  
microwave breakdown, nonlinear effects 2-41269  
MIS struct., carrier generation processes under nonequilib. depletion conditions 2-17167  
MIS structure, optical tunnel trap charging of anodic oxide 2-36142  
MOS structure, capacitance, I-V characts. 2-51324  
n-type,  $1/f$  noise, mag. field effect 2-26458  
n-type, acoustic wave multitransit generation in elec. field 2-5442  
n-type, electron drift vel. under impact ionisation conditions at 77K 2-8802  
n-type, high elec. field Hall effect meas. 2-51214  
n-type, hot electrons, energy loss mechanisms 2-30901  
n-type, hot electrons, noise and diffusivity 2-51182  
n-type, IR emission under crossed elec. and mag. fields 2-916  
n-type, Landau levels nonthermal broadening, transverse magnetoresist. and photomag. effect 2-8822  
n-type, low conc., mag. freeze-out and high press. induced metal-nonmetal transition 2-21611  
n-type, magnetophonon effect of hot electrons 2-26417  
n-type, metallic impurity cond. and metal-nonmetal transition at low temp. 2-40976  
n-type, nonreciprocal semiconductor devices employing the magnetoplasma reflection minimum effect at MM-wave 2-1938  
n-type, US attenuation, transverse mag. field effect 2-26451  
narrow band gap semicond., free and bound magneto-polarons 2-40807  
narrow band gap semicond., space charge layer, multiband effective Hamiltonian anal. 2-51313  
nonradiative transitions in donor centers in a strong magnetic field 2-26328  
optical bistability and trasphasor action 2-11743  
optical const. meas. at 4.2K and 1.5K in spectral region below  $40\text{ cm}^{-1}$  2-38679  
optically bistable devices, large refr. index nonlinearities 2-11745  
p-type, acoustoelec. interaction, US relax. and magnetoresist. study 2-45413  
p-type, extrinsic semicond., magnetoconc. effect 2-8823  
p-type crystals, light and heavy hole mobility and conc., effect of dislocations (*Russian*) 2-26395  
p-type film, hydrogenated, elec. transport props. 2-8895  
photoexcited hot carrier lifetime, magnetophonon oscillations 2-46068  
photoexcited hot carriers, far IR cyclotron reson. and emission 2-46384  
Raman active modes, stress depend. 2-2256  
ring-channel waveguide, bistability anal. 2-25112  
spin-flip Raman gain, effective g-value and radiation absorption under transient elec. field conditions 2-11746  
sputtered coating on GaAs, elastic stresses, X-ray diff. study 2-16974  
surface (110), ideal and relaxed, electronic struct. 2-30950  
surface magnetoplasma waves, non-existence in Faraday geometry 2-26428  
two-dimensional electron spectrum spin splitting in mag. field 2-46095  
ultrathin film, non-parabolic, Einstein relation, size quantisation effect 2-13198  
unipolar semicond. with nonstandard band structure, acoustomagnetolectric effect 2-5443  
wavelength modulation reflectance spectroscopy, band struct. study 2-51623  
InAs<sub>1-x</sub>Sb<sub>x</sub> alloys, epitaxial growth by MOCVD 2-5825  
InSb, anal. and control of solidification by differential dilatometry 2-1424  
n-InSb, cyclotron resonance, defect levels 2-21885  
InSb, deformation pots. pseudopot. calc. 2-21256  
n-InSb, influence of geometric factors on radioelectric effect 2-17107  
n-InSb, magnetised piezoelectric, laser beam interaction with acoustic wave 2-21242  
InSb:Ge, effect of nonmetal-metal transition due to doping in lattice thermal cond. 2-50939  
InSb:N<sub>2</sub><sup>+</sup> ion-implanted amorphous and crystalline film prep., electrical conductivity and Hall mobility 2-8533  
InSb:Te,Se,S epitaxial layers conc. profiles rel. to crystn. conditions 2-5144  
n-InSb-metal contacts, asymmetric current effects of  $1/f$  noise with appl. mag. field 2-5459  
InSb-NiSb, intraband magneto-optical studies 2-41332

## indium antimonide continued

- InSb-NiSb, semiconducting, crystallisation speed influence on elec. props. and struct. (*Russian*) 2-5382  
n-InSb-SiO<sub>2</sub>-Si hybrid struct., elec. cond. and capacitance 2-26478  
(InSb)<sub>1-x</sub>(CdTe)<sub>x</sub> solid soln., valence band spin-orbit splitting, electroreflectance study 2-17445  
LiNbO<sub>3</sub>-InSb film struct., acoustoelectronic interaction, quantum size effect 2-46081  
n-type, degenerate, US propag., magnetoacoustic phenomena 2-51241  
SiO<sub>2</sub>-InSb interface form., XPS study 2-26235
- indium compounds**  
*see also indium alloys; indium antimonide*  
(100) superlattice, vacancy induced band gap levels 2-45883  
composition dependence of energy gap of (CdTe)<sub>1-x</sub>(In<sub>2</sub>Te<sub>3</sub>)<sub>x</sub> with  $x < 0.02$  2-40780  
ferroelastic, EPR study of twin struct. RbHS:VO<sup>2+</sup> ZZ 2-41180  
Ga<sub>1-x</sub>In<sub>x</sub>-P-GaAs heterostructures, luminesc., effect of mismatch between lattice const. and thermal expansion coeffs. 2-9195  
glasses, In<sub>2</sub>Te<sub>3</sub> doped, nonlinear optical absorpt. effects, laser pulse modulation (*Chinese*) 2-44407  
In<sub>2-x</sub>Sn<sub>x</sub>O<sub>3</sub>-Si solar cell, fabrication and series resist. effects anal. 2-6146  
rare earth Ga(In,Tl)-chalcogen system, reactions and phase diagrams 2-9335  
AgInTe<sub>2</sub>, n-type ternary semicond., thermal cond. temp. depend. in synthesised and annealed samples 2-1686  
AgInTe<sub>2</sub>, n-type ternary semicond., thermal cond. temp. depend. in synthesised and annealed samples 2-5289  
AlGaAsSb/GaInAsSb/GaSb laser, light confinement and divergence 2-44364  
Al<sub>1-x</sub>Ga<sub>x</sub>In<sub>1-x-y</sub>Sb<sub>y</sub> lattice const. and optical energy gap, comp. depend. 2-25818  
Al<sub>0.48</sub>In<sub>0.52</sub>As, MBE layers, elec. props. 2-30978  
Al<sub>0.48</sub>In<sub>0.52</sub>As/Ga<sub>0.49</sub>In<sub>0.53</sub>As/Al<sub>0.48</sub>In<sub>0.52</sub>As DH laser, MBE grown 2-7791  
Al<sub>1-x</sub>In<sub>x</sub>N thin films, RF sputtering deposition 2-36784  
(Al<sub>1-x</sub>In<sub>x</sub>)<sub>2</sub>S<sub>3</sub> system, X-ray diff. study in In-rich region 2-45129  
Au-InP contacts, interfacial reactions, metallurgical and elec. behaviour 2-51306  
Au-InP Schottky diode, elec. characts. 2-26472  
Au-InP system, binary cpd. form. 320 to 360°C 2-1680  
Au-Langmuir film-InP 0.085 eV Schottky barrier 2-46105  
BaFe<sub>12-x</sub>In<sub>x</sub>O<sub>19</sub>, cryst. and mag. struct., Mossbauer study 2-21920  
BaFe<sub>12-x</sub>In<sub>x</sub>O<sub>19</sub>, hexagonal ferrites, mag. struct., Mossbauer study 2-21768  
c-amorphous In<sub>0.25</sub>Te<sub>0.75</sub>-C struct. nanosecond switching parameters 2-13143  
CC Ga<sub>0.5</sub>In<sub>0.5</sub>P, nuclear spin system reson. cooling, cond. electrons g-factor effect 2-36478  
Cd<sub>1-x</sub>In<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, cathodolum., band struct., impurity states 2-31562  
Cd<sub>1-x</sub>In<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, deviation from the Bloch law (*Russian*) 2-9003  
Cd<sub>1-x</sub>In<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub> single cryst., elec. cond. characts. 2-51176  
CdInGaS<sub>2</sub>, Raman light scatt. spectra 2-5687  
CdInS<sub>2</sub>, interaction of free carriers with optical phonons (*Russian*) 2-13466  
CdS-AlnSe heterostructures, photoelec. props. 2-51225  
CdS-CuInSe<sub>2</sub> thin-film high-efficiency solar cells, development 2-37364  
Co<sub>2-x</sub>M<sub>x</sub>B<sub>2</sub>,  $\tau$  borides, mag. moments, M=Zr, Nb, Mo, In, Sn or Sb 2-31152  
(Cu<sub>1-x</sub>Ag<sub>x</sub>)(In<sub>1-y</sub>Ga<sub>y</sub>)Te<sub>2</sub> lattice const. values 2-12554  
(CuCr<sub>2-4</sub>)<sub>x</sub>(Cu<sub>0.5</sub>In<sub>0.5</sub>Cr<sub>2.5</sub>)<sub>1-x</sub> mag. elec. and thermoelectric props. 2-9005  
p-CuGa<sub>1-x</sub>In<sub>x</sub>S<sub>2</sub>/n-ZnSe heterojunction LPE growth from In soln. 2-16966  
CuGa<sub>1-x</sub>In<sub>x</sub>Se<sub>2</sub> solid solns., band gap, comp. depend., transmission spectra 2-46603  
CuInGa<sub>1-(y+z)</sub>Se<sub>2</sub>Te<sub>2(1-z)}</sub> heterojunction solar cells prep., RF sputtering technique, characts. 2-37371  
CuInS<sub>2</sub>, crystal growth, horizontal Bridgman method 2-17615  
CuInS<sub>2</sub> photovoltaic material, growth and elec. props., solar cell and cell array appls. 2-36106  
CuInS<sub>2</sub>:Fe, vibrational modes, impurity effects, IR spectra study 2-16735  
CuInSe<sub>2</sub>, anisotropic thermal expansion, X-ray diffraction study 2-1642  
CuInSe<sub>2</sub>, hole effective masses, optical study 2-40762  
CuInSe<sub>2</sub> single crystal, carrier heating by microwave elec. field 2-8834  
CuInSe<sub>2</sub>-CdS thin film solar cells, development 2-37326  
n-CuInSe<sub>2</sub>-p-GaSe heterojunction, photoelec. and elec. props. 2-17152  
CuInTe<sub>2</sub>, anisotropic thermal expansion, X-ray diffraction study 2-1642  
FeCr<sub>2-x</sub>In<sub>x</sub>S<sub>4</sub>, electrical props. 100 to 650K (*Russian*) 2-13098  
FeFe<sub>1.95</sub>In<sub>0.05</sub>Se<sub>4</sub>, elec. props. 100 to 600K (*Russian*) 2-1967  
Ga<sub>1-x-y</sub>Al<sub>x</sub>In<sub>y</sub>As, energy band gap calc. using dielec. theory of electronegativity 2-8755  
GaInAs layer growth by vapour phase heteroepitaxy, thermodynamic delineation 2-46941  
GaInAs-AlInAs structures grown by molecular beam epitaxy 2-21456  
Ga<sub>0.47</sub>In<sub>0.53</sub>As LPE, CVD and VPE layers, electron and hole mobilities of n- and p-type films 2-5480  
Ga<sub>0.47</sub>In<sub>0.53</sub>As, LPE growth, baking temp. effect on purity, photoluminesc. and elec. props. 2-27106  
Ga<sub>0.47</sub>In<sub>0.53</sub>As, low temp. LPE growth 2-17637  
Ga<sub>0.47</sub>In<sub>0.53</sub>As uniform, MBE growth with rotating sample holder 2-17626  
Ga<sub>0.47</sub>In<sub>0.53</sub>As:Sn, MBE layers, elec. props. 2-30978  
Ga<sub>0.47</sub>In<sub>0.53</sub>As-Al<sub>0.48</sub>In<sub>0.52</sub>As heterojunction, MBE, modulation doped, electron mobility 2-46108  
Ga<sub>0.9</sub>In<sub>0.1</sub>As photocathode with neg. electron affinity, photoelectron spectra 2-13630  
Ga<sub>1-x</sub>In<sub>x</sub>As, epitaxial layers, Raman scatt. study 2-46577  
Ga<sub>1-x</sub>In<sub>x</sub>As epitaxial layers preparation and properties for photoelectric applications (*Slovak*) 2-51228  
Ga<sub>1-x</sub>In<sub>x</sub>As, epitaxial multilayers, vacuum metalorganic CVD growth 2-27092  
Ga<sub>1-x</sub>In<sub>x</sub>As graded band gap layers, ohmic contacts to n-GaAs grown by MBE 2-13174  
Ga<sub>1-x</sub>In<sub>x</sub>As MOS structures, plasma anodisation and interface props. 2-46133  
Ga<sub>1-x</sub>In<sub>x</sub>As solid soln., static bond charge props., X-ray study 2-1442  
Ga<sub>1-x</sub>In<sub>x</sub>As uniform epitaxial layers, organometallic VPE growth, elec. characts. 2-31638



## indium compounds continued

- Ga<sub>1-x</sub>In<sub>x</sub>As, electron drift, electric field depend., Monte Carlo calc. 2-51196  
 GaInAsP buried crescent laser emitting at 1.52  $\mu$ m, dispersion effects 2-44289  
 GaInAsP heteroepitaxial layer, X-ray meas. of lattice mismatch 2-30367  
 GaInAsP laser diode freq. doubling in LiNbO<sub>3</sub>/Ti waveguide, coherent green radiation source 2-7833  
 GaInAsP, proton bombard., optical props. 2-9206  
 GaInAsP single-mode optical waveguides 2-49911  
 GaInAsP/InP DH lasers, optical gain spectra, temp. depend. 2-911  
 GaInAsP/InP integrated twin-guide lasers for single-mode operation, fabrication techniques 2-7888  
 GaInAsP/InP long-wavelength lasers, efficiency, threshold current temp. depend., intervalence band absorpt. 2-49753  
 GaInAsP/InP surface emitting injection laser with buried heterostructures 2-16017  
 GaInAsP-InP BH distributed-Bragg-reflector integrated-twin-guide lasers, 1.58  $\mu$ m wavelength 2-29814  
 GaInAsP-InP BH distributed Bragg reflector integrated-twin-guide laser emitted at 1.5 to 1.6  $\mu$ m 2-29830  
 GaInAsP-InP chip, laser-polyimide/SiO<sub>2</sub> slab waveguide interconnection 2-49946  
 GaInAsP-InP DFB buried heterostruct. lasers, CW operation in 1.5  $\mu$ m wavelength region 2-34787  
 GaInAsP-InP DH CW operated laser diodes, current dependence of temp. rise 2-29817  
 GaInAsP-InP DH laser material, nonradiative regions correlation with dislocation clusters 2-34751  
 GaInAsP-InP DH diode lasers emitting at 1.5  $\mu$ m grown by LP-MO CVD 2-44290  
 GaInAsP-InP injection laser, fabrication and output characteristics 2-4517  
 GaInAsP-InP laser transmitter module, external cavity controlled single longitudinal mode 2-25030  
 GaInAsP-InP layers, long wavelength, temp. depend. photolum., surface recomb. vel. 2-5753  
 GaInAsP-InP mode-controlled long wavelength lasers, BH, MSB and TS types 2-4526  
 GaInAsP-InP p-i-n and avalanche photodiode detectors for 1.1 to 1.6  $\mu$ m operation, state of the art 2-3622  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, energy band gap calc. using dielec. theory of electronegativity 2-8755  
 (GaInAsP) lasers, temp. sensitivity 2-49754  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, electron Hall mobility calc. with two longitudinal optic phonon model 2-17094  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, IR refl. spectra, free carrier parameters and lattice vibrs. 2-5678  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>/InP terraced substrate single-mode laser 2-16016  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>/InP stripe lasers with chemically etched-mirrors, review 2-44332  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>-InP laser, 1.3  $\mu$ m, index-guiding struct. grown on terraced substrate 2-936  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>-InP heterostruct., thermal expansion coeff. difference determ. 2-45601  
 Ga<sub>0.5</sub>In<sub>0.5</sub>P film on GaAs, anisotropic theory of crystal-film interface 2-5311  
 Ga<sub>1-x</sub>In<sub>x</sub>P mixed cryst., Raman scatt. and IR absorpt. spectra 2-2235  
 Ga<sub>1-x</sub>In<sub>x</sub>P MBE film, struct. and photolum. props. 2-45758  
 Ga<sub>1-x</sub>In<sub>x</sub>P:N, luminescence study of exciton radiation transitions 2-46693  
 Ga<sub>1-x</sub>In<sub>x</sub>P-GaAs MBE DH, inter-face recombination vel. and misfit strain, photoluminescence study 2-22073  
 GaInPAs lasers, transient freq. and temp. variation, Michelson interferometric study 2-49748  
 Ga<sub>1-x</sub>In<sub>x</sub>P<sub>1-y</sub>As<sub>y</sub>, thin epitaxial layers, refl. spectra 2-17563  
 Ga<sub>1-x</sub>In<sub>x</sub>Se, layer compound, lattice instability, ionicity and phase diag. 2-50800  
 GaSb-AlSb-InAs polytype superlattices and multi-heterojunction characts. 2-1993  
 GaSb-InAs, heterojunctions and superlattices, band struct., effective mass approx., tight binding calc. 2-51292  
 Ga<sub>2</sub>Se<sub>3</sub>-In<sub>2</sub>Se<sub>3</sub> thin films, elec. and optical props. 2-5477  
 (Ga<sub>2</sub>Se<sub>3</sub>-In<sub>2</sub>Se<sub>3</sub>)-Bi metal-semiconductor contact, elec. and photovoltaic props. 2-51298  
 Hg<sub>1-x</sub>In<sub>x</sub>Te<sub>1-y</sub>Sn<sub>2y</sub> n-n heterojunction formed by optical contact, characts. 2-1998  
 Ho(Fe<sub>0.7</sub>Rh<sub>0.3</sub>)<sub>4</sub>B<sub>4</sub>, antiferromagnetic ordering above superconducting T<sub>c</sub> 2-31011  
 In-Ga complexes and salts, In-Ga bonds, Raman spectra 2-43918  
 In-Ga-P-As, LPE growth in vertical furnace 2-46954  
 In-Se system, phase diagram 2-2492  
 InAlAs/InGaAs MBE layer structs., ion beam anal. 2-35906  
 InAlAs-InGaAs interface, MBE, channelling anal. 2-12922  
 n-InAs accumulation layers, far IR cyclotron reson. and Shubnikov-de Haas oscills. 2-41020  
 InAs, anisotropy effects in vapour epitaxy, growth rate and surface microrelief 2-1795  
 InAs chemisorbed on As(111), phase transitions 2-45730  
 InAs, homogeneity region calc. 2-50876  
 n-InAs, magnetoresist. hysteresis in elec. field 2-21610  
 InAs, mean square atomic displacements, neutron diffraction determ. 2-40324  
 InAs, n-beam kinematical reflections, in dynamical formalism 2-44948  
 InAs, narrow band gap semicond., free and bound magneto-polarons 2-40807  
 InAs:N<sup>+</sup> ion-implanted amorphous and crystalline film prep., electrical conductivity and Hall mobility 2-8533  
 InAs-GaSb flat-band semicond. heterostructures, electronic props. 2-1994  
 InAs-GaSb superlattices, spatial separation of carriers, optical absorption meas. 2-9208  
 InAs-GaSb superlattices in high magnetic fields, band struct., elec. and optical props. 2-21669  
 InAs-GaSb superlattices, band struct. calcs. 2-40784  
 n-InAs-SiO<sub>2</sub>-Si hybrid struct., elec. cond. and capacitance 2-26478  
 (InAs)<sub>1-x</sub>(GaAs)<sub>x</sub>(GaSb)<sub>1-x</sub>(GaAs)<sub>x</sub> superlattices, electronic and at. struct., phase separation effects 2-16969  
 n-InAs<sub>0.65</sub>P<sub>0.35</sub>, transverse magnetoresist., Boltzmann equation calc. 2-21607  
 InAs(P)(Sb) inversion layer transport, insulator properties 2-2012  
 InAs<sub>1-x</sub>Py<sub>x</sub>Sb<sub>y</sub>, LPE growth on InAs substrate 2-40717

## indium compounds continued

- InCl<sub>3</sub>, cryst. powder and aq. soln., Raman study 2-17482  
 In<sub>2</sub>CrO<sub>4</sub>, matrix isolated, IR spectra 2-34397  
 InGaAs, reduction in dislocation densities in MBE step graded growth 2-21450  
 InGaAs/InP, MBE, double heterostructure laser (*Japanese*) 2-49781  
 InGaAs-InP BH lasers, with LPE burying layers, CW operation at 1.65  $\mu$ m 2-44328  
 InGaAs-oxide, native grown plasma oxides and inversion layers 2-41014  
 In<sub>0.05</sub>Ga<sub>0.95</sub>As-In<sub>0.5</sub>Ga<sub>0.5</sub>As<sub>1-x</sub>P<sub>x</sub>-GaAs heteroepitaxial system, dislocation struct., buffer layer effect 2-35504  
 n-In<sub>0.53</sub>Ga<sub>0.47</sub>As, electron drift velocity meas. at 300K using microwave time-of-flight technique 2-30916  
 In<sub>0.53</sub>Ga<sub>0.47</sub>As, Hall factor, temp. and elec. conc. depend. meas. 2-51212  
 In<sub>0.53</sub>Ga<sub>0.47</sub>As, near-band-gap absorpt. and photolum. 2-41394  
 In<sub>0.53</sub>Ga<sub>0.47</sub>As on InP substrate, Mn as p-type dopant, distrib. coeff., room temp. mobility and diffusion coeff. 2-25914  
 p-In<sub>0.53</sub>Ga<sub>0.47</sub>As, photoexcited minority electrons, velocity field characts. 2-5432  
 In<sub>0.53</sub>Ga<sub>0.47</sub>As-InP FET, short-gate, ballistic transport 2-51185  
 In<sub>0.53</sub>Ga<sub>0.47</sub>As epitaxial layers, electron mobility (*Czech*) 2-8897  
 InGaAsP alloys, VPE growth by single flat temp. method 2-2461  
 InGaAsP DH, electroluminescence, efficiency and kinetics 2-13573  
 InGaAsP DH layers, laser characts., nonradiative recomb. effect 2-29820  
 InGaAsP, deep level centre photolum., comp. depend. 2-5751  
 InGaAsP diode to single-mode fibre efficient coupling using two lens combination in confocal condition 2-16122  
 InGaAsP epitaxial layers, near-band-gap absorpt. at 1.3  $\mu$ m wavelength 2-46803  
 InGaAsP grown by LPE, layer thickness calc. 2-45768  
 InGaAsP heterostructures, nonequilib. carrier lifetime and edge luminesc. reemission 2-13554  
 InGaAsP, high purity grown by liq. phase epitaxy 2-36802  
 InGaAsP high T<sub>0</sub> low threshold crescent-shape mesa substrate buried heterostruct. laser fabrication 2-44330  
 InGaAsP injection laser, metallisation and heat sink problems 2-4519  
 InGaAsP inverted rib-wavelength lasers, fabrication and operation characteristics 2-20318  
 InGaAsP lattice, matched to InP, growth and charact. review 2-13662  
 InGaAsP long-wavelength laser devices, recent developments 2-11726  
 InGaAsP low threshold DH lasers double clad with InGaAsP confining layers 2-29815  
 InGaAsP, material requirements for near IR photodetectors, LPE and VPE growth techniques 2-15224  
 InGaAsP modulated single-longit. mode semicond. laser and fibre transmission characts. at 1.55  $\mu$ m 2-16047  
 InGaAsP, monolithic integration of optical sources and detectors 2-4611  
 InGaAsP n-channel inversion mode MISFET with low interface state density 2-13188  
 InGaAsP, ohmic contacts, low specific contact resistance, metallisation 2-2005  
 InGaAsP planar layer optical strip waveguides by metal diffusion 2-49910  
 InGaAsP ridge waveguide laser performance at 1.3  $\mu$ m 2-11698  
 InGaAsP short cavity single-mode 1.3  $\mu$ m lasers with evaporated high-reflectivity mirrors 2-29816  
 InGaAsP/InP 1.3  $\mu$ m laser material, meltback and pullover as causes of LPE growth disturbances 2-46956  
 InGaAsP/InP diode, 1.5  $\mu$ m wavelength laser light emission, detection by IR excitable phosphors 2-15219  
 InGaAsP/InP Z 2-16143  
 InGaAsP/InP:Cd DH lasers, LPE growth 2-22178  
 InGaAsP-InP buried heterostructure lasers, fabrication and application to fault location measurement 2-4516  
 InGaAsP-InP buried DH lasers with chemically etched mirrors 2-11714  
 InGaAsP-InP CW lasers, low-threshold-current, distributed feedback 2-49776  
 InGaAsP-InP DH laser, elec., threshold and temp. characts. analysis 2-913  
 InGaAsP-InP DH laser Gbit/sec pulse generation, gating with LiNbO<sub>3</sub> waveguide modulator 2-7811  
 InGaAsP-InP DH laser, degradation obs. by electron probe microanal. 2-44282  
 InGaAsP-InP DH lasers, gain meas. in 1.3  $\mu$ m 2-44292  
 InGaAsP-InP DH laser, degraded, lattice defect struct., SEM and TEM study 2-49769  
 InGaAsP-InP diode lasers, intrinsic saturable absorption anal. 2-977  
 InGaAsP-InP distributed-feedback BH lasers emitting at 1.57  $\mu$ m, room-temp. CW operation 2-29818  
 InGaAsP-InP dual wavelength lasers emitting at 1.2  $\mu$ m and 1.3  $\mu$ m wavelengths 2-34785  
 InGaAsP-InP dual wavelength transverse junction stripe lasers emitting at 1.17  $\mu$ m and 1.3  $\mu$ m 2-34786  
 InGaAsP-InP integrated LED-detector device 2-44489  
 InGaAsP-InP laser, current injection induced acoustic signals 2-950  
 InGaAsP-InP laser, Sn doping of active region 2-45210  
 InGaAsP-InP plano-convex waveguide 1.3  $\mu$ m laser, transverse mode stabilisation 2-921  
 InGaAsP-InP planar buried heterostruct. laser diode with low threshold current fabrication by LPE technique 2-34784  
 p-In<sub>0.75</sub>Ga<sub>0.25</sub>As<sub>0.55</sub>P<sub>0.45</sub>:Cd LPE layer, doping characts. and elec. props. 2-41031  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> laser and LED reliability for fibre-optic communications 2-4610  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>-InP buried-crescent laser diode 1.3  $\mu$ m fundamental transverse mode and life test 2-4532  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> LPE thin films, simultaneous Bragg diff. of X-rays 2-30759  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, laser transitions, Auger recombination mechanisms 2-44295  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, lattice matched to InP, comp. depend. of mobility, peak vel. and threshold field 2-5479  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, temp. depend. of transferred electron threshold current 2-17076  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> ultrashort cavity lasers, optically pumped, picosec. operation, 0.83-1.59  $\mu$ m 2-16001  
 In<sub>1-y</sub>Ga<sub>y</sub>As<sub>1-x</sub>P<sub>x</sub>, deep vacancy levels theory (*French*) 2-40818  
 In<sub>0.5</sub>Ga<sub>0.5</sub>As<sub>1-x</sub>P<sub>x</sub>, epitaxial layers, optical props., IR obs. 2-27008  
 In<sub>0.5</sub>Ga<sub>0.5</sub>As<sub>1-x</sub>P<sub>x</sub>-GaAs(111) heteroepitaxial system, formation of discrepancy dislocations 2-45754



## indium compounds continued

- $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$ , stabilisation by InP substrate inside unstable region in LPE 2-51833  
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{Sb}_y$ , LPE growth with enriched composition on InAs substrate 2-27107  
 InGaP-InGaAlP double heterostructures, optically pumped laser action at 77K, MBE prep. 2-49750  
 $\text{In}_{1-x}\text{Ga}_x\text{P}$ , disorder induced Raman scatt. 2-22032  
 $\text{In}_{1-x}\text{Ga}_x\text{P}$ , metallurgical VPE 2-5823  
 $\text{In}_{1-x}\text{Ga}_x\text{P}$ , Brillouin scatt. study, comp. depend. 2-5724  
 $\text{In}_{1-x}\text{Ga}_x\text{P}$ , MBE growth on GaAs, at high substrate temps. 2-26251  
 InGaPAs DH diode laser on GaAs substrate, fabrication and visible light emission 2-16019  
 InH, mass spectrometric determ. of dissociation energies 2-29726  
 $\text{InMoS}_8$ , superconductor, exchange interactions, CESR and spin waves study 2-36211  
 $\text{In}_2\text{Mo}_4\text{S}_{10}$ , struct. and supercond. props. 2-17244  
 $\text{In}_2\text{Mo}_4\text{Se}_{10}$ , struct. and supercond. props. 2-17244  
 $\text{In}_2\text{Mo}_4\text{Se}_{10}$ , struct. and supercond. props. 2-17244  
 $\text{InN}(\text{N}_2)(\text{N}_3)(\text{P})(\text{As})(\text{Bi})$ , electronic struct., X-ray spectra and XPS 2-40781  
 $\text{In}_2\text{O}_3$ , cleanliness of substrate surface, liq. crystal orientation (*Japanese*) 2-23620  
 $\text{In}_2\text{O}_3$  coated mirrors to eliminate spacecraft surface charging 2-37178  
 $\text{In}_2\text{O}_3$ , cryst. growth from vapour phase 2-31613  
 $\text{In}_2\text{O}_3$  film, conductivity modulation by  $\text{O}_2$  press. variation 2-5474  
 $\text{In}_2\text{O}_3$  film, semiconducting, struct., X-ray diffr. study 2-45788  
 $\text{In}_2\text{O}_3$  films, evaporation from  $\text{In}_2\text{O}_3/\text{In}$  source, chemical and elec. props. 2-12933  
 $\text{In}_2\text{O}_3$ , low temp. heat capacity 2-12774  
 $\text{In}_2\text{O}_3$  optical thin films obtained by plasma-induced chemical vapor deposition 2-51807  
 $\text{In}_2\text{O}_3$  transparent conducting coatings obtained by pulsed laser sputtering 2-49956  
 $\text{In}_2\text{O}_3$  transparent-conducting coating on a-Si:H based devices 2-14077  
 $\text{In}_2\text{O}_3$  vapour deposited films,  $\text{O}_2$  diffusion 2-50927  
 $\text{In}_2\text{O}_3/\text{BeO}/\text{SiO}_2/\text{p-Si}$ , heterojunction solar cell, effects of absorbed  $\text{H}_2\text{O}$ , trap-assisted tunnelling model 2-52344  
 $\text{In}_2\text{O}_3\text{-CdSe-VO}_2$  heterojunctions, optical control of spectral characts. 2-36143  
 $\text{n-In}_2\text{O}_3$ -electrolyte system, photoelectrochemical props. 2-8873  
 $\text{In}_2\text{O}_3\text{-SnO}_2/\text{Si}$  photovoltaic junction, current-voltage characts. 2-8899  
 $\text{In}_2\text{O}_3\text{-SnO}_2\text{-n-Si}$  SIS solar cells, fabrication and characteristics (*Korean*) 2-27614  
 $\text{In}_2\text{O}_3\text{-(SnO}_2\text{)}_x$  film, transparent conducting, transport and optical props. 2-8899  
 $\text{In}(\text{OH})_3$ , dissolution and crystn. mechanism from NaOH soln., ionic equilibria and cryst. phases 2-30426  
 $\text{In}_2\text{O}_3\text{-SnO}_2$  film, RF sputtering of  $\text{Y}_2\text{O}_3$  2-13643  
 $\text{InP}$  (100), low energy Ar ion bombard. damage, Rutherford backscatt. study 2-36750  
 $\text{InP}$  (110), surface core excitons, binding energies and oscill. strengths 2-8852  
 $\text{InP}$ , AES study 2-9229  
 $\text{InP}$ , amorphisation and low temp. recrystallisation 2-16665  
 $\text{p-InP}$  based photocathodes, solar to  $\text{H}_2$  conversion, polycryst. films improvement by reacting Ag with grain boundaries 2-42033  
 $\text{InP}$ , cold semicond., hot electrons, luminesc. expts. 2-51676  
 $\text{InP}$ , compressibilities, Debye-Waller factors and melting criteria 2-1580  
 $\text{InP}$  crystals, electron irradi., near-edge absorption 2-17483  
 $\text{InP}$ , cyclotron emission investig., as function of doping 2-5586  
 $\text{InP}$ , Czochralski grown, defects, etching obs. 2-40395  
 $\text{InP}$ , deep levels prod. by pairs of impurities 2-1857  
 $\text{InP}$ , defects, birefringence study, comparison with electrochemical etching 2-40397  
 $\text{InP}$ , deposition of  $\text{SiO}_2$  and  $\text{Si}_3\text{N}_4$  films by plasma enhanced CVD 2-41527  
 $\text{InP}$ , diffusion of Cd at 680°C, p-n junction formation 2-12850  
 $\text{InP}$ , directional reactive ion-etching, with  $\text{Cl}_2$  containing gases 2-2605  
 $\text{InP}$ , electronic band struct. calcs. 2-40782  
 $\text{InP}$  epitaxial film, metallurgical CVD, elec. props. 2-21698  
 $\text{InP}$  epitaxial layer, defect obs. and correl. with device performance 2-5333  
 $\text{InP}$  films, grown on faceted (0001)CdS substrates, small angle grain boundaries 2-5130  
 $\text{InP}$ , growth and cryst. quality by liq. encapsulated Czochralski technique 2-5809  
 $\text{InP}$  growth melts, Cd evaporation 2-8601  
 $\text{n-InP}$ ,  $\gamma$ -irradiated, homogeneously compensated, electron mobility at low electron density 2-26390  
 $\text{InP}$ , high purity grown by liq. phase epitaxy 2-36802  
 $\text{InP}$ , impurity spectra, cyclotron resonance in high mag. fields 2-22054  
 $\text{InP}$ , inhibited relaxation of nonresonantly excited electrons in a cold lattice, photolum. meas. 2-46741  
 $\text{InP}$  inversion-mode MISFET, pyrolytic  $\text{Al}_2\text{O}_3$  deposition temp. effect 2-13189  
 $\text{InP}$ , ion implanted, damage profile, cathodoluminescence, SIMS, chemical staining and C-V meas. 2-40449  
 $\text{InP}$ , ion implanted, pulse annealing 2-2383  
 $\text{InP}$ , ion-implanted, CW laser annealing, amorphous layer recrystallisation 2-5143  
 $\text{InP}$ , LPE film growth for MESFET appl. 2-9293  
 $\text{n-InP}$  LPE layer, donor-acceptor pair recomb. from donor ground and first excited states 2-5752  
 $\text{InP}$ , LPE-grown, effect of substrate orientation on electrical properties 2-26522  
 $\text{InP}$ , laser induced Pt, Au and Ni thin film deposition, Auger electron anal. 2-51836  
 $\text{InP}$ , liq. encapsulated Czochralski growth, B contamination and precipitation 2-5802  
 $\text{InP}$  MIS struct. with plasma anodized  $\text{Al}_2\text{O}_3$  film 2-51340  
 $\text{InP}$ , MOCVD 2-5829  
 $\text{n-InP}$ , MOS and Schottky barrier devices, elec. and photovoltaic props. 2-51309  
 $\text{InP}$ , n-beam kinematical reflections, in dynamical formalism 2-44948  
 $\text{InP}$ , ohmic contact formation using ion implantation 2-50677  
 $\text{InP}$ , ohmic contacts, low specific contact resistance, metallisation 2-2005  
 $\text{InP}$  oxide film deposition on InP for MOSFET appls. 2-36141  
 $\text{InP}$ , phonons, near zone-edge non-thermal, ballistic transport and decay 2-45448  
 $\text{n-InP}$ , photoluminescence press. depend. 2-46686

## indium compounds continued

- $\text{InP}$  planar layer optical strip waveguides by metal diffusion 2-49910  
 $\text{p-InP}$ , polarisation of hot photoluminescence spectra, role of split-off sub-band 2-17542  
 $\text{InP}$ , polycrystalline, low temp. growth, elec. props. meas. 2-22155  
 $\text{InP}$ , props., prep. and device appls., review 2-51087  
 $\text{InP}$ , proton bombard., optical props. 2-9206  
 $\text{InP}$ , proton implanted, cathodolum., Rutherford backscatt. and SIMS studies 2-46778  
 $\text{InP}$ , proton implanted, range determ. by SIMS analysis 2-5166  
 $\text{p-InP}$ , saturable absorption of high intensity  $\text{CO}_2$  laser light 2-975  
 $\text{InP}$ , semi-insulating, Fe and Cr redistrib. 2-8537  
 $\text{n-InP}$  single cryst., electron mobility and minority carrier lifetime 2-13093  
 $\text{InP}$  single crystal, lateral growth over dielec. films by orientation-depend. VPE 2-36793  
 $\text{InP}$  single crystals, n- and p-type, phototransport parameters, application in solar cells 2-5439  
 $\text{InP}$ , sputter deposition of InP oxide films for MOSFET appls. 2-36141  
 $\text{InP}$  surface, n- and p-type, lightly doped, ohmic contacts 2-13173  
 $\text{InP}$ , surface oxidation, composition changes 2-52086  
 $\text{InP}$ , surface oxide film, composition and thermal stability 2-26252  
 $\text{InP}$ , undoped single cryst., identification of faulted prismatic dislocation loops 2-8520  
 $\text{InP}$ , use of  $\text{SiO}_2$  boats for LPE 2-2468  
 $\text{InP}$ , VPE deposition on GaAs substrate in  $\text{InP-PCl}_3\text{-H}_2$  system, layer quality and elec. props. 2-27091  
 $\text{InP}$ , VPE on InGaAs, growth for photodiode appl. 2-46940  
 $\text{InP}$ , X-ray dispersive double cryst. topography 2-28840  
 $\text{InP:B}(\text{Si})(\text{Se})$ , ion implanted, stoichiometric disturbances 2-1501  
 $\text{InP:Co}$ , EPR study 2-2125  
 $\text{InP:Co}$  single cryst. growth and elec. props. 2-9264  
 $\text{InP:Co}^{2+}$ , impurity levels, photoluminesc. study 2-51655  
 $\text{InP:Cr}$ , deep level states, press. depend. and k-space localisation 2-35967  
 $\text{n-InP:Cr}$ , piezoelectric attenuation under hydrostatic press. 2-40491  
 $\text{InP:Cr}(\text{Fe})$ , thermal and optical studies of deep levels, DLTS and DLOS techniques 2-51127  
 $\text{n-InP:Cu}$ , homogeneously compensated, electron mobility at low electron density 2-26390  
 $\text{InP:Fe}$ , deep-level photocond., energy scheme 2-30924  
 $\text{InP:Fe}$ , Mg(Zn), ion implanted, struct. and elec. props. 2-21163  
 $\text{InP:Fe}$ , optical and capacitance spectroscopy 2-30925  
 $\text{InP:Fe}$  photoconductive detector, sub-100 ps bulk-recombination limited 2-48787  
 $\text{InP:Fe}^{2+}$ , deep impurity centres, photoluminesc. and DLTS study 2-51656  
 $\text{InP:O}$ , horizontal Bridgman growth, O doping effect, Hall effect meas. 2-16667  
 $\text{InP:S}$  VPE layers, effect of doping on mobility, Hall effect and magnetoresistance meas. 2-46044  
 $\text{InP:Se}$ , backscattering spectrum, channelling meas. using automatic beam alignment 2-19815  
 $\text{InP:Se}$ , ion implanted, pulsed laser annealing 2-30489  
 $\text{InP:Se}$  epitaxial layer, heavily doped, electroreflectance and photoluminescence 2-2353  
 $\text{InP:Se}^+$ , ion implanted, Rutherford backscatt. and ellipsometry 2-12617  
 $\text{InP:Si}$ , capless annealing, for microwave devices 2-2531  
 $\text{InP:Si}$ , ion implanted, electron pulse annealing with minimal P loss 2-30475  
 $\text{InP:Sn}(\text{Ge})(\text{S})$ , etched and unetched, dislocation obs. and Huber etching assessment 2-40396  
 $\text{InP:Te}$ , ion implanted, laser annealing, Mossbauer spectroscopy study 2-30481  
 $\text{InP:Yb}$  epitaxial films; photoluminescence spectra, fine struct. intracentric transitions 2-51704  
 $\text{InP:Zn}$ , diffusion profiles of Zn determ. using SIMS with primary Cs ion bombardment (*French*) 2-5148  
 $\text{InP:Zn}$ ,  $\text{p}^+\text{n}$  junction diodes and Schottky barriers, deep levels, Zn diffusion effects, DLTS study 2-12994  
 $\text{InP}/\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{O}_{3-y}$  solar cells 2-22543  
 $\text{InP}$ -based solar cells, fundamental physics and feasibility of efficient cell fabrication 2-37235  
 $\text{InP-In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$  PIN photodiodes for fibre-optic communications 2-7881  
 $\text{InP-In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{O}_{3-y}$  solar cell fabrication, appl. of RF and ion-beam sputtering 2-37375  
 $\text{InP-InGaAsP}$ , DH laser wafer, LPE growth and struct. 2-45744  
 $\text{InP-InGaAsP}$  DH lasers, bistable operation by optical injection 2-25029  
 $\text{InP-InGaAsP}$  heterostructure, electrolum. polarization due to internal strain 2-41432  
 $\text{p-InP}$ -liq. electrolyte interface, Fermi level pinning rel. to photoelectrochem. energy conversion 2-8871  
 $\text{InP-metal}$  interfaces, atomic and electronic struct., XPS and elec. meas. 2-8880  
 $\text{InP-metal}$  ohmic contacts; microstructure, correl. with elec. characts., electron microscopy obs. 2-40700  
 $\text{InP-SiO}_2(\text{Si}_3\text{N}_4)$  MIS capacitors, interface props., C-V meas. 2-8884  
 $\text{n-InP-Sn-Au}$  alloyed ohmic contact formation, contact resistance depend. on annealing temp. 2-5463  
 $\text{InP}$ -thermal nitride, interface in MIS diodes and MISFETs, interface props. annealing effects, device prop. 2-51308  
 $\text{InP}$ -thermally grown sulphide films, C-V and current leakage meas. on MIS diodes 2-51332  
 $\text{InP}(\text{As})$ , intrinsic defect theory 2-45884  
 $\text{InPS}_4$ , class 4 crystals, Raman spectra, circular dichroism 2-36651  
 $\text{InPS}_4$ , growth, physicochem., electrophysical and optical characts. (*Russian*) 2-20386  
 $\text{InS}$  heat capacity meas., rapid method 2-43011  
 $\text{In}_2\text{S}_3$  polycrystalline and amorphous film, manufacture and appls. (*Russian*) 2-1790  
 $\text{In}_2\text{S}_3$  thin film, growth and struct. (*Russian*) 2-21471  
 $\text{In}_2\text{S}_3(\text{O}_3)$ , electronic struct., X-ray spectra and XPS 2-40781  
 $\text{InSb}$ , band-tail optical absorption saturation 2-21983  
 $\text{In}_2\text{Sb}_2\text{O}_{12}$ , struct., ferroelec. and piezoelec. characts. 2-30441  
 $\text{InSe}$ , cryst. and amorphous, elec. and photoelectrical props. 2-51225  
 $\text{InSe}$ , cryst. growth 2-2492  
 $\text{InSe}$ , excitons, magneto-optical effects 2-26873  
 $\text{InSe}$  film, amorphous, short-range order, elec. cond. and opt. absorpt. edge 2-40712  
 $\text{InSe}$ , interband illumination induced impurity photoconductivity 2-40968  
 $\text{InSe}$ , photocurrent oscills. due to internal interf. of light 2-40966



**indium compounds continued**

- InSe, single crystal, IR quenching of photoelectrical memory (*Russian*) 2-40953  
 InSe, slowly relaxing cond. and elec. memory effect 2-26404  
 InSe, thin film, trap states in forbidden gap (*Russian*) 2-13091  
 InSe, two-exciton process reson. Raman scatt. 2-51584  
 In<sub>2</sub>Se<sub>3</sub>, Raman and X-ray studies of cryst. struct. 2-1467  
 In<sub>2</sub>Se<sub>3</sub>, cryst. struct. and phase transition, elec. field gradient, TDPAC study 2-26797  
 $\alpha$ -In<sub>2</sub>Se<sub>3</sub> intercalation compound with Li, layered, optical and transport meas. 2-26856  
 In<sub>2</sub>Se<sub>3</sub> layered cryst., transport props. 2-36069  
 In<sub>2</sub>Se<sub>3</sub>, one-phonon excitations, IR spectra study 2-51602  
 InSnO<sub>2</sub>, Ta<sub>2</sub>O<sub>5</sub>, ZnS:Mn-Ta<sub>2</sub>O<sub>5</sub>-Al thin film struct., DC electrom. 2-46764  
 In<sub>2</sub>SnO<sub>3</sub>-InP solar cells fabrication and characs. 2-37236  
 In<sub>2</sub>SnO<sub>3</sub>-Si solar cells fabrication using ion beam milling/sputter deposition and low pressure oxide growth process 2-37230  
 In<sub>2-x</sub>Sn<sub>x</sub>O<sub>3</sub> film, DC magnetron sputter deposition 2-51808  
 In<sub>2-x</sub>Sn<sub>x</sub>O<sub>3</sub> film, degradation in glow-discharge plasma 2-26250  
 In<sub>2-x</sub>Sn<sub>x</sub>O<sub>3-y</sub> films, sputter deposited, elec. and optical props., heat treatment effects 2-26523  
 In<sub>2-x</sub>Sn<sub>x</sub>O<sub>3-y</sub> sprayed films, rel. to efficiency optimisation of Cu<sub>2</sub>S-CdS backwall solar cells 2-27633  
 In<sub>2-x</sub>Sn<sub>x</sub>O<sub>3-y</sub>/InP solar cells 2-22543  
 In<sub>2-x</sub>Sn<sub>x</sub>O<sub>3-y</sub>/n-Si solar cells, stability 2-37417  
 In<sub>2-x</sub>Sn<sub>x</sub>O<sub>3-y</sub>/poly-Si solar cells, efficiency, stability and reproducibility 2-37396  
 In<sub>2-x</sub>Sn<sub>x</sub>O<sub>3-y</sub>-Si<sub>3</sub>N<sub>4</sub>-pSi tunnelling solar cells under concentrated light illum., conversion efficiencies 2-37395  
 In<sub>2-x</sub>Sn<sub>x</sub>O<sub>3-y</sub>-SiO<sub>2</sub>-pSi tunnelling solar cells under concentrated light illum., conversion efficiencies 2-37395  
 In<sub>2</sub>Te<sub>80</sub>, amorphous, elec. resist. at high press., time depend. 2-30888  
 In<sub>2</sub>Te<sub>3</sub>, impurity centres and stoichiometric vacancies, electron states, positron annihilation obs. 2-46816  
 In<sub>2</sub>Te<sub>3</sub>, single crystals, switching effect 2-13144  
 $\beta$ -In<sub>2</sub>Te<sub>3</sub>, X-ray and elec. props. study, 20 to 400°C (*Russian*) 2-13090  
 Ir complex, cis-dichlorobis(1-10-phenanthroline)Ir(III) chloride, intersystem crossing, ns and ps spectra 2-43967  
 Ir complexes, 12-vertex phosphinometallocarboranes, hindered rot., dynamic NMR study 2-7573  
 Ir compounds, X-ray absorpt. edge resonances, L<sub>2</sub> and L<sub>3</sub>, d orbital occupancy, Xalpha-SW MO calcs. 2-43936  
 IrGe<sub>5</sub>Si<sub>4</sub>(Se<sub>1.5</sub>), far IR lattice vibr. spectra 2-31491  
 K<sub>3</sub>InCl<sub>6</sub>·H<sub>2</sub>O struct. investig. by Raman spectroscopy 2-31504  
 (NH<sub>4</sub>)<sub>2</sub>InF<sub>6</sub>, electronic struct., X-ray spectra and XPS 2-40781  
 (NH<sub>4</sub>)<sub>2</sub>In(SO<sub>4</sub>)<sub>2</sub>, high temp. form, monoclinic-trigonal transition 2-25799  
 Pt compounds, X-ray absorpt. edge resonances, L<sub>2</sub> and L<sub>3</sub>, d orbital occupancy, Xalpha-SW MO calcs. 2-43936  
 p-Si/(n-(Ga<sub>2</sub>Se<sub>3</sub>-In<sub>2</sub>Se<sub>3</sub>)) heterojunction, I-V characs. and prep. 2-51295  
 T 2-29829  
 TlIn<sub>1-x</sub>Ga<sub>x</sub>Se<sub>2</sub>, solid soln., heat cond. (*Russian*) 2-5286  
 TlInSe<sub>2</sub>, estimation of X-ray dose (*Russian*) 2-40435  
 TlInSe<sub>2</sub>, heat cond., influence of Ge, Si and Sn doping (*Russian*) 2-12862  
 TlInSe<sub>2</sub>, long-wavelength absorption and photoconductivity edges 2-21635  
 TlInTe<sub>2</sub>, single cryst., elec. cond. in strong elec. field, 77 to 300K 2-40921  
 TlInTe<sub>2</sub>-TlInTe<sub>2</sub> system, substitutional solid solns. form. and characs., switching props. 2-40522  
 (YdCA)<sub>3</sub>(FeVIn)<sub>2</sub>O<sub>12</sub>, magnetostatic losses and saturation magnetisation temp. depend. 2-21828  
 ZnO-InP heterojunction solar cells, prep. using reactive evaporation, props. 2-6147

**INDO calculations**

- alkali halides, crystal surface, semiempirical approach to electronic struct. 2-46092  
 n-alkane cations, [H(CH<sub>2</sub>)<sub>n</sub>H]<sup>+</sup>  $\sigma$ -delocalised radical, ESR spectra 2-34452  
 aniline, directly <sup>15</sup>N-H spin couplings, solvent effect calc. 2-34328  
 aromatic amines, substituent effect of Ni(acac)<sub>2</sub>-induced, PMR and C NMR contact shifts, INDO calcs., EPR 2-13362  
 azaporphyrins, magnetic shielding of <sup>1</sup>H, interatomic contrib., INDO calcs. 2-39320  
 azobenzene, <sup>13</sup>C-<sup>15</sup>N spin-spin coupling const., relative signs and INDO-MO calcs. 2-29631  
 benzenes, substituted, substituted, H-H coupling const., pseudoatom MO calcs. 2-24609  
 benzo(c) cinnoline, <sup>13</sup>C-<sup>15</sup>N spin-spin coupling const., relative signs and INDO-MO calcs. 2-29631  
 bis( $\pi$ -pentadienyl)nickel, electronic struct., INDO calcs. and photoelectron spectrosc. 2-39317  
 carbazole crystal, polarisability and birefringence temp. depend. 2-51548  
 6-chloro-8-hydroxy-5-methoxy-1,4-naphthosquinone radical anion, EPR spectra, INDO-SCF-MO calcs. 2-34453  
 cyanoguanidine single cryst., X-ray irradi., EPR spectra at -60°C to room temp. 2-21870  
 cyclobutenes cycloreversion 2-24612  
 2,3-dimethyl-5,8-dihydroxy-1,4-naphthosquinone radical anion, methyl internal rot., EPR spectra 2-43949  
 1,2-dimethylcyclobutane, fragmentation and isomerisation, semiempirical MO SINDO1 calcs. 2-39321  
 enzyme reactions, self-consistent reaction field theory of core effects, quantum scheme 2-2693  
 ethanes, substituted, H-H coupling const., pseudoatom MO calcs. 2-24609  
 ethylenes, substituted, H-H coupling const., pseudoatom MO calcs. 2-24609  
 9-ethylidenefluorene, excited states, ionisation pots., MO INDO/S CI calcs. 2-34296  
 fluoren-9-one, and diazaderivatives, excited states, ionisation pots., MO INDO/S CI calcs. 2-34296  
 fluorocyclohexanes, <sup>19</sup>F-<sup>13</sup>C coupling const., conformational and substituent effects, INDO MO calcs. 2-11405  
 hydrogen molecule and breakdown of INDO-FPT, explicit model for NMR coupling constant 2-34433  
 9-iminofluorene, excited states, ionisation pots., MO INDO/S CI calcs. 2-34296  
 metallocenes, non-validity of HF picture, INDO calcs. 2-24607

**INDO calculations continued**

- methane, INDO CHF calcs. of spin-spin coupling const. involving H<sup>+</sup> 2-11404  
 methanol, spin-spin coupling const., solvent effects, INDO calcs. 2-34431  
 4-nitroaniline, directly <sup>15</sup>N-H spin couplings, solvent effect calc. 2-34328  
 phthalocyanine, magnetic shielding of <sup>1</sup>H, interatomic contrib., INDO calcs. 2-39320  
 PMR, H p orbitals, FPT-INDO spin-spin coupling const., geometrical depend. 2-4318  
 PMR isotropic shift 2-24727  
 polyenes, methyl substituted, twisted, sudden polarisation effect, INDO calc. 2-11396  
 porphine, magnetic shielding of <sup>1</sup>H, interatomic contrib., INDO calcs. 2-39320  
 propane-like mols., internal rot. coupling, INDO-SCF-MO theory 2-49292  
 pyrimidine, in hexane soln., fluoresc. excitation, CNDO and INDO calcs. 2-34473  
 spin-spin coupling const., UHF instabilities in semiempirical CNDO/S and INDO/S calcs. 2-24753  
 TCNQ salt, 2,5-difluoro TCNQ, electron acceptor, cryst., mol. and electronic struct., 2-50617  
 TCNQ salt, TTF-2,5-difluoro TCNQ, cryst. struct. Madelung energy 2-50618  
 2,3,6,7-tetramethyl-5,8-dihydroxy-1,4-naphthosquinone radical, methyl internal rot., EPR spectra 2-43949  
 transition metal compounds, ionisation energies, SCF and transition operator calcs. 2-19972  
 As<sub>2</sub>S<sub>3</sub>, molecular electronic struct., local struct. model for amorphous As<sub>2</sub>S<sub>3</sub> film 2-24611  
 BH<sub>3</sub> complex, BH<sub>3</sub> (pyridine, 2,6-lutidine)  $\sigma$ - $\pi$  transmitted coupling, molecular orbitals calc. 2-49457  
 H, frozen aq. solns. of acid., hyperfine interaction, INDO calcs. 2-49293  
 H to Br, CNDO/INDO molecular orbital formalism appl. 2-4225  
 H to Br atom combination, CNDO and INDO formalism 2-4224  
 K<sub>2</sub>MCl<sub>4</sub> (M=Pt, Pd), interligand interaction, LCAO INDO calcs., X-ray fluoresc. obs. 2-49503  
 LiF, defect props., modified INDO calc. 2-40824  
 LiF, F, H, V, centres, electronic struct., optical absorption energy, INDO calc. 2-45886  
 LiF, Frenkel pairs separation, self-trapped exciton annihilation mechanism, INDO simulation 2-25870  
 LiF, surface electron states, INDO and quasimol. large unit cell model calcs. (*Russian*) 2-17130  
 N heterocyclics, aromatic, spin-spin coupling const., FP-INDO calcs. 2-24610  
 NH<sub>3</sub>, INDO CHF calcs. of spin-spin coupling const. involving H<sup>+</sup> 2-11404  
 Ni complex, cyclopentadienyl-allyl-cyclobutadiene-dinickel, struct., INDO and HF calcs. 2-19975  
 Ni complex, cyclopentadienyl nickel nitrosyl, ground and cationic states, ionisation pot., INDO MO study 2-39324  
 Ni complex, methyl substituted bipyridine-Ni(II), PMR isotropic shift 2-24727  
 OH<sub>2</sub>, INDO CHF calcs. of spin-spin coupling const. involving H<sup>+</sup> 2-11404  
 Pd(NH<sub>3</sub>)<sub>2</sub>Cl<sub>2</sub>, interligand interaction, LCAO INDO calcs., X-ray fluoresc. obs. 2-49503  
 Pt(NH<sub>3</sub>)<sub>2</sub>Cl<sub>2</sub>, interligand interaction, LCAO INDO calcs., X-ray fluoresc. obs. 2-49503
- INDOR**  
 see also nuclear Overhauser effect  
 AX<sub>n</sub> system, INDOR spectra, theory 2-11528  
 double INDOR difference spectroscopy, appl. to overlapping spin systems anal. 2-11529  
 isoquinoline, <sup>1</sup>H-<sup>1</sup>H inter-ring coupling const., rel. to <sup>19</sup>F systems 2-24737  
 pyridazine-N-oxide, (<sup>15</sup>N), PMR, NMR and INDOR investig. 2-4327  
 quinoxaline, <sup>1</sup>H-<sup>1</sup>H inter-ring coupling const., rel. to <sup>19</sup>F systems 2-24737
- induced anisotropy (magnetic)**  
 metallic glasses, ribbons, magnetisation and mag. anisotropy relax. due to heat treatment 2-21824  
 CdCr<sub>2</sub>Se<sub>4</sub>-Ga, ferromagnetic semicond., susceptibility and photoinduced anisotropy disaccommodation 2-26606  
 CdCr<sub>2</sub>Se<sub>4</sub>-Ga, ferromagnetic semicond., complex mag. susceptibility, photo-induced anisotropy 2-36333  
 Co-Fe-B amorphous films, induced anisotropy and permeability, annealing effects 2-46349  
 Fe-B, amorphous, induced anisotropy and depend. on prep. parameters 2-8969  
 Fe-B, amorphous, magnetostriction props. and depend on prep. parameters 2-9015  
 Fe-B amorphous films, induced anisotropy and permeability, annealing effects 2-46349  
 Fe<sub>8</sub>B<sub>13</sub>Si<sub>3</sub>C<sub>2</sub>, amorphous alloy, evidence for C mobility from mag. anisotropy meas. 2-41123  
 Fe<sub>3</sub>Ni<sub>3</sub>Si<sub>6</sub>B<sub>2</sub>, amorphous, temp. depend. of mag. permeability 2-26656  
<sup>57</sup>FeB<sub>3</sub>, induced surface mag. anisotropy (*Russian*) 2-26625  
 Sm-Co alloy film, amorphous, mag. behaviour 2-51440  
 Y<sub>2</sub>Pr<sub>0.5</sub>Ca<sub>1</sub>Fe<sub>2</sub>O<sub>12</sub>, induced uniaxial anisotropy caused by Pr<sup>4+</sup> 2-26623
- inductance**  
 superconducting film, kinetic inductance, surface effect 2-17206
- inductance measurement**  
 inductor inductance and quality factor determ., by meas. series resonance (*Chinese*) 2-23661  
 modelling of inductance cell used in high frequency conductometric measurements 2-43044
- induction, electromagnetic** see electromagnetic induction
- induction heating**  
 see also electric furnaces; ovens  
 ceramic, sintering furnace, low cost, high temp. induction system 2-41559  
 glass-enamel coatings on steel tubes, temp. regime for induction annealing 2-37003  
 Maxwell's equation solution for axisymmetric invariance case (*French*) 2-34619



induction machines *see asynchronous machines*

induction motors

*see also squirrel cage motors*

noise reduction in industrial elec. motors 2-32147

inductor microphones *see microphones*

inductors

*see also coils; transformers*

inductance and quality factor determ., by meas. series resonance (Chinese) 2-23661

industrial atmospheres *see air pollution*

industrial economics *see economics*

industrial plants

absorption heat pump using industrial exhaust heat, heat exchanger performance improvement (Japanese) 2-22642

battery plate formation charging methods to keep pace with industrial demand, state-of-the-art 2-52311

cogeneration and integration into public supply grid 2-37483

computer-aided noise modelling 2-16186

energy generation from thermal processing of municipal solid waste in US 2-18140

environmental problems associated with coal use including desulphurisation and fly ash use (Dutch) 2-42052

forge hammer impact noise and overall plant noise control 2-9740

gas stream noise eliminator usability and effectiveness 2-14140

high temp. gas-cooled reactor as flexible heat source, potential 2-7328

liquid fuel from brown coal, pilot plant planning 2-47427

manufacturing plants, corporate noise abatement program 2-11933

noise control of environmental noise from industrial and commercial sources in New Jersey 2-16189

noise source locating system 2-11969

outdoor noise propagation model 2-14142

process plants, noise control at design stage 2-11934

solar energy for industrial processes (Croatian) 2-47517

stationary flywheel energy storage, appls. study (German) 2-14122

treatment plant for coal conversion, electrical equipment protection from explosions 2-52274

industrial research management *see research and development management*

industrial standards *see standards*

industries

*this heading is restricted to those industries which are not covered by other specific headings*

*see also automobile industry; brewing industry; cement industry; chemical industry; construction industry; electricity supply industry; food processing industry; glass industry; manufacturing industries; metallurgical industries; mineral processing industry; paper industry; petroleum industry*

energy problem and lack of industrial innovation in N.America 2-17953

inelastic electron tunnelling spectra *see tunnelling spectra*

inelastic electron tunnelling spectroscopy *see tunnelling spectroscopy*

inert anodes *see anodes*

inert gas compounds

*see also argon compounds; helium compounds; krypton compounds; neon compounds; radon compounds; xenon compounds*

tribromomethanes, chloride, bromide formation in quasi-stationary discharge (Russian) 2-13944

dichlorodifluoromethanes, chloride, bromide formation in quasi-stationary discharge (Russian) 2-13944

halide excimer lasers, stimulated Raman emission generation in gases 2-11765

halide excimer lasers, UV-visible laser development review 2-904

halide pulse compressors for inertial fusion appls. 2-11723

oxides, excimers in matrices 2-49482

inert gases

*see also argon; helium; krypton; neon; radon; xenon*

adsorption on activated C, review and evaluation 2-30744

Allende meteorite, distrib. of noble gases from differential oxidation study 2-38144

arc discharge, high pressure, plasma diagnostics, UV obs. 2-8384

atmospheric radioactive inert gases, low-level concentration determ. 2-32155

atom, transition state of many-electron systems on basis of quantum statistical ab initio theory 2-19949

atom+CrO<sub>2</sub>Cl<sub>2</sub>, IR multiphoton excitation, visible chemiluminesc. 2-47345

atom+Sr(<sup>3</sup>P), quenching rate, lifetimes, orbiting method, fluoresc. 2-20158

atoms, binding energy, SCF calcs. 2-20200

atoms, dispersion forces 2-7623

atoms, exchange and correl. energy, gradient expansion quantum corrections 2-49260

atoms, interaction energies, modified statistical methods calcs. 2-15864

atoms, perturbation of Cs(6S<sub>1/2</sub>-5D<sub>5/2</sub>) line 2-24653

binary mixtures, thermal diffusion factors at 300K, concentration depend. 2-30266

binding energy of core levels, photoemission spectroscopy (German) 2-17598

collisional dissociation of dimers by monomers in rare gases 2-44047

crystals, binding energy and interat. pot. 2-45875

crystals, phonon damping of excitons (Russian) 2-16996

discharge, plasma sheath transition, kinetic theory 2-40124

flow characteristics of two-temp. plasma in MHD channel 2-8279

fluid, intermolecular interaction influence on Kerr const. 2-36601

homonuclear diatoms, collision-induced Raman spectra and diatom polarizability 2-29598

inert gas+halogen compound reactions, fluoresc., reaction kinetics 2-49483

ion+atom collisions, stopping power in 40 to 200 keV range 2-24820

liquefied, dielectric const. determ. (Russian) 2-13395

liquid mixtures, nonlinear UV excitation 2-49344

liquid mixtures, phase separation, diagram calcs., variational theory 2-2491

metastable state excitation by electron impact (Russian) 2-11574

meteorites, noble gases origin and host phases, review 2-18743

microclusters, two-dimens. and adsorbed, struct., mol. dynamics method 2-1775

mixtures, collision induced absorpt., correl. functions and spectral densities 2-34332

mixtures, collision induced absorpt. spectra, fourth order intermol. correl. functions, mol. dynamics calc. 2-29565

inert gases continued

mixtures, collision-induced far-IR absorpt. 2-44824

mixtures, inert and molecular gas, discharge instability (Russian) 2-8372

mixtures, positron annihilation, electric and mag. field effects 2-7654

relativistic energy corrections, validity of first order perturbation theory 2-24625

Rydberg atom inert gas collisions, semiclassical and quantum form factors 2-34529

solid and liquid, exciton self-trapping, defect prod. 2-41388

solids, cohesion and many-body forces 2-1444

solubility in H<sub>2</sub>O and D<sub>2</sub>O in temp. range 300 to 600K 2-40553

spallogenic rare gases in Fe meteorites, no correl. with <sup>107</sup>Ag excesses 2-38141

transport in polymer films, permeation 2-16901

viscosity meas. by transient flow method 2-40020

HCl+inert gases, vibr. relax., time resolved IR fluoresc. study 2-11566

HCl+inert gases, HCl rot. vibr. line intensity modification at moderate press. 2-39371

Hg+rare gas, collisional perturbation of 6<sup>3</sup>D, and 6<sup>1</sup>D<sub>2</sub> levels of Hg 2-39470

PH(b<sup>1</sup>Σ<sup>+</sup>)+inert gases, collisional deactivation 2-15870

inertial navigation

Kalman filter design, state-space models of gravity disturbance gradients 2-6301

infinite series *see series (mathematics)*

inflammability *see combustion*

information dissemination

inertial confinement fusion program, declassification 2-29424

information retrieval

*see also information storage*

EMIS, computer-based online system for publishing and retrieving materials data 2-3320

solvent-extraction chemistry, personal reference data base using TOOL-IR-PDP systems (Japanese) 2-27516

information retrieval systems

Bathymetric Data Reduction Subsystem (BDRS) 2-52821

Canada's National Gravity Data Base, organisation and management 2-52716

EMIS, computer-based online system for publishing and retrieving materials data 2-3320

geodetic data management, conf. Copenhagen, Denmark (May 1981) 2-48400

geodetic requirements for DBMS 2-52700

German Geodetic Research Inst. database 2-52712

graphic interactive computer systems for geodetic data and mapping 2-52710

gravimetric data management at BGI [Bureau Gravimetrique International] 2-52709

gravity data management, field to publication 2-52707

IGN geodetic database, feasibility study 2-52701

land information systems, geodetic data 2-52713

large volume geodetic and geophysical data management 2-52704

Mexican geodetic database 2-52702

microstructure design for materials, information system 2-52123

National Geodetic Survey Database, horizontal observations validation 2-52706

National Geodetic Survey database query system, design and development 2-52705

National Land Survey of Sweden, geodetic and cartographic data handling 2-52714

Nigerian geodetic database establishment 2-52715

North America Datum, redesign of software 2-52711

information services

African geodetic database 2-52703

Bathymetric Data Reduction Subsystem (BDRS) 2-52821

Canada's National Gravity Data Base, organisation and management 2-52716

EMIS, computer-based online system for publishing and retrieving materials data 2-3320

geodetic data management, conf. Copenhagen, Denmark (May 1981) 2-48400

gravimetric data management at BGI [Bureau Gravimetrique International] 2-52709

large volume geodetic and geophysical data management 2-52704

Mexican geodetic database 2-52702

Nigerian geodetic database establishment 2-52715

superconductors, information sources 2-33203

information storage

*see also information retrieval*

African geodetic database 2-52703

information storage systems *see information retrieval systems*

information systems, management *see management information systems*

information theory

*see also codes; correlation theory; decision theory and analysis; estimation theory; filtering and prediction theory; modulation; signal detection; signal processing; speech intelligibility*

evoked potential discrimination, information, preliminary obs. 2-22757

quantum narrow-band free-space link, lower bound on information capacity 2-3409

radiographic information theory, appl. to mammography 2-47698

uncertainty principle, in signal theory or quantum mechanics (French) 2-15049

visual evoked potentials, human, insights from information theory 2-22756

infrared astronomical observations

1218+304 and 1727+50, BL Lacertae objects, underlying elliptical galaxies anal., visible/IR obs. 2-10509

1219+28, underlying elliptical galaxy redshift, visible/IR obs. 2-10509

AFGL 618, planetary nebula precursor, near-IR spectroscopy 2-3288

AO 0235+164, polarization burst, IR and optical obs. of BL Lac object 2-38309

324 Bamberga, surface aq. alteration rel. to IR spectral props. 2-6559

Barnard 35, far IR and submillimetre obs. rel. to heat sources for bright-rimmed mol. cloud 2-33115

Be stars, study of Paschen emission lines intensities 2-28475

Be stars with Paschen emission lines, obs. of IR lines of OH I and Ca II 2-28474

Be-stars, IR excess and line emission 2-48262

Becklin-Neugebauer (BN) object, near IR spectroscopy 2-53264



**infrared astronomical observations continued**

- 3C 273, no evidence for 3.3  $\mu$ m emission feature 2-38314  
 3C 273, quasar 3.3  $\mu$ m dust emission reexamined 2-33183  
 VY Canis Majoris, interferometric meas. of flattened circumstellar envelope 2-53255  
 cataclysmic variable stars, K-band photometry rel. to distances determ. 2-14862  
 Ceres, surface aq. alteration rel. to IR spectral props. 2-6559  
 2060 Chiron, surface materials from JHK obs. 2-38099  
 circumstellar dust shells, obs. using heterodyne spatial interferometry at 11  $\mu$ m 2-53254  
 Comet Bowell (1980b), JHK obs. and anal. 2-38123  
 comets, JHKL photometry, ice mantles on reddish refractory cores 2-10358  
 CRL 490, BR  $\gamma$  line emission from BN-like object 2-38262  
 V1489=NML Cygni, interferometric meas. of flattened circumstellar envelope 2-53255  
 30 Doradus complex, IR photometric studies of two stellar populations 2-28548  
 elliptical galaxies, stellar population evolutionary synthesis from visible/IR obs. 2-6664  
 G1316.8-0.1, H II region, distance, UHF/IR obs. 2-18799  
 G, K, M-type stars, medium resolution spectra in near IR (*Italian*) 2-10398  
 galactic plane at high longitudes, far IR emission 2-48316  
 galaxies IR continua, JHKL photometry of Seyferts and X-ray emitters 2-38305  
 galaxies occurrence of 3.3  $\mu$ m emission feature 2-38314  
 H II regions, O III and N III emission 2-33098  
 HD 108, IR excess and mass loss rate of extreme Of star 2-33049  
 interstellar diffuse bands between 2.9 and 4.0 microns, obs. in spectrum of M-type supergiant 2-33119  
 interstellar H<sub>2</sub> search in IR sources 2-53074  
 IR sources near H<sub>2</sub>O masers in star formation regions 2-18801  
 IRC+10216 (CW Leonis), circumstellar shell props. from IR spectroscopy 2-53381  
 IRS7, M-type supergiant, obs. of diffuse interstellar bands between 2.9 and 4.0 microns 2-33119  
 Jupiter, cloud features, dynamics and thermal struct. 2-28400  
 Jupiter, internal heat, IR albedo and energy balance 2-28393  
 Jupiter, plumes obs. by Voyager 2-28401  
 Jupiter, spectrophotometry of Great Red Spot at 0.6 to 1.1  $\mu$ m 2-6565  
 Jupiter, submillimetre spectrophotometry obs. 2-53161  
 Jupiter's Great Red Spot, thermal struct. and dynamics 2-28399  
 Jupiter He abundance, Voyager IR spectral and radio occultation obs. 2-32936  
 CW Leonis (IRC +10216), interferometric meas. of flattened circumstellar envelope 2-53255  
 Local Group galaxies stellar spheroids dust cloud anal., B<sub>K</sub> obs. 2-3300  
 M101 H II regions, IR, UV and EHF obs. 2-6665  
 M17, H II region, C II forbidden line halos, mapping 2-23333  
 M17 IRS 1, Br  $\gamma$  line emission from BN-like object 2-38262  
 M87, far IR obs. providing constraints on jet 2-28566  
 M-type supergiants in local group galaxies, IR luminosities rel. to use as distance indicators 2-10412  
 Markarian 421, IR and optical polarization of BL Lacertae-like object 2-14933  
 Markarian 509, Seyfert 1 galaxy, He I 10830 Å obs. 2-28553  
 Mars, north polar cap, IR spectra indicating H<sub>2</sub>O ice 2-53139  
 Mars, submillimetre spectrophotometry obs. 2-53161  
 Mira variables in Baade windows, IR photometry rel. to distance to galactic centre 2-38213  
 molecular cloud star formation regions, mapping and kinematics 2-10497  
 molecular clouds, 870  $\mu$ m obs. of J=3-2 emission of CO 2-14914  
 molecular clouds, C I abundance, obs. at 609 microns 2-38259  
 Neptune upper atmosphere rot., IR brightness obs. 2-32948  
 NGC 1052, nonthermal optical IR emission from BL Lacertae type source 2-53362  
 NGC 1344, elliptical galaxy, shell nature, BVRJH obs. 2-42748  
 NGC 2024 (IRS 1 and 2), IR spectra and nature 2-10498  
 NGC 2071 region, high velocity H<sub>2</sub> time emission obs. 2-33114  
 NGC 4151, Seyfert 1.5 galaxy, near IR spectrophotometry 2-28547  
 NGC 4151, Seyfert galaxy, no evidence for 3.3  $\mu$ m emission feature 2-38314  
 NGC 4151, type 1 Seyfert galaxy, spectral components from optical and IR obs. 2-28546  
 NGC 4565, edge on spiral galaxy, halo mass/light ratio, K-photometry obs. 2-23344  
 NGC 5128 (Centaurus A), JHK mapping of peculiar elliptical radiogalaxy 2-38287  
 NGC 7027, IR spectra of planetary nebula 2-18701  
 Nova Aquilae 1982, JHKL mags., blackbody temp. and dust shell 2-53286  
 OH 0739-14, OH maser/IR source, mass loss, spectral obs. 2-28440  
 Orion MC-1, high resolution submillimetre map 2-42731  
 Orion molecular cloud, detect. of S(8), S(12), S(13), S(14) and S(15) v=0-0 lines of H<sub>2</sub> 2-10503  
 Orion Nebula, near IR high resolution spectrophotometry of forbidden C I line 2-3289  
 Orion Nebula stars 2-6647  
 $\alpha$  Orionis, dust shell size, IR speckle interferometry obs. 2-23338  
 Pallas, surface aq. alteration rel. to IR spectral props. 2-6559  
 Periodic Comet Stephan-Oterma (1980g), thermal emission from dust, JHK obs. 2-38123  
 planetary nebulae, Ne, S, Ar abundance 2-14903  
 planetary nebulae, O III and N III line emission 2-33098  
 protostars, near IR spectroscopy 2-53264  
 QSO 0957+561 A,B, double quasar, gravitational lens effect 2-53380  
 QSO 1413+135, near-IR, X-ray and radio obs. 2-14951  
 red supergiant variables in SMC, luminosities from IR photometry 2-14864  
 S88 interstellar molecular cloud, IR and mol. obs. rel. to cloud energetics 2-28525  
 S 106, bipolar nebula, polarimetric obs. 2-33111  
 Saturn, submillimetre spectrophotometry obs. 2-53161  
 Saturn atmosphere, ethane abundance, IR spectral obs. 2-10353  
 Seyfert galaxies, He I 10830 Å obs. 2-28553  
 solar limb, extreme edge during eclipse, IR obs. 2-53224  
 solar limb brightening intensity profile in 300-400  $\mu$ m continuum, chromosphere spicule effects 2-10363  
 star formation regions, 10 and 20 micron images 2-53343

**infrared astronomical observations continued**

- stars, determ. of extra-atmospheric monochromatic magnitudes in tellurium bands 2-53101  
 stars of F- and G-type, CNO abundances from red and IR lines 2-28447  
 Sun, <sup>58</sup>Ni/<sup>60</sup>Ni from near-IR Ni lines 2-10376  
 Sun, photospheric spectral lines obs., 1976 to 1980, rel. to solar luminosity vars. 2-53194  
 sunspots, far-IR observations of active regions with balloon-borne 60-cm Cassegrain telescope 2-42679  
 supernova remnants in northern hemisphere, near IR spectroscopy and C abundances 2-28535  
 Titan atmosphere anal. during eclipse by Saturn 2-32945  
 Trapezium-type systems, near IR obs. and reddening low determ. 2-33080  
 Triton, unidentified features in spectrum 2-18737  
 Uranus, 5 micron obs. 2-32948  
 Uranus, submillimetre spectrophotometry obs. 2-53161  
 Venus atmosphere, Pioneer obs. 2-38090  
 W3 IRS 5 protostellar source, binary character, IR speckle interferometry obs. 2-23338  
 W51, H II region-molecular cloud complex, optical study in forbidden S III emission line 2-48302  
 white dwarfs, IR photometry of cool objects 2-48241  
 H II regions, galactic, abundances of Ar, S and Ne from IR forbidden lines 2-28524  
 H<sub>2</sub>O masers associated with far IR sources 2-33099

**infrared astronomy**

*see also infrared sources (astronomical)*

- balloon-borne studies (*Chinese*) 2-23353  
 cataclysmic variable stars, distances determ. from K-band photometry 2-14862  
 charge-injection-device Si:B IR detector array, space-based astronomical obs. appl. 2-3193  
 comet comae, icy grains detect. by IR astronomy 2-38120  
 Fourier transform spectroscopy, high resolution, with phase correction in real time 2-23745  
 GIRL baffle system and telescope straylight anal. 2-14774  
 heterodyne spatial interferometry at 11  $\mu$ m, results and future uses 2-53254  
 incoherent IR spatial interferometry, appl. to resolution of late-type stars 2-53089  
 interstellar diffuse bands between 2.9 and 4.0 microns, obs. in spectrum of M-type supergiant 2-33119  
 interstellar gas and dust mapping used to determine star form. regions (*French*) 2-10519  
 IRAS, obs. planning facility 2-48136  
 IRAS and SIRT telescope stray light mechanism and performance comparison 2-14773  
 IRAS telescope stray light control 2-14772  
 Jupiter atmosphere, IR radiometer images compared with visible and 5  $\mu$ m images 2-32903  
 monochromator-interferometer combination for submillimetre astronomical spectrometry from aircraft 2-18701  
 photometer, design, tests and construction (*Spanish*) 2-10324  
 spatial interferometry in IR, astronomical potential 2-53105  
 spiral galaxies, near IR photographic atlas 2-53364  
 stellar spectral classification for G, K, M-type stars, use of medium resolution IR spectra (*Italian*) 2-10398  
 sub-mm heterodyne astronomy from Mauna Kea 2-42596  
 telescopes of very large size, future designs 2-53083

**infrared communication** *see optical communication*

**infrared detectors**

*see also bolometers; photodetectors*

- adiabatic demagnetization refrigerator for infrared bolometers 2-38659  
 airborne thermal viewing system, appl. to study of Earth resources 2-52958  
 avalanche photodiodes, triggered avalanche detection of IR photons 2-23724  
 broadband, using transient thermal lens effect 2-222  
 charge-injection-device Si:B IR detector array, space-based astronomical obs. appl. 2-3193  
 coherent optical detection, real time Fourier processing, chirped heterodyne method 2-43085  
 coordinate-sensitive pyroelectric radiation detector 2-15229  
 eye, human, mechanism of detecting IR radiation 2-2870  
 fibre optic detectors, design considerations 2-4608  
 frequency characts. meas. apparatus, 0.03 to 1 GHz 2-218  
 integrating SPRITE detector for serial scan thermal imaging, 8-14  $\mu$ m band 2-43083  
 IR antenna using corner reflector, EM coupling with 10 micron laser radiation 2-38689  
 IR bolometer for use in high mag. fields 2-19184  
 IR detectors, using bolometers, pyroelectric devices, photoconductivity devices 2-10868  
 IR photometric analyser for moisture meas. 2-6885  
 IR process analyser recognition method (*German*) 2-10776  
 IV-VI epitaxial thin film IR detectors, device performance and basic material props. 2-15221  
 laser light emission, 1.5  $\mu$ m, detection by IR excitable phosphors 2-15219  
 materials for IR detectors, conf., Washington, DC, USA (April 1981) 2-14973  
 MOM diode as mixer 2-28893  
 optoacoustic detector system for thermal conductivity meas. (*German*) 2-38647  
 p-i-n and avalanche photodiode detectors for 1.1 to 1.6  $\mu$ m operation, state of the art 2-3622  
 photovoltaic detector arrays, backside-illuminated, MTF modelling 2-23722  
 physics, book contrib. 2-48786  
 pulsed 10.6  $\mu$ m radiation detector 2-48784  
 satellite instrumentation, IR radiance model validation by sensor flight measurements 2-38041  
 sensitive IR photon detect. with picosec. time resolution 2-38687  
 SPRITE detectors, practical realisation and performance, 8-14 and 3-5  $\mu$ m bands 2-43084  
 sub-MM heterodyne astronomy from Mauna Kea 2-42596  
 temperature scanner for heat treatment shops 2-221  
 thermal versus quantum room temp. IR detectors, pyroelec. and photocond. detector comparison 2-28892



**infrared detectors continued**

- thermographic luminescent screen characts. for IR radiation detect. 2-48785  
 Ag halide films, use in IR radiation detection 2-43088  
 Cd,Hg<sub>1-x</sub>Te p-n junction IR photovoltaic detectors, elec. props. 2-30958  
 Cd,Hg<sub>1-x</sub>Te photodiodes, 8-14  $\mu$ m range, doping influence 2-19178  
 CdSe:Ag, nonequilibrium sensitized, mid IR radiation detector, photocond. 2-8838  
 CdTe-CdHgTe heterostructs., equilib. band profiles calc., IR appls. 2-51296  
 GaAs<sub>1-x</sub>Sb<sub>x</sub> Schottky barrier quadrant detector development for 1  $\mu$ m appl. 2-15225  
 Ga<sub>0.47</sub>In<sub>0.53</sub>As, low temp. LPE growth 2-17637  
 GaP, impurity-doped, efficient linear IR to visible upconversion, IR detect. using NEA photocathode 2-17532  
 Ge:Ga, far IR and sub-MM detector, spectral response from blackbody meas. 2-19180  
 Ge:Li, photocond. IR detectors, low photon background appl. 2-19179  
 (Hg,Cd)Te photoconductive detector in 3 to 5  $\mu$ m range, UV irradiat. effect 2-15226  
 HgCdTe IR detector arrays performance, 1 to 14  $\mu$ m wavelength appls. 2-48778  
 Hg<sub>0.8</sub>Cd<sub>0.2</sub>Te, anodic oxide film, surface anal. and capacitance-voltage characterization 2-51366  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, detector grade, LPE growth from Te rich solns. 2-17638  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te IR detectors, MIS diode and photoconductive devices, perform. rel. to grain boundary angles 2-48788  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te intrinsic photoconductive IR detectors, two-dimens. effects 2-43082  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, low-temp. thermal expansion 2-5250  
 (Hg<sub>1-x</sub>Cd<sub>x</sub>)Te RF triode-sputtering film for IR detector arrays 2-17174  
 InGaAsP, material requirements for near IR photodetectors, LPE and VPE growth techniques 2-15224  
 Pb chalcogenides, photovoltaic detectors, R<sub>0</sub>A product temp. depend. 2-19177  
 Pb salt epitaxial film, photovoltaic diode IR detector, modified hot wall technique prep. 2-15222  
 Pb-PbS<sub>0.9</sub>Se<sub>0.1</sub> photodiode detector, improved performance from Cl incorporation at interface 2-15223  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Se photovoltaic detectors, minority carrier lifetimes, resist-area product 2-26433  
 PbSnTe IR photodiodes, role of lattice matching in improving performance 2-48782  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te photovoltaic detectors for 8-14  $\mu$ m atmospheric window, modified hot-wall evap. technique 2-10866  
 Si extrinsic focal plane arrays, influence of material props. 2-15227  
 Si thermopile IR detector, batch fabricated 2-33632  
 Si<sub>3</sub>Im, shallow acceptor X-levels, development as IR detector material 2-17015  
 Si:P, photocond. IR detectors, low photon background appl. 2-19179  
 Si:(Se) IR detector, spectral response, dopant diffusion vapour press. effect 2-219  
 Si:Ti, solution growth for 3 to 5  $\mu$ m photocond. detectors 2-17614  
 Si-Ge alloys, Si rich, for IR detectors, elec. and optical meas. 2-21628  
 Si-Ge alloys for IR detection, Czochralski growth and crucible-free process prep. 2-22160  
 Te, photoconducting for subMM wave detectors 2-48777

**infrared imaging**

- aberration correction method for thin achromat 2-34935  
 achromatic doublets for simultaneous imaging of IR (10.6- $\mu$ m) and visible (0.6328- $\mu$ m) radiation 2-34871  
 active/passive dual IR imaging systems 2-49938  
 atmospheric and aerosol emissions effect on IR imaging device performance 2-25141  
 brass, surface temp. distrib. rel. to high-power US heating, thermographic investigation, sites of rapid localized heating 2-16177  
 breast cancer screening by stress thermography, skin temp. meas. after peripheral vasoconstriction 2-47677  
 composites, thermographic detection of adhesive-bond and interlaminar flaws 2-31862  
 cooled detectors, review 2-29886  
 coronary surgery, thermography appl. 2-6255  
 Earth, IR radiance model validation by sensor flight measurements 2-38041  
 Earth's atmosphere, advanced instrumentation for remote sensing 2-42480  
 elastic waves in solid bodies (Russian) 2-12108  
 far IR imaging antenna array 2-48698  
 far IR imaging antenna array with Bi microbolometer detectors 2-38648  
 fluoroplastic, surface temp. distrib. rel. to high-power US heating, thermographic investigation, sites of rapid localized heating 2-16177  
 integrating SPRITE detector for serial scan thermal imaging, 8-14  $\mu$ m band 2-43083  
 medical imaging methods, review 2-27870  
 METEOSAT image deformation problem solution, horizon extraction from image data and orbit information 2-48050  
 mirror optical system for thermal viewing equipment 2-49866  
 multichannel scanning radiometer for remote sensing cloud physical parameters 2-18604  
 nonimpact printing technologies, conf., Venice, Italy (June 1981) 2-33234  
 objective lenses of thermal viewers for focusing at different distances, image quality preservation 2-49863  
 photometry, automatic TV system based on principle of iso-energy contours (Russian) 2-10870  
 photosensitive thermal imaging material 2-33637  
 photothermal imaging, optical beam deflection using localised excitation source 2-181  
 polarisation method of IR image conversion using cholesteric liq. crystals. (t) 2-39762  
 pyrovidicons using infrared imaging sensors (Japanese) 2-15220  
 rectangular cavity, geometry determ. from surface temp. scanning, heat flux calc. 2-4694  
 remote sounding of atmosphere and ocean, for climate research 2-3102  
 signal processing of pyroelectric vidicons (Japanese) 2-10867  
 SPRITE detectors, practical realisation and performance, 8-14 and 3-5  $\mu$ m bands 2-43084  
 steel, surface temp. distrib. rel. to high-power US heating, thermographic investigation, sites of rapid localized heating 2-16177

**infrared imaging continued**

- thermal image scanning system design eqns. for optical parameters (Chinese) 2-49937  
 thermal print papers, survey of compositions 2-33635  
 thermograph, camera and monitor assemblies, for technical and research appl. 2-33520  
 thermosensitive paper, colour formation mechanism 2-33636  
 transfer thermography 2-48699  
 visualisation of IR images, automatic TV system-based on principle of iso-energy contours (Russian) 2-10870  
 Cu, surface temp. distrib. rel. to high-power US heating, thermographic investigation, sites of rapid localized heating 2-16177  
 Si<sub>3</sub>ON<sub>2</sub>, IR thermography meas. of emissivity, parameters influence (French) 2-36639  
**infrared-infrared double resonance** see optical double resonance  
**infrared radiometers** see radiometers  
**infrared sources**  
 chalcopyrite crystals, far IR radiation generation, phase-matched difference mixing 2-34832  
 far-IR lasers, CW optically pumped, developments review 2-39612  
 IR and MM waves, conf., Miami Beach, FL, USA (Dec. 1981) 2-38365  
 tunable mid-IR difference-frequency generator 2-970  
 vacuum reference sources having liq.-N<sub>2</sub>-cooled protective windows, 5-12  $\mu$ m spectral range (t) 2-34870  
 AlGaAs, DH IR source, luminesc., external quantum efficiency, rough and smooth emitting surfaces 2-51712  
 HCN CW submillimetre wave laser (Chinese) 2-11709  
 NH<sub>3</sub> far IR intracavity laser pumped by TE CO<sub>2</sub> laser 2-39675  
**infrared sources (astronomical)**  
 GL 2789 (V645 Cygni), radiocontinuum and CO meas., EHF obs. 2-33185  
 AFGL 618, planetary nebula precursor, near-IR spectroscopy 2-3288  
 balloon-borne studies (Chinese) 2-23353  
 Barnard 35, far IR and submillimetre obs. rel. to heat sources for bright-rimmed mol. cloud 2-33115  
 Be stars with Paschen emission lines, IR excesses of stars with Ca II IR triplet emission 2-28474  
 Becklin-Neugebauer (BN) object, near IR spectroscopy 2-53264  
 BN/KL region in Orion, CO and SO<sub>2</sub> lines obs. rel. to high vel. gas props. 2-28523  
 VY Canis Majoris, interferometric meas. of flattened circumstellar envelope 2-53255  
 circumstellar dust shells, obs. using heterodyne spatial interferometry at 11  $\mu$ m 2-53254  
 circumstellar shells, ang. dias. and shapes meas. via spatial interferometry in IR 2-53105  
 CRL 490, BR  $\gamma$  line emission from BN-like object 2-38262  
 V1489=NML Cygni, interferometric meas. of flattened circumstellar envelope 2-53255  
 Cygnus X region, IR medium resolution maps interpretation 2-53376  
 G316.8-0.1, H II region IR sources positions and photometry 2-18799  
 galactic center, correl. between 10 micron maps and high resolution VLA obs. 2-28550  
 galactic nuclei, resolution using spatial interferometry in IR 2-53105  
 galaxies occurrence of 3.3  $\mu$ m emission feature 2-38314  
 GL 2636 (G82.6+0.4), high-resolution radio obs. 2-28580  
 Herbig-Haro objects HH 7-11, high vel. mol. gas obs. 2-28530  
 interstellar IR sources, search for H<sub>3</sub><sup>+</sup> 2-53074  
 IRC+10216 (CW Leonis), circumstellar shell props. from IR spectroscopy 2-53381  
 IRS7, M-type supergiant, obs. of diffuse interstellar bands between 2.9 and 4.0 microns 2-33119  
 KL-object in Orion, sub-mm heterodyne observations 2-42680  
 Kleinmann-Low Nebula, hot mol. core location, NH<sub>3</sub> lines obs. 2-23334  
 Kleinmann-Low nebulae in Orion, IR spectrum rel. to ice content 2-33110  
 late-type stars, sizes and shapes determ. using incoherent IR spatial interferometry 2-53089  
 CW Leonis (IRC +10216), interferometric meas. of flattened circumstellar envelope 2-53255  
 luminous stars, IR H lines form. in stellar winds, IR source implications 2-10393  
 M17 IRS 1, Br  $\gamma$  line emission from BN-like object 2-38262  
 M-type supergiants in local group galaxies, IR luminosities rel. to use as distance indicators 2-10412  
 molecular clouds, 870  $\mu$ m obs. of J=3-2 emission of CO 2-14914  
 NGC 2024 (IRS 1 and 2), IR spectra and nature 2-10498  
 NGC 2071 region, high velocity H<sub>2</sub> time emission near maser and IR sources 2-33114  
 NGC 4151, Seyfert 1.5 galaxy, near IR spectrophotometry 2-28547  
 NGC 4151, type 1 Seyfert galaxy, spectral components from optical and IR obs. 2-28546  
 NGC 604, H II region complex in M33, obs. over six decades in frequency 2-48298  
 NGC 7538 (IRS1), assoc. of 1720 MHz OH masers with formaldehyde masers 2-6678  
 NGC 7538 (IRS 1), OH masers obs. 2-38278  
 objects near to H<sub>2</sub>O masers in active star form. regions, IR obs. 2-18801  
 OH 0739-14, OH maser IR source, H<sub>2</sub>O ice existence, spectral obs. 2-28440  
 OH 26.5+0.6, OH/IR star, circumstellar shell/envelope OH maser emission, UHF obs. 2-23299  
 Orion MC-1, high resolution submillimetre map 2-42731  
 Orion molecular cloud, detect. of S(8), S(12), S(13), S(14) and S(15) v=0-0 lines of H<sub>2</sub> 2-10503  
 protostars, near IR spectroscopy 2-53264  
 protostars, obs. of thermal SiO emission assoc. with IR sources 2-42735  
 QSO 1413+135, near-IR, X-ray and radio obs. 2-14951  
 QSO 1413+135 (OQ+122), far-IR object 2-14950  
 S88 interstellar molecular cloud, IR and mol. obs. rel. to cloud energetics 2-28525  
 S 106-3, evidence for illumination of bipolar nebula S 106 from polarimetric obs. 2-33111  
 S-type stars in IRC and AFGL catalogues, possibility of circumstellar shells 2-10409  
 star formation regions, 10 and 20 micron images 2-53343  
 supernova remnants in northern hemisphere, near IR spectroscopy and C abundances 2-28535  
 W3 IRS 5, H<sub>2</sub>O maser, appl. of multiple point fringe rate method, obs. 2-3199



**infrared sources (astronomical) continued**

- W3 IRS 5 protostellar source, binary character, IR speckle interferometry obs. 2-23338  
 H II regions, galactic, abundances of Ar, S and Ne from IR forbidden lines 2-28524  
 H<sub>2</sub>O masers associated with far IR sources, obs. 2-33099  
 OH/IR star distrib. and galactic bulge mass models 2-38195  
 OH/IR stars, search for Type I OH emission 2-48230  
 OH/IR stars, IR background source confusion model rel. to search for IR counterparts 2-14942

**infrared spectra** *see* **infrared spectra of diatomic inorganic molecules; infrared spectra of inorganic solids; infrared spectra of organic molecules and substances; infrared spectra of polyatomic inorganic molecules; spectra of inorganic liquids and solutions**

**infrared spectra of diatomic inorganic molecules**

- adsorbed on metal surface, vibrational excitation intensities 2-2247  
 glow discharges formed in low press. upper atm. gases, IR emission spectroscopy 2-50462  
 localised mol. orbitals, IR and Raman vibr. optical activity intensities, unified approach 2-15767  
 multiphoton IR absorption, surface-of-section anal. in classical theory 2-44022  
 Ag<sup>+</sup>O<sub>2</sub>, form. of AgO and Ag<sub>2</sub>O<sub>3</sub> products isotope shifts, IR obs. 2-6028  
 Ar-He-(Ne)-(Kr) mixtures, lineshapes and dipole moments in collision-induced absorption 2-29574  
 Ar<sub>2</sub><sup>+</sup>, quenching reaction cross sections, triplet state, dissociation, IR obs. 2-7555  
 BCl, IR spectrum of vibr. bands 2-49407  
 Bi<sub>2</sub>, A-X band, rot. anal., visible and IR obs. 2-39393  
 CO, absolute intensity of 2-0 band, line broadening, IR absorpt. 2-34391  
 CO, adsorbed on Cu, refl. absorpt. IR spectroscopy study, book contrib. 2-41370  
 CO, adsorbed on metal surface, mol. vibr. interaction, dipole-dipole interaction 2-45709  
 CO adsorption on CaO(SrO), IR spectra study 2-707  
 CO bridge bonded on Pt, IR integrated absorpt. intensities and extinction coeff. 2-34396  
 CO, chemisorption on Pt {001} and {111}, coupling induced vibr. freq. shifts and island size determ., book contrib. 2-41372  
 CO, gas, IR absorpt. band shapes 2-49414  
 CO, in Ar cryst. matrix, IR and microwave spectra model 2-49384  
 CO in interstellar molecular clouds, J=3-2 870  $\mu$ m emission 2-14914  
 CO, oxidation on Pd surface, IR reflection-absorpt. spectra study 2-41921  
 CO, spectral, band integral emission absorpt. characteristics 2-15779  
 Co-He, gas, IR absorpt. band shapes 2-49414  
 Co IR bandshapes and overtone absorpt. bands, dipole correl. functions 2-44006  
 Co isotopic mixture overlayers on Cu (111) and (001), collective vibr. modes 2-12903  
 H-bonded system, position and integrated intensity of H-bonded system, anomalous isotopic effects 2-29581  
 H<sup>+</sup> molecule, 'hot' H atom, energy transfer, time resolved IR fluoresce. obs. 2-24831  
 H<sub>2</sub>, IR emission spectrum from H and H<sup>-</sup> associative detachment 2-4270  
 H<sub>2</sub>, interstellar, in Orion, detect. of S(8), S(12), S(13), S(14) and S(15) v=0-0 lines 2-10503  
 HX (X=Cl, Br, I), far IR absorpt., blue shift, phase transition effects 2-49399  
 HeH<sup>+</sup>, IR fundamental band, vibr.-rot. transitions 2-29596  
 He<sub>2</sub><sup>+</sup>, quenching reaction cross sections, triplet state, dissociation, IR obs. 2-7555  
 KF, in carboxylic acid solns., ab initio calcs., solvation, IR obs. 2-29501  
 N<sub>2</sub>, B<sup>+</sup>Π<sub>g</sub>=W<sup>+</sup>Δ<sub>g</sub> lasing lines, assignment and kinetic model 2-20060  
 NF(a<sup>+</sup>Δ), vibr.-rot. band detected by IR diode laser, hyperfine struct., rot. and centrifugal distortion const. 2-15780  
 NO, IR spectra, 5g-4f Rydberg-Rydberg transition, fine struct., oscillator strengths 2-15781  
 NO, rot. levels, state mixing, Fourier transform IR obs. 2-24687  
 NO(CO)-(O<sub>2</sub>) adsorbed on Pd surface, IR spectra, thermal desorpt. and XPS study 2-50997  
<sup>14</sup>N<sub>2</sub>, w<sup>+</sup>Δ<sub>g</sub>-a<sup>+</sup>Π<sub>g</sub> system anal., rot., IR obs. 2-49406  
 Na<sub>2</sub>, supersonic jet, tunable laser spectroscopy on A<sup>1</sup>Σ<sub>u</sub><sup>+</sup>-X<sup>1</sup>Σ<sub>g</sub><sup>+</sup>(v',v'') bands 2-11500  
 Ne<sub>2</sub><sup>+</sup>, quenching reaction cross sections, triplet state, dissociation, IR obs. 2-7555  
 O<sub>2</sub>, atom recombination in afterglow, mol. consts., mag. dipole transition, IR and microwave obs. 2-34387  
 O<sub>2</sub>, electric quadrupole transitions in fundamental band in 1600 cm<sup>-1</sup> region 2-11480  
 OH free radical fundamental band, sensitive mag. rotation spectroscopy with colour centre laser 2-11531  
 PRO, rot. anal., electronic spectra 2-49446  
 SiO 8  $\mu$ m line profiles in VY Canis Majoris 2-53273  
 XeI, excimer form. and (<sup>2</sup>π<sub>1/2</sub>-<sup>2</sup>Σ<sub>1/2</sub>) emission at 1.3  $\mu$ m 2-39405

**infrared spectra of inorganic solids**

- alkali halide crystals, anharmonic relax. times of mol. vibr. modes 2-5731  
 alkali metal 12-phosphomolybdates, vibr. modes, struct., laser Raman and IR obs. 2-36622  
 alkali metal 12-phosphotungstates, vibr. modes, struct., laser Raman and IR obs. 2-36622  
 aluminofluorophosphate glass, effect of additions of groups II and III fluorides on struct. and props. 2-8451  
 aluminosilicate interface, corrosion inhibiting an Al alloys, IR reflection and electron spectra 2-5988  
 ammonium hexahalometallates, low temp. transitions, IR spectra 2-5676  
 antimonates, R<sub>3</sub>Sb<sub>2</sub>O<sub>7</sub> (R=In, Sc, La, Pr, Tb, Yb) struct., ferroelec. and piezoelec. characts. 2-30441  
 asbestos, chrysotile, magnitude and phase photoacoustic spectra 2-48803  
 borate glasses, low freq. IR refl. spectra and optical consts. 2-26922  
 CC, Si, far IR absorption due to two-phonon difference process 2-26898  
 ceramic, KO-1 optical, refr. index meas., wavelength and temp. depend. 2-49842  
 complexes, adenine and adenosine chloroderivatives, mag. and vibr. props. 2-36640  
 diamond, natural, vibronic bands, luminesc. and absorpt. spectra 2-51653  
 E-glass fibres, surface coatings, IR spectroscopic characterisation 2-16934

**infrared spectra of inorganic solids continued**

- fluoride glass, 3d transition element doped, IR impurity absorpt. losses 2-25089  
 fluorozirconate type glasses, material dispersion characts. determ. 2-17430  
 glass:Nd, nonradiative energy transfer processes 2-31555  
 glasses, IR spectra, rel. to nonradiative deactivation of rare earth ions 2-26921  
 graphite intercalation compounds, single-staged, magnetorefl. and Shubnikov-de Haas expts. 2-22002  
 group II complexes, adenine and adenosine chloroderivatives, mag. and vibr. props. 2-36640  
 group V amorphous semiconductors, review 2-45037  
 ice, localised excess electrons 2-5370  
 III-V semiconductors, native oxides, chem. bonding model 2-25805  
 imidazole crystals, H bonding, isotope effects, IR spectrosc. investig. (French) 2-5672  
 interplanetary dust in stratosphere, IR spectra obs. 2-38111  
 majorite ((Mg,Fe)SiO<sub>3</sub>), IR spectrum and X-ray diffr. meas. of mineral high-pressure phase 2-22973  
 metal (II) complexes 1-phenyl-3-methyl-4-acetyl-pyrazolone-5, struct., IR and NMR spectra, cond. meas. 2-31503  
 metal (II) complexes of 1-phenyl-3-methyl-4-benzoyl-pyrazolone-5, synthesis, struct., IR and NMR spectra 2-26908  
 metal complexes of 1-phenyl-3-methyl-4-trifluoroacetyl-pyrazolone-5, synthesis, struct., IR and NMR spectra, cond. meas. 2-26909  
 metal film, surface plasmon spectroscopy characteris. of films and surfaces 2-17564  
 metal surface spectra, CT and totally symm. mode activity 2-22017  
 metallic particles, IR absorption, due to electron excitation and correlations 2-31512  
 metals, supercond. and normal, vertex corrections in IR absorption 2-31502  
 methanol-n-butanol glassy mixtures, trapped electron absorpt. spectrum, temp. effect 2-13524  
 Nasicon family, vibr. spectra 2-31509  
 nuclear materials, IR spectra meas. by matrix isolation method (Czech) 2-7164  
 optical black coatings, far IR reflectance 2-41375  
 plasma reflectivity spectra, effect of damaged surface layers 2-22013  
 pyroarsenates, A<sub>2</sub>B<sup>n</sup>X<sub>2</sub>O<sub>7</sub> type, struct. and IR charact. (French) 2-45121  
 pyrophosphates, A<sub>2</sub>B<sup>n</sup>X<sub>2</sub>O<sub>7</sub> type, struct. and IR charact. (French) 2-45121  
 pyrovanadates, A<sub>2</sub>B<sup>n</sup>X<sub>2</sub>O<sub>7</sub> type, struct. and IR charact. (French) 2-45121  
 quartz, amorphous fibres, IR spectra, resonances (German) 2-17458  
 quartz, ionic conductivity, interstitial defects, complex impedance anal. and IR meas. 2-50909  
 quartz wool multiple scatt. 2-41374  
 quartz-silicate amorphous net, influence of bond breaking on optical stability (Russian) 2-2227  
 radiation absorpt. coeffs. from 400 to 1400 nm 2-18474  
 rare earth aluminates and gallates of perovskite type, IR spectra, vibr. anal. (French) 2-26912  
 rare earth complexes, acac complexes, Raman and IR spectra 2-13495  
 rare earth ultraphosphates, struct. characts., IR and Raman obs. 2-41341  
 sapphire, IR radiation accompanying crystallisation 2-26919  
 semiconductor, microstructural information from opt. props. in near IR to near UV range 2-21972  
 semiconductor ternary alloys, local field effects and IR optical props. 2-22028  
 semiconductors, conference, Hakone, Japan (Sept. 1980) 2-18813  
 silica surface, aromatic esters adsorpt., IR spectra study 2-2231  
 silica surface, ethyl cyanoacetate adsorpt., IR spectra 2-706  
 silicates, appl. to interstellar IR spectra 2-48306  
 small metallic particles, electronic props. 2-30988  
 steel, C and weathering, corrosion products, IR and Raman spectroscopy 2-52110  
 superionic conductors, lattice phonon effects 2-45423  
 transition metal complex ions in condensed systems, outer-sphere cation effect on IR spectrum intensity 2-17471  
 transition metal complexes, acetates and formates, IR and Raman spectra, vibr. modes 2-26914  
 transition metal complexes, bis(1,2-diondioximate)metal(II), elec. resist. at high press. and IR spectra 2-40892  
 transition metal dihalides, cryst. vibrs., linear chain dynamical model 2-5197  
 transition metals, optical props., 0.1-500 eV, data compilation 2-36586  
 n<sup>+</sup>-Si, surface plasmons, ATR spectra 2-2234  
 [Na<sub>2</sub>-(NH<sub>4</sub>)<sub>2</sub>]<sub>2</sub>SO<sub>4</sub> phase transition, IR spectroscopic study 2-21294  
 Ag (100), surface state obs. by IR and visible electroluminescence spectroscopy 2-41355  
 Ag, IR absorption coeff., pseudopot. calc. (Russian) 2-22012  
 AgCrS<sub>2</sub>, two-dimens. superionic cond., phonons and ionic cond. 2-45443  
 AgGaIn<sub>1-x</sub>S<sub>2</sub> solid solns., optical props. 2-13474  
 AgI,  $\beta$ -phase, far IR phonon absorpt. spectrum, model calc. 2-46555  
 $\beta$ -Ag<sub>2</sub>Si, nonperiodic local Ag<sup>+</sup> ion motion, far IR cond. meas. 2-40597  
 AlAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As-GaAs superlattices, absorpt., stimulated emission and clustering 2-46794  
 AlN coatings on Mo, prep. by RF reactive ion plating, deposition mech., struct., chemical state and composition determ. 2-13658  
 $\gamma$  and  $\eta$ -Al<sub>2</sub>O<sub>3</sub>, adsorpt. of halogens, effect on catalytic activity, IR study 2-5682  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Ag<sub>2</sub>O(K<sub>2</sub>O)(Ti<sub>2</sub>O)(Na<sub>2</sub>O)(NH<sub>4</sub><sup>+</sup>), vibr. spectra 2-31509  
 $\beta'$ -Al<sub>2</sub>O<sub>3</sub>-Ag<sub>2</sub>O(Ti<sub>2</sub>O), vibr. spectra 2-31509  
 Al<sub>2</sub>O<sub>3</sub>-H<sub>2</sub>O<sup>+</sup> (Li<sub>2</sub>O)(Na<sub>2</sub>O),  $\beta$  and  $\beta'$  phases protonic species, cond., and vibr. spectra 2-26923  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-H<sup>+</sup>-H<sub>2</sub>O<sup>+</sup>, vibrational study, IR absorpt. spectra and neutron scatt. 2-9145  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O, diffusion of water into cond. plane, IR absorpt. study 2-45629  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O-H<sub>2</sub>O, intercalation of water, IR absorpt. and neutron diffr. study 2-27431  
 $\beta'$ -Al<sub>2</sub>O<sub>3</sub>-MgO-Na<sub>2</sub>O(K<sub>2</sub>O)(Ag<sub>2</sub>O)(Ti<sub>2</sub>O), vibrational spectra and cond. parameters 2-41369  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-NH<sub>4</sub><sup>+</sup>, prep., cryst. struct., and thermal decomp. 2-25847  
 Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, with high radiation absorpt. in 0.9-1.2  $\mu$ m range, production 2-22192  
 Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, surface phase comp., IR study 2-5682  
 Al(PO<sub>3</sub>)<sub>3</sub>-NaF, replacement of fluorides by chlorides or bromides, optical and thermooptical props. 2-31444



## infrared spectra of inorganic solids continued

- As-SiH<sub>4</sub> amorphous plasma deposited coating, optical props. and EPR 2-40734  
 As-Se, glassy, optical absorpt. spectra 2-17120  
 As-Se glass, vibrational spectra 2-5668  
 As-Se glasses, IR absorpt. spectra 2-26905  
 As-Se:H, amorphous plasma deposited coating, optical props. and EPR 2-40734  
 As<sub>2</sub>Se<sub>3</sub> thin films, antireflecting prop., effect of thermostructural changes 2-51730  
 (As<sub>2</sub>Se<sub>3</sub>)<sub>1-x</sub>(Sb<sub>2</sub>Se<sub>3</sub>)<sub>x</sub>, oscillator strength, far IR spectra and Kramers-Kronig analysis 2-26899  
 Au, IR absorption coeff., pseudopot. calc. (*Russian*) 2-22012  
 Au-Al, diffusion-formed, optical props., ellipsometric study 2-17432  
 AuBr, vibr. spectra and normal coord. anal. 2-31506  
 AuCl, vibr. spectra and normal coord. anal. 2-31506  
 AuI, vibr. spectra and normal coord. anal. 2-31506  
 (Au(NH<sub>3</sub>)<sub>4</sub>)<sup>2+</sup> and (Au(ND<sub>3</sub>)<sub>4</sub>)<sup>2+</sup>, vibr. spectra, normal coord. anal. 2-31511  
 B<sub>2</sub>H<sub>6</sub><sup>2+</sup>, vibr. spectra and struct. 2-49434  
 B<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O-LiF(Li<sub>2</sub>S) glass, superionic cond. and far IR spectra, expt. and computer simulation 2-16887  
 BaAs<sub>2</sub>, IR study of phonons and free carriers 2-36627  
 Ba(NO<sub>3</sub>)<sub>2</sub>, anhydrous and hydrated, IR spectra 2-22015  
 BaTiO<sub>3</sub>:H(D), impurity IR-absorpt. study 2-46639  
 Bi, Fermi surface and band parameters, press. depend. magnetoref. studies 2-13457  
 Bi<sub>2</sub>O<sub>3</sub> thin film optical transmission, refr. index, extinction coeff., visible and infrared range 2-51538  
 Bi<sub>1-x</sub>Sb<sub>x</sub>, Fermi surface and band parameters, press. depend. magnetoref. studies 2-13457  
 CO-N<sub>2</sub> mixed cryst., IR time-resolved saturation spectroscopy, vibr. dephasing and spectral diffusion 2-46571  
 (C,S) surface compounds, prep. and characterisation 2-2471  
 CaF<sub>2</sub>, rare earth oxyfluoride impurity effect on elec., mech. and optical characts. 2-26880  
 CaF<sub>2</sub>-CaO-SiO<sub>2</sub> glasses, struct. study by XPS, X-ray emission, IR spectra, and F ionic refr. 2-30403  
 CaMoO<sub>4</sub>, dipole centres, thermally stimulated depolarisation currents and optical absorpt. spectra 2-46466  
 CaO, CO adsorpt., IR spectra study 2-707  
 CaO:C, IR spectrum of OH-compensated defect 2-51634  
 CaO:H<sup>+</sup>, vibr. due to H<sup>+</sup> ion, IR absorpt. spectra 2-46606  
 CaO<sub>2</sub>:SiO<sub>2</sub>:nH<sub>2</sub>O, X-ray diff. and IR absorpt. obs. 2-36620  
 Ca<sub>10</sub>(PO<sub>4</sub>)<sub>6</sub>:CN<sub>2</sub>Cl, prep., cryst. struct., and chem. reactivity rel. to bivalent ions in apatite channels 2-40348  
 CaSO<sub>4</sub>·H<sub>2</sub>O, solid phases, IR spectra of hemihydrates and soluble anhydrides 2-2497  
 Ca<sub>10</sub>-Sr(AsO<sub>4</sub>)<sub>6</sub>(OH)<sub>2</sub>, cryst. struct. and OH torsional motion 2-25823  
 Cd complex, 3,3'-thiodipropionic-Cd(II), struct., mag. susceptibility, IR and electronic spectra 2-5664  
 Cd complex, bis(propylammonium)tetrachlorocadmate 2-31488  
 CdAs<sub>2</sub>, IR optical props., absorpt. coeff., reflectivity, plasmon-phonon coupling 2-26925  
 CdBi:Ni<sup>2+</sup>, impurity ion absorpt., emission and excitation spectra 2-2321  
 CdCl<sub>2</sub>:Ni<sup>2+</sup>, impurity ion absorpt., emission and excitation spectra 2-2321  
 Cd<sub>2</sub>F<sub>2</sub>:Ho<sup>3+</sup>, semiconductor, growth, IR spectra and elec. cond. 2-13638  
 CdI<sub>2</sub> type crystals, binding, struct., Raman and far IR spectra 2-46609  
 CdI<sub>2</sub>:Ni<sup>2+</sup>, crystal field and spin-orbit coupling, near IR d-d transitions study 2-22022  
 CdIn<sub>2</sub>S<sub>4</sub>, interaction of free carriers with optical phonons (*Russian*) 2-13466  
 CdIn<sub>2</sub>Se<sub>4</sub>, free current carrier interaction with LO phonons, plasmon-phonon modes, IR spectra 2-36635  
 CdP<sub>2</sub> and CdP<sub>3</sub>:Bi, absorpt. spectra and energy levels in band gap 2-13490  
 Cd<sub>3</sub>P<sub>2</sub>, IR optical props., absorpt. coeff., reflectivity, plasmon-phonon coupling 2-26925  
 CdSe, absorption coeff. in region of fundamental absorption edge, strong EM wave effect 2-51600  
 CdSe:Fe<sup>2+</sup>(Co<sup>2+</sup>)(Ni<sup>2+</sup>), zero-phonon lines in optical spectra 2-46650  
 CdSe:Ni<sup>2+</sup>, optical spectra, fine struct., Jahn-Teller centre interpretation 2-51636  
 CdSe-HgSe solid soln., fund. absorpt. and absorpt. by free carriers, lattice disorder influence 2-13465  
 CdTe real surfaces, optical and elec. props. 2-51278  
 CdTe thin films, optical props. 2-46805  
 CdTe:Al, Li, IR absorpt. of Al-Li defect pairs 2-9169  
 CdTe:Co<sup>2+</sup>, cryst. field splitting, press. induced changes, IR spectra study 2-26944  
 CeO<sub>2</sub> thin film, polarised IR absorpt. spectrum 2-2356  
 CePd<sub>3</sub>, valence fluctuation cpds, optical struct. near 20 meV 2-9152  
 Co complex, hexakis (pyridine N-oxide) cobalt (II) salts, reaction with alkali halide, used in IR spectroscopy 2-41895  
 Co complex with 3-nitroaniline, IR and electronic spectra, mag. and cond. meas. 2-26911  
 Co<sup>2+</sup> ions in crystals, optical spectra, covalency effects 2-22050  
 CoAs<sub>2</sub>-Sb<sub>2</sub>, far IR lattice vibr. spectra 2-31491  
 CoGe<sub>2</sub>S<sub>4</sub>(Se<sub>1</sub>S<sub>3</sub>), far IR lattice vibr. spectra 2-31491  
 CoI<sub>2</sub>, crystal field and spin-orbit coupling, near IR d-d transitions study 2-22022  
 CoI<sub>2</sub>, lattice vibr., polarised far IR reflection spectra study 2-17473  
 CoP<sub>3</sub>-As<sub>3</sub>, far IR lattice vibr. spectra 2-31491  
 Cr selectively absorbing films angle vapour deposition in vacuum, optical props. 2-9679  
 Cr<sup>3+</sup> ions in crystals, optical spectra, covalency effects 2-22050  
 CrBr<sub>3</sub>, ferromagnet, and paramag., thermorefectance spectra, magneto-optical effects 2-31459  
 Cs complex, Cs<sub>2</sub>(TCNQ)<sub>2</sub>, mol. vibr. and charge transfer states, polarised reflectance study 2-36637  
 CsBr:S<sub>2</sub><sup>-</sup>(S<sub>1</sub><sup>-</sup>), molecular ion centres, optical and IR absorpt. studies 2-46556  
 CsCl crystal, IR absorpt. spectra of impurity tetrahedral anions, vibr. bands 2-51638  
 CsCl(Br)(I):ReO<sub>4</sub><sup>-</sup>, IR and Raman spectra, ReO<sub>4</sub><sup>-</sup> ion orientation 2-13517  
 CsM(NH<sub>2</sub>)<sub>2</sub> (M=Ca, Sr, Eu), cryst. struct. and IR spectra (*German*) 2-8493  
 CsNO<sub>3</sub>, cryst. and melt, NO<sub>3</sub><sup>-</sup> ion anharmonicity oscils. 2-31498

## infrared spectra of inorganic solids continued

- CsPF<sub>6</sub>, vibrational spectra and crystallographic props. 2-31490  
 Cs<sub>2</sub>SbCl<sub>6</sub>, 2-9140  
 Cs<sub>2</sub>(Sn<sup>1-2</sup>, Sb<sup>1-2</sup>, Sb<sup>1-2</sup>) Cl<sub>6</sub>, 2-9140  
 Cu, adsorption of CO, refl. absorpt. IR spectroscopy study, book contrib. 2-41370  
 Cu complex with 3-nitroaniline, IR and electronic spectra, mag. and cond. meas. 2-26911  
 Cu, IR absorption coeff., pseudopot. calc. (*Russian*) 2-22012  
 Cu-complex, 2,2'-bipyridine copper(II), IR and EPR study 2-49465  
 Cu-Zr, amorphous film, electronic struct., optical spectra study (*French*) 2-22044  
 CuGaIn<sub>1-x</sub>Se<sub>2</sub>, solid solns., band gap, comp. depend., transmission spectra 2-46603  
 Cu(II) carboxylates adsucted with triphenylphosphine oxide, electronic, IR, EPR and mag. susceptibility 2-46270  
 Cu(II) complex with ethylenediamine derivatives of 2,2'-dihydroxychalcones, synthesis and IR spectra 2-46565  
 Cu(II) propionate complexes with heterocyclic N-oxide adducts, electronic, IR and EPR spectra, mag. props. 2-46566  
 CuInS<sub>2</sub>:Fe, low freq. B<sub>1</sub> mode, IR absorption and Fourier transform spectroscopy 2-31529  
 CuInS<sub>2</sub>:Fe, vibrational modes, impurity effects, IR spectra study 2-16735  
 n-CuInSe<sub>2</sub> crystals, optical absorpt., 0.9 to 1.0 eV 2-22024  
 CuS spectrally selective coating, chemically deposited, optical props. and emissivity 2-9680  
 D<sub>2</sub>, solid, Stark shift radiation-induced IR spectra 2-36612  
 DT, solid, Stark shift radiation-induced IR spectra 2-36612  
 ErGa<sub>2</sub>O<sub>7</sub>, IR and Raman study (*French*) 2-41361  
 Er<sub>3</sub>Ga<sub>2</sub>O<sub>7</sub>-Er<sub>3</sub>Al<sub>2</sub>O<sub>7</sub>, IR and Raman study (*French*) 2-41361  
 Eu salt adducts with N,N-dimethyl-diphenyl phosphinamide, absorpt. and emission spectra 2-17464  
 EuO, Eu-rich, IR absorpt. spectra, bound mag. polaron excitations 2-46602  
 e-AuP<sub>3</sub>, IR study of phonons and free carriers 2-36627  
 Fe complex, Fe(III) salts-3-amino-5-methylisoxazole, mag. moments, IR, electronic and Mossbauer spectra 2-31333  
 Fe complexes, Fe(III) high spin mixed chelate complexes, mag., elec., and spectral props. 2-9164  
 Fe, modulation temp. spectroscopy of elementary excitations 2-31462  
 Fe<sub>2</sub>O<sub>3</sub>, Li and Mg substituted, optical and magnetooptical props. 2-17449  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, local field effects and IR optical props. 2-22028  
 GaAs, amorphous, disorder effects and optical props. 2-2357  
 p-GaAs, IR transmission characteris. of impurities 2-17508  
 GaAs, LO-phonon-plasmon dispersion, IR and Raman spectra, hydrodynamic model 2-21521  
 GaAs, semi-insulating, deep donor, near IR optical absorpt. 2-17507  
 GaAs sub-micron epilayers, near-MM-wave optical props. 5-100 cm<sup>-1</sup> region 2-36728  
 n-GaAs wafer, proton implanted, IR reflectivity characteris. 2-17478  
 GaAs:C, implanted, IR localised mode vibr. spectroscopy, annealing temp. depend. 2-17509  
 GaAs:Si, heavily doped, annealing-induced changes, Si defect conc. depend. 2-30889  
 GaAs-Al<sub>x</sub>Ga<sub>1-x</sub>As submicron heterostructs., IR optical characterisation 2-17565  
 GaAs<sub>2</sub>, IR study of phonons and free carriers 2-36627  
 GaAsSb<sub>1-x</sub>, electron effective mass values 2-5345  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>, IR refl. spectra, free carrier parameters and lattice vibr. 2-5678  
 Ga<sub>1-x</sub>In<sub>x</sub>P mixed cryst., Raman scatt. and IR absorpt. spectra 2-2235  
 Ga<sub>1-x</sub>In<sub>x</sub>P<sub>1-y</sub>As<sub>y</sub>, thin epitaxial layers, refl. spectra 2-17563  
 GaP, amorphous, disorder effects and optical props. 2-2357  
 n-GaP, deformation pots., far IR spectra study (*Ukrainian*) 2-13463  
 GaP, IR absorption induced by impurities and radiation damage 2-46644  
 GaP:Fe(Ni), doubly charged donors, IR spectra 2-21538  
 GaP:Ni, optical absorpt. spectra and photocapacitance meas. 2-13518  
 Ga<sub>2</sub>Se<sub>3</sub>-In<sub>2</sub>Se<sub>3</sub> thin films, elec. and optical props. 2-5477  
 GaTe, phonon modes and optical const., far IR complex refl. meas. 2-5669  
 n-Ga methodic error in carrier conc. meas. by far IR absorpt. 2-5414  
 GdGa<sub>2</sub>O<sub>7</sub>, IR and Raman study (*French*) 2-41361  
 Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelectric, surface polariton states, ATR spectra 2-30734  
 GdSe<sub>1-x</sub> (0<x<0.17), opt. props. in fundamental and IR absorpt. regions 2-17484  
 n-Ge, EM wave absorption in mag. field 2-17452  
 Ge, IR laser radiation scatt. study of local inhomogeneities 2-22033  
 Ge, thermoluminescence rise in far IR spectrum (*Russian*) 2-31571  
 p-Ge, two-wave saturation spectroscopy with subpicosecond relax. time, theory 2-7840  
 Ge window material optical absorpt. investigation using photoacoustic spectroscopy (*Chinese*) 2-20383  
 Ge:Li film, amorphous, electret effect 2-17395  
 Ge:Si, impurity states, optical spectra and microhardness meas. 2-35971  
 Ge-Sb-Se system, beam-resistant films, prep. and struct., thermal stability, optical parameters 2-5317  
 Ge-Si, energy gap, electroreflectance determ. 2-17443  
 GeS single crystals, far IR transmission properties 2-26924  
 GeS<sub>2</sub>, glass, high-pressure, optical studies 2-46574  
 GeSe<sub>2</sub>, polarised IR and Raman spectra 2-26903  
 GeTe, plasma IR reflection, conc. phase heterogeneity 2-46612  
 H<sub>2</sub>, induced near IR spectra of p- and normal solid phases up to 12 kbar 2-30708  
 para-H<sub>2</sub>, solid, ΔJ=4 rot. transition obs. and phonon density of states inference 2-12707  
 H<sub>2</sub>, solid, vibrational overtone optical absorption 2-36634  
 H<sub>2</sub>AlP<sub>2</sub>O<sub>10</sub>·2H<sub>2</sub>O, IR spectroscopic investigation of proton-containing groups 2-13464  
 HCL-DCL mixed crystals, far IR and Raman spectra investigated in lattice mode region 2-36616  
 HD, solid, Stark shift radiation-induced IR spectra 2-36612  
 H<sub>2</sub>NbO<sub>6</sub>, niobic acid, <sup>1</sup>H NMR, IR spectra, conductivity and ion exchange studies 2-2145  
 H<sub>2</sub>O glasses, localised excess electrons 2-5370  
 Hf complex, HfCl<sub>4</sub>-acetonitrile-d<sub>0</sub>(-d<sub>3</sub>), vibr., force const., IR and Raman study 2-2239  
 HfF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glasses, influence of processing conditions of IR edge absorpt. 2-5680  
 HfF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glasses, influence of processing conditions of IR edge absorpt. 2-13475



## infrared spectra of inorganic solids continued

- HfH<sub>2</sub> IR fluoride glass, multiphonon absorption 2-49847  
 Hg complex, 3,3'-thiodipropionic-Hg(II), struct., mag. susceptibility, IR and electronic spectra 2-5664  
 HgI<sub>2</sub>, diffuse reflectance spectra, luminescence and polymorphism 2-46747  
 Hg<sub>1-x</sub>Mn<sub>x</sub>Te, semimagnetic semicond., interband IR magnetoabsorpt. study 2-21998  
 InAs-GaSb superlattices, spatial separation of carriers, optical absorption meas. 2-9208  
 InAs-GaSb superlattices in high magnetic fields, band struct., elec. and optical props. 2-21669  
 InGaAsP epitaxial layers, near-band-gap absorpt. at 1.3  $\mu$ m wavelength 2-46803  
 In<sub>0.9</sub>Ga<sub>0.1</sub>As<sub>1-x</sub>P<sub>x</sub>, epitaxial layers, optical props., IR obs. 2-27008  
 InP crystals, electron irradi., near-edge absorption 2-17483  
 InP:Fe, optical and capacitance spectroscopy 2-30925  
 In<sub>2</sub>Se<sub>3</sub>, one-phonon excitations, IR spectra study 2-51602  
 Ir, optical cond., optical spectra and band struct. (Russian) 2-21964  
 IrGe<sub>1-x</sub>Si<sub>1-x</sub>(Se<sub>1-x</sub>), far IR lattice vibr. spectra 2-31491  
 KBF<sub>4</sub>, superionic cond., phonon response, IR reflectivity and Raman spectra study 2-16733  
 KBiF<sub>4</sub>, superionic conductor, phonon spectra 2-22031  
 KCl, holograms recorded through F $\rightarrow$ X conversion, diff. efficiency, X-centre anisotropy effect 2-39596  
 K<sub>2</sub>D<sub>2</sub>( $\alpha$ - $\beta$ )PO<sub>4</sub>, cryst., spontaneous parametric light scatt., deuteration effects 2-36660  
 K<sub>2</sub>Fe(CN)<sub>6</sub>·3H<sub>2</sub>O cryst., ferroelec., H<sub>2</sub>O stretching vibrs., spectrosc. obs. 2-51572  
 K<sub>2</sub>Fe(CN)<sub>6</sub>·3H<sub>2</sub>O, ferroelec., H<sub>2</sub>O vibr., IR and Raman spectra study 2-21249  
 KH<sub>2</sub>PO<sub>4</sub>, far-IR reflectivity spectra 2-26902  
 KH<sub>2</sub>PO<sub>4</sub>, proton pot. estimation from IR and crystallographic data 2-9139  
 KH<sub>2</sub>PO<sub>4</sub>, proton potential from spectroscopic and crystallographic data 2-36618  
 KLn(MoO<sub>4</sub>)<sub>3</sub> (Ln=Y, Dy, Ho, Er, Tm, Yb, Lu), cryst. and mol. struct., IR and Raman study 2-41362  
 K<sub>4</sub>(Mo(CN)<sub>8</sub>)<sub>2</sub>H<sub>2</sub>O, IR and Raman spectra, CAN stretching freq., isotopic shifts and assignments 2-26915  
 KNbO<sub>3</sub>, soft ferroelec. mode, IR reflectivity meas. 2-31417  
 K<sub>4</sub>P<sub>2</sub>S<sub>8</sub>·2H<sub>2</sub>O, vibr., normal coordinate anal. of anion, IR and Raman study 2-2240  
 K<sub>2</sub>SO<sub>4</sub>, phase transition, IR study 2-21293  
 KTa<sub>1-x</sub>Nb<sub>x</sub>O<sub>3</sub>, ferroelec., deviation from Curie-Weiss law at high temp., IR refl. spectra 2-31479  
 KTaO<sub>3</sub>, incipient ferroelectrics, temp. depend. of OH stretching mode 2-31478  
 $\alpha$ -K<sub>2</sub>Y(MoO<sub>4</sub>)<sub>3</sub> crystals, structural characts. 2-50605  
 K<sub>4</sub>(Mo(CN)<sub>8</sub>)<sub>2</sub>·2H<sub>2</sub>O, normal calcs. of [Mo(CN)<sub>8</sub>]<sup>4-</sup>, IR and Raman study 2-31489  
 La phosphites, solubility diagrams and thermal decomp. 2-31685  
 LaB<sub>6</sub>, characteristics of conduction electrons, optical study 2-9161  
 LaGaO<sub>3</sub>, perovskite struct., vibr., IR and Raman study (French) 2-41360  
 La<sub>1-x</sub>Nd<sub>x</sub>MgAl<sub>10</sub>O<sub>19</sub>, prep., struct., optical and mag. props. 2-31619  
 LiCe(PO<sub>3</sub>)<sub>4</sub>, cryst. struct. and IR spectra 2-22202  
 LiCl glasses, visible absorpt. band of trapped electrons between 4 and 100K 2-13526  
 LiF, IR spectra, isotope induced one phonon absorpt. coeff. meas. 2-46562  
 LiF, spectra and lasing props. of colour centres (Chinese) 2-9174  
 LiGaO<sub>3</sub>, IR active modes, absolute Raman cross-sections and effective charge parameters 2-2277  
 LiKSO<sub>4</sub>, weakly IR active modes detection, optical rot. meas. 2-46535  
 LiNaSO<sub>4</sub> with <sup>6</sup>Li and <sup>7</sup>Li, Raman and IR reflectivity spectra 2-41342  
 LiNbO<sub>3</sub>:Fe, thermal fixing of holograms, evidence for mobile H<sup>+</sup> ion mechanism 2-24979  
 LiNdP<sub>4</sub>O<sub>12</sub> crystals, IR spectrum, structural props. (Chinese) 2-17454  
 LiVO<sub>3</sub>, single cryst. prep. and opt. props. 2-41511  
 LiYF<sub>4</sub>:Nd<sup>3+</sup> energy levels, high resolution absorpt. spectra 2-9141  
 Mg(ClO<sub>4</sub>)<sub>6</sub>·6H<sub>2</sub>O, librational modes of water and phase transitions, IR spectra study 2-46596  
 MgO:C, IR spectra, effect of C surface layer (German) 2-26942  
 MgO:C, IR spectrum of OH-compensated defect 2-51634  
 MgO:H<sup>+</sup>, vibr. due to H<sup>+</sup> ion, IR spectra study 2-46606  
 Mn complex, bis(propylammonium)tetrachloromanganate, phase transitions, vibr., IR study 2-31488  
 MnAs, ferromagnetic, optical. props. and band struct. (Russian) 2-13504  
 Mo black film, CVD, of high IR reflectance and significant solar absorptance 2-22655  
 Mo complex, cis-Mo(t-BuS)<sub>2</sub>(t-BuNC)<sub>4</sub>, struct., X-ray diff., <sup>1</sup>H and <sup>13</sup>C NMR, UV-visible and IR spectra 2-50593  
 MoO<sub>3</sub> and suboxides, diffuse reflectance meas. 2-2311  
 n-GaAs, far IR two-photon transitions, magnetophotocond. 2-13126  
 NH<sub>3</sub>, isotope effects, vibr. spectra, H exchange rates, IR and Raman study 2-36623  
 NH<sub>3</sub>·H<sub>2</sub>O, isotope effects, vibr. spectra, H exchange rates, IR and Raman study 2-36623  
 NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>, overdamped modes at 300K in IR refl. spectra 2-51597  
 (NH<sub>4</sub>)<sub>2</sub>P<sub>2</sub>S<sub>8</sub>·2H<sub>2</sub>O, vibr., normal coordinate anal. of anion, IR and Raman study 2-2240  
 N<sub>2</sub>O<sub>4</sub>, solid, Raman and IR spectra 2-2266  
 Na fluorophosphate glasses, struct., spectral luminesc. characteristics 2-26984  
 NaBF<sub>4</sub>(NaBH<sub>4</sub>) complex with polyethylene oxide, ionic cond., IR and Raman spectra study 2-16892  
 NaCN·2H<sub>2</sub>O, CN orientational disorder, IR spectra 2-5666  
 NaCaHSiO<sub>4</sub>, Raman and IR vibr. spectrum and structural ordering 2-36633  
 Na<sub>2</sub>Ca<sub>2</sub>[HSiO<sub>4</sub>]<sub>2</sub>·PO<sub>4</sub>, optimal form. conditions and characteris. 2-51838  
 NaCe(PO<sub>3</sub>)<sub>4</sub>, cryst. struct. and IR spectra 2-22202  
 NaCl:Yb<sup>3+</sup>, IR luminesc. and absorpt. spectra of 4f<sup>14</sup>→4f<sup>13</sup>5d transition 2-51668  
 Na<sub>2</sub>Mg<sub>1-x</sub>Cu<sub>x</sub>Si<sub>2</sub>O<sub>30</sub>, ESR and diffuse refl. spectra, ZZ to 298K (French) 2-41186  
 NaNO<sub>3</sub>, cryst. and melt, NO<sub>3</sub><sup>-</sup> ion anharmonicity oscils. 2-31498  
 Na<sub>2</sub>Nb<sub>1-x</sub>Cr<sub>x</sub>(PO<sub>4</sub>)<sub>3</sub> solid soln., ionic cond., X-ray diff., IR absorpt., Raman scatt. 2-16870  
 NbN superconducting thin films, far IR spectroscopy, transmission data 2-36655

## infrared spectra of inorganic solids continued

- Nd salt adducts with N,N-dimethyl-diphenyl phosphinamide, absorpt. and emission spectra 2-17464  
 NdAlO<sub>3</sub>, IR spectra, vibr. anal., force field and pot. energy distrib. (French) 2-26912  
 Nd<sub>3</sub>Ga<sub>2</sub>O<sub>12</sub>, IR and Raman study (French) 2-41361  
 Ni, modulation temp. spectroscopy of elementary excitations 2-31462  
 Ni<sup>2+</sup> complex, nickel antipyrine, cryst. field parameters, IR and visible absorpt. spectra 2-17479  
 Ni<sup>2+</sup> ions in crystals, optical spectra, covalency effects 2-22050  
 Ni<sub>2</sub>Cu<sub>1-x</sub>, modulation temp. spectroscopy of elementary excitations 2-31462  
 NiI<sub>2</sub>, crystal field and spin-orbit coupling, near IR d-d transitions study 2-22022  
 NiI<sub>2</sub>, lattice vibr., polarised far IR reflection spectra study 2-17473  
 Ni(II) complex with 3-nitroaniline, IR and electronic spectra, mag. and cond. meas. 2-26911  
 NiO, antiferromagnetic, absorpt. spectrum fine struct. 2-36652  
 NiSiF<sub>6</sub>·6H<sub>2</sub>O(6D<sub>2</sub>O), vibrational fine struct. in optical spectra 2-17463  
 NiTiF<sub>6</sub>·6H<sub>2</sub>O(6D<sub>2</sub>O), vibrational fine struct. in optical spectra 2-17463  
 OH<sup>-</sup> in crystal, local electric field and donor-acceptor bond effect on internal vibr. freq. 2-16739  
 P<sub>2</sub>S<sub>3</sub>, IR absorpt. spectrum, temp. depend. 2-22023  
 P<sub>2</sub>S<sub>9</sub> in P<sub>2</sub>S<sub>10</sub>, vibrational spectra, IR and Raman, by laser spectrophotometry 2-2276  
 P<sub>2</sub>S<sub>x</sub> (x=3, 5, 7, 9, 10), vibrational spectra, IR and Raman, by laser spectrophotometry 2-2276  
 (Pb,Ba)Ge<sub>2</sub>O<sub>6</sub>, ferroelec., cryst. struct. and props. 2-46492  
 (Pb,Sr)Ge<sub>2</sub>O<sub>6</sub>, ferroelec., cryst. struct. and props. 2-46492  
 Pb chalcogenides, strongly compensated, Hall effect and absorpt. spectra 2-5422  
 PbGeGe<sub>2</sub>O<sub>4</sub> single crystals, growth and certain props. 2-36774  
 $\alpha$ -,  $\beta$ -,  $\gamma$ -PbGeGe<sub>2</sub>O<sub>6</sub>, polymorphism, growth and certain props. 2-50609  
 PbGe<sub>2</sub>O<sub>6</sub>, ferroelec., cryst. struct. and props. 2-46492  
 Pb<sub>3</sub>(Ge<sub>1-x</sub>Si<sub>x</sub>)<sub>2</sub>O<sub>11</sub>, ferroelec. crystals, X-ray spectroscopic and dielec. studies 2-21109  
 Pb<sub>1-x</sub>Ge<sub>x</sub>Te, optical props. in rhombohedral and cubic phases 2-31481  
 PbO-SiO<sub>2</sub> (61.8 mol.%) glass, first row transition element impurities, optical and mag. props. 2-41383  
 PbO-SiO<sub>2</sub> glass, Raman and IR invest. 2-26891  
 p-Pb<sub>0.97</sub>Sn<sub>0.03</sub>Se, IR absorpt., 2 to 15  $\mu$ m 2-41347  
 p-PbTe and Pb<sub>0.9</sub>Sn<sub>0.1</sub>Te, electronic and lattice props., intra-band magnetooptics study 2-22001  
 PbTe:Ti, elec. and optical props. at high impurity conc. 2-40948  
 Pd complex, palladium (II) nitrosyl acetate-methylene chloride, cryst. struct. 2-35460  
 Pd surface, adsorbed, NO(NO-CO)(NO-O<sub>2</sub>), IR spectra, thermal desorption and XPS study 2-50997  
 Pd-H system, H induced charges in electronic struct. thermorefectance meas. 2-41337  
 (Pd(NH<sub>3</sub>)<sub>4</sub>)<sup>2+</sup> and (Pd(ND<sub>3</sub>)<sub>4</sub>)<sup>2+</sup>, vibr. spectra, normal coord. anal. 2-31511  
 PrCrO<sub>4</sub>, monoclinic form, charact., X-ray powder diagrams and IR spectrum 2-5088  
 PrGaO<sub>3</sub>, perovskite struct., vibr., IR and Raman study (French) 2-41360  
 Pr<sub>2</sub>Ga<sub>2</sub>O<sub>12</sub>, IR and Raman study (French) 2-41361  
 Pt [001] and [111], chemisorption of CO, coupling induced vibr. freq. shifts and island size determ., book contrib. 2-41372  
 Pt, optical absorpt. and photocond. meas. (Russian) 2-13505  
 (Pt(NH<sub>3</sub>)<sub>4</sub>)<sup>2+</sup> and (Pt(ND<sub>3</sub>)<sub>4</sub>)<sup>2+</sup>, vibr. spectra, normal coord. anal. 2-31511  
 RbBr:Eu<sup>2+</sup>, thermoluminesc., fluoresc., and optical absorpt. meas., luminesc. mechanism 2-27002  
 RbCl(Br)(I):ReO<sub>4</sub><sup>-</sup>, IR and Raman spectra, ReO<sub>4</sub><sup>-</sup> ion orientation 2-13517  
 RbNO<sub>3</sub>, cryst. and melt, NO<sub>3</sub><sup>-</sup> ion anharmonicity oscils. 2-31498  
 Rh, optical cond., optical spectra and band struct. (Russian) 2-21964  
 RhGe<sub>1-x</sub>Si<sub>x</sub>(Se<sub>1-x</sub>), far IR lattice vibr. spectra 2-31491  
 SbSI, soft mode, temp. depend. in paraelec. phase, IR refl. study 2-31419  
 Se phosphites, solubility diagrams and thermal decomp. 2-31685  
 Se amorphous film, vapour deposited, optical loss as meas. of crystallinity 2-36724  
 Si, amorphous, ion implanted, refractive index, thermal annealing effects 2-51537  
 Si, Czochralski grown, heat treated, O precipitation, C-O nucleation centres, IR spectra study 2-50861  
 Si, Czochralski-grown, high temp. annealed, octahedral precipitates 2-2514  
 Si epitaxial layers, IR reflectance spectra for layer thickness meas. 2-22106  
 Si film, implanted, CW laser-induced solid phase epitaxy dynamics, time-resolved reflectivity meas. 2-45791  
 Si, IR laser radiation scatt. study of local inhomogeneities 2-22033  
 Si, ion implanted, amorphous, ultrashort pulse laser annealing 2-45266  
 Si, ion implanted, laser annealing, time-resolved Raman scatt. and transmission meas. 2-46616  
 Si, laser-induced amorphous, adsorpt. of O, expt. study 2-45268  
 Si, oxidation by ion implantation and laser irradiation 2-16675  
 Si, proton bombarded, annealing IR spectroscopy and X-ray topography study 2-1531  
 n-Si, pulsed-laser irradi., time-resolved optical transmission and refl. meas. 2-46636  
 Si, spectral transmission, selection rel. to optical component manufacture 2-988  
 Si:As, dopant distrib., sheet resist., spreading resist, junction depth, SIMS, and IR spectra meas. 2-12624  
 Si:As, implanted, CW laser annealed, real-time monitoring of opt. props. 2-46617  
 Si:C, O, role of C in precipitation of O, IR and DLTS studies 2-21315  
 SiC<sup>+</sup>(N<sup>+</sup>)(O<sup>+</sup>), formation of SiC, Si<sub>3</sub>N<sub>4</sub> and SiO<sub>2</sub> by laser annealing 2-50675  
 Si:F, amorphous, structural model 2-45030  
 Si:F, sputtered amorphous coating, struct. model, expt. study 2-16593  
 a-Si:F:H, electrical, spectral and doping properties 2-45790  
 n-Si:Gd,  $\gamma$ - and electron-irradi., defect formation; elec. and optical study 2-21175  
 Si:H, amorphous, bonding struct. and H distrib. IR absorpt. and NMR meas. 2-40276  
 Si:H, amorphous, effect of annealing on optical gap 2-2211



**Infrared spectra of inorganic solids continued**

- Si:H, amorphous, glow discharge deposited, photoinduced absorpt., time resolved spectra 2-46801  
 Si:H, amorphous, plasma deposition, impurity doping, substrate pot. effect 2-40724  
 Si:H, amorphous, ultrashort laser pulse annealing, expt. study 2-21170  
 Si:H, amorphous film, struct. evolution during annealing 2-45035  
 Si:H, amorphous film, X-ray study of atomic struct. 2-45034  
 Si:H, amorphous films, optical props. 2-36727  
 Si:H, amorphous hydrogenated, reactive laser evaporation, elec. and optical props. 2-2456  
 Si:H, amorphous ion beam deposited coating, prep. and props. 2-40723  
 Si:H, amorphous plasma deposited coating, IR and electron spectra and oxidation, polysilane analogue 2-41351  
 Si:H, amorphous RF magnetron sputtered coating, elec. and optical props. 2-40727  
 Si:H, amorphous RF sputtered coating, IR 2000  $\text{cm}^{-1}$  absorpt. band and photoelectronic props. 2-41353  
 Si:H, Cl amorphous films, IR vibr. spectra 2-36630  
 Si:H, Cl glow discharge films, amorphous, optical characts. and photoluminesc. 2-31546  
 Si:H, crystalline, reactive sputtering fabrication, struct. study by X-ray diff. and optical spectra 2-1792  
 Si:H, implanted, vibrational spectra 2-41354  
 Si:H, microcryst. plasma deposited coating, elec. cond. and optical absorpt. 2-46165  
 Si:H, O sputtered films, amorphous, optoelectronic props., effect of O 2-41443  
 Si:H,B amorphous film, elec. props., optical props. 2-46176  
 Si:H,B(P), amorphous, IR and far IR absorpt., annealing effect 2-36628  
 Si:H,N(O), amorphous glow discharge film, elec. cond. and photocond.,  $\text{N}_2(\text{O}_2)$  doping effect 2-40733  
 $\alpha$ -Si:H,O, RF sputtered,  $^{15}\text{N}$  ion irradi., H effusion 2-5161  
 Si:H amorphous film, photoacoustic spectroscopy, optical consts. determ. 2-2355  
 Si:H amorphous film deposition by Penning glow discharge of SiH<sub>4</sub> 2-41528  
 Si:H amorphous films for electrophotographic appl., photoelec. props. 2-46168  
 Si:H amorphous plasma deposited coating, elec. and optical props., RF power and growth temp. depend. 2-40729  
 Si:H amorphous plasma deposited coating, IR spectra, temp. depend. 2-41352  
 Si:H film, amorphous plasma deposited, RF power and reactant gas press. effect 2-21458  
 a-Si:H film, low optical absorption, annealing studies, photoacoustic spectroscopy meas. 2-36718  
 a-Si:H film, optical absorption spectra, photocurrent signal, waveguiding technique 2-36720  
 a-Si:H films, sub-gap and band edge optical absorption, photothermal deflection spectroscopy 2-36717  
 Si:H films, vibr. props. study 2-46798  
 Si:In, IR absorpt. calibration using neutron transmutation 2-26939  
 Si:N amorphous film, elec. and optical props. 2-17074  
 Si:O, Czochralski grown, precipitated O redissolution, expt. study 2-50860  
 Si:P CVD layers, refr. index, absorption coeff., free carrier model 2-31577  
 Si:Rh, photoconductivity at 4.2K 2-40969  
 Si:Se, diffused and mass transported, IR absorpt. spectra 2-1854  
 Si:Te, donor levels, excited states, junction space-charge, IR absorption and ESR meas. 2-26323  
 Si-F-H amorphous film, Schottky-barrier and MIS solar cell appls. 2-37344  
 Si-Ge alloys, Si rich, for IR detectors, elec. and optical meas. 2-21628  
 Si-SiO<sub>2</sub> interface,  $\text{Na}^+$ -bound electrons, IR absorption study 2-51273  
 SiC submillimeter grains IR spectra, comparison with C star spectra 2-10408  
 SiC thin layers formed by C ion implantation in Si, struct. and annealing props. 2-8733  
 SiC:N(6H) IR photoexcitation spectra of donor centres, effective masses 2-51639  
 Si,C,F<sub>2</sub> amorphous films, reactive RF sputtering prep., optical and comp. props. 2-51727  
 Si<sub>1-x</sub>Ge<sub>x</sub>:H film, amorphous, ESR and IR studies 2-26740  
 (SiH<sub>2</sub>)<sub>n</sub> and (SiH)<sub>n</sub>, polysilanes, IR and electron spectra, a-Si:H analogue 2-41351  
 Si<sub>3</sub>N<sub>4</sub>, hot-pressed, study of oxidation with IR reflection spectroscopy 2-2603  
 a-Si<sub>3</sub>N<sub>4</sub>:H, wide optical-gap, photoconductive, elec. and optical props. 2-26439  
 SiO<sub>2</sub> films, amorphous, DC reactive sputtering prep., anomalous phys. props. 2-30764  
 SiO<sub>2</sub>, fused, D<sub>2</sub> treated, IR transmission spectra 2-51571  
 SiO<sub>2</sub> layer, on Si, IR optical props. under weak modulation fields 2-31455  
 SiO<sub>2</sub> layer on Si, remote-resonance spectra 2-26920  
 SiO<sub>2</sub>, plasma-deposited, charact. 2-9278  
 SiO<sub>2</sub>, precipitated, X-ray diff. and IR absorpt. obs. 2-36620  
 SiO<sub>2</sub>, vitreous, additional absorpt. spectrum after heat treatment, structural fragment of SiO<sub>2-x</sub> comp. 2-13491  
 SiO<sub>2</sub>:TiO<sub>2</sub>, highly dispersed, IR spectra obs. of struct. conversions 2-17457  
 Si<sub>2</sub>ON<sub>2</sub>: IR thermography meas. of emissivity, parameters influence (French) 2-36639  
 SrAs, IR study of phonons and free carriers 2-36627  
 Sr,Nb,O<sub>3</sub>, single crystals, optical props. 2-26887  
 SrO, CO adsorpt., IR spectra study 2-707  
 SrO:H<sup>+</sup>, vibr. due to H<sup>+</sup> ion, IR absorpt. spectra 2-46606  
 SrTiO<sub>3</sub>, incipient ferroelectrics, temp. depend. of OH stretching mode 2-31478  
 SrTiO<sub>3</sub> single crystals, 3d and 4f ion activated, absorpt. spectra and  $\gamma$ -radiation stability 2-46646  
 T<sub>2</sub>, solid, Stark shift radiation-induced IR spectra 2-36612  
 TeO<sub>2</sub>-ZnCl<sub>2</sub>-BaO(Na<sub>2</sub>O)(WO<sub>3</sub>) glasses, opt. consts. and spectral props. 2-13444  
 Th complex of tetrakis ( $\beta$ -ketophosphonato), IR, Raman,  $^1\text{H}$ ,  $^{13}\text{C}$  and  $^{31}\text{P}$  NMR spectra 2-26913  
 Ti<sub>1-x</sub>S<sub>x</sub>, transport and optical props. 2-1932  
 TiBr high-frequency phonon detec. using time-resolved far-IR laser spectroscopy 2-41373

**Infrared spectra of inorganic solids continued**

- TiBr(Cl), for IR and Raman scatt. spectra due to two phonon processes 2-9144  
 TiCl high-frequency phonon detec. using time-resolved far-IR laser spectroscopy 2-41373  
 TiCl(Br), phonon difference absorpt. for detection of acoustic zone-boundary phonons 2-45449  
 TiGaS<sub>2</sub>(Se<sub>2</sub>) layer cryst., IR reflectivity spectrum 2-36636  
 TiInS<sub>2</sub> layer cryst., IR reflectivity spectrum 2-36636  
 TiInSe<sub>2</sub>, long-wavelength absorption and photoconductivity edges 2-21635  
 VO, optical props., 0.1 to 3 eV, rel. to electronic struct. (Russian) 2-21965  
 V<sub>2</sub>O<sub>5</sub>, amorphous, hydration process, IR and Raman study 2-51578  
 V<sub>2</sub>O<sub>5</sub>PO<sub>3</sub>F<sub>2</sub>, prep., IR and Raman spectroscopy (French) 2-12488  
 V,Ti<sub>1-x</sub>Se<sub>2</sub>, thermo-optical response in plasmon region 2-36610  
 W(100) chemisorption of H, IR study by surface EM wave spectroscopy 2-26220  
 Y phosphites, solubility diagrams and thermal decomp. 2-31685  
 Y<sub>2</sub>Fe<sub>2</sub>O<sub>7</sub>:Ru, angular variation of mag. linear dichroism 2-21992  
 YIG:Ca film, mag. linear dichroism, stability of Fe<sup>4+</sup> centre 2-21991  
 YFeCuSi<sub>2</sub>, valence fluctuation cpds., optical struct. near 20 meV 2-9152  
 Zn complex, 3,3'-thiodipropionic-Zn(II), struct., mag. susceptibility, IR and electronic spectra 2-5664  
 Zn complex, hexakis (pyridine N-oxide) zinc (II) salts, reaction with alkali halides used in IR spectroscopy 2-41895  
 Zn, reflectance spectrum meas. 2-2306  
 Zn<sub>3</sub>As<sub>2</sub>, thin film and single cryst., band gap, absorpt. spectra and refl. meas. 2-26926  
 ZnB<sub>2</sub>O<sub>4</sub>-CdB<sub>2</sub>O<sub>4</sub>-PbF<sub>2</sub>, spectral luminesc. study 2-26985  
 Zn(ClO<sub>4</sub>)<sub>2</sub>.6H<sub>2</sub>O, librations, Raman scatt. and IR absorpt. 2-2273  
 Zn(ClO<sub>4</sub>)<sub>2</sub>.6H<sub>2</sub>O, librational modes of water and phase transitions, IR spectra study 2-46596  
 ZnCs<sub>2</sub>(SO<sub>4</sub>)<sub>2</sub>.6H<sub>2</sub>O:Ni<sup>2+</sup>, vibr., spin-orbit interactions, IR study 2-2322  
 (Zn<sup>2+</sup>Fe<sup>3+</sup>)<sub>1-x</sub>(Fe<sup>3+</sup>)<sub>1/3</sub>+□<sub>(1-x)/3</sub>BO<sub>4</sub><sup>2-</sup>, oxidation to defect phase  $\gamma$  and hematite, IR absorpt. study 2-22018  
 ZnGeP<sub>2</sub>, IR absorpt., brightening effect, heat treatment effects 2-36654  
 ZnO microcryst., IR spectrum, electronic and vibr. effect under different temp. and environmental conditions 2-46573  
 ZnO opacified glazes, liquation rel. to crystn. 2-25747  
 Zn<sub>3</sub>P<sub>2</sub>, reflectivity spectra, Kramers-Kronig anal. 2-26937  
 ZnS<sub>2</sub>Se<sub>2-x</sub>, polycryst., prepared by CVD, struct. and optical props. 2-45769  
 ZnSe, uncoated, photoacoustic chopping freq. expt., surface and bulk absorpt. coeffs. 2-46553  
 ZnSe:Al, Li, IR absorpt. of Al-Li defect pairs 2-9169  
 ZnSe:Cu, defect accumulations 2-5667  
 ZnSe:Ni, optical absorpt. spectra and photocapacitance meas. 2-13518  
 Zn<sub>2</sub>SiO<sub>3</sub>-Be<sub>2</sub>SiO<sub>4</sub> system, Mn-activated solid soln. form and characts. 2-40552  
 Zr complex, ZrCl<sub>4</sub>-acetonitrile-d<sub>0</sub>(-d<sub>3</sub>), vibr., force consts., IR and Raman study 2-2239  
 ZrF<sub>4</sub> IR fluoride glass, multiphonon absorption 2-49847  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub>, influence of processing conditions of IR edge absorpt. 2-5680  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub>, influence of processing conditions of IR edge absorpt. 2-13475  
 ZrO<sub>2</sub>:Y, IR multiphonon absorpt. 2-46578  
 ZrS<sub>3</sub> layer compound, IR, Raman, reson. Raman spectra and valence force field 2-31472  
 ZrSe<sub>3</sub>, IR spectra and reflectivity 2-5665

**Infrared spectra of organic molecules and substances**

- see also molecular rotation  
 1,2-dichloroethane, gauche, press. effect on conform., Raman and IR spectra 2-29605  
 acetates, phase transformations, thermal decomp., IR study 2-41893  
 acetic acid, adsorpt. on rutile immersed in n-heptane, IR obs. 2-41350  
 acetic acid, chloro substituted, soln. and gas phase, rot. isomerism, IR obs. 2-39404  
 acetic acid, solns., IR absorpt. spectra, solvation effect 2-29594  
 acetic acid+ion interactions, IR spectrosc. obs. 2-11476  
 acetone, vibr. modes, IR intensities meas. 2-49402  
 acetone solvation in fluid and aq. systems, IR spectra study 2-8407  
 acetophenone+HCl(HBr), interactions, form. consts., IR obs. 2-31901  
 acetylene, absorption spectrum, Q-branches, 9366 and 9407  $\text{cm}^{-2}$  bands 2-34410  
 acetylene (-d<sub>1</sub>)(-d<sub>2</sub>), IR intensities and electrooptical param. 2-34462  
 acetylenes, substituted, electronic interactions, CH stretching vibrs., IR band intensities investig. 2-709  
 acrolein, vibr. freq., force field, CNDO/2 calcs., IR and Raman obs. 2-29590  
 acrylic polymers with biphenyl fragments in side branchings, cryst. and liq. cryst. struct. (Russian) 2-21047  
 alcohols, glassy, localised electron spectra evolution gamma irradi. at 4K 2-13513  
 alcohols, hydrogen bonding with mono- and di-carbonyls, IR spectra 2-29727  
 alkali methoxides, methanolic soln., IR and NMR spectrosc. characts. (French) 2-39396  
 n-alkane:urea clathrates, vibr. band shapes of C-H stretching modes 2-17493  
 n-alkanes, crystal, phase transitions and nonplanar conformers 2-30597  
 alkenes chemisorpt. on BPO<sub>4</sub>, IR spectra 2-26900  
 p-n-alkoxybenzoic acids, IR, far IR, Raman, and thermodynamic studies of solid, mesomorphic, and isotropic phases 2-22021  
 alkyl-cyanobiphenyls, order parameter determ. in nematic phase using far IR spectroscopy 2-13493  
 bis-(alkylammonium) tetrahalogen metallates(II), phase transition, IR spectra 2-29592  
 alkylammonium halides, phase transition, IR spectra 2-29592  
 alkylureas, amide absorpt. bands shifts rel. to electronic struct., IR obs. 2-29593  
 allene, Fermi resonance, Coriolis interaction, IR obs. 2-49405  
 allene-d<sub>8</sub>,  $\nu_7$  band, mol. consts., high resolution IR obs. 2-704  
 alloxan-d<sub>0</sub>(-d<sub>3</sub>), force consts., vibr., bonds, normal coord. anal., IR study 2-41363  
 amino acids, 3-tropane,3-granatane and 3-bicyclo(3.2.1)octane epimeric, IR and  $^1\text{H}$  NMR spectra 2-24704  
 amino acids, far IR spectroscopic obs. 2-52435



## infrared spectra of organic molecules and substances continued

- anthracene and derivatives, electronic absorpt. spectra in soln., rel. to assoc. 2-34407  
aromatic esters adsorption on silica immersed in carbon tetrachloride, IR spectra study 2-2231  
arsabenzene, IR and Raman spectra 2-51573  
7-azaindole, self-assoc. in nonpolar solvents 2-41884  
azulene<sup>+</sup>+azulene (Ar), collisional energy transfer, IR fluoresc. obs. 2-34467  
benzene adsorbed on Pt-Al<sub>2</sub>O<sub>3</sub>, Fourier transform IR spectroscopy, evidence for  $\pi$ - and  $\sigma$ -bonded chemisorbed species 2-40694  
benzenes, substituted, mirror symmetry loss in IR spectra 2-20053  
benzoic acid pyridine N-oxide derivative complexes, IR spectra 2-26907  
benzonitrile derivatives, C $\equiv$ N stretching mode, IR intensities, substituent effects 2-39318  
benzophenone, far IR spectrum 2-4286  
benzophenone+HCl (HBr), interactions, form. const., IR obs. 2-31901  
benzothiazole substituted in position 2, IR vibr. bands, electronic interactions (French) 2-24705  
benzoylformic acid, soln. cryst. and glassy state dipole moment, IR spectra, dielectric const. 2-17388  
N-benzylaniline in several solvents, molecular flexibility, H bonding study (Japanese) 2-24752  
beryllium acetate, vibr. struct., IR and Raman study 2-13486  
beryllium formate, vibr. struct., IR and Raman study 2-13486  
bicyclopentyl, liq. and solid, vibr., force const. CNDO calcs., IR and Raman study 2-31485  
bis(n-alkylammonium) tetrabromozincates, thermal behaviour and liq. cryst. phases 2-50532  
bis(triethylammonium)hexachlorostannate, struct., H-bonds, IR spectra 2-21125  
blood proteins, adsorption kinetics, Fourier transform IR spectroscopy 2-52422  
2-bromoethanol isolated in Ar matrices, IR induced rotamerisation 2-43898  
bromoform, IR bandshape of  $\nu_s$ (CH) 2-7602  
bromoform, mol. rot. and spectral band shape in high press. gases 2-43909  
bromomethane, isotopically substituted, crit. considerations of penetrations in IR spectra 2-39398  
bromomethane, microwave and far-IR spectra with Mori continued fraction, moment analysis of dipolar absorpt. 2-29568  
bromomethane-d<sub>3</sub>, x-y Coriolis perturbation in  $\nu_4$  band 2-24672  
(bromomethyl)cyclopropane, vibr. spectra and conform. 2-49435  
1-bromonaphthalene, microwave and far-IR spectra with Mori continued fraction, moment analysis of dipolar absorpt. 2-29568  
bromotrifluoromethane, isotope shifts, rot. struct., IR obs. 2-49404  
butylamine-isocobols, mixtures, excess volumes, compressibilities, ultrasonic and IR study 2-26893  
para-di-t-butylbenzene, intramol. reorientation and thermal history H-bonds, <sup>1</sup>H spin-lattice relax., IR spectra 2-36461  
t-butylperoxyvalate, decomp., high press. and temp., kinetics, IR obs. (German) 2-41899  
n,n'-di-t-butylphenol (n,n')=(3,5), (2,6) or (2,5), intramol. reorientation and thermal history H-bonds, <sup>1</sup>H spin-lattice relax., IR spectra 2-36461  
2-butyne, IR intensities and electrooptical param. 2-34462  
d-camphor, crystalline, order-disorder transition, far IR spectrum obs. 2-31482  
n-carboxylic acid, IR vibr. spectra (Russian) 2-22035  
2-carboxyphenylazo- $\beta$ -naphthylamine, pH meas. visible, UV and IR obs. 2-9588  
 $\beta$ -carotene, doped, highly conducting, Raman and IR spectra 2-2280  
cement, K-400, interaction with pyroceramic and quartz, MFTIR IR spectra obs. 2-49840  
chiral molecules, mag. vibr. circular dichroism, IR spectra 2-743  
chitosan films, solid state characterisation of struct. 2-25756  
chloral, and derivatives, IR and Raman spectra, vibr. assignments 2-41345  
5-chloro-2-methoxyaniline, vibr., IR obs. 2-49400  
1-chloro-2-methylpropene, microwave, IR and Raman spectra 2-20040  
3-chloro-4-methoxyaniline, vibr., IR obs. 2-49400  
chlorodifluoromethane, IR multiphoton energy deposition, dissoc. 2-702  
chloroform-aliphatic nitrile complexes, IR absorpt. integrated intensities, ab initio and MO calcs. 2-29591  
chloromethane, rovir. study by IR spectra (French) 2-34405  
chloropentafluoroethane, isotopically selective dissoc. in two strong IR laser fields 2-29664  
cholesteric liquid crystals, vibrational spectra in solid phase, rel. to cholesteric phase 2-46597  
3-coumarin ethyl carboxylate, IR and Raman spectra, vibr. assignments 2-29583  
crotonaldehyde, IR and Raman spectra, vibr. anal., CNDO/2 calc. 2-34399  
crown ethers-Th salts complexes, IR spectra (Chinese) 2-20049  
crown ethers-U salts complexes, IR spectra (Chinese) 2-20049  
Cu complexes, bis(ethyl acetoacetato) with thiourea and substituted thioureas, IR and electronic spectra 2-4272  
cubane vibr. IR and Raman spectra 2-34378  
cyanine dyes, trinuclear, symm., chem. and photographic props. 2-52232  
cyanoacetylene, diode laser IR spectrum of  $\nu_2$  band at 5  $\mu$ m 2-39402  
cyanobutadiene, IR spectrum detection 2-11484  
cyclohexane, liqs., rot. and vibr. relax., IR spectra 2-49416  
cyclohexane adsorbed on Pt-Al<sub>2</sub>O<sub>3</sub>, Fourier transform IR spectroscopy, evidence for  $\pi$ - and  $\sigma$ -bonded chemisorbed species 2-40694  
cyclohexanone+HCl(HBr), interactions, form. const., IR obs. 2-31901  
decamethylmetalocene dicarbonyls, synthesis, spectra, mol. struct. 2-799  
di(methylammonium)hexachlorostannate, crit. phase transition, calorimetric and IR study 2-1608  
di(tetramethylammonium)uranyl tetrachloride, electronic and vibr. spectra 2-31493  
di- $\mu$ -benzene thiolato-bis (dicarbonyl) iridium I, CO groups, vibr. model (French) 2-40499  
di-p-phenolate-thianium dihydrate, X-ray cryst. struct. study and IR spectroscopy 2-25861  
diatomic molecules, multiphoton IR absorption, surface-of-section anal. in classical theory 2-44022  
1,2-dibromo-2-methylpropane, vibr. anal., IR and Raman spectra 2-51575  
2,5-dibromo-nitrobenzenes, vibr. assignments in IR spectra 2-29584  
1,2-dibromoethane, gauche, press. effect on conform., Raman and IR spectra 2-29605

## infrared spectra of organic molecules and substances continued

- 1,6-dicarborane, vibr. spectra and struct. 2-49434  
1,2-dichloro-2-methylpropane, vibr. anal., IR and Raman spectra 2-51575  
3,4-dichloro-nitrobenzenes, vibr. assignments in IR spectra 2-29584  
 $\alpha,\alpha'$ -dichloro-p-xylene, pyrolysis, struct. and polymerisation, electronic and IR spectroscopy (Russian) 2-22443  
dichloroacetic acid, dimerisation, spectrosc. obs. 2-52197  
2,4-dichlorobenzotrifluoride, liq. phase, vibr., IR study 2-26894  
2,4-dichlorobenzoylchlorides, IR vibr. spectra in liq. and soln. phase 2-29585  
dichlorodifluoromethane, Freon-12, force const. and mean vibr. amplitudes, IR spectrum anal. 2-695  
dichloroketene, form. by photolysis of dichlorovinylene carbonate, Ar matrix isolated IR obs. 2-13985  
difluorocarbene, (X $\sim$ A<sub>1</sub>) state,  $\nu_1$  band, rot. const., IR obs. 2-34395  
1,2-difluoroethane, matrix isolated, IR hole burning with a tunable diode laser 2-49408  
diglycine sulphate, dielec. props. and vibr. spectra 2-36497  
dihalomethanes, IR overtone spectra, symm. effects 2-20058  
2,4-dihydroxyphenylazo-2'-hydroxybenzene, pH meas. visible, UV and IR obs. 2-9588  
 $\alpha,\alpha'$ -dilromo-p-xylene, pyrolysis, struct. and polymerisation, electronic and IR spectroscopy (Russian) 2-22443  
dimethyl (-d<sub>3</sub>)-(-d<sub>4</sub>), IR and Raman torsional spectra anal. 2-20069  
dimethylammonium cadmium tetrachloride, dichroism meas. in far IR 2-5655  
2,3-dimethylaniline, Raman and IR spectra 2-11491  
dimethylmalonate acid salt, in aq.-soln. symmetry and conformation (French) 2-1379  
dimethylphosphine adducts, IR and Raman vibr. spectra 2-36613  
N,N-dimethylpyrrolidinium fluoride dihydrate, H-bonds, low temp. IR spectra 2-43904  
dimethylselenide (-d<sub>3</sub>), IR spectra, vibr. assignments, torsional transitions 2-34400  
dimethylsulphone, mol. cryst., IR spectra, stretching vibr. band widths 2-13472  
N,N-dimethylthioacetamide, vibr., normal coordinate anal., IR and Raman obs. 2-4284  
dioxane-myristic acid-carbon tetrachloride system, IR spectra 2-5663  
diphenyllithium in ethereal solvents, struct., solvent effects 2-43903  
DMSO-HCl interaction, hydrogen bonding, biological props. and protonation, IR and Raman study 2-29607  
epibromohydrin, vibr. spectra and conform. 2-49435  
epoxy-sorbed water vapour interaction, Fourier-transform IR study 2-46572  
ethane, rot. levels, torsional splitting, IR obs. 2-34403  
ethane-1,1,1-d<sub>3</sub>, high resolution IR spectrum of rovir. levels 2-24695  
ethanol-water glasses, electron trapping at ultra-low temps. 2-13525  
ethanols, 2-substituted, H-bonding and conformation, <sup>1</sup>H NMR and IR spectra 2-34441  
ethyl acetate, adsorpt. on rutile immersed in n-heptane, IR obs. 2-41350  
ethyl cyanoacetate adsorption on silica in carbon tetrachloride, IR spectra study 2-706  
ethylene, IR absorpt. spectra and rot. param. 2-24698  
ethylene gas, selectivity emitting, radiative cooling 2-1286  
ethylene glycol-D<sub>2</sub>O glass-electron trapping at 6 and 72K, accumulated radiolysis effect 2-13483  
ethylene glycol-water glasses, visible absorpt. band of trapped electrons between 4 and 100K 2-13526  
ethylene-d<sub>0</sub>(-d<sub>4</sub>), rot. and vibr., isotope effects Fourier transform IR obs. 2-24686  
1,1-ethylene-d<sub>3</sub>, IR study of a-axis Coriolis interacting band system, vibr. and rot. parameters 2-34404  
ethylene-d<sub>4</sub> in liquid Kr, cryogenic opticoacoustic laser spectroscopy 2-17486  
ethylenes, substituted, electronic interactions, CH stretching vibr., IR band intensities investig. 2-709  
ethynyl radical, laboratory millimeter and submillimetre spectrum 2-32831  
fluorobenzene cation radicals, 1-3 methyl substituents, spectroscopy and decay dynamics 2-43901  
m-fluorobenzoic acid, mol. vibr., IR obs. 2-24689  
fluoromethane-d<sub>3</sub>, vibr.-rot. spectra, Q branch, K struct., IR obs. 2-20064  
fluoromethane, isotopic species, matrix isolated, IR absorpt. spectra 2-7558  
fluoromethane-d<sub>0</sub>(d<sub>3</sub>), Ar and Kr matrix isolated, rot., vibr., IR obs. 2-49401  
fluoromethane-d<sub>3</sub>, IR intensities, dipole moment derivatives sign determ. 2-39394  
formaldehyde, absorpt. coeff. at 3.508  $\mu$ m temp. and press. depend. 2-43902  
formaldehyde, high. resolution laser spectroscopy using He-Xe laser 2-11679  
formaldehyde-d<sub>3</sub>,  $\tilde{a}^1A_1$  state struct., rot. anal., IR obs. 2-20062  
formic acid, dimer and crystal, excited state proton tunnelling, fine struct., IR spectra 2-26886  
formic acid (-d<sub>3</sub>), gaseous, Raman spectra 2-39412  
formyl fluoride molecules, vibr.-rot. relax. investigation 2-4417  
Freon-13, IR spectrum in region 4.8 to 16  $\mu$ m 2-24691  
furan, IR and isotropic and anisotropic Raman band profiles, correl. functions 2-31469  
furan, IR and Raman spectra, rot. relax. 2-31468  
furan IR and Raman spectra, librational motions 2-26910  
glyoxal, vibr. freq., force field, CNDO/2 calcs., IR and Raman obs. 2-29590  
guanine, crystallisation under the influence of water, IR and UV absorpt. spectra 2-2354  
heptafluoriodopropane, laser multiphoton dissoc., IR absorpt. obs. 2-47366  
hexamethylenetetramine, solid phase, vibr. transitions, IR and Raman spectra (French) 2-51593  
Hofmann type inclusion cpd., Raman and IR spectra 2-2271  
hydrocarbons, adsorpt. on rutile, IR obs. 2-41349  
o-hydroxy benzaldehyde, IR absorpt. and electronic vapour absorpt. spectra 2-29586  
hydroxybenzonitrile, solid phase, isomers, vibr., IR and Raman study 2-26892  
ice, RF, microwave, visible and IR spectra, review 2-31587  
[IDL- $\alpha$ ]+glutamic acid, thermal decomp., IR study 2-41894



## infrared spectra of organic molecules and substances continued

in gas phase and in low-temperature matrices, tautomerism, IR spectra 2-7554  
 1-iodoacetylenes, complexes with Lewis bases, IR spectra study 2-11472  
 2-iodoethanol isolated in Ar matrices, IR induced rotamerisation 2-43898  
 iodoform, cryst., Raman and IR spectra, press. and temp. depend. 2-51577  
 isocyanic acid-d<sub>3</sub>,  $\nu_1$  fundamental bond, rot. and distortion consts., IR obs. 2-34390  
 ketones, anharmonicity of charact. vibr. mode of carbonyl group, overtone a- analysis (*French*) 2-4273  
 ketones, hydrogen bonding with mono- and di-carbonyls, IR spectra 2-29727  
 lactams, H-bond assoc., solvent and conc. study, IR obs. 2-4285  
 liquids, hydrogen stretching IR bands with strong H bonds, stochastic theory 2-34398  
 lithium acetylacetonate, dielec. behaviour and IR spectra 2-13390  
 lithium formate, parametric scatt. spectrum second-order vibrs. 2-46611  
 localised mol. orbitals, IR and Raman vibr. optical activity intensities, unified approach 2-15767  
 lutetium diphthalocyanine, electrochromism, IR, electronic, and ESR spectra 2-36603  
 MBBA, nematic film, with two free surfaces, IR study of mol. orientation 2-1388  
 membrane protein monolayer, hydrophobic, IR spectra and electron microscopy study 2-27785  
 mercaptobenzothiazole, IR spectra, effect of coupling between vibr. and H-bands, isotope effect 2-26885  
 metal cluster complexes containing  $\mu_2$ -bridging carbonyl ligand, IR spectra, vibr. freq. 2-43905  
 methacrolein, IR and Raman spectra, vibr. anal., CNDO/2 calc. 2-34399  
 methacryloyl fluoride, IR and Raman spectra, conformational props., torsional pot. functions, thermodynamic functions 2-43921  
 methane, band model, synthetic spectra, reproduction at planetary spectra 2-10344  
 methane, dipole moment function calc., overtone and combination bands intensities for  $\nu_3$  and  $\nu_4$  determ. 2-49591  
 methane, disulphoryl chloride-d<sub>0</sub>(-d<sub>2</sub>), liq. and solid phase, rot. isomerism, vibr., IR and Raman obs. 2-2242  
 methane, interacting upper states theoretical model 2-7536  
 methane, IR spectra, line assignments and intensities 2-11475  
 methane+He system, collision anisotropy, IR spectra study 2-15911  
 methane-d<sub>3</sub>,  $\nu_3$  band anal., IR absorpt. spectrum in range 7 to 11  $\mu\text{m}$  2-24692  
 methane-d<sub>4</sub>, ground state rot. consts., IR spectra (*French*) 2-43913  
 methanol, high resolution Fourier transform spectroscopy in far IR 2-39392  
 methanol, liq., OH stretching vibr. temp. depend., IR and Raman study 2-41348  
 methanol, X state existence near C-O stretch vibr., IR spectra 2-7538  
 methanol catalysts, adsorpt. of CO, FT-IR spectrosc. obs. 2-27487  
 methanol IR transitions, investigated using optoacoustic technique and Stark effect meas. 2-39634  
 methanol optically pumped around CO<sub>2</sub> 9R(10) and 10R(34) laser lines, high resolution IR-far IR spectroscopy 2-39630  
 methanol vibr. excited, dipole moment determ. by combined Stark effect and Lamb dip spectroscopy 2-49472  
 methinophosphide, vibr.-rot. bands, l-type resonance and doubling, isotope effects, IR obs. 2-705  
 methoxide, adsorbed on Cu (100), vibr. damping, IR spectra study 2-45707  
 methoxide adsorbed on Cu(100), CH stretch vibr., IR spectra 2-20051  
 methyl acetate, rot. isomerism, low temp. matrix IR study using thermal mol. beams 2-29576  
 methyl arsines, deuterated and substituted, CH stretching freq., bonds, IR obs. 2-39409  
 methyl bromide, rot. anal. of interacting IR bands 2-49413  
 methyl carbamate, IR spectrum, equilib. geometry 2-34402  
 methyl chloride,  $\nu_1 + \nu_3$  and  $\nu_1 + \nu_2$  IR bands, rot. struct. 2-4274  
 methyl chloride, rovibrational anal., IR obs. 2-717  
 methyl chloride,  $\nu_2$ -band intensity, isotope effect, IR obs. 2-20028  
 methyl fluoride,  $\nu_2$  band, Stark effect, IR and microwave spectra, vibr.-rot. parameters and dipole moment 2-7584  
 methyl fluoride, IR spectrum, rovibrational anal., Fermi type and Coriolis reson. 2-4278  
 methyl formate, collisionless intramol. vibr. energy transfer, state resolved IR fluoresc. obs. 2-34475  
 methyl formate, rot. isomerism, low temp. matrix IR study using thermal mol. beams 2-29576  
 methyl iodide, collision induced vibr. relax. rates, relax. pathways in 3000  $\text{cm}^{-1}$  energy regime 2-34393  
 methyl nitrite, rot.-internal rot., far-IR obs. 2-39406  
 methyl nitrite isotopomers, IR matrix spectra, normal coord. anal. and valence force field 2-29597  
 methyl phenyl-sulphide-d<sub>0</sub>(-d<sub>3</sub>) (-d<sub>5</sub>) and rel.cpsds., vib. spectra, valence force field, normal modes (*French*) 2-34409  
 methyl radical, IR spectra, vibr.-rot. spectra, rot., centrifugal distortion and spin-rot. interaction const. 2-20059  
 methyl substituted unsaturated hydrocarbons, splitting of CH stretching vibr. in overtone spectra 2-20052  
 methyl thionitrite-d<sub>0</sub> (-d<sub>3</sub>), vibr., isotope effects valence force field, spectral shifts, IR obs. 2-29588  
 methyl vinyl ether, rot. isomers, mol. struct. 2-49411  
 methyl vinyl ketone, liq., solid and gaseous states internal rot., vibr., IR and Raman study 2-9142  
 3-methyl-2-butenenitrile, IR and Raman spectra 2-17466  
 3-methyl-3-butenenitrile, liqs. and solid, IR and Raman spectra, vibr. assignment, conformational equilb. 2-49421  
 2-methyl-3-butenenitrile, vibrational spectra and conformational props. 2-4289  
 methyl-N-methylcarbamate, assoc. by H bonds, vibr. spectra and anal. 2-43912  
 N-methylacetamide (-d<sub>1</sub>), IR spectra, conformational dynamics, NH splitting and barrier height 2-29580  
 N-methylacetamide and its N-deuterated derivatives, IR and Raman spectra 2-31470  
 9-methyladenine, IR and Raman spectra 2-31496  
 methylamine, laser-Stark spectrum at 337  $\mu\text{m}$  2-49473  
 methylbromoethynylmercury(II)(-d<sub>3</sub>), IR and Raman vibr. spectra and normal coord. calcs. 2-7534

## infrared spectra of organic molecules and substances continued

methylchloroethynylmercury(II)(-d<sub>3</sub>), IR and Raman vibr. spectra and normal coord. calcs. 2-7534  
 methylene, probable IR spectrum 2-22452  
 methylmercury complexes of 9-methyladenine, IR and Raman spectra 2-31496  
 3-methylpentane-1-propanol glass mixtures, electron transfer and solvation, gamma ray irradi. at 77 and 4K 2-13523  
 5-methylresorcinol, mol. aggregates in soln. and -cryst. phase, spectrosc. obs. 2-43910  
 methylthiosilanes, IR and Raman vibr. spectra and synthesis 2-34392  
 methylvinylketone, IR and Raman spectra, vibr. anal., CNDO/2 calc. 2-34399  
 methylviologen and radical cation, IR, Raman, and reson. Raman spectra 2-49429  
 monochloroacetic, acid, dimerisation, spectrosc. obs. 2-52197  
 monomethyl fumaryl chloride, vibr., spectra and assignment, conjugative effects 2-49410  
 monosaccharides, conformation, vibr., pot. energy distrib., IR obs. 2-24700  
 naphthalene- $\beta$ -naphthol mixed mol. cryst., manifestation of intermol. H bond, IR spectra 2-51598  
 nickel(II)-substituted blue copper proteins, near-IR, visible and near-UV absorpt. spectra 2-9773  
 nileblue-A-oxazone in carbon tetrachloride, temp. depend. solvent shift, ultrashort two-pulse spectroscopy 2-24702  
 p-nitrobenzoic acid, mol. monolayer chemisorbed on oxide-coated Cu, FT IR spectrum 2-17455  
 n-nonadecane, solid, phase transitions and melting, mol. mobility 2-1592  
 nonaqueous electrolyte solns., props. in microwave and far IR region 2-9219  
 n-octane, C-H stretching bands, solvent-induced freq. shifts, FT IR invest. 2-4275  
 oligophenylenes, branched, halogen-containing, synthesis and props. (*Russian*) 2-37073  
 optical black coatings, far IR reflectance 2-41375  
 organo-germanes, deuterated and substituted, CH stretching freq., bonds, IR obs. 2-39409  
 organophosphorus polysulphides, Raman and IR spectra, P-S and S-S stretching freqs. 2-719  
 organotin(IV) derivatives, struct., bonding, IR and DMR obs. 2-39408  
 oxytocin c-terminal tripeptide, vibrational spectroscopic studies 2-14203  
 perchlorothene, IR bandshape of  $\nu_2(\text{CH})$  2-7602  
 pentachloroaniline, solid and soln. in CCl<sub>4</sub>, mol. vibrs., Raman and IR spectra study 2-31495  
 pentafluorobenzene-pyridene-d<sub>5</sub>, hydrogen bonding, NMR and IR spectra obs. 2-43761  
 pentafluoriodoethane, laser multiphoton dissoc., IR absorpt. obs. 2-47366  
 cis-2-pentenitrile, vibrational spectra and conformational props. 2-4289  
 4-n-pentyl-4'-cyanobiphenyl, IR spectra, orientation in boundary region of cell 2-17470  
 permethylcyclosilanes, synthesis and spectra 2-7574  
 phase IV-based induced cholesteric solns., chiral solute orientation, IR rot. dispersion spectra 2-30392  
 phenolic Mannich bases, dielectric loss, IR study 2-26882  
 phenothiazine derivatives, perchlorate and bromide salts, mag. susceptibility and optical spectra 2-41105  
 pheophytin solns., spectra props. and birefringence, Alentsev-Fok method calcs. 2-13473  
 pheromone cabbage looper, and ethanol mixture, nonlinear IR resonance 2-22700  
 phosphabenzene, IR and Raman spectra 2-51573  
 photoacoustic spectroscopy, quantitative Fourier transform IR, of condensed phases 2-43109  
 photoacoustic spectroscopy of near IR and visible vibr. overtones 2-43896  
 (phthalocyanine-AlF<sub>3</sub>)<sub>2</sub>, conductivity, thermogravimetric anal., IR and Raman obs. 2-26896  
 (phthalocyanine-GaF<sub>3</sub>)<sub>2</sub>, conductivity, thermogravimetric anal., IR and Raman obs. 2-26896  
 poly(2,6-dimethyl 1,4-phenylene oxide)-atactic polystyrene blends, orientation, FT IR obs. 2-46604  
 poly(p-phenylene benzobisoxazole), spectroscopic study of struct. 2-45067  
 poly(p-phenylene benzobisthiazole), spectroscopic study of struct. 2-45067  
 poly(vinylidene fluoride), structural study of conformational phases by far-IR spectroscopy 2-25757  
 poly-1,1,2,2-tetrachlorobutane, IR and Raman vibr. spectra, head to head model for PVDC 2-11602  
 poly-pyromellitic amino-acid fibres, effect of heat treatment on orientation and mech. props. (*Russian*) 2-36883  
 polyacetylene, doped, highly conducting, Raman and IR spectra 2-2280  
 polyacetylene, doped, IR absorpt., vibr. modes 2-46599  
 polyacetylene, doped, one dimens. disordered cryst., vibr. dynamics and struct. 2-51565  
 polyacetylene, n-doped and undoped, IR photoacoustic spectrosc. 2-26877  
 polyacetylene, soliton vibr. excitations 2-16740  
 polyacetylene chains, ideal and kinked, lattice dynamics and IR activity 2-45466  
 polyacetylene epitaxial layers, optical and elec. anisotropy 2-46598  
 polyacetylene film, doped with CISO<sub>3</sub>H, elec. and opt. props. in semicond. and metallic states 2-31575  
 polyacetylene-d<sub>0</sub> (-d<sub>1</sub>), n-type doping, conduct. transitions, thermal isomerisation, ESR and IR study 2-5574  
 polyacetylene-FeCl<sub>3</sub>, synthesis and charact. of organic metals formed by interaction 2-21576  
 polydimethylxlylenylamides, synthesis and props. 2-46994  
 polyethylene, IR spectra, elec. field induced modifications 2-13471  
 polyethylene, absorpt. coeffs. of amorphous IR bands, melting depend. (*Russian*) 2-46554  
 polyethylene, high density, B<sub>1u</sub> lattice vibr., Gruneisen parameters and press. depend. 2-22026  
 polyethylene, IR spectra changes after  $\gamma$ -irradiation in proces of elec. ageing in air (*Russian*) 2-35539  
 polyethylene crystal, two-phonon absorpt. of far IR radiation 2-46600  
 polyethylene solid solns., struct., IR spectral deconvolution 2-16606  
 polyfluoromethane films, prep. in glow discharge, props. 2-17893  
 polyimide PMDA-p,p'-ODA simulated space radiation effects, IR spectroscopic anal. 2-30491  
 cis-1,4-polyisoprene, orientation crystn. and stress-strain props. 2-47148  
 polymer chains, mechanically stressed, quasiharmonic IR bands, temp. effect 2-17459



**infrared spectra of organic molecules and substances continued**

- polymer coated metals, photochem., thermal and environmental degradation, FT IR obs. 2-27470
- polymer coatings, plasma-polymerised, prep. and charact. 2-47212
- polymer films, on metal surface, thermal degradation, IR emission spectrosc. obs. (*Japanese*) 2-31500
- polymers, amorphous state, Fourier transform IR spectra and calorimetry 2-5059
- polymers, electron irradiated in TEM, spectroscopic study 2-35542
- polyoxacyclobutane (modification IV), planar zigzag modification and its disordered struct. 2-25758
- polypeptides, far IR spectroscopic obs. 2-52435
- polyphenylene oxide-poly-4-chlorostyrene, incompatible blends, factor anal. and Fourier transform IR spectra 2-24900
- polyphenylene oxide-polystyrene blend, factor anal. and Fourier transform IR spectra 2-24900
- polypropylene, isotactic, crystn. kinetics 2-12508
- polypropylene crystallisation kinetics anal. by IR spectroscopy 2-21042
- polytetrafluoroethylene, vibr. spectra, review 2-13478
- polyurethane elastomers, segmented, inversion of IR-dichroism (*Russian*) 2-43955
- polyurethane film, permeability to water vapour, IR spectra obs. using deuterioexchange reaction 2-30745
- polyvinylidene fluoride, phase changes and piezoelec. effects 2-36532
- polyvinylidene fluoride film, piezoelectric,  $\gamma$ -irradiated, props. 2-36530
- polyvinylidene fluoride films, structure changes during dielec. polarization, study by far IR Fourier transform spectroscopy 2-13402
- potassium ascorbyl palmitate, thermotropic phase behaviour, IR spectra 2-22004
- potassium dodecanoate nematic, mag. field orientable, struct. studied by NMR methods and polarised absorpt. spectroscopy 2-50520
- potassium tetraoxalate, hydrogen bonds, X-ray redetern. of cryst. struct. 2-45142
- propionitrile, isotopic species, IR and Raman vibr. spectra 2-39401
- B-propionolactone, hydrolysis in dil. aq. soln., IR spectrosc. investig. 2-27489
- propyne ( $-d_1$ )-( $-d_3$ ), IR intensities and electrooptical param. 2-34462
- proteins, far IR spectroscopic obs. 2-52435
- purines in gas phase and in low-temperature matrices, tautomerism, IR spectra 2-7554
- PVA films, anisotropics in UV, vis. and IR spectra 2-46605
- PVC, glassy, mol. mobility, intermol. interaction, and conform. comp. under forced elastic deform. 2-47111
- PVC, pressure-induced freezing of conformational states 2-26052
- PVC films thermal treatment, Cd stearate stabiliser effect, IR study 2-51725
- pyrazine-N-oxide, polycryst., Raman and IR spectra, vibr. band assignment 2-9137
- pyridine trifluoroacetates, benzene solvent, isotope effects, IR study 2-29571
- 1-(2-pyridylazo)-2-naphthol, pH meas. visible, UV and IR obs. 2-9588
- pyrimidines, in gas phase and in low-temperature matrices, tautomerism, IR spectra 2-7554
- pyromellitic dithioanhydride, cryst. and solns., vibr., IR and Raman obs. 2-2243
- $\beta$ -quinol clathrate, orientation-translation coupling of encaged  $N_2$ , empirical guest-host pot. 2-43897
- rare earth formates, IR and laser Raman spectra, vibr. anal. 2-26906
- rare earth oxalates, vibr. freqs., cryst. struct., laser Raman and IR study 2-36621
- resorcinol, mol. aggregates in soln. and cryst. phase, spectrosc. obs. 2-43910
- rhodamine 6G, soln., association with dyes, deformation of IR spectra 2-24701
- Rochelle salt: Cu single crysts., optical props. 2-46652
- salicylic acid and acetylsalicylic acid, H-bonded, IR spectra 2-22007
- simple liquids, collision-induced IR absorpt. spectra 2-49398
- sodium formate, vibr. modes, polarised IR reflection and Raman study 2-13487
- sodium oxalate, vibr. freqs., cryst. struct., laser Raman and IR study 2-36621
- solvated electron absorption spectra, correlation with solvent parameter 2-49415
- spectral moments in far IR spectroscopy 2-29579
- styrene crosslinks in cured polyester, sequence distrib., NMR and IR spectra 2-13949
- styrene-sodium p-styrene carboxylate copolymer, ion clustering, vibr., IR and Raman obs. 2-15933
- synthesis and charact. of organic metals formed by interaction 2-21576
- tartaric acid, optically active, IR spectra 2-29595
- TCNQ salt, MEM(TCNQ), IR spectrum in high temp. phase 2-41359
- TCNQ salt, tetrafluoro-7,7,8,8-TCNQ, cryst. and mol. struct., soln. spectra 2-1468
- TCNQ salt, TMB-TCNQ, electron-phonon interaction and temp. depend. of IR absorption 2-13489
- TCNQ salts, quasi-one-dimens. cond., neutron irradi., IR spectra and defects influence 2-31467
- TCNQ-Cu charge transfer salt, semicond. film, vibr. and XPS spectra, Auger obs. 2-31600
- terphenyl phenyl sulphides and selenides, photochemical reaction study 2-27452
- tetracyanobenzene-anthracene- $d_0$ -( $d_{10}$ ), charge transfer complexes, disordered phase, IR and Raman study 2-13484
- tetraethylammonium hexafluoroantimonate, IR and Raman spectra 2-31507
- tetrafluoro-1,3-dithietane, IR band intensities and IR photochemistry 2-29577
- tetrafluoromethane, linewidth meas. of  $\nu_2 + \nu_4$   $R^+$ (29) absorpt. 2-39449
- terralin, laser-powered homogeneous dissociation, NMR and IR spectra obs. 2-47328
- tetraphenylethylenes, para-substituted, half-wave oxidation and reduction pot. merostabilisation 2-52175
- tetrapropylammonium trichloromercurate(II), vibr. modes, far-IR and Raman study 2-51599
- tetrapropylammoniumdiiodobromomercurate(II), IR and Raman spectra, vibr. anal. 2-26916
- tetrapropylammoniumdiiodochloromercurate(II), IR and Raman spectra, vibr. anal. 2-26916
- thioamides, primary, bending and stretching vibr. modes, solvent effects, IR obs. 2-2241

**infrared spectra of organic molecules and substances continued**

- thiomethyl germanes,  $(CH_3)_nH_{3-n}GeSCH_3$  ( $n=0-3$ ), vibr., IR and Raman obs. 2-39407
- thiophene, IR and isotropic and anisotropic Raman band profiles, correl. functions 2-31469
- thiophene, IR and Raman spectra, rot. relax. 2-31468
- thiophene in liq. and plastic phases, IR and Raman spectra, librational motions 2-26910
- thiophosgene,  $A_1A_2$  state, IR multiphoton absorpt., state-to-state dynamics 2-34516
- thiosemicarbazides, bending and stretching vibr. modes, solvent effects, IR obs. 2-2241
- thiourea, bending and stretching vibr. modes, solvent effects, IR obs. 2-2241
- toluene- $d_8$  cryst., IR and Raman spectra of C-H stretching vibr., methyl group dynamics 2-17494
- tribromoacetic acid, dimerisation, spectrosc. obs. 2-52197
- 2,4,6-tribromophenyl acetate, IR vibr. spectrum 2-20055
- sym-tribromotrifluorobenzene cation, IR Ne matrix spectra of ground state 2-29578
- tributyltin acrylate copolymerisation reactions with vinyl acetate and N-vinylpyrrolidone 2-13948
- tributyltin methacrylate copolymerisation reactions with vinyl acetate and N-vinylpyrrolidone 2-13948
- trichloroacetic acid, dimerisation, spectrosc. obs. 2-52197
- trichloroacetic acid+ion interactions, IR spectrosc. obs. 2-11476
- trichloromethane, IR absorpt. spectrum, spectrometer resolution effect 2-48802
- trichloromethylphosphonic acid dialkylesters, vibr. spectra and conformational anal. 2-4288
- triethyleneglycoldimethacrylate, photopolymerising copying layers, IR study (*Russian*) 2-27460
- trifluoroacetic acid, dimerisation, spectrosc. obs. 2-52197
- trifluoroacetic acid+ion interactions, IR spectrosc. obs. 2-11476
- 1,3,5-trifluorobenzene- $d_3$ , vibr. modes, Coriolis coupling const., IR and Raman obs. 2-715
- trifluoriodomethane, laser multiphoton dissoci., IR absorpt. obs. 2-47366
- trifluoromethylgermanes, IR and Raman vibr. spectra and normal coord. anal. 2-29561
- trimethylamine oxide dihydrate, H-bonds, low temp. IR spectra 2-43904
- trimethylborane, IR and Raman spectra, vibr. anal. 2-804
- trimethylgallane-dimethylether( $-d_6$ ), liquid and solid, vibr. studies, Raman and IR spectra study 2-29611
- trimethylgermylazide, vibr. assignments and normal coord. calc. Raman and IR spectra obs. 2-29610
- trimethylsilyl cyanide, liq., IR bandshapes 2-31465
- 1,3,5-trinitrobenzene, IR and Raman spectra, normal vibr. 2-13496
- 1,3,5-trinitrotriaminobenzene, IR and Raman spectra, normal vibr. 2-13496
- s-trioxane, IR multiphoton dissoci., kinetic study 2-39456
- 1,2,3-trioxolane, IR spectrum in solid Xe 2-11473
- triphenylethoxymethane, cryst. struct., IR study 2-50615
- triphenylphosphine oxides, methyl substituted, IR spectra, assignments 2-43907
- triquinacenes, substitution and deuterium isotope effects, chirality, IR absorpt. and circular dichroism obs. 2-34460
- tris-sarcosine calcium chloride bromide, Raman and IR spectra,  $T_c$  2-36555
- TSeF-TCNQ, quasi-one-dimens. cond. Peierls distortion, far IR vibr. spectra 2-22009
- TTF-chloranil, neutral-to-ionic phase transition anomalies, optical study 2-30592
- TTF-TCNQ, electron-intramolecular vibr. coupling, IR spectra study 2-26904
- TTF-TCNQ, quasi-one-dimens. cond., donor and acceptor stack contribs. to phase transitions 2-22010
- TTF-TCNQ, quasi-one-dimens. cond. Peierls distortion, far IR vibr. spectra 2-22009
- TTT $_2$ I $_3$ , disorder and ground state, sp. ht. and IR spectra study 2-31508
- uranium oxide (di)formamide hydrate, IR spectra, microanal. and X-ray diff. 2-2710
- vinylidene fluoride-trifluoroethylene random copolymers, ferroelectric phase transition 2-21955
- ytterbium dipthalocyanine, electrochromism, IR, electronic, and ESR spectra 2-36603
- zinc acetate, dihydrate and anhydrous form, vibr. struct., IR and Raman study 2-13486
- Al-Al $_2$ O $_3$ -Pb tunnel junction, adsorbed ethyl  $\alpha$ -cyanoacrylate, IR and IETS study 2-40691
- AsO radical, IR laser mag. reson. spectra 2-29633
- Bi complex, Bi(III)-2-methyl-benzoxazole ligand study by IR spectra 2-31505
- CO, oxidation on Pt surface, vibr. excited surface reaction products, IR chemilum. technique appl. 2-41924
- $^{12}C^{18}O_2$ , rovibr. transitions, emission Fourier spectra anal. in 4.5  $\mu m$  region 2-24693
- Cs $_2$ UO $_2$ F $_6$ , absorpt. and MCD spectra 2-36607
- Cu complexes, Cu (II)-pyridine, mag. moments, IR and electronic spectra 2-4271
- Cu complexes, Cu (II)-thiopolycarboxylic, mag. moments, IR and electronic spectra 2-4271
- H-bonded system, position and integrated intensity of H-bonded system, anomalous isotopic effects 2-29581
- HCl, press, broadening spectroscopy of pure rot. lines with far-IR optically pumped laser 2-24793
- HD $^+$  near dissoci. limit, vibr.-rot. spectra, proton hyperfine interaction 2-11452
- NO, electron impact,  $2^3\Pi$  state, predissoc., laser photofragment spectroscopy. 2-7656
- Pd complex with diene rings, cryst. struct. and spectra 2-8489
- Sb complex, Sb(III)-2-methyl-benzoxazole ligand study by IR spectra 2-31505
- TCNQ salt, TEA-TCNQ, IR reflectance of microsurfaces, precise meas. method (*Russian*) 2-28911

**infrared spectra of polyatomic inorganic molecules**

- electrolyte solutions, subMM absorpt. coeffs. meas. 2-4277
- localised mol. orbitals, IR and Raman vibr. optical activity intensities, unified approach 2-15767
- multiphoton absorption meas. by single-pulse photoacoustic technique 2-44021



## infrared spectra of polyatomic inorganic molecules continued

- resist films, VUV photochem. reactions, Fourier transform IR difference spectra study 2-9555  
 ternary oxides  $M_2XO_4$ , matrix isolated, IR spectra 2-34397  
 water integrated vapour density along long optical path, absorpt. band meas. 2-32567  
 $Ag_2O_3$ , form. of  $AgO$  and  $AgO_2$  products isotope shifts, IR obs. 2-6028  
 Ar-N<sub>2</sub> complex, IR spectra, rot. predissoc., lineshapes 2-43899  
<sup>10</sup>BCl<sub>3</sub> laser isotope separation, IR absorpt. spectroscopy of irradiated products (Chinese) 2-15853  
 BF<sub>3</sub>(*v*<sub>3</sub>), band model parameters, flame and flow tube, meas., IR absorpt. coeffs. 2-7561  
 B<sub>2</sub>H<sub>6</sub><sup>2+</sup>, vibr. spectra and struct. 2-49434  
 BO<sub>2</sub> radical, vibronic interaction between  $\bar{A}^2\Pi_u$  and  $\bar{X}^2\Pi_g$  states, diode laser spectroscopy, Renner-Teller interactions 2-11479  
 B<sub>2</sub>O<sub>3</sub>, mol. struct. and computed vibr. spectrum 2-689  
<sup>10</sup>B<sub>2</sub>D<sub>6</sub>, high-resolution IR vibr. studies 2-39400  
<sup>10</sup>B<sub>2</sub>H<sub>6</sub>, high resolution IR rovibr. studies 2-24694  
 CO/Rh/Al<sub>2</sub>O<sub>3</sub> system, IR spectra 2-37100  
 CO<sub>2</sub> absorption spectra monitor diving appl. 2-41967  
 CO<sub>2</sub>, rot.-vibr. spectrum, IR opto-acoustic cell sensitivity as laser spectroscopy detectors 2-28910  
 CO<sub>2</sub>, spectral, band integral emission absorpt. characteristics 2-15779  
 CO<sub>2</sub>, vibr.-rot. absorpt. bands, integral intensities, temp. effects 2-49412  
 CO<sub>2</sub>-CO gas mixture, monochromatic absorptivity calc. (French) 2-15782  
 CS<sub>2</sub>, liq., vibr. spectrosc., assignments, teaching expt. 2-10573  
 CS<sub>2</sub>, high resolution IR spectrum and struct. determ. 2-24696  
 CdF<sub>2</sub> and CdFCl(Br), matrix isolated vibr. spectra 2-11490  
 Co complex, ethyldiene tricobalt nonacarbonyl, vibr. spectra, chemisorbed ethylene analogue 2-4282  
 CrO<sub>2</sub>Cl<sub>2</sub>, IR multiple-photon excitation and electronic emission 2-7557  
 Cs<sub>2</sub>MoO<sub>4</sub>, IR spectra 2-29582  
 Cs<sub>2</sub>SO<sub>4</sub>, matrix isolation IR spectroscopic studies and dimerisation in N matrices 2-24688  
 Cs<sub>2</sub>SO<sub>4</sub>, struct., pot. functions, isomers, vibr. IR obs. 2-39403  
 Cs<sub>2</sub>WO<sub>4</sub>, IR spectra 2-29582  
 Cs<sub>2</sub>WO<sub>4</sub>, matrix isolation IR spectroscopic studies and dimerisation in N matrices 2-24688  
 Cu(II) complex with ethylenediamine derivatives of 2,2'-dihydroxychalcones, synthesis and IR spectra 2-46565  
 FCO radical, IR diode laser spectroscopy of *v*<sub>1</sub> and *v*<sub>2</sub> bands 2-24697  
 FeOCl, intercalation cpd. with crown ether 2-21080  
 GeCl<sub>4</sub>, Ar resonance photolysis products, IR matrix spectra 2-29589  
 GeH<sub>4</sub>, *v*<sub>3</sub> and *v*<sub>1</sub> IR band anal., vibr.-rot. interaction, isotope effects 2-11474  
 H-bonded system, position and integrated intensity of H-bonded system, anomalous isotopic effects 2-29581  
 H+CO<sub>2</sub>(N<sub>2</sub>O), laser photolysis of hot H, vibr. excitation collisions, IR obs. 2-24830  
 H<sub>2</sub><sup>+</sup>, *v*<sub>2</sub> fundamental band obs. in laboratory and search in interstellar medium 2-53074  
 HBr, polymer, IR and Raman spectra, struct. in nitrogen matrix 2-15867  
 HCN, stratospheric, absorption near 14  $\mu$ m 2-23104  
 HCl, polymer, IR and Raman spectra, struct. in nitrogen matrix 2-15867  
 (HF)<sub>n</sub>, n=2-6, vibr. predissoc. spectra 2-7556  
 HNC-HCN equilb. system, high temp., high resolution IR spectral meas. 2-20056  
 H<sub>2</sub>O, appl. of Fourier transform IR laser spectroscopy 2-19187  
 H<sub>2</sub>O, dimer effect on absorption of the 2.7  $\mu$ m IR absorpt. band 2-34394  
 H<sub>2</sub>O fluorescence, Nimbus 7 SAMS meas. in 2.7  $\mu$ m band in mesosphere 2-23071  
 H<sub>2</sub>O, IR rot. spectra, centrifugal distortion anal. 2-7560  
 H<sub>2</sub>O, IR spectrum rel. to atmospheric absorpt. of solar radiation by water vapour 2-14601  
 H<sub>2</sub>O in CO matrix, IR spectrum at 10K, bifurcated dimers evidence 2-20057  
 H<sub>2</sub>O vapour absorpt. at 1 laser line 2-20048  
 H<sub>2</sub>O, vibr.-rot. absorpt. bands, integral intensities, temp. effects 2-49412  
 H<sub>2</sub><sup>17</sup>O, IR rot. spectra, centrifugal distortion anal. 2-7560  
 H<sub>2</sub><sup>18</sup>O, IR rot. spectra, centrifugal distortion anal. 2-7560  
 H<sub>2</sub>O(*v*<sub>6</sub>) band intensity around 1266 cm<sup>-1</sup> 2-24685  
 HfCl<sub>4</sub>POCl<sub>3</sub>, Raman and IR spectra, normal coordinate anal., Urey Bradley force const., pot. energy functions 2-24703  
 HgF<sub>2</sub> and HgFCl(Br), matrix isolated vibr. spectra 2-11490  
 (Hg(NH<sub>3</sub>)<sub>2</sub>)Cl<sub>2</sub> with <sup>15</sup>N/<sup>14</sup>N and H/D isotopic substitution, IR and Raman spectra, normal coordinate anal. 2-34401  
 I<sup>14</sup>N<sup>12</sup>C, I<sup>15</sup>N<sup>12</sup>C, and I<sup>14</sup>N<sup>13</sup>C, matrix isolated, Raman and IR spectra, vibr. assignments 2-720  
 K<sub>2</sub>CrO<sub>4</sub>, IR spectra 2-29582  
 K<sub>2</sub>SO<sub>4</sub>, struct., pot. functions, isomers, vibr. IR obs. 2-39403  
 K<sub>2</sub>UO<sub>2</sub>Cl<sub>4</sub>·xH<sub>2</sub>O, polarised luminescence, IR and Raman spectra 2-13546  
 LiBeF<sub>3</sub>, struct., force field, freq. and intensities of normal modes, ab initio calc., IR spectrum 2-49254  
 Li<sub>2</sub>CrO<sub>4</sub>, IR spectra 2-29582  
 Li<sub>2</sub>MoO<sub>4</sub>, IR spectra 2-29582  
 Li<sub>2</sub>WO<sub>4</sub>, IR spectra 2-29582  
 N<sub>2</sub>, IR spectrum, collision-induced, quadrupole and hexadecapole moments 2-29573  
 NF<sub>3</sub>, IR absorpt. bands, ab initio and localised MO calcs. 2-43906  
 N<sub>2</sub>F<sub>4</sub>, saturation by short CO<sub>2</sub> laser pulse 2-44408  
 NH<sub>3</sub>, double resonance sub-Doppler spectrosc. 2-11530  
 NH<sub>3</sub>, IR absorpt. bands, ab initio and localised MO calcs. 2-43906  
 NH<sub>3</sub>, IR diode laser heterodyne meas. 2-24699  
 (NH<sub>4</sub>)<sub>2</sub>UO<sub>2</sub>Cl<sub>4</sub>·xH<sub>2</sub>O, polarised luminescence, IR and Raman spectra 2-13546  
 N<sub>2</sub>O in inert solvents, rot. relax., Raman and IR spectra 2-11487  
 N<sub>2</sub>O, vibr. relaxation, Raman and IR spectra 2-11453  
 N<sub>3</sub>PBr<sub>2</sub>F<sub>6-n</sub>, isomers, vibr. anal., IR and Raman obs. 2-11481  
 N<sub>3</sub>P<sub>2</sub>Cl<sub>2</sub>F<sub>6-n</sub>, isomers, vibr. anal., IR and Raman obs. 2-11481  
 Na<sub>2</sub>CrO<sub>4</sub>, IR spectra 2-29582  
 NdGaO<sub>3</sub>, perovskite struct., vibr., IR and Raman study (French) 2-41360  
 Ne-Ar mixtures, translational absorpt. spectra arising from collision induced dipole moment 2-31463  
 Ni complex, hexakis (pyridine N-oxide) nickel in salts, reaction with alkali halides used in IR spectroscopy 2-41895  
 O<sub>3</sub>, line profiles, precision IR heterodyne spectra 2-20063  
 O<sub>3</sub>, matrix isolated, anharmonicity and bond angle 2-7671

## infrared spectra of polyatomic inorganic molecules continued

- O<sub>3</sub>, vibrationally excited mol., emission near 9.6 microns 2-10223  
 OCS, heterodyne freq. meas. near 1050 cm<sup>-1</sup> 2-39399  
 OCS, *v*<sub>3</sub> band, IR spectrum, intensity and dipole moment autocorrelation functions 2-20050  
 OCS, pure rot. far IR spectrum 2-20054  
 OH+HO<sub>2</sub>NO<sub>2</sub>(propene), reaction rate const. determ. by FTIR spectroscopy and relative rate method 2-22412  
 PD<sub>3</sub>, IR spectrum, rot. anal., equilb. struct., quadratic force field 2-4279  
 PF<sub>3</sub>, IR absorpt. bands, ab initio and localised MO calcs. 2-43906  
 PH<sub>3</sub>, IR absorpt. bands, ab initio and localised MO calcs. 2-43906  
 P<sub>4</sub>S<sub>6</sub> molecular vibr., normal coord. anal., Raman and IR spectra 2-805  
 PbF<sub>3</sub><sup>-</sup> anion, matrix isolation, IR spectrosc. obs. 2-39395  
 Pt complex Pt(pyrazine-d<sub>4</sub>)(-d<sub>4</sub>)<sub>2</sub>X<sub>2</sub>, (X=Cl, Br, I, NO<sub>2</sub>), vibr., isotope effects, IR obs. 2-11483  
 Pt(II) complex, (Pt(aniline)<sub>2</sub>X<sub>2</sub>) x=Cl, Br, I, NO<sub>2</sub>, ligand vibr., IR obs. 2-29587  
 Rb<sub>2</sub>SO<sub>4</sub>, struct., pot. functions, isomers, vibr. IR obs. 2-39403  
 Rb<sub>2</sub>UO<sub>2</sub>Cl<sub>4</sub>·xH<sub>2</sub>O, polarised luminescence, IR and Raman spectra 2-13546  
 ReO<sub>4</sub><sup>-</sup> matrix-isolated mols., homogeneous linewidth meas., IR hole-burning spectroscopy 2-708  
 (SCN)<sub>2</sub>, trapped in Ar matrix at 20K, IR and Raman spectra 2-718  
 SF<sub>6</sub>, CW laser absorpt. at 10.6  $\mu$ m, in presence of transparent gases, influence of thermal diffusion (French) 2-34389  
 SF<sub>6</sub>, high-resolution IR spectrum of interacting vibr. band anal. 2-7559  
 SF<sub>6</sub>, isolated in Xe matrix, vibr. energy relax., IR multiphoton dissociation 2-780  
 SF<sub>6</sub>, laser beam profile, IR multiple photon absorpt. 2-24803  
 SF<sub>6</sub>, laser excited, transient population distrib. 2-691  
 SF<sub>6</sub>, laser induced multiphoton excitation, semiclassical treatment 2-34514  
 SF<sub>6</sub>, vibr.-rot. spectra, band parameters, IR obs. 2-20061  
 SF<sub>6</sub>, IR multiphoton induced electron detachment 2-20140  
 SF<sub>6</sub>+N<sub>2</sub>(O<sub>2</sub>), IR transitions, integrated intensities, bandwidths and frequency shifts 2-29572  
 SO<sub>2</sub>, photochemical oxidation, IR spectra (Russian) 2-17909  
<sup>32</sup>SF<sub>6</sub>, *v*<sub>3</sub>+*v*<sub>6</sub> band, Coriolis splitting laser diode IR obs. 2-24690  
<sup>34</sup>SF<sub>6</sub>, *v*<sub>3</sub> band, rotovibr., IR obs. 2-49403  
 SeOF<sub>4</sub>, vibr., force field, bonds, configs., IR and Raman obs. (German) 2-11482  
 SiCl<sub>4</sub>, Ar resonance photolysis products, IR matrix spectra 2-29589  
 SiD<sub>3</sub>H, *v*<sub>1</sub> band, IR spectrum 2-4281  
 SiF<sub>2</sub>, IR spectrum, Coriolis coupling, vibr. transition moments 2-4276  
 SiF<sub>4</sub>, *v*<sub>3</sub> band near 9.7  $\mu$ m, tunable laser diode study 2-49370  
 SiH<sub>3</sub>NCSE, matrix isolated, vibr. spectra, isotope shifts 2-4283  
 SnCl<sub>4</sub>, Ar resonance photolysis products, IR matrix spectra 2-29589  
 Ti<sub>2</sub>CrO<sub>4</sub>, IR spectra 2-29582  
 U complex, bis-(1,1,1,5,5,5-hexafluoropentane-2,4-dionato)(<sup>18</sup>O) dioxo U(VI), gas phase IR spectra 2-703  
 U(SO<sub>4</sub>)(H<sub>2</sub>O)<sub>4</sub>, vibr. spectrum calcs. and investig. 2-43911  
 WO, WO<sub>2</sub> and WO<sub>3</sub>, matrix isolated, IR spectra, vibr. const., bond angles 2-4280  
 Zn complexes, octamethylporphyrin-d<sub>0</sub>, -d<sub>4</sub> and anions and radicals, IR spectra 2-43908  
 ZnF<sub>2</sub> and ZnFCl(Br), matrix isolated vibr. spectra 2-11490  
 ZrCl<sub>4</sub>POCl<sub>3</sub>, Raman and IR spectra, normal coordinate anal., Urey Bradley force const., pot. energy functions 2-24703
- infrared telescopes** see *telescopes*  
**infrared transmitters** see *infrared sources*  
**infrasonic waves** see *acoustic waves*  
**initial value problems**  
 differential eqns., numerical methods for solving with inadequate data 2-18870  
 discrete coordinates, orthogonalization method 2-3367  
 dual time scales in a wave problem governed by coupled nonlinear equations 2-23468  
 early Universe, inhomogeneity form., initial value problem method 2-6690  
 Einstein vacuum field equations, asymptotic characteristic initial value problem 2-23510  
 Hamiltonians, quadratic multidimens., exact propagators, initial value soln. 2-6757  
 internal wave eqn., Cauchy problem soln. 2-18916  
 JIPP T-II Tokamak, disruptions nonlinear anal. 2-50438  
 Klein-Gordon equation with convolution, domain of influence 2-3392  
 Maxwell's equations, initial boundary value problem, semi-discrete Galerkin approx. 2-63  
 rotating MHD viscous flow, convection, initial value theory 2-8130  
 second-order nonlinear PDEs, initial boundary problem, functional approach 2-51  
 shallow water theory, existence of unique soln. of initial boundary value problem 2-53  
 steady current generation in cylinder using m=0 RF waves 2-1310  
 unsteady MHD boundary layer flow, Hall effects, initial value problem soln. 2-8239  
 variable moment of inertia models, initial values for nonlinear fit, computer program 2-24137
- injection lasers** see *semiconductor junction lasers*  
**injury by radiation** see *biological effects of radiation*  
**inorganic insulators** see *insulating materials*  
**inorganic molecule configurations**  
 see also *isomerism*  
 AF<sub>3</sub>, equilb. geometry, all-valence NDDO-MO calcs. 2-4222  
 AH<sub>3</sub>F, equilb. geometry, all-valence NDDO-MO calcs. 2-4222  
 AH<sub>3</sub>, equilb. geometry, all-valence NDDO-MO calcs. 2-4222  
 AHF<sub>2</sub>, equilb. geometry, all-valence NDDO-MO calcs. 2-4222  
 d-2-646  
 interligand interaction, LCAO INDO calcs., X-ray fluoresc. obs. 2-49503  
 M<sub>2</sub>SO<sub>4</sub> (M=Li,Na,K,Cs,Rb), pot. functions, configs. semiempirical calcs. 2-39403  
 molecule, electronic struct. obtained by pseudopotential method, pot. curves 2-34257  
 salts of type M<sub>2</sub>XO<sub>4</sub>, structure, gas phase electron diffraction 2-15898  
 Ag complex, Ag(I) p-aminobenzoate, X-ray diffraction, struct. 2-12558  
 AlCl<sub>3</sub>, electronic struct., DVM X $\alpha$  calcs., electron affinities 2-39312  
 AlF<sub>3</sub>, struct., bending vibr., bond angles, CNDO/2 calcs. 2-19971



**inorganic molecule configurations continued**

- Ar-N<sub>2</sub>O weakly bound complex, rot. spectra meas. using mol. beam spectroscopy, struct., dipole moments 2-20026  
 BCl<sub>3</sub>, electronic struct., DVM Xalpha calcs., electron affinities 2-39312  
 BF<sub>3</sub>, struct., bending vibr., bond angles, CNDO/2 calcs. 2-19971  
 B<sub>2</sub>H<sub>4</sub>, geometrical struct. and vibr. freq. studied via ab initio mol. electronic struct. theory 2-49280  
 B<sub>2</sub>H<sub>10</sub>, optimised geometry, restricted HF level MO CI calcs. 2-19974  
 B<sub>2</sub>H<sub>6</sub>, vibr. spectra and struct. 2-49434  
 B<sub>2</sub>N<sub>2</sub>H<sub>6</sub>, borazafulvenes, struct. using MNDO calcs. (French) 2-34306  
 B<sub>2</sub>O<sub>3</sub>, electronic states, geometry, spectra, source field, nonempirical calcs. 2-20202  
 B<sub>2</sub>O<sub>3</sub>, mol. struct. and computed vibr. spectrum 2-689  
 BeCl<sub>2</sub>, electronic struct., DVM Xalpha calcs., electron affinities 2-39312  
 BeF<sub>2</sub>, electron capture to form anion, pot. energy surface, force consts. 2-646  
 Be<sub>2</sub>H<sub>2</sub><sup>+</sup>, geometrical struct. and force field, SCF MO LCAO calcs. 2-34291  
 Be<sub>2</sub>H<sub>4</sub>, geometrical struct. and force field, SCF MO LCAO calcs. 2-34291  
 Be<sub>2</sub>H<sub>2</sub><sup>-</sup> anion, struct. and stability, ab initio calcs. 2-29502  
 BeH<sub>2</sub>, ground and ionised states, force consts, ionisation pots., CI SCF MO calcs. 2-24616  
 C<sub>3</sub>, mol. consts. evaluation 2-4254  
 C<sub>3</sub>N<sub>2</sub>, mol. shape and cryst. struct. calcs. 2-15919  
 CO<sub>2</sub>-HF complex, energy hypersurface, stationary points, form. thermodynamics 2-15862  
 CSe<sub>2</sub>, high resolution IR spectrum and struct. determ. 2-24696  
 CdF<sub>2</sub> and CdFCl(Br), matrix isolated vibr. spectra 2-11490  
 Cd(II) complex, Cd<sub>10</sub>(SCH<sub>2</sub>(H<sub>2</sub>OH))<sub>16</sub><sup>4+</sup>, mol. struct. correl. with <sup>13</sup>Cd NMR spectra 2-26774  
 ClHPNH<sub>2</sub>, mol. struct. pseudopot. calcs. (French) 2-15708  
 Co complexes, cis-(Co(X)<sub>2</sub>(en))<sup>+</sup> (X=CN<sup>-</sup>, NO<sub>2</sub><sup>-</sup>, NCS<sup>-</sup>, N<sub>3</sub><sup>-</sup>, Cl<sup>-</sup>), directional ion assoc., CD meas. 2-44033  
 Cr complex, (η<sup>5</sup>-benzene)tricarbonylchromium (Co), mono-substituted derivatives, configs., moments, electronic birefringence 2-29639  
 CrO<sub>5</sub>·H<sub>2</sub>O, short-lived reaction intermediate, reson. Raman study 2-722  
 Cs<sub>2</sub>SO<sub>4</sub>, struct., pot. functions, isomers, vibr. IR obs. 2-39403  
 Cu complex, binuclear, with paraxylol connecting group, ((CuCl<sub>2</sub>C<sub>18</sub>H<sub>20</sub>N<sub>3</sub>)<sub>2</sub>)·2H<sub>2</sub>O, X-ray struct. anal. 2-8501  
 Cu complex, Cu(II)-bis-ethylenediamine electronic spectra and struct. 2-31524  
 Cu complex, Cu(II)-poly(styrenesulphonate), struct. study by transient electric dichroism 2-20098  
 Cu(I) complex, chloro(bis(z-pyrimidyl)disulphide) copper (I) monohydrate, coplanar, mol. mechanics and orbital calcs. 2-29527  
 FCO radical, IR diode laser spectroscopy of ν<sub>1</sub> and ν<sub>2</sub> bands 2-24697  
 FH.CN<sup>-</sup>, prod. from HF CN<sup>-</sup> reaction, electronic struct. and geometry, quantum chem. calc. 2-22433  
 H<sub>2</sub>, molecular shape effects and quantum theory 2-11379  
 H<sub>2</sub><sup>+</sup>, internal stresses and chemical binding 2-39279  
 H<sub>2</sub><sup>+</sup>, molecular shape effects and quantum theory 2-11379  
 HBr, polymer, IR and Raman spectra, struct. in nitrogen matrix 2-15867  
 HC(SO<sub>2</sub>F)<sub>3</sub>, mol. struct., electron diff. obs. 2-49572  
 HCl, polymer, IR and Raman spectra, struct. in nitrogen matrix 2-15867  
 HF molecules, bent chain, equilib. geometry and vibr. spectra, ab initio studies 2-43783  
 H<sub>2</sub>F<sub>10</sub><sup>+</sup> anions, mol. struct., MNDO calcs. 2-15726  
 HIF structure study 2-39503  
 H<sub>2</sub>N-OH, conformational stability, ab initio SCF-MO calcs. 2-34273  
 H<sub>2</sub>N-SH, conformational stability, ab initio SCF-MO calcs. 2-34273  
 HNCO, basis set depend. of calc. geom. 2-49276  
 HNO, electronic states, equilibrium geometry, vibr., complete active space SCF 2-43780  
 H<sub>2</sub>NSO<sub>2</sub>F, mol. struct., electron diff. obs. 2-49572  
 H<sub>2</sub>O, normal and supercooled, Raman scatt. and struct. 2-17461  
 H<sub>2</sub>O, structure in vicinity of solvated ion, molecular dynamics simulation 2-11417  
 H<sub>2</sub>O<sup>+</sup>, nonplanarity evidence 2-11393  
 H<sub>2</sub>PNH<sub>2</sub>, mol. struct. pseudopot. calcs. (French) 2-15708  
 H<sub>2</sub>PNHCl, mol. struct. pseudopot. calcs. (French) 2-15708  
 HSNCN, geometric and electronic struct. studied by non-empirical and MNDO methods 2-43805  
 H<sub>2</sub>SO<sub>4</sub>, microwave spectra, struct., and dipole moment 2-11463  
 Hf complex, HfCl<sub>4</sub>-acetonitrile-d<sub>0</sub>(-d<sub>3</sub>), vibr., force consts., IR and Raman study 2-2239  
 HgF<sub>2</sub> and HgFCl(Br), matrix isolated vibr. spectra 2-11490  
 IF<sub>5</sub>, excited vibr. states, microwave spectrum, accidental degeneracy and avoided crossing, struct. 2-4268  
 KCN, configs., pot. energy curves, ab initio SCF calcs. 2-43797  
 KLn(MoO<sub>4</sub>)<sub>2</sub> (Ln=Y, Dy, Ho, Er, Tm, Yb, Lu), cryst. and mol. struct., IR and Raman study 2-41362  
 K<sub>2</sub>SO<sub>4</sub>, struct., pot. functions, isomers, vibr. IR obs. 2-39403  
 Li-CO<sub>2</sub> complexes, geometries and stabilities, self consistent field HF method 2-39293  
 LiBeF<sub>3</sub>, struct., force field, freq. and intensities of normal modes, ab initio calc., IR spectrum 2-49254  
 LiBe<sub>2</sub>H<sub>2</sub>, complex, struct. and stability, ab initio calcs. 2-29502  
 LiOH, pot. surface, equilib. geometry and dipole moment calc., Mulliken population anal. 2-11420  
 MgCl<sub>2</sub>, electronic struct., DVM Xalpha calcs., electron affinities 2-39312  
 Mn complex, cc Mn(II)-L-histidine complex, H<sup>+</sup> NMR relax., pH and correl. time depend. 2-24751  
 MnBr<sub>2</sub>, monomeric mol. struct., electron diff. studies 2-7668  
 MoCl<sub>3</sub> tris-thiourea complex, Mo[SC(NH<sub>2</sub>)<sub>2</sub>]<sub>3</sub>Cl<sub>3</sub>, cryst. and mol. struct. 2-12562  
 MoOCl<sub>4</sub> complex 2-35448  
 N<sub>2</sub>, structure factor at 160K 2-11375  
 NH<sub>3</sub>, adsorbed on Ru (001), mol. conform. 2-5302  
 NH<sub>3</sub> clusters, H bonding, EPEN/2 calcs. 2-813  
 (NH<sub>3</sub>)<sub>n</sub> (n=3-6), dipole moment, N-N dist., polarisation model 2-44135  
 (NO)<sub>2</sub>, mol. beam elec. reson. spectra and struct. 2-735  
 Na-CO<sub>2</sub> complexes, geometries and stabilities, self consistent field HF method 2-39293  
 NaCN, configs., pot. energy curves, ab initio SCF calcs. 2-43797  
 Na<sub>2</sub>(SeO<sub>3</sub>)<sub>2</sub>, cryst. and mol. struct. of paraelectric and ferroelectric phases 2-40330  
 Na<sub>6</sub>V<sub>10</sub>O<sub>28</sub>, soln., struct., chemical shift <sup>17</sup>O NMR study 2-20086

**inorganic molecule configurations continued**

- Ni complex, (dithiocyanate tetraamine)nickel(II), geometry, struct., pot. surface, CNDO-UHF, MO-LCAO-SCF calcs. 2-34297  
 Ni complex, cyclopentadienyl-allyl-cyclobutadiene-dinickel, struct., INDO and HF calcs. 2-19975  
 Ni complex, N,N'-ethylenebis(benzoylacetoniminato)-Ni(II), cryst. and mol. struct. 2-45124  
 Nz-HF, geometry, nuclear quadrupole and spin coupling constants., microwave rot. spectra 2-43891  
 PCl<sub>5</sub>, electronic struct., DVM Xalpha calcs., electron affinities 2-39312  
 PD<sub>2</sub>, IR spectrum, rot. anal., equilib. struct., quadratic force field 2-4279  
 P<sub>2</sub>O<sub>5</sub>, S<sub>8</sub>, cryst. synthesis and struct. 2-5086  
 P<sub>2</sub>S<sub>3</sub>, P<sub>2</sub>S<sub>5</sub><sup>+</sup> and its mass spectral fragment pairs, struct. and energies, CNDO calc. 2-43803  
 Pb complex, nitrate-(m-aminobenzoate)lead(II), cryst. and mol. struct. determ. 2-40353  
 Pd complex with diene rings, cryst. struct. and spectra 2-8489  
 Pt(II) complex, (Pt(aniline)<sub>2</sub>X<sub>2</sub>) x=Cl, Br, I, NO<sub>2</sub>, ligand vibr., IR obs. 2-29587  
 Pt(NH<sub>3</sub>)<sub>2</sub>Cl<sub>2</sub>, interligand interaction, LCAO INDO calcs., X-ray fluores. obs. 2-49503  
 Rb<sub>2</sub>MoO<sub>4</sub>, struct., gas phase electron diff., internuclear distances determ. 2-11571  
 RbNO<sub>3</sub>, mol. struct., electron diff. obs. 2-49575  
 Rb<sub>2</sub>SO<sub>4</sub>, struct., pot. functions, isomers, vibr. IR obs. 2-39403  
 Rb<sub>2</sub>WO<sub>4</sub>, structure, gas phase electron diff. 2-15898  
 SF<sub>6</sub>, mean amplitude of vibration, multiple scatt., struct., electron diff. obs. 2-24855  
 S<sub>2</sub>N<sub>2</sub>, mol. and electronic struct., ab initio MO calcs. 2-34275  
 SO<sub>2</sub>, structure parameters, electron diff. study 2-24854  
 S<sub>2</sub>O, mol. consts. evaluation 2-4254  
 SeOF<sub>4</sub>, vibr., force field, bonds, configs., IR and Raman obs. (German) 2-11482  
 SiCl<sub>4</sub>, electronic struct., DVM Xalpha calcs., electron affinities 2-39312  
 Si<sub>2</sub>Cl<sub>6</sub>, mol. struct. determ. by electron diff. 2-34262  
 SiCl<sub>4</sub>OBCl<sub>2</sub>, mol. struct., MNDO calcs. 2-15727  
 SiF<sub>3</sub>, struct., bending vibr., bond angles, CNDO/2 calcs. 2-19971  
 SiF<sub>3</sub>OBf<sub>2</sub>, mol. struct., MNDO calcs. 2-15727  
 Si<sub>2</sub>H<sub>4</sub>, singlet and triplet states, struct. and stability, ab initio SCF calcs. 2-39296  
 SiH<sub>3</sub>NCNO isotopically substituted, microwave spectrum and r<sub>S</sub> struct. corr. 2-39384  
 SiH<sub>3</sub>OBH<sub>2</sub>, mol. struct., MNDO calcs. 2-15727  
 SiO<sub>2</sub>, equilib. geometries and relative stabilities, ab initio SCF MO calcs. 2-34286  
 (SiX<sub>2</sub>YZ)<sup>+</sup> (X, Y, Z=H, F, Cl), mol. struct., Jahn-Teller effects, MNDO calc. 2-664  
 ThO<sub>2</sub>, geometries calc. using relativistic effective core pot. 2-34281  
 UO<sub>2</sub><sup>+</sup>, geometries calc. using relativistic effective core pot. 2-34281  
 V complex μ-oxo-(oxobis (8-quinolinolato) vanadium(V)) (oxobis (8-quinolinolato) vanadium(IV)) ion, synthesis and cryst. and mol. struct. 2-8500  
 V complex dioxo bis (8-quinolinolato) vanadium(V) ion, cryst. and mol. struct. 2-8500  
 W complex, bis(tetrathiotungstate(VI)-S,S'-oxotungstate(IV), synthesis and mol. struct. 2-8499  
 ZnF<sub>2</sub> and ZnFCl(Br), matrix isolated vibr. spectra 2-11490  
 Zr complex, ZrCl<sub>4</sub>-acetonitrile-d<sub>0</sub>(-d<sub>3</sub>), vibr., force consts., IR and Raman study 2-2239
- inorganic molecule electronic structure** *see molecular electronic states*
- input-output programs**  
 airborne geophysical instruments, I/O structure, microinterrupts appl. 2-28252  
 CAMAC I/O software system 2-11365
- input-output routines** *see input-output programs*
- insolubility** *see solubility*
- inspection**  
*see also quality control; reliability; testing*  
 adhesive bond, hydrothermal degradation detection by US spectroscopy 2-17853  
 anisotropy factor determination by metallography using Epiquant instrument 2-37015  
 cermets, nondestructive testing, scanning γ-ray method 2-47278  
 coating thickness gauging method using X-ray fluorescence 2-13896  
 coatings, nonuniform, inspection with integral thickness gauge 2-10782  
 computerised US scan system, automated inspection with interactive graphics displays 2-52143  
 debond inspection in solid rocket motor section, acoustical chirp frequency and computer correl. technique 2-17855  
 defect reconstruction and classification by phased arrays 2-52140  
 diamond-metallic binder tools, EM inspection method 2-27378  
 dielectric coating on inner surface of pipe, DK-1 composite quality inspection unit 2-6006  
 dimensioning flaws in pipeline girth welds by radiographic methods 2-13901  
 eddy current NDT, conf. Gaithersburg, USA, (Nov. 1977) 2-10552  
 electrical contact assemblies, US exam. for bond integrity 2-17857  
 Elinvar alloy 44NKhMT, inspection of heats using Curie temperature 2-9487  
 EM inspection by inductive method simultaneous magnetization of test and reference samples 2-2676  
 flaw location, shape and dimensioning using ALOK system, remote controlled automated US inspection 2-52139  
 fusion, computerised methods 2-15627  
 glass, plate, differential device for optical distortions determ. 2-27371  
 honeycomb bond structures, real time fluoroscopic imaging system 2-9501  
 hydraulic system elements, pneumatic inspection, optimisation of parameters 2-27386  
 in-service inspection using data acquisition and processing system (Japanese) 2-24385  
 internal surface inspection with wide-angle projection viewer 2-2666  
 liquid level inspection of bottles performed by photoelectric switches 2-6873  
 longitudinal creeping wave appl. and creeping wave probes 2-47289  
 magnetic hand yoke for magnetic particle inspection (German) 2-9504  
 magnetic particle quality inspection of drilling equipment and tool parts 2-27383  
 metal, anomaly detection by electric discharge in gases 2-9516



**inspection continued**

- multifrequency eddy current inspection techniques 2-13925
- NDT, inspection of multiparameter meas. problems, statistical approach 2-27381
- nonmagnetic coatings on heavy cylindrical steel parts, PKN-40 semiautomatic unit for thickness meas. 2-163
- nuclear steam generator tubing, eddy current inspection 2-13921
- nuclear steam generator tubing, eddy current inspection 2-13922
- pipeline distributed processing system for real time pattern recognition applications 2-17847
- pressure vessel inservice inspections using acoustic holography methods 2-1093
- real-time video imaging of internal flaws, high resolution US B-scan imaging 2-52141
- rolled bars mech. props. NDT with KAP-1 instrument 2-27385
- signal processing technique rel. to eddy current inspection 2-13927
- steel, 40KhN, hardness inspection by higher harmonics method 2-6005
- steel, alloy 40Kh, heat treatment quality control, inspection instrument, electromag. losses in mag. reversal in weak mag. field meas. 2-27384
- steel, anisotropic, electrical, crystallographic texture in moving strip, inspection 2-2678
- steel, austenitic stainless, casting, US inspection, heat treatment effect 2-17865
- steel, austenitic stainless, weld, US inspection 2-13917
- steel, austenitic stainless weld, texture study using SAW 2-31878
- steel, austenitic weldment, US inspection of fatigue cracks using shear wave probe 2-52125
- steel, C, magnetic method of quality inspection of high temp. tempering 2-27382
- steel, constructional, heat treatment inspection by electromagnetic-acoustic method 2-2679
- steel, pressurised water reactor, review of AE appl. 2-17804
- steel, stainless, automatic inspection of intergranular corrosion tendency, potentiostat programmers' appl. 2-37017
- steel, stainless, optical inspection of small-diameter deep bores using rod optics with low-light television and still photography 2-9517
- steel, structural, fractures inspection for nonmetallic inclusions using TEM and C replicas 2-47276
- subsurface-flaw detection with models ITs-61 or -70 US head wave probes 2-27391
- surface gloss meas. specular reflection device (*Japanese*) 2-43069
- surface layer inspection using US head waves, probe 2-2673
- thermal inspection anal., three dimensional problem 2-2680
- thermal method of NDT, vortex tube as source of excitation 2-2681
- three dimensional charact. of US sound field by computer controlled rotational scanning 2-52138
- tightness inspection, automated, reliability 2-6007
- US oblique probe, high temp. 2-4668
- US pipe inspection, involute search unit 2-9499
- US probes used for periodic inspection, charact. 2-11988
- visual inspection technique for optical fibre preforms 2-7897
- weld defect detection, X-ray and US exam. 2-41826
- Al alloy AK4-1, heat treatment quality inspection by EM method 2-6012
- UO<sub>2</sub> fuel rod inspection by nondestructive array 2-9514

**instability** *see stability***installation**

- see also commissioning; computer installation*
- domestic solar photovoltaic power systems 2-32062
- heat pumps, classification, working and installation (*Italian*) 2-37425

**installation, computer** *see computer installation***instrumentation**

- see also aerospace instrumentation; computerised instrumentation; digital instrumentation; digital readout; display instrumentation; nuclear instrumentation; physical instrumentation control*
- electron, input keys requirements, tests and selection (*German*) 2-15158
- ion implantation equipment and techniques, conf., Kingston, Ont., Canada (July 1980) 2-3323
- pH measurement, electrodes and instrumentation (*German*) 2-22464
- stationary characts. of meas. devices improvement, by parametric and structural means (*German*) 2-3553
- testing, periods between tests optimisation, w.r.t. test quality 2-6820
- trends in instrumentation and measurement systems, electronic methods, review 2-15186

**instruments**

- see also individual types of instruments, e.g. astronomical instruments, bridge instruments, optical instruments*
- No entries

**insulated gate field effect transistors**

- conductance in restricted-dimensionality accumulation layers 2-41019
- impact ionisation through surface states 2-17129
- MNOS structure, degradation props. 2-13187
- MOS, effective channel length control (*Russian*) 2-1650
- MOSFET, energy loss of warm electrons at interface of (100) Si 2-46140
- MOSFET, n-Si inversion layer, electron mobility, oxide charge, phonon and surface scatt. 2-51320
- MOSFET, Si<sup>+</sup> implanted, deep level distribution profiling system 2-51113
- MOSFET, Si inversion layer, ballistic phonon absorption by 2D electron gas 2-51323
- MOSFET, Si inversion layers, AC cond. in gap regions between Landau levels 2-51317
- MOSFET, Si inversion layers, electron mobility, temp. and carrier conc. effects 2-51319
- MOSFET fabrication by Si lateral epitaxy by seeded solidification on SiO<sub>2</sub> 2-5314
- MOSFET inversion layers, electron transport in high mag. fields 2-21685
- V-MOS transistors thin gates fabrication in V-groove (*Slovak*) 2-46162
- GaAs-Si<sub>3</sub>N<sub>4</sub> interface, trap studies 2-26507
- InGaAsP n-channel inversion mode MISFET with low interface state density 2-13188
- InP inversion-mode MISFET, pyrolytic Al<sub>2</sub>O<sub>3</sub> deposition temp. effect 2-13189
- InP oxide film deposition on InP for MOSFET appls. 2-36141
- InP-thermal nitride, interface in MIS diodes and MISFETs, interface props. annealing effects, device prop. 2-51308
- n-Si MOSFET-type struct., electronic response to illumination, surface effects 2-17111

**insulated gate field effect transistors continued**

- Si (001) MIS transistors, cyclotron resonance of inversion layers 2-51468
- Si, film, CW laser-recrystallised material, for semiconductor device manufacture 2-51056
- Si film, encapsulated, zone-melting recrystn. on SiO<sub>2</sub>, morphology and crystallography 2-51012
- Si MOSFET, absorption of ballistic phonons by 2D electron gas 2-50809
- Si MOSFET, nonmetallic cond. in electron inversion layers at low temp. 2-17169
- Si MOSFET, quantised Hall resist. meas. at liq. <sup>3</sup>He temps. 2-46136
- Si-SiO<sub>2</sub> interface, neutral scatt. centres in MOSFET devices prep. by oxidation of trichloroethylene 2-51339
- SiO<sub>2</sub>:N dielectric films, Mrad electron irradiation tolerance, for IGFETs 2-45275
- WSi<sub>2</sub>-Si<sub>3</sub>N<sub>4</sub> annealing behaviour, effect on MOSFET IC device fabrication 2-8720

**insulated wires**

- natural convective cooling 2-44635

**insulating coatings**

- see also varnish; waxes*
- photovoltaic modules, elec. insulation systems, defect design 2-37354

**insulating materials**

- see also asbestos; ceramics; composite insulating materials; dielectric materials; gaseous insulation; glass; insulating thin films; mica; organic insulating materials; thermal insulating materials*
- dielectric phenomena, conf., Whitehaven, PA, USA (Oct. 1981) 2-10548
- glass, surface flashover measurements in vacuum and N<sub>2</sub> gas 2-17408
- glass fibreboard, standard reference material, effective thermal cond. meas. 2-8680
- slab, effective charge tensor and acoustic sum rule 2-30814
- surface and volume conductivity, field calcs. (*German*) 2-17128

**insulating materials, acoustic** *see noise abatement***insulating materials, thermal** *see thermal insulating materials***insulating oils**

- dielectric liquids, conduction current and DC breakdown voltage (*Korean*) 2-17401
- ferromagnetic liquid insulation, spatial distrib. of quantum parameters 2-26676
- mineral oil under external bubble injection, electrically induced pressure 2-12243
- with SF<sub>6</sub>, effect of elec. field on electron attachment 2-1977
- solid-liquid interfaces, effect of particles on electric-field induced phenomena 2-13412

**insulating thin films**

- see also dielectric thin films; electronic conduction in insulating thin films*
- AES and XPS study 2-45784
- composite oxide films formed by DC plasma anodization of Al/GaAs 2-17762
- delayed thermal filamentary breakdown in electrical insulators (*French*) 2-51527
- fluorocarbon polymer, prep. by RF sputtering and plasma polymerisation of freons, elec. and optical props. 2-21705
- high conductivity mechanism, current carrier injection from metal to dielectric conduct-band 2-21703
- hot electron phenomena and electroluminescence 2-13571
- Myler thin film, surface flashover arc orientation 2-36518
- PMMA thin film masts, for use in electron beam lithography, thickness profile determ. 2-23784
- polyethylene terephthalate films, elec. breakdown, influence of water 2-41267
- polyethylene/polypropylene blend films, oriented polymers from soln. 2-27108
- Pyrex glass, Ar and He sputtering yields, meas. using quartz crystal oscillator (*Japanese*) 2-27045
- quartz, fused, Ar and He sputtering yields, meas. using quartz crystal oscillator (*Japanese*) 2-27045
- sulphide films, thermally grown on GaAs and InP, C-V and current leakage meas. on MIS diodes 2-51332
- Teflon in MIM structure, charge storage and transport in electron-irradiated and corona-charged dielectrics 2-36167
- thermally aged anodic films on III-V semiconductors, native oxide reactions 2-52205
- time reversal symmetry in light scattering by excitations in a film 2-31579
- TTT film, influence of struct. on elec. cond. (*Russian*) 2-21704
- AgI film conductivity in Ag/β-AgI/2I<sub>2</sub>/Py cell 2-16878
- AlF<sub>3</sub> film, absorption spectrum, Al L<sub>2,3</sub> excitation 2-2310
- Al<sub>2</sub>O<sub>3</sub> film, plasma anodized, in GaAs and InP MIS structs. 2-51340
- BaO film, nucleation depend. on crystallographic orientation of substrate 2-51035
- Bi<sub>2</sub>O<sub>3</sub> thin film optical transmission, refr. index, extinction coeff., visible and infrared range 2-51538
- C films, hydrogenated, produced by reactive magnetron sputtering, props. 2-39704
- C thin films, amorphous and cryst., RF plasma decomposition and ion beam deposit ion growth, structure, TEM and electron diff. obs. 2-12931
- Cd<sub>0.8</sub>Hg<sub>0.2</sub>Te, anodic surface layer, surface and in-depth anal. 2-51063
- Hg<sub>0.8</sub>Cd<sub>0.2</sub>Te, anodic oxide film, surface anal. and capacitance-voltage characterization 2-51366
- Hg<sub>1-x</sub>Cd<sub>x</sub>Te-oxide interface, carrier transport props. 2-51337
- InP oxide film deposition on InP for MOSFET appls. 2-36141
- LiF thin film, optical vibr. modes by thermal emission 2-17594
- MgF<sub>2</sub> film, absorption spectrum, Mg L<sub>2,3</sub> excitation 2-2310
- NiH<sub>x</sub> ion implanted, resistivity annealing and TDPAC study 2-46180
- Si-rare earth oxide film MOS struct., negative resist., switching and signal generation 2-46149
- β-SiC layer formation on Si substrate, direct sublimation method 2-51822
- Si<sub>3</sub>N<sub>4</sub> amorphous layers, oxidation kinetics, ellipsometric obs. on Si-Si<sub>3</sub>N<sub>4</sub>-SiO<sub>2</sub> struct. 2-5970
- Si<sub>3</sub>N<sub>4</sub> film, CVD or thermally grown, Rutherford backscatt., AES and ellipsometric study 2-51021
- Si<sub>3</sub>N<sub>4</sub> film, MNOS struct., electron traps, photoionisation cross-section 2-46135
- Si<sub>3</sub>N<sub>4</sub> in MNOS structure, quasi-static and HF C(V) curves, insulator polarisation effect 2-46145
- Si<sub>3</sub>N<sub>4</sub> insulating film, electronic struct. and total-current spectra 2-13208



**insulating thin films continued**

- Si<sub>3</sub>N<sub>4</sub> layer on GaAs, RF sputtered, characterization of intermediate layer 2-51062  
 Si<sub>3</sub>N<sub>4</sub> layers on n-InP substrate, elec. props., MIS capacitor fabrication 2-8884  
 Si<sub>3</sub>N<sub>4</sub>, plasma CVD (*Japanese*) 2-13654  
 Si<sub>3</sub>N<sub>4</sub>, plasma enhanced CVD on to InP 2-41527  
 Si<sub>3</sub>N<sub>4</sub>, plasma-enhanced CVD, using SiH<sub>4</sub>N<sub>2</sub> mixture, mech. 2-31631  
 Si<sub>3</sub>N<sub>4</sub>, prep. by direct thermal nitridation of Si (*Japanese*) 2-22357  
 Si<sub>3</sub>N<sub>4</sub>, prep. by plasma and low press. CVD in horizontal reactor 2-22175  
 Si<sub>3</sub>N<sub>4</sub>, synthesis by ion implantation (*Japanese*) 2-12618  
 SiO<sub>2</sub>, thin film photocurrent meas. 2-13125  
 SiO<sub>2</sub>, amorphous film, influence of ion irradiation on struct. 2-45774  
 SiO<sub>2</sub>, amorphous RF sputtered films, elec. cond., EPR and optical absorpt. 2-45975  
 SiO<sub>2</sub>, electron energy loss and mean free path 2-31592  
 SiO<sub>2</sub> film, Si self-diffusion meas. 2-8739  
 SiO<sub>2</sub> film, thermal, bulk and interface trapped charge generation, H<sub>2</sub>O diffusion effect 2-26526  
 SiO<sub>2</sub> films, dielectric breakdown, time depend. 2-36520  
 SiO<sub>2</sub> films, reactive ion etching induced radiation damage 2-35549  
 SiO<sub>2</sub>, insulating film, electronic struct. and total-current spectra 2-13208  
 SiO<sub>2</sub> layers on annealed InP, cracking 2-8741  
 SiO<sub>2</sub> layers on n-InP substrate, elec. props., MIS capacitor fabrication 2-8884  
 SiO<sub>2</sub>, obtained in presence of catalyst, struct. and morphology, substrate contaminations influence 2-40710  
 SiO<sub>2</sub> on Si, inhomogeneous, ellipsometric eval. of thickness, anomalous refr. index 2-31581  
 SiO<sub>2</sub>, plasma deposition on GaAs 2-47217  
 SiO<sub>2</sub>, plasma enhanced CVD onto InP 2-41527  
 SiO<sub>2</sub>, plasma-deposited, charact. 2-9278  
 SiO<sub>2</sub>, prep. by plasma and low press. CVD in horizontal reactor 2-22175  
 SiO<sub>2</sub>, synthesis by ion implantation (*Japanese*) 2-12618  
 SiO<sub>2</sub>, thermally grown film, role of cations in struct. formation (*Russian*) 2-40745  
 SiO<sub>2</sub>, thin films, enhanced low temp. diffusion of electron-beam evaporated Al 2-50925  
 SiO<sub>2</sub>/D film, D conc. meas. by SIMS, charact. of wet thermal oxidation of Si 2-17746  
 SiO<sub>2</sub>/N dielectric films, Mrad electron irradiation tolerance, for IGFETs 2-45275  
 SiO<sub>x</sub>, amorphous glow discharge film, band gap, photoluminesc. study 2-40766  
 SiO<sub>x</sub> film, vapour deposited, light scatt. 2-46808  
 SiO<sub>2</sub>(111) thin film, surface electronic struct., tight binding method 2-26466  
 TiO<sub>2</sub> film, reactively sputtered, light scatt. 2-46808  
 TiO<sub>x</sub> film, sputtered, contamination, Rutherford backscatt. study 2-45787

**insulation**

- see also cable insulation; electric breakdown; insulating coatings; insulating materials; insulators; machine insulation; transformer insulation  
 high vacuum accelerator tubes, prebreakdown and breakdown processes, review 2-11310  
 HV impulse devices with aqueous insulation, insulator shape optimisation 2-44923

**insulation, thermal** see thermal insulation**insulation testing**

- fibre mat insulation efficacy, press. gradient influence (*German*) 2-509  
 LV insulations AC voltage insulating power (*German*) 2-50464  
 nondestructive, AC current-testing method and measurement equipment 2-8370  
 photovoltaic concentrator cell modules cost reduction by using automatic cell assembly, test modules testing 2-37246  
 solid materials electric breakdown, influence of probability distribution bimodality (*Slovak*) 2-40191

**insulator-metal boundaries** see metal-insulator boundaries**insulator-semiconductor boundaries** see semiconductor-insulator boundaries**insulators**

- i.e. insulating devices. For materials see insulating materials  
 see also bushings; insulation  
 cryostat for ion implantation at low temps. 2-5137  
 flashover in vacuum, surface props. 2-17409

**integral equations**

- see also integro-differential equations  
 angle-ply laminate holes, stress analysis 2-50173  
 augmented elec. and mag. field integral eqns. for scatt. from object 2-49633  
 biharmonic Dirichlet problem, soln. by direct integral eqn. method 2-10585  
 boundary integral eqn. method for aquifer problems 2-37911  
 boundary integral eqn. method for soln. of anisotropic elasticity problems 2-15028  
 boundary integral equation solutions to moving interface between two fluids in porous media 2-37912  
 boundary integral equations, theoretical aspects 2-42858  
 calculating magnetic fields in nonlinear anisotropic media (*Russian*) 2-21792  
 capacitance of quadrilateral, computational method 2-42841  
 Cauchy type singular equation soln. 2-38434  
 Chan-Lu method for Abel's integral eqn. inversion 2-15009  
 classical continuous systems, correlation eqns. solns. 2-28812  
 classical scattering, boundary-value problems, functional anal. 2-15075  
 concrete structures stress, force method 2-50106  
 conducting earth, image approximations extensions 2-7701  
 curvilinear screen array, diffraction of plane E-polarised waves (*Russian*) 2-34634  
 digital image restoration, direct algorithm 2-39574  
 distribution functions, BBGKY eqn. hierarchy, integral eqns. 2-23593  
 drift of flexibly connected frames 2-50105  
 dual time scales in a wave problem governed by coupled nonlinear equations 2-23468  
 dual topological unitarisation theory, bilinear eqn. for cylinder, Pomeroy residue 2-29091  
 eddy current problem, 3-D, boundary integral eqns. of minimum order 2-49624  
 eddy currents, high frequency, boundary integral equation method 2-29749

**integral equations continued**

- elasticity, contact problem for heavy half-plane 2-8095  
 elasticity, singular integral calc., limiting integral eqn. method 2-42863  
 elasticity problems for large deformations, soln. by numerical implementation of integral eqn. method 2-44653  
 elastoplasticity, boundary element solution scheme 2-30037  
 elastostatic boundary value problems, round-off errors comparison in integral eqn. formulation 2-33293  
 electromagnetic field vector representation 2-34620  
 EM fields, 3-D, numerical solns., singularity/integral eqn. method 2-29750  
 EM screen, integral eqn. anal. 2-29754  
 EM wave scatt. by open cylinder, electric field integral equation, numerical solution 2-49642  
 EM wave scattering from dielectric cylinder 2-29766  
 emissivity and temp. of cavities evaluation, at Au freezing point 2-15170  
 forced vibrational response finite element model 2-10619  
 fracture, dislocation-free zone model 2-45332  
 Fredholm equations, first kind, double integral-transform methods of soln. 2-33349  
 Fredholm integral eqn. of first kind, synthesis of one- and two dimensional electrostatic field 2-7696  
 free field equations, antiexact soln., associated linear integral eqns. 2-23820  
 gas lens, ray trajectory eqn., analytic soln. method 2-34874  
 granular materials grain size determination by linear anal. (*German*) 2-22401  
 groundwater flow, integral transform method for linearised Boussinesq eqn. 2-23030  
 half plane under impact load, transient response of finite crack 2-50192  
 half-plane, anisotropic, weakened by hole or cut, boundary value problems of elasticity 2-25250  
 heat conduction with nonlinear material and nonlinear boundary conditions, boundary value problems 2-42965  
 Helmholtz-type equations in unbounded regions, numerical methods 2-15076  
 homogeneous Fredholm integral eqns., iterative soln. 2-15052  
 induction pump, linear, boundary integral eqn. soln. 2-29752  
 integral eqn. method, appl. to stress concentration problems 2-15027  
 iterative solution, alternative to Pade technique 2-38408  
 Kirchhoff integral for seismic body wave calcs. 2-22897  
 Korteweg-de Vries eqn., linearisation integral eqn. 2-58  
 ladder  $\phi_3$  model, integral eqn. for causal distrib. and their self-similar asymptotic behaviour 2-10977  
 laminated anisotropic curved beam and shell stiffening finite element 2-50112  
 Lippmann-Schwinger equations for acoustic vibr. field in stratified medium 2-48512  
 liquid theory, integral eqns. for radial distrib. function 2-8406  
 magnetostatic Poisson's eqn., two-dimens., hybrid finite element-boundary integral soln. 2-29744  
 mixed problems in arbitrary domains 2-15043  
 multiple Wiener-Itô integrals. With applications to limit theorems in random variables problems, book 2-10558  
 n-dimensional convolution integrals computation 2-18864  
 non-prismatic three-dimensional beam finite element model 2-12025  
 nonlinear, soln. using iterative method with regularity constraints (*French*) 2-38412  
 nonlinear singular integral magnetic field eqns., spectrum lower bound 2-13328  
 optimum design of stiffened conical shells with natural frequency constraints 2-10612  
 orthotropic bodies, elasticity plane problem soln., numerical implementation of integral eqn. method 2-25251  
 Painlevé II eqn., linearisation integral eqn. 2-58  
 perfect gas, three-dimens. flows in narrow ducts 2-50315  
 plane EM wave scattering from eccentrically coated metallic sphere 2-7709  
 plastic flow, modularised program, for integrating constitutive eqns. using boundary conditions 2-30028  
 plasticity, boundary element method 2-8051  
 plate, circular, elastic, on elastic half space, asymmetric vibrs. 2-25286  
 plate, elastic, bending, Reissner's model, boundary integral eqn. soln. 2-44652  
 polyethylene, integral eqn. method for entropy calc. of confined chain 2-16819  
 potential theory eqns. 2-38404  
 Prandtl, discrete vortices method solution 2-18904  
 prestressed layer clamped rigidly by vibr. stamp, elastic wave generation 2-4745  
 pyrometry integral equation numerical solution 2-15174  
 reduced wave eqn. with fixed incident wave, inverse problem 2-28671  
 rough surfaces, coherent scatt., integral equations 2-15078  
 shells of revolution, rot., oscill. eqn. integrals (*Russian*) 2-33283  
 singular integral eqns., closed and semi-closed quadrature rules appl. to direct numerical soln. 2-18865  
 singular integral equations, iterative soln. 2-16266  
 small-angle scattering, avoiding cutoff effects in integral transformations 2-35354  
 space-time integral eqn. approach to EM wave scattering in dielectric solids 2-34629  
 stiff wire pendulum, vibrations, integral eqns. and composite method 2-34  
 stiffness matrices derivation 2-25245  
 stress boundary integral equations numerical algorithm 2-10604  
 strip elasticity theory, punch indentation, mixed problem soln. 2-1153  
 superionic conductors, two-dimens. fluid model, pair correlations 2-21351  
 thermocline-type cylindrical enclosure for heat storage in solar power plants, numerical model of effects of walls on axisymmetric natural convection flows 2-47527  
 three-nucleon system, nucleon-nucleon interaction 2-24094  
 trimensional plasticity problems appl. of boundary integral equation techniques 2-42859  
 turbulent boundary layer, oscill., integral method calcs. 2-50248  
 two-particle system in force field, nonsingular integral eqns. for T-operator 2-33355  
 viscoelastic stress in materials, Volterra integral eqn. direct numerical soln. 2-28655  
 Volterra eqns. of second kind, reducible quadrature methods, numerical stability 2-10584



**integral equations continued**

- Wiener integrals, associated Fredholm determinants 2-23405
- X-ray sources spectra, numerical soln. of time-depend. Compton scatt. problems via integral eqn. 2-14952

**integral transforms** *see transforms***integrated circuit manufacture**

- Used for commercial manufacture only*
- see also masks; photolithography*
- ion implantation, trends in technology 2-35522
- plasma etching for semiconductor masking 2-41819
- WSi<sub>2</sub>-Si:P annealing behaviour, effect on MOSFET IC device fabrication 2-8720

**integrated circuit technology**

- See also under specific integrated circuit headings*
- see also semiconductor technology*
- accelerometers, Si integrated microbeam PI-FET 2-33502
- capacitive dew-point sensors, construction and props. 2-15179
- diffusion barriers in layered contact structures 2-8882
- electron beam lithography, resolution limits 2-23790
- electronic devices, microstruct. fabrication, review 2-51828
- glass screen-printed optical components 2-1045
- glassivation, bubble expulsion from molten glass by surface-tension gradient method 2-5851
- IC capacitive press. transducer with high sensitivity 2-33506
- ion implantation in microelectronics, bibliography 2-42809
- ion-beam pattern profiles, simulation 2-2604
- laser annealing, pulsed and CW, of polysilicon films 2-25912
- laser CW annealing of polysilicon films, SiO<sub>2</sub>, Si<sub>3</sub>N<sub>4</sub> substrate material effect 2-8534
- micromechanical accelerometer integrated with MOS detect. circuitry 2-33501
- MIL-M-38510 finishes for microelectronic components 2-47210
- MOS ionisation dosimetry device fabrication and testing 2-29436
- MOS self aligned contact technology using N<sub>2</sub><sup>+</sup> ion implantation 2-50676
- plasma etching, end-point detection, opt. methods 2-17755
- plasma etching, end-point detection with laser interferometry 2-19173
- quartz, ion beam etching techniques to overcome nonuniformity 2-36988
- selective plating and etching using resistive heating for metal lines on chips 2-2600
- solar cells, HV multijunction concentrator, fabrication by IC technology 2-27685
- NaCl electron resists, crystal etching at 2 nm size scale, vaporisation using electron beam 2-36993
- Si capacitive pressure transducer with low temp. sensitivity, batch fabricated 2-33505
- Si magnetic-field-sensitive multicollector n-p-n transistors 2-33582
- Si, model of impurity diffusion from oxide source 2-12846
- Si thermopile IR detector, batch fabricated 2-33632
- Ti, evaporation from W refractory metal boat, service life improvement 2-2459
- WSi<sub>2</sub>, laser formed, oxidation, expt. study 2-52067

**integrated circuit testing**

- MOS ionisation dosimetry device fabrication and testing 2-29436
- nuclear and space radiation effect, conf., Seattle, WA, USA (July 1981) 2-33215
- photoresist film thickness meas., optical microscopy and interferometry appl. 2-48766
- SEM and optical microscope techniques combination 2-3660
- SEM techniques, voltage resolution in isolated voltage contrast mode 2-19218

**integrated circuits**

- see also digital integrated circuits; hybrid integrated circuits; large scale integration; linear integrated circuits; masks; microwave integrated circuits; monolithic integrated circuits; substrates; thick film circuits; thin film circuits*
- autoradiography appls. to microelectronics 2-6002
- time mark generator for time-of-flight system 2-49232

**integrated optics**

- see also fibre optics; optical films; optical modulation; optical waveguides; semiconductor junction lasers*
- acousto-optic mode converter, ultra-wideband design using SAW and optical guided-wave struts. 2-11863
- acousto-optic spectral analyser using grating components 2-7892
- beam propagation method in integrated optics 2-49950
- bistable integrated directional coupler switch, remotely controlled, in optical fibre link 2-25146
- bistable optical device using semiconductor laser diode and photodetector 2-957
- chirped waveguide diffraction gratings, improved holography 2-4581
- circuit fabrication 2-7882
- circuit losses, expt., fibre pigtailling of chips 2-16146
- component fabrication by ion implantation 2-49966
- coupler, directional, using deposited SiO<sub>2</sub> waveguides 2-16101
- coupler, high-efficiency, on raised grid with large period 2-39736
- DFB laser action in fibre surrounded by gain modulated dye soln., evanescent field coupling 2-20309
- diffraction grating fabrication for integrated optics 2-20402
- diffused strip waveguides in glass 2-34892
- diffused waveguide characteristic determ. by approximating function method 2-49904
- distributed feedback bistable optical device, end refl. effect on switching threshold 2-7830
- distributed feedback bistable optical devices, self-pulsing and chaos 2-44373
- dye laser, thin film optical waveguiding evanescent, with corner reflecting resonator 2-918
- electro-optic oscillator, high freq., using integrated interferometer 2-49940
- electrooptic guided-wave device for general polarisation transforms. 2-16100
- elements and systems review 2-29890
- elongated integrated optical components fabrication by fibre pulling 2-20430
- fabrication technology 2-49948
- fibre gyroscope with nonreciprocally operated fibre-coupled LiNbO<sub>3</sub> phase shifter 2-25131
- fibre interferometer sensor systems, diode laser source limitations 2-11837

**integrated optics continued**

- fibre optics communication link, integrated-optics microelectronic terminal 2-49944
- fibre-optic integrated interf. filter fabrication 2-39726
- fibre-optic rotation sensor, toward an integrated device, review 2-1036
- flip-chip coupler fabrication between single-mode fibers and LiNbO<sub>3</sub>:Ti channel waveguides 2-44443
- fluoromethane optically pumped 496  $\mu$ m DFB gas laser 2-11713
- Fresnel lenses integrated on oxidised Si substrate, focusing efficiencies 2-34944
- Fresnel reflection halo lasers, planar laser action of 2D disc-shaped active material 2-20339
- geodesic components, use of aspherical surfaces 2-7883
- geodesic lenses, second order effects, anal. 2-11861
- geodesic lenses in Ti-indiffused LiNbO<sub>3</sub> waveguides, performance characts. 2-4613
- glass screen-printed optical components 2-1045
- glass substrate, diffusion of K<sup>+</sup>, fabrication of optical waveguides 2-16111
- glass waveguides formed by Ag<sup>+</sup> ion exchange, stripe waveguides, directional couplers and bends, optical filter appls. 2-11859
- grating focusing-device-design using Poynting-vector-optics 2-16092
- grating profiles, asymm. triangular, with 90° groove angles, by ion-beam erosion 2-1047
- guided-wave acousto-optic devices and appls., review 2-7891
- guided-wave devices, polarisation-indepnd. 2-11815
- guided-wave devices for optical communication 2-16098
- guided-wave optical and SAW devices, systems and appls., conf., San Diego, CA, USA (July 1980) 2-3329
- gyrotropic waveguide theory, Faraday rot.-const. 2-49903
- heterodyne detector with diffraction grating integrated onto surface of Si photodiode 2-7890
- heterodyne detector with integrated diffraction grating on diode surface 2-23721
- high-resolution RF spectrum analyser with Fourier transform geodesic lens system 2-7894
- holographic diffr. gratings, formation in photoresists. 2-11801
- hybrid bistable optical device using an acoustooptic waveguide modulator 2-20403
- IC elements, appl. of chalcogenide amorphous films 2-44492
- II-VI compound vacuum evaporated film, optical const. determ. with optical waveguides 2-17560
- III-V semiconductors for optoelectronic devices, fibre communication appls. 2-44493
- image transmission characts. of planar multimode waveguides, optimization of self-imaging props. 2-11657
- inhomogeneous diffused channel waveguide in integrated optics, wave propagation, anal. using finite-difference method 2-11862
- interferometer, guided-wave, using periodic structures 2-4614
- interferometry, optical amplitude/phase measurement by phase-modulated single sideband detect., integrated optics appl. 2-6898
- laser optics, conf., Leningrad, USSR (Jan. 1980) 2-28594
- laser pulse transmission, ultrashort, through waveguide resonator with distributed Bragg mirrors 2-4536
- leaky modes on waveguides for integrated optics 2-4612
- light radiation from dielectric waveguide, depend. on surface corrugation 2-20432
- low-loss bends for integrated optics 2-25147
- Luneberg lenses made by laser evaporation, design and prep. 2-4572
- Luneburg lens, thin-film, design for max. focal length control 2-20391
- Mach-Zender amplitude modulator with optoelectronic feedback loop, response linearization 2-11866
- measurement appl. developments, review 2-34913
- measurement sensors, using fibre optics and integrated opto-electronics 2-44475
- metal clad dielec. film waveguide with low refractive index buffer layer, guided mode-surface plasma mode resonant coupling 2-16109
- micro lens fabrication using electron-beam lithography 2-34947
- microgratings, electron-beam directly written, for integrated optical circuits 2-4618
- miniaturisation limits in optics (German) 2-44434
- monolithic integrated microgratings and photodiodes for wavelength demultiplexing 2-44487
- multilayered waveguide, mode analysis and prism coupling 2-1017
- multimode strip waveguides formed by ion-exchanged processes, field-induced index profiles 2-11857
- open dielectric waveguides, generalised two-dimensional coupled-mode anal. of curved and chirped periodic structures 2-1018
- optical data preprocessor, 16-channel, fabrication details 2-44490
- periodic multilayered waveguide, expression for no. of guided TE modes 2-11812
- photochromic stripe waveguides for integrated optics, organic fulgides appls. 2-11860
- photoemission, nonlinear, for viewing guided or evanescent waves 2-16147
- planar demultiplexer with chirped grating for optical fibre systems, WDM technique 2-7887
- planar diffused glass waveguide, 1D image feeding using prism-film coupler 2-44491
- planar waveguide, power depend. refr. index 2-16105
- polarisation-insensitive integrated microoptical switches/modulators, new approach 2-16099
- polymer thin films, Raman spectroscopy using integrated optical techniques 2-5766
- ring-channel waveguides, bistability anal. 2-25112
- single-sideband modulator or freq. shifter 2-7855
- spatial filters, passive and active 2-4617
- spectral analyser, integrated acoustooptic, prototype 2-1046
- spectrum analyser, aspheric geodesic lenses 2-7884
- spectrum analyser for RF signals, fabrication and performance 2-4616
- strip waveguides driven by surface acoustic waves 2-44488
- surface EM wave dispersion and attenuation in far IR, inelastic light scatt. meas. 2-4615
- surface periodic gratings, guided wave scatt., perturbation field theory, normal-mode anal. 2-39562
- switch utilizing total refl. crit. angle controlled by dielec. chip motion 2-1016
- switching devices in integrated optics, using LiNbO<sub>3</sub>:Ti channel waveguides 2-11852
- switching network, NXM electrooptical, in planar LiNbO<sub>3</sub> optical waveguide, for computer communications 2-11849



**integrated optics continued**

- thick-grating non-divergent focusing device, two dims. analysis 2-7853  
thin-film DFB laser emission, wavelength tuning method 2-44351  
waveguide, dielectric, with periodically varying parameters, reson. mode conversion 2-34890  
waveguide, glass sputtered coating, imperfections, light scatt. study 2-20408  
waveguide optical components for integrated optical signal processing 2-16113  
waveguides, composite, grating struct. investigation 2-34891  
waveguides, model and real, guided TM mode acoustooptic interaction efficiency, freq. depend. 2-34894  
AlGaAs constricted double-heterojunction diode lasers, structs. and electrooptical characts. 2-34789  
AlGaAs lasers with micro-cleaved mirrors suitable for monolithic integration 2-49774  
As-S, amorphous film, optical waveguide, laser beam electrooptic modulation 2-34885  
As<sub>2</sub>S<sub>3</sub> amorphous film waveguide with optical grating devices 2-49901  
CO<sub>2</sub>, 80  $\mu$ m hollow-core slab waveguide laser, 10.6  $\mu$ m optical gain meas. 2-15979  
GaAlAs/GaAs multilayer monolithic integration of active and passive components for integrated optics 2-11868  
GaAlAs-GaAs multilayer structures, monolithic integration of optoelectronic, electronic and passive components 2-49945  
Ga<sub>1-x</sub>Al<sub>x</sub>As electron-beam-pumped laser, oxide film influence on threshold current density 2-34822  
GaAs lasers, longitudinal mode control using three mirror active passive cavity 2-20333  
GaAs monolithic integration of electro-optic bistable device 2-49949  
GaAs single-mode DH lasers using three-mirror active-passive cavity, longit.-mode control 2-11700  
GaAs/GaAlAs curved rib waveguides, loss value meas. 2-11867  
GaAs-AlGaAs DH system, monolithic integration of optical sources and detectors, processing techniques 2-4611  
GaAs-GaAlAs integrated optical devices fabricated by MBE and metal-organic CVD 2-49947  
GaInAsP single-mode optical waveguides 2-49911  
GaInAsP/InP integrated twin-guide lasers for single-mode operation, fabrication techniques 2-7888  
GaInAsP-InP BH distributed-Bragg-reflector integrated-twin-guide lasers, 1.58  $\mu$ m wavelength 2-29814  
GaInAsP-InP BH distributed Bragg reflector integrated-twin-guide laser emitted at 1.5 to 1.6  $\mu$ m 2-29830  
GaInAsP-InP chip, laser-polyimide/SiO<sub>2</sub> slab waveguide interconnection 2-49946  
glass waveguides with Ag<sup>+</sup> ion exchange, loss anal. 2-11858  
InGaAsP planar layer optical strip waveguides by metal diffusion 2-49910  
InGaAsP-InP integrated LED-detector device 2-44489  
In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>1-y</sub> ultrashort cavity lasers, optically pumped, picosec. operation, 0.83-1.59  $\mu$ m 2-16001  
InP planar layer optical strip waveguides by metal diffusion 2-49910  
InSb ring-channel waveguide, bistability anal. 2-25112  
LiIO<sub>3</sub>-Si layered system, Gulyaev-Blyushtein and Rayleigh wave amplification 2-21980  
LiNbO<sub>3</sub> Bragg modulator, relax. processes 2-4586  
LiNbO<sub>3</sub>, c-plate orientation, diffused optical waveguides on +c and -c faces, integrated optics appls., chemical etching 2-11853  
LiNbO<sub>3</sub> channel waveguide interferometric modulator 2-49894  
LiNbO<sub>3</sub>, electro-optic directional coupler integrated with pyroelec. waveguide detector, optical bistability 2-7885  
LiNbO<sub>3</sub> optical waveguide prism coupler, temp. compensation 2-11856  
LiNbO<sub>3</sub> single mode optical waveguides, fabrication by ion implantation 2-20407  
LiNbO<sub>3</sub> Ti-diffused waveguide, modal fields and curvature losses 2-4588  
LiNbO<sub>3</sub> waveguides, stoichiometry-control and performance for integrated optics 2-44442  
LiNbO<sub>3</sub>:Ti diffused channel waveguide, surface-index profile meas. using interferometric technique 2-20406  
LiNbO<sub>3</sub>:Ti diffused channel waveguide characts. 2-34893  
LiNbO<sub>3</sub>:Ti diffused waveguides, stoichiometry-control and performance for integrated optics 2-44442  
LiNbO<sub>3</sub>:Ti guided-wave acousto-optic Bragg cells with SAW transducers, centre freqs. >1 GHz, 500 MHz bandwidth 2-7893  
LiNbO<sub>3</sub>:Ti guided-wave electro-optical devices for integrated optics, review 2-11864  
LiNbO<sub>3</sub>:Ti low-loss coherently-coupled waveguide bends, design rules 2-49906  
LiNbO<sub>3</sub>:Ti optical waveguides, dispersion curves rel. to fabrication parameters, comparison of theory and expt. 2-11854  
LiNbO<sub>3</sub>:Ti tunable electro-optic TE=TM mode converter/wavelength filter 2-11865  
LiNbO<sub>3</sub>:Ti waveguide optical serrodyne freq. translator 2-7886  
LiNbO<sub>3</sub>:Ti waveguides, electrooptic-photorefr. modulation 2-25109  
LiNbO<sub>3</sub> crystals for light deflection and switching, thermo-optic effect 2-11797  
LiNbO<sub>3</sub>:Ti stripe waveguides, end-fire coupling of optical fibres for interconnection purposes 2-11855  
rectangular metallic waveguide resonator performance evaluation near 1.2 mm wavelengths 2-34802  
SiO<sub>2</sub>-Ta<sub>2</sub>O<sub>5</sub> waveguide dielec. thin films, refr. index var. due to laser irradi. and annealing 2-16106  
T 2-29829  
T 2-49777  
YIG anisotropic planar lightguide covered by metal layer, TE=TM mode conversion 2-20431  
ZnS-Ta<sub>2</sub>O<sub>5</sub>-Nb<sub>2</sub>O<sub>5</sub> multilayered thin films optical tunable couplers using SAW, filtering props. 2-34945

**integrating circuits**

- wideband preamplifier and signal processing filter for gas proportional detectors 2-43727

**integrating spheres see photometry****integration**

- beam transverse shear and rotary inertia Gaussian model 2-18910  
Brillouin zone integration for calculating intra-band joint densities of states 2-45806  
celestial mechanics, numerical integration of satellites of outer planets 2-32815  
doubly curved isoparametric triangular shell stress anal. model 2-10601

**integration continued**

- dynamic response by means of functions of matrices 2-18887  
electron gas in random potential, path integration of a related Lagrangian 2-42934  
equation of motion  $d^2y/dx^2 + c^2 \sin y = 0$ , solns. for pendulum and alternators 2-18872  
gyroscope calc., elastically suspended, nonstationary motion in magnetic fields (Chinese) 2-33513  
heat conduction transient analysis using conjugate gradient method, highly accurate integration formulae 2-44630  
inelastic stress-strain rels., integration, developments of method 2-30030  
inelastic stress-strain rels., integration, foundations 2-30029  
interpolation formula using Taylor's formula of operational calculus (German) 2-10582  
plane elasticity, Cauchy type, numerical algorithm 2-10608  
plastic flow, modularised program, for integrating constitutive eqns. using boundary conditions 2-30028  
rainfall rate statistics, influence of integration time and height of rain-gauge 2-47950  
shells, finite element analysis, numerical integration effects 2-25239  
steam turbine blade rotor nonadiabatic viscosity numerical model 2-20652  
structure analysis, numerical integration comparison 2-39840  
Takagi-Taupin equations, comparison of two numerical methods for integration 2-38410  
Taylor vortex flow, coupled-mode eqns. 2-20685

**integro-differential equations**

- see also Boltzmann equation; Fokker-Planck equation; Liouville equation; master equation; Vlasov equation  
aeroelasticity, stability of integro-differential eqn. solns. (Russian) 2-50171  
atmospheric model, mass and energy conservation eqns. (Russian) 2-3079  
atomic inelastic scatt., use of local exchange pots. 2-39493  
Benjamin-Ono eqn., asymptotic props. 2-48514  
ductile elasticity theory 2-33295  
Einstein's nonsymmetric unified field theory, magnetic monopole mass 2-10688  
elastic brittle material, in mode III, speed of propag. of damaged zone (French) 2-35087  
elastic-plastic problems solution, existence and uniqueness, convergence of approx. solutions (Chinese) 2-28653  
ELMO Bumpy Torus with enhanced ion tail, kinetic model for neoclassical transport 2-50431  
EM wave propag. in nonlinear media; nonlinear integro-differential equation (Russian) 2-20379  
Hartree equations critical points 2-34267  
Korteweg de Vries eqn., generalisation to integro-differential eqn. 2-48515  
light diffraction by vol. transparencies 2-39573  
MHD flow between vertical conducting walls 2-35231  
Newtonian mechanics, new formulation of fundamental law of motion 2-18873  
particle cluster scatt. and effective pot. between clusters 2-23942  
periodic intermediate long-wave equation, props. and solns. 2-48516  
radiation effects in single-phase and multiphase flows, review 2-16372  
random fluid, acoustic wave propag., integrodifferential eqn., asymptotic behaviour 2-12169

**intelligence, artificial see artificial intelligence****intelligibility, speech see speech intelligibility****intensification see amplification****intensity measurement**

- see also acoustic intensity measurement  
light intensity-to-frequency converter, for incorporation into MOS circuits 2-33638  
streamer chamber absolute  $\gamma$  quantum flux meas. apparatus 2-43691

**interactive programming**

- see also interactive systems  
modular interactive data analysis system, MIDAS 2-7476  
nuclear engineering education, interactive computer codes use 2-43527  
standard CAMAC subroutines for on-line computers at CERN 2-7469

**interactive systems**

- see also interactive programming; interactive terminals; online operation  
GOES' imagery, interactive techniques for precipitation estimation 2-23145  
LANDSAT MSS data, geometric correction, land cover classification and change detection 2-48042  
meteorological data 3-D display techniques 2-23120  
meteorological satellite image processing, computer system 2-10175  
nuclear data analysis, modular interactive system 2-7457  
nuclear reactor system interactive safety assessment 2-7319

**interactive terminals**

- see also interactive systems  
CRT assembly noise reduction 2-16179  
raster-scanned terminal to emulate Tektronics 4010 2-7484  
touch terminal, for high-energy physics expt. control 2-24563

**interatomic potentials see potential energy functions****intercalation compounds**

- alkali graphite intercalation compounds, phonons 2-50787  
alkali-graphite intercalation cpds., thermal expansion meas. 2-50892  
conference, Hakone, Japan (Sept. 1980) 2-18813  
dichalcogenides, quasi-one-dimens. cond., intercalation reaction dynamics 2-41871  
graphite, bond length change and cond., review 2-26270  
graphite, discommensurations, X-ray diffuse scatt. study 2-25829  
graphite, elec. props. in high mag. fields 2-21566  
graphite, electronic dispersion relations, energy bands 2-12956  
graphite, magnetorefr. and Shubnikov-de Haas expts. 2-22002  
graphite, order-disorder transition and charge density waves 2-16780  
graphite, phonon dispersion curves, phenomenological model 2-40500  
graphite, quasi-one-dimens. cond., intercalation reaction dynamics 2-41871  
graphite, struct. and electronic props., review 2-26269  
graphite, struct. studies using (001) X-ray diffr. 2-12563  
graphite intercalated spin susceptibility 2-31263  
graphite intercalated with SbF<sub>6</sub> XPS studies 2-41497  
graphite intercalation compound, C<sub>24</sub>Rb, ordered struct., X-ray diffr. study 2-45126  
graphite intercalation compound with Cs, staging and ordering 2-1618  
graphite intercalation compound with K, charge distrib. 2-1852



## intercalation compounds continued

- graphite intercalation compound with K, order-disorder phase transitions 2-1619
- graphite intercalation compounds, effect of electron-phonon interaction on Raman spectra 2-51585
- graphite intercalation compounds, lattice dynamics modelled by phonon dispersion of linear chains 2-50790
- graphite intercalation compounds, phonons 2-50779
- graphite intercalation compounds, prep. by electrochem. method, characterisation 2-5839
- graphite intercalation compounds, role of phonons in intra-plan ordering 2-50780
- graphite intercalation compounds with alkali metals, mech. of supercond. 2-46181
- graphite intercalation cpd. with K, supercond., K conc. depend. 2-13212
- graphite intercalation cpds., positive electrodes in galvanic cells 2-6039
- graphite intercalation cpds., press. enhancement of elec. cond. 2-5394
- graphite- $\text{AlCl}_3$ , intercalate, Shubnikov-de Haas effect (*Russian*) 2-8820
- graphite- $\text{AlCl}_3$  intercalation compounds, order-disorder transformation 2-27171
- graphite- $\text{FeCl}_3$ , longitudinal lattice modes, inelastic neutron scatt. study 2-16732
- graphite- $\text{H}_2\text{SO}_4$ , electronic and chem. struct., XPS study 2-27051
- graphite-halogen, enthalpy changes of phase transitions 2-16778
- graphite-halogen intercalation compounds, X-ray diff. obs. of intralayer ordering and phase transitions 2-16779
- graphite- $\text{ICl}$  intercalate, Shubnikov-de Haas effect (*Russian*) 2-8820
- insertion compounds, struct. and electrochem. reactions 2-22466
- lattice gas models, comparison of Monte Carlo, cluster variation method and renormalisation group calcs. 2-33469
- low-dimensional synthetic metals, conf., Helsingør, Denmark, (Aug. 1980) 2-18805
- Mossbauer spectroscopy, characterisation of solids 2-51509
- polyacetylene,  $\text{AsF}_6^-$  doped, cryst. struct., neutron diff. study 2-45073
- polyphenylene,  $\text{AsF}_6^-$  doped, cryst. struct., neutron diff. study 2-45073
- pyridine intercalated  $\text{NbS}_2$ , optical props., EELS study 2-2391
- solid state physics, advances, conf. Munster, Germany (Mar. 1981) 2-23374
- superconductivity, triplet, in thin films and layered compounds 2-46186
- $\beta\text{-Al}_2\text{O}_3\text{-Li}_2\text{O-H}_2\text{O}$ , intercalation of water, IR absorpt. and neutron diff. study 2-27431
- $\text{AsF}_6^-$  intercalated graphite, cond. and anisotropy of skin depth,  $^{19}\text{F}$  NMR spectra 2-45965
- $\text{C}_{24}\text{C}_5(\text{H}_7)_x$ , H rot. tunnelling spectra 2-35408
- $\text{C}_6\text{F}_6$ , Auger line shape construction 2-27031
- $\text{C}_6\text{Eu}$ , high field magnetisation 2-17319
- $\text{C}_6\text{K}$  intercalation compounds, absorbed H, CESR compounds 2-46383
- $\text{C}_6\text{K}$  intercalation compounds, absorbed H, CESR compounds 2-46383
- $\text{C}_6\text{Li}$ , Auger line shape construction 2-27031
- $\text{C}_6\text{Li}$ , universality, tricriticality, and Potts transition 2-40535
- $\text{C}_{24}\text{Rb}(\text{H}_2)_x$ , H rot. tunnelling spectra 2-35408
- $\text{Cu}_2\text{VS}_4$ ,  $\text{Li}^+$  insertion studies 2-22442
- $\text{EuCl}_6$ , intercalate, Raman spectra 2-36647
- $\text{FeOCl}$  and intercalates, lattice dynamics, hyperfine interactions and mag. ordering temp. 2-41241
- $\text{FeOCl}$ , intercalation cpd. with crown ether 2-21080
- $\text{FeOCl}$ -ferrocene, intercalation cpd., X-ray and Mossbauer reson. studies 2-21128
- $\text{Fe}_2\text{Zr}(\text{Ti})(\text{Nb})\text{Se}_2$ , layered intercalation compound, elec. and optical characts. 2-17072
- $\text{GaSe}$ , intercalated, exciton photoluminescence and reflection spectra 2-17540
- $\text{GaSe}$ , intercalated with Ba or anthracene, electroreflection spectra 2-13453
- graphite- $\text{VOF}_3$ , synthesis (*French*) 2-22182
- $\text{HTiNO}_3\text{-N}$  derivatives, intercalation cpds., comp. and struct. evolution (*French*) 2-5062
- $\alpha\text{-In}_2\text{Se}_3$ , intercalation compound with Li, layered, optical and transport meas. 2-26856
- K-graphite intercalates, press. induced anomaly in c-axis resistivity 2-51141
- $\text{KC}_8$ , back-folded graphite band excitations, EELS study 2-41467
- $\text{Li}$  intercalates, triangular lattice gas, cluster variation method 2-35641
- $\text{Li/LiC}_2\text{O}_2\text{F}_3$ -polyethylene oxide/ $\text{Li}_x\text{Na}_y\text{TiS}_2$  ( $y=0, 0.6$ ) electrochem. cell investig. 2-21369
- $\text{LiC}_{18}$ , graphite intercalation cpd., electronic struct. calc. 2-12955
- $\text{LiCoO}_2$ , cathode material for batteries of high energy density 2-18043
- $\text{LiFeS}_2$ , cathodic material for Li secondary battery 2-22562
- $\text{LiFeS}_2$ , electrochemical system, thermodynamic model 2-17899
- $\text{Li}_2\text{FeV}_3\text{O}_8$ , structural aspects of Li insertion 2-25850
- $\text{Li}_2\text{FeV}_3\text{O}_8$ , topotactic lithium reactions with  $\text{ReO}_3$  related shear structures 2-27433
- $\text{Li}_2\text{KTi}_2\text{S}_7$ , co-intercalated, prep., Li activity and K stability 2-17641
- $\text{Li}_2(\text{Mo}_{0.7}\text{V}_{0.3})\text{O}_8$ , structure, transport and equilibrium props. 2-26136
- $\text{Li}_2\text{Na}_2\text{WO}_6$  bronze, thermodynamics and kinetics of electrochemical Li insertion 2-27434
- $\text{Li}_2\text{NiP}_3$ , electrochem. intercalation of Li, in situ ESR of  $\text{Ni}^{2+}$  (*French*) 2-21871
- $\text{Li}_2\text{ReO}_3$ , structural aspects of Li insertion 2-25850
- $\text{Li}_2\text{ReO}_3$ , topotactic lithium reactions with  $\text{ReO}_3$  related shear structures 2-27433
- $\text{Li}_2\text{Ta}_{1-x}\text{Fe}_x\text{S}_2$ , intercalation cpd., electronic struct., Mossbauer effect study 2-31343
- $\text{Li}_{0.3}\text{TiS}_2$ ,  $^7\text{Li}$  NMR linewidth and ordering 2-51484
- $\text{Li}_2\text{TiS}_2$ , anomalous Bragg peak widths, X-ray diff. expts. 2-16630
- $\text{Li}_2\text{TiS}_2$ , elec. resist. and Hall coeff. at low temp. 2-35984
- $\text{Li}_2\text{TiS}_2$ , intercalation rate of  $\text{Li}^+$  and thermoelec. determ. 2-40606
- $\text{Li}_2\text{TiS}_2$ , lattice parameters and thermoelec. power meas. 2-16633
- $\text{Li}_2\text{V}_{1-x}\text{Co}_x\text{S}_2$ , layered compounds, mag. props. 2-21765
- $\text{Li}_2\text{V}_{1-x}\text{Fe}_x\text{S}_2$ , layered compounds, mag. props. 2-21765
- $\text{Li}_2\text{V}_{1-x}\text{Ni}_x\text{S}_2$ , layered compounds, mag. props. 2-21765
- $\text{Li}_2\text{VO}_3$ , structure, transport and equilibrium props. 2-26136
- $\text{Li}_2\text{WO}_3$ , structure, transport and equilibrium props. 2-26136
- $\text{Li}_2\text{ZrSe}_6$ , elec. resist. and Hall coeff. at low temp., supercond. props. 2-35984
- $\text{Li}_2\text{ZrSe}_6$ , semiconductor-metal transition upon intercalation 2-21504
- $\text{Na}$  intercalation cpd. with  $\text{TiS}_2$ ,  $\text{TaS}_2$ ,  $\text{NbS}_2$ , behaviour as solid soln. electrode 2-21370
- $\text{Na}_2\text{CoO}_2$  bronzes, electrochem. intercalation of Na 2-18042
- $\text{Na}_2\text{CrS}_2$ ,  $\text{Li}^+$  intercalation in secondary Li cells 2-9637

## intercalation compounds continued

- $\text{Na}_2\text{Cr}_{0.5}\text{V}_{0.5}\text{S}_2$ , form. during  $\text{Cr}_{0.5}\text{V}_{0.5}\text{S}_2$  discharge in Na cell, struct. study 2-47470
- $\text{NbS}_2$ , intercalation electrodes in Ag solid state cells, kinetic, diffusion and thermodynamic studies 2-52326
- $\text{NbSe}_2\text{-2H}$ , Ag electrointercalation 2-21353
- $\text{NiCl}_2$ -graphite intercalation cpd., second stage, mag. phase transition in external mag. field 2-5547
- $\text{RbC}_8$  intercalation cpd., neutron spectroscopy of phonons 2-50789
- $(\text{SNBr})_x$ , energy band struct. and Fermi surface 2-30795
- $(\text{SNBr})_x$ , interacting two-carrier system, elec. resistivity 2-30882
- $\text{SbCl}_5$ -graphite, intercalant species identification by Mossbauer spectroscopy 2-31335
- $\text{Ta}_{0.9}\text{Nb}_{0.1}\text{S}_2$  (4Hb), intercalated pyridine, interlayer supercond. coupling 2-31114
- $\text{TaS}_2$ , intercalation electrodes in Ag solid state cells, kinetic, diffusion and thermodynamic studies 2-52326
- $\text{TaS}_2(\text{IT})$  intercalation complexes with hydrazine, transport and optical props. 2-45966
- $\text{TiS}_2$ , intercalation electrodes in Ag solid state cells, kinetic, diffusion and thermodynamic studies 2-52326
- $\text{TiS}_2+\text{Li}^+$  electrointercalation at solid soln. liq. soln. electrodes, mass transport and heterogeneous rate parameters 2-22467
- $\text{V}_2\text{O}_5$  gels, lamellar struct., intercalation of polar-organic solvents (*French*) 2-2741
- $\text{VOCl}$ , crystalline parameters thermal dilatation coeffs. and mol. intercalation (*French*) 2-1451
- $\text{VOCl}$ , dynamics of intercalated mols., X-rays, NMR line widths and inelastic neutron scatt. studies 2-46389
- $\text{VSe}_2(\text{N}_2\text{H}_4)_x$  intercalation cpd., resistivity, temp. depend. 2-30873
- $\text{WO}_3$ , hexagonal, intercalation chem. and prep. 2-22184

## interdiffusion see diffusion

## interface electron states

- excited atom and molecule deactivation 2-5447
- heterojunctions, nonideal, photoelectric props. 2-36132
- heterojunctions and MIS struct., local density of states, oscills. (*Russian*) 2-17146
- metal-dielectric interface, phonon and photon reson. absorpt. 2-30737
- metal-nonlinear semiconductor interface, surface plasmon propag. const. 2-26459
- metal-semiconductor interface, metal thickness effects on electronic props. 2-26498
- MIS inversion layer solar cells, surface recombination current 2-14078
- MNOS structure, degradation props. 2-13187
- MNOS structure, quasi-static and HF C(V) curves, insulator polarisation effect 2-46145
- MOS structure, charge properties, influence of Si etching in RF Ar plasma (*Russian*) 2-5468
- MOS structure, fast surface state distrib. determ. method 2-17160
- MOS structures, characts. of slow interface traps created during electron avalanche injection 2-46153
- non-local effects in the electromagnetic properties of interfaces 2-30954
- polaron at interface between two polar crystals 2-26470
- Schottky barrier junction, energy distrib. of surface states 2-13182
- semiconducto-piezoelectric insulator interface, coupled acoustic-magnetoplasma oscills. 2-36145
- semiconductor interface physics, conf., Williamsburg, VA, USA (Jan. 1981) 2-6702
- semiconductor junctions, homogeneous, charge meas. of interface 2-46110
- semiconductor junctions with deep impurity levels, admittance, space charge anal. 2-13169
- semiconductor-insulator nonlattice matched interface, U-shaped background density of interface states 2-26508
- semiconductors, electronic props. of surfaces and interfaces 2-40994
- Si-Ge interfaces, low energy EELS study 2-9232
- solar cells, MIS, p-type, electron capture by surface states, adverse and beneficial effects 2-37228
- solar materials interfaces and interfacial phenomena, review 2-5312
- wurtzite interface, mismatch dislocation dangling bond distrib. 2-8517
- zinc blende interface, mismatch dislocation dangling bond distrib. 2-8517
- $\text{Al/Si}$  (111) cleaved interface, photoemission, Auger electron yield, and AES study 2-5797
- $\text{Al-CdS}(\text{Se})$ , electronic barrier characts., time-resolved charge injection 2-8878
- $\text{Al-SiO}_2\text{-Si}$  structure, hole mobility and density of states at  $\text{Si-SiO}_2$  interface 2-5469
- $\text{Al-Si}(111)(2\times 1)$  interface electron struct.,  $\text{L}_1\text{L}_{2,3}\text{V}$  AES study 2-13594
- $\text{Au/Si}$  (111) interface, growth mode, energetics, structural and electronic props. 2-2002
- $\text{CdS}$ -anthracene interface, exciton reflection and luminesc. spectra 2-51091
- $\text{Cu}_2\text{-S-CdS}$  thin film solar cells with dual impurity distrib. in base 2-37214
- $\text{GaAs}$  (110)- $\text{Al}$  interface, initial stage of formation 2-8881
- n-GaAs, passivation and interface state studies 2-17747
- $\text{GaAs}$ , surface chemistry and interface Fermi level position, single defect model 2-26460
- $\text{GaAs-Al}_x\text{Ga}_{1-x}\text{As}$  interface, far IR emission from 2D electrons 2-2336
- $\text{GaAs-AlAs}$  heterojunction band discontinuities, XPS meas., growth sequence depend. 2-13619
- $\text{GaAs-AlAs}$  interface, antisite defect 2-26321
- n-GaAs-Au Schottky barrier height increase, Fermi energy pinning behaviour 2-5451
- $\text{GaAs-GaAlAs}$  heterojunction, localisation and interaction effects in electron gas 2-21664
- $\text{GaAs-GaAlAs}$  interface, cyclotron emission, two-dimens. character of electron gas 2-5586
- $\text{GaAs-n-AlGaAs}$  heterostructure grown by MBE, growth temp. effect on two-dimens. electron gas mobility 2-8867
- $\text{GaAs-oxide}$  interface states: gigantic photoionization via Auger-like process 2-26510
- n-GaAs-oxide layer, interface defect states effect on electronic props. 2-26509
- $\text{GaAs-Si}_3\text{N}_4$  interface, trap studies 2-26507
- $\text{GaAs-ZnSe}$  heterojunction interface, LPE conditions effect 2-45748
- $\text{Ga}_{1-x}\text{In}_x\text{As}$  MOS structures, plasma anodisation and interface props. 2-46133



## interface electron states continued

- p-Ge/CdS junction, admittance with deep impurity levels, space-charge anal. 2-13169  
 Ge-GaAs (100) interface, atomic and elec. struct. 2-12923  
 Ge-GaAs (111) and (111) interfaces, electronic struct., EHT calc. 2-8854  
 Ge<sub>3</sub>N<sub>4</sub>-GaAs MIS devices, elec. characts. and memory behaviour 2-46147  
 Ge<sub>3</sub>N<sub>4</sub>-n-GaAs MIS devices, interface characts. determ. 2-30970  
 InGaAsP n-channel inversion mode MISFET with low interface state density 2-13188  
 InP-SiO<sub>2</sub>(Si<sub>3</sub>N<sub>4</sub>) MIS capacitors, interface props., C-V meas. 2-8884  
 InP-thermal nitride, interface in MIS diodes and MISFETs, interface props. annealing effects, device prop. 2-51308  
 PbO<sub>2</sub>, partially reduced, semicond. and electrochem. props. (*German*) 2-5457  
 n-PbTe epitaxial layers, interface electron states, IR radioelectric effect study 2-51352  
 Pd-SiO<sub>2</sub>-Si diodes, DC response, small signal admittance, Fermi level, theoretical modelling 2-51311  
 Pd-SiO<sub>2</sub>-Si diodes, H<sub>2</sub> induced interfacial trapping states, I-V characts. and admittance response meas. 2-51310  
 Pd-Si-Si interface, thermally induced Si accumulation, Si-Pd bonds, photoemission study 2-26505  
 Si (100)-SiO<sub>2</sub> interface, energy structure, density of states, tight binding anal. 2-21646  
 Si (100)-SiO<sub>2</sub> interface Auger LVV line shape, 2-22124  
 Si (111)-Ag interface, struct. and electronic props., LEED, photoemission and Auger meas. 2-21448  
 Si (111)-Ga(Sb) interface Schottky barrier formation 2-41011  
 Si MOS structs., pre-breakdown field treatment effect on elec. props. (*Russian*) 2-2007  
 Si polycrystalline, n and p-type, photocurrents and diffusion length new grain boundaries, interfacial recomb. vel. 2-51209  
 Si polycrystalline in MIS devices, grain boundary effects, capacitance, cond. 2-21679  
 Si semicrystalline Schottky diode, quantitative model of grain boundaries influence on junctions space charge 2-37243  
 Si:H amorphous film, photoconductivity threshold and optical gap 2-36097  
 p-Si/aqueous electrolyte interface in solar cells, oxide optimisation 2-22613  
 Si/GaP interface, impurity deep traps 2-51267  
 Si-Au interface, electronic struct. 2-51302  
 Si-Ni silicide interfaces, potential barrier height and interface states 2-51307  
 Si-Si interface electronic props. 2-51288  
 Si-SiO<sub>2</sub>, n-type inversion layers, impurity-shifted intersubband transitions 2-51274  
 Si-SiO<sub>2</sub> interface, electron scatt. at low temp., interface states role 2-51338  
 Si-SiO<sub>2</sub> interface, hot electron induced defects 2-46152  
 Si-SiO<sub>2</sub> interface, Na<sup>+</sup>-bound electrons, IR absorption study 2-51273  
 Si-SiO<sub>2</sub> interface, phys. struct. of interface states, correl. to technology anal. (*German*) 2-26512  
 Si-SiO<sub>2</sub> interface defects, low temp. annealing and hydrogenation 2-8885  
 Si-SiO<sub>2</sub> interface in MOS structs., memory effects caused by irradiat. (*Russian*) 2-21681  
 Si-SiO<sub>2</sub> interface in MOS structures, radiation-induced trivalent Si defect buildup 2-30969  
 Si-SiO<sub>2</sub> interface in MOS device, bias stress effect on interface state density 2-51333  
 Si-SiO<sub>2</sub> interfaces, electronic struct. of defects, extended muffin-tin orbital calc. 2-8853  
 Si-SiO<sub>2</sub>-n-InAs(n-InSb)(p-ZnTe) hybrid struct., elec. cond. and capacitance 2-26478  
 SiO<sub>2</sub>, electron trapping, reduction by high temp. N<sub>2</sub> annealing 2-26405  
 SiO<sub>2</sub> film, thermal, bulk and interface trapped charge generation, H<sub>2</sub>O diffusion effect 2-26526  
 SiO<sub>2</sub>/Si, induced defects, due to ion beam lithography (*Japanese*) 2-50717  
 SiO<sub>2</sub>-Si, avalanche electron injection, interface states generation 2-17162  
 SiO<sub>2</sub>-Si interface, local atomic order and electronic struct. theory (*French*) 2-17127  
 SiO<sub>2</sub>-Si interface states generation at low temp. with ionising radiation 2-30944  
 SiSiO<sub>2</sub>-electrolyte structures, interface state props. depend. on pH 2-36140  
 Si(111)(2×1)-Ge heterojunction, localised interface states, photoemission spectra and tight-binding calc. 2-40991  
 Ti-p-Si MIS type Schottky barriers 2-46100  
 p-Zn<sub>3</sub>P<sub>2</sub>/n-ZnO heterostructures, I-V and C-V characts., band diag., interface state density 2-51290

## interface phenomena

- see also adsorption; crystal surface and interface vibrations; interface structure; Kapitza resistance; semiconductor-electrolyte boundaries; surface phenomena  
 acoustic reflection coefficient at lossy liquid-lossless solid interface 2-16158  
 adhesive performance prediction, surface energy characterisation 2-35899  
 benzene, monosubstituted derivatives, interface response, dielectric relax., permittivity meas. (*French*) 2-17396  
 boiling incipience due to contact angle hysteresis on metal surface 2-35033  
 bonding, diffusion, theoretical model 2-41864  
 cholesteric liquid cryst., radiation transmission through gradual interface 2-1400  
 composite materials 2-45746  
 composites, brittle, toughening by second-phase particles, crack paths 2-27270  
 composites, particulate, cracking due to thermomech. stress 2-8559  
 computational models for convective motions induced at fluid interfaces 2-4831  
 condensation, direct contact, studied by steam injection at subsonic injection rates 2-25230  
 contact surface determ. by holographic interferometry 2-871  
 convection 2-30715  
 diatomic fluid structure near a wall 2-20992  
 dislocation, elastic field at edge of dihedral interface in isotropic elasticity (*French*) 2-45167

## interface phenomena continued

- disperse systems, of spherical particles, dielectric relaxation profiles 2-2180  
 donor acceptor approach to interface phenomena, role of phase boundaries 2-40748  
 droplet motion, Newtonian interface 2-25424  
 elastic waves on cylindrical liq.-prestrained body interface, Stoneley wave theory (*Ukrainian*) 2-12066  
 enamel/metal interface, X-ray Auger microanalysis of Fe 2-35900  
 epitaxy, interface problems, review 2-51047  
 fibres with brittle shape layers, prediction of tensile strength 2-35587  
 film, insoluble, phase transitions at the air-water interface 2-1712  
 fluid interfaces and films in technology (*German*) 2-30714  
 fluid-fluid interface, reflectivity rel. to thermal fluctuations (*French*) 2-17576  
 fluid-solid interfaces, transport processes, fluid layer equil. fluctuations 2-50999  
 fluids interface deflections induced by Marangoni effect, IR-visible image conversion appl. 2-23701  
 freezing, transition from convection-controlled to conduction-controlled growth 2-4705  
 heat transfer in stressed liquid 2-12156  
 III-V compounds, peculiarities of isothermal contact of liq. and solid phase during LPE 2-30763  
 inhomogeneous liquid interface self-oscills. in elec. field 2-20764  
 insulators, photoinjection and cond., theory 2-1952  
 interaction of charges moving near the surface of a solid 2-21661  
 internal shape changes, kinetics, role of interfaces 2-40409  
 intrusive gravity current, head struct. 2-30207  
 Ising model, two or three dimens., roughening transition and linear singularity localisation (*French*) 2-15118  
 Lennard-Jones particles, crystal-melt interface, Monte Carlo simulation 2-26024  
 light reflection from non-ideal interface boundary 2-24943  
 liquid-air interface, aq.-nonelectrolyte soln., surface activity, H bond form. theory 2-1709  
 liquid-liquid interface, asymptotic representation of acoustic pulse reflection 2-7929  
 liquid-liquid system, mass transfer, conc. distrib. at phase interface 2-12885  
 liquid-vapour interface, capillary waves and inherent density profile 2-40651  
 liquid-vapour interface, molecular models 2-8690  
 liquid-vapour system, interface region, light scatt. due to density fluctuations 2-2297  
 liquid/gas(solid) interface, model calcs. (*German*) 2-50958  
 loaded Rayleigh waves on lightly loaded interfaces, damping, appl. to Kapitza conductance 2-12900  
 magnetisable fluid flow, interface instability study 2-1172  
 material interfaces, energy deposition, semi-empirical electrontransport model 2-30503  
 MBBA-air interface, disclination obs. 2-5047  
 metal aq. electrolyte interface, electroreflectance spectra 2-2220  
 metal composites, fatigue crack prop. along interface 2-47153  
 metal interfaces, plasmon dispersion effects 2-26318  
 metal-dielectric tandem with rough interfaces, selective absorpt. of solar radiation (*French*) 2-9672  
 metal-liquid interface, US mode conversion from SAW to compression waves 2-35876  
 metal-thermoplastic system, structural changes in surface layer of plastic due to sliding friction 2-31799  
 metallic thin film-liquid interface, thermoelastically generated MHz waves 2-11998  
 metals, hot working, friction, influence of scale thickness and comp. 2-31805  
 metals, hydride-forming, terminal solid solubility, effects of misfit and external stresses 2-12759  
 microemulsions, modification of interfacial film during structure inversion (*French*) 2-22492  
 microscopic and macroscopic contact angles 2-50960  
 multicomponent fluid struct. near solid substrates 2-20990  
 nematic liq. cryst., wall effect of director deformation 2-40257  
 neutral dielectric bodies, planar interface, polarisation theory 2-2178  
 neutron crit. reflection of interfacial phenomena 2-3988  
 phospholipid geometry in interface region, Raman spectroscopy 2-14205  
 physical adhesive state between solids 2-27406  
 physical electronics conf., Bozeman, MT, USA (June/July 1981) 2-10547  
 piezoelectric-semiconductor layered structure, shear-wave convolution 2-8699  
 polymer bridging forces in liquid/liquid systems 2-35864  
 polymer interfaces, healing of junction surface welding process analysis 2-17748  
 rectangular interfacial atomic meshes, ideal epitaxial configurations 2-51031  
 semi-infinite boundaries, anisotropic elasticity, dislocations at common edge 2-40382  
 semiconductor structure, space charge model 2-36522  
 semiconductor-dye interface, in situ obs. by photoacoustic spectroscopy, ZnO/rosebengal appl. 2-2722  
 semiconductor-vacuum interface, electrostatic energy of charge, field electron emission barrier 2-41501  
 sliding contacts, heat distrib. parameters, compilation 2-20615  
 solar energy, materials, stability of interfaces, review 2-22621  
 solar materials interfaces and interfacial phenomena, review 2-5312  
 solid metallic surfaces in contact, press. distrib. determ. (*Japanese*) 2-8716  
 solid-fluid interface, curved, surface stress 2-50979  
 solid-state electrochem. cells, electrode and interface reactions, review 2-13973  
 SOS films with negative and positive interfacial charges 2-8886  
 steel fibre reinforced Ag, high-cycle fatigue, failure mechanisms 2-52027  
 steel fibre reinforced Ag, low-cycle fatigue 2-52026  
 superconductor-nonmetal system props. 2-31069  
 thermal fluctuations in the interface of an inhomogeneous fluid 2-50057  
 thermo-optical transition radiation of sound 2-13462  
 thermodynamics, statistical mech. 2-1805  
 thermodynamics 2-45721  
 transition radiation from rough interfaces (*Russian*) 2-22107  
 two phase fluid, one-component, microscopic theory of interfacial hydrodynamics 2-25418



**interface phenomena continued**

- two-layer liquid, interface dynamics investig. 2-12223  
 two-phase bodies, continuously interconnected, internal morphology 2-30570  
 van der Waals fluid, nucleation, spinodal decomp. and interface motion 2-20987  
 wear crack initiation, effect of second-phase particles 2-25981  
 Ag-rhodamine B adsorbed layer, surface plasmons, light reflection study (French) 2-2360  
 Al, interfacial transfer to steels and ceramics, loaded contact, large temp. difference between contact surfaces 2-47193  
 Al, interfacial transfer to steels and ceramics, in loaded contact, both surfaces at high temps. 2-47194  
 Au-aq. electrolyte interface, electroreflectance spectra 2-2220  
 B fibre reinforced composites, strength, interface effect 2-36919  
 Cu/Ni couple, intrinsic diffusion coeffs., determ. by multiple markers method 2-40610  
 Fe-C-S, liq., C dissoln. rate, influence of S 2-1620  
 Fe-Cr-C, hypo-eutectic alloys, solidification, partition of solute elements 2-47033  
 Fe-(Ni), galvanic coatings on steel (Russian) 2-9392  
 Fe<sub>81</sub>S<sub>19</sub>, amorphous ribbon form., effect of casting vel. 2-27114  
 GaAs + As<sub>2</sub>O<sub>3</sub>, interfacial reaction, Raman scatt. detection 2-6086  
 GaSb + Sb<sub>2</sub>O<sub>3</sub>, interfacial reaction, Raman scatt. detection 2-6086  
 He II-interface excitations, two-dimens. rotors 2-26158  
<sup>4</sup>He, solid-superfluid interface, roughening transition 2-1704  
 Li-Li<sub>2</sub>N interface behavior under anodic polarisation, diffusion 2-16874  
 Li-Si/FeS<sub>2</sub> primary cell, reactive interface materials characterisation 2-14056  
 MoSi<sub>2</sub> coating on steel, oxidation resistance 2-52090  
 Na-S cells,  $\beta$ -Al<sub>2</sub>O<sub>3</sub> interface resistance study 2-27589  
 Nb-Ti composite high-field supercond., current-carrying, stability, elec. charge effect 2-51385  
 Ni electrodes, polycryst., in alkaline soln., impedance meas. 2-51305  
 Ni-In, grain boundary diffusion of In, meas. by SIMS 2-35739  
 Ni-W-Zr (28, 0.4 wt.%) alloy plate, surface reaction with (Ba, Sr, Ca)CO<sub>3</sub> powder (Japanese) 2-13849  
 Ni-W-Zr (28, 0.4 wt.%) alloy plate, chemical cpds. formed at interface with (Ba, Sr, Ca)CO<sub>3</sub> powder (Japanese) 2-13850  
 Ni<sub>3</sub> Al-Ni<sub>3</sub> Nb, eutectic alloy, directional solidification 2-5868  
 Ni<sub>3</sub>Si<sub>2</sub> formation on Si, TEM obs. 2-51030  
 Pd crystallites, Al<sub>2</sub>O<sub>3</sub> supported, in oxygen, form. of pits, role of interfacial phenomena, TEM 2-12886  
 Sb, solid, dissoln. into molten Bi, interfacial phenomena 2-1750  
 Si-Si thin film interface, buried Ag layers quantitative anal. 2-45743  
 Si-SiO<sub>2</sub> structures in electrolytes, generation props., high electric fields effect (Russian) 2-17157  
 Sn film, solid-phase spreading on In over surface 2-21479  
 Sn-Ge phase boundary, orientational depend. of surface tension 2-1777  
 Ti/W interface, surface free energy, field ion microscopy study 2-45695  
 TiB<sub>2</sub> film electrode behaviour in Si vacuum deposited thin film solar cell 2-40716  
 ZrO<sub>2</sub>, stabilised, cell, electrode processes studied by complex impedance method 2-13974

**interface structure**

- aluminosilicate interface, corrosion inhibiting an Al alloys, IR reflection and electron spectra 2-5988  
 austenitic stainless steels, AISI 304L and 316L, glow discharge optical spectroscopy of passive film (French) 2-52101  
 cement, K-400, interaction with pyroceramic and quartz, MFTIR IR spectra obs. 2-49840  
 contact interface, deformation of asperities (Japanese) 2-27253  
 crystal-melt interface, struct. and thermodynamics, review 2-12528  
 electron microscopy, high resolution, techniques, review 2-20980  
 FCC-BCC interface, appl. of surface dislocation theory 2-45739  
 field ion microscopy, recent progress (Japanese) 2-5031  
 ice-metal interface, growth orientation 2-51006  
 III-V semiconductor/oxide interfaces, chem. comp. and form., review 2-9444  
 ion etching limitations for interface analysis, review 2-8718  
 ion scattering, high energy, for surface struct. determ., review 2-22132  
 magnetic-nonmagnetic metal sandwich films, use of electron diff. for contact struct. 2-26239  
 metal silicide-Si interface, microstructure and elec. props. (Japanese) 2-26499  
 metal-metal (semiconductor), thin film structures, laser, electron and ion beam induced reactions 2-51011  
 metal-metal interfaces, FEM, FIM and atom-probe studies (Japanese) 2-26238  
 metal-polymer-metal boundaries, US interface wave attenuation 2-45703  
 metal/ $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O interface, evolution in humid atm. (French) 2-8877  
 misfit dislocation theory, for continuous distrib. of interface dislocations 2-21152  
 Monte Carlo computer simulation of microclusters, surfaces, and interfaces 2-21478  
 polystyrene, fracture of crazes by propag. of interfacial stress waves 2-52025  
 semiconductor interface physics, conf., Williamsburg, VA, USA (Jan. 1981) 2-6702  
 semiconductors, X-ray topographic anal. 2-30366  
 solar energy, materials, stability of interfaces, review 2-22621  
 solar materials interfaces and interfacial phenomena, review 2-5312  
 solid particles embedded in solid matrix, surface stress and chem. equilib. 2-35897  
 SOS films with negative and positive interfacial charges 2-8886  
 spherical microstructures, struct. and stress 2-21429  
 steel, Cr-Ni, oxidation, influence of metal grain growth 2-9470  
 steel, Mn-Si-V, dual phase, struct.-prop. relations 2-36916  
 thin film formation, conf., Fonyod, Hungary (Sept.-Oct. 1980) 2-48399  
 wurtzite interface, mismatch dislocation dangling bond distrib. 2-8517  
 zinc blende interface, mismatch dislocation dangling bond distrib. 2-8517  
 Zircaloy-2, microstructural features of hot press. bonding with stainless steel type ATSI 304 2-30661  
 a-Si vacuum deposited coating on c-Si, annealing, EPR and TEM study 2-26244  
 Al/n-Si, small area laser beam annealing, subsurface alloying and deep Al penetration 2-1517  
 Al/Si (111) cleaved interface, photoemission, Auger electron yield, and AES study 2-5797

**interface structure continued**

- Al-Al, impurity content, secondary ion mass spectrometry (Russian) 2-5310  
 Al-Cu, directionally solidified, meas. of cell and primary dendrite arm spacings 2-1806  
 Al-Cu (2-5 wt.%), coarsening of Gq' plates, influence of ledge mechanism 2-13723  
 Al-GaAs interfaces, at. geometry, soft XPS and elastic LEED studies 2-8714  
 Al-Mg-Si, directionally solidified, meas. of cell and primary dendrite arm spacings 2-1806  
 Au/Si (111) interface, growth mode, energetics, structural and electronic props. 2-2002  
 Au-Ag thin film couples, interfacial reactions, Auger depth profiling, TEM, and contact resist. meas. 2-8678  
 Au-InP system, binary cpd. form., 320 to 360°C 2-1680  
 Au-Sn-Al metallisations on GaAlAs, interfacial struct. studies 2-8713  
 C-Si interface in polysilicon film growth on C substrates with pyrocarbon coating 2-51835  
 CdTe-TeO<sub>2</sub> interface struct., high resolution TEM study 2-30473  
 CoSi<sub>2</sub>-Si epitaxial layers on Si(111) substrate, TEM and Rutherford backscatt. anal. 2-40703  
 Cu-Zn (37.65 at.%), reverse martensitic transform., resulting dislocation structs. 2-51896  
 CuInSe<sub>2</sub>, oxidation, AES, SIMS and XPS studies 2-27315  
 Cu<sub>2</sub>S-CdS thin-film heterostruct. solar cell, struct. and phase studies by X-ray diff. 2-37366  
 Fe-C and Fe-Fe<sub>3</sub>C eutectics, interphase spacing and growth temp. rel. to growth vel. 2-31694  
 Fe-C lath martensite, anal. of habit plane traces 2-40321  
 Fe-C-Si (Ni, Mn, Cr), grain boundary ferrite allotriomorphs, growth kinetics 2-16659  
 Fe-Si interface, silicide formation studied by Mossbauer spectroscopy and Rutherford backscatt. 2-31347  
 (Ga,Al)As-GaAs heteroepitaxial layers, stacking faults and substructure 2-35515  
 Ga-Mo interface, comp. and surface atom stability, high mass resolution atom probe anal. 2-35898  
 Ga-W(Mo), FEM, FIM and atom-probe studies (Japanese) 2-26238  
 Ga<sub>1-x</sub>Al<sub>x</sub>As-GaAs interfaces, nondestructive charact. using nucl. profiling 2-12921  
 GaAs, MIS solar cell, degradation, metal-oxide interfacial reaction, AES study 2-52343  
 GaAs-Al<sub>x</sub>Ga<sub>1-x</sub>As multiquantum well structures, opt. props. and interface disorder, growth-temp. optimisation 2-8869  
 GaAs-Cu(Ag)(Zn)(Sn)(Al) contacts, metal diffusion, penetration depth, SEM and microprobe anal. 2-40701  
 GaAs-metal contact interface, metallurgical and elec. props., heat treatment effects (Chinese) 2-21672  
 GaAs-metal ohmic contacts, microstructure, correl. with elec. characts., electron microscopy obs. 2-40700  
 GaAs-oxide interface, ion beam channelling characterisation 2-26236  
 GaAs-Si<sub>3</sub>N<sub>4</sub>, RF sputtered, characterization of intermediate layer 2-51062  
 GaAs-Sn layers, laser annealed, interface struct. and diffusion 2-30757  
 GaAs-ZnSe heterojunction interface, LPE conditions effect 2-45748  
 Ge epitaxial films on GaAs (110), surface defect struct., LEED study 2-8694  
 Ge/Ga heavily doped single crystals grown from melt, interface breakdown 2-25777  
 Ge/Si(111) system, pseudomorphic struct. at. interface, high energy ion scatt. study 2-12938  
 Ge-Au interface formation, UPs study 2-40699  
 Ge-GaAs (100) interface, atomic and elec. struct. 2-12923  
 Ge-GaAs abrupt (110) interface, geometry 2-12920  
 Ge-SiO<sub>2</sub>, dislocation configurations and misfit dislocations, in heterostructures with continuous and island films 2-5121  
<sup>4</sup>He, solid-superfluid interface, roughening transition 2-1704  
 Hg<sub>80</sub>Cd<sub>20</sub>Te-oxide interface, anodic oxide composition and Hg depletion 2-26237  
 In-W(Mo), FEM, FIM and atom-probe studies (Japanese) 2-26238  
 InAlAs-InGaAs interface, MBE, channelling anal. 2-12922  
 InGaAs, reduction in dislocation densities in MBE step graded growth 2-21450  
 InGaAsP-InP DH laser, degradation obs. by electron probe microanal. 2-44282  
 InP-InGaAsP, DH laser wafer, LPE growth and struct. 2-45744  
 InP-metal ohmic contacts, microstructure, correl. with elec. characts., electron microscopy obs. 2-40700  
 Nb/Cu multilayers, X-ray scatt., resist., and supercond. transition temp. 2-40741  
 Nb-Nb<sub>2</sub>O<sub>5</sub>-Pb Josephson tunnel junction, structural anal., for voltage standard 2-5505  
 Ni-Al-Mo-base superalloys, microstruct. features 2-41689  
 Ni-base superalloys, astrolay, grain boundary microcracking after room temp. deform. 2-41737  
 Ni-Ni<sub>3</sub>Al-Mo,  $\gamma/\gamma'$ -aligned eutectic composite, elevated temp. stability of phases 2-22228  
 Ni<sub>3</sub>Al-Mo, eutectic, directionally solidified, low cycle fatigue behaviour 2-36953  
 Pb-Bi alloys, dil., unidirectional solidification 2-2499  
 Pb-PbS<sub>0.5</sub>Se<sub>0.5</sub> photodiode detector, improved performance from Cl incorporation at interface 2-15223  
 Pd-Si form. on slightly oxidised Si, oxide effects, TEM and Auger spectroscopy obs. 2-16958  
 Pd-Si/Si(111) epitaxial interface struct. and propag., TEM obs. 2-45747  
 PtSi form. on slightly oxidised Si, oxide effects, TEM and Auger spectroscopy obs. 2-16958  
 Sb<sub>2</sub>S<sub>3</sub>, epitaxial growth on PbTe with diffusion interaction at phase boundary 2-51040  
 Si (111)/Au interface, AES, EELS, LEED and depth profiling study, UHV conditions 2-21446  
 Si (111)-Ag interface, struct. and electronic props., LEED, photoemission and Auger meas. 2-21448  
 Si film, grain boundaries, TEM and EBIC obs. 2-30472  
 Si islands, laser crystallised on fused SiO<sub>2</sub>, microstrain, Raman scatt. study 2-45750  
 Si liquid-solid interface, laser-induced crystn. study 2-45742  
 Si, twins, grain boundaries, atomic struct. 2-50661  
 Si:H amorphous, interface with noble metals, struct. and elec. props. 2-41012



**interface structure continued**

- Si-H-Pd(Pt), amorphous Si:H, interface phonons, interference enhanced Raman scatt. study 2-51592  
 Si-Au-Ag interface, AES and EELS meas. 2-40698  
 Si-Ni<sub>2</sub>Si, crystal interface, ion beam studies 2-45742  
 Si-sapphire epitaxial layer structs., high resolution TEM study 2-30771  
 Si-Si interface electronic props. 2-51288  
 Si-SiO<sub>2</sub>, amorphous-crystal interface, ion beam studies 2-45742  
 Si-SiO<sub>2</sub>, interface struct., high resolution TEM study 2-30473  
 Si-SiO<sub>2</sub>, physico-chemical nature, EPR spectroscopy, review (Polish) 2-46359  
 Si-SiO<sub>2</sub> interface, electrically active paramagnetic centres, spin-depend. resonance meas. 2-13336  
 Si-SiO<sub>2</sub> interface, polar-angle depend of XPS and EELS 2-26234  
 Si-SiO<sub>2</sub> interface, transition region, XPS study (Chinese) 2-31598  
 Si-SiO<sub>2</sub>-Al structure, Al-SiO<sub>2</sub> and Si-SiO<sub>2</sub> interlayer charact., ellipsometry, C-V meas., and AES study. 2-5470  
 Si-SiO<sub>2</sub>-Si implanted epitaxial struct., interfacial struct., channelling study 2-30758  
 Si-SiO<sub>2</sub>-Ta sputtered coating, interface stresses and elec. props. 2-21475  
 SiC fibre reinforced Ti, micro-area Auger anal. 2-16959  
 Si<sub>3</sub>N<sub>4</sub>-SiO<sub>2</sub>-Si structure, Auger depth profiling, relative thickness of oxide layers 2-8717  
 Si<sub>3</sub>N<sub>4</sub>-SiO<sub>2</sub>-Si structure, spectroscopic ellipsometry, nondestructive anal. 2-21447  
 SiO<sub>2</sub>/Si interface, H and Cl depth profiles 2-45233  
 SiO<sub>2</sub>-InSb interface form., XPS study 2-26235  
 SiO<sub>2</sub>-Si interface, local atomic order and electronic struct. theory (French) 2-17127  
 Sn-Ir interface, comp. and surface atom stability, high mass resolution atom probe anal. 2-35898  
 Sn-W(Mo), FEM, FIM and atom-probe studies (Japanese) 2-26238  
 Ti/Au thin films, interdiffusion and phase formation, expt. study 2-45749  
 Ti-Al-Mo-V (8, 1, 1 wt.%), deform. of individual Widmanstätten colonies with  $\alpha$ - $\beta$  lamellar microstruct. 2-36913  
 TiC coating on WC-Co, atom probe microanal. 2-13859  
 ZnTe-Si heterostructure, epitaxial growth model of ZnTe, film comp. and interface struct. 2-40711

**interface tension** see surface tension**interface vibrations** see crystal surface and interface vibrations**interfaces, computer** see computer interfaces**interfaces, mechanical** see mechanical contact**interfacial energy** see surface energy**interfacial tension** see surface tension**interfacial waves** see surface waves (fluid)**interference**

## see also interference (signal)

- beats as moving interference patterns, ripple tank and computer simulation methods 2-48443  
 polyhedral crystals, STEM and CTEM obs. of interference between Laue- and Bragg-diffracted electrons 2-5029  
 quantum interferometry, interfering beams spin directions 2-28707

**interference (signal)**

## see also crosstalk; electromagnetic interference

- ELF radio noise, 1-D distrib. function of vertical elec. component 2-38026  
 optical fibre, multimode, transmitted laser signal, amplitude fluctuation 2-7872

**interference spectrometers**

- direct-reading spectrometers, excitation by inductively coupled plasma, optimum operation conditions 2-48798  
 Fabri-Perot etalon spectrometer for Doppler profile meas. 2-38691  
 IR high contrast multipass Fabri-Perot spectrometer 2-38700  
 Michelson interferometer, asymmetric, for direct determ. of far IR opt. consts. of semicond. 2-15245  
 selective interferometer design, physical criteria 2-38682  
 spectral line contours, automatic plotting 2-23736  
 twin-etalon scanning spectrometer, high-luminosity high-resolution 2-15230  
 two pass Fabri-Perot interferometer and photoelectric digital spectral resolution 2-48793

**interference spectroscopy**

## see also Fourier transform spectroscopy

- Kerr spectroscopy, interference enhanced, for thin absorbing films 2-51556  
 negative photoresists, refractive index modulation by mol. diffusion 2-10889  
 solute absorption detect. using interferometer and thermooptic effect, optical nulling method 2-27513  
 spectral line contours, automatic plotting 2-23736  
 visible region Fourier approach to absolute spectroradiometry 2-232

**interference suppression**

- adaptive receiving array interference nulling schemes compared 2-44585  
 diode lasers, electronic phase-noise suppressions 2-29813  
 measuring systems, EMI suppression in solid-state expts. (Japanese) 2-33503

**interferometers**

## see also acoustic wave interferometers; electromagnetic wave interferometers; interferometry

## No entries

**interferometry**

- see also acoustic wave interferometry; electromagnetic wave interferometry; holographic interferometry; interferometers  
 electron interferometry, amplitude division 2-3662  
 optical bistability interference effects between one- and two-photon transition processes 2-49815  
 quantum interferometry, interfering beams spin directions 2-28707  
 solar limb prominence interferometry at 656.3 nm, H $\alpha$  line widths interpretation 2-10388  
 solar limb prominences interferometry at 656.3 nm (H $\alpha$ ) 2-10387

**intergalactic matter**

## see also clusters of galaxies; galaxies

- 0016+16, distant cluster of galaxies, intracluster gas props. from microwave background decrement 2-33187  
 0016+16, galaxy cluster at  $z=0.54$ , intracluster gas props. from X-ray struct. obs. 2-33164

**intergalactic matter continued**

- 2006-56 region, rich irregular cluster of galaxies, diffuse radio emission obs. 2-38324  
 Abell 1314, introcluster medium rel. to struct. of head-tail radio galaxy (IC 708) 2-28544  
 Abell 2256 C cluster radio source, intergalactic medium, density and temp. 2-14940  
 clusters of galaxies, gas contents meas. by obs. of background radiation at 10.6 GHz 2-14932  
 Coma Berenices cluster of galaxies, intergalactic X-ray emission rel. to dynamical anal. model (French) 2-48341  
 deceleration parameter taking intergalactic extinction into account 2-14954  
 dust extinction, rel. to quasar reddening and microwave background spectrum 2-28581  
 dust grains, electric potential 2-42646  
 dynamical gas pressure, ablation effect on disk galaxy (Japanese) 2-28559  
 galaxy clusters diffuse fields 2-33190  
 gas flow interaction with rigid body spheroidal galaxy 2-33137  
 intracluster Faraday rotation, statistical analysis 2-38289  
 intracluster gas, problems with dynamical evolution 2-6668  
 Magellanic Stream, relation to very high velocity H I clouds 2-10501  
 Magellanic Stream, velocities rel. to proper motion of Magellanic Clouds and halo mass of Galaxy 2-48332  
 Magellanic Stream and H I remnants of Magellanic Cloud tidal disruption, obs. 2-33127  
 Magellanic Stream formation, vel. struct. of gas in lines of sight to Magellanic Clouds 2-10508  
 microwave background by intergalactic dust 2-38343  
 non-Abell clusters radiogalaxies, X-ray emission as link between environment and nonthermal radioemission 2-33162  
 on massive-neutrino halos and galactic structures 2-28565  
 photoionisation by massive neutrino decay, rel. to quasars absorpt. spectra 2-48333  
 primordial intergalactic cloud one-dimensional collapse, instability 2-28589  
 primordial intergalactic clouds, physical state 2-14931  
 protocluster gas, stability of contracting pancakes 2-14928  
 shells at large red shift from galactic explosions 2-6662

**intermediate bosons**

- 2 meson, propagation in homogeneous mag. field, Salam-Weinberg model 2-33768  
 charged Higgs boson with  $m_{H^+} < m_B$  2-33791  
 conformal invariance of scalar bosons in Weinberg-Salam type theories 2-43251  
 cosmological model, nonsingular, conformally flat, density of massless vector bosons calc. 2-48372  
 effective weak non-leptonic Hamiltonians for s, c, b and t decay, W exchange 2-38861  
 electroweak bosons in rishon model 2-299  
 electroweak gauge model, W<sub>1</sub>, Z<sub>1</sub> generation 2-29042  
 electroweak models based on  $\gamma$ -W<sup>0</sup> mixing expansion 2-43235  
 electroweak vector bosons, topological theory 2-29048  
 extended technicolour interactions, pseudo-Goldstone boson masses from broken gauge interactions 2-43279  
 fermion mass spectrum, from Dyson eqn. solns. 2-48966  
 flavour changing Higgs boson couplings in K and B decays 2-287  
 fundamental interactions theory developments, Winter School, Karpeaz, Poland (Feb.-March, 1980) 2-48384  
 gauge theories of strong, weak and EM interactions 2-29022  
 Goldstone bosons gravitational interaction (Russian) 2-48934  
 grand unification with strong gauge coupling of weak interactions and composite Higgs fields 2-3734  
 Higgs particles, in superunified models, cosmology apps. 2-38824  
 Higgs boson mass, in Weinberg-Salam model 2-23914  
 Higgs boson masses, upper bounds in Weinberg-Salam model with three Higgs doublets 2-19292  
 horizontal symmetry and pseudo-Goldstone bosons, Higgs pot. minimisation 2-23884  
 left-right symmetric electroweak model without broken gauge interactions, quark-lepton composite model 2-6984  
 lepton number violating muon decay theories and LAMPF expt. 2-319  
 light gauge boson search in T, T and positronium decays, supersymmetric theories 2-318  
 muon decay, CP-even and CP-odd transverse polarisation of electron (Russian) 2-23982  
 natural axion invisibility and SU(N) flavor unification 2-38795  
 nuclear axion decay 2-38992  
 pseudoscalar Goldstone mesons, chiral-symmetry breakdown and spectrum in QCD 2-7000  
 QCD and electroweak gauge model, gauge bosons, spin asymmetries in large- $p_T$  prod. 2-29144  
 scalar fields, conserved currents, mass spectra, Killing eqns., Goldstone theorem, classification scheme 2-19317  
 SU(2)×U(1)×SU(2) gauge model with heavy weak bosons and small additional neutral current interaction 2-48935  
 SU(2)×U(1) electroweak model, nonlinear R<sub>2</sub> gauge condition 2-43232  
 SU(2)×U(1) gauge models, Higgs-scalar sector anal. through intermediate boson decay 2-43249  
 SU(3)<sub>c</sub>×SU(2)<sub>L</sub>×U(1)<sub>Y</sub>, Veltman-Derman dynamical model, composite fermions effective pot. 2-48961  
 SU(5) Higgs pot. in one-loop approx. (Russian) 2-33781  
 SU(5) model, heavy fermions and vector bosons mass hierarchy 2-43245  
 SU(5) model, Higgs bosons and gauge bosons couplings 2-19298  
 superheavy bosons, nonequilibrium decay, rel. to Universe baryogenesis 2-53402  
 superlight grand unified axion in SU(5) model 2-19296  
 technicolour and the three-fermion composite model 2-7016  
 weak-boson mass from available neutrino data 2-3742  
 Weinberg angle and proton lifetime in asymptotically free grand unification model (Russian) 2-10975  
 Weinberg-Salam model and QED, minimal subtraction scheme, W and Z masses 2-29050  
 WZ<sup>±</sup> coupling in hypercolour and SU<sub>L</sub>(2)@U(1) extended gauge theories 2-23892  
 Z boson mass, EM correction, hadronic contrib. in standard model 2-23995  
 2-W<sup>+</sup> $\pi^-$ , decay width, test of electroweak Lagrangian 2-23902



**intermediate bosons continued**

- $a_0$ , axion mass lower limit and search in  $^{137}\text{Ba}^*$  monochromatic  $\gamma$ -transition 2-11112  
 B decay constraint on 'no t-quark models' 2-43332  
 B decays, CP violation observability,  $Z^0$  resonance 2-43335  
 $e^+e^- \rightarrow \gamma X$ ,  $X$ =Higgs particle or pseudo-Goldstone boson, ang. distrib. and polarisation effects 2-43322  
 $e^+e^- \rightarrow \gamma \gamma X$ ,  $X$ =Higgs particle or pseudo-Goldstone boson, ang. distrib. and polarisation effects 2-43322  
 $e^+e^-$  annihilation, charged hyperion prod., hypercolour scenario 2-19387  
 $e^+e^-$  annihilation, neutral Higgs bosons prod. in Weinberg-Salam model 2-19359  
 $e^+e^-$  annihilation three-jet production, gluon and Higgs scalar contrib. in QCD 2-3799  
 $e^+e^-$  collisions, neutrino counting method, radiative  $Z^0$  prod. 2-29099  
 $e^+e^- \rightarrow e^+\mu^+\mu^-$  cross section at PETRA energies, comparison with Salam-Weinberg theory 2-19361  
 $e^+e^- \rightarrow \gamma Z$ ,  $Z \rightarrow \mu^+\mu^-$  two jets, long. pot. beams,  $\text{SU}(2)_L \times \text{U}(1) \times \text{U}(1)$ ,  $\text{SU}(2)_L \times \text{SU}(2)_R \times \text{U}(1)$  predictions 2-3797  
 $e^+e^- \rightarrow \text{HZ}^0(\text{Hf})$ , polarisation effects, Weinberg model calc. 2-24004  
 $e^+e^-$  physics, lepton and hadron prod.,  $\tau$ ,  $\psi$ ,  $T$  and  $Z^0$  2-43368  
 $e^+e^- \rightarrow \pi^+\pi^-\pi^0$ , charge asymmetry EM origin, neutral currents,  $Z$  boson 2-24007  
 ep, coloured pseudo-Goldstone bosons photoproduction cross-section at very high energy 2-48999  
 ep  $\rightarrow eW^+X$ ,  $W$  bosons electroproduction cross section in Weizsacker-Williams approx. 2-43360  
 $\eta \rightarrow \pi^0\mu^+\mu^-$  ( $\pi^0\mu^+\mu^- \gamma$ ), rare decay branching ratios, light Higgs particle search 2-7023  
 $\eta' \rightarrow \eta\mu^+\mu^-$  ( $\pi^0\mu^+\mu^-$ ), rare decay branching ratios, light Higgs particle search 2-7023  
 $\gamma N \rightarrow Z^0X$ , quark-parton mechanism (*Russian*) 2-3791  
 $\gamma p \rightarrow \text{HX}$ , Higgs-boson photoproduction at very high energy 2-43359  
 $\gamma p \rightarrow P_0^0X(P_0^0X)$ , coloured pseudo-Goldstone bosons prod. at very high energy 2-48999  
 $\gamma q \rightarrow W^+q$ , zeros in energy and ang. distrib. with real or virtual photons 2-43354  
 $K \rightarrow 2\pi$  and CP violation, Higgs boson exchange models 2-48979  
 np  $\rightarrow da$ , possible axion search in LWRs 2-19394  
 $\nu_e \rightarrow \mu^- X$ , radiation correction effect on  $\rho^2$  and  $\sin^2\theta_w$  determ. and  $W^\pm$ ,  $Z^0$  2-11041  
 $P^+$  pseudo-Goldstone boson mass, chiral dynamics in technicolour 2-3747  
 pN scatt., high energy, axion prod. and mass, direct axion-quark coupling calc. 2-7047  
 pp, colour triplet states, technicolour pseudo-Goldstone boson couplings to gluon fields 2-19322  
 pp, pol. p,  $W^\pm$  and  $Z^0$  leptonic decay polarisation effects 2-11077  
 pp  $\rightarrow l^+l^-X$ ,  $S^{1/2}=800$  GeV, multilepton study for bb, tt and Higgs boson search 2-43392  
 pp(pp), high-mass dileptons ang. distrib. 2-43395  
 pp(pp), QCD-electroweak interference and weak vector-boson prod. 2-49021  
 pp  $\rightarrow W^\pm X$ ,  $W$  identification from decay lepton distrib. 2-19407  
 $W$  boson mass, EM correction, hadronic contrib. in standard model 2-23995  
 $W$  production, duality theory (*Dutch*) 2-15328  
 $W$ -boson decay lepton spectra (*Russian*) 2-15355  
 $Z$  and  $W$  boson masses, order  $\alpha_s$  corrections 2-48944  
 $Z$  boson in grand unified theories, low-energy neutral current phenomena 2-6977  
 $Z \rightarrow l^+l^-$ , lowest-order QED corrections 2-33790  
 $Z \rightarrow \nu\nu$ , in superunified models, cosmology appls. 2-38824  
 $Z^0$  mass bounds in multi- $Z^0$  unified model 2-19297  
 $Z^0$  bosons in gauge field theory,  $e^+e^- \rightarrow l^+l^-$  test 2-24000

**intermediate state**

- current induced intermediate state in wire, LF kinetic surface impedance 2-13246  
 cylindrical superconductor, paramag. effect in weak mag. field, appl. to intermediate state (*Russian*) 2-17240  
 flux flow, elec. current and temp. gradient effects 2-31116  
 Landau and Baird-Mukherjee models of intermediate state in wire when supercond. is destroyed by current 2-41080  
 LF voltage response of direct current induced intermediate state in type I wire 2-41079  
 magnetic struct. and inhomogeneities, high resolution imaging using SEM 2-41077  
 magnetic structures, high resolution obs. 2-21734  
 In film, type I supercond., mixed and intermediate states, microwave study 2-41078  
 In wire, LF AC response of direct current induced intermediate state 2-41081  
 In-Pb alloy wire, LF AC response of direct current induced intermediate state 2-41081  
 Pb film, type I supercond., mixed and intermediate states, microwave study 2-41078  
 Sn, monocrystalline, intermediate state core radius at destruction of supercond. (*Russian*) 2-41076

**intermediate valence compounds** see mixed valence compounds**intermetallic compounds** see alloys**intermodulation measurement**

No entries

**intermolecular forces**

see also Van der Waals forces

- acetone, in non-polar solvents, mol. interactions, viscosity meas. 2-8653  
 benzene-benzene, intermolecular interaction, config., semiempirical quantum-chemical calcs. 2-39463  
 benzene-TCNE, intermolecular interaction, config., semiempirical quantum-chemical calcs. 2-39463  
 binary gas mixture, unlike-pair potential parameters, from second virial coeffs. 2-20798  
 classical intermol. interaction pot., quantum theory 2-20154  
 crystals, molecular, modulated struct. formation 2-35410  
 energy transfer, spin selection rules using doublet state acceptors 2-34542  
 ethylene, dimer, excimers and dimer ions, intermol. pots. 2-34523  
 fluid phase equilibria, molecular theory, empirical equations of state 2-19063  
 linewidth dephasing relax. in dense media, temp. depend. 2-44003  
 liquid crystal, Frank elastic consts., mol. statistical theory 2-16565

**intermolecular forces continued**

- long-range, three-body problem appl. (*Rumanian*) 2-44025  
 methyl ethyl ketone, in non-polar solvents, mol. interactions, viscosity meas. 2-8653  
 molecular correlation function approaches, to dielec. relax., review 2-9083  
 molecular polar fluid, site-site correlation functions, RISM eqn. 2-25700  
 molecular vibration, local mode model, intra- and intermolecular forces 2-20033  
 $N \times K$  level molecule dynamics coupled to thermal reservoir 2-3471  
 naphthalene- $d_8$  in rare gas matrices, phosphoresc. spectra, site induced structs. in electronic transitions 2-43982  
 naphthalene-TCNE, intermolecular interaction, config., semiempirical quantum-chemical calcs. 2-39463  
 nematic liquid crystals, elastic consts. calcs. using an anisotropic Lennard-Jones pot. 2-50732  
 nematic liquid crystals, molecular theory including anisotropic repulsion 2-12472  
 pentanes, methyl substituted, intramol. and intermol. interactions, CH stretching overtone spectra 2-772  
 polyacenes, crystals, sound vel., compressibility and thermal expansion, linear chain model 2-45401  
 polyacetylene, reson. Raman scatt. and opt. props., microscopic struct., doping and isomerisation influence 2-31466  
 p-phenyls, crystals, sound vel., compressibility and thermal expansion, linear chain model 2-45401  
 polystyrene, isotactic, extended-chain struct., X-ray diffr. and calorimetric data 2-22495  
 PVC, glassy, mol. mobility, intermol. interaction, and conform. comp. under forced elastic deform. 2-47111  
 symmetric top mol., Rayleigh scatt. light spectral distrib., intermol. interactions effect, Racah algebra approach 2-710  
 TCNQ salt, tetrafluoro-7,7,8,8-TCNQ, cryst. and mol. struct., soln. spectra 2-1468  
 three-parameter corresponding states parameter, multiproperty approach 2-10760  
 Ar-Xe mixture, intermol. forces and gaseous viscosities 2-44812  
 $\text{H}_2$ -Ag(Ne), gas mixtures, intermol. pot. from  $\text{H}^+$  spin-lattice relax. 2-20152  
 $\text{H}_2\text{O}$ , intermolecular pot. functions and props., semi-empirical model 2-39461  
 $^7\text{Li}$  projectiles in liquid organic substances, electronic stopping cross section, intermol. interactions effect 2-21197  
 $\text{N}_2$ , solid, phonons, self-consistent harmonic approx. 2-45455  
 $\text{N}_2\text{O}$ , vibr. relaxation, Raman and IR spectra 2-11453  
 Se, effect of struct. transform. on viscosity 2-8655

**intermolecular mechanics**

- see also association; intermolecular forces; kinetic theory of gases; liquid structure; liquid theory; Morse potential; potential energy functions  
 acetic acid + ion interactions, IR spectrosc. obs. 2-11476  
 acridine dyes, solns., intermol. interactions and photochem. reactions, spectrosc. obs. 2-24716  
 acrylonitrile copolymer-methyl methacrylate, phase diagrams and viscosity of liqs. (*Russian*) 2-26018  
 adenine-Pt(II) cpd. interactions, quantum chem. calcs. 2-43795  
 anthracene-pyromellitic anhydride, dimers and charge transfer complexes, electronic excitation, intermol. vibr. freq. 2-1567  
 anthrone-anthracene interaction, fluoresc. quenching, proximity effects, absorb. and emission spectra 2-49490  
 azabenzene, static and dynamical props. calc. using model which includes atom-atom and internal interactions 2-21248  
 benzene, static and dynamical props. calc. using model which includes atom-atom and internal interactions 2-21248  
 para-*t*-butylbenzene, methyl and tertiarybutyl reorientation, nuclear spin-lattice relax., temp. depend. 2-36462  
 di-*t*-butylbenzene and its isomers, methyl and tertiarybutyl reorientation, nuclear spin-lattice relax., temp. depend. 2-36462  
 cyanine dyes, intermol. interactions in solns., spectrosc. obs. 2-24715  
 $\text{N,N}$ -disubstituted amides solns., self-association, dielectric permittivity anal. 2-13386  
 ethane, in  $\text{H}_2\text{O}$ , solute-solvent interactions, electrostatic model calcs. (*German*) 2-4235  
 guanidine-Pt(II) cpd. interactions, quantum chem. calcs. 2-43795  
 hexamethylbenzene, solid, entropy calc., intermol. contrib., internal rot. 2-12777  
 inert gas mixtures, collision induced absorb. spectra, fourth order intermol. correl. functions, mol. dynamics calc. 2-29565  
 lipid bilayer, hydrophobic core, statistical mech. theory 2-16567  
 lipids, biological, behaviour in water 2-45011  
 liquids, solutions and dense gases, structure and thermophysical props. with allowance for intermol. interactions 2-8405  
 liquids containing supercritical compounds, molecular thermodynamics 2-8635  
 methane, in  $\text{H}_2\text{O}$ , solute-solvent interactions, electrostatic model calcs. (*German*) 2-4235  
 methanol, in  $\text{H}_2\text{O}$ , solute-solvent interactions, electrostatic model calcs. (*German*) 2-4235  
 methanol-water solution, mol. calculations 2-24605  
 1-methylmercury-2-benzyl-o-carborane, X-ray diffr., struct., intermol. coordination 2-16640  
 molecular configurations, chromatographic anal. 2-11589  
 molecular crystals, tetrahedral, classification in terms of cryst. structs. Debye temp., and transition or melting temp. 2-35632  
 molecular crystals, two-level systems, photon echoes of impurity dimers and energy transfer 2-976  
 molecular rotations, generalised M-diffusion theory 2-16544  
 nonlinear molecules, second order perturbation theory for angular correlation function 2-29678  
 nonpolar molecules, potential pair interaction energy 2-29683  
 polyadenylic acid, single-stranded, adenine-adenine interaction, ab initio MO study 2-52423  
 polymers, insulating and metallic, expression for dispersion interaction of two infinite linear chains 2-768  
 porphyrin, short-range and long-range intermol. interaction energies calc. using perturbation theory 2-769  
 radiation process as an adiabatic process 2-39378  
 rigid polar molecules, exact asymptotic form of site-site direct correlation function 2-11378  
 solute-solvent interactions, electrostatic model calcs. (*German*) 2-4235  
 toluene, solid, entropy calc., intermol. contrib., internal rot. 2-12777



**intermolecular mechanics continued**

- trichloroacetic acid + ion interactions, IR spectrosc. obs. 2-11476  
 trifluoroacetic acid + ion interactions, IR spectrosc. obs. 2-11476  
 vinyl sulphate in binary solvents, phase diagrams and viscosity of liqs. (Russian) 2-26018  
 CS<sub>2</sub>, liquids, interaction-induced spectra, lineshapes 2-22019  
 H-bonded Van der Waals mol., 3-21G intermol. interaction energies appl. 2-764  
 H<sub>2</sub><sup>+</sup>, in external field, interaction parameters calcs. 2-44125  
 H<sub>2</sub> + H<sub>2</sub>, intermol. interactions, bond orbital calcs., polarisation and delocalisation effects 2-29499  
 HBr, polymer, IR and Raman spectra, struct. in nitrogen matrix 2-15867  
 HCl, polymer, IR and Raman spectra, struct. in nitrogen matrix 2-15867  
 HF, exchange dispersion effect calc. 2-49538  
 HF, in H<sub>2</sub>O, solute-solvent interactions, electrostatic model calcs. (German) 2-4235  
 HF, intermol. pot. energy functions, second virial props. and H-bond energies calc. 2-15865  
 HF, vibr. relax. between 300 and 700K, laser excited vibr. overtone fluoresc. meas. 2-7592  
 (HF)<sub>2</sub>, susceptibilities and nuclear mag. shielding consts., intermol. effects 2-29627  
 H<sub>2</sub>O, D<sub>2</sub>O and their isotropic mixtures, Raman spectra, intermol. coupling of bending vibr. 2-34423  
 H<sub>2</sub><sup>16</sup>O, ν<sub>2</sub> band, self-broadening coeffs., meas. and calcs. 2-20131  
 (H<sub>2</sub>O)<sub>2</sub>, susceptibilities and nuclear mag. shielding consts., intermol. effects 2-29627  
 He...He, perturbation theory approach to intermolecular interactions 2-7622  
 MnCl<sub>2</sub>, in aq. polyethylene glycol soln., intermol. relax., ESR and paramag. relax. obs. 2-15827  
 N<sub>2</sub>, structure factor at 160K 2-11375  
 O<sub>2</sub> in liq. mixtures, electronic and vibr. energy relax., conc. and temp. depend. 2-29694

**intermolecular vibrations** *see molecular rotational-vibrational energy transfer***intermolecular vibrations (molecular crystals)** *see lattice dynamics of molecular crystals***internal combustion engines**

- 4 MW resiliency-mounted shipboard diesel engine sound transfer paths 2-9725  
 British coal mine diesel-powered vehicle design for noise-limitation type approval 2-9745  
 compression ignition engines, H<sub>2</sub> fueled, experimental study 2-47530  
 cylinder gas exchange process for four-stroke engine (Rumanian) 2-25441  
 diesel engine, air swirl effect on combustion, exhaust smoke study 2-22448  
 diesel engine idling noise 2-14170  
 diesel engines, comparison of noise source identification techniques 2-16209  
 diesel engines, vibration transmission causing noise 2-1069  
 flow velocity rapid estimate using photon correlation laser anemometry 2-12256  
 gas ejector, zero and negative ejection coefficient operation, thermal energy separation characts. 2-44771  
 multicylinder engine exhaust system insertion loss and radiated sound pressure analysis 2-14159  
 NSU Wankel rotary engine, frequency and time domain analysis of exhaust pressure pulses 2-1082  
 Otto cycle, optimal control theory 2-47512  
 standby power generation unit internal combustion engine co-utilisation to drive heat pump plant 2-18122  
 Stirling engine inner loop parameters calc. method 2-44638  
 substitute natural gas as automotive fuel 2-17972  
 vegetable oil as a diesel engine fuel 2-9610  
 H<sub>2</sub> fuel backfire control 2-9614  
 H<sub>2</sub> fueled automotive vehicles, fuel cell substitution for internal combustion engines 2-6194

**internal conversion***see also conversion electron spectra*

- electron-positron pair internal creation, total and differential conversion coeff. 2-24174  
 electron-positron pair prod. from elec. monopole transitions 2-24176  
 electrostatic spectrometer for internal conversion electrons meas. in 0.1-20 keV region 2-49213  
 muon conversion coeffs. in transition surface currents model, nuclear deformation allowance 2-33956  
 Z≤60 nuclei, internal conversion coeffs., ratios, data table 2-29178  
 Ag, intranuclear conversion of hindered transitions 2-43451  
<sup>108</sup>Ag, E3 transition conversion lines relative intensities determ. 2-24175  
<sup>45</sup>Ca, internal bremsstrahlung accompanying β-decay 2-43450  
 Cd, intranuclear conversion of hindered transitions 2-43451  
<sup>4</sup>Cd, A=110-112, levels characts. study 2-24149  
<sup>153</sup>Dy, γ-ray, internal conversion electron and γ-coincidence spectra study 2-24153  
<sup>155</sup>Dy, decay diagram investigation 2-19479  
<sup>164</sup>Dy bands and interband transition multipolarities, J<sup>π</sup>, IC coeffs. from <sup>164</sup>Dy(d, p) 2-373  
<sup>4</sup>Er, A=161, 163, 165, rotational states lifetimes and γ-transition reduced probabilities study 2-24172  
<sup>164</sup>Er, <sup>155</sup>Ho, β-decay and <sup>155</sup>Ho excited levels 2-19480  
<sup>149</sup>Eu conversion electron spectra, internal conversion coeffs., <sup>149</sup>Sm levels (Russian) 2-43442  
<sup>149</sup>Eu, <sup>149</sup>Sm, internal conversion spectra 2-43449  
<sup>151</sup>Gd, <sup>151</sup>Eu, internal conversion spectra 2-43449  
 Na<sub>4</sub>Fe(CN)<sub>6</sub>·10H<sub>2</sub>O Mossbauer multisectional proportional resonance counter 2-43694  
 Pd, intranuclear conversion of hindered transitions 2-43451  
<sup>138</sup>Pm, <sup>138</sup>Nd, <sup>138</sup>Nd structure study from β<sup>+</sup>-decay 2-24185  
<sup>183</sup>Re, internal conversion electron spectrum study 2-33953  
<sup>152</sup>Sm rotational bands, J<sup>π</sup>, ICC, T<sub>1/2</sub> and transitions from <sup>150</sup>Nd(α, 2nγ) 2-43401  
<sup>181</sup>Ta, K X-ray and γ-ray emission correl. 2-4251  
<sup>153</sup>Tb excited states, γ-ray, internal conversion electron and γ-coincidence spectra study 2-24157  
<sup>155</sup>Tb, <sup>155</sup>Gd, γ-ray, internal conversion electron and γ-coincidence spectra study 2-24154  
<sup>192</sup>Tl, decay γ-ray spectra, Hg levels 2-29193

**internal conversion continued**

- <sup>4</sup>Tm→<sup>4</sup>Er, A=161, 162, 165, internal conversion and γ-ray spectra study 2-24158  
<sup>169</sup>Tm, K X-ray and γ-ray emission correl. 2-4251  
<sup>125</sup>Xe decay, γ-ray and γ-coincidence spectra study 2-24159  
<sup>4</sup>Yb, A=170, 172, 2<sup>+</sup>→0<sup>+</sup> M, N and O subshell internal conversion, intensity ratios 2-33952

**internal conversion in atoms** *see Auger effect***internal conversion in molecules** *see nonradiative transitions***internal fields, crystal** *see crystal field interactions***internal friction***see also Bordoni effect; damping; Snoek effect; Zener relaxation*

- alkaline earth metaphosphate glasses, temp. depend. of internal friction (Polish) 2-35589  
 alloys, internal friction phenomena associated with diffusionless phase transforms 2-47095  
 anelastic relaxations and mag. aftereffects in solids, conf., Katowice, Poland (Jan. 1981) 2-23371  
 automated internal friction apparatus of inverted torsion pendulum type 2-43004  
 brass, internal friction in conc. alloys 2-45344  
 ceramic, acoustic reson. method for investig. of elastic props. and internal friction (Polish) 2-35098  
 conference, Lausanne, Switzerland (July 1981) 2-38360  
 β-Cu-Zn(-Al), anelastic effects after quenching 2-47097  
 dislocation amplitude-dependent hysteresis, dynamic theory (Russian) 2-5125  
 dislocation mobility, high temp., internal friction 2-45350  
 dislocation model, continuous distrib., with inhomogeneous sliding along high-angle grain boundaries 2-45354  
 dislocation motion, Peierls barrier calc., tension-Frenkel-Kontorova model 2-12594  
 dislocation multiplication and steady-state nonlinear vibrs., US effects 2-50639  
 dislocation-point defect interactions studied by US meas. during cyclic deform. 2-45242  
 ferrites, effects of substituted atoms on C interaction energy with dislocations (Russian) 2-8523  
 ferromagnets, magnetoelastic damping theory (Russian) 2-51445  
 glass-fibre reinforced epoxy (polyester resin), damping 2-50762  
 heat treatment, US method, heating position and tempering 2-47057  
 ice I<sub>h</sub>, ageing phenomena, internal friction, X-ray topography meas. (French) 2-12680  
 ice I<sub>h</sub>, internal friction, very low freq. meas. 2-45359  
 Incoloy 800, dislocation struct. influence on internal friction after short-time creep (Polish) 2-27210  
 martensitic alloys, damping spectrum rel. to dislocation motion 2-47096  
 measurement at acoustic freqs., relaxator device (Polish) 2-25341  
 measurement of free damping vibrs., electronic arrangement (Polish) 2-25340  
 metal, damping and mech. props. 2-51970  
 metallic glass, relaxation phenomena, review 2-40484  
 metals, internal friction and elastic modulus, automatic apparatus for temp. characts. determ. 2-9488  
 metals, internal friction caused by intrinsic dislocation relax., review 2-40399  
 metals, internal friction in plastic deform., general dislocation dynamic model 2-45348  
 metals, pure, high temperature damping spectra 2-45349  
 piezomagnetic materials, internal damping and mag. permeability disaccommodation, automated recording method 2-33587  
 polycarbonate, glassy, internal friction during plastic flow 2-47087  
 polystyrene, amorphous, internal friction at low temp. and high freq. 2-21229  
 programmable system for shear modulus and internal friction meas. at very low freqs. 2-43006  
 PVC, glassy, mol. mobility, intermol. interaction, and conform. comp. under forced elastic deform. 2-47111  
 rectangular strips and square plates, pulse echo method of elastic moduli determ. 2-17803  
 semiconductors, structural defects, dynamic characts., internal friction method 2-1555  
 steel, 14HG, thermochem. treatment influence on internal friction processes (Polish) 2-27211  
 steel, 14HG and N18K9M5T, low temp. internal friction, surface mineral oil layer influence (Polish) 2-27209  
 steel, austenitic, cold worked, internal friction peaks 2-47077  
 steel, austenitic Cr-Ni-Mn type, martensite transform. effect on cyclic strength and damping during deform. 2-52048  
 steel, austenitic stainless, Cr-Ni (25, 20 wt.%), internal friction during steady state creep 2-47082  
 steel, boiler type, influence of use on internal friction (Polish) 2-36906  
 steel, Cr-Ni-Mn, energy loss during fracture 2-31722  
 steel, Fe-Cr, as-quenched with low interstitial C content 2-27204  
 steel, H10N7K10M5, quenched and aged internal friction peak at 250K, shear modulus change (Polish) 2-27207  
 steel, quenched and aged, N18K8M5T steel, internal friction and shear modulus changes, 320 to 650K (Polish) 2-27208  
 steels, alloy, internal friction, rel. to temper brittleness 2-47090  
 stress-gradient induced ordering, elastic quadrupoles of asymm. solute atom-vacancy pairs 2-1490  
 superconductors, internal friction at kHz freqs. near crit. temp. 2-46197  
 thin plate, metallurgical characterization by ultrasonics 2-17828  
 US attenuation meas. coupled with low freq. stress meas. 2-44692  
 Ag, cold worked, internal friction and modulus defect, temp. depend. (Polish) 2-36907  
 Ag, internal friction, high temp., and dislocation motion 2-45352  
 Ag<sub>2</sub>Mg, low temp. internal friction, surface mineral oil layer influence (Polish) 2-27209  
 Al alloys, dilute, cold worked, low freq. internal friction peaks, strain amplitude 2-47079  
 Al, dynamic internal friction and dynamic modulus meas. 2-45351  
 Al film, grain-boundary sliding, vibrating reed technique 2-45792  
 Al, internal friction, high temp., and dislocation motion 2-45352  
 Al, internal friction of cyclic deformation, impurity conc. and annealing effects 2-45340  
 Al, neutron irradiated, effect of point defects on room temp. internal friction 2-25985  
 Al, polycrystalline, internal friction, medium temp. 2-45353  
 Al-Ag, precipitation stages, internal friction 2-47036



## internal friction continued

- Al-B fibre composite, damping props. (*Russian*) 2-1562  
 Al-B fibre composite, structural instability and damping props. (*Russian*) 2-2534  
 Al-Cu(Fe)(Si)(Cu-Mg-Si-Fe), internal friction and creep rupture behaviour 2-47083  
 Al-Ga (0.5 wt.%), cold work internal friction peak at low temp. 2-45342  
 Al-Mg (5 wt.%), internal friction, grain boundary effect of environment 2-51962  
 Al-Mg (5.5 at.%), cold worked, recovery, role of Mg atoms 2-47051  
 Al-Mn, grain boundary and precipitation effects, internal friction and dynamic elastic modulus meas. 2-47038  
 Al-Mn, precipitation and recrystn., internal friction study 2-47037  
 AlMgSi, aged, high temp. background of internal friction 2-27213  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>·Na<sup>+</sup>, mech. and elec. relaxation meas. 2-16718  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>·Na<sub>2</sub>O, superionic conductor, low freq. responses, model 2-21361  
 (Al<sub>2</sub>O<sub>3</sub>)<sub>2</sub>MgO spinels, elastic and anelastic effects, precipitation 2-45373  
 Au-Cd, internal friction and elastic modulus near martensitic transform. 2-47105  
 Au<sub>2</sub>Cu, anomalous internal friction peak after quenching and deform. 2-47094  
 B filament surface layer struct., heat treatment effects, internal friction meas. 2-40655  
 B, fine grained, internal friction, temp. depend. 2-41649  
 Be, viscous boundary glide and plasticity, low temp. (*Russian*) 2-21210  
 Bi, temperature depend. of Young's modulus in different crystallographic directions 2-5172  
 CeO<sub>2</sub>·Y<sup>3+</sup>, relax. peaks due to defect complexes 2-45369  
 Co-Ni-Cr-Mo, cold-rolled and recovered, internal friction meas. 2-41664  
 CoPt alloy, disordered, diminution of high internal friction level due to magnetoelastic hysteresis (*Polish*) 2-27206  
 CoPt, internal friction curve, effect of thin surface layers of mineral 2-47108  
 CoPt, low temp. internal friction, surface mineral oil layer influence (*Polish*) 2-27209  
 Cu, [110] surface, high temp. dislocation internal friction (*Russian*) 2-1486  
 Cu, dislocation damping, dynamic 2-45191  
 Cu, electron irradi., internal friction background and peaking effect 2-45339  
 Cu, electron irradiated, internal friction, oxidising and reducing anneals effect 2-47078  
 Cu, fatigue at low amplitudes, inelastic study 2-47169  
 Cu, internal friction, high temp., and dislocation motion 2-45352  
 Cu, internal friction peaking effect, lattice dynamics model 2-45346  
 Cu:N(Ne), ion implanted, fatigue and internal friction 2-47182  
 Cu-Al, concentrated alloy, internal friction 2-45343  
 Cu-Al (10.1 wt.%), internal friction meas. during tempering 2-47089  
 $\beta$ -Cu-Al-Ni (14, 4.1 wt.%), elastic and anelastic props., effect of thermoelectric martensitic transform. 2-47102  
 Cu-Fe-Zr alloy, dispersion hardenable, temp. depend. of internal friction (*Polish*) 2-36904  
 $\alpha$ -Cu-Ni-Zn, internal friction and elastic moduli meas. 2-47091  
 Cu-Zn, concentrated alloy, internal friction 2-45343  
 Cu-Zn-Al, internal friction meas. rel. to two way memory effect 2-47099  
 Cu-Zn-Al high-damping coil spring, pseudoelectric behaviour 2-47100  
 Fe, cast, grey, internal friction spectrum and damping capacity 2-47092  
 Fe, cold worked, internal friction spectrum 2-41654  
 Fe, dislocation relax., effect of H changing 2-40406  
 Fe, dislocation struct. generated by low temp. deform. and associated damping phenomena 2-40405  
 Fe, high-purity, defect investigs. using mag. aftereffect and internal friction (*Polish*) 2-27205  
 Fe, internal friction amplitude depend. at low temp. 2-41655  
 Fe, magnetoelastic damping theory (*Russian*) 2-51445  
 $\alpha$ -Fe, meas. in N and C Snoek relax. region using relaxator device (*Polish*) 2-25341  
 Fe, microplasticity and internal friction, 4 to 250K 2-41680  
 Fe, pure polycrystalline, internal friction effect of H, low temps. 2-22261  
 Fe:rare earth, dopant distrib. studied by internal friction 2-45238  
 Fe-Al (12.7 wt.%) alloy, doped, piezomag., magnetomech. internal friction (*Polish*) 2-36407  
 Fe-Al-Co alloy, piezomag., annealed, internal damping depend. on mag. polarisation (*Polish*) 2-36903  
 Fe-B metallic glass, struct. relaxation, crystn., internal friction and elastic modulus 2-47085  
 Fe-Cr-Al, high temp. props. improvement by rare earth additions, internal friction study 2-45355  
 Fe-Cr-N, influence of N content on internal friction 2-45374  
 $\alpha$ -Fe-H, deformed, internal friction peaks 2-41656  
 Fe-Mo system, Gent alloy, damping characts. 2-1556  
 Fe-Ni, internal stresses in martensite, transform type effect, internal friction meas. (*Russian*) 2-22256  
 Fe-Ni-C, internal friction behaviour, 77 to 300K, effect of thermal transform. and cold working 2-47106  
 Fe-Ni-C-H alloy,  $\gamma$ -phase, internal friction and cathodic H charging 2-47076  
 Fe-Si alloy, plasticity, internal friction and struct. (*Polish*) 2-36905  
 Fe-Ti (2 wt.%) alloy, low temp. internal friction, surface mineral oil layer influence (*Polish*) 2-27209  
 Fe-V-N, internal friction, mag. aftereffect study 2-45370  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub> metallic glass, anelasticity and struct. relaxation 2-45357  
 K, screw dislocation struct., internal friction meas. 2-40482  
 KH<sub>2</sub>(SeO)<sub>2</sub>, ferroelastic, internal friction, domain struct. dynamics 2-40481  
 Li, screw dislocation struct., internal friction meas. 2-40482  
 Lu-H(D), solid solution, anelastic effects 2-45365  
 Mg, dislocation-point defect interactions 2-45243  
 Mg, internal friction spectrum after plastic deform., impurities effect 2-41659  
 Mg, polycrystalline, internal friction, medium temp. 2-45353  
 Mg-In, phase transition, internal friction study 2-45560  
 MgO, dislocation-point defect interaction, internal study 2-45187  
 Mo, 300 to 750K, Mo-O-N-C samples, thermochem. and quenching treatment (*Polish*) 2-27212  
 Mo, cold worked and H-charged, internal friction  $\alpha$  and  $\beta$  peaks, 90 to 400K 2-41652  
 Mo, dislocation relax. peaks, internal friction meas. 2-40401  
 Mo, internal friction, amplitude and temp. depend., 5.9 to 300K 2-41651  
 Mo, internal friction, amplitude depend., 5.9 to 300K, rel. to dislocation unpinning 2-50655

## internal friction continued

- Mo wire, internal friction after different heat treatments 2-27214  
 Mo:C(O)(N), Snoek peak study 2-45366  
 Mo-N solid solution, internal friction study 2-45367  
 Na, screw dislocation struct., internal friction meas. 2-40482  
 NaCl crystals, recovery of internal friction 2-5185  
 NaCl, dislocation photodamping with F-centres, internal function study 2-45188  
 Nb, cold worked, internal friction study of  $\gamma$ -peak 2-41653  
 Nb, deformed, dislocation mobility, internal friction and TEM obs. 2-35509  
 Nb, diffusion of C (*Russian*) 2-5275  
 Nb, dislocation motion, internal friction study 2-40402  
 Nb film, O contamination, vibrating reed technique 2-45792  
 Nb, H-dislocation interactions and intrinsic dislocation relax. 2-40403  
 Nb, internal friction study of N-H and O-H pairs 2-45361  
 Nb:N,T, internal friction meas., low freq. 2-21231  
 Nb:O,T, internal friction meas., low freq. 2-21231  
 Nb-H, acoustic emission during hydride precipitation, effect of thermal cycling 2-45392  
 Nb-O, Snoek-Koster relaxation 2-47114  
 Nb-O solid solution, Snoek relax. study 2-45368  
 Nb-Ti (5 at.%), relax. peaks at liq. He temps. due to H motion in trap sites 2-22254  
 Nb-Ti-H, internal friction study 2-45364  
 Nb-Ti-H, mechanical relax. of substitutional-interstitial atom complexes 2-45151  
 Nb-Ti-N, influence of ageing on internal friction 2-47088  
 Nb-V alloys, H Snoek peak, internal friction meas. 2-22262  
 Nb<sub>2</sub>Sn, internal friction and elastic softening 2-16717  
 Nb<sub>2</sub>Sn, internal friction and Young's modulus, 6 to 300K 2-47107  
 Ni, internal friction, high temp., and dislocation motion 2-45352  
 Ni, internal friction peak due to H-dislocation interaction 2-41658  
 Ni:H, cold-worked, internal friction peaks 2-8568  
 Ni-Co (0 to 70 wt.%), relation between damping capacity and magnetomechanical props. (*Japanese*) 2-26715  
 Ni-Cu alloys, solid solns., internal friction (*Russian*) 2-36862  
 Ni-P metallic glass, struct. relaxation, crystn., internal friction and elastic modulus 2-47085  
 Ni-Ti base alloys, internal friction spectrum of premartensitic transformations 2-47103  
 Ni-Ti-(Cu), thermoelastic, dislocation relax. in martensitic phase, internal friction meas. 2-47104  
 Ni-Zr metallic glass, thermally activated internal friction peaks, dissolved H, related 2-47086  
 Ni<sub>40</sub>B<sub>20</sub>, amorphous sheets, electrodeless deposited, internal friction and dynamic modulus behavior 2-21230  
 NiMn ferrite, doped, piezomag., magnetomech. internal friction (*Polish*) 2-36407  
 P<sub>2</sub>O<sub>5</sub>-FeO-V<sub>2</sub>O<sub>5</sub> glass, internal friction and elec. cond. 2-1907  
 Pb, amplitude depend. damping and modulus defect, normal-supercond. transition effect 2-46198  
 Pb, damping decrement and modulus defect, amplitude depend., dynamic dislocation drag influence 2-50658  
 Pb<sub>2</sub>(VO<sub>4</sub>)<sub>2</sub>, ferroelastic, internal friction and modulus effects at phase transitions 2-45375  
 Pd-Zr metallic glass, thermally activated internal friction peaks, dissolved H, related 2-47086  
 Pd<sub>40</sub>Si<sub>20</sub>, amorphous, internal friction peaks 2-47084  
 Sb, internal friction, overdamped and underdamped dislocation unpinning 2-45341  
 Si filamentary cryst., microplasticity, cyclic deform. 2-50746  
 p-Si, whiskers, internal friction peak 2-8569  
 Si whiskers, low temp. internal friction 2-26266  
 Si:O, obs. of impurities by internal friction 2-12681  
 SiO<sub>2</sub>, vitreous, Gruneisen coeff., thermoelastic determ. 2-35628  
 SiO<sub>2</sub>, vitreous, Gruneisen parameter, thermoelastic determ. 2-45598  
 SiO<sub>2</sub>-Na<sub>2</sub>O(K<sub>2</sub>O)(Li<sub>2</sub>O), binary glasses, H<sub>2</sub>O vapour effect on internal friction 2-51968  
 Ta, dislocation motion, internal friction study 2-40402  
 Ta, dislocation relax. peaks, intrinsic and impurity depend. effects 2-40404  
 Ta-O, Snoek-Koster relaxation (*German*) 2-47115  
 Ta-O, Snoek-Koster relaxation 2-47114  
 Ta-O solid solution, Snoek relax. study 2-45368  
 Ti-Al-V-H, internal friction study 2-45362  
 Ti-H solid solution; internal friction transients 2-47075  
 V, dislocation motion, internal friction study 2-40402  
 V-H, internal; friction study of twist effect, precipitation 2-45372  
 V-M-H, M=Ti, Zr, Mo, Nb, Cr, Fe, Cu, internal friction study 2-45363  
 V-Ti-H, mechanical relax. of substitutional-interstitial atom complexes 2-45151  
 Zn, automodulation and nonlinear resonance 2-40483  
 Zn single cryst., internal friction under impact loading 2-45347  
 Zn-Al eutectoid, internal friction and thermal losses 2-30525  
 $\alpha$ -Zr, dislocation core diffusion and unpinning 2-45196  
 $\alpha$ -Zr, dislocation relaxation in a random array of solutes 2-45189  
 Zr, internal friction, dislocation-point defect interactions 2-45345

internal friction of liquids see viscosity of liquids

internal mechanics, molecular see molecular vibration

internal mechanics of atoms see atomic structure

internal modes see molecular vibration in solids

## internal stresses

- alloys, polyphase, microstruct. changes in presence of externally appl. pot. gradients 2-41616  
 amorphous alloys, struct. and mag. props. 2-30400  
 amorphous solids, structural defects, computer model statistical anal. 2-1408  
 anisotropic elastic medium, Somigliana dislocation 2-21146  
 annular girder, loaded in plane, bracket support, transfer matrices calc. of deform. and internal forces (*German*) 2-25258  
 annular girder on brackets, three-dimensional loading, transfer matrices calc. (*German*) 2-25259  
 austenite, high temp. creep, effect of precip. of intragranular M<sub>23</sub>C<sub>6</sub> particles 2-22272  
 brittle materials, fatigue analysis using indentation flaws 2-8562  
 bulk material meas. using neutron diff. 2-2658  
 butadiene-styrene block copolymer with elastomer blocks, coating struct. and physicomech. props. 2-30414



## internal stresses continued

- BWR piping systems, residual stresses, weld parameter effects, evaluation by finite element analysis 2-24338  
 ceramic ware, strain meas. by holographic interferometry (*Japanese*) 2-47292  
 chalcogenide glass film, origin of photoconstriction effect 2-35910  
 coatings, multilayer, residual stresses 2-39812  
 composite material thin-walled rotational shells, residual stresses determ. by annular element removal method 2-20617  
 critical temperature, influence of plastic deform. 2-17182  
 cylinder rolling on elastoplastic half-space medium, stress and deform. fields (*French*) 2-4725  
 deformation, high-temp., internal stresses 2-12664  
 dislocation boundary effect on internal stress distrib. in cryst. 2-21150  
 dislocation linearised gauge theory, traction boundary value problem 2-50637  
 elastico-plastic plate, circular, stability rel. to residual stresses (*Russian*) 2-39829  
 electrochemical machining surface prep., portable system, residual stress meas. appl. 2-27376  
 enamel coatings, vitreous, on steel, residual stresses optimisation 2-41809  
 fatigue, rolling contact, crit. stresses 2-45335  
 filamentary Al<sub>5</sub> superconductors, strain depend. props., review 2-8916  
 films, cubic single cryst., elastic stresses, X-ray diff. study 2-16974  
 galvanic coatings, internal stresses measuring unit 2-2645  
 garnets, ion implanted, stress profile determ. 2-25910  
 glass, large pieces, meas. of degree of tempering 2-27191  
 glass, structural changes during heat treatment 2-27192  
 glass plate elements, hardening stresses optimisation 2-5917  
 glass sheet, air quenching 2-36828  
 glass-ceramic coatings with quartz, X-ray investigation of microstresses 2-37036  
 glasses, slow crack growth, post-indentation 2-2584  
 graphite, nucl. grade, NDT eval. of fatigue damage using US meas., phys. and mech. props. correl. 2-41832  
 heat-treated components, residual stresses 2-51941  
 hollow cores caused by stress of line and planar defects, thermodynamic stability conditions 2-45160  
 ice  $\lambda_1$ , ageing phenomena, internal friction, X-ray topography meas. (*French*) 2-12680  
 indentation, elastic and plastic, stress field anal. 2-50744  
 layered ultrathin coherent structures, diff. model, lattice strain effect 2-20965  
 magnetomechanical acoustic emission, NDT internal stress meas. 2-2657  
 measurement by NDT, review 2-31866  
 metal, damage variable role in elec. resist. (*French*) 2-5381  
 metal sphere, residual stress meas. by X-ray penetration dep. 2-47273  
 metals, laminated inhomogeneous, stress-strain curve, effect of initial residual stress (*Japanese*) 2-5909  
 metals polycrystalline, induced plastic anisotropy mechanism 2-45322  
 optical phonons, long wavelength, simulation by generalised internal strains 2-45452  
 Pb chalcogenides, epitaxial bicrystals, elastic deform. and stress. 2-51007  
 Peierls and internal stresses, additivity 2-51992  
 phosphosilicate glass/Al-Si thin film structs., stress, temp. depend. 2-1804  
 piezoelectric resonators, natural freq., effect of intrinsic streams in deposited thin films 2-16973  
 plasma deposited coatings, residual stress calc. method (*Russian*) 2-1803  
 plastic pipe, residual stress determ. method, role in fracture 2-47290  
 plastics, residual stress meas. layer removal method 2-28850  
 plate, orthotropic thick circular, on elastic foundation (*Polish*) 2-8043  
 plate during two-sided diffusion impregnation, stress-strain state 2-25256  
 PMMA, internal stress and activation vol. meas. 2-22260  
 polyalkoxysiloxane films, deposited from methyltrimethoxysilane plasma, internal stresses 2-46950  
 polycarbonate, glassy, internal friction during plastic flow 2-47087  
 polycarbonate, impact strength, effects of internal stress, ageing and thickness 2-52024  
 polycrystals, cyclic stress-strain curve 2-35570  
 polyethylene, internal stress-pattern memory effect, stress relax.,  $\gamma$ -ray irradiated (*French*) 2-47070  
 polymer, internal stress and activation vol. 2-22259  
 polymers, radiation change in stress, theory 2-5156  
 precipitates, fully coherent, self-stress fields, elasticity linear isotropic theory 2-12761  
 prismatic dislocations, cross-slip and stresses 2-50652  
 residual stress mapping by US tomography 2-17833  
 residual stress meas. by US 2-17832  
 ring method, for residual stresses determ. 2-31861  
 ruby rod crystals, luminesc.  $R_1$  line 2-22087  
 slab, elastic, infinite, containing flat annular crack under torsion, mixed boundary value problem 2-20607  
 steel, alloy, gas nitriding in medium of NH<sub>3</sub> and CO<sub>2</sub> 2-52103  
 steel, alloy, microstruct. and mech. props., effect of thermal cycling (*Korean*) 2-5946  
 steel, austenitic, heat-resistant, types 21-4N with precipitates and SUS 304, internal stress during high temp. creep (*Japanese*) 2-27230  
 steel, high strength low alloy, creep resist., microstruct. effects 2-27238  
 steel, low-alloy sintered, density effect on fracture behaviour, model investigation 2-41735  
 steel, low-alloy sintered, density effect on tensile strength, fracture toughness and fatigue crack prop. 2-41734  
 steel, martensitic, strengthening mechanism in tempering, after surface plastic deform. 2-41637  
 steel, medium C, residual stress form. anal. during hardening by surface deform. 2-41630  
 steel, mild, circular plate, residual stress distrib. due to axial symm. temp. distrib., effect of heat input (*Japanese*) 2-21204  
 steel, mild, internal stress meas. using neutron diff. 2-2658  
 steel, structural, X-ray stress meas., statistical anal. by Gaussian curve fitting method 2-8100  
 stress coining technique, theory, improvement of fatigue performance at hole 2-12085  
 superconductor, quenching stress, quenching current and plastic strain effects 2-41082  
 superplasticity, fundamentals and appl. 2-47150  
 two-phase material, particle size depend. of thermoelastic stress intensity factor 2-21203  
 X-ray stress meas., statistical anal. by Gaussian curve fitting method 2-8100

## internal stresses continued

- xerographic paper, internal stress and viscoelastic papers, numerical determ. 2-31724  
 xerographic paper, internal stress levels 2-31723  
 Zircaloy-2, I stress corrosion cracking susceptibility, texture and surface condition effects 2-31843  
 Ag film, evaporated, mech. props. (*Japanese*) 2-26263  
 Al anodic films, intrinsic stresses meas. 2-47229  
 Al, friction welded tubes, residual stress assessment 2-27297  
 Al, internal stresses and Bordoni relax. during plastic deformation or annealing 2-47074  
 Al, plastically deformed, temp. depend. of US velocity to evaluate internal stresses 2-17835  
 Al, vapour quenched films, mech. stresses 2-5336  
 Al-Ag(Cu), two-phase alloys, plastic anisotropy in load reversal tests 2-51976  
 Al-Cu(Sn)(Ag), vapour quenched films, mech. stresses 2-5336  
 Al-Mg (3 wt.%), stress sensitivity parameter in high temp. creep 2-41693  
 Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>, alumina-mullite ceramic, susceptibility to delayed failure after dynamic testing 2-5920  
 Au/Sn thin film couples, interdiffusion, TEM, X-ray and Rutherford backscatt. study 2-21403  
 B, vacuum deposited coating, mech. props., cracks and wrinkles 2-21476  
 BN, superhard polycrystals, struct. and mech. props., annealing effect 2-31788  
 C film, on glass substrate, internal stress, Young's modulus and adhesion energy 2-8740  
 C vacuum deposited coating, mech. props., cracks and wrinkles 2-21476  
 Cd-Ag (0.25 at.%), stress relax. in tensile deform. in temp. range from 77K to 200K 2-22255  
 Cr, electrodeposit, low contractile, cryst. struct. and internal stresses 2-21470  
 Cu bicrystals, deformed, grain boundary effects 2-51973  
 Cu film, evaporated, mech. props. (*Japanese*) 2-26263  
 Cu, plastically deformed, temp. depend. of US velocity to evaluate internal stresses 2-17835  
 Cu sputtered film, struct. and props., Ar press. and substrate temp. depend. 2-1787  
 Cu-SiO<sub>2</sub> alloy single crystals, high temp. deform. (*Japanese*) 2-2561  
 Cu-V<sub>2</sub>O<sub>5</sub> composites, in situ prep., supercond. and mech. props. 2-13263  
 Cu-Zn-Al, internal friction meas. rel. to two way memory effect 2-47099  
 Fe, cast, microscopic distrib. of local strains under static load 2-41708  
 $\alpha$ -Fe, creep, transient phenomena, kinetics and role of internal stress (*Czech*) 2-31750  
 $\alpha$ -Fe, creep, transient phenomena, dislocation struct. behaviour (*Czech*) 2-31751  
 Fe, dislocation struct. generated by low temp. deform. and associated damping phenomena 2-40405  
 Fe-Al, magnetisation and magnetostriction, magnetic annealing effects 2-17322  
 Fe-Ni, internal stresses in martensite, transform type effect, internal friction meas. (*Russian*) 2-22256  
 Fe-Ni (22 wt.%), strengthening mechanism in tempering, after surface plastic deform. 2-41637  
 Fe-Ni ferritic alloys, mag. and mech. props., telephone receiver appl. 2-26662  
 Fe-Ni-C, internal friction behaviour, 77 to 300K, effect of thermal transform. and cold working 2-47106  
 FeSi, internal strains of magnetostrictive origin, domain wall struct., X-ray diff. obs. 2-36378  
 Ge film, amorphous, vacuum deposited, internal stress and Young's modulus (*Japanese*) 2-26264  
 GeO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>, vitreous, internal press. from elastic constants 2-25969  
 InP-InGaAsP heterostructure, electrolum. polarization due to internal strain 2-41432  
 KBr, single crystals, annealing and ageing as thermal and temporal recovery mechanism 2-35581  
 KCl, single crystals, annealing and ageing as thermal and temporal recovery mechanism 2-35581  
 K<sub>2</sub>Fe(CN)<sub>6</sub>·3H<sub>2</sub>O, polytype form. conditions, stat. temp. control 2-40312  
 KI, single crystals, annealing and ageing as thermal and temporal recovery mechanism 2-35581  
 LiF film, vac. evap., intrinsic stress determ. using cantilevered plate technique 2-21472  
 MgF<sub>2</sub>, vacuum deposited coating, mech. props., cracks and wrinkles 2-21476  
 NaCl, single slip, internal stresses and dislocation mobility, stress relax. method 2-16655  
 Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>, glass, internal press. from elastic constants 2-25969  
 Na<sub>2</sub>O-GeO<sub>2</sub>, glass, internal press. from elastic constants 2-25969  
 Nb<sub>3</sub>-Sn-Nb-bronze composites, supercond. props., stress effects 2-13265  
 Nb<sub>3</sub>Sn composites, crit. currents strain response, alloying effects 2-13264  
 Nb<sub>3</sub>Sn, multifilamentary, prestrain and upper crit. field 2-13249  
 Nb<sub>3</sub>Sn multifilamentary wires, in situ prep., high field crit. current density, mech. stresses effect 2-13262  
 Ni-Co, fatigued FCC material, eigenstresses determ. from X-ray diff. profiles 2-27258  
 Ni-Cr, plasma deposited, props. anal. using dimensionless complex parameters 2-41552  
 Ni-Fe, fatigued FCC material, eigenstresses determ. from X-ray diff. profiles 2-27258  
 Ni<sub>3</sub>Al-Mo, eutectic, directionally solidified, low cycle fatigue behaviour 2-36953  
 Pb-Bi, Josephson junction counter electrodes, microstruct., thermal cycling effects, 298 to 42K 2-51945  
 Pb-In-Au Josephson junction electrodes, microstruct. and strain, thermal stability 2-51943  
 Pb-Sn alloy, eutectic, anelastic contrib. to stress relax. and stress dip tests 2-41822  
 Pt sputtered film, microstruct., X-ray diff. study 2-51022  
 Si, dislocation motion in planar struct. (*Russian*) 2-1477  
 Si film on sapphire, thermally assisted pulsed laser annealing, residual strain 2-51060  
 Si islands, laser crystallised on fused SiO<sub>2</sub>, microstrain, Raman scatt. study 2-45750  
 Si polycryst. film, on SiO<sub>2</sub> coated substrates, zone melting recrystallised, stress enhanced carrier mobility 2-46161  
 Si, surface stresses, X-ray scatt. diagnostic technique (*Russian*) 2-44974  
 Si-SiO<sub>2</sub> system, internal stresses, effect on void formation 2-45328  
 SiO<sub>2</sub> layers on annealed InP, cracking 2-8741



**internal stresses continued**

- SiO<sub>2</sub>, vitreous films, deposited from methyltrimethoxysilane plasma, internal stresses 2-46950  
 Ta, sputtered coating on Si, interface stresses and elec. props 2-21475  
 Ti  $\alpha$ -alloy, surface plastic strain effect on surface quality and fatigue strength 2-13747  
 V-H, internal; friction study of twist effect, precipitation 2-45372  
 YAG:Nd, Czochralski grown crystal, residual stress, high temp. annealing effect (Chinese) 2-45144  
 Zn-Al eutectoid alloy, superplastic, room temp. decomp. 2-27137  
 ZnS film, vac. evap., intrinsic stress determ. using cantilevered plate technique 2-21472

**internuclear double resonance** *see* INDOR**interplanetary magnetic fields***see also interplanetary matter*

- auroras in afternoon sector, config. depend. on IMF 2-28263  
 B<sub>z</sub>-component orientation, rel. to Pc 1 geomag. pulsations generation at daytime magnetopause 2-6506  
 comet tails, mag. field strength rel. to tail rays folding phenomenon 2-38137  
 cosmic ray drift effect on geomag. aa index correl. with cosmic ray neutrons flux 2-28300  
 cosmic ray scintillations due to interplanetary mag. field fluctuations, anal. of obs. 2-18667  
 counter-electrojet obs. at Trivandrum rel. to IMF azimuthal component 2-6496  
 current sheet structure in sector boundaries, Helios 2 obs. 2-53037  
 drift effect on galactic cosmic ray transverse gradient 2-14736  
 Earth bow shock, upstream wave periods rel. to IMF strength 2-32755  
 east-west magnetic field component, simulation study of effects on magnetosphere 2-32750  
 evolution relative to solar coronal field 2-3231  
 geomagnetic activity index correl. to solar wind speed and IMF 2-10276  
 geomagnetic activity rel. to IMF sector boundary passage, 1947 to 1978 AD 2-3156  
 heliospheric current sheet, structure and dynamics 2-48127  
 heliospheric magnetic field cosmic ray transport, gradient and curvature drifts effects 2-10284  
 inhomogeneities relative to cosmic ray muons var. spectra remote sensing 2-28307  
 ionosphere E and F-regions, drift speed at low latitudes, interplanetary mag. field effects 2-42518  
 ionosphere E- and F-regions, ionisation irregularities drift vel., interplanetary mag. field effects 2-42519  
 ionospheric and geomag. activity correl. to IMF B<sub>z</sub> component 2-32709  
 Jupiter, origin for energetic mesons, interplanetary mag. field accel. 2-48118  
 large-scale structure at Earth's orbit, rel. to solar activity and solar system orientation 2-3178  
 low-energy electron magnetometer for terrestrial and aerial mag. field meas. 2-3595  
 magnetic clouds observed at 1 AU 2-53038  
 magnetopause position and shape, influence of IMF and thermal press. 2-42546  
 magnetosphere, magnetically open, asymmetry effects due to interplanetary mag. field X-component 2-3163  
 magnetosphere interaction, B<sub>z</sub>-component rel. to Alfvén fluctuations and substorm mechanism (Chinese) 2-3143  
 magnetosphere interaction, relation between D<sub>st</sub> variation and interplanetary mag. field 2-6508  
 magnetosphere polar region open flux area geometry depend. on interplanetary mag. field 2-3162  
 magnitude enhancement during 1978-1979, role of radial mag. flux density increase 2-6515  
 measurement by Japanese artificial planet, effect of spacecraft magnetisation (Japanese) 2-3171  
 measurements, via ring core magnetometer on artificial planet MST5 (Japanese) 2-3182  
 orientation rel. to energetic magnetosheath ion detections 2-14701  
 polar cap arcs rel. to diffuse auroral oval, interplanetary mag. field effect 2-48063  
 polarity, latitudinal and solar cycle dependence 2-53042  
 polarity effect on F<sub>2</sub>-layer 2-48078  
 proton interaction with magnetic field inhomogeneities 2-14740  
 quiet solar wind magnetic fluctuations near 4 and 5 AU, Pioneer 10 and 11 obs. 2-42566  
 sector boundary fine-scale characts., Helios 1 obs. 2-3172  
 sector effects on polar winter geomag. field 2-27980  
 sector pattern correlation with corona brightness curve 2-32953  
 sector struct., characteristics of polarities between 1963 and 1972 AD 2-48125  
 sector structure behaviour from South Pole data, 1959 to 1970 AD 2-10293  
 sector structure pattern during minimum of solar activity 2-53036  
 shock waves, mag. field amplitude correl. with cosmic ray intensity vars. 2-3168  
 solar cycle peak prediction, use of IMF 2-23228  
 solar extended field, hemispheres orientation effect on cosmic ray anisotropies at Earth 2-32952  
 solar wind high speed plasma streams on preferred Bartel days, assoc. interplanetary mag. field 2-23204  
 solar wind low energy electron propagation, effect of interplanetary large scale mag. struct. 2-28311  
 solar wind magnetic fluctuations and whistler mode waves props. 2-28312  
 solar wind magnetic loop behind interplanetary shock wave 2-18670  
 solar wind plasmoids, comparison with ideal MHD filaments 2-3175  
 solar wind streams, structure in latitude and longitude from multispacecraft obs. 2-32793  
 stream front associated enhancements of IMF 2-14744  
 variations and struct. 2-3222  
 Y-component variation effect on polar F-region structure 2-38015

**interplanetary matter***see also comets; cosmic dust; interplanetary magnetic fields*

- brightness integral inversion, along zodiacal and coronal lines of sight (French) 2-42562  
 charged micron-sized grains in outer planetary magnetospheres 2-53129  
 comet tails, anal. of tail rays folding phenomenon 2-38137  
 cosmic rays, effects of particle drift on transport with more realistic diffusion coeffs. 2-10285

**interplanetary matter continued**

- cosmic rays interplanetary acceleration, anal. of superadiabatic accel. by shock waves 2-3166  
 damping of a solitary magneto-acoustic wave in a magneto-active plasma (Russian) 2-25525  
 dust and gegenschein photometric centre, brightness contours 2-32951  
 dust collected in Earth's stratosphere, electron microscopy obs. 2-6571  
 dust grains, electric potential 2-42646  
 dust grains collisional processes, unlikely origin for  $\beta$ -meteoroids 2-32958  
 dust grains in interplanetary medium, book 2-38379  
 dust in stratosphere, IR spectra obs. 2-38111  
 dust particles, definition of albedo and appl. to irregular particles 2-32950  
 electron acceleration by interplanetary shocks 2-48128  
 electrostatic turbulence, high frequency, effect on cometary plasma tails 2-42650  
 EM wave propagation, ergodicity hypothesis 2-15109  
 energetic ions in Earth's bow shock, accel. processes 2-32791  
 galactic cosmic rays, gradients in plane of ecliptic from radioactivity data for Bruderheim chondrite 2-48116  
 heliosphere, program for obs. from space, (1980 to 1995) 2-3185  
 meteorites, noble gas origin, planetary component 2-18743  
 OPEN programme, scientific rationale for future solar-terrestrial research programmes 2-3184  
 particle collisions with comets 2-53178  
 physical processes and models of interplanetary responses, suggested theoretical studies 2-3180  
 radio transmission through ionosphere and solar wind, appl. of refr. scintillation theory 2-38022  
 scintillation of radio sources, new technique for obs. of density gradients in solar wind plasma 2-3173  
 scintillation phenomena, refractive scatt. theory 2-29759  
 scintillations of radio sources, anal. of obs. 2-6516  
 shock wave interaction with magnetosphere, rapid traversal of magnetopause by ISEE satellites 2-18632  
 shock waves, evidence for assoc. 'cold' chromospheric plasma in solar wind (German) 2-3176  
 shock waves, flare produced, interaction with solar wind protons 2-18672  
 shock waves, propag. speed correl. with cosmic ray intensity vars. 2-3168  
 shock waves, rel. to vars. of low energy ions during energetic storm particle event 2-32785  
 solar wind terminating shock, generalised eqns. for press. transition and stand off distance 2-6514  
 transient phenomena originating at Sun, interplanetary view 2-6517  
 travelling interplanetary phenomena, theoretical interpretation rel. to solar origins 2-3179  
 zodiacal dust-plasma interactions, observational consequences 2-38035  
 inner zodiacal light, brightness distrib. from Salyut-6 spacecraft pictures (Russian) 2-53167  
 H I Lyman  $\alpha$  flux, determ. independently of instrument calibration 2-32969  
 He<sup>+</sup> EUV 304 Å emission obs. in Earth antisolar direction 2-42648

**interplanetary medium** *see interplanetary matter***interpolation***see also function approximation*

- Boltzmann equation, interpolation method, DT fusion system appl. 2-15428  
 digital images, bilinear interpolation 2-7729  
 drilling freedom problem finite element formulation 2-50110  
 energy band calc., smooth interpolation with gradient utilisation 2-45803  
 image reconstruction from projections, interpolation method comparison 2-34672  
 incompressible flow, primitive variable finite element formulations, mixed interpolation 2-25348  
 Ising model, three-dimensional, partition function, approx. interpolation formula (Chinese) 2-19032  
 laminated anisotropic curved beam and shell stiffening finite element 2-50112  
 meteorological automatic data processing, objective anal. (Chinese) 2-23114  
 moving object computed tomography, time domain interpolation effectiveness 2-14331  
 nested Hilbert spaces refinement and interpolation theory 2-28697  
 nuclear power plants under seismic loads, dynamic anal. with finite elements 2-11247  
 optical fibre preforms, three-dimensional refractive index profiling 2-20420  
 plasticity, boundary element method 2-8051  
 plate bending finite element formulation 2-18891  
 time interval meter based on Elektronika B3-21 calculator 2-48680  
 unified approach of interpolation formula using Taylor's formula of operational calculus (German) 2-10582  
 Pt resistance thermometer calibration between 13.81K and 273.15K, interpolation methods 2-15137

**interstellar dust** *see cosmic dust***interstellar magnetic fields***see also interstellar matter*

- B5, dark cloud, coupling of mag. field and rotation 2-33113  
 clouds fragmentation to star form., mag. field role 2-6659  
 dense interstellar clouds, mag. fields props. and behaviour 2-53352  
 galaxies magnetic field model, disk dynamo asymptotic props. 2-14760  
 irregularities due to turbulence caused by plasma irregularities, cosmic ray scatt. 2-32778  
 in M31, field rel. to rotation 2-48324  
 M31 and M33, spiral galaxies, mag. field config. 2-10518  
 molecular clouds towards 3C 133, 3C 123 and W51, mag. field determ., UHF obs. 2-6652  
 South Celestial Pole, mag. field-dust grains coupling rel. to interstellar gas and dust correl. 2-38277  
 Zeeman effect in 21 cm line radiation 2-38319  
 OH masers, mag. field strength rel. to circular polarisation of emission lines 2-42737

**interstellar matter***see also cosmic dust; H I regions; H II regions; interstellar magnetic fields; nebulae*

- <sup>18</sup>OH/<sup>18</sup>OH abundance ratio in molecular clouds 2-38276  
 adiabatic blast waves in preexisting cavities 2-38263  
 ambipolar diffusion in clouds rel. to degree of ionization 2-38267  
 amorphous interstellar grains, origin 2-38279  
 asteroid impact on neutron stars, models for  $\gamma$ -ray bursts 2-53385



## interstellar matter continued

- asteroid-neutron star collision, radiation emission 2-10471  
 asteroids impact on neutron stars, giant scatt. as  $\gamma$ -ray burst source 2-10527  
 asteroids impact on neutron stars, precursors to  $\gamma$ -ray burst 2-53386  
 B5, dark cloud, coupling of mag. field and rotation 2-33113  
 Barnard 35, far IR and submillimetre obs. rel. to heat sources for bright-rimmed mol. cloud 2-33115  
 BD=8°4232, possible  $\delta$  Scuti star, interstellar reddening from Stromgren photometry 2-33038  
 Bok globules, formation due to H II region ionisation front interactions 2-14909  
 broad-line gas dynamics in type I Seyferts 2-53361  
 UW Canis Majoris, eclipsing binary, interstellar lines in UV spectrum 2-3274  
 Carina Nebula molecular cloud struct., CO map, EHF obs. 2-18787  
 Cassiopeia A direction, identification of 26.13 MHz absorpt. line, HF obs. 2-23342  
 $\gamma$  Cassiopeiae, Be star, assoc. nebulosity, visible obs. 2-53355  
 chemical processes in shocked interstellar gas, review 2-53348  
 chemical reaction scheme, extension to D chemistry and mol. isomers 2-53349  
 chemistry in low and medium density interstellar clouds, modelling 2-14910  
 clouds, adiabatic and rotating, collapse and fragmentation 2-28529  
 clouds, C<sup>+</sup>, C and CO network 2-33103  
 clouds, collapsing and form., effect on star form. in one zone model galaxy 2-6666  
 clouds, formation, collapse and fragmentation, mag. field role 2-6659  
 clouds, formation of planets 2-23234  
 clouds, ionising shock waves, effect on cosmic ray accel. 2-10280  
 clouds towards halo B-type stars, props. from spectral obs. 2-33019  
 Collinder 228 open cluster, spectral morphology, distance and reddening, visible obs. 2-53342  
 contracting protoplanetary cloud, grain settling 2-3207  
 cosmic ray gas, kinetics (*Russian*) 2-33122  
 cosmic rays interaction, implications of antiproton flux meas. and search for antihelium 2-10288  
 cyanoacetylene, J=4-3 rotational transition, 36.4 GHz obs. (*Russian*) 2-33123  
 cyanopolynes, absorpt. lines obs. in direction of Cassiopeia A 2-6655  
 Cygnus OB2 members energy injection to interstellar medium, H I super-shell form. 2-28515  
 Cygnus region stars between Sagittarius and Orion spiral arms, interstellar extinction 2-28532  
 dense interstellar clouds, mag. fields props. and behaviour 2-53352  
 diffuse bands, strengths in spectra of stars previously reported anomalous 2-14849  
 diffuse interstellar bands, nature of carrier rel. to chemical processes in interstellar medium 2-53347  
 diffuse interstellar bands between 2.9 and 4.0 microns, obs. in spectrum of M-type supergiant 2-33119  
 diffuse interstellar lines, origin 2-33121  
 DR 21 molecular cloud, clumping evidence from NH<sub>3</sub> (1,1) transition SHF obs. 2-23336  
 dust distribution used for star formation region mapping (*French*) 2-10519  
 dust emission from comets at large heliocentric distances 2-53176  
 dust grains, electric potential 2-42646  
 dust grains and far IR emission from galactic plane at high longitudes 2-48316  
 dust grains in galaxies, evidence from occurrence of 3.3  $\mu$ m emission feature 2-38314  
 dust grains in globular clusters, polarisation of scattered light 2-28518  
 dust in neutral and ionized gas, origin of diffuse far IR and sub-mm emission 2-42730  
 in elliptical galaxies, effect of gaseous energy dissipation on global props. 2-14930  
 elliptical radio galaxies with dust lanes, model for stationary states of interstellar gas 2-38312  
 ethynyl radical, laboratory millimeter and submillimetre spectrum 2-32831  
 evolution and structure, effect of supernova remnant interactions 2-10505  
 extinction, determ. using dust sensitive forbidden line ratios 2-32858  
 formaldehyde, absorpt. line mapping towards H II regions DR21 and W58 (K3-50) 2-14911  
 formaldehyde, protonated, potentially observable interstellar molecule, spectra 2-14900  
 formaldehyde masers in NGC 7538 (IRS1), assoc. with 1720 MHz OH masers 2-6678  
 galactic absorption rel. to galaxy counts, selection of galaxies in Lick survey 2-14927  
 galactic centre molecular gas and cosmic ray penetration 2-10514  
 galactic discs, regular three-wave processes rel. to weak turbulence in self-gravitating gaseous disc 2-28572  
 in galaxies, nonlinear instability of gravitating gas disc 2-28570  
 galaxies absorption line coronae, theory rel. to quasars absorpt.-line systems 2-28541  
 galaxies gaseous discs, hydrodynamic interaction with halo rel. to origin of warping discs 2-33147  
 galaxies of Virgo cluster, magnitude corrections for internal absorpt. rel. to luminosity function 2-38303  
 Galaxy hot corona, possible detect. of far UV line emission 2-10517  
 gamma radiation, COS-B obs. of large-scale distrib. 2-48315  
 gas, newly ionised, interaction with expanding solar wind 2-3177  
 gas cloud impacting neutron star in X-ray burst model 2-53390  
 gas clouds in nuclei of Seyfert galaxies and quasars, kinematics (*Russian*) 2-53369  
 gas in spiral galaxies bending and warping 2-33137  
 gas stripping in clusters of galaxies, effects on intracluster gas evolution 2-6668  
 gas/dust ratio effect on microwave cosmic background 2-23354  
 gaseous disks in elliptical galaxies, geometrical structure 2-38290  
 giant molecular clouds, HNC and HCN abundance ratio, implications, EHF obs. 2-14897  
 giant stars, extremely metal-deficient, temps., metallicities and colour excesses from Vilnius system photometry 2-38180  
 globular cluster cores, dust cloud effects, radiation transfer and press., models 2-18784  
 grains, growth behind dense snowploughing shock fronts 2-38264  
 halo B-type stars, spectra and interstellar lines anal., obs. 2-33019

## interstellar matter continued

- HD 147419, WN6 star, anomalous far UV interstellar extinction obs. 2-6605  
 Herbig-Haro objects HH 7-11, high vel. mol. gas obs. 2-28530  
 high velocity cloud (HVC A1), H I fine struct. obs. 2-6656  
 hydrocarbon, potentially observable interstellar molecule, spectra 2-14900  
 IC 59 and 63, nebulae assoc. with  $\gamma$  Cassiopeiae, visible obs. 2-53355  
 interstellar extinction law in dusty H II regions, results from stellar UVRI photometry 2-3291  
 ionised gas in galactic nuclei or star cluster centres, gravitational collapse 2-3302  
 isotope exchange in ion-neutral reactions, laboratory studies and interstellar implications 2-53350  
 kinematics, of high-speed gas in envelopes of Seyfert 1 nuclei and quasars 2-28571  
 Kleinmann-Low Nebula, hot mol. core location, NH<sub>3</sub> lines obs. 2-23334  
 Kleinmann-Low nebulae in Orion, ice content meas. 2-33110  
 local gas interaction with solar environment 2-14739  
 Local Group galaxies stellar spheroids dust cloud anal., BI<sub>k</sub> obs. 2-3300  
 LSI+61°303, variable radio star, interstellar extinction from far UV obs. 2-6596  
 M16 (NGC 6611), investigation of neutral and ionised gas 2-6648  
 M17, H II region C II forbidden line halos, mapping, obs. 2-23333  
 M17 dark cloud region, polarisation survey appl. of Savart plate measurements reduction procedure 2-32860  
 M-type giants towards Cassiopeia, extinction, UVB obs. 2-10413  
 Magellanic Clouds, integrated colours and gas fraction rel. to past star form. rate 2-38300  
 Magellanic Clouds directions, vel. struct. of interstellar gas 2-10508  
 masers, influence of geometrical shape on radiation props. 2-48307  
 molecular cloud containing star form. region, model 2-6654  
 molecular cloud ensemble, props. from <sup>13</sup>CO EHF obs. 2-14898  
 molecular cloud star formation regions, mapping and kinematics IR obs. 2-10497  
 molecular cloud UV radiative transfer used to find formaldehyde lifetime 2-14905  
 molecular clouds, constraint on prompt supernova cosmic ray prod. from  $\gamma$ -ray obs. 2-6512  
 molecular clouds, contrib. of cosmic ray irradiation to number of apparent  $\gamma$ -ray sources 2-28534  
 molecular clouds, gamma-ray emission, enhanced electron fluxes 2-48308  
 molecular clouds, global press. instability due to optical effect 2-33117  
 molecular clouds, high resolution spectroscopy rel. to star form. 2-53351  
 molecular clouds, impact of supernova shock waves, grain form. 2-38264  
 molecular clouds as gamma ray sources 2-6685  
 molecular clouds outside solar circle in first quadrant, CO emission 2-10516  
 molecular clouds towards 3C 133, 3C 123 and W51, mag. field determ., UHF obs. 2-6652  
 molecular mm-wavelength spectral line data, calibration 2-28349  
 molecules, 2 mm transitions, new obs. 2-38260  
 molecules, review of spectroscopy prompted by astrophysical obs. 2-53075  
 molecules formation in dense clouds, protostar existence (*German*) 2-10507  
 molecules in interstellar gas, review of radio obs. 2-53346  
 multiple scattering of solar resonance radiation 2-38272  
 N159 molecular cloud complex in Large Magellanic Cloud, protostar discovery, HKL obs. 2-38306  
 N59A (DEM 241), giant filamentary shell in LMC, dynamics 2-3293  
 nearby region UV obs. indicating supernova remnant is surrounding Sun 2-3295  
 neutron star gamma-ray burst on accretion of solid body 2-10526  
 NGC 2024 (IRS 1 and 2), IR spectra and nature 2-10498  
 NGC 2071 region, high velocity H<sub>2</sub> time emission obs. 2-33114  
 NGC 2346, binary central star and reddening of planetary nebula 2-28494  
 NGC 3132 and 3242, planetary nebulae ionisation struct. and obscuration 2-53354  
 NGC 3201, globular cluster, interstellar reddening from photometry of main sequence stars 2-10490  
 NGC 3379, elliptical galaxy, gas flows fuelled by stellar mass loss, evolution 2-33151  
 NGC 4151, cloudy structure of Seyfert nucleus from forbidden O II line profile anal. 2-48322  
 NGC 4151, Seyfert 1.5 galaxy, limit on interstellar reddening of galactic nucleus 2-28547  
 NGC 4151, type 1 Seyfert galaxy, effects of interstellar reddening on spectral components 2-28546  
 NGC 6712, X-ray globular cluster, interstellar reddening and distance from BV photometry 2-28514  
 NGC 6791, open cluster, distance, age and reddening, UVB obs. 2-3284  
 NGC 7538 H II region, assoc. mol. cloud, CO obs. 2-23335  
 Nova Coronae Austrinae 1981, interstellar extinction rel. to distance 2-10437  
 open clusters, distances and reddening determ. for 43 clusters from Geneva photometric boxes 2-38256  
 rho Ophiuchi nebula star HD 147889, UV interstellar extinction 2-6650  
 rho Ophiuchi region, H I self absorpt. rel. to visual extinction, discrepancies, UHF obs. 2-33105  
 Orion BN/KL region, CO and SO<sub>2</sub> lines obs. rel. to high vel. gas props. 2-28523  
 Orion I and stellar formation from gas and dust 2-6594  
 Orion MC-1, high resolution submillimetre map 2-42731  
 Orion MC-1 region, obs. of NH<sub>3</sub> emission 2-38273  
 Orion molecular cloud, detect. of S(8), S(12), S(13), S(14) and S(15) v=0-0 lines of H<sub>2</sub> 2-10503  
 Orion Molecular Cloud 1, methyl cyanide lines obs. 2-33095  
 Orion Nebula stars, UV extinction, obs. 2-6650  
 Orion star formation region structure, anal. of spatial extent, mass and age 2-23296  
 oxide grains, surface chemistry 2-33118  
 Perseus I star field, star space density and interstellar extinction, RGU obs. 2-38274  
 planetesimals, implications of primordial comet cloud dissipation by tidal encounters with massive nebulae 2-48188  
 plasma, conf., London England (July 1977) 2-18822  
 plasma irregularities parameters, determ. from pulsar scintillations 2-3297  
 polarization in immediate solar neighbourhood 2-42729



## interstellar matter continued

- positive ion reactions with  $H_2$ , rate coeffs. and interstellar implications 2-6530
- proto-cluster clouds, gravit. encounters rel. to origin of stellar ang. momentum 2-53245
- protostellar cloud collapse, re-examination of fragmentation in rotating protostar 2-14848
- protostellar gas cloud dynamic collapse, role of rot. 2-10389
- pulsars interstellar scintillation, characts. of saturated scintillations in space and time 2-42705
- QSO 0957+561 AB emission line form. region, size and number of clouds 2-38341
- quasar emission line cloud, line form., photoionisation and heating 2-33177
- quasar emission line clouds, dust abundance, UV obs. 2-14948
- quasar emission line regions, two phase models 2-14947
- quasars, high redshift, dust shell hypothesis constraints from EHF obs. 2-38337
- radio wave scattering matter, galactic distrib. rel. to H II regions and supernova remnants 2-3296
- reddening low determ. 2-33080
- reddening of RV Tauri, distance determ. 2-18771
- reflection nebulae with R-associations, reddening law determ. 2-53339
- S88 molecular cloud, IR and mol. obs. rel. to cloud energetics 2-28525
- Selected Area 64, extinction, Vilnius photometry obs. 2-28532
- UZ Serpentis, dwarf nova, interstellar reddening from outburst spectra 2-14865
- Seyfert galaxies Balmer line asymmetry due to optically thick clouds expanding system 2-53375
- in Seyfert galaxies nuclei, comparative parameters of interstellar gas in Seyfert 1 and Seyfert 2 galaxies 2-3308
- Seyfert galaxy nuclei, emission line form., photoionisation and heating 2-33177
- Sh2-152 molecular cloud, assoc. SNr G109.1-1.0 (GF 2259+586), EHF obs. 2-14915
- shock compressed gas layers, gravitationally driven instabilities 2-48299
- shocked magnetic gas clouds, non-steady flow analysis 2-14913
- silicates, evidence from spectra comparisons with laboratory obs. 2-48306
- solar system interaction with interstellar gas flux, effect of neutral component of solar wind (*Russian*) 2-53041
- solar wind terminating shock, generalised eqns. for press. transition and stand off distance 2-6514
- South Celestial Pole region ( $l^I = 301^\circ$ ,  $b = -18^\circ$  to  $-31^\circ$ ), distrib. of galactic H I and dust 2-38277
- spherical clouds, self-gravitating, convective instability 2-32826
- spiral arms and a supernova-dominated interstellar medium 2-48329
- star formation, collapse of rotating non-axisymmetric isothermal cloud 2-14847
- star formation regions, 10 and 20 micron images 2-53343
- supernova remnants interaction with interstellar medium, effects on radio morphology 2-48301
- supershells expanding from OB assoc., formed by supernovae, search 2-23331
- Taurus dark clouds stars, extinction, UXPYZVS photometry obs. 2-28531
- Taurus Molecular Cloud 1, deuterated cyanodiacetylene detect., SHF obs. 2-23339
- Taurus Molecular Cloud 1, deuteriocyanobutadiene detect., SHF obs. 2-23340
- Taurus molecular cloudlets, obs. of four molecules 2-33112
- three-phase interstellar medium, dust sputtering and collisions rel. to Ca-Al rich inclusions in meteorites 2-32959
- turbulence, prod. by shock waves and stellar winds irregularities 2-42736
- turbulence causing plasma instabilities causing mag. irregularities, cosmic ray scatt. 2-32778
- W3 IRS 5 protostellar source, binary character, IR speckle interferometry obs. 2-23338
- W51, H II region-molecular cloud complex, visual extinction distrib. from optical study 2-48302
- W51 North,  $H_2O$  maser sources proper motion and distances, SHF obs. 2-6651
- C abundance toward  $\delta$  Scorpii, determ. from obs. of interstellar C II line 2-42733
- C I in molecular clouds, abundance, obs. at 609 microns 2-38259
- C I in Orion Nebula, near IR high resolution spectrophotometry of 872.7 non forbidden line 2-3289
- CO and CS, mm line intensities 2-28538
- CO in H I clouds, 2.6 mm line obs. and correls. with H I and OH 2-3290
- CO in molecular clouds, high vel. wings and self reversal 2-14899
- CO in molecular clouds, 870  $\mu$ m obs. of J=3-2 emission 2-14914
- CO, UV lines obs. in direction of HD 102567 (4U 1145-61) by IUE 2-33032
- $CO^+$ , 235-470 GHz elec. dipole allowed transitions 2-23337
- Ca II, obs. of new interstellar line component in spectrum of HD 72127A 2-42732
- Ca II, radial vels. of interstellar lines towards eclipsing binaries V1425 Cygni and AH Cephei 2-38242
- Ca II K-line in spectra of southern OB<sup>+</sup> stars, radial vels. meas. 2-6593
- H I absorpt. towards pulsars, statistics 2-6609
- H II regions, extragalactic, star form. and extinction, stellar mass distrib. at birth 2-33107
- $H_2$  absorption in solar neighbourhood from Lick galaxy counts 2-48297
- $H_2$ , prod. in dense mol. clouds 2-28533
- $H_2$ , search in IR sources 2-53074
- $H_2O$  abundance in diffuse clouds, results from oscillator strengths of  $\tilde{F}(0, 0, 0)$ - $\tilde{X}(0, 0, 0)$  band (111.5 nm) 2-38227
- $H_2O$  masers, collisional pumping models rel. to energy sink problem 2-53357
- $H_2O$  masers associated with far IR sources, obs. 2-33099
- $H_2O$  masers in active star form. regions, nearby IR sources survey, IR obs. 2-18801
- $H_2O$ , new search for interstellar absorpt. line in spectrum of  $\zeta$  Ophiuchi 2-28522
- Li, obs. towards  $\sigma$  Scorpii,  $\beta^7$  Scorpii and 55 Cygni 2-28521
- Mg II, density in direction of  $\alpha$  Centauri A from high resolution obs. of Mg II 2800  $\text{\AA}$  2-53257
- MgO particles, spectroscopic evidence 2-42734
- NH<sub>3</sub>, rear galactic centre 2-28537
- NH<sub>3</sub>, SHF emission from southern sources 2-48296

## interstellar matter continued

- OH 1720 MHz masers in NGC 7538 (IRS1), assoc. with formaldehyde masers 2-6678
- OH, 18 cm lines obs. in Herbig-Haro objects and refl. nebulae 2-3298
- OH absorption, UHF obs. towards galactic nuclei 2-38294
- OH, circular polarisation of maser emission lines 2-42737
- OH masers in NGC 7538 (IRS 1), spatial and vel. components obs. 2-38278
- $^{17}O/^{18}O$  abundances in molecular clouds, uniform galactic distrib., VHF obs. 2-14896
- Rb detection in local interstellar space from Rb I line towards  $\zeta$  Ophiuchi 2-23341
- Si depletion, IUE obs. of reddened stars 2-48294
- Si isotope abundances from SiO EHF obs. 2-14895
- SiO grains, possible explanation for interstellar 9.7 micron band 2-14907
- SiO, mm line intensities 2-28538
- SiO, use of thermal emission as probe of high vel. motions in regions of star form. 2-42735
- interstitials  
see also *Cottrell atmospheres; crowdions; Snoek effect*
- alkali halides, F-colouring, role of impurities on primary process 2-12591
- alkaline earth fluorides, relation between bound and free ion motion 2-21389
- BCC lattice, mechanical relax. of substitutional-interstitial atom complexes 2-45151
- ceramics, ion-beam thinning characts. 2-50724
- chemical potential in solids 2-40473
- condensed systems of particles with only translational mobility, differential geom. of defects 2-21136
- deep levels due to nonsubstitution impurity cluster, MTO calc. 2-30820
- fast ion transport in solids induced by an electric field 2-40589
- FCC crystal, vibrational motion of interstitial impurity atom 2-8589
- FCC metals reson. vibrs. of self-interstitials, appl. to sp. ht. and neutron scatt. 2-45432
- fluorites, nature of disorder in superionic state 2-45148
- graphite, neutron irradiation damage, substitutional B effect 2-25938
- hexagonal systems, lattice sum and distortion field calc. program 2-16608
- HVM irradiation produced, migration enthalpy, review (*French*) 2-30493
- ice single crystals, stacking fault formation by cooling 2-16661
- ionic crystals, melt-grown, foreign ion distrib. coeff. as function of ionic radius 2-12621
- kinks on moving dislocations, impurity atoms interaction 2-1514
- metal, defects detected by spin precession methods, review 2-30848
- metal, double layer oxide film form. by anion interstitial diffusion 2-9461
- metal crystal lattice, interstitial H atoms equilibrium positions 2-1474
- metal hydrides, H coordination, isotopic effect 2-45155
- metals:He, implanted, self-trapping study 2-40427
- metals, FCC, displacement cascades, spatial characteristics, computer simulation 2-16674
- metals, impurities and lattice defect studies by muon spin rotation technique 2-31359
- metals, interstitial electrotransport, numerical simulation 2-35748
- metals, self-interstitials relax. vol. 2-45149
- metals, thermal He desorption spectrometry, defect chemistry 2-45719
- metals, vacancy type defects 2-25872
- metals recombination volume between vacancies and self-interstitials 2-12587
- point-defect migration into infinitesimal dislocation loop 2-40429
- quartz, ionic conductivity, interstitial defects, complex impedance anal. and IR meas. 2-50909
- radiation cascades in crystals, spatial distrib. of vacancies and interstitials, theory 2-45248
- regular interstitial soln., thermodynamic props. 2-21330
- semiconductor crystals, interstitial atoms, electronic struct. calc. 2-21539
- Snoek relaxation of single cryst. subjected to external tensile stress (*Polish*) 2-25987
- solid solutions, interstitial 2-40551
- solid solutions, with short range repulsive interactions, configurational entropy calc. 2-5246
- steel, alloy, plastic strain ratio, variation with strain level 2-17715
- steel, austenitic stainless, creep, high-temp., form. of multiples 2-9368
- steel, Fe-Cr, as-quenched with low interstitial C content, internal friction 2-27204
- steel, low C, strain-rate hardening, constitutive eqns. 2-31707
- steel, wrought, low C Cr-Ni, austenitic stabilisation during tempering (*Czech*) 2-47063
- substitutional alloy, with interstitial impurity, equilibrium vacancy conc. 2-50631
- trapping of interstitials atoms in solid solutions 2-40377
- Ag, electron irradi., dislocation-point defect complexes stability, Bordoni effect study 2-45186
- Ag, electron irradiated, free migration of interstitials 2-35544
- Ag, geometrical structure of lattice defect-impurity config., TDPAC study 2-31354
- Ag-Al, electron irradiated, extended jog motion on dissociated dislocations, weak beam electron microscopy obs. 2-25886
- Ag-Cu, point defect mobility, high-voltage electron microscopy study 2-21398
- Ag-Cu(Ni), dil. alloys, electron irradiated, free migration of interstitials 2-35544
- $\alpha$ -Ag-Zn, radiation-enhanced ordering due to vacancies and self-interstitials 2-12812
- Ag-Zn, radiation-enhanced ordering, role of vacancies and self-interstitials 2-12813
- Al, electron irradiated, interstitial trapping by Ga or Si atoms 2-35543
- Al, neutron irradiated, effect of point defects on room temp. internal friction 2-25985
- Al:<sup>57</sup>Fe, interstitial <sup>57</sup>Fe sites, struct. and oscillational motion 2-51116
- Al-Be(Ca)(K)(Li)(Mg), irradi., interstitial-solute complexes, configs. and binding energies 2-30483
- Al-C-B interstitial solid soln., mixing energy (*Russian*) 2-5228
- $\beta$ - $Al_2O_3$ - $Na_2O$  and  $\beta''$ - $Al_2O_3$ - $Na_2O$ , superionic conductors, pot. energy calc. 2-21362
- Au, geometrical structure of lattice defect-impurity config., TDPAC study 2-31354
- Au:He, spontaneous precipitation of He 2-13727
- BaF<sub>2</sub> crystals, ionic conductivity 2-45612



## interstitials continued

- BaF<sub>2</sub>:R (R=rare earth), dopant-interstitial binding energies, lattice simulation calc. 2-40428  
 Ba<sub>1-x</sub>La<sub>x</sub>F<sub>2+x</sub>, superionic cond., cond. enhancement and dielec. response 2-16884  
 Ba<sub>1-x</sub>La<sub>x</sub>F<sub>2+x</sub>, superionic cond., <sup>19</sup>F NMR relax. and ionic thermocurrents study 2-17362  
 Bi<sub>2</sub>Se<sub>3</sub>, electromigration of Cu, effective ion charge, temp. and elec. cond. depend. 2-35749  
 Bi<sub>2</sub>Te<sub>3</sub>-Sb<sub>2</sub>Te<sub>3</sub>, electromigration of Cu, effective ion charge, temp. and elec. cond. depend. 2-35749  
 CaF<sub>2</sub>:R (R=rare earth), dopant-interstitial binding energies, lattice simulation calc. 2-40428  
 CaO:Ca, IR spectrum of OH-compensated defect 2-51634  
 Ca<sub>1-x</sub>R<sub>x</sub>F<sub>2+x</sub> (R=La, Gd, Er, Y), conc. solid solns., elec. cond. rel. to defect regions 2-26111  
 Cd electron irradiated, diffuse X-ray scatt. and elec. resist. meas. 2-21179  
 CdS:Li crystal, interstitial electromigration, exciton luminescence study 2-5279  
 CdTe:P(P,Ga)(P,Al)(P,In), localised vibr. modes, Green's function calc. 2-50814  
 Co<sub>1-x</sub>Al<sub>x</sub>, deform., dependence on stoichiometry 2-51974  
 Cr, self-diffusion, 1073 to 1446K 2-12815  
 CsBr, tunnelling charge transfer to Frenkel defects, luminesc. obs. 2-45153  
 CsBr, vacancy and interstitial formation under optical exciton generation conditions 2-31572  
 Cu, electron irradi., dislocation-point defect complexes stability, Bordoni effect study 2-45186  
 Cu, geometrical structure of lattice defect-impurity config., TDPAC study 2-31354  
 Cu, interstitial atom trapping and D localisation at <sup>57</sup>Co impurities 2-30484  
 Cu, point defect-impurity interactions 2-21165  
 Cu-H, electronic struct. of interstitial H 2-21526  
 Cu-Ni alloys, sputter-induced solute segregation in surface layer during A ion bombardment (Japanese) 2-2515  
 Fe alloys containing O, high temp. mag. aftereffect 2-21843  
 Fe, deformed, isothermal annealing positron annihilation study 2-51736  
 α-Fe, electron irradiated, positron annihilation, self-interstitial migration in stage III 2-21183  
 α-Fe, electronic struct. and dislocation splitting, alloying elements influence (Russian) 2-51077  
 Fe, Fe solid solns. and steels, self-diffusion and heterodiffusion, review 2-50904  
 Fe, high-purity, defect investigs. using mag. aftereffect and internal friction (Polish) 2-27205  
 α-Fe, interaction energy of Al-C pair from mag. permeability disaccommodation (Polish) 2-36396  
 α-Fe, internal friction meas. in N and C Snoek relax. region using relaxator device (Polish) 2-25341  
 α-Fe, interstitial solute atom influence on self-diffusion and vacancy formation determ. 2-12814  
 Fe, Mag. and mech. relax. due to C and N interstitials 2-26685  
 α-Fe, Snoek relax. peak of C (Polish) 2-25987  
 Fe-Al (24.3 at%) alloy, atomically ordering, mag. aftereffects related to C migration (Polish) 2-36394  
 α-Fe-C, dil., with substitutional atoms, mag. permeability disaccommodation, model (Polish) 2-36392  
 Fe-C, solute peak associated with grain boundaries 2-45150  
 Fe-C (1.5-7.2 at%), martensitic, interstitial atom config., study using Mossbauer spectroscopy 2-35439  
 Fe-C martensitic, modulated struct. studied by electron microscopy and diff. 2-12538  
 Fe-Co, neutron irradiated, accelerated diffusion (French) 2-35546  
 Fe-Co-M(V)(Ti) alloys, neutron irradiated, accelerated diffusion (French) 2-35546  
 Fe-Cr-N, influence of N content on internal friction 2-45374  
 Fe-Cr-Ni commercial alloys, irradi. induced swelling 2-50716  
 Fe-H system, formation of interstitial H-clusters 2-5884  
 Fe-Ni, dil., mag. aftereffect after low temp. neutron irradi. 2-51439  
 Fe-Si alloy, plasticity, internal friction and struct. (Polish) 2-36905  
 Fe-Ti alloy, dil., migrational mag. aftereffects, 200 to 500K (Polish) 2-36393  
 Fe-Ti-Mn (0.19, 0.39 wt.%), single cryst., deform. behaviour, effect of orientation and temp. 2-22273  
 Fe-Ti-N, lattice parameter changes 2-45116  
 Fe<sub>0.05</sub>HoMo<sub>0.95</sub>S<sub>8</sub>, Chevrel phase supercond., high temp. Mossbauer study 2-17379  
 Fe<sub>1-x</sub>Sb<sub>x</sub>, magnetic ordering of interstitial Fe 2-46299  
 Fe<sub>0.05</sub>SnMo<sub>0.95</sub>S<sub>8</sub>, Chevrel phase supercond., high temp. Mossbauer study 2-17379  
 GaAs:Cr, ion implanted, stoichiometric disturbances and Cr redistrib. during annealing 2-21161  
 GaAs:Se(S), impurity profile, implantation temp. and crystallinity depend. 2-40423  
 GaAs:Zn, nonequilib. substitutional-interstitial Zn diffusion, photoluminesc. study 2-16899  
 β-Ga<sub>2</sub>O<sub>3</sub>-K<sub>2</sub>O(Na<sub>2</sub>O) and β"-Ga<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, defect struct., X-ray diff. study 2-25871  
 Ge, donor local field corrections to binding energies 2-21536  
 Ge, electron irradiated, defects study by electron microscopy 2-45274  
 Ge, self-interstitials and vacancies, absolute zero to melting temp., review 2-30461  
 Ge:As, gamma irradi., radiation defects interaction with impurity 2-12633  
 Ge:Cu, gamma-ray induced defect formation 2-40437  
 Hg<sub>0.9</sub>Cd<sub>0.1</sub>, undoped and In and Ag doped, interdiffusion study 2-12859  
 HgI<sub>2</sub>, single cryst., low temp. thermal cond. 2-50938  
 In<sub>2</sub>O<sub>3</sub>, vapour deposited films, O<sub>2</sub> diffusion 2-50927  
 InP, diffusion of Cd at 680°C, p-n junction formation 2-12850  
 K, effective defect conc., dilatometric meas. 2-35488  
 K<sub>1-x</sub>Bi<sub>x</sub>F<sub>2+x</sub>, solid solutions, F atom distrib. between normal and interstitial sites, neutron diff. obs. (French) 2-50632  
 KBr, behaviour of defects introduced by intense electron pulse 2-25868  
 KBr:H, charged substitutional and interstitial impurities, crystal electrostatic energy, Ewald method 2-16618  
 KBr:Sr, electron irradi., interstitial trapping by divalent impurities (French) 2-16646

## interstitials continued

- KCl:H, charged substitutional and interstitial impurities, crystal electrostatic energy, Ewald method 2-16618  
 KCl:Li, Ag and KCl:Na, Ag<sup>+</sup>, interstitial Ag centre form. by optical destruction of Ag<sup>+</sup> centres, absorpt. spectra study 2-41386  
 KCl:PbCl<sub>2</sub>, X-ray irradi., H, V<sub>22</sub> centres, polarised luminesc., absorption, emission bands 2-46745  
 KCl(Br), vacancy and interstitial formation under optical exciton generation conditions 2-31572  
 K<sub>2</sub>ReCl<sub>6</sub>-K<sub>2</sub>ReBr<sub>6</sub> mixed crystal, chem. effects of <sup>35</sup>Cl(n,γ)<sup>36</sup>Cl reaction 2-47368  
 LuH<sub>3</sub>, specific heat below 2K, H tunnelling effects 2-30621  
 MgO:Ca, IR spectrum of OH-compensated defect 2-51634  
 Mn, dil. solns. of H<sub>2</sub> and D<sub>2</sub>, thermodynamics, 555 to 700K 2-1637  
 Mo, electron irradiated, paraelectric interstitials 2-8513  
 Mo, electron-irradiated, paraelectric interstitial defect (French) 2-21139  
 Mo, internal friction, 300 to 750K, Mo-O-N-C samples, thermochem. and quenching treatment (Polish) 2-27212  
 Mo:C(O)(N), Snoek peak study 2-45366  
 NaCl, behaviour of defects introduced by intense electron pulse 2-25868  
 Nb, BCC, localised vibr. spectra of H and D on T-sites 2-26010  
 Nb, electron irradi., hardening of single crystals 2-45276  
 Nb, plastic deformation, slip, effects of electron beam produced interstitials 2-27248  
 Nb:N(H,D), influence of N impurities on diffusion coeff. 2-45626  
 Nb-O, Snoek-Koster relaxation 2-47114  
 Nb-Ti-H, mechanical relax. of substitutional-interstitial atom complexes 2-45151  
 Pb-Au, dil. alloy, electron irradi., dipole formation, resistivity annealing spectra study 2-36880  
 Pb<sub>1-x</sub>Th<sub>x</sub>F<sub>2+x</sub> solid solns., ionic conductor, neutron diff. study (French) 2-5274  
 α-Pd hydrides, tight binding estimate of dipole force tensor 2-40418  
 Pd-based solid solutions, containing H and noble metal substitutional component, thermodynamic behaviour 2-40548  
 Pd-based solid solutions, containing H and noble metal substitutional component, kinetic behaviour 2-40549  
 Pd<sub>80</sub>Si<sub>20</sub> metallic glass, Gorsky relaxation and H diffusion 2-5278  
 Rb<sub>1-x</sub>Bi<sub>x</sub>F<sub>2+x</sub>, solid solutions, F atom distrib. between normal and interstitial sites, neutron diff. obs. (French) 2-50632  
 RbBr, vacancy and interstitial formation under optical exciton generation conditions 2-31572  
 Si, B ion implanted, defects after oxidation 2-52064  
 Si, B-defect form. and growth, thermodynamic model 2-50630  
 Si, defect formation during high-temp. inert gas annealing 2-30460  
 Si, diffusion mechanism of group V impurities, review (Japanese) 2-5262  
 Si, dislocated, diffusion of Au, kick-out mechanism 2-50924  
 Si, donor local field corrections to binding energies 2-21536  
 Si, heavily doped, electron irradiated, defect formation 2-21180  
 Si, impurity diffusion, kick-out mechanism, analytical soln. 2-26138  
 Si, neutron irradi., 1.0186 eV luminesc. centre symm. and nature 2-41418  
 Si, oxidation by O<sub>2</sub>, model 2-22354  
 Si, self-interstitials and vacancies, absolute zero to melting temp., review 2-30461  
 Si, thermally annealed Czochralski wafers, ambient effects on defect formation 2-50627  
 Si, two dimensional diffusion of self interstitials during oxidation, analytical soln. 2-45616  
 Si:B, ion implanted, point defect generation during oxidation, loop annealing technique 2-25869  
 Si:Cr, energy levels and solubility, EPR and Hall effect study 2-40817  
 Si:Fe, deep levels, capacitance transient spectroscopy 2-17018  
 Si:O, obs. of impurities by internal friction 2-12681  
 Si:O<sub>2</sub>, influence of C on precipitation of O<sub>2</sub> 2-12763  
 Si:P, impurity effect in stacking fault energy 2-45209  
 Si/Ni(Pd) systems, local chemical struct., XPS study 2-9246  
 Si-SiO<sub>2</sub> interfaces, electronic struct. of defects, extended muffin-tin orbital calc. 2-8853  
 n-SiC(6H), electron bombarded, subthreshold defect form., cathodoluminescence obs. 2-51718  
 SrCl<sub>2</sub>, intrinsic and lightly doped crystals, defect struct. 2-5109  
 SrF<sub>2</sub>:R (R=rare earth), dopant-interstitial binding energies, lattice simulation calc. 2-40428  
 SrO:Fe<sup>3+</sup>, EPR of Fe<sup>3+</sup> in C<sub>11</sub> sites 2-41185  
 Ta, BCC, localised vibr. spectra of H and D on T-sites 2-26010  
 β-Ta thermal oxidation below 500°C 2-52116  
 Ta:N(H,D), influence of N impurities on diffusion coeff. 2-45626  
 Ta-O, Snoek-Koster relaxation 2-47114  
 Th<sub>2</sub>Mn<sub>23</sub>D<sub>3</sub>, interstitial site occupancy by D atoms 2-30436  
 Ti-C, interstitial solns. with FCC and BCC lattices, interatomic interaction 2-21058  
 V, BCC, localised vibr. spectra of H and D on T-sites 2-26010  
 V, point defects, Mossbauer spectra and positron annihilation study 2-35489  
 V-Mn(Fe)(Co)(Ni)(Cu), self-diffusion and impurity diffusion mechanism 2-5268  
 V-Ti-H, mechanical relax. of substitutional-interstitial atom complexes 2-45151  
 W superalloy development, refractory interstitial phase strengthening (German) 2-51930  
 WO<sub>3-x</sub>, elec. cond. near stoichiometric comp., prep. conditions and tempering effects, cryst. defects (French) 2-51173  
 YAG:Co<sup>2+</sup>, ESR, Co<sup>2+</sup> spin sites 2-41183  
 Y<sub>6</sub>Mn<sub>23</sub>D<sub>3</sub>, interstitial site occupancy by D atoms 2-30436  
 Zn-N, exptl. estimation of interaction parameter e<sub>0</sub>, dislocation meas. 2-1487  
 ZnO, intrinsic defects, ESR study (German) 2-25867  
 ZnSe, doped, luminescence centres, activation energy of form. 2-41392  
 ZnSe: alkali metal ion, interstitial energy of form. 2-30459  
 α-Zr, dislocation core diffusion and unpinning 2-45196  
 Zr, irradiation growth of single crystals 2-45284  
 Zr-C, interstitial solns. with FCC and BCC lattices, interatomic interaction 2-21058  
 Zr-Cr alloys, self-diffusion studies 2-5267  
 Zr-Fe alloys, self-diffusion studies 2-5267  
 ZrH<sub>2</sub>(D<sub>2</sub>), hydrogen atom position study 2-45154  
 ZrV<sub>2</sub>H<sub>3</sub>, thermal desorption spectra from bulk 2-16945

intersystem crossing see nonradiative transitions

intramolecular forces see atomic forces

intramolecular mechanics see atomic forces



intramolecular potentials *see potential energy functions*

intramolecular vibrations *see molecular vibration; molecular vibration in solids*

intrinsic magnetisation *see spontaneous magnetisation*

## Invar

- critical neutron scatt. temp. range, magnetisation 2-46248
- exchange interaction role between ferro- and antiferromagnetic components 2-31168
- magnetism conference, Kharkov, USSR (Sept. 1979) 2-28593
- magnetovolume effects, fluctuating local band model 2-41173
- martensitic transform. strains, interaction with soft elastic modes 2-21296
- martensitic transformation, role of incommensurate atomic struct. in mechanism 2-13720
- Fe-B amorphous Invar alloys, effect of cold rolling on thermal expansion and mag. props. 2-26595
- Fe-Ni Invar alloy, spontaneous volume magnetostriction press. depend., X-ray diffr. study 2-9018
- Fe-Ni Invar alloys, bulk modulus anomalies, X-ray diffr. study 2-9017
- Fe-Ni-H(C), Invar alloys, Mossbauer spectroscopy study 2-9064
- Fe-Pt, Invar alloy, spontaneous volume magnetostriction press. depend., X-ray diffr. study 2-9018
- Fe-Pt Invar alloys, bulk modulus anomalies, X-ray diffr. study 2-9017
- Fe-Pt ordered alloys, magnetic and magnetovolume props. around  $\gamma$ - $\alpha$  phase boundary 2-17324
- Fe<sub>65</sub>Ni<sub>35</sub>, magnetovolume effects, local-band theory 2-26719

## invariance

- see also conservation laws*
- Boussinesq and Darcy-Boussinesq equations, invariant quantities (French) 2-35130
- magnetic vector pot., depend. on history of EM field 2-38392
- perfect fluid flow, invar. props., using variational methods with Lagrangian representation 2-8182

## inversion layers

- adsorbates on narrow semicond. channels, proposed spectroscopy 2-35885
- electron gas, two-dimensional, momentum distrib. function, impurity scatt. effect 2-12984
- electron-impurity systems, 2-D, Thomas-Fermi screening and level broadening 2-51099
- inhomogeneous, elec. cond., Hall effect, 2D resistor network computer simulation 2-51322
- metal-p-n Schottky structure anal., inversion layer effects 2-46131
- MIS inversion layer solar cells, surface recombination current 2-14078
- MIS structure, depletion widths anal. 2-2009
- MIS structure with Schottky contacts, photogalvanic effect 2-40971
- MOS capacitor, physical characterisation of deep bulk levels by MOS conductance technique 2-46144
- MOS structure, charge properties, influence of Si etching in RF Ar plasma (Russian) 2-5468
- MOS structure, Monte Carlo simulation of conduction electrons in n-type inversion layer 2-51331
- semiconductors, narrow gap, inversion layers, plasma waves and soft modes 2-21644
- Al-SiO<sub>2</sub>-Si structure, hole mobility and density of states at Si-SiO<sub>2</sub> interface 2-5469
- Ge<sub>2</sub>N<sub>2</sub>-n-GaAs MIS devices, interface characts. determ. 2-30970
- InAs(P)(Sb) inversion layer transport, insulator properties 2-2012
- InGaAs-oxide, native grown plasma oxides and inversion layers 2-41014
- InSb, narrow band gap semicond., space charge layer, multiband effective Hamiltonian anal. 2-51313
- InSb, two-dimensional electron spectrum spin splitting in mag. field 2-46095
- InSb-based MIS struct., carrier generation processes under nonequilibrium depletion conditions 2-17167
- PbTe, surface space charge layer physics 2-17137
- Si (001) MIS transistors, cyclotron resonance of inversion layers 2-51468
- Si (100), metallic cond., temp. depend., above mobility edge 2-13190
- Si (100), thermally activated cond. by electrons excited above mobility edge 2-13191
- Si (100) inversion layer, infrared conductivity of electrons, impurity effects 2-51315
- Si (100) inversion layers, determ. of valley splitting 2-30971
- Si (100) MOS inversion layers, transverse and Hall conds., temp. depend. under strong mag. fields 2-21686
- Si, electron transport in high mag. fields 2-21685
- Si, inversion layer, 2-D electron localisation, electron-electron interaction, review 2-40987
- Si, inversion layer, velocity overshoot, hot electron submm wave cond. study 2-46141
- Si inversion layer in strong mag. field, temp. depend. Hall cond., mobility edge model 2-40933
- Si inversion layer MIS solar cells, electrostatic effects 2-37418
- Si inversion layers, 2D electron gas, freq. depend. memory function elec. cond. meas. 2-51318
- Si inversion layers, logarithmic corrections to two-dimensional transport 2-41018
- Si inversion layers, small-signal velocity overshoot obs. by broadband sub-MM wave spectroscopy 2-36148
- Si, MOS inversion layers, Anderson localisation, Hall mobility study 2-51316
- Si, MOS structures, oxidation in Cl-containing media, effect on electron/hole mobilities in inversion channels 2-51326
- Si MOSFET, absorption of ballistic phonons by 2D electron gas 2-50809
- Si MOSFET, energy loss of warm electrons at interface 2-46140
- Si MOSFET, inversion layer, ballistic phonon absorption by 2D electron gas 2-51323
- Si MOSFET, nonmetallic cond. in electron inversion layers at low temp. 2-17169
- Si MOSFET, quantised Hall resist. meas. at liq. <sup>3</sup>He temps. 2-46136
- Si MOSFET inversion layers, AC cond. in gap regions between Landau levels 2-51317
- Si, MOSFET inversion layers, electron mobility, temp. and carrier conc. effects 2-51319
- n-Si, MOSFET inversion layer, electron mobility, oxide charge, phonon and surface scatt. 2-51320
- Si, magnetoconductance and weak localisation 2-21608
- Si, polycryst., high efficiency inversion layer solar cells by appl. of Si<sub>3</sub>N<sub>4</sub> 2-37208
- Si, remote polar phonon scatt. for hot electrons 2-30972

## inversion layers continued

- Si surface inversion layer, uniaxially stressed, electron cyclotron reson. 2-13155
- Si, two-dimens. electron system, mag. field induced Wigner glass 2-40988
- Si-MOS n-inversion layers, Anderson localisation and negative magnetoresistance (Japanese) 2-26513
- Si-SiO<sub>2</sub>, MOS struct., inversion layer, Si surface states, surface roughness effects 2-51275
- Si-SiO<sub>2</sub>, n-type inversion layers, impurity-shifted intersubband transitions 2-51274
- Si-SiO<sub>2</sub> interface, inversion layers, surface roughness induced scattering and band tailing 2-51321
- Si-SiO<sub>2</sub> interface, neutral scatt. centres in MOSFET devices prep. by oxidation of trichloroethylene 2-51339
- Si-SiO<sub>2</sub> inversion layer, excitonic effects on optical absorption, shielded potential approx. 2-51314
- Si(100) inversion layer, hot electrons at low lattice temps. 2-46137

## invertors

- line-commutated inverter for residential photovoltaic power systems anal. and test 2-37303
- photovoltaic systems, utility interactive, depend. of delivered energy on inverter characts. 2-37301
- small power photovoltaic systems, pilot power conditioning installation 2-32077

## iodine

- see also nuclei with .....*
- adsorbed on Cu(001), charge state, XPS study 2-41494
- adsorption of iodine on polyethylene terephthalate, struct. and props. (Russian) 2-6065
- agar-agar/I complex,  $\gamma$ -ray irradi., visible absorpt. spectra and viscosity changes 2-49615
- atmosphere iodine budget, contrib. from seawater 2-10081
- atoms, semiempirical estimate of ground state polarisability 2-24878
- atoms and solid, binding energy, Auger and photoelectron spectra 2-34367
- crystalline, Raman spectra, first and second order 2-2269
- deposition into plants, effects of exposure duration, stomatal resistance, humidity 2-42055
- diffusion in Ag<sub>2</sub>RbI<sub>3</sub>, coeffs. conc. profiles 2-30653
- diffusion in polyacetylene 2-40601
- doped polyacetylene, swelling 2-40299
- emissions in HTR coolant following water ingress (German) 2-533
- He-Ne/I<sub>2</sub> laser as a frequency standard in the visible spectrum 2-44370
- K-shell fluorescence and photoionisation in elements  $28 \leq Z \leq 53$  2-29549
- laser, chem. pumped, as fusion driver, modelling 2-4498
- laser, chemically pumped, candidate laser fusion driver 2-908
- laser, chemically pumped, energy storage kinetic anal. 2-11688
- laser, chemically pumped, O<sub>2</sub>( $\Delta$ ) generation 2-2700
- laser, chemically pumped, reactor size, total system efficiency 2-932
- laser, photodissoc., CW operation 2-34739
- laser, photodissociation, absorpt. cell construction feasibility, tuned to 1315 nm 2-39673
- laser, photodissociation, controlled thermonuclear fusion appls., review 2-39639
- laser, photolytic, nuclear pumped, photon transport computer code simulation 2-44338
- laser advanced concepts, energy storage and extraction, pulsewidth variability and freq. conversion 2-905
- laser amplifier, high-energy, beam-quality-determining processes 2-907
- laser pulse generation, smooth, nanosec., by excimer laser pumping 2-15995
- laser transition at high press., saturation energy density and line profile 2-906
- lasers, photodissociation, spectroscopy and primary processes in photolysis of iodides 2-44269
- molecule, absolute wavelengths of hyperfine compounds determ. by using CW tunable dye laser 2-34333
- molecule, B<sup>1</sup> $\Pi_g^+$ -X<sup>1</sup> $\Sigma_g^+$  ellipsa-detected one- and two-photon transitions 2-760
- molecule, B-X band, Q-branch splitting, Raman obs. 2-49423
- molecule, collision with smooth surfaces, vibr.-rot.-translational energy exchange 2-39474
- molecule, electron impact dissociation for at. radiative lifetimes meas. 2-34349
- molecule, high resolution CARS spectra obs. 2-49417
- molecule, long range pot. energy curve calc. 2-49309
- molecule, luminesc. and excitation spectra, buffer gas influence 2-34490
- molecule, optical analogs of NMR phase coherent multiple pulse spectroscopy 2-34427
- molecule, predissoc. and geminate recombination kinetics in liq. Xe and methane 2-29666
- molecule, resonance Raman spectra, exact calcs. 2-4304
- molecule, rotation-vibr. anal. of electronic states by laser induced fluorescence. Fourier transform spectroscopy 2-15923
- molecule, solvent complex form. in supersonic mol. beams, fluorescence excitation spectrum, blue shift 2-43976
- molecule, stabilised He-Ne lasers international comparison at 633 nm 2-34726
- molecule, thermal electron attachment, negative ion pot. energy curves 2-790
- molecule, vibration rotation Franck-Condon factors 2-34501
- molecule excitation spectrum induced by laser radiation in 15780-15815 cm<sup>-1</sup> region 2-7567
- molecule photoproduction using platinumized TiO<sub>2</sub> photocatalyst 2-6048
- partition equilibrium in aqueous NaOH-H<sub>2</sub>BO<sub>3</sub> mixtures 2-6054
- photodissociation laser free-oscill. pulses, delayed amplification characts., pulse duration control 2-34742
- poly(vinylpyridine)-I<sub>2</sub>, charge transfer complex <sup>129</sup>I Mossbauer study 2-17371
- polyacetylene-I<sub>2</sub>, <sup>129</sup>I Mossbauer effect study, elec. cond. mechanism 2-26800
- trans-polyacetylene-I<sub>2</sub>, <sup>13</sup>C enriched, NMR spin-lattice relax. of solitons 2-36470
- polyacetylene-I<sub>2</sub>, magnetic behaviour, Pauli spin susceptibility 2-13273
- polyacetylene-I, morphology, rel. to elec. cond., SEM study 2-16605
- polyacetylene-I, Mossbauer study 2-46448
- trans-polyacetylene-I, NMR spin-lattice relax. of <sup>1</sup>H 2-36471
- polyacetylene, I doped, morphology, SEM study 2-45077
- polyacetylene, I doped, three dimensional orientation, doping and isomerisation effects 2-45075



## iodine continued

- polyacetylene films, I doping profile, dielec. and X-ray anal. study 2-45239  
 polyvinylacetate: I<sub>2</sub> film, unpoled, thermally stimulated discharge currents 2-41264  
 proton bombarded, K- and L-shell ionisation 2-4372  
 radiation protection, I propylaxis risk 2-39241  
 radioisotopes, conf., Ontario, Canada (Sep. 1980) 2-48395  
 radioisotopes, qualitative and quantitative meas. 2-49242  
 radioisotopes dosimetry 2-52638  
 radiotoxicology of I, review 2-52573  
 removal tests for BWR containment spray by large scale facility 2-7270  
 solar simulator-pumped gas laser for the direct conversion of solar energy 2-22659  
 starch-I<sub>2</sub> complex, amorphous, selective. reson. Raman enhancement 2-13482  
 thyroid, I distrib. and content, appl. of X-ray fluoresc. for study 2-42201  
 vapour, deposition velocity, rel. to atmospheric variables 2-42062  
 vapour, E O<sub>g</sub><sup>+</sup> state rot. consts. determined by polarisation spectroscopy 2-4416  
 vapour, reson. fluoresc. and reson. Raman spectrosc. 2-716  
 AgBr:I, near band-gap optical absorpt. 2-13515  
 AgBr(Cl):I layer, dye sensitised photolum. 2-46728  
 I I radiation lifetimes of levels 2-34349  
 I II, radiation lifetimes of levels 2-34349  
 I<sup>-</sup> in developing solution adsorption on Ag electrodes (*Russian*) 2-27481  
 I<sup>-</sup> in dodecyltrimethylammonium chloride, micelle soln., fluoresc. quenching of pyrene 2-24776  
 I<sup>-</sup> in various gases, ion mobility determ. 2-20813  
 I<sup>-</sup>+I in CCl<sub>4</sub>, liq. state chem. reaction dynamics, R-depend. correl. functions 2-41881  
 I<sub>2</sub> cells verification for stabilised lasers, using Hanle effect 2-16009  
 I<sub>2</sub> laser, B state, stimulated emission and absorpt. losses 2-15987  
<sup>127</sup>I<sub>2</sub>, continuum resonance Raman effect 2-15795  
<sup>127</sup>I<sub>2</sub>, stabilised He-Ne lasers international comparison 2-34726  
 I<sub>2</sub>+F<sub>2</sub>, reaction rate consts. meas. 2-27414  
 I<sub>2</sub>+He(Ne)(Ar), very low energy collision, adiabatic and effective pot. approx. calcs. 2-39469  
 I<sub>2</sub>+O, ang. momentum conservation representation in energy space 2-39464  
 I<sub>2</sub><sup>-</sup>, absorbed on zeolite, Raman spectra 2-17465  
 I<sub>2</sub><sup>-</sup>, A=123,124,125,131, dose calcs. in thyroid gland of mouse, rat and man 2-18303  
 A<sub>1</sub>, A=123-6,130-2, yield from Te and Sb, 2-18301  
<sup>123</sup>I, facility for prod. by Cs spallation 2-52628  
<sup>123</sup>I generator/iodination kit, medical appl. 2-52630  
<sup>123</sup>I, high purity, prod. of Curie quantities with 15 MeV protons 2-42215  
<sup>123</sup>I, high-purity, cyclotron prod. for medical appls. 2-52629  
<sup>123</sup>I, routine prod. by <sup>124</sup>Te (p,2n)<sup>123</sup>I reaction in Manitoba 2-52632  
<sup>123</sup>I activity determ., implementation of coincidence method 2-49245  
<sup>123</sup>I, airborne, arising from surface contamination 2-37688  
<sup>123</sup>I and <sup>14</sup>C, simultaneous determ. of activities using liq. scintillation counting 2-49244  
<sup>123</sup>I cytotoxicity, therapy implications and radiation risk estimation 2-27832  
<sup>123</sup>I decay, electron spectrum calc., Monte Carlo method 2-29238  
<sup>123</sup>I decay rate determ., precaution in appl. of coincidence method 2-49243  
<sup>123</sup>I, dual label determ. by liq. scintillation counting 2-43661  
<sup>127</sup>I, hyperfine spectroscopy using Ar lasers 2-11501  
<sup>127</sup>I, determ. in environmental media, comparison of methods 2-14324  
<sup>131</sup>I absolute intensity meas., efficiency extrapolation method (*Chinese*) 2-34250  
<sup>131</sup>I applied to Tradescantia inflorescence, calc. of β-ray absorbed dose rate 2-18265  
<sup>131</sup>I monitoring in rivers and waterplants 2-29461  
<sup>131</sup>I radioecology, equilibrium model appl. 2-29460  
<sup>131</sup>I radiopharmaceuticals, automatic dispenser and preparation units 2-47708  
<sup>131</sup>I release and handling at TMI-2 2-11251  
 I<sup>+</sup>+Br<sub>2</sub>, transformation of spin-orbit excited states 2-52180  
 Li/LiI<sub>2</sub> (PVP) pacemaker battery, solid electrolyte role 2-18045

## iodine compounds

- charge transfer complexes, conductometric meas. 2-5371  
 graphite-ICl intercalate, Shubnikov-de Haas effect (*Russian*) 2-8820  
 graphite-ICl intercalation compound, enthalpy changes of phase transitions 2-16778  
 graphite-ICl intercalation compounds, X-ray diffr. obs. of intralayer ordering and phase transitions 2-16779  
 Ag/β-AgI/2I<sub>2</sub>/Py cell, AgI solid electrolyte cryst. microstruct. 2-16806  
 Ag/β-AgI/2I<sub>2</sub>/Py cell, AgI film conductivity 2-16878  
 I<sub>2</sub>-aromatic hydrocarbon charge transfer cpds., ionic cond. and ESR study 2-16893  
 IBR, fluoresc., reaction kinetics of mixtures with inert gases 2-49483  
 IBR, predissociative state, reson. Raman scatt., nonadiabatic effects 2-34512  
 IBR, resonance Raman spectra, exact calcs. 2-4304  
 IBR, soln., reson. Raman spectrum, pot. energy function (*French*) 2-11485  
 IBR, two-photon sequential absorpt. spectroscopy in 5 eV region 2-29672  
 IBR+Br, transformation of spin-orbit excited states 2-52180  
 ICN, 266 nm photodissoc., CN rot. distrib. 2-29559  
 ICl as visible oscillators or amplifiers 2-11683  
 ICl, fluoresc., reaction kinetics of mixtures with inert gases 2-49483  
 ICl supersonic beam, MODOR 2-34457  
 ICl+Sr, SrCl (A-X, B-X) bands chemiluminesc. 2-41903  
 I<sub>2</sub>Cl<sub>2</sub>·SbCl<sub>5</sub> cryst. struct. 2-21078  
 IF as visible oscillators or amplifiers 2-11683  
 IF, fluoresc., reaction kinetics of mixtures with inert gases 2-49483  
 IF<sub>5</sub>, excited vibr. states, microwave spectrum, accidental degeneracy and avoided crossing, struct. 2-4268  
 I<sup>14</sup>N<sup>12</sup>C, I<sup>15</sup>N<sup>12</sup>C, and I<sup>14</sup>N<sup>13</sup>C, matrix isolated, Raman and IR spectra, vibr. assignments 2-720

## ion-atom collisions see atom-ion collisions

## ion beam effects

- see also ion-surface impact; ionoluminescence; plasma-beam interactions  
 alloy, metastable phases formation by ion implantation and ion beam mixing 2-30501  
 atomic redistribution of solids, first order diffusion approx., finite range approx. 2-21189

## ion beam effects continued

- biological objects, single hitting by heavy ions, statistical approach to effect anal. (*Russian*) 2-52560  
 ceramics, ion-beam thinning characts. 2-50724  
 channelling-backscattering expts., alternative method for dechannelling-correction 2-16697  
 conference on ion beam anal., Sydney, Australia (Feb. 1981) 2-42775  
 corundum, polycryst., intermediate energy ion bombardment, effect on props. 2-25947  
 creep under irradiation, microstructure developments 2-30485  
 diamond, ion beam analyses 2-45231  
 epileptic discharge, cats, spread restriction by Bragg peak intracranial irradi. by Ne ions 2-52568  
 Fe<sub>2</sub>Ni<sub>3</sub>Cr<sub>14</sub>P<sub>13</sub>B<sub>6</sub>, Metglas 2826 A, amorphous, He ion irradiated, blister formation 2-16687  
 fusion reactor first wall materials, cyclical ion bombardment, blistering study 2-12649  
 fusion reactor materials, metallic, radiation damage 2-24424  
 garnet bubble films, ion irradi., anisotropy change, ferrimag. and stripe lattice reson. study 2-21861  
 garnets, ion-implanted, strain and damage distrib., kinematic X-ray diffr. in cryst. films 2-45296  
 glass surfaces, bombarded by noble gas ions at 30...50 keV, electron microscopic investigations 2-5785  
 graphite, pyrolytic, surface struct. following H<sup>+</sup> irradi., RHEED study 2-40653  
 graphite film, ion bombardment to form solid high-resistivity form of C 2-16692  
 heavy ions, accelerated, effects of single doses in normal tissue, tumours and cells in vivo 2-27844  
 heavy ions, accelerated, fractionated irradi. of intestinal crypt cells 2-27845  
 ice targets mol. particles release rel. to H<sub>2</sub> prod. in dense interstellar mol. clouds 2-28533  
 ICF target, ion driven, ion energy deposition, finite material temp. model 2-19763  
 Inconel 625, cone form. by ion bombardment in Ar DC glow discharge, SEM obs. 2-25948  
 ion bombarded, emission spectra, contamination induced changes 2-46777  
 ion-solid interactions, surface texturing, bulk effects, appls., review 2-40444  
 ionic crystal, extended defects produced by irradi. and TEM obs. (*French*) 2-30500  
 irradiation induced creep, fusion neutron induced damage by light ion beams from accelerator 2-17722  
 lenticular bubble, ductile extension under high energy ion bombardment rel. to blistering and flaking 2-1528  
 magnetic bubble materials, ion implanted, strain distrib. modelling 2-2111  
 metal silicide films, epitaxial growth, pulsed proton beam annealing 2-50718  
 metal surfaces, channelling contrast after ion beam etching, SEM specimen prep. appl. 2-17810  
 metal-metal (semiconductor), thin film structures, laser, electron and ion beam induced reactions 2-51011  
 metals, thermal He desorption spectrometry, defect chemistry 2-45719  
 9-methyladenine, H-bombarded, ESR study 2-27453  
 mineral, extended defects produced by irradi. and TEM obs. (*French*) 2-30500  
 MoSi<sub>2</sub>, contact metallurgy technique by using ion-beam mixing 2-1679  
 near-surface composition changes, Monte Carlo simulation 2-45293  
 Mimonic PE16, defect struct. in dual beam irradi. material, TEM obs. 2-43609  
 orientations of ion bombarded single crystals surface struct., and sputtered spot patterns 2-46857  
 oxidation technique using ion beam 2-2602  
 oxide, extended defects produced by irradi. and TEM obs. (*French*) 2-30500  
 oxide film deposition, electron and ion irradi., local surface temp. fluctuations (*Russian*) 2-5810  
 phase changes in solids, ion bombardment induced, anal. of nonlinear thermal diffusion processes 2-16686  
 plasma nonlinear interaction, in mag. mirror trap (*Russian*) 2-12322  
 PMMA, ion beam exposure profiles, computer simulation 2-45297  
 polyatomic solids, displacement oxides (*French*) 2-1536  
 polycarbonate films, nuclear tracks chem. etching, pore formation study 2-45146  
 PVC film, surface treatment, effects of ion beam bombardment or ion beam sputter deposition (*Japanese*) 2-35550  
 quartz, etching techniques to overcome nonuniformity 2-36988  
 rare earth and rare earth oxides, ion irradiated surface, secondary mol. ion formation study 2-22134  
 semiconductor, ion-implantation-induced defect annealing using electron and laser beams (*German*) 2-35534  
 spermatogonial killing, RBE of high-Z, high-LET charged particles compared to <sup>60</sup>Co γ-rays 2-52580  
 steel, Cr-Mn, austenitic, surface topography after He ion bombardment 2-25946  
 steel, low C, Z (*Russian*) 2-5296  
 steel, stainless austenitic, type 0Kh16N15M3B, blistering under simultaneous D<sup>+</sup> and He<sup>+</sup> irradi. 2-29428  
 stopping power of solids for low vel. ions, materials depend. 2-25952  
 subshell ionisation cross section meas. using HIXE and comparison with theories 2-51745  
 superconductors, A-15 compounds, ion irradiated, depend. of crit. temp. (*Russian*) 2-13209  
 surface erosion by ion bombardment 2-2607  
 thermal-diffusion release of gas implanted in a gravity film by ion bombardment 2-1665  
 transition metal sulphates, Ar ion-bombardment damage, XPS studies 2-41489  
 unipolar arc erosion rates measured using an ion beam activation technique 2-30522  
 Ag-Au alloys, material sputtered by Ar<sup>+</sup>, ang. distrib. 2-46914  
 Al-Li alloys, thin-foil prep. ion-beam thinning, precipitation 2-31698  
 Ar solid, erosion by fast He<sup>+</sup> ions 2-45294  
 Ar, solid, stopping power meas. for 0.5-3 MeV He ions using backscattering method 2-15684  
 As amorphous film, UHV sublimed, elec. and optical props. 2-46172  
 Au, spike effect obs. in heavy-ion sputtering 2-2398



## ion beam effects continued

- Au-n-GaAs Schottky barrier diodes, ion beam damage during low energy cleaning 2-50721  
 C, amorphous and graphitised foils, differences in stripper qualities 2-11336  
 C stripper foil behaviour in  $^{127}\text{I}$  beam 2-11338  
 C stripper foils, radiation lifetimes and failure mechanisms 2-11335  
 C, surface erosion and re-emission behaviour of various types under He ion bombardment 2-50722  
 Ca, corrosion protective coatings on Fe substrate 2-22387  
 $\text{CaF}_2$ , ion bombarded, surface decomposition, electron beam induced, AES, EELS and XPS study 2-25931  
 Cd, HCP, lattice defects, PAC and distrib. methods study 2-30462  
 Co single crystal,  $\text{Ar}^+$  bombardment, sputtering yield, ion damage effects 2-46915  
 Cu, adsorbed Xe ordered layer, He atom scatt. with energy anal. 2-41482  
 Cu mirrors, optical effects of energetic Cu-ion irradi. 2-25942  
 Cu, non-normal incidence ion bombarded, development of tailed-cones 2-16685  
 Cu, on the ion bombardment induced cone/pyramid apex angle 2-13606  
 Cu, sputtering, Ar ion bombardment induced hypersonic shock waves, computer simulation 2-2394  
 Cu-Ni alloys, sputter-induced solute segregation in surface layer during A ion bombardment (Japanese) 2-2515  
 Cu-Pd (9-86 at.%) sputter-induced surface composition change, Auger study 2-46849  
 Cu-Pt alloys, material sputtered by  $\text{Ar}^+$ , ang. distrib. 2-46914  
 $\text{Cu}_2\text{Au}$  ordered alloy, ion irradi., atomic replacement, resistivity meas. 2-8547  
 Fe, ion irradiated, Doppler broadening of positron annihilation lines, struct. characts. 2-22111  
 Fe, pure, ion beam irradi., dislocation and void prod. 2-21190  
 Fe, surface morphology changes during ion bombardment (Russian) 2-5296  
 $\text{Fe}_{40}\text{Ni}_{38}\text{Mo}_2\text{B}_{18}$  amorphous alloy, He bubble form. under  $\text{He}^+$  ion irradi. 2-50725  
 $\text{Fe}_{40}\text{Ni}_{40}\text{P}_{14}\text{B}_6$  amorphous alloy, He ion irradiation effects 2-1530  
 $\text{FeSO}_4$  solutions, integral yields when irradi. by Ne, C and Ar ions 2-17908  
 GaAs, proton implanted, cathodolum., Rutherford backscatt. and SIMS studies 2-46778  
 GaAs surface, ion bombarded channelling-backscatt. study, dechannelling correction 2-16697  
 GaAs-oxide interface, ion beam channelling characterisation 2-26236  
 (GaSb),  $^6\text{Ge}_1$ , metastable single phase polycryst., from annealing of amorphous mixtures 2-51015  
 $\text{Gd}_3\text{Ga}_2\text{O}_{12}:\text{Ne}^+$ , strain and damage profiles, X-ray diffraction and backscatt. anal. 2-45290  
 Ho, D release by low energy H ions, dose and energy dependence 2-43608  
 InP, proton implanted, cathodolum., Rutherford backscatt. and SIMS studies 2-46778  
 $\text{Li}_2\text{O}$ , neutron and ion irradi. damage, ESR study 2-17338  
 Mo, 15 keV  $\text{D}_2^+$  ion irradiated, TEM study of defects 2-40442  
 Mo CVD coating, He ion irradiation effects 2-12651  
 Mo,  $\text{V}^+$  ion irradi., void swelling 2-43607  
 Mo-Zr alloy, TSM-6, heat treated, He ion blistering 2-12648  
 $\text{Mo}_2\text{Ge}(\text{Si})$ , ion irradi., superconducting  $T_c$ , specific heat, elec. cond. 2-36180  
 $\text{Mo}_2\text{Si}$  disordered thin films, superconductivity and elec. cond. 2-41050  
 NaCl crystal, radiation enhanced Br diffusion 2-21392  
 NaCl crystals with Au vacuum decoration,  $\text{Ar}^+$  ion bombard., surface topology electron microscope obs. 2-45286  
 NaCl single crystal surface, structural changes under ion bombard. 2-12646  
 NaI:TI response to relativistic Ne, Ar, and Fe ions, scintillation efficiency curves 2-26997  
 Nb, ion irradiated, void growth and shrinkage, irradi. temp. change effects 2-50723  
 Nb metallic films, deposition process 2-9289  
 $\text{Nb}_2\text{N}_3^+$ , ion irradi. film, elec. cond., Hall effect (Russian) 2-2015  
 Nb-V alloy, ion bombarded, emission spectra, contamination induced changes 2-46777  
 NbSi, contact metallurgy technique by using ion-beam mixing 2-1679  
 Ni, ion irradiated, void formation and denudation 2-45298  
 Ni, surface (001) adsorbed O c(2x2) overlayer, ion bombardment, angular distrib. of ejected atoms 2-1529  
 Ni-Au alloys, composition change from  $\text{Ar}^+$  bombardment, Rutherford backscatt. meas. 2-45292  
 Ni-Si, surface segregation induced by ion irradi. (French) 2-41613  
 $\text{PbMoS}_6$  thin films, ion irradi., supercond. crit. temp. 2-30996  
 $\text{Pb}_{50}\text{Sn}_{50}:\text{Te}:\text{Sb}$ , surface oxide modification due to  $^4\text{He}$  ion bombardment 2-16688  
 Si,  $\text{As}^+$  implanted, ion beam annealing 2-50719  
 n-Si, deep centres introduced by Ar ion bombardment 2-30826  
 Si, defect accumulation due to ion irradi., influence of cryst. struct. state 2-16689  
 Si, non-normal incidence ion bombarded, development of tailed-cones 2-16685  
 Si, radiation damage simulation 2-30499  
 Si, reactive ion beam etch rate and yield with  $\text{Ar}^+\text{-Cl}_2$  system 2-40443  
 Si single crystal surface, structural changes under ion bombard. 2-12646  
 Si:As, ion implanted, radiation damage determ. by profiling oxide growth rate 2-40448  
 Si:As implanted film, pulsed proton beam annealing 2-50718  
 p-Si, heavily doped, defect profiles formed by light ion irradi., B distrib. effect 2-16691  
 Si:B, ion implanted, electron microscopy of surface defects 2-40420  
 Si:B, radiation-stimulated diffusion influence on sputtering 2-36785  
 Si:B implantation, lattice deformation, post-laser irradi., backscatt., channelling study 2-45213  
 $\text{Si:B}^+$ , single crystal, TEM and AES study of ion bombardment 2-25913  
 Si:Fe implanted layer, lattice damage, compressive stress, TEM study 2-45291  
 Si:Ge, high fluence implantation, radiation damage annealing, backscatt. and channelling, anal. 2-45289  
 $\alpha\text{-Si:H}_2\text{O}$ , RF sputtered,  $^{15}\text{N}$  ion irradi., H effusion 2-5161  
 Si:P, influence of oxygen on radiation-stimulated diffusion 2-26140  
 Si:Pb, ion implanted, dopant range, damage depth, backscatt. and channelling anal. 2-45216

## ion beam effects continued

- Si-Mo Schottky barrier formation, effect of ion-beam sputter damage 2-2001  
 SiC CVD layer, blistering reduction with pre-dosing (Japanese) 2-25945  
 SiC, polycrystalline, containing excess Si after neutron and ion irradi., microstruct. 2-30496  
 SiO<sub>2</sub>, amorphous film, influence of ion irradi. on struct. 2-45774  
 SiO<sub>2</sub> films, reactive ion etching induced radiation damage 2-35549  
 SiO<sub>2</sub>, induced defects due to ion beam lithography (Japanese) 2-50717  
 Sn corrosion protective coatings on Fe substrate 2-22387  
 SrTiO<sub>3</sub>, boundary layer capacitor material, microstruct. 2-50874  
 Ta, ion irradiated, Doppler broadening of positron annihilation lines, struct. characts. 2-22111  
 Ta, thin films, ion irradiation, impurity distrib., Rutherford backscattering 2-12631  
 Ta: $\text{N}_2^+$ , ion irradi. film, elec. cond., Hall effect (Russian) 2-2015  
 Ti: $\text{N}_2^+$ , ion irradi. film, elec. cond., Hall effect (Russian) 2-2015  
 TiC coating, behaviour under H<sub>2</sub> and D<sub>2</sub> ion bombardment 2-43613  
 TiC coating, surface erosion under  $^4\text{He}^+$  and  $\text{D}^+$  ion irradiation 2-12650  
 V<sub>3</sub>Ge(Si), ion irradi. damage, effect on supercond. transition temp., channelling meas. 2-5162  
 V<sub>3</sub>Si, defect structures determ. by ion channelling and X-ray diff. 2-45295  
 W, radiation damage due to  $^{252}\text{Cf}$  fission fragments, FEM study 2-8548  
 YIG epitaxial layers,  $\text{Xe}^+$  irradi., magnetisation, Faraday rot. and FMR linewidth 2-21847  
 Zn, HCP, lattice defects, PAC and distrib. methods study 2-30462  
 ZnS single crystals, photoluminesc. band intensity, Ne ion irradi. effects 2-31548
- ion beam lithography**  
 point electron and ion source optics, numerical anal. method 2-51774  
 Ga<sup>+</sup> liquid-metal ion source extraction region, trajectory calcs. 2-51775  
 SiO<sub>2</sub>, induced defects (Japanese) 2-50717
- ion beams**  
 see also beam-foil spectra; beam-foil spectroscopy; energy loss of particles; ion beam effects; ion optics; ion-surface impact; mass spectrometers; particle accelerators; sputtering  
 accelerator facility for nuclear bombardment target prep. 2-7412  
 accelerator system, high efficiency 2-6924  
 achromatic quadrupole lens doublet for positive ions 2-49656  
 Aurora pulser, high-impedance ion-diode expt. 2-43655  
 beam optics design for ion implantation, overview 2-4447  
 cancer treatment, new modalities, use of heavy charged particles 2-2927  
 charged particle beams, post acceleration systems (Russian) 2-29476  
 cyclotron heavy-ion beam sweeping apparatus for uniform irradiation of samples 2-43653  
 dose control technique for ion implantation 2-7377  
 dosimetry measurement in ion implanters 2-6921  
 electrostatic ellipsoidal mirror, fast separator for recoiling and highly charged particle 2-15660  
 electrostatic ion optics and beam transport for ion implantation 2-834  
 electrostatic mass spectrometer, with time-of-flight detector 2-43126  
 EM scanning system for ion implantation 2-6919  
 energy broadening in field emitted electron and ion beams 2-7713  
 flowing plasma measurements, using movable Langmuir probes for background ions correction 2-50456  
 heavy charged particle radiotherapy, review, book contrib. 2-27899  
 heavy ion fusion, transverse emittance requirements 2-4156  
 high intensity heavy ion sources, physics, chemistry and technology aspects 2-4157  
 implantation dose uniformity improvement by compensated scan pattern generator 2-7379  
 implantation system with X-Y scanning, sweep freq. optimal, selection 2-7378  
 implanters, correlation between electrostatic scan pattern and local dose nonuniformities 2-7376  
 in-situ implantation system in ANL HVEM-tandem facility 2-7413  
 inertial confinement fusion using light ion beams 2-15614  
 inertial confinement fusion, ion beam drivers 2-15613  
 inertial confinement heavy ion fusion, RF linac driver 2-15615  
 intense ion beam propagation transverse to a mag. field 2-1314  
 ion beam collective focusing 2-40186  
 JAERI heavy ion tandem accelerator 2-11298  
 laser cooling of heavy ion beams 2-7427  
 magnet optics, beam transport for ion implantation processes 2-4448  
 microprocessor-based beam sweep control unit 2-7415  
 molecular ion beams from tandem accelerators 2-11324  
 molecular ions, Coulomb explosion technique for determining geometrical structures 2-44131  
 negative ion beams of rare and radioactive isotopes for tandem accelerators 2-11340  
 negative-ion injectors, recuperator, expt. simulation 2-14121  
 particle induced X-ray emission anal. appl. to analytical problems 2-14029  
 PIG, cold-cathode ion source for ion implantation appl. 2-577  
 plasma, linear dispersion eqn. calcs. (Japanese) 2-35292  
 plasma heating in solenoids, ion beam generation expts. 2-25571  
 pulse, low intensity, simple profile monitor 2-7431  
 pulse injected ions, RF quadrupole trapping 2-48836  
 Pulselac C inductive linear accelerator, space charge neutralised ion beam for inertial fusion 2-4150  
 solar wind, beaming upstream of Earth's bow shock, non-EXB ordering 2-14697  
 space charge neutralisation in gas, inelastic electron collisions effect 2-4384  
 stable thermonuclear pinch 2-8338  
 tandem Dynamitron, intense low energy heavy ion beams 2-11326  
 target chamber design for industrial ion implanter 2-7416  
 target chambers for ion implantation using mechanical scanning 2-6920  
 Tokamak, intense pulsed-ion beam injection, appl. to plasma heating and current maintenance 2-40130  
 VICKSI accelerator system, operating experience 2-11309  
 XTU tandem Van de Graaff accelerator, progress report 2-11297  
 XTU tandem 150 kV injector operation 2-11294  
 Au, liquid, rapidly frozen, ion sources, droplet emission, SEM obs. 2-36767  
 $^{14}\text{C}$  beam accel. in electrostatic accelerators 2-11323  
 D<sup>+</sup> beam, high current, production by charge exchange in Na 2-43656  
 Ga, liquid, ion source, droplet emission, Rutherford backscatt. spectrometry 2-36767



**ion beams continued**

- He<sup>+</sup> bunched ion beam, generation and time compression 2-15650  
 In, liquid, ion sources, droplet emission, TEM 2-36767  
 KrF<sup>+</sup>, mass spectrometric study 2-19818  
 S, highly stripped ions prod. using dual MP tandem facility in accel-decel mode 2-11325

**ion chambers** *see* **ionisation chambers****ion counters** *see* **counters****ion cyclotron resonance heating** *see* **plasma heating****ion cyclotron resonance spectra** *see* **mass spectra****ion cyclotron resonance spectroscopy** *see* **mass spectroscopy****ion density**

- see also* **plasma density**  
 atmosphere, balloon-borne meas. of small ion conc. 2-18537  
 dense ionised gas, electron and negative ion density determ. 2-50372  
 ionisation gauge, high-pressure, calc. 2-48719  
 ionosphere, auroral ionisation profiles rel. to energy spectra of incident electrons 2-32730  
 ionosphere, electron and ion distrib. in near wake of Explorer 31 and AE-C satellites 2-10298  
 CuI, mobile ion density, EXAFS investig. 2-22117  
 Cu<sub>2</sub>Se, mobile ion density, EXAFS investig. 2-22117  
 He-Zn, hollow cathode laser discharge, excitation processes (*Japanese*) 2-49733  
 He-Zn hollow cathode laser discharge, He<sup>+</sup> density, intensity ratio method meas. 2-24999

**ion emission**

- see also* **field ion emission**; **secondary ion emission**; **thermionic ion emission**  
 fracture of materials, emission of electrons and positive ions 2-9398  
 metal particles, micron size, collision with solid surface at vel. of 1 to 5 km/s 2-46886  
 Al, laser irradiated plane target, ion flow characts. 2-36739  
 K compounds, surface ionisation, mass spectrometry 2-48834  
 Na compounds, surface ionisation, mass spectrometry 2-48834

**ion engines**

- see also* **aerospace propulsion**; **rockets**  
 charge-exchange plasma flow meas. 2-50454  
 inert-gas, plasma processes modelling 2-50382  
 interplanetary Mars-Earth-Venus shuttle, flight characts. with solar powered thermionic generator 2-28316  
 magnetosphere modification due to Ar<sup>+</sup> ion injection 2-10275

**ion etching** *see* **sputter etching****ion exchange**

- alkali silicate glass, mixed-alkali, elec. cond. theory, electronegativity and internal ion exchange role 2-12822  
 alkylammonium cations, membrane transport using macrocyclic carriers 2-41934  
 anion exchanger system, element separation (*Chinese*) 2-19684  
 benzytriphenylphosphonium halides, anion selective liq. membrane conc. pot., detection limit 2-17923  
 bipolar ion-exchange membranes, H<sub>2</sub>O mols. electrolytic dissoc. mechanism 2-31932  
 cation exchange membrane, bionic cell with SrCl<sub>2</sub> and KCl, mass and charge transfer, hydrostatic pressure gradient 2-17919  
 cation exchange membranes, radiation grafted, swelling behaviour investig. 2-41935  
 chelating ion-exchange resin containing 2-nitroso-1-naphthol, prep. and props. 2-41898  
 electroalytic polymers, charge carrier exchange with dielec. liquids 2-6063  
 electronegative ion-exchange membranes, electroosmotic permeability (*Spanish*) 2-13999  
 ethyltriphenylphosphonium halides, anion selective liq. membrane, conc. pot., detection unit 2-17923  
 glass, ion exchange diffusion from AgNO<sub>3</sub>-NaNO<sub>3</sub> melts for planar waveguide prep. 2-39738  
 glass, ion exchanges, bending strength, surface damage effect 2-13818  
 glass light filters, strengthening by ionic exchange method 2-20387  
 in aq. soln., <sup>17</sup>O mag. relax. 2-51494  
 methyl mercury cation affinities in gas phase, high press. mass spectrometry 2-27412  
 peralkylcyclohexadienyllithium compounds, struct. of ion-paired species, <sup>1</sup>H, <sup>13</sup>C and <sup>7</sup>Li NMR spectra 2-52188  
 poly(acrylic acid) in aq. soln., <sup>17</sup>O mag. relax. 2-51494  
 polyantimonic acid, ion exchanger, thermodynamic props. (*Russian*) 2-13945  
 radiolytic effects on ion-exchangers containing radioactive waste 2-11187  
 regions separation using single bed deioniser 2-47332  
 saponite clay, ion exchange study, appl. to radioactive waste treatment 2-7155  
 Ag recovery from photographic process ECP-2 washwaters by ion-exchange methods 2-13941  
 β<sup>+</sup>-Al<sub>2</sub>O<sub>3</sub>-BaO(SrO)(CdO), ion exchange prep., ionic cond. props. 2-12835  
 β-Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-Li<sub>2</sub>O, ion exchange prep., ionic cond. props. 2-12835  
 β-Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-NH<sub>4</sub><sup>+</sup>, ion exchange and thermal evolution 2-27432  
 Cd<sup>2+</sup> ion interaction with polyelectrolyte, <sup>113</sup>Cd NMR obs. 2-24747  
 Cr<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>, solid solutions, inter- and intra-crystalline ion exchange equilb. 2-52201  
 FeCr<sub>2</sub>O<sub>4</sub>-FeAl<sub>2</sub>O<sub>4</sub> spinel solid solutions, inter- and intra-crystalline ion exchange equilb. 2-52201  
 GaInAs-AlInAs structures grown by molecular beam epitaxy 2-21456  
 H<sub>2</sub>NbO<sub>9</sub>, niobic acid, <sup>1</sup>H NMR, IR spectra, conductivity and ion exchange studies 2-2145  
 IrO<sub>2</sub> film, electrochromic amorphous, cation insertion reactions 2-27435  
 LiNbO<sub>3</sub>, topotactic to cubic perovskite structural transform. due to ion exchange 2-30587  
 LiNbO<sub>3</sub> waveguides, single-mode, planar and channel, fabricated by ion exchange 2-49905  
 LiNbO<sub>3</sub>:Ti waveguide, fabrication by ion exchange in TiNO<sub>3</sub> soln. 2-49898  
 Li<sub>2</sub>O-GeO<sub>2</sub> glasses, ion exchange interaction with molten alkali nitrates and refr. index gradient 2-26147  
 Li<sub>2</sub>O-Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> ion exchanged glass, conc. depend. of refr. index gradient 2-41322  
 Li<sub>2</sub>O-SiO<sub>2</sub> glass containing sesquioxides, ion exchange interaction with NaNO<sub>3</sub> and AgNO<sub>3</sub> melts 2-13942  
 Li<sub>2</sub>SO<sub>4</sub>-β-Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, solid phase ion exchange 2-6025

**ion exchange continued**

- LiTaO<sub>3</sub>, topotactic to cubic perovskite structural transform. due to ion exchange 2-30587  
 NH<sub>4</sub><sup>+</sup> cations, membrane transport using macrocyclic carriers 2-41934  
 Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, ion exchange strengthening, thermal shock resist. 2-13819  
 NiO-SiO<sub>2</sub> catalysts, impregnated and ion-exchanged, XPS use for dispersion variations detection 2-9602  
 Pb<sup>2+</sup> ion selective electrode membrane, effect of bivalent metal ions, ESCA 2-37103  
 Si-P-Sb cation exchangers, struct. and thermal stability (*Russian*) 2-12572  
 SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-K<sub>2</sub>O:Cu<sup>2+</sup> glasses, diffusion layers prod. by ion exchange, EPR and optical study 2-13332  
 ZrP, amorphous, ion exchange mechanism, enthalpy and entropy changes 2-14000  
 α-ZrP, thermodynamics of alkali metal ion exchange 2-14001

**ion exchanging** *see* **ion exchange****ion excited X-ray emission** *see* **ion microprobe analysis****ion implantation**

- see also* **semiconductor doping**  
 accelerator facility for nuclear bombardment target prep. 2-7412  
 alloy, metastable phases formation by ion implantation and ion beam mixing 2-30501  
 beam optics design for ion implantation, overview 2-4447  
 compensated scan pattern generator, for implanted dose uniformity improvement 2-7379  
 correlation between electrostatic scan pattern and local dose nonuniformities 2-7376  
 diamond:Fe, ion implanted, Mossbauer effect evidence of high internal press. 2-2168  
 diamond, C<sup>+</sup> ion implantation, crystal growth, proton channelling 2-45212  
 diamond, ion beam analyses 2-45231  
 diffusion, implant, with position depend. diffusion coeff. 2-16903  
 dose control technique for ion implantation 2-7377  
 dosimetry measurement in ion implanters 2-6921  
 duoplasmatron ion source for implantation appl. 2-7417  
 electronic devices, microstruct. fabrication, review 2-51828  
 electrostatic ion optics and beam transport for ion implantation 2-834  
 EM scanning systems 2-6919  
 equipment, post-implant methods for characterising doping uniformity and dose accuracy 2-8528  
 equipment and techniques, conf., Kingston, Ont., Canada (July 1980) 2-3323  
 equipment development, historical perspective and future trends 2-3353  
 fast target heating system 2-5138  
 garnet bubble film, ion implanted layer, mag. state, temp. depend. study 2-26759  
 garnet film, ion-implanted, mag. domain struct. 2-5568  
 garnet film, magnetic bubble layers, influence of implantation-induced stress gradients 2-9012  
 garnet films, implanted bubble, dynamics of formation of statically stable 2II Bloch lines 2-26699  
 garnet layer, Ne implanted, stress distrib. determ., nondestructive method 2-9491  
 garnets, implanted, charged walls 2-17311  
 garnets, ion implanted, stress profile determ. 2-25910  
 garnets, ion-implanted, strain and damage distrib., kinematic X-ray diffr. in cryst. films 2-45296  
 high current metal ion beam prod. for ion implantation appl. 2-4159  
 in-situ implantation system in ANL HVEM-tandem facility 2-7413  
 insulators, cryostat for ion implantation at low temps. 2-5137  
 integrated optical component fabrication by ion implantation 2-49966  
 ion stopping distrib. profile calc. in a planar target 2-16698  
 ion-implanted, high temp. oxidation 2-52111  
 laser annealing initiation of ion implanted material alterations 2-5142  
 liquid metal field-emission ion sources 2-578  
 low energy implant simulation using target tilt 2-5135  
 low temp. irradiation equipment for meas. down to 150 mK 2-3654  
 magnet optics, beam transport for ion implantation processes 2-4448  
 magnetic bubble materials, ion implanted, strain distrib. modelling 2-2111  
 mechanically scanned target chamber for high beam current ion implanter 2-6923  
 medium current ion implant systems, manufacturing advantages for remote control 2-7375  
 metal:H(D), saturation and isotope mixing during low temp. implantations 2-50671  
 metal, surface modification by ion implantation, ion beam anal. 2-45215  
 metallic thin films, ion implanted, relax. processes, acoustic vibr. effect 2-45775  
 metals:He, implanted, self-trapping study 2-40427  
 microelectronics appl., bibliography 2-42809  
 microprocessor-based beam sweep control unit 2-7415  
 molecular ion implantation system for appl. in solar cell prep. 2-6918  
 MOS capacitor, improved oxide from backsurface Ar implantation 2-2006  
 near-surface composition changes, Monte Carlo simulation 2-45293  
 PIG, cold-cathode ion source for ion implantation appl. 2-577  
 profile evolution, atomic mixing influence 2-45225  
 quartz-silicate amorphous net, influence of bond breaking on optical stability (*Russian*) 2-2227  
 reference standard manufacture, advanced equipment design by ion implantation 2-6922  
 semiconductor, ion implanted, plasma annealing 2-16664  
 semiconductor, ion-implantation-induced defect annealing using electron and laser beams (*German*) 2-35534  
 semiconductor, photolum. and photolum. excitation spectroscopy characteris., review 2-17533  
 semiconductor characterisation uses of modulation spectroscopy, review 2-15243  
 semiconductor doping, implantation technique 2-5136  
 semiconductor processing 2-5140  
 semiconductors, ion implantation radiation damage annealing by light and electron beam irradi. (*German*) 2-25923  
 semiconductors, laser annealing, liq. phase and solid-state epitaxial recrystallisation 2-12638  
 simulation chamber design and fabrication implantation damage study 2-6841



## ion implantation continued

- simultaneous deposition and ion implantation technique 2-8529  
solar cells, effects of junction depth and impurity conc. 2-27619  
solar cells laser-annealing, optimisation 2-27703  
SOS film, cryst. quality improvement by O implantation and thermal annealing 2-51023  
staining ion implanted layers and angle lapping, anomalous effect 2-12614  
steels, surface modification, ion implantation parameter influence 2-1499  
steels implanted with unseparated ions and selected ions, comparison between props. 2-5981  
sweep freq. optimal selection in ion implantation systems with X-Y scanning 2-7378  
target chamber design for industrial ion implanter 2-7416  
target chambers for ion implantation using mechanical scanning 2-6920  
techniques and equipment for non-semiconductor appl. 2-5134  
technology trends 2-35522  
thermal-diffusion release of gas implanted in a gravity film by ion bombardment 2-1665  
thin film synthesis by ion implantation (*Japanese*) 2-12618  
variable temperature implantation and anal., medium energy facility 2-6917  
wafers, gas cooling during ion implantation 2-5139  
Ag, ion implanted, diffusion of Al 2-12847  
Al:Cu, ion implanted, pulsed laser irradiation, Cu redistrib., thermal diffusion role 2-45250  
Al:Sb, ion implanted, laser treated, ion microprobe anal. 2-46836  
Al-Mo(Cd), highpower laser effects 2-50705  
n-AlGaAs:Be, p-n junction formation by Be<sup>+</sup> implantation 2-51287  
AlN film prep. by ion implantation, AES and low-energy EELS studies 2-12613  
AlN, projected ranges and standard deviations (*Japanese*) 2-12653  
Al<sub>2</sub>O<sub>3</sub>, projected ranges and standard deviations (*Japanese*) 2-12653  
β-Al<sub>2</sub>O<sub>3</sub>:Mg<sup>2+</sup> ion implanted thin film, sputter deposition, Raman scatt. 2-27088  
Au, ion implanted, diffusion of Al 2-12847  
Au:He, spontaneous precipitation of He 2-13727  
B<sub>4</sub>C, projected ranges and standard deviations (*Japanese*) 2-12653  
BN, projected ranges and standard deviations (*Japanese*) 2-12653  
BeO, projected ranges and standard deviations (*Japanese*) 2-12653  
C, projected ranges and standard deviations (*Japanese*) 2-12653  
Cu, ion implanted, diffusion of Al 2-12847  
Cu, sulphidation inhibition by B implantation 2-27322  
Cu:Al ion implanted film, corrosion inhibition, Rutherford backscatt. study 2-47228  
Cu:Mg ion implanted film, corrosion inhibition, Rutherford backscatt. study 2-47228  
Cu:N(Ne), ion implanted, fatigue and internal friction 2-47182  
Fe, ion implanted, trapping of Sb by TaC and Cu precipitates 2-2513  
Fe:Di(Ar)(Sb), ion implanted single crystal, Rutherford backscattering and channelling anal. 2-45220  
Fe:N<sup>+</sup> ion implant, depth profile, stopping power, backscatt. meas. 2-45234  
Fe-H, ion implanted, Mossbauer study 2-41235  
Fe<sub>40</sub>Ni<sub>38</sub>Mo<sub>4</sub>B<sub>18</sub> metallic glass, vitrification during sputtering 2-12501  
GaAs, Bragg diffraction, ion implantation effects 2-21114  
GaAs, capless annealing, for microwave devices 2-2531  
GaAs, compensation mechanisms related to deep B implantation 2-50678  
GaAs, defects produced by laser annealing 2-1523  
GaAs, electron trap outdiffusion due to thermal treatment 2-51104  
GaAs, fast neutron irradiated, As<sub>Ga</sub><sup>4+</sup> antisite defect, ESR spectra 2-46376  
GaAs Hall devices, highly linear, fabricated by ion implantation 2-33581  
GaAs, ion implantation and low temp. epitaxial regrowth 2-8532  
GaAs, ion implanted, Raman scatt. characteris. of changes induced by encapsulation and thermal annealing 2-17477  
GaAs, ion implanted and laser annealed, residual damage, TEM study 2-30502  
GaAs ion implanted layers, mobility and carrier conc. profiles determ. at 299 and 105K 2-51167  
GaAs large diameter bulk crystals for microwave device technology 2-17619  
GaAs, laser annealed, pulsed, and ion implanted, photoluminesc. spectrum 2-51643  
GaAs, low-dose Si ion implantation into semi-insulating LEC grown wafers, elec. props. obs. 2-8530  
GaAs post-implant annealing, encapsulation of semiconductor with CVD Si<sub>3</sub>N<sub>4</sub> to prevent decomposition 2-41634  
n-GaAs, proton implanted, IR absorpt. 2-34886  
GaAs, proton implanted, damage profile, cathodoluminescence, SIMS, chemical staining and C-V meas. 2-40449  
GaAs, proton implanted, cathodolum., Rutherford backscatt. and SIMS studies 2-46778  
n-GaAs, Raman scatt. from ion implanted carriers 2-46607  
GaAs, redistribution of implanted O 2-50687  
GaAs, single step selective implantation technology using proximity annealing, 10 GHz FET fabrication 2-16666  
GaAs substrates, Cr, Si, Mn, and Fe distrib. after annealing with and without SiO<sub>2</sub> encapsulant 2-30478  
GaAs, undoped semi-insulating, growth by liquid encapsulated Czochralski method 2-12622  
GaAs, VPE layers, implanted and annealed, elec. and optical props. 2-46164  
n-GaAs wafer, proton implanted, IR reflectivity characteris. 2-17478  
GaAs:As<sup>+</sup>, ion implanted layers, solid phase epitaxial regrowth 2-16960  
GaAs:B(Si)(Se), ion implanted, stoichiometric disturbances 2-1501  
GaAs:C, implanted, IR localised mode vibr. spectroscopy, annealing temp. depend. 2-17509  
GaAs:C, ion implanted, photolum. study 2-17512  
GaAs:Cd<sup>+</sup>, ion-doped films, elec. props. 2-21701  
GaAs:Cr, ion implanted, stoichiometric disturbances and Cr redistrib. during annealing 2-21161  
GaAs:Cr, ion-implanted, depth distrib., range-energy data and shape factors 2-1500  
GaAs:Fe, impurity redistrib. on annealing, saturation density 2-1508  
GaAs:Mn, heat treatment below Si<sub>3</sub>N<sub>4</sub> encapsulant of Mn implant, dopant profiles and diffusion mechanism (*French*) 2-5897  
GaAs:O, carrier removal using O implantation 2-21162  
GaAs:Se, ion implantation, substrate orientation effects 2-25915  
GaAs:Si, implanted, multiply scanned electron beam annealing 2-45211

## ion implantation continued

- GaAs:Si, ion implanted and annealed, carrier conc. profiles, C-V meas. techniques 2-12623  
GaAs:Sn, laser implantation, impurity distrib. 2-35518  
GaAs:Zn<sup>+</sup>, implanted layers, photoluminescence study 2-41422  
GaAs:Zn(Mg)(Si)(Se) ion-implanted homojunction solar cells, pulsed ruby laser annealing, SEM, TEM and SIMS meas. 2-27662  
GaAs:Zn(Se), ion implanted, annealed, TEM study 2-25894  
GaAs<sub>1-x</sub>P<sub>x</sub>:Zn(N), ion implanted, optical and elec. props. (*Chinese*) 2-8800  
GaAs(Sb)(P):Te, ion implanted, laser annealing, Mossbauer spectroscopy study 2-30481  
GaP:Mg, ion implanted, minority carrier diffusion length meas. 2-26411  
GaP:N, Al<sup>2+</sup> postimplantation gettering effects in p-n junctions 2-12627  
Ge, amorphous, solid-phase epitaxial crystn. on Si (100) 2-12932  
Ge:Al, ion implanted, annealing behaviour obs., Al conc. profiles determ. 2-45241  
Ge:Te, crystalline and amorphous, Mossbauer study of disorder 2-41238  
GeO<sub>2</sub>TeO<sub>2</sub>, amorphous, <sup>125m</sup>Te ion implanted, Mossbauer study of disorder 2-41238  
Hg<sub>1-x</sub>Cd<sub>x</sub>Te, ion-implanted, CW CO<sub>2</sub> and ruby laser annealing, expt. study 2-41457  
InAs:N<sup>+</sup> ion-implanted amorphous and crystalline prep., electrical conductivity and Hall mobility 2-8533  
InP, amorphisation and low temp. recrystallisation 2-16665  
InP, ion implanted, damage profile, cathodoluminescence, SIMS, chemical staining and C-V meas. 2-40449  
InP, ion-implanted, CW laser annealing, amorphous layer recrystallisation 2-5143  
InP, ohmic contact formation using ion implantation 2-50677  
InP, proton implanted, cathodolum., Rutherford backscatt. and SIMS studies 2-46778  
InP, proton implanted, range determ. by SIMS analysis 2-5166  
InP, pulse annealing 2-2383  
InP:B(Si)(Se), ion implanted, stoichiometric disturbances 2-1501  
InP:Fe, Mg(Zn), ion implanted, struct. and elec. props. 2-21163  
InP:Se, ion implanted, pulsed laser annealing 2-30489  
InP:Se<sup>+</sup>, ion implanted, Rutherford backscatt. and ellipsometry 2-12617  
InP:Si, capless annealing, for microwave devices 2-2531  
InP:Si, ion implanted, electron pulse annealing with minimal P loss 2-30475  
InP:Te, ion implanted, laser annealing, Mossbauer spectroscopy study 2-30481  
InSb:N<sup>+</sup> ion-implanted amorphous and crystalline film prep., electrical conductivity and Hall mobility 2-8533  
LiNbO<sub>3</sub> single mode optical waveguides, fabrication by ion implantation 2-20407  
LiNbO<sub>3</sub>:H<sup>+</sup>(He<sup>+</sup>), propag. of SAW during implantation 2-35875  
α-Lu<sub>2</sub>O<sub>3</sub>, ion implanted and thermally diffused, D lattice location, channelling study 2-35517  
Mo:Ge(In)(Te)(C), deform., high temp., effect of ion implantation 2-47142  
Mo-Si contacts, P ion implantation effects 2-8531  
Nb film, ion implanted, supercond. crit. temp. and density of states 2-31014  
Nb single crystals, implanted Ne atoms anal. using nuclear reson. reactions 2-45219  
Nb:N<sub>2</sub><sup>+</sup>, ion irradi. film, elec. cond., Hall effect (*Russian*) 2-2015  
Nb-Ti alloy, He<sup>+</sup> ion implanted, heat treated, sp. ht. and supercond. props. 2-36280  
δ-NbN<sub>0.85</sub>, ion implantation of C and N, supercond. obs. 2-2027  
Ni, Hf ion implanted, laser pulse melting, TDPAC, Rutherford backscatt. and channelling meas. 2-31351  
Ni<sub>40</sub>Fe<sub>20</sub>Co<sub>20</sub>Cr<sub>12</sub>Mo<sub>6</sub>B<sub>16</sub> amorphous alloy, H<sup>+</sup> ion bombardment effects 2-50672  
NiH<sub>x</sub>, ion implanted, resistivity annealing and TDPAC study 2-46180  
NiSi formation, effects of implanted O using <sup>4</sup>He<sup>+</sup> backscattering spectroscopy study 2-1502  
PLZT ceramics, photoferroelec. props., ion implantation effects 2-36086  
Pb:H(D) ion implanted, supercond. transition temp. 2-31000  
Pb-Mn, dilute, supercond., impurity bands, electron tunnelling obs. 2-2039  
Pd-Cu-H system, Cu ion implanted and H-charged supercond. transition temp. meas. 2-36170  
Pt film on Si, silicid growth kinetics, O effect 2-21401  
PtH<sub>x</sub>, ion implanted, search for superconductivity 2-36202  
S:As, through oxide As implanted, recoil O implants and O thermal redistrib. 2-5133  
Si, amorphous, ion implanted, refractive index, thermal annealing effects 2-51537  
Si, amorphous, K, Rb, and Cs atom diffusion 2-45624  
Si, amorphous, plasma deposited and CVD coatings, ion implantation, elec. cond. and photoluminesc. 2-40905  
Si, amorphous, prep. by ion implantation, optical reflectivity 2-17436  
Si, amorphous, solar cells, materials, assessment, internal field, hole transport and lifetime 2-42010  
Si, amorphous implanted, phase transitions produced by pulsed laser or electron irradi. 2-45283  
Si, As<sup>+</sup> implanted, ion beam annealing 2-50719  
Si, B ion implanted, defects after oxidation 2-52064  
Si, carrier lifetime profile induced by ion implantation, determ. using MOS struct. 2-51210  
Si, channelling of As ions, roles of electronic and nuclear stopping 2-8549  
Si crystal, N<sup>+</sup> bombardment, Si<sub>3</sub>N<sub>4</sub> buildup kinetics study 2-45229  
Si film, implanted, CW laser-induced solid phase epitaxy dynamics, time-resolved reflectivity meas. 2-45791  
Si film on sapphire, implanted, laser annealed, dislocations, twins 2-25893  
Si, heavily implanted layers, pulsed thermal annealing 2-50682  
Si, implanted, amorphous, ultrashort pulse laser annealing 2-45266  
Si, implanted, solute trapping after laser annealing 2-45262  
Si, implanted, supersaturated alloy form. during epitaxial regrowth, substitution solubility limitations 2-45261  
Si, implanted, threshold energy density for epitaxial recrystn. 2-45260  
Si, ion implantation, amorphisation, lattice displacement criterion 2-45221  
Si, ion implantation by N ions, Si<sub>3</sub>N<sub>4</sub> form., AES and EELS studies 2-40422  
Si, ion implantation damage, isothermal annealing using thermal radiation source 2-16663



## ion implantation continued

- Si, ion implanted, annealing in plasma of pulsed gas discharge 2-40918  
 Si, ion implanted, directional distrib. of Burgers vectors of dislocation loops 2-16648  
 $p^+$ -Si, ion implanted, isothermally annealed, carrier mobility and conc. profiles 2-51170  
 Si, ion implanted, laser annealing, time-resolved Raman scatt. and transmission meas. 2-46616  
 Si, ion implanted, laser annealing, thermally enhanced 2-50695  
 Si, ion implanted, laser and electron beam annealed, deep levels, DLTS study 2-51105  
 Si, ion implanted, materials alterations possible with laser annealing 2-5142  
 Si, ion implanted, pulsed electron beam apparatus and annealing 2-12625  
 Si, ion implanted, residual defects after pulsed laser annealing obs. 2-50683  
 Si, ion implanted atomic defect chain configuration identification 2-25890  
 Si, ion implanted laser annealed, defect photoluminesc. 2-46667  
 Si ion implanted layers, interference of As and O<sub>2</sub> diffusion 2-50928  
 Si, ion-implanted, surface state effects on laser annealing mechanism (Russian) 2-1981  
 Si, laser annealing and crystallisation 2-1503  
 Si layers, CW laser annealed, EBIC contrast rel. to residual defects, X-ray, TEM, and SEM obs. 2-30465  
 Si, N<sup>+</sup> ion implantation for self-aligned contact MOS technology 2-50676  
 Si, n-type doping increase after Cl<sup>+</sup> and F<sup>+</sup> implantation 2-50684  
 Si, oxidation by ion implantation and laser irradiation 2-16675  
 Si, picosecond laser annealing 2-25926  
 Si polycrystalline film, Ge ion implantation effect on amorphization and recrystn. 2-21474  
 Si polycrystalline films, ion implanted, laser beam annealed, Raman study 2-36726  
 Si, proton bombarded, annealing IR spectroscopy and X-ray topography study 2-1531  
 Si, radiation damage simulation 2-30499  
 Si, self-annealing implantation, elec. and struct. characterisation 2-50681  
 Si, self-implanted amorphous layers, swept-line electron beam annealing 2-50713  
 Si sheet, ion implanted thin film solar cells 2-37297  
 Si, single step doping technique, pulsed ion implantation 2-35520  
 Si solar cell, ion implanted; laser annealed, substrate heating and emitter dopant effects 2-2379  
 Si solar cell, junction formation by ion implantation using high-current ion beam 2-37357  
 Si solar cell, metal-insulator-semiconductor p-n, ion implantation doping 2-47477  
 Si solar cell; metal-insulator-n-p junction struct., 678 mV open circuit voltage 2-6137  
 Si solar cells, ion-implanted, effects of laser and electron beam annealing 2-27624  
 Si solar cells, laser-annealed, comparison between ion-beam and glow discharge implantation 2-27623  
 Si solar cells, laser-processed, effect of emitter dopant concentrations on open circuit voltage and fill factor 2-27621  
 Si solar cells, p-n junction, B implantation from BF<sub>3</sub> gas discharge source 2-18093  
 Si wafer, Au gettering by P diffusion and Ar implementation, mech. and limitations 2-1671  
 Si wafer, low power electron irradiation, with conventional electron gun, heating effect numerical simulation 2-25932  
 Si:Ar implant damage gettering of generation impurity, backscatt., PIXE study 2-45288  
 Si:As, atom and carrier depth distrib. for channelled 300 keV As ions, SIMS study 2-5163  
 Si:As, implanted, CW Ar laser annealing, in situ temp. meas. using opt. pyrometer 2-45270  
 Si:As, implanted, CW laser annealed, real-time monitoring of opt. props. 2-46617  
 Si:As, implanted, laser or electron beam annealed, defect form., electron beam induced current study 2-45271  
 Si:As, ion implanted, doping profiles and elec. activation, Rutherford backscatt. study 2-25916  
 Si:As, ion implanted, ellipsometric spectrum (Chinese) 2-31519  
 Si:As, ion implanted, polycrystn. film, laser irradiation, elec. props. grain size, annealing effect 2-17173  
 Si:As, ion implanted, pulsed electron beam annealing 2-50710  
 Si:As, ion implanted, radiation damage, in situ ion beam annealing 2-25911  
 Si:As, ion implanted, radiation defects annealing, Mossbauer and surface cond. study 2-35523  
 Si:As, ion implanted, radiation damage determ. by profiling oxide growth rate 2-40448  
 Si:As<sup>+</sup>, implanted, CW laser annealing and electron beam annealing 2-12640  
 Si:As<sup>+</sup> ion implant, depth profile, stopping power, backscatt. meas. 2-45234  
 Si:As<sup>+</sup>(P<sup>+</sup>), extended defect depth profiling, channelling, Rutherford backscattering meas. 2-12628  
 Si:As<sup>+</sup>(P<sup>+</sup>) ion implanted, laser annealing effects, refl. study 2-16677  
 Si:As<sup>+</sup>, ion implantation, scanned electron beam annealing 2-1527  
 Si:As(B) (111)(1×1) surfaces, electronic props., photoemission study 2-17136  
 Si:As(P), polycryst. film, CW laser annealing, SiO<sub>2</sub>, Si<sub>3</sub>N<sub>4</sub> substrate material effect 2-8534  
 Si:As(P), polycryst. film, pulsed and CW laser annealing 2-25912  
 Si:Au, implantation gettering of Au, neutron activation study 2-35519  
 Si:B, amorphous, gas phase and ion implant doping, H content 2-45214  
 Si:B, amorphous, profile distortions and at. mixing in SIMS anal. 2-45236  
 Si:B, As, P, amorphous, ion implanted, epitaxial regrowth, compensating impurity effect 2-51014  
 Si:B, B profiling using neutron induced reaction <sup>10</sup>B(n, α)<sup>7</sup>Li 2-2751  
 Si:B, ion implanted, annealed, red defects, TEM obs. 2-25883  
 Si:B, ion implanted, Auger study 2-45224  
 Si:B, ion implanted, defect formation during annealing 2-45179  
 Si:B, ion implanted, electron microscopy of surface defects 2-40420  
 Si:B, ion implanted, point defect generation during oxidation, loop annealing technique 2-25869

## ion implantation continued

- Si:B, P, ion implanted, doping profiles, implantation sequence effect 2-45228  
 Si:B,As, ion implantation, alternate technique during MBE growth 2-50670  
 Si:B implantation, lattice deformation, post-laser irradiation, backscatt., channelling study 2-45213  
 Si:B<sup>+</sup>, single crystal, TEM and AES study of ion bombardment 2-25913  
 Si:B<sup>+</sup>(P<sup>+</sup>)(As<sup>+</sup>), solar cells, prep. by ion implantation and pulsed laser annealing, optical and elec. characterisation 2-14080  
 Si:BF<sub>3</sub><sup>+</sup>, amorphous, elec. activation and impurity redistribution during pulsed laser annealing 2-45254  
 n-Si:BF<sub>3</sub><sup>+</sup>, ion implanted, plasma annealing 2-16664  
 Si:B(P), ion implanted, elec. props., incident ion energy depend. 2-45227  
 Si:Bi, furnace and laser annealed, backscatt. and channelling anal., depth distrib. 2-45253  
 Si:C, implanted, photoluminescence study 2-41419  
 Si:C, ion implantation to from SiC thin layers, struct. and annealing props. 2-8733  
 Si:C(N<sup>+</sup>)(O<sup>+</sup>), formation of SiC, Si<sub>3</sub>N<sub>4</sub> and SiO<sub>2</sub> by laser annealing 2-50675  
 Si:Co, implanted, laser and thermal annealing studied by Mossbauer spectroscopy 2-31346  
 Si:Cr, ion-implanted, depth distrib., range-energy data and shape factors 2-1500  
 Si:Cs, ion implanted, dopant retention, backscatt. study 2-45217  
 n-Si:Fe, deep trap conc., in-depth profile 2-1858  
 Si:Fe implanted layer, lattice damage, compressive stress, TEM study 2-45291  
 Si:Ga, high dose implanted, thermal annealing and elec. activation 2-5147  
 Si:Ge, high fluence implantation, radiation damage annealing, backscatt. and channelling, anal. 2-45289  
 Si:Ge, ion irradiation, damage, complex-refr. index profiles 2-5654  
 Si:H, implanted, vibrational spectra 2-41354  
 Si:H amorphous films, H conc. and spatial distrib. 2-40735  
 Si:H<sup>+</sup>(He<sup>+</sup>), ion implanted, range distrib. characts., Monte Carlo calc. 2-45302  
 Si:He(Ne)(Ar), ion implanted, radiative recomb. centres, photoluminesc. study 2-9194  
 Si:In,Sb (100), ion implanted, solid phase epitaxy, solid solubility, channelling study 2-50862  
 Si:In (Sb) implanted amorphous layers, defect and solubility limit study 2-30477  
 Si:O, ion implanted, complex refractive index, light wave propagation 2-46532  
 Si:P, amorphous, gas phase and ion implant doping, H content 2-45214  
 Si:P, electron irradiated, TEM and channelling anal. of defects 2-25937  
 Si:P, implanted, MeV He<sup>+</sup> dechannelling from secondary defects 2-30505  
 p-Si:P, ion bombarded, doping by radiation accelerated diffusion 2-30476  
 Si:P, ion implanted, I-V characts., temp. depend., elec. cond. model 2-51356  
 Si:P film, LPCVD, polycryst., grain size and resist. 2-13202  
 Si:P film, microstructure and sheet resistance 2-30480  
 Si:P implanted wafer, multicasting electron beam annealing, solar cells appl. 2-21177  
 Si:P ion-implanted solar cells, pulsed electron beam annealing 2-37362  
 Si:P(Kr) implanted layer annealing using laser beam 2-46838  
 Si:Pb, ion implanted, dopant range, damage depth, backscatt. and channelling anal. 2-45216  
 Si:Sb, polycrystalline, ion implanted, doping profiles and elec. resist., annealing effects 2-50685  
 Si:Sn, ion implanted, radiation defects annealing, Mossbauer and surface cond. study 2-35523  
 Si:Sn(Fe), laser implantation, impurity distrib. 2-35518  
 Si:Xe, ion implanted, dopant retention, backscatt. study 2-45217  
 Si-insulator triple struct. fabrication by O<sub>2</sub> implantation and epitaxial growth 2-40719  
 Si-Ni interface, formation of Si oxides at Ni/Ni<sub>2</sub>Si interface 2-30968  
 Si-Si thin film interface, buried Ag layers quantitative anal. 2-45743  
 Si-SiO<sub>2</sub> interface, through oxide layer implantation, Monte-Carlo simulation of O<sub>2</sub> recoil effects 2-50680  
 Si-SiO<sub>2</sub> MIS struct., Ar ion implanted, deep levels, C-V characts. meas. 2-13010  
 Si-SiO<sub>2</sub> MOS system, As implants through SiO<sub>2</sub> layer, TEM, Rutherford backscatt. and device characts. study 2-40450  
 Si-SiO<sub>2</sub>-Si implanted epitaxial struct., interfacial struct., channelling study 2-30758  
 SiC (6H), ion implanted, defect luminescence spectra 2-36712  
 SiC, thin film, synthesis by ion implantation (Japanese) 2-12618  
 SiC, Z (Japanese) 2-12653  
 SiC:Al<sup>+</sup> implanted epitaxial diodes, cathodoluminescence characts. 2-17557  
 α-SiC:Al<sup>+</sup> LED, electroluminesc. spectra fine struct. 2-46774  
 SiC:B(Si)(Se), ion implanted, stoichiometric disturbances 2-1501  
 Si<sub>3</sub>N<sub>4</sub>, projected ranges and standard deviations (Japanese) 2-12653  
 Si<sub>3</sub>N<sub>4</sub>, thin film, synthesis by ion implantation (Japanese) 2-12618  
 Si<sub>3</sub>N<sub>4</sub>-Si, ion beam synthesised passivating layers, XPS study 2-45218  
 SiO<sub>2</sub> and photoresists with B ion implantation, masking props. 2-50674  
 SiO<sub>2</sub>, thermal, oxide charges induced by scanning electron and laser beam annealing 2-50711  
 SiO<sub>2</sub>, thin film, synthesis by ion implantation (Japanese) 2-12618  
 SiO<sub>2</sub>:P, effect of heat treatment on chemical state of P, XPS study 2-36754  
 SiO<sub>2</sub>-Si:B, ion implanted layers, equivalent circuit 2-46143  
 Sn:H(D), ion implanted, supercond. transition temp. 2-31000  
 Ta, thin films, ion irradiation, impurity distrib., Rutherford backscattering 2-12631  
 Ta:N<sub>2</sub><sup>+</sup>, ion irradiation, film, elec. cond., Hall effect (Russian) 2-2015  
 Ti, corrosion resistance improvement by Pd ion implantation 2-21164  
 Ti:N<sub>2</sub><sup>+</sup>, ion irradiation, film, elec. cond., Hall effect (Russian) 2-2015  
 TiC, projected ranges and standard deviations (Japanese) 2-12653  
 V superconducting thin films, resist. transition broadening due to He ion implantation 2-17222  
 VN<sub>0.74</sub>, superconducting transition temp., N ion implantation 2-13214  
 V<sub>2</sub>Si<sub>2</sub>He, ion implanted, strain study, divergent beam X-ray diffraction obs. 2-16684  
 W surface, (110), <sup>3</sup>He and <sup>4</sup>He atoms reflection coeffs., atom probe FIM study 2-27043



**ion implantation continued**

- YIG:Gd(Tm)(Ga) film, mag. profile determ. by ferromagnetic resonance 2-2138  
 (YSMgGdR)<sub>3</sub>(GaFe)<sub>2</sub>O<sub>12</sub> (R=Tm, Yb, Lu), single layer LPE films for 1  $\mu$ m diameter bubble ion implanted contiguous disc devices 2-5569  
 (YSMTm)<sub>3</sub>(GaFe)<sub>2</sub>O<sub>12</sub> bubble thin film, ion implanted, mag. anisotropy, FMR study 2-31251  
 ZnSe:N<sup>+</sup> ion implanted, shallow N-acceptor, bond exciton line and phonon replicas obs. 2-51630

**ion lasers**

- absorption spectra of accelerated atoms, Landau-Zener type nonlinear effects (*Russian*) 2-15736  
 electron gun, hollow cathode, for excitation of CW lasers 2-44325  
 hollow-cathode lasers, electron energy distrib. review (*Japanese*) 2-49734  
 laser optics, conf., Leningrad, USSR (Jan. 1980) 2-28594  
 metal ion CW lasers, UV-visible laser development review 2-904  
 ring ion laser, nonlinear effects in generation (*Russian*) 2-15983  
 Ag hollow cathode CW ion laser at 4788 Å (*Chinese*) 2-16010  
 Ar ion UV and IR hollow-cathode laser, operating characts. 2-15985  
 Ar II CW laser with transverse supersonic gas circulation 2-39621  
 Ar II ion laser, CW, supersonic transverse gas flow 2-34800  
 Ar III CW laser with transverse supersonic gas circulation 2-39621  
 Ar ion laser, active mode locking by acousto-optic AM modulation (*Chinese*) 2-7807  
 Ar ion laser coagulation of dermal lesions 2-22813  
 Ar ion laser therapeutic appls. 2-9855  
 Ar laser, highly stable acousto-optic mode-locking using active feedback 2-7809  
 Ar lasers in ophthalmic surgery 2-9854  
 Ar, medical laser devices, applications and status 2-14311  
 Ar<sup>+</sup> laser, active mode-locking using temp. compensated acousto-optic modulator (*Chinese*) 2-25043  
 Ar<sup>+</sup> laser, actively mode-locked, charact. obs. using scanning interferometer (*Chinese*) 2-20291  
 Ar<sup>+</sup> laser, optical pumping of <sup>7</sup>Li<sub>2</sub> laser transitions 2-7750  
 Ar<sup>+</sup> laser, passive mode locking using rhodamine 110 dye saturable absorber, optical bistability 2-20340  
 Ar<sup>+</sup> lasers with glass envelopes, expt. study of props. (*Chinese*) 2-39622  
 Ar<sup>+</sup>, pulsed laser, performance and fabrication 2-34791  
 Au ion UV and IR hollow-cathode laser, operating characts. 2-15985  
 Cu II hollow cathode laser characts. 2-15989  
 Cu ion UV and IR hollow-cathode laser, operating characts. 2-15985  
 CuII UV laser optimisation 2-15986  
 He-Cd laser, longevity problem investigation 2-25032  
 He-Cd laser operation in nonuniform mag. field (*Chinese*) 2-16011  
 He-Se<sup>+</sup> cataphonic laser, props. and design feature 2-49783  
 He-Zn, hollow cathode laser discharge, excitation processes (*Japanese*) 2-49733  
 He-Zn hollow cathode laser discharge, He<sup>+</sup> density, intensity ratio method meas. 2-24999  
 Hg, electron beam pumped CW, characts. 2-44250  
 Kr<sup>+</sup> laser, optical pumping of <sup>7</sup>Li<sub>2</sub> laser transitions 2-7750  
 Xe small bore pulsed laser, output and threshold parameters (*Chinese*) 2-25027

**ion lenses** *see* **lenses****ion lithography** *see* **ion beam lithography****ion microanalysis**

- see also* **ion microprobe analysis**  
 conference on ion beam anal., Sydney, Australia (Feb. 1981) 2-42775  
 drift tube, ionic transport coeff. meas. (*Japanese*) 2-52198  
 Si (111)/Au interface, AES, EELS, LEED and depth profiling study, UHV conditions 2-21446  
 a-Si<sub>1-x</sub>Ge<sub>x</sub> film, methods of comp. anal. (*Japanese*) 2-41955

**ion microprobe analysers** *see* **ion microprobe analysis****ion microprobe analysis**

- see also* **ion microanalysis**  
 air, Cl and S anal. by Ar ion induced X-ray emission 2-47545  
 charged particle bombardment, X-ray emission 2-51747  
 computer code SOXS for X-ray spectra synthesis 2-47399  
 conference on ion beam anal., Sydney, Australia (Feb. 1981) 2-42775  
 corrected electrostatic lens systems for ion beams, microprobe formation 2-43138  
 cyclotron heavy-ion beam sweeping apparatus for uniform irradiation of samples 2-43653  
 diamond, ion beam analyses 2-45231  
 elemental distributions, image processing 2-27515  
 external beam proton microprobe, for materials anal. 2-43648  
 heavy elements trace detection using PIXE in biological science 2-47691  
 Heidelberg proton microprobe using 6 MV tandem Van de Graaff accelerator 2-14044  
 mass anal. on nonconductors, expts. with negative ions 2-19223  
 olivine, major, minor and trace element anal. 2-6071  
 particle induced X-ray emission anal. appl. to analytical problems 2-14029  
 PIXE, detection limit ang. depend. 2-27495  
 PIXE, thin film anal. 2-47423  
 PIXE anal., on-demand beam excitation system performance 2-52254  
 PIXE expts., secondary fluoresc. in micrometer vicinity of ion microprobe spots 2-47400  
 quartz crystals, synthetic, defects, X-ray topography and ion probe study (*Chinese*) 2-25906  
 silicate minerals, charact. of SIMS spectra (*Chinese*) 2-33676  
 SIMS beam optics 2-246  
 sputter deposition measurement using PIXE and Rutherford backscatt. (*Japanese*) 2-41472  
 steel sheet, uncoated and galvanised, depth profiling by ion beam 2-45235  
 subshell ionisation cross section meas. using HIXE and comparison with theories 2-51745  
 thick target proton induced X-ray yield, uncertainties in theoretical values 2-47398  
 trace element detection by high energy heavy ion induced X-ray emission 2-47397  
 trace elements distrib. in mature wheat seed using Melbourne proton microprobe 2-47763  
 ultrahigh vacuum, appl. to H detection 2-15263  
 zircons, natural, trace element distrib., PIXE meas., proton microprobe dating 2-48018  
 Al:Sb, ion implanted, laser treated, ion microprobe anal. 2-46836  
 Al-Zn(Sb), pulsed laser annealing 2-50700

**ion microprobe analysis continued**

- Au coin elemental analysis by particle induced X-ray emission 2-22498  
 H<sup>+</sup> microprobe beam line, with supercond. final lens, for Van de Graaff accelerator 2-43647  
 He channelled microbeam for semicond. anal. 2-45299  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, ion-implanted, laser annealing, PIXE study 2-41457  
 Nb-V alloy, ion scatt. spectra, sputter-induced photon spectra, SIMS 2-46848  
 Si, oxidation by O<sub>2</sub>, model 2-22354  
 Si:Ar implant damage gettering of generation impurity, backscatt., PIXE study 2-45288  
 SiO<sub>2</sub> low press. CVD film, deposited by SiH<sub>2</sub>Cl<sub>2</sub>-N<sub>2</sub>O mixture, Cl distrib. and surface roughness 2-45761
- ion microscopes**  
*see also* **field emission ion microscopes**; **ion microscopy**  
 No entries
- ion microscopy**  
*see also* **field emission ion microscopy**; **ion microscopes**  
 Si, gettering and redistrib. of O, 300 to 500°C 2-8536
- ion mobility**  
*see also* **electrolytic ion mobility**; **ionic conduction in solids**  
 alkylammonium cations, membrane transport using macrocyclic carriers 2-41934  
 atmosphere, balloon-borne meas. of elec. cond., positive ion mobility and recomb. coeff. 2-18538  
 p-cyanophenyl-p-caproyloxbenzoate liq. cryst. cells, effect of dielec. coatings on charge carrier behaviour 2-51519  
 excited membranes, exptl. meas. of ionic permeability, electronic and computing subsystems (*Russian*) 2-47754  
 hexafluorobenzene, liquid, fast migrating negative species study using pulse radiolysis 2-1645  
 momentum transfer and capture cross sections for ion-polar molecule collisions 2-34526  
 negative halogen ions in various gases, ion mobility determ. 2-20813  
 runaway mobility, depend. on gas number density 2-25484  
 temperature dependence, kinetic theory, mass spectra 2-20810  
 Al/Al<sub>2</sub>O<sub>3</sub>/Pb tunnel junctions, zero-bias resist., voltage and thermal treatment effects, ionic mobility 2-51343  
 Ar<sup>+</sup>Cl<sup>-</sup>, tests of interaction pots., ion mobility and diffusion coeff. calcs. 2-34539  
 Cu<sub>3</sub>VS<sub>4</sub>, Li<sup>+</sup> insertion studies 2-22442  
 He<sup>+</sup>H<sup>+</sup> (Br<sup>+</sup>), tests of interaction pots., ion mobility and diffusion coeff. calcs. 2-34539  
 He<sup>+</sup>Ne<sup>+</sup> (Kr<sup>+</sup>), ion mobility meas. at 294K 2-50361  
<sup>4</sup>He, superfluid, surface, negative ions mobility 2-35778  
 K<sup>+</sup>(H<sub>2</sub>O) in N<sub>2</sub> at room temp., ion mobility meas. 2-20225  
 Li<sup>+</sup> in Ar, ion mobility, directly determ. pot. 2-4913  
 NH<sub>4</sub><sup>+</sup> cations, membrane transport using macrocyclic carriers 2-41934  
 Na<sub>4</sub>Zr<sub>2</sub>Si<sub>2</sub>O<sub>12</sub>, Nasicon-type struct., thermal expansion of lattice rel. to Na<sup>+</sup> mobility 2-16868  
 SF<sub>6</sub>, liquid, drift of radiation-induced charge carriers 2-1644  
 SO<sub>2</sub>, ion-molecule reactions, attachment and detachment coeffs. 2-27429  
 SO<sub>2</sub>-O<sub>2</sub> mixtures, ion-molecule reactions, attachment and detachment coeffs. 2-27429  
 XeCl<sup>+</sup> well depth from Cl<sup>-</sup> mobility and diffusion data 2-8260
- ion-molecule collisions**  
*see also* **charge exchange**; **ion-molecule reactions**  
 ethylene + He<sup>+</sup>(N<sup>+</sup>), ion stopping powers at 40-200 keV 2-34536  
 heavy ions, multicharged, charge-changing collision in gaseous media (*Japanese*) 2-49569  
 ion dipole molecule collisions, average dipole orientation method, rate coeff. 2-774  
 ion-molecule collisions, spontaneous emission mechanisms calc. 2-49559  
 momentum transfer and capture cross sections for ion-polar molecule collisions 2-34526  
 N<sub>2</sub><sup>+</sup>(B<sup>2</sup> $\Sigma$ ) + N<sub>2</sub>(H<sub>2</sub>), relative vibr. quenching 2-15880  
 Ar<sup>+</sup> + H<sub>2</sub>O, H<sub>2</sub>O<sup>+</sup> and ArH<sup>+</sup> formation, crossed beam study at low energies 2-4378  
 Ar<sup>+</sup> + O<sub>2</sub>, charge transfer, O<sub>2</sub><sup>+</sup>(<sup>4</sup> $\Pi_u$ ) product state, rate coeffs. 2-34555  
 CO<sub>2</sub> + H<sub>2</sub><sup>+</sup> (D<sup>+</sup>), vibr. excitation, mode selectivity and time effects 2-44051  
 Cl<sup>+</sup> + CO(D<sub>2</sub>)(N<sub>2</sub>), electron detachment, direct coupling, charge exchange, shape resonances 2-44070  
 F<sup>+</sup> + CO(D<sub>2</sub>)(N<sub>2</sub>), electron detachment, direct coupling, charge exchange, shape resonances 2-44070  
 H<sup>+</sup> + CO(D<sub>2</sub>)(N<sub>2</sub>), electron detachment, direct coupling, charge exchange, shape resonances 2-44070  
 H<sub>2</sub> + H<sup>+</sup>, electron detachment, cross sections; form. of excited H atoms 2-24841  
 H<sub>2</sub> + He<sup>+</sup>(N<sup>+</sup>), ion stopping powers at 40-200 keV 2-34536  
 H<sub>2</sub> + highly charged ions, single electron capture, cross section,  $\sigma(H_2)/\sigma(H)$  ratio 2-20183  
 He<sup>+</sup> + N<sub>2</sub>(O<sub>2</sub>), vibr. excitation, electron capture, energy-loss meas. 2-24833  
 K<sup>+</sup> + difluorobenzene, momentum transfer collision freq. meas. by ICR spectrometer 2-9534  
 Li<sup>2+</sup> + H<sub>2</sub>(He), electron capture cross-sections 2-20176  
 Li<sup>3+</sup> + H<sub>2</sub>(He), electron capture cross-sections 2-20176  
 N<sup>+</sup> + CO collisions, CO<sup>+</sup> comet-tail emission and chemilum. 2-15885  
 N<sub>2</sub> + H<sup>+</sup>, electron detachment, cross sections, form. of excited H atoms 2-24841  
 O<sub>2</sub> + He<sup>+</sup>(N<sup>+</sup>), ion stopping powers at 40-200 keV 2-34536  
 O<sub>2</sub><sup>+</sup> + O<sub>2</sub>(N<sub>2</sub>), autoionisation, reaction rate const. 2-7626  
 SrF<sub>2</sub>, reson. electron transfer following ionisation 2-11567
- ion-molecule reactions**  
 acetamide, alkyl substituted, cation interactions, HF SCF mode calcs. 2-633  
 acetylene-d<sub>n</sub>, ion/mol. reactions, primary ion state effects 2-9532  
 alcohols, pyrolysis products in ion-molecule reactions, chemical ionisation mass spectra 2-17875  
 alkenes, mol. ions, photodissoc. and ion-molecule reaction kinetics, isomerisation, ICR study 2-15855  
 capture cross sections, total energy and angular momentum conserved average charge-dipole interaction theory 2-17878  
 chlorophyll, photooxidation, ion-mol. electron exchange, CIDNP study 2-7575  
 cycloalkanes, photodissoc. and ion-molecule reaction kinetics, isomerisation, ICR study 2-15855  
 ethylene + methyl ion, reaction intermediate, isotope effects, pot. energy profile 2-37052



**ion-molecule reactions continued**

- interstellar reaction scheme, extension to D chemistry and mol. isomers 2-53349  
 ion dipole molecule collisions, average dipole orientation method, rate coeff. 2-774  
 isotope exchange in ion-neutral reactions, laboratory studies and interstellar implications 2-53350  
 polyatomic negative ions in KF-AlF<sub>3</sub> system, form., mol. const., thermodynamic functions, ion-mol. reactions 2-22428  
 positive ion reactions with H<sub>2</sub>, rate coeffs. and interstellar implications 2-6530  
 protonation energies, correl. corrections, basis set depend. 2-9528  
 Ar<sup>+</sup>+H<sub>2</sub>O, H<sub>2</sub>O<sup>+</sup> and ArH<sup>+</sup> formation, crossed beam study at low energies 2-4378  
 BrO<sub>2</sub><sup>+</sup>+malonic acid, Belousov-Zhabotinskii reaction, oscillations, catalysis by bis-bipyridine-Ag complexes 2-22423  
 BrO<sub>2</sub><sup>+</sup>+malonic acid, Belousov-Zhabotinskii system, oscillating reaction, Os and Cr bipyridine complexes catalysts 2-22424  
 C<sup>+</sup>+H<sub>2</sub>+H<sub>2</sub>, rate coeff. calc. from statistical theories compared with expt. data 2-17882  
 C<sup>+</sup>+H<sub>2</sub>(D<sub>2</sub>), chemiluminescence spectra, product state distrib. 2-47327  
 C<sup>+</sup>+H<sub>2</sub>→CH<sup>+</sup>+H, pot. energy surfaces, chemiluminescence, ab initio MSCF-POLCI calcs. 2-27427  
 C<sup>+</sup>+O<sub>2</sub> chemiluminesc. reaction, CO<sup>+</sup>(A<sup>2</sup>Π) vibr. distrib. 2-49360  
 C<sub>2</sub>H<sub>4</sub><sup>+</sup>, gas phase chem. 2-9531  
 Cl<sub>2</sub>+H<sub>2</sub>O<sub>2</sub>-NaOH solution, O<sub>2</sub>(<sup>1</sup>Δ) generation for I laser pumping 2-2700  
 Co(CO)<sub>4</sub><sup>+</sup>, protonation, mol. electrostatic pots. calcs. 2-29679  
 D<sub>2</sub><sup>+</sup>+H<sub>2</sub>O, proton transfer, unimolecular decay and isotope scrambling, crossed mol. beam studies 2-13936  
 F<sup>+</sup>+HX→HF+X<sup>+</sup>, X=Cl, Br and I, HF vibr. state distrib., IR chemiluminesc. 2-17883  
 F<sup>+</sup>+methylbromide, space charge effects in flowing afterglow, rate const. 2-17879  
 H<sup>+</sup>+F<sup>-</sup>→HF(v)+e<sup>-</sup> assoc. detachment reaction, HF vibr. state distrib. 2-17884  
 H<sub>2</sub><sup>+</sup>+H<sub>2</sub>O(D<sub>2</sub>O), proton transfer, unimolecular decay and isotope scrambling, crossed mol. beam studies 2-13936  
 HF+CN<sup>+</sup>→FH.CN<sup>+</sup> reaction, quantum chem. study 2-22433  
 Mg ions, gas phase chemistry, flowing afterglow studies 2-2704  
 N<sub>2</sub><sup>+</sup>+SO<sub>2</sub>, depend on internal energy, charge transfer 2-2705  
 NH<sub>3</sub>+H<sup>+</sup>, protonation energies, correl. corrections, basis set depend. 2-9528  
 NH<sub>3</sub><sup>+</sup>+NH<sub>3</sub>, charge transfer, H transfer, cross sections photoelectron obs. 2-9542  
 O<sup>+</sup>+O<sub>2</sub>, charge transfer reactions 2-22437  
 O<sub>2</sub><sup>+</sup>+O<sub>2</sub>(N<sub>2</sub>), autoionisation, reaction rate const. 2-7626  
 O<sub>2</sub><sup>+</sup>(H<sub>2</sub>O)<sub>n</sub>+O<sub>2</sub>(NO)(SO<sub>2</sub>)(CO<sub>2</sub>), reaction rate const. meas. with variable temp. flowing afterglow apparatus 2-47325  
 Pn<sub>3</sub><sup>+</sup>+ethylene, electrophilic addition, non-empirical SCF MO calc. 2-6022  
 SF<sub>6</sub>+HS<sup>-</sup>(s<sup>-</sup>)(OH<sup>-</sup>)(O<sup>-</sup>), reactions charge exchange, electron affinity 2-31913  
 SF<sub>6</sub>+Cl<sub>2</sub>(NO<sub>2</sub>), reactions charge exchange, electron affinity 2-31913  
 SO<sub>2</sub>, ion-molecule reactions, attachment and detachment coeffs. 2-27429  
 SO<sub>2</sub>-O<sub>2</sub> mixtures, ion-molecule reactions, attachment and detachment coeffs. 2-27429

**ion optics**

- see also ion beams; ion microscopes; mass spectrometers*  
 achromatic quadrupole lens doublet for positive ions 2-49656  
 arithmetic algorithm for ion extraction from collisionless plasma 2-833  
 axial focusing in mag. analyser with nonuniform field and electrostatic lens 2-20245  
 beam optics design for ion implantation, overview 2-4447  
 beam sharing system between Linac and separated-sector cyclotron (Japanese) 2-835  
 beam transport magnet optics for ion implantation processes 2-4448  
 broad-range particle spectrograph 2-587  
 corrected electrostatic lens systems for ion beams 2-43138  
 electric field distrib. within field emission systems, numerical and expt. study 2-48841  
 electric RF multipole fields, fundamentals 2-34651  
 electrostatic ellipsoidal mirror, fast separator for recoiling and highly charged particle 2-15660  
 electrostatic ion optics and beam transport for ion implantation 2-834  
 EM isotope separator ion optics 2-4046  
 extraction optics, slot end effect 2-11630  
 ion impact spectrometer (Japanese) 2-19215  
 ion implantation equipment and techniques, conf., Kingston, Ont., Canada (July 1980) 2-3323  
 JAERI magnetic spectrograph design for heavy-ion reaction studies 2-4168  
 Liouville theorem appl. to electron and ion optical systems possessing primary aberrations 2-24931  
 magnetic spectrograph ion-optical system, induced aberrations optimisation 2-4169  
 mass spectrometer using mag. and elec. sector fields 2-3648  
 mass spectrometer with variable dispersion and simultaneous detection 2-3649  
 multiple aperture ion source, ion optics improvement 2-19212  
 point electron and ion source optics, numerical anal. method 2-51774  
 Poisson-Vlasov equation, ion extraction and optics in 3D 2-16429  
 primary aberrations, optical transfer matrix, Liouville's theorem appl. (Chinese) 2-29775  
 quadrupole lenses elec. rotation 2-4449  
 respiratory and blood gases anal. by twin ion source spectrometer, simultaneous meas. (Japanese) 2-19206  
 second order trajectories in crossed toroidal elec. and inhomogeneous mag. fields (Chinese) 2-24923  
 sector magnet, second order image aberration meas. 2-572  
 SIMS beam optics 2-246  
 single focusing mass spectrometer, ion optics (Japanese) 2-19205  
 tandem accelerator straight field tube, field pattern choice and optical characts. 2-11315  
 Van de Graaff accelerator, bremsstrahlung characts. and particle trajectories in inclined field tubes 2-11313  
 Ga<sup>+</sup> liquid-metal ion source extraction region, trajectory calcs. 2-51775

**ion plating**

- diamond, C<sup>+</sup> ion implantation, crystal growth, proton channelling 2-45212

**ion plating continued**

- film structure prep. by ion beam techniques 2-51809  
 selective plating and etching using resistive heating for metal lines on chips 2-2600  
 AlN coatings on Mo, prep. by RF reactive ion plating, deposition mech. 2-13658  
 Au film, ion plated, frictional and morphological characts. 2-30775  
 Co coating, ion plated, highly oriented, tribological props. 2-30777  
 Cu-Al-Fe (14, 4 wt.%) ion plated coating, wear under arduous metal-forming conditions 2-30778  
 Mo, ductility improvement by forming surface layer containing B 2-31836  
 Pb film, ion plated, frictional and morphological characts. 2-30775  
 TiN, ion plated on steel, adhesion studies 2-8719  
 ZnTe layers on Si, growth by solid-state reactions of Zn and Te layers prep. by ion beam evap., junction props. (Japanese) 2-17627
- ion probe analysers** *see ion microprobe analysis*  
**ion probe microanalysis** *see ion microprobe analysis*  
**ion pumps**  
 gas laser operation, vacuum technology 2-34782  
 high-vacuum plasma pump 2-48715  
 multipactor, for UHV (Japanese) 2-28859  
 space chambers, small, vac. pumping systems (Japanese) 2-43037
- ion recombination**  
 alkali metal negative ions, photorecomb., at. polaris effects 2-49348  
 9-amino acridine hydrochloride, recomb., delayed fluores. 2-11535  
 atmosphere, balloon-borne meas. of elec. cond., positive ion mobility and recomb. coeff. 2-18538  
 D-region, ion recomb. coeffs. from electron density var. rel. to ionisation rate var. 2-38017  
 2,5-diphenyloxazole in cyclohexane soln., pulse radiolysis, radical ion kinetics, EPR study 2-15823  
 ionosphere, ion recomb. coeff. rel. to auroral ionisation profiles and incident electron spectra 2-32730  
 mutual neutralisation coefficient in an ambient gas 2-34521  
 negative ion photorecomb., at. polaris. effects 2-49348  
 NGC 3242, planetary nebula, N abundance determ. from N II recomb. lines 2-3292  
 organic glasses, excess electrons recombination kinetics at low temps. 2-13552  
 photorecombination with excitation 2-11573  
 plasma impurities, line radiation from ions, ionisation and recombination 2-44837  
 production by O<sub>2</sub><sup>+</sup> dissociative recomb. 2-14644  
 radical ion pairs in liq. soln., recombination dynamics, electron hopping effect 2-52186  
 recombination and retrapping probabilities, luminesc., kinetics 2-7595  
 space charge neutralisation in gas, inelastic electron collisions effect 2-4384  
 time-dependent geminate recomb. 2-4376  
 Ar arc plasma, decaying, recomb., ionisation, diffusion and convection 2-30279  
 C II, obs. of 1335 Å dielectronic recomb. lines in planetary nebula (IC 418) 2-6657  
 CO<sub>2</sub>, electron-ion recombination coeff. 2-44118  
 Fe I to XXVI, radiative recomb. rate coeffs. 2-7601  
 Fe XXV, dielectronic satellite spectra theory with improved inner-shell and He-like excitation rates 2-38052  
 H I, detectability of radio recomb. lines in compact radio galaxies and quasars 2-42757  
 Hg<sub>2</sub><sup>+</sup>, electron impact, dissociative recombination, rate coeff. excited states 2-24874  
 K<sup>+</sup>+Cl<sup>-</sup>, two- and three-body ionic recombination, Monte Carlo calcs. 2-44053  
 Kr<sup>+</sup>+F<sup>-</sup>, two- and three-body ionic recombination, Monte Carlo calcs. 2-44053  
 NH<sub>3</sub>, electron-ion recombination coeff. 2-44118  
 Na-like ions, dielectronic recombination involving high Rydberg states 2-677  
 Na<sup>+</sup>+Cl<sup>-</sup>, two- and three-body ionic recombination, Monte Carlo calcs. 2-44053  
 O<sup>8+</sup>, in ISX-B Tokamak, charge exchange excitation and recomb. 2-20819  
 O<sub>2</sub><sup>+</sup> in ionosphere, reaction rate coeff. for dissociative recombination 2-10249  
 Si II dielectronic recombination in P Cygni, implications of P Cygni line profiles 2-38197
- ion scattering** *see collision processes; ion mobility; ion-surface impact*  
**ion solvation** *see solvation*  
**ion sources**  
*see also ion emission*  
 accelerator facility for nuclear bombardment target prep. 2-7412  
 alkali atom optical pumping process and polarised alkali ion sources 2-575  
 applications for prod. of excited atomic and molecular states 2-39257  
 Aurora pulser, high-impedance ion-diode expt. 2-43655  
 broad beam ion source, with uniform distrib. of current density over cross-section (Russian) 2-28931  
 cold plasma electron/negative ion source 2-19213  
 constricted RF ion source, plasma oscillation and instability study 2-16438  
 cyclotron appl., temporal stability increase 2-19823  
 D<sup>-</sup> ion source for neutral beam injectors 2-25639  
 duoplasmatron, ion extraction through channel with radius Debye length 2-16438  
 duoplasmatron for multiple charged ions (Chinese) 2-34220  
 duoplasmatron ion source for implantation appl. 2-7417  
 ELSIRE, reflex ion source for singly charged heavy ions 2-4158  
 emission source for molecular ion studies 2-38712  
 extraction optics, slot end effect 2-11630  
 field-ion microscope with accelerated ion source 2-43140  
 fundamental research on ion sources for nuclear fusion experiments (Japanese) 2-49205  
 HF sputter type, modified, characts. 2-583  
 high current metal ion beam prod. for ion implantation appl. 2-4159  
 high intensity heavy ion sources, physics, chemistry and technology aspects 2-4157  
 hollow cathode discharge as a plasma source for H<sup>-</sup> production 2-12336  
 implementation equipment and techniques, conf., Kingston, Ont., Canada (July 1980) 2-3323



## ion sources continued

- ISOL facility, ion-source-U target system 2-19805  
 liquid metal field-emission ion sources 2-578  
 liquid metal ion sources charact. 2-5140  
 magnetic multipole discharge role of anode area 2-34229  
 magnetic multipole ion source plasma, instabilities (*French*) 2-40072  
 metastable He(<sup>2</sup>S) beam source based on coaxial electron impact excitation 2-49211  
 MISS-4, miniature sputter ion source for tandem accelerator 2-11344  
 molecular ion implantation system for appl. in solar cell prep. 2-6918  
 monopolar ions production by travelling wave corona discharge 2-20814  
 multi-aperture, with deflectable focused beam for compositional control in sputter deposition 2-7429  
 multicusp H ion source, effect of magnetic filter 2-10920  
 multiple aperture ion source, ion optics improvement 2-19212  
 Munich MP-tandem accelerator improvements 2-11304  
 negative ion beams of rare and radioactive isotopes for tandem accelerators 2-11340  
 negative ion sputter source for radioactive dating project 2-11342  
 negative sputter ion sources performance, theoretical anal. 2-11341  
 neutral beam injection, prototype for high current density ion beam production 2-48837  
 Penning source, design and operating characteristics (*Bulgarian*) 2-15646  
 PIG, cold-cathode ion source for ion implantation appl. 2-577  
 plasma heating in solenoids, ion beam generation expts. 2-25571  
 plasma sources for anal. mass spectrometry 2-244  
 Poisson-Vlasov equation, ion extraction and optics in 3D 2-16429  
 polarised negative ion sources, review 2-11339  
 proton beam injector, 1A current, 100 keV energy 2-15640  
 pulsed ion source with cryogenic anode 2-23770  
 Pulselec C inductive linear accelerator, space charge neutralised ion beam for inertial fusion 2-4150  
 quadrupole mass spectrometer, high-efficiency ion source (*Chinese*) 2-38710  
 SNICS, surface ionisation sputter-type ion sources, sputter cathode enhanced axial erosion 2-11343  
 sputter negative ion source, XTU-tandem 150 kV injector operation 2-11294  
 Stony Brook FN tandem operation 2-11305  
 tandem Dynamitron, intense low energy heavy ion beams 2-11326  
 Texas A&M cyclotron polarised ion source 2-39255  
 Au liquid-metal ion sources, field evaporation and ionisation, optical emission probe of neutral atoms 2-51707  
<sup>14</sup>C beam accel. in electrostatic accelerators 2-11323  
 D<sup>+</sup> beam, high current, production by charge exchange in Na 2-43656  
 D<sup>+</sup> production by D<sub>2</sub> electron impact dissociative ionisation in threshold region by monoenergetic beam 2-7655  
 Ga, liq., positive ion source, mass transport 2-584  
 Ga, liquid, ion source for scanning microbeam 2-48835  
 Ga liquid-metal ion sources, field evaporation and ionisation, optical emission probe of neutral atoms 2-51707  
 Ga<sup>+</sup> liquid-metal ion source extraction region, trajectory calcs. 2-51775  
 H<sup>+</sup> ion formation from a surface conversion type ion source 2-8331  
 H<sup>+</sup> ion source, charge exchange, conversion coeff. and scatt. angle 2-4382  
 H<sup>+</sup> polarised ions production by electron transfer from atoms 2-24469  
 H<sup>+</sup> polarised source, optically pumped, electron spin depolarisation 2-19813  
 H<sup>+</sup> production by H<sub>2</sub> electron impact dissociative ionisation in threshold region by monoenergetic beam 2-7655  
 He gas-jet coupled ion source for ISOL on-line mass separator 2-19694  
 He<sup>+</sup> bunched ion beam, generation and time compression 2-15650  
 KrF<sup>+</sup> mass spectrometric study 2-19818  
 Na target for negative ion injector 2-15653  
<sup>23</sup>Na, nuclear spin polarised beam prod. using optical pumping 2-24895  
<sup>210</sup>Po  $\alpha$ -particle sources, prevention of contamination in  $\alpha$ -particle spectrometry 2-15663  
 S, highly stripped ions prod. using dual MP tandem facility in accel-decel mode 2-11325  
<sup>31</sup>Si isotope, sputter target for negative ions generation 2-49208  
 Ti<sup>+</sup> surface ionisation source, for beam energy calibration 2-19806

## ion-surface impact

- see also particle backscattering: sputtering  
 backscattering from solid targets, empirical formulas 2-17587  
 emission and scattering techniques, cong., Alghero, Italy (Sept. 1980) 2-42795  
 energy loss in C foils at 50-150 keV per nucleon 2-615  
 Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec. surface, ion beam refl. and chemical etching study 2-30722  
 glass surfaces, bombarded by noble gas ions at 30...50 keV, electron microscopic investigations 2-5785  
 high energy, for surface struct. determ., review 2-22132  
 ice targets mol. particles release rel. to H<sub>2</sub> prod. in dense interstellar mol. clouds 2-28533  
 ion cleaning, effects on thick film adhesion 2-52171  
 ion impact spectrometer (*Japanese*) 2-19215  
 ion scattering spectrometry, low energy, for material characterisation 2-46859  
 low energy ion scattering, comp. and struct. analysis of solid surfaces, review 2-27047  
 low energy technique for surface atomic geometry and electron distrib. anal. 2-26192  
 metal surfaces, ion bombardment, O effect on continuum radiation emission 2-22137  
 molecular ion bombardment, sputtering shock wave model, nonlinear effect (*Japanese*) 2-13609  
 monodefinic hydrocarbons, energy loss spectra, ion impact spectrometer (*Japanese*) 2-19215  
 neutralisation scatt. from surfaces 2-2401  
 physical electronics conf., Bozeman, MT, USA (June/July 1981) 2-10547  
 PVC film, surface treatment, effects of ion beam bombardment or ion beam sputter deposition (*Japanese*) 2-35550  
 range shortening and possibility of thermal instability 2-25949  
 reconstructed surface, H-induced ordering 2-50965  
 red blood cells, ang. depend. sputtering yield, Ar<sup>+</sup> ion irradiation (*Japanese*) 2-41476  
 semiconductor surface, XPS, angle-resolved, for solid surface characterisation 2-5794  
 surface phonon and Debye temp., ion scatt. study 2-50984

## ion-surface impact continued

- thin film formation, substrate surface characterisation 2-50975  
 thin layers, ion scattering spectroscopy and particle induced X-ray emission 2-47423  
 transition metal sulphates, Ar ion-bombardment damage, XPS studies 2-41489  
 (110) surface, caesiated, H<sup>-</sup>, D<sup>-</sup> formation by H<sup>+</sup>, D<sup>+</sup> scatt. 2-41477  
 Ag, proton bombarded, K- and L-shell ionisation 2-4372  
 Ag, silicide formation on Si (111), studied by high energy He<sup>+</sup> scatt. 2-27477  
 Ag-Au alloys, material sputtered by Ar<sup>+</sup>, ang. distrib. 2-46914  
 Al, ang. depend. sputtering yield, Ar<sup>+</sup> ion irradiation (*Japanese*) 2-41476  
 Al, ion bombarded, secondary electron emission 2-27042  
 Al, surface, heavy-ion bombardment, Auger electron emission 2-27046  
 Al-Zn alloys matrix effect study in secondary ion emission, O<sub>2</sub> adsorption saturation conditions 2-46851  
 Au, differential scatt. cross-sections for ions in energy range 65-135 keV 2-46852  
 Au film, evaporated on Si, growth, backscatt. study 2-46924  
 Au film, point defects, exoelectron emission, photostimulated emission and oriented growth on NaCl 2-45757  
 Au, high-resolution Rutherford backscattering spectra of  $\alpha$ -particles 2-46854  
 Au, silicide formation on Si (111), studied by high energy He<sup>+</sup> scatt. 2-27477  
 Au, spike effect obs. in heavy-ion sputtering 2-2398  
 Au/Ag(111) epitaxy, first stage, backscatt./channelling anal. 2-50965  
 BaTiO<sub>3</sub>, ferroelec. surface, ion beam refl. and chemical etching study 2-30722  
 CaF<sub>2</sub>, recoil sputtering mechanism, excited sputtered particle source 2-17589  
 Co single crystal, Ar<sup>+</sup> bombardment, sputtering yield 2-46915  
 Cu, ion bombarded, secondary ion emission, incident ion energy depend. 2-27044  
 Cu, ion-induced secondary-electron yield, ang. depend. 2-17588  
 Cu, on the ion bombardment induced cone/pyramid apex angle 2-13606  
 Cu-Pt alloys, material sputtered by Ar<sup>+</sup>, ang. distrib. 2-46914  
 Fe/N<sup>+</sup> ion implant, depth profile, stopping power, backscatt. meas. 2-45234  
 GaAs (100), low energy Ar ion bombard. damage, Rutherford backscatt. study 2-36750  
 Ge, amorphous and single crystal, scattered-ion yield enhancements near 180°, reversibility effects 2-46853  
 Ge/Si(111) system, pseudomorphic struct. at interface, high energy ion scatt. study 2-12938  
 H<sup>+</sup> ion source, charge exchange, conversion coeff. and scatt. angle 2-4382  
<sup>4</sup>He ions backscattering yield enhancement near 180°, expt. study 2-46855  
 I, proton bombarded, K- and L-shell ionisation 2-4372  
 InP (100), low energy Ar ion bombard. damage, Rutherford backscatt. study 2-36750  
 KCl, ionic clusters, sputtering 2-46916  
 LiF, ionic clusters, sputtering 2-46916  
 LiF, recoil sputtering mechanism, excited sputtered particle source 2-17589  
 LiNbO<sub>3</sub>(TaO<sub>3</sub>), electron and ion bombard., electron spectra 2-41462  
 MgF<sub>2</sub>, recoil sputtering mechanism, excited sputtered particle source 2-17589  
 Mo, ion bombarded, secondary ion emission, incident ion energy depend. 2-27044  
 Mo, secondary electron emission, impact of O<sup>-</sup>, H<sup>-</sup> and Cl<sup>-</sup> 2-46856  
 NaCl, ionic clusters, sputtering 2-46916  
 Nb, polycryst., Ar<sup>+</sup> ion bombarded, cluster ion emission 2-46850  
 Nb-V alloy, ion scatt. spectra, sputter-induced photon spectra, SIMS 2-46848  
 Nb-V alloys, Ar<sup>+</sup> ion bombardment, cluster ion emission 2-46850  
 Ni (001), clean and O covered, low energy He<sup>+</sup> ion scatt. spectroscopy, neutralisation 2-13612  
 Ni, polycrystalline, He<sup>+</sup> low energy ion scatt., neutralisation 2-51759  
 Ni surface, (110), ion scatt., multiple scatt. effects, expt. and computer simulation 2-36749  
 Ni-Au alloys, composition change from Ar<sup>+</sup> bombardment, Rutherford backscatt. meas. 2-45292  
 Pd, silicide formation on Si (111), studied by high energy He<sup>+</sup> scatt. 2-27477  
 Pt, desorption of H<sub>2</sub>, studied by He beam diffr. Debye-Waller effect, surface vibr. 2-51001  
 Si (100), low energy Ar ion bombard. damage, Rutherford backscatt. study 2-36750  
 Si interfaces, backscattering and ion channelling studies 2-45742  
 Si, ion scatt., 0.1 to 2 MeV, struct. sensitive surface peak, Monte Carlo simulation 2-13614  
 Si reordered surfaces, struct., backscatt./channelling anal. 2-50965  
 Si surface, (111), Ag growth and surface struct., low energy ion scatt. spectra 2-45727  
 Si surface, condensation of bombarding Ga<sup>+</sup> ions 2-17584  
 Si, surface, heavy-ion bombardment, Auger electron emission 2-27046  
 Si:As<sup>+</sup> ion implant, depth profile, stopping power, backscatt. meas. 2-45234  
 Si:Cs, ion implanted, dopant retention, backscatt. study 2-45217  
 Si:Pb, ion implanted, dopant range, damage depth, backscatt. and channelling anal. 2-45216  
 Si:Sb(In), Rutherford backscatt., ion channelling, dopant diffusion 2-45252  
 Si:Xe, ion implanted, dopant retention, backscatt. study 2-45217  
 TiC coating, surface erosion under <sup>4</sup>He<sup>+</sup> and D<sup>+</sup> ion irradiation 2-12650  
 TiC(001) and (111) surfaces, atomic struct., electronic struct., chemisorption 2-40654  
 V, Ar<sup>+</sup> ion bombarded, cluster ion emission 2-46850  
 W, desorption of C, Ar ion bombardment expt. Auger spectra 2-26207  
 W, secondary electron emission impact of O<sup>-</sup>, H<sup>-</sup> and Cl<sup>-</sup> 2-46856  
 W surface, (110), <sup>3</sup>He and <sup>4</sup>He atoms reflection coeffs., atom probe FIM study 2-27043  
 WO<sub>3</sub> (001), adsorption of H and H<sup>+</sup> ion bombard., new states in UPS spectra 2-17605



ion thrusters see ion engines

## ionic conduction in solids

- see also superionic conducting materials
- alkali silicate glass, mixed-alkali, elec. cond. theory, electronegativity and internal ion exchange role 2-12822
- electrode materials for high-temp. solid electrolyte fuel cells 2-14069
- Frenkel-Kontorova model, configurational excitations and sp. ht. 2-1633
- galvanic cell measurements, with stabilised  $ZrO_2$  and Pt probes 2-30648
- germanate glasses, O anomalies, rel. to props. 2-5055
- glass, ionically conducting, shape of complex resistivity arcs 2-16846
- glass surface reacted with water, elec. resist. 2-1658
- gluconolactone-containing polymer membrane, alkali metal ion active transport 2-45615
- ice, electron and proton cond. 2-1971
- ice, struct. and proton cond. at high press., review 2-1386
- immittance data, three dims. perspective plotting and fitting 2-26109
- microwave conductivity near order-disorder phase transition 2-21378
- MOS structures, ionic movement of Na, models (Chinese) 2-8661
- NASICON, ceramic solid electrolyte (Polish) 2-30652
- Nernst-Einstein eqn. for high defect conc. solids 2-26108
- NMR techniques for studying ionic diffusion in solids, review 2-31314
- one-dimensional superionic conductors 2-12843
- oxides, doped, with fluorite struct., ionic cond. 2-21385
- oxides, stabilised fluorite struct., config. model for cond. 2-21352
- polyacetylene analogues, prep., thermal and elec. props. 2-50906
- polyethylene terephthalate ionic cond., steady-state sublinear DC cond. due to neutralisation of mobile ions 2-8670
- properties and research topics, review 2-45048
- quartz, fused, resistivity under shock compression 2-5405
- quartz, ionic conduction, X-ray and  $\gamma$ -ray induced, annealing, activation energy 2-50910
- quartz, ionic conductivity, interstitial defects, complex impedance anal. 2-50909
- quartz filled bisphenol epoxy HV DC insulation, effects of quartz fillers 2-8671
- rare-earth silicates (germanates), synthesis, structural characts. and elec. cond. 2-50948
- silicate glasses containing Sb oxide or As oxide, elec. props. 2-16897
- solid state ionics and galvanic cells, conf., Tokyo, Japan (Sept., 1980) 2-14975
- superionic conductor, glassy, ionic conduction mechanisms 2-16839
- superionic conductor, ionic conductivity theory 2-16840
- thermally stimulated processes, kinetic eqn., mixed first and second order form. 2-27003
- transport coefficient measurement, construction of drift tube (Japanese) 2-52198
- Ag chalcogenides, ionic cond. meas. 2-16842
- AgCl: Cd, low temp. elec. cond. 2-1655
- AgCl(Br), ionic transport, anomalously high, defect mechanisms 2-21399
- AgCrS<sub>2</sub>, conduction ions partly-filled 2D-hexagonal sublattice, phase diagram 2-21303
- Ag<sub>2</sub>HgI<sub>4</sub>, high press. phase, phase boundaries 2-16753
- Ag<sub>2</sub>HgI<sub>4</sub>, superionic conductor, ionic cond. and dielec. relaxation 2-16853
- AgI, elec. cond. and phase transition, CdI<sub>2</sub> effect 2-45550
- AgI film conductivity in Ag $\beta$ -AgI/2I<sub>2</sub>Py cell 2-16878
- AgI multiphase disperse systems, AC elec. cond. enhancement 2-16877
- $\alpha$ -AgI type superionic conductors, transverse cond. and polaritons 2-16859
- AgI-Ag<sub>2</sub>MoO<sub>4</sub> superionic conducting glass, thermoelec. power 2-16858
- AgI-Ag<sub>2</sub>WO<sub>4</sub> vitreous superionic conductor, ionic diffusion coeffs. 2-16905
- Ag<sub>2</sub>SBr, ionic transport, elec. cond. and thermoelec. power 2-16851
- Ag<sub>2</sub>Si(Br), structural phase transition, dielec. and neutron scatt. studies 2-16777
- $\alpha$ -Ag<sub>2</sub>Se, thermal diffusion coeff. of Ag atoms 2-16857
- $\beta$ -Al<sub>2</sub>O<sub>3</sub>, AC conductivity below  $10^{11}$  Hz 2-40899
- $\beta''$ -Al<sub>2</sub>O<sub>3</sub>, moisture effect on ionic cond. 2-26116
- $\beta''$ -Al<sub>2</sub>O<sub>3</sub>:H<sub>2</sub>O<sup>+</sup>(-K<sup>+</sup>), protonic motion, NMR study 2-16856
- $\beta$ -Al<sub>2</sub>O<sub>3</sub>:Mg<sup>2+</sup> ion implanted thin film, sputter deposition, Raman scatt. 2-27088
- $\beta''$ -Al<sub>2</sub>O<sub>3</sub>:NH<sub>4</sub><sup>+</sup>, H<sub>2</sub>O<sup>+</sup>, proton motion and relation times 2-16855
- $\beta$ -Al<sub>2</sub>O<sub>3</sub>:NH<sub>4</sub><sup>+</sup>, proton motion and relation times 2-16855
- $\beta$ -Al<sub>2</sub>O<sub>3</sub>:Na<sup>+</sup>, mech. and elec. relaxation meas. 2-16718
- $\beta$ - and  $\beta''$ -Al<sub>2</sub>O<sub>3</sub>:Na<sup>+</sup> single crystals, ionic conductivities 2-16844
- As<sub>2</sub>Se<sub>3</sub>-Ag amorphous film, XPS study, core electron binding energy 2-46872
- B<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O glasses, ionic cond., relation to alkali metal ion conc. (French) 2-50922
- B<sub>2</sub>S<sub>3</sub>-Li<sub>2</sub>S, vitreous domains, synthesis and elec. props. (French) 2-50905
- B<sub>2</sub>S<sub>3</sub>-Na<sub>2</sub>S, vitreous domains, synthesis and elec. props. (French) 2-50905
- BaF<sub>2</sub> crystals, ionic conductivity 2-45612
- Bi<sub>1-x</sub>Ba<sub>x</sub>O<sub>(3-x)/2</sub>, cryst. chemistry anal. elec. props. 2-21383
- Bi<sub>1-x</sub>Ca<sub>x</sub>O<sub>(3-x)/2</sub>, cryst. chemistry anal. elec. props. 2-21383
- Bi<sub>1-x</sub>Ca<sub>x</sub>O<sub>(3-x)/2</sub>(Sr<sub>2x</sub>)(Ba<sub>2x</sub>)O<sub>3-x</sub> solid soln., cryst. struct. 2-12571
- Bi<sub>2</sub>O<sub>3</sub>-R<sub>2</sub>O<sub>3</sub> (R=La, Nd, Sm, Dy, Er, Yb), sintered, high oxide ion conductive phase form. 2-8667
- Bi<sub>2</sub>O<sub>3</sub>-R<sub>2</sub>O<sub>3</sub> (R=rare earth) system, sintered, high O<sup>2-</sup> ion conduction 2-12837
- Bi<sub>1-x</sub>Sr<sub>x</sub>O<sub>(3-x)/2</sub>, cryst. chemistry anal. elec. props. 2-21383
- CaF<sub>2</sub>, rare earth oxyfluoride impurity effect on elec., mech. and optical characts. 2-26880
- CaO-B<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>, autosolvation effect, elec. cond. 2-50908
- Ca<sub>1-x</sub>R<sub>x</sub>F<sub>2+x</sub> (R=La, Gd, Er, Y), conc. solid solns., elec. cond. rel. to defect regions 2-26111
- CaS-TiS<sub>2</sub> solid electrolyte for S determ. in liq. Fe 2-12842
- CdF<sub>2</sub>:Na(Y), thin films, ionic thermal current, conduct. mechanism 2-50907
- (CeO<sub>2</sub>)<sub>0.82</sub>(GdO<sub>1.5</sub>)<sub>0.18</sub>, sintered, density and ionic cond. 2-5261
- Co complex with 3-nitroaniline, IR and electronic spectra, mag. and cond. meas. 2-26911
- CsI, charge transport, yield point and microhardness, influence of crystal growth method and impurities 2-21208
- Cu complex with 3-nitroaniline, IR and electronic spectra, mag. and cond. meas. 2-26911
- Cu<sub>2</sub>HgI<sub>4</sub>, microwave conductivity near order-disorder phase transition 2-21378
- CuI-RbCl-(CuCl) system, phase diagram and solid state ionics 2-17672
- Cu<sub>2-x</sub>S, NMR and ionic cond. 2-12826
- Cu<sub>2-x</sub>Se, NMR and ionic cond. 2-12826
- DTaWO<sub>6</sub>, D site location from neutron powder diff. data 2-21118
- ionic conduction in solids continued
- DUO<sub>2</sub>AsO<sub>4</sub>4D<sub>2</sub>O, diffusion and cond. mech. from neutron diff. evidence 2-21377
- GeO<sub>2</sub>-Na<sub>2</sub>O glasses, transport props., impurity OH effect 2-8668
- (H(H<sub>2</sub>O)n)<sub>1/2</sub>Sb<sub>2</sub>O<sub>6</sub>, new proton conductor 2-16847
- <sup>4</sup>He, solid, ionic current bursts, charged low angle grain boundary motion model 2-35857
- K<sub>2</sub>Al<sub>2</sub>Ti<sub>10</sub>O<sub>26</sub> and K<sub>2</sub>Mg<sub>2</sub>Ti<sub>8</sub>O<sub>20</sub>:Li, one-dimens. ionic cond., AC cond. and <sup>7</sup>Li NMR study 2-13372
- KCl:SO<sub>4</sub><sup>2-</sup> anion migration enthalpy, preexponential frequency factor, ionic thermocurrent meas. 2-12851
- KLiSO<sub>4</sub>, ionic conductor, dielec. const. in DC field (Chinese) 2-41245
- K<sub>0.1</sub>Li<sub>0.9</sub>SbO<sub>3</sub>, struct. and cond. props. (French) 2-5273
- K<sub>1.6</sub>Mg<sub>0.8</sub>Ti<sub>7.2</sub>O<sub>16</sub> single cryst., microwave ionic cond. at 9.54 and 32.8 GHz 2-21381
- K<sub>1.8</sub>Ta<sub>1.8</sub>W<sub>0.2</sub>O<sub>6</sub>nH<sub>2</sub>O, ionic cond., X-ray and NMR study 2-30654
- LaF<sub>3</sub>(CaF<sub>2</sub>), ion transport at low temps. 2-16849
- (LaO)<sub>4</sub>Ag<sub>1.5</sub>Ga<sub>1.5</sub>S<sub>6</sub>, leaf-struct. compounds (French) 2-35452
- (LaO)AgS, Ag migration, electron microscope obs. (French) 2-35736
- (La<sub>1-x</sub>Sr<sub>x</sub>)FeO<sub>3</sub> (0<x<0.5), ionic cond., elec. resist. meas. under various relative humidities 2-8666
- Li/LiI/I<sub>2</sub> (PVP) pacemaker battery, solid electrolyte role 2-18045
- Li/LiI/1-n-butylpyridinium polyiodide solid electrolyte cell, reaction mechanisms 2-17900
- Li-Li<sub>2</sub>N interface behavior under anodic polarisation, diffusion 2-16874
- LiAl composite electrodes in solid state battery 2-27583
- LiBr(I), H<sub>2</sub>O, electrochem. behaviour, AC impedance spectra and ionic conduction 2-22468
- LiCl, dispersed second phase particles, enhanced ionic cond., <sup>7</sup>Li NMR study (Chinese) 2-41206
- LiCl:Ca<sup>2+</sup>(Sr<sup>2+</sup>), ionic cond. of pure and doped single crystals 2-26115
- LiH<sub>2</sub>PO<sub>4</sub>, ionic cond. and electrochem. props. 2-40596
- LiI, ionic conduction, composition and imperfections effects 2-21371
- LiI-H<sub>2</sub>O, phase equilibria and ionic cond. 2-16873
- LiI-NH<sub>4</sub>I(H<sub>2</sub>O), conductivity and phase equilibrium 2-21372
- LiI-H<sub>2</sub>O, conductivity enhancement by dispersed oxide phases 2-16875
- Li<sub>2</sub>MC<sub>4</sub>(M=Mg, Mn, Fe, Cd), spinel struct., ionic conductivity 2-5269
- Li<sub>0.5</sub>(M<sub>0.25</sub>V<sub>0.75</sub>)O<sub>3</sub>, structure, transport and equilibrium props. 2-26136
- Li<sub>3</sub>N, amorphous ionic conductor, sound vel. temp. depend., H impurity tunnelling 2-30534
- Li<sub>3</sub>N:H, ionic conductivity, complex least squares fitting, admittance data 2-50919
- $\alpha$ -Li<sub>2</sub>O, cryst. growth and elec. props., Chinese research 2-46896
- Li<sub>2</sub>O, antiferroelectric-cubic cryst., self-diffusion of constituent ions 2-12838
- Li<sub>2</sub>O-SiO<sub>2</sub> glass system, elec. cond., heat treatment effects 2-35732
- LiOH-Li(Br)(Cl), phase equilibria and ionic cond. 2-16873
- Li<sub>2</sub>SO<sub>4</sub>-based glasses, roller quenching prep., struct. and ionic cond. props. 2-30402
- Li<sub>2</sub>SO<sub>4</sub>-Li<sub>2</sub>B<sub>2</sub>O<sub>4</sub> ((NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>), phase diagram and ionic cond., DTA and X-ray diff. obs. (Chinese) 2-22201
- Li<sub>1.8</sub>Ta<sub>1.8</sub>W<sub>0.2</sub>O<sub>6</sub>nH<sub>2</sub>O, ionic cond., X-ray and NMR study 2-30654
- Li<sub>2</sub>Ti<sub>2</sub>O<sub>7</sub> with ramsdellite struct., solid electrolyte props. and existence region in phase diagram 2-40592
- Li<sub>2</sub>TiS<sub>2</sub>, lattice parameters and thermoelec. power meas. 2-16633
- Li<sub>2</sub>V<sub>2</sub>O<sub>7</sub>, structure, transport and equilibrium props. 2-26136
- Li<sub>2</sub>WO<sub>4</sub>, structure, transport and equilibrium props. 2-26136
- mLiF.nAlF<sub>3</sub>, amorphous thin film ionic conductors 2-21355
- MgAl<sub>2</sub>O<sub>4</sub>, elec. cond. 2-30649
- NaBH<sub>4</sub>, complex with polyethylene oxide, ionic correl. and dielec. loss 2-17400
- Na<sub>2</sub>CaP<sub>2</sub>O<sub>7</sub> derivatives, Na<sup>+</sup> ion conductivities 2-16872
- NaCl, ionic conductor, dielec. const. in DC field (Chinese) 2-41245
- Na<sub>2</sub>CrTi<sub>1-x</sub>S<sub>2</sub> system, cryst. struct., elec., mag., and NMR study 2-40360
- NaF-BiF<sub>3</sub> system, synthesis and anionic cond. of phases 2-16848
- Na<sub>2-x</sub>(H<sub>2</sub>O)<sub>x</sub>Al<sub>2</sub>Si<sub>2</sub>O<sub>7</sub>2H<sub>2</sub>O, H-natrolite, proton conduction 2-21376
- Na<sub>2</sub>Nb<sub>1-x</sub>Zr<sub>x</sub>(PO<sub>4</sub>)<sub>3</sub> solid soln., ionic cond., X-ray diff., IR absorpt., Raman scatt. 2-16870
- Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-P<sub>2</sub>O<sub>5</sub>-Li<sub>2</sub>O(K<sub>2</sub>O)(MgO)(CaO)(BaO) glasses, elec. cond., mixed alkali effect 2-12825
- Na<sub>2</sub>O-SiO<sub>2</sub> glass, elec. relax. from hydrated surface layers 2-13407
- Na<sub>2</sub>O-SiO<sub>2</sub> glass, fluctuations in ionic current induced by mech. strain 2-27302
- Na<sub>2</sub>O.3SiO<sub>2</sub> glass, elec. cond., water content effect 2-50914
- Na<sub>2</sub>O.MgO.5Al<sub>2</sub>O<sub>3</sub> ceramics, preparation and elec. cond. 2-27128
- Na<sub>2</sub>SO<sub>4</sub>.V, doped and undoped, phase transition and elec. props. 2-12739
- Na<sub>3(1+x)</sub>Sc<sub>2-x</sub>(PO<sub>4</sub>)<sub>3</sub>, relation between cryst. struct. and ionic cond. 2-25848
- Na<sub>1-x</sub>Si<sub>x</sub>Zr<sub>2</sub>P<sub>3-x</sub>O<sub>12</sub>, Nasicon system, electrochem. and struct. parameters 2-16634
- Na<sub>1.8</sub>Ta<sub>1.8</sub>W<sub>0.2</sub>O<sub>6</sub>nH<sub>2</sub>O, ionic cond., X-ray and NMR study 2-30654
- Na<sub>x</sub>V<sub>2</sub>O<sub>6</sub>, mixed conduction study 2-1970
- Na<sub>2</sub>YSi<sub>4</sub>O<sub>12</sub>, ionic conductivity and conduction path struct. 2-16869
- Na<sub>2</sub>YSi<sub>4</sub>O<sub>12</sub>, superionic conductor, elec. cond. study 2-1664
- Na<sub>1+x</sub>Zr<sub>2-x</sub>Fe<sub>2-x</sub>(PO<sub>4</sub>)<sub>3</sub> ionic conductor, conduction paths 2-16871
- Na<sub>1+x</sub>Zr<sub>2-x</sub>Fe<sub>2-x</sub>(PO<sub>4</sub>)<sub>3</sub>, sintered ionic conductive material, conduction paths 2-21356
- Na<sub>1+x</sub>Zr<sub>2-x</sub>L<sub>x</sub>(PO<sub>4</sub>)<sub>3</sub> (L=Cr, In, Yb), Nasicon-type phases, ionic cond. 2-16867
- Na<sub>2</sub>ZrSi<sub>2</sub>O<sub>12</sub>, crystal struct. and ionic conductivity 2-8498
- Na<sub>4</sub>ZrSi<sub>2</sub>O<sub>12</sub>, Nasicon-type struct., thermal expansion of lattice rel. to Na<sup>+</sup> mobility 2-16868
- Na<sub>1+x</sub>Zr<sub>2-x</sub>Si<sub>2-x</sub>P<sub>3-x</sub>O<sub>12</sub> (2.0<x<2.4) elec. cond. using complex admittance method 2-1661
- Na<sub>1+x</sub>Zr<sub>2-x</sub>Si<sub>2-x</sub>P<sub>3-x</sub>O<sub>12</sub>, NASICON, solid electrolyte, thermal cycling effects on conductivities and mech. props. 2-5270
- Ni(II) complex with 3-nitroaniline, IR and electronic spectra, mag. and cond. meas. 2-26911
- $\beta$ -PbF<sub>2</sub>, ionic conduction determ. 2-5271
- $\beta$ -PbF<sub>2</sub>:NaF(TbF<sub>3</sub>)(UF<sub>6</sub>), ionic cond., high press. effects 2-45617
- $\beta$ -PbF<sub>2</sub>:NaF, ionic conduction determ. 2-5271
- $\beta$ -PbF<sub>2</sub>:TbF<sub>3</sub>, ionic conduction determ. 2-5271
- PbMoO<sub>4</sub>, struct. imperf. elec. and mass transfer mechanism 2-40591
- PbO<sub>2</sub>.6Bi<sub>2</sub>O<sub>3</sub>, anion transport studyd by elec. cond. and SIMS 2-21384
- RbAg<sub>2</sub>I<sub>3</sub>, interdependence of mobile and stationary ions, NMR study 2-21912
- SiO<sub>2</sub>-Li<sub>2</sub>O(Na<sub>2</sub>O) glass, ionic cond., computer simulation 2-16887
- SiO<sub>2</sub>.6Bi<sub>2</sub>O<sub>3</sub>, anion transport studyd by elec. cond. and SIMS 2-21384
- SnCl<sub>2</sub>, ionic cond., 50°C to melting point 2-12831
- SnCl<sub>2</sub>.2H<sub>2</sub>O, protonic conductivity, crit. fluctuations contrib. 2-16854



**ionic conduction in solids continued**

- SrCeO<sub>3</sub>-based sintered oxides, proton cond., appl. to steam electrolysis for H<sub>2</sub> prod. 2-12830
- Sr(Sr<sub>(1/3)</sub>-xNb<sub>(2/3-x)</sub>O<sub>3-(3/2)x</sub>) perovskite structure, non-stoichiometry and ionic conductivity 2-1660
- α-TaO<sub>5</sub>, stabilized, solid electrolyte, complex impedance meas. 2-21382
- TeO<sub>2</sub>, electrical conductivity meas. 2-21640
- ThO<sub>2</sub> single cryst., O<sub>2</sub><sup>-</sup> self-diffusion and elec. cond. mechanism 2-12839
- TiBr-PbBr<sub>2</sub>, X-ray and thermoanalytic investigations (*German*) 2-13709
- Tl<sub>1.8</sub>Ta<sub>1.8</sub>W<sub>0.2</sub>O<sub>6</sub>N<sub>2</sub>H<sub>2</sub>O ionic cond., X-ray and NMR study 2-30654
- V<sub>2</sub>O<sub>5</sub>, composite electrodes in solid state battery 2-27583
- Y<sub>2</sub>Al<sub>2</sub>O<sub>7</sub>, elec. cond. 2-30649
- Zn<sub>2</sub>Cr(OH)<sub>6</sub>X.nH<sub>2</sub>O (X=F, Cl, Br, I, CO<sub>3</sub>, NO<sub>3</sub>), thermal decomp., ionic cond. appls. 2-22434
- Zn<sub>2</sub>Cr(OH)<sub>6</sub>X.nH<sub>2</sub>O (X=F, Cl, Br, I, NO<sub>3</sub>, CO<sub>3</sub>), anion cond. due to interparticle swelling 2-21354
- ZrHNa(PO<sub>4</sub>)<sub>2</sub>, ionic conductivity, vector impedance method, ionic diffusion coeffs. 2-50920
- Zr(HPO<sub>4</sub>)<sub>2</sub>, ionic conductivity, vector impedance method, ionic diffusion coeffs. 2-50920
- Zr(NaPO<sub>4</sub>)<sub>2</sub>, ionic conductivity, vector impedance method, ionic diffusion coeffs. 2-50920
- ZrO<sub>2</sub>, anion deficient, defect struct., rel. to ionic cond. 2-21167
- ZrO<sub>2</sub>, stabilised, cell, electrode processes studied by complex impedance method 2-13974
- ZrO<sub>2</sub> thin films for solid electrolyte fuel cells by RF sputtering 2-14070
- ZrO<sub>2</sub>, Y<sub>2</sub>O<sub>3</sub> stabilized, complex impedance anal. for development of O<sub>2</sub> sensor 2-10796
- ZrO<sub>2</sub>, Y<sub>2</sub>O<sub>3</sub> stabilized, elec. cond. behaviour 2-12840
- ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub>, solid solutions, nature of elec. cond. 2-12818
- ZrO<sub>2</sub>-Y<sub>2</sub>O<sub>3</sub> solid electrolyte, phase change and mech. props. after ageing 2-13715

**ionic conductivity in solids** see *ionic conduction in solids*

**ionic thermocurrents** see *thermally stimulated currents*

**ionisation**

- see also *associative ionisation; autoionisation; charge exchange; electron attachment; electron capture; field ionisation; ion recombination; ionisation of atoms; ionisation of gases; ionisation of liquids; ionisation of molecules; ionisation of solids; ionisation potential; Penning ionisation; photoionisation; surface ionisation*
- Orion MC-1, submillimetre emission distrib. rel. to ionisation front 2-42731
- H II regions, ionisation front interactions rel. to Bok globules form. 2-14909

**ionisation chambers**

- air-equivalent, for absolute meas. of exposure 2-24506
- avalanche chamber, multistep, performance rel. to counter gas composition (*Chinese*) 2-34242
- Bragg-curve spectroscopy detector 2-43683
- BWR, neutron flux distrib. analyser, operational testing (*German*) 2-11235
- collection efficiency determ., use of a Victoreen 500 electrometer 2-34237
- cryogenic ionization chamber for high-resolution fission cross-section measurements 2-19846
- cylindrical ion chamber for neutron dosimetry, characts., book contrib. 2-19884
- dose meas. with ionisation chambers in phantom irradiated by neutron beams 2-22837
- drift chamber, gas mixture control system in Axial Field Spectrometer 2-19842
- effective meas. point for in-phantom meas. with photons 2-19784
- exposure absolute determ. for 60-250 kV X-rays, ionisation chamber meas. (*Chinese*) 2-34233
- fast neutron beam dosimetry physics group experiences in USA, book contrib. 2-22833
- fast neutron dosimetry, ionisation chambers characts., book contrib. 2-19879
- fast neutron dosimetry, nonhydrogenous ionisation chamber appl. 2-19791
- free-air chambers, corrections for scatt. photons 2-49226
- gas ionisation by X-ray, counter capable of seeing individual electrons 2-50363
- graphite ionisation chambers, ionisation error due to porosity 2-19892
- gridded ionisation chamber, secondary scintillation study 2-39269
- He ionisation detector appl. to gas chromatography 2-2755
- high-energy electrons, dose estimation using ionisation chambers (*Czech*) 2-19914
- inelastic interaction cross section, attenuation length and power of energy spectrum, shower registration threshold effect (*Russian*) 2-15679
- ion chamber for neutron dosimetry, book 2-18823
- ion chambers for photon dosimetry, minimum operational requirements, book contrib. 2-19875
- kerma determ. with ion chambers 2-19781
- kerma determination ion chamber, characts. book contrib. 2-19877
- KT ion chamber characts., book contrib. 2-19876
- liquid, free-carrier yields of radiation induced cond. in liquefied rare gases 2-1974
- low ionisation current meas., dosimetric problem 2-19890
- methane-CO<sub>2</sub>-N<sub>2</sub>, tissue-equivalent gas mixture, W<sub>n</sub> values computation 2-19783
- mixed-field dosimetry, uncertainty anal. 2-19787
- multisegmented ion chamber for CT scanner dosimetry 2-6266
- multistep avalanche chamber, design, building and testing (*Chinese*) 2-34245
- multiwire chambers, filament tension meas. device 2-15163
- multiwire chambers, filament tension meas. device 2-19097
- MWPC monitoring, task transfer to microprocessor 2-24556
- neutron dosimetry, experience with ionisation chamber by ECNEU group, book contrib. 2-22834
- neutron dosimetry, ion chambers effective measuring position 2-19785
- neutron dosimetry with ionisation chambers, cavity theory and its practical implications 2-19780
- non-hydrogenous detectors, relative neutron sensitivity 2-19788
- NRPB ion chamber for neutron dosimetry appl., characts., book contrib. 2-19882
- parallel plate avalanche counter, fission fragments detection 2-19857
- particle position meas. 2-15669
- particle trajectories electrostatic imaging 2-43680

**ionisation chambers continued**

- pion beam, ionisation chamber meas. 2-15685
- position sensitive parallel plate avalanche counter for minimum ionising particle detection 2-4172
- recombination correction for pulsed, swept radiation, expt. 2-49247
- recombination correction for pulsed, swept radiation, theory 2-49246
- spherical ion chamber IC-17A for neutron dosimetry, characts., book contrib. 2-19881
- stopping power in ionisation chamber meas. interpretation 2-19891
- TE ion chamber, thimble type, dosimetry appl., book contrib. 2-19878
- TE ion chamber, tube length at gas exhaust port, influence on response, book contrib. 2-19888
- TE ion chamber meas. for neutron dosimetry, interpretation and corrections and book contrib. 2-19885
- TE ion chambers model IC-17 for dose meas., calibration constancy 2-19886
- TE ionisation chambers, displacement correction factor 2-19786
- thimble ionisation chamber for neutron dosimetry appl., characts., book contrib. 2-19880
- tissue equivalent plastic ionisation chambers, response characts. in photon and neutron fields, book contrib. 2-19887
- tissue-equivalent ionisation chambers, performance tests 2-19889
- TNO spherical tissue equivalent ion chamber for neutron dosimetry, characts., book contrib. 2-19883
- UV and X-ray photons detection, coordinate gas detector with HF field 2-611
- W-values relevant for neutron dosimetry 2-19782
- n-y dose meas. in water phantom for 18.4 MeV neutrons 2-19789
- <sup>3</sup>He spectrometer calibration and neutron spectrum meas. from Am/Li source 2-15662
- Mg-Ar ion chamber sensitivity to high energy neutrons 2-19790
- <sup>210</sup>Pb chronology using ionisation chamber and Si detector 2-19796
- <sup>235</sup>U mass meas. in large vol. multiplicated fission ionisation chamber 2-38938

**ionisation gauges**

- axial emission ultrahigh vacuum gauge 2-48717
- calibration by standard laboratories, comparison 2-48716
- calibration system based on piston manometer 2-191
- calibration using molecular beam collision technique 2-23658
- cryogenics and vacuum engineering, T-p relationship (*Japanese*) 2-43034
- high pressure, calc. of ion current 2-48719
- nonlinearity at upper limit of measured press. 2-19126
- radioisotopic ionisation pressure gauge, for 650-1.7×10<sup>5</sup> Pa range 2-19124
- triode and Bayard-Alpert types, long term behaviour 2-19125
- UHV, design and performance (*Japanese*) 2-28860

**ionisation of atoms**

- see also *atomic electron impact ionisation*
- alkali metals ionisation in CO flames, RF reson. study and RF system design 2-4238
- atom+heavy charged particles, inner-shell electron ionisation, classical model, relativistic effects 2-20173
- atom+ion collision, electron ejection, ang. and energy distrib. calcs. 2-44071
- atomic cation, two electron double escape, depend. on states, Wannier theory 2-44105
- atoms, electron entrainment by reson. light and quadrupole reson. 2-15759
- atoms, ionisation pots., total Hartree-Fock energy-eigenvalue sum calcs. 2-11385
- benzene, multiphoton ionisation and fragmentation, isotope selectivity, mass spectra 2-34504
- chaotic laser field ionisation, influence of non-Lorentzian line shape 2-24663
- continuum electrons in a Coulomb field, wave functions asymptotic form 2-42894
- cross section scaling laws for charge exchange, ionisation and electron loss atom-highly charge ion collisions 2-7638
- electron impact ionisation, laser field effect, appl. to photoionisation 2-4389
- electron-positron pair photoproduction is atomic electron field, cross section calcs. 2-43874
- empirical approach to K-shell ionisation cross sections by electrons 2-34366
- heavy ion+atom collisions, dynamic inner-shell ionisation 2-34549
- heavy particle collision ionisation, multichannel treatment with discretisation of electronic continuum 2-44076
- highly stripped atoms, relativistic Auger and X-ray deexcitation rates 2-11446
- hydrogenic atoms, invariable field highly-excited, tunnel ionisation 2-43820
- inner shell ionisation by light ions, conference, Linz, Austria (March 1981) 2-42774
- ions with K-electrons, influence of dense plasma on wave functions and ionisation energies 2-10313
- isoelectronic series ionisation energy test for atomic total energies approx. formulas, numerical calcs. 2-49270
- K-shell fluorescence and photoionisation in elements 28≤Z≤53 2-29549
- K-shell internal ionisation in beta decay 2-29231
- K-shell ionisation by heavy charged particles, cross sections 2-44096
- K-shell ionisation by protons and deuterons, Coulomb deflection factors, role of dipole amplitudes 2-44040
- K-shell ionisation cross sections and relative X-ray emission rates of Sn, Ho, Tm, Au, Pb and Bi bombarded with 9-155 MeV alpha particles 2-777
- K-shell ionisation of atoms by relativistic ions 2-34545
- L-shell ionisation by low-energy protons and alpha particles 2-39364
- laser atomic spectroscopy appls. in nuclear physics 2-3628
- light ion induced reactions, recoil effects in atomic inner shell ionization 2-43876
- low energy light ion impact ionisation, double collision mech. 2-4373
- low energy X-ray diagnostics conference, Monterey 1981 2-33205
- low energy X-ray interactions: photoionization, scattering, specular and Bragg reflection 2-29554
- low-energy at. collisions, ionisation processes 2-49566
- magic-angle photoionisation, Zeeman inhomogeneity elimination 2-34363
- multiconfiguration ground state, photo-excitation and ionisation, relativistic RPA 2-43873
- multiphoton ionisation, effective order of non-linearity 2-15756
- multiphoton ionisation, high-intensity approx. 2-7614



## ionisation of atoms continued

- multiphoton ionisation probabilities, calcs, perturbative treatment 2-4249  
 multiphoton reson. excitation and ionisation, laser appls. 2-31973  
 multiphoton transitions, depend. on light statistical props. 2-875  
 particle scatt. in strong multimode laser field, theory 2-20014  
 photoionisation, electron interference in homogeneous electric field (*Russian*) 2-11444  
 photoionisation, shape resonance and Cooper-minimum struct., overlap 2-34361  
 photoionisation cross section calc. at sub keV 2-29555  
 photoionisation in a static mag. field 2-34362  
 probability measurement with MWPC 2-19852  
 recoil effects in atomic inner shell ionization 2-43876  
 resonance EM field effect on autoionisation states (*Russian*) 2-49346  
 resonance ionisation spectroscopy, summary and appl. 2-43090  
 screening effects on Wannier's theory of atomic threshold ionisation 2-7649  
 semiclassical approach to electron-electron correl. in electron impact ionisation of atoms 2-34574  
 single atom detection methods, using laser beams, review 2-7685  
 spectra of atoms and atomic ions, wavelengths and transition probabilities, data table 2-4237  
 Stark effect, measuring system perturbations 2-11433  
 steady-state quantum interference in resonance fluorescence 2-34342  
 two-electron systems, dipole transitions from excited S-states, time-depend. Hartree-Fock theory 2-29498  
 two-particle-hole Tamm-Dancoff approx. calcs. 2-19946  
 Z=5 to 30 ions, 213l' autoionis. states, transition probabilities calcs. 2-34359  
 Ag, inner shell ionisation by electron impact, 60-600 keV region 2-20190  
 Ag, K-shell ionisation by protons 2-43875  
 Ag, proton bombarded, K- and L-shell ionisation 2-4372  
 Ar, photoionisation, cross sections, spin-polarisation, data compilation 2-38370  
 Ar-H<sup>+</sup>, K-shell ionisation probability meas. 2-24840  
 Ar+He, total ionisation cross section, mass anal. 2-34544  
 Ar+He\*(2's, 2's), total integral collision and ionisation cross sections in thermal energy region (*German*) 2-7624  
 Ar<sub>n</sub> clusters, photoionisation efficiency curves 2-39521  
 Au, K-shell ionisation by protons 2-43875  
 Ba, atomic, many-photon two electron ionisation, freq. depend. 2-29556  
 Ba, config. interaction between autoionis. and Stark state resons. 2-34318  
 Ba II fluorescence from Ba atoms resonantly photoionised by 584-Å radiation 2-39353  
 Ba, nonlinear two-electron ionisation process, depend. on laser radiation polarisation 2-49347  
 Ba, photoionisation cross sections, mass spectra study 2-24662  
 Be isoelectronic sequence, outer-shell photoionisation calc. 2-685  
 C ions, electron impact ionisation in plane-wave Born approx. 2-44109  
 C, partial photoionisation cross sections, subshell branching ratios 2-7529  
 Ca, photoionisation, fluoresc., matrix isolation obs. 2-669  
 Cd, spin-polarisation, angular distrib., photoionisation cross sections 2-43871  
 Cl, sparking pot. and secondary ionisation coeff. 2-1356  
 Cl+Pb, K-shell ionisation process, trajectory, binding and relativistic effects 2-44041  
 Co, transition probabilities and oscillator strengths, data compilations 2-7523  
 Cs, electric field ionisation, spin-orbit effect 2-34330  
 Cs, ionisation rate const. in CO flames, RF reson. determ. 2-4239  
 Cs, multiphoton ionis. rel. to Cs<sub>2</sub> laser photodecom. 2-20146  
 Cs, multiphoton ionisation probabilities, calcs, perturbative treatment 2-4249  
 Cs, resonant multiphoton ionisation at 1.059 μm, laser temporal-coherence effects 2-15757  
 Cs, Stark enhancement in resonant multiphoton ionisation in incoherent laser pulses 2-19997  
 Cs, three-photon ionisation, probability rate, spin-orbit coupling, electron spin polarisation 2-686  
 Cu, atomic, photoabsorpt. and photoemission with reson. two electron excitation 2-34583  
 Cu, K-shell ionisation by protons 2-43875  
 F ions, electron impact ionisation in plane-wave Born approx. 2-44109  
 Fe, transition probabilities and oscillator strengths, data compilations 2-7523  
 Ga<sup>+</sup>, electron impact excitation autoionisation 2-44110  
 H, electric field ionisation rate 2-4418  
 H, highly excited formation in beam-foil interaction 2-44074  
 H like atoms, ionisation by slow ions (*Russian*) 2-24828  
 H, multiphoton ionisation, non-Hermitian Schrodinger eqn., time depend. theory 2-4250  
 H<sup>+</sup> polarised ions production by electron transfer from atoms 2-24469  
 H-like ions, Stark effect appl. 2-49330  
 H+H<sup>+</sup>, classical trajectory calcs. using Wigner function 2-20160  
 H+H<sup>+</sup>(C<sup>6+</sup>), charge transfer and ionisation cross sections, quantal study, finite-elemental 2-39485  
 H+H<sup>+</sup>(Li<sup>3+</sup>)(B<sup>3+</sup>)(C<sup>5+</sup>)(Si<sup>14+</sup>), ionisation, excitation and charge transfer cross section calcs. 2-44089  
 H<sup>+</sup>+Cu(Ag)(Au), K-shell ionisation, impact parameter depend. 2-44042  
 HCl, photoionisation, HCl<sup>+</sup> UV emission spectra 2-39417  
 He, collisions with nuclei, ionisation processes, electron approx. 2-24839  
 He, electron impact ionisation, coincidence cross sections meas. 2-7650  
 He, photoionisation, partial cross section meas. and autoionisation to He<sup>+</sup>(N=2) 2-49349  
 He<sup>+</sup> ions in solar wind, rel. to chromospheric plasma ejection (*German*) 2-3176  
 He+Ar(Kr), He metastable states; chemi-ionisation velocity depend. 2-44069  
 He+C(N)(O)(F) ions, one-electron ions ionisation and capture 2-7636  
 He<sup>+</sup>+He, ionisation, autoionising states, electron spectra 2-44077  
 Hg, 4f and 5d subshells, photoionisation, Hartree-Slater central field model 2-24664  
 Hg, 6s<sup>2</sup> photoionis., autoionisation resons. meas. by photoelectron polarisation 2-49352  
 Hg, spin-polarisation, angular distrib., photoionisation cross sections 2-43871  
 I, proton bombarded, K- and L-shell ionisation 2-4372  
 In, excited, diabatic field ionisation, elec. field slew rate 2-43867  
 In Rydberg series study by two-photon laser spectroscopy 2-29676  
<sup>113</sup>In, internal conversion, double electron ejection 2-49354

## ionisation of atoms continued

- K, ionisation rate const. in CO flames, RF reson. determ. 2-4239  
 K, multiphoton ionisation probabilities, calcs, perturbative treatment 2-4249  
 K, three-photon ionisation, polarization effects 2-11445  
 Kr atoms in Kr-Ar mixtures, pressure-induced multiphoton ionisation 2-7530  
 Kr, photoionisation, cross sections, spin-polarisation, data compilation 2-38370  
 Li atom, inner shell excitation freq., spin flipping operator effects anal. (*Spanish*) 2-665  
 Li, ionisation rate const. in CO flames, RF reson. determ. 2-4239  
 Li-like ions, photo-Auger ionisation, cross sections, isolated resonance approx. 2-43878  
 Li<sup>4+</sup>+H(Li<sup>4+</sup>+H<sup>+</sup>+e, crossed beam obs. 2-44072  
 Lu, single photon photoionisation mass spectroscopy via autoionising resonances 2-49587  
 N ions, electron impact ionisation in plane-wave Born approx. 2-44109  
 N-like atoms, fluoresc. radiaton polarisation subsequent to inner-shell photoionisation, LS coupling formulas 2-49324  
 Na, ionisation rate const. in CO flames, RF reson. determ. 2-4239  
 Na+Ba, two-photon radiative ionisation collision obs. 2-44049  
 Na+He<sup>+</sup>(Ne<sup>+</sup>)(Ar<sup>+</sup>), Rydberg atom l-change near matching vel. region 2-4374  
 Na+Na, excited states, associative ionisation, rate consts. 2-47334  
 Na+Na, Na<sub>2</sub><sup>+</sup> and Na<sup>+</sup> prod., associative and Penning ionisation 2-15889  
 Nb<sup>4+</sup>, energy levels and spectrum meas. and analysis, ionisation energy calcs. 2-11426  
 Ne two-particle-two-hole type resonances, influence of interchannel interactions upon characts. 2-666  
 Ne+Ar<sup>+</sup>, low energy collisions, charge transfer, ionisation, cross section meas. 2-34562  
 Ne+Ni, K-shell ionisation process, trajectory, binding and relativistic effects 2-44041  
 Ne<sup>+</sup>+Ne collisions, electron emission, continuous energy distrib. 2-29705  
 Ni, transition probabilities and oscillator strengths, data compilations 2-7523  
 O ions, electron impact ionisation in plane-wave Born approx. 2-44109  
<sup>187</sup>Os, nuclear excitation by electron transition following K-shell ionisation by bremsstrahlung 2-7081  
 Pb+Cl ions, K shell ionisation, role of relativistic and binding energy effects 2-34548  
 Rb, electric field ionisation, spin-orbit effect 2-34330  
 Rb, highly excited S state, collisional ionis. 2-20168  
 Sb, inner shell ionisation by electron impact, 60-600 keV region 2-20190  
 Se, inner shell ionisation by electron impact, 60-600 keV region 2-20190  
 Se\*(<sup>1</sup>S) wavelength depend. photoionisation cross section in VUV, OCS<sub>2</sub> photodissociation 2-15758  
 Sn, partial photoionisation cross sections, subshell branching ratios 2-7529  
 Sr, atomic, many-photon two electron ionisation, freq. depend. 2-29556  
<sup>88</sup>Sr+H<sup>+</sup>, K-shell ionisation probability across nuclear elastic scatt. reson. 2-7635  
 U, high-lying excited autoionising levels and Rydberg progressions, spectroscopic data 2-43830  
 U ionisation and excitation in hollow-cathode lamp, carrier gas influence 2-15886  
 U, partial photoionisation cross sections, subshell branching ratios 2-7529  
 U, soft X-ray total attenuation coeff. 2-29546  
 Xe, multiphoton ionisation, photoelectron spectra 2-687  
 Xe, photoionisation, cross sections, spin-polarisation, data compilation 2-38370  
 Xe, post-collision interaction in inner shell ionisation 2-20019  
 Xe<sup>+</sup>(<sup>2</sup>D<sub>3/2</sub>), photoionisation, photoelectron and Auger electron asymmetries 2-20015  
 Yb, single photon photoionisation mass spectroscopy via autoionising resonances 2-49587  
 Zn, spin-polarisation, angular distrib., photoionisation cross sections 2-43871

## ionisation of gases

- see also atmospheric ionisation; electron avalanches; Townsend discharge  
 air, average energy to create ion pair by U and Pb ions 2-44820  
 dense ionised gas, electron and negative ion density determ. 2-50372  
 gas transparency, ionisation-induced, in reson. EM field 2-20816  
 He ionisation detector appl. to gas chromatography 2-2755  
 individual electrons of ionisation track observed after X-ray ionisation 2-50363  
 insulator surfaces in gases, charging by ionization and transport in gas 2-12268  
 JIPP T-II, stellarator plasma, preionisation and heating at electron cyclotron frequency 2-1318  
 methane-CO<sub>2</sub>-N<sub>2</sub>, tissue-equivalent gas mixture, W<sub>n</sub> values computation 2-19783  
 microwave conductivity measurements, for SREM simulator 2-44822  
 molecular gas breakdown by short laser pulses 2-29662  
 monopolar ions production by travelling wave corona discharge for electrostatic precipitators 2-20814  
 non-linear ionization waves (*Russian*) 2-40086  
 nonaqueous solvents, excess electrons 2-13632  
 olefin vapours, mono- and cyclo-, electrical ionization and breakdown 2-44924  
 plasma sheath, glow transition 2-20952  
 relaxation generator based on non-self-sustained volume discharge 2-44938  
 soil, electrical breakdown props., air ionisation effect, following EM pulse 2-47859  
 W-values relevant for neutron dosimetry 2-19782  
 Al plasma, partially ionised, eqn. of state models comparison 2-16425  
 Ar arc plasma, decaying, recomb., ionisation, diffusion and convection 2-30279  
 Ar, electron swarm parameters 2-25487  
 Ar, Fano factor meas. 2-50359  
 Ar imploded microballoon plasma, dielectronic satellite spectral lines, inner shell excitation 2-44905  
 Ar-Kr mixture, Fano factor meas. 2-50359  
 Ar-Xe mixture, Fano factor meas. 2-50359  
 CO, vibrationally nonequilibrium mol. gas flow, associative ionisation 2-35179



## ionisation of gases continued

- Kr, electron swarm parameters 2-25487  
 Kr, Fano factor meas. 2-50359  
 N<sub>2</sub>, vibrationally nonequilibrium mol. gas flow, associative ionisation 2-35179  
 N<sub>2</sub>O, breakdown field strength 2-1359  
 O, electron energy distrib. and three-body adhesion rate with external ioniser 2-20812  
 SF<sub>6</sub>-(N<sub>2</sub>)(N<sub>2</sub>O), breakdown field strength 2-1359  
 Xe, Fano factor meas. 2-50359

## ionisation of liquids

- anthracene negative ion in nonpolar liq., electron photodetachment, temp. effect 2-7613  
 benzene, liq., photoionisation, fluoresc. and electron scavenger quenching 2-34503  
 charged dangling bonds model, appl. to self-ionisation and disproportionation 2-13015  
 1,2-dimethoxyethane aq. soln., thermodynamics of autoionisation, structuredness of solvents 2-45595  
 electroanalytic polymers, charge carrier exchange with dielec. liquids 2-6063  
 nonaqueous solvents, excess electrons 2-13632  
 tetrahydrofuran aq. soln., thermodynamics of autoionisation, structuredness of solvents 2-45595  
 Ar, free-carrier yields of radiation induced cond. in liquefied rare gases 2-1974  
 Ar fundamental props., use as radiation detector media 2-49227  
 D<sub>2</sub>O, enthalpy of ionisation,  $\Delta C_p^\circ$  and  $\Delta V^\circ$  2-5240  
 (KCl)<sub>n</sub>, (n=1,2), molten salt, relative ionisation cross sections utilising transpiration vapour press. data (*Japanese*) 2-15925  
 Kr liquid, fundamental props., use as radiation detector media 2-49227  
 (NaCl)<sub>n</sub>, (n=1,2), molten salt, relative ionisation cross sections utilising transpiration vapour press. data (*Japanese*) 2-15925  
 NaKCl<sub>2</sub>, molten salt, relative ionisation cross sections utilising transpiration vapour press. data (*Japanese*) 2-15925  
 Xe liquid, fundamental props., use as radiation detector media 2-49227

## ionisation of molecules

- see also molecular electron impact ionisation  
 acetone ion dissoc. scaling relationships in photoelectron-photoion coincidence studies 2-29668  
 acetylene, valence shell photoionisation cross section, strong autoionisation in partial channel 2-7611  
 5'-adenosine monophosphate, metastable decomposition, <sup>252</sup>Cf fission fragment ionisation, mass spectra 2-34604  
 alanylalanylalanine, metastable decomposition, <sup>252</sup>Cf fission fragment ionisation, mass spectra 2-34604  
 amines, tertiary, multiphoton ionisation fragmentation patterns 2-7612  
 anthracene molecules, gas phase, stepwise photoionisation, UV laser radiation induced 2-44009  
 anthracene negative ion in nonpolar liq., electron photodetachment, temp. effect 2-7613  
 1,2-benzanthracene molecules, gas phase, stepwise photoionisation, UV laser radiation induced 2-44009  
 benzene, ionisation threshold, elec. field depend. 2-20208  
 benzene, liq., photoionisation, fluoresc. and electron scavenger quenching 2-34503  
 benzene, ps. UV laser induced multiphoton ionisation and fragmentation 2-7610  
 benzene-Ar, ionisation threshold, elec. field depend. 2-20208  
 1-butene, two-photon ionization coeffs. 2-49530  
 CC, photoionisation cross section rel. to C<sup>+</sup> prod. rate in Venus and Mars ionospheres 2-32832  
 chlorophyll a, metastable decomposition, <sup>252</sup>Cf fission fragment ionisation, mass spectra 2-34604  
 Compton effect and electronic struct., impulse approx. calcs., Compton defect (*French*) 2-5157  
 $\pi$ -conjugated molecules, core ionisations and simultaneous excitations, semi-empirical calc. using equivalent core and  $\pi$ -electron approx. 2-15712  
 1,2-dichloroethene, selective multiphoton ionisation for isomer separation 2-7617  
 dimanganese decacarbonyl, supersonic beams, laser multiphoton dissoc. and ionisation 2-27463  
 2,5-diphenylfuran molecules, gas phase, stepwise photoionisation, UV laser radiation induced 2-44009  
 erythromycin, metastable decomposition, <sup>252</sup>Cf fission fragment ionisation, mass spectra 2-34604  
 ethylene-h<sub>2</sub>(d<sub>4</sub>), Rydberg states, multiphoton ionisation spectra, two-photon reson. 2-34515  
 ferrocene, multiphoton dissoc. and ionis., cooling and mol. beams 2-39458  
 ferrocene, Penning ionisation and electron spectrum, steric effect on electronic interaction 2-20166  
 fluorescent organic mols. in liq. media, photoionisation 2-4356  
 guanosine, metastable decomposition, <sup>252</sup>Cf fission fragment ionisation, mass spectra 2-34604  
 2,4-hexadiyne, resonance enhanced multiphoton ionisation, dissoc. through ionic states, mass spectra 2-806  
 HF, oscillator strengths, photoabsorption and photoionisation, PES 2-24790  
 iron dodecacarbonyl, supersonic beams, laser multiphoton dissoc. and ionisation 2-27463  
 methyl alcohol, IR multi-photon ionisation (*Chinese*) 2-20145  
 2-methyl-2-nitrosopropane, photoionisation during VUV photolysis 2-47364  
 methyl-halogenated nitrosocompounds, photoionisation during VUV photolysis 2-47364  
 methylamines, two-photon ionization coeffs. 2-49530  
 molybdenum diformate, satellite peaks in C 1s photoelectron spectra 2-20125  
 molybdenum methylidiformate, satellite peaks in C 1s photoelectron spectra 2-20125  
 multi-photon ionisation-fragmentation maximal-entropy theory, alternative ionisation pathway test 2-24797  
 multiphoton ionisation, high-intensity approx. 2-7614  
 nickelocene, multiphoton dissoc. and ionis., cooling and mol. beams 2-39458  
 phenylalkene cations in solid Ar, UV absorpt. spectra and photochem. rearrangements 2-43934

## ionisation of molecules continued

- polymers, core electron photoionisation, binding and relax. energies, XPS 2-29739  
 propane, two-photon ionization coeffs. 2-49530  
 resonance ionisation spectroscopy, summary and appl. 2-43090  
 resonance synchrotron radiation impact phenomena in mol. photoionisation, synchrotron radiation impact 2-49529  
 SF<sub>6</sub>, dissociative and double ionisation in the 75 to 125 eV region 2-15857  
 statistical fragmentation patterns in multiphoton ionisation 2-24798  
 p-terphenyl molecules, gas phase, stepwise photoionisation, UV laser radiation induced 2-44009  
 toluene, triplet state, two-colour photoionisation, time evolution study 2-49531  
 Xalpha theory, symmetry breaking and ionisation from symm. equiv. inner shells and lone pairs 2-39314  
 Ar+N<sub>2</sub>(CO)(O<sub>2</sub>), He metastable states; chemi-ionisation velocity depend. 2-44069  
 Ar<sub>2</sub>, photoionisation cross section, mass spectra 2-49532  
 ClF, cone and valence binding energies, SCF and MCSCF/CI calc. 2-19977  
 CO, 5 $\sigma$  photoionis., vibr. branching ratios and photoelectron ang. distrib. 2-20143  
 CO, associative molecular ionisation on adiabatic expansion in supersonic flow (*Russian*) 2-15890  
 CO, free and coordinated, core ionisation, XPS study of intensity borrowing 2-15848  
 CO<sub>2</sub>, dimers and clusters, photoionisation study 2-15852  
 CO<sub>2</sub>, photoionisation cross section rel. to C<sup>+</sup> prod. rate in Venus and Mars ionospheres 2-32832  
 CO<sub>2</sub> photoionisation shape reson. features comparative studies 2-34506  
 H<sub>2</sub>, two-photon ionisation, HF Green's function calcs. 2-20017  
 HCl, 2 $\pi$  and 5 $\sigma$  orbitals, photoionisation cross section calcs. 2-39452  
 HO<sub>2</sub><sup>+</sup>, X<sup>3</sup>A<sup>+</sup> state, VUV PES of transient species 2-34493  
 H<sub>2</sub>O, photoelectron angular distrib. 2-39445  
 H<sub>2</sub>O, photoexcitation and ionisation, calcs. 2-39453  
 H<sub>2</sub>O, structure in vicinity of solvated ion, molecular dynamics simulation 2-11417  
 (H<sub>2</sub>S)<sub>n</sub>, n=1 to 7, mol. beam photoionisation 2-20141  
 N<sub>2</sub>, associative molecular ionisation on adiabatic expansion in supersonic flow (*Russian*) 2-15890  
 N<sub>2</sub>, electronic states interaction via vibr. modes and photoionisation 2-49361  
 N<sub>2</sub>, ionisation coeff. in vol. discharge 2-40205  
 N<sub>2</sub>, reson. 3 $\sigma_g$  photoionis., Hartree-Fock vibr. branching ratios 2-20142  
 N<sub>2</sub>, shape-resonant states, wave functions eigenchannel contour maps, appl. to photoionisation 2-7487  
 NO, five photon ionisation cross sections, ab initio calcs. 2-29660  
 NO, four-photon ionisation spectrum 2-20148  
 NO, multiphoton ionisation and two-photon excited fluoresc. action spectra 2-44010  
 NO, photoionisation, multiphoton spectra, ab initio calcs. 2-24590  
 NO, shape resonance, photoionisation spectra 2-49516  
 NO, Stark effect, line broadening, multiphoton ionisation spectra 2-29671  
 NO valence orbitals, photoionisation cross section and photoelectron asymm. 2-34505  
<sup>14</sup>N<sup>16</sup>O, <sup>15</sup>N<sup>16</sup>O, multiphoton ionisation in mass spectrometer 2-11557  
 N<sub>2</sub>O, dimers and clusters, photoionisation study 2-15852  
 O<sub>2</sub>, dissoc. photoionization, cross sections meas. 2-44011  
 O<sub>2</sub>+He(2<sup>3</sup>S,2<sup>1</sup>S), Penning ionis., electron spectrosc. obs. 2-49567  
 SO<sub>2</sub>, VUV photoexcited, radiative and dissoc. relax. processes, photoion fluoresc. photon coincidence study 2-749
- ionisation of solids**  
 nonaqueous solvents, excess electrons 2-13632  
 semiconductor, ionisation mech. of defect production 2-45249  
 semiconductors, ion diffusion, irradi. enhanced, ionisational mechanism 2-16904
- ionisation potential**  
 see also work function  
 acetic acid, electron impact dissoc., methoxy cation heat of formation 2-22483  
 aldehydes, aliphatic, ionisation pot., mass spectra 2-39507  
 aliphatic alcohols 2-22483  
 analyser, development (*Japanese*) 2-3651  
 atomic total energies approx. formulas, ionisation energy test, numerical comparison 2-49270  
 atoms, ionisation potentials, atomic props., Thomas Fermi models 2-7489  
 atoms, ionisation pots., total Hartree-Fock energy-eigenvalue sum calcs. 2-11385  
 atoms, valence electron spin-orbit splitting, Slater transition state calcs. 2-34283  
 azomethine compounds, ground and ionised state intramol. hydrogen bonds 2-29514  
 benzene, ionisation threshold, elec. field depend. 2-20208  
 benzene, momentum distrib. and ionisation pot. for valence orbitals 2-29723  
 benzene-Ar complex, in jet, ionisation pot. meas. 2-49598  
 benzene-Ar, ionisation threshold, elec. field depend. 2-20208  
 benzenes, disubstituted, valence ionization energies, LCAO MO calcs. 2-39310  
 bis( $\pi$ -pentadienyl)nickel, electronic struct., INDO calcs. and photoelectron spectrosc. 2-39317  
 charge transfer coupling elements, second order asymptotic electronic wavefunction 2-34556  
 cyclohexane, electron impact ionisation and fragmentation 2-20196  
 cyclohexanone, CO stretching vibr., mol. props. MINDO/2 calcs. 2-7505  
 cyclohexanone monomethyl derivatives, methyl rotation, intramolecular interactions, MINDO/2 calcs. 2-7506  
 diethyl ether, electron impact dissoc., methoxy cation heat of formation 2-22483  
 dimethyldithiocarbamate, ionisation energies, LCAO CNDO/2 calcs. 2-34298  
 ethane, outer shell ionisation pots., many-body Green's function methods 2-11588  
 9-ethylideneffluorene, excited states, ionisation pots., MO INDO/S CI calcs. 2-34296  
 fluoren-9-one, and diazaderivatives, excited states, ionisation pots., MO INDO/S CI calcs. 2-34296  
 free atoms, ionisation pot. calcs., LSD approx. 2-39502



**ionisation potential continued**

- furan, electron affinity, ionisation pot. and photoionisation cross sections calc. using CNDO approx. 2-43804  
 halogenmethanes, PES, vibr. fine struct. anal. and ionisation energies 2-44000  
 III-V semiconductor compounds, ionisation potentials and energy barriers estimation at hetero junctions (*German*) 2-12963  
 9-iminofluorene, excited states, ionisation pots., MO INDO/S CI calcs. 2-34296  
 ions with K-electrons, influence of dense plasma on wave functions and ionisation energies 2-10313  
 isooxalazine, ionisation pot., electronic transitions, moments, MINDO/3 MO calcs. 2-39322  
 lanthanides, sixth ionisation pot. calc. 2-11578  
 methyl bromide, UV and visible spectrum; autoionisation reson., ionisation pot. 2-34429  
 methylbenzenes, absolute extinction coefficient spectra, Rydberg excitations, ionisation pot. 2-15775  
 molecules, ground-state charge transfer and electronegativity equalization 2-43790  
 organic compounds, O-containing, struct., PES study 2-49517  
 polyacene molecules in micellar systems or homogeneous soln., photoionisation, ionisation pot. meas. 2-49599  
 positive ions, ionisation pots., total Hartree-Fock energy-eigenvalue sum calcs. 2-11385  
 n-propyl formate, electron impact dissoc., methoxy cation heat of formation 2-22483  
 pyridine, ground and ionised state, ab initio valence bond calc., ionisation pot. 2-657  
 selenophene, electron affinity, ionisation pot. and photoionisation cross sections calc. using CNDO approx. 2-43804  
 tellurophene, electron affinity, ionisation pot. and photoionisation cross sections calc. using CNDO approx. 2-43804  
 tetrathiafulvalene derivatives, polarisation energies, UV PES 2-4350  
 thiophene, electron affinity, ionisation pot. and photoionisation cross sections calc. using CNDO approx. 2-43804  
 transition metal atoms and ions, excitation energies, ionisation pots., HF calcs., relativistic contrib. 2-7509  
 transition metal compounds, ionisation energies, SCF and transition operator calcs. 2-19972  
 Xalpha theory, symmetry breaking and ionisation from symm. equiv. inner shells and lone pairs 2-39314  
 Ag I isoelectronic series, I VII to La XI, wavelengths, energy levels and pot. energies 2-24635  
 AgI isoelectronic series, Ce XII to Ho XXII and W XXVIII, wavelengths, energy levels and pot. energies 2-24636  
 $\alpha$ -Al<sub>2</sub>O<sub>3</sub>, optical, thermal, and polaron energy levels 2-17000  
 Am, surface ionisation, ionisation pots. studied by mass spectra 2-17591  
 Au<sup>2+</sup>, threshold ionisation pot. 2-7664  
 Au<sup>3+</sup>, threshold ionisation pot. 2-7664  
 Au<sup>4+</sup>, Z. 2-7664  
 B isoelectronic series oscillator strengths, polarised frozen-core approx. 2-43851  
 BeH<sub>2</sub>, ground and ionised states, force consts, ionisation pots., CI SCF MO calcs. 2-24616  
 C I, energies and oscillator strengths, polarised frozen core approx. 2-43852  
 CO, chemisorbed on Ni (100), geom., vibr. freqs., ionisation pot., and photoelectron spectrum 2-1743  
 CO<sub>2</sub>, dimers and clusters, photoionisation study 2-15852  
 Ce, surface ionisation, ionisation pots. studied by mass spectra 2-17591  
 Cf, surface ionisation, ionisation pots. studied by mass spectra 2-17591  
 Co(CO)<sub>4</sub>NO, electronic struct., ionisation pot., photoelectron spectra, X $\alpha$ -SW-CI calcs. 2-34293  
 Cs<sub>2</sub>, equil. separation and electron affinity calc. using Xalpha discrete-variation method 2-29524  
 Cu isoelectronic series spectra, Ba<sup>27+</sup> to W<sup>45+</sup>, wavelengths, energy levels and ionisation energies 2-24634  
 Cu, electronic struct., Hartree-Fock-Slater calcs. 2-43798  
 Cu(II) (difluorodithiophosphate)<sub>2</sub>, ionisation energies, LCAO CNDO/2 calcs. 2-34298  
 Cu(II) (dithiophosphate)<sub>2</sub>, ionisation energies, LCAO CNDO/2 calcs. 2-34298  
 Fe-porphine, ab initio LCAO SCF MO calc. with double zeta basis set 2-11390  
 Ge, ionisation potentials and energy barriers estimation at hetero junctions (*German*) 2-12963  
 H halides, mol. ionisation potential and dissoc. energies related to atomic ionisation pot. 2-24599  
 H<sub>2</sub>, mol. in rigid spheroidal box, electronic and vibr. props. at high press. 2-34285  
 H<sub>2</sub>, mol. ionisation potential and dissoc. energies related to atomic ionisation pot. 2-24599  
 HF, vertical ionisation pot. calc. using Rayleigh Schrodinger perturbation theory 2-49597  
 HNSi ionisation pot., MSW SCF Xalpha calc. 2-11403  
 H<sub>2</sub>S, multiphoton ionisation mass spectrum, dissoc. 2-15859  
 H<sub>2</sub>S, Rydberg transitions, ionisation pot., vacuum UV PES 2-15849  
 HX (X=F, Cl, Br, I), dissoc. energy, overlap integral rel. to atomic ionisation pots. 2-11582  
 He<sub>2</sub>, excited state, dissoc. and ionisation energies, pot. energy curves, CEPA-PNO, PNO-CI calcs. 2-11411  
 K dimers and trimers, electronic properties, pseudopot. spin density functional calc. 2-11586  
 Li clusters, binding energy, ionisation pot., CNDO/BW study 2-815  
 Li<sub>2</sub>H<sub>4</sub> (m $\leq$ n $\leq$ 4), electronic struct., ab initio SCF MO calc. 2-43788  
 Mg ions, gas phase chemistry, flowing afterflow studies 2-2704  
 Mn(CO)<sub>5</sub>NO, electronic struct., ionisation pot., photoelectron spectra, X $\alpha$ -SW-CI calcs. 2-34293  
 N II, energies and oscillator strengths, polarised frozen core approx. 2-43852  
 N<sub>2</sub>, fluoresc. from  $\Pi_u$  and  $\Sigma_u^+$  states excited with synchrotron radiation 2-747  
 N<sub>2</sub>O, dimers and clusters, photoionisation study 2-15852  
 NeF, excitation and ionisation energies from electron energy loss spectra of HF and F<sub>2</sub> 2-15909  
 NeH, excitation and ionisation energies from electron energy loss spectra of HF and F<sub>2</sub> 2-15909  
 Ni complex, cyclopentadienyl nickel nitrosyl, ground and cationic states, ionisation pot., INDO MO study 2-39324

**ionisation potential continued**

- Ni(II) (dithiophosphate)<sub>2</sub>, ionisation energies, LCAO CNDO/2 calcs. 2-34298  
 O<sub>2</sub><sup>+</sup>, 1s core level ions, symm. adapted vs. symm. broken wavefunctions 2-631  
 O<sub>2</sub>, core binding energy, ab initio SCF calcs. 2-34280  
 O<sub>3</sub>, ionisation pots., comparison of HF calcs. with LCAO X $\alpha$  calcs. 2-39313  
 OF<sub>2</sub>, core binding energy, ab initio SCF calcs. 2-34280  
 P<sub>2</sub>, pseudopotential calcs. 2-29507  
 P<sub>2</sub>, pseudopotential calcs. 2-29507  
 P<sub>4</sub>, pseudopotential calcs. 2-29507  
 P<sub>4</sub>H<sub>2</sub>, pseudopotential calcs. 2-29507  
 Pu, surface ionisation, ionisation pots. studied by mass spectra 2-17591  
 Re, surface ionisation, ionisation pots. studied by mass spectra 2-17591  
 SF<sub>4</sub>, electronic struct., PES 2-11547  
 SOF<sub>2</sub>, electronic struct., PES 2-11547  
 SO<sub>4</sub>, electronic struct., PES 2-11547  
 Si (111)-Ag interface, struct. and electronic props., LEED, photoemission and Auger meas. 2-21448  
 Si, ionisation potentials and energy barriers estimation at hetero junctions (*German*) 2-12963  
 (SiX<sub>2</sub>YZ)<sup>+</sup> (X, Y, Z=H, F, Cl), mol. struct., Jahn-Teller effects, MNDO calc. 2-664  
 U, surface ionisation, ionisation pots. studied by mass spectra 2-17591  
**ionisation time** see ionisation  
**ionogen** see electrolytes  
**ionoluminescence**  
 ion bombarded, emission spectra, contamination induced changes 2-46777  
 liquid scintillation following  $\alpha$ -irrad. (*Bulgarian*) 2-22096  
 semiconductor, variable-gap, nucl. radiation detection, energy and range determ. 2-43708  
 Be, CC 2-13575  
 Cd, ion bombard., at. excitations, photon emission study 2-13575  
 Mg, ion bombard., at. excitations, photon emission study 2-13575  
 NaI:Ti response to relativistic Ne, Ar, and Fe ions, scintillation efficiency curves 2-26997  
 Nb-V alloy, ion bombarded, emission spectra, contamination induced changes 2-46777  
 SiC (6H), ion implanted, defect luminescence spectra 2-36712  
 SiO<sub>2</sub> glass, luminesc. autoradiography after  $\alpha$ ,  $\beta$  or  $\gamma$  irrad. 2-5743  
 Ti, sputtered, excited atom energy parameter meas., photon emission 2-11432  
 Zn, ion bombard., at. excitations, photon emission study 2-13575  
 ZnS:Mn, ionoluminescence, irrad. enhancement mechanism 2-51716  
**ionosondes** see ionospheric measuring apparatus  
**ionosphere**  
 see also D-region; E-region; F-region; ionospheric electromagnetic wave propagation; ionospheric techniques; sporadic-E layer  
 afternoon counter-electrojet events at Trivandrum, lunar modulation of occurrence frequency 2-14674  
 AL index variability, effect of conductivity 2-32404  
 artificial satellite wakes, effect of thermal motion of ions in determining ion distrib. 2-6502  
 artificial satellite wakes, electron and ion distrib. in near wake of Explorer 31 and AE-C 2-10298  
 aurora (discrete type), theory 2-48088  
 auroral arc, electric field, ion and electron temps. obs. 2-18617  
 auroral arc (prebreakup) electrodynamics and elec. fields 2-53001  
 auroral arc precipitation, explosive charge ionospheric disturbance expt. 2-14660  
 auroral convection patterns chatanika radar obs. 2-42530  
 auroral electron beams, elec. currents and energy sources 2-23177  
 auroral electron beams at 200-250 km altitude, stability and accel. 2-23176  
 auroral electron energy spectra, energy flux and inferred pot. drop 2-38020  
 auroral energetic component meas. with X-ray pin hole camera 2-18597  
 auroral ionisation profiles, appl. to determ. of energy spectra of incident electrons 2-32730  
 auroral ionosphere, current convective instability theory 2-6503  
 auroral ionosphere, formation of kilometric inhomogeneities above F-region maximum 2-3130  
 auroral ionosphere, intense wave-particle event obs. 2-32719  
 auroral ionosphere, vars. of elec. conductivities during magnetospheric substorms 2-23158  
 auroral ions (low-energy) meas. during substorm 2-32746  
 auroral morphology, electrostatic shocks, plasma wave emission, particle distribution and precipitation boundaries 2-10225  
 auroral zone, meas. of long delayed radio echoes 2-32718  
 auroral zone, three-dimensional current flow in morning sector during substorm recovery phase 2-32742  
 auroral zone parallel elec. fields mechanism 2-18619  
 auroral zone parallel electric fields struct., use of electron data 2-10195  
 Birkeland currents, and electric fields, global model 2-52990  
 Birkeland currents and low-latitude asymmetric disturbances 2-48101  
 Birkeland currents distant mag. field effects determ. 2-32768  
 Birkeland currents on large scale, seasonal depend. from mag. field data 2-38021  
 charged ions injected into radiation belts, distribution, effect of charge exchange 2-14724  
 computer simulation of inner magnetosphere/ionosphere during substorm 2-10256  
 conductivity change, solar-flare-induced, magnetospheric MHD wave oscillation 2-14725  
 conference on space and laboratory plasmas, April 1980, Tokyo, Japan 2-10553  
 corpuscular heating of lower ionosphere including mesosphere and lower thermosphere 2-6483  
 cosmic noise absorpt. events deduced from E-region plasma instabilities 2-14678  
 currents and convection in 1979 November 8 midnight sector 2-10230  
 damping of a solitary magneto-acoustic wave in a magneto-active plasma (*Russian*) 2-25525  
 dayside cusp, field-aligned currents and electric fields 2-14717  
 dayside cusp, mag. field aligned electron distrib. 2-32721  
 disturbances of D-region at mid-latitude following mag. storm 2-32737  
 double layer structures, S3-3 search for confined regions of large parallel elec. fields 2-32753



## ionosphere continued

- drift dissipative waves modified by elec. field of ionosphere 2-52983  
 dynamo in two-layer ionosphere, equivalent circuit calc. 2-10234  
 dynamo region, field line equipotentiality and ion neutral collision freq. 2-18622  
 electric currents, effects on reduction of satellite magnetometer data for geological studies 2-32673  
 electric currents at high-latitude, model for substorm conditions 2-52991  
 electric currents caused by semidiurnal tidal winds 13-dimens. struct. 2-14670  
 electric currents during substorm, model of ionosphere and magnetosphere currents 2-3136  
 electric currents observed in auroral zone, during westward travelling surge 2-10245  
 electric field (parallel to mag. field) meas. by ion beam method 2-42472  
 electric field contrib. to thermosphere Joule heating 2-23148  
 electric field convection, meas. by long-line technique 2-6500  
 electric field generated by tidal dynamo, theory 2-52998  
 electric fields, field-aligned, on auroral lines of force, nature 2-6493  
 electric fields, tangential, meas. in drifting auroral arc 2-28262  
 electric fields in high latitude E-region, deduced from plasma instabilities 2-14678  
 electric pot. rel. to auroral magnetosphere evening sector 2-32717  
 electrojet ionisation irregularities due to plasma instabilities 2-14679  
 electron beam in ionosphere, guiding centre of diffusion theory rel. to artificial auroral streak widths 2-6489  
 electron beam-ionosphere plasma simulation expts. in large vacuum chamber 2-14677  
 electron collision frequency in ionosphere var. with height and time of day 2-23166  
 electron content, pulsating aurora effects 2-3116  
 electron content at  $L=4$  during substorms, nighttime enhancement 2-28272  
 electron content seasonal variations, harmonic anal. of ATS-6 radiosignals 2-42513  
 electron density obs., 200-1500 km altitude 2-3129  
 electron density profile, obs. made by reson. scatt. sounding method 2-32663  
 electron precipitation, longitude variations after substorm 2-52985  
 electron precipitation, spatial aspects of electron energy degradation in O 2-6499  
 electron temp. determ. by plasma line technique 2-18596  
 electrostatic cyclotron harmonic waves, production and consequences 2-28271  
 electrostatic instability driven by parabolic density gradient, theory 2-53006  
 electrostatic ion cyclotron instability, current-driven, along auroral field lines, simulation 2-32754  
 electrostatic noise generated by auroral beam 2-3138  
 electrostatic noise generated by auroral electron beam 2-6497  
 electrostatic shocks on auroral field lines between 2.5 and 7 Earth radii 2-28274  
 EM wave emission from homogeneous magnetoplasma, theory 2-48090  
 EM wave fields generated by electrons, theory 2-48091  
 EM wave rapid conversion to electrostatic waves in ionosphere 2-14673  
 equatorial electrojet, Type I irregularities, two stream plasma instability simulation 2-23169  
 equatorial electrojet plasma instabilities, cross-field conditions 2-10235  
 equatorial electrojet plasma instabilities, two-stream conditions 2-10236  
 equatorial topside ionosphere, night-time electron temp. troughs satellite 2-32731  
 evening sector elec. field and electron density obs. 2-52987  
 F<sub>2</sub>-layer infrasonic oscills. assoc. with thunderstorms, detect. by HF radar obs. 2-14672  
 Farley-Buneman instability, two-layer model 2-48069  
 fast ion structure attenuation due to charge exchange and impact ionisation collisions 2-32729  
 field aligned currents and auroral zone struct. 2-42524  
 field aligned currents and struct. of auroral ionosphere 2-14680  
 field-aligned currents, relationship to electrostatic cyclotron waves 2-10264  
 field-aligned currents due to field line interaction in boundary layer 2-14659  
 field-aligned currents in polar magnetosphere and ionosphere, anal. of distrib. 2-3133  
 flute type plasma instability, theory of stability 2-23173  
 geomagnetic field, meas. at rocket altitudes via ring core magnetometer on K-9M-72 rocket (*Japanese*) 2-3182  
 geomagnetic tides, spherical harmonic anal. of 1964-1965 data 2-14391  
 global distrib. of radiowave absorpt., anal. of vertical incidence soundings 2-48072  
 global electric fields (April 1978) during mag. storms and quiet times 2-23168  
 gravity waves at ionosphere altitude excited by tornado storms 2-18613  
 gyro-magnetic frequencies, and height of radiowave reflection (*Rumanian*) 2-23181  
 heating by HF pump, small scale field aligned plasma irregularities generation 2-32724  
 high-latitude trough dynamics, obs. made from Antarctica 2-48080  
 horizontal drifts, radar obs. 2-38007  
 Indian region abnormal quiet day Sq(Z) ranges due to Sq current system movement 2-27981  
 ion composition at high-latitude, 140-300 km altitude 2-23179  
 ion convection and elec. fields in visual auroral arcs 2-23155  
 ion streams from ionosphere in magnetotail tail lobes and plasma sheet 2-18649  
 ion temperature vertical profile, sounding rocket obs. 2-52948  
 ion-neutral momentum coupling near discrete high-latitude features 2-42528  
 ionisation of lower ionosphere, under effect of strong radio pulses 2-3131  
 ions with pancake pitch angle distrib., ISEE-1 obs. 2-3152  
 irregularities at high-latitude during mag. storms 2-42520  
 irregularities of kilometer size, formal during midnight collapse 2-23178  
 jet flow and 2-D turbulence in magnetised plasma (*Russian*) 2-25509  
 Langmuir waves generation by nonlinear wave-wave interactions 2-18626  
 low energy particles, ions, in ionosphere 2-52977  
 low latitude disturbances, electron density vertical distrib. 2-32710  
 magnetosphere-ionosphere electrodynamic coupling in auroral zone 2-42525  
 magnetospheric signature of F-layer positive storms 2-10240

## ionosphere continued

- microwave beams from solar power satellite, ionosphere heating effects 2-48065  
 mid-latitude trough dynamics, obs. made from Antarctica 2-48080  
 morning sector ion precipitation following substorm injection 2-3137  
 neutral winds at low latitude 2-52999  
 nightglow emission from neutral atomic oxygen rel. to ionosphere parameters 2-10222  
 nighttime mid-latitude vertical structure, model 2-14651  
 nonlinear evaluation of plasma enhancements in the auroral ionosphere 2-52979  
 paired electrostatic shocks, elec. field anal. 2-23160  
 Pc 1 generation and propagation 2-23196  
 Pc 5 elec. fields in ionosphere, STARE radar obs. 2-53013  
 Pedersen and Hall currents distrib. during distributed conditions 2-10242  
 Pedersen conductivity effect on toroidal Pc 5 pulsations 2-48109  
 Pedersen currents in polar ionosphere, rel. to newly emerging model of magnetospheric substorms 2-14728  
 photoelectron thermalisation and transport, theory 2-32745  
 physical basis in solar-terrestrial system, conf., Po uli, Italy (October 1980) 2-18817  
 Pi 2 magnetic pulsations, ionospheric effect on conjugate relationship 2-32769  
 Pi C waves in ionosphere and radioauroral pulsations during substorms 2-10273  
 plasma, BL-type disturbance, MHD model (*Rumanian*) 2-23182  
 plasma clouds, EXB gradient drift instability, spatial power spectrum 2-23171  
 plasma electron accel. under influence of Interkosmos 19 radio radiation near plasma freq. 2-28268  
 plasma instabilities driven by electric currents, and rel. phenomena 2-12301  
 plasma instability to low-freq. waves 2-32713  
 plasma lines intensity, effects of electron-neutral collisions 2-6501  
 plasma particle trajectories through mag. holes 2-48089  
 plasma physics (*Norwegian*) 2-10229  
 plasma physics explanation for ionospheric properties (*Norwegian*) 2-42515  
 plasma turbulence, small-scale, in auroral ionosphere, spectral form 2-10248  
 plasma waves, wavenumber meas. by rocket expts. (*Japanese*) 2-3124  
 plasmopause, equatorial region plasma parameters 2-52986  
 plasmopause, thermal plasma behaviour during quieting mag. activity 2-42523  
 plasmopause electron precipitation induced by VLF noise bursts 2-18623  
 plasmopause observed by means of its LF-VLF emission 2-38025  
 plasmasphere, electron temperature global distrib., based on satellite obs. 2-32741  
 plasmasphere, equatorial region plasma parameters 2-52986  
 plasmasphere, penetration of substorm associated electric fields 2-10258  
 plasmasphere, thermal plasma behaviour during quieting mag. activity 2-42523  
 polar cap absorption rel. to solar flare activity 2-48066  
 polar cap plasma flow entry region 2-10263  
 polar cusp, H I Balmer  $\alpha$  and  $\beta$  emissions, model calc. 2-23154  
 polar cusp ionosphere projection rel. to midday discrete auroras gap, electron precipitation anal. 2-10231  
 polar ionosphere electron distrib. in dark sector 2-48070  
 polar region, O<sup>+</sup> and N<sup>+</sup> concs., magnetospheric effects 2-28269  
 polar region field lines, cyclotron waves and heating 2-23159  
 polar regions, light ion vels. 2-23172  
 polar wind, calc. of proton temp. anisotropy 2-52981  
 positive ion temperature, result of by K-9M-67 sounding rocket (*Japanese*) 2-6491  
 post substorm plasma convection and auroral arc currents 2-42522  
 precipitation in S.Atlantic anomaly during mag. storm disturbance 2-23175  
 predictions, review of progress 2-42537  
 Project Waterhole, auroral modification expt., prelim. results 2-3120  
 prompt striations and plasma jetting, EM effects 2-42533  
 protonosphere replenishment after enhanced geomag.-activity period 2-32744  
 protonospheric O<sup>+</sup> and H<sup>+</sup> fluxes, satellite obs. 2-32743  
 Ps 6 associated electric current flow in auroral forms 2-10246  
 pulsating cosmic radio noise absorption due to E-region plasma waves 2-42514  
 radiowave active stimulation of auroral plasma, prospects 2-14681  
 satellite wake ion depletion 2-48074  
 severe auroral disturbances effect on equatorial ionosphere 2-52992  
 sheetlike scintillation producing irregularities in auroral zone 2-42527  
 SID effect on reson. freq. of Earth-ionosphere cavity 2-52997  
 solar cycle response of ionosphere, altitude depend. 2-18551  
 solar eclipse disturbance, Oct. 1976, VLF transmission obs. 2-32740  
 solar eclipse disturbance of 16 Feb. 1980, obs. of satellite signal (*Chinese*) 2-48013  
 solar eclipse disturbance of electron density, 16 Feb. 1980 over China (*Chinese*) 2-48064  
 solar flare classification for application to ionospheric disturbances 2-48126  
 solar parameters rel. to ionosphere behaviour with 12-150 day periodicity 2-18628  
 solar radiation interactions (*French*) 2-18749  
 sounding rocket with retarding potential analyser for ion temp. meas. 2-52948  
 spacecraft-ionospheric plasma interaction leading to sensor instrumentation effects 2-42476  
 Sq and field aligned currents generated by asymm. dynamo 2-52995  
 storm-time slab thickness at low latitudes 2-23157  
 stormtime total electron content to low-latitudes 2-52999  
 stratification of plasma, mechanism associated with inertial drift (*Russian*) 2-10251  
 striations, electron-ion collision effects on formation 2-14661  
 substorm, computer simulation of behaviour for inner magnetosphere/ionosphere region ( $L \geq 6$ ) 2-10257  
 sunequatorial evening ionosphere, response to magnetic storms, disturbances 2-42529  
 sunward convection expanded regions effect on aurora 2-48063  
 surface impedance tensor of lower boundary of ionosphere for arbitrary geomagnetic field (*German*) 2-28267  
 temperature profiles on solar corpuscular fluxes penetration of middle ionosphere 2-6484



## ionosphere continued

- topside,  $O^+$ ,  $H^+$ ,  $He^+$  conc. profiles and diffusion coeffs. 2-3141  
 topside height variations in auroral zone electrodynamics 2-32720  
 topside ionosphere, latit. patterns in plasma scale heights and ion transition altitudes at low latits. 2-23163  
 total electron content, geomag. conjugate effects, correl. study 2-14669  
 total electron content during solar eclipse, 1980 February 16, obs. (Chinese) 2-3121  
 total electron content monitoring by Doppler shift of satellite radio beacon 2-52996  
 travelling ionospheric disturbances, internal atmospheric gravity wave theory 2-38023  
 upgoing auroral ionospheric electrons, generation of ion-conic distrib. 2-23180  
 VLF ground hiss and field-aligned current in dayside cusp 2-42549  
 VLF induced emission from polar electrojet region 2-32712  
 VLF noise background generated in iono- and magnetospheres 2-48073  
 VLF wave-particle interactions, Exos-B satellite-Siple Station expts. (Japanese) 2-3181  
 wave particle interactions during substorm causing electron precipitation 2-10233  
 westward travelling surges during substorms 2-28283  
 winter nighttime ion temp. and energetic electrons, OGO 6 obs. 2-10238  
 winter radiowave absorpt. anomaly in auroral zone 2-32715  
 Ba cloud, radially injected, numerical simulation 2-42531  
 Ba release experiment, development model with contour currents 2-32716  
 $N^+$  topside equatorial ionosphere ion concs. 2-3128  
 NO in polar ionosphere, formation mechanism 2-14638  
 $O^+$  ions in magnetosphere, ionospheric origin 2-28292  
 $O^+$  topside equatorial ionosphere ion concs. 2-3128  
 $O^+$ , prod. and transport in ionosphere and plasmasphere 2-6498  
 $O_2^+$  dissociative recombination, reaction rate coeff. 2-10249

## ionospheric electromagnetic wave propagation

- see also *atmospherics*  
 anisotropic ionosphere with arbitrary geomagnetic field 2-6490  
 artificial discontinuity excitation of HF radiation with oblique beam radiowave scatt. (Russian) 2-48087  
 atmospherics, dispersive propagation in land and sea-ionosphere waveguide 2-32602  
 auroral absorption events correl. with ionosphere electron content enhancement 2-28272  
 auroral electron precipitation, appl. of Ramfjordmoen partial refl. expt. 2-28231  
 auroral ionosphere, amplitude fluctuations rel. to spectral form of small-scale plasma turbulence 2-10248  
 auroral ionosphere, radar waves incoherent scatt. 2-10243  
 auroral plasma stimulation by high power pulsed HF radiowave transmitting system 2-28265  
 auroral scintillation, current convective instability theory for auroral ionosphere- 2-6503  
 auroral zone, meas. of long delayed radio echoes 2-32718  
 axial magnetic field influence on radiowave scatt. (Russian) 2-23184  
 blackout of ionogram traces, occurrence rel. to max. plasma freq. 2-32734  
 conversion to electrostatic waves 2-14673  
 D-region, electron density profile from VLF meas. 2-53003  
 D-region incoherent scattering, thermally induced chemical fluctuation effects 2-14666  
 D-region radar reflection properties and structure 2-48079  
 D-region winter anomaly, aeronomic and meteorological aspects, review 2-32706  
 daytime ionospheric drift meas. during sporadic E over Ahmedabad, India 2-3127  
 decametric long path propag. at 10 MHz, adiabatic method analysis 2-3099  
 decametric oblique sounding signal fading 2-14656  
 differential phase meas. of electron content during Waterhole expt. 2-3126  
 E-layer critical frequency prediction 2-23156  
 E-region, crit. freq. solar and latitude depend. 2-42535  
 E-region, polar, elevated electron temps. determ. from radar incoherent scatt. obs. 2-18625  
 E-region, radar echoes interpretation from 100 km using phased antenna array 2-28230  
 Earth-ionosphere cavity, resonance freq. variations during SIDs 2-52997  
 electrojet, equatorial, magnetic storm time elec. field changes, VHF backscatter from plasma irregularities 2-6504  
 ELF atmospherics, distrib. function for ELF noise 2-38026  
 ELF/VLF wave propagation on auroral electrojet modulation wave generation 2-32722  
 equatorial spread-F, early phase obs. by HF ionosonde and VHF backscatter radar 2-23164  
 error analysis, Monte Carlo technique 2-52917  
 $F_2$ -layer, daily variation of ionisation during magnetical quiet periods 2-32708  
 $F_2$ -layer, photochemical effects of strong radiowave action 2-14657  
 $F_2$ -layer infrasonic oscills. assoc. with thunderstorms, detect. by HF radar obs. 2-14672  
 F-region, critical freq. and peak height, comparison of CCIR predictions and obs. over Brazil 2-18629  
 F-region, equatorial, radar interferometer echoes rel. to plasma irregularities and drifts 2-28270  
 Faraday rotation, meas. during solar eclipse, 1980 February 16, rel. to total electron content (Chinese) 2-3121  
 global distrib. of radiowave absorpt., anal. of vertical incidence soundings 2-48072  
 gyroechoes in presence of sporadic-E layer, mechanism and characts. 2-28281  
 gyromagnetic frequencies, and height of radiowave reflection (Rumanian) 2-23181  
 HF ducts in auroral zone 2-3134  
 HF propagation prediction using F-layer critical frequencies observed with Ionosphere Sounding Satellite-b (Japanese) 2-48085  
 HF pump heating ionosphere, small scale field aligned plasma irregularities generation 2-32724  
 incoherent radar scattering, effects of electron-neutral collisions on plasma lines- intensity 2-6501  
 ionosonde echo amplitudes with quasi-periodic freq. depend. 2-32738  
 irregularities at high-latitude during mag. storms 2-42520

## ionospheric electromagnetic wave propagation continued

- Jupiter radio emission, effects of propag. in terrestrial ionosphere on decametric spectra modulation 2-38103  
 Langmuir waves generation by nonlinear wave-wave interactions 2-18626  
 LF EM oscillations generation by field of powerful radiowave in ionosphere 2-42540  
 LF waves at oblique incidence, ionosphere refl. height determ., use of AM transmitters 2-37984  
 long-distance path HF propagation, daily variations, USSR to Cuba 2-32714  
 long-distance radio paths, normal-wave method appl. 2-42541  
 lower ionosphere, variation of parameters under action of high-power radio emission 2-48081  
 MF absorption at low latitude, seasonal and solar control 2-42516  
 microwave equatorial scintillation intensity during solar maximum 2-14676  
 midlatitude MF and HF absorption winter anomaly, geomag. control 2-32726  
 nonlinear effects caused by two VHF pulses (Russian) 2-48086  
 nonlinear reflectivity of high-power HF radiowaves 2-53000  
 plasmopause electron precipitation induced by VLF noise bursts 2-18623  
 polar cap absorption rel. to solar flare activity 2-48066  
 pulsating cosmic radio noise absorption due to E-region plasma waves 2-42514  
 quasi-transverse approx. for collision freq. function rel. to power refl. coeffs. 2-52978  
 radio location, spatial dual-freq. systems, residual errors 2-10228  
 radio reflection sounding, use of phasor display for echo anal. 2-32736  
 radio transmission through ionosphere and solar wind, appl. of refr. scintillation theory 2-38022  
 radio waves, model of partially scattered field with completely displaced spectrum 2-3132  
 radiowave partial reflections, amplitude statistics 2-42538  
 radiowave propagation analogous to microwave propagation in laboratory plasma 2-12300  
 radiowave propagation in ionosphere, freq. dispersion during transmission and refl., review of theoretical studies 2-18618  
 radiowave refraction by man-made ionospheric disturbances 2-48082  
 radiowave scintillation, freq. depend. appl. to electron density irregularities estimation 2-48076  
 radiowaves, conf., Po uoli, Italy (October 1980) 2-18817  
 radiowaves, field-aligned ionization scatter geometry applied to transequatorial paths 2-28285  
 radiowaves, ionospheric propag., inverse scattering theory 2-18630  
 radiowaves in layer with strongly extended random inhomogeneities, statistical characts. 2-48083  
 ray scattering indicatrix in plane layered anisomerically inhomogeneous medium 2-38024  
 ray trajectories of EM modes radiation from inhomogeneous magnetoplasma, theory 2-12303  
 real ray tracing in an unmagnetized absorptive ionosphere 2-6495  
 reflected wave from 130 MW equiv. transmitter, plasma instability effects 2-14662  
 reflection of magnetosphere waves propagating along mag. field lines 2-48095  
 RF signals, scintillations associated with geomagnetic storm (22 March 1979) (Japanese) 2-48084  
 rocket effluent effects assessment 2-10244  
 scattering by equatorial and high latitude waves and irregularities 2-28277  
 scintillation, appl. of long-line technique to elec. field convection meas. 2-6500  
 scintillation modelling, review 2-23165  
 scintillation of mid-latitude VHF transmissions 2-52993  
 scintillation phenomena, refractive scatt. theory 2-29759  
 sheetlike scintillation producing irregularities in auroral zone 2-42527  
 SHF Earth-space path in Kuwait, power spectrum of ionospheric scintillation 2-38027  
 SHF radioauroral pulsation excitation during substorms assoc. with Pi C 2-10273  
 short wave propagation around Earth, tomographic investigation methods 2-42542  
 solar decametric radio bursts, night-time reception and propag. theory 2-3140  
 solar power satellites, environmental effects on upper atmosphere 2-52400  
 spread-F, relation to vibrationally excited nitrogen 2-32735  
 stimulated ionisation of the upper ionosphere by powerful radiowaves (Russian) 2-28284  
 strong radio pulses, effect on ionisation of lower ionosphere 2-3131  
 sudden ionospheric disturbances, correl. with solar activity 2-6492  
 SW radio signal propag. in horizontally homogeneous/inhomogeneous ionospheric layers, dead-zone range, max. usable freq. 2-23183  
 transionospheric HF and VLF signals, Faraday rotation fluctuations 2-52989  
 transionospheric VHF and UHF scintillation spectra 2-32733  
 vertical sounding method, reson. scatt. method 2-32663  
 VHF backscatter from sporadic E-layer over Central Europe 2-38018  
 VHF diffuse radar aurora, 53.5 MHz obs., power spectrum 2-14649  
 VHF nighttime scintillations near Indian equatorial anomaly crest 2-42539  
 VHF scintillations due to F-region irregularities during nighttime 2-23178  
 VHF scintillations obs. at Natal, Brazil 2-23174  
 VHF transionospheric equatorial scintillation rel. to spread F occurrence 2-10241  
 VHF/UHF and L-band satellite signal scintillation at Guam 2-14675  
 VLF emission modulation 2-14655  
 VLF hiss and whistlers, mechanisms, obs. at Srinagar 2-42544  
 VLF propagation, nighttime group delaytime difference depend. on azimuth, atmospherics anal. 2-42517  
 VLF propagation and radio noise used to study Forbush decrease effect on ionosphere 2-32782  
 VLF wave-particle interactions, Exos-B satellite-Siple Station expts. (Japanese) 2-3181  
 VLF whistler mode attenuation in Earth-ionosphere cavity 2-52988  
 whistler range low-frequency waves, propag. in magnetosphere and upper ionosphere 2-3148  
 whistlers, medium latitude, propag. characts., direction finding obs. 2-23188



**ionospheric electromagnetic wave propagation continued**

- whistlers at low latitude, propag. mechanism, goniometric direction finding obs. 2-18641
- winter radiowave absorpt. anomaly in auroral zone 2-32715

**ionospheric measuring apparatus**

- electron temperature determ., differential meas. system 2-52939
- ionosonde produced by Radio Research Labs., Japan (*Japanese*) 2-48047
- particle beam interaction expts. carried by Space Shuttle (SEPAC) 2-14755
- Shuttle Electrodynamic Tether System, electrical behaviour (*Japanese*) 2-32796

**ionospheric measuring instruments** *see ionospheric measuring apparatus***ionospheric propagation** *see ionospheric electromagnetic wave propagation***ionospheric techniques**

- see also electron density; ion density*
- adiabatic method for analysis of decametric long path propag. at 10 MHz 2-3099
- auroral electron energies from  $O\ I/N_2^+$  technique 2-3117
- auroral electron precipitation, appl. of Ramfjordmoen partial refl. expt. 2-28231
- auroral electrons, energy spectra determ. from auroral ionisation profiles 2-32730
- cosmic ray electron scintillation detector, calibration procedure 2-10326
- cryogenic pump for sounding rocket instrumentation systems 2-43038
- directional ionosonde system 2-32739
- E-region, radar echoes interpretation from 100 km using phased antenna array 2-28230
- electric field (parallel to mag. field) meas. by ion beam method 2-42472
- electric field convection measurement, appl. of long-line technique 2-6500
- electron temperature determ., differential meas. system 2-52939
- EM vertical sounding method, reson. scatt. method 2-32663
- F-region parameters from airglow line intensity ratios 2-6441
- F-region plasma densities, comparison of AEROS-B and S3-1 satellite techniques 2-28282
- geomagnetic field line mapping using hydromagnetic waves 2-48031
- geostationary satellite radio beacon 'polarimetry' method (*Chinese*) 2-48013
- ion temperature determination using retarding potential analyser on rocket 2-52948
- particle beam interaction expts. carried by Space Shuttle (SEPAC) 2-14755
- photoelectron flux due to solar  $He^+$  304 Å line, evaluation method 2-28225
- plasma motion measurement by HF radar technique 2-32675
- polar obs. techniques, review 2-14627
- positive ion temperature meas. by K-9M-67 sounding rocket, expt. method and result (*Japanese*) 2-6491
- radar interferometry, appl. to studies of equatorial F-region irregularities and drifts 2-28270
- radar sounding, anal. of radar waves incoherent scatt. in auroral ionosphere 2-10243
- radio reflection sounding, use of phasor display for echo anal. 2-32736
- radiowave active stimulation of auroral plasma, prospects 2-14681
- satellite in ionospheric plasma, near wake supersonic flow 2-32707
- scintillation modelling, review 2-23165
- short wave propagation around Earth, tomographic investigation methods 2-42542
- spacecraft-ionospheric plasma interaction leading to sensor instrumentation effects 2-42476
- total electron content monitoring by Doppler shift of satellite radio beacon 2-52996
- triple probe method for plasma parameter display in spacecraft condition 2-32805
- VLF refl. sounding technique for lower ionosphere electron density 2-52963

**iontophoresis** *see electrophoresis***ions**

- see also atoms; electrolytic ions; hydrogen ions; negative ions*
- solar wind upstream of Earth's bow shock, particle spatial gradients 2-14690

**i.r. astronomy** *see infrared astronomy***i.r. detectors** *see infrared detectors***IR drop** *see electric potential***i.r. imaging** *see infrared imaging***i.r. sources** *see infrared sources***i.r. spectra** *see infrared spectra of diatomic inorganic molecules; infrared spectra of inorganic solids; infrared spectra of organic molecules and substances; infrared spectra of polyatomic inorganic molecules; spectra of inorganic liquids and solutions***irasers** *see lasers***iridium**

- see also nuclei with .....*
- abundance anomaly in Brazos River section, Texas, at Cretaceous-Tertiary boundary 2-6338
- chemisorption, of  $O_2$ , on (110) face, surface struct., LEED and thermal desorpt. obs. 2-21445
- chemisorption and decomp. on (110) surface, thermal desorption, XPS, UPS, AES, LEED, and contact pot. meas. 2-12913
- chemisorption of  $N_2$  and coadsorption of  $H_2$  on (110) surface, thermal desorption, XPS, UPS, AES, and LEED meas. 2-12914
- optical cond., optical spectra and band struct. (*Russian*) 2-21964
- overlayers on W (110), FIM study 2-1742
- surface (110), chemisorption and reaction of cyclopropane 2-40674
- transition metal alloy with  $^{191}Ir$ , Mossbauer isomer shift, cellular, model 2-36488
- vacuum deposition on mirror surfaces for UV astronomy 2-51811
- Ir-Ir adatom-adatom pair energy meas. on W{110} plane 2-12910
- $^{191}Ir$  seeds, activity uniformity 2-27882
- $^{192}Ir$  wire, technique for loading into patients 2-2931
- $^{191m}Ir$  in Fe, nucl. spin lattice relax. meas. 2-17356
- Sn-Ir interface, comp. and surface atom stability, high mass resolution atom probe anal. 2-35898

**iridium alloys***see also iridium compounds*

- Ir-B phase diagram, DTA, metallographic and X-ray analyses 2-41585
- Ni-Ir, dil., sp. ht. coeff., impurity conc. depend. 2-46297

**iridium alloys continued**

- Pt-Ir conventional electrode, comparison with activated vitreous C for pacemaker stimulating electrodes 2-32364
- ZrIr<sub>2</sub>, ESR and supercond. of Nd<sup>3+</sup> and Gd<sup>3+</sup> 2-2026

**iridium compounds***see also iridium alloys*

- rare earth borides,  $R(Rh_{1-x}Ir_x)_4B_4$ , phase boundaries rel. to supercond. 2-13221
- rare earth cpds.,  $R(Rh_{1-x}Ir_x)_4B_4$ , antiferromag. order and supercond. 2-36323
- Cr<sub>1-x</sub>Ir<sub>x</sub>O<sub>3</sub> solid soln., mag. props. (*French*) 2-26599
- Ho(Rh<sub>1-x</sub>Ir<sub>x</sub>)<sub>4</sub>B<sub>4</sub>, antiferromag. order and supercond. 2-36323
- InP:Fe, thermally stimulated cond. investigation 2-26407
- Ir (III) complexes, luminesc. spectra, vibr. progression anal. 2-17515
- IrH, heat of form., bond anal., local density functional approx. 2-35433
- IrO<sub>x</sub>, electrochromic props., display device appls. 2-17448
- IrO<sub>x</sub> film, electrochromic amorphous, cation insertion reactions 2-27435
- IrO<sub>x</sub> sputtered films, phase transitions, DTA, evolved gas anal., and SEM studies 2-40742
- Ir<sub>2</sub>O<sub>3</sub> catalytic anodic coating for H<sub>2</sub>O vapour electrolysis, improved cell 2-9553
- La(Os,Ir)<sub>4</sub>B<sub>4</sub>, mag. behaviour and struct. chem. 2-41104
- Nd(Os,Ir)<sub>4</sub>B<sub>4</sub>, mag. behaviour and struct. chem. 2-41104
- Pr(Os,Ir)<sub>4</sub>B<sub>4</sub>, mag. behaviour and struct. chem. 2-41104

**iron***see also nuclei with .....*

- adsorbed O layers, electron stimulated desorption 2-26231
- adsorption of CO on Fe films, interaction investigated by means of thermal desorpt. mass spectrometry 2-9569
- anomalous mass transfer under shock loading, Mossbauer study (*Russian*) 2-1668
- Armco, acoustic emission mechanisms during plastic deform. 2-22275
- Armco, corrosion in molten LiCl-KCl eutectic salt, effect of O (*Korean*) 2-41790
- Armco, dimensional changes offer phase recrystallisation, bulk cold plastic deform. effect 2-22239
- Armco, dynamic recrystn. during hot rolling (*Russian*) 2-36878
- Armco, friction, expt. and theory 2-9430
- Armco, liq. metal embrittlement, grain size role 2-17738
- Armco, nitriding in vac. 2-22381
- Armco, oxidation in reversing rubbing 2-5986
- Armco Fe, absorption of H in acid pickling, inhibitors influence 2-27349
- Armco Fe, diffusion coated with Ga, influence of comp. of impregnating medium 2-41803
- Armco Fe, diffusional interaction of CrB<sub>2</sub> under flow-discharge conditions 2-31848
- Armco Fe, fracture toughness characts., loading cycle influence 2-52040
- Armco Fe, thin elastic cylindrical shell, sound pulse scattering (*Russian*) 2-16162
- Armco Fe, wear surfaces investigation by electrode potential method 2-41761
- Armco Fe cylinder, surface wave resonances in sound pulse scattering (*Russian*) 2-34965
- atom, internal conversion coeff. depend. on state 2-34364
- atom level structure calcs. 2-29516
- atoms, transition probabilities and oscillator strengths, data compilations 2-7523
- Auger effect, XVV spectra model, comparison with photoemission data 2-9228
- bacterial photosynthetic reaction centres, X-ray absorpt. study of Fe site 2-52453
- BCC, mag. props. and local moments above Curie temp. 2-31121
- cadmium oxalate trihydrate: Fe<sup>2+</sup>, thermal decomp. kinetics, impurity effects 2-6029
- carburized with abnormal struct., reaction with liquid Zn (*Japanese*) 2-13851
- cathodic H-changing, Rayleigh wave attenuation study 2-40662
- cluster, magnetism and electronic struct. 2-41102
- cold worked, internal friction spectrum 2-41654
- copper oxalate: Fe<sup>2+</sup>, chemical development, photo-processes (*Russian*) 2-23761
- corrosion, electrochemical DC and AC methods of rate determ. 2-41830
- corrosion and passivation, autoradiography using labelled electrolytes 2-2655
- corrosion in neutral solution, anode to cathode area ratio 2-52094
- corrosion in ortho-phosphoric acid 2-17788
- cosmic ray nuclei abundances and energy spectra from 1 to 10 GeV 2-10287
- creep, transient phenomena, dislocation struct. behaviour in  $\alpha$ -phase (*Czech*) 2-31751
- creep, transient phenomena, kinetics and role of internal stress in  $\alpha$ -phase (*Czech*) 2-31750
- crystal orientation determ. using back-refl. Kossel camera in electron probe microanalyser (*Japanese*) 2-1372
- cubic ferromagnet, pseudokuadrupole effect 2-36375
- defects study, appl. of relax. techniques in high purity Fe (*Polish*) 2-27205
- deformed, dislocations obs. by high-field susceptibility meas. 2-1489
- deformed, isothermal annealing positron annihilation study 2-51736
- diamond:Fe, ion implanted, Mossbauer effect evidence of high internal press. 2-2168
- diffusion, radiation-stimulated, in amorphous SiO<sub>2</sub> 2-40600
- diffusion in V, 938-1815°C 2-5277
- diffusion of C, coeffs. calc. from single meas., activation enthalpy 2-16902
- dimer, matrix isolated in solid inert gas, resonance Raman spectroscopy 2-4308
- disappearance potential spectroscopy, rel. to AES (*Japanese*) 2-51746
- dislocation relax., effect of H changing 2-40406
- dislocation struct. generated by low temp. deform. and associated damping phenomena 2-40405
- dislocations, delayed emission from hot hardness indentations on {100}-surfaces 2-12597
- disperse system, struct. and mag. charact. relationship 2-31248
- dissolution in NHO<sub>3</sub> solution, effect of local mag. field 2-41815
- EELS study, interband transitions 2-5780
- EELS study, interband transitions 2-9233
- electrochemical properties, freshly formed surfaces in electrolyte solns. 2-41904



## iron continued

- electrochemistry in molten  $\text{Na}_2\text{SO}_4$ , 1173K, thermodynamic diagrams 2-5978  
 electrodeposited, stress meas. using slip initiation 2-41713  
 electron irradiated,  $\alpha$ -phase positron annihilation self-interstitial migration in stage III 2-21183  
 electronic structure, meas. and calc. of charge, spin and momentum density 2-40774  
 enamel/metal interface, X-ray Auger microanalysis of Fe 2-35900  
 epitaxial (110) films, first order mag. phase transition in appl. field 2-31183  
 evaporated film, texture meas. 2-8735  
 exposure and dose rate characts. for 6.2 MeV source photons through Pb, Fe, concrete shields 2-7371  
 fatigue crack propag. under cyclic loads (Russian) 2-22304  
 ferrite-austenite transition, thermopower detection method, appl. to surface reaction and diffusion 2-13867  
 ferromagnetic, itinerant-electron system, Ising model and Bethe approx. 2-26642  
 ferromagnetic, polarised neutron crit. scatt. asymmetry and crit. dynamics above  $T_c$  in mag. field (Russian) 2-26639  
 ferromagnetic effect of Coulomb correlations on energy bands 2-51079  
 ferromagnetic host metal, for rare earth impurities, nucl. orientation 2-46397  
 ferromagnetism, fluctuating band picture 2-31126  
 film, magneto-optical absorpt. spectra, photoacoustic detection 2-46795  
 fine particles, polyhedral mag. struct. obs. by Lorentz microscopy and electron holography 2-36313  
 foil, electrodeposited, mag. props. 2-26664  
 fracture, high temp., role of grain boundaries 2-41732  
 fracture, intergranular, cathodic pot., effect of grain boundary chem. 2-9406  
 free thin film production, technique 2-46925  
 grain boundary self-diffusion, evidence for vacancy mechanism, mol. dynamics simulation 2-35731  
 high-porosity, props. 2-17646  
 hydrogen embrittlement, microscopic process of failure and mechanism (Japanese) 2-52032  
 internal friction amplitude depend. at low temp. 2-41655  
 internal friction meas. in N and C Snoek relax. region using relaxator device,  $\alpha$ -Fe samples (Polish) 2-25341  
 ion beam irradi., dislocation and void prod. 2-21190  
 ion implanted, Mossbauer studies, review 2-31339  
 ion implanted, trapping of Sb by TaC and Cu precipitates 2-2513  
 ion irradiated, Doppler broadening of positron annihilation lines, struct. characts. 2-22111  
 K-shell X-ray emission spectra, double plasmon satellites decay 2-46828  
 Lake Mariut, Egypt, heavy metal pollutants in water and fish 2-52399  
 laser pulse melting, epitaxy and allotropy, expt. study 2-50702  
 lattice vacancies mobility, determ. by high voltage electron microscopy 2-40378  
 liquid, electrical resist., mean free path and multiple scatt. corrections 2-5379  
 liquid, S content determ. using  $\text{CaS-TiS}_2$  solid electrolyte 2-12842  
 liquid, structure study using molecular dynamics method 2-25719  
 liquid, temp. effect on struct. change 2-26035  
 magnetic and magnetomechanical props., influence of dislocation structs. 2-26712  
 magnetic and mechanical relaxation due to C and N interstitials 2-26685  
 magnetic domain wall thickness, neutron refraction study 2-26654  
 magnetic film, resonance optical absorpt. 2-21996  
 magnetic form factor by inelastic coherent vibr. neutron scatt. 2-8958  
 magnetic permeability disaccommodation, interaction energy of Al-C pair,  $\alpha$ -Fe specimens (Polish) 2-36396  
 magnetic properties calc. by functional integral method, review 2-31124  
 magnetic props. for soft magnetic appl., heat treatment 2-21831  
 magnetocrystalline anisotropy, effect of hydrostatic press. 2-17273  
 magnetoelastic damping theory (Russian) 2-51445  
 magnetovolume effects, fluctuating local band model 2-41173  
 magnetovolume effects, local-band theory 2-26719  
 melt, C saturated, vacuum vapourisation of certain elements (Chinese) 2-30572  
 metal, nitriding effect of  $\text{N}_2\text{-H}_2$  plasmatron, hardness 2-1353  
 microplasticity and internal friction, 4 to 250K 2-41680  
 modulation temp. spectroscopy of elementary excitations 2-31462  
 muon hyperfine fields 2-46451  
 neutron total cross-sections from 0.5 to 60 MeV 2-4123  
 nickel oxalate: $\text{Fe}^{3+}$ , chemical development, photo-processes (Russian) 2-23761  
 nodular cast, US attenuation caused by Rayleigh scatt. by graphite nodules 2-12687  
 nuclear spin lattice relaxation of  $^{191}\text{Ir}$  in Fe 2-17356  
 oxidation, (001) and (112) crystals, growth and struct. of oxide films, 200-300°C 2-2622  
 oxidation, growth and struct. of oxide films on polycrystal., 240-320°C 2-2623  
 oxidation, initial, at 200 and 300°C and surface S effect 2-47250  
 oxidation FeO grain size and cavities effects 2-41779  
 oxide glasses, coordination of  $\text{Fe}^{3+}$  and  $\text{Mn}^{2+}$  ions, model calcs. 2-2127  
 particles, mag. props., mag. tape appl. 2-21840  
 passivation films, phys. and chem. props. (French) 2-47245  
 passive film, ESCA and SIMS study 2-17767  
 passive film on surface, photoelectrochem. charact. 2-8837  
 passive films, formation in acidic  $\text{PO}_4$  solns., comp. struct. and thickness (Japanese) 2-9466  
 phase stability of  $\alpha/\gamma$  interface rel. to magnetic props. 2-51871  
 phase transform, impurity effects (Slovak) 2-47024  
 plasma temp. meas. by photoelec. scanning spectrometry, spectral line and transition probability selection 2-16513  
 plastically deformed at 195 and 77K, mag. domain patterns and dislocation structs. 2-46333  
 plastically twisted, H-induced cracking 2-22321  
 positron annihilation, band struct. and Fermi surface 2-46814  
 powder, atomised, pressing characts., particles porous struct. effect on compressibility 2-41551  
 powder, electrolytic, replacement with ferrite powder in mag. separation of grains (Rumanian) 2-26683  
 powder, plating with Ni, electrolytic stable operation conditions 2-41807  
 powder compacts, atomised, high purity, mag. props. 2-47200  
 protective coatings by anodic coupling polymerization of o-allylphenol 2-27328

## iron continued

- pure, correlation between mechanically and X-radiographic strain meas. (German) 2-52149  
 pure polycrystalline, internal friction effect of H, low temps. 2-22261  
 reactive sputtering, in mixed Ar- $\text{O}_2$  atmosphere (Japanese) 2-30765  
 rod embedded in Ni-Al matrix, intrinsic boundary dislocations, anisotropic elastic fields 2-36900  
 self diffusion, elec. spark discharge effect, radioactive tracer study (Russian) 2-45611  
 shallow water divers, local heating from granular mixture Fe and Mg particles activated by seawater 2-14100  
 shield, 14 MeV neutron flux, two transport codes, comparison 2-7127  
 shielding benchmark expts. for LMFBRS 2-24319  
 short range mag. order 2-31127  
 sintered, friction in liq. corrosive medium, electrochem. phenomena effect 2-41763  
 sintered, infiltration of liquid Cu (Japanese) 2-27117  
 sintered, influence of speed on wear 2-36976  
 sintered, porous, grain growth mechanism (Japanese) 2-2476  
 sintered, steam treatment effect on wear resistance 2-22393  
 sintered, strain hardening during cold plastic deform. 2-22238  
 sintered compacts, based on atomised powder from tinplate scrap 2-36809  
 sintered powder, effect of compacting pressure and 0.5% Mo on props. 2-9313  
 sintering, model of variation of specific surface area 2-46965  
 Snoek relaxation of C in  $\alpha$ -Fe (Polish) 2-25987  
 Snoek-Koster relax., role of screw dislocations and C-vacancy pairs 2-40407  
 solar wind streams, thermal Fe ions, temp. and bulk vel. 2-28310  
 solid solubility and heat capacity in Sc 2-8622  
 solid solutions and steels, self-diffusion and heterodiffusion, review 2-50904  
 solid state reduction in olivine, planetary and meteoritic evolution implications 2-23233  
 solubility in liquid Li, absorpt. X-ray spectral analysis 2-1629  
 sponge, thermal cond. determ. (German) 2-13038  
 steady-state creep, influence of oxidation 2-2569  
 strain hardening rate, changes during adsorption and desorption of H during cathodic charging 2-22243  
 strontium tartrate tetrahydrate: $\text{Fe}^{3+}$ , electronic absorpt. spectra 2-46647  
 structural materials in fast reactors, Doppler effect 2-7158  
 substrate for Ca and Sn corrosion protective coatings 2-22387  
 supersaturate vapour, homogeneous condensation kinetics investig. in shock tube 2-35655  
 surface, (111), water vapour adsorption, LEED and work function changes meas. 2-26206  
 surface, adsorpt. of  $\text{H}_2$ , K preadsorpt. effect 2-26224  
 surface,  $\text{N}_2+3\text{H}_2\rightarrow 2\text{NH}_3$  catalysis, AES and thermal desorpt. study 2-41922  
 surface, polycryst., interactions with K,  $\text{O}_2$  and  $\text{N}_2$ , AES, work function and thermal desorption meas. 2-16939  
 surface, S chemisorption thermodynamics 2-40676  
 surface (100) electronic. states and photoelectron spin polarisation 2-51768  
 surface dispersed layers in far from thermodynamic equil. state, prep. by surface reactions, amorphous struct. 2-2739  
 surface modification, ion implantation parameter influence 2-1499  
 surface morphology changes during ion bombardment (Russian) 2-5296  
 surfaces (100) and (110), N adsorpt., adsorbed O effect (Japanese) 2-26218  
 TGS: $\text{Fe}^{3+}$ , ferroelec. transition, US velocity and absorption, doping effects 2-16727  
 thermal emission spectra, circular polarisation 2-13506  
 thermodynamic excitations, spin waves and Curie temp., d-band model 2-36301  
 thermophysical props. in vicinity of phase transformations 2-35710  
 thin film structures, refractory metal, direct writing by laser photodeposition 2-13652  
 thin plate,  $^{57}\text{Fe}$  nuclei polarisation during superposition of FMR and NMR lines (Russian) 2-9044  
 thin surface layer study using depth selective conversion electron Mossbauer spectroscopy 2-51504  
 ultrafine particles, Mossbauer effect, hyperfine fields 2-46435  
 whisker, crystal growth (Japanese) 2-5337  
 whiskers, Landau struct., mag. stray fields meas. 2-21860  
 X-ray K-absorption edge shifts due to chem. combination 2-2369  
 XIII to XVI, beam-foil lifetimes 2-24667  
 XPS, chemical analysis peak area measurement reliability 2-47416  
 $\text{Al}^{3+}$ :Fe, interstitial  $^{57}\text{Fe}$  sites, struct. and oscillational motion 2-51116  
 $\text{Al}(\text{NO}_3)_3\cdot\text{Cr}^{3+}$ ,  $\text{Fe}^{3+}$ , EPR spectra and crystal struct. 2-13333  
 $\text{Al}(\text{NO}_3)_3\cdot 9\text{H}_2\text{O}:\text{Fe}^{3+}$ , Mossbauer study of hyperfine struct. 2-31329  
 $\text{Al}_2\text{O}_3:\text{Fe}^{3+}$ ,  $\text{V}^{2+}$  bicrystal, freq. crossing and inelastic scatt. at surfaces 2-45644  
 $\text{Al}_2\text{O}_3:\text{Fe}^{3+}$ , particle orientations characterisation by EPR 2-31264  
 $\text{Al}_2\text{SiO}_5:\text{Fe}^{3+}$ , inverted spin system, cross relax. 2-2129  
 $\text{Ba}_2\text{NaNb}_2\text{O}_{10}:\text{Fe}$ , photoelec. and photorefractive props. 2-36102  
 $\text{BaO-V}_2\text{O}_5:\text{Fe}$  glass, elec. cond. and EPR spectra 2-46365  
 $\text{BaTiO}_3:\text{Fe}$ , dielectric and optical props. 2-46457  
 $\text{Bi}_2\text{GeO}_{10}:\text{Fe}^{3+}$ , anomalous US attenuation, illum. effect 2-50772  
 $\text{Bi}_2\text{GeO}_{10}:\text{Fe}^{3+}$ , EPR study 2-31270  
 C activity, on Fe in flowing methane- $\text{H}_2\text{-H}_2\text{O}$  mixtures 2-31946  
 $\text{CaO}:\text{Fe}$ , charge transfer transitions, energies of optical absorption and emission 2-22052  
 $\text{CdI}_2:\text{Fe}^{2+}$ , resonance enhanced electronic Raman scatt. 2-2283  
 $\text{CdSe}:\text{Fe}^{2+}$ , zero-phonon lines in optical spectra 2-46650  
 $\text{Co}:\text{Fe}$ , charge compensation mechanism, absorpt. Mossbauer spectra 2-36489  
 Cu-Fe composites, cold worked in-situ, microstructural strengthening 2-41629  
 Cu-Fe thermocouple cross effects of thermoelectricity 2-26366  
 Cu+Fe collisions, K-shell X-ray prod. probability, target thickness effect 2-33697  
 $\text{CuInS}_2:\text{Fe}$ , low freq.  $\text{B}_1$  mode, IR absorption and Fourier transform spectroscopy 2-31529  
 $\text{CuInS}_2:\text{Fe}$ , vibrational modes, impurity effects, IR spectra study 2-16735  
 Fe (110), clean and oxidised,  $\text{H}_2\text{O}$  dissoci. reaction studied using UPS 2-47326  
 $\alpha$ -Fe, crystalline film, transmission electron diff. pattern contrast, amorphous material effect 2-44986



## iron continued

- $\alpha$ -Fe, electronic struct. and dislocation splitting, alloying elements influence (*Russian*) 2-51077  
 $\alpha$ -Fe, erosion by spherical glass particles 2-27299  
 Fe group metal electrodes, surface tension, pot. depend. 2-50963  
 Fe I 386 nm emission in twilight spectra; obs. by ratioing technique 2-6486  
 Fe I lines, oscillator strengths and abundance for photosphere 2-32973  
 Fe I to XXVI, radiative recomb. rate coeffs. 2-7601  
 Fe II, semiempirical calc. of gf values 2-7516  
 Fe II, sextet transitions, astronomical significance 2-38047  
 Fe II emission in quasars and Seyfert 1 galaxies 2-38330  
 Fe II spectrum of Seyfert 1 galaxies and quasars 2-38299  
 Fe II UV line profiles, balloon-borne obs. of  $\alpha$  Cygni, mass loss determ. 2-48237  
 $\alpha$ -Fe, interstitial solute atom influence on self-diffusion and vacancy formation determ. 2-12814  
 Fe ion lines, extreme UV emission spectra from plasma focus, 70 to 210 Å 2-40168  
 Fe XIII to XVI, beam-foil lifetimes, decay curve anal. 2-39368  
 Fe XXIII, UV and X-ray lines, electron-iron scatt. in distorted wave approx. 2-32966  
 Fe XXV, dielectronic satellite spectra theory with improved inner-shell and He-like excitation rates 2-38052  
 Fe XXVI transitions in solar flares, X-ray obs. 2-38158  
 Fe<sup>15+</sup>, dielectronic recombination involving high Rydberg states 2-677  
 Fe<sup>15+</sup>, electron impact ionisation, electron capture, resonant state, Auger emission 2-20195  
 Fe<sup>2+</sup> in reaction centres from Rhodospseudomonas sphaeroides, electronic struct., EXAFS obs. 2-52428  
 Fe<sup>2+</sup> ions, config. mixing and cryst. field splitting 2-26342  
 Fe<sup>2+</sup> ions, effect on Cu anodic dissolution and cathodic deposition 2-13659  
 Fe<sup>2+</sup>, s-hole states, CI calcs. 2-43809  
 Fe<sup>22+</sup>, electron impact excitation, collision strengths, line strengths, spectra 2-34581  
 Fe:Dy(Ar)(Sb), ion implanted single crystal, Rutherford backscattering and channelling anal. 2-45220  
 Fe:H, dislocation solute atmospheres, influence of thermodynamic soln. props. 2-1511  
 Fe:N<sup>+</sup> ion implant, depth profile, stopping power, backscatt. meas. 2-45234  
 $\alpha$ -Fe:Zn, Zn diffusion, mag. transitions effect 2-40602  
 Fe/dilute <sup>4</sup>He mixture, Kapitza conductivity constant 2-17356  
 Fe-Al<sub>2</sub>O<sub>3</sub> compact, infiltration of liquid Cu (*Japanese*) 2-27117  
 Fe-Al<sub>2</sub>O<sub>3</sub> granular thin films, blocking temp. freq. depend., susceptibility and Mossbauer study 2-31249  
 Fe-C solidifying melt, liq. solid region formation of two-phase zone, convection effect 2-22208  
 Fe-Cu multilayer condensate, high temp. creep study 2-13785  
 Fe-Fe<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub>, phase relations and oxidation at 700 to 1100°C 2-41591  
 Fe-Fe<sub>2</sub>O<sub>3</sub>-CaO, phase diagram, homogeneity and maximal solubility of CaO 2-5862  
 Fe-graphite, dynamic hot pressing, antifricition characts. 2-17648  
 Fe-graphite-Cu rolled strip, appl. to mating parts of friction and wear testing apparatus 2-41854  
 Fe-graphite-ZnS alloy ZnGr3Tss4, antifricition props. in end face rubbing 2-17649  
 Fe-NiO-Ni, ferromag. films, spin pol. electron tunnelling obs. 2-51342  
 Fe-Si interface, silicide formation studied by Mossbauer spectroscopy and Rutherford backscatt. 2-31347  
 Fe-thionine, photogalvanic cell, use of new thiazine to improve efficiency 2-13978  
 Fe<sup>24+</sup>+H, electron capture, cross sections, eikonal calcs. 2-34560  
 Fe<sub>2</sub>O<sub>3</sub> layers on Fe, obs. on void formation 2-2610  
<sup>57</sup>Fe anomalous charge states from <sup>57</sup>Co electron capture Mossbauer spectra 2-13384  
<sup>57</sup>Fe, matrix isolated in NH<sub>3</sub> and NH<sub>3</sub>/Xe matrices, reactions, Mossbauer study 2-19984  
<sup>57</sup>Fe<sup>2+</sup> in trigonal symmetry, EPR and ENDOR spectra, generalised spin Hamiltonian calcs. 2-5576  
 GaAs:Fe, heat treated substrate, photoluminescence props. studies 2-13531  
 GaAs:Fe, impurity redistrib. on annealing, saturation density 2-1508  
 GaAs:Fe p- $\pi$ -n strucs. current-voltage characts. and electrom. study 2-13178  
 GaAs:Mn:Fe, heat treatment effects on surfaces, thermal redistrib. of impurities 2-5151  
 GaAs<sub>0.9</sub>P<sub>0.4</sub>Fe, impurity centre characts., thermal and optical capacitance transients study 2-5362  
 GaP:Fe, doubly charged donors, IR spectra 2-21538  
 GaP:Fe, hole localization and charge transfer excitation by time depend. photolum. meas. 2-51702  
 GaP:Fe, solubility and distrib. ratio of impurities in melt-cryst. system 2-5146  
 Ge,Se<sub>1-x</sub>, Fe glasses, photocond. and elec. cond., dopant effects 2-36089  
 InP:Fe, deep-level photocond., energy scheme 2-30924  
 InP:Fe, Mg(Zn), ion implanted, struct. and elec. props. 2-21163  
 InP:Fe, optical and capacitance spectroscopy 2-30925  
 InP:Fe, semi-insulating, Fe redistrib. 2-8537  
 InP:Fe, thermal and optical studies of deep levels, DLTS and DLOS techniques 2-51127  
 InP:Fe, thermally stimulated cond. investigation 2-26407  
 InP:Fe photoconductive detector, sub-100 ps bulk-recombination limited 2-48787  
 InP:Fe<sup>2+</sup>, deep impurity centres, photoluminesc. and DLTS study 2-51656  
 K<sub>2</sub>CoF<sub>4</sub>:Fe, antiferromagnet, localised magnon gap modes 2-26611  
 KMgF<sub>3</sub>:Fe<sup>2+</sup>, acoustic relax. losses due to mag. ions, lattice strain effects 2-45412  
 KNbO<sub>3</sub>:Fe<sup>2+</sup> phase-conjugate wave-front reflectivity, electric-field depend. 2-39698  
 KNbO<sub>3</sub>:Fe<sup>2+</sup>, volume phase holograph form., coherent light amplification and optical phase conjugation 2-34830  
 KTaO<sub>3</sub>:Fe<sup>3+</sup>, Li<sup>2+</sup>, ESR spectra, effect of off-centre Li impurity 2-26737  
 Li-Fe double layers, cond. electron spin resonance 2-31288  
 LiAlO<sub>3</sub>:Fe<sup>3+</sup>, fluorescence of octahedral site impurities 2-51657  
 LiGaO<sub>3</sub>:Fe<sup>3+</sup>, fluorescence of octahedral site impurities 2-51657  
 LiNbO<sub>3</sub>:Fe, dynamic gratings, phase transformation of coherent light beams meas. 2-11804

## iron continued

- LiNbO<sub>3</sub>:Fe, ferroelec., photorefractive processes 2-9131  
 LiNbO<sub>3</sub>:Fe, Hall photocurrents 2-21630  
 LiNbO<sub>3</sub>:Fe, magnetophotovoltaic effects 2-21631  
 LiNbO<sub>3</sub>:Fe, one-and-two-photon holograms, optical erasure 2-7730  
 LiNbO<sub>3</sub>:Fe, optical erasure dynamics of one- and two-photon holograms 2-29795  
 LiNbO<sub>3</sub>:Fe, photorefractive electrooptic cryst. with vol. phase hologram, light diff. 2-11664  
 LiNbO<sub>3</sub>:Fe, Raman spectra variations for LO phonon lines, exciting light wavelength depend. 2-46601  
 LiNbO<sub>3</sub>:Fe, refr. index temp. depend. meas., impurity induced optical anomaly 60 to 120°C 2-26848  
 LiNbO<sub>3</sub>:Fe, thermal fixing of holograms, evidence for mobile H<sup>+</sup> ion mechanism 2-24979  
 LiNbO<sub>3</sub>:Fe, white light image processing 2-11654  
 LiNbO<sub>3</sub>:Fe crystal, photorefractive effect, nonfield contrib. 2-9117  
 LuPO<sub>4</sub>:Fe<sup>3+</sup>, EPR spectra, crystal field splittings 2-36412  
 MgO:Fe, charge transfer transitions, energies of optical absorption and emission 2-22052  
 MgO:Fe, EPR, FMR and electron diff. study 2-46371  
 MgO:Fe<sup>2+</sup>, ESR spectra, temp. influence 2-9029  
 NH<sub>4</sub>AlF<sub>6</sub>:Fe<sup>3+</sup>, order-disorder transition, ESR investig. 2-40528  
 NH<sub>4</sub>AlF<sub>6</sub>:Fe<sup>3+</sup>, order-disorder transition, EPR study 2-50849  
 Ni alloy-Fe fibre composites, temp. resistance, strength (*Russian*) 2-2481  
 Pb-Fe (Fe-Pb) shields, gamma ray buildup factors 2-7380  
 Rb<sub>2</sub>CoF<sub>6</sub>:Fe, antiferromagnet, localised magnon gap modes 2-26611  
 ScPO<sub>4</sub>:Fe<sup>3+</sup>, EPR spectra, crystal field splittings 2-36412  
 Si:Au, Fe, hyperfine interactions of Au-Fe complex, electronic struct., EPR obs. 2-45920  
 Si:Au,Fr, EPR study, hyperfine interactions 2-41187  
 Si:Fe, deep levels, capacitance transient spectroscopy 2-17018  
 Si:Fe, deep levels, photocapacitance study 2-12998  
 n-Si:Fe, deep trap conc., in-depth profile 2-1858  
 Si:Fe, laser implantation, impurity distrib. 2-35518  
 n-Si:Fe, solid soln. precip., capacitance study 2-16804  
 Si:Fe implanted layer, lattice damage, compressive stress, TEM study 2-45291  
 SiO<sub>2</sub>:Fe, quartz crystal thermal cond. and magnetisation 2-35757  
 SiO<sub>2</sub>:Al<sub>2</sub>O<sub>3</sub>:MgO-K<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>:Fe<sup>3+</sup> glass-ceramic, CGW-9658, transport and reactivity of H<sub>2</sub> 2-22488  
 Sr<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, ferroelec. normal phase, ESR study, 250°C 2-41184  
 SrO:Fe<sup>2+</sup>, EPR of Fe<sup>3+</sup> in C<sub>10</sub>S<sub>15</sub> sites 2-41185  
 SrO:Fe<sup>3+</sup>, off-centre effects and lattice energy calc. 2-45237  
 SrTiO<sub>3</sub>, axial Fe<sup>3+</sup>-V<sub>o</sub> centre ESR study 2-46370  
 SrTiO<sub>3</sub>:Fe, electronic struct. and charge transfer bands 2-17016  
 TiO<sub>2</sub>:Fe, diffusion doped, elec. and optical props. 2-5369  
 Y<sub>6</sub>Mn<sub>23</sub>:Fe, mag. order, Mossbauer study 2-26587  
 Y<sub>6</sub>Mn<sub>23</sub>H<sub>2</sub>:Fe, mag. order, Mossbauer study 2-26587  
 YPO<sub>4</sub>:Fe<sup>3+</sup>, EPR spectra, crystal field splittings 2-36412  
 ZnS:Fe, impurity electronic struct., Green's function method 2-40823  
 ZnS:Fe, Raman scatt., local force variations, press effects 2-41358  
 ZnS:Fe<sup>2+</sup>, impurity triplet to quintet luminesc. 2-51658  
 ZnS:Fe<sup>2+</sup>, spin-forbidden transitions, optical absorpt. spectra 2-51633

## iron alloys

- see also Elinvar; Invar; iron compounds; Permalloy; steel  
 absorption of H during charging, SAW technique 2-45702  
 alloying addition equivalent effect on conc. and temp. depend. of N<sub>2</sub> solubility (*German*) 2-13695  
 Alnico 5 with Nb additions, columnar, permanent mag., mag. props. 2-17316  
 amorphous alloys, stress-mag. effects and shock-stress sensors with no power 2-31259  
 cast, grey, internal friction spectrum and damping capacity 2-47092  
 cast austenitic, struct. and mech. props., heat treatment effect 2-51953  
 cast Fe, amorphous phase form. by laser treatment 2-41792  
 cast Fe, diffusional interaction of CrB<sub>2</sub> under flow-discharge conditions 2-31848  
 cast Fe, electron-thermal treatment, surface struct. (*Russian*) 2-31828  
 cast Fe, grey, Mg modified, struct. state effect on failure 2-41755  
 cast Fe, grey, microstruct. form. during solidification 2-27162  
 cast Fe, grey, wear resist. in oil-abrasive medium, impulse hardening influence 2-41760  
 cast Fe, high-eutectoid, inoculated, two-layer spheroidal graphite inclusion form. (*Ukrainian*) 2-27165  
 cast Fe, microscopic study, of local strains under static load 2-41708  
 cast Fe, oxidation in reversing rubbing 2-5986  
 cast Fe, spheroidal graphite, surface fatigue improvements by mech. and heat treatments (*French*) 2-47056  
 cast Fe, wear in US field 2-22342  
 cast Fe pair, contact area determ. during sliding contact 2-27298  
 cast iron piston rings, improvement of corrosion and wear resist. by nitriding (*Russian*) 2-31829  
 cast white complex-alloy, microstruct. characts. and elements distrib. 2-51888  
 dilute impurity binding energy, correlation with heat of formation 2-1497  
 electrical resistivity, residual sub-band 2-30878  
 Fe<sub>2</sub>Ni<sub>3</sub>Cr<sub>1</sub>P<sub>2</sub>B<sub>8</sub>, Metglas 2826 A, amorphous, He ion irradiated, blister formation 2-16687  
 Fe-Al-B amorphous system, annealing effects on magnetic properties and crystallisation process (*Japanese*) 2-22242  
 $\beta$ -Fe-Be alloys, pseudoelastic force balance and appl. 2-5873  
 ferritic fracture surfaces, oxidised, SEM fractography (*German*) 2-13916  
 ferrous alloys, ion implanted, Mossbauer studies, review 2-31339  
 Hastelloy, surface oxidised HTR heat exchanger materials, tritium and H permeation reduction (*German*) 2-471  
 Hastelloy B, high temp. behaviour in HCl/water vapour atmos. 2-43610  
 Hastelloy X, high-temp. alloy, carburisation effects conductivity 2-31738  
 Hastelloy X welded joint, creep behaviour 2-15501  
 high coercivity Fe alloys, hysteresis curve, math. model (*Russian*) 2-2099  
 IN903A, Fe-base superalloy, grain boundary embrittlement 2-9408  
 Incoloy, HTR metal under process gas atm., temp. cycling influence on tritium permeability (*German*) 2-470  
 Incoloy, surface oxidised HTR heat exchanger materials, tritium and H permeation reduction (*German*) 2-471  
 Incoloy 800, dislocation struct. influence on internal friction after short-time creep (*Polish*) 2-27210  
 Incoloy 800, materials requirements for PWR steam generator tubing 2-4009



## iron alloys continued

- Incoloy 800, nuclear steam generator materials, pitting corrosion studies 2-4018  
 Incoloy 800, performance in PWR steam generators 2-4005  
 Incoloy 800, stress corrosion cracking in water at 315°C 2-22366  
 Inconel 600, PWR steam generator materials, Cu and Ni compounds effects on corrosion 2-4013  
 Inconel 600 boiler tubing, stress corrosion cracking 2-15494  
 Inconel 600 tubing in nuclear power demonstration unit boiler, chem. cleaning 2-4019  
 Inconel 617, SIMS study of carburisation and decarburisation 2-31961  
 Inconel 625, superalloy, thermal stability 2-47060  
 Inconel 690, stress-corrosion cracking, treatment, reactor boiler appls. 2-15497  
 Inconel 706, influence of Ti, Nb, Al additions on struct. and mech. props. (French) 2-27229  
 Inconel 706 Base material and gas W arc weldments, cryogenic mech. props. meas. 2-22330  
 Inconel 718, fretting wear at elevated temps. 2-36980  
 Inconel 800, creep-deformed, small-angle neutron scattering study of voids 2-2562  
 Inconel 800, steam generator tube for PHWR,  $\text{NaH}_2\text{PO}_4$  evaluation as denting inhibitor 2-4016  
 Kovar/glass bonding, new technique for surface prep. of metal 2-22370  
 laser surface alloyed, comp. uniformity, effect of fusion zone shape 2-52114  
 low-temp. brittleness (Chinese) 2-22302  
 magnetic aftereffect, high temp., in Fe alloys containing O 2-21843  
 martensitic  $\gamma \rightarrow \epsilon$  transformation in aged alloy (Russian) 2-13717  
 melt, ternary and multicomponent, alloying element effect on conc. and temp. depend. of  $\text{H}_2$  solubility (German) 2-27138  
 metallic glasses, magnetostriction and magnetoelastic effects 2-21863  
 metallic glasses, test of electronic stability criterion 2-35401  
 metglas 2826 MB, crystallisation charact. 2-21034  
 microwire, temp. depend. of strength props. of type 8A alloy (Russian) 2-2553  
 mischmetal-Co-Cu-Fe-Mg alloys, mag. props. for permanent magnet application 2-41164  
 Monel 400 steam generator tubes, low cycle fatigue 2-15503  
 Ni-hard IV, cast, white, duplex eutectic carbide form. in commercially important alloys 2-47017  
 phase transformation  $\gamma \rightarrow \alpha$ , Cr and Ni redistribution, STEM X-ray microanal. 2-36857  
 plastic flow, press depend. and dilatancy 2-16712  
 rare earth alloy,  $\text{RFe}_2$ , 4f moment determ. from NMR 2-46420  
 rare earth alloys,  $\text{RFe}_2$  2-8985  
 rare earth-iron intermetallics,  $\text{RFe}_2$ , NMR study of hyperfine field parameters and mag. moments 2-31324  
 recent studies, review (Japanese) 2-26354  
 steel Si45-cast Fe pair, contact area determ. during sliding contact 2-27298  
 superalloy, thermal stability 2-47060  
 superalloys, manufacture in vacuum arc furnace with permanent electrode (German) 2-46980  
 thermophysical props. in vicinity of phase transformations 2-35710  
 Zircaloy-2, I stress corrosion cracking susceptibility, texture and surface condition effects 2-31843  
 Zircaloy-2 tubings, I-induced stress corrosion cracking, surface condition influence on crack initiation 2-31844  
 Zircaloy-2-clad U alloy target, design and evaluation for pulsed neutron source 2-29472  
 Al-Co-Fe alloys, magnetomech. coupling, annealing effect 2-26713  
 Al-Cr-Fe, plasma deposited coatings formed from mechanically alloyed powders 2-17622  
 Al-Cu-Mg-Fe-Ni, superplasticity in creep (Russian) 2-5905  
 Al-Cu-Mg-Si-Fe, internal friction and creep rupture behaviour 2-47083  
 Al-Fe, internal friction and creep rupture behaviour 2-47083  
 Al-Fe, low-field Hall effect, impurity effects 2-36011  
 Al-Fe, rapidly solidified, coarsening of intermetallic particles 2-41611  
 Al-Fe intermetallic phase, formed during controlled solidification 2-36848  
 Al-Fe liquid-phase sintering, effect of gravity (Japanese) 2-5842  
 Al-Fe-Mn, eutectic alloys, ternary directionally solidified, struct. and mech. props. (Korean) 2-22209  
 Al-Fe-Si system, phase equilibria, critical eval. of constitution 2-5857  
 Al-Mg-Fe-Ni, alloy type 2168-T651, fatigue crack arrest threshold, influence of various parameters 2-27264  
 Al-Zn-Mg-Cu-Fe-Ni(Zr), struct. and mech. props., Fe with Ni or Zr addition effect 2-51991  
 Au-Cu-Fe spin glass, RKKY interaction, conduction electron mean free path depend. 2-46271  
 Au-Cu-Fe(Mn) alloys, low temp. elec. cond., scatt. mechanisms 2-35997  
 Au-Fe, dil., Hall effect 2-17048  
 Au-Fe, dilute, crit. behaviour at onset of ferromag., dynamic response meas. 2-2076  
 Au-Fe, Kondo system, thermoelec. transport parameters 2-36021  
 Au-Fe alloy, negative magnetoresistance 2-36018  
 Au-Fe(14.5 at.%), field induced ferromagnetism, close to percolation limit (French) 2-51411  
 C exchange between steel and FeCr, autoradiography study (Russian) 2-2711  
 $\text{CeFe}_2$ , electric and mag. resist., 1.5 to 300K 2-5385  
 $\text{CeFe}_2$ , electric and mag. resist., 1.5 to 300K 2-8786  
 Co-Cr-Fe system, phase equilibria, critical eval. and constitution 2-47009  
 Co-Fe-B amorphous films, induced anisotropy and permeability, annealing effects 2-46349  
 Co-Fe-B(-Si), metallic glass, crystn., Lorentz microscopy study 2-21033  
 Co-Fe-Cr films, mag. props. variation during electron bombard., surface comp. (Russian) 2-21844  
 Co-Fe-Cr sputtered films, mag. props., effects of Cr 2-26688  
 Co-Fe-Ni system, phase equilibria, critical eval. and constitution 2-47009  
 Co-Fe-V, influence of thickness on mag. props. 2-5564  
 CoFe, NMR on oriented nuclei, spin-lattice relax. parameters 2-9049  
 $^{58}\text{CoFe}$  and  $^{60}\text{CoFe}$ , nuclear spin lattice relax. 2-26777  
 $\text{Co}_{48}\text{Si}_{14}\text{Fe}_{2.5}$  amorphous alloy, electron irradi. effects (Ukrainian) 2-25929  
 Cr-Fe, matrix effects in quantitative AES 2-37128  
 Cr-Fe-Ni ternary system, X-ray intensities, matrix correction methods appls. 2-38733  
 $\text{Cr}_{1-x}\text{Fe}_x$ , 3d-like electron localisation, anal. of positron annihilation and Mossbauer data 2-40816

## iron alloys continued

- Cu-Al-Fe, C62500 Al bronze, laser quenched, cavitation erosion, surface layer transform. 2-9458  
 Cu-Al-Fe (14, 4 wt.%) ion plated coating, wear under arduous metal-forming conditions 2-30778  
 Cu-Fe multifilamentary composites, in situ formed, mag. hysteresis loops 2-13315  
 Cu-Fe supersaturated solid soln., Mossbauer spectrum model, rel. to Fe atom states 2-41236  
 Cu-Fe-Zr, dispersion hardenable, temp. depend. of internal friction (Polish) 2-36904  
 Cu-Ni-Fe decomposed solid solns., plastic deform. effect on mag. props. (Russian) 2-21862  
 Cu-Ni-Fe-Mn, assessment of quality of surface film on cooling water side of condenser tubes 2-5993  
 Cu-Sn-Al-Fe-Ni-Mn, fracture and mech. props., effect of comp. and crystn. conditions 2-41729  
 Cu-Zr-Fe, glassy, vitrification, bulk and surface positron annihilation study (Russian) 2-46817  
 Dy-Fe/Gd-Fe double layer film, amorphous, thermomag. writing 2-31188  
 DyFe<sub>2</sub>, magnetisation meas. of magnetostriction, mag. moments and anisotropy (Russian) 2-21835  
 Dy<sub>0.7</sub>Tb<sub>0.3</sub>Fe<sub>2</sub>, magnetoelastic effects, hysteresis loop width (Russian) 2-51446  
 ErFe<sub>2</sub>, magnetisation meas. of magnetostriction, mag. moments and anisotropy (Russian) 2-21835  
 Er<sub>6</sub>Fe<sub>23</sub>, influence of H on struct. and mag. props. 2-2063  
 (Fe<sub>2</sub>Co)<sub>100-x</sub>(Ta<sub>2</sub>W)<sub>x</sub>, RF sputtered amorphous films, mag. and thermal props. 2-36397  
 Fe and its alloys, magnetocrystalline anisotropy, effect of hydrostatic press. 2-17273  
 Fe: rare earth, dopant distrib. studied by internal friction 2-45238  
 Fe<sup>183</sup>Ta, dil., Knight shift from hyperfine field anal. of NMR-ON results 2-46400  
 Fe-(P)(C)(B) metalloid type alloys, glass forming ability (Japanese) 2-51870  
 Fe-Al, cold worked, Mossbauer study of atomic reordering 2-17377  
 Fe-Al, magnetisation and magnetostriction, magnetic annealing effects 2-17322  
 Fe-Al, Mossbauer spectra hyperfine struct. parameters 2-5613  
 Fe-Al (10 to 50 at.%), elastic moduli (German) 2-51971  
 Fe-Al (12.7 wt.%), doped, piezomag., magnetomech. internal friction (Polish) 2-36407  
 Fe-Al (20 to 50 at.%), coeff. of expansion (German) 2-12788  
 Fe-Al (24.3 at.%), atomically ordering, mag. aftereffects related to C migration (Polish) 2-36394  
 Fe-Al (30.5 at.%), ordered alloy, plastically deformed, antiphase domain boundary tubes obs. 2-41691  
 Fe-Al alloy system, Fe-rich, long-range order parameter, Mossbauer spectra (Chinese) 2-2165  
 Fe-Al bronzes, laser surface melting from homogenisation 2-2539  
 Fe-Al single cryst., ordered B2 type, annealing-out of quenched-in vacancies 2-47065  
 Fe-Al-C,  $\alpha$ -martensite anomalous tetragonality, role of Al and C (Russian) 2-51921  
 $\alpha$ -Fe-Al-C, dil., mag. permeability disaccommodation, interaction energy of Al-C pair (Polish) 2-36396  
 Fe-Al-Co, piezomag., annealed, internal damping depend. on mag. polarisation (Polish) 2-36903  
 Fe-Au, dil., hyperfine field, press. and temp. depend. 2-35980  
 Fe-Au(Cu)-Ni, precipitation at interphase boundaries 2-13729  
 Fe-B, amorphous, induced anisotropy and depend. on prep. parameters 2-8969  
 Fe-B, amorphous, mag. behaviour under press., invar-like prop. 2-9016  
 Fe-B, amorphous, magnetostriction props. and depend. on prep. parameters 2-9015  
 Fe-B, amorphous, perminvar effect, domain struct. stabilisation 2-8995  
 Fe-B, amorphous, with transition metal substituents, mag. props. and crystn., cluster form. 2-8997  
 Fe-B, amorphous-cryst. transform., coercive force and TEM obs. 2-8438  
 Fe-B (17 at.%), amorphous, high press. crystn. and struct. transitions 2-30409  
 Fe-B amorphous and crystallised alloys, phase diagram magnetisation, elec. resist. and thermal expansion meas. 2-17664  
 Fe-B amorphous films, induced anisotropy and permeability, annealing effects 2-46349  
 Fe-B amorphous Invar alloys, effect of cold rolling on thermal expansion and mag. props. 2-26595  
 Fe-B amorphous metals, electron optical study 2-16598  
 Fe-B liq. and amorphous alloys, struct. (Russian) 2-8413  
 Fe-B metallic glass, quenching conditions influence on mag. aftereffect 2-9006  
 Fe-B metallic glass, struct. relaxation, crystn., internal friction and elastic modulus 2-47085  
 Fe-B-C-Si, amorphous low core loss materials, comp. and heat treatment 2-31242  
 Fe-B-Si-C, amorphous, mag. props., surface inclusions effect 2-41159  
 Fe-B-Si-C-Al, amorphous, crystn. temp., mag. props. 2-41160  
 Fe-B-Si(-C), metallic glass, ribbon, mag. domains, SEM study 2-21816  
 Fe-B(-Ni) based metallic glass, amorphous ribbons and toroids, pulse magnetisation losses 2-31239  
 Fe-B(18 wt.%), amorphous and crystalline, NMR study 2-26771  
 Fe-base amorphous alloys, density, conc. depend. 2-30506  
 Fe-base amorphous alloys, mag. props., comp. depend. 2-31244  
 Fe-base materials, hard, microstruct. refinement by laser and electron beam surface melting 2-41794  
 Fe-Bi-Si, amorphous, mag. props., surface inclusions effect 2-41159  
 Fe-C, binary liq. alloys, meas. of N activity by N conc. cells 2-30634  
 $\alpha$ -Fe-C, dil., with substitutional atoms, mag. permeability disaccommodation, model (Polish) 2-36392  
 Fe-C, liq., thermodynamic props. 2-21333  
 Fe-C, oxidation, 600 to 850°C 2-52107  
 Fe-C, solute peak associated with grain boundaries 2-45150  
 Fe-C (1.5-7.2 at.%), martensite, interstitial atom config., study using Mossbauer spectroscopy 2-35439  
 Fe-C (5.5 wt.%), Cr<sub>2</sub>C, layer growth on austenite and cementite 2-27317  
 Fe-C alloy, AE during tensile tests 2-31873  
 Fe-C alloys, ductility deterioration due to nonuniform distrib. (Japanese) 2-9370



## iron alloys continued

- Fe-C and Fe-Fe<sub>3</sub>C eutectics, interphase spacing and growth temp. rel. to growth vel. 2-31694  
 Fe-C lath martensite, anal. of habit plane traces 2-40321  
 Fe-C martensite, modulated struct. studied by electron microscopy and diff. 2-12538  
 Fe-C-B alloys, liq. and amorphous struct. (*Russian*) 2-8413  
 Fe-C-P, equilibrium segregation of P at grain boundaries 2-5881  
 Fe-C-S, liq., C dissoln. rate, influence of S 2-1620  
 Fe-C-Si (Ni, Mn, Cr), grain boundary ferrite allotriomorphs, growth kinetics 2-16659  
 Fe-C-Si (Ni, Mn, Cr), proeutectoid ferrite growth kinetics, influence of carbide precip. 2-17682  
 Fe-C-Si alloys, formation mechanism of precipitated graphite shapes (*Japanese*) 2-2516  
 Fe-C-Si-Mn, cast, isothermally hardened, strengthening by surface induction hardening 2-52105  
 Fe-Co, dilute solid soln., softening at low temp. (*French*) 2-36873  
 Fe-Co, FCC particles in Cu matrix, ferromag.-antiferromag. transition 2-13294  
 Fe-Co, metal pigment, coercivity and unit particle size 2-26680  
 Fe-Co, neutron irradiated, accelerated diffusion (*French*) 2-35546  
 Fe-Co, order-disorder transitions, specific heat 2-21794  
 Fe-Co alloys, free thin film production, technique 2-46925  
 Fe-Co film, NMR, conduction electron spin reorientation 2-5593  
 Fe-Co film, oblique incidence deposition, mag. props. 2-21850  
 Fe-Co-B amorphous hyperfine field <sup>11</sup>B NMR 2-46407  
 Fe-Co-M(V)(Ti) alloys, neutron irradiated, accelerated diffusion (*French*) 2-35546  
 Fe-Co-Mn (46-51, 3-10 at.%), mag. moment, Hall const., outer electron band filling 2-51080  
 Fe-Co-Ni (38-48, 3-11 at.%), mag. moment, Hall const., outer electron band filling 2-51080  
 Fe-Co-V, Vicalloy, cellular decomposition (*Russian*) 2-13726  
 Fe-Co-V-Ni, Vicalloy, cellular decomposition (*Russian*) 2-13726  
 Fe-Cr, corrosion in ortho-phosphoric acid 2-17788  
 Fe-Cr, elastic meas., volume effects 2-2546  
 Fe-Cr, mag. moments for different local at. configs. 2-46255  
 α-Fe-Cr, nitrogenation kinetics in NH<sub>3</sub>-H<sub>2</sub> mixtures, influence of alloying elements 2-41793  
 Fe-Cr, spin waves, neutron diff. study 2-46266  
 Fe-Cr, α-phase, electron microsc. obs. 2-45113  
 Fe-Cr (18%) alloy, volumic diffusion of S, 850 to 1200°C (*French*) 2-16898  
 Fe-Cr (20 wt.%), scaling in H<sub>2</sub>-H<sub>2</sub>O-H<sub>2</sub>S mixtures 2-47254  
 Fe-Cr (20 wt.%) alloys, effect of Y<sub>2</sub>O<sub>3</sub> dispersion on high temp. oxidation 2-2632  
 Fe-Cr nitridation, two-phase zone growth kinetics (*Russian*) 2-1622  
 Fe-Cr sputtered films, mag. props., effects of Cr 2-26688  
 Fe-Cr-Al, high temp. props. improvement by rare earth additions, internal friction study 2-45355  
 Fe-Cr-Al (0-17.7, 2.6-9.3 wt.%), Al<sub>2</sub>O<sub>3</sub>-forming, oxidation morphology 2-27341  
 Fe-Cr-Al alloy, effects of rare earth on preferred orientation in oxide scales (*Chinese*) 2-22232  
 Fe-Cr-C, cast, white, duplex eutectic carbide form. in commercially important alloys 2-47017  
 Fe-Cr-C, hypo-eutectic alloys, solidification, partition of solute elements 2-47033  
 Fe-Cr-C-P, equilibrium segregation of P at grain boundaries 2-5881  
 Fe-Cr-Co, mag. hard, high-temp. transform 2-41604  
 Fe-Cr-Co, permanent magnet, heat treated in miscibility gap, mag. props. 2-36983  
 Fe-Cr-Co-C, permanent mag. props., C content effect, expt. study 2-52062  
 Fe-Cr-Co-Si (27, 17.5, 1 wt.%), mag. and struct. transitions, mag. props. 2-26630  
 Fe-Cr-Cr<sub>2</sub>O<sub>3</sub>, oxidation resist., high temp., effect of dispersed oxides 2-47244  
 Fe-Cr-Mn, unstable austenitic, deform. induced γ→ε→α transition and mech. props. (*Russian*) 2-51900  
 Fe-Cr-Mn-C, cast, austenite transform., Mn conc. influence 2-51902  
 Fe-Cr-Mo, single crystals, shear band form., fatigue-induced 2-41710  
 Fe-Cr-Mo base amorphous alloys, spontaneous corrosion passivation in 6 N HCl 2-31846  
 Fe-Cr-N, influence of N content on internal friction 2-45374  
 Fe-Cr-Ni (7, 2 wt.%), decomp. of austenite, kinetic and microstruct. study 2-9347  
 Fe-Cr-Ni alloys, low temp. change of mag. struct. and plastic props. 2-22294  
 Fe-Cr-Ni commercial alloys, irradiated swelling 2-50716  
 Fe-Cr-P, equilibrium segregation of P at grain boundaries 2-5881  
 Fe-Cr-Si, deform., embrittling α-phase precipitate effects 2-47046  
 Fe-Cr-Si alloys, oxidation, scale growth morphology 2-27340  
 Fe-Cr-Si-B amorphous ribbons, mag. props. 2-36384  
 Fe-Cr-V-Mn-C, cast, microstruct. characts. and elements distrib. 2-51888  
 Fe-Cu, liq. phase sintered, grain boundary wetting, temp. depend. 2-35869  
 Fe-Cu, sintered, steam treatment effect on wear resistance 2-22393  
 Fe-Cu system, phase diagram, α(δ)/γ equilibrium 2-13697  
 Fe-Cu-graphite, dynamic hot pressing, antifriction characts. 2-17648  
 Fe-CuNi sheathed thermocouple, reference standard for calibrating industrial thermocouples (*German*) 2-15166  
 Fe-Cu(C), (5,(5) wt.%), influence of speed on wear 2-36976  
 Fe-FeSi (29-33 at.%Si) hypoeutectic films, transition from dendritic to lamellar struct. 2-27166  
 Fe-Ge, molten, elec. resist., temp. and conc. depends. (*Russian*) 2-21555  
 Fe-Ge-Mn(Co)(Ni), crystal and mag. struct. 2-45115  
 α-Fe-H, deformed, internal friction peaks 2-41656  
 Fe-H, ion implanted, Mossbauer study 2-41235  
 Fe-H, thermocycled, anomalous spontaneous plastic deformation (*Ukrainian*) 2-13773  
 Fe-H system, formation of interstitial H-clusters 2-5884  
 Fe-M-B (M=transition metal), amorphous alloys, mech. props., thermal stability 2-31787  
 Fe-Mn, BCC alloys, metastable, produced by RF sputtering 2-13648  
 Fe-Mn, dil., hyperfine field, press. and temp. depend. 2-35980  
 Fe-Mn, dil., local order, conc. and temp. depend., <sup>55</sup>Mn NMR study 2-46390  
 Fe-Mn, elastic meas., volume effects 2-2546

## iron alloys continued

- Fe-Mn, Fe distrib. in β-Mn struct., X-ray and Mossbauer effect anal. 2-35444  
 Fe-Mn, sulphidation, Mossbauer spectroscopy study 2-41782  
 Fe-Mn quenched Heisenberg material with random sites, spin-glass state (*Russian*) 2-51427  
 Fe-Mn-C, carbide form. upon tempering at low temps. 2-17697  
 Fe-Mn-Co alloys, hardening of martensite (*Russian*) 2-36872  
 Fe-Mn-Cr base amorphous alloys, corrosion behaviour, Mn content effects 2-31845  
 α-Fe-Mo, nitrogenation kinetics in NH<sub>3</sub>-H<sub>2</sub> mixtures, influence of alloying elements 2-41793  
 Fe-Mo system, Gentalloy, damping characts. 2-1556  
 Fe-Mo system, phase equilib. and thermodynamics 2-27140  
 Fe-Mo(Ti)(Nb), dilute, muon hyperfine fields 2-46451  
 Fe-Nb-Co-W system, Recalloy, props. (*Japanese*) 2-51400  
 Fe-Ni, dil., mag. aftereffect after low temp. neutron irradi. 2-51439  
 Fe-Ni, elastic meas., volume effects 2-2546  
 Fe-Ni, ferromagnetic, work function (*Japanese*) 2-26477  
 Fe-Ni, internal stresses in martensite, transform type effect, internal friction meas. (*Russian*) 2-22256  
 Fe-Ni, metallic glasses, isothermal transform., activation energies 2-12732  
 Fe-Ni, thermal growth of Fe<sub>2</sub>O<sub>3</sub>, photoelectrochem. behaviour 2-37078  
 Fe-Ni (22 wt.%), strengthening mechanism in tempering, after surface plastic deform. 2-41637  
 Fe-Ni (36 and 50 wt.%), mag. props. after deform. and annealing 2-26673  
 γ-Fe-Ni alloys, diffusion and electrotransport of C 2-16908  
 Fe-Ni based alloys, amorphous, production by flame-spray quenching 2-2480  
 Fe-Ni based metallic glasses, crystn., effect of electron irradi., in-situ HVEM study 2-21040  
 Fe-Ni ferritic alloys, mag. and mech. props., telephone receiver appl. 2-26662  
 Fe-Ni system, diffusion processes 2-5265  
 Fe-Ni-Al, ageing in region of reverse martensitic transform., phys. props. change (*Russian*) 2-51942  
 Fe-Ni-Al alloy YuND4 magnets, cooling rate rel. to mag. props. 2-26674  
 Fe-Ni-B amorphous hyperfine field <sup>11</sup>B NMR 2-46407  
 Fe-Ni-B-Si, amorphous, annealing effect on Barkhausen impulses 2-8999  
 Fe-Ni-C, internal friction behaviour, 77 to 300K, effect of thermal transform. and cold working 2-47106  
 Fe-Ni-C, martensite habit plane crystallographic parameter modification after prestraining of austenite matrix (*Czech*) 2-31749  
 Fe-Ni-C (17.1, 0.81 wt.%) 2-13721  
 Fe-Ni-C alloy, TEM study of strain rate influence and deform. mode on substruct. 2-5904  
 Fe-Ni-C-H alloy, γ-phase, internal friction and cathodic H charging 2-47076  
 Fe-Ni-Co, oxidation mechanism 2-47249  
 Fe-Ni-Co, solid soln., mutual diffusion coeffs., calc. method (*Russian*) 2-50903  
 Fe-Ni-Co-Cu, reverse martensite transform. stabilization of austenite (*Chinese*) 2-2508  
 Fe-Ni-Cr, Alloy 800, corrosion, high-temp. in carburising, oxidising and sulphidising environments 2-27337  
 Fe-Ni-Cr, alloy 800H, low-cycle fatigue, high temp., effect of ageing and cold working 2-36951  
 Fe-Ni-Cr, scale-resist., alloying fundamentals 2-2619  
 Fe-Ni-Cr alloy 800 H, high-temp. alloy, carburisation effects conductivity 2-31738  
 Fe-Ni-Cr sputtered films, mag. props., effects of Cr 2-26688  
 Fe-Ni-Cr system, self-diffusion of components in FCC phase of binary solid solns. 2-1653  
 Fe-Ni-Cr-Mo (14.5, 14.5, 2.5 at.%), elastic moduli, 300 to 600K, US pulse-echo overlap meas. 2-5170  
 Fe-Ni-Cr-Mo (14.5, 14.5, 2.5 at.%), elastic moduli, 300 to 600K, US pulse-echo overlap meas. 2-8554  
 Fe-Ni-Cu-Si-Mn-Cr-C, cast austenitic, struct. and mech. props., heat treatment effect 2-51953  
 Fe-Ni-P-B-Al, amorphous, ferromag. reson. 2-31292  
 Fe-Ni-P-B(Si) metallic glass, ferromag., absolute thermoelec. power 2-51154  
 Fe-Ni-Ti, austenite precipitation hardened, decomp., struct. mechanism (*Russian*) 2-22247  
 Fe-Ni-V alloy, martensitic transformation, kinetics and struct. singularities (*Russian*) 2-13718  
 Fe-Ni-X, X=Ge, P, Au or Pt, ternary partition coeff., expt. determ. 2-36860  
 Fe-Ni(Co), solid and liq., thermodynamic activities and heat of mixing meas. by Knudsen-Cell mass spectrometry 2-16817  
 Fe-Ni(Cu), computer supported evaluation of the Gibbs-Duhem-equation at 1873K (*German*) 2-13696  
 Fe-Ni(Ru), mag. struct. determ. using specific heat, magnetocaloric effect data 2-13274  
 Fe-Ni(Si), grain boundary etching method appl. (*Japanese*) 2-25903  
 Fe-nonmetal amorphous alloys, thermal stability, magnetic props. (*Dutch*) 2-9002  
 Fe-P, alloys, sintered, mag. props. 2-22346  
 Fe-P, amorphous, crystn. mechanism, DTA and X-ray diff. invest. (*Korean*) 2-40283  
 Fe-P, equilibrium segregation of P at grain boundaries 2-5881  
 Fe-P alloys, P segregation, rel. to grain boundary struct. 2-22222  
 Fe-P binary alloys, amorphous state formation, thermal stability, melt quenching 2-30408  
 Fe-P-B-Si-C ribbons, crit. thickness for amorphous state form. 2-36832  
 Fe-Pb (50 to 80 at.%), superlattice alloys, vol. change on ordering (*Japanese*) 2-27174  
 Fe-Pd, γ-phase, magnetisation and soft modes, neutron diff. study 2-50821  
 Fe-Pd (18 to 52.5 at.%), mag. props., by mag. meas. and X-ray diff. 2-21833  
 Fe-Pd-Ag, Ag effect on magnetic props. (*Japanese*) 2-27301  
 Fe-Pt, dilute solid soln., softening at low temp. (*French*) 2-36873  
 Fe-Pt ordered alloys, magnetic and magnetovolume props. around γ-α phase boundary 2-17324  
 Fe-Rh, pressure-temp. mag. phase diagram 2-36347  
 Fe-S, self-diffusion, bulk and grain boundary (*French*) 2-50902



## iron alloys continued

- Fe-Sb-transition metal alloys, segregation, influence of chem. interaction between Sb and transition metal 2-47039  
 Fe-Se (3.25 wt.%), subboundary dislocations incorporated in deformation twin 2-50665  
 Fe-Si, dislocations, group velocity 2-12595  
 Fe-Si, elastic constants, depend. on order and comp., exptl. study 2-31727  
 Fe-Si, ferromagnetic domains, neutron diffr. topography obs. 2-36377  
 $\alpha$ -Fe-Si, nitrogeneration kinetics in  $\text{NH}_3\text{-H}_2$  mixtures, influence of alloying elements 2-41793  
 Fe-Si, plasticity, internal friction and struct. (Polish) 2-36905  
 Fe-Si, single 180° Bloch wall displacement in monocrystalline medium (French) 2-8996  
 Fe-Si, single crystals, shear band form, fatigue-induced 2-41710  
 Fe-Si (10.40 wt.%), anodic processes, galvanostatic conditions 2-47223  
 Fe-Si (2.6 wt.%) single crystal, quasibrittle fracture and cleavage initiation in different environments 2-5955  
 Fe-Si (3 wt.%) sheets, grain oriented, remanence theory in presence of external stresses 2-26708  
 Fe-Si (3 wt.%), domains struct. and EM losses at high induction amplitudes 2-31232  
 Fe-Si (3 wt.%), energy loss anomaly study 2-21827  
 Fe-Si (3 wt.%), g-factor determ. by FMR 2-21494  
 Fe-Si (3 wt.%), grain oriented, effects of surface coatings on domain struct. 2-26652  
 Fe-Si (3 wt.%), grain oriented, effect of tensile stress on domain wall motion and wall bowing 2-26710  
 Fe-Si (3 wt.%), grain oriented, magnetised, effect of stress on mag. props. 2-26711  
 Fe-Si (3 wt.%), grain-oriented, effect of Al on mag. props. (Chinese) 2-22345  
 Fe-Si (3 wt.%), grain-oriented, magnetostrictive props. of individual grains 2-26709  
 Fe-Si (3 wt.%), single crystals containing preintroduced twins, cyclic deform. 2-22316  
 Fe-Si (3 wt.%), textured state ensuring high mag. props. (Russian) 2-22235  
 Fe-Si (3 wt.%), with (110) surface, domain wall angles, stress effects 2-26651  
 Fe-Si (3 wt.%) single crystals grown by floating zone melting, Si inhomogeneities and striations 2-36781  
 Fe-Si (3 wt.%) single crystals, Barkhausen noise and domain struct. dynamics 2-51433  
 Fe-Si (3%), grain substruct. formation during recrystallisation 2-13746  
 Fe-Si (3.2 wt.%) single crystal, struct. changes during necking (Russian) 2-5871  
 Fe-Si (3.25 wt.%), grain-oriented, core-loss, effect of cutting operation 2-17744  
 Fe-Si (3.25 wt.%), propag. of rapidly moving crack, effect of twins (Russian) 2-22305  
 Fe-Si (6.5 wt.%), powder, prep. by spark erosion 2-41545  
 Fe-Si (6.5 wt.%) ribbons, mag. props. and grain struct. after annealing 2-26665  
 Fe-Si alloys, high Si content, mech. and mag. props., recent studies 2-26648  
 Fe-Si alloys, rapidly quenched, mag. props. 2-17315  
 Fe-Si amorphous ribbon materials, causes of anomalous loss 2-26647  
 Fe-Si steel plate, non-oriented, Fe losses calc. 2-29751  
 Fe-Si-Al single crystals, mag. props. near Sendust comp. 2-26624  
 Fe-Si-B ribbons, crit. thickness for amorphous state form. 2-36832  
 Fe-Si-B substituted metallic glasses, electronic struct., saturation magnetisation 2-1817  
 Fe-Si-C (1.9, 4.2 wt.%), rapidly solidified,  $\epsilon$ -phase form., study using SEM, TEM, X-ray diffr. and DTA 2-31691  
 Fe-Si-Nb(Cr)(V), anodic processes, galvanostatic conditions 2-47224  
 Fe-Si-P alloys, sintered, mag. props. 2-22346  
 Fe-Si-Sb alloy, grain boundary relaxation, grain boundary segregation effect 2-47081  
 Fe-Si(3 wt.%) crystal, X-ray topographic method, determ. of subgrain misorientation 2-8526  
 Fe-Sn,  $\alpha$ -solid soln., interdiffusion (Japanese) 2-12858  
 $\alpha$ -Fe-Sn, intergranular creep fracture at migrating and sliding grain boundaries 2-13813  
 Fe-Ta-Co-W system, Recalloy, props. (Japanese) 2-51400  
 Fe-Ti, ferrite-austenite transition, thermopower detection method, appl. to surface reaction and diffusion 2-13867  
 $\alpha$ -Fe-Ti, H-induced slip and twinning 2-50656  
 Fe-Ti (2 wt.%), low temp. internal friction, surface mineral oil layer influence (Polish) 2-27209  
 Fe-Ti (3.85 wt.%), carbide dispersion carburizing (Japanese) 2-27182  
 Fe-Ti-C, dil., migrational mag. aftereffects, 200 to 500K (Polish) 2-36393  
 Fe-Ti-Mn (0.19, 0.39 wt.%), single crystal, deform. behaviour, effect of orientation and temp. 2-22273  
 Fe-Ti-N, lattice parameter changes 2-45116  
 Fe-TiC, microstruct. refinement by laser and electron beam surface melting 2-41794  
 Fe-transition metal amorphous binary alloys, Curie temp., magnetisation 2-36341  
 Fe-V alloy, local mag. moments and atomic ordering, continued fraction technique calcs. 2-31147  
 Fe-V-C, elec. resistivity and length changes during precipitation 2-5882  
 $\alpha$ -Fe-V-C, magnetic permeability disaccommodation in alloys containing substitutional-interstitial pairs 2-2107  
 Fe-V-Cr-H-O-C system, phase equilib. calc. 2-13699  
 Fe-V-N, internal friction, mag. aftereffect study 2-45370  
 Fe-W-M, M=Co, Cr, Mo, Ni, Si, Ti, critical eval. of constitutions 2-22197  
 Fe-Zn, thermodynamical, phase diagram modifications 2-13712  
 Fe-Zn (9-32 wt.%), grain boundary migration, diffusion-induced, metallographic study 2-12609  
 Fe-Zn-C, phase transform kinetics, effect of Zn 2-36853  
 Fe-Zr-B, amorphous, form. range, mag. props. and thermal stability 2-31243  
 Fe<sub>1-x</sub>M, Si (M=transition metal), spin echo NMR study 2-9056  
 Fe<sub>2</sub>(Ni)<sub>2</sub>C, two-phase, rel. between strength and second phase vol. fraction (Korean) 2-41679  
 FeAl, electron momentum distrib. and charge transfer, Compton scatt. study 2-26281  
 FeAl, positron annihilation, band struct. and Fermi surface 2-46814

## iron alloys continued

- FeAl, single cryst., effect of compositional deviations from stoichiometry on slip transition direction 2-5177  
 Fe<sub>3</sub>Al single crystal, deformation, at high temps. 2-41695  
 Fe<sub>3</sub>Al<sub>0.8</sub>Si<sub>0.2</sub>, DO<sub>3</sub> struct., deform. 2-27256  
 Fe<sub>3</sub>Al<sub>1</sub>Si<sub>1-x</sub>, mag. hyperfine field and isomer shift, Mossbauer study 2-17374  
 FeAuPd<sub>2</sub>, ferromagnetic-antiferromagnetic transition (Russian) 2-51404  
 Fe<sub>100-x</sub>B<sub>x</sub>, amorphous, Mossbauer spectra asymmetry 2-31332  
 Fe<sub>100-x</sub>B<sub>x</sub>, series, amorphous, elec. resist., 80 to 300K 2-45933  
 Fe<sub>2</sub>B and FeB, bonding rel. to struct. and mag. props., photoemission meas. and ab initio calcs. 2-13628  
 Fe<sub>73</sub>B<sub>27</sub>, metallic glass, microhardness and porosity investigation (Russian) 2-2577  
 Fe<sub>80</sub>B<sub>20</sub>, amorphous, annealing behaviour on continuous heating 2-17690  
 Fe<sub>80</sub>B<sub>20</sub>, amorphous, electron scatt. mechanisms, resist. temp. depend. meas. 2-13059  
 Fe<sub>80</sub>B<sub>20</sub>, amorphous, mag. aftereffect due to relax. of atoms (Polish) 2-36395  
 Fe<sub>80</sub>B<sub>20</sub>, amorphous, phase transitions, laser-induced 2-25748  
 Fe<sub>80</sub>B<sub>20</sub>, glassy metals, corrosion and dissoln. 2-31858  
 Fe<sub>80</sub>B<sub>20</sub>, metallic glass, thermomagnetic and transport props. 2-26362  
 Fe<sub>80</sub>B<sub>20</sub>, metallic glass, crystn. kinetics, TEM and DSC study 2-35399  
 Fe<sub>81-8-x</sub>Be<sub>x</sub> metallic glasses, <sup>57</sup>Fe Mossbauer spectra study 2-17375  
 Fe<sub>81.5</sub>B<sub>18.5</sub>S<sub>0.4</sub>, amorphous ribbon form., effect of casting vel. 2-27114  
 Fe<sub>75.4</sub>B<sub>24.6</sub>Si<sub>10.4</sub>, amorphous, mag. props. and crystn. 2-46441  
 Fe<sub>81.5</sub>B<sub>18.5</sub>Si<sub>0.4</sub>, metallic glass, ribbon, mag. permeability relax. quenching rate effect 2-21823  
 Fe<sub>81.3</sub>Si<sub>18.7</sub>C<sub>2</sub>, amorphous alloy, evidence for C mobility from mag. anisotropy meas. 2-41123  
 Fe<sub>81.3</sub>Si<sub>18.7</sub>C<sub>2</sub>, metallic glass, thermomagnetic and transport props. 2-26362  
 Fe<sub>81.3</sub>Si<sub>18.7</sub>C<sub>2</sub>, Metglas 2605, magnetomech. coupling and permeability 2-31258  
 (Fe<sub>80.8</sub>B<sub>19.18</sub>)<sub>0.9</sub>Tb<sub>0.05</sub>La<sub>0.05</sub>, amorphous and crystallised, mag. props. 2-21820  
 Fe<sub>1-x</sub>B<sub>x</sub> amorphous film, Hall effect meas. 2-51149  
 Fe<sub>70</sub>Co<sub>30</sub>, amorphous alloys, crystn., study of struct. defects in metastable Fe<sub>73</sub>C<sub>3</sub> (French) 2-12489  
 Fe<sub>75</sub>C<sub>25</sub>, amorphous alloys, crystn., study of struct. defects in metastable Fe<sub>73</sub>C<sub>3</sub> (French) 2-12489  
 FeCo, adsorpt. of CO, interaction investigated by means of thermal desorpt. mass spectrometry 2-9569  
 FeCo alloy, change in electron bands in order-disorder transition (Russian) 2-8752  
 FeCo film, order-disorder effects in magneto-optical props. 2-21995  
 FeCo, order-disorder transition, Mossbauer study 2-45570  
 FeCo, ordering, electron diffr. study 2-45047  
 Fe<sub>74</sub>Co<sub>10</sub>B<sub>16</sub>, metallic glass, ferromag., absolute thermoelec. power 2-51154  
 Fe<sub>74</sub>Co<sub>10</sub>B<sub>16</sub>, metallic-glass fibre-optic phase modulators 2-34882  
 Fe<sub>67</sub>Co<sub>10</sub>B<sub>14</sub>Si<sub>1</sub>, Metglas 2605, magnetomech. coupling and permeability 2-31258  
 Fe<sub>73</sub>Co<sub>10</sub>Ni<sub>5</sub>Cr<sub>10</sub>Si<sub>15</sub>B<sub>7</sub>, metallic glass, microhardness and porosity investigation (Russian) 2-2577  
 Fe<sub>68</sub>Co<sub>10</sub>Si<sub>10</sub>, amorphous mag. alloys, Fourier analysis of Mossbauer spectra 2-26803  
 Fe, Co<sub>1-x</sub>Si<sub>x</sub>, helimagnetic struct., magnetisation and small-angle neutron scatt. meas. 2-2056  
 (Fe<sub>1-x</sub>Co<sub>x</sub>)<sub>75</sub>Si<sub>18</sub>B<sub>7</sub>, amorphous, mag. aftereffect, nonlinear and hysteretic changes of permeability (Polish) 2-26686  
 FeCr<sub>30</sub>Ni<sub>30</sub>Al<sub>2</sub>, wire, mass spectrometric anal. of precipitates formed under heat treatment (French) 2-51960  
 Fe<sub>70</sub>Cr<sub>10</sub>P<sub>13</sub>C<sub>7</sub> (Russian) 2-2577  
 Fe<sub>7</sub>Ga, ordering, electron diffr. study 2-45047  
 FeGe<sub>2</sub> crystals, growth rate influence, on lateral face development character, Czochralski method 2-21050  
 Fe<sub>92-x</sub>M<sub>8</sub>B<sub>18</sub> alloys, amorphous, effects of additions on crystn. temps. 2-1410  
 FeMn<sub>2</sub>Al, Mossbauer spectrum, hyperfine struct. investig. 2-13380  
 (Fe<sub>1-x</sub>Mn<sub>x</sub>)<sub>80</sub>B<sub>20</sub>, amorphous, mag. props., magnetisation and Mossbauer effect study 2-26666  
 (Fe<sub>2</sub>Mn<sub>1-x</sub>)<sub>75</sub>P<sub>16</sub>B<sub>6</sub>Al<sub>3</sub>, spin glass transition study 2-31182  
 Fe<sub>1-x</sub>Mn<sub>x</sub>Si<sub>3</sub>, hyperfine field, NMR satellites 2-46406  
 (Fe<sub>1-x</sub>Mn<sub>x</sub>)<sub>4</sub>Si<sub>3</sub>, hyperfine coupling tensor anisotropy, <sup>57</sup>Fe Mossbauer study 2-41237  
 FeNi foil, dynamic magnetisation powers, 3-DIM neutron polarisation anal. 2-26661  
 Fe<sub>70</sub>Ni<sub>30</sub>, coexistence of Fe mag. states, coherent and incoherent neutron scatt. study 2-2057  
 Fe<sub>1-x</sub>Ni<sub>x</sub>, binary alloys, Fe-rich, at. ordering, elec. resist. and mag. moment meas. 2-35992  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, amorphous, Lorentz electron microscopy study of domain struct. 2-5562  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, glassy metals, corrosion and dissoln. 2-31858  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, positron annihilation study 2-2365  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, crystn., X-ray invest. (German) 2-35403  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, atom probe FIM study of microstruct. after annealing 2-36874  
 Fe<sub>40</sub>Ni<sub>40</sub>B<sub>20</sub>, metallic glass, anelasticity and struct. relaxation 2-45357  
 (Fe<sub>2</sub>Ni<sub>1-x</sub>)<sub>80</sub>B<sub>20</sub>, metallic glass, mag. and Mossbauer study 2-21921  
 Fe<sub>40</sub>Ni<sub>10</sub>B<sub>18</sub>Mo<sub>4</sub>, Metglas 2826 MB, mech. props., effect of external mag. field 2-9428  
 (Fe<sub>2</sub>Ni<sub>100-x</sub>)<sub>80</sub>B<sub>10</sub>P<sub>10</sub>, amorphous alloys, magnetoresistance in magnetic fields up to 14.5 T 2-1894  
 FeNiB<sub>2</sub> amorphous alloys, thermoelec. power singularities 2-21568  
 Fe<sub>70</sub>Ni<sub>70</sub>B<sub>10</sub>Si<sub>1</sub>, amorphous, second order mag. phase transition 2-2077  
 Fe<sub>72</sub>Ni<sub>25</sub>B<sub>18</sub>Si<sub>10</sub>, amorphous alloys, effects of neutron irradiation on mag. props. 2-2104  
 $\gamma$ -Fe<sub>82-x</sub>Ni<sub>18</sub>Cr<sub>18</sub>, spin glass state study (Russian) 2-51410  
 Fe<sub>73</sub>Ni<sub>16</sub>Cr<sub>14</sub>P<sub>12</sub>B<sub>6</sub>, glassy, electrical elastoresistivity at 77.4K 2-5380  
 Fe<sub>73</sub>Ni<sub>16</sub>Cr<sub>14</sub>P<sub>12</sub>B<sub>6</sub>, metallic glass, crystallisation and mech. props. 2-8447  
 (Fe<sub>1-x</sub>Ni<sub>x</sub>)<sub>78-x</sub>Cr<sub>10</sub>Si<sub>10</sub>B<sub>2</sub>, metallic glass, mag. and elec. props. 2-21834  
 $\gamma$ -FeNiMn, mixed exchange interaction, mag. phase diagram 2-36325  
 Fe<sub>40</sub>Ni<sub>38</sub>Mo<sub>4</sub>B<sub>18</sub>, amorphous alloy, He bubble form. under He<sup>+</sup> ion irradiation 2-50725  
 Fe<sub>40</sub>Ni<sub>38</sub>Mo<sub>4</sub>B<sub>18</sub>, metallic glass, vitrification during sputtering 2-12501  
 (Fe<sub>1-x</sub>Ni<sub>x</sub>)<sub>80</sub>P<sub>14</sub>B<sub>6</sub>, alloy, production by flame-spray quenching 2-2480  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, amorphous alloy, He ion irradiation effects 2-1530  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, amorphous, creep, stress relax. and struct. charge 2-13769



## iron alloys continued

- Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, amorphous ferromag., transverse magnetostriction due to shearing stress 2-21864  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, amorphous ribbons, low field mag. props. 2-46346  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, amorphous ferromagnet, magnetisation study 2-46347  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, glassy, electrical elastoresistivity at 77.4K 2-5380  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, metallic glass, torsional elastic behaviour 2-31720  
 Fe<sub>40</sub>Ni<sub>40</sub>P<sub>14</sub>B<sub>6</sub>, ordering, electron diff. study 2-45047  
 (Fe<sub>0.06</sub>Ni<sub>0.04</sub>)<sub>75</sub>P<sub>16</sub>B<sub>6</sub>Al<sub>3</sub> spin glass, AC susceptibility meas. 2-26600  
 (Fe<sub>0.9</sub>Ni<sub>0.1</sub>)<sub>75</sub>P<sub>16</sub>B<sub>6</sub>Al<sub>3</sub>, amorphous, ferromag. transition, struct. relax. effect on scaling law anal. 2-5542  
 (Fe<sub>0.9</sub>Ni<sub>0.1</sub>)<sub>75</sub>P<sub>16</sub>B<sub>6</sub>Al<sub>3</sub>, spin glass transition study 2-31182  
 (Fe<sub>0.9</sub>Ni<sub>0.1</sub>)<sub>75</sub>P<sub>16</sub>B<sub>6</sub>Al<sub>3</sub>, amorphous, Mossbauer study 2-31356  
 (Fe<sub>1-x</sub>Ni<sub>x</sub>)<sub>75</sub>P<sub>16</sub>B<sub>6</sub>Al<sub>3</sub>, amorphous, breakdown of magnetism, susceptibility and Mossbauer meas. 2-8976  
 Fe<sub>39</sub>Ni<sub>39</sub>Si<sub>12</sub>B<sub>12</sub>, amorphous, temp. depend. of mag. permeability 2-26656  
 Fe<sub>39</sub>Ni<sub>39</sub>Si<sub>12</sub>B<sub>12</sub>, amorphous spin glass, Mossbauer study 2-31331  
 Fe<sub>51</sub>Rh<sub>48</sub>S<sub>1</sub>, ferromagnetic, press. induced antiferromagnetism 2-46282  
 Fe<sub>1-x</sub>S (0.083 ≤ x ≤ 0.125) single crystals, Fe vacancy distrib., Mossbauer study 2-2171  
 Fe<sub>1-x</sub>Sb, magnetic ordering of interstitial Fe 2-46299  
 FeSi, internal strains of magnetostrictive origin, domain wall struct., X-ray diff. obs. 2-36378  
 Fe<sub>2</sub>Si, ordering, electron diff. study 2-45047  
 Fe<sub>75</sub>Si<sub>10</sub>B<sub>15</sub>, amorphous metallic powder, prep. 2-31656  
 FeSn, Fe<sub>2</sub>Sn<sub>3</sub> and FeSn<sub>2</sub>, electron struct., invest. using X-ray and X-ray electron spectra (Russian) 2-35434  
 Fe<sub>3</sub>Ni<sub>1-x</sub>, amorphous, mag. phase diagram 2-36342  
 FeTi, mixing enthalpy, expt. and theoretical, CsCl type phases 2-12765  
 FeTi phase, effect of oxide phase and βTi phase on hydriding characts. (Japanese) 2-8623  
 FeTi, positron annihilation, band struct. and Fermi surface 2-46814  
 FeTi-(Mn) alloys, H storage props. 2-22409  
 FeTi-H system, theory of H absorpt., mean-field approx. calcs. 2-5303  
 FeTi-H<sub>2</sub> system, phase comp. and struct., X-ray diff. study 2-45114  
 FeTiB amorphous films, mag. props., effect of B and Ti 2-36399  
 Fe<sub>1-x</sub>V<sub>x</sub>, short-range order, neutron scatt. and <sup>51</sup>V NMR study 2-35441  
 Fe<sub>68</sub>Ni<sub>10</sub>B<sub>12</sub>Si<sub>10</sub>, amorphous mag. alloys, Fourier analysis of Mossbauer spectra 2-26803  
 Fe<sub>3</sub>-V<sub>2</sub>Si, hyperfine field, NMR satellites 2-46406  
 Fe<sub>22</sub>Zn<sub>78</sub>, cubic phase, complex struct. rel. to γ-brass type 2-12537  
 Fe<sub>30</sub>Zr<sub>10</sub>, amorphous mag. alloys, Fourier analysis of Mossbauer spectra 2-26803  
 Fe<sub>90</sub>Zr<sub>10</sub>, amorphous ribbon, Curie temp. pres. depend. 2-13297  
 Gd-Fe, amorphous film, effect of annealing on compensation temp. 2-26627  
 Gd-Fe amorphous film, RF magnetron sputtering and mag. props. 2-36782  
 Gd-Fe amorphous film, XPS study 2-17597  
 Gd-Fe film, amorphous, galvanomag. props., Hall effect curves (Bulgarian) 2-21689  
 Gd-Fe/Dy-Fe double layer film, amorphous, thermomag. writing 2-31188  
 Gd-Fe/Tb-Fe, exchange coupled ferrimag. double layered films, magnetisation curves 2-26692  
 Gd-Fe/Tb-Fe double layer film, amorphous, thermomag. writing 2-31188  
 (Gd<sub>0.26</sub>Fe<sub>0.74</sub>)<sub>0.96</sub>Bi<sub>0.04</sub>, metallic glass, film, laser annealed, mag. props. 2-21853  
 Gd<sub>1-x</sub>Y<sub>x</sub>-Fe<sub>3</sub>, magnetic behaviour, 4.2 to 1300K, temp. and comp. depend. 2-5530  
 Gd<sub>1-x</sub>Y<sub>x</sub>-Fe<sub>3</sub>, magnetic behaviour, 4.2 to 1300K, temp. and comp. depend. 2-8965  
 Ge-B-Ga, amorphous, crystn. temp., mag. props. 2-41160  
 HoFe<sub>2</sub>, magnetisation meas. of magnetostriction, mag. moments and anisotropy (Russian) 2-21835  
 Ho<sub>2</sub>Fe<sub>3</sub>, influence of H on struct. and mag. props. 2-2063  
 Ho<sub>1-x</sub>Tb<sub>x</sub>Fe<sub>2</sub>, crystal struct. distortion and thermal expansion (Russian) 2-5077  
 Mn-Cu-Fe (10.4, 1 wt.%), Mossbauer study of structural and mag. transitions 2-17679  
 Mn-Fe (615 at.%), elastic moduli, 300 to 600K, US pulse-echo overlap meas. 2-5170  
 Mn-Fe (615 at.%), elastic moduli, 300 to 600K, US pulse-echo overlap meas. 2-8554  
 Mo-Fe, matrix effects in quantitative AES 2-37128  
 Nd<sub>2</sub>(Co<sub>0.5</sub>Fe<sub>0.5</sub>)<sub>12</sub>, neutron diff., preferential site occupation and mag. struct. 2-50586  
 NdFe<sub>2</sub>, Laves phase cpds., Mossbauer study of mag. props. 2-31355  
 Nd<sub>1-x</sub>Fe<sub>x</sub>, amorphous alloys, melt-spun, crystallisation and mag. props. 2-17314  
 Ni-base alloys, Nimonic PE 16 and 105, γ-precipitating, new aspects of particle hardening mechanisms, TEM study 2-36870  
 Ni-base superalloy, fatigue crack growth behaviour, effect of product form 2-31793  
 Ni-Cr electrodeposit, Cr finished, corrosion on brass and steel substrates 2-47261  
 Ni-Cr-Fe, heat treatment effect on stress and corrosion in BWR, PWR environment 2-29345  
 Ni-Cr-Fe alloy 600, stress corrosion cracking in PWR steam generator 2-49137  
 Ni-Fe, dissoln. and passivation, influence of S (French) 2-47246  
 Ni-Fe, electrodeposition, effect of superposition of alternating current on direct current 2-17781  
 Ni-Fe, fatigued FCC material, eigenstresses determ. from X-ray diff. profiles 2-27258  
 Ni-Fe, fracture modes, creep and hot working 2-41731  
 Ni-Fe, high permeability, sheet permeability (Japanese) 2-36909  
 Ni-Fe, stress corrosion cracking and localised corrosion in CO<sub>2</sub>/H<sub>2</sub>S environment 2-22364  
 Ni-Fe, subband resist. and spontaneous resist. anisotropy, two-current model 2-1888  
 Ni-Fe alloy films, deposition kinetics from sulphate-chloride soln. 2-17783  
 Ni-Fe single-crystal alloys, elastic stiffness coeffs. meas. at room temp. 2-12659  
 Ni-Fe-B-Si, amorphous, Barkhausen noise, power spectrum 2-8998  
 Ni-Fe-Cr alloys, anal. by X-ray fluoresc. and fundamental parameter approach 2-41960  
 Ni-Fe-Nb-Al, struct. effect on physical props. (Chinese) 2-2533  
 Ni-Mo-Fe sintered strip, struct. and mech. props. 2-31658

## iron alloys continued

- Ni-resist, type 2, austenitic cast Fe, potentiometric study of corrosion 2-27327  
 Ni<sub>3</sub>(Fe,Ti), conductivity, mag. moment per atom 2-40872  
 Ni<sub>3</sub>(Fe,Ti), Hall constant, electron configurations 2-40874  
 NiFe chevron elements, 90° symmetrical, magnetisation processes and distrib. 2-26663  
 NiFe-(Cr,Mn) double layer mag. films, planar Hall effect 2-21565  
 NiFe<sub>2</sub>-Ni<sub>3</sub>Cr system, struct. transform., conc. depend. (Russian) 2-22196  
 Ni<sub>3</sub>Fe orderable alloy, work hardening, grain size effect 2-27188  
 Ni<sub>3</sub>Fe, substructure after laser irradiation (French) 2-12606  
 Ni<sub>40</sub>Fe<sub>60</sub>Co<sub>20</sub>Cr<sub>12</sub>Mo<sub>6</sub>B<sub>16</sub>, amorphous alloy, H<sup>+</sup> ion bombardment effects 2-50672  
 Ni<sub>45</sub>Fe<sub>55</sub>Co<sub>20</sub>Cr<sub>10</sub>Mo<sub>4</sub>B<sub>16</sub>, metallic glass, crystn., effect of electron irradiation 2-35402  
 Ni<sub>3</sub>(Fe<sub>1-x</sub>Nb<sub>x</sub>), Hall effect rel. to temp. (Russian) 2-13041  
 Ni<sub>70</sub>Fe<sub>30</sub>Si<sub>10</sub>B<sub>12</sub>, amorphous, shear crack propag., plastic flow 2-31757  
 Pd-Fe, dil., forced vol. magnetostriction, conc. and temp. depend. 2-46356  
 Pd-Fe, dil., thermoelec. power, 5 to 100 mK, secondary thermometer appls. 2-30864  
 Pd-Fe, dilute alloy, nonmagnetic Fe surface impurities, magnetisation props. 2-36311  
 Pd-Fe, dilute alloy, paramagnetic, mag. order, neutron scattering study 2-8960  
 Pd-Fe dilute alloys, thermoelec. power, spin glass freezing obs. 2-36022  
 Pd<sub>75-85</sub>Cu<sub>15-15</sub>Fe<sub>10</sub>, amorphous, phonon thermal cond., 0.3 to 10K effect of impurities 2-12865  
 Pd<sub>1-x</sub>Fe<sub>x</sub>H, superconducting, Kondo effect and spin-glass freezing due to impurities 2-31140  
 Pd<sub>3</sub>FeH<sub>2</sub>, site occupancy and cryst. struct., <sup>57</sup>Fe Mossbauer study 2-17376  
 (Pd<sub>0.9965</sub>Fe<sub>0.0035</sub>)<sub>95</sub>Mn<sub>0.05</sub>, spin glass transition, resist. anomaly 2-30862  
 (Pd<sub>1-x</sub>Fe<sub>x</sub>)<sub>3</sub>Fe, atomically ordered, transverse magnetoresist., ferromag.-antiferromag. transition 2-36020  
 Pd<sub>75</sub>Si<sub>20</sub>Fe<sub>5</sub>, amorphous, shear crack propag., plastic flow 2-31757  
 Pr<sub>2</sub>(Co<sub>1-x</sub>Fe<sub>x</sub>)<sub>17</sub>, elec. resist. singularities and spin reorientation transitions 2-41133  
 PrFe<sub>2</sub>, Laves phase cpds., Mossbauer study of mag. props. 2-31355  
 Pt-Fe, dil., forced vol. magnetostriction, conc. and temp. depend. 2-46356  
 Pt-Fe resistance thermometer, low-temp. appls. (Chinese) 2-15168  
<sup>109</sup>RuFe, dilute alloy, nuclear spin-lattice relax. study of mag. moment 2-26594  
 Sc<sub>2</sub>Fe<sub>2</sub>Si<sub>3</sub>, supercond., Mossbauer effect study of absence of Fe magnetism 2-31344  
 Si-Fe, magnetostriction and magnetisation process 2-2113  
 SmCo<sub>5-x-y</sub>Fe<sub>x</sub>Sn<sub>y</sub>, permanent magnets, Mossbauer effect 2-9066  
 SmFe<sub>2</sub>, magnetoelastic effects, hysteresis loop width (Russian) 2-51446  
 Tb-Fe, amorphous film, interference enhanced Kerr spectra 2-51556  
 Tb-Fe amorphous film, RF magnetron sputtering and mag. props. 2-36782  
 Tb-Fe amorphous thin films, low temp. resistivity anomalies 2-8891  
 Tb-Fe/Gd-Fe double layer film, amorphous, thermomag. writing 2-31188  
 TbFe amorphous film, Faraday rotation 2-21989  
 TbFe<sub>2</sub>, magnetoelastic effects, hysteresis loop width (Russian) 2-51446  
 Tb<sub>4</sub>Fe<sub>6</sub>, magnetic props. and struct. (Chinese) 2-31256  
 TbFeSn amorphous film, Faraday rotation 2-21989  
 Tb<sub>2</sub>Y<sub>1-x</sub>Fe<sub>x</sub>, magnetic struct., neutron diffraction study (Russian) 2-46243  
 ThFe<sub>3</sub>, absorption of H<sub>2</sub>, mag. struct., and surface props. 2-35701  
 ThFe<sub>3</sub>, supercond., Mossbauer effect study of absence of Fe magnetism 2-31344  
 Ti-Al-Fe-Ag (4, 0.75, 0.25 wt.%), crack initiation and propagation, microstruct. effect (German) 2-13823  
 Ti-Co-Fe, absorption-desorption characts. of H<sub>2</sub> 2-8703  
 β-Ti-Fe, relative force constant determ., Mossbauer second-order Doppler shift 2-51505  
 Ti-Fe-Al(O), phase equilibria (German) 2-13700  
 TiAl<sub>3</sub>-VAL<sub>3</sub>-FeAl<sub>3</sub>, room temp. section of Ti-Al-V-Fe system, phase diagram (Chinese) 2-2488  
 TiCu<sub>2</sub>Fe<sub>2</sub>Be<sub>2-x-y</sub>, itinerant magnetism, magnetisation and Mossbauer studies 2-31151  
 TiFe, recursion method, asymptotic behaviour, local densities of states 2-5360  
 Tm<sub>2</sub>Fe<sub>2</sub>Si<sub>3</sub>, reentrant superconductivity 2-5484  
 U-Fe film, amorphous, ferromag. reson. obs., anisotropy type 2-9038  
 U(Al,Fe) dil. alloys, TEM obs. of microstruct. rel. to hardness 2-43557  
 UFe<sub>2</sub>, mag. props. effect of 5f electron localisation 2-31236  
 UFe<sub>2</sub>-UCO<sub>2</sub> system, elec. and mag. props., model of strong scatt., temp. and field depend. 2-8784  
 UFe<sub>2</sub>-UNi<sub>2</sub> system, temp. depend., elec. resist., 4.2 to 300K, Kondo-like system behaviour 2-8789  
 U(Fe,Al)<sub>3</sub>, electronic struct., Mossbauer study 2-13378  
 V-Fe, self-diffusion and impurity diffusion mechanism 2-5268  
 V-Fe-H, internal friction study 2-45363  
 V<sub>1-x</sub>Fe<sub>x</sub>, 3d-like electron localisation, anal. of positron annihilation and Mossbauer data 2-40816  
 V<sub>2</sub>Ge<sub>1-x</sub>Fe<sub>x</sub>, solid solns., Mossbauer spectra 2-26801  
 W-Ni-Fe binder phase, struct., heat treatment conditions effect 2-17696  
 Y-Fe-Cu, Mossbauer effect study of recoil free functions 2-46447  
 Y<sub>0.66</sub>Fe<sub>0.34</sub>, metallic glass, crystn. process, microscopic changes 2-21035  
 Y<sub>1-x</sub>Fe<sub>x</sub>, amorphous, mag. props., spin glass behaviour 2-21798  
 Y<sub>1-x</sub>Fe<sub>x</sub>, amorphous, Mossbauer spectra, mag. struct., 1.5 to 300K 2-21924  
 Y<sub>66</sub>(Fe<sub>1-x</sub>M<sub>x</sub>)<sub>34</sub>, M=B,C,Si,Ge, metallic glasses, struct. and elec. props. 2-21031  
 Y(Mn<sub>1-x</sub>Fe<sub>x</sub>)<sub>12</sub>, structural and mag. props. (Chinese) 2-21821  
 YbFe<sub>2</sub>, Laves phase cpds., Mossbauer study of mag. props. 2-31355  
 Zr-Cu-Fe-Mo-V, high corrosion resistant alloy, creep and creep fracture (Czech) 2-31752  
 Zr-Fe alloy oxide films, correl. between phase composition and corrosion kinetics, Mossbauer investig. 2-21929  
 Zr-Fe alloys, self-diffusion studies 2-5267  
 Zr-Fe system, phase diagram in range 20-40 at.% Fe 2-27141  
 Zr-Fe-Cu-W alloy oxide film, correl. between phase composition and corrosion kinetics, Mossbauer investig. 2-21929  
 Zr<sub>3</sub>Fe amorphous mag. alloys, Fourier analysis of Mossbauer spectra 2-26803  
 Zr<sub>3</sub>Fe, cryst. struct. and Zr-Fe phase diagram 2-27141  
 Zr<sub>70</sub>Fe<sub>30</sub> glasses, supercond. transition temp. and upper crit. field 2-36197



## iron alloys continued

- Zr(Fe<sub>1-x</sub>Al<sub>x</sub>)<sub>2</sub> Laves phase, mag. hyperfine interactions, <sup>57</sup>Fe Mossbauer study 2-4638  
 Zr(Fe<sub>1-x</sub>Co<sub>x</sub>)<sub>2</sub> Laves phase, mag. hyperfine interactions, <sup>57</sup>Fe Mossbauer study 2-4638  
 Zr(Fe<sub>1-x</sub>Co<sub>x</sub>)<sub>2</sub>, magnetic order range, magnetisation and Mossbauer study 2-46341  
 Zr(Fe<sub>1-x</sub>Mn<sub>x</sub>)<sub>2</sub>, ferromag., mag. transition, <sup>55</sup>Mn NMR spin echo study 2-26788

## iron compounds

see also ferrites; iron alloys

- acetate, ESR study 2-41189  
 clay minerals, 1:1 layer pipe, mag. props. and struct. 2-26589  
 dihalides, photoelectron spectra and electronic struct. 2-4351  
 γ-Fe<sub>2</sub>O<sub>3</sub> audio tape recording props. rel. to particle size 2-36389  
 FeCO<sub>3</sub>, siderite, pseudomorphs, mag. props. 2-26678  
 ferrous, oxalate dihydrate, thermal decomp. study using DC elec. cond. meas. 2-13938  
 glycerol liquid, X-ray struct. factor 2-12505  
 graphite-FeCl<sub>3</sub> stage 2 intercalation cpd., longitudinal lattice modes, inelastic neutron scatt. study 2-16732  
 graphitic sulphide-rich schists from Maine, petrology, desulphidation during prograde regional metamorphism 2-37857  
 haematite, single crystals, conversion electron Mossbauer obs. at low temp. 2-46444  
 hematite, first-order phase transition kinetics, neutron scatt. study 2-1615  
 jagoite, cryst. struct. analysis and ordering schemes 2-21077  
 (Mg,Fe)(Cr,Al,Fe)O<sub>4</sub>, partly inverted spinel, Mossbauer spectra 2-41239  
 Mossbauer transition in <sup>57</sup>Fe, determ. by <sup>57</sup>Fe decay rate modification (*Flemish*) 2-11117  
 olivine, major, minor and trace element anal., ion microprobe techniques 2-6071  
 olivine, synthetic, defect structures 2-8519  
 ore, prereduced, feasibility of a type specimen (*French*) 2-2424  
 ore pellets, appl. of mercury porosimetry for evaluation 2-27404  
 oxides, carothermal metallisation, mechanism and kinetics (*Russian*) 2-22415  
 picolinate, dimer and monomer, Mossbauer study 2-51507  
 polyacetylene-FeCl<sub>3</sub>, synthesis and charact. of organic metals formed by interaction 2-21576  
 prussian blue, and several kinds of additives, thermal decomp. products (*Japanese*) 2-2754  
 o-pyroxene, Fe-rich, geochrometry, reaction reversal expts. and geological implications 2-37858  
 pyroxene, low-Ca, major, minor and trace element anal., ion microprobe techniques 2-6071  
 o-pyroxenes, cation disordering rate obs. 2-35446  
 rare earth compounds, R<sub>2</sub>Fe<sub>2</sub>Si<sub>2</sub>, supercond. and mag. props., Mossbauer study 2-13383  
 synthesis and charact. of organic metals formed by interaction 2-21576  
 verdoehomochrome, electronic states, ESR, NMR and Mossbauer obs. 2-4323  
 vivianites, oxidised, Mossbauer study (*French*) 2-9061  
 Al-Fe-B system, B-rich phases grown from melts, X-ray diffr. study 2-46904  
 Al<sub>3</sub>-TiO<sub>2</sub>-Fe<sub>2</sub>TiO<sub>5</sub>, strength and thermal expansion obs. (*Japanese*) 2-31729  
 β-Al<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>, ionic and electronic cond. and Mossbauer study 2-26124  
 β-Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-Fe<sub>2</sub>O<sub>3</sub>, ionic cond., effect of the Fe doping level 2-26114  
 As-S-Fe glass, dielec. const. and loss angle (*Russian*) 2-26816  
 α-Ba-Fe<sub>2</sub>O<sub>3</sub>, magnetochemical investig. 2-5539  
 B<sub>2</sub>O<sub>3</sub>-PbO Fe<sub>2</sub>O<sub>3</sub> glasses, struct., elec., and mag. props. 2-45054  
 Ba-Fe<sub>2</sub>O<sub>3</sub> system, ternary compounds, phase relations 2-27157  
 BaTiO<sub>3</sub>:Fe<sup>3+</sup>, effect of Fe content on resistivity anomaly (*Czech*) 2-30898  
 CaO-FeO-SiO<sub>2</sub>, crystn. of glasses and formation of sitalls 2-8448  
 CeFe<sub>2</sub>Si<sub>2</sub>, effect of 3d element on Ce electronic state (*Russian*) 2-30798  
 Cr(CO)<sub>6</sub>:Fe(CO)<sub>5</sub>, single cryst., EPR spectrum 2-36413  
 Cr<sub>1-x</sub>Fe<sub>x</sub>Al<sub>0.7</sub>Mg<sub>0.3</sub>O<sub>4</sub>, mixed valence spinel, specific site valence, EELS determ. 2-46844  
 CsFeCl<sub>3</sub>·2H<sub>2</sub>O, crystal field effects, Mossbauer study 2-26795  
 CsFeCl<sub>3</sub>·2H<sub>2</sub>O, mag. ordering, Mossbauer study 2-26796  
 Cs<sub>2</sub>LiCo(CN)<sub>6</sub>:(Fe(CN)<sub>6</sub>)<sup>3-</sup>, mol. vibr., solid state effects, resonance Raman scatt. 2-5671  
 Cs<sub>2</sub>NaCo(CN)<sub>6</sub>:(Fe(CN)<sub>6</sub>)<sup>3-</sup>, mol. vibr., solid state effects, resonance Raman scatt. 2-5671  
 Cu<sub>2</sub>-S-FeS-PbS melts, activities at 1200°C 2-8646  
 Cu<sub>0.5</sub>Fe<sub>0.5</sub>Cr<sub>2</sub>S<sub>4</sub>, ferromagnetic semicond., hyperfine interactions and mag. props. 2-26346  
 Cu<sub>1-x</sub>Fe<sub>x</sub>Cr<sub>2</sub>S<sub>4</sub>, thiopinsels, Mossbauer spectra, lattice constants, seebeck coeff. 2-51508  
 Cu<sub>1-x</sub>Fe<sub>x</sub>Cr<sub>2</sub>(S<sub>0.5</sub>Se<sub>0.5</sub>)<sub>4</sub>, thiopinsels, Mossbauer spectra, lattice constants, seebeck coeff. 2-51508  
 Cu<sub>1-x</sub>Fe<sub>x</sub>Rh<sub>2</sub>S<sub>4</sub>, thiopinsels, Mossbauer spectra, lattice constants, seebeck coeff. 2-51508  
 CuFeS<sub>2</sub>, band struct., self consistent discrete variational Xα calc. 2-12969  
 CuFeS<sub>2</sub>, chalcopyrite, standard energy of combustion in F, bomb calorimetry, standard enthalpy of form. 2-27468  
 DyFe<sub>2</sub>H<sub>7</sub>, Mossbauer spectroscopy and bulk magnetisation meas. 2-31345  
 ErFe<sub>2</sub>H<sub>7</sub>, Mossbauer spectroscopy and bulk magnetisation meas. 2-31345  
 Fe complex, bis(isothiocyanato)-di-(4-ethylcarboxyl)-1,10-phenanthroline/iron(II) hemi-α-picoline, mag. meas., Mossbauer effect 2-20095  
 Fe complex, dimethylsulphoxide iron(III), variable temp. PMR and <sup>13</sup>C NMR spectra 2-51488  
 Fe complex, EDTA-FeSO<sub>4</sub> chelate, US vel., temp. depend. 2-35596  
 Fe complex, Fe III tetraphenylporphyrin, EPR detect. using photoacoustic effect 2-46363  
 Fe complex, Fe oxyporphyrin, electronic states, ESR, NMR and Mossbauer obs. 2-4323  
 Fe complex, Fe(III) salts-3-amino-5-methylisoxazole, mag. moments, IR, electronic and Mossbauer spectra 2-31333  
 Fe complex, Fe(II) porphyrin, electronic struct., SCF-Xα study 2-653  
 Fe complex, iron(II)-poly(N-acrylamidomethylthionine), spectral and photogalvanic props. 2-9549  
 Fe complexes, dihydroxynaphthalene-Fe<sup>2+</sup> chelates, stability consts. and thermodynamic functions 2-9562

## iron compounds continued

- Fe complexes, Fe(III) high spin mixed chelate complexes, mag., elec., and spectral props. 2-9164  
 Fe complexes, protoporphyrinato iron (III), ligand field effects, g-values, EPR study 2-26729  
 Fe complexes with O-phenanthroline, and related ligands, soln. redox couples for electrochemical energy storage 2-9688  
 Fe-Fe<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub>, phase relations and oxidation at 700 to 1100°C 2-41591  
 Fe-Fe<sub>2</sub>O<sub>3</sub>-CaO, phase diagram, homogeneity and maximal solubility of CaO 2-5862  
 Fe-Mo-O system, phase equilb. and thermodynamics 2-27140  
 Fe-porphine, ab initio LCAO SCF MO calc. with double zeta basis set 2-11390  
 Fe-S, two-sublattice model for liquid phase 2-47015  
 Fe<sub>1-x</sub>, elastic consts., US vel. meas. 2-35566  
 FeB, band structure and bonding 2-40779  
 FeB, magnetic anisotropy 2-13290  
 n-FeB<sub>29.5</sub>, prep., electronic transport props., cryst. struct. 2-40886  
 FeBO<sub>3</sub>, AFMR line width, inhomogeneous elastic deform. effect 2-36442  
 FeBO<sub>3</sub>, ferromag. reson., photoacoustic detection 2-26753  
 FeBO<sub>3</sub>, parametric spin wave excitation (*Russian*) 2-46268  
 FeBO<sub>3</sub>, weak ferromagnet, mag. susceptibility, anomalous crit. behavior 2-36369  
 Fe<sub>3</sub>B<sub>2</sub>O<sub>11</sub>, dielec. anomalies 2-9110  
 Fe<sub>3</sub>B<sub>2</sub>O<sub>11</sub>, ferroelectric phase transition, pyroelectric and dielec. meas., thermodynamic model 2-31412  
 Fe<sub>3</sub>B<sub>2</sub>O<sub>11</sub>, ferroelectric phase transition, Raman scatt. study 2-31475  
 Fe<sub>3</sub>B<sub>2</sub>O<sub>11</sub>, improper ferroelec., pyroelec. response, effects of defects 2-36541  
 FeBr<sub>3</sub>, cryst., binding, struct., Raman and far IR spectra 2-46609  
 FeBr<sub>3</sub>, magnon energies, temp. renormalisation 2-36337  
 FeBr<sub>3</sub>, resonance Raman spectra, spin-orbit coupling and Jahn-Teller effects 2-4303  
 Fe<sub>2</sub>C, cementite lattice, thermal expansion study (*Russian*) 2-50891  
 Fe(CN)<sub>6</sub><sup>3-</sup>, electronic struct., X-ray emission and XPS 2-29626  
 Fe(CO)<sub>5</sub>, CNDO-Cl calcs., UV spectra, photochemical activity 2-49294  
 Fe(CO)<sub>5</sub>, multiphoton dissoci., electronically excited products 2-24801  
 Fe(CO)<sub>5</sub>, photolysis, excited levels 2-22471  
 FeCl<sub>2</sub>, cryst. vibr., linear chain dynamical model 2-5197  
 FeCl<sub>2</sub>, mag. prop. study (*Russian*) 2-46264  
 FeCl<sub>2</sub>, X-ray Cl L<sub>2,3</sub> spectra and electronic struct. 2-27027  
 FeCl<sub>2</sub>-MnCl<sub>2</sub>, metamagnetic, Mn and Fe spin excitations, AFMR study 2-21892  
 FeCl<sub>3</sub>, effect on changes in rheological props. of glycerol determ. by acoustic method 2-30079  
 FeCl<sub>3</sub>·6H<sub>2</sub>O melt, polynuclear complex formation, isoelectronic soln. method 2-41883  
 FeCl<sub>3</sub>·nH<sub>2</sub>O, K X-ray absorpt. spectra 2-17572  
 Fe<sub>1-x</sub>Co<sub>x</sub>S, magnetic transitions, mag. susceptibility study 2-41136  
 FeCr<sub>2</sub>·In<sub>2</sub>S<sub>4</sub>, electrical props. 100 to 650K (*Russian*) 2-13098  
 Fe<sub>1-x</sub>Cr<sub>x</sub>NbO<sub>4</sub>, prep., cryst. struct., mag. and electronic props. 2-26440  
 FeCr<sub>2</sub>O<sub>4</sub>-FeAl<sub>2</sub>O<sub>4</sub> spinel solid solutions, inter- and intra-crystalline ion exchange equilb. 2-52201  
 FeCr<sub>2</sub>O<sub>6</sub>, with tetrahedral vacancies, synthesis and struct. (*French*) 2-40327  
 FeCr<sub>2</sub>Se<sub>4</sub>, heat treatment effects on props. 2-13276  
 Fe<sub>1-x</sub>Eu<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, synthesis and physicochem. props., semicond. behaviour 2-9256  
 FeF<sub>2</sub>, coupled magnon-phonon modes, in mag. crystals with Shubnikov symmetry 2-17270  
 FeF<sub>3</sub>, amorphous, elec. field gradient, random packing model 2-30847  
 FeF<sub>3</sub>, parametric spin wave excitation 2-31154  
 FeF<sub>3</sub>, chem. equilb., heats of form. and dissoci., mass spectra 2-37086  
 FeF<sub>4</sub>, chem. equilb., heats of form. and dissoci., mass spectra 2-37086  
 Fe(Fe<sub>1.5</sub>Al<sub>0.49</sub>)<sub>2</sub>O<sub>4</sub> spinels, thermal segregation of cations 2-31697  
 FeFe<sub>0.95</sub>In<sub>0.05</sub>Se<sub>4</sub>, elec. props. 100 to 600K (*Russian*) 2-1967  
 Fe<sub>3</sub>·Fe<sub>4</sub>·[PO<sub>4</sub>]<sub>6</sub>, hydrothermal crystn. and crystal structure 2-1464  
 FeGa<sub>2</sub>S<sub>4</sub>, crystallographic study (*French*) 2-36841  
 FeH, gaseous, max. dissociation energies 2-29726  
 Fe<sub>0.05</sub>Ho<sub>0.95</sub>S<sub>8</sub>, Chevrel phase supercond., high temp. Mossbauer study 2-17379  
 FeI<sub>2</sub>, mag. ordering and phase transitions, high field <sup>57</sup>Fe Mossbauer spectrosc. obs. 2-41108  
 Fe(II) complex, bi-chelate series, ligand mutual influence effect, struct., CNDO calcs. 2-34304  
 Fe(III) complex, NH<sub>4</sub>[Fe(5-Br-salicylaldehyde thiosemicarbazone)<sub>2</sub>], mag. props., cryst. struct. determ. 2-40352  
 Fe(III) high spin complexes of triazene 1-oxides, mag., electronic and Mossbauer spectra 2-26799  
 FeMgBO<sub>4</sub>, quasi-one-dimens. spin glass, spin dynamics, inelastic neutron scatt. study 2-8988  
 FeMo<sub>5</sub>S<sub>8</sub>, mag. and struct. transformations, mag. susceptibility and Mossbauer study 2-31185  
 Fe<sub>3</sub>N<sub>4</sub>, pigment, coercivity and unit particle size 2-26680  
 Fe(NO<sub>3</sub>)<sub>3</sub>, EPR spectra and crystal struct. 2-13333  
 FeNb<sub>2</sub>Se<sub>10</sub>, chalcogenide, cryst. struct. 2-1458  
 FeNb<sub>2</sub>Se<sub>10</sub>, cryst. struct. rel. to CDW 2-16629  
 FeO, heat resistant materials for medium high temp. ranges, chem. and phys. props. (*German*) 2-472  
 FeO<sub>2</sub>, molten drops, steam explosion, LWR core meltdown appl. 2-7284  
 Fe<sub>1-x</sub>O, wustite, elec. props. 2-51220  
 Fe<sub>1-x</sub>O, wustite, reflection spectrum anal. 2-2316  
 α-Fe<sub>2</sub>O<sub>3</sub>, AFMR line width, inhomogeneous elastic deform. effect 2-36442  
 γ-Fe<sub>2</sub>O<sub>3</sub>, acicular, prep., condensed phosphates as antisintering agents 2-26682  
 α-Fe<sub>2</sub>O<sub>3</sub>, electrode, photovoltage response to temp. change 2-46056  
 Fe<sub>2</sub>O<sub>3</sub>-Fe<sub>3</sub>O<sub>4</sub>, reduction, microstruct. changes 2-9348  
 γ-Fe<sub>2</sub>O<sub>3</sub>, ferrimag. reson. using photoacoustic effect as probe 2-36440  
 α-Fe<sub>2</sub>O<sub>3</sub>, ferrimagnetic phase form. during milling 2-27193  
 Fe<sub>2</sub>O<sub>3</sub>, γ-α transition, temp. stability (*Bulgarian*) 2-21773  
 α-Fe<sub>2</sub>O<sub>3</sub>, haematite, energy spectrum, photoemission, opt. spectra and elec. cond. obs. 2-5790  
 Fe<sub>2</sub>O<sub>3</sub>, haematite, magneto-optical props. (*Russian*) 2-26871  
 α-Fe<sub>2</sub>O<sub>3</sub>, haematite, obtained from dehydration of goethites, Morin transition 2-5606  
 α-Fe<sub>2</sub>O<sub>3</sub>, haematite, particle adhesion and removal, kinetics of detachment from steel 2-27485  
 α-Fe<sub>2</sub>O<sub>3</sub>, haematite, prep. by oxidation-precip., effect of heating 2-51946  
 α-Fe<sub>2</sub>O<sub>3</sub>, hematite, surface mag. helicoid on nonbasal faces, Kerr effect study 2-46552



## iron compounds continued

- $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, high dielec. const. and anomalous charact., 500 Hz to 1.6 MHz 2-31364  
 Fe<sub>2</sub>O<sub>3</sub>, hydrated, sorption activity change w.r.t. thermal treatment temp. 2-16942  
 $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> particles, coercivity, vol. packing fraction depend. 2-21841  
 Fe<sub>2</sub>O<sub>3</sub> particles dispersed in Teflon, obs. by TEM of particle size 2-36838  
 Fe<sub>2</sub>O<sub>3</sub>, photoelectrochemical behaviour in presence of redox reagents 2-22475  
 Fe<sub>2</sub>O<sub>3</sub>, photoelectrochemical meas. kinetic eqn. for minority carrier flux 2-30931  
 Fe<sub>2</sub>O<sub>3</sub>, polycryst. films, thermally grown, photoelectrochem. behaviour 2-37083  
 Fe<sub>2</sub>O<sub>3</sub> sputtered film, anal. by ESCA 2-27509  
 $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, supported on silica gel particle size determ. 2-2521  
 Fe<sub>2</sub>O<sub>3</sub> surface dispersed layers in far from thermodynamic equil. state, prep. by surface reactions 2-2739  
 Fe<sub>2</sub>O<sub>3</sub>, thermal growth on Fe-Ni alloys, photoelectrochem. behaviour 2-37078  
 $\gamma$ -Fe<sub>2</sub>O<sub>3</sub> thin film recording media preparation method 2-22164  
 $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, ultrafine particles, Mossbauer effect, hyperfine fields 2-46435  
 $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, X-ray emission spectrum K $\beta_{1,3}$  line, spline fitted, deconvolution 2-2374  
 Fe<sub>2</sub>O<sub>3</sub>, XPS, chemical analysis peak area measurement reliability 2-47416  
 Fe<sub>2</sub>O<sub>3</sub>, XPS and UPS 2-36756  
 $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>:Co particles, doped and adsorbed, coercivity, vol. packing fraction depend. 2-21841  
 $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>:Ge<sup>4+</sup>(Pb<sup>2+</sup>)(Sn<sup>4+</sup>) electrodes, photoactivity, doping effect 2-26436  
 $\gamma$ -Fe<sub>2</sub>O<sub>3</sub>:Ti(Co), sputtered double-layer disk, mag. props., recording charact. 2-21851  
 Fe<sub>2</sub>O<sub>3</sub>:Al<sub>2</sub>O<sub>3</sub>:SiO<sub>2</sub> based glasses, crystn. in ferromag. phase, effect of chem. comp. 2-25753  
 Fe<sub>2</sub>O<sub>3</sub>:P<sub>2</sub>O<sub>5</sub> glasses, high field DC cond. 2-46006  
 Fe<sub>2</sub>O<sub>3</sub>+H<sub>2</sub>, reduction, external mag. field effects 2-9539  
 Fe<sub>2</sub>O<sub>3</sub> and Fe<sub>2</sub>O<sub>4</sub>-x F<sub>2</sub>, fermi glass, cond. activation energy and Seebeck coeff. in nearest-neighbour hopping regime, effective medium theory 2-8829  
 Fe<sub>2</sub>O<sub>4</sub>, elec. cond. temp. depend. below Verwey transition, tunnelling explanation 2-13068  
 Fe<sub>2</sub>O<sub>4</sub> formation by air oxidation of Fe(OH)<sub>2</sub>, suspension on Pt 2-9462  
 Fe<sub>2</sub>O<sub>4</sub> layers on Fe, obs. on void formation 2-2610  
 Fe<sub>2</sub>O<sub>4</sub>, Li and Mg substituted, optical and magneto-optical props. 2-17449  
 Fe<sub>2</sub>O<sub>4</sub>, magnetite, mag. aftereffects, nonlinear approx. 2-36391  
 Fe<sub>2</sub>O<sub>4</sub>, magnetite, valence instabilities, metal-insulator transition 2-30800  
 Fe<sub>2</sub>O<sub>4</sub>, magnetite powder, electrical conductivity meas. (German) 2-21581  
 Fe<sub>2</sub>O<sub>4</sub>, magnetoelectric effects at 4.2K 2-5571  
 Fe<sub>2</sub>O<sub>4</sub>, multi-domain and milled, magnetisation processes, neutron diff. study 2-36386  
 $\gamma$ -Fe<sub>2</sub>O<sub>4</sub> particles, mag. props., mag. tape appl. 2-21840  
 Fe<sub>2</sub>O<sub>4</sub>, reactive sputtering of Fe, in mixed Ar-O<sub>2</sub> atmosphere (Japanese) 2-30765  
 Fe<sub>2</sub>O<sub>4</sub>, resistance, Hall effect, magnetoresistance study 2-13101  
 Fe<sub>2</sub>O<sub>4</sub>, stoichiometric, cation distrib., thermopower meas. 2-17101  
 Fe<sub>2</sub>O<sub>4</sub>, thermochemical short cycle oxide decomposition in heliostat of arc image solar furnaces 2-37183  
 Fe<sub>2</sub>O<sub>4</sub>, ultrafine particles, Mossbauer effect, hyperfine fields 2-46435  
 Fe<sub>2</sub>O<sub>4</sub>:FeAl<sub>2</sub>O<sub>4</sub> spinel solid solns., thermodynamic props. 2-35695  
 Fe<sub>2</sub>O<sub>4</sub>:FeV<sub>2</sub>O<sub>4</sub>(FeCr<sub>2</sub>O<sub>4</sub>), spinel solid soln., thermodynamic props. 2-51883  
 FeOCl and intercalates, lattice dynamics, hyperfine interactions and mag. ordering temp. 2-41241  
 FeOCl, crystalline parameters thermal dilatation coeffs. (French) 2-1451  
 FeOCl, intercalation cpd. with crown ether 2-21080  
 FeOCl-ferrocene, intercalation cpd., X-ray and Mossbauer reson. studies 2-21128  
 Fe(OH)<sub>2</sub> suspension, Fe<sub>2</sub>O<sub>4</sub> formation by air oxidation, on Px 2-9462  
 Fe(OH)<sub>2</sub>, dissolution and crystn. mechanism from NaOH soln., ionic equilibria and cryst. phases 2-30426  
 $\alpha$ -FeOOH, goethite, cryst. struct. during dehydration to haematite, Mossbauer obs. and Morin temp. of haematite 2-5606  
 $\alpha$ -FeOOH, synthetic acicular particles, dendrite obs., TEM study 2-16976  
 xFe<sub>2</sub>O<sub>3</sub>(1-x)(3B<sub>2</sub>O<sub>3</sub>-PbO), Fe valence states, matrix composition influence, Mossbauer effect study 2-46443  
 Fe<sub>2</sub>O<sub>3</sub>:H<sub>2</sub>O, amorphous, competitive adsorption of Cd, Cu, Zn and Pb 2-35887  
 20Fe<sub>2</sub>O<sub>3</sub>.80(3B<sub>2</sub>O<sub>3</sub>:yGeO<sub>2</sub>(1-y)PbO), Fe valence states, matrix composition influence, Mossbauer effect study 2-46443  
 Fe<sub>2</sub>P, lattice compression, anisotropic, X-ray diff. study 2-25971  
 Fe<sub>2</sub>PO<sub>4</sub>, mixed valence cpd., electron localisation, Mossbauer expts. 2-1870  
 Fe<sub>2</sub>PO<sub>4</sub>, mixed valence compound, prep. Mossbauer, structural and mag. studies (French) 2-50600  
 FePS<sub>3</sub>, cathode in Li battery, synthesis, struct. and phys. props. (French) 2-32057  
 FePS<sub>3</sub>, cryst. and mag. struct., neutron diff. study 2-31144  
 FeS, positive electrode for rechargeable Li cells 2-47468  
 FeS<sub>2</sub>, pyrite and marcasite conversion in different atm., thermomagnetic studies 2-26598  
 FeS<sub>2</sub>, trace element distrib., SIMS obs. (French) 2-6081  
 FeS<sub>2</sub>/Li-Si primary cell, reactive interface materials characterisation 2-14056  
 Fe<sub>1-x</sub>S, pyrrhotite, modulated struct. of NC-type (N=5.5) 2-45120  
 Fe<sub>2</sub>S<sub>3</sub>, greigite, electronic struct., mol. orbital calcs. 2-40751  
 Fe<sub>2</sub>(S<sub>2</sub>CN(C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>)<sub>2</sub>Cl, ferromagnetic, critical behaviour, mag. susceptibility and magnetisation study 2-46307  
 FeSO<sub>4</sub>(NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>.6H<sub>2</sub>O, single crystals, conversion electron Mossbauer obs. at low temp. 2-46444  
 Fe(SO<sub>4</sub>)(NH<sub>4</sub>)<sub>2</sub>.6H<sub>2</sub>O, Mossbauer studies under appl. elec. field 2-26798  
 FeSO<sub>4</sub>.7H<sub>2</sub>O, Mossbauer studies under appl. elec. field 2-26798  
 FeSO<sub>4</sub>.7H<sub>2</sub>O, single crystals, conversion electron Mossbauer obs. at low temp. 2-46444  
 Fe<sub>2</sub>S<sub>3</sub>, natural pyrrhotites, hexagonal, mag. transition obs. 2-41124  
 FeSBO<sub>4</sub>, double oxide, crystal data 2-12555  
 Fe(Sb<sub>1-x</sub>Te<sub>x</sub>)<sub>2</sub>, <sup>57</sup>Fe Mossbauer effect study, struct. transforms. 2-13379  
 Fe<sub>0.864</sub>Se single crystals, metamagnetic behaviour 2-46276

## iron compounds continued

- FeSi, acoustic wave vel., temp. depend. (Russian) 2-50769  
 FeSi, K-edge of absorpt. of Si, fine struct. (Russian) 2-36734  
 FeSiF<sub>6</sub>.6H<sub>2</sub>O.Cu<sup>2+</sup>, phase transitions, EPR study 2-46367  
 Fe<sub>0.05</sub>SnMo<sub>0.95</sub>S<sub>8</sub>, Chevrel phase supercond., high temp. Mossbauer study 2-17379  
 Fe<sub>2</sub>SnMo<sub>2</sub>S<sub>8</sub>, Chevrel phase cpd., Mossbauer studies of mag. props. 2-17380  
 Fe<sub>2</sub>Te<sub>2</sub>O<sub>8</sub>, magnetic struct. at 4.2K, neutron diff. study (French) 2-46246  
 Fe<sub>2</sub>TiO<sub>5</sub>, monoclinic, defect struct., electron microscopy and diff. studies 2-25907  
 Fe<sub>2</sub>TiO<sub>5</sub>, monoclinic polytype, struct. determ. and Mossbauer spectroscopy 2-25826  
 Fe<sub>2</sub>TiO<sub>5</sub>, Mossbauer study, mag. ordering temp. 2-31334  
 FeTi<sub>2</sub>S<sub>8</sub>, mag. aftereffect and domain walls 2-36390  
 FeTi<sub>2</sub>S<sub>8</sub>, mag. props. 2-26657  
 Fe<sub>1-x</sub>V<sub>x</sub>NbO<sub>4</sub>, prep., crystallographic, elec., and mag. props. 2-21084  
 Fe<sub>1-x</sub>Zn<sub>x</sub>F<sub>2</sub>, antiferromagnet, randomly diluted, antiferromag. resonance, theory 2-46273  
 Fe<sub>2</sub>R(Ti)(Nb)Se<sub>2</sub>, layered intercalation compound, elec. and optical charact. 2-17072  
<sup>57</sup>FeBO<sub>3</sub>, induced surface mag. anisotropy (Russian) 2-26625  
 Ga<sub>2</sub>S<sub>3</sub>-FeS system, phase diagram and crystallographic study (French) 2-36841  
 KCl:(Fe(CN)<sub>6</sub>)<sup>4-</sup>, X- and  $\gamma$ -irrad., ESR studies 2-31267  
 KFeF<sub>3</sub>, relationship between mag. and crystallographic struct. 2-36329  
 xK<sub>2</sub>O-(100-x)B<sub>2</sub>O<sub>3</sub>-7Fe<sub>2</sub>O<sub>3</sub>-0.63 KCl, x=10 to 40 mol.%, Mossbauer and ESR studies 2-26792  
 K<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-Fe<sub>2</sub>O<sub>3</sub> glasses, Mossbauer spectroscopy study of nonbridging O atoms 2-9068  
 K<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub> system glasses, Fe<sub>2</sub>O<sub>3</sub> additions influence on Faraday rot. 2-41336  
 LaFe<sub>2</sub>P<sub>12</sub>, superconductivity and mag. order 2-31012  
 Li-Al/FeS cell performance prediction equations, development by multiple regression analysis 2-22457  
 Li-Al/FeS, batteries, ceramic-coated positive current collectors 2-47469  
 Li-FeS battery system for electric utility storage and load levelling 2-32059  
 Li<sub>2</sub>FeCl<sub>4</sub>, spinel struct., ionic cond. 2-5269  
 LiFeCo<sub>2</sub>TeO<sub>8</sub>, spinel, <sup>57</sup>Fe and <sup>127</sup>Te Mossbauer study 2-41240  
 LiFeNi<sub>2</sub>TeO<sub>8</sub>, spinel, <sup>57</sup>Fe and <sup>127</sup>Te Mossbauer study 2-41240  
 Li<sub>0.5</sub>Fe<sub>0.5</sub>O<sub>4</sub> matrix, ferrite form., Sc<sub>2</sub>O<sub>3</sub>-CeO<sub>2</sub>-CoC<sub>2</sub>O<sub>4</sub> activator effect 2-22441  
 Li<sub>0.5</sub>Fe<sub>0.5</sub>O<sub>4</sub>, order-disorder transition, first order 2-30589  
 Li<sub>2</sub>FeS<sub>4</sub>, cathodic material for Li secondary battery 2-22562  
 Li<sub>2</sub>FeS<sub>4</sub>, electrochemical system, thermodynamic model 2-17899  
 Li<sub>2</sub>FeV<sub>2</sub>O<sub>8</sub>, structural aspects of Li insertion 2-25850  
 Li<sub>2</sub>FeV<sub>2</sub>O<sub>8</sub>, topotactic lithium reactions with ReO<sub>3</sub> related shear structures 2-27433  
 Li<sub>2</sub>FeV<sub>2</sub>O<sub>8</sub>, Mossbauer study 2-26802  
 Li<sub>2</sub>FeV<sub>2</sub>O<sub>8</sub>, effect of Li on electronic config., <sup>57</sup>Fe Mossbauer study 2-13377  
 Li<sub>2</sub>O-Fe<sub>2</sub>O<sub>3</sub>-WO<sub>3</sub>, phase relations 2-17668  
 Li<sub>2</sub>Ta<sub>2</sub>Fe<sub>2</sub>S<sub>7</sub>, intercalation cpd., electronic struct., Mossbauer effect study 2-31343  
 Li<sub>2</sub>V<sub>1-x</sub>Fe<sub>x</sub>S<sub>2</sub>, layered compounds, mag. props. 2-21765  
 (Mg,Fe)SiO<sub>3</sub>, olivine, Fe-rich, grown by floating zone method, defect struct. 2-50646  
 (Mg<sub>1-x</sub>Fe<sub>x</sub>)<sub>2</sub>[SiO<sub>4</sub>], synthetic olivines, polarised single crystal near UV spectra 2-17503  
 MgO-Cr<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO-SiO<sub>2</sub> constitution changes due to O<sub>2</sub> press. at high temp. 2-31822  
 MgO-FeO(Fe<sub>2</sub>O<sub>3</sub>)-Al<sub>2</sub>O<sub>3</sub>-Cr<sub>2</sub>O<sub>3</sub> system, spinels form. kinetics 2-41598  
 Mn-Zn ferrites, high permeability, magnetic spectra, effect of eddy currents 2-13314  
 Mn<sub>0.99</sub>Fe<sub>0.01</sub>As, lattice parameters at first-order mag. phase transition, temp. depend. 2-46288  
 Na<sub>2</sub>Ca(Mn,Fe)<sup>2+</sup>(P<sub>4</sub>)<sub>6</sub>, fillowite, cryst. struct. 2-21076  
 Na<sub>2</sub>FeF<sub>6</sub>, cryst. struct. determ. 2-35463  
 Na<sub>2</sub>O-Fe<sub>2</sub>O<sub>3</sub>-WO<sub>3</sub>, phase relations 2-17668  
 NiFe electronic states, ab initio HF-CI calcs. 2-24623  
 NiFe<sub>2</sub>-Cr<sub>2</sub>O<sub>4</sub> mixed Jahn-Teller system, phase transition, acoustic study 2-45575  
 P<sub>2</sub>O<sub>5</sub>-FeO-V<sub>2</sub>O<sub>5</sub> glass, internal friction and elec. cond. 2-1907  
 P<sub>2</sub>O<sub>5</sub>-ZnO-Li<sub>2</sub>O-Fe<sub>2</sub>O<sub>3</sub> glass, ESR spectra, 300 to 700K 2-31268  
 PbO-xPbF<sub>2</sub>-yB<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>, variable comp.-system, dynamics of boundaries of co-crystallising phases 2-27159  
 RbBr:(Fe(CN)<sub>6</sub>)<sup>4-</sup>, X- and  $\gamma$ -irrad., ESR studies 2-31267  
 RbCl:(Fe(CN)<sub>6</sub>)<sup>4-</sup>, X- and  $\gamma$ -irrad., ESR studies 2-31267  
 RbCl-FeCl<sub>2</sub>, isomer shift, Mossbauer study 2-5611  
 RbFeCl<sub>3</sub>, pseudo-one-dimens. system, mag. and optical props. 2-8951  
 RbFeCl<sub>3</sub>.2H<sub>2</sub>O, crystal field effects, Mossbauer study 2-26795  
 RbFeCl<sub>3</sub>.2H<sub>2</sub>O, mag. ordering, Mossbauer study 2-26796  
 RbFeF<sub>6</sub>, Mossbauer effect, critical behaviour near T<sub>N</sub> 2-13292  
 SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>-CaO-MgO-Na<sub>2</sub>O-Fe<sub>2</sub>O<sub>3</sub> glass, ESR spectra, 300 to 700K 2-31268  
 SiO<sub>2</sub>-Na<sub>2</sub>O-CaO-Al<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>-MgO-SO<sub>3</sub> glass, chem. stability, electrochem. treatment effect 2-22349  
 SiO<sub>2</sub>-PbO-Fe<sub>2</sub>O<sub>3</sub> glass, ESR spectra, 300 to 700K 2-31268  
 SnFe<sub>2</sub>Mo<sub>2</sub>S<sub>8</sub>, powder neutron diff. study of Sn and Fe sites 2-16637  
 TeO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>, phase separation, electron microscope obs. 2-13707  
 Th<sub>2</sub>Fe<sub>2</sub>H<sub>14</sub>, mag. struct., and surface props. 2-35701  
 YFe<sub>2</sub>H<sub>14</sub>, Mossbauer spectroscopy and bulk magnetisation meas. 2-31345  
 YFeO<sub>3</sub>, surface with colloid deposit, Bitter patterns, magneto-optical props. 2-36606  
 YIG, ferromagnetic relaxation, influence of low temp. electron and neutron irradiation (Russian) 2-26762  
 $\gamma$ -(Zn,Mn)<sub>2</sub>(PO<sub>4</sub>)<sub>2</sub>, (Me=Mg, Mn, Fe, Co, Cu, Ni, Cd), solid solns., crystal chem. 2-16626  
 (Zn<sub>1-x</sub>Fe<sub>x</sub>)<sub>2</sub>(Fe<sub>1+x/3</sub>)<sub>3</sub><sup>3-</sup>□<sub>(1-x)/3</sub>BO<sub>4</sub><sup>2-</sup>, oxidation to defect phase  $\gamma$  and hematite, IR absorpt. study 2-22018

iron phosphate semiconductor glasses see amorphous semiconductors

irradiation effects see radiation effects

irradiation induced creep

- dislocation glide, effect on creep rate 2-1520  
 fusion neutron induced damage by light ion beams from accelerator 2-17722  
 low temperature, theory, taking account of microscopic processes in dislocation cores 2-45329



**irradiation induced creep continued**

- Mark C fuel irradiation tests (*German*) 2-11201  
 microstructure of irradi. creep, comparison with models 2-30485  
 standard material, destructive tests on stress induced swelling (*German*) 2-15531  
 steel, austenitic, no.14981, radiation-induced creep and swelling between 400 and 500°C (*German*) 2-47130  
 steel, austenitic stainless, irradiation creep, interrelation with swelling 2-22269  
 steel, austenitic stainless, irradiation induced swelling and creep 2-29340  
 steel, austenitic stainless, neutron irradiated, creep-fatigue crack propagation, cavity form, and linkage 2-31771  
 steel, precip. hardening, deform. under thermal cycling, neutron irradi. and stress 2-51996  
 Zircaloy-2, proton irradi. creep 2-47127  
 Zircaloy-4 cladding, creep and irradi. growth models development and correl. 2-39110  
 Al, C ion effect on creep and fracture 2-17737

**Ising lattices**

see also *Ising model*

- Ashkin-Teller model, N-color, phase transitions and phase diagram 2-42959  
 equilibrium polymerisation as an Ising model 2-152  
 finite size scaling analysis of Ising model block distribution functions 2-19048  
 fractals with dimensionality  $\sim 1$ , crit. phenomena and topology 2-10744  
 inhomogeneous Ising systems, boundary spin correl., nonuniversal and anomalous decay 2-10736  
 invariant transformation theory 2-3526  
 magnetic lattice, nonspatial symmetry group 2-48642  
 modulated phase of an Ising system with competing interactions on a Cayley tree 2-19049  
 one dimensional steady-state problem 2-38586  
 phase equilib., Ising model, two dimens., cryst. shapes at finite temp. 2-45101  
 rectangular 2D lattices, shape of clusters, phase separation computer expt. 2-42958  
 site dilution in the fully frustrated triangular lattice in two dimensions 2-10740  
 sodium nickel triacetylacetonate, antiferromag. triangular Ising lattice, mag. phase transition 2-41130  
 structural phase transition in Ising universality class model, crit. behaviour 2-30565  
 structural phase transitions, X-ray studies, review (*Japanese*) 2-16751  
 two-dimensional, phase separation line, local struct. 2-38595  
 two-dimensional Ising system, roughening transition, surface tension, droplet shapes 2-33454

**Ising model**

see also *Ising lattices*

- absence of long-range order in one-dimensional spin systems 2-23583  
 amorphous system, competing antiferromag. exchange interactions, frustration effects 2-31221  
 anisotropic two-dimensional Ising model, transfer matrix renormalisation group 2-48628  
 ANNNI model, 2-D, finite size behaviour 2-5558  
 antiferromagnet, crit. and tricrit. behaviour, Monte Carlo renormalisation group method 2-2095  
 antiferromagnet, FCC, low temp. series expansion 2-2089  
 antiferromagnet, I(1) model, FCC lattice, crit. and thermodynamic props., series expansion calc. (*Chinese*) 2-41146  
 antiferromagnet, Ising to Heisenberg crossover, AC calorimetry method 2-23639  
 antiferromagnet, one-dimens., ESR due to domain wall propag. 2-13331  
 antiferromagnet, quasi-one-dimensional, with Ising anisotropy, Mossbauer linewidth, soliton contrib. 2-26793  
 antiferromagnetic frustrated zig-zag chain, dilution effects 2-31220  
 antiferromagnetic lattice gas, clusters and Ising droplets 2-41151  
 antiferromagnetic spin 1/2 systems, highly disordered, scaling studies 2-51390  
 axial next-nearest neighbour model, mean field approx. anal. 2-36296  
 binary alloys, SRO and mag. props. 2-2092  
 boundary spin correlations, renormalisation group explanation of nonuniversal decay 2-38602  
 classical, dynamics and statistical mechanics in transverse field 2-118  
 classical 1-dimensional anisotropic planar model, high and low temp. analytic expressions 2-26573  
 classical spin systems, percolation for low energy clusters and discrete symmetry breaking 2-6801  
 classical spin systems sp. ht. and inhomogeneous differential approximants 2-3514  
 cluster Ising models, exact solns., critical phenomena 2-31223  
 clusters for real-space renormalisation group 2-33455  
 commensurate-incommensurate 2X2 transition, Monte Carlo simulation 2-46326  
 commensurate-incommensurate transitions with 2X2 structure in mean-field approx. 2-21813  
 continuous spin Ising model, renormalisation group anal. 2-270  
 correlated site-bond percolation in 2-D, Monte Carlo study of phase diagram 2-21809  
 correlation function of many statistical operators 2-23589  
 correlations at high temp., falloff rate 2-38596  
 critical phenomena with vacancies 2-31225  
 critical properties from Monte Carlo coarse graining and renormalization 2-134  
 cross-over behaviour due to random perturbations, rigorous relations 2-132  
 cubic lattice with ferromagnetic ordering, Ising model, Devil's staircase behaviour 2-2094  
 decorated, with singular crit. surface and modified crit. exponents 2-42956  
 decorated lattices, one- and two-dimensional, model study 2-48629  
 dilute disordered Ising magnets, generalised mean-field theory, appl. to spin glass 2-26645  
 dilute frustrated model, spin glass stability 2-17303  
 domain wall pinning by weakened bonds in two-dimens. 2-2101  
 duality of the three-dimensional Ising model with quartet interactions 2-19043  
 equilibrium polymerisation as an Ising model 2-152  
 exact renormalization in two dimensional Ising systems, book contrib. 2-10743

**Ising model continued**

- ferrimagnet, disordered, Neel and compensation temps. 2-17301  
 ferroelectric polarization fluctuations, mean field coupled Ising spins, Monte Carlo simulation 2-36506  
 ferroelectrics, hydrogen-bonded, soft modes, damping and overdamping (*Russian*) 2-1581  
 ferromagnet, randomly diluted, percolation theory and annealed model 2-51422  
 ferromagnet, specific heat, magnetisation, renormalisation group approach 2-46314  
 ferromagnet, surface phase transitions, renormalisation group calc. 2-51405  
 ferromagnet, three dimensional bond-dilute, renormalisation group phase boundary 2-5557  
 ferromagnet, two-dimens., crit. exponents, renormalisation group technique 2-46322  
 ferromagnetic alloy mixed cryst., phase diagram 2-51426  
 ferromagnetic binary alloys, phase transitions, Griffiths singularity 2-26644  
 ferromagnetic chain, classical Ising-Heisenberg, solitons and excitation spectrum 2-46228  
 ferromagnetic phases in random field, supersymmetric surface fluctuations 2-33445  
 ferromagnetic systems with pair interaction, GHS inequality for large external field 2-41098  
 ferromagnetic two-dimensional dynamic model, phase transition vs. disorder 2-8989  
 Feynman relativistic chessboard as Ising model 2-23816  
 field theoretic method for calc. of crossover exponent from Heisenberg to Ising behaviour 2-10730  
 films, Ising and XY model, variable thickness, phase diagrams, renormalisation group studies 2-3507  
 finite size scaling analysis of Ising model block distribution functions 2-19048  
 Fisher-stabilised Ising antiferromagnet, reflection positivity, phase transitions 2-41153  
 four-dimensional lattice gauge theories and two-dimensional spin systems, exact relation 2-48873  
 free energy derivatives calc. by modified Kadanoff variational method 2-38588  
 frustrated chains, ground state props. 2-13305  
 frustrated layered Ising model, free energy, critical points 2-46317  
 frustration model, two-dimens., ground state morphology 2-41149  
 infinite range, tricrit. point 2-46321  
 infinite range Ising spin glass, low-temp. behaviour 2-51415  
 inhomogeneous critical systems, scaling theory of boundary spin correlations 2-38603  
 inhomogeneous Ising models with diagonal structure on a square lattice 2-15115  
 interacting Ising spin chains, phase transitions 2-139  
 interacting Ising spin chains, phase transitions 2-3525  
 interface in 1+d dimensions, crit. dynamics 2-28797  
 internal energy, specific heat and correlation function of the bond-random Ising model 2-46230  
 Ising spin glass model with long-range interaction, entropy 2-8991  
 kinetic, dynamic Monte Carlo renormalisation group study 2-48640  
 kinetic, spin relax. times, Monte Carlo simulation 2-46315  
 lattice field theories, fermions, gauge fields and supersymmetry 2-23817  
 lattice renormalization in quantum field theory 2-48911  
 layered, thermodynamic props. 2-15116  
 layered model with competing axial interactions, mean-field approx. 2-17306  
 layered triangular lattice, commensurate and incommensurate phases 2-46327  
 leading singularity pole in two-dimens., shift in two point function 2-38604  
 lipid bilayer properties, effects of active molcs., cholesterol problem 2-22699  
 liquid crystals, spin-S Ising model, quadrupole analog., Bragg-Williams approx. 2-16573  
 liquid-vapour critical phenomena, asymm. Landau-Ginzburg-Wilson model 2-8603  
 low-dimensional, droplet theory 2-28794  
 magnetic lattice, nonspatial symmetry group 2-48642  
 magnetisation in frustration models 2-3515  
 mean-field solution of a spin-1 Ising-like model 2-23825  
 metallic spin glass, sp. ht. in mean field theory 2-13308  
 metastable states in the random antiferromagnetic Ising chain 2-31226  
 Migdal-Kadanoff renormalisation group scheme improvement for Ising model calc. 2-28787  
 mixed Heisenberg and Ising-like model, critical temp. 2-5554  
 model with impurities, critical behaviour 2-42964  
 modified two-dimensional model, critical props. 2-51424  
 modulated phase of an Ising system with competing interactions on a Cayley tree 2-19049  
 Monte Carlo simulation, multi-spin-coding method 2-3510  
 neural network model 2-9797  
 one-dimensional, dynamic crit. exponent 2-23590  
 one-dimensional chain with inverse-square interaction 2-8990  
 one-dimensional classical system, Yang-Lee edge behaviour 2-19066  
 partition function bounds 2-10726  
 partition functions, bounds, frustration appl. 2-10727  
 percolation, Ising and Potts clusters, renormalisation group appl. 2-2047  
 periodically modulated structures, Ising models, solitons, and the Devil's Staircase 2-18929  
 phase transition lines via surface energy calculations in the two dimensional ANNNI model 2-28788  
 phospholipid bilayer, lattice model, phase transitions and crit. behaviour 2-16768  
 poly-L-proline, I and II, order-order transition, Ising model study 2-32178  
 polymer chain dynamics, 1-D Ising model, dielectric relax. 2-4433  
 population biology appl. 2-33486  
 probability density functions for collective coordinates in Ising-like systems 2-129  
 quantum Ising-Heisenberg chain, spin wave damping 2-21799  
 quantum S=1/2 models, effective classical field Hamiltonian 2-41154  
 quantum spin systems, evolution in ground state, multiplicative and additive cluster expansions 2-17304  
 random bond, correlation equalities 2-17305  
 random bond Ising model in self-avoiding walk approximation 2-46320



## Ising model continued

- random bond system, ferromagnetic antiferromag. interactions, generalised susceptibilities 2-21812
- random dilute ferromagnet, paramag. susceptibility, relative magnetisation, mol. field approx. 2-8954
- random Ising chain, metastable states struct. 2-46323
- random Ising model phase transition 2-19037
- Random Ising model with long-range interactions 2-126
- random magnetic atom distrib., Ising- and Heisenberg-like spins, critical temp. 2-31194
- random spin system, oscillatory interactions, Bogolyubov method 2-21810
- random-bond, finite energy barriers, rel. to phase transition existence 2-48638
- random-bond Ising model and n-vector model., upper bonds to correl. functions 2-125
- random-bond Ising model on square lattice, ferromag. phase existence 2-36372
- random-bond Ising models, frustration effect and spin glass transition temp. 2-2088
- random-field instabilities, domain interface roughness effect, in three or less dims. 2-46328
- randomly dilute Ising ferromagnets, spontaneous magnetisation 2-26597
- randomly dilute model, cubic N-vector model 2-48635
- real-space dynamic renormalisation group 2-2093
- rigorous entropy-energy arguments 2-23584
- self-dual Ising chain in a transverse field with multispin interactions 2-46318
- simple cubic lattice, Ising model, free energy, lower band approx. 2-33443
- singlet-triplet, appl. to simple fluids, nematic mixtures and  $^3\text{He}$ - $^4\text{He}$  mixtures 2-131
- singlet-triplet, liq., gas equilibria in ternary mixtures appl. 2-1603
- site bond percolation in ferromagnetic and antiferromag. Ising model, renormalisation group approach 2-15119
- spin 1 model quantum projection renormalisation group study, universality 2-33463
- spin dynamics and sound propagation near the spin-glass transition 2-51416
- spin glass state, electronic theory 2-13302
- spin glass, ferromag. phase existence, Peierls-Griffiths argument 2-46319
- spin glass, Gaussian, bond patterns and clustering, Monte Carlo simulation 2-26641
- spin glass, ground state degeneracy and ferromagnetism 2-41150
- spin glass, Ising model, stationarity of free energy 2-2091
- spin glass, two-dimens. Ising model, critical temp. 2-51421
- spin glass model, metastable states 2-2087
- spin glasses, critical behaviour in transverse field 2-17307
- spin glasses, Ising model with random bonds 2-51425
- spin glasses, lattice gauge theory for classical XY model 2-21811
- spin systems with frustration, phase transitions 2-8992
- spin- $1/2$  BCC Ising ferromagnet, Curie temp., three-spin interactions effects 2-2090
- spin-Peierls transition model, phase diagrams in mag. field 2-36373
- square Ising model, exact differential renormalisation group 2-6806
- square lattice Ising model, self-dual cluster renormalisation group approach 2-38593
- squaric acid, microscopic model based on 3-D coupling of 1-D Ising chains 2-2203
- superfrustration models 2-17256
- surface melting and nonsingular crystal surfaces appearance (Russian) 2-30568
- TGS(Se), crit. fluctuations, mean-field soln. of Ising model 2-46497
- three dimensional correlated site-bond percolation, phase diagram 2-42953
- three-dimensional, partition function, approx. interpolation formula (Chinese) 2-19032
- three-dimensional, partition function, hypercomplex number system anal. (Chinese) 2-19031
- three-dimensional Ising model, high-temp. series and renormalisation calcs. 2-19044
- three-dimensional to one-dimensional crossover, Monte Carlo study 2-19040
- transverse, effective field theory 2-36370
- transverse, randomly diluted, second order phase transition 2-36371
- transverse, with substitutional disorder, static props. 2-26834
- transverse field coupled to acoustic phonons, longitudinal spin dynamics 2-36546
- transverse two dims. model, finite size rescaling transformation approach 2-33449
- triangular Ising antiferromagnet, phase diagram 2-31224
- triangular Ising antiferromagnet variational approx., phase diagrams 2-127
- triangular Ising model, second-order phase transition 2-28814
- triangular lattice, quantum frustration, renormalisation group approach 2-2086
- triangular lattice, with first and second neighbour interactions, crit. behaviour 2-41148
- trimethyl ammonium cobalt chloride, ferromag. Ising chain, statistics in mag. field 2-31222
- two dims. system, linear defects, finite size scaling theory 2-28790
- two dimensional Ising lattice gas model, percolation props., real space renormalisation group study 2-3523
- two or three dims., roughening transition and linear singularity localisation (French) 2-15118
- two-dimens. axial nearest neighbour, finite lattice calc. 2-46325
- two-dimens. axial nearest neighbour, spatially modulated phases, crit. behaviour 2-46324
- two-dimensional, interface profile, agreement with capillary wave theory 2-50961
- two-dimensional, layered, critical points 2-46316
- two-dimensional, with impurity bonds, crit. behaviour 2-42954
- two-dimensional Ising systems, spin correlations calc. from one-dimensional kinetic models 2-5556
- uniaxial crystals, critical behaviour near phase transitions 2-45530
- Van der Waals model, low temp. region, Falk and Bruch bounds 2-36297
- Van der Waals-Ising models, renormalisation group transformations, random field singularities 2-3519
- water, shear viscosity, influence of pressure 2-26099
- weakly coupled nonlinear chains, struct. phase transitions 2-35666
- Weiss-Ising model, quantum mechanical dynamics 2-3517

## Ising model continued

- Z(N) models in random field, crossover from discrete to continuous behaviour 2-133
- $\text{Cd}_{1-x}\text{Mn}_x\text{Te}$ , light scatt. by magnons 2-13469
- Co complex, Co( $\gamma$ -methylpyridine N-oxide) perchlorate, mag. ordering, susceptibility and sp. ht. obs. 2-26604
- Co complex, cobalt pyridine chloride, ground state, local excitations 2-21750
- $\text{Co}_3\text{Zn}_2\text{F}_2$ , three-dimens. Ising antiferromag., random-field effects, neutron scatt. study 2-51423
- $\text{CsCoCl}_3$  antiferromagnet, quasi-one-dimensional Ising-like, ESR study 2-41182
- $\text{CsCoCl}_3 \cdot 2\text{H}_2\text{O}$ , antiferromag., one-dimens.,  $^{133}\text{Cs}$  nuclear spin-lattice relax., domain boundary propag. effect 2-26779
- $\text{DyVO}_4$ , specific heat at Jahn Teller transition 2-30624
- Fe, ferromagnetic, itinerant-electron system, Ising model and Bethe approx. 2-26642
- $\text{Fe}(\text{S}_2\text{CN}(\text{C}_2\text{H}_5)_2)_2\text{Cl}$ , ferromagnetic, critical behaviour, mag. susceptibility and magnetisation study 2-46307
- $\text{KD}_2\text{PO}_4$ , wave vector dependent susceptibility, four cluster approx. 2-36543
- $\text{KMnF}_3$ , specific heat capacity, cross-over from 3-D Heisenberg to Ising behaviour near Neel temp. 2-8980
- $\text{LiTb}_{0.5}\text{Ho}_{0.49}\text{F}_4$ , random Ising dipole coupled ferromag., mag. susceptibility 2-46261
- $\text{MnF}_2$ , specific heat capacity, cross-over from 3-D Heisenberg to Ising behaviour near Neel temp. 2-8980
- Ni complex, NaNi(acac) $_3$ , benzene, triangular Ising lattice, mag. phase transitions 2-36343
- Ni, ferromagnetic, itinerant-electron system, Ising model and Bethe approx. 2-26642
- $\beta\text{-Ni}(\text{NO}_3)_2 \cdot 4\text{H}_2\text{O}$ , field induced spin ordered states, low dimensionality 2-41147
- $\text{Rb}_2\text{Co}_7\text{Mg}_{0.3}\text{F}_4$ , two-dimens. Ising antiferromag., random-field effects, neutron scatt. study 2-51423
- island-like metallic thin films** see discontinuous metallic thin films
- islet-like metallic thin films** see discontinuous metallic thin films
- isobaric analogue resonances**  
see also nuclear collective states and giant resonances
- $0^+$  nuclear states, self-consistent description with exact account for one-particle continuum (Russian) 2-7067
- nuclei far from stability, half-life periods and  $\beta$ -decay strength function structure (Russian) 2-43458
- $^{209}\text{Bi}$   $g_{9/2}$  and  $i_{11/2}$  isobaric analogue resonances, decay modes from (e,p), ( $\gamma$ ,p) 2-24210
- $^{40}\text{Ca}$ ,  $A=242,244-8$ , neutron parameters in reson. region 2-3886
- $^{57}\text{Co}$  proton resonances, deexcitation, spectroscopic factors 2-33989
- $^{56}\text{Fe}$ (p,p), isobaric analogue resonances 2-33989
- $^{76}\text{Ge}$ (p,e), 3-4.34 MeV, nuclear E0 transition meas. 2-43484
- $^4\text{He}$ (p,p), 1 GeV, isobaric intermediate states, Glauber model 2-29261
- $^{51}\text{Mn}$ ,  $g_{9/2}$  isobaric analogue resonances,  $\gamma$ -decay, from  $^{50}\text{Cr}$ ( $\gamma$ , $\gamma$ ) 2-43468
- $^{147}\text{Nd}$ , resonance parameters, neutron levels 2-3885
- $^{238}\text{Np}$  isobaric analogue resonance fission probability and width from  $^{238}\text{U}$ ( $^3\text{He}$ ,f) 2-7125
- $^{232}\text{Pa}$  isobaric analogue resonance fission probability and width from  $^{232}\text{Th}$ ( $^3\text{He}$ ,f) 2-7125
- $^{208}\text{Pb}$ , giant Gamow-Teller reson. 2-39000
- $^{50}\text{Sn}$ (p, $\gamma$ ),  $A=112-124$ , collective states in even Sn nuclei 2-33888
- isobaric analogue states**  
see also isobaric analogue resonances
- charge-exchange nuclear excitation, strength function 2-19498
- high-energy proton scatt., review 2-29273
- hypernuclei Coulomb energies and  $\Delta N$  force charge depend. (Russian) 2-38974
- $^{12}\text{C}$ , low energy spectrum, virtual isobar admixture influence 2-11095
- $^{56}\text{Fe}$ (p,n), 20-35 MeV, analogue state, isovector deformation parameter 2-24110
- $^{40}\text{Kr}$ ,  $A=79,81$ , lowest isobaric analog state from Br( $^3\text{He}$ ,t) 2-33986
- $^{92}\text{Mo}$ ( $^3\text{He}$ ,  $\alpha$ ) $^{91}\text{Mo}$ , 97.3 MeV, inner-hole excitation study 2-7108
- $^{20}\text{Na}$ , beta-delayed particles kinematic shifts as probe of  $\beta$ - $\gamma$  ang. correl. 2-19502
- $^{48}\text{Ti}$ ( $^{42}\text{Ca}$ ,X), single and double charge exchange reactions, excitation functions and ang. distrib. 2-19571
- $^{90}\text{Zr}$ ( $^3\text{He}$ ,  $\alpha$ ) $^{89}\text{Zr}$ , 97.3 MeV, inner-hole excitation study 2-7108

## isobars see atmospheric pressure and density

## isoelectronic series

- alkali metal atoms, appl. of dipole matrix element for Rydberg states 2-29538
- atoms and ions, second differences in Hartree Fock SCF energies 2-49258
- diamond isoelectronic compounds as basis for hard and super-hard materials 2-21088
- hydrogenic atoms, invariable field highly-excited, tunnel ionisation 2-43820
- hydrogenic atoms, polarisabilities in mag. fields, implications for impurity atoms in semiconductors, white dwarfs and neutron stars 2-34595
- hydrogenic atoms, radial probability density and normalisation, theory 2-14996
- hydrogenic ions, 1s ground state, Compton defect theory appl. (French) 2-11553
- hydrogenic ions, stark broadening of Lyman- $\beta$  line by low freq. fields in dense plasmas 2-49331
- hydrogenlike ions, metastable  $2s_{1/2}$  level, lifetime meas. 2-34354
- ionisation energy test for atomic total energies approx. formulas, numerical comparison 2-49270
- isoelectronic systems, electronic energy inequalities 2-24578
- logarithmic energy functions in  $Z^{-1}$  perturbation theory 2-29493
- ten electron atoms, scaled atomic number expansion of HF energies 2-621
- transition probabilities in electric field, relativistic Coulomb Green's function appl. 2-24655
- two-electron systems, dipole transitions from excited S-states, time-depend. Hartree-Fock theory 2-29498
- Ag I isoelectronic series, I VII to La XI, wavelengths, energy levels and pot. energies 2-24635
- AgI isoelectronic series, Ce XII to Ho XXI and W XXVIII, wavelengths, energy levels and pot. energies 2-24636
- Al-like ions, electric dipole transitions, oscillator strengths, relativistic energy levels 2-679



## isoelectronic series continued

- B isoelectronic series oscillator strengths, polarised frozen-core approx. 2-43851  
 Be, correlation energies, CI and perturbation calcs. 2-7510  
 Be isoelectronic sequence, outer-shell photoionisation calc. 2-685  
 Be isoelectronic sequence, spin-forbidden transitions between  $2p^2$  and  $2s2p$  states 2-11413  
 Be-like ions, electron impact ionisation, cross section calcs. 2-4391  
 Be-like ions, electron impact ionisation cross sections and rates 2-4396  
 Be-like ions, electron impact excitation, coupling collision strengths, fine struct. transitions 2-29718  
 Be-like ions, electron impact excitation, collision strengths, line strengths, spectra 2-34581  
 Be-like ions, electron impact, collision strengths, data compilation 2-38368  
 Be-like ions, electron-ion scatt., cross sections, weak-coupling approx. 2-44115  
 Be-like ions, N IV and O V,  $2s2p$   $^1P$  level, lifetimes, beam foil spectra cascade anal. 2-11436  
 Be-like ions, resonance transitions and excitation energies calc., multiconfig. relativistic random phase approx. 2-49303  
 C I to Ca XV isoelectronic series, oscillator strengths 2-15741  
 Co I X-ray spectra of W XLVIII, Tm XLIII from laser-produced plasmas 2-11428  
 Cu I, X-ray spectra of W XLVI, Tm XLI from laser-produced plasmas 2-11428  
 Cu isoelectronic series spectra,  $Ba^{27+}$  to  $W^{45+}$ , wavelengths, energy levels and ionisation energies 2-24634  
 F-like ions, intershell correlation corrections to energy levels of  $n=2$  states 2-43810  
 H-like atoms in arbitrary mag. field, sum rules 2-7496  
 H-like ions, electron-ion scatt., cross sections, weak-coupling approx. 2-44115  
 H-like ions, spectra and energy levels in mag. field of neutron star 2-28490  
 H-like ions, spectral broadening in intense mag. field 2-43846  
 H-like ions,  $Z=6$  to 33, dielectronic satellite spectra for  $(2l^3l^1-1s2l^1, 2l^3l^1-1s3l^1)$  transitions 2-34344  
 HABC mols. with 16 valence electrons, mol. configs., MO study 2-4202  
 He, fine and hyperfine struct. 2-19966  
 He isoelectronic sequence, electron impact excitation, oscillator strengths calc. 2-20192  
 He isoelectronic structure, limiting behaviour of  $\langle r_{12}^{-1} \rangle / \langle r_1^{-1} \rangle$  in HF framework 2-11391  
 He isoelectronic series, lower bound of ground states, HF functions 2-19950  
 He-like ions, electron impact excitation, coupling collision strengths, fine struct. transitions 2-29718  
 He-like ions, electron-ion scatt., cross sections, weak-coupling approx. 2-44115  
 He-like ions, Tokamak plasma, UV spectra 2-672  
 He-like ions,  $Z=6$  to 33, dielectronic satellite spectra for  $(1s2l^3l^1-1s^22l^1, 1s2l^3l^1-1s^23l^1)$  transitions 2-34344  
 HeI-like spectra, Na X through to Ar XVII, series formulae 2-24633  
 Hg-like ions, fluoresc. complexes in soln., energy and spatial struct. 2-24771  
 Li isoelectronic sequence, electron impact excitation 2-7653  
 Li isoelectronic sequence, improved Hylleraas calc. for ground state energies 2-24592  
 $Li^+$ , fine and hyperfine struct. 2-19966  
 Li-like atom, photoionisation cross sections, close coupling calcs., autoionizing reson. 2-43872  
 Li-like ions, electron impact ionisation, cross section calcs. 2-4391  
 Li-like ions, electron-ion scatt., cross sections, weak-coupling approx. 2-44115  
 Li-like ions, intershell correlation corrections to energy levels of  $n=2$  states 2-43810  
 Li-like ions, photo-Auger ionisation, cross sections, isolated resonance approx. 2-43878  
 Mn XVII to XXIII, atomic data and level populations calc. 2-42797  
 N I sequence, forbidden line transition probabilities 2-38050  
 N-like atoms, fluoresc. radiation polarisation subsequent to inner-shell photoionisation, LS coupling formulas 2-49324  
 Na-like ions, dielectronic recombination involving high Rydberg states 2-677  
 Na-like ions, electron impact ionisation, excitation and autoionisation, cross sections and rate coeff. 2-4395  
 O ions, He-like, in TFR Tokamak plasma, ratio of intercombination to reson. line intensities 2-20932  
 P I sequence, forbidden line transition probabilities 2-38051  
 S isoelectronic sequence, optical oscillator strength calcs. 2-43858  
 Si isoelectronic sequence, optical oscillator strengths, Born approx. and LS coupling calc. 2-29551  
 $ThO_2$ , geometries calc. using relativistic effective core pot. 2-34281  
 $UO_2^{2+}$ , geometries calc. using relativistic effective core pot. 2-34281

isolators, microwave see microwave isolators

## isomer shift

- amorphous mag. alloys, Fourier analysis of Mossbauer spectra 2-26803  
 calibration constants for Mossbauer isomer shift, electron capture (Russian) 2-15832  
 complex equilibria, Mossbauer spectrosc. obs. 2-29636  
 hyperfine magnetic fields at  $^{57}Fe$  nuclei, press. depend. regularities 2-51485  
 metallic solids, amorphous, Mossbauer spectroscopy studies 2-31340  
 $R_2Fe_2Si_2$  ( $R=Ga$  to  $Er$ ), mag. susceptibility and  $^{57}Fe$  Mossbauer studies 2-46256  
 rare earth alloys,  $RM_6Al_6$  ( $M=Cr, Mn, Cu$ ), magnetism, spin relax. and hyperfine interactions 2-36484  
 rare earth antimonides,  $^{121}Sb$  Mossbauer spectra 2-9065  
 $Si:Sn$ , amorphous, short range order,  $^{119}Sn$  Mossbauer spectra study 2-46449  
 transition metal alloys, dil., bonding effects, Mossbauer isomer shift study 2-46440  
 transition metal alloys, Mossbauer isomer shift of  $^{99}Ru$ ,  $^{193}Ir$ ,  $^{195}Pt$ ,  $^{197}Au$ , cellular model 2-36488  
 triphenyltin chloride, Mossbauer study of Debye temp. 2-46437  
 $Cu,Ta,Si$ , isomer shift of 6.2 KeV nucl. transition of  $^{181}Ta$  2-36485  
 Fe compounds, Mossbauer transition in  $^{57}Fe$ , determ. by  $^{52}Fe$  decay rate modification (Flemish) 2-11117

## isomer shift continued

- $\alpha$ -Fe, electronic struct. and dislocation splitting, alloying elements influence (Russian) 2-51077  
 $Fe_2Al_3Si_{1-x}$ , mag. hyperfine field and isomer shift, Mossbauer study 2-17374  
 $Fe_{100-x}B_x$ , amorphous, Mossbauer spectra asymmetry 2-31332  
 $Fe_2B_{1-x}B_x$ , metallic glasses,  $^{57}Fe$  Mossbauer spectra study 2-17375  
 $Fe_{2.4}B_{1.4}Si_{10.4}$ , amorphous, mag. props. and crystn. 2-46441  
 $Fe_2PO_4$ , mixed valence cpd., electron localisation, Mossbauer expts. 2-1870  
 Ge:Te, crystalline and amorphous, Mossbauer study of disorder 2-41238  
 $Ge_{0.8}Te_{0.2}$ , amorphous,  $^{125m}Te$  ion implanted, Mossbauer study of disorder 2-41238  
 $K_2NpO_4$ , tetragonal, first order mag. phase transition 2-17278  
 $K_2O-B_2O_3-SiO_2-Fe_2O_3$  glasses, Mossbauer spectroscopy study of nonbridging O atoms 2-9068  
 $Li_2FeV_3O_8$ , Mossbauer study 2-26802  
 $Li,Ta_{1-x}Fe_xS_2$ , intercalation cpd., electronic struct., Mossbauer effect study 2-31343  
 $NpCo_2Si_2$ , antiferromagnet, high press. Mossbauer study 2-46442  
 $RbCl-FeCl_2$ , isomer shift, Mossbauer study 2-5611  
 $Sc,Fe_2Si_3$ , supercond., Mossbauer effect study of absence of Fe magnetism 2-31344  
 $Si:As$ , ion implanted, radiation defects annealing, Mossbauer and surface cond. study 2-35523  
 $Si:Sn$ , ion implanted, radiation defects annealing, Mossbauer and surface cond. study 2-35523  
 $SnCl_2^{2+}$ , complex equilibria, Mossbauer spectrosc. obs. 2-29636  
 $SnF_3^-$ , frozen aq. soln., Mossbauer spectrosc. obs. 2-29637  
 $(Sn_{0.5}Se_{0.5})(As_{0.1}Ge_{0.3}Se_{0.6})_{100-x}$  glasses and glass-ceramics, Mossbauer study 2-21923  
 $Th,Fe_3$ , supercond., Mossbauer effect study of absence of Fe magnetism 2-31344  
 $U(Fe,Al_{1-x})_2$ , electronic struct., Mossbauer study 2-13378  
 $Zr(Fe_{1-x}Al_x)_2$ , Laves phase, mag. hyperfine interactions,  $^{57}Fe$  Mossbauer study 2-46438  
 $Zr(Fe_{1-x}Co_x)_2$ , Laves phase, mag. hyperfine interactions,  $^{57}Fe$  Mossbauer study 2-46438

## isomerisation

- acetaldehyde cations, fragmentation and isomerisation 2-2698  
 alkenes, mol. ions, photodissoc. and ion-molecule reaction kinetics, isomerisation, ICR study 2-15855  
 azobenzene, triplet-sensitised photoreaction in  $H_2SO_4$  (German) 2-22480  
 cycloalkanes, photodissoc. and ion-molecule reaction kinetics, isomerisation, ICR study 2-15855  
 cyclohexanone liq., energy param., US dispersion studies 2-35607  
 cyclopropane- $d_6$  ( $-d_6$ ), isomerisation, vibr. energy transfer, isotope effect, variable encounter method 2-37046  
 dideuteroethylene, unimolecular cis-trans isomerisation, vibration nonadiabatic model calcs. 2-7531  
 3,3'-diethyldicarbocyanine iodide, photoacoustic spectra, photoinduced isomerisation influence 2-43928  
 3,3'-diethyloxadicarbocyanine iodide, photoinduced isomerisation, fluorescence 2-47331  
 1,2-dimethylcyclobutane, fragmentation and isomerisation, semiempirical MO SINDO1 calcs. 2-39321  
 ethylene, ground state singlet pot. surface, rearrangement to  $CH_3CH$ : and  $H_2$  elimination 2-29506  
 formaldehyde, fragmentation and isomerisation, intrinsic reaction coordinate, ab initio MO calc. 2-31903  
 hydromethyl beryllium ion, H transfer reaction, rearrangement, MO calcs. 2-47307  
 intramolecular rate process, isomerisation dynamics, transition to chaos 2-2706  
 methyl borane, H transfer reaction, rearrangement, MO calcs. 2-47307  
 methyl silylium ion, H transfer reaction, rearrangement, MO calcs. 2-47307  
 perfluorobutadiene, cyclisation, single pulse shock tube studies 2-37058  
 polyacetylene, doped, cis-trans isomerisation mechanism 2-31907  
 polyacetylene, I doped, three dimensional orientation, doping and isomerisation effects 2-45075  
 polyacetylene, isomerisation and spin generation, Raman and EPR study 2-47333  
 polyacetylene, photoluminesc. and photocond. studies, effect of cis-trans isomerisation 2-17530  
 polyacetylene, reson. Raman scatt. and opt. props., microscopic struct., doping and isomerisation influence 2-31466  
 polyacetylene, soliton photogeneration, cis-trans isomerisation influence 2-30922  
 polyacetylene film, cis-trans isomerisation,  $^{13}C$  NMR obs. in solid state 2-31906  
 polyacetylene films, prep. by Luttinger's catalyst, morphology and isomerisation 2-45076  
 polyacetylene- $d_0$  ( $-d_0$ ), n-type doping, conduct. transitions, thermal isomerisation, ESR and IR study 2-5574  
 polymers, crosslinked photochromic, photochem. effects 2-41315  
 quadricyclene charge transfer complexes, ionic photodissoc., wavelength depend. 2-47357  
 transstilbene, excited singlet state, isomerisation, photochemistry 2-41908  
 styrene, cis-trans photoisomerisation, CI calcs. 2-29529  
 $TCNQ^+ +$  organic radicals, radical trapping, product struct. and isomerisation, mass spectra 2-27422  
 tetraphenylethylenes, para-substituted, half-wave oxidation and reduction pot. merostabilisation 2-52175  
 vision mechanism, spectroscopic aspects 2-18205  
 visual pigment, local elec. field as spectroscopic and photochem. determinants 2-14246  
 $CHF_2$  + ethylene, addition reaction, isomerisation, vibr. energy of  $CHF_2$  2-22425

## isomerism

- see also isomerisation; nuclear isomerism; rotational isomerism  
 tert-butylphenylalene, mono- and di-substituted isomers,  $^{13}C$  NMR, PMR 2-738  
 amino acids, 3-tropane, 3-granatanate and 3-bicyclo(3.2.1)octane epimeric, IR and  $^1H$  NMR spectra 2-24704  
 aminopyridine, tautomeric forms stability, MNDO study 2-34302  
 2-bromoethanol isolated in Ar matrices, IR induced rotamerisation 2-43898  
 cyanopyridines, isomeric, anomalous luminesc. behaviour 2-41396  
 cyclopentane isomers, charge exchange mass spectra 2-24891



**isomerism continued**

- 1,2-dichloroethene, selective multiphoton ionisation for isomer separation 2-7617
- dicyandiamide, isomers, struct., stabilities, STO calcs. 2-34270
- 3,5-dimethoxy-4-hydroxyazobenzene and 2,6-dimethoxy-4-hydroxyazobenzene, azo-hydrazone tautomerism, Raman study 2-49436
- 1,4-dithiin, mol. conformations, ab initio STO study 2-630
- DNA adenine-thymine base pair, electronic struct., semiempirical calcs. 2-37487
- ethyl dithioacetate, rotational isomers, Raman study 2-17469
- ethyl methyl sulphate gauche isomer, microwave spectrum, struct., dipole moment and internal rot. 2-49390
- ethyl thioacetate, rotational isomers, Raman study 2-17469
- glycyanilide drugs, anxiolytic activity rel. to 7-membered ring struct., quantum mech. calcs. 2-15706
- hydrocarbons, saturated, charge distrib. and chem. effects, vibr. energies rel. to mol. stabilities 2-4209
- 2-hydroxy-5-methyl-azobenzene, azo-hydrazone tautomerism, Raman study 2-49436
- hydroxypyridine, tautomeric forms stability, MNDO study 2-34302
- hydroxypyridines, vapour phase tautomeric equilib., ab initio calcs. 2-15709
- interstellar molecules, effects of isomeric forms on chemical reaction schemes 2-53349
- 2-iodoethanol isolated in Ar matrices, IR induced rotamerisation 2-43898
- isomer discrimination by topological information approach 2-800
- leukotriene D, protected, 360 MHz PMR spectra 2-43946
- mercaptopyridine, tautomeric forms stability, MNDO study 2-34302
- molecular chirality and biological time arrow 2-15693
- naphthalene, hemi-Dewar and valence struct., CNDO/2 MO calcs. 2-34303
- organic conjugated systems, tautomer stability, PPP calcs. 2-39326
- polyacetylene, saturation and linewidth of ESR signal, relax. behaviour, O and isomerisation influence 2-31261
- polyacetylene film, Raman studies of cis-trans isomerism, oxidation and doping 2-2281
- polyenes, struct. isomerism, PPP investigation 2-49297
- propadienone, and struct. isomers, equilib. struct., ab initio calcs. 2-24594
- purines in gas phase and in low-temperature matrices, tautomerism, IR spectra 2-7554
- pyrimidines, in gas phase and in low-temperature matrices, tautomerism, IR spectra 2-7554
- 7-quinolinol, photoautomerism kinetics obs. by picosecond fluoresc. spectroscopy 2-47359
- quinolymethylenes, geometric isomerism, triplet EPR obs. 2-34449
- silaethyne, isomerisation and hydrogenation, Si-C triple bond stability, SCF calc. 2-7675
- stimulated conformal transformations, three-term model (Russian) 2-20139
- tetrazoles, gas phase tautomerism, PES and ab initio MO calcs. 2-20128
- triazoles, gas phase tautomerism, PES and ab initio MO calcs. 2-20128
- $B_2H_4^{+}$ , optimised geometry, restricted HF level MO CI calcs. 2-19974
- $C_4H_4^{+}$ , struct. and energies of isomers ab initio calcs. 2-19962
- $C_2H_3O^{+}$  isomers, pot. surface, ab initio MO calcs. 2-770
- $C_2SiH_4$  isomers, multiple bonds stability, ab initio SCF calc. 2-7674
- HF + ClF, association reaction, thermodynamics, isomerism, energy hyper-surfaces 2-27418
- $H_nF_{n+1}^{-}$  anions, mol. struct., MNDO calcs. 2-15726
- $N_3P_2BrF_6-n$  isomers, vibr. anal., IR and Raman obs. 2-11481
- $N_3P_2Cl_2F_6-n$  isomers, vibr. anal., IR and Raman obs. 2-11481
- Pd complex with diene rings, cryst. struct. and spectra 2-8489

**isomorphism**

- LIV<sub>2</sub>, NaVO<sub>3</sub>, Vegard's law in various types of isomorphic substitutions 2-50611

**isothermal transformations**

- metallic glasses, activation energies 2-12732
- Au-Cd, internal friction and elastic modulus near martensitic transform. 2-47105
- Fe-Cr-Mn-C, cast, austenite transform., Mn conc. influence 2-51902
- Ti-Nb (35 wt.%), isothermal  $\omega$  phase form., electron microscopy and small-angle X-ray scatt. study (French) 2-9352
- Ti-C-Zr-C-HfC system, pseudoternary phase diagram, 1700°C isothermal section 2-9339

**isotope detection**

- see also mass spectra
- actinide nuclides meas. in water samples from nuclear power plant primary cct. 2-11576
- electrostatic on-line collection system 2-20198
- exotic nuclei identification using ( $\pi^+$ ,  $\pi^-$ ) reactions 2-15421
- fission yield meas. with combined GJRT-SISAK technique, continuous on-line method 2-477
- gas-jet coupled ISOL facility development with  $^{252}\text{Cf}$  spontaneous fission source 2-19694
- ISOTRACE facility using Tandemtron accelerator 2-14043
- mass spectroscopic methods using tandem accelerator for rare isotope detection and dating 2-11577
- rare-earth nuclei identification produced in  $^{252}\text{Cf}$  spontaneous fission 2-15916
- p-emulsion nuclei reactions, fast H and He isotopes prod. (Russian) 2-29297
- $\pi$ -emulsion nuclei reactions, fast H and He isotopes prod. (Russian) 2-29297
- $^{209}\text{Bi}(A,X)$ ,  $A=^{40}\text{Ar}$ ,  $^{50}\text{Ti}$ ,  $^{54}\text{Cr}$ , isotopes with  $Z \geq 100$  produced in fusion reaction, exptl. study 2-19590
- $^{14}\text{C}/^{12}\text{C}$  dating facility using MP tandem accelerator 2-14636
- $^A\text{Hf}$ ,  $A=162-165$ , refractory isotopes on-line separation at ISOCELE separator 2-19692
- $^A\text{Pb}(B,X)$ ,  $A=206-208$ ,  $B=^{40}\text{Ar}$ ,  $^{50}\text{Ti}$ ,  $^{54}\text{Cr}$ , isotopes with  $Z \geq 100$  produced in fusion reaction, exptl. study 2-19590
- $^A\text{Ta}$ ,  $A=163-165$ , refractory isotopes on-line separation at ISOCELE separator 2-19692
- U, isotopic abundances, meas. using mag. reson. methods 2-47409

**isotope effects**

- see also isotope shifts
- acetylene- $d_0(d_2)$ , vibr., polarisability, Raman scatt. 2-49437
- acetylene- $d_0$  ( $-d_1$ )( $-d_2$ ), harmonic force field calcs. using Raman intensities 2-693
- alkali ions, hydration and struct. changes in  $\text{H}_2\text{O}(\text{D}_2\text{O})$ , isotope effects, thermodynamics 2-16545

**isotope effects continued**

- alkaline earth ions, hydration and struct. changes in  $\text{H}_2\text{O}(\text{D}_2\text{O})$ , isotope effects, thermodynamics 2-16545
- aminonaphthalenes, nonradiative transitions, deuteration effects 2-43988
- anisole - $d_0(d_2)$  ( $-d_3$ )( $-d_4$ ), solid, internal rot., isotope effects, STO-3G calcs., Raman study 2-31487
- anthracene-pyromellitic anhydride, isotopically mixed, charge-transfer exciton bandwidth, refl. and luminesc. spectra 2-17537
- anthracene-pyromellitic anhydride, isotopically mixed, librational phonon modes, Raman spectra 2-17480
- aqueous electrolyte solns., excess thermodynamic props., solvent isotope effects 2-1636
- azobenzene,  $^{13}\text{C}/^{15}\text{N}$  spin-spin coupling const., relative signs and INDO-MO calcs. 2-29631
- benzene, multiphoton ionisation and fragmentation, isotope selectivity, mass spectra 2-34504
- m-benzene- $d_3$ , fluoresc. excitation for  $^1B_{2u}-^1A_{1g}$  two-photon transition, isotopically induced harmonic mode scrambling 2-7594
- benzo(c) cinnoline,  $^{13}\text{C}/^{15}\text{N}$  spin-spin coupling const., relative signs and INDO-MO calcs. 2-29631
- bis(1,1,1,5,5,5-hexafluoropentane-2,4-dionato) trimethylphosphate dioxo uranium (VI), laser photochemical decomp., isotope effect 2-52176
- butane-1,3-diol, gas phase, distorted chair conformation investig. 2-49393
- CDW state, electron-phonon coupling, strong coupling approx. 2-21512
- Chevreul phase supercond. cpds., electron-phonon interactions, isotope effect and tunnelling spectroscopy expts. 2-8917
- chiral molecules, isotope substituted, vibr. Raman optical activity, sum rule 2-29601
- cycloheptatriene- $d_0(-7d_1)$ , vibr. spectra and mol. geometries, interpretation 2-15765
- (R)-cyclopentanone- $d_1$ , conformational isotope effect, absolute config., circular dichroism spectra 2-34459
- cyclopropane- $d_0(-d_2)$ , isomerisation, vibr. energy transfer, isotope effect, variable encounter method 2-37046
- 2,4-dioxabicyclo[3.1.0]hexan-3-one, rot. const.,  $r_s$  struct., microwave obs. 2-700
- ethane- $d_1(d_2)$  ( $-d_4$ ), internal rot., pot. function,  $v_2$  struct., microwave obs. 2-24683
- trans-ethylamine- $d_0(d_1)(d_2)$ , hyperfine struct., quadrupole and rot. const., microwave obs. 2-49387
- ethylene + methyl ion, reaction intermediate, isotope effects, pot. energy profile 2-37052
- ethylene- $d_0(-d_4)$ , rot. and vibr., isotope effects Fourier transform IR obs. 2-24686
- fluoromethane- $d_0(d_2)$ , Ar and Kr matrix isolated, rot., vibr., IR obs. 2-49401
- guaiaicol - $d_0(-d_1)(-d_3)$ ,  $\alpha$  and  $\beta$  phases, vibr., H band, Raman obs. 2-31486
- halide ions, hydration and struct. changes in  $\text{H}_2\text{O}(\text{D}_2\text{O})$ , isotope effects, thermodynamics 2-16545
- heavy water, high pressure  $^{17}\text{O}$  spin-lattice relaxation times 2-17355
- hydroxynaphthalenes, nonradiative transitions, deuteration effects 2-43988
- imidazole, isotope effects, nucl. quadrupole coupling dipole moments, microwave obs. 2-39390
- imidazole crystals, H bonding, isotope effects, IR spectrosc. investig. (French) 2-5672
- isotope substitution in molecules, mol. struct., rot. spectra, Kraitichman's eqn. extension 2-24883
- isotopic polyatomic molecules, Renner param. 2-19979
- laser atomic spectroscopy appls. in nuclear physics 2-3628
- lattice with dislocation core, nonlinear heat transfer 2-12001
- mercaptobenzothiazole, IR spectra, effect of coupling between vibr. and H-bands, isotope effect 2-26885
- metal-H(D), saturation and isotope mixing during low temp. implantations 2-50671
- metal hydrides, H coordination, isotopic effect 2-45155
- metal-H systems, isotope effect on electronic struct. of H, review 2-41224
- methane- $d_4$ , solid, phase III, tunnelling states, inelastic neutron scatt. and thermodynamic data correl. 2-21660
- methanol, liq., OH stretching vibr. temp. depend., IR and Raman study 2-41348
- methinophosphide, vibr.-rot. bands, l-type resonance and doubling, isotope effects, IR obs. 2-705
- methyl arsines, deuterated and substituted, CH stretching freq., bonds, IR obs. 2-39409
- methyl chloride,  $v_1$ -band intensity, isotope effect, IR obs. 2-20028
- methyl phenyl-sulphide- $d_0(d_3)$  ( $-d_2$ ) and rel. cpds., vib. spectra, valence force field, normal modes (French) 2-34409
- trans-methyl silylmethyl ether,  $r_s$  struct., dipole moments, internal rot., isotope effects, microwave obs. 2-7547
- methyl thionitrite- $d_0$  ( $-d_3$ ), vibr., isotope effects valence force field, spectral shifts, IR obs. 2-29588
- N-methyl-p-fluoroaniline - $d_0(-d_1)$ , vibr. states inversion and torsion of HNCH<sub>3</sub> group, microwave obs. 2-29569
- methylammonium chloride ( $-d_3$ ), valence and Urey-Bradley force fields 2-696
- methylidimethylphosphinate ( $-d_3$ ), Raman conformational anal. 2-4290
- 5-methylresorcinol, mol. aggregates in soln. and cryst. phase, spectrosc. obs. 2-43910
- methylvinylsilane - $d_0(-d_1)(-d_2)(-d_3)$ , rot. isomerism, mol. moments, struct., Stark effect, microwave obs. 2-29570
- monofluorobenzene, partially oriented in thermotropic liq. crystals, NMR obs. 2-2151
- multiatomic molecules, dipole moment, isotropic relations for derivatives 2-802
- 1,5-naphthyridine- $d_0(-d_4)$ , electronic spectra, vibr. struct., fluoresc., CNDO/S calcs. 2-4223
- 1,5-naphthyridine- $d_0(-d_6)$ , vibr., isotope effects, UV obs. 2-730
- organo-germanes, deuterated and substituted, CH stretching freq., bonds, IR obs. 2-39409
- pivalic acid single cryst., self-diffusion, isotope mass effects 2-45614
- pivalic acid, vol. self-diffusion in plastic phase, diffusion coeffs. and isotope effect (French) 2-50911
- polyacetylene, deuterated, resonant Raman scatt. 2-2278
- polyacetylene film, reson. Raman scatt., deuteration effects 2-31576
- polystyrene blends, labelled, single chain form factors by small-angle neutron scatt. 2-16641
- n-propyl bromide, gauche conformation, quadrupole coupling and rot. const., MW obs. 2-20044



## isotope effects continued

- pyridazine-N-oxide, ( $^{15}\text{N}$ ), PMR, NMR and INDOOR investig. 2-4327  
 pyridine trifluoroacetates, benzene solvent, isotope effects, IR study 2-29571  
 resorcinol, mol. aggregates in soln. and cryst. phase, spectrosc. obs. 2-43910  
 SIMS, isotope abund. ratios, meas. method, emission isotope effect obs. (French) 2-6080  
 squaric acid, ferroelastic phase transition, theory 2-35572  
 superconducting transition temp., isotope effect, jellium and Brout model 2-36205  
 transition metal hydrides, isotopic effect in gas-liquid phase transition 2-5214  
 triquinacenes, substitution and deuterium isotope effects, chirality, IR absorpt. and circular dichroism obs. 2-34460  
 water, high pressure  $^{17}\text{O}$  spin-lattice relaxation times 2-17355  
 Ag (111), Rb dosed, chemisorption of  $\text{O}_2$ , surface species identification, isotope scrambling, reaction studies 2-26208  
 $\text{Ag}_2$ , isotopically enriched, E-X and C-X band system anal. in region 247-271 nm 2-24721  
 Ar, salting out from alkali halide solns. in  $\text{D}_2\text{O}(\text{H}_2\text{O})$ , struct. effects 2-16801  
 Ar, salting-out from alkali halide solns. in  $\text{D}_2\text{O}(\text{H}_2\text{O})$ , thermodynamics 2-16800  
 CaBr, excited  $\text{B}^2\Sigma$  state, hyperfine struct., mol. beam, laser RF double resonance meas. 2-34465  
 Cd complexes, Cd(glycine),  $^{113}\text{Cd}$ - $^{15}\text{N}$  spin-spin coupling const., soln struct., NMR obs. 2-43943  
 CdF $_2$  and CdFCl(Br), matrix isolated vibr. spectra 2-11490  
 $\text{CdS:Ni}^{2+}$ , optical spectra, fine struct. and isotope splitting, Jahn-Teller center interpretation 2-51635  
 D+ClF, reaction products, influence of isotope effect on energy distrib. 2-17889  
 $\text{D}+\text{O}_2\rightarrow\text{OD}+\text{O}$ , kinetic isotope effects, thermal rate coeffs., quasiclassical trajectory calcs. 2-27424  
 $\text{DSiCl}_3$ , liq. and solns., mol. motion, relax. times, Raman bandwidths study 2-31461  
 Flacridine cryst., triplet-triplet absorpt. study 2-46702  
 F+HBr(DBr), nonadiabatic reactions, dynamics, isotope effect, pot. energy surface 2-9538  
 $\text{GeH}_4$ ,  $\nu_3$  and  $\nu_1$  IR band anal., vibr.-rot. interaction, isotope effects 2-11474  
 H/D isotopic comp. in high-freq. discharge, spectrosc. determ. 2-50470  
 H-bonded system, position and integrated intensity of H-bonded system, anomalous isotopic effects 2-29581  
 $\text{HCO}^+$ , rot. const., isotope effects, MW obs. 2-4264  
 HD, dipole moment, adiabatic description of nonadiabatic isotope asymmetry effects (Russian) 2-11457  
 $\text{H}_2\text{O}$ , liquid, OH stretching vibr. temp. depend., IR and Raman study 2-41348  
 $\text{H}_2\text{O}$ , local mode behaviour, mol. vibr., Morse oscillator model 2-11559  
 $\text{H}_2\text{O}$ -dioxan soln., Raman band  $\nu_1$ , intensity, isotopic effect 2-5695  
 $\text{H}_2\text{SO}_4\cdot\text{H}_2\text{O}$ , oxonium ion nucl. quadrupole double reson. 2-24740  
 $\text{HSiCl}_3$ , liq. and solns., mol. motion, relax. times, Raman bandwidths study 2-31461  
 $^3\text{H}$  exchange equilibrium between H gas and  $\text{Ti}_0.4\text{Mn}_{0.6}\text{H}_n$ , tracer expts. 2-34593  
 $^3\text{He}$ - $^4\text{He}$  isotope mixture, metastability exchange (Russian) 2-11564  
 $\text{H}_2$ ,  $6^3\text{P}_1$  state, time-resolved spectrosc. 2-34340  
 $\text{HgF}_2$  and  $\text{HgFCl}(\text{Br})$ , matrix isolated vibr. spectra 2-11490  
 $^{11}\text{N}^{12}\text{C}$ ,  $^{13}\text{N}^{12}\text{C}$ , and  $^{14}\text{N}^{13}\text{C}$ , matrix isolated, Raman and IR spectra, vibr. assignments 2-720  
 $\text{K}_{2x}\text{D}_{2(x-1)}\text{PO}_4$  cryst., spontaneous parametric light scatt., deuteration effects 2-36660  
 KI, purity for use in phasers, phonon scattering by natural isotopes and impurities 2-12626  
 $\text{LaH}_2$ , ( $\text{LaD}_2$ ), ( $\text{LaT}_2$ ), isotope effects on equil. pressures 2-1623  
 $\text{Li}_2$ , excitation by laser, isotopes, transition moment, UV fluoresc. obs. 2-20117  
 $\alpha\text{-Lu}(\text{H}, \text{D})_x$ , elec. resist. due to H, 4.4 to 170K, Manninen-Jena effect 2-17046  
 Mn, dil. solns. of  $\text{H}_2$  and  $\text{D}_2$ , thermodynamics, 555 to 700K 2-1637  
 $\text{Mn}_{1-x}\text{O}_{2-x}\cdot^{55}\text{Mn}$ , cation self-diffusion and isotope effect 2-35735  
 $\text{Mo}_2\text{Se}_8$ , supercond., electron-phonon interaction studies 2-36273  
 NH-N, H bonds, pot. functions, vibr. anal., SCF calcs. 2-19953  
 NH-O, H bonds, pot. functions, vibr. anal., SCF calcs. 2-19953  
 $\text{NH}_3$ , isotope effects, vibr. spectra, H exchange rates, IR and Raman study 2-36623  
 $\text{NH}_3$ , liquid, optical absorpt. spectrum of solvated electrons, isotope and temp. effects 2-5728  
 $\text{NH}_3\cdot\text{H}_2\text{O}$ , isotope effects, vibr. spectra, H exchange rates, IR and Raman study 2-36623  
 $\text{N}_2\text{H}_4\text{SO}$ , gamma irradiated, paramagnetic centre, EPR study 2-13339  
 $^{14}\text{N}^{16}\text{O}$ ,  $^{15}\text{N}^{16}\text{O}$ , multiphoton ionisation in mass spectrometer 2-11557  
 Nz-HF, geometry, nuclear quadrupole and spin coupling constants, microwave rot. spectra 2-43891  
 $\text{O}+\text{H}_2(\text{D}_2)$ , rate consts. meas., O conc., resonant absorpt. meas. 2-47316  
 OCS, isotope species effect, mol. const., heterodyne freq. meas. 2-20045  
 OCS, vibr. states, rot. and centrifugal consts., microwave obs. 2-699  
 OH-O, H bonds, pot. functions, vibr. anal., SCF calcs. 2-19953  
 $\text{OH}+\text{H}_2$ , variational transition state theory and semiclassical vibr. adiabatic transmission coeff appl. 2-47319  
 Pb(H,D) ion implanted, supercond. transition temp. 2-31000  
 o- $\text{P}_6$  atoms, quenching reactions, Smoluchowski eqn. appls. 2-49604  
 Pt complex Pt(pyrazine- $d_6$ -( $d_4$ )) $_2$ , ( $\text{X}=\text{Cl}$ , Br, I,  $\text{NO}_2$ ), vibr., isotope effects, IR obs. 2-11483  
 Pt(II) complex, (Pt(aniline) $_2$ ) $_2$ ,  $\text{x}=\text{Cl}$ , Br, I,  $\text{NO}_2$ , ligand vibr., IR obs. 2-29587  
 Ru complex, Ru(1,10-phenanthroline) $^{2+}$ , aq. soln., solvent isotope effect on photophysics 2-43963  
 Ru complex, Ru(2,2'-bipyridine) $^{2+}$ , aq. soln., solvent isotope effect on photophysics 2-43963  
 SbH, radical, deuterium isotope effects, rot. anal., vacuum UV obs. 2-11505  
 Si, phonon transmission, high freq., thermalisation and isotope scatt. 2-50944  
 Si-Cr, Jahn-Teller centre, ER spectrum, isotopic vibronic struct. 2-36419  
 $\text{SiCl}_4^+$ , emission spectrum, vibr. anal. 2-4314  
 Sn NMR, heteronuclear second-order coupling effects 2-4332  
 Sn:H(D), ion implanted, supercond. transition temp. 2-31000  
 $\text{SnMo}_6\text{S}_8$ , supercond., electron-phonon interaction studies 2-36273

## isotope effects continued

- Ta:H(D), localised vibr., rel. to H(D) pot. 2-21258  
 $\alpha\text{-Ti-H(D)}$ , optic phonon modes and supercond., neutron scatt. study 2-35624  
 $\text{U}(\text{SO}_4)_2(\text{H}_2\text{O})_4$ , vibr. spectrum calcs. and investig. 2-43911  
 ZnD, mol. const., pot. curves, Franck-Condon factors, isotope effects, visible obs. 2-49445  
 $\text{ZnF}_2$  and  $\text{ZnFCl}(\text{Br})$ , matrix isolated vibr. spectra 2-11490  
 $\alpha\text{-Zr-H(D)}$ , optic phonon modes and supercond., neutron scatt. study 2-35624

## isotope exchanges

- dimethylmercury, determ. in liq. biological samples 2-37127  
 diphenylmercury, determ. in liq. biological samples 2-37127  
 inosine-(3')5'-monophosphate, H-D exchange and kinetic isotope effects, Raman spectra obs. 2-29615  
 interstellar molecules, implications of laboratory studies of isotope exchange in ion-neutral reactions 2-53350  
 optical fibre preforms, OH ion reduction by isotope exchange 2-44465  
 $\text{D}+\text{HF}(\text{HCl})$ , exchange reactions barrier heights, generalized reson. VB calc. 2-2708  
 H isotope exchange reaction in hydrophobic catalyst bed, appl. to heavy water enrichment 2-39126  
 $\text{H}+\text{H}_2$ , isotopic substitution, classical anal. of quantum reson. 2-52177  
 H-S-D-S system, photoacoustic detection of H-D exchange 2-47302  
 $^3\text{H}$  exchange equilibrium between H gas and  $\text{Ti}_{0.4}\text{Mn}_{0.6}\text{H}_n$ , tracer expts. 2-34593  
 Li-O, antiferroite-cubic cryst., self-diffusion of constituent ions 2-12838  
 $\text{NH}_3$ -trifluoromethane-d, TEA  $\text{CO}_2$  laser induced D-H exchange 2-47361  
 OH-OD exchange process, reduction of losses in optical fibres 2-44455  
 $\text{ThO}_2$  single cryst.,  $\text{O}_2^+$  self-diffusion and elec. cond. mechanism 2-12839

## isotope relative abundance

- see also element relative abundance  
 $^{87}\text{Rb}/^{87}\text{Sr}$  study of diogenites 2-14810  
 abundance enhancement prod. by collisionless shocks 2-32787  
 Aleutian island arc magmas,  $^{143}\text{Nd}/^{144}\text{Nd}$ ,  $^{87}\text{Sr}/^{86}\text{Sr}$  and trace element constraints on petrogenesis 2-42355  
 ALHA 76005, Antarctic achondrite, O isotopic comp. rel. to polymict eucrite nature 2-6573  
 Allende carbonaceous chondrite, Te isotope abundances 2-48189  
 Allende meteorite, Te isotope ratios 2-28419  
 anomalies in meteorites, effects of nucleosynthesis and supernovae in OB associations 2-3287  
 aquifer in Lincolnshire, England, chemistry of  $^{234}\text{U}/^{238}\text{U}$  ratios 2-52879  
 calc-alkaline granite batholiths of Sierra Nevada and Peninsular Ranges, California, Nd and Sr isotopic study 2-42359  
 NW Caribbean, isotope study of Quaternary alkaline volcanic events 2-52757  
 chondrites, O isotopic anomalies, internal chem. energy, astrophysical history depend. 2-3223  
 Cordillera Darwin, Chile, orogenic events timing and isotopic ages 2-18408  
 cosmic rays, charge and isotopic comp. of  $Z=6$  to 14 nuclei at source 2-53030  
 cosmogenic isotopes in Bruderheim meteorite, radioactivity rel. to galactic cosmic rays gradients 2-48116  
 cumulative fast reactor fission yields 2-7325  
 Earth mantle, fine-scale isotope heterogeneity in sub-Atlantic mantle 2-37808  
 Earth mantle evolution, rel. to isotope composition of mantle rocks 2-52755  
 East Pacific Rise basalts and sulphides, Pb and Sr isotope ratios 2-18395  
 galactic cosmic ray B,C,N and O nuclei 2-23197  
 hydrothermal activity, submarine, off N Baja California, evolution and isotope geochemistry 2-37899  
 Iceland, hydrothermal Sr isotopes and seawater contamination 2-52880  
 interstellar molecules, implications of laboratory studies of isotope exchange in ion-neutral reactions 2-53350  
 Kalka layered basic intrusion, central Australia, Nd-Sr isotopic evidence for extreme crustal contamination 2-37861  
 lunar basalt (12038) isotope and REE study of petrogenesis 2-38075  
 mantle isotopic structure explained by mixing histories of magma reservoirs 2-52754  
 mass spectroscopic methods using tandem accelerator for rare isotope detection and dating 2-11577  
 meteorites, isotopic anomalies, review 2-3224  
 minerals, possible isotopic fractionation effects in sputtered materials 2-32517  
 natural U nuclear fuel, heavy atom isotope correl. 2-19619  
 New England Batholith, E Australia, isotopic characts. rel. to source-rock types 2-42361  
 noble gases in Allende meteorite, isotopic comps. from differential oxidation study 2-38144  
 ocean crust alteration and water transport from pore water O isotopic comp. 2-42348  
 ocean crust basalt alteration pattern from site 396B, DSDP, correl. with O isotope ratios 2-42356  
 Orgueil meteorite, Ne isotopes of density separates 2-14811  
 E Pacific Rise,  $^3\text{He}$  in hydrothermal vent plume 2-32543  
 pentafluoriododecane, IR multiphoton dissociation, product distrib. and isotope selectives 2-758  
 s-process nucleosynthesis, stellar abundances, and galactic evolution 2-3191  
 Samail ophiolite, Oman, isotope systematics of abducted oceanic crust 2-3001  
 SIMS, isotope abund. ratios, meas. method, emission isotope effect obs. (French) 2-6080  
 Solar System, isotopic variations in primitive meteorites 2-38150  
 stable isotope geochemistry (book) 2-3342  
 tholeiites from Mid Atlantic Ridge FAMOUS zone, Th and Sr isotope geochemistry 2-18396  
 tholeiites from ocean ridges and continents, Nd, Sr and Pb isotopes 2-52756  
 transactinium nuclides, decay scheme studies and anal.,  $\gamma$ -ray spectrometry appl. 2-11347  
 Usu volcano, Japan,  $^{13}\text{C}/^{12}\text{C}$  and  $^{87}\text{Sr}/^{86}\text{Sr}$  ratios of volcanic gases and rocks (French) 2-52789  
 vinylic derivatives,  $^2\text{H}$  NMR, isotopic labelling in natural abundance (French) 2-21893



**isotope relative abundance continued**

- volcanic rocks, metamorphosed, and volcanic neck in Sierra Nevada, California, petrology and geochronology 2-42302  
Wadi Shwas volcanics, Saudi Arabia, age from Sr and Nd isotopic anal. 2-9977  
<sup>227</sup>Ac conc. meas. in soil samples 2-7443  
<sup>107</sup>Ag excesses in Fe meteorites, no correl. with spallogenic rare gases concs. 2-38141  
<sup>40</sup>Ar abundance in Venus atmosphere, rel. to planet plate tectonics 2-28366  
<sup>40</sup>Ar/<sup>39</sup>Ar age spectra of metamorphics from Broken Hill, N.S.W. 2-14420  
<sup>40</sup>Ar/<sup>39</sup>Ar dating of KBS Tuff, Koobi Fora Formation 2-22941  
B, in matrices, nucl. track detect. 2-17935  
BCL, IR spectrum of vibr. bands 2-49407  
<sup>10</sup>B/<sup>11</sup>B isotope ratio determ. using FT IR spectrosc. 2-23744  
<sup>10</sup>Be/<sup>9</sup>Be ratio used to analyse transport processes between stratosphere and troposphere 2-28226  
<sup>12</sup>C/<sup>13</sup>C ratio in high-vel. gas in Orion BN/KL region, results from CO obs. 2-28523  
<sup>12</sup>C/<sup>13</sup>C ratio of C stars, criteria by line profiles of <sup>13</sup>CN 2-38220  
<sup>13</sup>C/<sup>12</sup>C ratio of particulate organic C in marine atmosphere, meas. rel. to origin 2-28129  
<sup>14</sup>C activity in atmosphere, long term vars. and relation to geophysical and astrophysical phenomena 2-47948  
<sup>14</sup>C, cosmogenic, short-term vars., 1909-1952, rel. to 11-year cosmic ray vars. 2-48120  
<sup>14</sup>C formation rate in atmosphere during Maunder minimum (1645-1715) review 2-48201  
<sup>14</sup>C in atmosphere since 300 AD, tree ring evidence for solar activity and flux changes 2-18750  
<sup>14</sup>C in tree rings, natural vars. on prolonged time scale rel. to solar activity 2-47827  
<sup>14</sup>C/<sup>12</sup>C dating facility using MP tandem accelerator 2-14636  
<sup>14</sup>CO in troposphere, seasonal and latitudinal variations 2-10130  
D/H of groundwater in seismically active regions of California 2-22907  
D/H ratio in  $\alpha$  Carinae (Canopus), upper limit 2-33012  
D/H ratios in interstellar molecules, rel. to chemical reaction schemes 2-53349  
D/H ratios in unequilibrated ordinary chondrites, meas. 2-38149  
H/D isotopic comp. in high-freq. discharge, spectrosc. determ. 2-50470  
<sup>3</sup>He/<sup>4</sup>He in solar cosmic rays, ion heating at cyclotron freq. as cause of anomalous abundance ratio 2-48199  
<sup>176</sup>Hf/<sup>177</sup>Hf, initial ratio in Amitsoq gneisses, Gr eenland, rel. to Lu-Hf total-rock age 2-14421  
<sup>113</sup>In, abundance in solar system, origin 2-28360  
Kr mixing ratios in Venus atmosphere 2-32884  
Li in matrics, nuclear track detect. 2-17935  
<sup>176</sup>Lu use as cosmic clock for s-process nucleosynthesis 2-42588  
N in Allende meteorite, microanal. of isotope abundances and assoc. with noble gas carriers 2-38145  
N ratios in Allende meteorite (carbonaceous chondrite) 2-38140  
<sup>14</sup>NH<sub>3</sub>/<sup>15</sup>NH<sub>3</sub> ratio in interstellar medium, meas. in and around (Orion MC-1) 2-38273  
<sup>143</sup>Nd/<sup>144</sup>Nd, initial ratio in 3800 Myr old crust in E India rel. to early mantle differentiation 2-6348  
<sup>143</sup>Nd/<sup>144</sup>Nd ratio in Iapetus Ocean seawater, estimate from ca. 490 Ma metalliferous sediments 2-37891  
<sup>20</sup>Ne/<sup>22</sup>Ne in Solar System, ratio var. and solar nebular condensation 2-14794  
<sup>58</sup>Ni/<sup>60</sup>Ni from near-IR Ni I solar lines 2-10376  
O, isotopic composition of cristobalite-pyroxene in L6 chondrite ALHA 76003 rel. to meteorite metamorphism 2-38146  
<sup>16</sup>O abundances in Ca,Al-rich inclusions in carbonaceous chondrites, evidence for interstellar dust precursor 2-38143  
<sup>16</sup>OH/<sup>18</sup>OH abundance ratio in interstellar molecular clouds 2-38276  
<sup>16</sup>O/<sup>18</sup>O abundances in molecular clouds, uniform galactic distrib., VHF obs. 2-14896  
<sup>18</sup>O climatic record, role of glacial Arctic Ocean ice sheets 2-37876  
<sup>18</sup>O/<sup>16</sup>O of groundwater in seismically active regions of California 2-22907  
<sup>18</sup>O/<sup>16</sup>O record in Arabian Sea core rel. to 150 kyr BP climate 2-52922  
<sup>18</sup>O/<sup>16</sup>O/<sup>18</sup>O<sub>2</sub> ratio in stratosphere, height distrib. meas. 2-18500  
<sup>208</sup>Pb/<sup>207</sup>Pb and Central American and Caribbean mineralisation 2-37862  
<sup>207</sup>Pb/<sup>204</sup>Pb, <sup>206</sup>Pb/<sup>204</sup>Pb in rocks, appl. in new interpretive procedure for whole-rock U-Pb systems 2-42307  
Pu isotope ratios, gamma spectroscopic method 2-14036  
<sup>244</sup>Pu/<sup>238</sup>U ratio in chondritic whitlockite 2-6574  
<sup>226</sup>Ra/<sup>228</sup>Ra, activity ratio in groundwater from bedrock 2-10086  
S, hydrothermal, on East Pacific Rise at latit. 21°N, isotopic comp. and origin 2-37846  
Si in interstellar medium from SiO EHF obs. 2-14895  
Sm in Allende meteorite, anomalies 2-23265  
<sup>114</sup>Sn/<sup>115</sup>Sn, abundances in solar system, origin 2-28360  
<sup>87</sup>Sr/<sup>86</sup>Sr, initial lunar ratio rel. to Rb-Sr chronology 2-42617  
<sup>87</sup>Sr/<sup>86</sup>Sr, initial ratios in LL-type chondritic meteorites from <sup>87</sup>Rb/<sup>87</sup>Sr dating 2-38147  
<sup>87</sup>Sr/<sup>86</sup>Sr ratios in Mt. Edgecumbe volcanic field, Alaska, rel. to tholeiitic and calc-alkaline volcanism 2-32476  
T, concs. in natural waters of Ispra area, Italy (Italian) 2-9704  
<sup>234</sup>Th and <sup>228</sup>Th removal rates from New York Bight water 2-6400  
U isotopes ratio anal. in soils of Lower Saxony 2-14130  
U, isotopic abundances, meas. using mag. reson. methods 2-47409  
UO<sub>2</sub> enrichment meas. using Ge(Li) and NaI(Tl) detectors 2-7192  
UO<sub>2</sub> enrichment meas. using Ge(Li) and NaI(Tl) detectors 2-7192  
<sup>234</sup>U/<sup>235</sup>U activity ratios in fault-assoc. groundwater, earthquake precursor 2-22913  
Xe mixing ratios in Venus atmosphere 2-32884

**isotope separation**

- see also isotope exchanges; laser isotope separation; radiochemistry  
CARP, triple focusing recoil separator 2-19693  
continuous chem. separation methods for nuclei from beta-stability studies 2-19695  
cryogenic distillation, column control system 2-39219  
dichlorodifluoromethane-O<sub>2</sub> mixt., <sup>13</sup>C isotopic selectivity in IR multiphoton photolysis 2-47356  
EM separator ion optics 2-4046  
fission yield meas. with combined GJRT-SISAK technique, continuous on-line method 2-477

**isotope separation continued**

- gas-jet coupled ISOL facility development with <sup>252</sup>Cf spontaneous fission source 2-19694  
isotope separation using RF spectroscopy 2-49586  
isotopic separation, continuous flow cryostat method 2-33549  
laser isotope separation using two-step photodissociation method (Japanese) 2-43571  
laser research and applications, review (French) 2-29827  
minerals, possible isotopic fractionation effects in sputtered materials 2-32517  
multicomponent separating cascade, porous membrane method, simulation 2-44126  
pentafluoriodoethane, IR multiphoton dissociation, product distrib. and isotope selectives 2-758  
symmetric mass-diffusion cascades 2-34594  
BCL, distillation, isotope separation coeffs., 278 to 438K 2-11207  
<sup>209</sup>Bi(A,X), A=<sup>40</sup>Ar, <sup>50</sup>Ti, <sup>54</sup>Cr, isotopes with Z $\geq$ 100 produced in fusion reaction, exptl. study 2-19590  
CIF+SF<sub>6</sub> laser isotopic photochemistry, Raman anal. 2-47360  
D separation technology, present status (Japanese) 2-11205  
H isotope separation by cryogenic distillation, computer anal. 2-24418  
<sup>3</sup>H, enrichment by sorption on KC, lamellar compounds 2-39220  
<sup>4</sup>Hf, A=162-165, refractory isotopes on-line separation at ISOCELE separator 2-19692  
<sup>4</sup>In, A=103-105, neutron-deficient isotopes, beta-decay energies study following mass separation 2-19485  
La, Ce and Pr isobar nuclides separation using surface ionisation 2-43570  
<sup>4</sup>Pb(B,X), A=206-208, B=<sup>40</sup>Ar, <sup>50</sup>Ti, <sup>54</sup>Cr, isotopes with Z $\geq$ 100 produced in fusion reaction, exptl. study 2-19590  
Pu, determ. in large amount of Am (Chinese) 2-47402  
Sb, neutron deficient isotopes selective prod. at ISOLDE using liquid salt target 2-19833  
T, separation technology, present status (Japanese) 2-11205  
<sup>4</sup>Ta, A=163-165, refractory isotopes on-line separation at ISOCELE separator 2-19692  
U enrichment, separative power of plasma centrifuges 2-5002  
U enrichment in France by gas diffusion (French) 2-39166  
U isotope separation, chemical methods (Czech) 2-43573  
U, isotope separation, chemical methods (Czech) 2-43575

**isotope shifts**

- see also atomic spectra  
acetone ( $-d_6$ ), electron impact energy loss spectra meas., isotope shifts 2-44119  
adsorbed species on metal surfaces, EELS study 2-22127  
atoms, gaseous, high resolution polarisation spectroscopy, review (Japanese) 2-39508  
bromotrifluoromethane, isotope shifts, rot. struct., IR obs. 2-49404  
bromotrifluoromethane multiphoton dissociation in strong IR field of pulsed CO<sub>2</sub> laser, NO acceptor influence 2-34513  
CIS-but-1-ene, isotopic varieties, microwave spectra (French) 2-39380  
ethanol glass, solvated electrons, geometrical struct. electron spin echo modulation obs. 2-7577  
macrofiche polyethers, complexation of <sup>24</sup>Na<sup>+</sup> and <sup>22</sup>Na<sup>+</sup>, isotope effects 2-52190  
multiple quantum NMR, analogy with isotopic spin labelling 2-3597  
nuclear dissolver tank solutions safeguards, remote plasma atomic emission spectroscopy appl. 2-6084  
paraffin samples, low temp. dielec. relax., deuteration shifts 2-5620  
polyethylene, low temp. dielec. relax., deuteration shifts 2-5620  
pyridine, in nematic solvent, <sup>1</sup>H and <sup>2</sup>H NMR obs. 2-11515  
pyridine-N-oxide, in nematic solvent, <sup>1</sup>H and <sup>2</sup>H NMR obs. 2-11515  
pyromellitic acid dihydrate, deuterated, EFG tensors and deuteron positions, FT NMR obs. 2-24735  
tartaric acid, optically active, IR spectra 2-29595  
trifluoromethylgermanes, IR and Raman vibr. spectra and normal coord. anal. 2-29561  
trimethylsilylcymanide, microwave spectrum, evidence for existence 2-49395  
vinyl silane, struct., dipole moment and internal rots., microwave spectra 2-49392  
Ag+O<sub>2</sub>, form. of AgO and AgO<sub>2</sub> products isotope shifts, IR obs. 2-6028  
BeCl<sub>2</sub>, concentrated aq. solns., Raman spectra, isotopic substitution effects 2-5694  
<sup>4</sup>Cd, A=106-116, stable even isotopes, subshell effect in mean square charge radii 2-24111  
<sup>4</sup>Cs, A=118-145 and isomers, hyperfine struct., D<sub>2</sub> isotope shift, nuclear moments, charge radii and deformation 2-29186  
D, Rydberg const. determ. by crossed laser beam spectroscopy 2-11416  
Dy, isotope shifts, visible-UV obs. 2-49318  
Eu I, 4f<sup>5</sup>5d<sup>6</sup>, <sup>10</sup>D-term isotope shift 2-34597  
Eu I, 4f<sup>5</sup>5d<sup>6</sup>-4f<sup>5</sup>5d<sup>6</sup> transitions, laser atomic beam spectroscopy 2-24637  
Eu, UV transitions obs. using freq. doubled CW ring dye laser 2-673  
GdO, emission spectrum, rot. anal., isotopic shifts 2-4263  
H, Rydberg const. determ. by crossed laser beam spectroscopy 2-11416  
KBr:Li, phonon absorpt. lines, uniaxial stress depend. 2-30547  
K<sub>4</sub>Fe(CN)<sub>6</sub>·3H<sub>2</sub>O cryst., ferroelec., H<sub>2</sub>O stretching vibrs., spectrosc. obs. 2-51572  
K<sub>4</sub>(Mo(CN)<sub>8</sub>)2H<sub>2</sub>O, IR and Raman spectra, CAN stretching freq., isotopic shifts and assignments 2-26915  
<sup>39</sup>40<sup>41</sup>K, D<sub>1</sub> and D<sub>2</sub> lines, isotope shifts, hyperfine struct., laser spectra 2-15745  
<sup>4</sup>K, A=38,39,41-47, isotope shifts and HFS by laser spectroscopy 2-49341  
NaNO<sub>2</sub>, substitution of <sup>18</sup>O for <sup>16</sup>O, <sup>15</sup>N NMR spectra obs. 2-49459  
Nd II, isotope shifts in energy levels 2-20006  
O<sub>2</sub>, rot., isotope shifts, microwave obs. 2-49386  
<sup>18</sup>O(<sup>18</sup>O<sub>2</sub>), I, I', and I'' absorpt. band in 790 to 865 Å region 2-7570  
SO<sub>2</sub>, <sup>16</sup>O, <sup>18</sup>O isotope shifts, Raman spectra, hot band assignment 2-15787  
SO<sub>2</sub>, liquid, reson. energy transfer in  $\nu_1$  Raman mode of dipolar aggregates 2-9157  
SiH<sub>3</sub>NCSe, matrix isolated, vibr. spectra, isotope shifts 2-4283  
SiO, X<sup>2Σ</sup>- state, rot., isotope shifts, microwave obs. 2-49386  
SiS, A II-X<sup>2Σ</sup> system, valence states, rot. anal. 2-49378  
Sm, anomalous isotope shifts, mass effect, phenomenological approach 2-15744  
Sn<sub>2</sub>Mo<sub>2</sub>S<sub>8</sub>, supercond. transition temp., stoichiometry effect, Mossbauer study 2-31001



**isotope shifts continued**

- Sr isotope shifts, hyperfine induced singlet-triplet mixing in  $^1S_0$  Rydberg states 2-24656  
 Zn complexes, octamethylporphyrin- $d_0$ ,  $-d_4$  and anions and radicals, IR spectra 2-43908

**isotopes**

see also radioisotopes

- $^4\text{He}$ -isotope, nonrelativistic energies for lowest singlet and triplet S-states 2-24877

**isotopic generators** see radioactive sources**isotopic spin (elementary particles)**

see also baryon spin and parity; lepton spin and parity

- exotic baryon reson. with isospins  $\geq 5/2$ , props. study (Russian) 2-48963  
 $K \rightarrow 2\pi(3\pi)$ , strong isospin violation and  $\eta\pi$  mixing in  $|\Delta S|=1$  weak transition 2-33832  
 $\Lambda$ -decay, strong isospin violation and  $\eta\pi$  mixing in  $|\Delta S|=1$  weak transition 2-33832  
 $\pi N$  phase shifts from isospin constraints and fixed  $t$  analyticity 2-38896  
 $\pi^\pm N$ , large  $P_T$  inclusive processes, isospin violations in perturbative QCD 2-33800  
 $\Sigma$ -decay, strong isospin violation and  $\eta\pi$  mixing in  $|\Delta S|=1$  weak transition 2-33832  
 $\Xi$ -decay, strong isospin violation and  $\eta\pi$  mixing in  $|\Delta S|=1$  weak transition 2-33832

**iteration methods** see iterative methods**iterative methods**

- celestial mechanics, theory of outer planets using iterative method (French) 2-6522  
 classical scattering, boundary-value problems, functional anal. 2-15075  
 compressible flow patterns, streamline coordinates use in numerical soln. 2-20700  
 conjugate gradient iterative method 2-3388  
 convergence characteristics of iterative wave function optimisation methods 2-39290  
 convergence of iterative methods for solving Navier-Stokes eqns. by finite differences 2-1163  
 correction algorithms for digital meas. instruments 2-28820  
 crystal covalent bonding, iteration-perturbation theory 2-21061  
 cyclopropanes, alkyl and vinyl substituted, geometric and electronic struct., IMOA and MINDO/3 calcs. 2-49289  
 cyclopropenes, alkyl and vinyl substituted, geometric and electronic struct., IMOA and MINDO/3 calcs. 2-49289  
 cylindrical shock problem, second order iterative scheme solutions 2-4860  
 diffusion problems, fitting error functions to data 2-8738  
 eigenvector determination by iterative optical methods 2-15959  
 elastostatics, finite element, Loubignac's iterative method 2-42861  
 electron impact expt., iterative deconvolution method 2-15906  
 EM fields, 3-D, numerical solns., singularity/integral eqn. method 2-29750  
 EM scattering by perfectly conducting rough surfaces, facet model 2-24921  
 EM wave scatt. from freq. selective surfaces, periodically perforated screens, spectral-iteration 2-49631  
 empirical statistical spectral analysis procedures 2-44596  
 heat conduction, steady-state, general soln. by iterative boundary integral method 2-4686  
 heat conduction with nonlinear material and nonlinear boundary conditions, boundary value problems 2-42965  
 homogeneous Fredholm integral eqns., iterative soln. 2-15052  
 hot carrier cond., transient regime, Monte Carlo and Boltzmann eqn. iterative solns. 2-46003  
 III-V semiconductors, carrier velocities, time depend., Boltzmann eqn., iterative soln. 2-45956  
 incompressible liquids, toroidal axisymmetrical flows with free boundaries, convergence of iterative method (Russian) 2-30149  
 inelastic stress-strain rels., integration, foundations 2-30029  
 integral equations, alternative to Pade technique 2-38408  
 jets, free round, numerical soln. using finite element method (Polish) 2-8200  
 LF fluidborne noise mufflers, computer-aided design and evaluation 2-14161  
 magnetohydrodynamics, convergence of successive-pass method for difference scheme of one-dimensional system 2-44794  
 METEOSAT image deformation problem solution, horizon extraction from image data and orbit information 2-48050  
 molecular flow, free and quasi-free, of gas through pipes of axial symmetry (German) 2-25398  
 monoenergetic diffusion eqn., finite element method appl. 2-49089  
 multigroup diffusion-transport problems in two dimensions, finite element method 2-49095  
 nonlinear integral eqns. soln. using iterative method with regularity constraints (French) 2-38412  
 particle size distribution function from small angle scatt. data, numerical method 2-48669  
 permanent magnets, anisotropic, force anal. 2-21829  
 polyacetylene, eigenspectrum, nearly SCF LCAO HF calc., negative factor counting and inverse iteration technique 2-29734  
 polymers, disordered, eigenspectrum, nearly SCF LCAO HF calc., negative factor counting and inverse iteration technique 2-29734  
 post-buckling analysis of spatial structures by vector iteration methods 2-39837  
 potential relaxation for field problems with open boundaries 2-34618  
 power/response spectrum consistent generation, iterative procedure 2-24360  
 pulse spectrum technique, iterative numerical algorithm for thermal cond. remote sensing 2-38614  
 quantum crystals, propagator construction, iterative procedure 2-50955  
 quantum spin systems, ground-state and finite temp. props., iterative approaches 2-36298  
 quasilinear hyperbolic systems in first canonical form, iterative methods 2-33277  
 radiation-shielding problems, finite element method appl. 2-49185  
 rigid-plastic structures, dynamically loaded, mode shapes determ. 2-50122  
 singular integral equations, iterative soln. 2-16266  
 structures, thin, elastic postbuckling behaviour, asymptotic study, finite element method 2-30048  
 superalloys crystals, directional solidification, iterative nonlinear thermal anal. using fast elliptic solver 2-2505

**iterative methods continued**

- transonic axisymmetric flow computations using multigrid method 2-30167  
 trimimensional plasticity problems appl. of boundary integral equation techniques 2-42859  
 vibrating systems, discrete, damped, eigenvalue computation, reduction and iteration (German) 2-28645  
 X-ray spectral distrib. from attenuation data using iterative computational method 2-43740  
 $\text{Bi}_{12}\text{SiO}_{20}$  optical image converter, effect of electron-hole recomb. on performance 2-39732  
 $\text{Ga}_{1-x}\text{In}_x\text{As}_y\text{P}_{1-y}$  electron Hall mobility calc. with two longitudinal optic phonon model 2-17094  
 $\text{Ge:Ga}$ , far IR and sub-MM detector, spectral response from blackbody meas. 2-19180  
 $\text{MgH}_2$  crystal, covalent bonding, iteration-perturbation theory 2-21062

**itinerant model of magnetism** see band model of magnetism**IV-VI semiconductors**

- basic properties, evolving perspectives and unifying characts. 2-17066  
 defect states, optical and magneto-optical meas. 2-17510  
 epitaxial thin film IR detectors, device performance and basic material props. 2-15221  
 ferroelectric lattice instabilities 2-31388  
 IR detector materials, conf., Washington, DC, USA (April 1981) 2-14973  
 magnetoresistance strong and weak-field effects 2-17096  
 narrow gap, impurity levels, four-band isotropic model 2-5366  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Se}$  heterostructure for injection lasers 2-41522  
 Pb chalcogenides, epitaxial bicrystals, elastic deform. and stress. 2-51007  
 transverse effective charge 2-16748  
 Al-Pb-PbTe-Pb tunnel junctions, ballistic electron transmission obs. (Russian) 2-8888  
 $\text{CdHg}_{1-x}\text{Te}$  p-n junction IR photovoltaic detectors, elec. props. 2-30958  
 $\text{CdSe}$  photoelectrochemical solar cell, high efficiencies and losses meas. 2-52370  
 $\text{GeS}$  (001), density of empty states meas. in cond. band 2-8746  
 $\text{GeS}$ , electroabsorption and optical absorpt. spectra 2-21982  
 $\text{GeS}$ , SCL currents, layer thickness depend., static current-voltage characts. meas. 2-36049  
 $\text{GeS}$  single crystals, far IR transmission properties 2-26924  
 $\text{GeS}$ , thermoreflectance meas., 1.2-5.2 eV 2-13461  
 $\text{GeS}(\text{Se})$ , amorphous, local struct. EXAFS, XPS studies 2-45032  
 $\text{GeS}(\text{Se})(\text{Te})$ , amorphous, electronic states calcs. 2-40764  
 $\text{GeSe}$  (001), density of empty states meas. in cond. band 2-8746  
 $\text{Ge}_{1-x}\text{Sn}_x\text{S}$ , Raman scatt. study of long-wavelength optical phonons 2-36648  
 $\text{Ge}_{1-x}\text{Sn}_x\text{Se}$ , Raman scatt. study of long-wavelength optical phonons 2-36648  
 $\text{GeTe}$ , low temp. elec. resist. and Debye temp. 2-13079  
 $\text{GeTe}$ , thermoelec. hole spectrum model of transport props. 2-26424  
 $\text{GeTe-Bi}_2\text{Te}_3\text{-Cu}_2\text{Te}$  quasinary system, electrophys. props. of  $\text{GeTe}$ -based solid solns., double doping effect 2-13089  
 Pb chalcogenide layers and their solid solutions, controllable epitaxial growth 2-2448  
 Pb chalcogenides, strongly compensated, Hall effect and absorpt. spectra 2-5422  
 Pb salt epitaxial film, photovoltaic diode IR detector, modified hot wall technique prep. 2-15222  
 $\text{Pb-PbS}_2\text{Se}_3$  photodiode detector, improved performance from Cl incorporation at interface 2-15223  
 $\text{Pb}_{1-x}\text{Ge}_x\text{Te}$  injection laser fabrication 2-16028  
 $\text{Pb}_{1-x}\text{Ge}_x\text{Te}$ , optical props. in rhombohedral and cubic phases 2-31481  
 PbO film, photoconductivity in space charge and recombination regime 2-21622  
 $\text{PbO}_2$ , partially reduced, semicond. and electrochem. props. (German) 2-5457  
 $\text{PbS}$  abrupt p-n junction,  $R_0A$  product, dopant conc. effect 2-21665  
 $\text{PbS}$  crystals, growth from interacting colloids in gels 2-9262  
 $\text{PbS}$  crystals, n- and p-type, corrosion rate in  $\text{HNO}_3$  2-17750  
 $\text{PbS}$ , galena,  $\text{Cu}^{2+}(\text{Ag}^+)(\text{Au}^+)$  adsorpt., rest pot. and surface photovoltage changes 2-41008  
 $\text{PbS}$ , high field resistivity, at 1.4K, Kondo-Toyozawa theory 2-45990  
 $\text{PbS}$ , monocrystalline, negative magnetoresistance effects 2-17093  
 $\text{PbS}$  photosensitive films for thermophotovoltaic appl., dip-dry process for prep. 2-22163  
 $\text{PbS}$ , photovoltaic detector,  $R_0A$  product temp. depend. 2-19177  
 $\text{PbS/PbSe}(\text{Te})$  epitaxial bicrystals, growth spirals on phase boundaries, electron microscopic discernment 2-45740  
 $\text{PbSe}$  abrupt p-n junction,  $R_0A$  product, dopant conc. effect 2-21665  
 $\text{PbSe}$  films, evaporated, structural defects and photosensitivity 2-51018  
 $\text{PbSe}$ , photovoltaic detector,  $R_0A$  product temp. depend. 2-19177  
 $(\text{PbSe})_{1-x}(\text{SnTe})_x$  in solid soln., elec. props. 2-8796  
 $\text{PbSnSe}$ , phase transition study 2-21299  
 $\text{p-Pb}_{0.97}\text{Sn}_{0.03}\text{Se}$ , IR absorpt., 2 to 15  $\mu\text{m}$  2-41347  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Se}$  DH laser, CW operation at 80K 2-930  
 $\text{n-Pb}_{1-x}\text{Sn}_x\text{Se}$ , intrinsic defect energy levels, galvanomag. coeffs. meas. 2-30830  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Se}$  photovoltaic detectors, minority carrier lifetimes, resist.-area product 2-26433  
 $\text{PbSnSeTe-PbSeTe}$  DH laser, lattice matched, low threshold 2-39668  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Se}(\text{Te})$ , Auger recomb. and ionisation rates, Lax band struct. 2-8813  
 $\text{PbSnTe}$  buried heterostructure lasers, longitudinal mode behaviour 2-25009  
 $\text{PbSnTe}$ , phonon-induced anomalous elec. resist. in struct. phase transition 2-45954  
 $\text{Pb}_{0.7}\text{Sn}_{0.3}\text{Te}$ , electronic and lattice props., intra-band magneto-optics study 2-22001  
 $\text{Pb}_{0.9}\text{Sn}_{0.1}\text{Te:Sb}$ , surface oxide modification due to  $^4\text{He}$  ion bombardment 2-16688  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}$ , density of states calcs. 2-21486  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}$  ( $0 \leq x \leq 1$ ) films, photothermoelectric effect 2-2020  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}$  ( $x=0.18-0.24$ ) laser diodes prepared by diffusion of Sb 2-4512  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}$  crystals, mechanism of chem. polishing 2-47201  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}$ , disorder scatt. 2-17059  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}$  epitaxial films, photoluminesc., effect of impurities 2-36696  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}$ , epitaxial layer, elec. cond. and Hall effect (Russian) 2-46179  
 $\text{Pb}_{1-x}\text{Sn}_x\text{Te}$ , high-temp. phase transitions, sound velocity study 2-35680



## IV-VI semiconductors continued

- Pb<sub>1-x</sub>Sn<sub>x</sub>Te solid solns., mobility and hole scatt. anisotropy, magnetoresist. meas. 2-40938  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te, thermoelectric effect in moderate and quantising mag. field, 4.2 to 77K 2-26422  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Bi photo- and electroluminescence spectra 2-13549  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Cd, carrier density, temp. depend. 2-17089  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Cd crystals and LPE layers, doping and elec. props. 2-45223  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Ga, elec. prop. press. depend. 2-17067  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:In, impurity fluctuation pot. model, photoelec. and galvanomag. effects 2-13009  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te IR photocond. polycrystalline thin films, 1/f noise behaviour 2-51264  
 n-Pb<sub>1-x</sub>Sn<sub>x</sub>Te(In)-p-PbTe heterojunction, electrophysical props. 2-17148  
 PbTe<sub>1-x</sub>(111) epitaxial thin films, elec. transport props., thermal-cycling induced changes 2-13201  
 PbTe, diffusive-convective physical vapour transport from Te-rich solid source 2-45087  
 PbTe, electronic and lattice props., intra-band magneto-optics study 2-22001  
 p-PbTe epitaxial film, elec. props., H<sub>2</sub> effect 2-8900  
 PbTe, epitaxial film, electrometer determ. of electron scatt. intensities 2-40708  
 PbTe epitaxial film on BaF<sub>2</sub>, strain effects, interband magneto-optical transitions 2-26876  
 PbTe film, magnetoresistance strong and weak-field effects 2-17096  
 PbTe films, magnetoresistance, Hall mobility 2-51360  
 n-PbTe films thermal treatment in air, effects on thermopower and electrical conductivity 2-21695  
 PbTe, indirect exchange interaction between embedded mag. ions 2-51140  
 PbTe, LPE growth on PbSnTe substrate through stripe openings on CaF<sub>2</sub> coating 2-2465  
 PbTe, mode softening 2-45519  
 PbTe, photovoltaic detector, R<sub>0</sub>A product temp. depend. 2-19177  
 PbTe, screening breakdown in Voigt cyclotron resonance 2-26751  
 PbTe, surface space charge layer physics 2-17137  
 PbTe, thin films, struct. and elec. props. stoichiometry and prep. condition depend. 2-51353  
 PbTe:Cl, self-compensation of donor effect by vacancy-impurity complexes, Hall carrier density meas. 2-36067  
 PbTe:In film, impurity states, absorpt. coeff. 2-17021  
 PbTe:Ti, elec. and optical props. at high impurity conc. 2-40948  
 PbTe:Ti, hole scattering and mobility, impurity effects 2-13107  
 PbTe:Ti, type II supercond. semicond., sp. ht. obs., 1.4K 2-36204  
 PbTe:Ti, volume supercond. 2-17192  
 PbTe-Csl system, phase diagram construction, solid solns. form. 2-40521  
 PbTeSe, LPE growth lattice-matched to PbSnTe, phys. and elec. props. 2-5320  
 SnO<sub>2</sub>:Sb, thin film elec. and optical props. 2-41037  
 SnS(Se)(Te), XPS valence band struct. 2-41492  
 SnSe condensed film, dislocation struct. of twin boundaries, electron microscopic obs. 2-45199  
 SnSe<sub>2</sub>, occurrence of polytypism 2-8466  
 Sn(S<sub>1-x</sub>Se<sub>x</sub>)<sub>2</sub> mixed cryst., reflectivity meas. 2-17504  
 p-SnTe epitaxial thin film, elec. transport, nonstoichiometry effect 2-8901  
 SnTe, ferroelectric, tricritical point in strong EM wave field 2-9103  
 SnTe, mode softening 2-45519  
 SnTe, nonlinear lattice dynamics, phonon-periodon modes 2-45467  
 SnTe, self diffusion mechanism, defect chemistry 2-8665  
 SnTe-Sn-SnTe sandwiches, parallel Moire effect in electron micrographs 2-44987  
 (SnTe)<sub>1-x</sub>(PbSe)<sub>x</sub> epitaxial layers, band struct. parameters (Russian) 2-21499  
 Te-GeTe(PbTe) doped eutectic alloys, electrophys. props. and struct., doping influence 2-40882  
 TlSbTe<sub>2</sub>-2PbTe cross section, phase diagram and elec. props. 2-12721

## J particles see psi mesons

## Jahn-Teller effect

- alkali superoxides, CDW and displacive collective Jahn-Teller effect 2-21514  
 band Jahn-Teller model, shear elastic mode, press. depend. near struct. transition 2-50740  
 chlorobenzenes, photoelectron spectra, ab initio calc., vibr. fine struct., Jahn-Teller splitting 2-29657  
 cubic crystals, effect of applied stress on luminescence 2-46683  
 cubic system with <sup>3</sup>T term, Jahn-Teller effect, allowing for spin-orbit interaction and trigonal cryst. field, eigenfunction soln. 2-17036  
 cyanopyridines, isomeric, anomalous luminesc. behaviour 2-41396  
 cyclobutadiene radical cation, pot. surface, ab initio and CI calcs., Jahn-Teller effect 2-49310  
 diamond, defects, unrelaxed neutral vacancy and substitutional N, energy levels 2-26324  
 diamond, dynamic Jahn-Teller effect in E and T electronic states 2-8779  
 diamond, optical absorption spectrum, 1.71 eV phonon sideband of G1 centre 2-46643  
 p-dichlorobenzene, distortion of lowest excited triplet state 2-45834  
 E<sub>0</sub> and Γ<sub>6</sub>⊗r<sub>2</sub> systems, dynamic solution 2-30846  
 electron spin resonance 2-29533  
 ferroelectrics, Jahn-Teller, coupled dielec. and elastic anomalies 2-31421  
 fluorobenzene cation radicals, 1-3 methyl substituents, spectroscopy and decay dynamics 2-43901  
 hexachlorobenzene, photoelectron spectra, ab initio calc., vibr. fine struct., Jahn-Teller splitting 2-11546  
 impurity centre spectrum moments for parity-forbidden transition 2-45922  
 local and pseudolocal states of cryst. with T-level impurity 2-45921  
 magnesium porphyrin, in n-octane matrix, site selection, Zeeman effect, Shpolskii obs. 2-49474  
 magnesium porphyrin-ethanol, n-octane matrix isolated, site selection, Zeeman effect, photochemistry, SCF-PPP calcs. 2-49475  
 molecules, pseudo-Jahn-Teller distortion, vibr. mode, HF instability 2-4230  
 open-system perturbative approach, electronic relax. and optical response 2-13025  
 perovskites, anion-sharing systems, cooperative Jahn-Teller ordering 2-26345  
 powder, Jahn-Teller coupling determ. from ESR line-shape 2-13027

## Jahn-Teller effect continued

- semiconductors, cubic, phonon transport mechanism, influence of dynamical Jahn-Teller effect 2-45645  
 tetramethylammonium tetrachlorocuprate, ferroelastic-incommensurate, phase transitions 2-30581  
 transition metal complexes, mag. props., vibronic levels, photoelectron spectra satellites 2-5241  
 sym-triazine, laser induced fluoresc. spectrum, translational, rot. and vibr. temp., Jahn-Teller effect, lifetimes 2-20114  
 sym-tribromotrifluorobenzene cation, IR Ne matrix spectra of ground state 2-29578  
 vibronic spectra and struct., book contrib. 2-26347  
 zero-phonon lines, homogeneous broadening, electron-phonon interactions effect 2-45917  
 Al<sub>2</sub>O<sub>3</sub>:Ni<sup>2+</sup>(Mn<sup>3+</sup>), Jahn-Teller system, effect of stress, EPR data anal. 2-45924  
 BF<sub>3</sub>, vibr. fine struct., ab initio coupling consts., photoelectron spectrum 2-34492  
 BaCuF<sub>4</sub>, Jahn-Teller cooperative effect, mag. props. influence (French) 2-2126  
 BaTiO<sub>3</sub>:Mn, EPR study of Mn oxidation states, elec. cond. 2-45880  
 BaTiO<sub>3</sub>:Pt<sup>3+</sup>, ESR spectrum, phase transition and Jahn-Teller effects 2-17333  
 CaCuF<sub>4</sub>, Jahn-Teller cooperative effect, mag. props. influence (French) 2-2126  
 CaO:Cu, Cu<sup>2+</sup> ion pairs, EPR study 2-46369  
 CdS:Ni<sup>2+</sup>, optical spectra, fine struct. and isotope splitting, Jahn-Teller centre interpretation 2-51635  
 CdSe:Ni<sup>2+</sup>, optical spectra, fine struct., Jahn-Teller centre interpretation 2-51636  
 CdSe:Ni<sup>2+</sup> zero-phonon lines in optical spectra 2-46650  
 Cr(H<sub>2</sub>O)<sub>6</sub><sup>2+</sup> complex, aq. soln., H<sub>2</sub>O exchange, EXAFS method appl. 2-27021  
 CsCuCl<sub>3</sub>, Jahn-Teller phase transitions, <sup>133</sup>Cs quadrupole perturbed NMR study 2-21897  
 CsCuCl<sub>3</sub>, magnetic susceptibility study 2-41114  
 Cu atoms isolated in various matrices, UV-visible spectra 2-49319  
 Cu<sup>2+</sup>, ground state wave function in rhombic cryst. field 2-8778  
 Cu(H<sub>2</sub>O)<sub>6</sub><sup>2+</sup> complex, aq. soln., H<sub>2</sub>O exchange, EXAFS method appl. 2-27021  
 CuSiF<sub>6</sub>·6H<sub>2</sub>O, structure instability near first-order transition 2-35462  
 DyVO<sub>4</sub>, specific heat at Jahn-Teller transition 2-30624  
 DyVO<sub>4</sub> type crystal, Jahn-Teller ferrodistorion antiferroelec., elementary excitations in elec. field 2-13026  
 DyVO<sub>4</sub>, undergoing cooperative Jahn-Teller effect, thermal cond. meas. 2-45640  
 GaAs:Cr, luminescence, no phonon at 0.84 eV, Zeeman and axial stress splitting calc. 2-51659  
 GaAs:Cr, phonon scatt. by impurities, thermal cond. meas. 2-8584  
 GaAs:Cr, phonon scatt. by Cr ions, uniaxial stress effect, thermal cond. meas., 50 mK to 100K 2-45648  
 GaAs:Cr, photoluminescence anisotropy, high mag. field Zeeman splitting 2-22090  
 GaP:Ni<sup>2+</sup>, <sup>3</sup>T<sub>1</sub>(P) absorpt. band, Jahn-Teller anal. 2-5732  
 HfNb<sub>2</sub>I<sub>6</sub>, cluster compound, spin-crossover transition 2-2053  
 K halides, vibration-induced absorpt., MCD spectra line shape anal. 2-21997  
 KCl, R-centres, optical absorpt. R<sub>2</sub> band, lineshape calc. 2-2320  
 KCoF<sub>3</sub>, relationship between mag. and crystallographic struct. 2-36329  
 K<sub>2</sub>CuF<sub>4</sub>, two-dimensional ferromag., magneto-optical props. 2-2222  
 K<sub>2</sub>Dy(MoO<sub>4</sub>)<sub>2</sub>, antiferrodistortive Jahn-Teller ordering 2-8606  
 KFeF<sub>3</sub>, relationship between mag. and crystallographic struct. 2-36329  
 Mg,Mn<sub>2-9-x</sub>Fe<sub>x</sub>O<sub>4</sub>, Mossbauer study of cation distrib. and lattice distortion 2-21928  
 MgO:V<sup>2+</sup>, interlevel nonradiative transitions of impurities 2-13550  
 NH<sub>4</sub><sup>+</sup> in NH<sub>4</sub>Cl, X-ray K emission spectra, <sup>2</sup>T<sub>2</sub> valence state, Jahn-Teller effect 2-34430  
 NaCl:Pb<sup>2+</sup>, A band spectral line shape 2-41420  
 Nb<sub>6</sub>I<sub>11</sub>, cluster compound, spin-crossover transition 2-2053  
 NiFe<sub>2-x</sub>Cr<sub>x</sub>O<sub>4</sub> mixed Jahn-Teller system, phase transition, acoustic study 2-45575  
 P<sub>2</sub>S<sub>5</sub>, P<sub>2</sub>S<sub>7</sub><sup>+</sup> and its mass spectral fragment pairs, struct. and energies, MNDO calc. 2-43803  
 RbCl:Pb<sup>2+</sup>, A band spectral line shape 2-41420  
 Rb<sub>2</sub>Cr<sub>1-x</sub>Mn<sub>x</sub>Cl<sub>4</sub>, Cr-rich, struct. and mag. order 2-26590  
 RbCuCl<sub>3</sub>, cooperative Jahn-Teller distorted struct. 2-8497  
 Si, Jahn-Teller distortion of A- and E-centres 2-1872  
 Si:Cr, Jahn-Teller centre, ER spectrum, isotopic vibronic struct. 2-36419  
 (SiX<sub>3</sub>YZ)<sup>+</sup> (X, Y, Z=H, F, Cl), mol. struct., Jahn-Teller effects, MNDO calc. 2-664  
 SrCuF<sub>4</sub>, Jahn-Teller cooperative effect, mag. props. influence (French) 2-2126  
 TbVO<sub>4</sub>, undergoing cooperative Jahn-Teller effect, thermal cond. meas. 2-45640  
 Ti<sup>3+</sup>-type ions in cubic field, Jahn-Teller effect of B absorption band 2-2318  
 TmAsO<sub>4</sub>, undergoing cooperative Jahn-Teller effect, thermal cond. meas. 2-45640  
 TmVO<sub>4</sub>, cooperative Jahn-Teller system, phonon and pseudo-magnon transport 2-45647  
 TmVO<sub>4</sub>, undergoing cooperative Jahn-Teller effect, thermal cond. meas. 2-45640

## jellies see gels

## jellium

- alkali metals, liquid, selfconsistent theory, surface tension 2-25717  
 bounded, response functions and retarded surface plasmon 2-1988  
 Coulomb systems, one-dimensional 2-17056  
 electron gas, metallic densities, coupled cluster formalism 2-35958  
 electron ordering in complete degeneracy limit, electron liq. form. 2-40517  
 metal, light reflecting, surface contrib., use in Van der Waals interaction 2-26842  
 metal surfaces, correlated wave function theory 2-36120  
 superconducting transition temp., isotope effect, jellium and Brout model 2-36205  
 transition metals, chemisorption of H, embedded cluster model 2-12915

## jet stream see atmospheric movements

## jets

- see also plasma jets; sprays  
 aerodynamics of an eddy dryer for liquid materials 2-30202



## jets continued

air, perpendicular jet flow through perforated wall for small Reynold numbers, convective heat exchange 2-25371  
 air jet array, impingement with crossflow, streamwise flow and heat transfer distrib. 2-12194  
 air jets, 'quiet' no le design for noise reduction 2-1079  
 airfoils, upper surface blown, incompressible and transonic flows 2-50288  
 alkali-metal vapour, gas-dynamic jet, use of vacuum props. 2-1245  
 annular jets, excited, of small inner diameter 2-44769  
 annular supersonic jet, shock wave effects, impinging on concave body, separation bubble 2-20705  
 in astronomical sources, collimation of particle beams from thick accretion discs 2-14765  
 axial, flow outside wall boundary layer (*French*) 2-35186  
 axisymmetric jets, preferred mode 2-4869  
 axisymmetric turbulent EHD jet problems 2-39992  
 benzene-Ar, complex,  $U_0$  transition, struct., fluoresc. obs. 2-39442  
 buoyant wall jets, horizontal and vertical, extended k-e model 2-12195  
 4C 18.68, QSO with precessing radio jets, spectrum and map 2-53377  
 3C 273, QSO, radiojet, UHF obs. 2-33182  
 3C 449 radiogalaxy, jets fluid dynamical twisting 2-23343  
 capillary jet, free surface problem, finite difference computation 2-4870  
 circular hydraulic jump, form., instability 2-30199  
 circular jet, external flow velocity influence on inviscid instability 2-39964  
 coherent structures induced by two simultaneous sparks in an axisymmetric jet 2-8195  
 combustion chamber film cooling by air jet injection (*German*) 2-8153  
 compressible flow patterns, streamline coordinates use in numerical soln. 2-20700  
 confined turbulent flow, numerical anal., appl. to confined jet axisymmetric mixing 2-44705  
 cumulative jet form. anal. calcs. (*Russian*) 2-16357  
 deformation of a liquid surface by an impinging gas jet 2-50305  
 diffusion combustion in a liquid, theory 2-13954  
 diffusion combustion turbulent mixing in a channel 2-4868  
 dye-jet laser pumped by second harmonic of Q-switched mode-locked  $\text{Nd}^{3+}$ :YAG laser 2-34749  
 edge noise theories, for jet flow 2-44715  
 EHD jet in vacuum, density meas. 2-44797  
 elastic liquid, extrusion flow jet from a capillary, swelling effect 2-12192  
 ethene, supersonic free jet, rot. relax. CARS spectra 2-43919  
 flame impinging on heat sensing surface, heat transfer 2-30201  
 flow, effect of blowing across blunt body surface, numerical simulation 2-35187  
 flow characteristics of jet parallel to adjacent wall 2-16355  
 flow induced by a jet in a cavity measurements and 3D numerical simulation 2-30106  
 flow of supercritical aqueous solns. of electrolytes with Joule heating in thin capillary tubes 2-35194  
 flows with nucleation and condensation 2-8204  
 fluidised bed, pressurised, jet penetration 2-20744  
 formation of and dispersal of toxic components, chemical kinetics, jet flows in atmosphere 2-35188  
 free boundary flows in thermally stratified medium, laminar buoyancy induced 2-35202  
 2-D free jet of viscoelastic fluid, laminar (*French*) 2-25413  
 free round jets, numerical soln. using finite element method (*Polish*) 2-8200  
 free shear layer, axisymm., turbulent spot azimuthal struct. and initiation mechanism 2-16295  
 free submerged axisymmetrical jets having symmetrically nonuniform initial vel. profile 2-39962  
 gas dispersion in liq., onset of jetting conditions 2-35195  
 gas jet in initial stage, normal impingement against obstacle, Godunov method (*Russian*) 2-35200  
 gas streams injected in liquid, math. expression of trajectory 2-25430  
 gas-solid two phase round jet, laminar flow, mass and momentum transport 2-30203  
 heat transfer in plane channel with single system of jets in a cross flow (*Russian*) 2-8134  
 heated saline jets, salt-finger convection in surface discharge 2-16310  
 heterogeneous, high temp., contact methods for mass flow meas. (*Russian*) 2-35240  
 2,4-hexadiene cation, emission spectrum in supersonic free jet 2-29616  
 high-temperature, particle migration (*Russian*) 2-35197  
 horizontal, viscous buckling 2-8201  
 impact of a figure of revolution in a stream of incompressible fluid with separation of a jet 2-20795  
 impinging jet, forced convection boiling, burnout heat flux 2-35190  
 instabilities simulation and sound generation 2-12134  
 interaction of explosive charges on the surface of a barrier in a hydrodynamic jet model 2-20696  
 interaction of low-intensity subsonic jets with supersonic drifting stream (*Russian*) 2-30197  
 inverted velocity profile coannular, noise characts. 2-44716  
 isothermal fibre form., fluid flow rate, finite element anal. 2-50311  
 jet, issuing from channel, extrudate swell study 2-35196  
 jet noise, review 2-50251  
 Kelvin-Helmholtz instability, jet stream-generated, VHF radar meas. 2-10141  
 laminar flow heat transfer between 2-dimens. water jet and flat surface 2-44717  
 laminar jet assimilation into aligned uniform stream 2-44770  
 laminar swirling impinging jets, flow characts. 2-30195  
 laser heated gas jet, plasma production, soft X-ray source 2-28960  
 liquid jet, dynamics, asymptotic eqns. 2-39960  
 low level jet formation and var. during heavy rain, wind and vorticity anal. 2-47985  
 mass-filter probe, rarefied gasdynamical problems appl. (*Japanese*) 2-4905  
 metal surfaces, high temp., no le spray water cooling, heat exchange 2-12140  
 meteoron jet propagation into frontal layered clouds, cumulus development and precipitation (*Russian*) 2-18508  
 methyl salicylate, free jet, dual fluoresc. excitation, visible. UV obs. 2-15846  
 MHD flow, near electric current point source, vortex motion, numerical calcs. 2-12231  
 $\text{N}_2$ , supersonic free jet, rot. relax. CARS spectra 2-43919

## jets continued

naphthalene, cold isolated molecules from jet, intersystem crossing, quantum yield 2-34474  
 NGC 6251, giant radio galaxy, radio jet obs. 2-6680  
 nocturnal jet evolution and breakup, assoc. wind and temp. 2-32627  
 noise generated by air flow through coaxial jet in long, straight pipe, downstream modal press. spectra meas. for 200-6000 kHz range 2-1189  
 nozzles finite width reattachment flow, initial turbulence intensity effects 2-39959  
 numerical methods in fluid dynamics, conf., Stanford, CA, USA 2-28608  
 oblique jet interaction with subsonic flow, laser velocimetric obs. (*French*) 2-50343  
 oceans, meanders and detached eddies of strong eastward flowing jet, two layer model 2-18463  
 parallel flow, initial conditions 2-1242  
 planar buoyant turbulent jets, propag. in shear flow, parameters calcs. (*Russian*) 2-8197  
 plunging liquid jets, air entrainment rate and diffusion pattern 2-8196  
 polymer dilute solutions, anomalous flow at Pitot tube inlet 2-50318  
 pulsating submerged jet and thermally induced oscillations 2-30200  
 pulsed jet form. behind supersonic nozzle when gas can relax at entrance to nozzle 2-20723  
 pulsed laminar free jets, unsteady effects, numerical soln. 2-20722  
 radio sources, flat spectrum, relativistic jet model rel. to statistical study at 966 MHz 2-6681  
 radiosources, compact extragalactic, processing jet model 2-33167  
 reaction, impulsive forces meas., on wind tunnel model, using conventional strain gauge balance 2-20783  
 round jets upon plane wall, incompressible jet impingement computations, rot. flow model 2-12191  
 semibounded, drag and heat transfer calc. by means of Karman integral rel. 2-8198  
 shaped charge jet and long rod penetration, finite compressibility, shock effects 2-1557  
 shear layer, noise and its effect on jet forcing 2-16360  
 slender body at subsonic and transonic speed, lateral forces and their alleviation 2-50304  
 slug flow jet, HF acoustic wave transmission 2-20752  
 solar atmosphere, jet phenomena (*Japanese*) 2-18744  
 solar atmosphere, numerical hydrodynamics of jet phenomena rel. to spicules 2-48214  
 sonic nozzle, influence of angle of taper on operation of jet generator 2-30115  
 sound propag. through hot wall-jet flow over absorbing wall, sound-absorbing liners, blown flap environment 2-4624  
 spherical particles, charged, uniform, coherent stream production 2-16371  
 spherical particles, charged, uniform, for studying matter in extreme states 2-16370  
 stability of a two-dimensional jet 2-12190  
 stratosphere sudden warmings and jet occurrence, transformed Eul erian mean approach 2-37943  
 submerged laminar jet, impingement on plane, appl. to shear strength of vascular endothelium 2-39963  
 supersonic flow, oncoming, penetration depth of injected jet 2-1221  
 supersonic jet, exhausting in vacuum with an obstacle, shock wave 2-30172  
 supersonic jet flow vel. meas. using CARS technique 2-35235  
 supersonic nonviscous jet in submerged space or hypersonic flow, boundaries calc. 2-35193  
 Taylor-Görtler instability of turbulent wall jets along concave surface 2-4796  
 temperature separation, by Hartmann-Sprenger tube coupling a secondary resonator 2-30198  
 thermal and dynamic boundary layers in porous medium with allowance for spontaneous convection (*Russian*) 2-50264  
 thin rod penetration depth into a half-space, analytic derivation 2-16356  
 turbulent, acoustic wave propag., coherent part and intensity (*French*) 2-44768  
 turbulent, spectral broadening of acoustic beam (*French*) 2-49975  
 turbulent coherent structure, conf., Madrid, Spain (1980) 2-14980  
 turbulent flow, eddy coherent investigation, flow visualisation 2-16358  
 turbulent flow velocity derivative, high order moments, Reynolds number depend. 2-14513  
 turbulent jet stream interacting normal to lamina, heat emission (*Russian*) 2-8199  
 turbulent shear flow, intermittency factor, closure model, appl. to plane jets and boundary layers 2-4808  
 turbulent shear flows, perturbed and unperturbed coherent struct. study 2-16359  
 turbulent underexpanded jet, supersonic flow, mixing layer investigation 2-30196  
 turbulent wall jets 2-8202  
 twin jets, heated, expt. study of noise characts. 2-44568  
 two-dimensional jet 2-1244  
 two-dimensional turbulent jet theory in a stratified fluid due to temperature difference (*Chinese*) 2-25416  
 two-dimensional turbulent jet-boundary interaction, temp. distrib. 2-12149  
 two-jet ground impingement phenomena, stagnation line and upwash form. 2-39958  
 underexpanded, impinging on flat plate, flow field development 2-35192  
 underexpanded jet roll length formed by a sonic no le with cylindrical rod on its axis 2-1243  
 vertical jets, dense, behavior rel. to height, nozzle dia., Froude number, density ratio 2-35198  
 viscous fluid buckling of plane and axisymmetric jets 2-35191  
 viscous fluid steady flow due to rot. sphere 2-20686  
 viscous gas flow, jet from cylinder into vacuum, Navier-Stokes eqns. calcs. 2-35189  
 viscous incompressible liquid, accelerating nonisothermal jets in field of centrifugal forces, instability anal. 2-39961  
 viscous liquid jet, solidification without mixing with surrounding medium 2-12193  
 viscous-inviscid interaction model of jet entrainment 2-1246  
 wall jet, turbulent convection, heat transfer and skin friction 2-35199  
 Ar, free jet expansion, dimer depletion mass spectrometric meas. 2-27496  
 Ar, pulsed jet form. behind supersonic nozzle when gas can relax at entrance to nozzle 2-20723  
 $\text{CO}_2$ , free jet expansion, dimer depletion mass spectrometric meas. 2-27496



## jets continued

- CO<sub>2</sub>, pulsed jet form. behind supersonic nozzle when gas can relax at entrance to nozzle 2-20723  
 CaCl<sub>2</sub> jet, laser-induced fluoresc. obs. (German) 2-745  
 D<sub>2</sub>, supersonic free jet, rot. relax. CARS spectra 2-43919  
 H<sub>2</sub>, supersonic free jet, rot. relax. CARS spectra 2-43919  
 H<sub>2</sub>O, swirling hollow, frictionless flow, influence of inertia and surface force (German) 2-20721  
 N supersonic jet flow, shock waves, flow struct. study 2-50297  
 N<sub>2</sub>, pulsed jet form. behind supersonic nozzle when gas can relax at entrance to nozzle 2-20723  
 O<sub>2</sub>, supersonic free jet, rot. relax. CARS spectra 2-43919

## j.f.e.t. see junction gate field effect transistors

## Johnsen-Rahbek effect see adhesion; electrostatics

## Johnson noise see thermal noise

## joining processes

- see also brazing; cable jointing; soldering; welding  
 flange connections, fatigue strength under simultaneous cyclic bending and tension (Russian) 2-30063

## jointing, cable see cable jointing

## jointing (electric connectors) see electric connectors

## Jordan-Thiry field see cosmology; general relativity

## Josephson effect

- chaos and noise rise in Josephson junctions 2-21724  
 critical current amplitude modulation steps 2-36238  
 current driven Josephson junction, microwave induced steps, thermal fluctuations and transition rates 2-31093  
 current in finite thickness junction 2-17233  
 DC Josephson current in asymm. junction, formula 2-13242  
 distorted steps in the I-V characteristic of Josephson junctions 2-13243  
 distributed inhomogeneous junction, static props. (Russian) 2-26560  
 down conversion at a Josephson contact for large intermediate frequencies 2-5503  
 Fiske steps in long Josephson junctions, dynamic fluxon model 2-31097  
 fluxon propag. in long Josephson junctions 2-31096  
 fluxon reflection on Josephson line from perturbative point of view 2-36239  
 heterodyne sub MM wave detector at high thermal background levels 2-43086  
 hysteretic Josephson junction, time-dependent dissipative steady states fluctuations and transition rates 2-42951  
 intermediate length Josephson tunnel junctions, fluxon dynamics 2-31095  
 Josephson functions, coherent transient effects 2-31078  
 Josephson junction, simple electronic analog 2-18835  
 Josephson technology system level experiment for supercond. computer 2-13241  
 Josephson tunnel junctions, multiple freq. generation by bunched solitons 2-51378  
 junction, DC I-V curves, punchthrough effect obs. with microwave radiation 2-41068  
 junction, fluxon propag. with external mag. field 2-17230  
 junction, hysteretic, nonequilib. steady state, thermal fluctuations and lifetime 2-51380  
 junction array, 2-dimensional, vortex motion, numerical anal. 2-26568  
 junction with direct cond., steady-state props., kinetic inductance (Russian) 2-26557  
 junctions, barrier uniformity, crit. supercurrent mag. field depend. study 2-31106  
 junctions, macroscopic quantum tunnelling and dissipation 2-36269  
 junctions, weakly coupled, thermal fluctuations and phase locking 2-17223  
 junctions, zero field singularities, sine-Gordon eqn. superconducting junction devices 2-36253  
 long junction, fluxon interactions (Russian) 2-21733  
 macroscopic quantum system and quantum meas. theory 2-18964  
 magnetic superconductors, Josephson effect, formulation 2-17232  
 microbridges, Josephson behavior, nonequilibrium theory, review 2-41070  
 multiconnected Josephson network, higher-harmonic susceptibility meas. 2-41069  
 narrow superconducting channel, Josephson effect 2-46210  
 noise thermometer, elec. impedance, math. model 2-43016  
 one-dimensional lattices, dynamical soliton structs. 2-33470  
 operator algebra for Josephson tunneling 2-51379  
 oscillations spectrum in system of Josephson junctions 2-21732  
 photosensitive Josephson junction with hydrogenated amorphous Si barrier 2-31073  
 plasma physics and electron temperatures 2-49183  
 point contact, current noise 2-46204  
 proximity-effect sandwiches, Josephson tunnelling theory 2-36258  
 quasi-one-dimensional conductor, excess conductivity due to fluctuations above supercond. transition temp. 2-5500  
 radiation linewidth anomalies in Josephson junctions 2-31094  
 radiators, two coupled, coherence and linewidth 2-31076  
 research activities at Electrotechnical Institute, Slovak Acad. of Sciences, review 2-17183  
 resonant small-junction Josephson circuit, characteristic modes and transition to chaos 2-36272  
 RF biased junction, chaotic states 2-17229  
 S-N-I-N-S junction, external field and impurity effect on Josephson current (Russian) 2-46212  
 sandwich Josephson junction, with direct conductivity, microwave props. 2-51382  
 shunted Josephson junction model, non-ohmic effect 2-21731  
 sine-Gordon field with spatial boundary condition and application to Josephson junction 2-36241  
 small area Josephson junctions, LF voltage noise 2-51384  
 SQUID, DC, dynamics, characteristic times, current-voltage characteristics 2-31064  
 SQUID, resistive, with large crit. current, Josephson oscillation 2-17231  
 superconducting filaments, phase-slip centres, self-consistent nonequilibrium description 2-51372  
 superconductivity, macroscopic manifestations, theory 2-13234  
 superconductor-normal (insulator)-supercond. struct., crit. supercurrent, temp. depend. near transition temp. 2-31080  
 superconductor-normal-superconductor junction, mag. thermoelec. effect 2-31099  
 superconductor-normal-superconductor sandwiches with Bi interlayer (Russian) 2-17226
- Josephson effect continued**  
 transmission line, Ohmic dissipation due to fluxon motion, anomalous DC current 2-36240  
 tunnel junction, large, fabrication and eval. (Japanese) 2-17235  
 tunnel junction, nonhysteretic, microwave direct and heterodyne detect. 2-17228  
 tunnel junction, rectangular cavity modes obs. 2-46206  
 tunnel junction, resistively shunted, obs. of zero, point fluctuations 2-13245  
 tunnel junction amplifier low noise self-pumped, parametric amplification props. 2-13239  
 tunnel junction array, artificially inhomogeneous, two-dimensional 2-31090  
 two-dimensional superconductors, quantum fluctuations, crit. behaviour 2-26556  
 ultrasmall Josephson junction, scaling characteristics 2-51373  
 ultrasmall junctions, tunnelling characts. 2-31074  
 voltage fluctuations in Josephson junctions, microscopic theory 2-31092  
 weak link, basic model 2-5502  
 weak links, crit. currents, electron interaction effects 2-31082  
 weak links, short range interactions 2-31105  
 weak-link system, EM wave stimulated emission feasibility 2-44316  
 weakly interacting junctions, vortex chain movement and monochromatic radiation 2-36236  
 Z 2-2040  
 Al film, granular, resist. transitions, vortex unbinding 2-17249  
 BaPb<sub>0.7</sub>Bi<sub>0.3</sub>O<sub>3</sub> film, grain boundary Josephson current 2-2035  
 CuCr film, superconducting Kondo effect study using DC Josephson current 2-31091  
 Er<sub>0.58</sub>Hf<sub>0.42</sub>Rh<sub>0.4</sub>Nb oxide-Nb point contact junction, temp. depend. of Josephson current 2-2037  
<sup>4</sup>He, superfluid, Josephson effect, double-ended Helmholtz resonator study 2-35775  
 In narrow channels, superconducting phase slip centres, charge imbalance waves 2-36245  
 Nb bridges, variable thickness, coherent effects 2-31071  
 Nb, Josephson junction, pair shot noise, zero-point Johnson noise 2-51377  
 Nb Josephson junctions 1 μm, macroscopic quantum tunnelling below 100 mK 2-31098  
 Nb Josephson tunnel junctions with thin Al overlayers near barrier 2-51383  
 Nb point contacts, AC Josephson effect above voltage 2-36268  
 Nb-Er<sub>2</sub>O<sub>3</sub>(Lu<sub>2</sub>O<sub>3</sub>)-Pb tunnel junction; leakage and thermal stability 2-51374  
 Nb-Nb<sub>2</sub>O<sub>5</sub>-Cu/Pb proximity junctions, order parameter, spatial depend. 2-13244  
 Nb-Nb<sub>2</sub>O<sub>5</sub>-Pb Josephson tunnel junction, structural anal., for voltage standard 2-5505  
 Nb-Nb<sub>2</sub>O<sub>5</sub>-Pb(In) Josephson contacts, prod. by sputtering in low power HF discharge 2-46920  
 Nb-NbO<sub>2</sub>-Pb, tunnel junctions, Nb energy gap and critical currents, temp. depend., base electrode annealing effects 2-36242  
 Nb-NbO<sub>2</sub>-PbIn Josephson edge junction, specific capacitance 2-36264  
 Nb-Pb, Josephson tunnel junctions, long, zero-field steps, temp. depend. 2-36254  
 Nb-Pb thin film Josephson junctions, AES, XPS investigation 2-21727  
 NBN film, two-dimens. granular, resist. characts. of phase incoherent-phase coherent supercond. transition 2-17208  
 Pb alloy Josephson junctions, electron irradiation effects 2-51375  
 Pb and Pb-alloy Josephson junctions, surface obs. and failure cause 2-31072  
 Pb Josephson junction, energy gaps and crit. current, quasiparticle injection effects 2-36265  
 Pb Josephson junctions, interaction of pair in proximity (Chinese) 2-21726  
 Pb/In-oxide-Pb(Bi) quasiparticle tunnel junctions for MM-wave detection 2-41075  
 Pb-PbO<sub>2</sub>-Pb, long Josephson tunnel junctions, vortex vel. from microwave induced DC voltage 2-31065  
 Pb-PbO<sub>2</sub>-Pb Josephson junction, negative resist. switching 2-36251  
 Si:Pb-Nb Josephson struct., high resistance 2-41073  
 Sn cylindrical Josephson junctions 2-31075  
 Sn microstrip, phase-slip centres internal struct. 2-31083  
 Sn particles, two-dimens. Josephson coupled random array, resist., temp. and mag. field depend. 2-26558  
 Sn-SnO<sub>2</sub>-Sn junction, quasiparticle harmonic mixing 2-41074  
 Sn-SnO<sub>2</sub>-Sn, long Josephson tunnel junctions, resistive branches, step struct. 2-36252  
 Ta-Cu-Ta sandwiches, elec. field penetration near normal-supercond. interface 2-36237  
 Tc multiconnected Josephson network, superconducting transition, susceptibility meas. 2-31063  
 V-V<sub>2</sub>O<sub>5</sub>-Pb tunnel junctions, max. Josephson current, temp. depend. 2-31066  
 V-V<sub>2</sub>O<sub>5</sub>-Pb(CdS-In) Josephson junction, max. supercurrent, temp. depend. 2-36267
- Joshi effect see glow discharges**
- Joule-Thomson effect**  
 microliquefier, Joule-Thomson type, starting time analysis 2-38657  
 space He refrigerator, at 4.4K, for Salyut-6 2-19111  
 He-H<sub>2</sub> mixture in liq.-gas phase equil. region, enthalpy calc. and Joule-Thomson coeff. 2-20806
- junction gate field effect transistors**  
 Al<sub>x</sub>Ga<sub>1-x</sub>As-GaAs heterojunction FET, magnetoconductance, g-factor, gate voltage 2-41003  
 Al<sub>x</sub>Ga<sub>1-x</sub>As-GaAs heterojunction FET, magnetoconductance, g-factor 2-41002
- junction lasers see semiconductor junction lasers**
- junctions, waveguide see waveguide couplers**
- Jupiter**  
 1979 J 3 discovery, period and albedo 2-3220  
 Amalthea 2-32935  
 astrometry in 1978 from Observatoire Royal de Belgique 2-32898  
 atmosphere, composition and evolution 2-38105  
 atmosphere, deep N<sub>2</sub> source 2-32904  
 atmosphere, equatorial features, convective growth rates 2-53156  
 atmosphere, IR radiometer images compared with visible and 5 μm images 2-32903  
 atmosphere, radio-occultation obs. 2-28394



**Jupiter continued**

atmosphere, weather and climate 2-53135  
 atmosphere aerosols, absorpt. of sunlight 2-28373  
 aurora or airglow at visible wavelengths 2-28403  
 auroral secondary electrons, effect on Io plasma torus 2-32901  
 bow shock overshoots 2-53131  
 Callisto, crater populations and cratering history 2-32934  
 Callisto, limits on large crater production and obliteration 2-18733  
 cloud cover color props., latitude and longitude var., visible spectra obs. 2-32938  
 cloud features, dynamics and thermal struct. 2-28400  
 colours of clouds, Voyager obs. 2-28404  
 comet clouds, effect of Jupiter 2-32955  
 cometary capture 2-18741  
 current sheet and inner magnetosphere, model 2-32921  
 cyclonic spots, oscills. and velocity struct. 2-28397  
 decametric arc radiation 2-32928  
 decametric arc radioemission, heuristic model 2-32927  
 decametric arc radioemission, models 2-32929  
 decametric emission, catalogue of Jan. 1978-Dec. 1979 obs. 2-18723  
 decametric emission in 15-40 MHz range, Voyager 1 and 2 obs. catalogue 2-18722  
 decametric radio spectra, S-L burst interaction 2-53155  
 decametric radioemission, arcs interpreted as interference pattern 2-32924  
 decametric radioemission, model of arc patterns 2-32926  
 decametric spectra modulations, role of propag. effects in terrestrial ionosphere and Jovian environment 2-38103  
 dynamo theory of magnetic field 2-52722  
 Europa, effect of ejecta and plasma form I. 2-6562  
 fireball observed by Voyager cameras 2-28415  
 Galilean satellite interior models 2-3212  
 Galilean satellites, charged dust impact geometries 2-53129  
 Galilean satellites, icy surfaces impact craters, viscous relax., viscosity var. with depth 2-3214  
 Galilean satellites orbital reson. and tidal interactions 2-6560  
 Ganymede, crater populations and cratering history 2-32934  
 Ganymede, terrain types and tectonic evolution 2-48178  
 Great Red Spot, flow fields obs. by Voyager 2-28398  
 Great Red Spot, results of spectrophotometry at 0.6 to 1.1  $\mu$  2-6565  
 Great Red Spot, thermal struct. and dynamics 2-28399  
 Great Red Spot., UV photochemistry of PH<sub>3</sub> 2-42642  
 Great Red Spot as Rossby soliton (*Russian*) 2-50279  
 Great Red Spot origin, role of magnetosphere and magnetic fields (*Russian*) 2-6563  
 He abundance, Voyager IR spectral and radio occultation obs. 2-32936  
 internal heat, IR albedo and energy balance 2-28393  
 Io, ionospheric plasma interactions, crit. ionisation vel. effect 2-14767  
 Io, magma heat transport as mechanism allowing thick lithosphere 2-28371  
 Io, plasma disk, centrifugally driven diffusion 2-28383  
 Io, post-eclipse brightening, SO<sub>2</sub> condensation/sublimation 2-32902  
 Io, sputter ejection of matter due to incident Jovian magnetosphere particle interaction 2-23249  
 Io, surface albedo and colour variations, Voyager 1 obs. 2-32932  
 Io, thermal models and chem. evolution 2-6561  
 Io, volcanic eruptions during Voyager 1 and 2 encounter 2-32930  
 Io, volcanic plume particle sizes at Loki site 2-32931  
 Io, volcanic plumes and craters 2-32899  
 Io atmosphere, SO<sub>2</sub> and CS<sub>2</sub> mixing ratio calcs., implications of UV absorpt., cross sections 2-23243  
 Io ejecta on Europa 2-6562  
 Io generated Alfvén wave causing magnetospheric flow vel. perturbations, plasma obs. 2-28388  
 Io plasma torus, atomic clouds of O and S 2-23251  
 Io plasma torus, detect. by (Pioneer 10) 2-32900  
 Io plasma torus, electron gyroharmonic waves obs. 2-28387  
 Io plasma torus, energy injection mechanism 2-53153  
 Io plasma torus, EUV spectrum anal. 2-32908  
 Io plasma torus, morphology UV spectral intensity obs. 2-53152  
 Io plasma torus, plasma parameters and effect on fly-by spacecraft 2-42641  
 Io plasma torus, radiowave ray tracing 2-28390  
 Io plasma torus, ring current impoundment 2-28384  
 Io plasma torus, spectral obs. of S<sup>+</sup> gyrospeed 2-53154  
 Io plasma torus ions diffusion 2-32760  
 Io post-eclipse brightening, search by Voyager spacecraft 2-3213  
 Io ionospheric content, dispersive Doppler meas. 2-28382  
 ionosphere, calc. of ionisation production and losses 2-53151  
 ionosphere, electron cooling by collision with H<sub>2</sub> 2-32881  
 ionosphere, Joule heating by corotation enforcement currents 2-42640  
 ionosphere connection with Io, standing Alfvén wave current system, mag. field obs. 2-28389  
 ionosphere electron density profile, UVS obs. and theory 2-53157  
 ionosphere lower layers, formation 2-28375  
 magnetic field models, generalised inverse approach 2-28374  
 magnetic field trapped energetic protons, charact. times for satellite absorpt. 2-28406  
 magnetic fields and charged particles around major planets and their satellites 2-38082  
 magnetopause structure, Pioneer 10 and 11 obs. 2-3215  
 magnetosheath mag. field and plasma flow obs. 2-32909  
 magnetosphere, charge exchange loss of energetic charged particles 2-48177  
 magnetosphere, Io torus region, and electron ang. distrib. 2-28386  
 magnetosphere, low-energy charged particles at 5-20 R<sub>J</sub> 2-32919  
 magnetosphere, magnetic anomaly model 2-28380  
 magnetosphere, magnetic pumping of trapped particles 2-3218  
 outer magnetosphere, magnetodisc model of latitude particle density 2-23250  
 magnetosphere, O and S ions energy spectra and phase space densities 2-32905  
 magnetosphere, plasma wave spectra obs. 2-32911  
 magnetosphere, proton injection and scatt. to mag. equator 2-32906  
 magnetosphere, review 2-3211  
 magnetosphere broadband electrostatic emission and field-aligned currents 2-32920  
 magnetosphere corotating convection system driven by Io plasma torus longitudinal asymmetry 2-32907  
 magnetosphere electron density profile from plasma wave obs. 2-32912

**Jupiter continued**

magnetosphere electron distrib. deduced from synchrotron radiation 2-3216  
 magnetosphere hot plasma characts. 2-32914  
 magnetosphere nonthermal ion composition 2-32917  
 magnetosphere particles eroding Galilean satellite surfaces 2-6564  
 magnetosphere plasma dissipation and turbulent heating 2-38104  
 magnetosphere radiation belt asymmetry, deduced from radiowave data 2-3217  
 magnetosphere solar wind interaction, evolving corotating interaction, regions MHD simulation 2-18734  
 magnetospheric bow shock plasma electron environment 2-32910  
 magnetotail, distant, Voyager obs. anal. 2-28377  
 magnetotail and current sheet, mag. field 2-28376  
 magnetotail and predawn current sheet, motion and orientation 2-28379  
 magnetosphere as origin of upstream and downstream energetic particle events 2-32795  
 mean zonal flow and eddies, Voyager obs. 2-28396  
 motion in Le Verrier and Gailliot's theories (*German*) 2-28405  
 north polar region, Pioneer II distorted image rectification 2-23220  
 origin and interior structure, constraints 2-38106  
 origin for energetic mesons, interplanetary mag. field accel. 2-48118  
 Period Comet Gehrels 3, orbit variations, temporary satellite captures by Jupiter 2-18738  
 plasma in inner magnetosphere 2-28381  
 plumes obs. by Voyager 2-28401  
 precise positions (May 1980), ESO GPO obs. 2-18732  
 predawn magnetotail energetic particles 2-28378  
 radio emission, arc struct. of decametric emission 2-32923  
 radio occultation flash of Voyager's signal 2-28395  
 radioemission, S burst sources 2-32925  
 radioemission, source region location by anal. of interplanetary scintillation 2-3219  
 radioemission morphology (low-freq. range) 2-32913  
 radioemission obs. by Voyager, statistical properties 2-32922  
 ring system, dimensions and optical props. 2-28391  
 ring system, radio occultations obs. 2-28392  
 rings, microscopic particle origin 2-28372  
 rings in solar system 2-38109  
 satellite debris, ionised component in Jovian magnetosphere, loss processes 2-28385  
 satellite system origin, anal. of restricted three-body problem in resisting medium (*Italian*) 2-10338  
 satellites (outer), intercollision probability 2-53149  
 solar wind interaction with bow shock of Jupiter 2-28315  
 sub-mm heterodyne observations 2-42680  
 submillimetre spectrophotometry obs. 2-53161  
 trapped particles precipitation from magnetospheric axisymmetric mag. flux tube 2-10232  
 upper atmosphere, composition and temp. from Voyager 2 obs. of Regulus occultation 2-14800  
 near UV scattering props. of atmos. 2-28402  
 UV spectral obs. made by Voyager spacecraft 2-32915  
 voyager spacecraft images of Jupiter and Saturn 2-53148  
 White Oval BC, flow fields obs. by Voyager 2-28398  
 winds, competing models 2-42643  
 outer ZZ 2-32916  
 middle ZZ 2-32918  
 NH<sub>3</sub>-methane mixture photolysis 2-53150

**K-capture** see nuclear electron capture

**K mesons** see kaons

**K-N interactions** see kaon-nucleon interactions

**Kalman filters**  
 design for inertial navigation system, state-space models of gravity disturbance gradients 2-6301  
 linear dynamic system state vector meas. using Kalman-Bucy filter (*Russian*) 2-157  
 nuclear reactor, power estimation, Kalman filter appl. 2-49147  
 nuclear reactor online computer control using optimal control and state estimation methods 2-7255  
 orbit and attitude determ. for Bhaskara satellite 2-48139  
 PWR pressuriser instrumentation, bias identification, using generalised likelihood ratio technique 2-19729

**kaon-baryon interactions**  
 see also kaon-baryon scattering; kaon-hyperon interactions; kaon-nucleon interactions  
 No entries

**kaon-baryon scattering**  
 see also kaon-baryon interactions; kaon-hyperon scattering; kaon-nucleon scattering  
 No entries

**kaon decay**  
 see also kaon hadronic decay; kaon leptonic decay  
 flavour changing Higgs boson couplings in K and B decays 2-287  
 K $\rightarrow\pi\pi$ , form factors, QCD short distance behaviour 2-11045  
 K $\rightarrow\pi\pi\gamma$ ,  $\Delta=1, 1/2$  rule, Weinberg+QCD model 2-23990  
 K $^+\rightarrow\pi^+\nu\bar{\nu}$  ( $\pi^+a$ ), branching ratio 2-19369  
 K $^+\rightarrow\pi\mu\nu$ ,  $\mu^+$  CP nonconserving polarisation 2-3772  
 K $_{L\rightarrow\gamma\gamma}$ , one-loop contrib., pole-dominance model 2-23991  
 K $^0$ -light neutrals, CP violation, gauge theory calc., heavy quark mass 2-38876

**kaon hadronic decay**  
 see also kaon regeneration  
 K $\rightarrow 2\pi$ , final state interactions 2-33825  
 K $\rightarrow 2\pi$  and CP violation, Higgs boson exchange models 2-48979  
 K $\rightarrow 2\pi(3\pi)$ , strong isospin violation and  $\eta$ - $\pi$  mixing in  $|\Delta S|=1$  weak transition 2-33832  
 K $\rightarrow\pi\pi$ , weak decays, quark dynamics in current algebra 2-317  
 K $^0\rightarrow\pi^+\pi^-$ , effective Hamiltonian and matrix elements in SU(3) $\times$ U(1) gauge theory (*Russian*) 2-38879  
 K $^+\rightarrow\pi^+a$ ,  $a$ =axion, lower bound for branching ratio and Peccei-Quinn axion non-existence 2-48978  
 K $^+\rightarrow\pi^+\pi^0$ , effective Hamiltonian and matrix elements in SU(3) $\times$ U(1) gauge theory (*Russian*) 2-38879

**kaon-hyperon interactions**  
 see also kaon-hyperon scattering  
 No entries



**kaon-hyperon scattering**

see also kaon-hyperon interactions

No entries

**kaon interactions** see kaon-baryon interactions; kaon-nucleus reactions; lepton-hadron interactions; meson-meson interactions; photon-hadron interactions**kaon leptonic decay**

pseudoscalar-meson leptonic decays, weak processes involving neutrinos, general theory 2-3774

 $K^+ \rightarrow \gamma e^+ \nu$ , photon radiative weak decays in quark model 2-48981 $K^+ \rightarrow \mu^+ \nu$ , expt. limit on decay mode 2-3775 $K_L \rightarrow \nu X$ , neutrino oscillations, CP invariance test (Russian) 2-11044 $K^+ \rightarrow \mu^+ \nu$ , stopped  $K^+$ , heavy neutrino search 2-3773**kaon-nucleon interactions**

see also kaon-nucleon scattering; kaon-proton interactions

exotic atoms and the kaon-nucleon interaction 2-11596

unitarity corrections, sigma terms 2-281

 $K^+ \alpha \rightarrow \Delta n$  ( $\Delta t$ ), Adn final state from K NN interactions 2-33856

KN, coupling consts., analytic continuation and correlations 2-19401

KN, low and intermediate energy physics, conf., Rome, Italy, (Mar. 1980) 2-10551

KN, use of zeros in dispersion relation and coupling const. calc. 2-10998

KN dispersion theory, review 2-10995

KN interaction at low energies, CDD pole,  $\Lambda(1405)$  prod. 2-11068

KN interaction near threshold, dispersion relations 2-11062

KN sigma term, chiral symmetry breaking 2-19354

 $K^+ n \rightarrow K^0 p$ , 0.85 to 1.35 GeV, pol. meas. 2-11065 $K^+ n \rightarrow K^0 p$ , 1.06 to 1.49 GeV, polarisation parameter meas. 2-11063 $K^+ n \rightarrow K^0 p$ , 6 and 12 GeV, on transverse polarised deuteron target 2-19399 $K^+ n \rightarrow K^0 p$ , 6 GeV, on transverse polarised deuteron target, amplitude anal. 2-19400 $K^+ n \rightarrow \psi$ , 39.5 GeV, total cross-sections 2-350**kaon-nucleon scattering**

see also kaon-nucleon interactions; kaon-proton scattering

backward scattering, high energies, Regge pole model in  $SU_3$  2-29133

dispersion relation appls. 2-11070

fixed t low energy KN and KN amplitude 2-10994

forward elastic scattering data at high energies, Regge pole model anal. 2-38868

forward scattering amplitudes, zeroology 2-10997

 $K^+ n$ , 0.85 to 1.35 GeV, pol. meas. 2-11065 $K^+ n$ , 1.06 to 1.49 GeV, polarisation parameter meas. 2-11063 $K^+ n$  single energy partial wave analysis for  $l=1$  and 0 states 2-48916**kaon-nucleus reactions**

for inelastic kaon-nucleus scattering, see "kaon-nucleus scattering"

see also kaon-nucleon interactions

atomic nucleus structure and nuclear spectroscopy, conf., Leningrad, USSR (March, 1980) 2-33209

EM and mesic probes of the nucleus 2-3963

exotic atoms and the kaon-nucleon interaction 2-11596

 $(K, \pi^-)$  strangeness exchange, hypernuclear formation 2-11149 $^9\text{Be}(K^-, \pi^-)^9\text{Be}$ ,  $^9\text{Be}$  neutron hole states 2-29224 $^{12}\text{C}(K^-, \pi^-)^{12}\text{C}$ , reson. dominated strangeness changing nuclear reactions, baryon momentum effects 2-29294 $^{12}\text{C}(K^-, \pi^-)^{12}\text{C}$ ,  $^{12}\text{C}$  neutron hole states 2-29224 $^{12}\text{C}(K, x)$ , total cross section calc. 2-24275 $^{13}\text{C}(K, \pi^-)$ , 800 MeV/c, hypernuclear levels 2-367 $^3\text{H}(K^+, K^0)^3\text{He}$ , 0.4-1 GeV, single charge exchange reaction cross section 2-34088 $^4\text{He}(K^-, \Delta n)$ , Adn final states from K NN interactions 2-33856 $^6\text{Li}(K, x)$ , total cross section calc. 2-24275 $^6\text{Li}(K^-, \pi^-)^6\text{Li}$ ,  $^6\text{Li}$  neutron hole states 2-29224 $^{14}\text{N}(K^-, \pi^-)$ , 800 MeV/c, hypernuclear levels 2-367 $^{16}\text{O}(K^-, \pi^-)$ , 800 MeV/c, hypernuclear levels 2-367**kaon-nucleus scattering**

see also kaon-nucleon scattering

analyticity concept for scatt. amplitudes and regeneration calcs. 2-11150

 $^{12}\text{C}(K^+, K^0)$ , 800 MeV/c, Glauber model calcs. 2-39072**kaon production**

multiple hadron prod. processes, quark statistics rules test (Russian) 2-33813

 $B \rightarrow \psi X$ , inclusive  $\psi$  distrib.,  $b \rightarrow \psi s$  free quark transition based calcs. 2-33827 $e^+ e^-$ , 33 GeV,  $\Lambda$ ,  $\bar{\Lambda}$ ,  $K^0$ ,  $\bar{K}^0$  prod., differential and scaling cross sections 2-7039 $e^+ e^-$  annihilation, 9.4, 12.0, 30 GeV, inclusive  $K_S^0$  prod. 2-3798 $e^+ e^- \rightarrow K^+ K^-$ , charged kaon form factor for 1.0-1.4 GeV 2-33842 $\gamma p \rightarrow m X$ ,  $\pi^\pm K^\pm$  inclusive meson spectra, large  $p_T$  jets target jet remnants process depend. 2-29115 $h h \rightarrow K^0 X$ , scaling in the mean hypothesis test 2-49017 $h p$ ,  $\pi^\pm$ ,  $K^\pm$ ,  $p$  prod., target proton fragmentation, 2 Reggeon final state 2-43371 $K^+$ , 110 GeV/c,  $\gamma$ ,  $K^0$ ,  $\bar{\Lambda}^0$  and  $\bar{\Lambda}^0$  inclusive prod. 2-11074 $K^+$ , 14.3, 70 GeV/c,  $\pi$  and  $K^0$   $p_T$  invariant distrib., energy depend. 2-24040 $K^+ p \rightarrow K^+ p \pi^+ \pi^- (K^+ p \pi^+ \pi^-) (K^+ p p p)$ , 32 GeV/c, reson. prod. mechanism in four-particle final states (Russian) 2-29136 $K^+ p \rightarrow K^0 X$ , 70 GeV/c, longit. distrib. in quark-parton model 2-15353 $K^+ p \rightarrow K^0 X$ , 70 GeV/c, inclusive and semi-inclusive cross sections 2-19406 $\mu p$ , 219 GeV,  $K$ ,  $\pi$  and  $p$  prod. ratios 2-33848 $\nu_\mu(p_\mu) N \rightarrow \mu N K$ , cross-section calc. 2-23969 $\nu$ , 43 GeV, inclusive neutral strange particle prod.,  $K^0$ ,  $\Lambda$ ,  $\bar{\Lambda}$ ,  $K^*$  and  $\bar{K}^*$  2-38873 $p p$ , 32.1 GeV, inclusive prod. of neutral strange particles  $K^0 \bar{K}^0 \Lambda$  and  $\bar{\Lambda}$ , struct. functions 2-29154 $p p(p p) \rightarrow K X$ , 53 GeV,  $p_T$  and rapidity and distrib. 2-38912 $p p \rightarrow \pi^-(K^+, p, p) X$ , 200 and 300 GeV large transverse momentum prod. cross sections 2-29146 $\pi^+ N \rightarrow K^+ X$ , 100 GeV/c, inclusive hadron prod., additive quark model predictions (Russian) 2-7056 $\pi^+$ , 40 GeV/c,  $K^0$  mesons,  $\Lambda$  and  $\bar{\Lambda}$  hyperons prod. (Russian) 2-29150 $\pi^+ p \rightarrow \Delta X$ , 40 GeV/c,  $\gamma$  quanta prod. with strange particles, multiplicity and inclusive spectra (Russian) 2-29151 $\pi^+ p \rightarrow A^0 K^0$ , hyperon exchange, Regge model in  $SU_3$  2-29135 $\pi^+ p \rightarrow \pi^+(K^+, p, p) X$ , 200 and 300 GeV large transverse momentum prod. cross sections 2-29146**kaon-proton interactions**

see also kaon-proton scattering

angular distrib. scaling in multiparticle prod. 2-345

 $h(h)p$ ,  $h = \pi, k, p$ , high  $p_T$  jet prod., antiparticle-particle total cross section differences 2-24042 $K p \rightarrow K N$  2-38869 $K^+$ , 110 GeV/c, charge transfer distrib. study 2-38909 $K^+$ , 110 GeV/c, forward and backward multiplicities study 2-29156 $K^+$ , 110 GeV/c,  $\gamma$ ,  $K^0$ ,  $\bar{\Lambda}^0$  and  $\bar{\Lambda}^0$  inclusive prod. 2-11074 $K^+$ , 14.3, 70 GeV/c,  $\pi$  and  $K^0$   $p_T$  invariant distrib., energy depend. 2-24040 $K^+$ , 32 GeV/c, event structure anal. by rapidity gap method (Russian) 2-7048 $K^+$ , 32 GeV/c, multiple hadron prod. processes, quark statistics rules test (Russian) 2-33813 $K^+$ , 4 GeV/c, exotic exchange processes, hyperon prod., Regge cut, quark and exchange models 2-43374 $K^+$ , 6.5 GeV/c,  $S = -2$  and  $-3$  baryon states prod. 2-11061 $K^+$ , 8.25 GeV/c, inclusive  $\Xi^-$ ,  $\Xi(1530)$ ,  $\Omega^-$  prod., triple Regge anal. 2-24025 $K^+$ ,  $<300$  MeV/c, elastic scatt., charge exchange and  $\Sigma^\pm$  prod.,  $\Sigma^\pm$  polarisation 2-38899 $K^+$ , hyperon polarisation at high energies 2-7041 $K^+$ , secondary particles average multiplicities, quark combinatorics predictions expt. test (Russian) 2-48956 $K^+$ , slow and stopping interactions in bubble chamber 2-11067 $K^+ p \rightarrow \Lambda$ , 8.25 GeV/c, cross sections, polarisation, parity exchange contribs. 2-19397 $K^+ p \rightarrow K^+ K^+ \Lambda$ , 4.2 GeV/c, interference effect and threshold  $KK$  S wave amplitude 2-19398 $K^+ p \rightarrow K^+ p(K^0 n)(\pi^0 \Lambda)(\pi^\pm \Sigma^\pm)$ , 1.720-1.796 GeV, cross sections, pol. distrib., high stats. data 2-49008 $K^+ p \rightarrow K^+ p \pi^+ \pi^- (K^+ p K^+ K^-) (K^+ p p p)$ , 32 GeV/c, reson. prod. mechanism in four-particle final states (Russian) 2-29136 $K^+ p \rightarrow K^+ K^+ \Delta^{++}$ , 10, 16 GeV/c,  $K^+$   $\pi^-$  scatt. information extraction based on one-pion exchange model 2-19403 $K^+ p \rightarrow K^+ \pi^+ n$ , 11 GeV, partial wave anal.,  $K^*$  resonances,  $\kappa(1500)$ , and  $\kappa(1850)$  2-24029 $K^+ p \rightarrow K^0 X$ , 70 GeV/c, longit. distrib. in quark-parton model 2-15353 $K^+ p \rightarrow K^0 n$ , 30 GeV/c, differential cross section,  $\rho$  and  $A_2$  exchanges 2-3809 $K^+ p \rightarrow K^+ K^+ (\pi^0) X$ , 70 GeV/c, longit. distrib. in quark-parton model 2-15353 $K^+ p \rightarrow \Delta X$ , 70 GeV/c, longit. distrib. in quark-parton model 2-15353 $K^+ p \rightarrow \Delta \pi^0 (\Sigma^0 \pi^0 \Sigma^+ \pi^+)$ , production ratios at rest 2-11066 $K^+ p \rightarrow \rho \Sigma^+ (\Omega^+)$ , 4.2 GeV/c, helicity amplitude structure 2-29128 $K^+ p \rightarrow \Lambda \pi^+$ , up to 8 GeV/c, differential cross section anal. 2-49007 $K^+ p$ , 13 GeV/c, search for  $S = +1$ ,  $Q = +2$  narrow meson with  $\bar{\Lambda} \Delta^+ + \text{or } \Sigma^+ p$  decay 2-33860 $K^+ p$ , 70 GeV/c, inclusive  $\Lambda$  and  $\bar{\Lambda}$  prod. cross-section and single particle distrib. 2-3820 $K^+ p$ , 70 GeV/c, multiparticle systems, jet-like props. 2-29143 $K^+ p \rightarrow K^0 X$ , 70 GeV/c, inclusive and semi-inclusive cross sections 2-19406 $K^+ p \rightarrow K^+ p \pi^+ \pi^- \pi^-$ , 32 GeV, cluster-like props. (Russian) 2-11072 $K^+$ , 32 GeV/c, interference correl. study between pions (Russian) 2-3810 $K^\pm$ , average charged multiplicity and KNO scaling, diffractive component 2-33862**kaon-proton scattering**

see also kaon-proton interactions

 $K^+$ , 0.955 to 1.272 GeV, polarisation meas. 2-11064 $K^+$ ,  $<300$  MeV/c, elastic scatt., charge exchange and  $\Sigma^\pm$  prod.,  $\Sigma^\pm$  polarisation 2-38899 $K^+ p \rightarrow K^+ p(K^0 n)(\pi^0 \Lambda)(\pi^\pm \Sigma^\pm)$ , 1.720-1.796 GeV, cross sections, pol. distrib., high stats. data 2-49008 $K^\pm$ , 100, 200 GeV/c, elastic scatt. differential cross section meas. 2-43379**kaon regeneration**

analyticity concept for scatt. amplitudes and regeneration calcs. 2-11150

 $g_{NSK}$  determination from  $K^0$  regeneration data 2-10996**kaon resonances** see meson resonances**kaon scattering** see kaon-baryon scattering; kaon-nucleus scattering; lepton hadron scattering; meson-meson scattering; photon-hadron scattering**kaons**

see also kaon regeneration

form factor study in  $e^+ e^-$  annihilation,  $\phi(1.64)$  resonance prod. 2-15350

resonant time-like form factor, radiative corrections, charge radius 2-29109

structure functions, perturbative QCD calc. in leading twist approx. 2-322

 $e^+ e^- \rightarrow K^+ K^-$ , charged kaon form factor for 1.0-1.4 GeV 2-33842 $K$ , mesons regeneration on nuclei in coloured quark model (Russian) 2-49049 $\bar{K}^0 K^*$  and  $\bar{K}^0 K^-$  EM mass difference 2-43348**Kapitza-Dirac effect**

see also Schwarz-Hora effect

No entries

**Kapitza resistance**

defective interface, interface wave model 2-35879

ferromagnetic superconducting thin film, irradiation, 1-V characts. 2-36214

glass-liquid He interface, localised surface excitations, Kapitza conductance 2-35878

loaded Rayleigh waves on lightly loaded interfaces, damping, appl. to Kapitza conductance 2-12900

nonequilibrium superconductivity, phonons and Kapitza boundaries, conf., Acquafredda di Maratea, Italy (Aug. 1980) 2-33238

solid-solid interface, Kapitza thermal boundary resist., acoustic mismatch model 2-30740

surface roughness contribution to Kapitza conductance 2-12870

surface roughness effects 2-50985

surface roughness effects 2-50986

Ag-Mn dil. alloy-He interface, mag. Kapitza resist., expt. design 2-30735

CMN powder-liquid  $^3\text{He}$  interface, thermal resist., mixed powder decimeter effect 2-30736Cu, sintered, low freq. phonons, Young's modulus and sound vel. meas., rel. to Kapitza resist. with liq.  $^3\text{He}$  2-45520 $\text{CuK}_2(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$  powder- $\text{He-II}$  interface, thermal resistance in mag. field, 0.7 to 1.8 K 2-35882



**Kapitza resistance continued**

- CuSO<sub>4</sub>.K<sub>2</sub>SO<sub>4</sub>.6H<sub>2</sub>O—liquid <sup>3</sup>He interface, thermal boundary resist., mag. coupling 2—30738  
 Fe/dilute <sup>3</sup>He—<sup>4</sup>He mixture, Kapitza conductivity constant 2—17356  
 He, solid-Cu interface, thermal boundary resist., <sup>3</sup>He nuclear spin relax. study 2—30711  
 He, adsorbed layer, heat transmission from substrate, film thickness depend. 2—50954  
 He, liq., thermal boundary resistance to small particles, phonon cond., size effect 2—45708  
 He, liquid, Kapitza resist. with solid interface 2—30686  
 He, solid or liquid, interface with solid, phonon reflection spectrum study 2—30687  
 He, superfluid, temperature distrib. near heated surface (*Russian*) 2—8685  
 MnCl<sub>2</sub>(Br<sub>2</sub>).4H<sub>2</sub>O, antiferromag., Kapitza resistance determ. from relaxation behaviour 2—36492  
 MnSO<sub>4</sub>(NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>.6H<sub>2</sub>O, Tutton salt, thermal cond. and Kapitza resist. 2—35881

**KDP see potassium compounds****Kelvin-Helmholtz instability see flow instability****Kennelly-Heaviside layer see E-region; ionosphere****keratin see proteins****Kerr electro-optical effect**

- see also optical Kerr effect  
 aliphatic esters, optical anisotropy, Molar Kerr constants, Rayleigh scatt. obs. 2—43923  
 $\alpha,\omega$ -dibromoalkanes, molar Kerr const., dipole moments, dielectric study 2—20097  
 electro-optical distance measuring instrument, two channel laser modulation (*German*) 2—28880  
 4-n-hexyl-4'-cyanobiphenyl isotropic liq. cryst., Kerr effect, RF dispersion 2—5659  
 hydrocarbons, birefringence in mag. and electric field, quantum. chemical calcs. 2—20099  
 inert gases, fluid, intermolecular interaction influence on Kerr const. 2—36601  
 isotropic liq. cryst., Kerr effect, RF dispersion 2—5659  
 4-nitrophenyl 4-n-alkoxybenzoates liq. cryst., isotropic-smectic A transition, elec. Kerr effect obs. 2—16781  
 oxirane skeleton and C-C bond in its derivatives, electron-optical props., mol. polarisability, electric moment 2—11532  
 N-(2-oxy-4-alkoxybenzylidene)-4-n-alkylamine homologs, dielectric dispersion 2—46459  
 4-n-pentyl-4'-cyanobiphenyl, pretransitional Kerr effect 2—36605  
 PMMA, glassy, Kerr effect relaxation meas. 2—13452  
 viscous liqs. polarisable dipolar mols., dynamic Kerr effect and dielec. relax., linear and non-linear effects 2—29640  
 Co<sub>2</sub>Al, Heusler alloys, mag. and magneto-optical props. 2—26671  
 Co<sub>2</sub>YGa, Heusler alloys, mag. and magneto-optical props. 2—26671  
 Cr complex, ( $\eta^5$ -benzene)tricarbonylchromium Co, mono-substituted derivatives, configs., moments, electric birefringence 2—29639

**Kerr magneto-optical effect**

- amorphous mag. materials, domain pattern meas. using C-CD image sensor 2—36379  
 interference enhanced Kerr spectroscopy for thin absorbing films 2—51556  
 measurement techniques (*Japanese*) 2—19149  
 measurement using piezo-birefringent modulator 2—41334  
 steel, Cr-Mn, austenitic, surface  $\gamma$ - $\alpha$  phase transition during oxidation (*Russian*) 2—50966  
 tri(2-pyridinyl)-s-triazine, conformations, Kerr and Cotton-Mouton effect study 2—49471  
 triphenyl-s-triazine, conformations, Kerr and Cotton-Mouton effect study 2—49471  
 1,3,5-triphenylbenzene, conformations, Kerr and Cotton-Mouton effect study 2—49471  
 B<sub>1-x</sub>Co<sub>x</sub>, amorphous, mag. and magneto-optical props. 2—17450  
 BaCoFe<sub>16</sub>O<sub>27</sub>, hexagonal ferrite, magneto-optical spectra 2—31458  
 BaFe<sub>2</sub>O<sub>19</sub>, hexagonal ferrite, magneto-optical spectra 2—31458  
 Co<sub>2</sub>Si<sub>1-x</sub>, sputtered film, transport props. and magneto-optic Kerr effect 2—21556  
 Fe<sub>2</sub>O<sub>3</sub>, haematite, magneto-optical props. (*Russian*) 2—26871  
 $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>, hematite, surface mag. helioid on nonbasal faces, Kerr effect study 2—46552  
 Fe<sub>2</sub>O<sub>3</sub>, Li and Mg substituted, optical and magneto-optical props. 2—17449  
 Gd-Fe/Tb-Fe, exchange coupled ferrimag. double layered films, magnetisation curves 2—26692  
 Ge, interband Faraday and Kerr effects anal. 2—26874  
 NiFe chevron elements, 90° symmetrical, magnetisation processes and distrib. 2—26663  
 Si, interband Faraday and Kerr effects anal. 2—26874  
 Si<sub>1-x</sub>Co<sub>x</sub>, amorphous, mag. and magneto-optical props. 2—17450  
 SrFe<sub>12</sub>O<sub>19</sub>, hexagonal ferrite, magneto-optical spectra 2—31458  
 Y<sub>2</sub>Fe<sub>2</sub>-Al<sub>2</sub>O<sub>12</sub>, ferrimagnetic, magneto-optical Kerr effect and reflectivity 2—21987  
 Y<sub>2</sub>Fe<sub>2</sub>-Ga<sub>2</sub>O<sub>12</sub>, ferrimagnetic, magneto-optical Kerr effect and reflectivity 2—21987  
 Y<sub>2</sub>Fe<sub>2</sub>-In<sub>2</sub>O<sub>12</sub>, ferrimagnetic, magneto-optical Kerr effect and reflectivity 2—21987

**kicksorters see counting circuits****kidney**

- artery models with Newtonian and non-Newtonian fluids, flow velocity meas. 2—14281  
 artificial, past, present and future 2—27938  
 assist systems, overview 2—27937  
 bifurcation, glass model, wall shear stress meas. 2—9820  
 blood flow patterns, normal and abnormal renal artery, US echo-Doppler scanning meas. 2—47667  
 irradiation, low dose, effect on enlargement in children following nephrectomy for Wilms' tumour 2—6252  
 phantom materials for radiation dosimetry, liqs. and gels 2—47715  
 polycystic disease, vol. estimation from computerised tomography 2—47688  
 radiopharmaceuticals, dosimetry, importance of bladder radioactivity 2—27904  
 renal medulla multistage modelling, mass balance in a single stage 2—32385

**kidney continued**

- renography using <sup>125</sup>I on serial radiographs (*Russian*) 2—32311  
 sonographic diagnosis of kidneys and retroperitoneal space, review (*German*) 2—32291  
 urinary calculus research, appl. of PICTOVAL microprojection instrument in micrograph anal. 2—9897  
 US velocities of several biological tissues 2—37623

**Kikuchi lines see electron diffraction crystallography****killed steel see alloy steel****kinematic viscosity see viscosity****kinematics**

- see also acceleration; ballistics  
 Centaurus A (NGC 5128), radio galaxy, H I radial vels. 2—3307  
 galaxies, vel. dispersions in bulges of spiral and S0 galaxies rel. to three-component model 2—28542  
 granular materials, ideal, kinematics, plasticity theory 2—21212  
 hydrology, subsurface stormflow 2—37909  
 IC 708, head-tail radio galaxy, orbital motion around centre of Abell 1314 cluster 2—28544  
 interacting galaxies kinematics, motions in nests and chains 2—42753  
 interstellar cyanopolyynes, vel. components of absorpt. lines in direction of Cassiopeia A 2—6655  
 interstellar gas, vel. struct. in lines of sight to Magellanic Clouds 2—10508  
 interstellar gas clouds in nuclei of Seyfert galaxies and quasars, kinematics (*Russian*) 2—53369  
 interstellar H I clouds, very high velocity, vel. and space distrib. rel. to intergalactic population 2—10501  
 Magellanic Clouds, proper motion rel. to halo mass of Galaxy 2—48332  
 NGC 650-1, planetary nebula, emitting gas rel. field rel. to spatial-kinematical model 2—6658  
 rectangular bar and rectangular beam, collision, impact force and kinematics 2—35049

**kinematography see cinematography****kinerecording see video recording****kinetic theory**

- see also Boltzmann equation; collision processes; intermolecular mechanics; kinetic theory of gases  
 Boltzmann principle, kinetic analogue 2—42978  
 Brownian particles, strongly interacting, dynamic shear viscosity, kinetic theory 2—28802  
 correlation functions asymptotics in generalised Boltzmann-Enskog model 2—48604  
 electron cyclotron resonance maser, kinetic theory considering space charge effect 2—20286  
 ELMO Bumpy Torus with enhanced ion tail, kinetic model for neoclassical transport 2—50431  
 entropy principle, two point kinetic equations 2—19061  
 exact Markov master eqn., derivation without approximation 2—3498  
 free electron laser with waveguide cavity, magnetic resonant 3-D kinetic theory 2—39664  
 liquids, solutions and dense gases, structure and thermophysical props. with allowance for intermol. interactions- 2—8405  
 Markov master eqn. derivation problem 2—19005  
 massive neutrino gas, vol. viscosity 2—48609  
 non-unique solutions of kinetic equations 2—10700  
 plasma kinetic equations solns. 2—20820  
 polarised fluid, in EM field, pressure tensor and force density anisotropy 2—28746  
 polymer liquids, kinetic theory (*Dutch*) 2—50898  
 quantum fluid, time correlation function, kinetic eqn., memory kernel 2—30672  
 random processes, divergences in kinetic eqns. construction 2—6800  
 relativistic plasma, kinetic theory 2—40166  
 selectively absorbing boundaries, kinetic boundary layer for Fokker-Planck eqn. 2—38570  
 sputtered atom thermalisation from Cu and Nb 2—13605  
 superconductors, kinetic theory of nonequilibrium phenomena 2—41072  
 three-phase mixtures, balanced conditions and universality at critical point (*Dutch*) 2—48657

**kinetic theory of gases**

- see also Brownian motion; collision processes; equations of state; intermolecular mechanics; Joule-Thomson effect  
 Brownian particle kinetic energy relax. 2—28776  
 dense gases, kinetic theory 2—35255  
 diatomic gas spherical flow from evaporating drop 2—1280  
 diatomic molecules, vibr.-rot. excitation, models for kinetic theory 2—20803  
 diatomic molecules kinetic theory cross sections, collision dynamics 2—24819  
 education, Boltzmann processes, gas kinetics, energy space model, computer simulation 2—48439  
 Enskog equation, kinetic model, modification 2—50354  
 Enskog kinetic theory and hydrodynamic transport coeff. 2—25479  
 expansion into vacuum, breakup of mol. clusters 2—39953  
 finite collision time effects and bound state effects in binary collision approx. 2—8255  
 fluid phases of matter, hard sphere model 2—35368  
 formulation of boundary conditions for internal temperature 2—40018  
 gas dynamics, collision integrals, Chapman-Enskog method 2—30264  
 hard sphere gas, fluctuations about Boltzmann eqn. 2—38607  
 heteromolecular nucleation in vapours, free energy change, electrostatic energy contrib. 2—20801  
 hypersonic flow similitude of low density gas over blunt bodies 2—50294  
 ion mobilities, temperature dependence, kinetic theory, mass spectra 2—20810  
 kinetic models for the generalized Enskog equation 2—35254  
 liquids, solutions and dense gases, structure and thermophysical props. with allowance for intermol. interactions 2—8405  
 Lorentz gas, kinetic theory, repeated-ring approx. 2—50353  
 Maxwell gas, nonlinear Boltzmann eqn., powerlike decreasing solns. 2—40016  
 moderately dense gas, kinetic theory, long wavelength hydrodynamic perturbations 2—20804  
 molecular gas, Boltzmann eqn., correspondence of classical and quantum theories 2—3535  
 molecular high-energy translational motion, Boltzmann eqn. soln. 2—44807



**kinetic theory of gases continued**

- monocomponent gases, direct simulation scheme derived from Boltzmann eqn. 2-23595
- monocomponent gases, direct simulation scheme derived from Boltzmann eqn. 2-23596
- nonequilibrium gas mixtures, transport eqns. 2-20802
- one-dimensional compressible gas dynamics calculations using the Boltzmann equation 2-8253
- quantum kinetic equations in systems with bound states 2-30265
- recent developments book contrib. 2-12265
- relativistic multicomponent gas, entropy production 2-35253
- renormalised kinetic eqns. for dense high temp. classical gas (*Russian*) 2-44810
- rigid sphere molecules, relaxation rates of inverse-power 2-1282
- slowing down of energetic molecules in a spatially uniform gas 2-1283
- sorption dynamics, Goursat problem for quasi-linear system 2-8254
- spacecraft emitted gas, mean free path 2-50352
- spin polarised gas, transport props. 2-50350
- spin polarised gas, transport props. 2-50351
- turbulent kinetic theory of gases, Hilbert-Chapman-Enskog expansion 2-25480
- turbulent kinetic theory of gases, Hilbert-Enskog-Chapman expansion 2-25481
- velocity correlation in model cell, direct simulation scheme derived from Boltzmann eqn. 2-44805
- void diffusion in porous medium with surface diffusion, mean free path theory 2-40015
- Ar-CO binary gas mixtures, thermal cond. 2-50357
- H<sub>2</sub>-N<sub>2</sub> binary gas mixtures, thermal cond. 2-50357
- He-CO binary gas mixtures, thermal cond. 2-50357
- N<sub>2</sub>-Ar mixture, room temp. thermal cond., rel. to kinetic theory 2-30269
- N<sub>2</sub>-He mixture, room temp. thermal cond., rel. to kinetic theory 2-30269
- N<sub>2</sub>-Kr mixture, room temp. thermal cond., rel. to kinetic theory 2-30269
- N<sub>2</sub>-Ne mixture, room temp. thermal cond., rel. to kinetic theory 2-30269

**kinetic theory of liquids** *see kinetic theory; liquid theory***kinetics of chemical reactions** *see reaction kinetics***kink bands**

- crack extension by kink propagation, atomistic model 2-30519
- dislocation mobility and dislocation-point defect interactions, kink model 2-45161
- dislocations, moving, with kinks, impurity atoms interaction 2-1514
- Al, thermally activated double kink generation during cyclic deformation, US study 2-45185
- Fe, high-purity, defect investigs. using mag. aftereffect and internal friction (*Polish*) 2-27205

**kinoforms** *see computer-generated holography***Kirkendall effect** *see diffusion in solids***kitchen appliances** *see domestic appliances***KKR calculations**

- alloys, random, angle-resolved photoemission, KKR-CPA treatment of disorder 2-9248
- edge dislocation, electronic struct. calc., KKR approach 2-30819
- scalar relativistic approx., Green's function method (*Chinese*) 2-26271
- transition metal, electronic structure of impurities, review 2-26333
- Ag, cyclotron mass anisotropy and electron-phonon interaction 2-45810
- Ag<sub>1-x</sub> optical props. and band struct., press. depend. 2-13448
- Ag<sub>1-x</sub>Pd<sub>x</sub> mass and lifetime enhancement due to disorder, residual resist., KKR-CPA calc. 2-30880
- CuCl(Br)(I), optical props. and band struct., press. depend. 2-13448

**klystrons***see also reflex klystrons*

- microwave power feeding for magnetic fusion devices, multipactor in the Brambilla Grill 2-49180
- optical klystrons and multibeam free electron lasers 2-39659
- phototron, direct conversion of light to radio frequency energy 2-22660

**Knight shift***see also nuclear magnetic resonance*

- fine metallic particles, structure and props. 2-51069
- metallic glasses, NMR studies, review 2-21896
- metallic glasses, NMR study, review 2-9045
- cis-polyacetylene, metallic, <sup>13</sup>C Knight shift absence, soliton model 2-46403
- Be-Mo-Zr, amorphous, NMR, elec. resist. and supercond. props. 2-36460
- Be-Nb-Zr, amorphous, NMR, elec. resist. and supercond. props. 2-36460
- Bi-Ni, liq., Ni influence on <sup>209</sup>Bi NMR linewidth and Knight shift 2-41218
- Ce, muon spin rotation study of  $\gamma$ - $\alpha$  transition 2-9350
- Ce<sub>0.7</sub>Th<sub>0.3</sub>, muon spin rotation study of  $\gamma$ - $\alpha$  transition 2-9350
- Cu, In implanted, brute force/NMR expt. 2-36451
- Cu<sub>2</sub>Rh<sub>1-x</sub>, mag. props., mag. susceptibility and NMR meas. 2-17261
- Fe<sup>183</sup>Ta, dil., Knight shift from hyperfine field anal. of NMR-ON results 2-46400
- In-Zn liquid system, <sup>115</sup>In spin-lattice relax. and Knight shift 2-21913
- Li, Knight shift vol. depend. 2-9046
- LiCd(Zn), self-consistent linear muffin-tin orbital calcs. 2-21496
- Na, Knight shift vol. depend. 2-9046
- PbMo<sub>6</sub>Se<sub>6</sub>(S<sub>8</sub>), Chevrel phase supercond., NMR study 2-41064
- Pt particles, microelectronic struct., NMR study 2-26775
- Pt small particles, NMR study 2-31315
- SmCu<sub>4</sub>, Knight shift and mag. susceptibility, temp. depend. 2-2152
- SmCu<sub>5</sub>, Knight shift and mag. susceptibility, temp. depend. 2-2152
- SnMo<sub>6</sub>Se<sub>6</sub>, Chevrel phase supercond., NMR study 2-41064
- TiH<sub>2</sub>, band struct., NMR study 2-40777
- Ti<sub>1-x</sub>V<sub>x</sub>H<sub>1.95</sub>, proton NMR study of electronic struct. 2-2154
- V alloys, superconducting transition temp., elec. cond., density of states 2-36178
- V<sub>2</sub>Ga(Ge)(Si), spin-lattice relax. and Knight shift, temp. depend. 2-36472
- VSi<sub>2</sub>, Knight shift, high temp. NMR study 2-41219
- V<sub>2</sub>Si, Knight shift, high temp. NMR study 2-41219

**Knudsen flow**

- cell, UHV compatible miniaturised Knudsen cell as controlled Ag evaporation scene 2-2452
- formaldehyde, mol. beam, translational and rotational temps. (*French*) 2-39473
- molecular flow, free and quasi-free, of gas through pipes of axial symmetry (*German*) 2-25398
- molecular Knudsen flow, mag. field effects 2-35181

**Knudsen flow continued**

- void diffusion in porous medium with surface diffusion, mean free path theory 2-40015
- <sup>3</sup>He-<sup>4</sup>He, superfluid, shear viscosity and phonon gas flow kinetic processes 2-35763
- <sup>4</sup>He, superfluid, shear viscosity and phonon gas flow kinetic processes 2-35763
- Nb-C-O, equil. vapour press. meas. by Knudsen effusion method (*Japanese*) 2-27143

**Knudsen number** *see Knudsen flow***Kohn effect** *see lattice dynamics***Kondo effect**

- Anderson impurity clusters, sp.-ht. and susceptibility Fermi liq. relations 2-26325
- Anderson model, density of states, intermediate valence case and Kondo limit 2-13000
- CESR spectroscopy in presence of mag. impurities 2-26746
- dilute alloys with rare earth impurities, exact soln. of Kondo problem 2-36309
- Fermi surface sum rule and consequences for periodic Kondo and mixed valence systems 2-51075
- magnetic ions in metals, theory of ESR, review 2-46360
- metal, conduction electrons, surface scatt. on mag. impurities, Kondo effect (*Russian*) 2-5397
- model, magnetoresistance calcs. 2-40866
- one-dimensional conductor, organic, low temp. cond., Kondo effect in presence of gap-precursor 2-26369
- specific heat of Kondo model, mag. impurity contrib. calcs. 2-31195
- spin glasses, Stoner and Kondo, mean field description 2-31219
- Weigmann eigenstates of Kondo Hamiltonian, completeness in Hilbert space 2-46242
- Wiegmann's soln., completeness 2-5526
- Ag-Mn dil. alloys, press. depend. of elec. resist. in dil. limit and spin glass regime 2-5398
- Au foil, annealed under reduced Cl<sub>2</sub> press., elec. cond. increase, 4.2K 2-35994
- Au-Cu-Fe(Mn) alloys, low temp. elec. cond., scatt. mechanisms 2-35997
- Au-Fe, Kondo system, thermoelec. transport parameters 2-36021
- (Ce, La)Al<sub>2</sub>, high-field magnetisation, single ion Kondo effect and ferromag. short range order 2-36310
- (Ce,M)Al<sub>2</sub> (M=La, Y, Sc), spin dynamics, neutron scatt. study 2-26584
- CeAl<sub>2</sub>, high-field magnetisation, single ion Kondo effect and ferromag. short range order 2-36310
- CeAl<sub>2</sub>, spin dynamics, neutron scatt. study 2-26584
- CeAl<sub>3</sub>, low temp. magnetoresist., cryst. field and Kondo effects 2-5390
- CeB<sub>6</sub>, spin dynamics, neutron scatt. study 2-26584
- CeCu<sub>2</sub>Si<sub>2</sub>, spin dynamics, neutron scatt. study 2-26584
- CuCr film, superconducting Kondo effect study using DC Josephson current 2-31091
- Fe-Ni-P-B(Si) metallic glass, ferromag., absolute thermoelec. power 2-51154
- Fe<sub>40</sub>Co<sub>60</sub>B<sub>4</sub> metallic glass, ferromag., absolute thermoelec. power 2-51154
- (Fe<sub>1-x</sub>Ni<sub>x</sub>)<sub>78-y</sub>Cr<sub>2</sub>Si<sub>10</sub>B<sub>12</sub> metallic glass, mag. and elec. props. 2-21834
- (LaCe)Al<sub>2</sub>, re-entrant supercond. phase boundaries, press. depend. 2-31020
- La<sub>0.8</sub>Th<sub>0.2</sub>Ce, re-entrant supercond. phase boundaries, press. depend. 2-31020
- Pd<sub>1-x</sub>M<sub>x</sub>H (M=Cr, Mn, Fe), superconducting, Kondo effect and spin-glass freezing due to impurities 2-31140
- Sc, solid solubility and heat capacity of Fe 2-8622
- SmS, collapsed, press. induced transition from intermediate valence to metallic behaviour 2-26453
- ThCr, superconducting, sp. ht. meas. 2-31052
- UF<sub>6</sub>-UNi<sub>2</sub> system, temp. depend., elec. resist., 4.2 to 300K, Kondo-like system behaviour 2-8789
- ZnMn dil. single crystals, mag. anisotropy at low temps. 2-36357

**Korringa-Kohn-Rostoker calculations** *see KKR calculations***Koster effect** *see dislocation damping***k.p. calculations**

- InSb, electronic struct. in zinc-blende and rocksalt phases 2-12968
- NaCl, SCF APW-k.p. calc. of band struct. 2-12952
- Se, relativistic ab initio valence band and conduction band levels 2-35930
- SiC, cubic, electron-hole liq., ground state props., valence band masses, exciton and acceptor energies 2-35947
- Te, relativistic ab initio valence band and conduction band levels 2-35930
- TlSe, energy band struct. 2-40788

**Kramers-Kronig relations**

- absolute specular reflectance, calc. of optical and dielectric constants (*Czech*) 2-26854
- anthracene, singlet system, exciton energy shifts, piezoreflection spectra 2-5658
- 1,5-bis(dimethylamino)pentamethinium perchlorate, singlet system, polariton energy shifts, piezoreflection spectra 2-9126
- borate glasses, low freq. IR refl. spectra and optical consts. 2-26922
- dispersion of magnetooptical effects, special features 2-17451
- laser electronics and systems, book 2-48413
- linear wave propag. in homogeneous and inhomogeneous media, dispersion relations 2-18911
- refractive index, complex, Gaussian type, formula 2-21969
- semiconductor, longitudinal dielec. function, small wave vector and freq. depend. 2-40809
- solid, dielectric properties calc. from optical reflection spectra using Kramers-Kronig anal. (*German*) 2-26809
- TCNQ, singlet system, polariton energy shifts, piezoreflection spectra 2-9126
- thin crystal, radiative decay of excitons, crystal size depend. on optical spectra 2-8758
- ultrasonic attenuation and phase velocity 2-16157
- X-ray Cherenkov radiation, permittivity calcs. near photo-absorpt. edge (*Russian*) 2-24929
- $\alpha$ -AgI, ionic cond. and dielec. const. in microwave region, 420 to 550K 2-30646
- (As<sub>2</sub>Se<sub>3</sub>)<sub>1-x</sub>(Sb<sub>2</sub>Se<sub>3</sub>)<sub>x</sub>, oscillator strength, far IR spectra and Kramers-Kronig analysis 2-26899
- $\beta$ -B, rhombohedral single cryst., optical props. in fundamental absorpt. range 2-41321
- C, X-ray Cherenkov radiation, permittivity calcs. near photo-absorpt. edge (*Russian*) 2-24929



**Kramers-Kronig relations** continued

- Cs complex,  $\text{Cs}_2(\text{TCNQ})_2$ , mol. vibr. and charge transfer states, polarised reflectance study 2-36637  
 Cu-Zr, amorphous film, electronic struct., optical spectra study (*French*) 2-22044  
 EuB<sub>6</sub>, single cryst., optical const., and electronic structure 2-41320  
 Fe<sub>1-x</sub>O, wustite, reflection spectrum anal. 2-2316  
 GaN epitaxial layers, refl., 5 to 30 eV, dielec. function and electron energy loss function 2-22045  
 GeSe<sub>2</sub>, polarised IR and Raman spectra 2-26903  
 HgI<sub>2</sub>, red, low temp. reflectivity and optical props. 2-2313  
 KC<sub>8</sub>, graphite intercalation cpd., back-folded graphite band excitations, EELS study 2-41467  
 LaB<sub>6</sub>, characteristics of conduction electrons, optical study 2-9161  
 LaB<sub>6</sub>, single cryst., optical const., and electronic structure 2-41320  
 NaCrS<sub>2</sub>, reflectivity spectrum, Kramers-Kronig anal., optical functions, band struct. 2-26935  
 Si, amorphous, energy gap determ. from optical meas. 2-13437  
 SmB<sub>6</sub>, single cryst., optical const., and electronic structure 2-41320  
 Zn<sub>3</sub>P<sub>2</sub>, reflectivity spectra, Kramers-Kronig anal. 2-26937  
 ZnSe single cryst., polished and etched, reflectivity and electroluminescence 2-36604

**Kramers systems** see *determinants***Kromayer lamps** see *mercury vapour lamps***Kronig-Penney model**

- crystal model, discrete Schrodinger eqn. soln. 2-19014  
 semiconductor superlattices, electronic props. calc. method using complex band struct. 2-26273

**krypton**see also *nuclei with* .....

- abundance in solar system from s-process systematics 2-3935  
 adsorbed on graphite, pair pot. 2-1768  
 adsorbed on graphite, two-dimensional phase transforms. 2-8700  
 adsorbed on Pd, layer-dependent core-level shifts 2-2014  
 adsorption on Ag(111), monolayer and bilayer films, lattice const. and vibr., thermodynamic props. 2-45714  
 anharmonic cryst., thermodynamic props. 2-35719  
 atom, bound odd-parity spectrum, Rydberg series, multichannel quantum defect theory 2-15734  
 atom, elastic scatt. of electrons, spin polarisation between 10 and 50 eV 2-24857  
 atom, electron bombardment, bremsstrahlung fluoresc. obs. 2-19996  
 atom, electron impact ionisation yield 2-29721  
 atom, electrons elastic scatt., relativistic effects 2-34567  
 atom, expectation values, momentum density, inequalities, comment 2-39301  
 atom, g factor meas., optical pumping, mag. resonance 2-4265  
 atom, M subshells, ionisation cross sections by electron impact 2-34580  
 atom, outer shell photoelectron spectra, model for calc. atomic satellite struct. appl. 2-43997  
 atom, photoionisation, cross sections, spin-polarisation, data compilation 2-38370  
 atom, positrons elastic scatt., polarisation pot. 2-34568  
 atomic absorption edge, synchrotron-Cerenkov radiation study 2-19989  
 atomic beam, metastable states, excitation to Rydberg level, field ionisation detection 2-15733  
 atoms, (e,2e) valence separation energy spectra, electron correl. effects 2-7528  
 atoms, valence electron spin-orbit splitting, Slater transition state calcs. 2-34283  
 atoms, XPS shake up studies 2-43870  
 atoms in Kr-Ar mixtures, pressure-induced multiphoton ionisation 2-7530  
 electron swarm parameters 2-25487  
 electronic stopping power of charged particles near its maximum 2-21193  
 emissions in HTR coolant following water ingress (*German*) 2-533  
 equation of state of pure fluid in one-phase region development from expt. data 2-40509  
 gas, 61.6 nm coherent radiation generation by fifth harmonic conversion of XeCl laser 2-20366  
 gas, Fano factor meas. 2-50359  
 gas, singly ionised, singly ionised gas, model for satellite struct. in atomic spectra 2-43823  
 gas, thermodynamic props., density determ. 2-40022  
 gas, two-body depolarised CILS spectra at 295K 2-8263  
 highly ionised plasma form. by electron beam in crossed electric and mag. field (*Russian*) 2-25566  
 homonuclear diatoms, collision-induced Raman spectra and diatom polarisability 2-29598  
 isotope mixing ratios in Venus atmosphere 2-32884  
 liquid, free-carrier yields of radiation induced cond. in liquefied rare gases 2-1974  
 liquid, fundamental props., use as radiation detector media 2-49227  
 liquid, nonpolar, hot electron scatt. 2-30941  
 liquid state props. along saturation line, Monte Carlo simulation 2-25716  
 methane-Kr mixture, orientational disordering by spin conversion 2-25768  
 molecule, relative photoionisation cross sections between  $^2\text{P}_{3/2}^0$  and  $^2\text{P}_{1/2}^0$  fine struct. thresholds 2-29661  
 monolayer on graphite, struct. and phase transitions 2-1754  
 perturbation of TI and Hg spectral line shapes 2-29552  
 physisorbed monolayer, two-dimensional melting 2-1759  
 quantum crystal, inverse and energy surfaces, elastic waves 2-50956  
 selective population of levels in afterglow 2-49317  
 singly charged ion source 2-4158  
 solid, SIMS 2-36746  
 solid, transition to metallic state, band struct. 2-26300  
 supersonic beams, absolute intensities and perpendicular temps. 2-29732  
 gas,  $\alpha$ -particles excited, recombination luminesc. at high-pressure, time depend. 2-50368  
 Ar-Kr mixture, Fano factor meas. 2-50359  
 Ar-Kr-F<sub>2</sub> gas mixture, plasma props. under steady discharge condition (*Chinese*) 2-8367  
 He-Kr, electrically excited, electron energy distrib. and transport coeffs., Boltzmann stability eqn. calc (*Chinese*) 2-25665  
 K<sup>3+</sup>, optical oscillator strengths, Born approx. and LS coupling calc. 2-29551  
 K<sup>4+</sup>+NH<sub>3</sub>, energy disposal in thermal energy CT reactions 2-44084  
 Kr II, excited states, radiative lifetime meas., delay coincidence method 2-24651  
 Kr VIII, beam-foil excitation, relative level populations 2-43880

**krypton** continued

- Kr<sup>+</sup> laser, optical pumping of  $^7\text{Li}_2$  laser transitions 2-7750  
 Kr-Ar, lineshapes and dipole moments in collision-induced absorption 2-29574  
 Kr-Ar, pressure-induced multiphoton ionisation of Kr atoms 2-7530  
 Kr-Ar mixture released during nuclear fuel reprocessing, data on stabilising materials for low temp. rectification (*German*) 2-11211  
 Kr-CO<sub>2</sub>, binary systems, diffusion coeff. temp. depend. 2-35256  
 Kr-H<sub>2</sub>, hyperfine spectrum obs. 2-34385  
 Kr-H<sub>2</sub>, hyperfine spectrum meas. using mag. beam reson. technique 2-34520  
 Kr-H<sub>2</sub> mixture, viscosity meas. 2-1285  
 Kr-methane system, liq.-vapour equil. 2-26031  
 Kr+Ar, He metastable states; chemi-ionisation velocity depend. 2-44069  
 Kr+Ar, Kr L X-ray prod. cross sections, charge-state depend. of inner-shell vacancy prod. 2-7630  
 Kr+Ar<sup>+</sup>, low energy charge transfer reactions, time of flight study 2-15888  
 Kr+Ca collision broadening of principal series line 2-43831  
 Kr+H<sub>2</sub>(D<sub>2</sub>), metastable atoms, collisional de-excitation cross sections expt. 2-24822  
 Kr+HF, rot. to translational energy transfer, state-to-state cross sections 2-39480  
 Kr+Kr<sup>+</sup>, collision broadening in MO-electron spectra 2-11568  
 Kr+Mg (Al) (Cs) (Pb) (Bi) ions charge transfer cross sections involving electron capture processes 2-7631  
 Kr+Ne, Ne K X-ray prod. cross sections, charge-state depend. of inner-shell vacancy prod. 2-7630  
 Kr<sup>+</sup>+Ar, collision broadening in MO-electron spectra 2-11568  
 Kr<sup>+</sup>+He, ion mobility meas. at 294K 2-50361  
 Kr<sup>+</sup>+Kr, collision broadening in MO-electron spectra 2-11568  
 Kr<sup>4+</sup>+Kr, oscillations in coincident MO Auger spectra emitted in 450 keV 2-24842  
 Kr<sub>2</sub>, monomer effective core pots., pot. energy curves, SCF and CI calcs. 2-24620  
<sup>83</sup>Kr dating of groundwater rel. to T and <sup>14</sup>C (*German*) 2-6458  
<sup>83</sup>Kr irradiation facility using pressurisation-dissolution method 2-7428  
<sup>83</sup>Kr leakage from stored fuel elements (*German*) 2-466  
<sup>83</sup>Kr monitoring during TMI-2 purge 2-49193  
 Kr\* levels populated by two-photon absorpt. using ArF laser, fluoresc., radiative lifetimes 2-24640  
 Kr<sub>2</sub>\*, metastable excimers, electron impact ionisation, cross sections 2-4400  
 Kr<sub>2</sub>\*, radiative lifetime meas. 2-20135  
 N<sub>2</sub>-Kr mixture, room temp. thermal cond., rel. to kinetic theory 2-30269  
 N<sub>2</sub>-Kr thin layers, vapour deposited, condensate struct., TEM study (*Russian*) 2-26242  
 Ne-Kr, electrically excited, electron energy distrib. and transport coeffs., Boltzmann stability eqn. calc (*Chinese*) 2-25665  
 Si:Kr implanted layer annealing using laser beam 2-46838  
 UO<sub>2</sub> kernels, monolayer capacity in physical adsorpt. of Kr 2-30756

**krypton compounds**

- laser, broad band, electron beam pumped 2-34727  
 KrCl\* molecules excited by fast discharge, stimulated emission 2-4494  
 KrF angular multiplexed 50-kJ laser module for inertial confinement fusion, conceptual design 2-931  
 KrF angular multiplexed 50 kJ laser amplifier for inertial confinement fusion, conceptual design 2-7786  
 KrF excimer laser, UV preionised, pulse energy and laser performance (*Chinese*) 2-7781  
 KrF laser, backward wave Raman pulse compression in methane, laser fusion appls. 2-7797  
 KrF laser, electron beam pumped, steady state model 2-11682  
 KrF laser, electron beam excited, output performance, computer simulation 2-44337  
 KrF laser, electron-beam-excited, 1.6 GW litre<sup>-1</sup> atm<sup>-1</sup> pump power density 2-44340  
 KrF laser intensification for laser fusion appl., backward-wave Raman pulse compression 2-16024  
 KrF laser radiation, amplified phase conjugate refl. 2-25070  
 KrF laser radiation freq. up-conversion by four-wave mixing in Mg vapour 2-11748  
 KrF laser radiation phase conjugation using degenerate four-wave mixing in CS<sub>2</sub> 2-25074  
 KrF lasers for compression and fusion 2-11274  
 KrF short-pulse laser operation, kinetic issues 2-895  
 KrF\*, mass spectrometric study 2-19818  
 KrF\* discharge e-beam controlled laser, ionisation instability (*Chinese*) 2-24996  
 KrF\*, electron-beam excited, vibr. relax. studies 2-20207  
 KrF\* molecules excited by fast discharge, stimulated emission 2-4494  
 Kr<sub>2</sub>F\*, radiative lifetime meas. 2-20135

**Kuhn-Thomas sum rule** see *molecular energy levels***Kurie plots** see *beta-decay theory***Kyropoulos method** see *crystal growth from melt***labelled atoms** see *radioactive tracers***labelled compounds** see *radioactive tracers***labelled molecules** see *radioactive tracers***laboratories**see also *acoustical laboratories*

- acoustical laboratory accreditation schemes 2-11978  
 acoustical testing laboratory, calibration and certification activities 2-11977  
 Francis Bitter National Magnet Laboratory, USA, cryogenic research facilities 2-18847  
 physics, at Universities, models (*Polish*) 2-23

**laboratory apparatus and techniques**

- see also *specific instruments and techniques*, e.g. *balances*, *plasma probes*, *vacuum techniques*  
 see also *instrumentation*; *instruments*; *measurement*; *student laboratory apparatus*; *test equipment*; *test facilities*; *testing*  
 automation, experiences with Hewlett-Packard HP 3350 minicomputer 2-3569  
 balance, electronic, Delta Range series, laboratory automation 2-3565  
 centrifuge, refrigerated, laboratory, with sample temperature control, review 2-177  
 computerised chromatograph, productivity increase through automation 2-173



**laboratory apparatus and techniques continued**

- digital voltage meas. using microprocessor 2-48472
- electrochemical analysis appl. of microprocessors 2-172
- feedback controlled nerve fiber impalement device 2-52679
- geomechanics, large-scale laboratory testing, conference, Berkeley, California, (1981 February 17 to 18) 2-28596
- HPLC columns packing 2-14017
- laboratory as teaching aid in teaching engineering student with specific symbol difficulties 2-33261
- mechanical instrument of high reposition accuracy, spatial filter reposition in optical processing (*Chinese*) 2-7721
- optical and radiation pyrometers for meas. temp. and radiation field 2-38386
- optoelectronic III-V semiconductor crystal growth in laboratory 2-46961
- plasma deposition/etching systems, gas pumps, oil lubricants and sealants 2-19092
- rock specimens large-scale laboratory testing, samples acquisition and preparation 2-32668
- spectrophotometer cuvette for turbidity studies near binary liquid critical points 2-42995
- tectonophysics, experimental, laboratory techniques 2-32665
- universal flatness tester with hydrostatic vertical displacement pick-ups 2-48696
- LaNi<sub>5</sub> hydride device for minimising laboratory H<sub>2</sub> hazards 2-6197

**labyrinth speakers** *see loudspeakers***Lacertids** *see BL Lacertae-type objects***ladder filters** *see filters***lakes***see also rivers*

- acid precipitation effects, colour photography appl. 2-10182
- acidification of lakes in New York State, effect on sediments 2-37473
- Australian maars, 10000 yr geomag. secular var. record from lake sediments 2-9927
- Baikal, obs. made with Pisces submersible 2-48037
- bank of reservoir, pore water press. calc. method 2-52881
- Bonneville, Utah, USA, old shoreline levels and crust isostatic compensation 2-52810
- Caspian Sea, wind wave effects on temp. and vel. in air layer 2-23009
- currents, objective anal. method, appl. to Lake Ontario 2-52950
- Donjek Lake, Yukon Territory, Canada, estimates of magnitude of glacier outburst floods 2-37894
- Erie, upwelling radiance over water, meas. and calc. as function of altitude 2-18576
- groundwater flow around lakes, seasonal reversals rel. to stagnation points and lake budgets 2-23038
- Group V elements, determ. in lake water using hydride at. absorpt., valence state effects 2-17931
- heavy metal contamination sediments investigation (*German*) 2-10093
- ice action on shores, Schefferville, Canada examination 2-37896
- Keowee, S.Carolina, stratification during cooling, long term simulation 2-28106
- Kinneret (Sea of Galilee), land-sea breezes 2-52886
- Kinneret sedimentary layers, seismic sounding study 2-37902
- Krakenes, Norway, sediment palaeomagnetism and magneto-mineralogy 2-32407
- Langmuir circulation, thermal struct. observations 2-42408
- Laurentian Great Lakes, comparison of concs. of <sup>239,240</sup>Pu, <sup>137</sup>Cs and <sup>90</sup>Sr in 1973 and (1974) 2-9698
- Llyn Gwernan, late glacial sediments, stratigraphic resolution and <sup>14</sup>C dating 2-10090
- Loch Ness, thermal struct. observation of Langmuir circulation 2-42408
- Manitoba, Canada, Late Quaternary history 2-14508
- Mariut, Egypt, heavy metal pollutants in water and fish 2-52399
- Michigan, snow storm formation, winter land breeze effect 2-6406
- Nurek Reservoir, Tadzhikistan, USSR, induced seismicity 2-28022
- nutrient changes simulation, model of Lac du Bourget (*French*) 2-3040
- Oklahoma lakes Ham and Arbuckle, whole lake mixing, water quality 2-10104
- Ontario, currents, appl. of objective anal. method 2-52950
- pollution accumulation in closed basin, diffusion eqn. soln. 2-18153
- Pontchartrain, USA (connected to Gulf of Mexico), subtidal water level variation 2-6381
- reservoir, microseismicity due to groundwater freezing in cracks 2-10088
- sediment <sup>210</sup>Pb chronology 2-17936
- sediment remanent magnetisation charact., of Greek lakes 2-52823
- Snake Lake, Wisconsin, seasonal reversal of groundwater flow rel. to stagnation points and lake budgets 2-23038
- stratification in cooling lakes, long term simulation 2-28106
- Superior, evaporation estimates based on IFYGL data 2-37913
- Suwa ice plate, icequake activity and thermal stresses 2-14500
- Telets, USSR, bottom sediments, geothermal anal. 2-14509
- Walden Reservoir, freshwater ice thickness from passive microwave sensors 2-3041

**Lamb shift**

- atoms, gaseous, high resolution polarisation spectroscopy, review (*Japanese*) 2-39508
- harmonic oscillator atom, level shift perturbation calc. 2-28701
- harmonic oscillator coupled to quantised, massless scalar field, model 2-28700
- high-order binding corrections to the Lamb shift 2-29532
- metastable hydrogenic atoms, shift meas. from anisotropy quenching radiation 2-20008
- methanol vibr. excited, dipole moment determ. by combined Stark effect and Lamb dip spectroscopy 2-49472
- muonium atoms, formation in 2S state in vacuum, Lamb shift meas. 2-49603
- nuclear size and radiative corrections 2-34324
- QED tests, Lamb shift of the hydrogen atom and hydrogenic ions 2-20009
- virtual transitions, line shape and pot. gauge (*Russian*) 2-20137
- Cl<sup>16+</sup>, hydrogenic, Lamb shift meas. 2-49340
- He, excited state, 1s3d <sup>1</sup>D non-relativistic total energy 2-43817

**lambda point** *see liquid helium-4; superfluidity***laminar flow***see also laminar to turbulent transitions*

- turbulence structure of a reattaching mixing layer 2-4801
- axisymmetric laminar squeeze film flow, approx. anal. of fluid inertia effects 2-30093
- bifurcated channel flow 2-dimens. and axisymmetric, body-fitted coord. calcs. 2-39981

**laminar flow continued**

- boundary layer, heat and mass transfer, coeff. change (*German*) 2-50237
- boundary layer, laminar to turbulence transition reversal, deep cooling effect 2-50293
- boundary layer, reverse transition influence of suction (*Russian*) 2-30098
- boundary layer, transformation and soln. method (*Chinese*) 2-25354
- boundary layer flow over rot. body, heat and mass transfer 2-35146
- boundary layer flow past two dimens. obstacles 2-35112
- boundary layer on a wall nearly parallel to a magnetic field 2-44798
- boundary layer on permeable surface in neighbourhood of symmetry plane of blunt bodies 2-39883
- boundary layer separation in supersonic flow following shock wave 2-20639
- boundary layers, flow on swept cylinders, similar solns. 2-20636
- boundary layers on an oscill. wedge 2-4789
- CANDU reactors, laminar falling film flow and heat transfer characteristics on horizontal tubes 2-24353
- circular pipe flow, transient anal. (*Chinese*) 2-4888
- compressible boundary layer with stationary origin on continuous moving porous surface with large suction 2-35111
- conducting dusty fluid, MHD motion between parallel plates 2-8238
- contaminant dispersion in laminar shear flows 2-16279
- convection, combined forced and free, in entry region of vertical annulus with rot. inner cylinder 2-35138
- convection, forced and free, in horizontal tube, interferometric obs. 2-8146
- convection with high Rayleigh number in shallow enclosures with different end temps. 2-1193
- convective heat transfer in tubes with laminar flow and axial heat conduction (*German*) 2-39881
- corrugated wall channels, with two bends, fluid flow and heat transfer 2-39985
- developing flow in eccentric annular ducts, numerical soln. 2-35108
- developing flow temp. in eccentric annular ducts, numerical soln. 2-35109
- developing laminar free convection in a heated vertical open-ended concentric annulus 2-35147
- dielectric fluid flowing along annular channel, influence of electric field of heat transfer 2-44791
- dielectric liquid, elec. charge generation by laminar flow in tube, quantitative theory 2-31434
- dielectric liquid, electric current generation by laminar flow 2-12796
- drag reduction in laminar and turbulent boundary layers 2-4791
- droplet, drag in translating fluctuating flow 2-12187
- duct flow, heat transfer contrib. (*German*) 2-50325
- ducts, annular, concentric, laminar flow determ., implicit finite difference scheme 2-12220
- electrically conducting fluid, motion in plane linear induction machine duct, current load 2-39990
- ethanol-water, binary distillation, heat and mass transfer meas. 2-30122
- eutectic growth, effect of forced convection 2-1423
- fin tip, heat transfer coeffs., analytical calc. 2-4691
- flame front, linear stability 2-12245
- flow pattern and frictional losses in incompressible pulsating laminar pipe flow 2-44785
- flow separation over moving walls, MRS criterion 2-20637
- flume for rotating laminar flow with linearly varying temp. distribution 2-16401
- forced convective heat transfer in trapezoidal channels 2-8108
- free boundary flows in thermally stratified medium, laminar buoyancy induced 2-35202
- 2-D free jet of viscoelastic fluid (*French*) 2-25413
- free-forced laminar flow convective heat transfer from square cavity in var. inclination channel 2-4816
- free-jets, unsteady effects, numerical soln. 2-20722
- friction compressor, compressible laminar subsonic flow, difference eqn. soln. (*German*) 2-20699
- fully developed pipe flow, wall turbulence prediction, k-ε model appl. 2-25360
- gas, perfect, two-dimens. streams, free expansion 2-1247
- gas-solid two phase round jet, laminar flow, mass and momentum transport 2-30203
- governing equations, laminar flow in a helically coiled pipe 2-1262
- heat transfer, pulsatile flow effects in curved tubes 2-35140
- heat transfer between 2-dimens. water jet and flat surface 2-44717
- heavy liquid around a cylinder, asymptotic theory 2-30094
- Hele-Shaw lamina flow of neutrally buoyant particles, blood appl. 2-35219
- horseshoe vortex flow, compressible Navier-Stokes eqn. 2-30152
- ice-salt water boundary layers, convection and turbulent flows 2-18454
- incompressible boundary layers, interaction with strong viscous-inviscid interaction, calc. 2-1167
- incompressible flow, primitive variable finite element formulations, mixed interpolation 2-25348
- incompressible fluid flow in channel 2-20635
- incompressible fluid with variable physical props. in tube in porous walls, drag and heat transfer in laminar motion 2-25352
- incompressible laminar flow in square section curved duct, numerical calcs. (*Japanese*) 2-8234
- incompressible Newtonian fluid, steady laminar flow in rectangular ducts 2-20632
- injection from finite section of a flat plate placed parallel to uniform stream 2-4792
- interference between boundary layer flow and wake flow 2-4787
- internally finned tubes, laminar heat transfer charact., fin conductance effect 2-4813
- interrupted plate passages, heat transfer, plate thickness effect, appl. to heat exchanger 2-4790
- jet, impinging, laminar, swirling, flow characts. 2-30195
- jet assimilation into aligned uniform stream 2-44770
- jets, two dimens., thermohydraulic transient regime injected into a rectangular cavity numerical study 2-1244
- laminar boundary layer, transitional spot, Reynolds number and pressure gradient effect 2-16283
- laminar boundary layer flow, singularity at separation, forced convection 2-16281
- laminar film condensation on a porous vertical wall with non-uniform normal velocity 2-50231
- laminar flowmeter research and appl. (*Chinese*) 2-16395
- laminar free convection round isothermal sphere, numerical anal. 2-1198



**laminar flow continued**

laminar separation bubble with transition-attempt at prediction with local coupling (*French*) 2-1259  
 limited cavitation on axisymmetric bodies obs. 2-25411  
 methane, laminar diffusion flame, thermal radiation, boundary layer eqns. 2-31921  
 methane oxidation near a cold wall in a shock tube 2-37076  
 methanol-water, binary distillation, heat and mass transfer meas. 2-30122  
 MHD system 2-40001  
 micropolar fluid flow in channel with porous walls, numerical soln. 2-50316  
 multi-solid particle system transport phenomenon anal. at higher Reynolds numbers by Karman-Pohlhausen method 2-25347  
 natural convection, double-diffusive counterbuoyant boundary layer 2-35144  
 natural convection from vertical surfaces, influences of variable props. 2-50266  
 natural convection heat transfer from inclined cylinders 2-44721  
 natural convection in breeder reactor, temp. rise, flow rate, laminar flow and turbulence 2-4092  
 natural convection in shallow cavities, numerical calcs. 2-8109  
 Newtonian fluid in horizontal rectangular duct, laminar heat transfer, friction factor 2-35136  
 non-Newtonian fluid, stationary Stokes problem, artificial isochoric strain-rate method (*French*) 2-3380  
 non-Newtonian fluid through channel of volute type disk pump, isothermal flow 2-35110  
 non-Newtonian power law fluids, pipe flow, laminar heat transfer, variable wall heat flux 2-20661  
 nonstationary flow in annulus between two tubes, inner cylinder harmonic oscill. depend. (*German*) 2-12227  
 nonstationary heat exchange of laminar flow of viscous incompressible fluids in channels 2-44732  
 oscillatory compressible, flow past yawed cylinders 2-12122  
 perturbations effect on flow struct. in detachment region 2-44702  
 pipe flow, axial conduction, heat flux wall, temp. profile soln. 2-4818  
 pipe flow, wall injection, conc. distrib., distorted velocity profiles 2-25442  
 pipe flows, transient wall-friction law struct., in one dimens. models 2-35225  
 plastic viscoelastic fluids, laminar shear flow 2-25353  
 polyethylene oxide solns. in square duct and capillary flow, along reduction, solvent effects 2-20755  
 polymer solns., semi-dilute, mech. degradation in laminar flow 2-30225  
 polymer solns., laminar flow, three parameter model describing expt. rel. between shear stress and shear rate 2-30095  
 potential flow over cylinder, finite element method appl. 2-16282  
 power law fluids, in tubes, laminar heat transfer, rheological props. 2-16220  
 power-law fluids, solid sphere in swarm, drag coeffs. and void functions 2-35114  
 precipitation, AC and DC electrostatic and magnetic, efficiency calc. 2-20735  
 radial flow through rot. annular discs, heat transfer and friction loss 2-8141  
 rarefied gas flow, model for flow prediction over free molecule to laminar flow range 2-25395  
 rotating fluid, mean flow induced by travelling wave 2-12163  
 sea drift struct. and compensating currents near bank slope 2-32533  
 separated flow past slender elliptic cone at incidence 2-1237  
 separated flows, two-dimensional boundary-layers calc. 2-16280  
 separating flow over backsteps, visualisation study 2-50234  
 Smith, A.M.O., boundary layer research 1945-75 2-42838  
 solar absorber-converters, laminar heat transfer characts. in triangular passages, Nusselt number determ. 2-2808  
 solute dispersion in laminar flow through tubes by simultaneous diffusion and convection 2-12120  
 sphere, in spheric cavity axisymmetric flows (*French*) 2-39880  
 static pressure hole problem, separation of velocity gradient, wall curvature and boundary layer effects (*French*) 2-16291  
 storage tank, laminar flow, temp. distrib., appl. to solar heating systems (*German*) 2-50233  
 stream function method, for steady laminar fluid flow problems 2-8110  
 submerged laminar jet, impingement on plane, appl. to shear strength of vascular endothelium 2-39963  
 supersonic and hypersonic laminar separated flow, numerical soln. (*Chinese*) 2-25388  
 supersonic interacting boundary layer flow past compression corner 2-1169  
 supersonic stream, oscillating wedge, laminar boundary layer, influence of blowing 2-30097  
 suspensions, flocculation in laminar tube flow 2-16278  
 Taylor vortex flow, transition from laminar flow, visualisation study 2-20774  
 thermally driven unsteady laminar flow in cavities, heat transfer, numerical calcs. 2-30137  
 thermally stratified fluid, nonsimilar laminar convection 2-4871  
 thermophoretic deposition of small particle onto cold surfaces, Blasius series 2-35205  
 thermosyphon, vertical, effects of inlet conditions on free convection (*French*) 2-16308  
 transonic flow, viscous-inviscid interaction, over airfoils, separated laminar and turbulent flows, boundary layers 2-8174  
 transonic laminar viscous-inviscid interaction flow field calc., boundary layers 2-4850  
 tube bank operating at low Reynolds numbers, laminar heat transfer calcs. (*Japanese*) 2-39910  
 turbulent mean reaction rates in large activation energy limit 2-4901  
 two dimensional flows with finite length separated regions 2-1235  
 unsteady compressible 3-dimens. stagnation point laminar boundary layers, self-similar soln. 2-8111  
 unsteady compressible laminar boundary-layer flow within a moving expansion wave 2-50235  
 viscous fluid, laminar gravitational open flow in cylindrical channel (*French*) 2-39882  
 viscous incompressible fluid, asymptotic theory of flow attachment 2-20633  
 viscous incompressible fluid flow through channel 2-20634  
 viscous two dimens. time depend. flow past more than two obstacles 2-44700  
 viscous uniform two-dimens. flow past obstacles, numerical soln. 2-44699

**laminar flow continued**

wall effects, in laminar flow through packed beds 2-35214  
 water, laminar gravit. heat convection in dead-end channels 2-4820  
 water, pure and saline, plume flows at density extremum 2-35113  
 wavy laminar filmwise condensation 2-8604  
 CO<sub>2</sub>, boiling-like phenomena in free-convection heat transfer at supercritical pressures (*German*) 2-39913  
 H<sub>2</sub>-He flow, over flat plate, laminar boundary layer, effect of C blowing, heat transfer 2-35131  
<sup>4</sup>He superfluid laminar flow through capillary tubes and narrow channels, two-fluid theory 2-16918  
 N<sub>2</sub>, heat transfer from vertical surfaces, influences of variable props. 2-50266

**laminar to turbulent transitions**

distribution of disturbance field with character of transition regime 2-12130  
 free shear layer, laminar-turbulent transition 2-20656  
 heat transfer in turbulent boundary layers of accelerated flows (*Russian*) 2-30125  
 hydrodynamic instabilities, transition to turbulence, book 2-23392  
 instability wave generation in boundary layer by external turbulence 2-30103  
 interference between boundary layer flow and wake flow 2-4787  
 laminar boundary layer, transitional spot, Reynolds number and pressure gradient effect 2-16283  
 liquid films, aerodynamic heating, ablation, laminar to turbulent transition, asymptotic props. 2-35132  
 natural convection in undivided and partially divided rectangular enclosures 2-50269  
 nematic liquid crystals, transition to turbulence, EHD instabilities, and tumbling phenomenon 2-12125  
 planar channel flow, numerical simulation of transition and turbulence 2-1268  
 Rayleigh-Benard convection, transition to turbulence, hydrodynamic instability 2-25377  
 rotating disk flow, instability and transition 2-20677  
 shear flow instabilities, laminar to turbulent transition, boundary layers 2-25358  
 spinning axisymmetric body, boundary-layer transition, smoke visualisation 2-50334  
 supersonic axisymmetric flow, over sharp edge of bodies, boundary layers, viscosity influence 2-30171  
 Taylor vortex flow, transition from laminar flow, visualisation study 2-20774  
 turbulent growth regions in laminar boundary layers 2-4800  
 viscous incompressible flow, between rotating cylinders, flow instabilities and transitions 2-25357  
<sup>4</sup>He, superfluid, rotating Couette flow, second sound meas. 2-21413

**laminates**

angle-ply laminate holes, stress analysis 2-50173  
 beam, laminated, elasticity, shear stress at clamped ends 2-12033  
 cantilever sandwich bar, stability when loaded by following force 2-30052  
 carbon fibre reinforced plastics, nondestructive testing and fatigue behaviour 2-17796  
 composite, tri-laminated, wave propag. normal to layers, mixture model calcs. 2-39844  
 composite laminates, stress anal., finite element method 2-42860  
 composite shell structures, finite element analysis 2-20564  
 cord-rubber composites, mech. props. 2-47147  
 cross-reinforced, edge effects 2-20540  
 cylindrical shells, laminated, of arbitrary open profile, free vibrations 2-30058  
 debond inspection in solid rocket motor section, acoustical chirp frequency and computer correl. technique 2-17855  
 delamination, relation of engng. props. 2-27274  
 dynamic response modelling, mixture theories 2-30006  
 fatigue damage mechanisms and fatigue-life diagram 2-4767  
 fibre reinforced composite laminates, strength, design with reliability concept (*Japanese*) 2-36865  
 fibreglass laminate with simulated flaws orthogonal to surface, thermal NDT using liquid crystals 2-52126  
 filamentary-reinforced composites, cryogenic props., review 2-2550  
 flexural failure analysis of anisotropic elliptic plates 2-39839  
 generalized ultrasonic impediography 2-17859  
 glass cloth/epoxy laminates, G-10 CR and G-11 CR, mech. elec. and thermal charact., cryogenic appl. 2-22296  
 glass fibre reinforced polyester, fatigue and failure mechanisms under complex stresses 2-17740  
 glass fibre reinforced polyester, interlaminar fracture energy and compliance 2-22307  
 glass fibre reinforced polyester, SMC R-50, interlaminar shear fatigue 2-13811  
 glass fibre reinforced polyester composite, mech. testing 2-22406  
 glass-cloth reinforced epoxy, thermal contraction and strength 2-13787  
 graphite fibre reinforced epoxy laminate, fatigue damage monitoring by US mapping 2-9500  
 graphite reinforced laminated composite plate subject to low velocity impact, structural integrity 2-13812  
 graphite/epoxy laminates, creep rupture and viscoelastic moduli 2-52022  
 harmonic waves in layered and fibre-reinforced composites, finite element analysis 2-1134  
 interlaminar shear strength study at cryogenic temps. 2-22332  
 joint, failure under combined tension and bolt load 2-27273  
 layer structure containing different kinds of layers and stacking faults, diff. 2-12430  
 metal-metal adhesively bonded structures, through transmission US attenuation meas. 2-17856  
 mica flake integrated sheet/epoxy laminates, mech. and elec. props. 2-27222  
 multi-layer eddy current simulators, EM charact., temp. depend. 2-2677  
 phenolic laminate, thermal and mech. props., low temp. meas. 2-22297  
 phthalocyanide, C-10, development for composite matrix appl. 2-13694  
 plate, bimodulus composite, free vibrs. 2-12075  
 polycarbonate, impact strength, effects of internal stress, ageing and thickness 2-52024  
 polymer films, multilaminate, modes of polymer composites 2-36924  
 rotating disc, high speed, reinforced by laminating and hoop winding method 2-4712



**laminates continued**

- sandwich plates, undamped, transient response, effects of rotary and longitudinal inertias 2-35082
- shell, cylindrical, buckling behaviour changes resulting from system param. var. 2-16251
- shells, anisotropic laminate, of variable stiffness, applied theory of vibr. 2-25296
- shells, cylindrical, laminated, composite, thermoelasticity 2-30021
- shells, laminated anisotropic cylindrical, finite element model for through cracks anal. 2-4761
- steel, C, laminated, fatigue fracture 2-5924
- steel, C, multilayer material, impact strength and damping props. 2-17706
- steel, low-alloy, laminated pipes, impact strength and cold brittleness threshold, effect of number of layers 2-13796
- strength, 3-D fracture mech. approach 2-13874
- thermographic detection, of adhesive-bond and interlaminar flaws 2-31862
- unsymmetric, room temp. shape calc. 2-22226
- US methods for characterising response 2-17822
- vibration and noise control, materials 2-25178
- woven plastic glasses, crack resistance depend. on stacking 2-36970
- Al multilayered adhesively bonded structures, appl. of adaptive learning networks to US signal processing, flaw classification 2-17854
- Al-polyethylene, sandwich laminates, cold press workability 2-13745
- C fibre reinforced plastic, orthotropic plate, stresses around rectangular hole 2-20539
- C fibre reinforced plastics, thermal expansion, effect of distribution between fibre orientations 2-26084
- C fibre reinforced plastics, laminar, with 3 reinforcement angles, mech. breakdown, layer ratio influence 2-36965
- C-fibre reinforced plastic laminates, thermal expansion, influence of fibre weave in fabric reinforcement 2-1641

**laminations**

- Fe-Si (3 wt%) sheets, grain oriented, remanence theory in presence of external stresses 2-26708
- Fe-Si (3 wt.%), grain oriented, magnetised, effect of stress on mag. props. 2-26711
- Fe-Si (3 wt.%), with (110) surface, domain wall angles, stress effects 2-26651

**lamps**

- see also discharge lamps; filament lamps; light sources*
- luminescence investigations, vision research implications 2-52488
- UV transient spectrometry, intensity stabilised pulsed analysing lamp 2-33651

**Landau levels**

- acousto-optical interaction in mag. field, reson. effects 2-41326
- CDW state, two-dimens., in strong mag. field 2-21515
- electron gas, two-dimensional, CDW patterns in high mag. field, HF approx. 2-45858
- electron gas, two-dimensional, localisation and quantised Hall resistance 2-17003
- electron system, two-dimensional, Landau subband tail state struct. 2-30811
- electron-hole liquid, ground-state energy in strong mag. field 2-12979
- Fermi surface neck region screw dislocations influence on de Haas-van Alphen signals 2-21493
- Graphite intercalation compounds, single-staged, magnetorefr. and Shubnikov-de Haas expts. 2-22002
- quasi-Landau resonance spacing, WKB approx. 2-45859
- semiconductor film, size quantised, cyclotron reson. 2-46386
- semiconductors, magnetoabsorption, free carrier, in quantising mag. field, phonon scatt. effects 2-51559
- semiconductors, spin-magnetophonon reson. and sound absorpt. 2-13141
- semiconductors, ultrasonic absorpt. oscils. in crystals with inverted band struct. 2-16726
- semimetals and semiconductors, magnetoresistance, transverse, electron resonance scatt. in quantum limit 2-40944
- spectroscopy of Landau transitions of two-dimensional electron gases 2-31580
- two-dimensional electron-phonon system, transverse static magnetoconductivity 2-45930
- two-dimensional system, Anderson localisation in Landau levels, Hall cond. and cyclotron resonance lineshape 2-51101
- two-dimensional system, localisation of electrons under strong mag. field 2-45876
- Al<sub>0.9</sub>Ga<sub>0.1</sub>As-GaAs heterojunction, selectively doped, cyclotron reson. linewidth 2-51467
- Bi, galvanic- and thermo-mag. props., quantum oscillations, SQUID meas. 2-36064
- Bi, quantum EM excitations, microwave magnetoabsorpt. study 2-36737
- Cd<sub>3</sub>As<sub>2</sub>, Landau level structure, g-factors Luttinger parameters, effective Hamiltonian method 2-26312
- Cd<sub>1-x</sub>Mn<sub>x</sub>Te(Se), elec. and mag. props. in mag. fields 2-30799
- GaAs, hot electron nonMaxwellian distrib. function in mag. field, cyclotron emission study 2-46038
- GaAs-Al<sub>0.3</sub>Ga<sub>0.7</sub>As superlattice, mag. quantisation and transport 2-26492
- GaAs-AlGaAs DH injection laser, active layer radiative processes in strong mag. field 2-4751
- Hg<sub>1-x</sub>Mn<sub>x</sub>Te, semimagnetic semicond., interband IR magnetoabsorpt. study 2-21998
- Hg<sub>1-x</sub>Mn<sub>x</sub>Te(Se), elec. and mag. props. in mag. fields 2-30799
- InSb, conduction electron effective g-factor, Raman scatt. study 2-46610
- n-InSb, cyclotron resonance, defect levels 2-21885
- n-InSb, Landau levels nonthermal broadening, transverse magnetoresist. and photomag. effect 2-8822
- InSb, photoexcited hot carrier lifetime, magnetophonon oscillations 2-46068
- Si (100) MOS inversion layers, transverse and Hall conds., temp. depend. under strong mag. fields 2-21686
- Si inversion layer in strong mag. field, temp. depend. Hall cond., mobility edge model 2-40933
- Si MOSFET inversion layers, AC cond. in gap regions between Landau levels 2-51317

**Landé g-factor** *see g-factor***Landé splitting factor** *see g-factor***landing fields** *see airports***Langmuir films**

- dipalmitoyl phosphatidyl ethanolamine, charge transport in thin biological films grown by the Langmuir-Blodgett technique 2-9763

**Langmuir films continued**

- Au-Langmuir film-InP 0.085 eV Schottky barrier 2-46105
- CdTe-Langmuir film MIS solar cells photovoltaic props. 2-37211
- n-GaP/stearic acid, surface pot. studies on Langmuir-Blodgett films 2-26511

**Langmuir probes**

- see also plasma diagnostics*
- flowing plasma measurements, background ions correction 2-50456
- spherical and cylindrical, probe and diode eqns. unified treatment 2-20930
- vacuum chamber, cleaning, Ar, Ar/O<sub>2</sub> and H<sub>2</sub> glow discharges 2-50475

**languages, programming** *see programming languages***lanthanides** *see rare earth metals***lanthanons** *see rare earth metals***lanthanum**

- see also nuclei with .....*
- 4f states, electronic density role, bremsstrahlungisochromats 2-21487
- 4f states, electronic density role, characteristic isochromats 2-21488
- 4f states, electronic density role, energy conservation, isochromat spectroscopy 2-21490
- 4f states, electronic density role, self absorption difference spectra 2-21489
- atomic states involving f electrons 2-15692
- disappearance potential spectroscopy, rel. to AES (*Japanese*) 2-51746
- EELS, dynamic effects, localised states 2-27036
- electronic aspects of electron-phonon interaction 2-30808
- isobar nuclides separation using surface ionisation 2-43570
- liquid, compressibility and sound vel. 2-35593
- small particles, supercond. enhancement 2-31024
- superconducting transition temp. (*Chinese*) 2-41045
- X-ray 5p emission band 2-46831
- Z 2-41444
- zone refining, evaluation as purification technique 2-20709
- La I to XVI, plasma, ground state configs., 4d-4f emission obs. 2-43835
- PbF<sub>3</sub>:La, relation between bound and free ion motion 2-21389
- SrTiO<sub>3</sub>:La, self-compensation 2-25909

**lanthanum alloys**

- see also lanthanum compounds*
- Al-Mg-La, mech. props., La effect 2-27242
- Ca<sub>1-x</sub>La<sub>x</sub>/BiO<sub>0.1</sub>F<sub>2.9</sub> solid-state galvanic cells 2-32051
- (Ce, La)Al<sub>2</sub>, high-field magnetisation, single ion Kondo effect and ferromag. short range order 2-36310
- (Ce,La)Al<sub>2</sub>, spin dynamics, neutron scatt. study 2-26584
- Ce<sub>0.9-x</sub>La<sub>x</sub>Th<sub>0.1</sub>, mixed valence alloy, mag. excitations, mag. susceptibility and neutron diff. study 2-45913
- (Fe<sub>0.82</sub>Bi<sub>0.18</sub>)<sub>0.9</sub>Tb<sub>0.05</sub>La<sub>0.05</sub>, amorphous and crystallised, mag. props. 2-21820
- Gd<sub>0.05</sub>La<sub>0.94</sub>Al<sub>2</sub> spin glass, freq. depend. ESR 2-31271
- La-Al-Ga metallic glasses, struct. determ. by X-ray diff. 2-12492
- La-Ga, amorphous, elec. transport props. 2-26355
- La-Ga, metallic glass form. conditions and short-range order features 2-41577
- La<sub>80</sub>Al<sub>20</sub>, amorphous, press. depend. of supercond. transition temp. 2-36176
- La<sub>75</sub>Al<sub>25</sub>In<sub>10</sub>, amorphous, press. depend. of supercond. transition temp. 2-36176
- (La,Ce)Al<sub>2</sub>, re-entrant supercond. phase boundaries, press. depend. 2-31020
- LaCo<sub>3</sub>, absorption of H<sub>2</sub>, thermodynamic and kinetic characts., diffusion coeff. determ. 2-41926
- La<sub>70</sub>Cu<sub>30</sub>, amorphous, heat treatment effects below crystn. temp., supercond. props. and normal state resist. 2-36195
- La<sub>70</sub>Cu<sub>30</sub>, amorphous, supercond. penetration depth 2-31046
- LaCu<sub>2</sub>Si<sub>2</sub>, magnetisation and mag. susceptibility meas. 2-46259
- La<sub>80</sub>Ga<sub>20</sub>, amorphous, press. depend. of supercond. transition temp. 2-36176
- (La<sub>1-x</sub>Gd<sub>x</sub>)Os<sub>2</sub>, magnetic supercond., local Gd environment, EXAFS study 2-5773
- La<sub>1-x</sub>Gd<sub>x</sub>Sn<sub>3</sub>, Hall effect, spin-orbit interaction 2-36016
- La<sub>3</sub>In, supercond. transition temp. (*Chinese*) 2-41045
- La<sub>1-x</sub>Nd<sub>x</sub>Sn<sub>3</sub>, Hall effect, spin-orbit interaction 2-36016
- La(Ni,Al)<sub>3</sub> and La(Ni,Cu)<sub>3</sub>, 2-35697
- LaNi<sub>3</sub>, absorption-desorption of H<sub>2</sub>, thermodynamics, differential heat flow calorimetry 2-8704
- LaNi<sub>3</sub>, absorption-desorption of H<sub>2</sub>, thermodynamics for single-phase regions, differential heat flow calorimetry 2-8705
- LaNi<sub>3</sub>, adsorpt. of H<sub>2</sub>, electrochem. oxidation kinetics 2-30754
- LaNi<sub>3</sub> films, elec. resist., effect of H<sub>2</sub> absorpt. 2-26520
- LaNi<sub>3</sub>-H, plateau press. and hysteresis, annealing effect 2-41928
- LaNi<sub>2</sub>Al<sub>3</sub>, lattice constants (*Ukrainian*) 2-25813
- LaNi<sub>4.9</sub>Al<sub>0.1</sub>-H<sub>2</sub> system, form. and decomp. kinetics, press. depend. 2-26059
- LaNi<sub>3</sub>Sn<sub>2</sub>, cryst. struct., elec. and mag. props. (*Russian*) 2-50585
- LaPd<sub>3</sub>, heat capacity and magnetisation meas. 2-50881
- LaPd<sub>2</sub>Ge<sub>2</sub>, supercond. transition temp. meas. 2-46188
- La<sub>1-x</sub>Pr<sub>x</sub>Sn<sub>3</sub>, crystal field mag. anisotropy 2-31137
- LaPr<sub>2</sub>Ge<sub>2</sub>, supercond. transition temp. meas. 2-46188
- LaSn<sub>3</sub>, band struct., self consistent APW calc. 2-16983
- LaSn<sub>3</sub>, de Haas-van Alphen effect and linear muffin-tin orbital band struct. 2-40757
- LaSn<sub>3</sub>, Mossbauer study of finite temp. lattice softening 2-46446
- LaSn<sub>3</sub>, thermodynamic and mag. props. 2-1643
- La<sub>0.8</sub>Tb<sub>0.2</sub>Ce, re-entrant supercond. phase boundaries, press. depend. 2-31020
- (Tm<sub>1-x</sub>La<sub>x</sub>)B<sub>13</sub> susceptibility and magnetisation, cryst. field and exchange effects (*French*) 2-5521

**lanthanum compounds**

- see also lanthanum alloys*
- chromite, pure and alloyed, elec. cond. at high temps. 2-40884
- inner level and vacancy electronic spectra structure 2-1825
- phosphites, solubility diagrams and thermal decomp. 2-31685
- PLTZ, additional max. on dielec. const. temp. depend., hydrostatic press. depend. 2-5645
- PLTZ film, reactively sputtered, composition 2-16963
- use in solid-state galvanic cells 2-32051
- BaF<sub>2</sub>:LaF<sub>3</sub>, polarisation effects associated with space charges, ionic thermal current meas. 2-13400
- Ba<sub>3</sub>La<sub>2</sub>Cu<sub>6</sub>O<sub>14+y</sub>, electric transport and mag. props., progressive semicond.-semimetallic transition 2-40977



## lanthanum compounds continued

- Ba<sub>1-x</sub>La<sub>x</sub>Cu<sub>0.4+y</sub> progressive semiconductive-semimetallic transition, struct. aspects and energy levels 2-40359  
 Ba<sub>1-x</sub>La<sub>x</sub>F<sub>2+x</sub> small-signal AC response, 300 to 820K 2-40594  
 Ba<sub>1-x</sub>La<sub>x</sub>F<sub>2+x</sub> superionic cond., cond. enhancement and dielec. response 2-16884  
 Ba<sub>1-x</sub>La<sub>x</sub>F<sub>2+x</sub> superionic cond., <sup>19</sup>F NMR relax. and ionic thermocurrents study 2-17362  
 Bi oxides, La modified layer struct., grain oriented ferroelec. ceramics, elec. props. 2-31380  
 C-LaB<sub>6</sub> system, powder, hot-pressing 2-51845  
 Ca<sub>1-x</sub>La<sub>x</sub>CrO<sub>3</sub> solid soln., distorted perovskite struct. (*French*) 2-50590  
 CaLaGa<sub>2</sub>S<sub>7</sub>Er<sup>3+</sup> luminesc. props., energy transfer 2-46721  
 (CaWO<sub>4</sub>)<sub>1-x</sub>(LaNbO<sub>4</sub>)<sub>x</sub> solid solns., fergusonite-scheelite phase transition and Raman spectra 2-26044  
 Ce<sub>1-x</sub>La<sub>x</sub>Cu<sub>2</sub> mag. and elec. props., mag. resist., cryst. field effect 2-8973  
 (Ce<sub>1-x</sub>La<sub>x</sub>)<sub>2</sub>Mg<sub>3</sub>(NO<sub>3</sub>)<sub>12</sub>·24H<sub>2</sub>O, adiabatic demagnetisation 2-36349  
 CeO<sub>2</sub>·La<sub>2</sub>O<sub>3</sub> ionic cond. meas. 2-21387  
 Cs<sub>3</sub>La(NH<sub>2</sub>)<sub>6</sub>NH<sub>3</sub> and Cs<sub>3</sub>La(NH<sub>2</sub>)<sub>7</sub>NH<sub>3</sub>, X-ray cryst. struct. determ. (*German*) 2-8492  
 HfF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glasses, influence of processing conditions of IR edge absorpt. 2-5680  
 HfF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glasses, influence of processing conditions of IR edge absorpt. 2-13475  
 HfF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glass, material dispersion characts. determ. 2-17430  
 La-B films on Ta substrate, AES and work function changes 2-40743  
 LaAl<sub>2</sub> mixed valence cpd., F-bands 2-30844  
 LaAlO<sub>3</sub>, perovskites, stability and thermodynamic props. 2-26078  
 LaAlO<sub>3</sub>:Cr<sup>3+</sup>, energy transfer, fluoresc. responses, time resolved laser spectroscopy 2-26964  
 LaB<sub>6</sub> (100) single cryst. surface, O<sub>2</sub> interaction and oxides thermal desorption 2-1729  
 LaB<sub>6</sub> cathode for high brilliance microfocus X-ray source 2-38730  
 LaB<sub>6</sub>, characteristics of conduction electrons, optical study 2-9161  
 LaB<sub>6</sub> films, optical props. and appls. 2-17434  
 LaB<sub>6</sub>, mixed valence cpd., F-bands 2-30844  
 LaB<sub>6</sub>, multi-cathode, prototype of ion source for neutral beam injection 2-48837  
 LaB<sub>6</sub> single cryst., optical const., and electronic structure 2-41320  
 LaB<sub>6</sub>, specific heat at elevated temps. 2-30626  
 LaB<sub>6</sub>-GdBr<sub>3</sub> quasi-binary system, lattice struct. and mag. susceptibility meas. 2-8487  
 LaB<sub>6</sub>, hemispherical single cryst., thermionic emission pattern 2-17593  
 La<sub>4-2x</sub>Ba<sub>2+2x</sub>Cu<sub>2-x</sub>O<sub>10-2x</sub> cryst. struct. (*French*) 2-8496  
 LaBe<sub>2</sub>O<sub>3</sub>, inner level and vacancy electronic spectra structure 2-1825  
 LaBe<sub>2</sub>O<sub>3</sub>:Nd, x-axis laser, Q-switched operation, comparison with Nd:YAG laser 2-16040  
 LaBr<sub>3</sub>:Nd<sup>3+</sup> 2-1871  
 LaC<sub>2</sub>, electrical resistivities, superconductivity 2-31181  
 La<sub>1-x</sub>Ca<sub>x</sub>FeO<sub>3-y</sub> (0 ≤ x ≤ 0.5), mixed valency ferrites with perovskite struct. 2-5609  
 La<sub>1-x</sub>Ce<sub>x</sub>Mo<sub>6</sub>S<sub>8</sub> superconducting and mag. props. 2-31019  
 LaCl<sub>3</sub>, valence shell electronic struct., He I/II PES 2-755  
 LaCl<sub>3</sub>:Eu<sup>3+</sup>, Ho<sup>3+</sup> (Pr<sup>3+</sup>), energy transfer from <sup>5</sup>D<sub>1</sub> and <sup>5</sup>D<sub>0</sub> levels, temp. depend. 2-26978  
 LaCl<sub>3</sub>:Nd<sup>3+</sup> 2-1871  
 LaCl<sub>3</sub>:Pr<sup>3+</sup>:(Eu<sup>3+</sup>), <sup>19</sup>F systems, forced electric dipole transition probabilities, electron correl. effects, hypersensitive transitions 2-21519  
 LaCl<sub>3</sub>(F<sub>3</sub>), internal strain effects, ion-lattice interaction parameters 2-17032  
 La<sub>2</sub>Co<sub>3</sub>(NO<sub>3</sub>)<sub>12</sub>·24H<sub>2</sub>O:Mn<sup>2+</sup> (Gd<sup>3+</sup>), EPR study 2-21877  
 La<sub>2</sub>Co<sub>3</sub>O<sub>10</sub> oxidation catalyst, struct. evolution and catalytic activity (*French*) 2-8483  
 La<sub>2</sub>Cr<sub>3</sub>N<sub>23</sub> prep., cryst. struct., and supercond. props. (*French*) 2-9298  
 LaCrO<sub>3</sub>, perovskites, stability and thermodynamic props. 2-26078  
 LaCrO<sub>3</sub>:Sr, O<sub>2</sub> sensitive electrode impedance 2-8859  
 LaCrO<sub>4</sub>, cryst. data, X-ray powder data 2-45127  
 LaCu<sub>2</sub>Si<sub>2</sub>, thermal expansion study 2-30638  
 La<sub>1-2-x</sub>Eu<sub>x</sub>Mo<sub>6</sub>S<sub>8</sub> pseudoternary system, superconductivity 2-31018  
 La<sub>1-2-x</sub>Eu<sub>x</sub>Mo<sub>6</sub>S<sub>8</sub>, upper crit. mag. field enhancement 2-5507  
 LaF<sub>3</sub>, inner level and vacancy electronic spectra structure 2-1825  
 LaF<sub>3</sub>:Er<sup>3+</sup> phonons, tunable high freq., stimulated emission 2-45475  
 LaF<sub>3</sub>:Eu<sup>3+</sup>, hypersensitive 4f-4f transitions, rel. to pseudo-multipolar field (*Portuguese*) 2-26344  
 LaF<sub>3</sub>:Gd<sup>3+</sup>, spin Hamiltonian parameters of Gd<sup>3+</sup>, superposition model anal. 2-17035  
 LaF<sub>3</sub> above lanthanum trifluoride, ion-molecular equilibria, enthalpy of form. 2-41913  
 LaF<sub>3</sub>(CaF<sub>2</sub>), ion transport at low temps. 2-16849  
 LaFe<sub>2</sub>P<sub>12</sub>, superconductivity and mag. order 2-31012  
 LaGaO<sub>3</sub>, perovskite struct., vibr., IR and Raman study (*French*) 2-41360  
 La<sub>2</sub>Ga<sub>2</sub>S<sub>7</sub>Er<sup>3+</sup> luminesc. props., energy transfer 2-46721  
 LaH<sub>2</sub> (LaD<sub>2</sub>), (LaT<sub>2</sub>), isotope effects on equilib. pressures 2-1623  
 La<sub>2</sub>LiFeO<sub>6</sub>, characterisation of six-coordinated iron 2-36414  
 La<sub>2</sub>LiO<sub>6</sub>, ordered antiferromagnetic perovskite, crystal struct. and mag. props. (*French*) 2-8486  
 La<sub>2</sub>LiRuO<sub>6</sub>, ordered antiferromagnetic perovskite, crystal struct. and mag. props. (*French*) 2-8486  
 LaMgAl<sub>11</sub>O<sub>19</sub>, crystal growth and physical props. 2-22159  
 LaMgAl<sub>11</sub>O<sub>19</sub>, single cryst. growth (*German*) 2-8461  
 LaMgB<sub>6</sub>O<sub>3</sub>:Eu<sup>3+</sup> (Tb<sup>3+</sup>), self-quenching of luminesc., one-dimens. interactions 2-26965  
 La<sub>2</sub>Mg<sub>3</sub>(NO<sub>3</sub>)<sub>12</sub>·24H<sub>2</sub>O:Co<sup>2+</sup>, Ce<sup>3+</sup>, maser effect on Co<sup>2+</sup> spin sub-levels (*Russian*) 2-7734  
 LaNbO<sub>4</sub>, fergusonite-scheelite phase transition and Raman spectra 2-26044  
 LaNbO<sub>4</sub>-LaWO<sub>4</sub>, phase equilib., cryst. chem., struct. modulation, elec. cond. 2-50601  
 La<sub>0.33</sub>NbO<sub>3</sub>, cryst. struct. refinement 2-30448  
 LaNb<sub>1-x</sub>W<sub>x</sub>O<sub>4+x/2</sub>, scheelite based compounds, cryst. chem., struct. modulation, elec. cond. 2-50601  
 La<sub>1-x</sub>Nd<sub>x</sub>MgAl<sub>11</sub>O<sub>19</sub>, crystal growth and physical props. 2-22159  
 La<sub>1-x</sub>Nd<sub>x</sub>MgAl<sub>11</sub>O<sub>19</sub>, prep., struct., optical and mag. props. 2-31619  
 LaNi<sub>4</sub> metal hydrides, mechanically stable, designed for rapid cycling, preparation and characts. 2-32130  
 LaNi<sub>5</sub> hydride device for minimising laboratory H<sub>2</sub> hazards 2-6197  
 LaNi<sub>5</sub>H<sub>7</sub>, H diffusive motion, anomalous spectral density function, NMR relax. time meas. 2-30655  
 La<sub>2</sub>O<sub>3</sub>, inner level and vacancy electronic spectra structure 2-1825  
 La<sub>2</sub>O<sub>3</sub>, rare earth determ. by X-ray 2-15244  
 La<sub>2</sub>O<sub>3</sub>, strong resonance X-ray emission bands 2-46832

## lanthanum compounds continued

- La<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub> glasses, low freq. IR refl. spectra and optical const. 2-26922  
 La<sub>2</sub>O<sub>3</sub>-Cr<sub>2</sub>O<sub>3</sub> system, effects of O<sub>2</sub> pressure on phase rels. at high temp. 2-5859  
 La<sub>2</sub>O<sub>3</sub>-Cr<sub>2</sub>O<sub>3</sub>-CaO system, effects of O<sub>2</sub> pressure on phase rels. at high temp. 2-5859  
 La<sub>2</sub>O<sub>3</sub>-Cr<sub>2</sub>O<sub>3</sub>-CrO<sub>3</sub> MHD-related materials, O reactivity 2-27153  
 (LaO)<sub>4</sub>Ag<sub>3</sub>Ga<sub>3</sub>S<sub>8</sub>, leaf-struct. compounds (*French*) 2-35452  
 (LaO)Ag<sub>3</sub>Ag migration, electron microscope obs. (*French*) 2-35736  
 LaOCl:Eu<sup>3+</sup>, free ion and cryst. field parameters, Stark levels, fluoresc. 2-9178  
 LaOCl:R<sup>3+</sup> (R=Sm, Eu, Tb, Dy, Tm), fluoresc., local crystal symmetry 2-41403  
 LaOF, inner level and vacancy electronic spectra structure 2-1825  
 LaOF: rare earth ion doped, crystal fields and luminesc. props. 2-40855  
 La(Os, Ir)<sub>4</sub>B<sub>4</sub>, mag. behaviour and struct. chem. 2-41104  
 LaP<sub>2</sub>O<sub>4</sub>, Brillouin-Rayleigh scattering central peaks near ferroelastic transition 2-31517  
 LaP<sub>2</sub>O<sub>4</sub>, coupled optical and acoustic modes, press. depend. near ferroelastic transitions 2-45511  
 LaP<sub>2</sub>O<sub>4</sub>, energy transfer mechanisms, donor-acceptor interaction, fluorescence obs. 2-46719  
 LaP<sub>2</sub>O<sub>4</sub>, ferroelastic transition, under high hydrostatic press., Raman and Brillouin scatt. study 2-30585  
 LaP<sub>2</sub>O<sub>4</sub>, ferroelastic phase transition, EPR and DTA meas. 2-31278  
 La, Pr<sub>1-x</sub>Cl<sub>3</sub>:Nd, fluorescence, inhomogeneous profiles, satellite lines, energy-transfer and up-conversion processes 2-51652  
 LaPt, specific heat, 1.5 to 16K 2-46303  
 LaRb<sub>6</sub> (R=Ce, Pr, Sm, Dy), surface composition, temp. depend. Auger spectra obs. 2-30723  
 La(Rh<sub>0.85</sub>Ru<sub>0.15</sub>)<sub>4</sub>B<sub>4</sub>, nonmagnetic contrib. to superconducting T<sub>c</sub> variations 2-31009  
 LaRh<sub>2</sub>Si<sub>2</sub>, new ternary silicides, cryst. struct. and mag. props. 2-16625  
 LaRu<sub>2</sub>P<sub>12</sub>, superconductivity and mag. order 2-31012  
 LaS, point contact spectroscopy 2-30554  
 LaS<sub>2</sub> (x=1.33 to 1.5), optical props. and chem. bands 2-31443  
 LaS<sub>2</sub>, positron lifetimes 2-27017  
 La<sub>2</sub>S<sub>3</sub> (Se<sub>3</sub>), inner level and vacancy electronic spectra structure 2-1825  
 La<sub>2</sub>S<sub>3</sub>, piezoelec. effect 2-17414  
 La<sub>2</sub>S<sub>3</sub>:Ce(Nd), luminesc. and energy transfer 2-51685  
 La<sub>2</sub>S<sub>3</sub>:S<sub>2</sub>Gd, mag. and supercond. phase diagram 2-17191  
 La<sub>2</sub>S<sub>3</sub>, thermal expansion at low temps., rel. to supercond. props. 2-12878  
 LaSF<sub>6</sub>, metallic glass, phonon damping at hypersonic freq. 2-45398  
 LaSb, homogeneity ranges, vapour phase anal. 2-17951  
 LaSb, mixed valence cpd., F-bands 2-30844  
 LaSb powders, evaporation characts. 2-17914  
 LaSb<sub>2</sub>O<sub>12</sub>, struct., ferroelec. and piezoelec. characts. 2-30441  
 (La<sub>1-x</sub>Sr<sub>x</sub>)CoO<sub>3</sub>, cubic perovskite struct., mag. props. meas. 2-26618  
 La<sub>2-x</sub>Sr<sub>x</sub>CuO<sub>4-x/2+δ</sub>, cryst. struct., rel. to Cu oxidation state and O vacancy disordering 2-30444  
 (La<sub>1-x</sub>Sr<sub>x</sub>)FeO<sub>3</sub> (0 ≤ x ≤ 0.5), ionic cond., elec. resist. meas. under various relative humidities 2-8666  
 La<sub>1-x</sub>Tb<sub>x</sub>NbO<sub>4+x/2</sub>, scheelite based compounds, cryst. chem., struct. modulation, elec. cond. 2-50601  
 La<sub>2</sub>Ti<sub>3</sub>O<sub>9</sub>, synthesis, cryst. struct. and electrophys. props. 2-41562  
 La<sub>2</sub>V<sub>2</sub>Si<sub>2</sub>O<sub>7</sub> mixed oxysulphides, crystallographic characters. (*French*) 2-8484  
 La<sub>2</sub>WO<sub>6</sub> crystals, polytypism 2-50577  
 La<sub>2</sub>Y<sub>1-x</sub>C<sub>x</sub>, mag. and elec. props., supercond. transition temp. 2-8973  
 La<sub>2</sub>ZrO<sub>7</sub>, total and electronic cond. 2-51158  
 Li-La phosphate glass:Cr<sup>3+</sup>, Nd<sup>3+</sup>, energy transfer between Cr and Nd ions 2-44313  
 Nd<sub>0.8</sub>La<sub>0.2</sub>P<sub>2</sub>O<sub>14</sub>, struct. characts., IR and Raman obs. 2-41341  
 Nd<sub>2</sub>La<sub>1-x</sub>P<sub>2</sub>O<sub>14</sub>, luminesc. kinetics and excitation spectra, quenching 2-46724  
 Nd<sub>2</sub>La<sub>1-x</sub>P<sub>2</sub>O<sub>14</sub>, reabsorption influence on fluoresc. 2-39429  
 PLZT, ferroelec., amorphous behaviour, demonstrated by thermal cond. meas. 2-12864  
 PLZT, influence of press. on phase transitions 2-2206  
 Pb<sub>1-x</sub>La<sub>x</sub>Zr<sub>1-x</sub>O<sub>3</sub> ceramic, dielectric props. 2-46455  
 Pb<sub>3</sub>(MgW)<sub>6</sub>O<sub>8</sub>-La<sub>1/33</sub>(MgW)<sub>6</sub>O<sub>8</sub> solid solns. 2-16628  
 PbTiO<sub>3</sub>-La(Mg<sub>2/3</sub>O<sub>3</sub>), piezoelectric ceramic, piezoelectric props. 2-41271  
 PbTiO<sub>3</sub>-La(Zn<sub>2/3</sub>Nb<sub>1/3</sub>O<sub>3</sub>), piezoelectric ceramic, piezoelectric props. 2-41271  
 Pr<sub>1-x</sub>La<sub>x</sub>F<sub>3</sub>, far UV spectra, multiphoton and multi-ion effects 2-51626  
 SrF<sub>2</sub>:LaF<sub>3</sub>, polarisation effects associated with space charges, ionic thermal current meas. 2-13400  
 Sr<sub>1-x</sub>La<sub>x</sub>FeO<sub>3</sub>, valence state of Fe ions, Mossbauer study 2-2167  
 SrLaGa<sub>2</sub>S<sub>7</sub>Er<sup>3+</sup> luminesc. props., energy transfer 2-46721  
 UO<sub>2</sub>-ZrO<sub>2</sub>-La<sub>2</sub>O<sub>3</sub>, solid soln. and phase equilib., 1270 to 1670K 2-43553  
 ZnO-La<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub> glasses, low freq. IR refl. spectra and optical const. 2-26922  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub>, influence of processing conditions of IR edge absorpt. 2-5680  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub>, influence of processing conditions of IR edge absorpt. 2-13475  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-LaF<sub>3</sub> glass, material dispersion characts. determ. 2-17430

## Laplace transforms

- acoustic wave scattering, integral transforms, asymptotic expansion method 2-15079  
 acousto-optic multiple scatt., use of Laplace transforms 2-16176  
 cantilever cylindrical shell under impulsive load at free edge, transient response 2-1118  
 compliant tubes, fluid-filled, linear and nonlinear pulse prop. 2-50317  
 diffusion and plane harmonic waves in solids (*Polish*) 2-8658  
 dislocation damping by point defect dragging, theory 2-45162  
 edge dislocations, nonuniformly moving 2-8516  
 half plane under impact load, transient response of finite crack 2-50192  
 multispecies medium, radiation damage, collision density approach 2-5153  
 natural gas pipelines, low-temp., heat-insulated, nonstationary temperature regimes anal. 2-44640  
 nonlinear mechanical systems, approx. anal. by Laplace transform, comments on use of operational calculus 2-6734  
 numerical inversion of Laplace transform by new method 2-49672  
 radiation damage in a multi-species medium, collision density approach 2-1521  
 Raman transitions quantum statistics, analytical soln. 2-29803



**Laplace transforms continued**

- rigid mass connected to elastic half-space by elastic rod, transient torsional vibrs. 2-25236
- solution method for diff. eqn. containing symbolic functions 2-28
- stochastic Heisenberg model, convergence to equilib. 2-2048
- Timoshenko beam transient responses 2-18909

**Large Magellanic Cloud**

- A 0538-66, X-ray binary in LMC, optical counterpart outburst, visible obs. 2-48366
- A 0538-66, X-ray binary in LMC, optical counterpart spectral type, visible obs. 2-48291
- A 0538-66, X-ray binary optical counterpart, nature and emission 2-14875
- A 0538-66, X-ray transient in LMC, optical counterpart spectral/photometry obs. 2-48365
- Cepheid variables in LMC, peculiarities of distrib. (*Russian*) 2-53370
- Cepheids, DDO props. comparison with galactic Cepheids, obs. 2-33017
- 30 Doradus complex, IR photometric studies of two stellar populations 2-28548
- eruptive variable star in LMC, discovery, precise position and photographic magnitudes 2-53284
- globular clusters, UV photometry for 147 objects 2-18785
- H, interstellar, and hot stars distrib. in LMC, results from UV obs. 2-6660
- hot stars and interstellar H distrib. in LMC, results from UV obs. 2-6660
- interstellar gas in LMC line of sight, vel. struct. obs. 2-10508
- member stars, third list (*French*) 2-18795
- N105 H II region, OH Type I maser detect., UHF obs. 2-38307
- N59A (DEM 241), giant filamentary shell in LMC, dynamics 2-3293
- N70, mass-loss bubble within massive collapsing H I cloud, radio and optical obs. 2-28520
- nova, BV photometry (1981 November 1) 2-28483
- Nova LMC 1977b, spectral props. 2-33045
- P40 planetary nebula, C abundance and chem. comp., UV spectral obs. 2-53363
- protostar discovery in H II region/mol. cloud N159, HKL obs. 2-38306
- R136, central object of 30 Doradus Nebula, R136, central object of 30 Doradus Nebula, identification as supermassive star 2-10416
- R 71 in LMC, minimum state obs. of S Doradus-type star 2-28477
- supergiants, DDO props. comparison with galactic supergiants, obs. 2-33017
- supergiants, luminous F- and G-type objects in Galaxy and LMC, spectra 2-33020
- superluminous giants in NGC 1866, globular-like cluster 2-10411
- UBV sequences in NGC 1466, 2214 and 2257 clusters 2-14892
- Wolf-Rayet stars in LMC, multiplicity and absolute magnitudes 2-28476
- X-ray sources in LMC, catalogue from soft X-ray study 2-6545

**large scale integration**

- multi-scalar system 2-29484
- nuclear and space radiation effect, conf., Seattle, WA, USA (July 1981) 2-33215
- plasma etching, end-point detection, opt. methods 2-17755
- quartz, ion beam etching techniques to overcome nonuniformity 2-36988
- sound processor design, VLSI appls. 2-11956
- Si epitaxial film deposition in CVD reactor, transients 2-22172
- Si wafer, Czochralski grown, photolum. characteris. of thermally-induced defects 2-17535
- TiN film, oxidation kinetics in dry O<sub>2</sub> 2-27312

**laser accessories**

- absorption cell evaluation for He-Ne laser stabilised with I<sub>2</sub> vapour (*Slovak*) 2-44347
- absorption cell tuned to 1315 nm for I photodissoc. laser, construction feasibility 2-39673
- alkali borosilicate gradient-index AR film deposited by sol-gel process 2-49951
- angular encoder, axisymm., short pulse generation for laser fusion 2-4540
- Argus 355-nm 90-mm aperture target illum. expts., optical system 2-955
- beam profile shaping with binary diff. gratings 2-7820
- beamsplitter programs, for TI-59 with PC-100 printer 2-44433
- Bragg cell deflection and translation of laser beams with zero freq. shift 2-25106
- calorimeter, heat sink, wire spun Al sphere, laser energy meas. 2-15172
- computerised optical diagnostic system for UV and visible supersonic flow pulsed lasers 2-10876
- cooling of high power elements using porous materials 2-49868
- deformable high-speed mirror system, laser wave front correction appls. 2-49856
- dichlorodifluoromethane as dye laser tuning gas, refr.-index meas. 2-20315
- diffuser for CO<sub>2</sub> laser, speckle pattern effects 2-7818
- distributed-loss laser, longit.-type oscills., nonlinear splitting 2-7738
- dual-prism laser beam compressor, compact collinear and variable anamorphic, design 2-49791
- electrode fabrication, electroforming process, use in TEA lasers 2-34781
- electron gun, hollow cathode, for excitation of CW lasers 2-44325
- electron guns, for pulsed electron beam controlled discharge lasers (*Rumanian*) 2-20324
- electrooptic devices as laser modulators, using phase change material with reflective, transmissive states 2-25111
- etalons, quartz cryst., for far-IR methanol laser interferometer 2-38685
- extended preionizing UV source for pulsed gas lasers 2-49762
- Fabry-Perot reflecting interferometer, for laser wavelength meas. 2-44362
- high powder lasers, folded resonators (*Chinese*) 2-20344
- hole grating beam sampler, high-energy laser diagnostics appls. 2-49873
- holographic optical elements for laser radiation spectral and ang. charact. control 2-44212
- interference-polarisation filter, controllable stage 2-1010
- IR optics, precise, produced by diamond turning technique 2-4620
- isochronous storage ring, free electron laser electron source, theory 2-7779
- Kerr shutter, krypton triggered, for laser pulse selection 2-29837
- laser electronics and systems, book 2-48413
- laser-pumping flashlamps, failure, reson. mechanism 2-11707
- LED pump source for Nd:YAG laser, tight gap pumping cavity 2-44344
- liquid polarising filter operating in visible, UV regions, high damage threshold 2-25104
- luminescent filters, efficiency of wavelength conversion of laser pump light 2-20398

**laser accessories continued**

- mirror development, high reflectivity, using cavity-attenuated phase-shift method 2-11735
  - mirror thermal deform. influence on resonator parameters (*Chinese*) 2-20334
  - mirrors made of metal-fibre structs. cooled with liq. alkali metals, thermal-deform characts. 2-44366
  - multibeam collimator using prism stack for surveying 2-7850
  - multicascade electro-optical light deflector control device 2-49881
  - multilaser expts., computer-controlled timing system 2-16051
  - multimode lasers with internal variable lenses, stability and beam divergence 2-25050
  - optical isolator for semicond. lasers in 0.8  $\mu$ m range 2-29867
  - optical material developments for laser engineering 2-39667
  - optical system design for transforming laser beam, induced aberration correction 2-951
  - optical system error sensing using scattered light 2-49764
  - passive shutters for Nd:glass lasers, relax. time 2-44437
  - phase transform. interference optical reflecting material medium for visualisation of pulsed laser radiation 2-20390
  - photodiode power monitor for high-power gas lasers 2-7819
  - photodissociation laser with active medium circulation 2-923
  - power multiplication in parametric freq. converter with cavity dumper 2-39691
  - power supply, feedback controlled current stabilised, for CO<sub>2</sub> waveguide laser (*Chinese*) 2-7783
  - power supply for dye Q-switched lasers, simple charging and triggering cct. (*Chinese*) 2-25026
  - pulsed dye laser cell design 2-39671
  - pump radiation conversion in luminesc. substances 2-29826
  - pumping energy, continuous regulation in laser power systems 2-20321
  - radio pulse generator, for lasers with high freq. transverse discharge 2-20322
  - rare gas halide lasers, rare gas recovery system 2-20295
  - RF pulse generator for liquid acousto-optic shutter 2-49890
  - ruby laser, double resonator coupled through electrooptic shutter, ultra-short pulse formation 2-49796
  - scanning systems, precision anal. (*Chinese*) 2-25060
  - servo-control system, freq. and amplitude stabilisation of CW CO<sub>2</sub> laser 2-4522
  - spark gaps, triggered and untriggered, power requirements for N<sub>2</sub> laser circuit 2-11715
  - spectroscopy, one- and two-photon, microcomputer-based data acquisition and laser control circuitry 2-19090
  - spectrum width meter, pulse and continuous lasers meas. 2-29842
  - surface and coating laser-induced damage 2-949
  - vacuum system operation for use with gas laser 2-34782
  - wavemeter, multiple-wedge, for pulsed laser absolute wavelength meas. 2-34815
  - window materials, role of contamination (*Hungarian*) 2-44417
  - X-ray preionisation source for discharge-excited lasers 2-19228
  - BPN high-temperature insulating ceramic for elemental vapour lasers, physicochem. and electrophys. props. 2-49845
  - CO<sub>2</sub> laser, optogalvanic stabilisation using electrodynamic tuning element 2-49728
  - CO<sub>2</sub> laser light absorber, use of GeO<sub>2</sub>-ZnO-K<sub>2</sub>O glass 2-49803
  - CO<sub>2</sub> laser optical elements, deform. of KCl, NaCl, KRS-5, KRS-6, ZnSe and BaF<sub>2</sub> plates 2-49805
  - CO<sub>2</sub> laser optical material characts. 2-29856
  - Cu mirror, laser irradi., surface damage, brightness reflectivity and SEM study 2-49801
  - Ga, In,  $\gamma$ -As, P,  $\gamma$ -InP stripe lasers with chemically etched-mirrors, review 2-44332
  - I<sub>2</sub> cells verification for stabilised lasers, using Hanle effect 2-16009
  - ZnSe window for CO<sub>2</sub> laser radiation transmission into moist gas at high pressures 2-49883
- laser annealing** *see laser beam annealing*
- laser beam annealing**
- $\gamma$ -ray irradi., point defects, laser annealing 2-50696
  - amorphous semiconductor film, laser annealing and theory of photostimulated structures 2-25922
  - homogenisation of laser beams by means of a diffusing screen coupled to a tube diffuser (*German*) 2-4544
  - ion implanted material alterations initiated by pulsed laser annealing 2-5142
  - materials processing, conf., Boston, USA (Nov. 1980) 2-42788
  - mechanism of laser annealing (*Japanese*) 2-27030
  - metals, laser pulse melting, epitaxy and allotropy, expt. study 2-50702
  - molecular ion implantation system for appl. in solar cell prep. 2-6918
  - optical waveguide, glass thin-film, low loss, using surface coating and laser annealing 2-7859
  - semiconductor, ion-implantation-induced defect annealing using electron and laser beams (*German*) 2-35534
  - semiconductor, laser heated, nonlinear dynamic heat transport, carrier diffusion effect 2-2380
  - semiconductor, thermal analysis of CW laser annealing beyond melt temp. 2-45269
  - semiconductor annealing, microprocessor-controlled laser scanning system 2-49810
  - semiconductor processing, fund. mechanisms, review 2-45258
  - semiconductors, conference, Oxford, England (April 1981) 2-23364
  - semiconductors, exptl. tests for boson condensation and supercond. during pulsed beam annealing 2-12982
  - semiconductors, ion implantation radiation damage annealing by light and electron beam irradi. (*German*) 2-25923
  - semiconductors, laser annealing, liq. phase and solid-state epitaxial recrystallisation 2-12638
  - semiconductors, laser annealing technology, recent advances 2-29844
  - semiconductors, melting phenomena and laser annealing calcs. 2-26028
  - solar cell p-n junctions formation using pulsed laser processing technology 2-27622
  - solar cells, process optimisation 2-27703
  - solidification, solvent redistribution, solute trapping, impurity uptake, applic. to laser beam annealing 2-50865
  - steel, low alloy, laser transform. hardened, presence of retained austenite 2-22388
  - temperature measurement, in situ, using optical pyrometer, CW Ar laser annealing use 2-45270
  - Al/n-Si, small area laser beam annealing, subsurface alloying and deep Al penetration 2-1517



## laser beam annealing continued

- Al-n-Si diodes, CW laser processed, elec. props., laser power depend. 2-46127  
 Al-Zn(Sb), ion beam anal., TEM 2-50700  
 Au-Ge laser-annealed ohmic contacts on GaAs, microstruct. and resistivity 2-21675  
 Co-Cr-Al-Y laser treated coatings, struct. 2-30769  
 GaAs, ion implanted, defects produced by laser annealing 2-1523  
 GaAs, ion implanted and laser annealed, residual damage, TEM study 2-30502  
 GaAs, laser annealed, pulsed, and ion implanted, photoluminesc. spectrum 2-51643  
 GaAs, laser annealing induced defects 2-40433  
 GaAs surface, (111), pulsed laser annealing, LEED study 2-45267  
 GaAs, time-resolved reflectivity and transmission under intense laser excitation 2-17435  
 GaAs:Zn(Mg)(Si)(Se) ion-implanted homojunction solar cells, pulsed ruby laser annealing, SEM, TEM and SIMS meas. 2-27662  
 GaAs:Zn(Se), ion implanted, annealed, TEM study 2-25894  
 GaAs/Au-Ge ohmic contacts, laser annealed, resistivity and SIMS profile 2-26497  
 GaAs-Sn layers, laser annealed, interface struct. and diffusion 2-30757  
 GaAs(Sb)(P):Te, ion implanted, laser annealing, Mossbauer spectroscopy study 2-30481  
 ( $Gd_{0.26}Fe_{0.74}$ ) $_{0.96}Bi_{0.04}$ , metallic glass, film, laser annealed, mag. props. 2-21853  
 Ge film, amorphous, laser processing, explosive crystn., liq. layer existence 2-45265  
 Ge film, amorphous, scanned laser crystn., phase boundary kinetics meas. 2-45264  
 Ge surface, (111), pulsed laser annealing, LEED study 2-45267  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, ion-implanted, CW CO<sub>2</sub> and ruby laser annealing, expt. study 2-41457  
 InP, ion implanted, pulse annealing 2-2383  
 InP, ion-implanted, CW laser annealing, amorphous layer recrystallisation 2-5143  
 InP:Se, ion implanted, pulsed laser annealing 2-30489  
 Nb<sub>2</sub>Sn(Ge), laser annealing effect on transition temp. 2-36179  
 Ni, HF ion implanted, laser pulse melting, TDPAC, Rutherford backscatt. and channelling meas. 2-31351  
 Ni-Co-Cr-Al-Y laser treated coatings, struct. 2-30769  
 Ni-Cr-Al-Y laser treated coatings, struct. 2-30769  
 NiSi<sub>3</sub>, laser formed, post-irradiation annealing 2-51010  
 PbTiO<sub>3</sub> ferroelectric thin film, prep. by sputtering and laser annealing 2-2199  
 PdSi, laser formed, post-irradiation annealing 2-51010  
 PtSi, laser formed, post-irradiation annealing 2-51010  
 RhSi<sub>3</sub>, laser formed, post-irradiation annealing 2-51010  
 Si (111)(1×1):As(B) surfaces, highly doped, laser annealing prep., electronic props., photoemission study 2-8847  
 Si, amorphous, pattern laser annealing by pulsed laser 2-17578  
 Si, amorphous, rate of CW laser induced solid phase epitaxial regrowth 2-21451  
 Si, amorphous film, laser annealing,  $\alpha$ -particle channelling study (French) 2-1799  
 Si amorphous film, laser crystallisation (French) 2-16970  
 Si, amorphous films, explosive crystn. in solid and liq. phases 2-40269  
 Si, amorphous implanted, phase transitions produced by pulsed laser or electron irradi. 2-45283  
 Si, computer model of lattice temp., carrier conc. and temp. 2-45259  
 Si film, crystn. front periodic motion during beam annealing 2-5313  
 Si film, implanted, CW laser-induced solid phase epitaxy dynamics, time-resolved reflectivity meas. 2-45791  
 Si film on sapphire, implanted, laser annealed, dislocations, twins 2-25893  
 Si film on sapphire, thermally assisted pulsed laser annealing, residual strain 2-51060  
 Si, hydrodynamics of a dense plasma created during laser annealing pulses 2-2382  
 Si, IR spectroscopy appls. 2-36641  
 Si, implanted, macroscopic electron channelling pattern for laser induced recrystallisation monitoring 2-5164  
 Si, ion implanted, amorphous, ultrashort pulse laser annealing 2-45266  
 Si, ion implanted, laser annealing, time-resolved Raman scatt. and transmission meas. 2-46616  
 Si, ion implanted, laser annealing, thermally enhanced 2-50695  
 Si, ion implanted, laser and electron beam annealed, deep levels, DLTS study 2-51105  
 Si, ion implanted, materials alterations possible with laser annealing 2-5142  
 Si, ion implanted, residual defects after pulsed laser annealing obs. 2-50683  
 Si, ion implanted, solute trapping after laser annealing 2-45262  
 Si, ion implanted, supersaturated alloy form. during epitaxial regrowth, substitution solubility limitations 2-45261  
 Si, ion implanted, threshold energy density for epitaxial recrystn. 2-45260  
 Si, ion implanted laser annealed, defect photoluminesc. 2-46667  
 Si, ion-implanted, surface state effects on laser annealing mechanism (Russian) 2-1981  
 Si island growth on bulk fused SiO<sub>2</sub> by CO<sub>2</sub> laser annealing 2-45751  
 Si islands, laser crystallised on fused SiO<sub>2</sub>, microstrain, Raman scatt. study 2-45750  
 Si, islands, laser induced crystal growth, on amorphous substrates 2-51058  
 Si, laser annealed, structural study 2-25925  
 Si, laser annealing, metastable honeycomb model 2-40432  
 Si, laser annealing and crystallisation 2-1503  
 Si, laser annealing dynamics, transient Raman and optical transmission studies 2-2250  
 Si, laser heated, nonlinear dynamic heat transport, carrier diffusion effect 2-2380  
 Si, laser-induced solid-phase crystal growth investigation by time-resolved optical reflectivity 2-1800  
 Si, lattice temperature during pulsed laser annealing, Raman studies 2-31590  
 Si, lattice temperature meas. during pulsed laser annealing by time-depend. reflectivity 2-38650  
 Si layers, CW laser annealed, EBIC contrast rel. to residual defects, X-ray, TEM, and SEM obs. 2-30465  
 Si, melting phenomenon and laser annealing 2-1522

## laser beam annealing continued

- Si on sapphire, nonlinear transmission of intense laser pulse 2-5776  
 Si, on sapphire substrate, laser annealing, electron-hole plasma theory 2-30917  
 Si, oxidation by ion implantation and laser irradiation 2-16675  
 Si, picosecond laser annealing 2-25926  
 Si, polycryst., recrystallisation by CO<sub>2</sub> laser heating of SiO<sub>2</sub> 2-2441  
 Si, polycrystalline film, on amorphous substrates, CW laser recrystn. 2-2442  
 Si polycrystalline films, ion implanted, laser beam annealed, Raman study 2-36726  
 Si, polycrystalline thin film, pulsed laser recrystallisation, SEM technique 2-51057  
 Si, polysilicon on insulating layers, characterisation techniques 2-50699  
 Si, pulsed laser annealing, ambipolar excess carrier diffusion effects 2-5418  
 Si, rel. to LPE (Japanese) 2-5777  
 Si solar cell, ion implanted; laser annealed, substrate heating and emitter dopant effects 2-2379  
 Si solar cell fabrication, p-n junction form., laser annealing of ion-implanted substrates 2-37272  
 Si solar cells, ion-implanted, effects of laser and electron beam annealing 2-27624  
 Si solar cells, laser-annealed, comparison between ion-beam and glow discharge implantation 2-27623  
 Si solar cells, laser-processed, effect of emitter dopant concentrations on open circuit voltage and fill factor 2-27621  
 Si, solid phase epitaxial growth, effect of surface struct. and surface absorptates 2-16971  
 Si surface, (111), pulsed laser annealing, LEED study 2-45267  
 Si surface, (111), vicinal, laser and thermal annealed, LEED study 2-12892  
 Si surface (111), melting, resolidification and charged particle emission induced by laser pulses 2-16676  
 Si, thin film, laser growth, in patterned structures 2-51059  
 Si:As, CW laser and electron beam annealed, Rutherford backscatt. and SIMS anal. 2-46847  
 Si:As, implanted, CW Ar laser annealing, in situ temp. meas. using opt. pyrometer 2-45270  
 Si:As, implanted, CW laser annealed, real-time monitoring of opt. props. 2-46617  
 Si:As, implanted, laser or electron beam annealed, defect form., electron beam induced current study 2-45271  
 Si:As, ion implanted, laser annealed, Si MBE growth, doping profile, Rutherford backscatt. study 2-51813  
 Si:As<sup>+</sup>, implanted, CW laser annealing and electron beam annealing 2-12640  
 Si:As<sup>+</sup>(P<sup>+</sup>) ion implanted, laser annealing effects, refl. study 2-16677  
 Si:As(B) (111)(1×1) surfaces, electronic props., photoemission study 2-17136  
 Si:As(P), polycryst. film, CW laser annealing, SiO<sub>2</sub>, Si<sub>3</sub>N<sub>4</sub> substrate material effect 2-8534  
 Si:As(P), polycryst. film, pulsed and CW laser annealing 2-25912  
 Si:As(P), polycrystalline, heavily doped, comparison of thermal and CW laser annealing effect on resist. 2-51179  
 Si:Au, crystal-liquid interface vel. during pulsed laser annealing 2-31591  
 Si:B, implanted, free-running ruby laser annealing 2-21171  
 Si:B, pure and doped, pulsed-laser annealing, synchrotron X-ray diffr. study 2-51749  
 Si:B implantation, lattice deformation, post-laser irradi., backscatt., channelling study 2-45213  
 Si:B<sup>+</sup>(P<sup>+</sup>)(As<sup>+</sup>), solar cells, prep. by ion implantation and pulsed laser annealing, optical and elec. characterisation 2-14080  
 Si:BF<sub>3</sub>, amorphous, elec. activation and impurity redistribution during pulsed laser annealing 2-45254  
 Si:B(As)(In), pulsed laser annealing, melting phenomena 2-46837  
 Si:Bi, furnace and laser annealed, backscatt. and channelling anal., depth distrib. 2-45253  
 Si:C<sup>+</sup>(N<sup>+</sup>)(O<sup>+</sup>), formation of SiC, Si<sub>3</sub>N<sub>4</sub> and SiO<sub>2</sub> by laser annealing 2-50675  
 Si:Co, implanted, laser and thermal annealing studied by Mossbauer spectroscopy 2-31346  
 Si:H, amorphous, ultrashort laser pulse annealing, expt. study 2-21170  
 a-Si:H multilayer structs., comp. profiles, nucl. scatt. and Rutherford backscatt. meas. 2-40737  
 Si:P in-situ polycryst. films, influence of laser power and scan rate on CW laser annealing 2-50706  
 Si:P(Kr) implanted layer annealing using laser beam 2-46838  
 Si:CoSi<sub>2</sub>:Si (111), epitaxial growth of amorphous Si film 2-51009  
 SiO<sub>2</sub>, thermal, oxide charges induced by scanning electron and laser beam annealing 2-50711  
 Si(111) surfaces, laser- and thermally-annealed, electronic struct. similarities, photoemission study 2-31603  
 V<sub>3</sub>Si, laser annealing effect on transition temp. 2-36179  
 Y<sub>1-x</sub>Eu<sub>x</sub>Fe<sub>3-x</sub>Ga<sub>2</sub>O<sub>12</sub> epitaxial layers, laser annealed in O<sub>2</sub>, mag. props., FM study 2-31589  
 ZnS:Mn films, pulsed XeCl laser annealing, photoluminesc. study 2-50693

## laser beam applications

- see also holography; integrated optics; laser beam annealing; laser beam machining; laser beam welding; laser isotope separation; matrix isolation spectroscopy; measurement by laser beam; modulation spectroscopy; optical communication; optical radar; patient treatment; plasma production and heating by laser beam; Raman spectra; Raman spectroscopy; remote sensing by laser beam; spectroscopy; surgery; two-photon spectroscopy  
 acoustic emission source, laser-generated 2-39787  
 analysis of combined system for controlling laser-mirror scanner (Russian) 2-25057  
 anthracene molecule, multiphoton dissociative ionisation investigation using laser mass spectrometry 2-4357  
 aspheric surface calibrator 2-10836  
 biological tissue sections and cells in vitro, laser micromanipulation and prep. 2-32366  
 biology and medicine, overview 2-18283  
 bistable optical device using semiconductor laser diode and photodetector 2-957  
 bubble chambers, narrow bubble track formation by laser beam 2-15667  
 ceramic materials, laser enhanced etching in KOH 2-52068



**laser beam applications continued**

coagulation equipment for endoscopic haemostasis in gastro-intestinal tract for skin vascular anomalies treatment 2-9848  
 collinear collision between particle and nonlinear oscillator in laser field, trajectory studies 2-24816  
 colour separation, hand-colour lithographs to laser-scanned transparencies 2-19197  
 commercial appl., review 2-47216  
 conference, optical systems and appls., Utrecht, The Netherlands (Sept. 1980) 2-14971  
 corneal scleral coagulator based on Yb-Er:glass laser 2-47670  
 CVD, appl. of laser beam 2-9559  
 CVD, selective area deposition technique 2-22171  
 dermal lesion coagulation using Ar ion laser 2-22813  
 disc storage, digital data and video recording, laser appls. 2-15961  
 displays, audio-controlled 2-25059  
 double-resonance sub-Doppler spectroscopy in  $\text{NH}_3$  using a tunable-diode laser and CO laser 2-11530  
 dye laser intracavity absorption for molecular spectroscopy 2-39379  
 dye laser-helium gel system, unstable nuclei separation and studies 2-24482  
 dynamic interferometry techniques using elec. tunable lasers for optical path length meas. 2-19167  
 electrophotography, basic equations of electrostatic fields in reversal development 2-33672  
 electroplating enhancement mechanism 2-46957  
 excitation and delayed annihilation of Ps in a laser field 2-15926  
 F-like centre laser development and potential appls. (Chinese) 2-7772  
 fiber-optic laser gyro with easily introduced phase-difference bias 2-34902  
 fibres, single-mode, driven by semicond. CW BH laser, automatic electro-optic polarisation control system 2-16121  
 flash photolysis, pulsed laser beam appls. in initiation of excited state processes 2-17904  
 frequency-modulation spectroscopy with a pulsed dye laser 2-38695  
 gasdynamic laser with working medium heated by high temp. regenerative heat exchanger, metallurgical use 2-39685  
 handbook of semiconductor laser diodes and appls. 2-18825  
 He-Ne/ $\text{I}_2$  laser as a frequency standard in the visible spectrum 2-44370  
 high energy laser device technology for military appls., overview 2-7780  
 high power laser appls., review (Czech) 2-34780  
 holocamera, miniature, using multiple-pulse Q-switched ruby laser, aerosol anal. 2-49707  
 holographic intensity correlator using a laser cathode-ray tube 2-44219  
 holographic laser scanner for high resolution imaging appls. 2-11672  
 holographic laser scanner for nonimaging printing, hologram beam deflector design 2-4466  
 insulators, laser spectroscopy, book 2-14989  
 interferometry, piezoceramic shifters charact. (Polish) 2-3617  
 IR heterodyne spectroscopy, tunable  $\text{CO}_2$  laser sidebands, resonant electro-optic modulator 2-38702  
 IR laser magnetic reson. spectroscopy, relax. and modulation effects 2-3607  
 IR linewidth and line position meas. using diode lasers with internal calibration 2-28899  
 IR tunable laser sideband spectrometer, combination of stabilized  $\text{CO}_2$  laser lines with tunable MM waves, appls. 2-38703  
 laser spectroscopy, review and appls. 2-28908  
 laser-Raman matrix isolation spectroscopy 2-236  
 LASSO experiments on extremely precise time synchronisation using laser mirrors (Hungarian) 2-6539  
 lenses photofabrication, precision, computer controlled (Russian) 2-11869  
 materials processing, conf., Boston, USA (Nov. 1980) 2-42788  
 medical laser appls., laser scalpels, hemostatic treatment 2-6254  
 medical laser devices, applications and status 2-14311  
 metal, thermochemical processes, laser control and optimal laser heating in oxidising medium 2-22485  
 metal vapour laser appl. to Raman spectroscopy for gas and flame diagnostics 2-6036  
 metals, laser-plasma processing at high gas press. 2-47259  
 methanol far-IR laser interferometer, quartz cryst. etalons 2-38685  
 microsurgery in cell and developmental biology 2-27957  
 microsurgery trends, wet-field  $\text{CO}_2$  laser technique 2-22812  
 molecular absorptivities for laser thruster 2-7553  
 molten salts, thermal cond., laser flash method meas. 2-35750  
 moving object upper-limit speed in front-surface holography using Q-switched ruby laser 2-49701  
 neoplasm diagnosis and therapy, haematoporphyrin derivative and laser phot. irradi. appls. 2-32300  
 ophthalmic surgery, use of ruby, Ar and  $\text{CO}_2$  lasers 2-9854  
 optical fibres, picosec. pulse narrowing and soliton obs. using mode-locked colour centre laser 2-1030  
 optical gyroscopes, review 2-49809  
 optical heterodyne communication expt. with single-mode optical fibre using freq.-stabilised He-Ne lasers 2-4603  
 optical system alignment operation using gas laser 2-49865  
 photobiology and photomedicine, review 2-22811  
 photography of mass transport phenomena and flames 2-15257  
 photovoltaic module failure anal. using Solar Cell Laser Scanner, design, expt. results 2-37381  
 polymer electret film, polarization distrib. determ. using periodic heating 2-36529  
 porous media flow, hydrodynamics, Doppler investig. 2-30247  
 projection microscope, power self-regulation and negative image form. in illuminating beam 2-43081  
 rare earth atoms, observation using CW dye laser 2-52261  
 refractory metal thin film structures, direct writing by laser photodeposition 2-13652  
 refractory substances, laser heating system for researching parameters at high temp. and press. 2-8599  
 remote-sensing technology status, review 2-2831  
 research and applications, review (French) 2-29827  
 ring laser gyroscopes, for internal navigation systems 2-39684  
 satellite ranging (French) 2-10177  
 scanner design, low-cost 2-34824  
 scanner for computer-generated holograms 2-11673  
 scanning laser acoustic microscope, operational details and appls. 2-11961  
 scanning laser acoustic microscope examination of solar cells and solar cell welds 2-27690  
 scanning systems, precision anal. (Chinese) 2-25060

**laser beam applications continued**

scintillation counter hodoscope, laser based time and amplitude calibration system 2-39265  
 semiconductor, laser-induced solid phase epitaxial growth, monitoring using time-resolved opt. reflectivity 2-15238  
 semiconductor laser applications in Japan for fibre communication and information processing (German) 2-44369  
 sensor system consisting of semiconductor laser and external cavity, sources and configs. 2-6847  
 Si, monocrystalline, laser-induced diffusion of variously deposited surface dopants 2-18083  
 single atom detection methods, review 2-7685  
 solids, laser spectroscopy techniques and exptl. methods, book contrib. 2-15242  
 spectrometer monochromator alignment using laser diffraction system 2-28897  
 spectroscopy, basic concepts and instrumentation, book 2-23390  
 Stellarator-2 plasma, electron temp. meas. system, by Thomson scattering of Nd laser second harmonic 2-20929  
 surface alloying, bibliography 2-3345  
 surface processing with lasers 2-5989  
 synchronised quantum beat spectroscopy using periodic impact excitations with CW mode-locked laser pulse-s 2-3626  
 technology, recent advances 2-29844  
 terawatt laser nonfusion appls. 2-7824  
 therapeutic applications using Ar ion and Nd:YAG lasers 2-9855  
 thermocline-type cylindrical enclosure for heat storage in solar power plants, effects of walls on axisymmetric natural convection flows 2-47526  
 tunable mid-IR difference-frequency generator 2-970  
 ulcers, bleeding, laser coagulation treatment using Ar and Nd:YAG lasers 2-18288  
 ultrasonic defectoscopy of highly absorptive materials, use of single-pulse laser 2-47270  
 ultrasound generation and meas. 2-11997  
 unstable isotopes, laser spectroscopy, recent developments 2-24481  
 urological applications of  $\text{CO}_2$  laser radiation 2-18287  
 vacuum-chamber windows cleaning 2-190  
 vibrational spectroscopy using tunable lasers, book contrib. 2-23747  
 water droplets, radiative heating and evaporation 2-12724  
 xerographic recording, non-reversal, laser character generation methods (Hungarian) 2-16056  
 xerography, laser scanning system appls. 2-243  
 Al surface laser irradiated, corrosion behaviour 2-9474  
 $\text{BaTiO}_3$  photorefractive-index gratings formed by nanosec. optical pulses 2-4468  
 C, amorphous and graphitised foils, differences in stripper qualities 2-11336  
 C stripper foils comparative performance in Argonne FN tandem 2-11337  
 $\text{CO}_2$  laser guided plasma channel for light ion beam transport 2-40126  
 $\text{CO}_2$  laser surgery of head and neck tumors 2-18286  
 CS, vapour, laser snow effect induced by Kr laser 2-17906  
 CuCl, exciton and excitonic mol. diffusion const. determ. using tunable picosec. grating method 2-1839  
 $\text{Cu}_2\text{S}$ -CdS ungridded solar cell material, defect detect. by laser scanning 2-37365  
 Fe-Al bronzes, laser surface melting from homogenisation 2-2539  
 GaAs laser, dye-in-polymer films for ablative optical recording 2-39708  
 GaAs:Sn, laser implantation, impurity distrib. 2-35518  
 n-GaAs:Sn, laser-assisted doping from Sn evaporated films, ohmic contact form. 2-35521  
 GaAs- $\text{Al}_{0.3}\text{Ga}_{0.8}\text{Sb}$  non-lattice matched stacked solar cells, laser bonding 2-37407  
 GaAs-GaAlAs injection lasers, state of the art, operating parameters and limitations rel. to appls. 2-4525  
 Ge counters, laser-doped Li contacts 2-19851  
 N atom detection by two-photon laser-induced fluoresc. 2-688  
 $\text{N}_2$  gas laser photolysis system, microcomputer controlled, appls. (Japanese) 2-6046  
 NO B' $^2$  state radiative lifetimes obtained by VUV laser excitation 2-11550  
 NO, Doppler-free two-photon excitation with freq.-stabilised CW dye laser radiation 2-4361  
 NO $_2$  detection using DIAL 2-9750  
 Na beam, radiational slowing down and monochromaticity in opposing laser beam (Russian) 2-11440  
 O atom detection by two-photon laser-induced fluoresc. 2-688  
 Si counters, laser-doped Li contacts 2-19851  
 Si Fabry-Perot interferometer optical tuning by pulsed Nd:YAG laser 2-33618  
 Si, film, CW laser-recrystallised material, for semiconductor device manufacture 2-51056  
 Si film, polycryst., recrystn. using laser beam profiling technique 2-39686  
 Si, independent control of dopant profiles in As-B structures by pulsed laser processing 2-50689  
 Si, laser enhanced etching in KOH 2-52068  
 Si, laser induced oxidation 2-22359  
 Si, mono- and polycrystalline, As doping using laser-induced diffusion 2-16669  
 Si, p-n junction, fabrication by laser irradi. pulses 2-21668  
 Si, pulsed laser recrystallised on amorphous insulators, annular grain struct. 2-1778  
 Si sheet growth by ribbon-to-ribbon process, scanned  $\text{CO}_2$  laser beam appl., solar cell fabrication 2-37350  
 Si, single cryst. on oxide, CW laser induced lateral seeding process 2-12934  
 Si solar cell fabrication, p-n junction prep., one-step photochem. doping process using ArF excimer laser 2-37271  
 Si:B(P), laser chemically doped, elec. props. 2-21579  
 Si:H, amorphous hydrogenated, reactive laser evaporation 2-2456  
 Si:Sn(Fe), laser implantation, impurity distrib. 2-35518  
 SiF $_4$ , visible luminesc. induced by high power  $\text{CO}_2$  laser, press. depend. 2-24780  
 UF $_6$  chemical processing with lasers 2-15913  
 $\text{VO}_2$  film, laser sintering prep. 2-51840



## laser beam effects

see also laser beam annealing; plasma-beam interactions; plasma production and heating by laser beam  
 absorbing thin films, adhesion influence on laser heating and damage processes 2-35537  
 acoustic pulse generation, influence of temp. dependence of light absorption coeff. on pulse shape 2-5189  
 air, atm., breakdown by Nd laser radiation forming large-dia. focusing spots 2-35267  
 air breakdown by laser pulse near surface of solid transparent dielectric (Russian) 2-5007  
 alkali borosilicate gradient-index AR film deposited by sol-gel process, damage thresholds 2-49951  
 alkali halide solids, ion form. by high power pulsed laser irradi. 2-52204  
 amino acid formation from ammoniac-salt aqueous solns. of dicarboxylic acids, UV picosec. laser irradi. 2-27447  
 anaesthetisation of expt. equines using He-Ne laser (Chinese) 2-18254  
 anthracene, photocond. induced by pulsed dye laser, multiphoton carrier generation 2-36095  
 anthracene molecules, gas phase, stepwise photoionisation, UV laser radiation induced 2-44009  
 atmospheric light propagation, aerosol rupture effect in laser beams 2-44199  
 1,2-benzanthracene molecules, gas phase, stepwise photoionisation, UV laser radiation induced 2-44009  
 bromotrifluoromethane multiphoton dissociation in strong IR field of pulsed CO<sub>2</sub> laser, NO acceptor influence 2-34513  
 C, Si:H, amorphous, photoluminesc. and photocond., fatigue and Staebler-Wronski effects, irreversibility 2-46731  
 cell biology, ruby laser microbeam irradi. (Chinese) 2-47632  
 chalcogenide glass film, defect struct. 2-45056  
 charge particle energy-momentum transfer subjected to laser pulse along const. mag. field direction 2-34642  
 damage thresholds of thin film coatings at 532, 355 and 248 nm 2-952  
 dielectric coating optical breakdown, laser induced, chem. reactions 2-45251  
 dielectric layer, thermoluminescent, laser heating 2-17558  
 dielectric materials, laser-induced ripple patterns, polarisation charge model 2-9225  
 dielectric reflectors, laser UV damage resist. under multiple-shot irradi. 2-7817  
 dielectric transparent materials containing optical discontinuities, laser fracture, thermoelastic wave fields 2-30071  
 2,5-diphenylfuran molecules, gas phase, stepwise photoionisation, UV laser radiation induced 2-44009  
 DNA bases, efficiency of two-stage photolysis by high-power UV laser radiation 2-37633  
 DNA secondary structure, initiation of defects 2-2897  
 dye-jet laser pumped by second harmonic of Q-switched mode-locked Nd<sup>3+</sup>:YAG laser 2-34749  
 electron beam momentum modulation by laser fields, coherent optical radiation obs. 2-16055  
 fibre reinforced epoxy composites, laser induced ablation 2-30490  
 films, formation by laser produced plasma component condensation, props. 2-21468  
 fluoromethane molecules, light induced drift under vibr. excitation by CW CO<sub>2</sub> laser 2-29658  
 fluoroplastics, stress waves arising from rapid heating by laser radiation 2-30524  
 fog dispersal by CO<sub>2</sub> laser pulses, exact soln. including prevaporisation heating 2-48000  
 gas, laser induced convection instability 2-35158  
 gas atom laser cooling by optical freq. shift (Chinese) 2-7524  
 gas diffusion through barriers and in gases, laser control 2-39680  
 gaseous mixtures, separation using laser-induced thermal diffusion 2-50347  
 gases, nonequilib., test particle motion produced by reson. radiation 2-44809  
 glass, K8 and GLS1, exoelectron emission parameters rel. to laser radiation strength 2-49850  
 glass, laser beam heating, comparison with the effect of ball lightning 2-24253  
 glass, laser excited fluorescence spectroscopy, book contrib. 2-17549  
 glass textolite, stress waves arising from rapid heating by laser radiation 2-30524  
 glasses, optical breakdown, temp. depend. 2-45257  
 insulators containing microinclusions, optical breakdown threshold and dynamics, electron thermal cond. influence 2-50697  
 interaction of laser with target obs., high-speed cinematography and interferometry developments 2-20354  
 isozymes in rice sprouts, changes produced by laser irradi., electrophoretic analysis (Chinese) 2-18255  
 Josephson junctions, laser interaction studies 2-2040  
 liquid, sound excitation, thermo-optical methods, book contrib. 2-31460  
 Luneberg lenses made by laser evaporation, design and prep. 2-4572  
 magnetic bubbles interaction with elastic shock waves induced by laser pulse 2-21858  
 material evaporation by laser irradi. (Russian) 2-1602  
 material interaction observation with acoustic emission 2-4630  
 materials processing, conf., Boston, USA (Nov. 1980) 2-42788  
 MBBA, nematic liq. cryst., laser induced reorientation 2-50528  
 MBBA, nematic liq. cryst., laser induced reorientation 2-50548  
 melting, fusion interface depth and velocity from heat cond. eqn. analytical soln. 2-9221  
 metal, thermochemical processes, laser control and optimal laser heating in oxidising medium 2-22485  
 metal film, pulsed laser activated oxidation 2-9459  
 metal surface in vacuum, laser pulse interaction, plasma evolution process 2-9227  
 metal target influence on laser radiation generation 2-49806  
 metal-metal (semiconductor), thin film structures, laser, electron and ion beam induced reactions 2-51011  
 metal-Si, thin film, laser induced melting and quenching process, Au, Pt, Pd, V and Nb silicides 2-51061  
 metals, deep-penetration melting by moving laser beam 2-5210  
 metals, evaporation by laser radiation, form. of screening plasma layer 2-21172  
 metals, laser irradiated, photoemission of hot electrons, energy distrib. 2-17608  
 metals, laser transformation hardening, laser technical parameters effect (Chinese) 2-17685

## laser beam effects continued

metals, surface heating and melting using pulsed CO<sub>2</sub> lasers 2-9460  
 methane, saturated absorpt. at 3.39  $\mu$ m in two antiparallel laser beams 2-39700  
 methymethacrylate, threshold laser radiation impulses, depend. on length (Russian) 2-40434  
 mirrors made of metal-fibre structs. cooled with liq. alkali metals, thermal-deform. characts. 2-44366  
 molecular gas breakdown by short laser pulses 2-29662  
 nematic liquid crystal, laser induced reorientation, influence of light spot finite size 2-30389  
 OCB, nematic liq. crystals, laser induced reorientation 2-50548  
 octyl-cyano-biphenyl, nematic liquid crystal, laser induced reorientation, influence of light spot finite size 2-30389  
 octyl-cyano-biphenyl nematic liq. cryst., laser induced reorientation 2-50528  
 optical coating damage thresholds at 0.351  $\mu$ m 2-953  
 optical glass, K-8, laser induced bulk damage 2-35536  
 optical material destruction in crossed Nd<sup>3+</sup>:YAG laser beams of various frequencies 2-40431  
 optical thin-film coating, pulsed laser-induced damage, expt. results 2-7814  
 optical thin-film coating, pulsed laser-induced damage, theory 2-7815  
 plates, elastic and viscoelastic, thermal lens form. due to laser nonuniform heating 2-44415  
 PMMA, laser irradi. effect on microstructure (Russian) 2-21173  
 PMMA, laser-fracture cracks, limiting size 2-2323  
 PMMA, threshold laser radiation impulses, depend. on length (Russian) 2-40434  
 PMMA and modified, laser damage in sharply focused single-mode beams 2-30488  
 polymers, transparent, laser damage mechanism assoc. with their viscoelastic props. 2-35535  
 pulsed electric discharge, electrode erosion and spectrum, laser radiation effects 2-44930  
 quartz glass heated by CW long-wave light, pulsed optical breakdown 2-5778  
 resonator parametric optical oscillator, phosphate glass laser pumped, spectrally bonded picosecond pulse generation 2-44383  
 small molecules exposed to pulsed CO<sub>2</sub> laser radiation, isotopically selective dissociation 2-7619  
 solid, electron-avalanche ionisation, statistical approach to theory 2-9223  
 solid, electron-avalanche ionisation induced by EM waves, theory 2-9222  
 sound field excitation by moving laser thermo-optical services, experimental study 2-8577  
 spark gaps, laser triggered, expt. study (Chinese) 2-25667  
 speckle pattern behaviour, static and dynamic, operator algebra description 2-20252  
 steel, alloy, laser surface heat treatment, microstruct. study 2-47242  
 steel, cavitation erosion resistance, effect of laser quenching surfaces 2-31803  
 steel, stainless, hardening by laser irradiation 2-27334  
 steel, stainless, unipolar arc damage 2-12636  
 steel, stainless, vapourisation of target by microsecond pulsed TE-CO<sub>2</sub> laser radiation 2-2381  
 steel, type U10A, microstructure after laser irradi. and quenching (Russian) 2-2535  
 superconducting film, non-equilibrium effects, spatial correlation, optical excitation 2-51371  
 surface alloying, bibliography 2-3345  
 surface and coating laser-induced damage 2-949  
 surface tension driven convection in pulsed laser formed melt 2-45263  
 p-terphenyl molecules, gas phase, stepwise photoionisation, UV laser radiation induced 2-44009  
 tetralin, laser-powered homogeneous dissociation, NMR and IR spectra obs. 2-47328  
 thin film, thermoelastic instability under lasing action 2-45793  
 thin foils, laser burn-through, time-resolved meas. 2-20885  
 trifluoriodomethane selective dissociation in CO<sub>2</sub> laser IR field in presence of acceptors 2-7618  
 tumour cell HeLa, RNA synthesis rate, Cu laser visible light effect 2-2898  
 two-level systems, degenerate, nonadiabatic excitation by laser radiation with continuously variable freq. 2-49528  
 virus particles, laser radiation effect rel. to struct. of dye present 2-14286  
 water, free radical prod. by high-power UV laser radiation 2-52226  
 water vapour transparency increase in VUV under action of giant Nd:glass laser pulses 2-44019  
 5, glassy, photo-induced ESR 2-46377  
 Ag, precision diamond-machined surface pulsed laser-induced melting at IR wavelengths 2-9226  
 Ag-Cu alloys, metastable phase microstruct. generated by continuous laser melt quenching 2-9346  
 (Al,Ga)As multilayers, efficient luminesc. band created by athermal laser processing 2-9177  
 Al, laser irradiated plane target, ion flow characts. 2-36739  
 Al, laser pulse irradiated, slip deform. and melt threshold 2-1485  
 Al, liquid layer, freezing after laser pulse irradiation, non-equilib. Pb segregation effects 2-35699  
 Al, stress waves, laser induced, damping 2-16716  
 Al surface, modification by laser melt-particle injection 2-47263  
 Al:Cu, ion implanted, pulsed laser irradiation, Cu redistrib., thermal diffusion role 2-45250  
 Al:Sb, ion implanted, laser treated, ion microprobe anal. 2-46836  
 Al-Mo(Cd), recrystallisation, metastable phase formation 2-50705  
 As<sub>2</sub>S<sub>3</sub>, amorphous film, photostruct. change, temp. cycling studies 2-46800  
 As<sub>2</sub>S<sub>3</sub>-Ag light-sensitive system, behaviour during laser beam irradi. (Russian) 2-16679  
 As<sub>2</sub>Se<sub>3</sub>, amorphous film, reversible photodarkening, photopolymerisation model 2-46799  
 As<sub>2</sub>S<sub>3</sub>, non-crystalline, X-ray exam. of laser radiation effects on struct. (Russian) 2-1515  
 Au, precision diamond-machined surface pulsed laser-induced melting at IR wavelengths 2-9226  
 Ba spectroscopic decay-rate meas. below the laser threshold 2-43868  
 BaF<sub>2</sub> crystal plate, optical deform. due to continuous CO<sub>2</sub> laser irradi. 2-49805  
 CO<sub>2</sub> CW IR laser absorpt. in SF<sub>6</sub> gas mixtures, role of thermal diffusion 2-50367  
 CO<sub>2</sub> laser induced fluoresc. in SF<sub>6</sub>-H<sub>2</sub> mixtures 2-20119



## laser beam effects continued

- CO<sub>2</sub> laser-plasma interaction expts. 2-12326  
 Cd deposition on transparent substrates by laser induced dissociation of dimethylcadmium 2-51832  
 CdSe, absorption coeff. in region of fundamental absorption edge, strong EM wave effect 2-51600  
 Cr film, on Al, laser treatment at high power densities 2-51750  
 Cu mirror, laser irradi., surface damage, brightness reflectivity and SEM study 2-49801  
 Cu mirror, laser-induced pitting at 10.6  $\mu\text{m}$ , surface prep. method effect 2-7816  
 Cu, precision diamond-machined surface pulsed laser-induced melting at IR wavelengths 2-9226  
 Cu, stress waves, laser induced, damping 2-16716  
 Cu-Al-Fe, C62500 Al bronze, laser quenched, cavitation erosion, surface layer transform. 2-9458  
 Cu-Ni-Sn, laser surface melting, AES study and corrosion resist. 2-47264  
 Eu+HCl laser induced reaction 2-4377  
 Fe, cast, amorphous phase form. by laser treatment 2-41792  
 Fe, laser surface alloyed, comp. uniformity, effect of fusion zone shape 2-52114  
 Fe-base materials, hard, microstruct. refinement by laser and electron beam surface melting 2-41794  
 Fe<sub>80</sub>B<sub>20</sub>, amorphous, phase transitions, laser-induced 2-25748  
 GaAs heteroepitaxial layer deposited by laser pulse, condensation mechanism 2-35904  
 GaAs, laser induced Pt thin film deposition, Auger electron anal. 2-51836  
 GaAs, laser oxidation, expt. study 2-17751  
 GaAs MOS structures, charge trapping in anodic native oxide under pulsed laser illum. 2-41016  
 GaAs, oxidation, optically enhanced with visible laser light 2-27316  
 GaAs, pulsed UV laser photochemical doping, solar cell prod. 2-12620  
 Ge amorphous film, laser induced crystallisation 2-16595  
 Ge, laser excited, enhanced direct-free-hole absorption 2-51222  
 Ge, laser thermal breakdown, hysteresis effects 2-16678  
 Ge, laser-induced metastable states 2-45895  
 Ge-Se:Ag films, photo and electrochem. doping, AES and XPS study 2-45051  
 GeH<sub>4</sub>, UV laser photodissociation for low temp. polycryst. Ge film growth 2-51823  
 GeSe<sub>2</sub>, amorphous thin films, laser-induced phase transition 2-5762  
 a-GeSe<sub>2</sub> films, laser induced oscillatory phenomena, absorption coeff., photocurrent 2-36721  
 GeSe<sub>2</sub>, glass, reversible reconstruction and crystn. under laser irradi., Raman scatt. study 2-30410  
 H, fluorescence excitation by excimer lasers 2-43841  
 H<sub>2</sub>O, aerosol drops, heating, evaporation, rupture, laser radiation, optical consts. 2-9575  
 He-Ne laser-light scatt. in atm. turbulence, measured statistics 2-42466  
 Hg halide photodissociation by UV preionised ArF excimer laser 2-4358  
 HgBr<sub>2</sub>, one and two photon ionisation with ArF excimer laser at 193 nm (Chinese) 2-24794  
 In three-level system, laser-induced polarisation anisotropy 2-49314  
 InP, laser induced Pt, Au and Ni thin film deposition, Auger electron anal. 2-51836  
 InP, oxidation, optically enhanced with visible laser light 2-27316  
 InSb, epitaxial growth by laser evaporation, pulsed heating of substrate effect 2-46945  
 n-InSb, magnetised piezoelectric, laser beam interaction with acoustic wave 2-21242  
 KBr, laser pulse irradiated, pore formation 2-1519  
 KCl crystal, optical breakdown threshold at high temp. 2-46839  
 KCl crystal plate, optical deform. due to continuous CO<sub>2</sub> laser irradi. 2-49805  
 KCl:In, crystal, colour centre form. under intense UV laser radiation 2-45156  
 KCl:Pb, laser damage morphology, impurity state influence 2-45256  
 KCl:Pb, optical breakdown threshold, temp. depend., effect of impurities 2-25924  
 KCl(Br)(I) crystals, colouring arising from damage due to laser irradi. 2-13514  
 KH<sub>2</sub>PO<sub>4</sub> crystals, improving bulk laser damage resist. by pulsed laser irradiation 2-50694  
 KH<sub>2</sub>PO<sub>4</sub> crystals, laser damage threshold, dislocation density influence 2-25921  
 KH<sub>2</sub>PO<sub>4</sub>:Cr, laser damage threshold, Cr impurities effect 2-25051  
 MgO, laser pulse induced dislocation struct., surface damage 2-1518  
 Mo, surface imaging by pulsed laser stimulated field desorption of field adsorbed atoms 2-2421  
 N<sub>2</sub>F<sub>4</sub>, excited by reson. CO<sub>2</sub> laser radiation, collisional dissoc. characts. 2-44018  
 Na beam-laser field interactions, precision at.-beam studies 2-15876  
 Na<sub>2</sub>, bound-continuum transitions in laser fluoresc. expt. 2-49487  
 NaCl crystal, optical breakdown threshold at high temp. 2-46839  
 NaCl crystal plate, optical deform. due to continuous CO<sub>2</sub> laser irradi. 2-49805  
 NaCl, focused laser beam deform., multiphoton polaron and avalanche optical breakdown models 2-7813  
 NaCl, laser pulse induced dislocation struct., surface damage 2-1518  
 NaCl, laser pulse irradiated, pore formation 2-1519  
 NaCl, laser-induced breakdown threshold, temp. cycling effects 2-9224  
 NaCl, optical breakdown, laser-induced primary defect form. role 2-8539  
 NaCl:In, crystal, colour centre form. under intense UV laser radiation 2-45156  
 Nd:glass laser radiation damage of K8 glass containing inclusions 2-11737  
 Ni, defect structures and surface alloying 2-50701  
 Ni-Au, laser irradi., Soret effect in molten layer 2-40582  
 Ni-Au, surface films, pulsed laser mixing, expt. study 2-50703  
 Ni-B-Si-Cr brazing alloy, rapidly solidified surface melts 2-16935  
 Ni<sub>2</sub>Cr, substructure after laser irradiation (French) 2-12606  
 Ni<sub>3</sub>Fe, substructure after laser irradiation (French) 2-12606  
 Ni<sub>3</sub>Fe, photoabsorption cross-section, UV laser photolysis 2-33603  
 Pb(N<sub>3</sub>), low energy laser initiation of single crystals. 2-13956  
 Pt, surface imaging by pulsed laser stimulated field desorption of field adsorbed atoms 2-2421  
 RbI, laser pulse irradiated, pore formation 2-1519  
 SF<sub>6</sub>, CW laser absorpt. at 10.6  $\mu\text{m}$ , in presence of transparent gases, influence of thermal diffusion (French) 2-34389

## laser beam effects continued

- SF<sub>6</sub>, resonantly enhanced degenerate four-wave mixing, unequal CO<sub>2</sub> laser pump intensity effects 2-44402  
 SF<sub>6</sub> supersonic jet, Van der Waals cluster prod., IR laser irradi. effect 2-11608  
 Se-Te bilayer structural changes by laser writing 2-993  
 Se<sub>2</sub>-CO, photoabsorption cross-section, UV laser photolysis 2-33603  
 Si, amorphous, laser-induced metastable states 2-45895  
 Si amorphous film on Si<sub>3</sub>N<sub>4</sub>/glass substrate, crystallisation as function of CW laser scan speed 2-50707  
 Si amorphous film on SiO<sub>2</sub>, crystn. by CW laser irradi. 2-51013  
 Si amorphous layer induced by UV laser pulse, laser induced oxidation via O trapping 2-5975  
 Si, evaporated Sb and In layers, impurity distrib. after laser irradi. 2-45252  
 Si film, on SiO<sub>2</sub>, substrate, laser-induced melt dynamics, blackbody emission obs. 2-1595  
 Si film, polycryst., recrystn. using laser beam profiling technique 2-36886  
 Si, laser damage gettering and lifetime improvement appl. 2-12637  
 Si, laser-induced amorphous, adsorp. of O, expt. study 2-45268  
 Si, oxidation, optically enhanced with visible laser light 2-27316  
 Si polycrystalline film, surface stabilisation during laser recryst. 2-8722  
 Si, pulsed UV laser photochemical doping, solar cell prod. 2-12620  
 n-Si, pulsed-laser irradi., time-resolved optical transmission and refl. meas. 2-46636  
 Si surface (111), melting, resolidification and charged particle emission induced by laser pulses 2-16676  
 Si, surface composition, pulsed laser irradi. effects, AES 2-50968  
 Si surface layers, picosecond laser pulse induced phase transitions, space-time resolved reflectivity meas. 2-50835  
 Si:As, implanted, laser or electron beam annealed, defect form., electron beam induced current study 2-45271  
 Si:As, ion implanted, polycrystn. film, laser irradi., elec. props. grain size, annealing effect 2-17173  
 Si:H, amorphous, laser beam defect creation, luminesc. and ODMR study 2-35533  
 Si:H, amorphous, light induced changes, field effect meas. 2-45813  
 a-Si:H, defect creation by optical excitation, ODMR study 2-45255  
 Si:H amorphous, electron and laser beam induced centres, photoluminescence study 2-36682  
 Si/metal film interface, silicide formation using laser and electron beams 2-51008  
 SiH<sub>4</sub>, UV laser photodissociation for low temp. polycryst. Si film growth 2-51823  
 SiO<sub>2</sub>, surface composition, pulsed laser irradi. effects, AES 2-50968  
 SiO<sub>2</sub>, thermal oxide, pulsed laser irradi. effect 2-50698  
 SiO<sub>2</sub>-Ta<sub>2</sub>O<sub>5</sub> waveguide dielec. thin films, refr. index var. due to laser irradi. and annealing 2-16106  
 Sr(Mg)F<sub>2</sub> coatings, laser radiation microdamage investigation 2-35538  
 Te AR trilaterals, wavelength-depend. laser marking characts., 400-700 nm 2-992  
 TiC coating on stainless steel, unipolar arc damage 2-12636  
 TiO<sub>2</sub>, surface composition, pulsed laser irradi. effects, AES 2-50968  
 TiBr-TiI, TiCl-TiBr, (KRS-5, KRS-6) crystal plates, optical deform. due to continuous CO<sub>2</sub> laser irradi. 2-49805  
 TiBr-TiI (KRS-5) optical fibre high-power CW CO<sub>2</sub> laser beam transmission capabilities 2-34916  
 TiCl-TiBr KRS-6 single crystals, vol. radiation strength correl. with other optical characts. 2-16076  
 V-Si, laser induced defects, material interactions 2-50704  
 Yb<sup>3+</sup>, Er<sup>3+</sup>, glass, volume and surface optical strength meas. at 1.54  $\mu\text{m}$  2-34866  
 Yb+HCl laser induced reaction 2-4377  
 Zn-Al, laser irradi., Soret effect in molten layer 2-40582  
 ZnS coatings, laser radiation microdamage investigation 2-35538  
 ZnSe crystal plate, optical deform. due to continuous CO<sub>2</sub> laser irradi. 2-49805  
 ZnTe, laser induced O diffusion, photoluminesc. study 2-50923  
 Zr, laser pulse interaction, picosecond duration, photoelec. emission 2-51764  
 Zr(SiO)<sub>2</sub> coatings, laser radiation microdamage investigation 2-35538

## laser beam machining

- constructional materials, laser beam cutting, development and anal. of math. models (Russian) 2-9520  
 fission reactor fuel cycle, laser beam machining appls. 2-24349  
 heat transfer models 2-1117  
 metal, processing advances, conf., New York, USA (July 1978) 2-42791  
 review of laser processing of materials 2-47047

## laser beam welding

- core flow test loop fuel rod simulators, joining techniques 2-39129  
 review of laser processing of materials 2-47047

## laser beams

- see also *holography*; *laser frequency stability*; *Schwarz-Hora effect*  
 acousto-optic intensity modification of a Gaussian laser beam 2-29838  
 acousto-optic intensity modification of a Gaussian laser beam 2-34808  
 adaptive optical systems using discrete components, laser beam control 2-25100  
 adaptive optics, state-of-the-art report, atm. turbulence and thermal blooming correction 2-25085  
 aerosol atmosphere, random displacements of optical beams 2-29785  
 amplifier ultimate parameter estimation, spatial filtering 2-34767  
 amplifying system high-power pulse shaping 2-7823  
 angular encoder, axisymm., short pulse generation for laser fusion 2-4540  
 anisoplanatism for compensated imaging system and adaptive optics laser transmitter 2-24968  
 Argus 355-nm 90-mm aperture target illum. expts., optical system 2-955  
 aspheric optics focusing in laser fusion 2-7849  
 atmosphere, long-range transmission meas. in coastal environment 2-32632  
 atmosphere, modal compensation of turbulence induced wavefront aberrations 2-48001  
 atmosphere, multiple scatt. effects on optical propag. in fog and clouds 2-32640  
 atmosphere, multiwavelength extinction and refr. index fluctuation meas. 2-32644  
 atmosphere, Over-the-Horizon optical scatter propag. meas. in marine boundary layer 2-32639  
 atmosphere, results from Downlink Laser Cloud Propagation Experiment 2-32646



## laser beams continued

- atmosphere propagation, anal. of target signatures for laser altimeters 2-48010
- atmosphere thermal blooming, freq. response of thermally driven atmosphere 2-47999
- atmospheric laser systems, error reduction 2-52928
- atmospheric scintillation in Shanghai, effects on laser engineering (Chinese) 2-44359
- beam splitter programs, for TI-59 with PC-100 printer 2-44433
- commercial lasers, life testing, reliability 2-16054
- conical structure of light beam in nonlinear homogeneous medium 2-34821
- control in diffused waveguide by normal elastic waves in substrate 2-20411
- CW beam propagation through moving stagnation zone, thermal blooming 2-7842
- detecting laser illumination for military countermeasures, coherence discrimination using interferometer fringes 2-6894
- dielectrics, laser beam propag., filament form. threshold 2-34857
- diffuser for CO<sub>2</sub> laser, speckle pattern effects 2-7818
- direction determination, by polarisation meas. of reflected beam 2-20347
- distortion of Gaussian beam by thermal lens formed in Ge, GaAs and ZnSe optical elements 2-34859
- distribution shape analysis, sharpness and asymmetry methods 2-29841
- dual-prism laser beam compressor, compact collinear and variable anamorphic, design 2-49791
- dye Halo laser, two-dimens. operation (German) 2-44277
- effective bandwidth increase expts. in Nd:glass laser fusion driver 2-954
- electrooptic modulation by amorphous As-S thin film optical waveguide 2-3885
- emission light/colour characts. (Russian) 2-49804
- ergodicity of laser light in optical fibre transmission 2-16138
- filamentation, lossless suppression 2-44861
- focusing effect on multiphoton process power depend. 2-7620
- FSK heterodyne detect. expts. using semicond. laser transmitter and local oscillator 2-4541
- gas lasers, emission line asymmetry, expt. and theoretical evidence for causes (French) 2-49802
- Gaussian laser beam spot radius meas. by scanning knifeedge (Chinese) 2-25055
- high power, irradiance distribution, erasable recording using MnBi thin films 2-25058
- high power laser system, apodisation influence on radiation characts. in geometrical focus 2-16050
- high power lasers, folded resonators (Chinese) 2-20344
- high-powered laser system, beam propag. model 2-20353
- holographic laser beam dynamic correction method 2-29793
- homogenisation of laser beams by means of a diffusing screen coupled to a tube diffuser (German) 2-4544
- hot spot intensity in multimode laser beams 2-7812
- intensity distribution meas. using digitised TV 2-33612
- intensity fluctuation correlation function in laser propag. longit. direction (Russian) 2-34666
- intensity fluctuation reduction by defocusing with extended lens 2-4452
- intensity/phase autocorrelator for ultrashort optical pulse meas. 2-29868
- intrinsic optical bistability based on self-focusing 2-984
- IR laser beam, model of transmission through water droplet aerosol under thermal self-action 2-34862
- laser radiation in absorbing gas, thermal self-action in presence of induced convection, numerical modelling 2-29854
- liquid media interaction, ring pattern heartbeat phenomenon 2-49797
- metallic waveguide systems for collecting, directing, and shaping 3 kW laser beams 2-16110
- multielement amplifier systems, evolution of local perturbations 2-44315
- multiline ring resonator, injection locking 2-16053
- multiple scattering by large-scale discrete inhomogeneities, statistical characts. of intensity fluctuations 2-846
- nonlinear scattering of laser radiation by absorbing microinhomogeneities in BK-8 glass 2-4545
- optical bistability modulation by an additional laser beam 2-49816
- optical fibre, multimode, transmitted laser signal, amplitude fluctuation 2-7872
- optical system design for transforming laser beam, induced aberration correction 2-951
- passive laser pulse compression in fluorescent dye medium 2-49834
- perfect grating rhomb laser beam sampler, aberrations for diverging beam 2-25107
- picosecond light pulses, generation using wavefront inversion 2-16066
- picosecond optical pulse waveform, single-shot meas. using optical fibres and Pockels cell 2-11736
- polar diagram dynamic control, using Fabry-Perot interferometer (Russian) 2-4538
- probing experiment time resolution, influence of fluctuating pulse durations 2-25056
- profile shaping with binary diff. gratings 2-7820
- profiling technique, appl. to polycryst. Si film recryst. 2-39686
- propagation in anisotropic scattering media, small-angle scatt. approx. soln. limiting cases 2-39564
- propagation in turbid media, laboratory meas. 2-29786
- propagation optimisation in nonlinear media, nonlinear distortion suppression problems 2-29840
- propagation through hazes, fogs and clouds, significance of higher-order multiple scatt. 2-48002
- pulse compression in cholesteric liquid cryst. 2-966
- pulse energy measurement using bulk absorpt. laser calorimeter with semicond. thermopiles (Chinese) 2-23637
- pulse length measurement using dye lasing based on DFB 2-44357
- pulse properties and fast mol. relax. process investigation using combined laser-induced grating and transient-absorpt. expts. 2-16046
- pulse shaping by partial switching of resonator losses 2-25042
- pulse shaping for laser fusion 2-16043
- pulsed laser radiation energy meter (Russian) 2-34812
- pulsed laser radiation visualisation using phase Transform. interference optical reflecting material 2-20390
- pulsed laser source thermal lens, expt. tests of theory 2-25084
- pulsed light energy meas. using bulk-absorpt. laser calorimeter (Chinese) 2-23638
- pulsed radiation parameter determ. using semicond.-metal transitions in VO<sub>2</sub> 2-44367
- pulses, powerful laser, temporal characts., analytical description (Chinese) 2-25053

## laser beams continued

- radiation protection (German) 2-9882
- radiometer for laser beam power meas., characts. and performance, temp. radial gradient meas. (Romanian) 2-15228
- reflection with reversal of wave front, mean field 2-44363
- regenerative diode laser pulser 2-49765
- restricted laser beams, calculation and investigation of spatial parameters (Russian) 2-34813
- ring laser with two-scale amplitude corrector, diff. splitting of opposing wave freqs. 2-39677
- self-channelling, atm. propag. of high-power laser pulses 2-4565
- small diameter lasers, precise alignment technique 2-7822
- spatial and temporal field structure turbulent fluctuations in laser radiation 2-29784
- spatial coherence, in-resonator scatt. effect 2-49790
- spectrum width meter, pulse and continuous lasers meas. 2-29842
- stimulated Brillouin scatt., spectral reproduction 2-44396
- subnanosecond pulses in dye lasers, develop. using spiking phenomena and regenerative oscill. effect 2-25005
- target image quality, thermally bloomed atm. influence 2-49676
- temporal coherence of laser fields, anal. by heterodyne interferometry 2-49799
- thermal blooming anal. using theory of light propag. through inhomogeneous media 2-34664
- time-space structure of radiation deform. in absorbing-amplifying laser system 2-20352
- transmissive optical material compatibility with high intensity 0.351  $\mu$ m laser radiation 2-4568
- turbulent atmosphere propagation, intensity variance for discrete-spectrum polychromatic speckle field 2-11644
- ultrashort laser pulses, second harmonic beam anal., fine struct. calc. 2-34814
- ultrashort light pulse generation in laser with bleachable filter by intracavity generation of Raman emission 2-7810
- UV laser beam diagnostics using Dylux instant image photographic material 2-49798
- visible laser line freq. difference meas. up to 170 GHz using MIM point contact diodes 2-15150
- wavefront curvature measurement by diff. imaging (Chinese) 2-25054
- wavefront inversion and laser radiation struct. shaping problem 2-29851
- wavelength measurement, absolute, using multiple-wedge wavemeter 2-34815
- wavelength measurement using Lambda metre resolution enhancement using novel freq. metre 2-15216
- CO<sub>2</sub> and He-Ne laser sum-freq. mixing in proustite, CO<sub>2</sub> laser wavelength meas. 2-44389
- CO<sub>2</sub> laser exhibiting passive Q-switching, bistability obs. 2-49813
- CO<sub>2</sub> laser light absorber, use of GeO<sub>2</sub>-ZnO-K<sub>2</sub>O glass 2-49803
- CO<sub>2</sub> laser propagation in fog, pulse shape and delay 2-24946
- HCN CW subMM laser construction, output wavelength meas. (Chinese) 2-44327
- Nd:glass laser, tailored pulse reflection from stimulated Brillouin scatt. mirror 2-16044
- Nd:YAG actively mode-locked laser, pulse duration meas. using noncollinear SHG 2-16023
- Nd:YAG laser fourth harmonic (266 nm) 90 degree phase matched generation in 90 percent deuterated KD\*P 2-44386
- Nd:YAG laser pulse modulation and compression by Si cavity self-tuning 2-49793
- Nd:YAG self-injected laser, picosecond pulse generation by intracavity nonlinear compression 2-49792
- Nd<sup>3+</sup>:YAG active passive mode-locked pulses, temporal shape analysis 2-25048
- laser cavity resonators**
- acetylene combustion product gasdynamic laser 2-44259
- acid-base compound solns., stimulated emission characts., protolytic reaction rate influence 2-7758
- active-passive mode-locked oscillator generating nanosecond pulses 2-948
- annular resonator, coated cone performance 2-939
- concentric, semi-concentric resonators with circular mirrors, reson. mode field distrib., diff. theory (Chinese) 2-16032
- confocal unstable optical resonator with asymm. magnification 2-34805
- coupled ring laser, mode extinction under generation (Russian) 2-20338
- design for stable fundamental mode operation in solid state laser 2-7803
- detuning effect on fluctuation props. 2-49725
- DH diode lasers, CW constricted, spectral mode content, facet reflectivity effect 2-7804
- distributed-loss laser, longit.-type oscills., nonlinear splitting 2-7738
- dye, narrow-band linearly scannable IR lasing between 1.09 and 1.12  $\mu$ m 2-11719
- dye Halo laser, two-dimens. operation (German) 2-44277
- dye laser, CW, passively mode-locked, theory 2-44230
- dye laser, CW, synchronously mode-locked and internally freq.-doubled, anal. 2-44275
- dye laser, flashpumped, two-freq., high power short pulse generation 2-20349
- dye laser, injection locked flashlamp pumped, cavity resonances, narrow bandwidth oscillation 2-7798
- dye laser, laser pumped, subnanosecond pulse generation, cavity length change effect 2-11689
- dye laser, single-mode pulsed 2-44281
- dye laser, thin film optical waveguiding evanescent, with corner reflecting resonator 2-918
- dye laser intracavity absorpt., obs. in discharge of short-lived Ne excited states 2-11435
- dye laser intracavity absorption line shape of He, super-regen model 2-680
- dye laser resonator, grating tuned, beam expanding prism influence on linewidth and expansion ratio 2-25040
- dye laser subnanosec. narrow linewidth pulse generation by grazing-incidence on two gratings 2-7796
- dye lasers, mode-locked pumping theory 2-34748
- dye single-mode CW laser, Michelson mode selectors, spatial hole burning compensation 2-7784
- dyes, Eastman Kodak types A 9740 and A 9860, mode-locked laser oscill. using self-pumped phase-conjugate refl. 2-11730
- emission kinetics of laser pumped by short pulses 2-7741
- Fabry-Perot interferometers, use at IR and microwave frequencies 2-33619
- far IR hybrid laser with TEM<sub>00</sub> output beam 2-20319



## laser cavity resonators continued

- far IR lasers, resonator configs. for pumping, operational techniques (*German*) 2-44258  
 far-IR lasers, CW optically pumped, developments 2-39612  
 folded resonator for high power lasers (*Chinese*) 2-20344  
 free electron laser, 3.2  $\mu\text{m}$ , optical autocorrel. function 2-44321  
 free electron laser cavity resonator mode theory 2-39662  
 free electron laser with waveguide cavity, magnetic resonant 3-D kinetic theory 2-39664  
 free-electron lasers, multimode, with inhomogeneous freq. broadening, quasi-linear theory 2-44319  
 Fresnel reflection halo lasers, planar laser action of 2D disc-shaped active material 2-20339  
 gas laser, Gaussian beam, theory (*French*) 2-25039  
 O-H, regenerative Raman amplifier utilizing rot. transitions 2-49740  
 HCN laser, far-IR, CW, cavity length stabilization system 2-34803  
 holographic optical elements for laser radiation spectral and ang. charact. control 2-44212  
 intracavity absorption spectroscopy, mechanism and sensitivity (*Chinese*) 2-23732  
 intracavity adaptive optic compensation of phase aberrations, passive small equiv. Fresnel no. resonator 2-11728  
 intracavity generation laws of SHG (*Russian*) 2-20364  
 intracavity laser spectroscopy, obs. of rare earth atoms 2-52261  
 intracavity saturable absorber, gain function, dispersive effects 2-29806  
 laser, phase sensitivity and linewidth narrowing Fox-Smith configured semiconductor 2-44286  
 laser beam spatial coherence, in-resonator scatt. effect 2-49790  
 laser electronics and systems, book 2-48413  
 losses, programmed modulation, laser generation 2-29833  
 metal target influence on laser radiation generation 2-49806  
 methanol pumped by isotopic  $\text{CO}_2$  lasers, submillimetre laser line obs. and assignment 2-44253  
 methyl isocyanide, optically pumped MM wave CW laser lines, 823, 938 and 2140  $\mu\text{m}$  2-4490  
 mirror thermal deform. influence on resonator parameters (*Chinese*) 2-20334  
 mode phases anal. by interferometry 2-28634  
 multiline ring resonator, injection locking 2-16053  
 multimode lasers with internal variable lenses, stability and beam divergence 2-25050  
 off-axis laser resonators with two foci, stability conditions 2-942  
 open cavity with time-varying mirror refl. coeff., lowest type oscills. 2-49787  
 open resonator, diffr. power losses for symm. perturbed curved reflectors 2-938  
 optical losses, small, internal resonator meas. method 2-43062  
 optical material developments for laser engineering 2-39667  
 optical resonators, inhomogeneous mirrors, laser beam intensity distrib. 2-49788  
 optical system error sensing using scattered light 2-49764  
 passive shutters, LiF  $F_2$ -centres 2-29839  
 phase aperture resonators, selective props., lowest transverse mode 2-4535  
 phase conjugate mirror resonator for CW dye laser 2-11731  
 picosecond dye laser, synchronously pumped, theory 2-44271  
 plane resonator with quadratically nonuniform medium, natural oscil. modes 2-44349  
 plasma mirror laser model 2-943  
 Pockels 2-34809  
 power multiplication in parametric freq. converter with cavity dumper 2-39691  
 pulse shaping by partial switching of resonator losses 2-25042  
 pulse transmission, ultrashort, through waveguide resonator with distributed Bragg mirrors 2-4536  
 pump cavity design around flashlamp 2-29834  
 quasioptical resonators, with small instability, loss meas. 2-34804  
 Raman light-guide laser, ultrashort pulse generation 2-25018  
 regenerative amplifier development at the Laboratory for Laser Energetics 2-944  
 retroreflecting roof mirror laser resonator, reson. modes 2-20330  
 rhodamine 6G dye laser with compounds resonator pumped by Xe-ion laser 2-16030  
 rhodamine 6G flash-lamp pumped dye laser, cavity dumped PTM mode operation (*Chinese*) 2-20299  
 rhodamine 6G halo type dye laser, panoramic radiation (*French*) 2-44274  
 rhodamine 6G mode-locked CW dye laser, subpicosec. pulse internal amplification 2-20351  
 rhodamine 6G single-mode CW dye laser radiation single freq. SHG enhancement in reson. ring resonator 2-4502  
 ring laser with clipper, laws governing emission 2-44352  
 ring lasers, fluctuations and transitions at instabilities 2-29836  
 rooftop resonator, far-IR self-isolating cavity for optically pumped laser 2-39678  
 rotating-field unstable cavities, sensitivity to optical distortions 2-49789  
 ruby laser, double resonator coupled through electrooptic shutter, ultrashort pulse formation 2-49796  
 ruby passively mode-locked laser construction, transient stimulated Raman scatt. in liqs. 2-20341  
 semiconductor laser, linear and ring external-cavity, active mode locking 2-7808  
 small diameter lasers, precise alignment technique 2-7822  
 spectroscopy, near confocal multiple reflection cavity for a fine frequency marker 2-941  
 strip resonators, unstable, mode degeneracy, simplified calc. 2-34801  
 telescopic resonators for large-vol.  $\text{TE}_{00}$  mode operation 2-16034  
 thin optical layers, meas. of losses by means of intracavity technique (*German*) 2-43101  
 three-mirror coupled cavity dye lasers with lamp excitation 2-49785  
 toroidal mirror unstable-stable resonators 2-20331  
 tunnel mode locking feasibility in lasers 2-34819  
 tunnel mode locking theory (*Russian*) 2-11734  
 ultrashort light pulse generation in laser with bleachable filter by intracavity generation of Raman emission 2-7810  
 unstable optical resonator, mode restriction characts. (*Chinese*) 2-44346  
 unstable resonator modes, virtual-source theory 2-4534  
 unstable resonator with cancelling edge waves 2-49784  
 unstable resonator with mirror misfigures, near field phase calc. 2-940  
 wavefront reversal system efficiency enhancement using ring resonators 2-4561  
 wide-aperture plane resonator field investigation 2-34806

## laser cavity resonators continued

- AlGaAs constricted double-heterojunction diode lasers, structs. and electrooptical characts. 2-34789  
 AlGaAs DH laser, highly RF modulated, effect of cavity length on picosecond pulse generation 2-29832  
 AlGaAs DH laser amplifiers, signal gain, freq. bandwidth, saturation output power 2-16049  
 AlGaAs diode laser, subpicosecond coherent optical pulse generation by passive mode locking 2-44354  
 AlGaAs-GaAs laser with external dispersive resonator, bistable operation and spectral tuning 2-34817  
 CO laser, single line operation, transition struct. anal. 2-49736  
 CO pulsed laser having selective and nonselective resonators, spectral characts. 2-44358  
 $\text{CO}_2$  1.5 kW laser with excitation in a transverse RF-discharge (*German*) 2-7794  
 $\text{CO}_2$  amplifiers, electron-beam-controlled, inversion recovery following saturated extraction 2-892  
 $\text{CO}_2$  gasdynamic laser, three-freq. periodic pulse, energy capabilities 2-39617  
 $\text{CO}_2$  gasdynamic laser with electric-arc heating, stimulated emission at 18.4  $\mu\text{m}$  2-39672  
 $\text{CO}_2$  high-speed flow electrodischarge laser with active medium transverse pumping, amplification parameter calc. (*Russian*) 2-4480  
 $\text{CO}_2$  laser, high press. CW, output power, self-absorption effects 2-884  
 $\text{CO}_2$  laser, pulsed, metallised film mirror with variable curvature 2-16036  
 $\text{CO}_2$  laser with annular resonator, performance with polariser in annular leg 2-25037  
 $\text{CO}_2$  laser with intracavity diffr. selector, emission spectrum 2-34722  
 $\text{CO}_2$  lasers, high-power nanosec. pulse generation, new approach 2-29807  
 $\text{CO}_2$  pulsed laser, electron-beam-controlled, operating regime optimisation 2-34720  
 $\text{CO}_2$  sequence band TEA laser, multi-joule pulses 2-946  
 $\text{CO}_2$  TE continuously tunable laser using three mirror resonator, single mode operation 2-886  
 $\text{CO}_2$  TEA laser, tunable single longit. mode output 2-11720  
 $\text{CO}_2$  TEA laser mode-locking, gas lenslike effect influence (*Chinese*) 2-44240  
 $\text{CO}_2$  technological laser with closed gasdynamic channel, numerical investigation 2-49729  
 $\text{CO}_2$  tunable laser, spectral tuning using intracavity spatial filtering 2-7799  
 $\text{CO}_2$  tunable pulsed laser 2-7795  
 $\text{CO}_2$  tunable TEA laser with intracavity NaCl prisms as dispersive elements (*Chinese*) 2-24987  
 $\text{CO}_2$  tunable waveguide laser with high transverse mode and line discrimination 2-44241  
 $\text{CO}_2$  waveguide laser, effect of resonator-mirror curvature on output power 2-20337  
 $\text{CO}_2$  waveguide lasers containing diffr. grating, coupling losses 2-39619  
 CuII UV laser optimisation 2-15986  
 DF pulsed chemical laser with diff.-limited beam divergence 2-44268  
 $\text{D}_2\text{O}$  high power pulsed ring resonators in far IR 2-39674  
 $\text{D}_2\text{O}$  vapour, laser emission 2-39624  
 (GaAl)As injection lasers, mode locking study 2-11697  
 $\text{Ga}_{1-x}\text{Al}_x\text{As}$  electron-beam-pumped laser, oxide film influence on threshold current density 2-34822  
 GaAs buried optical guide laser, passively mode-locked, subpicosecond pulses 2-4539  
 GaAs laser, actively mode locked, subpicosecond pulse generation in external ring cavity 2-25038  
 GaAs lasers, longitudinal mode control using three mirror active passive cavity 2-20333  
 GaAs single-mode DH lasers using three-mirror active-passive cavity, longitudinal mode control 2-11700  
 GaInAsP-InP laser transmitter module, external cavity controlled single longitudinal mode 2-25030  
 $\text{Ga}_{1-x}\text{In}_x\text{As}_{1-y}\text{P}_y/\text{InP}$  stripe lasers with chemically etched-mirrors, review 2-44332  
 HCN stabilised laser with HF pumping 2-49780  
 HCN sub-MM wave laser, intensity modulation with Schottky barrier diode 2-39679  
 $\text{H}_2\text{O}$  CW waveguide laser, 118.6  $\mu\text{m}$  2-49775  
 $\text{He}^{22}\text{Ne}$  laser, freq. stabilisation by  $\text{CH}_4$  intracavity polarisation spectroscopy 2-925  
 He-Ne, transverse modes obs. of an optical resonator 2-42834  
 He-Ne frequency stabilised laser, optical feedback effects 2-16031  
 He-Ne laser, high power, single freq. operation anal., resonant cavities 2-893  
 He-Ne laser, simple method for single-freq. operation and stabilisation 2-11712  
 He-Ne laser stabilised with  $\text{I}_2$  vapour, absorpt. cell evaluation (*Slovak*) 2-44347  
 He-Ne laser with planspherical resonator, output-power instability investigation 2-49731  
 He-Ne/methane laser with periodically varying optical length, nonlinear absorber influence on radiation parameters 2-7752  
 He-Zn II laser using natural Zn, single-mode operation, 492.4 nm 2-44331  
 HgBr X-ray preionised electric-discharge laser, scaling studies 2-4497  
 I photodissociation laser using  $\text{C}_2\text{H}_2$ , resonator design and output characts. (*Korean*) 2-11718  
 InGaAsP short cavity single-mode 1.3  $\mu\text{m}$  lasers with evaporated high-reflectivity mirrors 2-29816  
 $\text{In}_{1-x}\text{Ga}_x\text{As}_{1-y}\text{P}_y$  ultrashort cavity lasers, optically pumped, picosec. operation, 0.83-1.59  $\mu\text{m}$  2-16001  
 KrF laser, electron-beam-excited, 1.6 GW litre $^{-1}$  atm $^{-1}$  pump power density 2-44340  
 KrF laser, broad band, electron beam pumped 2-34727  
 $\text{LiNdP}_4\text{O}_{12}$  lasers, FM mode-locked, gigabit optical pulse generation 2-44304  
 $\text{NH}_3$  far IR intracavity laser pumped by TE  $\text{CO}_2$  laser 2-39675  
 Nd laser with long resonator, self-mode-locking problem 2-44310  
 Nd:glass actively mode-locked lasers, intracavity SHG 2-49758  
 Nd:glass laser, deterministic passive mode locking 2-25041  
 Nd:glass mode-locked laser oscillator with intra-cavity pulse selection by Pockels cell shutter 2-25016  
 Nd:YAG laser, longit. mode self-locking 2-34820  
 Nd:YAG laser, using LED pumping, tight gap pumping cavity 2-44344



**laser cavity resonators continued**

- Nd:YAG laser pulse modulation and compression by Si cavity self-tuning 2-49793  
 Nd:YAG lasers, high power subnanosec. pulse generation 2-20348  
 Nd:YAG pulsed output of single spectral lines at 1.064, 1.073, 1.061 and 1.052  $\mu\text{m}$  (Chinese) 2-7773  
 Nd:YAG Q-switched TEM<sub>00</sub> mode laser with telescopic resonator, high power single freq. operation 2-25047  
 Nd:YAG ring laser with mode locking and unidirectional lasing 2-39655  
 Nd:YAG self-injected laser, picosecond pulse generation by intracavity nonlinear compression 2-49792  
 Nd:YAG solid state laser, polarisation charact. of emission 2-20308  
 Nd<sup>3+</sup>:YAG, travelling wave laser, frequency stabilisation using an intracavity selector 2-16035  
 Nd<sup>3+</sup>:YAG CW laser radiation static polarisation-modulation charact. control using intracavity electrooptic modulator 2-34766  
 Nd<sup>3+</sup>:YAG CW laser radiation, efficient intracavity SHG in LiIO<sub>3</sub> cryst. 2-34843  
 Nd<sup>3+</sup>:YAG continuously pumped laser with strong intracavity modulation, optimisation and stability 2-39656  
 Nd<sup>3+</sup>:YAG laser, continuously pumped, transient processes, forced mode locking 2-25017  
 Nd<sup>3+</sup>:YAG laser with LiF cryst. containing F<sub>2</sub> centres passive switch, spectral characts. 2-34774  
 rectangular metallic waveguide resonator performance evaluation near 1.2 mm wavelengths 2-34802  
 XeCl laser, injection-locked, unstable resonator based, picosecond high power extraction 2-44345  
 XeCl laser, broad band, electron beam pumped 2-34727  
 XeF laser, broad band, electron beam pumped 2-34727  
 XeF laser, transform-limited-bandwidth injection locking with Ar-ion laser at 3511 Å 2-39625  
 YAG:Nd<sup>3+</sup> pulsed laser, kinematic mode synchronisation 2-11704  
 ZnSe single crystals, lasing and luminesc., one- and two-photon excitation 2-34770

**laser frequency stability**

- DFB dye lasers, ultrashort pulse generation, energy characts. 2-44272  
 diode laser source limitations for fibre interferometer sensor systems 2-11837  
 dye laser frequency control on at. reference scanned by mag. field (French) 2-4528  
 Fabry-Perot long fibre interferometers for single-freq. laser source metrology 2-23711  
 far-IR lasers, CW optically pumped, developments 2-39612  
 free electron laser instability for relativistic annular electron beam propag. through helical wiggler field 2-39660  
 gas laser, two-frequency operation, stability limit, tuning range calcs. 2-7737  
 He-Ne/I<sub>2</sub> laser as a frequency standard in the visible spectrum 2-44370  
 Michelson interferometer, real-time active vibration controller 2-33629  
 ring laser stabilisation for gas flow meas. 2-25061  
 spectroscopy, sub-Doppler, quantum metrology appl. 2-6905  
 strapdown ring laser with no freq. locking, for optically biased laser gyro 2-4537  
 wavelength meas. using Fabry-Perot reflecting interferometer 2-44362  
 CO laser, intensity modulation, freq. stabilisation and tuning by extracavity Stark cell 2-34818  
 CO<sub>2</sub> CW laser, freq. and amplitude stabilisation using servo control system 2-4522  
 CO<sub>2</sub> heterodyne laser rangefinder using pulse compression 2-11740  
 CO<sub>2</sub> high-power military waveguide laser 2-11725  
 CO<sub>2</sub> hybrid TEA laser, freq. sweeping, origin 2-34807  
 CO<sub>2</sub> pulsed RF waveguide laser, gain-switched output 2-4524  
 CO<sub>2</sub> waveguide laser, optogalvanic stabilisation and offset tuning 2-44360  
 GaAlAs laser frequency stabilisation using automatic freq. control system 2-4527  
 HCN stabilised laser with HF pumping 2-49780  
 HF small scale CW laser, freq. stability 2-44333  
 He-<sup>22</sup>Ne laser, freq. stabilisation by CH<sub>4</sub> intracavity polarisation spectroscopy 2-925  
 He-Ne frequency stabilised laser, optical feedback effects 2-16031  
 He-Ne laser, methane-stabilised, rel. to third harmonic of 10.2  $\mu\text{m}$  R(30) transition of CO<sub>2</sub> laser, -freq. difference (Japanese) 2-4486  
 He-Ne laser, simple method for single-freq. operation and stabilisation 2-11712  
 He-Ne laser power stabilisation (Russian) 2-4485  
 He-Ne laser stabilized by methane saturated dispersion spectrum 2-25045  
 He-Ne/methane stabilised laser, freq. meas. (Russian) 2-7745  
 He-Ne frequency offset locked laser, performance at 3.51  $\mu\text{m}$  2-11679  
 I<sub>2</sub> cells verification for stabilised lasers, using Hanle effect 2-16009  
 Nd<sup>3+</sup>:YAG, travelling wave laser, frequency stabilisation using an intracavity selector 2-16035  
 Nd<sup>3+</sup>:YAG continuously pumped laser with strong intracavity modulation, optimisation and stability 2-39656  
 Nd<sup>3+</sup>:YAG laser, continuously pumped, transient processes, forced mode locking 2-25017

**laser isotope separation**

- high power laser appls., review (Czech) 2-34780  
 resonant medium, coherent propag. of laser pulse, appl. to isotope separation 2-34853  
 small molecules exposed to pulsed CO<sub>2</sub> laser radiation, isotopically selective dissociation 2-7619  
 spectroscopic requirements in photophys. and photochemical isotope separation 2-15912  
 trifluoriodomethane selective dissociation in CO<sub>2</sub> laser IR field in presence of acceptors 2-7618  
 trifluoromethane, T isotope separation, multiphoton dissociation, collisional effects 2-44013  
<sup>10</sup>BCl<sub>3</sub> laser isotope separation, IR absorpt. spectroscopy of irradiated products (Chinese) 2-15853  
 BFCI<sub>3</sub> formation by CO<sub>2</sub> laser in B isotope separation by multiphoton absorpt. of BCl<sub>3</sub> (Chinese) 2-24876  
 BF<sub>3</sub>Cl formation by CO<sub>2</sub> laser in B isotope separation by multiphoton absorpt. of BCl<sub>3</sub> (Chinese) 2-24876  
 D and T isotope separation by IR laser multiple-photon dissociation 2-15914  
 N<sup>16</sup>O, N<sup>18</sup>O separation, laser-heated thermal diffusion column operation 2-44127

**laser isotope separation continued**

- T separation by CO<sub>2</sub> laser-induced multiphoton dissociation of trifluoromethanes 2-15915  
 UF<sub>6</sub> chemical processing with lasers 2-15913  
 UF<sub>6</sub> laser isotope separation 2-9559  
 UF<sub>6</sub> laser multiphoton dissociation, reaction rate theory, isotope selectivity 2-37085  
 U(IV) complex, thenoyltrifluoroacetone, volatility rel. to laser isotope separation 2-45544
- laser magnetic resonance**  
 free electron laser with waveguide cavity, magnetic resonant 3-D kinetic theory 2-39664  
 free radicals, laser magnetic resonance spectroscopy 2-20088  
 free radicals, laser spectroscopy and reaction kinetics determin. 2-22427  
 methylene, rot-vibr. lines meas. and assigned using laser mag. reson. technique 2-7578  
 AsO radical, IR laser mag. reson. spectra 2-29633  
 H + HO<sub>2</sub> reaction rate const., LMR spectrosc. determin. 2-15821  
<sup>4</sup>He, <sup>4</sup>s-<sup>3</sup>P interval, precision determin. by laser mag. reson. 2-34454  
 OH free radical fundamental band, sensitive mag. rotation spectroscopy with colour centre laser 2-11531  
 O<sub>2</sub>(a  $\Delta_g$ ), metastable state, rot. transitions g-factors, laser mag. resonance 2-20089
- laser mode locking**  
 acousto-optic mode-locking, highly stable, using active feedback 2-7809  
 active-passive mode-locked oscillator generating nanosecond pulses 2-948  
 coumarin 102 synchronously pumped dye laser, improved performance by operating at increased repetition rate 2-4500  
 dye CW laser passive mode locking with contacted and non-contacted absorbers 2-11732  
 dye laser, CW, mode-locked, synchronously pumped, pulse emission obs. using streak-camera 2-11695  
 dye laser, CW, passively mode-locked, theory 2-44230  
 dye laser, CW, synchronously mode-locked and internally freq.-doubled, anal. 2-44275  
 dye laser, CW mode-locked, pumped directly by Ar ion laser, near IR picosecond pulse generation 2-44326  
 dye laser, flashlamp-pumped, injection locking at small injection powers 2-20350  
 dye laser, hard mode locking 2-16042  
 dye laser, tunable picosecond pulse generation, 750 to 780 nm by passive and synchronous modelocking 2-16041  
 dye lasers, mode-locked pumping theory 2-34748  
 dye ring lasers, synchronously pumped and hybrid, subpicosecond pulse generation 2-11727  
 dye-jet laser pumped by second harmonic of Q-switched mode-locked Nd<sup>3+</sup>:YAG laser 2-34749  
 dyes, Eastman Kodak types A 9740 and A 9860, mode-locked laser oscill. using self-pumped phase-conjugate refl. 2-11730  
 mode-locked optically pumped lasers, lethargic gain and short pulse generation 2-39631  
 multiline ring resonator, injection locking 2-16053  
 phosphate glass laser oscillator, mode-locked and Q-switched 2-16018  
 picosecond dye laser, synchronously pumped, theory 2-44271  
 picosecond pulse generation, using semicond. lasers, review (Japanese) 2-34755  
 pulse energy and stability regions in passively mode locked dye laser with linear cavity config. 2-39641  
 Raman laser, injection mode locking, numerical simulation 2-49795  
 regenerative amplifier development at the Laboratory for Laser Energetics 2-944  
 rhodamine 6G dye laser, output spectrum alteration under mode locking conditions 2-44356  
 rhodamine 6G halo type dye laser, panoramic radiation (French) 2-44274  
 rhodamine 6G mode-locked CW dye laser, subpicosec. pulse internal amplification 2-20351  
 ring dye laser, subpicosec., CW, passively mode-locked, time-resolved fluorescence spectroscopy appls. 2-34788  
 ring laser, travelling wave, subpicosecond pulse generation using synchronous double-modulation 2-4533  
 ruby passively mode-locked laser construction, transient stimulated Raman scatt. in liqs. 2-20341  
 semiconductor laser, linear and ring external-cavity, active mode locking 2-7808  
 semiconductor laser diode, synchronously pumped, mode-locked, picosecond pulse generation 2-44355  
 semiconductor laser injection locking, expt. obs. of asymmetric detuning characts. 2-49749  
 stilbene 3 synchronously pumped dye laser, improved performance by operating at increased repetition rate 2-4500  
 synchronised quantum beat spectroscopy using periodic impact excitations with CW mode-locked laser pulses 2-3626  
 tunnel mode locking feasibility in lasers 2-34819  
 tunnel mode locking theory (Russian) 2-11734  
 AlGaAs diode laser, subpicosecond coherent optical pulse generation by passive mode locking 2-44354  
 AlGaAs mode-locked diode lasers, oscillation characts. of coherent ultra-short optical pulses 2-25012  
 AlGaAs/GaAs, semiconductor laser amplifiers (Japanese) 2-34754  
 Ar ion laser, active mode locking by acousto-optic AM modulation (Chinese) 2-7807  
 Ar<sup>+</sup> laser, active mode-locking using temp. compensated acousto-optic modulator (Chinese) 2-25043  
 Ar<sup>+</sup> laser, actively mode-locked, charact. obs. using scanning interferometer (Chinese) 2-20291  
 Ar<sup>+</sup> laser, passive mode locking using rhodamine 110 dye saturable absorber, optical bistability 2-20340  
 CO<sub>2</sub> stable single-line mode-locked oscillator development 2-49779  
 CO<sub>2</sub> TEA laser mode-locking, gas lenslike effect influence (Chinese) 2-44240  
 D<sub>2</sub>O mode-locked optically pumped lasers, lethargic gain and short pulse generation 2-39631  
 (GaAl)As injection lasers, mode locking study 2-11697  
 GaAs buried optical guide laser, passively mode-locked, subpicosecond pulses 2-4539  
 GaAs laser, actively mode locked, subpicosecond pulse generation in external ring cavity 2-25038  
 He-Sr recombination laser, freq. tuning and mode self-locking, 430.5 nm 2-44263  
 HgBr laser, injection locking 2-902



## laser mode locking continued

- HgBr laser, line narrowing and enhanced efficiency by injection locking 2-20317  
 LiNdP<sub>2</sub>O<sub>12</sub> lasers, FM mode-locked, gigabit optical pulse generation 2-44304  
 Nd laser with long resonator, self-mode-locking problem 2-44310  
 Nd:glass actively mode-locked lasers, intracavity SHG 2-49758  
 Nd:glass laser, deterministic passive mode locking 2-25041  
 Nd:glass mode-locked laser oscillator with intra-cavity pulse selection by Pockels cell shutter 2-25016  
 Nd:YAG active acousto-optic mode-locked pulse laser (*Chinese*) 2-16037  
 Nd:YAG actively mode-locked Q-controlled laser, high repetition rate single picosecond pulses 2-16023  
 Nd:YAG laser, longit. mode self-locking 2-34820  
 Nd:YAG laser, mode locked, harmonic generation; freq. tuning 2-49828  
 Nd:YAG laser, mode-locked, electro-optically controlled 2-4543  
 Nd:YAG laser with antireson. ring struct., colliding pulse mode locking 2-20306  
 Nd:YAG passively mode-locked laser, quantitative theory and expt. 2-16003  
 Nd:YAG ring laser with mode locking and unidirectional lasing 2-39655  
 Nd:YAP passively mode-locked laser (*Chinese*) 2-16038  
 Nd<sup>3+</sup>:YAG active passive mode-locked pulses, temporal shape analysis 2-25048  
 Nd<sup>3+</sup>:YAG laser, continuously pumped, transient processes, forced mode locking 2-25017  
 Nd<sup>3+</sup>:YAG laser with LiF cryst. containing F<sub>2</sub> centres passive switch, spectral characts. 2-34774  
 Nd<sup>3+</sup>:YAG ring laser with acousto-optic mode locking, competitive effects 2-44309  
 XeF laser, transform-limited-bandwidth injection locking with Ar-ion laser at 3511 Å 2-39625

## laser modes

## see also laser mode locking

- active media, optical props. meas. during pulsed pumping 2-48750  
 annular resonator, coated cone performance 2-939  
 beam profiling technique, appl. to polycryst. Si film recrystn. 2-39686  
 channel-guide injection laser, leaky mode operation 2-16014  
 concentric, semi-concentric resonators with circular mirrors, reson. mode field distrib. diff. theory (*Chinese*) 2-16032  
 coumarin 102 synchronously pumped dye laser, improved performance by operating at increased repetition rate 2-4500  
 coupled ring laser, mode extinction under generation (*Russian*) 2-20338  
 DFB lasers, effect of complex coupling coeff. 2-44324  
 DFB semiconductor lasers with chirped grating, axial-mode selectivity and threshold gain 2-4509  
 DH diode lasers, CW constricted, spectral mode content, facet reflectivity effect 2-7804  
 diode lasers, longitudinal mode spectra 2-44287  
 diode lasers, single-mode, in interferometer systems, place noise 2-3612  
 dye laser, CW, with phase-conjugate mirror, longit. modes and aberration-correction props. 2-25008  
 dye laser, flashlamp-pumped, injection locking at small injection powers 2-20350  
 dye laser, injection locked flashlamp pumped, cavity resonances, narrow bandwidth oscillation 2-7798  
 dye laser, single-mode pulsed 2-44281  
 dye lasers, CW, multimode, quantum intensity fluctuations, intracavity laser spectroscopy sensitivity 2-39643  
 dye lasers, mode coupling, semiclassical theory (*Chinese*) 2-25006  
 dye single-mode CW laser, Michelson mode selectors, spatial hole burning compensation 2-7784  
 dye single-mode pulsed laser, design criteria and operating characts. 2-7785  
 free electron laser, oscillation mechanism for relativistic electron beam immersed in transverse static mag. field 2-34778  
 free-electron lasers, multimode, with inhomogeneous freq., broadening, quasi-linear theory 2-44319  
 gas laser, Gaussian beam, theory (*French*) 2-25039  
 gas laser, two-frequency operation, stability limit, tuning range calcs. 2-7737  
 high powder lasers, folded resonators (*Chinese*) 2-20344  
 injection heterojunction laser with high pulsed power 2-20329  
 injection laser, spontaneous emission factor 2-39649  
 injection laser structure, high-powered 2-44293  
 injection lasers, single mode power-gain curve, universal function, expt. determ. 2-44297  
 intracavity absorption spectroscopy, mechanism and sensitivity (*Chinese*) 2-23732  
 intracavity adaptive optic compensation of phase aberrations, passive small equiv. Fresnel no. resonator 2-11728  
 ion laser, nonlinear effects in generation (*Russian*) 2-15983  
 molecular lasers, powerful, in submm. region (*Russian*) 2-4520  
 multimode oscillation threshold, broadening ratio calc. 2-24985  
 multiple-quantum-well laser, formulae for no. of modes 2-11812  
 open cavity with time-varying mirror refl. coeff., lowest type oscils. 2-49787  
 phases anal. by interferometry 2-28634  
 resonator with retroreflecting roof mirror, reson. modes 2-20330  
 resonators with phase apertures, selective props., lowest transverse mode 2-4535  
 rhodamine 6G flash-lamp pumped dye laser, cavity dumped PTM mode operation (*Chinese*) 2-20299  
 ring laser, two-mode, macroscopic quantum fluctuations and first-order phase transition 2-39609  
 ring laser with active amplitude isolator, single freq. mode of generation (*Russian*) 2-20335  
 ring laser with clipper, laws governing emission 2-44352  
 ring lasers, fluctuations and transitions at instabilities 2-29836  
 ring resonator, with cross-sectionally varying anisotropy, oscill. eigenmodes 2-16033  
 solid state pulsed lasers, mode selection, coherence props. 2-49757  
 spatial distribution shape analysis, sharpness and asymmetry methods 2-29841  
 stilbene 3 synchronously pumped dye laser, improved performance by operating at increased repetition rate 2-4500  
 strip resonators, unstable, mode degeneracy, simplified calc. 2-34801  
 telescopic resonators for large-vol. TE<sub>00</sub> mode operation 2-16034  
 thermal blooming anal. using theory of light propag. through inhomogeneous media 2-34664
- laser modes continued  
 three-mirror coupled cavity dye lasers with lamp excitation 2-49785  
 TJS single-mode high-power crank struct. laser diodes, CW 15-mW operation test 2-11699  
 two-mode lasers, correl., transients, bistability and phase-transitions analogy 2-7740  
 unstable optical resonator, mode restriction characts. (*Chinese*) 2-44346  
 unstable resonator modes, virtual-source theory 2-4534  
 AlGaAs constricted DH laser, low threshold current temp. sensitivity 2-29819  
 AlGaAs constricted double-heterojunction diode lasers, structs. and electroptical characts. 2-34789  
 AlGaAs DH laser, highly RF modulated, effect of cavity length on picosecond pulse generation 2-29832  
 AlGaAs DH laser amplifiers, signal gain, freq. bandwidth, saturation output power 2-16049  
 AlGaAs oxide stripe CW lasers, spatial mode stability during aging 2-7764  
 AlGaAs window stripe laser, optimum design conditions, stable fundamental lateral transverse mode 2-7787  
 Al<sub>1-x</sub>Ga<sub>x</sub>As buried heterostruct. laser, single mode operation by loss stabilisation 2-7788  
 AlGaAsSb/GaInAsSb/GaSb laser, light confinement and divergence 2-44364  
 Ar<sup>+</sup> laser, actively mode-locked, charact. obs. using scanning interferometer (*Chinese*) 2-20291  
 CO pulsed laser having selective and nonselective resonators, spectral characts. 2-44358  
 CO<sub>2</sub> 16-μm bending-mode laser system 2-890  
 CO<sub>2</sub> laser, sealed-off single-mode type, characts. and performance (*Rumanian*) 2-16027  
 CO<sub>2</sub> laser discharge vibr. population distrib. meas. with tunable diode laser 2-49727  
 CO<sub>2</sub> TE continuously tunable laser using three mirror resonator, single mode operation 2-886  
 CO<sub>2</sub> tunable laser, spectral tuning using intracavity spatial filtering 2-7799  
 CO<sub>2</sub> tunable waveguide laser with high transverse mode and line discrimination 2-44241  
 CuCl laser, burst-mode, temp. depend. 2-7748  
 D<sub>2</sub>O high power pulsed ring resonators in far IR 2-39674  
 GaAlAs DH injection laser, coherent reception, multimode effects 2-38688  
 (GaAl)As injection laser linewidth measurements, CW longit. mode struct. 2-7768  
 (GaAl)As single-mode injection laser, power-depend. linewidth meas. 2-7769  
 GaAlAs single-mode laser, dynamic wavelength tuning 2-7770  
 GaAlAs/GaAs, DH single-mode injection lasers for optical fibre communication 2-16143  
 GaAs DFB laser, optically pumped, with variable grating period, mode selectivity and threshold gain 2-4509  
 GaAs lasers, longitudinal mode control using three mirror active passive cavity 2-20333  
 GaAs single-mode DH lasers using three-mirror active-passive cavity, longit.-mode control 2-11700  
 GaAs/AlGaAs TJS lasers, gain suppression 2-7759  
 GaAs-GaAlAs, stripe DH laser, Zn-diffused, molorganic CVD grown 2-49772  
 GaInAsP buried crescent laser emitting at 1.52 μm, dispersion effects 2-44289  
 GaInAsP-InP DFB buried heterostruct. lasers, CW operation in 1.5 μm wavelength region 2-34787  
 GaInAsP-InP injection laser, fabrication and output characteristics 2-4517  
 GaInAsP-InP laser transmitter module, external cavity controlled single longitudinal mode 2-25030  
 GaInAsP-InP mode-controlled long wavelength lasers, BH, MSB and TS types 2-4526  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>/InP terraced substrate single-mode laser 2-16016  
 Ga<sub>1-x</sub>In<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>/InP laser, 1.3 μm, index-guiding struct. grown on terraced substrate 2-936  
 H<sub>2</sub>O CW waveguide laser, 118.6 μm 2-49775  
 He-Cd II hollow cathode metal vapour lasers, oscill. spectra, 533.7 and 537.8 nm lines 2-44255  
 He-Ne, transverse modes obs. of an optical resonator 2-42834  
 He-Ne laser, high power, single freq. operation anal., resonant cavities 2-893  
 He-Ne two-mode ring laser, two-time correl. meas. 2-29843  
 He-Zn II, hollow cathode metal vapour lasers, oscill. spectra, 492.4 nm line 2-44255  
 He-Zn II laser using natural Zn, single-mode operation, 492.4 nm 2-44331  
 I photodissociation laser using C<sub>2</sub>H<sub>2</sub>, resonator design and output characts. (*Korean*) 2-11718  
 InGaAsP inverted rib-wavelength lasers, fabrication and operation characteristics 2-20318  
 InGaAsP long-wavelength laser devices, recent developments 2-11726  
 InGaAsP modulated single-longit. mode semicond. laser and fibre transmission characts. at 1.55 μm 2-16047  
 InGaAsP ridge waveguide laser performance at 1.3 μm 2-11698  
 InGaAsP short cavity single-mode 1.3 μm lasers with evaporated high-reflectivity mirrors 2-29816  
 InGaAsP/InP Z 2-16143  
 InGaAsP-InP plano-convex waveguide 1.3 μm laser, transverse mode stabilisation 2-921  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>/InP buried-crescent laser diode 1.3 μm fundamental transverse mode and life test 2-4532  
 LiNdP<sub>2</sub>O<sub>12</sub> lasers, laser-diode pumped, spike-mode oscils. 2-11701  
 LiNdP<sub>2</sub>O<sub>12</sub> multimode laser, phase-conjugate refl.-induced spiking oscill. 2-49755  
 N<sub>2</sub> atmospheric laser, travelling-wave mode (*Chinese*) 2-16012  
 NaF (F<sub>2</sub><sup>+</sup>)<sup>\*</sup>-centre laser, CW tunable single-mode operation in near IR 2-49766  
 Nd laser with long resonator, self-mode-locking problem 2-44310  
 Nd:YAG Q-switched TEM<sub>00</sub> mode laser with telescopic resonator, high power single freq. operation 2-25047  
 PbSnTe buried heterostructure lasers, longitudinal mode behaviour 2-25009



**laser radar** see *optical radar*

## **laser theory**

see also *laser transitions; population inversion; stimulated emission*  
absorbing-amplifying laser system, deform. of radiation time-space struct. 2-20352  
amplified-spontaneous-emission intensity fluctuations 2-20284  
amplifying media in inversion saturation regime, four-wave mixing 2-49832  
analogue computer for soln. of coupled nonlinear differential eqns. governing laser dynamics 2-44233  
benzoxazoles, spectral and luminesc. props. to assess lasing capacity, theoretical determ. 2-49511  
bidirectional amplification with nonsaturable absorption and amplified spontaneous emission 2-881  
broadening ratio calc. from multimode oscillation threshold 2-24985  
chemical lasers, gas flow, inhomogeneous and collisional broadening, models (*Chinese*) 2-39638  
Cherenkov laser, theory 2-49761  
Cherenkov Raman free electron lasers, theoretical and expt. performance 2-39665  
detuning effect on fluctuation props. 2-49725  
DFB laser with strong periodic modulations, theory based on complex Hill eqn. 2-39613  
DFB semiconductor lasers with chirped grating, axial-mode selectivity and threshold gain 2-4509  
DH lasers, self-consistent static model 2-912  
diode laser, narrow-stripe gain-guided, spontaneous emission factor 2-25010  
diode lasers, introduction 2-4508  
distributed-loss laser, longit.-type oscills., nonlinear splitting 2-7738  
distributed-loss laser, nonlinear splitting of longit.-type oscills. 2-34717  
dye laser, CW, passively mode-locked 2-44230  
dye laser, hard mode locking 2-16042  
dye laser, laser pumped, subnanosecond pulse generation, rate eqn. model 2-11690  
dye lasers, mode coupling, semiclassical theory (*Chinese*) 2-25006  
dye lasers using mixed dyes, output props. and energy transfer 2-34750  
emission kinetics of laser pumped by short pulses 2-7741  
far IR lasers, high power, freq. tuning and efficiency enhancement 2-39633  
fluoromethane-d<sub>3</sub>, vibrational lasing 2-20292  
free electron Cherenkov laser model, S-matrix theory 2-29825  
free electron laser, 3-D nonlinear theory 2-20312  
free electron laser, coherent and incoherent radiation with axial guide field 2-11706  
free electron laser, nonlinear theory 2-39661  
free electron laser, oscillation mechanism for relativistic electron beam immersed in transverse static mag. field 2-34778  
free electron laser, stimulated emission of bremsstrahlung in periodic mag. field 2-34775  
free electron laser, three dimensional nonlinear theory 2-39658  
free electron laser cavity resonator mode theory 2-39662  
free electron laser introduction 2-880  
free electron laser theory, quantum and classical aspects 2-20313  
free electron laser with waveguide cavity, magnetic resonant 3-D kinetic theory 2-39664  
free electron lasers, collective effects on operation, with axial guide field 2-39666  
free electron lasers, gain mechanism for helical and planar magnet arrays, one-dimens. anal. 2-25022  
free electron lasers, multiphoton processes, EM wave amplification (*Russian*) 2-15978  
free-electron laser amplifier, design considerations and simulation 2-20288  
gas laser, Gaussian beam, theory (*French*) 2-25039  
gas laser, two-frequency operation, stability limit, tuning range calcs. 2-7737  
gas laser nonlinear equation, time evolution relax. and loss parameter effect 2-34716  
gas lasers, saturation intensity and gain, flow effects (*Chinese*) 2-4476  
high power lasers, gain switching 2-882  
injection lasers, single mode power-gain curve, universal function, expt. determ. 2-44297  
injection lasers, threshold and oscillation, review of laser theory 2-44299  
injection-locked passively Q-switched lasers 2-44234  
intracavity saturable absorber, gain function, dispersive effects 2-29806  
ion laser, nonlinear effects in generation (*Russian*) 2-15983  
ion lasers, absorption spectra of accelerated atoms, Landau-Zener type nonlinear effects (*Russian*) 2-15736  
isochronous storage ring, free electron laser electron source, theory 2-7779  
light amplification prospects in the far UV, review 2-49726  
luminescence, theoretical aspects, review 2-46665  
multi-photon lasers, quantum theory 2-34714  
multiphoton lasers and multiphoton instability, unified approach 2-7739  
near millimetre wave sources, gas phase approach 2-7735  
near MM-wave coherent radiation, ideas for efficient generation 2-39611  
operation with output feedback pumping, phase transition analogy 2-24986  
optical bistable circuit, laser-amplifier-based, proposal and anal. 2-44374  
optically pumped gas laser with common pump and lasing level, kinetic model 2-7749  
optically pumped lasers, unidirectional Doppler-free gain and generation 2-44229  
optimally guided EM interactions, with two level waves and lasers (*Croatian*) 2-11674  
organic solution laser, coaxial pump props., influence of laser efficiency 2-7756  
picosecond dye laser, synchronously pumped, theory 2-44271  
plane resonator with quadratically nonuniform medium, natural oscill. modes 2-44349  
power multiplication in parametric freq. converter with cavity dumper 2-39691  
Q-switched pulse train laser theory (*Chinese*) 2-7806  
radiative collisional laser amplifier, theoretical and expt. evidence 2-15993  
Raman light-guide laser, ultrashort pulse generation 2-25018  
resonator losses, programmed modulation, laser generation 2-29833  
Rhodamine 6G, aq. solns., influence of surface active materials on laser efficiency 2-7757

## **laser theory continued**

ring laser beats with resonator frequency, noise perturbations effects 2-44348  
ring laser with clipper, laws governing emission 2-44352  
ring laser with detuning, self-pulsing 2-29835  
ring lasers, fluctuations and transitions at instabilities 2-29836  
saturable absorber-laser, bifurcation diagram 2-44231  
saturable absorber-laser, bifurcation diagram 2-44232  
self-modulation of radiation transmitted by amplifying medium with gain finite relax. rate 2-44236  
semiconductor laser, intrinsic resonant frequency magnitude 2-4505  
semiconductor laser, modulation response, lateral carrier diffusion effect 2-914  
semiconductor laser spectrum-narrowing ratio determ. by optical feedback 2-39647  
semiconductor lasers, heavily doped 2-7760  
semiconductor lasers, nonlinear circuit model 2-16000  
semiconductor lasers, physics, book contrib. 2-49752  
semiconductors, laser radiation, submicron, from exciton transitions excited by external source 2-44306  
short duration Gaussian pulses calc. (*Russian*) 2-7736  
single-mode laser with saturable absorber, model, oscillatory phenomena and Q switching 2-39610  
solid-state laser with negative feedback, periodic output stability 2-20311  
spontaneous emission of relativistic channelled particles in X-ray range (*Russian*) 2-25963  
spontaneous radiation trains, elementary lengthening processes 2-34707  
stimulated phonon emission, phonon maser and phonon laser (*Japanese*) 2-8588  
telescopic resonators for large-vol. TE<sub>00</sub> mode operation 2-16034  
three-energy-level laser system, non-equilib. steady state (*Chinese*) 2-44228  
three-level absorbers, bistability and hysteresis 2-20289  
tunnel mode locking theory (*Russian*) 2-11734  
two-photon laser, two-mode, nonclassical effects 2-39614  
ultrashort light pulse generation in laser with bleachable filter by intracavity generation of Raman emission 2-7810  
(Al,Ga)As DH injection laser with asymm. gain distrib., computer model 2-44291  
Ar-N<sub>2</sub> with pumping by high-current charged particles beam, numerical model 2-4493  
Cu vapour laser, multiparameter optimisation 2-34731  
γ-radiation kinetics, numerical solns. 2-19055  
He-Ne cascade laser, two-photon amplification 2-11681  
<sup>3</sup>He-Ne laser, CW nuclear pumped, lasing transition theory 2-24992  
I amplifier, high-energy, beam-quality-determining processes 2-907  
I chemically pumped laser as fusion driver, modeling 2-4498  
KrF short-pulse laser operation, kinetic issues 2-895  
NH<sub>3</sub> optically pumped laser with common pump and lasing level, kinetic model 2-7749  
Nd:glass high-peak-power laser systems, book 2-4515  
YAP, orthorhombic crystals, lasing process, thermal effects (*Chinese*) 2-25013

## **laser transitions**

see also *laser theory*  
chemical lasers, gas flow, inhomogeneous and collisional broadening, models (*Chinese*) 2-39638  
colour centre lasers, M<sup>1</sup>-centre transitions, 0.8 to 2.0 μm 2-11705  
colour-centre crystal solar-radiation-pumped CW laser, feasibility study 2-4514  
deuterated fluoroform SMMW laser transitions optically pumped by tunable CO<sub>2</sub> waveguide laser 2-44256  
deuterated methylene fluoride SMMW laser transitions optically pumped by tunable CO<sub>2</sub> waveguide laser 2-44256  
1,1-difluoroethylene SMMW laser transitions optically pumped by tunable CO<sub>2</sub> waveguide laser 2-44256  
dye DFB laser, N<sub>2</sub> laser pumped, UV and blue picosecond pulse generation 2-49782  
dye lasers, mode-locked pumping theory 2-34748  
fluoromethane, 496 μm transition, resonant pumping case, lethargic gain 2-897  
fluoromethane-d<sub>3</sub>, vibrational lasing 2-20292  
O-H<sub>2</sub> regenerative Raman amplifier utilizing rot. transitions 2-49740  
laser electronics and systems, book 2-48413  
light amplification prospects in the far UV, review 2-49726  
metal vapour recombination laser transitions in expanding plasmas 2-39627  
methanol pumped by isotopic CO<sub>2</sub> lasers, submillimetre laser line obs. and assignment 2-44253  
methyl alcohol, CH<sub>3</sub>OH and CD<sub>3</sub>OD, optically pumped, Stark effect in subMM laser lines 2-25000  
methyl alcohol, optically pumped, FIR laser lines, meas. and assignments 2-24998  
methyl bromide, optoacoustic spectrum, far IR laser action by pumping with waveguide CO<sub>2</sub> laser 2-38704  
methyl fluoride distributed feedback laser, optically pumped, 496 μm wavelength 2-39636  
methyl fluoride-d<sub>3</sub>, <sup>13</sup>CD<sub>3</sub>F, optimally pumped, sub MM wave laser emission 2-7746  
methyl isocyanide, optically pumped MM wave CW laser lines, 823, 938 and 2140 μm 2-4490  
molecules, combination scatt. and stimulated conformational transformations, three-term model (*Russian*) 2-20139  
near millimetre wave sources, gas phase approach 2-7735  
operation with output feedback pumping, phase transition analogy 2-24986  
optically pumped lasers, unidirectional Doppler-free gain and generation 2-44229  
tetrafluoromethane laser, isotopically pumped, isotope effects 2-44339  
two-mode lasers, correl., transients, bistability and phase-transitions analogy 2-7740  
Ag hollow cathode CW ion laser at 4788 Å (*Chinese*) 2-16010  
Ag ion UV and IR hollow-cathode laser, operating characts. 2-15985  
Au ion UV and IR hollow-cathode laser, operating characts. 2-15985  
CO electron-beam-controlled discharge laser, kinetics and energy characts. 2-34730  
CO laser, intensity modulation, freq. stabilisation and tuning by extracavity Stark cell 2-34818  
CO laser, single line operation, transition struct. anal. 2-49736



## laser transitions continued

- CO pulsed laser having selective and nonselective resonators, spectral characts. 2-44358  
 CO<sub>2</sub> electron-beam-controlled discharge laser, kinetics and energy characts. 2-34730  
 CO<sub>2</sub> gasdynamic laser, gain and vibr. temps. meas. and calc. 2-44245  
 CO<sub>2</sub> gasdynamic laser with electric-arc heating, stimulated emission at 18.4  $\mu$  2-39672  
 CO<sub>2</sub> laser, third harmonic of 10.2  $\mu$ m R(30) transition, rel. to methane-stabilised He-Ne laser, freq. difference (Japanese) 2-4486  
 CO<sub>2</sub> TEA laser, emission lines in 10.4 and 9.4  $\mu$ m bands 2-889  
 CO<sub>2</sub> TEA laser emitting lines in 00<sup>2</sup>-(10<sup>1</sup>0<sup>2</sup>0<sup>1</sup>)<sub>L,H</sub> bands, output parameter investigation 2-4482  
<sup>13</sup>CO<sub>2</sub> laser hot band transitions, heterodyne freq. meas. 2-16045  
 CO<sub>2</sub>-C<sup>16</sup>O laser, optically pumped in 4.3  $\mu$ m band, lasing investigation in 24- and 38- $\mu$ m region 2-44238  
 Cd, blue-green atomic laser using CdI<sub>2</sub> photodissociation, 508.6, 480.0 nm laser lines 2-7754  
 Cu II hollow cathode laser characts. 2-15989  
 Cu ion UV and IR hollow-cathode laser, operating characts. 2-15985  
 Cu vapour laser, active medium gain investigation 2-34736  
 D<sub>2</sub>O, 385  $\mu$ m transition, adiabatic Raman case, lethargic gain 2-897  
 Dy<sup>3+</sup>-CaF<sub>2</sub>, pot. as continuously tunable far-IR laser 2-44303  
 Er<sup>3+</sup>:YAG crystals, stimulated emission spectrum due to self-saturating transitions 2-25020  
 Er<sub>3</sub>Al<sub>2</sub>O<sub>7</sub>:Ho<sup>3+</sup>(Tm<sup>3+</sup>), cross-cascade stimulated ion emission 2-25019  
 GaInAsP-InP DH diode lasers emitting at 1.5  $\mu$ m grown by LP-MO CVD 2-44290  
 H<sub>2</sub> electron-beam-controlled discharge laser, kinetics and energy characts. 2-34730  
 HD VV 2-34730  
 HN<sub>3</sub> far IR laser, reson. pumping 2-15984  
 He/Cl<sub>2</sub> laser, electron beam pumped, 258 nm 2-44254  
 He-Ne cascade laser, two-photon amplification 2-11681  
 He-Ne laser line profile and width meas. at 6328 Å using optogalvanic spectroscopy (Chinese) 2-24991  
 He-Ne/methane laser with periodically varying optical length, nonlinear absorber influence on radiation parameters 2-7752  
 He-Te positive column laser transitions, excitation mechanism 2-7744  
 He-Zn hollow cathode laser discharge, He<sup>+</sup> density, intensity ratio method meas. 2-24999  
 He-Zn II laser using natural Zn, single-mode operation, 492.4 nm 2-44331  
<sup>3</sup>He-Ne laser, CW nuclear pumped, lasing transition theory 2-24992  
<sup>3</sup>He-Xe laser, nuclear pumped, lasing at 2.63  $\mu$ m 2-4484  
 Hg blue-green atomic laser using HgI<sub>2</sub> photodissociation, 546.1, 435.8 nm laser lines 2-7754  
 HgBr short pulse discharge laser 2-933  
 Ho<sup>3+</sup>:BaYbF<sub>8</sub> crystal energy transfer mechanism to 2- $\mu$  lasing channel 2-34771  
 I laser transition at high press., saturation energy density and line profile 2-906  
 InGaAsP-InP plano-convex waveguide 1.3  $\mu$ m laser, transverse mode stabilisation 2-921  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>1-y</sub> laser transitions, Auger recombination mechanisms 2-44295  
<sup>7</sup>Li<sub>2</sub> laser transitions assignment, Ar<sup>+</sup> and Kr<sup>+</sup> laser pumping 2-7750  
 N atomic laser action in hollow cathode discharge 2-24997  
 N<sub>2</sub> laser, intense output at 3577Å, SF<sub>6</sub> addition effects (Chinese) 2-24994  
<sup>14</sup>NH<sub>3</sub>, <sup>15</sup>NH<sub>3</sub> far IR laser lines predictions for CO<sub>2</sub>, N<sub>2</sub>O pump laser lines 2-49737  
 Na vapour, four-wave mixing involving two quadrupole transitions 2-971  
 Na, optically pumped laser lines, fluorescence spectra obs. 2-15843  
 Nd:YAG pulsed output of single spectral lines at 1.064, 1.073, 1.061 and 1.052  $\mu$ m (Chinese) 2-7773  
 Nd<sup>3+</sup>:metaphosphate glass laser, spectral generation investigation 2-4513  
 Nd<sup>3+</sup>:YAG 1.318  $\mu$ m laser radiation, higher harmonic generation 2-4557  
 PO chemiluminescent flame, UV light amplification 2-44266  
 SO<sub>2</sub> laser pumped by CO<sub>2</sub> laser radiation, transition identification, 139.5-685  $\mu$ m range 2-44261  
 Tl laser excited by TII photodissociation, efficient operation at 535.0 nm 2-15994  
 Xe laser utilising 5d(3/2)<sub>0</sub>-6p(3/2)<sub>1</sub> transition, buffer gas role investigation 2-44249  
 Yb laser, output power depend. on pump pulse repetition freq. 2-34732  
 Yb-Er glasses, laser-pumped, max. attainable gains 2-7775  
 Zn, blue-green atomic laser using ZnI<sub>2</sub> photodissociation, 481.1, 472.2 nm laser lines 2-7754  
 ZnI, gain at 602 nm on the B to X band 2-901

## laser tuning

- alkali halides, Tl<sup>+</sup>-doped, F<sub>A</sub>-type centre broadly tunable CW laser operation, optical props. 2-20310  
 benzoxazole derivative vapours, stimulated emission of UV radiation 2-49745  
 colour centre lasers, flashlamp excitation 2-7777  
 colour centre lasers, M<sup>+</sup>-centre transitions, 0.8 to 2.0  $\mu$ m 2-11705  
 colour centre tunable laser development, review 2-39653  
 detuning effect on fluctuation props. 2-49725  
 deuterated fluoroform SMMW laser transitions optically pumped by tunable CO<sub>2</sub> waveguide laser 2-44256  
 deuterated methylene fluoride SMMW laser transitions optically pumped by tunable CO<sub>2</sub> waveguide laser 2-44256  
 dichlorodifluoromethane as dye laser tuning gas, refr.-index meas. 2-20315  
 1,1-difluoroethylene SMMW laser transitions optically pumped by tunable CO<sub>2</sub> waveguide laser 2-44256  
 dye, narrow-band linearly scannable IR lasing between 1.09 and 1.12  $\mu$ m 2-11719  
 dye laser, cascade energy transfer, with wide tuning range 2-20303  
 dye laser, CW, synchronously mode-locked and internally freq.-doubled, anal. 2-44275  
 dye laser, CW, with phase-conjugate mirror, longit. modes and aberration-correction props. 2-25008  
 dye laser, CW mode-locked, pumped directly by Ar ion laser, near IR picosecond pulse generation 2-44326  
 dye laser, laser pumped, subnanosecond pulse generation, cavity length change effect 2-11689  
 dye laser, laser pumped, subnanosecond pulse generation, rate eqn. model 2-11690

## laser tuning continued

- dye laser, narrow band, tuned with two gratings (Chinese) 2-20346  
 dye laser, single-freq. tunable pulsed, with diff. grating 2-39669  
 dye laser, tunable waveguide, 200 W power output and narrow bandwidth 2-7789  
 dye laser resonator, grating tuned, beam expanding prism influence on linewidth and expansion ratio 2-25040  
 dye lasers, N<sub>2</sub>-laser pumped, amplified spontaneous emission 2-20302  
 dye ring laser, rapid freq. scanning 2-20332  
 dye-jet laser pumped by second harmonic of Q-switched mode-locked Nd<sup>3+</sup>:YAG laser 2-34749  
 far IR lasers, high power, freq. tuning and efficiency enhancement 2-39633  
 far-IR lasers, CW optically pumped, developments 2-39612  
 free electron lasers frequency tuning and high-harmonic generation with intense pumping 2-44235  
 gas laser, two-frequency operation, stability limit, tuning range calcs. 2-7737  
 rhodamine 6G dye laser with compounds resonator pumped by Xe-ion laser 2-16030  
 ring dye laser, subpicosec., CW, passively mode-locked, time-resolved fluorescence spectroscopy appls. 2-34788  
 ring laser, travelling wave, subpicosecond pulse generation using synchronous double-modulation 2-4533  
 thin-film DFB laser emission, wavelength tuning method 2-44351  
 tunable picosecond pulse generation, 750 to 780 nm by passive and synchronous modelocking 2-16041  
 AgGaSe<sub>2</sub>, noncritically phase-matched, tunable coherent 16  $\mu$ m radiation by difference freq. mixing 2-11717  
 AlGaAs-GaAs laser with external dispersive resonator, bistable operation and spectral tuning 2-34817  
 ArF excimer laser source, tunable ultrahigh spectral brightness 2-11724  
 ArF UV preionised discharged excimer laser, spectral tuning in 1926 to 1944Å range (Chinese) 2-25024  
 CO laser, intensity modulation, freq. stabilisation and tuning by extracavity Stark cell 2-34818  
 CO<sub>2</sub>, CW laser, sealed-off with tuning over lines of first two sequential bands 2-20328  
 CO<sub>2</sub> laser, optogalvanic stabilisation using electrodynamic tuning element 2-49728  
 CO<sub>2</sub> short-pulse line-tunable laser for photochemical studies 2-20316  
 CO<sub>2</sub> TEA laser, tunable single longit. mode output 2-11720  
 CO<sub>2</sub> tunable laser, spectral tuning using intracavity spatial filtering 2-7799  
 CO<sub>2</sub> tunable pulsed laser 2-7795  
 CO<sub>2</sub> tunable TEA laser with intracavity NaCl prisms as dispersive elements (Chinese) 2-24987  
 CO<sub>2</sub> tunable waveguide laser with high transverse mode and line discrimination 2-44241  
 CO<sub>2</sub> waveguide laser, optogalvanic stabilisation and offset tuning 2-44360  
 CdSe, noncritically phase-matched, tunable coherent 16  $\mu$ m radiation by difference freq. mixing 2-11717  
 DF pulsed chemical laser with diff.-limited beam divergence 2-44268  
 GaAlAs laser, freq. stabilisation, 0.5 THz tunable freq. range 2-4527  
 GaAlAs single-mode laser, dynamic wavelength tuning 2-7770  
 HCN stabilised laser with HF pumping 2-49780  
 HN<sub>3</sub> far IR laser, reson. pumping 2-15984  
 He-Ne cascade laser, two-photon amplification 2-11681  
 He-Ne/methane laser with periodically varying optical length, nonlinear absorber influence on radiation parameters 2-7752  
 He-Sr recombination laser, freq. tuning and mode self-locking, 430.5 nm 2-44263  
 KLi(F<sub>2</sub>)<sub>2</sub> centre laser, broadly tunable action beyond 3  $\mu$ m 2-34763  
 Kr,F laser, broad band, electron beam pumped 2-34727  
 LiF F<sub>2</sub><sup>+</sup> tunable colour centre laser and holographic selector 2-4529  
 LiF laser high repetition rate, pumped by Cu vapour laser 2-16004  
<sup>7</sup>Li<sub>2</sub> laser transitions assignment, Ar<sup>+</sup> and Kr<sup>+</sup> laser pumping 2-7750  
<sup>15</sup>NH<sub>3</sub> far IR laser system, isotopic CO<sub>2</sub> laser pumped, fine tuning characts. 2-16021  
 NaF(F<sub>2</sub>)<sub>2</sub> laser, stimulated emission 2-44311  
 Nd:YAG laser, mode locked, harmonic generation; freq. tuning 2-49828  
 Nd<sup>3+</sup>:YAG ring laser with acousto-optic mode locking, competitive effects 2-44309  
 Pb-salt diode laser, specific gas density, meas. appl. 2-22694  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Se DH laser, CW operation at 80K 2-930  
 Xe laser utilising 5d(3/2)<sub>0</sub>-6p(3/2)<sub>1</sub> transition, buffer gas role investigation 2-44249  
 XeCl excimer oscillator-ring amplifier system, laser tuning 2-49767  
 XeCl laser, broad band, electron beam pumped 2-34727  
 XeF laser, broad band, electron beam pumped 2-34727

## laser velocimeters

- airflow through cascade of turbine blades meas. 2-8248  
 anemometer, aerospace turbomachinery flow diagnostics appl. 2-20790  
 anemometer with 5 ns for wind tunnel meas. correlator processor 2-16404  
 anemometry, optical discriminator for Doppler frequency shifts (Russian) 2-4904  
 anemometry data processing, well-conditioned cubic b-spine model 2-24961  
 charged dust particles, dynamics in elec. field, laser Doppler velocimetry study 2-4908  
 circularly polarised light scattering in laser Doppler anemometry 2-39568  
 differential laser microanemometer; contactless meas. of flow velocity distrib. 2-20776  
 Doppler, subsonic wind tunnel appl. 2-40013  
 Doppler anemometer, output noise gradient spectrum modelling (Russian) 2-4903  
 Doppler anemometer backscatter meas., walls, two-phase flows, refl. suppression by polarisation 2-25452  
 Doppler anemometer measurements using nonorthogonal vel. components, error estimates 2-50333  
 Doppler anemometry, axisymmetric flow, near sphere in spheric cavity (French) 2-39880  
 Doppler anemometry, single-particle velocity and trajectory meas. of inhomogeneities in unstable airflows 2-50341  
 Doppler anemometry meas. in gas-solid flows 2-1250  
 Doppler effect laser sweep anemometer for velocity profile measurement (French) 2-35241



**laser velocimeters continued**

- Doppler laser anemometer system for rapid scanning of flow fields 2-20778  
 Doppler-difference anemometer, separated turbulent boundary layer in supersonic flow obs. 2-16408  
 electron-optical converter and photomultiplier based velocimeter 2-50337  
 fast deformation velocity measurement using laser Doppler velocity interferometer 2-44693  
 fibre laser Doppler velocimeter, dual single-beam 2-25451  
 fibre optics transmission of velocimeter signal 2-4591  
 flow rates measurement in liquids and gases, using Laser-Doppler velocity meter (Dutch) 2-4906  
 frequency shifting of LDV by moving wedged glass for blood velocity meas. 2-22862  
 internal combustion engine, flow velocity rapid estimate using photon correlation laser anemometry 2-12256  
 microprocessor controlled positioning, subsonic wind tunnel appl. 2-40010  
 oblique jet interaction with subsonic flow, laser velocimetric obs. (French) 2-50343  
 optical correlation techniques in fluid dynamics 2-20775  
 optical fibre high-resolution laser Doppler velocimeter for pulsatile blood flow meas. 2-9901  
 particle size and velocity simultaneous meas. using laser Doppler velocimeter 2-20777  
 shear-wave velocity meas. by interferometry, surface motion in shocked materials determ. 2-15217  
 slow variable sign flows with continuous velocity spectra, laser Doppler velocimeter meas. 2-35242  
 speckle velocimeters, vel. sensitivity 2-20355  
 submersible laser Doppler velocimeter, tidal channel flow meas. 2-28247  
 time-of-flight laser velocimeter for atm. wind speed meas., scaling law, photon-count distrib. 2-52944

**lasers**

- see also chemical lasers; distributed Bragg reflector lasers; distributed feedback lasers; dye lasers; excimer lasers; free electron lasers; gas lasers; laser beams; laser frequency stability; laser tuning; liquid lasers; nuclear pumped lasers; Raman lasers; ring lasers; solid lasers; X-ray lasers  
 conference, optical systems and appls., Utrecht, The Netherlands (Sept. 1980) 2-14971  
 IR and MM waves, conf., Miami Beach, FL, USA (Dec. 1981) 2-38365  
 laser electronics and systems, book 2-48413  
 physical principles and historical review 2-16008  
 resource letter, lasers and their applications 2-14991  
 summer school in laser physics, Hamilton, New Zealand (1980) 2-3322

**latent heat**

- see also heat of fusion; heat of sublimation; heat of vaporisation  
 Lorentz invariance, transformation, in inertial frame 2-40  
 molten salt-oil contact heat exchanger theoretical and exptl. investig. (French) 2-28852  
 one-dimensional phase change, heat transfer, finite element anal. 2-29991  
 passive latent heat storage units, log-mean temp. difference correction factors 2-37458  
 Potts models, three-dimens.,  $1/Q$  expansions for Lagrangian formulation 2-33471  
 Q-state Potts model in  $(1+1)$ -dimensional Hamiltonian field theory for  $Q \geq 4$  2-10734  
 storage unit, transient thermal response 2-37457  
 NaSO<sub>4</sub>·10H<sub>2</sub>O multfreeze-cycle life testing in a rolling cylinder heat store 2-47524

**latent heat of adsorption** see heat of adsorption

**latent heat of combustion** see heat of combustion

**latent heat of crystallisation** see heat of crystallisation

**latent heat of dissociation** see heat of dissociation

**latent heat of formation** see heat of formation

**latent heat of fusion** see heat of fusion

**latent heat of mixing** see heat of mixing

**latent heat of reaction** see heat of reaction

**latent heat of solution** see heat of solution

**latent heat of sublimation** see heat of sublimation

**latent heat of transformation** see heat of transformation

**latent heat of vaporisation** see heat of vaporisation

**latent image** see photographic process

**lattice constants**

- see also crystal atomic structure  
 (111) FCC overlayers, ideal epitaxial configurations on (110) BCC substrates 2-51032  
 (111) FCC thin films, epitaxy on (110) BCC substrates by coherence, ideal epitaxial configurations 2-51033  
 A15 structure phases, cell dimensions, at. diameters depend. 2-8481  
 adsorption of Ar, monolayer and bilayer films, lattice const. and vibr., thermodynamic props. 2-45714  
 2-amino-1,3 thiazole, parameters, space group and powder diagrams (French) 2-45140  
 binary A15 phases, empirical rule of form. and  $T_c$  variation (Chinese) 2-5853  
 bis(2,2'-bipyridyl)copper(I) perchlorate, in nitroalkanes, cryst. data of oxidation products 2-40365  
 composition dependence of energy gap of  $(\text{CdTe})_{1-x}(\text{InTe}_2)_x$  with  $x < 0.02$  2-40780  
 convergent beam electron diffraction, holz lines, detection of phase transition symmetry changes 2-25696  
 cubic lattice parameters, determ. by method suited to conditions of high-, low-temp. powder diffractometry 2-44960  
 deacetylpanicle, cryst. data 2-45141  
 decafluorocyclohexane, unit-cell refinement from powder diff. scans 2-40212  
 diamond, ground state props., ab initio density functional pseudopot. method 2-40318  
 diamond, struct.-energy calcs. using pseudopot. and localised Gaussian orbitals 2-30815  
 3-ethylpyridine decavanadate, cryst. data, X-ray powder data 2-45139  
 films, thermal expansion determination electron diff. pattern method 2-3562  
 Ga<sub>1-x</sub>In<sub>x</sub>P-GaAs heterostructures, luminesc., effect of mismatch between lattice const. and thermal expansion coeffs. 2-9195  
 2,4-hexadiyne-1,6 diol bis-(p-toluene sulphate), incommensurate phase struct. as function of polymer conversion 2-35482

**lattice constants continued**

- II-V compounds, physical and chemical props., and applications 2-25852  
 III-V semiconductor material design for electronic devices used under unusual conditions (Japanese) 2-8618  
 Inconel 625, superalloy, thermal stability 2-47060  
 kaolinite, solid phase deform. under influence of adsorbed water and organic compounds 2-35451  
 lattice contraction under high press., X-ray diff. obs., lattice strain 2-45376  
 metallic thin film growth, AES and LEED studies (Japanese) 2-1788  
 nitrides, wurtzite struct., cation packing and molar volume 2-5092  
 oxides, wurtzite struct., cation packing and molar volume 2-5092  
 (2.1.2.1)paracyclophan, cryst. data, X-ray powder data 2-40363  
 penanthrene crystals, thermodynamic functions from cell-model, X-ray structural meas. 2-26082  
 poly(acetylene), conformational and lattice packing anal. 2-15927  
 polydiacetylene crystal, defect struct. during polymerisation, X-ray topography study 2-45145  
 precipitation systems, orientation relationships 2-35429  
 D-psicose, branched-chain derivatives, cryst. data 2-40364  
 pyrene crystals, thermodynamic functions from cell-model, X-ray structural meas. 2-26082  
 pyridine decavanadate, cryst. data, X-ray powder data 2-45139  
 rare earth alloys, RGa<sub>3</sub>, RGa<sub>6</sub>, cryst. struct. 2-8477  
 rare earth borides, R(Os, Ir)<sub>4</sub>B<sub>4</sub>, (R=Nd, La, Pr), mag. behaviour and struct. chem. 2-41104  
 rare earth gallium garnets, Czochralski grown, lattice parameters and distrib. coeffs. as function of Ca, Mg and Zr concs. 2-45091  
 rectangular interfacial atomic meshes, ideal epitaxial configurations 2-51031  
 satellite spots spacing in electron diff. pattern, determ. of period of lattice parameter modulation 2-20977  
 semiconductor local lattice const. variations determ. by X-ray diff. method 2-5021  
 spinel, oxygen-containing, lattice const. calc. in atomic elastic interaction approx. 2-5085  
 steel, C, martensite structure after  $\chi'$ - $\alpha$  transition (Russian) 2-51892  
 steel, stainless, 18/10, precipitation and dissolution of Ti (C,N) (Polish) 2-27176  
 superalloy, thermal stability 2-47060  
 theophylline, anhydrous, cryst. data, X-ray powder data 2-40362  
 unit cell axes angles, expt. refinement with one-cryst. spectrometer 2-50481  
 X-ray powder diffraction patterns of 58 substances 2-50613  
 X-ray trajectories determ. from lattice distance potential behaviour 2-35348  
 zinc phthalocyanine, polycrystn., vacuum deposited film, high resoln. TEM images of polymorphs 2-5101  
 AgCrO<sub>3</sub>, mag. props. and struct. 2-51398  
 Ag<sub>2</sub>WO<sub>4</sub>, polymorphism, cryst. data 2-45103  
 Ag(111), adsorpt. of Xe(Kr), monolayer and bilayer films, lattice const. and vibr., thermodynamic props. 2-45714  
 Al, crystal energy and struct., ab initio pseudopot. calc. 2-35961  
 Al-Sn, struct. and mech. props., heat treatment effects, X-ray diff. obs. 2-35443  
 AlAs, crystal binding and density of states, pseudopot. calc. 2-45874  
 Al<sub>3</sub>Ga<sub>1-x</sub>In<sub>x</sub>Sb, lattice const. and optical energy gap, comp. depend. 2-25818  
 (Al<sub>1/3</sub>In<sub>2/3</sub>)<sub>2</sub>S<sub>3</sub>, powder diffractometer data 2-45129  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-AlN ceramics, form. and ionic cond. 2-12836  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-NH<sub>4</sub><sup>+</sup>, ion exchange and thermal evolution 2-27432  
 Au<sub>4</sub>Mg, 2D antiphase struct. studied by high-voltage-high-resoln. electron microscopy 2-44992  
 B-C phase struct. and props., X-ray and density studies 2-40339  
 B-C system, phase analysis 2-41593  
 B-Si phase diagram, thermal anal. and vaporization studies 2-41594  
 (BN)<sub>1-x</sub>C<sub>x</sub>,  $0 < x < 1$ , struct. and props. 2-35453  
 BaCO<sub>3</sub>, hydrothermal synthesis, lattice constants 2-9261  
 BaO-SrO-Na<sub>2</sub>O-Nb<sub>2</sub>O<sub>5</sub>, solid solution, phase equilib. study, Curie point and lattice const. 2-17667  
 BaTiO<sub>3</sub> films, preparation and struct. 2-46917  
 BaTiO<sub>3</sub>-based ferroelec. solid solns., Vegard's law validity, X-ray diff. meas. 2-16631  
 Bi<sub>2</sub>O<sub>3</sub>-R<sub>2</sub>O<sub>3</sub> (R=La, Nd, Sm, Dy, Er, Yb), sintered, high oxide ion conductive phase, form. 2-8667  
 Br<sub>0.25</sub>NbSe<sub>4</sub>, new pseudo-unidimens. cpd. (French) 2-5097  
 Br<sub>0.33</sub>NbSe<sub>4</sub>, new pseudo-unidimens. cpd. (French) 2-5097  
 Br<sub>0.25</sub>TaSe<sub>4</sub>, new pseudo-unidimens. cpd. (French) 2-5097  
 $\beta$ -Ca(COO)<sub>2</sub>, produced by thermal dehydration of weddellite 2-47303  
 Ca<sub>2</sub>Mn<sub>4</sub>Fe<sub>2-x</sub>O<sub>8</sub>, nonstoichiometric, elec. and mag. props. 2-17745  
 CaS-rare earth sulphide systems, phase relationships 2-17666  
 Cd-As system, solid solution form., solubility boundaries, homogeneity range, physico-chemical investigations 2-26067  
 Cd<sub>1-x</sub>Pb<sub>x</sub>S, solid solns., formation mechanism 2-31623  
 CdO-(PbO-CdO-BaO-B<sub>2</sub>O<sub>3</sub> glass) thick film resistors, X-ray and microscopic investigations 2-8488  
 CdP<sub>2</sub>, thermal expansion and phase transition, X-ray diff. obs. 2-26088  
 CdRh(VO<sub>4</sub>)<sub>3</sub>, (R=rare earth), synthesis and crystallographic data 2-40336  
 CdTe undoped p-type annealed in vacuum, electrical and crystalline props. 2-5750  
 Ce-Mn-Co system phase equilibria (Ukrainian) 2-51873  
 Ce<sub>1-x</sub>Al<sub>x</sub>Co<sub>5</sub>, constitution, struct. and mag. props. 2-47199  
 CeCo<sub>5</sub>-PrCo<sub>5</sub>, cryst. struct. and mag. props. 2-1447  
 CeCu<sub>2</sub>Si<sub>2</sub>, thermal expansion study 2-30638  
 CeM<sub>5</sub>, (M=Co, Cu, Ni), valence state of Ce, lattice const., mag. props. and X-ray absorption meas. 2-40320  
 CeNi<sub>2</sub>Al<sub>3</sub>, lattice constants (Ukrainian) 2-25813  
 CeO<sub>2</sub>, hexagonal phase, from oxidation product of Si<sub>3</sub>N<sub>4</sub>:CeO<sub>2</sub>+SiO<sub>2</sub> 2-47204  
 CePd<sub>3</sub>B<sub>4</sub>, valence change induced by B, lattice parameter and susceptibility meas. 2-40323  
 Ce<sub>2</sub>Zr<sub>2</sub>O<sub>10</sub>, non-conformation in CeO<sub>2</sub>-ZrO<sub>2</sub> system, X-ray powder diff. obs. 2-35456  
 Co-S system close to Co<sub>3</sub>S<sub>8</sub>, prep. and magnetic props. 2-21093  
 Cr thin films, crystallographic structure and anal. 2-1789  
 Cr-Si-N system, phase relations and reactions at 1600°C under 1 atm. N<sub>2</sub> (Japanese) 2-22205  
 CrBr<sub>3</sub> bladed crystals, lattice parameters, pycnometric density, stability in air, melting pt., surface struct. 2-40331  
 Cr<sub>2</sub>Te<sub>3</sub>, mag. props., thermal expansion effect 2-13301



## Lattice constants continued

- CsCa<sub>2</sub>Nb<sub>2</sub>O<sub>10</sub>, sheet perovskite (*French*) 2-35454  
 CsIO<sub>3</sub>-HIO<sub>3</sub>, phase equilibria, X-ray and thermal anal. (*Chinese*) 2-31684  
 Cu-III-VI<sub>2</sub> compounds, anisotropic thermal expansion, X-ray diffraction study 2-1642  
 Cu-Ni alloys, specific vol., variation with comp. 2-35445  
 (Cu<sub>1-x</sub>Ag<sub>x</sub>)(In<sub>1-x</sub>Ga<sub>x</sub>)Te<sub>2</sub>, lattice const. values 2-12554  
 Cu<sub>1-x</sub>Fe<sub>x</sub>Cr<sub>2</sub>S<sub>4</sub>, thiospinels, Mossbauer spectra, lattice constants, seebeck coeff. 2-51508  
 Cu<sub>1-x</sub>Fe<sub>x</sub>Cr<sub>2</sub>(S<sub>0.7</sub>Se<sub>0.3</sub>)<sub>4</sub>, thiospinels, Mossbauer spectra, lattice constants, seebeck coeff. 2-51508  
 Cu<sub>1-x</sub>Fe<sub>x</sub>Rh<sub>2</sub>S<sub>4</sub>, thiospinels, Mossbauer spectra, lattice constants, seebeck coeff. 2-51508  
 CuI-RbCl-(CuCl) system, phase diagram and solid state ionics 2-17672  
 Cu<sub>2</sub>SbS<sub>12</sub>, unit cell parameters, NQR study 2-41227  
 DyCo<sub>2</sub>, cryst. struct. distortion and magnetostriction 2-45119  
 ErCo<sub>2</sub>, cryst. struct. distortion and magnetostriction 2-45119  
 ErFe<sub>23</sub>, influence of H on struct. and mag. props. 2-2063  
 Eu-Yb-Pt, anomalous valency behaviour 2-9331  
 Fe-Mn, BCC alloys, metastable, produced by RF sputtering 2-13648  
 Fe-Ni Invar alloy, spontaneous volume magnetostriction press. depend., X-ray diff. study 2-9018  
 Fe-Ni Invar alloys, bulk modulus anomalies, X-ray diff. study 2-9017  
 Fe-Pb (50 to 80 at.%), superlattice alloys, vol. change on ordering (*Japanese*) 2-27174  
 Fe-Pt, Invar alloy, spontaneous volume magnetostriction press. depend., X-ray diff. study 2-9018  
 Fe-Pt Invar alloys, bulk modulus anomalies, X-ray diff. study 2-9017  
 Fe-Ti-N, lattice parameter changes 2-45116  
 FeGaS<sub>4</sub>, crystallographic study (*French*) 2-36841  
 α-Fe<sub>2</sub>O<sub>3</sub>, haematite, prep. by oxidation-precip., effect of heating 2-51946  
 Fe<sub>2</sub>O<sub>4</sub>, film, reactive sputtering of Fe, in mixed Ar-O<sub>2</sub> atmosphere (*Japanese*) 2-30765  
 Fe<sub>2</sub>P, lattice compression, anisotropic, X-ray diff. study 2-25971  
 FeTi-H<sub>2</sub> system, phase comp. and struct., X-ray diff. study 2-45114  
 Fe<sub>1-x</sub>V<sub>x</sub>NbO<sub>4</sub>, prep., crystallographic, elec., and mag. props. 2-21084  
 Ga<sub>1-x</sub>Al<sub>x</sub>As heteroepitaxial layers, coherent, on-axis layers, characterisation by X-ray multiple diff. technique 2-1783  
 GaAs, crystal binding and density of states, pseudopot. calc. 2-45874  
 GaAs:Ge(Se), neutron transmutation doping, elec. and physical props. 2-12619  
 GaAsP, composition modulated, electron microscopy images 2-44983  
 GaInAs heteroepitaxial layer, X-ray meas. of lattice mismatch 2-30367  
 Ga<sub>0.47</sub>In<sub>0.53</sub>As uniform, MBE growth with rotating sample holder 2-17626  
 GaInAsP heteroepitaxial layer, X-ray meas. of lattice mismatch 2-30367  
 β-Ga<sub>2</sub>O<sub>3</sub>-K<sub>2</sub>O(Na<sub>2</sub>O) and β'-Ga<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O, defect struct., X-ray diff. study 2-25871  
 GaP, struct.-energy calcs. using pseudopot. and localised Gaussian orbitals 2-30815  
 Gd<sub>1-x</sub>Er<sub>x</sub>Al<sub>2</sub>, cryst. struct., X-ray diff. study 2-8475  
 Ge-As solid solution, lattice const. meas. 2-21103  
 HfO<sub>2</sub>, Er<sub>2</sub>O<sub>3</sub>-stabilised, abrasability and hardness 2-47184  
 HfO<sub>2</sub>-Dy<sub>2</sub>O<sub>3</sub> system, high temp. solid solns., ordering 2-25797  
 HfO<sub>2</sub>-Er<sub>2</sub>O<sub>3</sub> system, high temp. solid solns., ordering 2-25797  
 HfO<sub>2</sub>-Yb<sub>2</sub>O<sub>3</sub> system, high temp. solid solns., ordering 2-25797  
 Hg<sub>1-x</sub>As<sub>x</sub>F<sub>6</sub>, Fermi surface press. depend. 2-35926  
 Hg<sub>2</sub>Br<sub>2</sub>, nonintrinsic ferroelectrics, X-ray struct. study of phase transition 2-21112  
 Hg<sub>2</sub>Cl<sub>2</sub>, nonintrinsic ferroelectrics, X-ray struct. study of phase transition 2-21112  
 Ho-Ga system, phase diagram, DTA, X-ray diff. and SEM study 2-51874  
 HoCo<sub>2</sub>, cryst. struct. distortion and magnetostriction 2-45119  
 HoFe<sub>23</sub>, influence of H on struct. and mag. props. 2-2063  
 InAs<sub>1-x</sub>P<sub>x</sub>Sb<sub>y</sub>, LPE growth on InAs substrate 2-40717  
 InGaAsP lattice, matched to InP, growth and charact. review 2-13662  
 KCa<sub>2</sub>Nb<sub>2</sub>O<sub>10</sub>, sheet perovskite (*French*) 2-35454  
 KF-BiF<sub>3</sub>, fluoride phase, ionic cond., density and lattice const., composition depend. 2-16882  
 KMnF<sub>3</sub>, lattice const. near struct. phase transition, crit. exponent 2-40334  
 KMnF<sub>3</sub>-KCoF<sub>3</sub>, mixed crystals, hydrothermal growth 2-51787  
 K<sub>2</sub>SeO<sub>4</sub>, commensurate-incommensurate transition, X-ray scatt. study 2-21295  
 K<sub>0.33</sub>Ti<sub>1-x</sub>W<sub>0.67</sub>O<sub>3</sub>, photoelectronic props. and synthesis 2-36098  
 (K,Ti)<sub>1-x</sub>Cd<sub>x</sub>(SO<sub>4</sub>)<sub>2</sub>, phase transition and lattice parameters 2-12730  
 K<sub>2</sub>TiOH(XO<sub>4</sub>), X=S, Se, lattice constants, X-ray diff. data (*French*) 2-40337  
 KY(WO<sub>4</sub>)<sub>2</sub>, unit cell axes angles, expt. refinement 2-50481  
 LaCrO<sub>3</sub>, cryst. data, X-ray powder data 2-45127  
 LaCu<sub>2</sub>Si<sub>2</sub>, thermal expansion study 2-30638  
 La<sub>2</sub>LiFeO<sub>6</sub>, characterisation of six-coordinated iron 2-36414  
 LaNi<sub>2</sub>Al<sub>3</sub>, lattice constants (*Ukrainian*) 2-25813  
 (LaO)<sub>1-x</sub>Ag<sub>1-x</sub>Ga<sub>1-x</sub>S<sub>1-x</sub>, leaf-struct. compounds (*French*) 2-35452  
 La<sub>2</sub>WO<sub>6</sub> crystals, polypitman 2-50577  
 LiAl fast-ion electrode, defects and disorder 2-21300  
 LiAlO<sub>3</sub>, single crystal, Czochralski growth, props. 2-2439  
 LiCa<sub>2</sub>Nb<sub>2</sub>O<sub>10</sub>, sheet perovskite (*French*) 2-35454  
 Li<sub>3</sub>Mg<sub>2</sub>XO<sub>6</sub>, X=Nb, Ta, Sb, cryst. data, X-ray powder diff. data 2-45130  
 Li<sub>0.33</sub>(Mo<sub>0.25</sub>V<sub>0.75</sub>)<sub>2</sub>O<sub>5</sub>, structure, transport and equilibrium props. 2-26136  
 LiNbO<sub>3</sub> single cryst. films, LPE growth for SAW devices 2-2467  
 Li<sub>2</sub>TiSi<sub>2</sub>, anomalous Bragg peak widths, X-ray diff. expts. 2-16630  
 Li<sub>2</sub>TiSi<sub>2</sub>, lattice parameters and thermoelec. power meas. 2-16633  
 Li<sub>2</sub>V<sub>2</sub>O<sub>5</sub>, structure, transport and equilibrium props. 2-26136  
 Li<sub>2</sub>WO<sub>3</sub>, structure, transport and equilibrium props. 2-26136  
 Li<sub>2</sub>ZrSe<sub>2</sub>, semiconductor-metal transition upon intercalation 2-21504  
 Li<sub>2</sub>ZrSi<sub>2</sub>O<sub>15</sub>, unit cell constants 2-2498  
 LuIn<sub>3</sub>, thermal expansion study 2-30638  
 Mg-Ni ferrites, struct., elec., and mag. props., cation distrib. effects, influence of heat treatment 2-46345  
 Mn<sub>0.99</sub>Fe<sub>0.01</sub>As, lattice parameters at first-order mag. phase transition, temp. depend. 2-46288  
 MnSb alloy, mag. props. depend. on press. and temp. (*Russian*) 2-13298  
 Mo, phonon freq. and lattice energy, first principles LCAO calc. 2-50794  
 Mo-S system, phase relationships at high temps. 2-17670  
 N<sub>2</sub>-Kr(Xe) thin layers, vapour deposited, condensate struct., TEM study (*Russian*) 2-26242

## Lattice constants continued

- (NH<sub>4</sub>)<sub>2</sub>, ferroelec., commensurate-incommensurate transition, X-ray study 2-30431  
 (NH<sub>4</sub>)<sub>2</sub>BeF<sub>4</sub>, ferroelectric phase transitions, X-ray dilatometric study 2-21954  
 NH<sub>4</sub>Ca<sub>2</sub>Nb<sub>2</sub>O<sub>10</sub>, sheet perovskite (*French*) 2-35454  
 NH<sub>4</sub>Ti(OH)(XO<sub>4</sub>), X=S, Se, lattice constants, X-ray diff. data (*French*) 2-40337  
 NaCa<sub>2</sub>Nb<sub>2</sub>O<sub>10</sub>, sheet perovskite (*French*) 2-35454  
 Na<sub>2</sub>Cr<sub>0.5</sub>V<sub>0.5</sub>S<sub>2</sub>, form. during Cr<sub>0.5</sub>V<sub>0.5</sub>S<sub>2</sub> discharge in Na cell, struct. study 2-47470  
 Na<sub>2</sub>Li<sub>2-x</sub>V<sub>2</sub>O<sub>6</sub>, Vegard's law in various types of isomorphic substitutions 2-50611  
 NaNO<sub>3</sub>, ferroelectric phase transition, X-ray powder diff. study 2-41307  
 Na<sub>1-x</sub>Si<sub>x</sub>Zr<sub>2</sub>P<sub>3-x</sub>O<sub>12</sub>, NASICON, chemical stability in liq. Na, fracture and cracking 2-52251  
 Nb, phonon freq. and lattice energy, first principles LCAO calc. 2-50794  
 Nb-Ge film, superconducting transition, struct. 2-41052  
 Nb-Ge films, DC sputtering prep. and struct. rel. to supercond. props. 2-30992  
 Nb-Ge sputtered coating, supercond. transition temp., composition and struct. depend. 2-30998  
 Nb-W-Mo-Zr-C, high-temp. ageing under stress, influence on lattice parameters 2-17695  
 Nb<sub>3</sub>Al<sub>0.75</sub>Ge<sub>0.25</sub>, elec. cond., lattice const. (*Russian*) 2-45939  
 Nb<sub>3</sub>Sn, phase transition at low temp., X-ray obs., effect of added elements and strain 2-30596  
 Nd<sub>2</sub>Mn<sub>23</sub> and Nd<sub>2</sub>Mn<sub>23</sub>H<sub>11</sub>, cryst. struct. and mag. props. 2-17282  
 Nd(MoO<sub>4</sub>)(ReO<sub>4</sub>), X-ray powder cryst. data 2-40335  
 Nd<sub>2</sub>Ni<sub>13</sub>B, crystal struct. and analogues (*Ukrainian*) 2-50584  
 Ni-Cr-Al-Ti-Mo, tensile behaviour, elevated temp., influence of coherency strain 2-9380  
 Ni-Cr-Nb, discontinuous precipitation, alloying addition influence (*Russian*) 2-51908  
 Ni-Pt, concentrated, lattice distortions, neutron diffuse scatt. study 2-25814  
 Ni<sub>3</sub>Al, strength, positive temp. depend., effect of nonstoichiometry 2-9356  
 Ni<sub>3</sub>Cu<sub>1-x</sub>Fe<sub>x</sub>O<sub>4</sub> (0≤x≤1) ferrites, structural and magnetic properties 2-2060  
 Ni<sub>3</sub>Ga, strength, positive temp. depend., effect of nonstoichiometry 2-9356  
 Ni<sub>3</sub>P in Mo-Ni-P system, X-ray anal. (*Ukrainian*) 2-27150  
 Ni<sub>3</sub>P, lattice compression, anisotropic, X-ray diff. study 2-25971  
 Pb, electronic and lattice-mechanical properties, pseudopotential theory 2-16619  
 Pb-Sn system, high press. intermediate phases 2-27147  
 PbBr<sub>2</sub>-I<sub>2</sub> system, phase diagram, crystal struct. X-ray diff. obs. 2-50602  
 PbCO<sub>3</sub>, hydrothermal synthesis, lattice constants 2-9261  
 PbCl<sub>2</sub>-I<sub>2</sub> system, phase diagram, crystal struct., X-ray diff. obs. 2-50602  
 Pb(Fe<sub>1/2</sub>Nb<sub>1/2</sub>)<sub>2</sub>O<sub>3</sub>-Pb(Mg<sub>1/2</sub>W<sub>1/2</sub>)<sub>2</sub>O<sub>3</sub> solid soln., phase anal. 2-26831  
 α-, β-, α'-PbGeGe<sub>2</sub>O<sub>9</sub>, polymorphism, growth and certain props. 2-50609  
 Pb(MgW)<sub>0.6</sub>La<sub>0.4</sub>W<sub>0.6</sub>, solid solns. 2-16628  
 PbTeSe, LPE growth lattice-matched to PbSnTe, phys. and elec. props. 2-5320  
 Pb(Zr,Ti)O<sub>3</sub> film, lattice const. shift through post-deposition heat treatment 2-16964  
 Pb(Zr,Ti)<sub>1-x</sub>O<sub>3</sub>Nb<sub>5+x</sub>(Sb<sup>5+</sup>) ceramics, wet or dry method prep., struct. and piezoelec. props., effect of initial Pb content 2-9091  
 Pd ultrafine particles, mean size of 20 Å, charact. by X-ray diff. 2-8471  
 Pd/Au bicryst. film, pseudomorphic epitaxial growth, deposit thickness depend., TEM study 2-35909  
 Pd-Au/Au bicryst. film, pseudomorphic epitaxial growth, deposit thickness depend., TEM study 2-35909  
 Pr<sub>1-x</sub>Al<sub>x</sub>Co<sub>3</sub>, constitution, struct. and mag. props. 2-47199  
 PrH<sub>2</sub>, precise lattice parameter determ. 2-45112  
 RbAlF<sub>4</sub>, ferroelastic, phase transitions, birefringence study 2-50845  
 RbCa<sub>2</sub>Nb<sub>2</sub>O<sub>10</sub>, sheet perovskite (*French*) 2-35454  
 α-RbCuCl<sub>3</sub>Cl<sub>2</sub>, solid electrolyte, powder data and lattice parameters 2-45128  
 RbCu<sub>4</sub>I<sub>2-x</sub>Cl<sub>2+x</sub> solid electrolyte, prep. and characterization 2-16876  
 RbIO<sub>3</sub>-HIO<sub>3</sub>, phase equilibria, X-ray and thermal anal. (*Chinese*) 2-31684  
 Rb<sub>2</sub>TiOH(XO<sub>4</sub>), X=S, Se, lattice constants, X-ray diff. data (*French*) 2-40337  
 Rh, FCC crystal, change of volume effects on electronic bandstructure 2-40773  
 RuO<sub>2</sub>-(PbO-CdO-BaO-B<sub>2</sub>O<sub>3</sub> glass) thick film resistors, X-ray and microscopic investigations 2-8488  
 Se-Te system, equilib. phase diagram 2-22200  
 Si, phonon freq. and lattice energy, first principles LCAO calc. 2-50794  
 Si, struct.-energy calcs. using pseudopot. and localised Gaussian orbitals 2-30815  
 SiC, solid solubility of Al and B 2-51884  
 Si<sub>3</sub>Mg<sub>8</sub>O<sub>30</sub>(OH)<sub>4</sub>(OH)<sub>4</sub>.8H<sub>2</sub>O, Eskisehir sepiolite fibres, X-ray powder profile calcs. 2-40216  
 (Sm<sub>1-x</sub>Gd<sub>x</sub>)<sub>2</sub>S<sub>4</sub>, elec. and mag. props. 2-1908  
 Sm<sub>2</sub>Mn<sub>23</sub> and Sm<sub>2</sub>Mn<sub>23</sub>H<sub>11</sub>, cryst. struct. and mag. props. 2-17282  
 SmS thin films, electrical, optical and X-ray study 2-8898  
 SrCO<sub>3</sub>, hydrothermal synthesis, lattice constants 2-9261  
 SrCeO<sub>3</sub>-BaCeO<sub>3</sub> solid soln., crystallographic charact. 2-50591  
 SrTiO<sub>3</sub>-based ferroelec. solid solns., Vegard's law validity, X-ray diff. meas. 2-16631  
 Tb<sub>0.4</sub>Fe<sub>0.6</sub>, magnetic props. and struct. (*Chinese*) 2-31256  
 (Th<sub>1-x</sub>U<sub>x</sub>)O<sub>2</sub>, irradi., lattice parameter change 2-43555  
 Th<sub>2</sub>Fe<sub>2</sub>H<sub>7</sub>, mag., struct., and surface props. 2-35701  
 Th<sub>48</sub>Ni<sub>43</sub>V<sub>9</sub>, long-period struct., electron diff. and electron microscopy study (*Russian*) 2-35442  
 Ti<sub>1-x</sub>S<sub>2</sub>, transport and optical props. 2-1932  
 TiSe<sub>2</sub> (1T), lattice dynamics and lattice instability, role of electron-lattice interaction 2-30549  
 Ti-Cr-S(Se)(Te) system cpds., mag. props. and struct. 2-51398  
 TiCa<sub>2</sub>Nb<sub>2</sub>O<sub>10</sub>, sheet perovskite (*French*) 2-35454  
 Ti<sub>2</sub>OH(XO<sub>4</sub>), X=S, Se, lattice constants, X-ray diff. data (*French*) 2-40337  
 TiSb<sub>2</sub>, unit cell parameters, NQR study 2-41227  
 UC, atomic displacement around C vacancy (*French*) 2-50629



## lattice constants continued

- U(Ni<sub>1-x</sub>Cu<sub>x</sub>), chemical shift of L<sub>α1</sub> line, lattice parameter, composition depend. 2-46833  
 UO<sub>2</sub>(H<sub>2</sub>AsO<sub>4</sub>)<sub>2</sub>·H<sub>2</sub>O, crystal data, Guinier pattern 2-45131  
 UO<sub>2</sub>(H<sub>2</sub>PO<sub>4</sub>)<sub>2</sub>·H<sub>2</sub>O, crystal data, Guinier pattern 2-45131  
 UO<sub>2</sub>·2O<sub>3</sub>(Gd<sub>2</sub>O<sub>3</sub>)(Eu<sub>2</sub>O<sub>3</sub>)(Nd<sub>2</sub>O<sub>3</sub>) solid soln., relation between lattice parameter and O/M ratio 2-50597  
 V<sub>3</sub>GaH<sub>x</sub>, sp. ht., lattice parameters, and supercond. props., 1.2 to 20K, comp. depend. 2-26552  
 V<sub>6</sub>GaSb, thermal expansion 2-50890  
 V<sub>2</sub>O<sub>3</sub>, elastic const., hydrostatic press. effects, high press. struct. transition 2-12663  
 VSe<sub>2</sub>, thermal expansion, X-ray diff. study, 40 to 1175K 2-8648  
 VSe<sub>2</sub>-S<sub>8</sub>, struct., mag., and electrochem. props., battery cathode appls. 2-41905  
 W-Ni-Fe binder phase, struct., heat treatment conditions effect 2-17696  
 WCoB, thermal expansion coeff., linear, X-ray diff. meas., 300-973K 2-16825  
 Xe, crystalline, lattice parameters, thermal expansion, thermal vacancies and eqn. of state 2-25831  
 YB<sub>4</sub> single crystals, growth and props. (*Japanese*) 2-51797  
 YCo<sub>2</sub>, lattice parameters, temp. depend. 2-45119  
 Y<sub>1-x</sub>Eu<sub>x</sub>Fe<sub>2</sub>-Ga<sub>2</sub>O<sub>3</sub> epitaxial layers, laser annealed in O<sub>2</sub>, mag. props., FMR study 2-31589  
 YIG(Ga), PbO-PbF<sub>2</sub> flux-grown crystals, lattice distortions caused by growth striations near surface 2-45089  
 YRh<sub>2</sub>B<sub>4</sub>-LuRh<sub>2</sub>B<sub>4</sub>-ThRh<sub>2</sub>B<sub>4</sub>, supercond. behaviour 2-41049  
 Yb(MoO<sub>4</sub>)(ReO<sub>4</sub>), X-ray powder cryst. data 2-40335  
 YbRh<sub>2</sub>Sn<sub>2</sub>, high press. synthesis 2-35676  
 ZnMnFe<sub>2</sub>O<sub>4</sub>Cr(Al)(In), dielec. props., elec. cond., mag. props., lattice constants, dopant effects 2-51524  
 ZnO:Mg<sup>2+</sup>(Ca<sup>2+</sup>)(Sr<sup>2+</sup>), crystalline state, effect of alkali-earth metal ions 2-16623  
 ZnO-B<sub>2</sub>O<sub>3</sub>-H<sub>2</sub>O system, phase formation under hydrothermal conditions 2-50567  
 ZnO-B<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O(K<sub>2</sub>O)-H<sub>2</sub>O systems, phase formation under hydrothermal conditions 2-50567  
 ZnS:Cu,Mn, mechanism of Cu-induced hexagonal-cubic transformation 2-12725  
 ZnS:Cu phosphor, relation between lattice parameter and particle size 2-22092  
 ZrRuP, superconducting props. and lattice parameters, effect of O impurities 2-13226  
 Zr<sub>2</sub>Ti<sub>3</sub>Sn<sub>2</sub>O<sub>4</sub> ceramics (x+y+z+2), existence range, structural and dielec. props. 2-36842

## lattice defects see crystal defects

## lattice diffusion see diffusion in solids

## lattice dynamics

- see also crystal surface and interface vibrations; displacive transformations; Gruneisen coefficient; lattice dynamics of covalent crystals; lattice dynamics of ferroelectric crystals; lattice dynamics of ionic crystals; lattice dynamics of metallic crystals; lattice dynamics of molecular crystals; lattice localised modes; lattice phonons; soft modes; vibrational states in disordered systems  
 trans-alkenes, cryst. state, double bond influence on Raman active acoustical mode 2-51569  
 anharmonic crystal, exchange inversion in spontaneous metamagnetism 2-41135  
 anharmonic Debye-Waller factors and struct. phase transitions 2-50818  
 anharmonic lattices and vectorial solitons, Korteweg-de Vries eqn. generalisation 2-30539  
 antimonates, vibrational study, Raman spectra, force consts. (*French*) 2-13494  
 BCC crystals elastic const., generalised N-particle interaction anal. 2-45314  
 coupled condensate-lattice systems, phase solitons near commensurate-incommensurate transition 2-8597  
 crystal harmonic lattices, freq. density calcs. 2-5194  
 crystal stability in random field produced by vibr. of continuous medium (*Russian*) 2-25808  
 crystals, generalised pseudoatom theory 2-45415  
 cubic crystals, melting process and thermal expansion 2-45539  
 defect effects on lattice vibr., semiclassical theory 2-28799  
 diatomic chain dynamics as parabolic periodic substrate 2-5113  
 disordered chain, lattice dynamics and spectral props. 2-16742  
 displacive phase transitions, lattice dynamics 2-45518  
 dynamic polarizability of the double quadratic and multiquadratic chains with anharmonic coupling 2-45416  
 elemental solids, entropy-compressibility correl. 2-1638  
 exponential lattice, time depend. response functions, dynamical correl. 2-12695  
 graphite intercalation compounds, lattice dynamics modelled by phonon dispersion of linear chains 2-50790  
 high frequency phonon lifetime, multiphonon decay 2-45442  
 II-VI compound semiconductors, transverse effective charge 2-16748  
 incommensurate crystal phases, vibr. spectra 2-45428  
 incommensurate phases, dielectric and light scattering spectroscopy, review 2-46627  
 insulating slab, effective charge tensor and acoustic sum rule 2-30814  
 ionic lattice, non-centrosymmetric, acoustic waves, elastic modulus 2-50776  
 lattice sums for ZnS struct. crystals 2-8582  
 local bare electron ion pseudopot. extraction from phonon dispersion curves 2-5196  
 local bare electron ion pseudopot. extraction from phonon dispersion curves 2-8587  
 metal, Mossbauer impurity atom, vacancy trapped, second-order Doppler shift, anharmonicity effect 2-21925  
 mixed crystals, vibr. behaviour, renormalisation group method 2-45420  
 mode condensation, simultaneous, at struct. phase transition 2-45515  
 modulated crystals, incommensurability and recursivity 2-25993  
 molecular field of deformational nature, separation procedure 2-5201  
 monatomic exponential lattice, time depend. correl., response functions at low temps. 2-12696  
 niobates, vibrational study, Raman spectra, force consts. (*French*) 2-13494  
 nonlinear lattice models, static and dynamic aspects 2-45417  
 one dimensional nonlinear lattice, dynamics and thermodynamics on continuum limit 2-50777

## lattice dynamics continued

- one dimensional physics, conference, Fribourg, Switzerland (Aug. 1980) 2-18814  
 one-dimensional crystal, loss of stability mechanisms 2-45508  
 one-dimensional systems, acoustic mode damping 2-1571  
 optical rot. meas. for detecting weakly IR active modes 2-46535  
 particle scattering, influence of vibr. of cryst. atoms (*Russian*) 2-36729  
 polybutene-1 fibres, isotactic, hexagonal, polarised laser Raman spectra 2-22027  
 polyethylene, high density, B<sub>1u</sub> lattice vibr., Gruneisen parameters and press. depend. 2-22026  
 prestressed crystals, Rayleigh waves, lattice dynamics and elastic wave theory 2-45704  
 pseudoatom formalism 2-45418  
 quantum crystals, propagator construction, iterative procedure 2-50955  
 Raman coeff., first order, related to optical props. of zinc blende crystals 2-17460  
 semiconductor, interband absorpt. of long-wave radiation, impurity influence 2-2378  
 solids, four-phonon processes, relax. rate 2-45441  
 superionic crystals, vibrations and diffusion of atoms, computer simulation 2-45496  
 tantalates, vibrational study, Raman spectra, force consts. (*French*) 2-13494  
 TBBA, smectic liq. crystal, local order and lattice dynamics, neutron diff. study 2-25724  
 TCNQ salts, press. depend. of lattice modes, Raman spectrum 2-51583  
 ternary semiconductors, review 2-26292  
 tetragonal crystals, class D<sub>4</sub>, energetic spectrum struct., dispersion laws 2-40503  
 thin ionic slabs, electrostatic energy and lattice vibr. 2-50782  
 Toda lattice, conventional approach to dynamic correlations 2-6804  
 transition metal dihalides, cryst. vibr., linear chain dynamical model 2-5197  
 Z<sub>N</sub> spin systems in Z-dimens., large N behaviour, spontaneous magnetisation 2-46226  
 β''-Al<sub>2</sub>O<sub>3</sub>-MgO-Na<sub>2</sub>O(K<sub>2</sub>O)(Ag<sub>2</sub>O)(Ti<sub>2</sub>O), vibrational spectra and cond. parameters 2-41369  
 CaF<sub>2</sub>, anharmonicity effects, phonon lifetime, rigid ion model calcs. 2-45438  
 (CaWO<sub>4</sub>)<sub>1-x</sub>(LaNbO<sub>4</sub>)<sub>x</sub> solid solns., fergusonite-scheelite phase transition and Raman spectra 2-26044  
 CoAs<sub>2</sub>-Sb<sub>2</sub>, far IR lattice vibr. spectra 2-31491  
 CoGe<sub>2</sub>S<sub>1.5</sub>(Se<sub>1.5</sub>), far IR lattice vibr. spectra 2-31491  
 CoI<sub>2</sub>, lattice vibr., polarised far IR reflection spectra study 2-17473  
 CoP<sub>3</sub>-As<sub>3</sub>, far IR lattice vibr. spectra 2-31491  
 DyGa<sub>5</sub>O<sub>12</sub>, IR and Raman study (*French*) 2-41361  
 ErGa<sub>5</sub>O<sub>12</sub>, IR and Raman study (*French*) 2-41361  
 ErGa<sub>5</sub>O<sub>12</sub>-Er<sub>3</sub>Al<sub>5</sub>O<sub>12</sub>, IR and Raman study (*French*) 2-41361  
 FeOCl and intercalates, lattice dynamics, hyperfine interactions and mag. ordering temp. 2-41241  
 GaAs, force consts., phonon dispersion curves, and dielec. const., ab initio calc. 2-50820  
 GaAs, phonons, zone centre, ab initio calc., local field effects 2-50797  
 Ga<sub>1-x</sub>In<sub>x</sub>P mixed cryst., Raman scatt. and IR absorpt. spectra 2-2235  
 Ga<sub>2</sub>In<sub>2</sub>-Se, layer compound, lattice instability, ionicity and phase diag. 2-50800  
 GaP crystal, bound state in Raman spectra 2-22034  
 n-GaP, deformation pots., far IR spectra study (*Ukrainian*) 2-13463  
 GaS, layer semicond., inelastic neutron scatt. and lattice dynamics 2-50788  
 GdGa<sub>5</sub>O<sub>12</sub>, IR and Raman study (*French*) 2-41361  
 Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, cryst., spontaneous parametric light scatt. 2-13502  
 GeSe<sub>2</sub>, polarised IR and Raman spectra 2-26903  
 H, crystalline atomic phase, eqn. of state 2-1705  
 He crystals, thermal cond., effect of Ne impurities 2-35858  
 InP<sub>4</sub>, class 4 crystals, Raman spectra, circular dichroism 2-36651  
 IrGe<sub>1.5</sub>S<sub>1.5</sub>(Se<sub>1.5</sub>), far IR lattice vibr. spectra 2-31491  
 KIO<sub>4</sub>, cryst., Raman spectrum, temp. effects 2-17456  
 KLn(MoO<sub>4</sub>)<sub>2</sub>, (Ln=Y, Dy, Ho, Er, Tm, Yb, Lu), cryst. and mol. struct., IR and Raman study 2-41362  
 (K<sub>2</sub>Na<sub>2</sub>)<sub>2</sub>Al<sub>2</sub>Si<sub>2</sub>O<sub>10</sub>·10 H<sub>2</sub>O phillipsite single cryst., Raman polarisation spectra, vibr. analysis 2-36611  
 K<sub>4</sub>[Mo(CN)<sub>6</sub>].2H<sub>2</sub>O, normal calcs. of [Mo(CN)<sub>6</sub>]<sup>4-</sup>, IR and Raman study 2-31489  
 LaGaO<sub>3</sub>, perovskite struct., vibr., IR and Raman study (*French*) 2-41360  
 LaNbO<sub>4</sub>, fergusonite-scheelite phase transition and Raman spectra 2-26044  
 LiKSO<sub>4</sub>, LO mode, anomalous temp. depend., 200 to 725K, Raman scatt. study 2-46595  
 MnAs, cryst. struct., phase transformations, X-ray diff. obs. 2-35471  
 MoS<sub>2</sub>(Se<sub>2</sub>)(Te<sub>2</sub>), Raman scatt. at high press. 2-51582  
 NaNO<sub>3</sub>, incommensurate phase transition, lattice instability 2-9114  
 NdGa<sub>5</sub>, perovskite struct., vibr., IR and Raman study (*French*) 2-41360  
 Nd<sub>3</sub>Ga<sub>5</sub>O<sub>12</sub>, IR and Raman study (*French*) 2-41361  
 NiI<sub>2</sub>, lattice vibr., polarised far IR reflection spectra study 2-17473  
 P, black, orthorhombic and rhombohedral structures, press. depend. of lattice vibr., Raman scatt. study 2-16730  
 PrGaO<sub>3</sub>, perovskite struct., vibr., IR and Raman study (*French*) 2-41360  
 Pr<sub>2</sub>Ga<sub>5</sub>O<sub>12</sub>, IR and Raman study (*French*) 2-41361  
 RbAg<sub>4</sub>I<sub>3</sub>, vibr. dynamics by Raman spectroscopy, 20K to melting point 2-46580  
 RbCaF<sub>3</sub>, phase transition at 50K, inelastic neutron scatt. study 2-30586  
 RhGe<sub>2</sub>S<sub>1.5</sub>(Se<sub>1.5</sub>), far IR lattice vibr. spectra 2-31491  
 SiC (3C), ionicity and transverse charge, vol. and temp. depend. 2-50579  
 SnS<sub>2</sub>, Raman light scatt., phonon dispersion 2-2248  
 TaS<sub>2</sub> (2H), lattice dynamics study by Raman scatt. 2-36645  
 TiSe<sub>2</sub> (1T), lattice dynamics and lattice instability, role of electron-lattice interaction 2-30549  
 Ti<sup>3+</sup>-type ions in cubic field, Jahn-Teller effect of B absorption band 2-2318  
 TiGaS<sub>2</sub>(Se<sub>2</sub>) layer cryst., IR reflectivity spectrum 2-36636  
 TiInS<sub>2</sub> layer cryst., IR reflectivity spectrum 2-36636  
 TiSe<sub>2</sub>, lattice dynamics and elastic const. 2-35617  
 VSe<sub>2</sub> (1T), CDW investig. by Raman scatt. 2-45861  
 Zn(ClO<sub>4</sub>)<sub>2</sub>·6H<sub>2</sub>O, librations, Raman scatt. and IR absorpt. 2-2273  
 ZnS(Se)(Te), linear thermal expansion coeff. and phonon curves at covalent-ionic transition press. 2-45468  
 ZnSe, phonons, zone centre, ab initio calc., local field effects 2-50797



**lattice dynamics continued**

- ZnSiP<sub>2</sub>, mean square amplitudes of lattice oscills., X-ray determ. 2-35613  
 ZrS<sub>3</sub> layer compound, IR, Raman, reson. Raman spectra and valence force field 2-31472

**lattice dynamics of covalent crystals**

- graphite, lattice properties, bonding and thermal props. 2-50582  
 graphite, surface atomic displacements, He atom scatt. study 2-36748  
 graphite surface phonon dispersion, He atoms reson. scatt. study 2-50983  
 GaAs:Nb, impurity luminesc., intracenter transitions 2-51703  
 GaP:Nb, impurity luminesc., intracenter transitions 2-51703  
 Ge, dispersive phonon focusing 2-45445  
 Ge, lattice dynamics, ab initio calc., local density functional formalism 2-50796  
 Ge, phonon focusing caustics, singular effects 2-45446  
 Ge, phonons, zone centre, ab initio calc., local field effects 2-50797  
 Ge, vibrational modes at vacancy site 2-50813  
 Se, trigonal and monoclinic, phonon dispersion from single vibr. pot. 2-50792  
 Si,  $\Gamma$ - $\Delta$  electron-phonon and hole-phonon scatt. matrix elements, rigid pseudoion model 2-50812  
 Si, harmonic and anharmonic props. 2-45421  
 Si, phonon freq. and lattice energy, first principles LCAO calc. 2-50794  
 Si, phonons, zone centre, ab initio calc., local field effects 2-50797  
 Si surface, (111), lattice dynamics and reconstruction, microscopic theory 2-50989  
 Si, vibrational modes at vacancy site 2-50813

**lattice dynamics of ferroelectric crystals**

- see also *displacive transformations; soft modes*  
 ferroelectric, H bonded, dynamical modes 2-36544  
 ferroelectric phase transitions, model descriptions 2-26839  
 phonon-damped proton tunnelling mode, RPA calc. 2-8592  
 quartz, light scattering studies, historical review 2-28638  
 Rochelle salt, dynamical study including proton-optical phonon interaction 2-36547  
 soft modes, damping and overdamping (*Russian*) 2-1581  
 soft modes, history of the concept 2-28637  
 squaric acid, ferroelastic phase transition, theory 2-35572  
 TGS, sp. ht. and permittivity, effect of impurities 2-8633  
 transition temperature and sp. ht. of ferroelects. with second order displacive transform; dilution effect 2-46511  
 Ba<sub>0.9</sub>Sr<sub>0.1</sub>Nb<sub>0.9</sub>O<sub>6</sub>, dielec. anomalies 2-26813  
 BaTiO<sub>3</sub>, dispersion curves for phonon-polaritons associated with an overdamped vibration mode 2-21246  
 cc KTa<sub>0.98</sub>Nb<sub>0.02</sub>O<sub>3</sub>, ferroelec., thermal and elastic props. at low temps. 2-30664  
 Cr<sub>2</sub>B<sub>2</sub>O<sub>5</sub>Cl, improper ferroelec. transition, disorder-order parameters, Raman scatt. study 2-31411  
 Fe<sub>3</sub>B<sub>2</sub>O<sub>7</sub>, ferroelectric phase transition, Raman scatt. study 2-31475  
 Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec. transition, low freq. A<sub>1</sub> modes, Raman spectra study 2-31413  
 H bonded system, coupled phonon mode-damped proton tunnelling mode, dynamics 2-35610  
 KD<sub>2</sub>PO<sub>4</sub>, cryst. struct. of tetragonal phase, temp. depend. 2-50596  
 K<sub>2</sub>D<sub>2</sub>(x-1)PO<sub>4</sub>, cryst., spontaneous parametric light scatt., deuteration effects 2-36660  
 KH<sub>2</sub>PO<sub>4</sub>, cryst. struct. of tetragonal phase, temp. depend. 2-50596  
 KH<sub>2</sub>PO<sub>4</sub>, Raman spectra and lattice dynamics 2-41338  
 KH<sub>2</sub>PO<sub>4</sub> type cryst., ferroelectric resonance and nonlinear effect 2-36545  
 KH<sub>2</sub>PO<sub>4</sub> type cryst., first order ferroelec. phase transition theory 2-36553  
 KH<sub>2</sub>PO<sub>4</sub>-type ferroelectrics and antiferroelectrics, cationic dynamics, paramag. probes 2-36490  
 KH<sub>2</sub>PO<sub>4</sub>-type ferroelectrics, anharmonic Debye-Waller factors and struct. phase transitions 2-50818  
 K<sub>1-x</sub>Li<sub>x</sub>Ta<sub>1-x</sub>Nb<sub>x</sub>O<sub>3</sub>, ferroelec. transitions, Raman scatt. studies 2-26888  
 KNbO<sub>3</sub>, cubic-tetragonal phase transition, lattice dynamics 2-45516  
 KNbO<sub>3</sub>, soft ferroelec. mode, IR reflectivity meas. 2-31417  
 K<sub>2</sub>SeO<sub>4</sub>, ferroelec., phase transitions, Brillouin spectra study 2-31516  
 K<sub>2</sub>SeO<sub>4</sub>, nonlinear lattice dynamics, phonon-periodon modes 2-45467  
 K<sub>2</sub>SeO<sub>4</sub>, O sublattice disorder, Raman spectra study 2-31474  
 KTa<sub>1-x</sub>Nb<sub>x</sub>O<sub>3</sub>, ferroelec., deviation from Curie-Weiss law at high temp., IR refl. spectra 2-31479  
 KTaO<sub>3</sub>, incipient ferroelectrics, temp. depend. of OH stretching mode 2-31478  
 KTaO<sub>3</sub>:Li, defect induced fluctuations, dielec. and optical props. meas. 2-26889  
 LaP<sub>2</sub>O<sub>14</sub>, coupled optic and acoustic modes, press. depend. near ferroelastic transitions 2-45511  
 (NH<sub>4</sub>)<sub>2</sub> ZnCl<sub>4</sub>, phase transitions, Raman and Brillouin scatt. study 2-31473  
 NH<sub>4</sub>H<sub>2</sub>PO<sub>4</sub>, overdamped modes at 300K in IR refl. spectra 2-51597  
 NaCaHSiO<sub>4</sub>, Raman and IR vibr. spectrum and structural ordering 2-36633  
 PbTiO<sub>3</sub>, ferroelec., lattice dynamics, rigid ion formalism 2-45450  
 PbTiO<sub>3</sub>, phonon dynamics study 2-30548  
 SbNbO<sub>4</sub> crystals, struct. and lattice dynamics at 300 to 1000K 2-21108  
 Sb<sub>2</sub>S<sub>3</sub>, lattice dynamics, neutron, X-ray scatt. and rigid ion model study 2-50795  
 SnTe, nonlinear lattice dynamics, phonon-periodon modes 2-45467  
 Sr<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, ferroelec. soft mode, polarised Raman scatt. meas. 2-26828  
 SrTiO<sub>3</sub>, incipient ferroelectrics, temp. depend. of OH stretching mode 2-31478

**lattice dynamics of ionic crystals**

- alkali halide crystals, anharmonic relax. times of mol. vibr. modes 2-5731  
 alkali halide thin film TO mode freq. press. depend. 2-45434  
 alkali halides, spin-lattice relax. mechanisms of V<sub>k</sub> and related centres 2-41195  
 alkali hydrides and deuterides, lattice dynamics shell model and deform. dipole model 2-8585  
 alkali metal halides, comparison of evaluation methods 2-21260  
 alkali metal halides, compressibility, Broat sum rule, Debye-Waller factor, melting 2-12698  
 alkaline earth halides, spin-lattice relax. mechanisms of V<sub>k</sub> and related centres 2-41195  
 chalcopyrite structure crystals, deformation, internal ionic displacements 2-40474  
 ionic crystals, Yamashita-Kurosawa dielec. theory, optic mode frequencies and Gruneisen parameters 2-25994

**lattice dynamics of ionic crystals continued**

- Landau-Pekar polaron and three-dimensional solitons (*Russian*) 2-12978  
 sphalerite lattice, Madelung field calcs. 2-35438  
 AgI,  $\beta$ -phase, far IR phonon absorpt. spectrum, model calc. 2-46555  
 $\beta$ -AgI, superionic transition, E<sub>2</sub> optical mode, pretransitional effects, Raman spectra study 2-51590  
 BaFBr, normal coord. and force const. calcs. 2-26004  
 Ba(NO<sub>3</sub>)<sub>2</sub>, US absorpt. and Brillouin scatt. 2-35603  
 BaTiO<sub>3</sub>, static shell model calcs. of electrostriction 2-46484  
 CaF<sub>2</sub>, Frenkel defect form. entropies in quasiharmonic approx. 2-45506  
 CaF<sub>2</sub>, spontaneous decay of high freq. acoustic phonons 2-26002  
 CaF<sub>2</sub>, spontaneous decay of high-frequency acoustic phonons 2-26009  
 Cs<sub>2</sub>SbCl<sub>6</sub>, 2-9140  
 Cs<sub>2</sub>(Sn<sup>1-2</sup>V<sub>1-2</sub>Sb<sub>1</sub>)Cl<sub>6</sub>, 2-9140  
 K halides, lattice dynamics 2-25995  
 KBiF<sub>4</sub>, superionic cond., phonon response, IR reflectivity and Raman spectra study 2-16733  
 KCl (001) surface phonons, inelastic atom scatt. time of flight spectra study 2-50982  
 KCl, dielec. function matrix and lattice dynamics 2-45869  
 KCl, R-centres, optical absorpt. R<sub>2</sub> band, lineshape calc. 2-2320  
 KI:Cl<sup>-</sup>(Br<sup>-</sup>)(Na<sup>+</sup>)(Rb<sup>+</sup>), means square displacement of substitutional defect and nearest neighbours 2-45489  
 KTaO<sub>3</sub>, static shell model calcs. of electrostriction 2-46484  
 LiF (001) surface phonons, inelastic atom scatt. time of flight spectra study 2-50982  
 LiF, IR spectra, isotope induced one phonon absorpt. coeff. meas. 2-46562  
 MgF<sub>2</sub> crystal, first-order Raman spectrum, uniaxial stress depend. 2-2238  
 NH<sub>4</sub>I, partially disordered cryst., two-phonon density of states 2-50806  
 Pb(NO<sub>3</sub>)<sub>2</sub>, US absorpt. and Brillouin scatt. 2-35603  
 RbCN, orientationally disordered phase I, mol. dynamics study 2-12520  
 RbCN, rotation-translation-coupling and lattice dynamics (*German*) 2-5198  
 SrF<sub>2</sub>, Frenkel defect form. entropies in quasiharmonic approx. 2-45506  
 Sr(NO<sub>3</sub>)<sub>2</sub>, US absorpt. and Brillouin scatt. 2-35603  
 SrTiO<sub>3</sub>, static shell model calcs. of electrostriction 2-46484  
 TiSe, lattice dynamics and sp. ht. 2-16745

**lattice dynamics of metallic crystals**

- alkali metals, electronic props., exchange and correlation effects, pseudopotential model 2-30813  
 alloys, dil., impurity-host force-const. ratios, method for determ. 2-40508  
 alloys, substitutional, phonon dispersion curves, average local information transfer approx. 2-45451  
 binary alloys, two-dimensional, disordering, vibr. entropy change 2-45528  
 cubic metals, Mossbauer recoilless fraction and second-order Doppler shift 2-2164  
 cubic metals, phonon dispersion, phenomenological models 2-45435  
 FCC metals reson. vibrs. of self-interstitials, appl. to sp. ht. and neutron scatt. 2-45432  
 superconducting and normal state metals, vertex corrections in IR absorption 2-31502  
 surfaces, (100), FCC and BCC metals, surface modes calc. 2-50990  
 surfaces, phonons, hydrodynamic eqns. 2-50987  
 transition metals, electron-phonon coupling, use of deform. transform. 2-45474  
 transition metals, phonon anomalies 2-50803  
 transition metals, phonon dispersion, consistent model, central-pair potential 2-45436  
 Ag, lattice dynamics, phonon dispersion rel. 2-35614  
 Al, anharmonic contribs. to sp. ht. 2-12770  
 Al, Eliashberg function and force consts., linear response theory 2-12708  
 Al, lattice dynamics, phonon dispersion 2-21253  
 Al, modified Ashcroft pseudopotential 2-35616  
 Au, lattice dynamics, phonon dispersion rel. 2-35614  
 Ba, phonon dispersion calc. 2-50802  
 Be, thermal vibration temp. depend. 2-45430  
 Cd, anharmonicity, X-ray diff. study 2-45500  
 Cr, surface phonons calc. 2-50990  
 Cs, phonon frequencies, six force constant model 2-30545  
 Cu, lattice dynamics, phonon dispersion rel. 2-35614  
 Cu, phonon frequencies in off-symmetry directions 2-50804  
 Fe-Pd,  $\gamma$ -phase, magnetisation and soft modes, neutron diff. study 2-50821  
 $\beta$ -Ga, metastable, phonon dispersion curves, neutron inelastic scatt. study 2-12705  
 HO, phonon dispersion 2-21252  
 In, phonon dispersion curves, modified axially symm. model with vol. forces 2-12706  
 K, lattice dynamical props. 2-21250  
 K, local bare electron ion pseudopot. extraction from phonon dispersion curves 2-5196  
 K, local bare electron ion pseudopot. extraction from phonon dispersion curves 2-8587  
 K, single cryst., X-ray diff. study, anharmonicity 2-45499  
 Mg, thermal expansion and temp. var. of negative second moment of its freq. spectrum 2-12786  
 Mo, phonon freq. and lattice energy, first principles LCAO calc. 2-50794  
 Na, thermal diffuse X-ray scatt. intensity, anharmonic contrib. 2-45422  
 Nb, phonon anomalies, model pot. approach 2-45419  
 Nb, phonon freq. and lattice energy, first principles LCAO calc. 2-50794  
 Ni, surface phonons calc. 2-50990  
 Ni<sub>3</sub>Al, lattice dynamics, specific heat 2-26005  
 Pb, electronic and lattice-mechanical properties, pseudopotential theory 2-16619  
 Pb, lattice dynamics, phonon dispersion 2-21253  
 Pd-Sn, very dil., force const. change of Mossbauer <sup>119</sup>Sn impurity nuclei 2-51503  
 Rh, lattice dynamics, specific heat, thermal expansion 2-40501  
 Ru, electron-phonon interaction, Raman scatt. study 2-36650  
 Ta, phonon dispersion, pseudopotential calc. 2-1570  
 Ta:H(D), localised vibrs., rel. to H(D) pot. 2-21258  
 Th, unpaired forces, lattice dynamics, phonon dispersion rel. 2-35615  
 TiNi, premartensitic, characterisation of lattice displacement waves 2-36855  
 TiNi, premartensitic effects, morphological study 2-36854  
 V<sub>2</sub>Si, model for arresting elastic modulus softening in supercond. state 2-31038



**lattice dynamics of metallic crystals continued**

- W, electronic attenuation of longitudinal acoustic phonons 2-30553  
 W-Zr, BCC, lattice dynamics, modified Krebb's model appl. 2-21251  
 Zr, lattice dynamics in model pot. theory 2-5195  
 Zr, lattice dynamics in model pot. theory 2-8586

**lattice dynamics of molecular crystals**

- alkylammonium manganese chlorides, Brillouin scatt. and linear birefringence 2-31518  
 anharmonic mol. cryst., dynamics, Green's function methods 2-45431  
 anharmonic mol. crystals, ultrasonic absorpt. 2-25990  
 anthracene, mol. crystal, internal phonons, inelastic incoherent neutron diff. study 2-50783  
 anthracene, molecular crystal, lattice dynamics 2-45454  
 anthracene, phonon and internal mode dispersion, neutron diff. study 2-50791  
 anthracene-pyromellitic anhydride, isotopically mixed, librational phonon modes, Raman spectra 2-17480  
 azabenzene, static and dynamical props. calc. using model which includes atom-atom and internal interactions 2-21248  
 benzene, static and dynamical props. calc. using model which includes atom-atom and internal interactions 2-21248  
 benzil, solid, phase transition, Raman scatt. study 2-51591  
 (benzophenone)<sub>2</sub>(KI)<sub>2</sub>CHCl<sub>3</sub>, I column struct. and dynamics, reson. Raman study 2-36631  
 biphenyl, crystn., mean square amplitudes, lattice dynamic calcs. 2-45501  
 biphenyl, solid, lattice dynamics of high temp. phase 2-45457  
 biphenyl molecular crystal, vibr. and librational dynamics, picosecond CARS 2-46570  
 p-chloroaniline, cryst., Raman lattice spectrum intensities, exciton-phonon interaction effects 2-31494  
 9-cyanoanthracene, mol. crystals, excimer formation and trapping processes 2-50778  
 cyclobutane, liq., plastic and cryst. phases, low-freq. Raman spectrum meas. 2-51595  
 n-dotriacontane, longit. acoustic modes and low freq. vibrs., incoherent inelastic neutron scatt. study 2-12704  
 excited-state interactions, laser-induced phonon spectroscopy study 2-12700  
 α-glycine, deuterated, Raman active lattice modes 2-1575  
 halogen crystals, lattice dynamics 2-21254  
 ice, I<sub>h</sub> single cryst. translational spectra, interaction induced light scatt. 2-36584  
 iodoform, cryst., Raman and IR spectra, press. and temp. depend. 2-51577  
 molecular crystals, improved approx. diagonalisation for exciton phonon coupling 2-1566  
 naphthalene, mol. crystal, internal phonons, inelastic incoherent neutron diff. study 2-50783  
 naphthalene, molecular crystal, lattice dynamics 2-45454  
 naphthalene, phonon and internal mode dispersion, neutron diff. study 2-50791  
 naphthalene molecular crystal, vibr. and librational dynamics, picosecond CARS 2-46570  
 naphthalene-β-naphthol mixed mol. cryst., manifestation of intermol. H bond, IR spectra 2-51598  
 meta-nitroaniline, electro-optic effect, contribs. from electron-field interaction an-d lattice vibrs. 2-5660  
 one-dimensional conductors with interchain interaction, structural energy and phonon dynamics 2-25999  
 one-dimensional organic metal, X-ray diffuse scatt. obs. of 4k<sub>F</sub> anomaly 2-26296  
 organic molecular crystals, phonon interactions dynamics 2-45471  
 oxamide, cryst., Raman intensities of lattice vibrs., CNDO calc. 2-50786  
 phonon-phonon interactions studied by ultrasonic methods 2-45469  
 polyacetylene chains, ideal and kinked, lattice dynamics and IR activity 2-45466  
 pyrene, mol. crystals, excimer formation and trapping processes 2-50778  
 Raman intensities and zero point motion 2-2289  
 review 2-45453  
 TCNQ, lattice modes calc. 2-26000  
 TCNQ salt, TEA(TCNQ)<sub>2</sub>, neutron inelastic scatt. obs. of phonons and vibrons 2-26001  
 tetracyanoethylene, monoclinic, internal and external modes, neutron diff. study 2-45426  
 tetrahedral, classification in terms of cryst. structs. Debye temp., and transition or melting temp. 2-35632  
 s-triazine, mol. cryst., ferroelasticity, phase transitions, eqn. of motion approach 2-50846  
 s-triazine crystal, acoustic phonon dispersion, mol. translational-rot. coupling effects 2-45456  
 trioxane, piezoelectric cryst., polar phonons, Raman study 2-51567  
 TSeF-TCNQ, quasi-one-dimens. cond., two-dimens. displacement pattern from X-ray 2k<sub>F</sub> scatt. 2-22112  
 TSeF-TCNQ, quasi-one-dimens. cond. Peierls distortion, far IR vibr. spectra 2-22009  
 TTF, lattice modes calc. 2-26000  
 TTF-TCNQ, lattice modes calc. 2-26000  
 TTF-TCNQ, quasi-one-dimens. cond., donor and acceptor stack contribs. to phase transitions 2-22010  
 TTF-TCNQ, quasi-one-dimens. cond. Peierls distortion, far IR vibr. spectra 2-22009  
 virial relations, general (Russian) 2-25998  
 Ba(NO<sub>3</sub>)<sub>2</sub>, US absorpt. and Brillouin scatt. 2-35603  
 CS<sub>2</sub>, mol. cryst., lattice dynamics 2-50801  
 FeOCl, intercalation cpd. with crown ether 2-21080  
 Mn complex, phosphacymantrene, order-disorder transition, calorimetric, X-ray and Raman diff. study (French) 2-50847  
 N<sub>2</sub>, solid, phonons, self-consistent harmonic approx. 2-45455  
 NH<sub>4</sub>NH<sub>2</sub>SO<sub>4</sub> single cryst., Raman spectra study 2-51576  
 N<sub>2</sub>O<sub>4</sub>, lattice dynamics 2-21247  
 NiSO<sub>4</sub>·6H<sub>2</sub>O, multiphonon processes, Raman spectra study 2-46588  
 P<sub>2</sub>S<sub>5</sub>, IR absorpt. spectrum, temp. depend. 2-22023  
 Pb(NO<sub>3</sub>)<sub>2</sub>, US absorpt. and Brillouin scatt. 2-35603  
 o-S, molecular cryst., second order Raman spectra 2-51588  
 S, solid and liquid, intermol. vibr., Raman spectra study 2-46586  
 α-S, US relax., mol. relax. mechanism 2-50775  
 Se, monoclinic and trigonal, molecular cryst., second order Raman spectra 2-51588  
 Sr(NO<sub>3</sub>)<sub>2</sub>, US absorpt. and Brillouin scatt. 2-35603  
 Te, trigonal, molecular cryst., second order Raman spectra 2-51588

**lattice energy**

see also binding energy

- alkaline-earth formates, energy anal. 2-1435  
 Bertaout series employing charge density functions and Tournarie's product function, convergence, Madelung const. 2-30809  
 cohesive energy, bulk modulus and press. derivative of bulk modulus, determ. using Morse-Kratzer pot. 2-50580  
 Coulomb potential expansion 2-35437  
 covalent crystals, lattice energy, electron-gas functional theory 2-1446  
 elements, post-transition, melting point relations 2-16756  
 Gaussian Wigner crystal, electrostatic structural transitions 2-45527  
 halides, potential energy function for repulsive interaction 2-16746  
 ice, density, lattice energies and bulk moduli 2-39461  
 ionic crystals, electrostatic bonding energy, electrostatic interaction during growth 2-25806  
 ionic crystals, electrostatic field at surface, electrostatic interaction during growth 2-25807  
 lattice sums for long-range interactions involving charged defects in non-cubic ionic crystals 2-40373  
 melting relations of crystals with rocksalt struct. related to bonding 2-16755  
 nickelocene, disordered and metastable ordered structs., X-ray diff. study (French) 2-25857  
 noble metals, eqn. of state and elastic consts. under press. 2-30563  
 one-dimensional conductors with interchain interaction, structural energy and phonon dynamics 2-25999  
 organic charge-transfer solid, neutral-ionic phase transform. mechanism 2-30593  
 organic molecular crystals, atom-atom approx. and lattice energy 2-25804  
 pseudo-harmonic model, commensurate-incommensurate phase transition 2-35646  
 solid soln., inhomogeneous, elastic energy, quasiperiodic particle distrib. 2-21057  
 sphalerite lattice, Madelung field calcs. 2-35438  
 spinels, cation distrib., effective electrostatic energy versus cryst. field stabilisation energy 2-25802  
 surface, ionic charge reduction 2-35915  
 TCNQ salt, TTF-2,5-difluoro TCNQ, cryst. struct. Madelung energy 2-50618  
 thin ionic slabs, electrostatic energy and lattice vibrs. 2-50782  
 TTF-chloranil, neutral-to-ionic phase transition anomalies, optical study 2-30592  
 Al, crystal energy and struct., ab initio pseudopot. calc. 2-35961  
 Al, modified Ashcroft pseudopotential 2-35616  
 AlAs, crystal binding and density of states, pseudopot. calc. 2-45874  
 BN, band and cryst. struct., LCAO SCF ab initio HF calc. 2-35935  
 Ba(HCOO)<sub>2</sub>, lattice energy calcs. 2-1435  
 α-Ca(HCOO)<sub>2</sub>, lattice energy calcs. 2-1435  
 CsF, soln. in formic, acetic and propionic acids, heat of soln., H-bonds 2-2725  
 GaAs, crystal binding and density of states, pseudopot. calc. 2-45874  
 GaAs, surface core level shifts, Madelung pot. effect 2-30949  
 Ge, electronic struct. and total energy, self consistent local pseudopot. method 2-45823  
 H, crystalline atomic phase, eqn. of state 2-1705  
 KBr:H, charged substitutional and interstitial impurities, crystal electrostatic energy, Ewald method 2-16618  
 KCl:H, charged substitutional and interstitial impurities, crystal electrostatic energy, Ewald method 2-16618  
 KF, soln. in formic, acetic and propionic acids, heat of soln., H-bonds 2-2725  
 Mo, phonon freq. and lattice energy, first principles LCAO calc. 2-50794  
 Nb, phonon freq. and lattice energy, first principles LCAO calc. 2-50794  
 RbF, soln. in formic, acetic and propionic acids, heat of soln., H-bonds 2-2725  
 Si, band structure and cryst. struct., LCAO SCF ab initio HF calc. 2-35929  
 Si, electronic struct. and total energy, self consistent local pseudopot. method 2-45823  
 Si, phonon freq. and lattice energy, first principles LCAO calc. 2-50794  
 α-Sn, electronic struct. and total energy, self consistent local pseudopot. method 2-45823  
 α-Sr(HCOO)<sub>2</sub>, lattice energy calcs. 2-1435  
 SrO:Fe<sup>3+</sup>(Cr<sup>3+</sup>), off-centre effects and lattice energy calc. 2-45237  
 TiO<sub>2</sub>, ion polarisability, Madelung pot. calcs. 2-1445

**Lattice gas** see lattice theory and statistics

**lattice localised modes**

see also phonon-defect interactions; phonon-impurity interactions

- alkali halide crystals, anharmonic relax. times of mol. vibr. modes 2-5731  
 alkali halides, Eu<sup>2+</sup> luminesc., temp. depend. 2-46662  
 alkali halides, spin-lattice relax. mechanisms of V<sub>k</sub> and related centres 2-41195  
 alkaline earth halides, spin-lattice relax. mechanisms of V<sub>k</sub> and related centres 2-41195  
 anharmonic crystal lattice, strongly localized vibr. states 2-40506  
 biphonons, localised at cryst. impurities, dispersion relations 2-45491  
 diamond, electron irradi., TR12 vibronic band, uniaxial stress effects 2-13519  
 diamond, type IIb, electron irradiated, luminesc. excitation 2-41409  
 diatomic linear lattice, impurity vibr. modes 2-30555  
 dynamical systems with nonlinear polarisability, nonlinear excitations 2-46461  
 elastic chain, disordered, absence of quantum diffusion 2-50815  
 excitation transfer, book contrib. 2-12710  
 FCC crystal, vibrational motion of interstitial impurity atom 2-8589  
 FCC metals reson. vibrs. of self-interstitials, appl. to sp. ht. and neutron scatt. 2-45432  
 FCC-HCP martensitic transform., US effects 2-47025  
 Fermi liquids, localised vibrational modes 2-106  
 ferromagnet, edge dislocation vibrs., effect on magnetisation dynamics (Russian) 2-41171  
 GaP:ZnO, defect reactions, photolum. studies 2-2333  
 imperfect crystal, local mode hybridisation with two-phonon bound state 2-45488  
 impurity in nonlinear lattice, interaction with soliton, computer simulation study 2-16737



**lattice localised modes continued**

- layered compounds, effect of non-mag. impurities on Raman scatt. by supercond. gap excitations 2-51581  
 nearly one-dimensional solids, phonon localisation 2-1578  
 one dimensional nonlinear nonuniform cryst. struct., localised oscillations (*Russian*) 2-45492  
 perylene in n-heptane cryst., fluoresc. selectively laser excited in phonon sideband 2-46711  
 phonon pulses from a relaxing system following defect optical absorpt. 2-45487  
 polyacetylene chains, ideal and kinked, lattice dynamics and IR activity 2-45466  
 semiconductor ternary alloys, local field effects and IR optical props. 2-22028  
 soliton-impurity interaction in nonlinear lattice, expt. using LC circuit 2-16738  
 BaClF, U-centre localised and reson. modes, Green's function study 2-45490  
 Ba<sub>0.5</sub>Sr<sub>0.5</sub>Nb<sub>2</sub>O<sub>6</sub>, dielec. anomalies 2-26813  
 CaO:H<sup>+</sup>, vibr. due to H<sup>+</sup> ion, IR absorpt. spectra 2-46606  
 CdTe:P(P,Ga)(P,Al)(P,In), localised vibr. modes, Green's function calc. 2-50814  
 Co<sub>9</sub>Ni<sub>3</sub>, US attenuation and vel. changes during FCC-HCP martensitic transform. 2-47026  
 CsCl crystal, IR absorpt. spectra of impurity tetrahedral anions, vibr. bands 2-51638  
 CsCl(Br)(I):ReO<sub>4</sub><sup>-</sup>, IR and Raman spectra, ReO<sub>4</sub><sup>-</sup> ion orientation 2-13517  
 Fe-Mn(Au), dil., hyperfine field, press. and temp. depend. 2-35980  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, local field effects and IR optical props. 2-22028  
 GaAs:C, implanted, IR localised mode vibr. spectroscopy, annealing temp. depend. 2-17509  
 GaAs:Cr, phonon spectra, supercond. tunnel junction meas. 2-50798  
 GaAs:Si, heavily doped, annealing-induced changes, Si defect conc. depend. 2-30889  
 Ge, vibrational modes at vacancy site 2-50813  
 HCL-DCL mixed crystals, far IR and Raman spectra investigated in lattice mode region 2-36616  
 KCl:Na<sup>+</sup>, low temp. sp. ht., impurity quasilocal vibr. effects 2-35715  
 KI:Cl<sup>-</sup>(Br<sup>-</sup>)(Na<sup>+</sup>)(Rb<sup>+</sup>), means square displacement of substitutional defect and nearest neighbours 2-45489  
 α-Lu(H, D)<sub>x</sub>, elec. resist. due to H, 4.4 to 170K, Manninen-Jena effect 2-17046  
 MgO:H<sup>+</sup>, vibr. due to H<sup>+</sup> ion, IR absorpt. spectra 2-46606  
 Nb, BCC, localised vibr. spectra of H and D on T-sites 2-26010  
 NbT<sub>0.2</sub>, vibrations due to T, neutron spectra 2-30556  
 OH<sup>-</sup> in crystal, local electric field and donor-acceptor bond effect on internal vibr. freq. 2-16739  
 Pb:H(D), localised modes, tunnelling study 2-35625  
 Pd-H, vibrational motion of interstitial impurity atom 2-8589  
 RbCl(Br)(I):ReO<sub>4</sub><sup>-</sup>, IR and Raman spectra, ReO<sub>4</sub><sup>-</sup> ion orientation 2-13517  
 Si, vibrational modes at vacancy site 2-50813  
 Si:Cr, Jahn-Teller centre, ER spectrum, isotopic vibronic struct. 2-36419  
 SrClF, U-centre localised and reson. modes, Green's function study 2-45490  
 SrO:H<sup>+</sup>, vibr. due to H<sup>+</sup> ion, IR absorpt. spectra 2-46606  
 Ta, BCC, localised vibr. spectra of H and D on T-sites 2-26010  
 Ta:H(D), localised vibr., rel. to H(D) pot. 2-21258  
 TbAl<sub>2</sub>, localised modes, γ-ray resonant absorption study 2-45486  
 TbO<sub>x</sub>, localised modes, γ-ray resonant absorption and specific heat study 2-45486  
 α-Ti, Σ=7 tilt boundary, struct. and at. vibr., mol. dynamics simulation 2-45201  
 Ti-H, α- and β-phases, H site occupation, inelastic neutron scatt. study 2-35440  
 α-Ti:H(D), optic phonon modes and supercond., neutron scatt. study 2-35624  
 V, BCC, localised vibr. spectra of H and D on T-sites 2-26010  
 V-Ta, dilute alloy, phonon sp. ht. at low temp. 2-30622  
 V-W, dilute alloy, phonon sp. ht. at low temp. 2-30622  
 α-Zr-H, H site occupation, inelastic neutron scatt. study 2-35440  
 α-Zr:H(D), optic phonon modes and supercond., neutron scatt. study 2-35624  
 ZrNiH<sub>x</sub>, cryst. and amorphous, local H vibr., time of flight neutron scatt. expt. 2-30557

**lattice mechanics** see *lattice dynamics*

**lattice parameters** see *lattice constants*

**lattice phonons**

- see also *electron-phonon interactions; lattice dynamics of covalent crystals; lattice dynamics of ferroelectric crystals; lattice dynamics of ionic crystals; lattice dynamics of metallic crystals; lattice dynamics of molecular crystals; lattice localised modes; phonon-defect interactions; phonon dispersion relations; phonon drag; phonon-exciton interactions; phonon-impurity interactions; phonon-magnon interactions; phonon-phonon interactions; phonon-plasmon interactions; polaritons; soft modes; spin-phonon interactions; tunnelling spectra; tunnelling spectroscopy*  
 alkali halide optical spectra, F-centre absorpt., vibr. props. 2-9170  
 alkali metal halides, F centre luminesc. uniaxial stress induced polarisation, expt. studies 2-17519  
 Anderson lattice, effective fourth-order Hamiltonian, RKKY interaction 2-26572  
 anharmonic crystals, self consistent phonon theory, thermodynamic Green's function method 2-35612  
 anomalies, microscopic theory, rel. to T<sub>c</sub> 2-5193  
 anthracene, phonon relax., hot luminescence study 2-46740  
 anthracene crystal, stimulated resonant Raman scatt. 2-2233  
 Brownian motion of domain wall with higher order phonon interactions 2-19024  
 m-chloronitrobenzene crystals, Raman line intensity of phonon spectra and electrooptical parameters 2-9151  
 crystals, quantum field theory, two-band model in one-dimensional fermion systems 2-50785  
 crystals, quantum field theory 2-50784  
 cubic crystals, ballistic phonons and acoustic ray surface shape 2-12701  
 cubic crystals, phonon focusing and ray surface shape 2-45447  
 detection, limitations on usefulness of metallic thin film semiconds. 2-50781  
 diamond, local field effects and dielectric response matrix 2-1850

**lattice phonons continued**

- diamond, optical absorption spectrum, 1.71 eV phonon sideband of GR1 centre 2-46643  
 diamond, phonon spectrum calc. with force consts. determ. from mol. vibr. spectra 2-50805  
 diamond, resonant excitation of GR 1, luminescence and cathodoluminescence study 2-46685  
 diamond, type IIb, electron irradiated, luminesc. excitation 2-41409  
 dielectric relaxation, nonlinear theory, phonon mean free path 2-5626  
 dielectric response renormalisation, appl. to effective ion interactions and phonons 2-12985  
 dielectric solids, high freq. phonon transport 2-45643  
 dielectric solids, lattice thermal cond., contrib. of low freq. longitudinal phonons 2-45651  
 disordered system, excitation transfer, book contrib. 2-12710  
 dispersive phase transitions, lattice dynamics 2-45518  
 echo phenomena in bulk and powdered materials 2-45458  
 elastic chain, disordered, absence of quantum diffusion 2-50815  
 electron-hole plasma, nonlocal thermal cond. (*Russian*) 2-8832  
 ethane-(d<sub>n</sub>) (n=0,1,2,3,5,6) polycryst. solid, Raman spectra 2-2265  
 ferroelectric, H bonded, dynamical modes 2-36544  
 ferroelectric, H bonded system, coupled phonon mode-damped proton tunnelling mode, dynamics 2-35610  
 ferroelectrics, hydrogen-bonded, soft modes, damping and overdamping (*Russian*) 2-1581  
 fine metallic particles, structure and props. 2-51069  
 graphite intercalation compounds, phonons 2-50779  
 graphite intercalation compounds, role of phonons in intra-plan ordering 2-50780  
 graphite-FeCl<sub>3</sub> stage 2 intercalation cpd., longitudinal lattice modes, inelastic neutron scatt. study 2-16732  
 halogen crystals, lattice dynamics 2-21254  
 hexamethylenetetramine, solid phase, vibr. transitions, IR and Raman spectra (*French*) 2-51593  
 high frequency phonon lifetime, multiphonon decay 2-45442  
 ice, I<sub>h</sub> single cryst. translational spectra, interaction induced light scatt. 2-36584  
 III-V semiconductor material design for electronic devices used under unusual conditions (*Japanese*) 2-8618  
 III-V semiconductors, TA phonon pulse generation and propag. 2-45643  
 imaging and focusing 2-45444  
 inhomogeneous solids, elastic wave attenuation 2-45338  
 insulators, incommensurate phase transitions, phonons role 2-45563  
 Ising model in transverse field coupled to acoustic phonons, longitudinal spin dynamics 2-36546  
 Jahn-Teller systems, open-system perturbative approach, electronic relax. and optical response 2-13025  
 large polaron in crystal with many LO phonon branches, ground state energy 2-35954  
 lifetime calcs., using perturbation theory 2-45439  
 lithium formate, parametric scatt. spectrum second-order vibr. 2-46611  
 luminescence radiation chemical potential 2-51688  
 metal powders, static polarisation echo 2-45459  
 molecular crystals, excited-state interactions, laser-induced phonon spectroscopy study 2-12700  
 molecular modes, high freq., theory of effective Debye Waller factor 2-35631  
 multiple-phonon states, classification, shift operator techniques 2-30541  
 multiple-phonon states, classification, shift operator techniques 2-30540  
 nonequilibrium superconductivity, phonons and Kapitza boundaries, gonf., Acquafredda di Maratea, Italy (Aug. 1980) 2-33238  
 nonequilibrium superconductivity, temp. depend. solns., excess distrib. functions, variational approach 2-21715  
 nonlinear lattice models, static and dynamic aspects 2-45417  
 nonradiative transitions in donor centers in a strong magnetic field 2-26328  
 optical phonons, long wavelength, simulation by generalised internal strains 2-45452  
 perovskites, dynamic correlations below anti-ferrodistortive transition 2-46502  
 polar crystals, electron-phonon interaction in luminescence and light scatt. 2-46690  
 polar semiconductors, multiphonon resonance Raman scatt. involving hot excitons 2-41367  
 polariton dispersion curves associated with overdamped vibr. mode 2-21246  
 polyacetylene film, reson. Raman scatt., deuteration effects 2-31576  
 rare earth ion nonradiative and radiative decay rates, energy gap and selection rules 2-46715  
 resonant Brillouin scattering intensities from multicomponent exciton-polaritons 2-2302  
 Roohelle salt, dynamical study including proton-optical phonon interaction 2-36547  
 ruby, acoustic phonon focusing, optical study 2-1573  
 ruby, phonon-impurity levels and phonon-phonon interactions 2-45424  
 semiconductor, nonlinear galvanomagnetic effects, phonon heating and drag 2-30912  
 semiconductor, nonohmic, nonreciprocity and magnetoresistance size effects, phonon heating and drag 2-30913  
 semiconductor ternary alloys, local field effects and IR optical props. 2-22028  
 semiconductors, free carrier cyclotron resonance linewidth due to ionised impurities 2-31289  
 semiconductors, nonradiative transitions in donor centers in a strong magnetic field 2-26328  
 semiconductors, phonon optics 2-30544  
 semiconductors, statistical mechanics of band states and impurity states 2-12967  
 semiconductors, tetrahedral, optical phonon deform. pots. 2-1576  
 sine-Gordon chain, equilib. dynamics, mol. dynamics study 2-42960  
 solid-state plasma, inelastic dynamic light scatt., non-local approach 2-2301  
 solids, four-phonon processes, relax. rate 2-45441  
 solids, phonon conductivity, role of thermal expansion 2-45642  
 stimulated emission, phonon maser and phonon laser (*Japanese*) 2-8588  
 stress relaxation in solids, cooperative model 2-5173  
 structural phase transitions, X-ray studies, review (*Japanese*) 2-16751  
 superconducting film, non-equilibrium effects, spatial correlation, optical excitation 2-51371  
 superconducting films, phonon deficit effect in UHF fields (*Russian*) 2-8915



## lattice phonons continued

- superconducting tunneling junctions, nonequilibrium phonons 2-36274  
 superconductor-nonmetal system props. 2-31069  
 superconductors, kinetic theory of nonequilibrium phenomena 2-41072  
 superconductors, spatially separated, electron beam excitation of nonequilibrium effects 2-21717  
 superionic conductors, lattice phonon effects 2-45423  
 TCNQ salt,  $\text{Tea}(\text{TCNQ})_2$ , neutron inelastic scatt. obs. of phonons and vibrons 2-26001  
 tetragonal crystals, class  $D_4$ , energetic spectrum struct., dispersion laws 2-40503  
 thermal conductivity, dislocation effects, phonon scatt. by strain fields 2-50940  
 thin films, Brillouin scattering, phonon modes, elastic consts., surface phonons 2-5767  
 three level system, phonon enhancement and saturation in EM field 2-45479  
 time reversal symmetry and the Raman scattering by crystals 2-45464  
 Toda lattice, soliton gas analogy 2-3521  
 trioxane, piezoelectric cryst., polar phonons, Raman study 2-51567  
 two-photon indirect transitions in crossed electric and magnetic fields 2-41330  
 $[\text{Ni}(\text{NH}_3)_6](\text{NO}_3)_2$ , neutron scatt. study of  $\text{NH}_3$  reorientations 2-30542  
 $\text{Ag}_2\text{S}_3$ , proustite, Brillouin scatt. spectra 2-46629  
 $\text{AgBr}(\text{Cl})$ , acoustic phonon anomaly, Brillouin scatt. study 2-46626  
 $\text{AgCl}$ , two-phonon resonant Raman scatt. at indirect exciton 2-46567  
 $\text{AgCrS}_2$ , two-dimens. superionic cond., phonons and ionic cond. 2-45443  
 $\text{AgI}$ ,  $\beta$ -phase, far IR phonon absorpt. spectrum, model calc. 2-46555  
 $\text{AgI}$ , Rayleigh-Brillouin spectra in  $\alpha$ - and  $\beta$ -phase 2-46625  
 Al, modified Ashcroft pseudopotential 2-35616  
 $\text{AlGa}_{1-x}\text{As-GaAs}$  quantum-well heterostruct. lasers, MBE growth, clustering and phonon effects 2-4510  
 $\text{Al}_{1-x}\text{Ga}_x\text{P}$  solid soln., Raman scatt. by optical phonons 2-17485  
 $\beta\text{-Al}_2\text{O}_3$ , polarized Brillouin scatt. 2-17500  
 $\text{Ba}_2\text{C}$ , metal-insulator transition, elec. cond., thermoelec. power and Hall effect meas. 2-40975  
 $\text{BaAs}$ , IR study of phonons and free carriers 2-36627  
 $\text{Ba}_2\text{NaNb}_2\text{O}_{15}$ , soft phonon valley near tetragonal-incommensurate phase transition 2-45514  
 $\text{BaTiO}_3$ , angular depend. of Raman scatt. spectra 2-46561  
 $\text{BaTiO}_3$ , dispersion curves for phonon-polaritons associated with an overdamped vibration mode 2-21246  
 $\text{BaTiO}_3$ , pure and doped, symm. problems on Raman scatt. 2-46558  
 $\text{BaTiO}_3$ , tetragonal-cubic phase transition, Raman study 2-46505  
 $\text{Bi}_2\text{GeO}_{20}$ , optical phonon freq., linear wave-vector depend. 2-1574  
 $\text{Bi}_2\text{GeO}_{20}$ , phonon echo props. 2-45460  
 $\text{Bi}_2\text{SiO}_{20}$ , backward-wave phonon echoes at 17 GHz 2-45461  
 $\text{CaCO}_3$ , calcite crystal, polariton Fermi reson. in hyper-Raman spectra 2-17481  
 $\text{CaF}_2$ , anharmonicity effects, phonon lifetime, rigid ion model calcs. 2-45438  
 $\text{CaF}_2:\text{Eu}^{2+}$ , acoustic phonon freq. depend. lifetimes 2-45437  
 $\text{CaF}_2:\text{Sm}^{2+}$ , Raman scatt. 2-2282  
 $\text{Ca}_2\text{Ga}_2\text{Ge}_2\text{O}_{12}$ , Raman and Mandel'shtam-Brillouin light scatt. 2-51601  
 $\text{CaO}(\text{S})(\text{Se})\text{Pb}^{2+}$  phosphors, luminesc. spectra, mag. field effect (French) 2-41417  
 $\text{CaWO}_4:\text{Sm}^{3+}$  cryst., energy transfer investig. by dye laser spectroscopy 2-41397  
 $\text{CdGaInS}_4$  layer cryst., sp. ht. 2-8634  
 $\text{CdGa}_2\text{Se}_4$ , Raman study of optical phonons 2-5686  
 $\text{Cd}_2\text{Hg}_{1-x}\text{Te}$ , magnetophonon reson. of nonequilibrium carrier density 2-8825  
 $\text{CdHg}_{1-x}\text{Te}$ , semimetallic, magnetophonon reson. of hot carriers at 4.2K 2-40940  
 $\text{CdInGaS}_4$ , Raman light scatt. spectra 2-5687  
 $\text{Cd}_{1-x}\text{Mn}_x\text{Te}$  crystal, Raman spectrum 2-2257  
 CdS, biexciton states, real and virtual, Raman, fluoresc. and radiative recomb. spectroscopy 2-45841  
 CdS, phonon echo props. 2-45460  
 CdS:Cu,Cl, activated phosphors, radiative and nonradiative recomb. centre struct. photoluminescence obs. 2-35966  
 CdTe p-n junctions, electrolytically prepared, emission props., TO phonon replicas obs. 2-2347  
 $\text{CeF}_3$ , paramagnet, optic phonons, reststrahlen spectra mag. field depend. study 2-46550  
 Cs, phonon frequencies, six force constant model 2-30545  
 Cu, phonon frequencies in off-symmetry directions 2-50804  
 $\text{Cu}^{119}\text{Sn}$ , Mossbauer study of force const. change 2-26794  
 CuCl, excitonic polaron dynamics 2-45838  
 CuCl $_2$ , exciton polaron study, Raman spectra 2-1843  
 CuCl $_2$ :Br $_2$ , Raman study of polaritons and phonons 2-45847  
 n-CuInSe $_2$  crystals, optical absorpt., 0.9 to 1.0 eV 2-22024  
 $\text{Cu}_2\text{O}$ , reson. Brillouin scatt., theory 2-5723  
 $\text{Cu}_2\text{VS}_4$ , Raman linewidth of phonon modes induced by hydrostatic press., resonant enhancement 2-46590  
 $\text{EuC}_6$ , intercalate, Raman spectra 2-36647  
 $\alpha\text{-EuP}_3$ , IR study of phonons and free carriers 2-36627  
 $\text{Eu}_2\text{S}_4$ , electron hopping and optic phonons 2-2245  
 $\text{Ga}_{1-x}\text{Al}_x\text{As}$ , disorder activated Raman scatt. 2-2244  
 $\text{Ga}_{1-x}\text{Al}_x\text{As}$ , local field effects and IR optical props. 2-22028  
 $\text{Ga}_{1-x}\text{Al}_x\text{Sb}$  epitaxial layer, Raman selection rules, resonance and inhomogeneity 2-2362  
 GaAs crystals and solid solns., hot electron luminescence 2-46712  
 GaAs electron mobility, space-charge and central-cell scatt. contrib. reassessment 2-13092  
 n-GaAs, epilayers, phonon generation and electron-phonon scattering 2-21257  
 GaAs, local field effects and zone centre phonons 2-26006  
 n-GaAs, magnetophonon effect of hot electrons 2-26417  
 GaAs, phonons and propagation in epitaxial or thin-film superlattice material 2-30543  
 GaAs, phonons, near zone-edge non-thermal, ballistic transport and decay 2-45448  
 GaAs, Raman scatt. by two LO-phonons near  $\Gamma$  2-36642  
 GaAs:Cr, no-phononluminescence, ground state of states 2-41402  
 GaAs:Cr, phonon spectra, supercond. tunnel junction meas. 2-50798  
 GaAs-AlGa $_{1-x}$ As submicron heterostructs., IR optical characterisation 2-17565  
 GaAs-AlAs superlattice, phonons, Raman scatt. study 2-51587  
 GaAs $_3$ , IR study of phonons and free carriers 2-36627  
 $\text{GaIn}_{1-x}\text{As}_x\text{P}_{1-y}$ , IR refl. spectra, free carrier parameters and lattice vibrs. 2-5678

## lattice phonons continued

- $\text{Ga}_{1-x}\text{In}_x\text{P}$  mixed cryst., Raman scatt. and IR absorpt. spectra 2-2235  
 GaP, IR absorption induced by impurities and radiation damage 2-46644  
 GaP, Raman scatt. by bound two-phonon states, polariton Fermi resonance (Russian) 2-13492  
 GaP:Bi p-n struct., electrolum. and photoresponse spectra 2-36709  
 GaS(Se)(Te), Debye temp. study (Russian) 2-21264  
 GaTe, phonon modes and optical consts., far IR complex refl. meas. 2-5669  
 Ge, dispersive phonon focusing 2-45445  
 Ge, electron-hole droplet drag velocity quantum oscils. 2-1841  
 Ge, local field effects and zone centre phonons 2-26006  
 Ge, mode Gruneisen parameters for long-wave phonons under press. 2-12712  
 Ge, phonon conductivity, role of thermal expansion 2-45642  
 Ge, phonon conductivity due to nondiagonal energy-flux operator 2-45650  
 Ge, phonon focusing caustics, singular effects 2-45446  
 Ge, phonon freq. and mode Gruneisen parameters, volume depend. 2-1572  
 Ge:As, luminescence study, exciton excited hole state 2-46691  
 Ge:Ga, impurity band, antiferromag. ordering, photoluminescence study 2-2340  
 $\text{Ge}_{1-x}\text{Sn}_x\text{S}$ , Raman scatt. study of long-wavelength optical phonons 2-36648  
 $\text{Ge}_{1-x}\text{Sn}_x\text{Se}$ , Raman scatt. study of long-wavelength optical phonons 2-36648  
 p-Hf-N crystals, phonon CPA calcs. 2-45669  
 H $_2$ , induced near IR spectra of p- and normal solid phases up to 12 kbar 2-30708  
 para-H $_2$ , solid,  $\Delta J=4$  rot. transition obs. and phonon density of states inference 2-12707  
 $^3\text{He}$ -H solid solution, HCP, thermal cond., density depend. 2-45676  
 $^4\text{He}$ , BCC, phonon anomaly, possibility of self-trapping 2-45670  
 $^4\text{He}$  cryst., heat conduction study (Russian) 2-45677  
 Hf, zone-centre [001] LO phonon anomaly 2-26007  
 HfC $_x$ , vacancy induced and two-phonon Raman scatt. 2-41356  
 HgI $_2$ , phonon spectrum anomalous behaviour under uniaxial press., Raman scatt. meas. 2-36632  
 HgI $_2$ , single cryst., low temp. thermal cond. 2-50938  
 HgSe, press. effects on elastic consts. up to phase transition 2-45317  
 InGa $_{1-x}$ P, Brillouin scatt. study, comp. depend. 2-5724  
 InP, phonons, near zone-edge non-thermal, ballistic transport and decay 2-45448  
 n-InSb, acoustic wave multitransit generation in elec. field 2-5442  
 n-InSb, cyclotron resonance, defect levels 2-21885  
 InSb, free carrier cyclotron resonance linewidth due to ionised impurities 2-31289  
 n-InSb, magnetophonon effect of hot electrons 2-26417  
 InSb, nonradiative transitions in donor centers in a strong magnetic field 2-26328  
 InSb:Ge, effect of nonmetal-metal transition due to doping in lattice thermal cond. 2-50939  
 In $_2\text{Se}_3$ , one-phonon excitations, IR spectra study 2-51602  
 $\text{KAl}(\text{SO}_4)_2 \cdot 12\text{H}_2\text{O}$ ,  $\text{SO}_4^{2-}$  orientational dynamics, Raman scatt. study 2-31483  
 KBF $_4$ , superionic cond., phonon response, IR reflectivity and Raman spectra study 2-16733  
 KBF $_4$ , superionic conductor, phonon spectra 2-22031  
 KBrLi, phonon absorpt. lines, uniaxial stress depend. 2-30547  
 KCl:Li $^+$ , phonon coupling in tunnelling systems at zero temp. instanton calcs. 2-1569  
 $\text{KD}_2\text{PO}_4$ , ferroelectric, light scatt. spectra, wave vector direction depend., effects of electrostatic and elastic long range forces 2-9158  
 KFeF $_4$ , lock-in type phase transition, Raman study 2-45513  
 $\text{KH}_2\text{PO}_4$ , far-IR reflectivity spectra 2-26902  
 $\text{KH}_2\text{PO}_4$ , paraelectric, low-lying  $\text{B}_2(\text{LO})$  Raman spectra 2-41343  
 $\text{KH}_2\text{PO}_4$ , Raman spectra and lattice dynamics 2-41338  
 $\text{KH}_2\text{PO}_4$  type cryst., first order ferroelec. phase transition theory 2-36553  
 $\text{KH}_2\text{PO}_4\text{-KD}_2\text{PO}_4$ , mixed cryst., light scatt. by polarization fluctuation 2-41344  
 $\text{KMgF}_3:\text{Ni}^{2+}$ , line profile influence on spin-lattice relax., phonon bottleneck 2-31273  
 $\text{KZnF}_3:\text{Ni}^{2+}$ , line profile influence on spin-lattice relax., phonon bottleneck 2-31273  
 LaF $_3:\text{Er}^{3+}$ , phonons, tunable high freq., stimulated emission 2-45475  
 LaP $_3\text{O}_4$ , coupled optic and acoustic modes, press. depend. near ferroelastic transitions 2-45511  
 LiF in liquid  $^3\text{He}$ , plastic flow stress temp. depend., phonon channelling mechanism 2-5179  
 LiF thin film, optical vibr. modes by thermal emission 2-17594  
 $\text{LiH}_2\text{PO}_4$  single cryst., polariton intensity as a function of wave vector orientation (French) 2-30803  
 LiIO $_3$ , Raman modes, press. depend. 2-31452  
 LiNbO $_3$  powder, phonon echoes, dipolar field fluctuation effects 2-45462  
 LiNbO $_3$ , backward-wave phonon echoes at 17 GHz 2-45461  
 LiNbO $_3$ , Raman study of optical phonon angular distrib. (Russian) 2-17487  
 LiNbO $_3$ :Fe, Raman spectra variations for LO phonon lines, exciting light wavelength depend. 2-46601  
 LiTaO $_3$ , backward phonon echoes at 17.3 GHz 2-25997  
 LiTaO $_3$ , backward-wave phonon echoes at 17 GHz 2-45461  
 LiTaO $_3$  powder, phonon echoes, dipolar field fluctuation effects 2-45462  
 $\text{MgAl}_2\text{O}_4:\text{Cr}^{3+}$ , luminescence spectrum, N-lines, partial spectrum 2-41406  
 $\text{Mg}_2\text{P}_2$ , photoluminescence and optical absorption 2-13555  
 $\text{MgS}:\text{Pb}^{2+}$  phosphor, luminesc. spectra, mag. field effect (French) 2-41417  
 NH $_4\text{Cl}$ , two-phonon bound state calcs. 2-45440  
 Na, thermal diffuse X-ray scatt. intensity, anharmonic contrib. 2-45422  
 NaBrO $_3$ , intramol. mode mixing 2-35611  
 $\gamma\text{-Na}_2\text{CO}_3$ , incommensurate, Raman spectrum, coupled amplitude modes 2-46593  
 NaClO $_3$ , intramol. mode mixing 2-35611  
 NaNO $_2$ , phonon relax., hot luminescence study 2-46740  
 NaNO $_2$ , resonant Raman scatt. 2-46569  
 Nb-Au superconducting-normal metal junction, Nb soft modes 2-12713  
 Nb-Zr, phonon density of states curves 2-30546  
 NbC $_x$ , vacancy induced and two-phonon Raman scatt. 2-41356



## lattice phonons continued

- Ni surface (111), adsorbed O, surface phonon calcs., loss function 2-50992
- P, black, orthorhombic and rhombohedral structures, press. depend. of lattice vibr., Raman scatt. study 2-16730
- Pb-H(D), supercond. phonons in CPA with off diagonal disorder 2-31110
- Pb<sub>1-x</sub>Ge<sub>x</sub>Te, optical props. in rhombohedral and cubic phases 2-31481
- PbTe and Pb<sub>0.7</sub>Sn<sub>0.3</sub>Te, electronic and lattice props., intra-band magneto-optics study 2-22001
- PbTiO<sub>3</sub>, phonon dynamics study 2-30548
- Pd<sub>0.71</sub>, mode Gruneisen parameters and supercond. transition temp. press. derivative 2-5200
- Pd<sub>0.71</sub>, mode Gruneisen parameters and supercond. transition temp. press. derivative 2-8591
- PdH(D), supercond., props. from off-diagonal CPA phonon spectrum 2-31049
- Rh, lattice dynamics, specific heat, thermal expansion 2-40501
- Si, acoustic phonon-hole interactions, transition rates, deformation-potential scattering theory calc. 2-21578
- Si, Auger recombination at low temp. 2-40931
- Si, heat pulse propagation in long crystals 2-5288
- Si, local field effects and zone centre phonons 2-26006
- Si, mode Gruneisen parameters for long-wave phonons under press. 2-12712
- Si, phonon conductivity, role of thermal expansion 2-45642
- Si, phonon frequencies and mode Gruneisen parameters, volume depend. 2-1572
- Si:H, amorphous, molecular H<sub>2</sub> as proton spin-lattice relaxation centres 2-2157
- n-Si<sub>63.5</sub>Ge<sub>36.5</sub>, thermal cond. and thermoelec. conversion, phonon-grain boundary scatt. effect 2-40947
- Sn crystal twinning plane, supercond. two-dimensional metal 2-31017
- SnS<sub>2</sub>, Raman light scatt., phonon dispersion 2-2248
- SrAs<sub>3</sub>, IR study of phonons and free carriers 2-36627
- SrF<sub>2</sub>:Sm<sup>2+</sup>, coated with Be film, phonon fluoresc. spectra excited by elec. current pulses 2-36699
- SrTiO<sub>3</sub>, far IR dispersion determ. by hyper-Raman spectroscopy 2-13481
- TaC<sub>x</sub>, vacancy induced and two-phonon Raman scatt. 2-41356
- TaSe<sub>2</sub> (2H), CDW, one- and two-phonon Raman scatt. 2-45860
- Tc, zone-centre [001] LO phonon anomaly 2-26007
- Te, crystal, second order Raman scatt. 2-2253
- TeBr, inelastic light scatt. study of dynamical behaviour 2-2254
- Ti, zone-centre [001] LO phonon anomaly 2-26007
- $\alpha$ -Ti-H(D), optic phonon modes and supercond., neutron scatt. study 2-35624
- Ti<sub>1-x</sub>S<sub>x</sub>, transport props. and Raman scatt., stoichiometry depend. 2-13043
- TiSe<sub>2</sub>, basal thermal cond. meas. 2-50942
- TiSe<sub>2</sub>, origin of structural transition, thermoelectric power and electron diff. meas. 2-1612
- TiBr high-frequency phonon detec. using time-resolved far-IR laser spectroscopy 2-41373
- TiCl high-frequency phonon detec. using time-resolved far-IR laser spectroscopy 2-41373
- TiCl(Br), phonon difference absorpt. for detection of acoustic zone-boundary phonons 2-45449
- TiGaS<sub>2</sub> type compounds, long-wavelength phonon interpretation by linear chain model 2-40502
- TiIn<sub>1-x</sub>Ga<sub>x</sub>Se<sub>2</sub>, solid soln., heat cond. (*Russian*) 2-5286
- TiInSe<sub>2</sub>, heat cond., influence of Ge, Si and Sn doping (*Russian*) 2-12862
- TiS, Raman spectra at 4.2 and 300K, vibr. anal. 2-51603
- TmSe, intermediate valence, Raman scatt. study 2-22030
- V-Ta (0.98 at.%) solid soln., thermal expansion and sp. ht. (*Russian*) 2-5252
- YFeO<sub>3</sub>, crystals, antiferromag. reson., sub-mm. absorpt. spectrum 2-2141
- YIG, thermal cond. at low temp. 2-45653
- ZnAl<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, luminescence spectrum, N-lines, partial spectrum 2-41406
- Zn<sub>1-x</sub>Cd<sub>x</sub>Se, resonant Raman scatt. of light 2-36649
- ZnGa<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, luminescence spectrum, N-lines, partial spectrum 2-41406
- ZnO:Cu, photoluminescence, vibronic struct. 2-41410
- Zn<sub>3</sub>P<sub>2</sub>, pair transitions, photolum. meas. 2-22057
- ZnS, anharmonic interaction in double phonon Raman spectrum 2-46579
- ZnS:Cr(Mn)(Fe)(Co)(Ni), Raman scatt., local force variations, press effects 2-41358
- ZnS<sub>1-x</sub>Se<sub>x</sub>, crystal, anharmonic interaction, acoustic phonon temp. depend. 2-30551
- ZnSe, local field effects and zone centre phonons 2-26006
- ZnSe:Mn, spin-lattice relax, of Mn<sup>2+</sup>, evidence for optical phonon contrib. (*French*) 2-51454
- ZnSe:N<sup>+</sup> ion implanted, shallow N acceptor, bond exciton line and phonon relics obs. 2-51630
- Zr, zone-centre [001] LO phonon anomaly 2-26007
- Zr-C, vacancy induced and two-phonon Raman scatt. 2-41356
- $\alpha$ -Zr-H(D), optic phonon modes and supercond., neutron scatt. study 2-35624
- ZrO<sub>2</sub>:Y, IR multiphonon absorpt. 2-46578
- ZrS<sub>3</sub>, Raman linewidth of phonon modes induced by hydrostatic press., resonant enhancement 2-46590
- ZrS<sub>3</sub>, IR spectra and reflectivity 2-5665

## lattice structure, crystals see crystal atomic structure

## lattice theory and statistics

- see also Ising lattices; percolation; renormalisation; X-Y model
- $\phi^4$  model on two-dimens. lattice, crit. and crossover behavior 2-42961
- adsorbate, ordered, chem. diffusivity simulation 2-1774
- adsorbed overlayer, critical properties near transition temp. using LEED intensity 2-1761
- adsorbed system, order-disorder transition, finite-size effects and charact. substrate sizes, renormalisation group calcs. 2-5309
- adsorbed system, honeycomb lattice gas model of transitions, renormalisation group calcs. 2-1776
- Anderson symmetric model, ground-state energy 2-23588
- anisotropic Heisenberg Hamiltonian, decimation approach appl. 2-38599
- antiferromagnet, triangular lattice, superfrustration models 2-17298
- antiferromagnetic clock models in two dims., phase transitions, renormalisation group study 2-26636
- Ashkin-Teller, d=2 model, Hamiltonian study 2-19042

## lattice theory and statistics continued

- Ashkin-Teller model, two-dimens., crit. exponents 2-48639
- Baxter model free energy derivation 2-10735
- Baxter-Wu model with quenched impurities, critical behaviour 2-136
- bifurcations with nonuniversal exponents in a lattice model 2-38601
- binary molecular model, chem. pot. generating function method parametric soln. 2-48627
- binary polymer mixture, vulcanisation and gelation 2-121
- Bogomolny equation, spherically symm., corresponding lattice model, soliton solns. 2-48632
- boundary spin correlations, renormalisation group explanation of nonuniversal decay 2-38602
- Brownian motion of domain wall with higher order phonon interactions 2-19024
- Cayley tree, diminishing, percolation 2-42955
- Cayley tree, polymer statistics, branching point fugacity 2-149
- cell arrangement in random networks 2-38598
- charge transport in fluctuating systems, quasicriticality 2-40860
- chemisorption on stepped surfaces theory, adatom binding energies, LEED intensity expression 2-1770
- chiral Potts or asymmetric clock models, many commensurate phases 2-130
- classical linear chain, nonanalytic thermodynamics, crit. density 2-3518
- classical spin systems, percolation for low energy clusters and discrete symmetry breaking 2-6801
- clock model, N-state, topological excitations, two-dimens. transitions 2-140
- clustering operators invariant subspaces 2-23580
- clusters for real-space renormalisation group 2-33455
- collective modes in quantum lattice or three-dimens. X-Y model 2-33465
- commensurate-incommensurate transitions with 2x2 structure in mean-field approx. 2-21813
- connected clusters, config. data 2-48634
- correspondence between self-avoiding random walks and mag. system as n $\rightarrow$ 0 2-138
- coupled boson-fermion systems, field theories Monte Carlo calc. 2-18973
- critical lattice model, renormalisation group study, convergence to line of fixed points 2-28983
- cross-over behaviour due to random perturbations, rigorous relations 2-132
- crystal harmonic lattices, freq. density calcs. 2-5194
- cubic lattice, self-avoiding walks, span limitations radius of gyration 2-116
- d-dimensional walks on finite and infinite lattices with traps, exact algorithm 2-28782
- d-regularity for near-rings 2-10729
- decorated lattices, one- and two-dimensional, model study 2-48629
- defect effects on lattice vibr., semiclassical theory 2-28799
- diatomic Toda lattice, eqn. of motion, soln. 2-33466
- dilute Baxter-Wu model, finite size scaling anal. 2-3513
- dilute Potts model, leading exponents anal. 2-33451
- directed percolation, pseudo-correlation length 2-123
- directed percolation network, diffusion 2-23582
- directed percolation series expansion studies, correl. length exponents estimation 2-10732
- discrete nonlinear lattice struct., statics and dynamics 2-48636
- discrete one-dimensional anharmonic lattice model, domain wall excitations 2-38592
- dislocation dynamics statistical theory, math. props. 2-25898
- distribution functions, BBGKY eqn. hierarchy, integral eqns. 2-23593
- dynamical polarizability of the double quadratic and multiquadratic chains with anharmonic coupling 2-45416
- eight-vertex operators, rel. to Gaussian operators, renormalisation connection 2-38585
- energy density in semi-infinite systems, crit. behaviour 2-3530
- energy flow and thermal conductivity in one-dimensional, harmonic, isotopically disordered crystals, book contrib. 2-10742
- Esaki effect, nonlinear equilibrium response 2-33462
- exponential lattice, time depend. response functions, dynamical correl. 2-12695
- fermion system, planar model, classical double Coulomb gas, crit. props. 2-23591
- ferromagnet, random spin system, second order phase transition, low temp. renormalisation group study 2-17295
- ferromagnetic systems with pair interaction, GHS inequality for large external field 2-41098
- finite size scaling 2-38587
- finite Toda chain as a reduced system, arbitrary root system generalisation 2-19046
- four-dimensional lattice gauge theories and two-dimensional spin systems, exact relation 2-48873
- fractal lattices, transport, rel. to backbone, critical exponents 2-28796
- frozen ionic solutions, trapped electrons, theoretical model 2-13006
- fuzzy expectation and energy states in fuzzy media 2-15117
- generalised Coulomb systems in 2-dimens., renormalisation group anal. 2-42937
- global Markov property for lattice systems 2-38597
- hard core statistical ensembles, defects theory 2-33460
- Heisenberg spin chain, classical anisotropic, eqn. of motion 2-51391
- Heisenberg to Ising behaviour crossover exponent calc. using fourth-order  $\epsilon$  expansion 2-10730
- heterophase systems, spaces of states 2-48618
- impurity in nonlinear lattice, interaction with soliton, computer simulation study 2-16737
- inhomogeneous critical systems, scaling theory of boundary spin correlations 2-38603
- interacting fermion Hamiltonian, real-space scaling methods 2-19045
- intercalation, lattice gas models, comparison of Monte Carlo, cluster variation method and renormalisation group calcs. 2-33469
- intramolecular exciplex formation, lattice model, Monte Carlo simulation 2-6803
- Ising model correl. at high temp., falloff rate 2-38596
- kink-phonon system, discretisation effects 2-18928
- lattice doped with traps, random walks survival probabilities 2-23579
- macroscopic solitons in thermodynamics,  $\phi^4$  theory 2-137
- magnetic lattice gas, disordered, infinite long range interactions with Gaussian prob. distrib. 2-46309
- magnetic lattice gas, distrib. function formulation 2-46308
- magnetic lattice gas, phase diagrams 2-46310
- magnetisation in frustration models 2-3515
- massless lattice field,  $\lambda(\Delta\phi^4)$  perturbation, cluster expansion 2-3508



**lattice theory and statistics continued**

- massless lattice field,  $\lambda(\Delta\phi^4)$  perturbation, cluster expansion convergence 2-3509
- Mayer expansions coeffs. estimates on IR region boundary 2-3528
- mean-field solution of a spin-1 Ising-like model 2-23825
- Model neutron matter crystallisation, repulsive Yukawa potential system, phase diagram 2-33937
- monatomic exponential lattice, time depend correls, response functions at low temps. 2-12696
- Monte Carlo renormalization-group transformations in momentum space 2-112
- multilayer adsorption, lattice gas model, Monte Carlo simulation 2-12916
- multiparticle scatt. theory and partition combinatorics 2-18953
- multistate driven systems 2-18927
- n<sup>2</sup> model, one-dimens., continuous symm. 2-38594
- nearest-neighbour three state model with infinitely many phases 2-19041
- non-abelian gauge theory, N=0 limit, model for self-avoiding random surfaces 2-48878
- non-intersecting line systems, statistical mech. 2-38590
- nonAbelian symmetry group, disorder variables for 2D stat. mechanical systems 2-23586
- nonlinear lattice models, static and dynamic aspects 2-45417
- nonlinear lattices and wave propagation, book 2-3335
- nonlinear systems, vibr. excitations 2-42957
- one dimensional soliton bearing systems, statistical mechanics 2-18926
- one-dimensional  $\phi^4$  theory with long-range gradient term 2-15121
- one-dimensional and two-dimensional systems, substrate effects on long range order and neutron scatt. characts. 2-1764
- one-dimensional anharmonic lattices, first order phase transition point, kinks and peridons 2-3531
- one-dimensional classical system, Yang-Lee edge behaviour 2-19066
- one-dimensional Heisenberg model continuum limit, Brownian motion on sphere surface 2-33429
- one-dimensional lattices, dynamical soliton structs. 2-33470
- one-dimensional nonhomogeneous lattice, random walk, Laplace operator 2-23558
- one-dimensional random walk with phase transition 2-15112
- order parameter, leading singularity corrections in systems at upper critical dimension 2-33478
- ordered binary p.c. system, ground states and structures 2-19039
- Peierls-Frohlich problem and pot. with finite number of gaps 2-3529
- percolation, anisotropic, network simulation 2-19035
- percolation, two dimens. direct, duality transformations and resistance problems 2-10737
- percolative phase transitions without infinite network 2-3512
- phase separation in the generalised spherical model 2-33446
- phonon lifetime calcs., using perturbation theory 2-45439
- phospholipid bilayer, lattice model, phase transitions and crit. behaviour 2-16768
- Plonka sum of complete lattices 2-33468
- point group labelling scheme for local lattice distortions 2-33447
- Poisson's eqn. soln. for arbitrary periodic charge distrib. 2-33457
- polymer, in random medium, self-avoiding walk on random strips model 2-48611
- polymer adsorption, self-avoiding walks interacting with a surface 2-40677
- polymer chain, gyration mean-square radius 2-128
- polymer chain, two-dimens., virial expansion, log. terms cancellation 2-100
- polymer chains, self-avoiding random walks mag. analog on a lattice 2-8947
- polymer chains embedded on diamond lattice, exact results for lattice version of freely rotating chain 2-19034
- polymer gels model, percolation on randomly expanded lattice 2-28789
- polymer mixtures on plane square lattice, thermodynamic props. 2-8712
- polymerisation, equilibrium, equivalence to O(n) field theory 2-52207
- polymers, dilute, real lattice trees branching 2-23581
- polymers, isolated chains, position-space renormalisation group 2-124
- polymers, self-avoiding walks, SC and FCC lattices, scaling law 2-117
- Potts  $\phi^3$  field theory, anisotropic, crossover, quadratic symm. breaking effect 2-42963
- Potts cluster, renormalisation group appl. 2-2047
- Potts ferromagnet, crit. frontiers 2-17302
- Potts lattice gauge model, many-component limit, mean field approx. 2-28982
- Potts model, exponents and logarithms through one-dimens. quantum Hamiltonian 2-10741
- Potts model, four-state, crit. exponents and marginality Monte Carlo renormalisation group 2-42962
- Potts model, N-state spin and gauge versions, variational approach 2-38600
- Potts model, review 2-48641
- Potts model, three-component, phase transition, effect of impurities 2-23592
- Potts model, two-layer, with four-body interaction, crit. point 2-48633
- Potts model in two-dimensions, 1/q-expansion for magnetisation discontinuity 2-36374
- Potts model with infinitely degenerate ground state 2-3511
- Potts models, three-dimens., 1/Q expansions for Lagrangian formulation 2-33471
- problems and solns. (*German*) 2-3520
- pseudo-semilattices and biondered sets 2-33467
- Q-state Potts model in (1+1)-dimensional Hamiltonian field theory for  $Q \geq 4$  2-10734
- Q-state Potts models, 1/Q expansions 2-19036
- quantum field theory, fermions, gauge fields and supersymmetry, math. foundations 2-23817
- quantum field theory, strong-coupling expansions, problems with continuum regulation 2-48881
- quantum inverse scattering method and applications to spin chains 2-18923
- quantum lattice systems, reflection positivity, phase transitions 2-41153
- quantum melting lattice model 2-48630
- quantum subsystem, kinetic eqns. for condensed medium with finite number of degrees of freedom 2-28798
- radicals in lattice ordered antiflexible rings 2-10728
- random animals, percolation clusters and compact clusters, diffusivity and radius 2-10731
- random bond system, ferromagnetic antiferromag. interactions, generalised susceptibilities 2-21812

**lattice theory and statistics continued**

- random four-state Potts model rel. to order-disorder transition of O on Ni (111) 2-50998
- random Ising model phase transition 2-19037
- Random Ising model with long-range interactions 2-126
- random lattice, diffusion, effective medium approx. 2-28804
- random Potts quenched and annealed models, phase diagrams 2-42952
- random walk on a one dimensional inhomogeneous lattice 2-33450
- random walks with self-similar clusters 2-28793
- random-bond Ising model and n-vector model., upper bonds to correl. functions 2-125
- randomly diluted network, percolation and conduction 2-120
- randomly disordered harmonic lattice, free energy using the replica trick 2-10739
- self-avoiding domain problem and generalised Potts models 2-33448
- self-avoiding walks on disordered lattice, statistics 2-19033
- simple cubic lattice, Ising model, free energy, lower band approx. 2-33443
- sine-Gordon chain, equilib. dynamics, mol. dynamics study 2-42960
- sine-Gordon model, Kosterlitz-Thouless transition 2-33464
- site bond percolation in ferromagnetic and antiferromag. Ising model, renormalisation group approach 2-15119
- site percolation in a square lattice with second- and dilute first-neighbor bonds 2-10738
- site percolation problems and multisite Potts models 2-33452
- site valence dimensionality percolation problems 2-33453
- six-state planar Potts model, high-field polynomial expansion 2-23578
- solid electrolyte, space charge distrib., interacting lattice gas model 2-21368
- solid electrolytes, phase transitions, two sublattice model 2-21273
- soliton-impurity interaction in nonlinear lattice, expt. using LC circuit 2-16738
- solitons, cylindrically diverging, in elec. lattice, exptl. obs. 2-18920
- spatially modulated phases of one-dimensional lattice model 2-33456
- spin glass, ground state degeneracy and ferromagnetism 2-41150
- spin system on Abelian group, global symm. 2-33459
- spin system on Abelian groups, global symm. 2-33458
- spin systems with frustration, phase transitions 2-8992
- spin van der Waals model, fluctuation and susceptibility 2-6807
- spinless interacting fermions, decimation approach appl. 2-38599
- string dynamics, off-axis string tension and rot. symm. restoration 2-6805
- SU(2) and Z(2) lattice gauge model, roughening effect in small Wilson loops 2-6940
- superionic conductors, discrete lattice-gas and liquid-like models 2-21350
- surface roughening with screw dislocations 2-5114
- systems with tensor order parameter, critical point dynamics, percolation, liquid crystals 2-19047
- temporally correlated random walk on lattice, solvable models 2-135
- temporally correlated random walk on lattice, solvable models 2-3524
- ternary alloys ordering in self-consistent field approx. 2-3527
- three-dimensional lattice, two-dimens. defect, local crit. exponents for  $n \rightarrow \infty$  2-48631
- three-dimensional lattice Yang-Mills field with gauge group U(1), bound states of Hamiltonian 2-3711
- three-state square lattice Potts antiferromagnet 2-31119
- threshold and scaling in percolation with restricted valence 2-28786
- Toda chain, force-force correlations 2-23587
- Toda equation, generalised, discrete analogue 2-23453
- Toda lattice, conventional approach to dynamic correlations 2-6804
- Toda lattice, shock waves, theory 2-19038
- Toda lattice, soliton gas analogy 2-3521
- Toda lattice equations, derivation and soln. by Iwasawa decomposition 2-28791
- transition metal dichalcogenides, triangular lattice gas, cluster variation method 2-35641
- transverse Ising model, effective field theory 2-36370
- triangular Ising antiferromagnet variational approx., phase diagrams 2-127
- triangular lattice, AB percolation problem, Monte Carlo simulation 2-3532
- triangular lattice, cluster-variation method convergence 2-28792
- triangular lattice, quantum frustration, renormalisation group approach 2-2086
- triangular lattice gas, cluster variation method 2-35641
- two-dimensional bond percolation, crit. exponents 2-48637
- two-dimensional Coulomb systems, lattice sums, simulation methodology 2-33461
- two-dimensional interacting Fermi field on lattice, probabilistic ideas 2-48879
- two-dimensional lattice gas, Haven ratio near order-disorder transition 2-26104
- two-dimensional lattice models, spin wave, vortices, fermions, duality 2-23804
- two-dimensional percolation, logarithmic corrections to critical behaviour from series expansion 2-10733
- two-dimensional percolation, surface roughening at  $p=1$  2-122
- two-dimensional system, configurations generated by computer simulation, orientational order analysis method 2-5338
- two-dimensional vertex model with two sublattices 2-3522
- two-dimensional abelian spin systems and Coulomb gas, Kosterlitz-Thouless transition 2-6802
- Union Jack lattice with three-spin interactions, spin and external field depend. crit. exponents 2-153
- Z<sub>N</sub> spin systems in Z-dimens., large N behaviour, spontaneous magnetisation 2-46226
- Z(5) model, real-space renormalisation group study 2-6808
- Z(N) spin systems, duality and criticality 2-38589
- Z(N) vector Potts spin model, renormalisation group and mean-field methods 2-19261
- O adsorbed on Ni(111), transition of the Heisenberg model with cubic anisotropy 2-12909
- Pb<sub>3</sub>(PO<sub>4</sub>), Potts model and ferroelastic phase transition 2-30590
- W(001), adsorbed H effect on commensurate-incommensurate transform. 2-1771

**lattice vibrations see lattice dynamics****Laves phases see alloys****lawrencium**

No entries

**lawrencium compounds**

No entries



laying, cable *see* cable laying

## LCAO calculations

alkali diatomics, dissociation energy estimation using extended Linderberg relation 2-11389  
alkali metal zirconosilicates, electronic struct., bonds, X-ray electron spectra, MO LCAO calcs. 2-39419  
alkali phosphate glasses, electronic struct., MO LCAO method 2-26280  
chemisorption, partitioning technique (*German*) 2-45735  
closed-shell molecules, LCAO-MO method, var. perturbation theory 2-49291  
cobaltocene, electronic struct., LCAO HFS calc., UV photoelectron and optical absorpt. spectra 2-29510  
complexes, metal-porphine dimer, excited states, SCF MO LCAO PPP calcs. 2-7507  
conjugated systems, substitution influence on diamagnetic susceptibility 2-49284  
cyclobutadiene, ground and core ionised states, nonempirical LCAO MO SCF calcs. 2-29509  
3H-cyclohepta[a]azulen-3-one, in organic solvents, UV and MCD spectra, MO calcs. 2-26867  
dimethyldithiocarbamate, ionisation energies, LCAO CNDO/2 calcs. 2-34298  
energy gradients, MC SCF LCAO wavefunction, basis set considerations 2-634  
hydrocarbons, birefringence in mag. and electric field, quantum. chemical calcs. 2-20099  
III-V semiconductors and ternary alloys, deep levels, ideal-vacancy-induced 2-30823  
linear molecules, multipole polarisabilities, coupled and finite perturbation theory using SCF MO LCAO CNDO density matrix appl. (*Russian*) 2-15721  
metal, BCC, localized impurity, density of non-Bloch electron states 2-1855  
methanol, CH<sub>3</sub> and OH fragment orbital study, LCAO, CNDO and MINDO calcs. 2-19970  
methanol-water solution, mol. calculations 2-24605  
molecule, single orbital relax. energy, ab initio LCAO MO SCF calcs. 2-19967  
molecules, localised orbital construction from density matrix, LCAO and CNDO/2 calcs. 2-39291  
polyacetylene, eigenspectrum, nearly SCF LCAO HF calc., negative factor counting and inverse iteration technique 2-29734  
polyenes, linear substituted, electronic band struct. and props. 2-5343  
polymers, disordered, eigenspectrum, nearly SCF LCAO HF calc., negative factor counting and inverse iteration technique 2-29734  
polypeptide chains, electronic struct., SCF LCAO calcs., density of electronic states 2-24901  
porphyrin  $\pi$ -electron ring currents, mag. props., MO LCAO SCF calcs. 2-11401  
semiconductors, deformation pots., one- and two-phonon, LCAO calc. 2-45481  
semiconductors, tetrahedral, optical phonon deform. pots. 2-1576  
shell structure use in eliminating linearly depend. AO integrals in LCAO calcs. 2-7493  
tetrahedrane, ground and core ionised states, nonempirical LCAO MO SCF calcs. 2-29509  
[MnF<sub>6</sub>]<sup>4-</sup> complexes in fluorides, superhyperfine interactions and covalency contrib. to axial zero field splitting 2-5373  
Ag (001), chemisorption of Cl, comparative LCAO and linear APW calcs. 2-40690  
AgCl, APW-LCAO energy bands and fundamental absorpt. 2-26288  
AlH<sub>4</sub><sup>-</sup>, ab initio LCAO SCF calc. 2-15722  
BN, band and cryst. struct., LCAO SCF ab initio HF calc. 2-35935  
BeAl<sub>2</sub>O<sub>3</sub>, chrysoberyl, electronic struct. and spectra 2-46634  
Be<sub>2</sub>Al<sub>2</sub>Si<sub>2</sub>O<sub>18</sub>, beryl, electronic struct. and spectra 2-46634  
Be<sub>2</sub>H<sub>2</sub><sup>+</sup>, geometrical struct. and force field, SCF MO LCAO calcs. 2-34291  
Be<sub>2</sub>H<sub>2</sub>, geometrical struct. and force field, SCF MO LCAO calcs. 2-34291  
CO, single orbital relax. energy, ab initio LCAO MO SCF calcs. 2-19967  
CrP, band struct. and mag. props. 2-30797  
Cu clusters, electronic struct., HF and LCAO X $\alpha$  calcs. 2-49287  
Cu, electron states 2-1979  
Cu(II) (difluorodithiophosphate)<sub>2</sub>, ionisation energies, LCAO CNDO/2 calcs. 2-34298  
Cu(II) (dithiophosphate)<sub>2</sub>, ionisation energies, LCAO CNDO/2 calcs. 2-34298  
Fe-porphine, ab initio LCAO SCF MO calc. with double zeta basis set 2-11390  
Ge<sub>2</sub>N<sub>2</sub>O, electronic band struct. calcs. 2-40785  
H<sub>2</sub><sup>+</sup>, single centre expansions, implications and improvements 2-43791  
HABC mols. with 16 valence electrons, mol. configs., MO study 2-4202  
H<sub>2</sub>MCu<sub>4</sub> (M=Pt, Pd), interligand interaction, LCAO INDO calcs., X-ray fluoresc. obs. 2-49503  
LiF:V<sup>4+</sup>, associated impurity-vacancy defect electronic struct. 2-40830  
MgO, electronic state of O<sup>2-</sup> by Compton profile method 2-43796  
MnP, band struct. and mag. props. 2-30797  
Mo, phonon freq. and lattice energy, first principles LCAO calc. 2-50794  
NaF, electronic struct. of F-centre 2-17010  
Nb, phonon freq. and lattice energy, first principles LCAO calc. 2-50794  
(Nb<sub>2</sub>Br<sub>2</sub>Cl<sub>2</sub>)Cl<sub>2</sub><sup>2-</sup> cluster, LCAO SCF calculations 2-11386  
(Nb<sub>2</sub>Br<sub>2</sub>Cl<sub>2</sub>)Br<sub>2</sub><sup>2-</sup> cluster, LCAO SCF calculations 2-11386  
NbSe<sub>3</sub>, Fermi surfaces, LCAO-X $\alpha$ -SCF relativistic band calc. 2-45805  
Ni complex, (dithiocyanate tetraammine)nickel(II), geometry, struct., pot. surface, CNDO-UHF, MO-LCAO-SCF calcs. 2-34297  
Ni(II) (dithiophosphate)<sub>2</sub>, ionisation energies, LCAO CNDO/2 calcs. 2-34298  
O, chemisorption on Al(111) surface, direct force calc. by LCAO X $\alpha$  method 2-654  
O<sub>2</sub> molecule, full-pot. self-consistent APW method for electronic struct. 2-651  
O<sub>2</sub>, ionisation pots., comparison of HF calcs. with LCAO X $\alpha$  calcs. 2-39313  
Pd (001) surface, Cl chemisorption, electronic struct., LCAO calc. 2-1987  
Pd(NH<sub>3</sub>)<sub>2</sub>Cl<sub>2</sub>, interligand interaction, LCAO INDO calcs., X-ray fluoresc. obs. 2-49503

## LCAO calculations continued

Pt(NH<sub>3</sub>)<sub>2</sub>Cl<sub>2</sub>, interligand interaction, LCAO INDO calcs., X-ray fluoresc. obs. 2-49503  
(SN)<sub>2</sub>, energy band struct. and Fermi surface 2-30795  
ScP, band struct. and mag. props. 2-35939  
Si, amorphous, molecular orbital self-consistent field calc. 2-45814  
Si, band structure and cryst. struct., LCAO SCF ab initio HF calc. 2-35929  
Si, directional Compton profiles in impulse approx., exact exchange Hartree-Fock calcs. 2-2364  
Si, phonon freq. and lattice energy, first principles LCAO calc. 2-50794  
Si<sub>2</sub>Au, Fe, hyperfine interactions of Au-Fe complex, electronic struct., EPR obs. 2-45920  
Si<sub>3</sub>N<sub>2</sub>O, electronic band struct. calcs. 2-40785  
Sn complexes, electronic struct., SCF MO LCAO method, CNDO approx. 2-43807  
TiC<sub>x</sub> (x=1 and 0.65) valence state, MO calcs., X-ray emission obs. 2-49453  
VP, band struct. and mag. props. 2-30797  
ZnS, surface (110) electronic band struct., intrinsic 2-40982

**lead**

*see also nuclei with .....*  
adsorbed on W, surface diffusion, effect of coadsorbed C 2-16955  
adsorbed on W, surface diffusion, field electron microscopy study 2-16954  
adsorption, competitive, of Cd, Cu, Zn and Pb on amorphous Fe<sub>2</sub>O<sub>3</sub>·H<sub>2</sub>O 2-35887  
airborne particulates, survey at Melbourne kindergartens 2-52403  
anodic passivation, initial steps, ellipsometric method meas. 2-31847  
atmosphere, ancient natural Pb concs. deduced from polar ice cores 2-52896  
atom, electron affinity, calcs. from dissociative electron attachment meas. on PbS (*French*) 2-34584  
atom, K $\alpha$  X-ray spectrum, energy-dispersive study 2-34339  
atom, L-subshell fluoresc. yields 2-39355  
atoms, bombarded with 9-155 MeV alpha particles, K-shell ionisation cross section and XES 2-777  
atoms, sensitive atomic anal. using saturated double-reson. emission spectroscopy 2-19988  
atoms, valence electron spin-orbit splitting, Slater transition state calcs. 2-34283  
bar, twisting torque moment calc. (*German*) 2-13771  
bicrystal interface, galvanomag. phenomena 2-40873  
blood Pb and <sup>210</sup>Pb origins in residents of Toulouse 2-9883  
creep, work-hardening rates derived from instantaneous elongation upon sudden load increments 2-9382  
damping, amplitude depend., and modulus defect, normal-supercond. transition effect 2-46198  
damping decrement and modulus defect, amplitude depend., dynamic dislocation drag influence 2-50658  
desorption of condensed films from GaAs {100}, thermal desorption spectra 2-21437  
determination in sea water by anodic stripping voltammetry with thin film Hg electrode 2-18588  
diamond cubic phase, phys. and structural props. 2-1440  
dislocation damping, dynamic 2-45191  
East Pacific Rise basalts and sulphides, Pb and Sr isotope ratios 2-18395  
electrolytic oxidation chromic sulphate to chromic acid, Pb anode preparation effects 2-22460  
electronic and lattice-mechanical properties, pseudopotential theory 2-16619  
exposure and dose rate characts. for 6.2 MeV source photons through Pb, Fe, concrete shields 2-7371  
fatigue, high temp., form. of boundary serrations and cavities 2-41733  
fibre reinforced, anodic corrosion 2-22353  
film, ion plated, frictional and morphological characts. 2-30775  
film, optical absorption spectra of outermost 5d core-levels 2-17561  
film, quasi-particle injected, inhomogeneous states 2-36250  
film, type I supercond., mixed and intermediate states, microwave study 2-41078  
granular films, growth and resistance 2-17633  
high-purity, spectrochem. anal. 2-9583  
ion bombarded single crystals, orientation, surface struct. and sputtered spot patterns 2-46857  
Josephson junction, energy gaps and crit. current, quasiparticle injection effects 2-36265  
Josephson junctions, interaction of pair in proximity (*Chinese*) 2-21726  
Josephson junctions, surface obs. and failure cause 2-31072  
lattice dynamics, phonon dispersion 2-21253  
liquid, small and large angle struct. factors 2-40254  
liquid structure factors, soft sphere charact. 2-12460  
LMFBR cladding breach monitoring by solid state tagging of fuel element surface, appl. 2-24340  
melting point, accurate meas. using thermoelec. resist. thermometer (*Japanese*) 2-19105  
microclusters, magic numbers 2-44160  
molecule, matrix isolated Raman spectra 2-712  
monolayer, on Ni, Cu, Al or Au, quantitative AES 2-36741  
Newark Bay, New Jersey, USA, heavy metal pollution of marine sediments 2-23023  
pair production probability and LPM bremsstrahlung 2-24526  
photoeffect cross sections at K-edges 2-7525  
photoemission, polarisation depend. 2-41493  
planet formation and evolution, application of Pb isochronism statistics 2-14795  
plasma, expanding, recombination laser transitions 2-39627  
pollution, causes and control, book 2-38376  
polycrystalline, photoelectron spectroscopy using gas-phase spectrometers 2-41490  
powder, static polarisation echo 2-45459  
resistive heating, 4.2K, in normal state 2-26563  
Sagunay fjord sediment, Hg, Cu, Pb, Zn spatial and temporal var. 2-14452  
seawater, simultaneous spectrochem. determ. method for Cd, Pb and Ag 2-48039  
secondary cells, Pb-acid, behaviour during pulsed charging (*German*) 2-47466  
segregation effects, in freezing liq. Al layer after laser pulse irradiation 2-35699  
shielding for electrons 2-2958



## lead continued

- small particles, supercond. transition temp., size depend., surface phonon softening contrib. 2-26544
- small particles, supercond. enhancement 2-31024
- solid, reaction with liquid Sn, morphological obs. 2-41588
- stress state when pressed by fibre reinforced composite (*Russian*) 2-9366
- stress waves, laser induced 2-16716
- subshell ionisation cross section meas. using HIXE and comparison with theories 2-51745
- substrate for Ge film, far IR surface plasmon coupling and attenuation 2-36725
- substrate for Zn electrodeposition from zincate solns. 2-26246
- superconducting, internal friction at kHz freqs. near crit. temp. 2-46197
- superconducting, magnetisation and crit. field, surface treatment effects 2-31045
- superconducting film, quench-condensed, electron tunnelling and resist. meas. 2-36244
- superconducting thin film, behaviour in nonequilibrium state (*Chinese*) 2-21725
- superconductivity, press. depend. 2-2024
- surface energy, work function, variational calc. 2-30741
- tholeites from ocean ridges and continents, Nd, Sr and Pb isotopes 2-52756
- vapour laser, IR emission at 3.15 and 7.15  $\mu$  2-34737
- X-ray induced electron emission meas. 2-31601
- Al/Al<sub>2</sub>O<sub>3</sub>/Pb tunnel junctions, zero-bias resist., voltage and thermal treatment effects, ionic mobility 2-51343
- Al-Al<sub>2</sub>O<sub>3</sub>/Pb tunnel junction, adsorbed ethyl  $\alpha$ -cyanoacrylate, IR and IETS study 2-40691
- Al-AlO<sub>x</sub>-Pb structure, inelastic electron tunnelling spectroscopy 2-26516
- Al-Pb-PbTe tunnel junctions, ballistic electron transmission obs. (*Russian*) 2-8888
- B-Pb glasses, types OF4 and OF5, chem. stability under high humidity and temp. conditions (i) 2-39707
- CaO(S)(Se):Pb<sup>2+</sup> phosphors, luminesc. spectra, mag. field effect (*French*) 2-41417
- n-CdTe:Pb films, vapour deposited, elec. anal. optical props. 2-30985
- $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>:Pb<sup>2+</sup> electrodes, photoactivity, doping effect 2-26436
- KCl:Pb, laser damage morphology, impurity state influence 2-45256
- KCl:Pb, optical breakdown threshold, temp. depend., effect of impurities 2-25924
- KCl(Br):(I):Pb<sup>2+</sup>, A band spectral line shape 2-41420
- MgS:Pb<sup>2+</sup> phosphor, luminesc. spectra, mag. field effect (*French*) 2-41417
- NaCl:Pb, precipitation of Pb, thermal cond. meas. 2-45652
- NaCl:Pb<sup>2+</sup>, A band spectral line shape 2-41420
- NaCl:Pb<sup>2+</sup>, impurity influence on mech. props. change during quenching 2-5895
- Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>:Pb<sup>2+</sup> glass, UV transparency, Pb<sup>2+</sup> ions effect 2-9171
- Nb-Nb<sub>2</sub>O<sub>5</sub>-Cu/Pb proximity junctions, order parameter, spatial depend. 2-13244
- Nb-Nb<sub>2</sub>O<sub>5</sub>-Pb Josephson tunnel junction, structural anal., for voltage standard 2-5505
- Nb-NbO<sub>x</sub>-Pb, tunnel junctions, Nb energy gap and critical currents, temp. depend., base electrode annealing effects 2-36242
- Nb-Pb thin film Josephson junctions, AES, XPS investigation 2-21727
- Nb-Ge-SiO<sub>2</sub>-Pb tunnel junction, tunnelling  $\alpha^2F(\omega)$  2-17237
- Pb ions + He (Ne) (Kr) (H<sub>2</sub>), charge transfer cross sections involving electron capture processes 2-7631
- Pb:H(D), ion implanted, supercond. transition temp. 2-31000
- Pb:H(D), localised modes, tunnelling study 2-35625
- Pb:Ti(Sb)(Bi)(Cd)(Sb), normal and supercond., dislocation-impurity interactions, US absorpt. study 2-45410
- Pb/acid secondary cells, Plante formation process for positive electrode 2-52325
- Pb/Ag proximity junction, anomalous quasiparticle mass renormalisations 2-46209
- Pb/Cu bimetallic thin film couple, interfacial reaction, contact resist. meas. 2-50931
- Pb/H<sub>2</sub>SO<sub>4</sub> secondary cells, negative plate active mass structure anal. 2-52324
- Pb-acid batteries for electric vehicle appls. 2-27603
- Pb-acid battery, positive plates, deep cycling effects 2-47350
- Pb-Ag-Pb, supercond.-normal-supercond. film struct., quantised resist. 2-36270
- Pb-Fe (Fe-Pb) shields, gamma ray buildup factors 2-7380
- Pb-Nb, Josephson tunnel junctions, long, zero-field steps, temp. depend. 2-36254
- Pb-PbO<sub>2</sub>-Pb, long Josephson tunnel junctions, vortex vel. from microwave induced DC voltage 2-31065
- Pb-PbO-Pb Josephson junction, negative resist. switching 2-36251
- Pb-Pb<sub>2</sub>Se<sub>3</sub> photodiode detector, improved performance from Cl incorporation at interface 2-15223
- Pb+Cl, K-shell ionisation process, trajectory, binding and relativistic effects 2-44041
- Pb+Cl ions, K shell ionisation, role of relativistic and binding energy effects 2-34548
- Pb+H<sup>+</sup> L-shell X-ray prod. cross sections meas. 2-44043
- <sup>208</sup>Pb/<sup>207</sup>/<sup>204</sup>Pb and Central American and Caribbean mineralisation 2-37862
- Pb(I) and (II), electron impact excitation, autoionising levels, electron spectra 2-24866
- <sup>208</sup>Pb NMR, spin lattice relax., mag. field depend. 2-31308
- <sup>208</sup>Pb ions, 4 MeV/amu, average energy to create ion pair in air 2-44820
- <sup>210</sup>Pb,  $\alpha$ -spectrometric method for anal. of concs. in surface air 2-9752
- <sup>210</sup>Pb in Antarctic Circumpolar Current, depth and location var. 2-18467
- <sup>210</sup>Pb marine atm. aerosols, size distrib. 2-37929
- <sup>210</sup>Pb removal from New York Bight water 2-18439
- RbCl:Pb<sup>2+</sup>, A band spectral line shape 2-41420
- Si:Pb, ion implanted, dopant range, damage depth, backscatt. and channelling anal. 2-45216
- V-Pb supercond. junctions with V<sub>2</sub>O<sub>5</sub>, C, or Si barriers, tunnelling spectroscopy 2-46211
- V-V<sub>2</sub>O<sub>5</sub>-Pb tunnel junctions, max. Josephson current, temp. depend. 2-31066
- YIG epilayers, SIMS anal. of Pb and B content 2-27497
- YIG:Bi, Pb, for magneto-optical appls. LPE growth, Pr, Bi and Pb segregation 2-31644
- ZnS:Pb, photosensitive EPR excitation and quenching meas. A-centre model 2-17336

## lead alloys

see also lead compounds

- Josephson functions, electron irradiation effects 2-51375
- Josephson junctions, surface obs. and failure cause 2-31072
- soft solder, for sealing demountable joints 2-19116
- Al-Pb, liq. state, interface tension meas. (*French*) 2-1710
- Al-Pb, structural props., prepared in quasi-weightless conditions (*Russian*) 2-2501
- Au+50InPb, vertical section of phase diagram 2-47010
- Bi-Pb, molten, boundary with Cu, surface energy role in fracture kinetics 2-41742
- In-Pb, liquid, dil., diffusivity, solubility, and activity of O, effect of solute additions 2-26094
- In-Pb, mag. props. of higher than second order super cond. phase transition 2-17184
- In-Pb, pinning force study 2-36291
- In-Pb alloy, ion sputtered, surface comp., AES study 2-26197
- In-Pb alloy wire, LF AC response of direct current induced intermediate state 2-41081
- In-Pb superconducting film, surface pot. distrib., resistive state struct. 2-36173
- In-Pb(28.35 wt.%) (12-16 wt.%), solid solns., mechanism of phase transformation (*Japanese*) 2-9351
- LiPb, bonding in liquid and amorphous binary semiconductor alloys 2-8436
- Li<sub>0.8</sub>Pb<sub>0.2</sub> heterocoordinated liq. alloy, dynamical struct. factor of conc. fluctuations 2-20997
- Li<sub>1.7</sub>Pb<sub>0.3</sub> liquid metal eutectic coolant/breeder, coupled neutronics-photonics anal. 2-7360
- Pb-Ag, dilute molten, O<sub>2</sub> activities 2-5243
- Pb-Ag, liq., thermodynamic behaviour of dil. soln. of S 2-40562
- Pb-Au, dil. alloy, electron irradiat., dipion formation, resistivity annealing spectra study 2-36880
- Pb-Au, dilute molten, O<sub>2</sub> activities 2-5243
- Pb-Bi, Josephson junction counter electrodes, microstruct., thermal cycling effects, 298 to 42K 2-51945
- Pb-Bi, polycryst., flow stress variation during supercond. transition, conc. depend. (*Russian*) 2-5482
- Pb-Bi alloys, dil., unidirectional solidification 2-2499
- Pb-Bi film, Josephson junction electrodes, thermal stability 2-51944
- Pb-Bi strong coupling superconductor, LF EM response 2-5499
- Pb-Bi-Ga (In), supercond. transition temp., comp. depend. 2-36168
- Pb-Bi-In, effect of impurities and press. on electron-phonon interaction 2-21718
- Pb-Bi(Cu)(Sn), elec. resistance and mag. susceptibility (*Russian*) 2-1885
- Pb-Cd, fine-grained, creep, influence of pipe diffusion 2-25978
- Pb-Ge foils, melting study 2-50836
- Pb-H<sub>2</sub>SO<sub>4</sub> secondary cells AC impedance of PbO<sub>2</sub> formed on Pb-alloys 2-37200
- Pb-In, superelasticity resulting from twinning processes (*Russian*) 2-22257
- Pb-In films, quasiparticle injected, two-gap states 2-36249
- Pb-In-Au Josephson junction electrodes, microstruct. and strain, thermal stability 2-51943
- Pb-Mn, dilute, supercond., impurity bands, electron tunnelling obs. 2-2039
- Pb-Ni-O, liq., O activity and solubility of Ni 2-16798
- Pb-Sn, eutectic, anelastic contrib. to stress relax. and stress dip tests 2-41822
- Pb-Sn, eutectic alloy, high temp. deform., expt. constitutive eqns. 2-22270
- Pb-Sn, nucleation mechanism for discontinuous precipitation cells (*Russian*) 2-50826
- Pb-Sn, solderability of molten solders and fluxes, effect of viscosity (*Japanese*) 2-2690
- Pb-Sn (3 wt.%), AES study of oxidation 2-27319
- Pb-Sn alloys, mag. and thermomag. props. 2-17049
- Pb-Sn eutectic alloy, superplastic flow, uniqueness of stress-strain rate relations 2-36915
- Pb-Sn system, high press. intermediate phases 2-27147
- Pb-Tl, binary solid solutions, self-diffusion theory 2-1654
- PbBi clustered film, supercond. props. 2-30995
- PbIn, barrier against flux exit 2-21741
- PbMn dilute alloy, bound states in energy gap 2-30822
- Sb-Sn wrought grids for cell, deep discharge cycle cell life 2-9641
- Sn-Pb, ingots, axis-symmetric, macrosegregation, effect of fluid flow 2-9353
- Sn-Pb (40 wt.%), crystallisation in outer-space conditions 2-27169
- Sn-Pb (40 wt.%) thin film, elec. cond. meas. 2-21691
- Sn-Pb electrodeposited coatings, for sliding contacts, adhesive wear props. 2-9425
- Sn-Pb sputtered coating on Cu ribbon, struct., phase composition (*Russian*) 2-5812
- Sr-Pb system, phase diagram and cryst. struct. of phases 2-9333
- Te<sub>60</sub>Si<sub>40</sub>-Pb, glass, thermal and elec. props. 2-21588
- Zn-Pb, structural props., prepared in quasi-weightless conditions (*Russian*) 2-2501

## lead compounds

see also lead alloys

- chalcogenides, strongly compensated, Hall effect and absorpt. spectra 2-5422
- electrophotographic oxide layers, mono- and polyphase types, photosensitivity and photodischarge parameters (*Russian*) 2-10902
- glasses, PbSe doped, nonlinear optical absorpt. effects, laser pulse modulation (*Chinese*) 2-44407
- IV-VI semiconductor, defect states, optical and magneto-optical meas. 2-17510
- jagote, cryst. struct. analysis and ordering schemes 2-21077
- MIL-M-38510 finishes for microelectronic components 2-47210
- Pb<sub>1-x</sub>Sn<sub>x</sub>Se heterostructure for injection lasers 2-41522
- Pb chalcogenides, epitaxial bicrystals, elastic deform. and stress. 2-51007
- PLZT:Mn<sup>2+</sup>, magnetically tagged nucl. relax., <sup>19</sup>F NMR study 2-17359
- PLZT, additional max. on dielec. const. temp. depend., hydrostatic press. depend. 2-5645
- PLZT film, reactively sputtered, composition 2-16963
- Al-Pb-PbTe-Pb tunnel junctions, ballistic electron transmission obs. (*Russian*) 2-8888
- $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-PbO, divalent cation cond. 2-26130
- B<sub>2</sub>O<sub>3</sub>-PbO Fe<sub>2</sub>O<sub>3</sub> glasses, struct., elec., and mag. props. 2-45054



## lead compounds continued

- B<sub>2</sub>O<sub>3</sub>-PbO-Al<sub>2</sub>O<sub>3</sub> glass system, dynamical scaling, small angle X-ray scatt. study 2-12500
- B<sub>2</sub>O<sub>3</sub>-PbO-Al<sub>2</sub>O<sub>3</sub> glass, cooling rate dependence of SAXS spectra 2-41599
- BaPb<sub>1-x</sub>Bi<sub>x</sub>O<sub>3</sub>, real space electron pairing, transition to k-space pairing 2-31036
- BaPb<sub>1-x</sub>Bi<sub>x</sub>O<sub>3</sub>, superconductivity near metal-semiconductor transition 2-17187
- BaPb<sub>1-x</sub>Bi<sub>x</sub>O<sub>3</sub>, thin superconducting film, preparation by RF sputtering (Japanese) 2-2445
- BiFeO<sub>3</sub>-PbTiO<sub>3</sub> solid solns., magnetoelec. effect, ferroelec. props. 2-36406
- Cd<sub>1-x</sub>Pb<sub>x</sub>S (x=0.0625, 0.15625) superstructural thin film, props. 2-13205
- CoO-B<sub>2</sub>O<sub>3</sub>-PbO glass, mag. props. 2-13272
- CsPbCl<sub>3</sub>, perovskite, structural phase transition, birefringence 2-1616
- CsPbCl<sub>3</sub>(Br<sub>3</sub>), electronic struct., optical and photoemission spectra 2-40783
- Cu<sub>2</sub>S-FeS-PbS melts, activities at 1200°C 2-8646
- xFe<sub>2</sub>O<sub>3</sub>(1-x)(3B<sub>2</sub>O<sub>3</sub>-PbO), Fe valence states, matrix composition influence, Mossbauer effect study 2-46443
- 20Fe<sub>2</sub>O<sub>3</sub>.80(3B<sub>2</sub>O<sub>3</sub>GeO<sub>2</sub>(1-y)PbO), Fe valence states, matrix composition influence, Mossbauer effect study 2-46443
- Gd<sub>3-x</sub>Pb<sub>x</sub>Fe<sub>5-x</sub>Ge<sub>10</sub>, Faraday rotation conc. and temp. depend. 2-21988
- KCl:PbCl<sub>2</sub>, X-ray irradi., H, V<sub>2z</sub> centres, polarised luminesc., absorption, emission bands 2-46745
- (NH<sub>4</sub>)<sub>2</sub>PbCl<sub>6</sub>, <sup>51</sup>Sn NQR temp. depend. 2-34444
- (Na<sub>1-x</sub>Pb<sub>x</sub>)(Nb<sub>1-x</sub>Ti<sub>x</sub>)O<sub>3</sub> solid solns., diagram and transitions, dielec. props. 2-40530
- (NiO)<sub>2</sub>(2B<sub>2</sub>O<sub>3</sub>.PbO)<sub>1-x</sub> glass, mag. props. 2-36332
- NiS-CdS/NiS-PbS selective coatings for solar thermal conversion 2-27730
- PLZT ceramic, dielectric eqn. of state in Curie range 2-46494
- PLZT ceramic, electrostriction and strain-optic phenomena 2-46486
- PLZT ceramic, linear electro-optical effect, domain struct. 2-46541
- PLZT ceramic, shape memory effect study 2-40468
- PLZT ceramics, photoferroelec. props., ion implantation effects 2-36086
- PLZT, ferroelec., amorphous behaviour, demonstrated by thermal cond. meas. 2-12864
- PLZT, influence of press. on phase transitions 2-2206
- PZT X/65/35, transparent ferroelec. ceramics, phase transitions 2-9102
- PZT, TEM obs. of grain boundary phase, sintering effects 2-17652
- (Pb,Ba)Ge<sub>2</sub>O<sub>9</sub>, ferroelec., cryst. struct. and props. 2-46492
- (Pb,Sr)Ge<sub>2</sub>O<sub>9</sub>, ferroelec., cryst. struct. and props. 2-46492
- Pb (Zr<sub>0.5</sub>Ti<sub>0.5</sub>)O<sub>3</sub> ceramics, influence of mixing medium on sintering and coupling coeff. 2-51841
- Pb chalcogenide layers and their solid solutions, controllable epitaxial growth 2-2448
- Pb complex, nitrate-(m-aminobenzoate)lead(II), cryst. and mol. struct. determ. 2-40353
- Pb complex 1-phenyl-3-methyl-4-acetyl-pyrazolone-5, struct., IR and NMR spectra, cond. meas. 2-31503
- Pb complex of 1-phenyl-3-methyl-4-benzoyl-pyrazolone-5, synthesis, struct., IR and NMR spectra 2-26908
- Pb salt epitaxial film, photovoltaic diode IR detector, modified hot wall technique prep. 2-15222
- Pb<sup>2+</sup> ion selective electrode membrane, effect of bivalent metal ions, ESCA 2-37103
- Pb-MoS system phase diagram at 1250K, superconducting PbMo<sub>6</sub>S<sub>8</sub> props. 2-27148
- Pb-PbO<sub>2</sub>-Pb, long Josephson tunnel junctions, vortex vel. from microwave induced DC voltage 2-31065
- Pb-PbO-Pb Josephson junction, negative resist. switching 2-36251
- Pb-PbS<sub>2</sub>Se<sub>0.5</sub> photodiode detector, improved performance from Cl incorporation at interface 2-15223
- Pb<sub>1-x</sub>Ba<sub>x</sub>Ge<sub>2</sub>O<sub>11</sub>, domain wall dynamics, acoustic emission study 2-45386
- Pb<sub>1-x</sub>Bi<sub>x</sub>F<sub>2+x</sub> symmetrical cells, interfacial phenomena 2-14064
- PbBr<sub>2-x</sub>I<sub>x</sub> system, phase diagram, crystal struct. X-ray diff. obs. 2-50602
- PbCO<sub>3</sub>, electric field application for large crystal growth by diffusion method 2-27067
- PbCO<sub>3</sub>, hydrothermal synthesis, lattice constants 2-9261
- p-Pb<sub>1-x</sub>Cd<sub>x</sub>Te epitaxial film, elec. transport props. 2-8894
- PbCl<sub>2-x</sub>I<sub>x</sub> system, phase diagram, crystal struct., X-ray diff. obs. 2-50602
- Pb(ClO<sub>4</sub>)<sub>2</sub>-Ba(ClO<sub>4</sub>)<sub>2</sub>, Raman spectra obs. (Russian) 2-17488
- Pb(ClO<sub>4</sub>)<sub>2</sub>-HClO<sub>4</sub>-H<sub>2</sub>O, Raman spectra obs. (Russian) 2-17488
- PbCrO<sub>4</sub>, crocoite, optical props. of CrO<sub>4</sub><sup>2-</sup> centres 2-26933
- Pb<sub>1-x</sub>Eu<sub>x</sub>Mo<sub>6</sub>S<sub>8</sub>, Chevrel phase supercond., resist. and Mossbauer studies 2-17381
- β-PbF<sub>2</sub>, anion disorder in superionic state, X-ray diff. study 2-12570
- PbF<sub>2</sub>, fast ion phase, quasielastic diffuse neutron scatt. 2-20975
- PbF<sub>2</sub>, high press. phase transitions, effect of Frenkel defects. 2-12736
- β-PbF<sub>2</sub>, ionic conduction determ. 2-5271
- β-PbF<sub>2</sub>, small signal AC response 2-17902
- β-PbF<sub>2</sub>, superionic, computer simulation study 2-16879
- PbF<sub>2</sub>, superionic, quasielastic light scatt. study 2-9159
- PbF<sub>2</sub>, superionic cond., phonon dispersion calc. 2-16733
- β-PbF<sub>2</sub>, symmetrical cells, interfacial phenomena 2-14064
- β-PbF<sub>2</sub>, thin films, superionic cond., O<sub>2</sub> adsorpt., ESCA and nuclear anal. 2-16881
- PbF<sub>2</sub>:Mn, <sup>19</sup>F-Mn transferred hyperfine interaction, NMR study 2-17352
- β-PbF<sub>2</sub>:NaF(TbF<sub>3</sub>)(UF<sub>6</sub>), ionic cond., high press. effects 2-45617
- PbF<sub>2</sub>:Na(La)(Ca), relation between bound and free ion motion 2-21389
- β-PbF<sub>2</sub>-NaF, ionic conduction determ. 2-5271
- PbF<sub>2</sub>-NaF(KF), superionic cond., <sup>19</sup>F motional relax., NMR study 2-17361
- PbF<sub>2</sub>-RbF solid electrolytes, elec. cond. and phase diagram 2-12819
- β-PbF<sub>2</sub>-SrF<sub>2</sub>-KF solid soln., superionic cond., temp. and press. stability 2-16880
- β-PbF<sub>2</sub>-TbF<sub>3</sub>, ionic conduction determ. 2-5271
- PbF<sub>3</sub><sup>-</sup> anion, matrix isolation, IR spectrosc. obs. 2-39395
- Pb(Fe<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>, EPR linewidth, crit. point anomalies 2-46368
- Pb(Fe<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>, ferroelectric domain study 2-46519
- Pb(Fe<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>, ferroelec. crystal, high-temp. soln. growth, single domain obs. 2-46897
- Pb(Fe<sub>1/2</sub>Nb<sub>1/2</sub>)O<sub>3</sub>-Pb(Mg<sub>1/2</sub>W<sub>1/2</sub>)O<sub>3</sub> solid soln., phase anal. 2-26831
- Pb<sub>2</sub>Fe<sub>3</sub>O<sub>8</sub>Cl, synthesis, cryst. struct., and thermal expansion 2-1453

## lead compounds continued

- Pb<sub>2</sub>GaF<sub>13</sub>, anion-excess fluorite related struct. (French) 2-8495
- Pb<sub>3</sub>(Ge<sub>2</sub>Si<sub>2</sub>)O<sub>11</sub> ferroelectric cryst., elec. cond., temp. depend. 2-36036
- PbGeGe<sub>2</sub>O<sub>4</sub> single crystals, growth and certain props. 2-36774
- α-, β-, α-PbGeGe<sub>2</sub>O<sub>4</sub>, polymorphism, growth and certain props. 2-50609
- PbGeO<sub>6</sub>, ferroelec., cryst. struct. and props. 2-46492
- Pb<sub>3</sub>Ge<sub>2</sub>O<sub>11</sub>, circular photogalvanic effect (Russian) 2-13128
- Pb<sub>3</sub>Ge<sub>2</sub>O<sub>11</sub>, domain wall dynamics, acoustic emission study 2-45386
- Pb<sub>3</sub>Ge<sub>2</sub>O<sub>11</sub>, electro- and magneto-optical phenomena 2-46542
- Pb<sub>3</sub>Ge<sub>2</sub>O<sub>11</sub>:Eu, magnetogyratation symm. anal. and Faraday effect (Russian) 2-22000
- Pb<sub>3</sub>GeO<sub>4</sub>(VO<sub>4</sub>)<sub>2</sub>, centrosymmetric crystal, electrogyration study 2-13451
- Pb<sub>3</sub>(Ge<sub>1-x</sub>Si<sub>x</sub>)<sub>2</sub>O<sub>11</sub> ferroelec. crystals, X-ray spectroscopic and dielec. studies 2-21109
- Pb<sub>1-x</sub>Ge<sub>x</sub>Te injection laser fabrication 2-16028
- Pb<sub>1-x</sub>Ge<sub>x</sub>Te, optical props. in rhombohedral and cubic phases 2-31481
- PbHPO<sub>4</sub>, ferroelectric, order onset, struct. study 2-35667
- PbHfO<sub>3</sub>, temperature-elec. field phase diagram 2-46517
- PbHfO<sub>3</sub>, antiferroelec., phase transition temp., influence of permanent mag. field 2-9108
- PbI<sub>2</sub>, electron-hole liquid, thermodynamic props., luminescence study 2-8759
- PbI<sub>2</sub>, luminescence and hyper-Raman emission 2-46697
- PbI<sub>2</sub>, studies using megagauss fields 2-31290
- PbI<sub>2</sub>:Bi<sup>3+</sup> films, exciton-impurity interaction, Verdet const. and absorpt. spectra study 2-26305
- PbI<sub>2</sub>(2H), reson. Brillouin scatt. of exciton polaritons 2-46621
- Pb<sub>1-x</sub>La<sub>x</sub>Zr<sub>1-y</sub>Ti<sub>1-y</sub>O<sub>3</sub> ceramic, dielectric props. 2-46455
- PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, ferroelectric, induced diffuse phase transitions 2-17426
- Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub> electrostrictor for deformable bimorphous m. in error 2-998
- Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>, electrostrictive ceramic, low Q electromechanical resonator 2-17413
- PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, ferroelectric phase transitions 2-41308
- Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>, ferroelectric domain struct. optical study 2-46520
- PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, reflection spectra in fundamental absorpt. band 2-5729
- PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub> single cryst., additional max. on dielec. const. temp. depend., hydrostatic press. depend. 2-5645
- PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, sp. ht., 140 to 790K, anomalies at ferroelec. transition and 673K 2-8629
- Pb<sub>3</sub>MgNb<sub>2</sub>O<sub>9</sub>, photoluminescence rel. to ferroelec. phase transition, domain struct. effect 2-9176
- Pb<sub>3</sub>MgNb<sub>2</sub>O<sub>9</sub>, electrets and photoelectrets 2-46463
- Pb<sub>3</sub>MgNb<sub>2</sub>O<sub>9</sub>, ferroelec., luminesc. props. 2-31539
- Pb<sub>3</sub>MgNb<sub>2</sub>O<sub>9</sub> crystals, optical and electrooptical props., growth layers effect 2-46545
- Pb<sub>3</sub>(MgW)O<sub>6</sub>-La<sub>1/3</sub>(MgW)O<sub>6</sub>, solid solns. 2-16628
- Pb(Mn<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>, ferroelec. crystal, high-temp. soln. growth 2-46897
- Pb<sub>1/2</sub>Mn<sub>1/2</sub>O<sub>3</sub>, perovskites, SHG study of paraelectric transitions 2-31424
- Pb<sub>1-x</sub>Mn<sub>x</sub>Te, indirect exchange interaction 2-51140
- PbMoO<sub>4</sub>, luminesc. quantum yield and photocond., surface effect 2-46744
- PbMoO<sub>4</sub>, struct. imperf. elec. and mass transfer mechanism 2-40591
- PbMoO<sub>4</sub>(WO<sub>4</sub>), Raman spectra, high press. effects 2-2258
- PbMo<sub>6</sub>S<sub>8</sub> film, critical currents and pinning forces 2-17252
- PbMo<sub>6</sub>S<sub>8</sub> film, critical currents and pinning forces 2-21748
- PbMo<sub>6</sub>S<sub>8</sub> sputtered coating, prep. and supercond. props. 2-30999
- PbMo<sub>6</sub>S<sub>8</sub>, supercond., phonon density of states meas. 2-16734
- PbMo<sub>6</sub>S<sub>8</sub> thin films, ion irradi., supercond. crit. temp. 2-30996
- PbMo<sub>6</sub>S<sub>8</sub> wires, critical current density, critical field 2-17253
- Pb<sub>3</sub>Mo<sub>6</sub>S<sub>8</sub>, magnetoresistance anisotropy, Fermi surface (Russian) 2-26413
- PbMo<sub>6</sub>Se<sub>8</sub>, supercond., phonon density of states meas. 2-16734
- PbMo<sub>6</sub>Se<sub>8</sub>(S<sub>8</sub>), Chevrel phase supercond., NMR study 2-41064
- Pb(N<sub>3</sub>)<sub>2</sub>, low energy laser initiation of single crystals 2-13956
- Pb(NO<sub>3</sub>)<sub>2</sub>, NMR, spin lattice relax., mag. field depend. 2-31308
- Pb(NO<sub>3</sub>)<sub>2</sub>+KI, periodic precipitation processes, temporal and spatial sequences 2-52243
- Pb(NO<sub>3</sub>)<sub>2</sub>, US absorpt. and Brillouin scatt. 2-35603
- Pb<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, perovskites, SHG study of paraelectric transitions 2-31424
- (Pb<sub>1-(3x/2)+(7/2)</sub>Nd<sub>x</sub>)(Ti<sub>1-y</sub>-yMn<sub>z</sub>In<sub>z</sub>)O<sub>3</sub> piezoelectric ceramics SAW vel., strain effects 2-12899
- PbO film, photoconductivity in space charge and recombination regime 2-21622
- PbO, single cryst., dielec. const. meas. 2-41253
- PbO-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>(P<sub>2</sub>O<sub>5</sub>)(SiO<sub>2</sub>) system glasses, acousto-optical effectiveness, conc.-depend. 2-41327
- PbO-B<sub>2</sub>O<sub>3</sub> glass, equilib. viscosity, temp. depend. 2-12805
- PbO-B<sub>2</sub>O<sub>3</sub> glasses, viscosity and thermal expansion in glass transition interval 2-26087
- PbO-Fe<sub>2</sub>O<sub>3</sub>-Sm<sub>2</sub>O<sub>3</sub> single crystal comp., lattice parameters and struct. defects, Sm<sup>2+</sup> solubility 2-12553
- PbO-Nb<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> system, precipitation of ferroelec. PbNb<sub>2</sub>O<sub>6</sub> and dielec. props. of crystallised glasses (Japanese) 2-51917
- PbO-SiO<sub>2</sub>, commercial glass, US attenuation 2-45387
- PbO-SiO<sub>2</sub> (61.8 mol. %) glass, first row transition element impurities, optical and mag. props. 2-41383
- PbO-SiO<sub>2</sub> glass, Raman and IR invest. 2-26891
- PbO-SiO<sub>2</sub>-Al<sub>2</sub>O<sub>3</sub> fritted glass, dielec. breakdown and device evaluation 2-21945
- PbO-TiO<sub>2</sub>-ZrO<sub>2</sub> solid state reactions during calcining 2-51949
- PbO-xPbF<sub>2</sub>-yB<sub>2</sub>O<sub>3</sub>-Fe<sub>2</sub>O<sub>3</sub>, variable comp.-system, dynamics of boundaries of co-crystallising phases 2-27159
- PbO-ZnO-B<sub>2</sub>O<sub>3</sub> glasses, elastic modulus and fracture toughness 2-51969
- PbO+Cd+Pb+CuO reduction equil., calorimetry and equil. meas., enthalpy of f reaction and form. of CdO 2-17912
- PbO+CuSO<sub>4</sub>, exchange reaction, thermoanalytical and mass spectroscopic study 2-41891
- β-PbO<sub>2</sub>, anode for ozone prod., electrolyte anion adsorption effects 2-47352
- PbO<sub>2</sub> films, nucleation and growth on Ti substrate, SEM and TEM study 2-51029
- PbO<sub>2</sub>, metallic electronic conductivity with various stoichiometric compositions 2-13036
- PbO<sub>2</sub>, partially reduced, semicond. and electrochem. props. (German) 2-5457
- PbO<sub>2</sub>, sputtered electrodes, photoelectrochemistry 2-22465
- xPbO.(1-x)SiO<sub>2</sub>, glass model of effective coordination states 2-8750
- PbO.2B<sub>2</sub>O<sub>3</sub>, vitreous, viscosity, impurity water conc. effect 2-12804



## lead compounds continued

- PbO<sub>2</sub>.2P<sub>2</sub>O<sub>5</sub>, improper ferroelectricity, dielec., pyroelectric charge and thermal expansion meas. 2-9112
- PbO<sub>2</sub>.6Bi<sub>2</sub>O<sub>3</sub>, anion transport study by elec. cond. and SIMS 2-21384
- Pb<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, ferroelastic phase transition dynamics 2-1611
- Pb<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, Potts model and ferroelastic phase transition 2-30590
- Pb<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>.Mn<sup>2+</sup>(Gd<sup>3+</sup>), ferroelec. transition, EPR study 2-21874
- PbS abrupt p-n junction, R<sub>0</sub>A product, dopant conc. effect 2-21665
- PbS, adsorpt. of O<sub>2</sub>, on atomically clean surface, calorimetric heat of adsorpt. determ. 2-12907
- PbS crystals, growth from interacting colloids in gels 2-9262
- PbS crystals, n- and p-type, corrosion rate in HNO<sub>3</sub> 2-17750
- PbS, electron impact, dissociative ionisation, Pb electron affinity calcs. (French) 2-34584
- PbS, galena, Cu<sup>2+</sup>(Ag<sup>+</sup>)(Au<sup>+</sup>) adsorpt., rest pot. and surface photovoltage changes 2-41008
- PbS, high field resistivity, at 1.4K, Kondo-Toyozawa theory 2-45990
- PbS, monocrystalline, negative magnetoresistance effects 2-17093
- PbS, phonon spectra and static defects, surface changes effects (Russian) 2-12904
- PbS photosensitive films for thermophotovoltaic appl., dip-dry process for prep. 2-22163
- PbS, photovoltaic detector, R<sub>0</sub>A product temp. depend. 2-19177
- PbS, void-free electrode, prep. and anodic behaviour, influence of O 2-6042
- PbS/CdS multilayer stacks as selective absorbers, designed and fabricated using solution growth techniques 2-9684
- PbS/PbSe bicrystals, misfit dislocations distrib. determ. by energetic He ion channelling 2-40398
- PbS/PbSe(Te) epitaxial bicrystals, growth spirals on phase boundaries, electron microscopic discernment 2-45740
- PbS-Ag<sub>2</sub>S, transport props. and cryst. struct. 2-30938
- PbS-Bi<sub>2</sub>S<sub>3</sub> system, struct., phase diagram, twinning 2-45135
- PbS{111}, substrate for Cu, Ag, and Au thin films, RHEED study 2-5326
- Pb(Sc<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>, ferroelectric domain struct. optical study 2-46520
- PbSc<sub>0.5</sub>Nb<sub>0.5</sub>O<sub>3</sub>, perovskites, SHG study of paraelectric transitions 2-31424
- Pb(Sc<sub>0.5</sub>Nb<sub>0.5</sub>)O<sub>3</sub>-Pb(Sc<sub>0.5</sub>Ta<sub>0.5</sub>)O<sub>3</sub>, diffuse ferroelectric transition 2-41303
- PbSe<sub>1/2</sub>Nb<sub>1/2</sub>O<sub>3</sub> transparent ferroelec. ceramics, phase transitions 2-9102
- Pb(Sc<sub>0.5</sub>Ta<sub>0.5</sub>)O<sub>3</sub>, ferroelectric domain struct. optical study 2-46520
- PbSe abrupt p-n junction, R<sub>0</sub>A product, dopant conc. effect 2-21665
- PbSe crystal, morphology, struct. and microhardness 2-5084
- PbSe films, evaporated, structural defects and photosensitivity 2-51018
- PbSe, photovoltaic detector, R<sub>0</sub>A product temp. depend. 2-19177
- (PbSe)<sub>1-x</sub>(SnTe)<sub>x</sub> in solid soln., elec. props. 2-8796
- Pb<sub>3</sub>SiO<sub>8</sub>, ferroelectric Curie temp., const. mag. field effect 2-13428
- Pb<sub>3</sub>SiO<sub>8</sub>(VO<sub>4</sub>)<sub>2</sub>, centrosymmetric crystal, electrogyration study 2-13451
- PbSnF<sub>4</sub>, ionic cond. 2-12828
- PbSnSe, phase transition study 2-21299
- p-Pb<sub>0.97</sub>Sn<sub>0.03</sub>Se, IR absorpt., 2 to 15 μm 2-41347
- Pb<sub>1-x</sub>Sn<sub>x</sub>Se DH laser, CW operation at 80K 2-930
- n-Pb<sub>1-x</sub>Sn<sub>x</sub>Se, intrinsic defect energy levels, galvanomag. coeffs. meas. 2-30830
- Pb<sub>1-x</sub>Sn<sub>x</sub>Se photovoltaic detectors, minority carrier lifetimes, resist.-area product 2-26433
- Pb<sub>1-x</sub>Sn<sub>x</sub>Se single crystal, photoelectron spectra, rel. to band struct. 2-51765
- PbSnSeTe-PbSeTe DH laser, lattice matched, low threshold 2-39668
- Pb<sub>1-x</sub>Sn<sub>x</sub>Se(Te), Auger recomb. and ionisation rates, Lax band struct. 2-8813
- PbSnTe buried heterostructure lasers, longitudinal mode behaviour 2-25009
- PbSnTe IR photodiodes, role of lattice matching in improving performance 2-48782
- PbSnTe, phonon-induced anomalous elec. resist. in struct. phase transition 2-45954
- Pb<sub>0.7</sub>Sn<sub>0.3</sub>Te, electronic and lattice props., intra-band magneto-optics study 2-22001
- Pb<sub>0.8</sub>Sn<sub>0.2</sub>Te, self-diffusion of Sn and Te at 600°C 2-30647
- Pb<sub>0.9</sub>Sn<sub>0.1</sub>Te:Sb, surface oxide modification due to <sup>4</sup>He ion bombardment 2-16688
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te, density of states calcs. 2-21486
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te (0 ≤ x ≤ 1) films, photothermographic effect 2-2020
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te (x = 0.18-0.24) laser diodes prepared by diffusion of Sb 2-4512
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te crystals, mechanism of chem. polishing 2-47201
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te, disorder scatt. 2-17059
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te epitaxial films, photoluminesc., effect of impurities 2-36696
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te, epitaxial layer, elec. cond. and Hall effect (Russian) 2-46179
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te, high-temp. phase transitions, sound velocity study 2-35680
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te, hole mobility and band struct. at 77K 2-1923
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te photovoltaic detectors for 8-14 μm atmospheric window, modified hot-wall evap. technique 2-10866
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te solid solns., mobility and hole scatt. anisotropy, magnetoresist. meas. 2-40938
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te, thermoelectric effect in moderate and quantising mag. field, 4.2 to 77K 2-26422
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Bi, photo- and electroluminescence spectra 2-13549
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Cd, carrier density, temp. depend. 2-17089
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Cd crystals and LPE layers, doping and elec. props. 2-45223
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Ga, elec. prop. press. depend. 2-17067
- Pb<sub>1-x</sub>Sn<sub>x</sub>Te:In, impurity fluctuation pot. model, photoelec. and galvanomag. effects 2-13009
- Pb<sub>0.9</sub>Sn<sub>0.1</sub>Te IR photocond. polycrystalline thin films, 1/f noise behaviour 2-51264
- n-Pb<sub>1-x</sub>Sn<sub>x</sub>Te(In)-p-PbTe heterojunction, electrophysical props. 2-17148
- PbTe (111) epitaxial thin films, elec. transport props., thermal-cycling induced changes 2-13201
- PbTe, bonding in liquid and amorphous binary semiconductor alloys 2-8436
- PbTe, diffusive-convective physical vapour transport from Te-rich solid source 2-45087
- PbTe, electronic and lattice props., intra-band magneto-optics study 2-22001
- p-PbTe epitaxial film, elec. props., H<sub>2</sub> effect 2-8900
- PbTe, epitaxial film, electrometer determ. of electron scatt. intensities 2-40708

## lead compounds continued

- PbTe epitaxial film on BaF<sub>2</sub>, strain effects, interband magnetooptical transitions 2-26876
- n-PbTe epitaxial layers, interface electron states, IR radioelectric effect study 2-51352
- PbTe film, magnetoresistance strong and weak-field effects 2-17096
- PbTe films, magnetoresistance, Hall mobility 2-51360
- n-PbTe films thermal treatment in air, effects on thermopower and electrical conductivity 2-21695
- PbTe, indirect exchange interaction between embedded mag. ions 2-51140
- PbTe, LPE growth on PbSnTe substrate through stripe openings on CaF<sub>2</sub> coating 2-2465
- PbTe, mode softening 2-45519
- PbTe, photovoltaic detector, R<sub>0</sub>A product temp. depend. 2-19177
- PbTe, screening breakdown in Voigt cyclotron resonance 2-26751
- PbTe, surface space charge layer physics 2-17137
- PbTe, thin films, struct. and elec. props. stoichiometry and prep. condition depend. 2-51353
- p-PbTe:Ag epitaxial layers, elec. cond. and Hall coeff. 2-41039
- PbTe:Cl, self-compensation of donor effect by vacancy-impurity complexes, Hall carrier density meas. 2-36067
- PbTe:In film, impurity states, absorpt. coeff. 2-17021
- PbTe:Ti, elec. and optical props. at high impurity conc. 2-40948
- PbTe:Ti, hole scattering and mobility, impurity effects 2-13107
- PbTe:Ti, type II supercond. semicond., sp. ht. obs., 1.4K 2-36204
- PbTe:Ti, volume supercond. 2-17192
- PbTe-Csl system, phase diagram construction, solid solns. form. 2-40521
- PbTe-InSb struct., epitaxial growth by laser evaporation, pulsed heating of substrate effect 2-46945
- PbTeSe, LPE growth lattice-matched to PbSnTe, phys. and elec. props. 2-5320
- Pb<sub>1-x</sub>Th<sub>x</sub>F<sub>2+2x</sub> solid solns., ionic conductor, neutron diffr. study (French) 2-5274
- Pb(Ti, Zr)O<sub>3</sub>, modified solid solns., phase composition, struct., electro-physical characts. 2-5082
- Pb(Ti, Zr)O<sub>3</sub>, tetragonal-rhombohedral transition, changes in dielectric constant 2-5616
- Pb<sub>3</sub>TiF<sub>6</sub>, anion-excess fluorite related struct. (French) 2-8495
- PbTiO<sub>3</sub>, amorphous, EXAFS study 2-41449
- PbTiO<sub>3</sub>, amorphous, crystallisation process 2-40524
- PbTiO<sub>3</sub>, amorphous, crystallisation, Raman study 2-41340
- PbTiO<sub>3</sub>, amorphous, phase transition, dielectric anomalies 2-41301
- PbTiO<sub>3</sub>, amorphous, struct. determ. by EXAFS 2-40270
- PbTiO<sub>3</sub>, electronic struct. calc. by PBX<sub>2</sub> method 2-51086
- PbTiO<sub>3</sub>, ferroelec., lattice dynamics, rigid ion formalism 2-45450
- PbTiO<sub>3</sub>, ferroelectric thin film, prep. by sputtering and laser annealing 2-2199
- PbTiO<sub>3</sub>, low temp. phase transitions 2-45552
- PbTiO<sub>3</sub>, perovskites, SHG study of paraelectric transitions 2-31424
- PbTiO<sub>3</sub>, phonon dynamics study 2-30548
- PbTiO<sub>3</sub>, photolum., rel. to structural phase transitions 2-36672
- PbTiO<sub>3</sub>, sintering, Raman scatt. study 2-41339
- PbTiO<sub>3</sub>:Fe, critical behaviour in ferroelectric transition region (Russian) 2-26835
- PbTiO<sub>3</sub>-La(Mg<sub>2/3</sub>O<sub>3</sub>), piezoelectric ceramic, piezoelectric props. 2-41271
- PbTiO<sub>3</sub>-La(Nb<sub>2/3</sub>Nb<sub>1/3</sub>O<sub>3</sub>), piezoelectric ceramic, piezoelectric props. 2-41271
- PbTiO<sub>3</sub>-PbZrO<sub>3</sub>-PbNb<sub>2/3</sub>Mn<sub>1/2</sub>O<sub>3</sub>-PbW<sub>1/2</sub>Mn<sub>1/2</sub>O<sub>3</sub> systems, temp. stability of reson. freq., comp. depend. 2-41313
- PbTiO<sub>3</sub>-PbZrO<sub>3</sub>-Pb(W<sub>0.5</sub>Cd<sub>0.5</sub>)O<sub>3</sub> pyroceramic electret with vitreous phase, prep. and characteris. 2-51866
- (PbTiO<sub>3</sub>)<sub>1-x</sub>(PbCeO<sub>3</sub>)<sub>x</sub>(PbNb<sub>0.6</sub>O<sub>3</sub>)<sub>0.4</sub>(MnO<sub>2</sub>)<sub>m</sub> system, piezoelectric, dielectric props. 2-41273
- Pb(Ti,Zr<sub>1-x</sub>)O<sub>3</sub> type ceramics, acoustic emission and piezoactivity 2-46485
- PbV<sub>2</sub>O<sub>8</sub>, ferroelectric Curie temp., const. mag. field effect 2-13428
- Pb<sub>3</sub>(VO<sub>4</sub>)<sub>2</sub>, ferroelastic, internal friction and modulus effects at phase transitions 2-45375
- PbWO<sub>4</sub>, stoltzite and raspite forms, atomic spacings (Portuguese) 2-30438
- Pb(Zn<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub>-PbTiO<sub>3</sub>, phase transition study 2-41300
- Pb(Zr,Sn,Ti)O<sub>3</sub> ceramic, microstructure effect on electrocaloric props. 2-41278
- Pb(Zr,Ti)O<sub>3</sub>, 4 and 8 type ceramics, high field props. 2-41249
- Pb(Zr,Ti)O<sub>3</sub> ceramics, elec. resist. effect of voids 2-17063
- Pb(Zr,Ti)O<sub>3</sub> ceramics, piezoelectric props. 2-41272
- Pb(Zr,Ti)O<sub>3</sub> ceramic, piezoelectric props., transducer appl. 2-41274
- Pb(Zr,Ti)O<sub>3</sub> ceramic, domain space distrib. meas. 2-41311
- Pb(Zr,Ti)O<sub>3</sub>, concentration-pressure-temp. phase diagram 2-41302
- Pb(Zr,Ti)O<sub>3</sub>, densification and sintering 2-41540
- Pb(Zr,Ti)O<sub>3</sub> film, lattice const. shift through post-deposition heat treatment 2-16964
- Pb(Zr,Ti)O<sub>3</sub>, high press. dielectric props. 2-41262
- Pb(Zr,Ti)O<sub>3</sub>, piezoceramic, electrophys. props. in tetragonal-rhombohedral transition region 2-41275
- Pb(Zr,Ti)O<sub>3</sub> piezoelectric ceramics, recent developments in Japan 2-46480
- Pb(Zr,Ti)O<sub>3</sub>, resonant freq. temp. depend., permittivity 2-41248
- Pb(Zr,Ti)O<sub>3</sub>, solid solutions, pyroelectric and dielectric props. 2-13424
- Pb(Zr,Ti)O<sub>3</sub>, structural defect study 2-40372
- Pb(Zr,Ti)O<sub>3</sub>, thermoelec. conversion feasibility, piezoelec. and pyroelec. phenomena 2-37420
- Pb(Zr,Ti)O<sub>3</sub>-polymer composites, pyroelec. props. 2-2197
- Pb(Zr,Ti)O<sub>3</sub>-Sr, sintering, preparation piezoelectric props. 2-41541
- Pb(Zr,Ti)O<sub>3</sub>-type piezoceramics theory 2-46504
- Pb<sub>3</sub>ZrF<sub>6</sub>, anion-excess fluorite related struct. (French) 2-8495
- Pb<sub>3</sub>ZrF<sub>6</sub>, anion-excess fluorite related struct. (French) 2-8495
- Pb<sub>1.02</sub>(Zr<sub>0.76</sub>Fe<sub>0.10</sub>Nb<sub>0.10</sub>Ti<sub>0.04</sub>)<sub>1-2x</sub>U<sub>2</sub>O<sub>7</sub>, elec. cond., pyroelectricity 2-45959
- PbZrO<sub>3</sub>, cryst. and domain struct. study, ferroelectric transitions 2-41306
- PbZrO<sub>3</sub>, Curie temp., external mag. field effect, thermographic study 2-9101
- PbZrO<sub>3</sub>, single cryst. and ceramic, pyroelec. effect 2-2192
- PbZrO<sub>3</sub>, temperature-elect. field phase diagram 2-46517
- PbZrO<sub>3</sub>-PbTiO<sub>3</sub>:MnO<sub>2</sub> solid solns., piezoelec. props. rel. to chem. comp. near morphotropic phase transition 2-9092
- PbZrO<sub>3</sub>-PbTiO<sub>3</sub>-Pb<sub>2</sub>FeNb<sub>6</sub> system, pyroelec. ceramics 2-46489
- Pb<sub>1-x</sub>Zr<sub>x</sub>O<sub>3-x</sub>, Gibbs energy of formation 2-30630
- Pb(Zr<sub>0.52</sub>Ti<sub>0.48</sub>)O<sub>3</sub>, influence of microcracking and slow crack growth on planar coupling coeff. 2-31777



**lead compounds continued**

- Pb( $Zr_{0.53}Ti_{0.47}$ )O<sub>3</sub> solid soln., synthesis by cryoprecip., prep. and dielec. characts. 2-41563  
 Pb(Zr,Ti<sub>1-x</sub>)O<sub>3</sub>, elec. props. study 2-45960  
 Pb(Zr,Ti<sub>1-x</sub>)O<sub>3</sub>, ferroelec., nature of morphotropic transition region 2-31426  
 Pb(Zr,Ti<sub>1-x</sub>)O<sub>3</sub>, morphotropic phase boundary 2-41305  
 Pb(Zr,Ti<sub>1-x</sub>)O<sub>3</sub>, transition entropy, Curie-Weiss behaviour 2-41304  
 Pb(Zr,Ti<sub>1-x</sub>)O<sub>3</sub>:Nb<sup>5+</sup>(Sb<sup>5+</sup>) ceramics, wet or dry method prep., struct. and piezoelec. props., effect of initial Pb content 2-9091  
 Pb<sub>1-x</sub>(Zr<sub>0.5</sub>Ti<sub>0.5</sub>)O<sub>3-x</sub> ceramics, microstruct. and props., effect of processing and excess PbO 2-5845  
 SiO<sub>2</sub>-PbO-Fe<sub>2</sub>O<sub>3</sub> glass, ESR spectra, 300 to 700K 2-31268  
 (SnTe)<sub>1-x</sub>(PbSe)<sub>x</sub> epitaxial layers, band struct. parameters (*Russian*) 2-21499  
 Te-PbTe doped eutectic alloys, electrophys. props. and struct. doping influence 2-40882  
 Ti-Pb-Se, phase equilibria, DTA, XPA and EMF meas. 2-9336  
 TiBiSe<sub>2</sub>-PbSe, phase diagram, electrophysical props. 2-9334  
 TiBr-PbBr<sub>2</sub>, X-ray and thermoanalytic investigations (*German*) 2-13709  
 TiSbTe<sub>2</sub>-2PbTe cross section, phase diagram and elec. props. 2-12721  
 ZnB<sub>2</sub>O<sub>4</sub>-CdB<sub>2</sub>O<sub>4</sub>-PbF<sub>2</sub>, spectral luminesc. study 2-26985

**leak detection**

- diffusion-discharge method of sealing monitoring for small components 2-2670  
 hydraulic system elements, pneumatic inspection, optimisation of parameters 2-27386  
 KNK-II reactor, second fuel element damage localisation and detection (*German*) 2-11258  
 LWR, leak detection in pressurised parts using sound emission (*German*) 2-19753  
 online diagnostic instrum. in nuclear power plants, experiences 2-15585  
 packing ring joint in He reactor coolant technology, leak tests (*German*) 2-508  
 prestressed cast steel press. vessel, cold press. test results (*German*) 2-543  
 tightness inspection, automated, reliability 2-6007  
 underground nat. gas pipes, active acoustic diagnostics 2-50031  
 US leak detectors, error due to frequency mismatch in channels 2-6008  
 Ni, pressed powder, porous permeable element, porous leaks 2-25439

**leakage, electrical** *see electrical faults***leakage, magnetic** *see magnetic leakage***leakage currents**

- Si integrated p<sup>+</sup>-n junctions under forward bias, leakage current degradation obs. 2-26487

**learning systems**

- see also adaptive systems; self-adjusting systems*  
 steel, stainless, pipe weld, crack detection using US signal processing, appl. of adaptive learning networks 2-13918  
 technological forecasting, discovery, invention and innovation cycles 2-6090  
 Al multilayered adhesively bonded structures, appl. of adaptive learning networks to US signal processing, flaw classification 2-17854

**least squares approximations**

- analytical ultracentrifuge data, anal. by nonlinear least-squares techniques 2-37484  
 arterial walls, energy density polynomial determ. by numerical method 2-14279  
 charact. temps., computer calc. from enthalpy data 2-5245  
 computerised tomography reconstruction estimation, least-squares technique 2-14322  
 critical susceptibility exponent, broadening effects 2-26631  
 digital image restoration, direct algorithm 2-39574  
 N,N-dimethylthioacetamide, vibr., normal coordinate anal., IR and Raman obs. 2-4284  
 flexible molecules, steric comparison, least squares fit 2-15920  
 functions of the form  $f(\mu(x-x_0))$ , formulas for fitting, radiotherapy appl. 2-42847  
 ionic conductors, immittance data, three dims. perspective plotting and fitting 2-26109  
 linearised least squares techniques for model  $\exp(A_1 + A_2 x)$  2-38409  
 LWR pressure vessel damage dosimetry, least squares anal. 2-4045  
 magnetic saturation, law of approach, critical examination 2-2103  
 matrix mutual orthogonality and parameter independence 2-10583  
 measurement accuracy assessment, efficiency of a set of estimates by a generalized method of least squares 2-28829  
 molecules, valence force field refinement, program using least squares method 2-15771  
 Navier equation, least squares finite element approximation 2-6745  
 nonlinear least squares model fitting to error-disturbed obs. 2-44595  
 nuclear reactor operating modes, data processing programme (*Bulgarian*) 2-7226  
 plate bending, least squares anal. (*Chinese*) 2-25280  
 plates, trapezoidal, three-ply freely supported, free vibrs. 2-39854  
 polymer electret film, polarization distrib. determ. using periodic heating 2-36529  
 polynomial piecewise least-square approx. for ocean synoptic velocity field reconstruction 2-23015  
 reverse Fourier neutron time-of-flight expt., correl. in statistical anal. 2-44975  
 solar cell dark current-voltage two exponential equation parameters determ. from empirical data using least-squares based approach 2-37221  
 solid phase comp. from solubility meas., least-squares triangle method 2-50864  
 sound field distortion for sphere with mixed boundary conditions 2-1057  
 thermal symmetrical plane problem soln. using boundary point least squares method 2-30119  
 X-ray spectra analysis, filtered least-squares fitting 2-28974  
 X-ray spectral anal., least-squares fit with digital filters 2-43159  
 X-ray spectrum deconvolution, multiple least squares fitting 2-43160  
 $\gamma$ -ray spectrum anal. method using IAEA test spectra, quantitative evaluation 2-43741  
 Li<sub>1/2</sub>N<sub>1/2</sub>H, ionic conductivity, complex least squares fitting, admittance data 2-50919  
 SO<sub>2</sub> concentration prediction, construction of diffusion model (*Japanese*) 2-22689  
 W, X-ray fluorescence spectra, least squares anal., Si(Li) detector response function appl. 2-22119

**leather** *see materials***Lee model**

- decay rates, perturbative calc. 2-43172  
 Yang-Lee edge singularity, critical exponents, renormalisation field-theoretic approach 2-150  
 pp, elastic scatt. in Lee model 2-38898  
 $\pi$ d, multichannel scatt. theory in Lee model 2-38898

**LEED** *see low energy electron diffraction***legal research (computing applications)** *see social and behavioural sciences computing***legislation**

- aircraft noise control at airports, certification 2-16192  
 building codes, noise control provisions, min. insulation requirements, simplified meas. procedures 2-11950  
 coal conversion technologies, environmental legislation and regulatory programmed in USA, review 2-27743  
 economic impact of state ordered avoided cost rates for photovoltaic generated electricity 2-27569  
 electricity supply and environmental protection, need for objective legislation (*German*) 2-27741  
 fissile material transport, criticality risk and packaging design (*French*) 2-24348  
 fission research reactors, radiation protection, legal requirements fulfilment, economic considerations (*German*) 2-49172  
 institutional issues—major issues and their impact on widespread use of photovoltaic systems 2-27568  
 nuclear facilities developments in German Federal Republic, back end fuel cycle concept implementation (*German*) 2-19680  
 nuclear fusion energy programme in United States, associated legislation 2-7362  
 nuclear power radiological safety laws, fundamental features main problems (*German*) 2-49196  
 occupational noise exposure levels in Netherlands 2-16191  
 power overhead lines construction, planning and authorisation guidelines for nature and countryside protection (*German*) 2-52418  
 radiation protection, laws and regulations in France (*French*) 2-6267  
 radioactive material transportation in nuclear fuel cycle (*French*) 2-24322  
 radioactive substance transportation, safety regulations and results (*French*) 2-24321  
 reforms to adjust to developments in energy, biological and information sciences 2-6726  
 research department compliance with radiation protection and monitoring regulations (*German*) 2-49195  
 U enrichment plants, licensing procedures in West Germany 2-19682

**length measurement**

- see also micrometry*  
 automobile industry, computer-based system (*German*) 2-10787  
 ceramics, complex thermal analysis apparatus (*Czech*) 2-28855  
 critical image measurement vernier 2-23717  
 differential contact length gauge 2-161  
 echosounder for fish size meas., based on swimbladder resonance 2-44525  
 Eppenstein method for meas. length, effect of misalignment of axis of telescope 2-42985  
 He-Ne/I<sub>2</sub> laser as a frequency standard in the visible spectrum 2-44370  
 laser spectroscopy, sub-Doppler, quantum metrology appl. 2-6905  
 linear high-precision measure, polished metal surface precision evaluation 2-42986  
 live length meas. with Quantimet image analysing computer 2-48671  
 steam turbine i.p. cylinder radial clearance, steam jet probe appl. 2-43019  
 US length meas. in single crystal and polycrystalline aggregate with preferred orientation 2-17827  
 He-Ne laser, I<sub>2</sub> stabilized, wavelength meas. by Michelson interferometer 2-6824  
 He-Ne laser stabilised with I<sub>2</sub> vapour, absorpt. cell evaluation (*Slovak*) 2-44347

**length standards** *see measurement standards***Lennard-Jones and Devonshire theory** *see liquid theory***Lennard-Jones potential**

- benzene, radial distrib. function, average coords. and adiabatic bulk modulus (*French*) 2-45003  
 binary diffusion coeff. from known interatomic pots. (*Russian*) 2-16412  
 binary gas mixture, unlike-pair potential parameters, from second virial coeffs. 2-20798  
 binary Lennard-Jones systems, mass depend. of self diffusion coeff. determ. by mol. dynamics simulation 2-21336  
 cluster-size distrib. and condensation bimodality in finite Lennard-Jones system 2-23601  
 complex polar fluids, effective pot. and viscosity 2-1281  
 crystal-melt interface, Monte Carlo simulation 2-26024  
 dense liquid, thermal relax. under shock compression 2-35565  
 diatomic fluids, nonequilib. mol. dynamics simulation and generalised hydrodynamics of transverse modes 2-35372  
 ethyl methyl phosphate conformational energy, ab initio SCF-MO calcs. 2-39306  
 fluid, frozen, localisation, normal model anal. by quench-echo techniques 2-30558  
 fluid, Lennard-Jones, free energy, vapour-liquid equilib., Monte Carlo calcs. 2-50500  
 fluid, one-dimensional, velocity autocorrelation function, mol. dynamics calcs. 2-12440  
 graphite, adsorpt. of Ar, second surface virial coeff. calc. 2-14002  
 HCP mixtures, core struct. of 1/3(1123) screw dislocations 2-40385  
 liquid mixtures, free energy of mixing phase stability and local composition 2-40240  
 liquids, solutions and dense gases, structure and thermophysical props. with allowance for intermol. int. eractions 2-8405  
 local antisymmetries of isothermal behaviour of the Lennard-Jones and real fluids 2-50498  
 metallic glasses, amorphous struct., reproducible model simulation by hard-sphere relax. 2-40282  
 nematic liquid crystals., elastic consts. calcs. using an anisotropic Lennard-Jones pot. 2-50732  
 nonamer chain, soln., mol. dynamics study, bead-spring model 2-15929  
 pentanes, methyl substituted, intramol. and intermol. interactions, CH stretching overtone spectra 2-772  
 simple fluids, hard and soft-core eqns. of state, charact. curves and loci of C<sub>p</sub> 2-12715



**Lennard-Jones potential continued**

- simple liq., attractive forces role in cage effect 2-40239  
 supercooled liquid, icosahedral bond orientational order, computer simulation 2-12443  
 tetrafluoromethane, anharmonic Urey-Bradley force field computational algorithm 2-29563  
 time decay resonant energies and widths; inner turning point delay 2-49541  
 triatomic time auto correl. functions, molecular dynamics simulation 2-49536  
 triplet correlations in the Lennard-Jones fluid, thermodynamics and configuration space struct. 2-8404  
 two dimensional system, sublimation, vaporisation and melting, Monte Carlo simulations, struct., thermodynamic props. 2-21270  
 two-dimensional melting, first order transition, isothermal-isobaric Monte Carlo study 2-1599  
 two-dimensional system, melting, computer simulation 2-33484  
 two-dimensional system, melting theory, Monte Carlo simulation, particle system behaviour 2-1600  
 water vapour, sound vel. calc. using effective potential 2-4912  
 Ar, adsorbed Lennard-Jones submonolayers on graphite, grand ensemble Monte Carlo study 2-21443  
 Ar+HF, state to state cross sections for energy transfer, modified infinite-order sudden theory 2-29698  
 Ca, collisional line broadening and shift, emission line 2-20003  
 Cu, collisional line broadening and shift, emission line 2-20003  
 I+I in CCl<sub>4</sub>, liq. state chem. reaction dynamics, R-depend. correl. functions 2-41881  
 K, collisional line broadening and shift, emission line 2-20003  
 Lil aq. soln. struct. props. derived from mol. dynamics simulation 2-12456  
 Mn, collisional line broadening and shift, emission line 2-20003  
 N<sub>2</sub>, compressibility and viscosity equations 2-20799  
 N<sub>2</sub>O<sub>4</sub>, lattice dynamics 2-21247  
 Na, collisional line broadening and shift, emission line 2-20003  
 Na+Xe(S<sub>0</sub>) interaction pot. from differential scatt. cross-section 2-34550

**lenses**

- see also aberrations; aspherical lenses; contact lenses; electron lenses; electrostatic lenses; focusing; magnetic lenses; photographic lenses*  
 aberration determination using holographic interferograms of pupils recorded for two points on image plane (French) 2-44217  
 achromatic doublets for simultaneous imaging of IR (10.6-μm) and visible (0.6328-μm) radiation 2-34871  
 apochromats, thin-component, glass choice on a BESM-6 computer (t) 2-39720  
 astigmatic optical systems, system matrix and dioptric power relations 2-49683  
 bifocal design, Duopal P 30 and Glaukar S 35, without leakage and zero image jump 2-11788  
 bifocals for myopia, research studies 2-37707  
 birefringent lens for HF enhancement 2-29789  
 birefringent lens for high freq. enhancement in image processing 2-49687  
 Bravais system, general paraxial anal. 2-25094  
 CAD, optimisation techniques comparison 2-1001  
 CAD algorithm for cemented double-lens objectives (Russian) 2-44427  
 centering techniques anal. by reflection or refraction 2-4571  
 comet camera lens design, wideband 2-53091  
 coupling in fibre optic devices, efficiency limits for GRIN-rod, ball and plane-convex rod lenses 2-4593  
 crystalline animal lens focal length determ. using Ronchi interferograms 2-2864  
 defocusing plastic rod prep. by copolymerisation 2-20405  
 double-symmetrical system, wave aberration calc., anamorphic or astigmatic imaging 2-20261  
 doublet comprising thin component and finite thickness meniscus, fund. aberration coeffs., numerical method 2-49867  
 Ecosorb, laminated lens material, optical tests of quasi-optical components for the MM region 2-39721  
 echelon lens, exptl. test for maximum intensity in focus 2-44426  
 electromagnetically controlled variable focus lens 2-29862  
 EM wave reflection and transmission for materials with arbitrarily graded parameters 2-39534  
 external-pupil objective lenses, anal., review 2-11787  
 eye chromatic aberration correcting lenses 2-37706  
 Fabry-Perot interferometer, converging light beam illum., interf. max. position shift 2-10860  
 fluid lens, variable curvature through external control of fluid press. on flexible membrane 2-4570  
 focusing light into specified volume by computer-synthesized holograms 2-49715  
 four-components systems, synthesis by paraxial element determ. 2-39718  
 Fourier transform geodesic lens system high-resolution RF spectrum analyser 2-7894  
 Fresnel, 2.2 kW actively cooled point focusing photovoltaic array giving hot water 2-27573  
 Fresnel, non-imaging, linear, design and performance anal. 2-11789  
 Fresnel for high conc. photovoltaic module employing AlGaAs/GaAs solar cells 2-27574  
 Fresnel lens 10-unit dichroic filter spectral splitter module for high efficiency 2-27571  
 Fresnel lens integrated on oxidised Si substrate, focusing efficiencies 2-34944  
 Fresnel lens low-cost photovoltaic concentrator module development and evaluation 2-27572  
 Fresnel lens point-focus photovoltaic concentrator passively-cooled module, design and performance 2-27575  
 Fresnel lens theoretical anal. as function of design parameters 2-44424  
 Fresnel lens use in solar concentration system, chromatic aberration effect 2-18003  
 Fresnel lenses efficiency with respect to reflection and transmission losses 2-39714  
 gas lens, ray trajectory eqn., analytic soln. method 2-34874  
 gas lens, thermal, numerical analysis of imaging props. 2-34873  
 hologram interferometry, lens-assisted, semicond. device behaviour investigation 2-20273  
 holographic lens, optical transformation theory (Chinese) 2-29792  
 holographic lens, wavelength shifted, design procedure using coupled multiwave efficiency analysis 2-867

**lenses continued**

- holographic lenses, image quality estimate, classical intensity MTF 2-39591  
 holographic lenses (Chinese) 2-11669  
 holographic wavelength shifted optical lenses, thermoplastic material diffr. efficiency property appls. 2-4467  
 image reconstructing lens, optical recessor aberrations, phase errors in Fourier transformed plane 2-852  
 integrated optic geodesic lenses, second order effects, anal. 2-11861  
 IR imaging systems, aberration correction method for thin achromat 2-34935  
 land camera, Polaroid SX-70, unusual optics 2-48806  
 laser beam intensity fluctuation reduction by defocusing with extended lens 2-4452  
 laser diode to single-mode fibre efficient coupling using two lens combination in confocal condition 2-16122  
 laser scanner design, low-cost 2-34824  
 lasers, multimode, with internal variable lenses, stability and beam divergence 2-25050  
 light ray path calc. on programmable TI 58/59 calculator (Czech) 2-11776  
 Luneburg lenses made by laser evaporation, design and prep. 2-4572  
 Luneburg lens, generalised, index-profile computation 2-16083  
 Luneburg lens, thin-film, design for max. focal length control 2-20391  
 manufacture for micro-optics, mechanisation (t) 2-34950  
 micro Fresnel lenses fabricated by electron-beam lithography 2-34875  
 micro lens fabrication using electron-beam lithography 2-34947  
 microlens formation on vapour phase axial deposition single-mode fibre ends 2-49952  
 microlenses for coupling single-mode fibres to thin-film waveguides, photoresist lens fabrication 2-4604  
 microscope objective MTF measuring instrumts. 2-15207  
 multielement US lens fabrication and performance 2-44621  
 objective lens, zonal errors influence on image quality, automatic correction program calc. 2-1003  
 objective lens centering accuracy, influence of microscope turret cylinder construction 2-48774  
 objective lenses of thermal viewers for focusing at different distances, image quality preservation 2-49863  
 objective wave aberration evaluation, shearing interferogram meas., wavefront reconstruction and reference sphere selection 2-20260  
 objectives, OTF meas. by holographic method (Czech) 2-865  
 ophthalmic spectacle lenses, evaluation using the Hartmann test 2-42183  
 optical fibre coupling using spheroid lens at fibre end 2-16130  
 optical memories, large capacity, correlator appls. 2-862  
 opto-electrical evaluation of reflex images in lens centering, review (German) 2-29861  
 paraxial lens system, impulse response, operator algebraic derivation 2-11777  
 photofabrication, precision, computer controlled (Russian) 2-11869  
 photolithographic, highly resolving, optical transfer function (German) 2-25096  
 photovoltaic concentrator technology, Fresnel lenses 2-27570  
 planar lens with refractive index varying over the plane 2-44431  
 plane screen system, solar wave propag., matrix theory (Chinese) 2-29780  
 point-focus photovoltaic concentrator modules, compatibility of Fresnel lens and photovoltaic cells 2-27681  
 poly-4-methylpentene-1, laminated lens material, optical tests of quasi-optical components for the MM region 2-39721  
 Raman gain spectroscopy, thermal lens detection 2-10884  
 refractive index measurement at 328 Å, meridional ray tracing 2-997  
 Ritchey-Chretien systems with prefocus correcting lenses, computer calc. techniques 2-42593  
 sensitivity of optical systems to curvature changes, finite sensitivity coeffs. 2-16081  
 sensitivity of optical systems to curvature changes, paraxial sensitivity coeffs. 2-16082  
 spherical 2-layer, RTV silicon rubber/zinc powder mixture, focussing properties compared with Luneburg law (Japanese) 2-8004  
 spherical element lens array manufacture, die contour shaping apparatus 2-16151  
 thermal image scanning system design eqns. for optical parameters (Chinese) 2-49937  
 thick lens-hologram refr.-diffr. optical system, aberration compensation 2-39719  
 two-component pancratic system, variable magnification, calc. of Gaussian elements 2-49864  
 two-lens system, Fourier transform of complex amplitude, comparison of thin- and thick-lens systems 2-20262  
 variable focal length lenses for colour TV cameras 2-4573  
 volume holographic off-axis lens, conjugate diff. order 2-15969  
 wave-optical evaluation of optical systems for automatic correction (German) 2-29860  
 zoom lens, built-in range extender, paraxial anal., thin lens config., thick lens system 2-33657  
 GaAs photovoltaic systems for combined heat/electricity generation, using high solar concentration ratios 2-37245

**lepton decay***see also muon decay*

- heavy lepton decay into  $e\gamma$  in SU(2)×U(1) model 2-23879  
 heavy neutrinos and the evasion of cosmological bounds 2-19252  
 massive neutrino radiative decay lifetime, Universe evolution after recombination era 2-28588  
 massive neutrinos, decay rel. to photoionisation of intergalactic medium 2-48333  
 massive neutrinos decay, implications of detect. of far UV line emission from hot galactic corona 2-10517  
 $l\alpha \rightarrow \nu_{\mu} l \gamma$ , leptonic decay, theory 2-7031  
 $M^0 \rightarrow \mu^+ e^- \nu_e$ , probability from  $e^+ e^-$  2-23964  
 $\nu_e \rightarrow \mu^+ e^-$ , neutrinos mass (Russian) 2-33838  
 $\nu_e$  or  $\bar{\nu}_e$  decay lifetime, experimental limit 2-33836  
 $\nu_e \rightarrow \mu^+ e^-$ , neutrinos mass (Russian) 2-33838  
 $\nu^+ \rightarrow \nu^- \gamma (\nu e^+ e^-)$ , neutrino oscills., physical processes involving Majorana neutrinos 2-43344  
 $\tau$ , three-prong decays, lifetime 2-38881  
 $\tau$  lepton decay in  $e^+ e^- \rightarrow \tau^+ \tau^-$ , decay branching ratio and lifetime study 2-15317  
 $\tau$  lifetime, in electroweak gauge model 2-29042  
 $\tau \rightarrow M \nu$ ,  $M$ =pseudoscalar meson, radiative corrections 2-11047  
 $\tau \rightarrow \nu + \pi$ , ( $n=1,2$ ), weak interaction locality 2-29107



**lepton decay continued**

- $\tau \rightarrow \nu \pi$ , decay amplitude, axial-vector current hadronic matrix element 2-43345
- $\tau \rightarrow \nu \pi$  and  $A_1$  reson. 2-48988
- $\tau \rightarrow \pi(\rho) \nu$ , from  $e^+e^-$  collisions 2-19392
- $\tau \rightarrow \pi \omega \nu$ , tau neutrino mass 2-23983
- $\tau \rightarrow \rho \nu$ , tau neutrino mass 2-23983
- $\tau \rightarrow \rho \nu$ , decay current nature, hadron polarisation 2-23981
- $\tau \rightarrow \mu^- \bar{\nu}_\mu \nu_\tau$ , probability from  $e^+e^-$  2-23964
- $\tau \rightarrow \pi^- \nu_\tau$ , branching ratio meas. 2-48989

**lepton-deuteron interactions**

- see also *lepton-deuteron scattering*
- inelastic scattering, QCD test 2-24002
- ed  $\rightarrow$  epp, chiral invariance role 2-38807
- $\bar{\nu}_e d \rightarrow e^- nn$ , reactor energies, form factors 2-19534
- $\nu d \rightarrow \nu p$ , nucleon energy correl. 2-43329

**lepton-deuteron scattering**

- see also *lepton-deuteron interactions*
- ed, elastic scatt., recoil electron polarization 2-43357
- ed, parity violation, Weinberg model test, breakup channels 2-33847
- ed scatt., electroweak EM corrections,  $\sin^2 \theta_w$  2-3789

**lepton-hadron interactions**

- see also *lepton-hadron scattering*; *lepton-nucleon interactions*
- A = 24, 28, 31, muonic X-rays,  $\mu h$  interactions, vacuum pol. test,  $\mu$  mass 2-49607
- deep inelastic scatt., hadronic form factors at large  $q^2$ , parton model 2-7036
- deep inelastic scatt., scaling violations, QCD massive quark model 2-325
- deep inelastic scatt., soft gluon radiation and parton model 2-11027
- deep-inelastic process, virtual corrections regularisation scheme depend. in perturbative QCD 2-29079
- lepton+hadron processes beyond leading order in QCD 2-29080
- structure functions in deep inelastic scatt., quantum field theory single-time formulation 2-11050
- SU(2) colour gauge theory, short-distance structure of instantons 2-3688
- $e^- h \rightarrow e^- x$ , deep inelastic scatt., higher order QCD effects 2-29113
- $lb \rightarrow X$ , leading baryon effect 2-19405

**lepton-hadron scattering**

- see also *lepton-hadron interactions*; *lepton-nucleon scattering*
- two photon exchange, low momentum transfer theorem 2-19383
- $e\pi^+$  elastic scatt., negative-pion radius meas. 2-48997
- $\pi e$ , 100 GeV/c, elastic scatt.,  $\pi^-$  form factor, differential cross section 2-23986
- $\pi e \rightarrow \pi e$ , pion charge radius value, rel. to values for  $m_p$  and coupling consts. 2-23999

**lepton interactions** see *lepton-deuteron interactions*; *lepton-lepton interactions*; *photon-lepton interactions***lepton-lepton interactions**

- see also *electron-electron interactions*; *electron-positron interactions*; *lepton-lepton scattering*; *neutrino-electron interactions*; *neutrino-neutrino interactions*
- $l^+ l^- \rightarrow l^+ l^- X$ , photon struct. function, QCD test 2-29110

**lepton-lepton scattering**

- see also *electron-electron scattering*; *electron-positron scattering*; *lepton-lepton interactions*; *neutrino-electron scattering*; *neutrino-neutrino scattering*
- electromagnetic corrections, higher order effects due to charged lepton scatt. 2-23993
- $\nu L \rightarrow \nu L$ , orthogonal polarisation in Weinberg-Salam model 2-43326

**lepton mass**

- charged lepton-spectrum inducing pot. and family problem 2-43308
- Dirac neutrinos in early cosmology 2-14960
- early Universe, neutrino rest mass and Jeans clustering 2-28584
- electron mass in first approx. of finite QED electron propagator 2-48931
- fermion mass relations, chiral symm., naturalness,  $t$  mass 2-29094
- grand unified theories based on SU(N), SO(10), SO(4N+10),  $E_6$ , radiative fermion masses 2-38826
- heavy neutrinos and the evasion of cosmological bounds 2-19252
- Majorana neutrino masses, SO(10) grand unified theory and parity restoration at low energies 2-48925
- Majorana neutrinos, CP properties, double beta decay 2-19277
- Majorana neutrinos, limit on masses from double  $\beta$  decay 2-49056
- massive neutrinos, right and left-handed, creation of two galactic populations 2-14961
- massive neutrinos, stellar stopping power neutrino magnetic moment 2-28336
- neutrino Jeans mass, neutrino dominated Universe, galaxies formation and clusters of galaxies 2-53366
- neutrino mass, cosmological constraints on Majorana mass implications 2-15318
- neutrino mass, in superunified models, cosmology appls. 2-38824
- neutrino mass matrix in Gell-Mann-Ramond-Slansky model 2-23895
- neutrino mass model with spontaneously broken B-L symmetry 2-38825
- neutrino masses, from large-scale struct. of space time, upper bounds 2-6693
- neutrino oscillations and mass, quantum flavour dynamics 2-33775
- neutrinoless double- $\beta$  decay, nucleon reson. transitions, Majorana neutrinos 2-33966
- primordial neutrinos with nonzero rest mass in hot Universe 2-3319
- QED, permutation symmetry breaking,  $\mu$ ,  $e$ ,  $\tau$  masses 2-38838
- right-handed neutrinos masses, cosmological bounds 2-53401
- SO(10) grand unification, quark and lepton mass hierarchy 2-23891
- SO(10) left-right symmetric GUT, neutrino mass and cosmological baryon excess 2-23887
- SU(11) model, invisible axion and neutrino oscill. 2-33774
- technicolour and the three-fermion composite model 2-7016
- Z 2-28585
- $\gamma$  mass from  $^{163}\text{Ho}$ ,  $^{193}\text{Pt}$  internal bremsstrahlung electron capture 2-43383
- Majorana  $\nu$  masses, baryon- and lepton-number non-conserving processes and intermediate mass scales 2-11003
- $\mu$ , mass and mag. moment 2-19379
- $\nu$ , 14-46 eV range from  $^3\text{H}$   $\beta$ -decay 2-11116
- $\nu_e$ , rest mass determ. from  $^3\text{H}$   $\beta$ -decay spectrum (Russian) 2-19484
- $\nu_e$  oscillation problem, mass degeneracy 2-6976
- $\nu_\mu$  and  $\nu_\tau$  mass (Russian) 2-33838
- $\bar{\nu}_e \rightarrow \bar{\nu}_\mu$  oscillation, mass difference parameter, transition probability 2-15304
- $\nu_\tau$  mass, from  $\tau$  semileptonic decays 2-23983

**lepton mass continued**

- $\nu_\tau$  mass meas. based on  $\tau$  hadronic decay mode 2-48989
- $\pi^+ \rightarrow \mu^+ \nu_\mu$ , finite mass neutrino search 2-23970
- $\pi^+ \rightarrow \mu^+ \nu_\mu$ , search for heavy neutrino state admixture, muon spectrum 2-15335
- $\tau$  mass and spin meas. based on  $\tau$  hadronic decay mode 2-48989

**lepton-nucleon interactions**

- see also *electron-nucleon interactions*; *lepton-nucleon scattering*; *muon-nucleon interactions*; *neutrino-nucleon interactions*
- deep inelastic scatt., fourth-order QCD corrections to longit. structure functions 2-43353
- deep inelastic scatt. 2-29117
- deeply inelastic scatt., quark jets, structure functions, currents 2-43361
- high-energy physics techniques, NATO Advanced Study, St. Croix, US Virgin Islands (July, 1980) 2-28591
- quarks and leptons low-lying excited states prod. cross section 2-43313
- $l^2 N \rightarrow l^2 X$ , P-odd asymmetries and possible method to test Weinberg-Salam theory (Russian) 2-33780
- $lp \rightarrow l^* X$ , possible visible  $l^*$  tracks in cosmic ray events 2-33823

**lepton-nucleon scattering**

- see also *electron-nucleon scattering*; *lepton-nucleon interactions*; *muon-nucleon scattering*; *neutrino-nucleon scattering*
- No entries

**lepton-nucleus reactions**

- see also *electron-nucleus reactions*; *lepton-nucleon interactions*; *muon-nucleus reactions*; *neutrino-nucleus reactions*
- No entries

**lepton-nucleus scattering**

- see also *electron-nucleus scattering*; *lepton-nucleon scattering*; *muon-nucleus scattering*; *neutrino-nucleus scattering*
- No entries

**lepton production**

- see also *electron pair production*; *muon production*; *neutrino production*
- deep inelastic scatt. and lepton pair prod., QCD Drell-Yan corrections 2-23928
- dilepton prod. polarisation asymmetry in perturbative QCD 2-24055
- Drell-Yan mechanism, perturbative QCD and lepton charge asymmetry at  $Z^0$  energies 2-43297
- Drell-Yan process, large  $P_T$ , 2nd order gluon radiative corrections to parton processes 2-3755
- elementary constituents and hadronic struct., conf., Les Arcs, Savoie, France (March 1980) 2-3331
- large momentum transfer processes, gauge field theory approach, QCD and parton model 2-265
- lepton-hadron deep inelastic scatt., soft gluon radiation and parton model 2-11027
- QCD and hard scatt. processes 2-48946
- soft gluon corrections to large- $P_T$  direct photon and dilepton production 2-3749
- $e^+e^- \rightarrow M^0 M^0$ , heavy lepton decay from muon signatures 2-23964
- $e^+e^- \rightarrow \tau^+ \tau^-$ , heavy lepton decay from muon signatures 2-23964
- $e^+e^- \rightarrow \tau^+ \tau^-$ , lepton pair prod., QED and electroweak theories tests at PETRA 2-19314
- $e^+e^- \rightarrow \tau^+ \tau^-$ ,  $\tau$  lepton pair prod. study, QED tests 2-15316
- $e^+e^- \rightarrow \tau^+ \tau^-$ ,  $\tau$  lepton pair prod. study, QED tests 2-15317
- $\gamma\gamma \rightarrow l^+ l^-$ , QED calc. 2-29165
- $hh \rightarrow l^+ l^- X$ , Drell-Yan process, QCD factorisation, initial state interactions 2-29147
- $hh \rightarrow l^+ l^- X$ , review 2-3818
- pN, 13 GeV/c, direct single electron prod. 2-29148
- pN, 400 GeV, neutrino produced in hadronic collision vicinity 2-355
- pp, 70 GeV/c, direct single electron prod. search 2-24032
- pp, heavy flavour identification from multipletion final states 2-49018
- pp,  $S^{1/2}=62.2$  GeV, prompt  $e^+e^-$  prod. cross-section meas. 2-29141
- pp  $\rightarrow e^+ \Lambda_b^0 X$ , 62 GeV, leading baryon effect, long. momentum distrib. 2-24038
- pp  $\rightarrow ex$ , 52.7 GeV, high  $P_T$  single prod. 2-352
- pp  $\rightarrow l^+ l^- X$ , weak processes in parton model 2-38905
- pp  $\rightarrow l^+ l^- X$ ,  $S^{1/2}=800$  GeV, multipletion study for  $b\bar{b}$ ,  $t\bar{t}$  and Higgs boson search 2-43392
- pp  $\rightarrow lX$ ,  $t\bar{t}$  state prod. cross section lower limit calc. 2-49020
- pp(pp), high-mass dileptons ang. distrib. 2-43395
- pp(pp), polarised, lepton pair prod. in SU(2) $\times$ U(1) model 2-43384
- pp  $\rightarrow l^+ l^- X$ , cross-sections and forward-backward asymmetry calc. in SU(2) $\times$ U(1) $\times$ G model 2-19409
- $\pi^- N \rightarrow \mu^+ \mu^-$ , 140-190 GeV, charm prod. 2-351
- $\pi^- p$ , 70 GeV, single electron prod. from D meson decay 2-353

**lepton scattering** see *lepton-deuteron scattering*; *lepton-hadron scattering*; *lepton-lepton scattering*; *photon-lepton scattering***lepton spin and parity**

- harmonically bound electron, spin and mag. moment in stochastic electrodynamics 2-23907
- $\tau$  mass and spin meas. based on  $\tau$  hadronic decay mode 2-48989

**lepton decays**

- see also *baryon leptonic decay*; *muon leptonic decay*; *muon decay*
- W-boson decay lepton spectra (Russian) 2-15355
- $Z \rightarrow l^+ l^-$ , lowest-order QED corrections 2-33790
- $Z \rightarrow \nu \bar{\nu}$ , in superunified models, cosmology appls. 2-38824

**leptons**

- see also *electrons*; *heavy leptons*; *lepton spin and parity*; *muons*; *neutrinos*; *positrons*
- anisotropic Yang-Mills interactions for quarks and leptons 2-43178
- anomalous mag. moment 2-19378
- anomalous mag. moment anal. 2-43351
- composite fermions, effective pot. in Veltman-Derman dynamical model 2-48961
- composite fermions mag. moments 2-43315
- composite leptons and quarks, spin 1/2 preons, family struct. 2-19352
- composite model, anomalous mag. moment (Chinese) 2-33816
- composite model, preons, as prepsins 2-48958
- composite model for leptons and quarks 2-48959
- composite models, lepton QCD interaction 2-38867
- composite quarks and leptons, Cabibbo angle, SU(3) generation symmetry 2-11032
- composite structure model 2-3761
- conference on high energy physics, Akaslompola, Finland (July-Aug. 1980) 2-42782
- dynamical scheme for quarks and leptons, composite Goldstone fermions 2-43310



**leptons continued**

- $E_8$  exceptional group, generators as bilinear quark, lepton fields 2-29045
- fundamental interactions theory developments, Winter School, Karpeaz, Poland (Feb.-March, 1980) 2-48384
- generation pu le for quarks and leptons 2-15323
- low-lying excited states in quarks and leptons composite models 2-43313
- magnetic preon confinement, radiation effects in monopole pair creation 2-29065
- maximal conserved flavour symmetry in models with complementarity 2-19351
- radial-excitation model of quark/lepton flavour 2-48960
- rishon model 2-299
- standard SU(5) model, large mass fermion effects on  $M_x$  and  $\sin^2\theta_W$  2-43229
- SU(3) $_c$ ×SU(2) $_L$ ×U(1), unified theories for quarks and leptons based on Clifford algebras 2-48928
- SU(3)×SU(2) $_L$ ×SU(2) $_R$ ×U(1), explanation of quark and lepton family struct. 2-43239
- SU(7)×U(1) anomaly-free gauge unification theory 2-43244
- SU(7) GUT with nonstandard charged quarks, leptons, low mass mag. monopole, p decay 2-6982
- SU(N) QCD in two dimensions, zero mass states 2-43282
- sub lepton-quark models, quark and lepton axial charge in O(N) group 2-43311
- subcomponent models for quarks and leptons, baryonic number nonconservation 2-43314
- valence preon model for composite quarks and leptons, algebraic search 2-33815
- $\tau$  mass in GUT, flavour numbers 2-38829

**level control**

- cryogenic system, automatic liq. N<sub>2</sub> filling system for spectroscopy expts. 2-23645
- crystallisation, liquid level control, microprocessor applns. (German) 2-9266
- self-flushing still temp., automatic electronic control 2-48692
- US level sensor for cryogenic liquids 2-33539
- N<sub>2</sub> liq., automatic level regulator 2-43025
- Si melt level automatically controlled, using laser beam monitoring 2-46909

**level crossing (energy) see energy level crossing****level measurement**

- differential pressure transducer design 2-33512
- fibre optical liquid level sensor 2-15141
- liquid level inspection of bottles performed by photoelectric switches 2-6873
- liquid level laser interferometer, water level change meas. 2-19168
- liquid level meas., pulse echo US technique 2-48675
- non-contacting level measurement of irregular surfaces using coded ultrasound and cross correlation analysis 2-48670
- PWR, bubble detection and level meas. in main coolant ccts. using ultrasonic transducers (German) 2-11260
- PWR coolant-level instruments, using differential pressure transducers 2-34168
- resonance high frequency level sensor for cryogenic media mass measurement (Russian) 2-23649
- transducer types, on-off or continuous (Dutch) 2-19094
- US level sensor for cryogenic liquids 2-33539

**levels, energy see energy states****levitation, magnetic see magnetic levitation****LIDAR see optical radar****Lie groups****see also elementary particle symmetry**

- A(m,n) Lie superalgebra, ladder representation, operation and annihilation operators 2-23866
- boson expansion from functional representation method 2-11102
- calculus of variations, Lagrangians, Lie derivatives 2-28644
- Casimir operators, criterion for completeness 2-18862
- Casimir operators for  $E_4$ ,  $E_6$ ,  $E_7$  and  $E_8$  2-18863
- chiral model, hidden symmetry, explicit approach to group structure 2-43225
- classical conservative system of point particles, time meas. inexactness implications 2-48485
- classification of left invariant complex structures on GL(2,R) and U(2) (Japanese) 2-3719
- Clifford, Lie and spinor algebras relation in intrinsic geometrical setting 2-38480
- complex semisimple Lie algebra, multiplicity problem, general Bessel series 2-23865
- complexifications of Lorentz- and symplectic structures 2-33765
- connected recurrent groups, characterisation (French) 2-15007
- dynamical selection rules 2-33744
- $E_8$  exceptional group, generators as bilinear quark, lepton fields 2-29045
- $e_8$  generators as bilinear fermions and its maximal subgroups 2-29046
- Einstein-Maxwell fields, prolongation struct., linear eigenvalues, SU(2,1) Lie algebra 2-89
- fermion states, functional representation in boson expansion theory 2-11101
- flexible Malcev-admissible algebras 2-29026
- four-dimensional supergravity theory, noncompact groups Lie algebras, bosonic construction 2-48597
- fourth-order Casimir invariants and indices for simple Lie algebras 2-38811
- Gabor operators theorems 2-10579
- geometrical first order supergravity in five space time dimensions 2-19001
- graded algebra construction by graded generalised Jordan triples 2-3725
- graded Lie algebras, boson, paraboson and boson-fermion representations 2-23868
- grand unified theories, direct product of groups 2-29035
- Gribov ambiguities from bifurcation theory viewpoint 2-38750
- Hamiltonian systems, Lie transform perturbation theory 2-33764
- hydrogen-type Hamiltonians in so(4,2) perturbation treatment, representation theory 2-48538
- IGL(n,R) groups, invariant operator 2-19275
- invariant connections on fibre bundles, spontaneous symm. breaking, mag. monopoles 2-23867
- ISL(n,R) groups, invariant operators 2-19276
- Kac-Moody Lie algebra, hidden symm. of chiral models 2-23870
- L-harmonics, generating functions, calc. program 2-23861

**Lie groups continued**

- massive Thirring model, inverse scattering problem for systems with anti-commuting variables 2-6968
  - N=8 supergravity, infinite Lie algebras 2-28743
  - neutron and proton spin, free mutation parameters, Lie-admissible spin algebra, appl. to neutron interferometry 2-29025
  - nilpotent Lie group orbits, Schwartz functions, associative algebra 2-43222
  - non-Abelian prolongations and complete integrability 2-38817
  - nonabelian gauge theories, Stokes theorem generalisation 2-28989
  - nonlinear  $\sigma$ -model on symmetric spaces, higher local conservation laws 2-23812
  - nonlinear partial differential equations 2-15085
  - nuclear interactions and non-potential forces, violation of time reversal invariance 2-29027
  - O(n) generator matrix elements and semisimple Lie group, Wigner coeffs. 2-33758
  - ordered products of exponential operators by similarity transformations 2-38466
  - osp(1,4) Lie superalgebra, canonical representations 2-19274
  - para-Bose operators, pair representation, graded Lie algebra calcs. 2-28755
  - prequantisation and KMS structures 2-38469
  - projective Lie algebras, representations from contraction 2-10987
  - quantum field theory, affine Lie algebra representations and boson-fermion correspondence 2-33720
  - quantum Hamiltonian associated with Lie algebra and factorised S-matrices (French) 2-23474
  - quantum Hamiltonians associated with finite-dimensional Lie algebras and factorized S matrices 2-275
  - quasigroup construction and first class constraints 2-18861
  - reductive Lie algebras SU(3) mass formula generalisation 2-11037
  - relativistic quantum mechanics, Schrodinger's eqn. and Lie-isotopic generalisation, field unification, neutron struct. model 2-29032
  - Schrodinger nonlinear equation, connection aspects 2-10651
  - single-particle system, Noether symmetry 2-3411
  - Sl(2) $\wedge$ T, central extension, irreducible representation 2-33271
  - sl(3,C), complete set of irreducible highest-weight representations 2-19273
  - sp(4N;r)(gl(4N;r)) for any integer N $\geq$ 1, Lorentz and SU(2)×U(N) anal. 2-33757
  - SU<sub>q</sub> groups, generalised coherent state theory, Lie groups 2-19282
  - SU(m/n) graded Lie algebra, irreducible representations (Chinese) 2-33762
  - SU(n) representation, triangle anomaly number 2-33753
  - SU(n/1), graded Lie algebra, irreducible representation 2-15296
  - symplectic manifold, dynamical Lie algebra, local Chevalley cohomology 2-10984
  - tempered distrib. on Heisenberg groups 2-33761
  - ten-dimensional simple Lie algebras, irreducible representations (Russian) 2-280
  - time-dependent Schrodinger eqn. symmetry, exact solns. 2-38482
  - two-dimensional gauge field with independent values of field tensor at every point 2-6967
  - two-dimensional Korteweg de Vries and Kadomtsev-Petviashvili equations 2-18913
  - unified field theories, internal-symmetry group 2-29036
  - vector field eqns., additional invariance 2-38818
  - Wigner 9j symbols and product group 2-33754
  - Yang-Baxter equation, GL(N,C)-invariant solns., representation theory 2-10981
  - <sup>3</sup>He, superfluid, dynamical Lie group model 2-1690
- life testing**
- amorphous p-i-n solar cells, stability tests 2-27701
  - carbonate fuel cell technology progress 2-22606
  - diode lasers, high power, CDH-LOC, with lifetimes >10000 h, optical recording appls. 2-44329
  - shunt diode design for solar cell arrays, planar-diffused struct., life testing 2-37360
  - solar collector durability determination, test procedures evaluation 2-18131
  - C stripper foil behaviour in <sup>127</sup>I beam 2-11338
  - C stripper foils comparative performance in Argonne FN tandem 2-11337
  - CO<sub>2</sub> sealed-off laser, gas constitution and electrode material effects on lifetime (Chinese) 2-25025
  - CO<sub>2</sub> waveguide laser, development of sealed-off long life device 2-16025
  - Co-P magnetic electroless thin films, effective life 2-41166
  - Cu<sub>2</sub>S-CDs sprayed backwall solar cells for terrestrial appls., reliability 2-37321
  - Ga<sub>1-x</sub>Al<sub>x</sub>As-GaAs heterojunction lasers, accelerated life tests, temp. interval optimisation 2-44300
  - In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> laser and LED reliability for fibre-optic communications 2-4610
  - In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub>-InP buried-crescent laser diode 1.3  $\mu$ m fundamental transverse mode and life test 2-4532
  - Na-S cell, corrosion resistant current collector, tests 2-22596
  - Ni-H<sub>2</sub> battery for spacecraft, real life test performance 2-27599
  - Ni-H<sub>2</sub> prototype cell evaluation tests 2-27601
  - Si-Ge thermoelectric generators, long term behaviour 2-27716
  - ZnCl<sub>2</sub> multiple cell battery stack, 1.7 kWh, life testing for eventual application in utility load leveling 2-52322
- lifts**
- passenger elevators, cab interior noise meas., effect of compartment velocity 2-11968
- ligand field theory see bonds (chemical); crystal field interactions; molecular energy levels**
- light**
- see also airglow; optics; sunlight; zodiacal light
  - gravitational lenses, realistic galaxy models 2-28335
- light absorption**
- see also atmospheric optics; densitometry; light transmission; optical constants; optical films; optical filters; optical saturable absorption; pleochroism; spectra
  - absolute specular reflectance, calc. of optical and dielectric constants (Czech) 2-26854
  - absorption coeff. of electrons in short range pot. as function of interaction parameter 2-15732
  - alkali halides, F-centres, spin-mixing parameter, light absorpt. effect 2-51632



**light absorption continued**

amorphous semiconductors, pressure-induced effects and phase transitions 2-45044  
 atmosphere, depend. of air to ground visibility on flight altitudes and meteorological parameters 2-32642  
 atmosphere, influence of cloud comp. and cloud geometry on absorpt. of solar radiation 2-18568  
 atmosphere, multiwavelength extinction and refr. index fluctuation meas. 2-32644  
 upper atmosphere, solar H Lyman- $\alpha$  absorpt. meas. rel. to O<sub>2</sub> density 2-38012  
 atmosphere, turbidity meas. over central North Carolina 2-14602  
 atmosphere, water vapour absorpt. rel. to determ. of extra-atmospheric monochromatic stellar magnitudes 2-53101  
 atmosphere aerosols, multiwavelength extinction meas. rel. to particle size evaluations 2-48011  
 atomic vapour near solid interface, light absorpt. and dispersion 2-11422  
 atoms, pair prod. at medium and high energies, Furry-Sommerfeld-Maue wave functions 2-11128  
 attenuator, five-element (*ti*) 2-33614  
 birefringence and dichroism theory, for biological tissue or composites of aligned particles 2-11634  
 bulk material scatt. and absorpt. coeffs. rel. to dental enamel mineralisation, nondestructive meas. method 2-22870  
 carbonaceous smokes, optical props. and mass conc. 2-2819  
 Caribbean Sea, attenuation index and colour index rel. to water dynamics (*Russian*) 2-10073  
 chalcogenide vitreous semiconds., photostructural changes, configurational model 2-12496  
 cholesteric layers, light propag. and reflection, absorption effect 2-17433  
 composition dependence of energy gap of (CdTe)<sub>1-x</sub>(In<sub>2</sub>Te)<sub>x</sub> with  $x < 0.02$  2-40780  
 conducting polymers, optical absorption (*Russian*) 2-26847  
 diamond, type IIb, electron irradiated, luminesc. excitation 2-41409  
 dilute alloys, impurity exciton band, density of states and absorpt. line profile 2-5353  
 dynamical systems with nonlinear polarisability, nonlinear excitations 2-46461  
 electrons scattered from rough surface 2-26845  
 etalons, quartz cryst., for far-IR methanol laser interferometer 2-38685  
 Gaussian light beam transmission through nonlinearity absorbing medium 2-7826  
 geocorona, Lyman  $\alpha$  absorpt. obs. rel. to solar Lyman  $\alpha$  flux determ. 2-32969  
 glancing light refraction from optically less dense absorbing media 2-34661  
 glass, absorpt. coeff. meas., error elimination using prism-shaped sample 2-994  
 glass heated by CW long-wave light, pulsed optical breakdown 2-5778  
 Hamilton eqns. of geomorphic optics for media with moderate absorption 2-39566  
 heavy ion beams, laser cooling 2-7427  
 hot electron semiconductor, electron temp. superlattice theory 2-13433  
 hydrocarbons, He-Xe laser radiation, absorpt. coeffs. 2-11637  
 II-V compounds, amorphous and cryst., thin films, prep., struct., elec. and optical props. 2-26262  
 interferometric-absorption study of cryst. growth from soln. 2-10857  
 interstellar absorption rel. to galaxy counts, selection of galaxies in Lick survey 2-14927  
 interstellar extinction law in dusty H II regions, results from stellar UVRI photometry 2-3291  
 interstellar extinction towards  $\delta$  Scorpii, rel. to C abundance and dust grains mass 2-42733  
 interstellar UV extinction, spectroscopic evidence for MgO particles 2-42734  
 Jahn-Teller systems, open-system perturbative approach, electronic relax. and optical response 2-13025  
 laser pulse properties and fast mol. relax. process investigation using combined laser-induced grating and transient-absorpt. expts. 2-16046  
 luminescent bodies, absorpt. coeff. in emission band 2-49716  
 measurement techniques for absorpt. coeffs. in cryst. materials 2-3629  
 membrane protein rotational diffusion rel. to time-dependent absorpt. anisotropy 2-9779  
 metal-dielectric tandem with rough interfaces, selective absorpt. of solar radiation (*French*) 2-9672  
 nightglow intensity, scattering and absorption effect (*Russian*) 2-48059  
 ocean water diffuse attenuation coefficient, remote sensing technique 2-32541  
 oceans, comparison of underwater radiance meas. with analytical treatments of radiative transfer eqns. 2-32540  
 one-dimensional systems, optical absorpt.: spectra, local field effects 2-13434  
 photoacoustic detection of nanosecond pulse induced optical absorpt. 2-43107  
 photographic emulsions, frequency-contrast charact. calcs., granularity (*Russian*) 2-23756  
 photothermal imaging, optical beam deflection using localised excitation source 2-181  
 polar semiconductor, multiphoton free carrier absorpt. in intense radiation field 2-41318  
 polaron crystals, optical absorption tail and Urbach rule (*Russian*) 2-26846  
 polyacetylene, doped, discrete Drude absorpt. by cond. charged soliton 2-17429  
 polymethine dyes, nonlinear light absorpt. in nanosecond and picosecond radiation field 2-39689  
 polynucleotide structure transitions, Raman negative hypochromism, resonance conditions 2-11604  
 quasar 2141+174, no self-absorption in Balmer lines 2-28579  
 quasar reddening, implications for intergalactic dust and microwave background spectrum 2-28581  
 resonant coupling phenomena of guided mode with metal surface plasma mode (*Japanese*) 2-29874  
 sapphire, photoacoustic dropping freq. 2-16175  
 semiconductor with superlattice light absorpt. in quantising mag. field 2-41335  
 semiconductors, LO phonon instability in free carrier absorpt. 2-16736  
 solar coronal structures, L $\alpha$  absorpt. rel. to H I density and temp. determ. 2-48217  
 soot, visible absorption in atmosphere 2-23105

**light absorption continued**

spectroscopy, polarised light absorption, multiple-beam interference, Fresnel losses, dichroism 2-24766  
 stratosphere, O<sub>3</sub> UV absorpt. meas. and comparison with mass spectrometer expt. 2-28131  
 thin films, multilayer, absorbing, reflectance, pot. transmittance, standing waves, symm. mirror design 2-34655  
 uniaxial crystals, refraction indices and absorpt. coeff. determ. by ellipsometry 2-38677  
 UV absorption due to off-centre impurity ions 2-13522  
 W51, H II region-molecular cloud complex, visual extinction distrib. from optical study 2-48302  
 Ag, IR absorption coeff., pseudopot. calc. (*Russian*) 2-22012  
 Ag island films, optical props., particle shape determ. 2-36723  
 Ag, surface plasmons nonradiative decay, photoacoustic obs. and optical absorpt. meas. 2-17135  
 AgI, optical props. and band struct., press. depend. 2-13448  
 Ag[Br,I] emulsions, dye sensitised, photocharge effects at millisecond range exposures 2-48815  
 As-Se glassy films, photostructural changes, photodarkening and thermal bleaching 2-12497  
 As<sub>2</sub>S<sub>3</sub>, amorphous, glass transition rel. to reversible photostruct. changes 2-26056  
 As<sub>2</sub>S<sub>3</sub>, amorphous, hot carrier relax., optical picosecond study 2-46529  
 As<sub>2</sub>Se<sub>3</sub>, crystalline, excitonic gaps and Urbach tail, absorpt. and electroabsorpt. 2-35946  
 Au, IR absorption coeff., pseudopot. calc. (*Russian*) 2-22012  
 $\beta$ -B, rhombohedral single cryst., optical props. in fundamental absorpt. range 2-41321  
 C foils, electron beam evaporation and glow discharge prep., optical absorpt. meas. 2-51728  
 CO<sub>2</sub> CW IR laser absorpt. in SF<sub>6</sub> gas mixtures, role of thermal diffusion 2-50367  
 CO<sub>2</sub> laser, high press. CW, output power, self-absorption effects 2-884  
 CO<sub>2</sub> laser light absorber, use of GeO<sub>2</sub>-ZnO-K<sub>2</sub>O glass 2-49803  
 CO<sub>2</sub> laser-target interaction, absorpt. and backscattering 2-16458  
 CaTiO<sub>3</sub>, absorption edge 2-2314  
 CdO-ZnO-P<sub>2</sub>O<sub>5</sub> (5.60 mol.%) glass, band gap determ. 2-40763  
 CdTe vacuum deposited films, optical band gap, thickness depend. 2-51731  
 CsI, highly transparent, bulk absorpt. coeff. at 10.6  $\mu$ m, laser calorimetry meas. 2-44418  
 Cu, IR absorption coeff., pseudopot. calc. (*Russian*) 2-22012  
 CuCl(Br)(I), optical props. and band struct., press. depend. 2-13448  
 Cu<sub>2</sub>S thin films, struct. and optical props. 2-51034  
 GaAs, hot carrier relax., picosecond laser pulse studies, review 2-46528  
 n-GaAs, proton implanted, IR absorpt. 2-34886  
 Ge, laser excited, enhanced direct-free-hole absorption 2-51222  
 Ge-Sb-S glasses, optical gap temp. depend., exponential absorpt. edge 2-13438  
 GeSe<sub>2</sub>, amorphous thin films, laser-induced phase transition 2-5762  
 a-GeSe<sub>2</sub>, films, laser induced oscillatory phenomena, absorption coeff., photoluminescence 2-36721  
 GeSe<sub>2</sub> glassy films, self diffusion and kinetics of annealing, optical absorption edge meas. 2-21357  
 H<sub>2</sub>S, He-Xe laser radiation, absorpt. coeffs. 2-11637  
 HO(OH)<sub>3</sub> crystal, mag. thermal and optical absorpt. props. 2-8963  
 In, granular films, electron plasma oscills. 2-13197  
 InGaAsP epitaxial layers, near-band-gap absorpt. at 1.3  $\mu$ m wavelength 2-46803  
 InP:Fe, optical and capacitance spectroscopy 2-30925  
 InSb, band-tail optical absorption saturation 2-21983  
 Ir, optical cond., optical spectra and band struct. (*Russian*) 2-21964  
 Mg<sub>3</sub>P<sub>2</sub>, photoluminescence and optical absorption 2-13555  
 NH<sub>3</sub>, CO<sub>2</sub> laser light absorpt., optothermal detector optimisation appls. 2-43100  
 Nd, phase transition, high temp., elec. cond., sp. ht., thermal cond. and light absorpt. study 2-26046  
 OCSe, photoabsorption cross-section, UV laser photolysis 2-33603  
 P sputtered, amorphous, optical absorption and struct. order 2-46802  
 p-Pb<sub>0.97</sub>Sn<sub>0.03</sub>Se, IR absorpt., 2 to 15  $\mu$ m 2-41347  
 PdH, optical absorption, density of states and dielec. function calc. 2-51540  
 Pr, phase transition, high temp., elec. cond., sp. ht., thermal cond. and light absorpt. study 2-26046  
 Rh, optical cond., optical spectra and band struct. (*Russian*) 2-21964  
 Se<sub>2</sub>-CO, photoabsorption cross-section, UV laser photolysis 2-33603  
 Si, amorphous, hot carrier relax., optical picosecond study 2-46529  
 Si film, polycrystalline, made by amorphous film laser annealing (*French*) 2-16970  
 a-Si:Ar RF sputtered films, elec. and optical props., effect of Ar 2-40736  
 Si:H, amorphous, hot carrier relax., optical picosecond study 2-46529  
 Si:H, Cl glow discharge films, amorphous, optical characts. and photoluminesc. 2-31546  
 Si:H, O sputtered films, amorphous, optoelectronic props., effect of O 2-41443  
 a-Si:H, optical absorption edge, electronic struct., thermal and struct. disorder effects 2-36719  
 Si:H amorphous film, light absorption 2-40838  
 Si:H amorphous film, photoacoustic spectroscopy, optical consts. determ. 2-2355  
 a-Si:H film, low optical absorption, annealing studies, photoacoustic spectroscopy meas. 2-36718  
 a-Si:H film, optical absorption spectra, photocurrent signal, waveguiding technique 2-36720  
 Si:P CVD layers, refr. index, absorption coeff., free carrier model 2-31577  
 Si<sub>3</sub>C<sub>2</sub>F<sub>6</sub> amorphous films, reactive RF sputtering prep., optical and comp. props. 2-51727  
 SiO<sub>2</sub>, hydroxyl-free vitreous, threshold of light breakdown 2-26855  
 TiO<sub>2</sub> electrodes, semiconducting, polycrystalline thin films, prepared by reactive sputtering of metallic Ti target, for water electrolysis using solar energy 2-6043  
 TiCl<sub>3</sub>-TiBr<sub>3</sub>, KRS-b, highly transparent, bulk absorpt. coeff. at 10.6  $\mu$ m, laser calorimetry meas. 2-44418  
 YIG:Ga<sup>3+</sup>(Al<sup>3+</sup>), nonmag. ion doped, optical consts., ellipsometric parameters 2-46531  
 Zn<sub>3</sub>P<sub>2</sub>, absorption edge, Kane three band model anal. 2-26858  
 ZnSe, uncoated, photoacoustic chopping freq. expt., surface and bulk absorpt. coeffs. 2-46553



**light absorption spectra** *see spectra*  
**light amplifiers** *see image intensifiers*  
**light attenuation** *see light absorption; light scattering; light transmission; optical dispersion*  
**light coherence**  
*see also laser beams; lasers*  
 aberration optimal balance under partially coherent illum. 2-11649  
 aerosol large particle random distrib., quadratic approx. validity range for optical propag. 2-49675  
 apodised system, two-point Sparrow resolution with phase, antiphasic partially coherent illum. 2-34680  
 confocal fluorescent microscopy, super-resolution 2-48773  
 detector, coherent, real time Fourier processing, chirped heterodyne method 2-43085  
 discrete particles, inverse scattering problems 2-49678  
 far-zone coherence significance for sources or scatterers with hidden periodicity 2-49668  
 filtering, high pass, in partially coherent light 2-49685  
 Fourier filter system, output signal, influence of partially coherent illumination and misalignment of spatial filter (*German*) 2-4459  
 free electron laser theory, quantum and classical aspects 2-20313  
 hologram copying with partially coherent light (*Spanish*) 2-49705  
 holography with partially coherent radiation 2-29791  
 image quality, no. of degrees of freedom illuminating source coherence effect 2-49689  
 intensity correlation metrology, comparative study 2-34667  
 interferometer, triangular path reversing, appl. to heat transfer studies in natural convection 2-19172  
 laser beam spatial coherence, in-resonator scatt. effect 2-49790  
 laser field temporal coherence anal. by heterodyne interferometry 2-49799  
 laser illumination detection for military countermeasures, coherence determination using interferometer fringes 2-6894  
 luminescence, theoretical aspects, review 2-46665  
 microscope polarising, with crossed polarisers, effect of temporal coherence on point spread function 2-23719  
 multilevel system, coherent radiation interaction, multiphoton processes 2-34372  
 optical instrument design, coherence effect, review 2-203  
 optical systems, conditions for effective phase adaption (*Russian*) 2-847  
 partially coherent beams, phase compensation for refr. distortions 2-34662  
 polychromatic fields, stationary, partially coherent, coherence function expansion 2-49669  
 quasi diffraction-limited optical imaging, transfer function and spread function of edge, coherence and wave aberration (*German*) 2-4458  
 resolution of optical system given coherent illumination (*Russian*) 2-24959  
 resonant medium, coherent propag. of laser pulse, appl. to isotope separation 2-34853  
 resonant nonlinear medium, coherent radiation, self effects, hysteresis 2-49838  
 reversing-wave-front interferometry of radiation from diffusely illuminated phase grating, coherence effect 2-48759  
 semiconductors, coherent light propag. theory (*Chinese*) 2-26843  
 semiconductors, coherent light propag. theory (*Chinese*) 2-26844  
 solid state pulsed lasers, mode selection, coherence props. 2-49757  
 speckle reference ESPI 2-19164  
 transition radiation from rough interfaces (*Russian*) 2-22107  
 two-photon laser, two-mode, nonclassical effects 2-39614  
 wavefront tilt compensation in inhomogeneous propagation media (*Russian*) 2-34665  
 wind velocity determination in turbulent atm., coherence analysis of optical meas. 2-42484  
 Ag-AgCl emulsion, interferograms obtained from photodichroic recording of partially coherent vibrs. 2-48758  
 AlGaAs mode-locked diode lasers, oscillation characts. of coherent ultra-short optical pulses 2-25012  
 GaAlAs DH injection laser, coherent reception, multimode effects 2-38688  
**light communication** *see optical communication*  
**light cones**  
*see also current algebra*  
 field theories, noncovariance, light-cone quantisation, scale-invariance 2-29004  
 nonAbelian gauge theory, light cone quantisation 2-10947  
 QCD, parton distrib. and decay functions 2-43293  
 virtual relativistic particles rel. to Weyl group in light-cone coords. 2-48863  
**light diffraction**  
*see also holography; optical zone plates*  
 acousto-optical effects in nonlinear photoelastic cryst. 2-13449  
 amplitude modulation of diffracted light waves caused by adjacent US beams of freq. ratio 1:n 2-11642  
 baffles, first-order design 2-11780  
 birefringent crystals, magneto-optical diffraction of light by banded domains 2-51562  
 camera shake evaluation by hand-held speckle photography 2-33656  
 cascaded apertures to reduce far IR diff. problems, geometrical diff. theory 2-28881  
 cascaded apertures to reduce far IR diff. problems, geometrical diff. theory expt. confirmation 2-28882  
 characteristics of acousto-optic diffraction for plane-polarized light (*Chinese*) 2-44192  
 cholesteric liquid crystal, Bragg diffraction, coupled wave theory 2-1401  
 circular aperture sampling theorem based on Dini series approach 2-34658  
 concentric, semi-concentric resonators with circular mirrors, reson. mode field distrib., diff. theory (*Chinese*) 2-16032  
 coronagraphs, theoretical evaluation of efficiency of external occulting systems 2-53084  
 correlated scattering objects, general, correl. functions 2-49677  
 diffractive coupling of light out of optical waveguide, depend. on depth of surface corrugation 2-20432  
 electro-optic cryst., hologram superlattices, radiation defects kinetic parameters determ. 2-2219  
 electron microscope, high voltage, astigmatism correction method using optical diff. 2-38724  
 erythrocyte, human, deformability meas. by optical diffractometric method 2-22707

**light diffraction continued**

evanescent-wave holograms, diff. efficiency charact. features for TM polarisation of reconstructing wave 2-44225  
 field phase struct. recording feasibility by acoustooptic method 2-34936  
 Fourier diffraction through tilted slit, simplified treatment 2-38390  
 Fraunhofer diffraction in inhomogeneous media with periodic stratifications (*Spanish*) 2-29783  
 Fraunhofer diffraction pattern analysis using a self-scanned linear photodiode array (*French*) 2-24941  
 Fresnel diffracted region, optical mutual intensity non-modified propag. 2-20249  
 Fresnel diffraction field, periodic amplitude and phase structures visualisation (*Russian*) 2-4454  
 Fresnel diffraction of circular Gaussian wave by Wood zone plate 2-11793  
 Fresnel diffraction patterns, irradiance distrib. evaluation 2-837  
 fundamental harmonic phase, expt. study of light wave passing through ultrasonic beam 2-34659  
 generalised ray-tracing for diffraction gratings of arbitrary form 2-11802  
 geometrical optics, boundaries of applicability 2-49671  
 geometrical optics analytical solutions with diffraction approx. 2-24937  
 grating with perfectly conducting surfaces, phenomenological model 2-49887  
 hologram, dynamic, stimulated light scatt., wavefront reconstruction, phase conjugation and diff. efficiency 2-49714  
 holographic crossed gratings, diff. efficiencies, aberration theory, ray tracing 2-39588  
 holographic storage for documents (*Chinese*) 2-20269  
 holographic wavelength shifted optical lenses, thermoplastic material diff. efficiency property appls. 2-4467  
 inhomogeneous dielectric cylinder, scatt. and diff. of EM waves 2-49928  
 integral-optical coupler, high-efficiency, on raised grid with large period 2-39736  
 interferometers, spectral composition influence (*Russian*) 2-28888  
 Lamb wave, propag., acoustic field distrib., optical probe technique 2-50034  
 laser high power system, apodisation influence on radiation characts. in geometrical focus 2-16050  
 laser high-powered system, diff. propag. code model 2-20353  
 laser recording, multiplexure, using AgCl emulsion films (*Russian*) 2-11659  
 lasers, small dia. precise alignment technique 2-7822  
 lens, off-axis, vol. holographic, conjugate diff. order 2-15969  
 linear dynamic range of optical nearfield diffraction technique for studying ultrasonic waves 2-16197  
 liquid cryst. diff. gratings, diff. maxima broadening 2-30388  
 liquid crystal phase change devices, cholesteric texture study by laser light diff. 2-8427  
 liquid-cryst., periodically modulated structs. determ. using optical diff. 2-25732  
 magnetic thin film, light diffraction by stripe domains 2-13458  
 muscle, striated, light diff. intensity rel. to incident angle 2-37621  
 muscle diffraction theory, diff. subpeaks rel. to discrete sarcomere length distrib. 2-52536  
 open resonator, diff. power losses for symm. perturbed curved reflectors 2-938  
 opto-mechanical systems of arbitrary geometry, diff. effect calc. method 2-11639  
 penumbral diffraction fields in inhomogeneous media 2-39572  
 phase diff. gratings, efficiency expression 2-49673  
 photographic material MTF determ. by means of random struct. (I) 2-39586  
 photographic material OTF meas. using holographic technique (*Czech*) 2-44216  
 polarisation filter stability, solar irradi. effect 2-16090  
 polysynthetically twinned struct., diff. pattern geometric characts. 2-45202  
 prism corner reflector, reflected light wave fine struct. 2-49674  
 Raman-Nath light diffraction by US in optically anisotropic media 2-36600  
 refracting spatial phase lattice, light diff., electrodynamic perturbation theory 2-20250  
 ring laser with two-scale amplitude corrector, diff. splitting of opposing wave freqs. 2-39677  
 rotating diff. gratings, light diff. and dispersion 2-49664  
 rotating diffuse object, speckle dynamics produced in diff. field, curvature effect 2-11643  
 scattered and diffracted energy calcs. using APART/PADE version 7 deterministic computer program 2-11782  
 self-diffraction of light in the nonsimultaneous interaction of pump waves 2-49837  
 speckle diffraction and speckle intensity meas. (*Chinese*) 2-7717  
 speckle displacement and decorrelation in diff. and image fields for small object deform. 2-842  
 speckle photography data numerical processing by Fourier transform 2-34663  
 spectrometer monochromator alignment using laser diffraction system 2-28897  
 surveying optical diffractometer, diff. patterns, from electron micrographs 2-29866  
 thick lens-hologram refr.-diff. optical system, aberration compensation 2-39719  
 thin film on metal, light diff. at impedance step, reson. effects, surface polaritons 2-27011  
 ultrasonic pulses in low MHz region used to produce structured diffraction patterns 2-20455  
 unstable resonator with cancelling edge waves 2-49784  
 by US beams having phase difference 2-11880  
 US light diff. spectra, complementarity prop. 2-49982  
 US light diffraction, reciprocity in case of non-Bragg oblique incidence 2-29914  
 US light-diffraction phenomenon, correspondence rule and reciprocity theorem 2-20247  
 US light-diffraction spectrum, Raman-Nath formula, improvement 2-20248  
 volume holograms dynamic theory, Hunter-Driffield curve characts. 2-24978  
 volume transparencies, light diff. 2-39573  
 AlGaAsSb/GaInAsSb/GaSb laser, light confinement and divergence 2-44364  
 AlGaAsSb/GaSb laser, light confinement and divergence 2-44364



**light diffraction continued**

- BaTiO<sub>3</sub> photorefractive-index gratings formed by nanosec. optical pulses 2-4468  
 Bi<sub>12</sub>SiO<sub>20</sub> photorefractive electrooptic cryst. with vol. phase hologram, light diffr. 2-11664  
 Bi<sub>12</sub>SiO<sub>20</sub> Soviet Prom and Priz spatial light modulators, test and evaluation 2-39731  
 DF pulsed chemical laser with diffr.-limited beam divergence 2-44268  
 DyFeO<sub>3</sub> crystals, with banded domain struct., light diffr. 2-51430  
 LiNbO<sub>3</sub> electrooptic crystal, laser beam wavefront inversion in anisotropic self-diffr. 2-982  
 LiNbO<sub>3</sub>:Fe, photorefractive electrooptic cryst. with vol. phase hologram, light diffr. 2-11664  
 Nd:glass amplifier, spatial energy radiation characts., diffraction and apodisation effects 2-11702  
 TeO<sub>2</sub>, angular spectra of diffracted light in strong acoustooptical interaction 2-41325

**light diffusion** *see light scattering***light dispersion** *see optical dispersion***light emitting devices**

- see also light emitting diodes; light sources; luminescent devices*  
 surface plasmon light emitter, electrically tunable, proposal 2-5754

**light emitting diodes**

- see also semiconductor junction lasers*

- Burros-type, interference effects in emission and reflection spectra 2-2361  
 DH LEDs, nonradiative lifetime and leakage losses 2-7763  
 dual fiber-optic source coupling 2-16128  
 fibre optic technology, sources and detectors, multiplexing schemes 2-34941  
 luminous intensity emitted by LED and optical fibre end, parametric representation using Legendre polynomials (*French*) 2-33611  
 optical fibre coupling using spheroid lens at fibre end 2-16130  
 optical fibre-LED alignment, built-in p-n photodiode alignment opt. for fibre-optic Si optical bench 2-16129  
 opto-isolator using interchangeable fibre-optic emitters and detectors 2-25120  
 photomultipliers gain regulation system using LED and optical fibres 2-24488  
 physics, book contrib. 2-51713  
 pump source for Nd:YAG laser, tight gap pumping cavity 2-44344  
 RF sputtering, optical monitoring using LEDs and fibre optics 2-51802  
 tide indicator using LED array 2-23123  
 VPE long-wavelength optoelectronic device fabrication and reliability for optical communication 2-4609  
 AlGaAs LED, role of buffer layers in reducing degradation 2-934  
 Au-Sn-Al metallisations on GaAlAs during LED fabrication, interfacial struct. studies 2-8713  
 GaAlAs/GaAs multilayer monolithic integration of active and passive components for integrated optics 2-11868  
 GaAlAs-GaAs multilayer structures, monolithic integration of optoelectronic, electronic and passive components 2-49945  
 Ga<sub>1-x</sub>Al<sub>x</sub>As injection light source radiation, electron-beam control 2-34759  
 GaAs LED, struct. defects, TEM studies 2-5332  
 GaAs:Si epitaxial p-n junctions, injection luminesc. 2-46773  
 GaP LED, struct. defects, TEM studies 2-5332  
 GaP, lanthanide doping influence on elec. and photolum. props., LED material 2-41391  
 GaP:In, Al<sup>3+</sup> postimplantation gettering effects in p-n junctions 2-12627  
 InGaAsP DH, electroluminescence, efficiency and kinetics 2-13573  
 InGaAsP-InP integrated LED-detector device 2-44489  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>P<sub>y</sub> laser and LED reliability for fibre-optic communications 2-4610  
 SiC LED for photographic recording system, construction principles 2-49854  
 SiC:Al<sup>3+</sup> implanted epitaxial diodes, cathodoluminescence characts. 2-17557  
 α-SiC:Al<sup>3+</sup> LED, electroluminesc. spectra fine struct. 2-46774  
 Si<sub>18</sub>Te<sub>45</sub>As<sub>29</sub>Ge<sub>20</sub>, amorphous chalcogenide IR emitting diode, optical props. 2-36705
- light filters** *see optical filters*
- light intensifiers** *see image intensifiers*
- light interference**
- see also light interferometers; light interferometry; Moire fringes*  
 adsorbed films, submonolayer, thickness detect. and meas. using optical reflectance technique 2-23710  
 channel divider for fibre-optics communication lines with spectral multiplexing 2-39743  
 diffraction of arbitrary form, generalised ray-tracing 2-11802  
 gas, CARS, interference effects and resonance 2-16064  
 laser beams, independ., interf., QED theory (*Russian*) 2-39602  
 lasers, small dia. precise alignment technique 2-7822  
 LED, Burros-type, interference effects in emission and reflection spectra 2-2361  
 liquid crystals, light propag. perpendicular to characteristic axis, fringes appearance 2-16558  
 multiple-beam interference fringes, visibility and intensity distribution 2-840  
 optical system alignment operation using gas laser, focusing by interf. pattern 2-49865  
 phase transform. interference optical reflecting material medium for visualisation of pulsed laser radiation 2-20390  
 photographic material MTF determ. by means of random struct. (t) 2-39586  
 polychromatic fields, stationary, partially coherent, coherence function expansion 2-49669  
 speckle patterns interference order, meas. by two-dimensional white-light interferometer 2-53093  
 speckle photography data numerical processing by Fourier transform 2-34663  
 spectroscopy, polarised light absorption, multiple-beam interference, Fresnel losses, dichroism 2-24766  
 uniaxial crystals, interference field of plane EM waves 2-49665  
 vapours and gases, anomalous dispersion, band-shift meas., random errors 2-16420  
 wedge, interferential, reflected and transmitted fringe shapes 2-11635  
 LiNbO<sub>3</sub>:Fe, dynamic gratings, phase transformation of coherent light beams meas. 2-11804  
 Si:Ge, ion irradi. damage, complex-refr. index profiles 2-5654

**light interferometers***see also light interferometry*

- bistable optical devices using Fabry-Perot interferometer, communication and processing appls. (*Spanish*) 2-39687  
 cholesteric liquid-crystal Fabry-Perot interferometer, amplitude and polarisation characts. 2-43079  
 compensator initial adjustment angle selection in automatic interferometer 2-48761  
 diamond turning machine, computer numerical and interferometer controlled, aspherical lens, fabrication 2-7901  
 diplexer, Martin-Puplett interferometer, Gaussian optics and design 2-29887  
 double-beam interferometer with background suppression, stack effluent spectral meas. 2-27753  
 electro-optic oscillator, high freq., using integrated interferometer 2-49940  
 electronic speckle pattern interferometer, for turbine part vibr. testing 2-2635  
 electronic Talbot interferometer using two Fourier images 2-214  
 Fabry-Perot, high performance multipass vernier tandem, construction and alignment 2-10858  
 Fabry-Perot, with nonuniform transmission, laser polar diagram dynamic control (*Russian*) 2-4538  
 Fabry-Perot and open resonators at microwave and millimetre wave frequencies, 2-300 GHz, review 2-33620  
 Fabry-Perot bistable interferometer with nonlinear feedback (*French*) 2-43075  
 Fabry-Perot etalon, finesse definition 2-43080  
 Fabry-Perot filter, narrow gap, tunable, with servo-control, astronomical appls. 2-14779  
 Fabry-Perot interferometer, converging light beam illum., interf. max. position shift 2-10860  
 Fabry-Perot interferometer, output wavelength meas. of HCN CW subMM laser (*Chinese*) 2-44327  
 Fabry-Perot interferometer, two photon double beam optical bistability theory 2-34856  
 Fabry-Perot interferometer max.-likelihood optimisation for thermospheric temp. and wind meas. 2-52945  
 Fabry-Perot interferometer operating in converging light beam, separator plate optimum thickness 2-48764  
 Fabry-Perot interferometers, nonlinear properties and optical bistability, review 2-33622  
 Fabry-Perot interferometers, use at IR and microwave frequencies 2-33619  
 Fabry-Perot interferometers as narrow-band filters for observing the Sun 2-14781  
 Fabry-Perot interferometers for use at submillimetre wavelengths, review 2-33621  
 Fabry-Perot long fibre interferometers 2-23711  
 Fabry-Perot reflecting interferometer, for laser wavelength meas. 2-44362  
 fibre interferometer, single mode, phase modulation induced by controlled vibr. 2-11834  
 fibre interferometer sensor systems, diode laser source limitations 2-11837  
 fibre interferometer using digital phase tracker 2-10856  
 fibre optic, Fabry-Perot interferometric sensor 2-7871  
 fibre optic interferometric sensors, research update 2-11825  
 fibre ring interferometer, nonreciprocity effect 2-48765  
 fibre ring interferometer, phase shift fluctuations between opposite waves 2-34924  
 fibre-optic current meas. sensor, using Sagnac interferometer (*French*) 2-43001  
 fibre-optic interferometer, accurate phase-meas. system 2-4606  
 Fizeau interferometer for imaging through fog 2-28889  
 FM radiation analysis on optical band using four-mirror interferometer 2-10862  
 fringe counting interferometer with Al coated cube corner prisms 2-33624  
 guided-wave interferometer using periodic structures 2-4614  
 gyro based on fibre ring interferometer, sensitivity limiting factors 2-49926  
 holographic interferometer, aberration and technological requirements calc. 2-49710  
 IKAP-2 interferometer for astron. mirror performance testing 2-10861  
 IKP-2 interferometer for testing flatness 2-48763  
 intensity interferometer, design and potential for stellar astronomy 2-53107  
 interferometers with (3×3) directional couplers, analysis 2-7873  
 interferometric dilatometer and specimen holders for thermal expansion coeffs. meas. (*Japanese*) 2-19081  
 IR interferometer-spectrometer, appl. to Earth-atmospheric IR background meas. 2-48055  
 JET plasma electron density meas. using far IR interferometer, waveguiding of IR radiation 2-40184  
 laser, double exposure, heat transfer to and from solid surfaces meas. appl. 2-16226  
 laser, dynamic and dosimetric characterisation of irradiated solids (*Rumanian*) 2-19174  
 laser, dynamic dosimetric characterisation of irradiated solids (*Rumanian*) 2-19174  
 laser, skin friction meter for wind tunnel flow meas. 2-20789  
 laser interferometer, appl. to study of Earth crust deform. 2-52957  
 laser interferometer, time resolution meas. with laser plasma 2-15215  
 laser interferometer for high temperature isothermal length changes over long time periods 2-38684  
 laser interferometric measurement and computerized evaluation of ultrasonic displacements 2-19162  
 liquid level laser interferometer, water level change meas. 2-19168  
 methanol far-IR laser interferometer, quartz cryst. etalons 2-38685  
 Michelson, asymmetric, for direct determ. of far IR opt. consts. of semiconductor 2-15245  
 Michelson, real-time active vibration controller 2-33629  
 Michelson, using CO<sub>2</sub> laser, shot start movement appl. 2-19175  
 Michelson, wavelength meas. of I<sub>2</sub> stabilized He-Ne laser for length standard 2-6824  
 Michelson interferometer for performing Fourier-transform photoacoustic spectroscopy 2-33640  
 Michelson interferometer output phase depend. on absorbing beam splitter thickness 2-6895



**light interferometers continued**

- Michelson stellar interferometer, prototype 11 metre instrument design 2-53088
- Michelson stellar interferometers, active control 2-53087
- multibeam interferometer, phase and amplitude characts. 2-43078
- multiple-beam interferometer, spread function calc. method 2-48760
- non-linear interferometers, beamprofile hysteresis change kinetics 2-3614
- nonlinear ring interferometer, symmetrically pumped, directionally asymmetric bistability 2-43077
- nonlinear ring interferometer for Sagnac effect enhancement 2-34828
- optical phase structures analyser 2-48754
- optical scanning interferometer for measuring surface flatness 2-6828
- optically bistable interferometer, time-evolution using adiabatic elimination 2-44376
- particle sizing interferometer for hygroscopic smokes in laboratory and field environments 2-23609
- phase measurement systems for adaptive optics 2-23716
- polarisation interferometer, versatile 2-19169
- polarisation interferometer with double-refracting prisms, flow obs. around sphere and behind shock wave 2-3616
- radial-grating shearing interferometer, multiple order, wavefront sensing in coherent radar system 2-6897
- selective interferometer design, physical criteria 2-38682
- shock oscillations on spiked body obs., flow visualisation using laser interferometer 2-20786
- single-mode fibre Mach Zehnder interferometer sensor configs. for AC current meas. 2-6877
- small vibration measuring interferometers 2-23714
- spectral line contours, automatic plotting 2-23736
- split-band interferometer using cross-correlation scheme to extend sensitivity 2-23713
- three-mirror retroreflector interferometer, fringe value 2-38681
- triangular path reversing interferometer, appl. to heat transfer studies in natural convection 2-19172
- two pass Fabry-Perot interferometer and photoelectric digital spectral resolution 2-48793
- two-dimensional white-light interferometer, review of appls. 2-53093
- very long baseline amplitude interferometer, prototype 2-53086
- AlGaAs mode-locked diode lasers, oscillation characts. of coherent ultrashort optical pulses 2-25012
- CO<sub>2</sub> laser interferometer, vibration compensated, heterodyne for plasma diagnostics 2-48756
- GaAs etalon, bistable device, external off and on switching 2-49811
- GaAs etalon, intrinsic bistable optical device, regenerative pulsations 2-44372
- Si Fabry-Perot interferometer appl. as variable coupler, uniform transmission of FIR lasers 2-3613
- Si Fabry-Perot interferometer, optical tuning by pulsed Nd:YAG 1.06  $\mu$ m laser 2-33618

**light interferometry**

- see also *holographic interferometry*; *Moire fringes*
- absorption-interferometric study of cryst. growth from soln. 2-10857
- accelerometer calibration, vibration standard appl. 2-33491
- achromatic grating interferometer appls., emulsion refr. index effect 2-19166
- amplitude/phase measurement by phase-modulated single sideband detect., integrated optics appl. 2-6898
- ASDEX Tokamak plasma, electron cyclotron emission meas. using polychromator and Michelson interferometer 2-35323
- aspheric surfaces centration by rotary scan interferometer 2-7911
- aspherical surface testing with interferometer using digital information processing 2-1048
- aspherical wavefront shape deviation determ. in lateral-shearing interferometer 2-10859
- astrometry, appl. of interferometry and imaging to stellar parallaxes and detect. of dark companions 2-53062
- astrometry, interferometric and space techniques 2-53061
- astronomical object undistorted by atmosphere, image reconstruction from speckle interferograms 2-53098
- automatic evaluation of interference patterns 2-48755
- axicon, cone and figure error test method 2-20434
- azoxy-4,4'-di-undecyl- $\alpha$ -methylcinnamate, liq. cryst., smectic A to smectic-C phase transition 2-21312
- binary star interferometry at high ang. resolution, appls. and limitations 2-53106
- VY Canis Majoris, interferometric meas. of flattened circumstellar envelope 2-53255
- cardiac activity, human, at apex region, laser speckle interferometric obs. 2-2917
- coherent light source alignment using spherical confocal Fabry-Perot interferometer (German) 2-33623
- computer processing of interferograms, fringe midpoint determ. from automated intensity scanning, accuracy assessment 2-33627
- computerised image processing for interactive interferometric fringe analysis, biomedical appls. 2-213
- contactless motion measurement system for surface transport vehicles (German) 2-43076
- cyanocetyl biphenyl, homeotropic alignment in cylindrical geometry, interferometry study 2-16584
- V1489=NML Cygni, interferometric meas. of flattened circumstellar envelope 2-53255
- diamond-turned plane single-point surfaces, roughness and scatt. characterisation 2-10784
- dielectric film refractive index determ. using immersion liqs., ellipsometry and multiple-beam interferometry methods 2-10848
- diffraction, spectral composition influence (Russian) 2-28888
- digital two-beam interferometers, computer controlled, automatic interferogram anal., three-interferogram method (German) 2-33626
- dimension meas., linear, below 0.1 mm, metrological provisions 2-28836
- diode lasers, single-mode, in interferometer systems, place noise 2-3612
- discharge tube, light refraction, Abel inversion 2-16454
- discrete photodetectors in interferometric systems 2-48762
- displacement meas., laser radiation divergence effect (Russian) 2-3558
- displacement measurement, three-dimens., sandwich holography and regulated path length interferometry 2-48753
- double exposure speckle photography, extension of measurable displacement limits 2-48673
- double speckle interferometry, out-of-plane displacement disturbance on in-plane displacement (Chinese) 2-43074
- dynamic interferometry techniques for optical path length meas. 2-19167

**light interferometry continued**

- ear, inner, basilar membrane vibr. meas. using electronic speckle pattern interferometry 2-42114
- ejection of material from shocked surface, thin foil vel. meas. with Doppler laser interferometer 2-23715
- ethylene propylene copolymer-methylvinylpyridene metal halide complexes, phase struct. and equilib. (Russian) 2-45533
- Fabry-Perot interferometer, resonator eqn. relating Fresnel number, finesse and number of beam transits 2-19165
- Fabry-Perot interferometer to determ. light source real line width (Bulgarian) 2-19170
- Fabry-Perot wavemeter, computer controlled 2-19171
- far IR Fourier transform spectroscopy, phase-error correction 2-38705
- fast deformation velocity measurement using laser Doppler velocity interferometer 2-44693
- fibre, polarisation mode dispersion meas., spatial technique based on visibility max. position meas. in interferometer 2-44469
- fibre interferometer using piezoelectric polyvinylidene fluoride compensator 2-49877
- fibre-optic differential interferometry, sensitivity to systematic alignment errors 2-19163
- Fourier spectrometer interferograms, absolute path-difference joining 2-15247
- garnets, ion implanted, stress profile determ. 2-25910
- giant stars, diameter meas. by two-telescope interferometry at optical wavelengths 2-28445
- glass, type ZF-7, nonlinear refr. index meas. using Jamin interferometer (Chinese) 2-25088
- goniometer radiation source selection 2-29859
- heterodyne spatial interferometry at 11  $\mu$ m, results and future uses 2-53254
- high angular resolution stellar interferometry, IAU Colloquium 50, College Park, Maryland, USA (1978 August 30 to September 1) 2-48404
- image plane holograms, interferometric spatial carrier formation with an extended source 2-20267
- imaging through fog with Fizeau interferometer 2-28889
- incoherent IR spatial interferometry, appl. to resolution of late-type stars 2-53089
- integrated optical data preprocessor, 16-channel, based on Mach-Zehnder interferometer config., fabrication 2-44490
- integrated optical force and stress sensor 2-6843
- intensity correlation metrology, comparative study 2-34667
- intensity interferometry, review of astronomical achievements and potential 2-53107
- intensity/phase autocorrelator for ultrashort optical pulse meas. 2-29868
- IR spatial interferometry, astronomical potential 2-53105
- Lambda metre resolution enhancement using novel freq. metre 2-15216
- laser, piezoceramic shifters characts. (Polish) 2-3617
- laser field temporal coherence anal. by heterodyne interferometry 2-49799
- laser fusion target gas press. monitoring using nondestructive interferometric method 2-33628
- laser illumination detection for military countermeasures, coherence determination using interferometer fringes 2-6894
- laser modes phases anal. by interferometry 2-28634
- laser speckle interferometry, for strain anal. (Korean) 2-12113
- laser speckle interferometry for surface contour determ. of three-dimens. objects 2-10854
- laser target interaction obs., high-speed cinematography and interferometry developments 2-20354
- lenses, crystalline, animal, focal length determ. using Ronchi interferograms 2-2864
- CW Leonis (IRC +10216), interferometric meas. of flattened circumstellar envelope 2-53255
- light speed anisotropy, laser interferometry expts. 2-3376
- line shape analysis for Fabry-Perot interferometer measurements 2-43847
- magnetised plasma, sound speed interferometric determ. using time delayed correlation techniques 2-20926
- methyl iodide, liquid, vibr. relaxation, US velocity, light scatt. study 2-16721
- microvibration meas. by heterodyne speckle interferometry 2-12116
- mirror control by Pb(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub> electrostrictor, interferometric meas. of parabolic deform. 2-998
- moire interferometry method, for in-plane and out-of-plane displacement meas. 2-50209
- moire topography methods (Japanese) 2-15142
- multiple-wedge wavemeter for pulsed laser absolute wavelength meas. 2-34815
- neuron activity investig. by optical methods (Russian) 2-47753
- objective wave aberration evaluation, shearing interferogram meas., wavefront reconstruction and reference sphere selection 2-20260
- optical fibre diameter variation display technique 2-39755
- optical field mapping, automated, using single-mode fibre interferometer 2-34899
- PET melt-spun fibres, struct., radial diversification (Polish) 2-36928
- phase and amplitude meas. by single sideband homodyne detect. 2-44439
- phase measurement using interferometer with filamentary spatial filter 2-38683
- phase modulation interferometry, modulator drift direct detect. and correction (French) 2-3615
- photoresist film thickness meas., multiple-beam interferometry and microscopy appl. 2-48766
- plasma, magnetic field, impurity probe spectroscopy meas. 2-16508
- plasma diagnostics by laser beams (Hungarian) 2-44903
- plasma etching, end-point detection with laser interferometry 2-19173
- PLT Tokamak, electron cyclotron emission obs. using fast-scanning Michelson interferometer 2-35322
- pulsed SAWs, investigation using wideband differential interferometry 2-29955
- quadrature fringe meas. error determ. and correction 2-10853
- quality surface deviation meas. by interference microscope 2-48770
- quantum limits of bandwidth of spatial optical signals (Russian) 2-23712
- quartz fused spheres, interferometric meas. of diameters 2-38632
- reversing-wave-front interferometry of radiation from diffusely illuminated phase grating, coherence effect 2-48759
- rotation angle measurement, using interferometer 2-48683
- Sagnac effect enhancement using nonlinear ring interferometer 2-34828
- shear-wave velocity meas., surface motions in shocked materials determ. 2-15217
- shock tube expt., density profiles of boundary layers predicting 2-20791
- shock-tube research, diffraction displacement interferometer appls. 2-216



**light interferometry continued**

- solar limb prominences, mass motions determ. from Fabry-Perot interferograms 2-53236
- spatial filtering for interferogram processing 2-29787
- speckle image reconstruction problem, wave-front correl. function and deterministic wave-front aberration influence 2-18714
- speckle interferometric and moire derivation in-plane displacement and strain meas. 2-10855
- speckle interferometry, ang. dependence of atmospheric turbulence effect 2-53110
- speckle interferometry, expt. (*German*) 2-33625
- speckle interferometry, modifications for astronomical reconstruction 2-53112
- speckle interferometry, optimum exposure time and filter bandwidth 2-53109
- speckle interferometry, quantification of atmospheric turbulence effects on imaging and pseudo-imaging systems 2-52932
- speckle interferometry, signal to noise ratio 2-53108
- speckle reference ESPI 2-19164
- spectrometer with Fabry-Perot multiplex for photoelectric recording of star and nebulae spectra 2-18708
- stack effluent spectral meas. using double-beam interferometer 2-27753
- stellar interferometry at high ang. resolution, appl. to study of single objects in visual region 2-53104
- stellar speckle interferometry, object intensity distrib. determ. method 2-42608
- stress analysis of deep beam, by laser interferometry 2-16272
- surface flow phenomena, study using Fizeau interferometry of oil films 2-25453
- surface measurement in three dimens., optical techniques 2-6835
- three-dimensional contour line order meas. for arbitrary object, time sequentially coded gratings, implementation 2-19084
- transversal shifts and rots., wide-range meas. by free-propag. speckling interferometry 2-33497
- two-layer lightguide fibres, microinterferometric meas. of refr. index 2-20425
- vibration analysis using holography combined with speckling 2-34697
- visual binary stars, interferometric obs. (*Russian*) 2-53335
- W51, H II region-molecular cloud complex, optical interferometric study 2-48302
- wave front folding interferometric image reconstruction through the turbulent atm. 2-42465
- wind tunnel testing, surface recession meas. using projected fringe technique 2-19086
- X-ray aspheric mirror, wavefront error, point diff. interferometric testing 2-6896
- Ag-AgCl emulsion, interferograms obtained from photodichroic recording of partially coherent vibrs. 2-48758
- Ar<sup>+</sup> laser, actively mode-locked, charact. obs. using scanning interferometer (*Chinese*) 2-20291
- CO<sub>2</sub> laser with resonator containing selective diff. interferometer, emission spectrum 2-34722
- CaCO<sub>3</sub>, calcite crystals, growth and etching, multiple beam interferometry of cleavage surfaces 2-16611
- Cu/CuSO<sub>4</sub>/Cu system, natural convection and steady state conc. polarisation by laser interferometry 2-20511
- GaAlAs DH diode laser wavefront meas. and anal. using interferometers 2-25049
- GaN/PAs lasers, transient freq. and temp. variation, Michelson interferometric study 2-49748
- KH<sub>2</sub>PO<sub>4</sub>-KD<sub>2</sub>PO<sub>4</sub>, mixed cryst., light scatt. by polarization fluctuation 2-41344
- LiNbO<sub>3</sub> channel waveguide interferometric modulator 2-49894
- LiNbO<sub>3</sub>:Ti diffused channel waveguide, surface-index profile meas. using interferometric technique 2-20406
- Nd:YAG laser rod internal strains, optical anal. using interferometry 2-34811
- Si, lattice temperature meas. during pulsed laser annealing by time-depend. reflectivity 2-38650

**light meters** see *photometers*

**light modulation** see *optical modulation*

**light polarisation**

- see also *birefringence; optical rotation; photoelasticity; polarimetry*
- acousto-optical correlator, time integrating, based on light polarisation processing 2-24965
- alkali metal halides, F centre luminesc. uniaxial stress induced polarisation, exptl. studies 2-17519
- anisotropic structure objects, scattered light polarised components indicators 2-34657
- atmosphere, effect of rotational Raman depolarisation on Rayleigh-scatt. optical depth 2-14603
- attenuator, five-element (*it*) 2-33614
- binary stars, linear polarisation and radiation intensity of oblique and precessing scatt. accretion discs 2-6643
- birefringence meas., polarised light technique 2-48471
- $\mu$  Cephei, late-type variable star, linear polarisation obs. in (1981) 2-38206
- $\alpha$  Ceti (Mira), late-type variable star, linear polarisation obs. in (1981) 2-38206
- chiral liquid cryst., texture, optical study 2-16580
- chloronaphthalene, soln., picosec. 2-photon absorpt. spectra, polarisation depend. 2-49449
- cholesteric liquid crystal in three-layer plate, light transmission, amplitude and polarisation characts. 2-36664
- cholesteric liquid-crystal Fabry-Perot interferometer, amplitude and polarisation characts. 2-43079
- circularly polarised light scattering in laser Doppler anemometry 2-39568
- clouds, depolarisation and multiple scatt. meas. by lidar system 2-32643
- conical reflector coating, performance in annular resonator 2-939
- corner reflectors, polarisation props. 2-16088
- crystal surface light refl. with change of polarisation (*Russian*) 2-13445
- degenerate four-wave mixing, two-dimens. vectorial theory, phase-conjugate image beam 2-958
- diphenyl, soln., picosec. 2-photon absorpt. spectra, polarisation depend. 2-49449
- double-refracting prisms for polarisation interferometer, flow obs. around sphere and behind shock wave 2-3616
- dye laser, variable polarisation, in liq. cryst. matrix 2-16026
- dye solutions, light amplification anisotropy, tensor description 2-34747

**light polarisation continued**

- electrooptic guided-wave device for general polarisation transforms. 2-16100
- ellipsometer, photometric, with phase and amplitude modulation, luminous flux intensity calcs. (*French*) 2-10844
- evanescent-wave holograms, diff. efficiency charact. features for TM polarisation of reconstructing wave 2-44225
- ferroelectrics and ferroelastics, domain struct. and phase transitions, microscopic obs. method 2-2208
- fibre, elliptical core, polarisation mode dispersion meas. by spatial technique 2-44469
- fibre, single-mode, birefr. wavelength depend. 2-11820
- fibre isolator, single mode, toroidal config. 2-25118
- fibre optics for physical field spatial distrib. meas., polarisation optical time domain reflectometry 2-16139
- fibre optics lightguide, long multimode, polarisation saturation 2-34927
- fibre-optic current meas. sensor, using Sagnac interferometer (*French*) 2-43001
- fibre-optic rotation sensors, unpolarised reciprocal operation 2-1042
- fibres, single-mode, anisotropic, eigen polarisation mode existence 2-11831
- fibres, single-mode, anisotropic, multiply perturbed, polarisation behaviour 2-44470
- fibres, single-mode, backward Rayleigh scatt. polarisation props. meas. and anal. 2-34912
- fibres, single-mode, birefr., forward-backward transmission, polarisation-sensitive meas. interpretation 2-25132
- fibres, single-mode, birefr., polarisation holding 2-39757
- fibres, single-mode, birefr. anal. and meas. using backscatt. method 2-25133
- fibres, single-mode, polarisation representation using Stokes parameters 2-39747
- fibres, single-mode, step-index, birefr. and polarisation characts. under elastic deforms. 2-16123
- fibres, single-mode output polarisation control 2-16121
- fibres, single-polarisation, single-mode 2-7865
- filter stability, solar irradi. effect 2-16090
- fluorescence, conc. depolarisation, orientation factor effects 2-43991
- Fourier-transform-spectrometer, polarising property calc. using Mueller matrix formalism (*German*) 2-38694
- fringe counting interferometer with Al coated cube corner prisms 2-33624
- p-GaAs, photon drag effect, polarisation, spectral and temp. characts. 2-1950
- glasses, optical and laser, self-induced polarisation change of 1.06  $\mu$ m laser radiation (*Chinese*) 2-25062
- globular clusters, polarisation of light scattered by dust particles 2-28518
- grating with perfectly conducting surfaces, phenomenological model 2-49887
- guided-wave devices, polarisation-independ. 2-11815
- n-heptane:coronene single cryst., luminesc. polarization, 4.2K 2-4348
- HH 103 associated with refl. nebula NGC 7129, visible polarisation obs. 2-53345
- HO139-68 optical counterpart, polarisation obs. rel. to identification as AM Herculis star 2-38247
- integrated microoptical polarisation-insensitive switches/modulators, new approach 2-16099
- interferometer, polarisation, versatile 2-19169
- interstellar linear polarization in immediate solar neighbourhood 2-42729
- IR image conversion using cholesteric liq. crystals, polarisation method (*it*) 2-39762
- kinoform, polarisational, complex 2-4470
- kinoform production, polarisation-holography method 2-29802
- Landau transitions of two-dimensional electron gases, spectroscopy 2-31580
- laser beam direction determ., of polarisation meas. of reflected beam 2-20347
- laser Doppler anemometer backscatter meas., walls, two-phase flows, refl. suppression by polarisation 2-25452
- laser radiation generation, metal target influence 2-49806
- liquid polarising filter operating in visible, UV regions, high damage threshold 2-25104
- liquids, optical props., laser meas., student demonstration 2-48447
- $\alpha$  Lyrae, stellar polarisation study with CERGA interferometer 2-6592
- magnetised plasma, EM wave propag. precessional rotation and freq. shift 2-30308
- MBBA, nematic liquid cryst., Rayleigh line intensity, scatt. ang. depend. validity of de Gennes formula 2-26929
- metal, light reflecting, surface contrib., use in Van der Waals interaction 2-26842
- metals, photoemission, polarisation depend. 2-41493
- methanol pumped by isotopic CO<sub>2</sub> lasers, submillimetre laser line obs. and assignment 2-44253
- microscope polarising, with crossed polarisers, effect of temporal coherence on point spread function 2-23719
- molecular gases, hyper-Raman effect, review 2-49426
- monochromatic light beam displacement parallel to itself without polarisation change 2-44196
- multimode light guide, mech. effects conversion into light signals 2-20410
- multimode optical waveguide, light polarisation modulation 2-16112
- multimode twisted fibres, light propagation, Verdet const. (*Russian*) 2-20427
- multiple reflections in the theory of the Faraday effect 2-24942
- nonlinear spectroscopy of degenerate two-level gas in mag. field, polarisation effects (*Russian*) 2-23739
- optical fibre, birefringent single-mode, degree of polarisation 2-34910
- optical fibre, polarisation maintenance 2-1034
- optical glass, striae visualisation by polarisation shearing method 2-20388
- optically active crystals, of middle system, azimuth, ellipticity, phase difference and dichroism determ. 2-51547
- Orion Nebula stars 2-6647
- particle light scattering, systematic studies, particle shape 2-24934
- path difference of polarised rays, objective meas. methods 2-15211
- phase-conjugate mirrors obtained by reson. degenerate four-wave mixing, polarisation characts. 2-44404
- phenanthrene cryst., nonlinear polariton effects 2-41389
- photoelastic light polarisation modulator (*Hungarian*) 2-34880
- Poynting vector in dissipative media, temporal and spatial behaviour, refr. from vac. into medium 2-11633
- prism corner reflector, reflected light wave fine struct. 2-49674



**light polarisation continued**

- Raman-Nath light diffraction by US in optically anisotropic media 2-36600  
 red dwarf stars, intrinsic polarisation meas. 2-10430  
 reflected light from non-ideal interface boundary 2-24943  
 reflection gratings, lossless, general modal theory 2-24940  
 reflection of light waves from uniaxial anisotropic media, longitudinal and polar config. (*Japanese*) 2-29873  
 reflectors, corner cube and flat, Mueller matrix comparison 2-838  
 rough surface scattering layer, spatial polarisation characs. of object field (*Russian*) 2-39546  
 S 106, bipolar nebula, polarimetric obs. 2-33111  
 Savart plate measurements reduction procedure for polarisation survey 2-32860  
 scattering of light by free electrons into second harmonic 2-34653  
 scheelites, thermoluminescence polarisation, rel. to thermal decay of intrinsic hole centres 2-13576  
 Si, electron bombarded, nuclei optical polarisation and excited triplet states 2-2162  
 single-mode low dispersion fibre transmission, practical versus theoretical max. transmission bandwidth 2-7864  
 single-mode optical fibre, 111 cm., polarisation behaviour fluctuations 2-20421  
 single-mode optical fibres, polarisation parameters meas. 2-44449  
 solar corona, polarisation obs. via K-coronameter rel. to active regions electron density meas. 2-6538  
 spectroscopy, Doppler-free intracavity, of CH<sub>4</sub>, freq. stabilisation of He-Ne laser 2-925  
 spectroscopy, nonlinear, gas relaxation consts. in mag. field, coherent polarisation method 2-43106  
 spectroscopy, polarised light absorption, multiple-beam interference, Fresnel losses, dichroism 2-47666  
 spectroscopy of condensed phases, cross relax. effect 2-19188  
 spun single-mode fibres, birefr. and polarisation mode-dispersion 2-1022  
 symbolic math. system for polarised light problem soln. 2-839  
 T Tauri stars, Ca II and H $\alpha$  emission correl. with polarisation 2-33008  
 tolane crystal, carbazole (anthracene) (naphthalene) doped, host-guest interaction, polarised spectra 2-22049  
 transition radiation from rough interfaces (*Russian*) 2-22107  
 twilight, zenith polarization and colour ratio 2-37967  
 two-level atom, polarisation props. of reson. fluoresc. 2-11431  
 unchangeable polarisation conditions for single-mode fibre in pulse were transmission 2-34932  
 uniaxial crystals, polarised light self-interaction (*Russian*) 2-16058  
 BE Ursae Majoris (PG 1155+492), unique cataclysmic variable-like object, photometry and spectrum 2-38188  
 wavefront inversion for light with spatially inhomogeneous polarization in a four-wave combination interaction 2-11754  
 waveguides, inhomogeneous, anisotropic, light propag. anal., generalised WKB method 2-16103  
 zodiacal light in antisolar hemisphere, stability and symmetry 2-42647  
 Ag-AgCl emulsion, interferograms obtained from photodichroic recording of partially coherent vibrs. 2-48758  
 Ag<sub>2</sub>O, mag. field enhanced exciton luminescence, polarisation and intensity 2-46754  
 As<sub>2</sub>S<sub>3</sub>, vitreous, electroabsorpt., polarised light anisotropy 2-46544  
 As<sub>2</sub>Se<sub>3</sub> (AsSe), vitreous, electroabsorpt., polarised light anisotropy 2-46544  
 Ba, nonlinear two-electron ionisation process, depend. on laser radiation polarisation 2-49347  
 Bi<sub>12</sub>SiO<sub>20</sub>, photorefractive electrooptic cryst. with vol. phase hologram, light diffr. 2-11664  
 CO<sub>2</sub> laser with annular resonator, performance with polariser in annular leg 2-25037  
 CdF<sub>2</sub>, two phonon Raman scatt. spectra, polarisation depend. 2-26927  
 CdSe, absorption coeff. in region of fundamental absorption edge, strong EM wave effect 2-51600  
 Co polycrystals, FCC and HCP, thermal emission spectra, circular polarisation 2-13506  
 Co<sub>2</sub>, lattice vibr., polarised far IR reflection spectra study 2-17473  
 Cs complex, Cs<sub>2</sub>(TCNQ)<sub>3</sub>, mol. vibr. and charge transfer states, polarised reflectance study 2-36637  
 CsMnF<sub>6</sub>, weak ferrimagnetism, polarisation spectroscopic study (*Russian*) 2-26931  
 Cu<sub>2</sub>O, mag. field enhanced exciton luminescence, polarisation and intensity 2-46754  
 Fe, thermal emission spectra, circular polarisation 2-13506  
 GaAs crystals and solid solns., hot electron luminescence 2-46712  
 p-GaAs, polarisation of hot photoluminescence spectra, role of split-off subband 2-17542  
 GaAs-type semiconds., electron-nucleus spin system, optical orientation in inclined mag. field 2-35981  
 GaN:Zn, photoluminesc. and electroluminesc., light polarisation 2-26980  
 GaSe<sub>2</sub>, x-ray, edge luminesc. spectra, optical and microwave study 2-46751  
 Ge:Ga, impurity band, antiferromag. ordering, photoluminescence study 2-2340  
 Ge:Sb(As)(Ga), electron-hole liq., photoluminesc. polarisation in mag. field study 2-35952  
 Ge<sub>2</sub>S<sub>3</sub>, vitreous, electroabsorpt., polarised light anisotropy 2-46544  
 GeSe<sub>2</sub>, polarised IR and Raman spectra 2-26903  
 He-Ne Zeeman lasers, mirror anisotropy effects, Jones matrix representation 2-39623  
 In three-level system, laser-induced polarisation anisotropy 2-49314  
 p-InP, polarisation of hot photoluminescence spectra, role of split-off subband 2-17542  
 K atom, three-photon ionisation, polarization effects 2-11445  
 KBr, optically pumped F centre, spin-memory loss, luminesc. obs. 2-46716  
 KCl, holograms recorded through F $\rightarrow$ X conversion, diffr. efficiency, X-centre anisotropy effect 2-39596  
 KCl:PbCl<sub>2</sub>, X-ray irradiat., H, V<sub>2x</sub> centres, polarised luminesc., absorption, emission bands 2-46745  
 KH<sub>2</sub>PO<sub>4</sub>-KD<sub>2</sub>PO<sub>4</sub>, mixed cryst., light scatt. by polarization fluctuation 2-41344  
 K<sub>1-x</sub>Li<sub>x</sub>Ta<sub>1-y</sub>Nb<sub>y</sub>O<sub>3</sub>, ferroelec. phase transition, symm. breaking impurity effect, Raman scatt. study 2-26837  
 (K<sub>2</sub>Na)<sub>2</sub>Al<sub>2</sub>Si<sub>2</sub>O<sub>10</sub>·10 H<sub>2</sub>O phillipsite single cryst., Raman polarisation spectra, vibr. analysis 2-36611  
 LiF:Mg, colour centres, photoluminesc. polarisation 2-22083  
 LiNbO<sub>3</sub>:Fe, photorefractive electrooptic cryst. with vol. phase hologram, light diffr. 2-11664

**light polarisation continued**

- LiNbO<sub>3</sub>:Fe crystal, photorefractive effect, nonfield contrib. 2-9117  
 (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, ferroelectric, internal vibr., polarised Raman spectrum 2-36653  
 Nd:YAG solid state laser, polarisation charact. of emission 2-20308  
 Nd<sup>3+</sup>:YAG CW laser radiation static polarisation-modulation charact. control using intracavity electrooptic modulator 2-34766  
 Ni, thermal emission spectra, circular polarisation 2-13506  
 NiI<sub>2</sub>, lattice vibr., polarised far IR reflection spectra study 2-17473  
 Pt, adsorption of gases at atm. press., visible optical reflectance study 2-40669  
 Se, amorphous, electroabsorpt., polarised light anisotropy 2-46544  
 Si:B, impurity bound localised holes antiferromag. ordering, polarised luminesc. in mag. field 2-36701  
 Si:H, amorphous, electroabsorpt., polarised light anisotropy 2-46544  
 SiO<sub>2</sub>-Si film-substrate system, polarised light refl. characs. 2-21962  
 Tb complex, terbium(III) (L-ammonia)isopropionidiacetic acid, hydrate, circularly polarized luminesc. 2-41411  
 Zn<sub>3</sub>P<sub>2</sub>, birefringence, dichroism, absorption edge, anisotropy 2-26862  
 ZnS:Al, single cryst., polarisation of electrolum. 2-22094  
 ZnS:TM<sup>3+</sup>, fluorescence and spontaneous pol. from nonequivalent Tm<sup>3+</sup> centres 2-51665  
 ZrSe<sub>3</sub>, polarisation depend. refl. spectra 2-2307  
 ZrTe<sub>3</sub>, polarisation depend. refl. spectra 2-2307

**light propagation**

- see also atmospheric light propagation; guided light propagation*  
 adaptive optics, anisoplanatism 2-44206  
 aerosol large particle random distrib., quadratic approx. validity range for optical propag. 2-49675  
 cholesteric and twisted nematic absorbing liq. crystals, light propag. 2-7716  
 cholesteric layers, light propag. and reflection, absorption effect 2-17433  
 dielectric twisted media, light propag. 2-49662  
 dispersive media propagation, application of Laplace transform numerical inversion 2-49672  
 far IR surface wave, electromagnetic study of grating-enhanced excitation 2-39567  
 Fresnel diffracted region, optical mutual intensity non-modified propag. 2-20249  
 Gaussian optical beam in random med., intensity fluctuations correlation function 2-39571  
 gravitational and EM radiation nonlinear effects on light propag. 2-87  
 holography and Fourier optics, wavelength var., operator algebra description 2-34690  
 inhomogeneous media with radial refr. index, appl. to laser beam thermal blooming 2-34664  
 lamelliform materials, opt. props. and characts. 2-21961  
 laser beam intensity fluctuation reduction by defocusing with extended lens 2-4452  
 laser beam propagation in anisotropic scatt. media, small-angle scatt. approx. soln. limiting cases 2-39564  
 laser electronics and systems, book 2-48413  
 laser radiation, spatial and temporal field structure turbulent fluctuations 2-29784  
 laser radiation propag., intensity fluctuations correl. function (*Russian*) 2-34666  
 liquid crystals, light propag. perpendicular to characteristic axis, fringes appearance 2-16558  
 metals, optics, undergraduate level introduction 2-3350  
 ocean surface layer suspended matter, vertical distrib. hydrophysical parameters and hydro-optical characts. (*Russian*) 2-10052  
 on paradoxes in wave propagations and interpretation of them by optical systems 2-24944  
 partially coherent beams, phase compensation for refr. distortions 2-34662  
 plane screen system, solar wave propag., matrix theory (*Chinese*) 2-29780  
 polarised light characteristic noise after traversal of resonant gas (*Russian*) 2-16421  
 random medium with large-scale discrete inhomogeneities statistical moment of wave field, Monte Carlo method 2-844  
 scintillation saturation for light beam propag. in turbulent medium 2-24947  
 selfinteraction of optical beam under kinetic cooling conditions 2-34864  
 semiconductors, coherent light propag. theory (*Chinese*) 2-26843  
 semiconductors, coherent light propag. theory (*Chinese*) 2-26844  
 special topics in optical propagation, conference, Monterey, California, (1981 April 6 to 10) 2-28611  
 target image quality, thermally bloomed atm. influence 2-49676  
 thermal self-interaction of light pulse in turbulent medium, Monte Carlo method 2-34863  
 underwater light, Green's function calc. of effects of air-water interface on optical propag. 2-32539  
 wavefront tilt compensation in inhomogeneous propagation media (*Russian*) 2-34665  
 CO<sub>2</sub> laser propagation in fog, pulse shape and delay 2-24946  
 SiO<sub>2</sub> ion implanted, complex refractive index, light wave propagation 2-46532

**light propagation in plasma**

- collective absorption of high intensity laser radiation, nonlinear effects 2-8318  
 discharge tube, light refraction, Abel inversion 2-16454  
 electrodeless discharge, AF and RF oscills. prod., external light effect 2-16455  
 graded-density plasma with colloidal net, second harmonic generation 2-1309  
 harmonics, visible and UV, in CO<sub>2</sub> laser prod. plasma 2-20869  
 laser beams, high power, filamentation lossless suppression 2-44861  
 long plasma column, stimulated Brillouin backscatter level obs. 2-25558  
 ponderomotive forces effect on wave dispersion and second harmonic light emission in laser-prod. plasma 2-8319  
 relativistic electrons, non-coherent light scatt., plasma effects (*Russian*) 2-40118  
 relativistic filamentation of laser beams in plasma 2-50411  
 underdense plasma, laser beam filamentation 2-50412

**light reflection**

- see also mirrors; optical films*  
 baffles, first-order design 2-11780  
 baffles, nonimaging, specular, radiation transfer via refl. 2-11783  
 beam splitter, preselected intensities system, using stepped thickness reflecting layers 2-49860



**light reflection continued**

- bistability due to mutual self-action of counterpropagated light beams 2-985
- boundary of isotropic and anisotropic media, lateral shift of light rays (*Japanese*) 2-29781
- chiral liquid cryst., texture, optical study 2-16580
- cholesteric layers, light propag. and reflection, absorption effect 2-17433
- contours of constant principal angle and constant principal azimuth in the complex  $\epsilon$  plane 2-39563
- crystal surface light refl. with change of polarisation (*Russian*) 2-13445
- diffraction of arbitrary form, generalised ray-tracing 2-11802
- diffuse reflection problem, asymptotic separation of ang. variables in optically thick inhomogeneous atmosphere 2-6533
- distributed feedback bistable optical device, end refl. effect on switching threshold 2-7830
- Earth surface reflectance, correction for solar irradiance changes during meas. 2-18602
- education, Huygens construction, laws of reflection and refraction, derivation 2-48453
- Fourier diffraction through tilted slit, simplified treatment 2-38390
- Fourier-transform-spectrometer, polarising property calc. using Mueller matrix formalism (*German*) 2-38694
- Fresnel reflection at index matched planar boundary 2-49661
- Fresnel reflection halo lasers, planar laser action of 2D disc-shaped active material 2-20339
- frustrated-total-reflection acoustic sensing method 2-20496
- ground reflectance, aerosol background contrib. 2-23107
- guided wave reflection and transmission calc. method 2-44446
- interface boundary, non-ideal, reflection coeff. 2-24943
- interface reflection computation, calculator program 2-49667
- isotropic solids interface, Raman scatt. in total refl. condition 2-5720
- laser beam direction determ., of polarisation meas. of reflected beam 2-20347
- laser beam reflected with reversal of wave front, mean field 2-44363
- laser beams, anal. of target signatures for laser altimeters 2-48010
- laser Doppler anemometer backscatter meas., walls, two-phase flows, refl. suppression by polarisation 2-25452
- laser projection microscope, power self-regulation and negative image form. in illuminating beam 2-43081
- LED, Burrus-type, interference effects in emission and reflection spectra 2-2361
- lens, centering techniques anal. by reflection or refraction 2-4571
- liquids, optical props., laser meas., student demonstration 2-48447
- magnetic bubbles, submicron diameter, characterisation techniques 2-51443
- MBBA, nematic, surface deform. and walls in cond. regime 2-8429
- metal particles, subwavelength dimens., EM wave reflection, field intensities 2-46522
- methyl iodide, liquid, vibr. relaxation, US velocity, light scatt. study 2-16721
- microscope image improvement, antiflex system incorporation 2-3618
- monochromatic light beam displacement parallel to itself without polarisation change 2-44196
- multiple reflections in the theory of the Faraday effect 2-24942
- perpendicular incidence photometric ellipsometry of anisotropic surfaces 2-10846
- phase reflection gratings, higher-order modes 2-1012
- phase transform. interference optical reflecting material medium for visualisation of pulsed laser radiation 2-20390
- photographic emulsions, frequency-contrast charact. calcs., granularity (*Russian*) 2-23756
- plane-parallel stack, incoherent reflectance and transmittance,  $2 \times 2$  matrices 2-836
- plasma etching, end-point detection, opt. methods 2-17755
- polystyrene, glassy, craze and fatigue resist., surface treatments, protective coatings, light refl. obs. 2-47168
- prism corner reflector, reflected light wave fine struct. 2-49674
- Rusch's piles with rectilinear birefringence, nonorthogonal eigen vibr. (*French*) 2-11638
- satellite solar power stations, reflectivity aspects (*Italian*) 2-27563
- scattering layers, optical characts. determ. from diffuse refl. and transmission 2-11636
- sea surface backscattering, theory of multiple scatt. of collimated irradiance 2-32538
- semiinfinite layer of scattering medium, optical props. and reflection 2-15955
- single-mode, multiple-scatt. noise 2-39759
- snow, spectral reflectance in LANDSAT MSS bands 2-10084
- snow spectral albedo, effect of grain size and snowpack water equivalence on satellite visible and near IR obs. 2-23040
- stress field analysis using caustics 2-25330
- stress intensity factors evaluation by reflected caustics, error analysis 2-25334
- sum rules for the reflectivity coefficients 2-49670
- thin films, optical consts. meas., using variable-angle reflectometer 2-43073
- thin-film-synthesis algorithm for refr. index realisation and Airy summation 2-49663
- uniaxial anisotropic media, reflected TE and TM waves, longitudinal and polar config. (*Japanese*) 2-29873
- wedge, interferential, reflected and transmitted fringe shapes 2-11635
- Ag-rhodamine B adsorbed layer, surface plasmons, light reflection study (*French*) 2-2360
- $\text{In}_2\text{O}_3$ -( $\text{SnO}_2$ ) film, transparent conducting, transport and optical props. 2-8899
- KrF laser radiation, amplified phase conjugate refl. 2-25070
- Mg mirror surface, dynamic hologram recording, wavefront inversion 2-872
- $\text{SiO}_2$ -Si film-substrate system, polarised light refl. characts. 2-21962
- $\text{SnO}_2$ -( $\text{In}_2\text{O}_3$ ) film, transparent conducting, transport and optical props. 2-8899
- $\text{Yb}_2\text{O}_3$  film on Cr, refractive index thickness depend., reflection ellipsometry study 2-46807

**light reflection spectra** *see reflectivity; spectra*

**light refraction**

- see also birefringence*
- achromatic grating interferometer appls., emulsion refr. index effect 2-19166
- atmosphere, abnormal refraction phenomena 2-6436

**light refraction continued**

- atmosphere, astron. refr. calc. at Mizusawa Latitude Observatory, Japan 2-10168
  - atmosphere, astronomical refr. calc. 2-10167
  - atmosphere, astronomical refr. calc. by means of continued fractions 2-6430
  - atmosphere, characts. of astron. refr. in Northern Hemisphere 2-6431
  - atmosphere, effects of local temp. field disturbances on geodetic-astronomical obs. with Danjon astrolabe (*German*) 2-9907
  - atmosphere, effects of refraction on tangential coordinates in astrometry (*French*) 2-6544
  - atmosphere, effects of urban heat islands on astronomical refr. 2-6428
  - atmosphere, elimination of terrestrial refr. from geodetic meas. using multiwave or single wave methods 2-3094
  - atmosphere, investigation of refr. in trigonometrical levelling traverses 2-9918
  - atmosphere, multiwavelength extinction and refr. index fluctuation meas. 2-32644
  - atmosphere, origin of vars. of astronomical refr. 2-6429
  - atmosphere, present state and future possibilities of levelling refr. research 2-3092
  - atmosphere, refraction effects in photogrammetry 2-3093
  - atmosphere, remote sensing of optical  $C_N^2$  by multidimensional anal. of stellar scintillation 2-32647
  - atmosphere, research into astronomical refraction 2-6427
  - atmosphere, statistical estimation of influence of environment on geodetic obs. 2-6306
  - atmosphere, vertical refraction effect in geodetic networks, models 2-37728
  - atmospheric IDM meas., refractive angle determ. accuracy 2-32638
  - atmospheric IDM measurements at Uppsala, turbulence effects 2-6435
  - atmospheric refraction coeffs., numerical filtering 2-6433
  - atmospheric vertical refraction angle from angle-of-arrival variance 2-6434
  - diffraction of arbitrary form, generalised ray-tracing 2-11802
  - discharge tube, light refraction, Abel inversion 2-16454
  - education, Huygens construction, laws of reflection and refraction, derivation 2-48453
  - eye, photorefractive study of dark focus and refraction 2-14240
  - fibre index profile meas. by refr.-ray method, refr. near-field scanning 2-11818
  - glancing light refraction from optically less dense absorbing media 2-34661
  - glass, tempered, surface stress meas. using laser biascope 2-50216
  - lens, centering techniques anal. by reflection or refraction 2-4571
  - liquids, optical props., laser meas., student demonstration 2-48447
  - partially coherent beams, phase compensation for refr. distortions 2-34662
  - polarised medium, light refraction 2-23436
  - Poynting vector in dissipative media, temporal and spatial behaviour, refr. from vac. into medium 2-11633
  - starlight deflection as quasi-classical refraction effect, solar case 2-53072
  - terrestrial refraction determ. accuracy from reciprocal zenith angles 2-6432
  - thick lens-hologram refr.-diff. optical system, aberration compensation 2-39719
  - thin prism refraction, direct method of polariton spectroscopy 2-2209
  - uniaxial crystals, refraction indices and absorpt. coeff. determ. by ellipsometry 2-38677
  - CuBr, light refraction in exciton part of spectrum (*Russian*) 2-13441
  - Ge acoustooptic refractive IR chopper 2-11796
- light scattering**  
*see also Brillouin spectra; opalescence; Raman spectra; Rayleigh scattering; stimulated scattering*
- 2-variable approach, multimode optical fibres appl. 2-20416
  - absorption and light scatt. of stationary and nonstationary incident radiation, diagram technique 2-43917
  - acetone, molecular light scatt. investigations (*Russian*) 2-17501
  - acid, soln. charac. 2-45006
  - acousto-optic scattering in near-Bragg region, Feynman diagram approach 2-11632
  - Advanced X-ray Astronomical Facility mirror samples, visible light scatter meas. 2-14775
  - aerosol large particle random distrib., quadratic approx. validity range for optical propog. 2-49675
  - aerosol pollutants in Brookhaven National Laboratory, New York boundary layer 2-9713
  - aerosol scattering at Mauna Loa 2-18536
  - aerosol volumetric scattering at South Pole 2-32562
  - airflow, unstable, single-particle velocity and trajectory meas. of microscale inhomogeneities 2-50341
  - amorphous materials, inverse scatt. problem, soln. using ergodic theory 2-51613
  - anisotropic light scattering in inhomogeneous atmosphere, asymptotic separation of ang. variables in optically thick layer 2-6533
  - anisotropic structure objects, scattered light polarised components indicators 2-34657
  - anisotropy of correlations near critical points 2-34660
  - N Atlantic nepheloid layer temporal variability due to storms, light scatt. anal. 2-10040
  - atmosphere, aerosol scatt. coeff. in Denver's emission plume rel. to warming and cooling effects 2-18156
  - atmosphere, intercomparison of integrating nephelometer meas. of particle scatt. coeff. 2-9751
  - atmosphere, laboratory meas. of propag. in turbid media 2-29786
  - atmosphere, multiple scatt. effects on optical propag. in fog and clouds 2-32640
  - atmosphere, Over-the-Horizon optical scatter propag. meas. in marine boundary layer 2-32639
  - atmosphere, visible spectrum contrast transmittance modelling from optical quantities meas. 2-32645
  - atmosphereless bodies surfaces, radiative transfer, inclusion of light scatt. 2-32878
  - atmospheric imaging, desert dust spectral effects 2-14607
  - atom, multiphoton scatt., time depend. 2-43879
  - atomic fluids, two-body dynamics as probed by interaction induced light scatt. 2-31513
  - atomic gases, collision induced depolarised light scatt., asymptotic line shape 2-1290
  - baffle design, surface scatt. theories BRDF meas. 2-11778



## light scattering continued

- benzene, molecular light scatt. investigations (*Russian*) 2-17501  
 binary liquids, light scatt. intensity, quenching near and above critical point 2-41376  
 binary stars, linear polarisation and radiation intensity of oblique and precessing scatt. anisotropy discs 2-6643  
 birefringence and dichroism theory, for biological tissue or composites of aligned particles 2-11634  
 book, progress in optics 2-48410  
 bulk material scatt. and absorpt. coeffs. rel. to dental enamel mineralisation, nondestructive meas. method 2-22870  
 butadiene-styrene block copolymer solns., light scatt. investig. (*Russian*) 2-22041  
 carbon tetrachloride, molecular light scatt. investigations (*Russian*) 2-17501  
 ceramics, counterpoled, polarisation and elastic vibr. distribns. laser probe meas. 2-36505  
 chain dynamics, steady-flow Newtonian intrinsic viscosity and dynamic struct. factor 2-5259  
 cholesteric liquid crystals, dynamic light scatt. 2-39703  
 circularly polarised light scattering in laser Doppler anemometry 2-39568  
 clouds, depolarisation and multiple scatt. meas. by lidar system 2-32643  
 clouds, time-dependent multiple backscattering 2-28203  
 coherence in inverse scattering from discrete scatterers 2-49678  
 composite particles micron-sized, surface waves and radiative props. 2-1115  
 corneal scattering characts., saline soln. immersion effect 2-22722  
 correlated scattering objects, general, correl. functions 2-49677  
 creeping wave radiation on micrometer size conducting fibres 2-4451  
 cyclohexane vapour, homogeneous nucleation, double-diaphragm shock tube study 2-35656  
 cylinders, transparent, non-absorbing, long, forward light scatt., approx. method validity domains 2-24939  
 D<sub>2</sub>O laser Thomson scattering and sub-MM wave heterodyne receiver meas. for Alcatraz C Tokamak 2-40178  
 dense systems of isotropic particles, light scatt., dipole induced dipole model 2-30376  
 devil's staircase, light scatt., dielec. and elastic props. 2-41314  
 diamond-turned plane single-point surfaces, roughness and scatt. characterisation 2-10784  
 diffusion-scattered coherent illumination, statistical props. (*Russian*) 2-20256  
 dispersive media, multiphoton parametric impurity-centre light scatt. (*Russian*) 2-13435  
 dust loading of Ar plasma in thermal blow-down expt., Mie scatt. single particle counting 2-20934  
 Dynel solutions, in dimethylformamide and dimethylsulfoxide, aggregation studies 2-25714  
 E. coli, migrating chemotactic bands, quasielastic light scatt. obs. 2-9784  
 echelle and holographic grating comparison for scatt. and spectral resolution 2-864  
 Enskog equation, kinetic model, modification 2-50354  
 ferroelectric transitions, mode coupling phenomena, light scatt. studies 2-31396  
 fibre centring in silicone coatings using forward-scatt. light 2-1032  
 fibres, single-mode, backward Rayleigh scatt. polarisation props. meas. and anal. 2-34912  
 fibres, single-mode, birefr. anal. and meas. using backscatt. method 2-25133  
 fibres, single-mode, long-range backscatt. expts. 2-34917  
 fibres, single-mode, multiple-scatt. noise 2-39759  
 film, time reversal symmetry in light scatt. by excitations 2-31579  
 finite Benard system crit. fluctuations, unavoidable pretransitional macroscopic fluid motion 2-50265  
 flow light scatt., shear rate effect, theoretical var. 2-35236  
 fluid mixtures of correlated atoms and molecules, spectral distrib. of scatt. light, stochastic theory 2-26928  
 Freon-113, scaled equation of state near phase separation boundary 2-35637  
 gas, laser induced convection instability, light scatt. on laser snow particles 2-35158  
 gas, local temp. and density meas. by coherent anti-Stokes light scatt. method 2-20809  
 gases, optical cooling, collisions effect 2-44816  
 gauge theory for spin-spin interaction, appl. in laser expts. 2-3681  
 glass, BK-8, nonlinear scattering of laser radiation by absorbing microinhomogeneities 2-4545  
 glass, scattering, type MS13 layers, anisotropic struct., natural light scatt. indicatrices 2-15957  
 guided wave scattering by waveguide roughness, three-dimens. treatment 2-34889  
 Heisenberg antiferromagnet, light scatt. from surface 2-2224  
 p-n-heptyloxybenzoic acid, smectic C and nematic phases, dynamic scatt. with storage 2-16572  
 hygroscopic smokes, optical particle size meas. in laboratory and field environments 2-23609  
 ice, I<sub>h</sub> single cryst. translational spectra, interaction induced light scatt. 2-36584  
 incommensurate phase, light scatt., dielec. and elastic props. 2-41314  
 incommensurate phase, light scatt. and dispersion of susceptibilities (*Russian*) 2-46630  
 incommensurate phases, dielectric and light scattering spectroscopy, review 2-46627  
 inhomogeneous dielectric cylinder, scatt. and diff. of EM waves 2-49928  
 inhomogeneous media, Bojarski exact inverse scatt. theory 2-49636  
 interstellar dust in globular clusters, polarisation of scattered light 2-28518  
 inverse optical scattering, encoding of information 2-7726  
 isobutyric acid-water mixtures, phase separation, light scatt., hydrodynamic effects 2-36661  
 isotropic scattering in finite thick cylindrical medium exposed to a laser beam 2-44193  
 Jupiter atmosphere, scatt. coefficient in Great Red Spot from 0.6 to 1.1  $\mu$ m spectrophotometry 2-6565  
 Kanecaron solutions, in dimethylformamide and dimethylsulfoxide, aggregation studies 2-25714  
 Landau transitions of two-dimensional electron gases, spectroscopy 2-31580  
 laser beam propagation through hazes, fogs and clouds, significance of higher-order multiple scatt. 2-48002  
 laser beam spatial coherence, in-resonator scatt. effect 2-49790

## light scattering continued

- laser Doppler anemometer backscatter meas., walls, two-phase flows, refl. suppression by polarisation 2-25452  
 laser light scattering assay of particulates in polymer solutions 2-36657  
 laser optical system error sensing using scattered light 2-49764  
 laser radiation multiple scattering by large-scale discrete inhomogeneities, statistical characts. of intensity fluctuations 2-846  
 laser turbidity meter, two-parameter, using through-flow cell (*Russian*) 2-10930  
 latex dispersed in water, laser beam anisotropic scatt., rel. to two-dimens. theory 2-7719  
 lecithin liposomes, struct. and aggregation stability as judged by light scatt. 2-14208  
 liquid crystals, nematic and cholesteric, deformation mechanism under electric and mag. fields, light scatt. 2-35382  
 liquid dielectrics, EHD convection by laser light scattering 2-12241  
 liquid drop, light scatt. by sound 2-39570  
 liquid free surface, optical recording of vibrations, thermal motion effect 2-44197  
 liquid-vapour system, interface region, light scatt. due to density fluctuations 2-2297  
 liquids, light scatt., local field model (*Russian*) 2-13503  
 lithium formate, parametric scatt. spectrum second-order vibrs. 2-46611  
 MBBA, nematic liquid crystal, elastic constants, light scatt. meas. 2-50734  
 MBBA nematic liquid crystal, Frank elastic const. ratio evaluation by intensity meas. of scattered light 2-45312  
 2-methyl-2,4-pentanediol, liq. and supercooled liqs., light scatt. obs. 2-51609  
 micellar diffusivity at low NaCl conc., light scatt. meas. 2-40580  
 microemulsion, single-phase system, crit. behaviour 2-14013  
 microemulsions, water-in-oil, light scatt. photon correl. and neutron scatt. obs. 2-41945  
 microflora analysis, by laser turbidity meas. (*Russian*) 2-14361  
 microprocessor-controlled scatt. instrum. for BRDF measurements from visible to far IR 2-10851  
 molecular crystals, Raman scatt. of light by polaritons, active spectroscopy (*Russian*) 2-5679  
 molecules, combination scatt. and stimulated conformational transformations, three-term model (*Russian*) 2-20139  
 monomode fibre, Rayleigh backscattered signals obs. using multichannel photon counting technique 2-16118  
 Mueller scattering matrix, inequalities between elements 2-49659  
 multimode optical fibres, length dependence of joint losses 2-44457  
 multiple scattering of waves by correlated distributions, review 2-15074  
 multispectral extinction data, relations between analytic inversion formulae 2-20254  
 nematic liquid crystal, director fluctuations, light scatt. (*Russian*) 2-25735  
 nematic liquid crystal, thin films, mol. orientation, nonlinear light scatt. 2-50538  
 nematic liquid crystals, elastic constants determ. from noise meas. of scattered laser light 2-45313  
 neuron activity investig. by optical methods (*Russian*) 2-47753  
 nightglow intensity, scattering and absorption effect (*Russian*) 2-48059  
 nonequilibrium media, reson. scatt. 2-39599  
 nonstationary light field, effect of seawater scatt. indicatrix form 2-10074  
 nucleosomes hydrodynamical props. 2-37485  
 ocean, laboratory meas. of propag. in turbid media 2-29786  
 oceans, comparison of underwater radiance meas. with analytical treatments of radiative transfer eqns. 2-32540  
 OHMBBA, nematic, optical determ. of viscoelastic props. 2-50733  
 optical fibre, single-mode losses, optical freq. domain reflectometry study 2-39741  
 optical fibre backscatter meas. using optical time domain reflectometer 2-20429  
 optical fibre high resolution measurement of diameter variations by backscatter method 2-25123  
 optical fibre mode power distrib., with fluctuation in physical parameters and appl. to backscattering signal anal. 2-20419  
 optical surface roughness, measurement by scattered coherent light 2-7910  
 optical waveguide, glass sputtered coating, imperfections, light scatt. study 2-20408  
 out-of-field radiation estimation, simplified technique 2-11779  
 particles, systematic studies, particle shape 2-24934  
 pentanediol, depolarised light scatt. and viscosity meas., spectral linewidth meas. 2-22038  
 pentanediols, liq. and supercooled liqs., light scatt. obs. 2-51609  
 phase fluctuations, Fourier spectroscopy, 1 in 10<sup>15</sup> resolution 2-28907  
 photoacoustic spectroscopy with light scattering samples 2-15231  
 photoreceptor cell static and dynamic props., light scatt. as sensitive probe 2-26275  
 photothermal modulation of Mie scattered light, aerosol particle absorption spectroscopy 2-6438  
 Photothermal spectroscopy of scattering media 2-43091  
 physical optics, far field inverse scatt. using Radon theory and polarisation information 2-20251  
 planet satellites surfaces radiative transfer, phase curve anal., light scatt. effect 2-32879  
 plasma diagnostics by laser beams (*Hungarian*) 2-44903  
 PMMA, electrical aging, light scatt. study 2-36526  
 polar crystals, electron-phonon interaction in luminescence and light scatt. 2-46690  
 polarization of light scattered into second harmonic by free electrons 2-34653  
 poly( $\gamma$ -benzyl-L-glutamate), liq. crystn. spherulites, light-scattering study of deform. 2-45023  
 poly(p-phenylene benzobisthiazole), rigid macromolecule, depolarised dynamic light scatt., rot. relax. time 2-15928  
 poly- $\gamma$ -benzyl-L-glutamate, rodlike textures, orientation in electric field, light scatt., birefringence 2-35381  
 poly-n-phenylene terephthalamide solns., light scattering, liq. crystn. state transition (*Russian*) 2-35661  
 polyacrylamide gels, dynamic light scatt. under hydrostatic pressure 2-17928  
 polyesters, thermotropic, liq. cryst. props., main chain flexible spacers effects 2-16560  
 polyethylene films, spherulite deformation, light diff. and X-ray obs. (*Russian*) 2-31764



## light scattering continued

- polymer A-polymer B-solvent ternary systems, apparent second virial coeff., thermodynamic interaction parameters determ. 2-12714  
 polymer films, spectral and structural props., speckle decorrel. created by small angle scatt. light 2-8454  
 polymer gels, Brillouin light scatt. 2-22039  
 polymers, rodlike, thermodynamic and rheological props. 2-50222  
 polystyrene, atactic, in bulk state near glass transition, light scatt., photon cond. spectroscopy 2-4429  
 polystyrene, diffusion coeff., conc. dependence at various mol. weights and temps, light scatt. study 2-21337  
 polystyrene, in tert-butylacetate solns., osmotic virial coeff., light scatt. meas. 2-5204  
 polystyrene, monodisperse, dissolved in cyclohexane, dynamic meas. as chain dimensions below  $\theta$ -temp. 2-40249  
 polystyrene, soln., extremely high mol. wt., props. 2-12452  
 polystyrene in tetrahydrofuran, effect of chain overlap on translational diffusion 2-5257  
 polystyrene in water, appl. of quasioelectric light scatt. spectroscopy, multiple scatt. suppression by homodyne coincidence technique 2-15237  
 polystyrene solutions, second virial coeffs. with low angle laser light scatt. 2-16749  
 polystyrene/poly(vinylmethyl ether) blends, thin films, phase separation 2-26062  
 polyvinylindazole carboxylic esters, soln., macromolecules, dipole moments, equilib. flexibility (*Russian*) 2-44159  
 quartz, light scattering studies, historical review 2-28638  
 quartz, synthetic, plate-like defect obs. by light scatt. tomography 2-25865  
 quasioelectric scattering, biochem. and biology appls., review, book contrib. 2-27964  
 quasioelastic light scatt. from cryst., nonequilib. thermodynamic approach 2-31515  
 quasioelectric light scatt. spectroscopy, multiple scatt. suppression by homodyne coincidence technique 2-15237  
 quasihomogeneous scattering media, IR radiation monochromatisation 2-15958  
 random inhomogeneous medium containing large spherical particles, optical radiation intensity fluctuations 2-845  
 randomly inhomogeneous media, instrumental functions of photoelec. schlieren devices 2-39724  
 resonance light scatt., intensity correl. functions, interference effects (*German*) 2-39410  
 resonantly scattered light, anomalous correlator 2-44381  
 retinal rod outer segments, flash-bleached, birefr. and forward light-scatt. meas. 2-42090  
 reviews (*Russian*) 2-24936  
 rough surface scattering layer, spatial polarisation characts. of object field (*Russian*) 2-39546  
 scattering atmosphere, flames, radiation laws for small particles 2-20255  
 scattering from thermally excited surface phonons and magnons 2-2304  
 scattering layers, optical characts. determ. from diffuse refl. and transmission 2-11636  
 seawater light scattering and attenuation indices, fluctuations 2-6392  
 self-focusing in small-angle scatt. for small optical inhomogeneity obs. 2-34858  
 semiconductor, surface roughness characterisation using light scatt. 2-15206  
 semiinfinite layer of scattering medium, optical props. and reflection 2-15955  
 serum albumin, bovine, appl. of quasioelectric light scatt. spectroscopy, multiple scatt. suppression by homodyne coincidence technique 2-15237  
 serum albumin, bovine, aq. solns., struct. props. 2-22698  
 single fibre light scatt. matrix, expt. determ. 2-24933  
 single microscopic particle discrimination, wide-angle laser scatt. intensity distrib. analysis 2-841  
 single-mode, multiple-scatt. noise 2-39759  
 single-mode fibres, meas. of backscatter factor 2-29878  
 sodium borosilicate glass, variable thickness layer, spectral and angular characts. 2-46527  
 solar energy, direct irradiance models, review, evaluation and improvement 2-37189  
 solid-state plasma, inelastic dynamic light scatt., non-local approach 2-2301  
 solids, light scatt. spectra, surface and size effects, book contrib. 2-51605  
 solids and liquids, light scatt. by surface vibrs. 2-2305  
 speckle pattern behaviour, static and dynamic, operator algebra description 2-20252  
 sperm motility study apparatus, microprocessor anal. of scatt. laser light 2-47779  
 spheres, two, depend. light scatt., microwave analogue expt. results 2-15943  
 spherical particle, weakly anisotropic, light scatt., dyadic Green's function soln. 2-34656  
 stellar atmospheres, polarisation study of  $\alpha$  Lyrae with CERGA interferometry 2-6592  
 stratified spheres, light scatt. intensity function calc. algorithms 2-20246  
 stray light, in laser Raman spectrometer, testing method (*Chinese*) 2-33641  
 stray light simulation in optical systems with the GUERAP III 2-11640  
 surface EM wave dispersion and attenuation in far IR, inelastic light scatt. meas. 2-4615  
 surface periodic gratings, guided wave scatt., perturbation field theory, normal-mode anal. 2-39562  
 suspended particles in high-purity liquids, conc. meas. by laser ultramicroscopy 2-10863  
 o-terphenyl, supercooled liq., homodyne light beating spectroscopy 2-31521  
 Thomson scattering in laser plasma interaction expts., 20-psec time scale 2-50450  
 Thomson-scattering subMM-wave ion temp. diagnostic using pulsed D<sub>2</sub>O laser at 385  $\mu$ m 2-1348  
 toluene, molecular light scatt. investigations (*Russian*) 2-17501  
 tomography, lattice defects, characterisation of crystals (*Japanese*) 2-17499  
 triphenylphosphite, near symmetric top mols., liqs. quasioelastic light scatt. spectra 2-43922  
 troposphere aerosol scatt. and particle size distrib., spectral anal. of meas. 2-18547  
 turbulence parameter determ. using laser method 2-42487  
 twilight atmosphere, optical phenomena 2-23111

## light scattering continued

- underwater light, Green's function calc. of effects of air-water interface on optical propag. 2-32539  
 underwater light, multiple scattering of collimated irradiance 2-32538  
 upwelling radiance over water, meas. and calc. as function of altitude 2-18576  
 veiling glare reduction methods compared for ophthalmic applications 2-18196  
 viscoelastic systems, hydrodynamics and VH light scatt., statistical mech. approach 2-30081  
 well-baffled optical systems, stray-radiation level estimation formulae 2-11781  
 Ar, collision-induced light scattering spectral moments, density depend. 2-29539  
 Ar dense liquid, depolarised light scatt. intensity, pot. effect 2-31436  
 Au-plated sandpaper, BRDF meas. 2-10852  
 CdS, highly excited, light scatt. by density fluctuations 2-51612  
 CdS, small-angle light scatt. by dislocations, green luminescence 2-46628  
 CdS:Al<sub>2</sub>O<sub>3</sub>(SnO<sub>2</sub>) coating prep. by spray pyrolysis, solar cells appl. 2-51042  
 Cu mirrors, optical effects of energetic Cu-ion irradiat. 2-25942  
 CuCl, resonant photon-photon scattering and approx. spherical symm. 2-1833  
 GaAs photoexcited electron-hole plasmas, collective modes 2-12983  
 GaAs-(AlGa)As heterostructs., light scatt. spectroscopy of electrons, rel. to transport props. 2-13500  
 GaAs-(AlGa)As heterostructure, coupled electron-LO phonon excitation 2-50808  
 GaAs-Al<sub>0.1</sub>Ga<sub>0.9</sub>As selectively doped multilayer systems, reson. inelastic light scatt., single particle and collective excitons 2-26493  
 Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, cryst., spontaneous parametric light scatt. 2-13502  
 He-Ne laser-light scatt. in atm. turbulence, measured statistics 2-42466  
<sup>3</sup>He-<sup>4</sup>He decomposing mixture, structure factor, light scatt. obs. 2-35828  
<sup>3</sup>He-<sup>4</sup>He decomposing mixture, light scatt. obs. near tricritical point 2-35829  
<sup>4</sup>He, liquid, light scatt. spectrum near T<sub>1</sub> 2-16916  
 KD<sub>2</sub>PO<sub>4</sub>, ferroelectric, light scatt. spectra, wave vector direction depend., effects of electrostatic and elastic long range forces 2-9158  
 K<sub>2</sub>D<sub>2</sub>(x-1)PO<sub>4</sub>, cryst., spontaneous parametric light scatt., deuteration effects 2-36660  
 KH<sub>2</sub>PO<sub>4</sub>, phase transition in elastic media 2-9113  
 KH<sub>2</sub>PO<sub>4</sub>:KD<sub>2</sub>PO<sub>4</sub>, mixed cryst., light scatt. by polarization fluctuation 2-41344  
 KNiF<sub>3</sub>, mag. energy fluctuations, light scatt. obs. 2-41119  
 Kr, two-body depolarised CILS spectra at 295K 2-8263  
 LiF film roughness determ. using guided light modes 2-31578  
 LiTaO<sub>3</sub>, light scatt. and its appl. 2-26865  
 N<sub>2</sub>, light scatt., density depend., permanent and collisional effects and their interferences 2-29600  
 NH<sub>4</sub> salts, aqueous solutions, light scatt. obs. of phase transition on electrolyte addition 2-16769  
 Na atom, depolarization ratios of near-resonance scattered light 2-4242  
 PbF<sub>2</sub>, superionic, quasioelastic light scatt., study 2-9159  
 Si, surface roughness characterisation using light scatt. 2-15206  
 SiO<sub>2</sub> film, vapour deposited, light scatt. 2-46808  
 TiO<sub>2</sub> film, reactive DC plasmatron sputtered, optical and struct. props. 2-51043  
 TiO<sub>2</sub> film, reactively sputtered, light scatt. 2-46808  
 TlCl-TlBr KRS-6 single crystals, vol. radiation strength correl. with other optical characts. 2-16076  
 Xe, two-body depolarised CILS spectra at 295K 2-8263  
 ZrO<sub>2</sub> stabilised single crystals, growth and optical perfection, SiO<sub>2</sub> influence 2-51791  
 ZrO<sub>2</sub>, Y<sub>2</sub>O<sub>3</sub> stabilized, fast O<sub>2</sub> diffusion, quasioelastic light scatt. study 2-16907

## light sources

- see also infrared sources; light emitting devices; photometric light sources; spectroscopic light sources  
 chromaticity temperature values of measured light sources, interpolation and extrapolation (*Slovak*) 2-49853  
 coherent light source alignment using spherical confocal Fabry-Perot interferometer (*German*) 2-33623  
 colour temp. measuring device (*Japanese*) 2-6886  
 correction factors for type Yu-116 and Yu-117 photometers (*Russian*) 2-48746  
 dark-field, for dissecting microscope 2-27954  
 extended preionizing UV source for pulsed gas lasers 2-49762  
 far-zone coherence significance for sources or scatterers with hidden periodicity 2-49668  
 fiber-optic light pipe for enhanced illumination of typewriter page 2-34869  
 fluorescent lamp for spectral brightness density meas., working standard for vacuum UV region 2-996  
 goniometer radiation source selection 2-29859  
 hologram recording and reconstruction in white-light source spectrum 2-11661  
 holography, historical development, overview (*Czech*) 2-44215  
 incoherent light source dimensions effect on optical filtering of images, ZZ 2-34681  
 laser emission light/colour characts. (*Russian*) 2-49804  
 LED and optical fibre end, emitted luminous intensity, parametric representation using Legendre polynomials (*French*) 2-33611  
 low-noise hologram copying process using narrow-band, non-laser light source 2-34699  
 luminescence, review and survey 2-46664  
 medical torch for transillumination of female breast tissues 2-42184  
 modal noise estimation for arbitrary connectors, fibres and sources 2-49916  
 multiple images produced by spatial freq. sampling, spectral width and source size effects 2-853  
 nature, operation and characteristics (*French*) 2-28885  
 photomacrography, lighting needs 2-23751  
 photometric characteristics, optical radiation effects on human bodies, measurement (*Japanese*) 2-9836  
 polychromatic light and dispersive phase element for multiplex optical processing 2-49688  
 statistical properties of light, thermal, superbunched, laser and antibunched light sources 2-876  
 two-coordinate measuring microscope accessories 2-48768  
 two-dimensional HALO laser excited by N<sub>2</sub> laser (*Hungarian*) 2-34713



**light sources continued**

- UV sources, irradiance obs., hazard evaluation 2-49852
- vacuum UV continuum radiation source, possible new radiation source 2-44423
- Van Cittert-Zernike theorem, multiplex version 2-39710
- BaNaNb<sub>3</sub>O<sub>15</sub>, cryst., laser pumped, parametric light source 2-39711
- He-Ne plasma, discharge noise relation to light output 2-44929
- SiC LED for photographic recording system, construction principles 2-49854

**light transmission**

- see also *light absorption; optical filters*
- absorbing film, optical consts. and thickness meas. method 2-21975
- adiabatic lightguides, light transmission 2-11814
- atmosphere, long-range transmission meas. in coastal environment 2-32632
- atmosphere, visible spectrum contrast transmittance modelling from optical quantities meas. 2-32645
- chalcogenide vitreous semiconductors, photostructural transformations, configurational approach 2-46533
- cholesteric liquid crystal in three-layer plate, light transmission, amplitude and polarisation characts. 2-36664
- cholesteric liquid crystals, optical props. under DC elec. field 2-31456
- cholesteric liquid crysts., superimposed layers, refl. transmittance, and colour gamut 2-9123
- cholesteryl ester mixtures, effect of rhodamine 6G on phase transition 2-5225
- correlated scattering objects, general, correl. functions 2-49677
- dispersive medium layer, light signal spatial filtering 2-39569
- fibre links, long, transmission props. 2-1035
- fibre transmission characteristics, numerical prediction from arbitrary refr.-index profiles 2-49914
- fibres, single-mode, birefr., forward-backward transmission, polarisation-sensitive meas. interpretation 2-25132
- fire smokes, spectral transmission, 0.4 to 4.5  $\mu$ m 2-4917
- granular composite films, microstruct. and dielec. props. 2-52063
- guided wave reflection and transmission calc. method 2-44446
- liquid crystal, acousto-optical effect, ang. depend. 2-21977
- liquid filters made of transition metal ion aq. solns., computer design 2-1008
- luminescent filters, efficiency of wavelength conversion of laser pump light 2-20398
- plane-parallel stack, incoherent reflectance and transmittance, 2X2 matrices 2-836
- polarisation filter stability, solar irradi. effect 2-16090
- polymethine dyes, nonlinear light absorpt. in nanosecond and picosecond radiation field 2-39689
- sapphire, strength and transmittance, surface treatment effects 2-17711
- semiconductor compounds as quantum electronic materials, physical characts. (Russian) 2-20385
- silicate glass: Cu, high SiO<sub>2</sub> content, nature of colour centres of Cu-ruby type 2-9199
- silicate glasses, containing S, Se, and Cd compound additions, colour centres 2-9173
- smectic liquid crystal, C<sub>2</sub> phase in elec. field 2-1402
- smectic-cholesteric mixed liq. cryst., light transmission characts. in optic effects 2-17442
- smoke plume, airborne lidar meas. of plume distrib., vertical transmission and particle size 2-47935
- spectrophotometric test sample transmission nonuniformity determ. 2-48747
- thin films, multilayer, absorbing, reflectance, pot. transmittance, standing waves, symm. mirror design 2-34655
- thin films, optical consts. meas. using variable-angle reflectometer 2-43073
- thin-film-synthesis algorithm for refr. index realisation and Airy summation 2-49663
- vacuum-crystal interface, light reflection and transmission near exciton transition 2-46523
- wedge, interferential, reflected and transmitted fringe shapes 2-11635
- BeF<sub>2</sub> glasses, vacuum UV props. 2-17502
- Bi<sub>2</sub>O<sub>3</sub>, thin film optical transmission, refr. index, extinction coeff., visible and infrared range 2-51538
- C particulate, in small pool fire flames, laser transmission meas. 2-13957
- Ge<sub>2</sub>Se<sub>3</sub>-In<sub>2</sub>Se<sub>3</sub> thin films, elec. and optical props. 2-5477
- Ge-Sb-S glasses, optical gap temp. depend., exponential absorpt. edge 2-13438
- In<sub>2</sub>O<sub>3</sub>-(SnO<sub>2</sub>) film, transparent conducting, transport and optical props. 2-8899
- In<sub>2</sub>-<sub>3</sub>Sn<sub>2</sub>O<sub>3-y</sub> films, sputter deposited, elec. and optical props., heat treatment effects 2-26523
- LaB<sub>6</sub> films, optical props. and appls. 2-17434
- Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-P<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub> system pyroceramics, props. 2-9436
- Si amorphous film on SiO<sub>2</sub>, crystn. by CW laser irradi. 2-51013
- Si, laser annealing dynamics, transient Raman and optical transmission studies 2-2250
- Si on sapphire, nonlinear transmission of intense laser pulse 2-5776
- Si, spectral transmission, selection rel. to optical component manufacture 2-988
- SiO<sub>2</sub>-GeO<sub>2</sub>-P<sub>2</sub>O<sub>5</sub> graded-index optical fibres, transmission bandwidth props. 2-34901
- SnO<sub>2</sub> films, amorphous and crystalline, prep. by reactive deposition and phys. props. 2-51050
- SnO<sub>2</sub>:Sb film, prep. by activated reactive evaporation 2-51821
- SnO<sub>2</sub>-(In<sub>2</sub>O<sub>3</sub>) film, transparent conducting, transport and optical props. 2-8899
- Sn<sub>2</sub>P<sub>2</sub>Se<sub>6</sub>, phase transitions, 100 to 300K, dielec., optical, elec., and acoustic props. 2-45573
- Sr<sub>4</sub>NaLiNb<sub>10</sub>O<sub>30</sub>, refr. index and transmissivity (Chinese) 2-21963
- Ta<sub>2</sub>S<sub>3</sub>(IT) intercalation complexes with hydrazine, transport and optical props. 2-45966
- TiBr-TiI solid solutions, short-wave spectral transmission 2-49841
- TiCl-TiBr KRS-6 single crystals, vol. radiation strength correl. with other optical characts. 2-16076
- TiCl-TiBr solid solutions, short-wave spectral transmission 2-49841
- WO<sub>3</sub>, thin film electrochromic elements, light transmittance curves 2-46547

**light velocity**

No entries

**light velocity measurement**

- extra Solar System measurement, use of visual binary stars 2-53099
- random fluctuations of vel. of light in vacuum 2-3557

**light water** see *water***lighting**

- brightness measurement, human eye adaptation effect (Japanese) 2-6887
- environmental lighting conditions, physiological effects (Japanese) 2-9835
- laser emission light/colour characts. (Russian) 2-49804
- luminescence investigations, vision research implications 2-52488

**lightning**

- ball lightning, Fryazino, Moskovskaya Oblast 2-42453
- ball lightning decay modes, nonlinear oscillator theory 2-47977
- concurrent lightning flashes striking two towers separated by 1.1 km 2-10139
- currents, EM field, wave form. and spectral distrib. 2-28159
- discharged current characts., from needle electrode, applications to thunderclouds detection 2-10120
- electric radiation fields, amplitude spectra in interval from 100 kHz to 20 MHz 2-18499
- ELF radio noise, from lightning discharges, 1-D distrib. function of vertical elec. component 2-38026
- heat loss by convection (from lightning channels) 2-47970
- infrasound and internal gravity waves produced by lightning discharges (Russian) 2-10122
- layered activity in channels, temperature boundaries 2-32596
- positive cloud-to-ground lightning flashes in severe storms 2-23063
- radar echoes at SHF, VHF and UHF frequencies, possibility of position 2-42423
- recording of lightning impulse voltages, by wave memories (German) 2-42489
- return stroke and magnetic fields, 0-20 km above ground 2-42426
- return stroke velocity obs. 2-10138
- simulation of lightning leader by rectilinear surface discharges 2-44926
- stratosphere, high latitude, effects of thunderstorms on electrical measurements 2-32599
- VHF radiation sources, two-dimensional interferometric positions 2-18540
- VHF radio pictures of location of cloud flashes 2-3051
- NO<sub>x</sub> and NO production by lightning, implications of meas. in laboratory discharge 2-28130
- NO<sub>y</sub> production, as natural source of latit. gradients of NO<sub>y</sub> in unpolluted troposphere 2-32565
- O<sub>3</sub> production by lightning, implications of meas. in laboratory discharge 2-28130

**lightning conductors** see *lightning protection***lightning protection**

- array subsystem development for photovoltaic array fields cost reduction 2-37315
- photovoltaic power systems 2-37193

**lightning rods** see *lightning protection***limit cycles**

- continuous onset in nonlinear chemical reactions 2-6033
- evolution equation, quantum, nonlinear, dissipative, stationary states 2-38478

**limited space charge accumulation**

- see also *Gunn effect; negative resistance effects; space-charge limited devices*

- CuInSe<sub>2</sub> single crystal, carrier heating by microwave elec. field 2-8834

**linear accelerators**

- see also *collective accelerators; electrostatic accelerators*
- azimuthal drift velocity, radial centre of gravity determ. 2-19797
- beam sharing system between Linac and separated-sector cyclotron (Japanese) 2-835
- Berkeley SuperHilac, fast-closing vacuum valve 2-49207
- CHEER injection system 2-24449
- current limitation in an accelerator with variable-phase focusing 2-15656
- electron, picosecond single pulse, injector development 2-4149
- electron accelerator, single bunch electron beam radiation loss expt. obs. 2-7411
- electron accelerator-based cold neutron source 2-49206
- electron beam noise characteristics in linear accel. 2-43660
- ETA gun characts. 2-564
- GELINA, pulsed neutron source improvement 2-4165
- heavy ion linear accelerator, resonant cavities, energy gain meas. 2-565
- high beam-current accelerators, research program in US, review 2-563
- high gradient pulsed proton beam accelerating equipment, 250 keV, design and testing (Chinese) 2-34228
- induction accelerators, synchronized switching mechanism 2-19795
- induction heavy ion linac, inertial confinement fusion appls. 2-15616
- inertial confinement heavy ion fusion, RF linac driver 2-15615
- injector pulse counter for a linear accelerator 2-39274
- intense linear ion accelerators 2-24452
- iris cavities, circularly symmetric EM fields theory 2-24453
- linac injector, heavy ion fusion, transverse emittance requirements 2-4156
- LWR fuel cycle, proton linac appls. 2-7212
- MEA 500 MeV electron linac, pion and muon studies (Dutch) 2-400
- MEA 500 MeV electron linear of section K of NIKHEF (Dutch) 2-562
- microprocessor control and data acquisition system 2-7480
- MIT Bates Linear Accelerator shielding, on the duct streaming of neutrons and photons 2-11283
- multiple beam electrostatic quadrupole focused linac, heavy ion fusion appls. 2-15642
- ORELA, neutron cross section meas. 2-4167
- particle acceleration in an HF field inhomogeneous over its cross section 2-15654
- particle bunches, intense nonrelativistic, longitudinal stability in resistive struct. 2-7711
- positron beam, dynamics, computer simulation 2-585
- pressured Pierce type high gradient accelerating tube, 250 keV, design and testing (Chinese) 2-34227
- proton (3X10<sup>16</sup> protons/sec), power costs saving design 2-39253
- proton linac, 500  $\mu$ A, 70 MeV, for medical radioisotope prod. 2-43639
- pulsed heavy-ion beam injection from FN tandem into linac 2-11305
- Pulsacel C inductive linear accelerator, space charge neutralised ion beam for inertial fusion 2-4150
- quadrupole RF focusing, high current beam dynamics, space charge effect 2-24455
- radiation therapy of malignant neoplasms, development trends, linear accelerator and betatron use (Russian) 2-37649



**linear accelerators continued**

- SLAC linear collider for  $e^+e^-$  physics 2-19798
- Stanford linac, CAMAC type U crate controller with auxiliary controller bus interface 2-7467
- superconducting linear accelerator booster project, status report 2-11308
- two-magnet doubly achromatic beam deflection system for electron linac beam 2-4154
- UHF injector for linear electron accelerator 2-49201
- VLEPP accelerators, possibility of obtaining opposing  $\gamma\gamma$ - and  $\gamma e$  beams (Russian) 2-24451

**linear algebra**

- see also determinants; eigenvalues and eigenfunctions; matrix algebra; tensors; vectors
- commutative  $C^*$  algebra state space, stochastic dynamics 2-33428
- effects of environmental temperature fluctuations on the parameters of a thermoelectric battery 2-42034
- electrochemical cell electrode polarisation 2-32042
- finite charges in Neumann algebras 2-33268
- stress anal. slope stability limit equilibrium method 2-10606
- $CO_2$ , electron scattering, exchange interactions, linear algebraic approach 2-24862
- $H_2$ , electron scattering, exchange interactions, linear algebraic approach 2-24862
- $LiH$ , electron scattering, exchange interactions, linear algebraic approach 2-24862
- $N_2$ , electron scattering, exchange interactions, linear algebraic approach 2-24862

**linear combination of atomic orbitals calculations** see LCAO calculations**linear differential equations**

- Caspian sea level long-range prediction 2-52960
- concrete structures, differential creep stress analysis 2-20548
- Euclidean Klein-Gordon eqn., ramified solns., monodromy preserving deformation 2-28705
- homogeneous eqns. invariant under arbitrary coordinate changes 2-33385
- inhomogeneous linear stochastic differential eqns., correlation functions 2-33432
- monodromy preserving deformation of ordinary differential eqns. with rotational coeffs. 2-38403
- multispecies medium, radiation damage, collision density approach 2-5153
- numerical methods for solving differential equations with inadequate data 2-18870
- Pade approximation and the Riemann monodromy problem 2-79
- plasma, warm, unmagnetised, collisionless, linear wave conversion 2-30307
- quasi-linear equations, sorption dynamics of a gas 2-8254
- reflection coeff. for waves governed by linear differential eqn., multiple integrals equality 2-10620
- solar single-pass water heating system performance anal. 2-18027

**linear integrated circuits**

No entries

**linear motors**

- EM guns and launchers, conf., San Diego, CA, USA (Nov. 1980) 2-48391

**linear network analysis**

- filters, Grassmann manifold-based theory 2-23503

**linear programming**

- chemical analysis methods development strategies 2-27491
- energy resource development systems, dynamic linear programming models 2-22553
- irrigation water, economic feasibility of solar pumping/ 2-37187
- MARKAL, linear programming model for energy systems analysis, BNL version technical features 2-52269
- MARKAL linear programming model for energy supply forecasting (German) 2-14046
- natural gas distribution and allocation forecasting using generalised networks 2-37145
- object restoration, regularised and positive-constrained inverse methods 2-24962
- shakedown, improved bounds for displacements 2-30032
- shell roof limit analysis 2-50111
- shells, circular cylindrical, symmetrically loaded, limit anal. by linear programming (French) 2-1124
- superresolving image restoration using linear programming 2-44201

**linear rectification** see rectification**linear systems**

- inverse scatt. problem, generating operator for  $n \times n$  linear system 2-23847
- linear dynamic system state vector meas. using Kalman-Bucy filter (Russian) 2-157
- stochastic difference systems, moment stability 2-28778

**linear vibrations** see vibrations**lines (telephone)** see telephone lines**linewidths (spectral)** see spectral line breadth**linguistics**

- anticipatory, labial coarticulation, experiment biological and linguistic variables 2-44604

**linguistics, language** see linguistics**linkages (electric connectors)** see electric connectors**linking** see joining processes**Liouville equation**

- see also Vlasov equation
- composite particles, perturbed wave functions in Liouvillian propagator technique 2-28774
- dense fluids, dynamical model, Langevin equation approach 2-50506
- dynamical systems generated by Liouville's eqn. singular solns., complete integrability 2-3710
- electron and ion optical systems possessing primary aberrations, Liouville theorem appl. 2-24931
- field-reversed axisymmetric plasma, equilibria and MHD stability calc. 2-20836
- generalised equation, operator and propagator props. 2-42846
- gravitational scale covariant kinetic theory for particles and photons 2-10305
- Hamiltonian systems exhibiting chaotic motion, nonlinear diffusion 2-38582
- integrable nonlinear eqns. and Liouville's theorem 2-28665
- integrable nonlinear eqns. and Liouville's theorem 2-28666

**Liouville equation continued**

- plasma kinetic equations 2-12275
- random processes, divergences in kinetic eqns. construction 2-6800
- stochastic systems, fluctuations and relaxation 2-23566

**lip microphones** see microphones**lipid bilayers**

- active molecule effects, cholesterol problem 2-22699
- acyl chain dynamics and lipid-protein interaction 2-47555
- bacteriorhodopsin, anisotropic rotation in lipid membranes, comparison theory with expt. 2-9778
- black membranes, artificial, from bipolar lipids of thermophilic archaea 2-52445
- breakdown voltage, dependence on rate of pot. diff. increase 2-6216
- cationic selectivity of BLM in the 'stress' state 2-2852
- crenation, rel. to haemolysis of human red blood cells 2-27795
- decreased bilayer stability due to transmembrane potentials 2-22704
- dimyristoylphosphatidylcholine, liposome system, photochem. reaction phase transition effect 2-9782
- dipalmitoyl lecithin, lipid membranes, successive phase transitions 2-9782
- dipalmitoyl phosphatidylcholine liposomes, phase transition, US study 2-14210
- dipalmitoylphosphatidylcholine, liposome system, photochem. reaction phase transition effect 2-9782
- dipalmitoylphosphatidylcholine bilayer liposome, phase transition, membrane boundary pot. effect 2-16784
- dipalmitoylphosphatidylcholine liposomes, fluoresc. quenching, exciplex probe 2-37505
- drag coefficient, trans. and rot., Navier Stokes equations 2-6219
- excluded volume effects of lipid chains in their conformation change 2-47577
- gramicidin channel in bilayer lipid membranes; effect of thickness, composition and tension 2-2851
- hydrophobic core, statistical mech. theory 2-16567
- liquid crystals, one- and two-dimens. ordered, conference, Garmisch-Partenkirchen, Germany (Jan. 1980) 2-10550
- membrane formation, hydrodynamic theory 2-9776
- phospholipid, correl. length and lateral compressibility in presence of the dynamic density fluctuations 2-16705
- phospholipid, hydrated, undulations due to water mediated bilayer-bilayer interactions 2-27778
- phospholipid, lattice model, phase transitions and crit. behaviour 2-1676
- phospholipid barrier, transport of organic solutes 2-27779
- phospholipid bilayers, interacting, measured forces and induced structural changes, review, book contrib. 2-27781
- phospholipid bilayers, investig. with pyridinium N-phenolbetaine  $E_T(30)$  polarity probes for aq. interfaces 2-22493
- phospholipid bilayers, isolated, defect struct. and texture 2-27782
- phospholipid geometry in interface region, Raman spectroscopy 2-14205
- phospholipid vesicles,  $H^+$  and  $OH^-$  permeability 2-27797
- photoelectric currents across planar bilayer membranes containing bacterial reaction centres 2-52450
- potassium palmitate- $D_2O$  lipid system, lamellar phase, anisotropy of self-diffusion 2-16832
- potassium palmitate-water, lipid bilayer system, biaxial ordering of melting chains near gel phase transition, NMR- study 2-9781
- rank order param. by fluoresc. polarisation 2-6217
- semipermeable, with protein films, two-dimens. thermodynamic functions theory 2-27784
- thymocyte plasma membrane proteins and lipids, thermal transitions, conformational changes, canavalin A effect 2-14211
- X-ray diffraction, determ. of first-order phase using electron density structure models 2-40214

**liquefaction of gases**

- cryogenic containers and applics., review 2-38656
- microliquefier, Joule-Thomson type, starting time analysis 2-38657
- He cycles, cryogenic components and apparatus for vacuum technology (Japanese) 2-43027
- He liquefier, ADL-Collins type, with activated charcoal 2-10813

**liquid alloys****see also liquid metals**

- alkali metal alloys. elec. resist. and struct., electron-ion plasma model 2-26356
- alkali metals, structure determ., electron-ion plasma 2-30383
- binary, thermal diffusion, cond. electron contrib. 2-35724
- binary systems, self-diffusion, appl. of hard sphere theory 2-21340
- flinging method for extremely rapid cooling (German) 2-51889
- grain size distribution during coarsening (Korean) 2-41579
- NMR expts., review 2-31300
- regular solution theory rel. to electron theory 2-40255
- steel, ferritic stainless, melt, deoxidation control using solid electrolyte cells 2-13943
- steel, fluid flow, heat and mass transfer, invest. by expt. technique 2-16309
- steel, hypereutectoid, precip. of spheroidal graphite during cooling from liq. states (Japanese) 2-5878
- steel, O probe for electrochem. meas. of free O content 2-10797
- steel, rimming, inclusions and O behaviour after refining with base oxygen furnace 2-13738
- thermodynamic functions, association model, basic concepts. 2-51875
- thermodynamic functions, association model, numerical treatment and results 2-51876
- Ag-Au-Cu liquid alloys, surface tensions 2-45685
- Ag-Pd, resist. and thermoelec. power, temp. and conc. depend. 2-21557
- Al-Ge-Si, heat of form. determ. by high temp. calorimetry 2-9563
- Al-In, liq. state, interface tension meas. (French) 2-1710
- Al-Pb, liq. state, interface tension meas. (French) 2-1710
- Al-Si, heat of form. determ. by high temp. calorimetry 2-9563
- $As_2Se_3$ , liquid covalently bonded alloys, bond equilibrium theory 2-45014
- Bi-Ni, liq., Ni influence on  $^{209}Bi$  NMR linewidth and Knight shift 2-41218
- Bi-Pb, molten, boundary with Cu, surface energy role in fracture kinetics 2-41742
- Co-Ge, elec. resist., temp. and conc. depends. (Russian) 2-21555
- Co-Au liquid alloy, metal-insulator transition 2-1828
- Cu alloys, deposited in steel, intergranular penetration mechanism 2-50929
- Cu-Bi alloys at 700 to 1100°C, thermodynamics and liquidus equilibrium 2-41582
- Cu-Bi liq. alloys, viscosity (German) 2-1648



## liquid alloys continued

- Cu-Co, liquid alloys, thermodynamic study (*Japanese*) 2-27144  
 Cu-Ni-O, Cu-rich region, liquidus equilibria and soln. thermodynamics 2-5854  
 Cu-Ti liq. alloy, thermochemistry 2-8624  
 Cu-Zn(Al)(Sn), free energy and other thermodynamic props., conc. depend. 2-12779  
 Fe alloy melt, ternary and multicomponent, alloying element effect on conc. and temp. depend. of H<sub>2</sub> solubility (*German*) 2-27138  
 Fe alloys, alloying addition equivalent effect on conc. and temp. depend. of N<sub>2</sub> solubility (*German*) 2-13695  
 Fe-B liq. and amorphous alloys, struct. (*Russian*) 2-8413  
 Fe-C, binary liq. alloys, meas. of N activity by N conc. cells 2-30634  
 Fe-C, liq., thermodynamic props. 2-21333  
 Fe-C-B alloys, liq. and amorphous struct. (*Russian*) 2-8413  
 Fe-C-S, C dissoln. rate, influence of S 2-1620  
 Fe-Ge, elec. resist., temp. and conc. depends. (*Russian*) 2-21555  
 Fe-Ni(Co), solid and liq., thermodynamic activities and heat of mixing meas. by Knudsen-Cell mass spectrometry 2-16817  
 Ga-Ag-S solvent, dil. soln. of S, thermodynamic study 2-51878  
 Ga-Au (Ag)(Cu), liquid, elec. cond. and mag. susceptibility (*Russian*) 2-51143  
 Ga-Cd(Tl) melts, atomic distrib. pattern during demixing 2-12459  
 Ga-Te, density and elec. cond. 2-45309  
 Ga-Te, reflectance and density of states, metal-semicond. transition 2-9162  
 Hg-In metallic solns., thermodynamic and elec. props. near crit. points 2-1883  
 In-Bi liq. alloys, thermodynamic props. 2-5249  
 In-Pb(Sn)(Ti), dil., diffusivity, solubility, and activity of O, effect of solute additions 2-26094  
 In-rare earth, liq. dilute alloy, elec. cond. and mag. susceptibility 2-26353  
 In-Sb, O activity 2-8644  
 In-Te, density and elec. cond. 2-45309  
 In-Te, reflectance and density of states, metal-semicond. transition 2-9162  
 In-Zn liquid system, <sup>115</sup>In spin-lattice relax. and Knight shift 2-21913  
 Li-Na, liquid, structure determ., electron-ion plasma 2-30383  
 Li<sub>0.9</sub>Pb<sub>0.2</sub> heterocoordinated liq. alloy, dynamical struct. factor of conc. fluctuations 2-20997  
 Na-K(Cs) liquid systems, elec. resist. and struct., electron-ion plasma model 2-26356  
 Ni-Ge, elec. resist., temp. and conc. depends. (*Russian*) 2-21555  
 O<sub>2</sub> immersion sensor for dissolved O<sub>2</sub> electrochem. determ. in metallic melts 2-10798  
 Pb-Ag, dilute molten, O<sub>2</sub> activities 2-5243  
 Pb-Ag, thermodynamic behaviour of dil. soln. of S 2-40562  
 Pb-Au, dilute molten, O<sub>2</sub> activities 2-5243  
 Pb-Ni-O, liq., O activity and solubility of Ni 2-16798  
 Pd-Cu system, mixing enthalpies, expt. determ. using high temp. calorimetry (*German*) 2-35702  
 Si-Al(Cu)(Pt) saturated solns. in melt, elec. cond., temp. depend. 2-5378  
 Si-Cu system, mixing enthalpies, expt. determ. using high temp. calorimetry (*German*) 2-35702  
 Sn-Te, liq., thermodynamic props., high temp., EMF meas. 2-12782  
 Sn-Zn, cutting fluid, influence on drilling alloy steel 2-2591  
 Ti-Al-V(9, 3 at.%), specific heat, diffusivity and thermal cond. in 750-1700K temp range 2-5239  
 Ti-Te, density and elec. cond. 2-45309  
 Ti-Te, reflectance and density of states, metal-semicond. transition 2-9162  
 UO<sub>2</sub>-liquid steel, influence of Na vapour on wetting, scanning Auger spectroscopy 2-45683  
 W-Al, solid-liquid interaction, W solubility in liquid Al (*Russian*) 2-1621  
 Zn-Bi-Cd liq. solns., Zn ternary interaction parameters 2-1639

## liquid crystal devices

- see also liquid crystal displays  
 C-CD driven liq.-cryst. spatial liq. modulators 2-11809  
 cholesteric liquid-crystal Fabry-Perot interferometer, amplitude and polarisation chars. 2-43079  
 4-cyano-4'-pentyl-biphenyl liquid crystal IR modulators, 8-12  $\mu$ m 2-49891  
 digital light beam deflector, wedge struct. with twisted orientation 2-11798  
 dye laser, variable polarisation, in liq. cryst. matrix 2-16026  
 field-effect electro-optical devices, liq. cryst. materials 2-12469  
 IR image conversion using cholesteric liq. crystals., polarisation method (t) 2-39762  
 light valve, using bulk Bi<sub>12</sub>SiO<sub>20</sub> as photocond. material 2-7856  
 multistable optical device based on nematic liquid crystals (*Slovak*) 2-7852  
 nematic liquid crystal cell, crit. angle calc. 2-8421  
 nematic liquid crystal colour filters, transmission spectra 2-1009  
 one-dimensionally and two-dimensionally ordered liq. crystals, and appls., conference, Garmisch-Partenkirchen, Germany (Jan. 1980) 2-10550  
 optical noise-limiting and multistability 2-7857  
 optical wavefront reversal possibility with aid of liq. cryst. transparencies 2-4558  
 opto-electronic liquid crystal bistable device, processing for real-time optical information 2-44435  
 phase change devices, cholesteric texture study by laser light diff. 2-8427  
 sensors and transducers appl. 2-38638  
 twisted nematic liquid crystal cell, dynamic response to transiently pulsed fields 2-51554  
 variable grating mode liquid crystal device for optical processing and computing 2-11652

## liquid crystal displays

- anthraquinone dyes in liq. crystals., order parameter and photochem. stability, display appls. (*French*) 2-12464  
 bicyclo[2.2.2]octane esters, nematic liq. cryst. props. rel. to display appls. 2-12468  
 cholesteric phase, electro-optical and thermo-optical appls. 2-16591  
 p-cyanophenyl=p'-caproyloxybenzoate liq. cryst. cells, effect of dielec. coatings on charge carrier behaviour 2-51519  
 exposure display for electronic-shutter reflex cameras (t) 2-33660  
 guest-host displays, dielec., electro-optical, and phase change props. 2-5043  
 homogeneous-heterotropic fluorescent liquid crystal cells 2-8418

## liquid crystal displays continued

- multicolour fluorescent display by scatt. states in liq. crystals 2-8417  
 nematic, 90° twisted, optical props., colorimetry 2-16566  
 nematic liquid crystal display under ambient illum., colour gamut 2-33605  
 smectic phase, electro-optical and thermo-optical appls. 2-16591  
 smectic-cholesteric mixed liq. cryst., light transmission chars. in optic effects 2-17442  
 thermotropic liquid crystals, physics and display appl. 2-45020  
 transmission type, brightness-luminance ratio, psychological expt. 2-18211  
 twisted nematic display devices, classification and props. of liquid crystals (*Japanese*) 2-16578  
 twisted nematic displays, appls. of liq. crystals, incorporating 1,4-disubstituted bicyclo[2.2.2]octane ring system 2-21006  
 twisted nematic displays, threshold voltage, improved temp. coeff. 2-9129  
 twisted nematic liquid crystal displays, effects of optical anisotropy and cell thickness (*Japanese*) 2-1399

## liquid crystal phase transformations

- 4-trans-4'-alkyl-cyclohexylbenzonitriles, pVT data and Tait eqn. in nematic and isotropic phases 2-35638  
 4-4'-alkoxy-cinnamoyloxy-benzylidene-4'-cyanoaniline, liq. cryst., re-entrant polymorphism NS<sub>2</sub>S<sub>2</sub>N<sub>2</sub> 2-40542  
 p-n-alkoxybenzoic acids, IR, far IR, Raman, and thermodynamic studies of solid, mesomorphic, and isotropic phases 2-22021  
 7-(4'-n-alkoxybenzoyloxy)-3-acetylcoumarins, mesomorphic heterocyclic homologous series 2-50534  
 p-(p'-n-alkoxycinnamoyloxy)-acetophenones, thermotropic mesogen, mesomorphic chars. 2-16562  
 p-(p'-n-alkoxycinnamoyloxy)-benzylidene-p'-anisidines (-anilines), synthesis and mesomorphic props. 2-12470  
 4-4'-n-alkoxyphenylpyridine N-oxides, liq. cryst. transition temps. 2-35687  
 p-alkyl-p'-alkoxy-azoxybenzene mesophases, glass transition, DSC study 2-35691  
 4-4'-n-alkoxybenzoyloxy-benzylidene-4'-cyanoethenyl-anilines, stable re-entrant nematic phase 2-26049  
 N-(4-n-alkoxybenzylidene)-4'-n-alkylanilines, smectic polymorphism and struct. 2-12478  
 4-n-alkylphenyl-4-n-alkylbicyclo[2.2.2]octane-1-carboxylates, laterally substituted, liq. cryst. props. 2-21007  
 p-amyloxy-p'-cyanodiphenyl-cholesteryl nonanoate, liq. cryst., Eu cpd. activation, phase transition 2-26051  
 aromatic-aliphatic polyesters, mesogenic elements and flexible spacers in the main chain 2-50517  
 azoxy polyesters, nematic and cholesteric thermotropic, with moderately low transition temps., synthesis and props. 2-35390  
 azoxy-4,4'-di-undecyl- $\alpha$ -methylcinnamate, liq. cryst., smectic A to smectic-C phase transition 2-21312  
 BBOA, smectic A-smectic B transition, proton NMR study 2-35686  
 benzene-hexa-n-heptanoate, mesogenic disc like mols., heat capacity, 13-393 3K 2-12769  
 biaromatic liq. crystals., low temp. smectic A phase with re-entrant behaviour, miscibility study 2-21026  
 biphenyl-4,4'-dicarboxylic acid, di-n-alkyl esters, mesogenic, synthesis and thermal anal. 2-50854  
 bis(n-alkylammonium) tetrabromozincates, thermal behaviour and liq. cryst. phases 2-50532  
 bis-(4,4'-n-alkoxybenzylidene)-1,4-phenylenediamines, smectic polymorphism at press. up to 3 kbar, DTA study 2-12751  
 4,4'-bis-(n-nonylamino)-biphenyl/cyanoethyl cpds., binary systems, liq. cryst. polymorphism 2-8610  
 BOBOA, mol. motions in nematic and smectic phases, ESR study using nitroxide spin probes 2-17341  
 N-p-butoxybenzylidene-p-n-octylaniline, dynamic shear props. near smectic A-smectic B phase transition 2-16790  
 n-butyl isocyanate-n-nonyl isocyanate copolymer, dielec. relax. of isotropic and lyotropic solns. 2-21943  
 butyloxybenzylidene octylaniline, crit. behaviour near nematic-smectic-A transition 2-21313  
 butyloxybenzylidene octylaniline freely suspended liq. cryst. film, mech. props. 2-1542  
 N-4-n-butylbutoxybenzylidene-4'-octylaniline, cryst. struct., mol. struct., and cryst.-smectic B transition 2-5107  
 CBOOA, mol. motions in nematic and smectic phases, ESR study using nitroxide spin probes 2-17341  
 charged rod fluid, statistical mechanics, ordering 2-35684  
 chemical struct. and reentrant behaviour 2-35389  
 chiral biphenyl mixtures, blue phases, lattice parameter behaviour 2-35396  
 cholesteric blue phase, BCC orientational order, Landau theory 2-16592  
 cholesteric blue phase single crystals, polarisation microscopy 2-12476  
 cholesteric liquid crystal, film, mag. field induced phase transitions 2-40541  
 cholesteric liquid crystal., successive transitions in AC elec. field 2-40539  
 cholesteric liquid crystals., blue phase, expt. results and problems 2-16590  
 cholesteric structures and the role of phase biaxiality 2-30391  
 cholesteric to nematic phase transition in mag. field 2-21305  
 cholesteric-isotropic-blue phase triple point 2-40543  
 cholesteryl butyrate, X-ray study of structural changes during solid-cryst. to liq.-cryst. transition 2-50837  
 cholesteryl dodecyl carbonate, oriented liq. cryst., refr. index meas. and order parameter estimation 2-46530  
 cholesteryl ester mixtures, effect of rhodamine 6G on phase transition 2-5225  
 cholesteryl halopropionate, mesomorphism, phase transition study and dielec. relax. meas. 2-12743  
 cholesteryl laurate, liq. cryst. phase transformation, thermodielectric electret 2-46468  
 cholesteryl myristate-cholesteryl propionate liq. cryst. mixtures, US vel. meas. 2-5042  
 cholesteryl oleate, phase transitions and mesophases, X-ray diff. study 2-21308  
 4- $\beta$ -cyanethyl-phenyl 4-n-alkyloxycinnamates, binary mixtures, reentrant nematic, smectic A and C phases 2-26048  
 cyano nematics, pre-transitional effects in elec. permittivity 2-16786  
 4-cyano-4'-octyloxybiphenyl and 4-cyano-4'-hexyloxybiphenyl mixtures, birefringence 2-31448  
 4-cyano-4'-pentyl-biphenyl liquid crystal IR modulators, 8-12  $\mu$ m 2-49891



## liquid crystal phase transformations continued

- 4-cyanophenyl 4'-p-benzoate (4-pentylbenzoate), nematic phase, orientational order parameter, temp. depend. 2-21015  
 4-cyanophenyl-3'-methyl-4-(4'-n-dodecylbenzoyloxy)benzoate reentrant nematogen, elec. cond. 2-17125  
 di-(4-alkoxyphenyl) tetrathiafulvalenes, mesomorphic props. 2-35392  
 di-(4-alkoxyphenyl) tetrathiafulvalenes, mesomorphic props. 2-35392  
 di-iso-butylsilanediol, thermotropic mesophase, struct. and phase transitions 2-25742  
 dialkylammonium metal tetrahalides, phase transitions 2-35662  
 dipalmitoyl phosphatidylcholine liposomes, phase transition, US study 2-14210  
 dipalmitoylphosphatidylcholine bilayer liposome, phase transition, memory boundary pot. effect 2-16784  
 disc-like liquid cryst., phase transformation, Landau theory (*Russian*) 2-30602  
 disc-like mesophases, struct., defects, third sound, transitions 2-25723  
 disc-like molecules, mag. susceptibility of mesophases 2-26581  
 discotic mesophases, form. and props., review 2-25740  
 DOBAMBC, ferroelectric phase transition, X-ray scatt. study 2-13426  
 doubly reentrant liquid crystals, frustrated spin-gas model 2-12747  
 electron donor-acceptor complexes in liq. cryst. mixed phases 2-35388  
 p-(p-ethoxy phenyl azo) phenyl propionate, liq. cryst., US velocity and specific vol. 2-45382  
 4-ethoxy-4'-hexytolane, nematic phase, order parameter fluctuations, Raman study 2-45028  
 n-p-ethoxy-benzyliden-p-n-butylaniline, isotropic phase, Brillouin scatt. under high press. 2-51619  
 ferroelectric smectic layer, A-C\* phase transition, boundary condition effects 2-16782  
 fluctuation theory of phase transitions with coupled order parameters 2-48663  
 4'-formylphenyl-7-n-alkoxycoumarin-3-carboxylates, mesomorphic heterocyclic homologous series 2-50534  
 guest-host displays, dielec., electro-optical, and phase change props. 2-5043  
 HBT-OBT binary mixtures, optical and dilatometric props. 2-30384  
 4,4'-n-heptylcyanobiphenyl, liq. cryst., transitions, mol. flexibility, orientational statistics, Raman study 2-13467  
 p-n-heptyloxybenzoic acid, electrohydrodynamic instability of smectic C phase 2-25729  
 4-n-heptyloxybenzylidenamino-4'-cyanobiphenyl 2-12748  
 n-hexyl-4'-n-pentylcyano-biphenyl-4-carboxylate, hexatic B and cryst. B phase chars. by optical microscopy 2-21013  
 4'-n-hexyloxy-4-cyanobiphenyl-4'-n-octyloxy-4-cyanobiphenyl reentrant nematogen, elec. cond. 2-17125  
 4'-n-hexyloxy-4-cyanobiphenyl-4'-n-octyloxy-4-cyanobiphenyl, reentrant nematic mixtures, mol. ordering effect on nematic-isotropic transition 2-40544  
 HOAB, MHD effect and orientational mobility (*Russian*) 2-12474  
 isotropic liq. to nematic liq. cryst. transition, specific heat anomalies 2-35685  
 isotropic liquid-nematic liquid crystals, phase transition, statistical behavior calc. in framework of Landau theory 2-12741  
 isotropic-nematic transition, parametric model 2-16789  
 lipid bilayer membranes, photochem. reactions, phase transition effect 2-9782  
 liquid crystalline polymer, oriented, spin probe ESR study 2-30396  
 liquid crystals, pyroelec. props. 2-9095  
 long persistent chains, solution, liquid crystal ordering 2-30385  
 lyotropic liq. crystals., NMR study on phase transitions caused by hydrophobic additives 2-50856  
 lyotropic liquid crystals., type I CM-type II DM phase transition 2-26050  
 MBBA, <sup>13</sup>C relaxation times and nuclear Overhauser effect, nematic and isotropic phases 2-51496  
 MBBA, isotropic phase, Brillouin scatt. under high press. 2-51619  
 MBBA, MHD effect and orientational mobility (*Russian*) 2-12474  
 MBBA-cholesterol formate-5CB, liquid cryst., DC-controllable bubble domains 2-8419  
 MBBA/tetrabutyltin (cyclohexane)(azobenzene), phase transition behavior, mag. birefr. and refr. index meas. 2-16783  
 mesogenic polymers, thermal props. and synthesis of thermotropic liq. crystn. backbone poly-esters 2-8609  
 p-methoxybenzylidene-p'-propoxyaniline, nematic phase, memory effect 2-50531  
 2-methyl-5-(4'-n-alkoxybenzoyloxy) pyridines, low melting homologous series, synthesis and mesomorphic behaviour 2-45579  
 d-4-(2-methylbutoxy)-phenyl 4-n-decyloxybenzoate, specific heat anomaly at phase transition 2-40545  
 2-methylbutyl p-(p-n-hexyloxybenzylidenamino) cinnamate, smectic, helical pitch, elec. field depend. near C\*-A transition 2-40263  
 nematic-smectic-A-smectic-C multicritical point 2-45580  
 nematic liquid cryst., dielec. relax. and glass transition 2-51526  
 nematic liquid cryst. mixture, order-disorder transition, Pople-Karasz theory extension 2-21306  
 nematic liquid crystals, diamagnetism and orientational order 2-50523  
 nematic liquid crystals, effective exponents 2-50521  
 nematic liquid crystals mixtures, induced smectic phases, amino substituent effect 2-12750  
 nematic phase, molecular theory including anisotropic repulsion 2-12472  
 nematic-isotropic phase transition, thermodynamical behaviour, influence of smectic phase 2-16793  
 nematic-smectic A reentrant transition, lattice model theory 2-40540  
 nematic-smectic A transition, AC calorimetry technique 2-23639  
 nematic-smectic A transition and gauge transforms. 2-35690  
 nematic-smectic C phase transition, renormalisation group anal. 2-12754  
 4-nitrophenyl 4-n-alkoxybenzoates, isotropic-smectic A transition, elec. Kerr effect obs. 2-16781  
 4-nitrophenyl-4'-n-octyloxybenzoate, phase A, induced electrohydrodynamic instability 2-25734  
 4-nitrophenyl-4-n-octyloxybenzoate, critical X-ray scatt. 2-46819  
 p-nonyloxy benzoic acid, molecular ordering EPR study, phase transitions 2-45026  
 p-n-octyloxybenzylidene-p-n-butylaniline, oriented liq. cryst., refr. index meas. and order parameter estimation 2-46530  
 octyl-cyanobiphenyl, liq. cryst., nematic-isotropic transition temp., mag. field depend. 2-21311  
 p-n-octyl-p'-cyanobiphenyl, induced second optical harmonic generation (*Russian*) 2-44400  
 octylcyanobiphenyl-biphenyl, field-induced nematic isotropic critical point, phase diagrams 2-50855

## liquid crystal phase transformations continued

- 4-octyloxy-4'-heptyl- $\alpha$ -cyanostilbene, specific heat anomaly at phase transition 2-40545  
 N-(4-n-octyloxybenzylidene)-4'-butylaniline, cryst. and mol. struct., cryst-smectic G transition 2-50529  
 4-n-octyloxybenzylidenamino-4'-cyanobiphenyl, new low temp. phase, enthalpy, dielectric relax. 2-12748  
 4,4'-n-octyloxycyanobiphenyl, liq. cryst., transitions, mol. flexibility, orientational statistics, Raman study 2-13467  
 octyloxycyanobiphenyl, nematic-smectic A transition, sp. ht. study 2-16788  
 octyloxycyanobiphenyl-hexyloxycyanobiphenyl mixtures, nematic-smectic A-reentrant nematic transitions, high resolution X-ray scatt. study 2-12746  
 one-dimensionally and two-dimensionally ordered liq. crystals, and appls., conference, Garmisch-Partenkirchen, Germany (Jan. 1980) 2-10550  
 p-sexiphenyl, nematic to isotropic transition, differential scanning calorimetry 2-16785  
 PAA, and homologues, nematic-isotropic phase transition, proton spin-lattice relax. study 2-16794  
 PAA, MHD effect and orientational mobility (*Russian*) 2-12474  
 PAA, refractive indices and nematic isotropic phase boundary 2-21968  
 PAA-PHAB, nematic mesophase mixture, fractional vol. change at nematic isotropic transition 2-12745  
 PAA-PPAB mixture, refractive indices and nematic isotropic phase boundary 2-21968  
 PAP, MHD effect and orientational mobility (*Russian*) 2-12474  
 4-n-pentyl-4'-cyanobiphenyl, pretransitional Kerr effect 2-36605  
 4-n-pentylphenyl-4'-n-heptyloxythiobenzoate, phase transitions, sp. ht. meas. and thermal anal. 2-21309  
 4'-pentylphenyl-4-alkoxychalcogenbenzoates, refr. index and dielec. const. 2-30390  
 phase change devices, cholesteric texture study by laser light diffraction 2-8427  
 poly( $\gamma$ -phenacyl L-glutamate) in N,N-dimethylformamide, gel formation and melting 2-8612  
 poly-n-phenylene terephthalamide solns., light scattering, liq. crystn. state transition (*Russian*) 2-35661  
 polymer solution, rod-like, isotropic to liq. cryst. phase transition, elec. field effect 2-21307  
 polymer-solvent binary mixture, nematic phase, domain of stability 2-30397  
 potassium palmitate-water, lipid bilayer system, biaxial ordering of melted chains near gel-phase transition, NMR study 2-9781  
 PPAB, refractive indices and nematic isotropic phase boundary 2-21968  
 4-propionyl-4'-n-heptanoyloxazobenzene, crystal B to hexatic B phase change 2-16787  
 4-(4'-pyridyl)phenyl 4'-n-alkoxybenzoates N-oxides, liq. cryst. props. 2-21310  
 reentrant nematic and smectic A phases, chem. struct. considerations 2-16589  
 reentrant nematic phase transition, order parameters, free energy functional 2-16791  
 scaled particle theory of a system of hard right circular cylinders 2-16570  
 smectic, dipole ordering, antiferroelec. and helicoidal types 2-35380  
 smectic A<sub>1</sub>-smectic A<sub>2</sub> phase transition, X-ray diffraction study 2-16792  
 smectic A mesophase, uniaxial-biaxial phase transition prediction using anisotropic pair pot. within mean field approx. 2-21000  
 smectic A mixture, refractive index near smectic A-nematic transition 2-45581  
 smectic A phase diagrams exhibiting enhancement, calorimetry 2-12744  
 smectic A-smectic A phase transition, order parameters, free energy functional 2-16791  
 smectic A-smectic A transition at high press., optical microscopy and DTA studies on 60PDB 2-35689  
 smectic film, freely-suspended, freely-suspended films, mech. prop. meas. and B-A transition 2-16582  
 smectic liquid crystals, A-phase, sound attenuation and propagation near phase transition 2-50768  
 smectic liquid crystals., layer struct., order and phase types based on miscibility meas. 2-12479  
 smectic phases, high resolution X-ray scatt. studies 2-12485  
 smectic S<sub>D</sub> and S<sub>A</sub> phases, hypothesis for mol. organisation 2-16575  
 smectic-A-S<sub>A</sub> phases, phase diagrams of dipolar mols., calorimetric and X-ray invest. 2-8611  
 sodium decyl sulphate, liq. cryst. type I CM-type II DM phase transition 2-26050  
 sodium decyl sulphate/1-decanol/water system, nematic phase, structural relations, X-ray diffraction obs. 2-12462  
 solution of rod-like particles with different lengths, phase transitions 2-30603  
 sound wave propagation properties, phase transition behaviour (*Japanese*) 2-8432  
 spin-S Ising model, quadrupole analog, Bragg-Williams approx. 2-16573  
 stability of bilayers and micelles 2-12742  
 superconductivity, lattice model, phase transition 2-30993  
 systems with tensor order parameter, critical point dynamics, percolation, liquid crystals 2-19047  
 TBBA, smectic B to smectic E phase transition, coherent neutron scatt. study 2-12753  
 TBBA, smectic H-smectic C phase transition, X-ray diffraction study 2-12752  
 TBBA, smectic liq. crystal, local order and lattice dynamics, neutron diffraction study 2-25724  
 thermodynamic props., mol. field approx. 2-25721  
 thermotropic liquid cryst., mol. struct. and phase transitions 2-16563  
 thermotropic liquid-crystalline polymers, cholesteric and nematic, phase diagrams 2-35688  
 thermotropic polymeric liq. crystals with mesogenic elements and flexible spacers in main chain 2-30395  
 triphenylene hexa-alkoxybenzoates, disc-like mesogens with nematic and columnar polymorphism 2-21001  
 truxene hexa-n-pentadecanoate, disc-like liq. cryst., reentrant phenomenon 2-8428  
 two-dimensional melting and dynamics 2-1597  
 4-alkylphenyl-4'-alkoxybenzoates, effect on mesomorphic props. of S substitution for ether O atom in ester linkage 2-45578  
 4-alkylphenyl-4'-alkylbenzoates, effect on mesomorphic props. of S substitution for ether O atom in ester linkage 2-45578



**liquid crystal phase transformations continued**

- 4-ethoxy-4'-octyltolane, nematic phase, order parameter fluctuations, Raman study 2-45028  
 $\beta$ -methyl-butyl-methoxybenzylidene amino cinnamate, smectic A-smectic B transition (*Russian*) 2-12749

**liquid crystals**

- see also *cholesteric liquid crystals*; *liquid crystal phase transformations*; *nematic liquid crystals*; *smectic liquid crystals*  
 acousto-optical effect, ang. depend. 2-21977  
 acrylic polymers with biphenyl fragments in side branchings, cryst. and liq. cryst. struct. (*Russian*) 2-21047  
 p-alkoxybenzoic acids, liq. cryst. phases, US propag. 2-45381  
 p-(p'-n-alkoxycinnamoyloxy)-acetophenones, thermotropic mesogen, mesomorphic characts. 2-16562  
 amphiphilic block copolymers, solubilisation of immiscible liqs. into highly swollen mesophases 2-8430  
 p-amyloxybenzylidene-p-butylaniline, on cryst. substrate, texture changes (*Rumanian*) 2-45017  
 anchoring energy on inorganic solid surfaces, effect of interfacial layer 2-8431  
 anisotropic liquid with rotational degrees of freedom, chain version of the molecular field approx. 2-25720  
 anisotropic medium mol. motion, dipolar interaction effect on nuclear spin relax. 2-36463  
 anisotropic system studied using mol. dynamics method 2-35384  
 aromatic-aliphatic polyesters, mesogenic elements and flexible spacers in the main chain 2-50517  
 aryl-aliphatic mesomorphic polyester, mol. dynamics study by  $H^+$ -decoupled  $^{13}C$  NMR lineshape 2-21908  
 biaxial discotics, hydrodynamics 2-35395  
 biorheological phenomena rel. to liq. cryst. structs. 2-37611  
 biphenyl-4,4'-dicarboxylic acid, di-n-alkyl esters, mesogenic, synthesis and thermal anal. 2-50854  
 n-butyl isocyanate-n-nonyl isocyanate copolymer, dielec. relax. of isotropic and lyotropic solns. 2-21943  
 canonic, curvature defects 2-16585  
 carbonaceous mesophase, struct. and phys. props., rel. to disc-like mols. 2-25739  
 cellulose, in trifluoroacetic acid-chlorinated-alkane solvent mixtures, lyotropic mesomorphic formation 2-25727  
 2'-chloro-4-biphenyl 4"-n-alkoxybenzoates, liq. cryst. phase, steric effects 2-50525  
 classification and properties, rel. to structure (*Japanese*) 2-16578  
 cyano-alkyl-biphenyl liquid crystals, polarisabilities and susceptibilities 2-50515  
 n-decyl isonicotinate hydrochloride-decanol-water, lyotropic lamellar phase, ESR study 2-21010  
 deuterium spectra simplification by refocussing of proton-deuterium dipolar couplings 2-25728  
 di-iso-butylsilanediol, thermotropic mesophase, struct. and phase transitions 2-25742  
 disc-like liquid crystals., mol. motions and nucl. mag. relax. 2-12466  
 disc-like mesogens, classification 2-1397  
 disc-like mesophases, struct., defects, third sound, transitions 2-25723  
 disc-like molecules, mag. susceptibility of mesophases 2-26581  
 disc-like molecules, mesophase form., rel. to carbonaceous mesophase 2-25739  
 discotic mesophases, form. and props., review 2-25740  
 disklike molecules, mol. dynamics study, new mesophases 2-21023  
 EHD instability in presence of external noise 2-3497  
 p-(p-ethoxyphenylazo) phenyl alkanoates, liq. cryst., internal field parameters 2-17034  
 fluoro liquid cryst., mesogenic power rel. to mol. ang. correl. in isotropic phase (*French*) 2-8425  
 2'-fluoro-4-biphenyl 4"-n-alkoxybenzoates, liq. cryst. phase, steric effects 2-50525  
 four wave mixing characteristics for liq. cryst. 2-16579  
 Frank elastic consts., mol. statistical theory 2-16565  
 4,4'-n-heptylcyanobiphenyl, liq. cryst., transitions, mol. flexibility, orientational statistics, Raman study 2-13467  
 hexa-n-alkoxy triphenylenes, mesogenic disc-like cpd., mol. arrangement 2-50522  
 hexa-n-alkoxy triphenylenes, mesogenic disc-like cpd., mol. arrangement 2-50522  
 hexapentoxo-triphenylene, discotic columnar mesophase, PMR, self diffusion meas. and spin-lattice relax. 2-21906  
 hexapentoxotriphenylene, hexagonal discotic mesophase, disclinations and walls (*French*) 2-12463  
 4-n-hexyl-4'-cyanobiphenyl isotropic liq. cryst., Kerr effect, RF dispersion 2-5659  
 homeotropic orientation by amphiphilic mol. monolayers 2-25737  
 hydrodynamics, nonlinear dissipative effects 2-50537  
 isotropic liq. cryst., Kerr effect, RF dispersion 2-5659  
 lipid liquid-crystal systems, pretransitional phenomena, struct. models evaluation 2-2840  
 lipid membrane system, rank order param. by fluoresc. polarisation 2-6217  
 liquid-cryst., periodically modulated structs. determ. using optical diffraction 2-25732  
 lyotropic, swelling, molecular field theory (*Russian*) 2-5046  
 lyotropic liq. crystalline materials containing Pd and Ni 2-16577  
 lyotropic liq. crystals., NMR study on phase transitions caused by hydrophobic additives 2-50856  
 lyotropic liquid crystals., type I CM-type II DM phase transition 2-26050  
 materials for field-effect electro-optical devices 2-12469  
 MBBA,  $^{13}C$  relaxation times and nuclear Overhauser effect, nematic and isotropic phases 2-51496  
 mean field theory of liquid crystalline phases of disc-shaped molecules 2-5044  
 microemulsions and lyotropic liquid crystalline mesophase, dielectric props. 2-12477  
 mixed liquid crystals, struct. and optical anisotropy 2-50543  
 molecular crystal, general virial relations (*Russian*) 2-25998  
 molecular dynamics, Jeener-Broekaert pulse sequence appl. 2-16559  
 molecular interactions, comparative anal. of smooth and multicentric models 2-30387  
 nonimpact printing, photochemical and photomechanical effects 2-37105  
 nonlocal continuum theory 2-21016  
 octanoate, on cryst. substrate, texture changes (*Rumanian*) 2-45017

**liquid crystals continued**

- n-p-octyloxybenzylidene-p-toluidine, liq. cryst., dielec. relax. in solid phases at low temperatures 2-2184  
 4,4'-n-octyloxycyanobiphenyl, liq. cryst., transitions, mol. flexibility, orientational statistics, Raman study 2-13467  
 one-dimensionally and two-dimensionally ordered liq. crystals, and appls., conference, Garmisch-Partenkirchen, Germany (Jan. 1980) 2-10550  
 orientation, on  $In_2O_3$  surface, evaluation of cleanliness (*Japanese*) 2-23620  
 p-n-hexahexyloxytriphenylene, discotic mesophase, D NMR study of dissolved solute mols. 2-51480  
 petroleum pitch, mesophase dynamics, hot-stage cinemicroscopy obs., disclinations form. 2-40258  
 poly( $\gamma$ -benzyl-L-glutamate), liq. crystn. spherulites, light-scattering study of deform. 2-45023  
 poly(benzylglutamates), lyotropic polymer liq. cryst., pretransitional effects in isotropic phase 2-40267  
 poly- $\gamma$ -benzyl-L-glutamate, liq. cryst. phase formation 2-50526  
 poly- $\gamma$ -benzyl-L-glutamate, rodlike textures, orientation in electric field, light scatt., birefringence 2-35381  
 poly- $\gamma$ -benzyl-L-glutamate lyotropic liq. cryst. solns., anisotropic refr. indices 2-21967  
 polyamides, semi-stiff chain aromatic, candidates for thermotropic liq. cryst. polymers 2-40266  
 polyesteramides, thermotropic behaviour 2-8416  
 polyesters, thermotropic, liq. cryst. props., main chain flexible spacers effects 2-16560  
 polyesters, thermotropic behaviour 2-8416  
 polymer liquid crystal, meas. of bend and splay elastic consts. by Frederik's distortion 2-16704  
 polymers, synthesis, struct. and props. 2-50516  
 polymorphism 2-5070  
 potassium laurate, liq. cryst., type I CM-type II DM phase transition 2-26050  
 quantum liquid crystals, orientationally ordered, theory 2-45668  
 quantum liquid crystals 2-16924  
 refractive indices, density and order parameters of some technologically important liquid crystalline mixtures 2-36588  
 rheology, of rod-like polymers in liq. crystn. state 2-50225  
 scaled particle theory of a system of hard right circular cylinders 2-16570  
 Schiff's bases, conform. motions in aromatic core, PCILO and Buckingham pot. calcs., effect of mol. packing 2-15922  
 shear impedance, effect of magnetic field 2-8433  
 sitosteryl, on cryst. substrate, texture changes (*Rumanian*) 2-45017  
 sodium decyl sulphate, liq. cryst. type I CM-type II DM phase transition 2-26050  
 symmetric and asymmetric rigid rods with anisotropic dispersion forces and rigid body repulsions 2-16568  
 terephthalylidene-bis-(4-n-alkylanilines), homologous series, liq. crystals 2-21019  
 thermotropic, mol. struct. and phase transitions 2-16563  
 thermotropic liq. crystals., new class 2-1389  
 thermotropic liquid crystalline polymers 2-30394  
 thermotropic liquid crystals, physics and display appl. 2-45020  
 triphenylene alkoxybenzoates, disc-like, fluid mesophase, X-ray diffraction study and mag. field effects 2-25741  
 triphenylene hexa-alkoxybenzoates, disc-like mesogens with nematic and columnar polymorphism 2-21001  
 triphenylenes, dissymmetric hexasubstituted, disc-like liq. crystals., columnar mesophase, mag. props. 2-1393  
 two-dimensional melting and dynamics 2-1597  
 uniaxial liquid crystals, structural order and molecular polarisability 2-30386  
 vanadyl chlorite, di-isopropyl ester, solid-state  $^{51}V$  NMR, in isotropic, nematic and mesophases 2-26768  
 vanadyl tri-isopropyl ester, solid-state  $^{51}V$  NMR, in isotropic, nematic and mesophases 2-26768  
 $VOCl_3$ , solid-state  $^{51}V$  NMR, in isotropic, nematic and mesophases 2-26768

**liquid drop model (nuclear) see nuclear liquid drop model****liquid films**

- see also *adsorbed layers*; *helium films*; *liquid helium*; *superfluidity*; *surface tension*  
 aerodynamic heating, ablation, laminar to turbulent transition, asymptotic props. 2-35132  
 air- $H_2O$ , two-phase flow, min. film thickness, flow obstruction effect 2-4873  
 anthraquinone derivatives, long-chain, multilayers, electronic spectra and mol. orientation 2-36716  
 binary microlayer, double diffusion problem 2-44773  
 black film rupture, theory 2-1711  
 butyloxybenzylidene octylaniline freely suspended liq. cryst. film, mech. props. 2-1542  
 cholesteric liquid cryst., film, mag. field induced phase transitions 2-40541  
 decane, evaporating thin film, heat transfer in contact line region, microphotometric obs. 2-10842  
 dielectric, elec. forces influence on dynamics and stability 2-35870  
 draining liquid film, heat transfer 2-16314  
 flow of film under inclined plate, wave motion 2-30158  
 fluid, conducting film, removal of Rayleigh-Taylor instability by mag. field and heat flux 2-8117  
 fluid-solid interfaces, transport processes, fluid layer equilib. fluctuations 2-50999  
 freely falling turbulent liq. films, gas absorption rates, viscosity and surface tension effects correl. 2-35129  
 hot gas flow past surface, form. of liquid film with variable viscosity, flow, heat and mass transfer 2-16312  
 inclined thin film flows, waviness and associated mass transfer 2-44742  
 insoluble, phase transitions at the air-water interface 2-1712  
 interaction forces in thin films (*German*) 2-30721  
 laminar film condensation on a porous vertical wall with non-uniform normal velocity 2-50231  
 Lennard-Jones fluid, monolayer, solvation forces 2-12888  
 linear stability with interfacial phase change 2-35115  
 liquid crystal, smectic, freely-suspended films, mech. prop. meas. and B-A transition 2-16582  
 liquid films, flow down oscillating plane, nonlinear stability 2-20641



**liquid films continued**

- MBBA, nematic film, with two free surfaces, IR study of mol. orientation 2-1388
- MBBA nematic layer, asymmetric anchored, penetration depth of surface forces 2-16564
- nematic liquid cryst., distortions induced by flow or elec. field conoscopic expts. 2-50533
- nematic liquid crystal, thin films, mol. orientation, nonlinear light scatt. 2-50538
- nonlinear waves in a liquid film entrained by a turbulent gas stream 2-50280
- oil film on sea, IR absorption and reflection (*Russian*) 2-9700
- polymer bridging forces in liquid/liquid systems 2-35864
- red cell membrane proteins, multilim. films, surface rheology 2-37507
- red cell membrane proteins, surface isotherms of monomol. films 2-37506
- rhodamine B, adsorbed on Ag, surface plasmons, light reflection study (*French*) 2-2360
- smectic-B liq. cryst. film, X-ray scatt. studies 2-1404
- subcooled, countercurrent steam condensation, rel. to LOCA 2-8151
- surface forces, operating at  $\sim 30$  Å separation, theory 2-45687
- thermocapillary stability during gravity flow of a liquid film 2-16285
- two-phase boundary layer, wave struct. of interface, statistical anal. 2-8168
- viscoelastic fluid, rimming flow in rotating cylinder, viscosity determ. 2-35238
- viscous fluid film flowing down vertical wall, stationary waves 2-4840
- water, nonfreezing, thermocrystn. flow on capillary surface 2-35224
- wave surface film, influence of hydrophobic impurities on statistical characteristics 2-8169
- wavy laminar filmwise condensation 2-8604
- $^3\text{He}$  film on  $^3\text{He}$ - $^4\text{He}$  mixtures, superfluid transition temperature 2-35839
- $^4\text{He}$ , superfluid, renormalisation of vortex diffusion const. 2-1701
- NaCl, contact with primary black film, linear tension at wetting perimeter 2-26179

**liquid flow coaxial cables** *see coaxial cables***liquid He** *see liquid helium***liquid helium**

- see also helium films; liquid helium-3; liquid helium-4; liquid helium sound propagation; ripples; vortices*
- breakdown, electrode surface influence 2-2186
- cryostat design, evaporation rates baffle config. for efficient use of liquid He 2-33548
- dewar, rotating, bayonet coupling of transfer tube investig. 2-33537
- electric breakdown, pulsed, delay time 2-36527
- elementary excitations in quantum liquids, review 2-50949
- first voltage breakdown, electrode behaviour 2-2185
- impurity quasiparticle as a weak inhomogeneity 2-28765
- isoangular scintillation vol. for fast neutron polarisation study 2-49219
- Kapitza conductance of localised surface excitations in glass-liq. He interface 2-35878
- multielectron surface dimple (*Russian*) 2-12881
- surface, many-electron dimples 2-40619
- surface, ordering of two-dimens. system of electrons 2-5293
- surface, two-dimens. Wigner and electron crystn., dislocation mediated melting 2-1706
- transient heat transfer expts. 2-1114
- Wigner crystal, two-dimens., defect states and melting transition, theory 2-1848
- He-H<sub>2</sub> mixture in liq-gas phase equil. region, enthalpy calc. and Joule-Thomson coeff. 2-20806
- $^3\text{He}$ , solid-liquid boundary, mag. quantum props. (*Russian*) 2-26175.

**liquid helium-3**

- see also fermion systems; superfluid helium-3*
- adsorbed layers on fluorocarbons, nuclear relax. study 2-35838
- CBF theory, recent development, future prospects 2-28769
- dynamic fluctuations, kinetic theory anal. 2-35822
- film, adsorbed on exfoliated graphite, ferromag. ordering, susceptibility and NMR study 2-35837
- film, adsorbed on graphite, second layer and nucleation, neutron diffraction study 2-40637
- film, adsorbed submonolayer on solid Ne, sp. ht. anomalies 2-40642
- film, sticking probabilities and binding energy of H 2-1694
- film on  $^3\text{He}$ - $^4\text{He}$  mixture, superfluid transition temperature 2-35839
- first sound propag. 2-35816
- ground state, abnormal occupation, intermolecular pots. 2-40650
- ground state energies, effective correlation theory 2-12872
- heat capacity discrepancy 2-50953
- heat capacity meas. 2-35825
- Kapitza conductance, surface roughness contrib. 2-12870
- Landau parameter  $F_2$  from US attenuation meas. 2-35821
- magnetic susceptibility in high mag. fields, manometric meas. 2-33585
- microdroplets, transparency in heavy atom collisions 2-30683
- NMR relaxation time in Landau Fermi liquid theory 2-35804
- normal phase, transverse acoustic impedance, 3 mK to 1K 2-35795
- nuclear mag. susceptibility, 3 to 15 mK, under press., surface enhancement 2-35803
- nuclear magnetic susceptibilities, quantitative appl. of Fermi-Dirac functions 2-10707
- nuclear spin relax. time 2-35805
- pairing phenomena in strong correlated Fermi liquids 2-42940
- photoresonance and mobility of localized electrons above liq. He (*Russian*) 2-21419
- quasiparticle mean free path and Poiseuille flow 2-35808
- refrigeration below 1K in space, review 2-33555
- refrigerator module 2-33554
- specific heat at 29.4 bar 2-1691
- specific heat in normal and superfluid phases 2-35826
- specific heat meas., phase diagram 2-30690
- spin diffusion, spin echo data anal. 2-35806
- spin diffusion coeff. in infinite and bounded geometries under press. 2-35807
- spin polarised, ground state energy, correlated basis function calc. 2-45663
- spin polarized, melting press. 2-30691
- SQUID magnetometer using  $^3\text{He}$ , performance limits and appl. 2-28869
- submonolayer on grafoil, melting in two dimensions 2-1698
- thermal cond. near liquid-vapour crit. point 2-35824
- transverse acoustic impedance, anomalous freq. depend. 2-35820
- vibrating wire expts. to 0.6 mK 2-35799

**liquid helium-3 continued**

- zero sound and melting curve, entropy contribs. 2-35823
- Ag-Mn dil. alloy- $^3\text{He}$  interface, mag. Kapitza resist., expt. design 2-30735
- CMN powder-liquid  $^3\text{He}$  interface, thermal resist., mixed powder decimeter effect 2-30736
- CMN-liquid  $^3\text{He}$  interface, thermal resist. below 100mK 2-35880
- $\text{CuSO}_4 \cdot \text{K}_2\text{SO}_4 \cdot 6\text{H}_2\text{O}$ -liquid  $^3\text{He}$  interface, thermal boundary resist., mag. coupling 2-30738
- $\text{MnSO}_4 \cdot (\text{MH}_4)_2\text{SO}_4 \cdot 6\text{H}_2\text{O}$ -liquid  $^3\text{He}$ , Kapitza resist. 2-35881

**liquid helium 3-4 mixtures**

- decomposing mixture, light scatt. obs. near tricritical point 2-35829
- decomposing mixture, structure factor, light scatt. obs. 2-35828
- dilute, density fluctuation spectra 2-30703
- dilute soln., transverse acoustic impedance 2-40635
- dilution kinetics, second sound expts. 2-26168
- dilution refrigerator,  $^4\text{He}$ -cycling, two phase counterflow visual obs. 2-35830
- dilution refrigerator in combination with an ESR spectrometer 2-33550
- film, heat capacity 40 to 350 mK, doubly two-dimens. behaviour, bound state 2-1695
- film, phase separation 2-30705
- film, unsaturated, superfluid onset, third sound and mass transport obs. 2-1693
- heat capacities and press. coeffs., simultaneous meas. apparatus 2-21409
- Ising model, singlet-triplet, appl. to simple fluids, nematic mixtures and  $^3\text{He}$ - $^4\text{He}$  mixtures 2-131
- isotopic separation, continuous flow cryostat method 2-33549
- Kapitza conductivity const. for Fe/dil.  $^3\text{He}$ - $^4\text{He}$  mixture 2-17356
- microstratified, surface phenomena 2-30704
- phase separation, visual obs. 2-40636
- superfluid, convective instability 2-26167
- superfluid, dil., onset of convection 2-26166
- superfluid, dilute, time depend. thermal convection 2-21421
- superfluid, first-sound attenuation, press. effects, 0.35 to 1.5K (*Russian*) 2-40634
- superfluid, oscill. convective instability 2-21423
- superfluid, Rayleigh-Benard instability, convective heat transfer 2-35827
- superfluid, shear viscosity and phonon gas flow kinetic processes 2-35763
- superfluid hydrodynamic eqn., Landau theory (*Chinese*) 2-21420
- superfluid transition temperature of  $^3\text{He}$  film on  $^3\text{He}$ - $^4\text{He}$  mixture 2-35839
- superfluidity, proximity effect 2-21422
- vortex ring nucleation by negative ion movement 2-35831
- $\text{CuSO}_4 \cdot \text{K}_2\text{SO}_4 \cdot 6\text{H}_2\text{O}$ -liquid  $^3\text{He}$  interface, thermal boundary resist.,  $^4\text{He}$  adsorbed layer effect 2-30738
- $^3\text{He}$ - $^4\text{He}$  mixtures, Rayleigh scatt. light intensity and linewidth, near gas-liq. crit. point 2-36662

**liquid helium-4**

- see also boson systems; superfluid helium-4*
- adsorbed film, attenuation of static polarisation echo 2-45667
- adsorbed on grafoil, solid layer struct. 2-1698
- anomalous viscosity near gas-liq. crit. point obs. 2-35728
- circular Couette flow, emergence of periodic mode in turbulent region 2-39896
- critical phenomena in vicinity of upper  $\lambda$ -point 2-35769
- equation of state, approx. of P- $\rho$ -T data near crit. point (*Russian*) 2-40615
- equation of state and melting curve to very high press. 2-26176
- film, solidon excitations 2-1696
- film, spatial orderings and elementary excitations 2-1697
- film, sticking probability of H 2-1694
- film on Mylar substrate, thermal cond. meas. 2-35832
- flow boiling of He I in vertical heated glass tube, press. drop. and flow struct. 2-35220
- ground state, abnormal occupation, intermolecular pots. 2-40650
- ground state, hard-core square well pot. parameters redeterm. 2-50950
- ground state energy, new constructive calc. 2-45655
- heat capacities and press. coeffs., simultaneous meas. apparatus 2-21409
- interface with solid  $^4\text{He}$ , capillary effects on phonon transmission 2-40616
- interparticle potentials, test 2-12869
- Kapitza conductance, surface roughness contrib. 2-12870
- Kapitza effect at  $^4\text{He}$ -solid interface, phonon reflection spectrum study 2-30687
- liquid phase existence above melting curve press. in small glass pores, sp.ht. obs. 2-35770
- loaded Rayleigh waves on lightly loaded interfaces, damping, appl. to Kapitza conductance 2-12900
- magnetic susceptibility in high mag. fields, manometric meas. 2-33585
- microdroplets, transparency in heavy atom collisions 2-30683
- multielectron bubbles, struct. and stability 2-30678
- neutron scatt., model study 2-30673
- phonon dispersion 2-50816
- photoresonance and mobility of localized electrons above liq. He (*Russian*) 2-21419
- purification, continuous flow isotopic separation cryostat 2-33549
- quasi-particle Hamiltonian 2-35789
- structure factor and anomalous dispersion 2-35791
- structure factor temp. depend., neutron scatt. study 2-30674
- submonolayer on large graphite crystals, heat capacity, two-dimens. transitions 2-1699
- surface, adsorbed spin polarised atomic H, longit. and transverse relax. 2-35862
- surface, adsorbed spin-polarised atomic H, adsorpt. isotherms and exchange interactions 2-35835
- surface, electron beam excitation 2-30685
- surface, multielectron dimples 2-40618
- thermal boundary resistance to small particles, phonon cond., size effect 2-45708
- thermodynamic and transport parameters,  $\lambda$  point to 4.2K, cubic spline fits 2-21343
- $^4\text{He}$  films, phonon induced desorpt. 2-40645

**liquid helium sound propagation**

- see also second sound; zero sound*
- review of modern acoustics 2-49967
- $^3\text{He}$ , first sound propag. 2-35816
- $^3\text{He}$ , normal phase, Landau parameter  $F_2$  from US attenuation meas. 2-35821
- $^3\text{He}$ , normal phase, transverse acoustic impedance, 3 mK to 1K 2-35795



**liquid helium sound propagation continued**

- <sup>3</sup>He, normal phase, transverse acoustic impedance, anomalous freq. depend. 2-35820  
<sup>3</sup>He, superfluid A, phase, linearised hydrodynamics 2-50951  
<sup>3</sup>He, superfluid B-phase, damping of first sound and viscosity near superfluid transition 2-35796  
<sup>3</sup>He, superfluid B-phase, Lande factors of collective mode multiplets and coupling strengths to sound waves 2-26165  
<sup>3</sup>He-<sup>4</sup>He, dil. soln., transverse acoustic impedance 2-40635  
<sup>3</sup>He-<sup>4</sup>He mixture film, unsaturated, superfluid onset, third sound and mass transport obs. 2-1693  
<sup>3</sup>He-<sup>4</sup>He mixtures, first-sound attenuation, press. effects, 0.35 to 1.5K (*Russian*) 2-40634  
<sup>3</sup>He-<sup>4</sup>He solution, microstratified, surface phenomena 2-30704  
<sup>3</sup>He-A, high freq. modes 2-30695  
<sup>3</sup>He-B, fourth sound shock waves 2-35797  
<sup>4</sup>He, adsorbed on pyrolytic graphite superfluid onset, third sound and vapour press. study 2-40644  
<sup>4</sup>He film, Helmholtz resonator of very LF used to study onset phenomena 2-40628  
<sup>4</sup>He film, two dimensional, three phonon coupling, third sound meas. 2-35833  
<sup>4</sup>He film, two dimensional, nonlinear superflow dissipation in third sound reson. 2-35834  
<sup>4</sup>He film freq.-depend. dissipation onset 2-40625  
<sup>4</sup>He, superfluid, collective motions in XY model 2-33465  
<sup>4</sup>He, superfluid, fourth sound vel. and two-scale-factor universality near  $T_\lambda$  2-35767  
<sup>4</sup>He, superfluid, hydrodynamic fluctuations, sound dispersion calc. 2-40624  
<sup>4</sup>He, superfluid, interacting boson props., excitation spectrum, struct. factor and sound vel. 2-21410  
<sup>4</sup>He, superfluid, physisort. of spin polarised atomic H, dynamic props., third sound study 2-30707  
<sup>4</sup>He, superfluid, step-wise solid layer nucleation on Grafoil, fourth sound vel. study 2-40643  
<sup>4</sup>He, superfluid, thermodynamic props., 0K to lambda transitions 2-5292  
<sup>4</sup>He superfluid film, adsorbed in porous Vycor glass, superfluid density, Landau elementary excitations 2-26171

**liquid lasers**

see also dye lasers

- Nd<sup>3+</sup> doped inorganic liquid laser systems, rare earth ion effects on laser performance (*Chinese*) 2-15996  
 Nd<sup>3+</sup>:POCl<sub>3</sub>-P<sub>2</sub>O<sub>5</sub>-Cl<sub>4</sub>-SnCl<sub>4</sub> system, laser performance and fluoresc. lifetime (*Chinese*) 2-15996

**liquid metal embrittlement**

- acoustic emission, influence of surface-active liq. metals 2-40494  
 review 2-5962  
 steel, alloy, drilling, influence of liq. Sn-Zn and powder Sn-Zn suspension cutting fluids 2-2591  
 steel, austenitic stainless, liq., metal embrittlement by Te-Cs mixture 2-36966  
 Cu, fracture kinetics, role of surface energy at boundary with liq. Bi-Pb 2-41742  
 Cu in liq. Hg, lifetime-under-load and fracture kinetics 2-36971  
 Fe, Armoq, liq. metal embrittlement, grain size role 2-17738

**liquid metals**

see also electron energy states of liquid metals; liquid alloys; mercury (metal)

- alkali metals, elec. resist. and struct., electron-ion plasma model 2-26356  
 alkali metals, selfconsistent theory, surface tension 2-25717  
 alkali metals and alloys, structure determ., electron-ion plasma 2-30383  
 amorphous systems atomic and electronic structs. 2-40771  
 density profile struct. at liq. metal-vapour interface 2-30720  
 diffraction models, thermodynamics, electrical cond. changes (*Dutch*) 2-8414  
 elastic moduli, HF, influence of many-body interactions (*Russian*) 2-40462  
 electron ordering and electron liq. form. 2-40517  
 electroneutrality conditions and interionic corrs. 2-30719  
 field-emission ion sources 2-578  
 flow rate measurement 2-40006  
 flow through cylindrical pipe, nozzle blockage by freezing, mathematical model 2-44706  
 generalised Cauchy relation, elastic const. (*Russian*) 2-45311  
 ingot solidification, continuous casting, intensive heat transfer (*Russian*) 2-9344  
 instability in alternating mag. field, surface undulations 2-39994  
 ion sources characts. 2-5140  
 isothermal compressibility rel. to surface tension 2-45310  
 kinematic viscosity measuring apparatus 2-12253  
 liquid, thermodynamics using hard sphere vs. one component plasma reference systems 2-8415  
 melted zone length influence on elimination of organic matter (*Russian*) 2-2440  
 metal powder production, gas atomisation process, math. modelling 2-36808  
 metal-metal carbide melts in contact with solid C, C vaporisation 2-21286  
 MHD cycle operation for solar collectors and fossil-fuel combustors 2-37419  
 phonon dispersion curves, Percus-Yevick phonon description 2-40507  
 rare earths, compressibility and sound vel. 2-35593  
 regulating device, EM pump, flow rate meas. 2-40007  
 simple, finite mean free paths and elec. resist. 2-40868  
 specific heat, based on Percus-Yevick phonon description 2-16807  
 steel, stainless, exposed to liq. Li, trapping and radiation-induced detraping of H 2-45272  
 surface tension calcs. 2-12887  
 surface tension of sound vel. at melting point 2-16927  
 surface tension pseudopotential perturbation theory 2-45682  
 Taylor vortex MHD flows, supercrit. state 2-30235  
 theory, variational prop. of effective medium approx. 2-1815  
 thermodynamic properties using one-component plasma reference system 2-45013  
 thermodynamic props. perturbed hard-sphere and corresponding states model 2-1635  
 thin metal conductors, current-carrying, thermal instability 2-51142  
 viscosity gauge, high-temp. vibr. 2-44801  
 Ag, effective pair potential and thermodynamic props. 2-45015

**liquid metals continued**

- Ag, O activity, electrochem. meas. 2-8647  
 Ag, US vel., meas. using pulse echo method 2-40489  
 Al, liquid, interionic pot. from struct. data 2-20996  
 Al, liquid, structure study using molecular dynamics method 2-25719  
 Al, liquid layer, freezing after laser pulse irradiation, non-equilib. Pb segregation effects 2-35699  
 Al, liquid struct., radial distrib. functions 2-40256  
 Al melting point, thermodynamic calc. 2-5209  
 Al, model at melting point (*Russian*) 2-35378  
 Al, small and large angle struct. factors 2-40254  
 Al, US vel., meas. using pulse echo method 2-40489  
 Au, effective pair potential and thermodynamic props. 2-45015  
 Au, ion source, droplet emission, SEM obs. 2-36767  
 Au liquid-metal ion sources, field evaporation and ionisation, optical emission probe of neutral atoms 2-51707  
 Ba, liquid, thermophysical props. 2-35562  
 Bi, molten, dissoln. of solid Sb, interfacial phenomena 2-1750  
 Bi, O activity, electrochem. meas. 2-8643  
 Bi, US vel., meas. using pulse echo method 2-40489  
 Ca, liquid, thermophysical props. 2-35562  
 CdTe, solubilities in liquid III metals 2-50863  
 Co, electrical resist., mean free path and multiple scatt. corrections 2-5379  
 Cs, liquid, thermophysical props. 2-35562  
 Cu, deoxidation, electrocond. increase by Mg and Ar injection, inclusion obs. (*Rumanian*) 2-47197  
 Cu, effective pair potential and thermodynamic props. 2-45015  
 Cu, electrical resist., mean free path and multiple scatt. corrections 2-5379  
 Cu, infiltration into sintered Fe and Fe-Al<sub>2</sub>O<sub>3</sub> compacts (*Japanese*) 2-27117  
 Cu, O activity, electrochem. meas. 2-8647  
 Cu, surface tension, effect of O 2-8691  
 Cu, US vel., meas. using pulse echo method 2-40489  
 Er, liquid, interionic pot. from struct. data 2-20996  
 Fe, electrical resist., mean free path and multiple scatt. corrections 2-5379  
 Fe, liquid, structure study using molecular dynamics method 2-25719  
 Fe, liquid, temp. effect on struct. change 2-26035  
 Fe melt, C saturated, vacuum vapourisation of certain elements (*Chinese*) 2-30572  
 Fe, model at melting point (*Russian*) 2-35378  
 Fe, S content determ. using CaS-TiS<sub>2</sub> solid electrolyte 2-12842  
 Ga, ion source, droplet emission, Rutherford backscatt. spectrometry 2-36767  
 Ga, liquid, ion source for scanning microbeam 2-48835  
 Ga, liquid, struct. determ. by synchrotron radiation 2-25718  
 Ga liquid-metal ion sources, field evaporation and ionisation, optical emission probe of neutral atoms 2-51707  
 Ga mixtures, interaction with stainless steel, and Nb-Zr-C 2-41801  
 Ga, positive ion source, mass transport 2-584  
 Gd, density and thermal expansion in temp. range 293-1850K 2-40575  
 Ge, O activity, electrochem. meas. 2-8643  
 H solubility, in liq. metals 2-30606  
 Hg, adsorbed molecule, surface enhancement Raman scatt., EM effects 2-5685  
 Hg, liquid-vapour interfacial width, Van der Waals description 2-26032  
 In, ion source, droplet emission, TEM 2-36767  
 K, freezing and liq. struct. factor 2-40517  
 Li, influence of creep of Nb alloys 2-41696  
 Li, interaction with austenitic stainless steel 2-41798  
 Li, interaction with Nb-Zr-C, O content influence 2-41799  
 Li, liquid metal curtain for ICF reactors 2-7335  
 Li<sub>2</sub>Pb<sub>3</sub> liquid metal eutectic coolant/breeder, coupled neutronics-photonics anal. 2-7360  
 Lu, liquid, interionic pot. from struct. data 2-20996  
 Mg, small and large angle struct. factors 2-40254  
 Na, coolant in fast reactor, method for generating and receiving US narrow beams 2-49130  
 Na, freezing and liq. struct. factor 2-40517  
 Na, struct. factor, neutron scatt. meas. 2-45016  
 Nd, liquid, interionic pot. from struct. data 2-20996  
 Ni, electrical resist., mean free path and multiple scatt. corrections 2-5379  
 Ni, molten, penetration into sintered TiC-Ni-Mo hard metal, effect on mech. props. 2-13674  
 Ni, solubility limit of O<sub>2</sub>, thermodynamic props. 2-2726  
 O<sub>2</sub> immersion sensor for dissolved O<sub>2</sub> electrochem. determ. in metallic melts 2-10798  
 Pb, liquid structure factors, soft sphere charact. 2-12460  
 Pb, small and large angle struct. factors 2-40254  
 Rb, expanded liquid, vel. autocorrelation function, mol. dynamics study 2-20998  
 Rb, liq., moments of current correl. functions and triplet correl. 2-35379  
 Rb, struct. factor, frieldel oscills. effect 2-40253  
 Sn, dissoln. kinetics of Ni 2-8626  
 Sn, O activity, electrochem. meas. 2-8643  
 Sn on graphite substrate, Si layer growth by CVD 2-13657  
 Sn, reaction with solid Pb, morphological obs. 2-41588  
 Zn, reaction with carburized Fe with abnormal struct. (*Japanese*) 2-13851

**liquid oscillations**

see also liquid waves

- asymmetric oscillating cylinder, secondary external flows 2-20692  
 creeping flows, drop dynamics with oscillating force or velocity 2-12186  
 droplet, drag in translating fluctuating flow 2-12187  
 drops, catastrophic breakup, two-stage Rayleigh-Taylor model 2-25429  
 free fluid surface confined by hyperelastic material membrane shell, oscills. in axisymm. vessel 2-25382  
 marginally stable inviscid flows with critical layers, review 2-8115  
 oscillation ripple marks of highly viscous fluids 2-20693  
 particle-fluid mixture, flow induced by oscill. flat plate, buoyancy effect 2-8209  
 semi-free liquid sphere, axial and tangential vibr. modes (*French*) 2-33298  
 sloshing problems, nonlinear, two-dimens., boundary element method anal. 2-25381  
 square and hexagonal cylinder vibr. in liquid 2-20695



**liquid oscillations continued**

- transverse oscillations of a cylindrical shell with compartments partially filled with fluid 2-25293  
 unsteady MHD boundary layer flow, Hall effects, initial value problem soln. 2-8239  
 water-solid interaction system, variational principle 2-20690  
 H<sub>2</sub>O, unsteady convective instabilities, oscillations 2-30129

**liquid permeability** *see permeability***liquid phase epitaxial growth**

- garnet films for magneto-optical appls. LPE growth, Pr, Bi and Pb segregation 2-31644  
 garnet LPE film, expt. evidence for step growth mechanism 2-26240  
 III-III-V-V quaternary layers grown by LPE, thickness calc., appl. to InGaAsP 2-45768  
 III-V compounds, peculiarities of isothermal contact of liq. and solid phase during LPE 2-30763  
 mass transfer processes and influence on epitaxial layer growth rate 2-5838  
 metals, laser pulse melting, epitaxy and allotropy, expt. study 2-50702  
 optoelectronic III-V semiconductor crystal growth in laboratory 2-46961  
 semiconductors, III-V, liq. phase electroepitaxial growth, new approach 2-17636  
 surface molecular dynamics method investig. of epitaxial crystn. from melt 2-1801  
 (Al,Ga)As, use of sapphire liners to eliminate edge growth in LPE 2-13661  
 Al<sub>0.5</sub>Ga<sub>0.5</sub>As, technological problems (*Japanese*) 2-2469  
 AlGaAs constricted double-heterojunction diode lasers, structs. and electro-optical characts. 2-34789  
 AlGaAs DH wavelength multiplexing injection laser source with graded comp. along active layer 2-919  
 AlGaAs-GaAs concentrator solar cells, fabrication by OM-VPE and LPE, performance and durability 2-32085  
 AlGaAs-GaAs heterostructures, LPE growth for solar energy conversion 2-46952  
 Al<sub>0.6</sub>Ga<sub>0.4</sub>As:Ge LPE film, dislocation clusters, TEM obs. 2-45762  
 Al<sub>0.5</sub>Ga<sub>0.5</sub>As, comp. change w.r.t. LPE temp. (*Russian*) 2-16967  
 Al<sub>0.5</sub>Ga<sub>0.5</sub>As epilayers, mm thick, Peltier-induced LPE and compositional control 2-5318  
 Al<sub>0.5</sub>Ga<sub>0.5</sub>As p-n junction solar cells, grown-in deep-level defects 2-37393  
 Al<sub>0.5</sub>Ga<sub>0.5</sub>As, photoluminesc. with graded forbidden band under pulsed excitation 2-13545  
 Al<sub>0.26</sub>Ga<sub>0.74</sub>Sb-GaSb photodetector, LPE growth and photo response (*Japanese*) 2-2469  
 Al<sub>0.5</sub>Ga<sub>0.5</sub>As heterostructure, reproducible epitaxial layer growth from saturated Ga soln. 2-17634  
 AlSb, LPE from Sb solns. 2-31643  
 Au-n-Ga<sub>1-x</sub>Al<sub>x</sub>P surface barrier struct., photoelectric effect 2-26500  
 CdTe, p-n junctions, LPE grown, injection electroluminescence 2-13569  
 p-CuGa<sub>1-x</sub>In<sub>x</sub>S<sub>2</sub>/n-ZnSe heterojunction LPE growth from In soln. 2-16966  
 (Ga,In)As alloys, on InAs substrates, substrate instability during LPE growth 2-2466  
 Ga<sub>1-x</sub>Al<sub>x</sub>As, conduction band structure from Hall mobility measurements at high pressures 2-46030  
 Ga<sub>1-x</sub>Al<sub>x</sub>As structs., varying band gap, for solar cells, liquid phase epitaxy 2-21467  
 p-Ga<sub>1-x</sub>Al<sub>x</sub>As:Ge, LPE grown, charge compensation, photoluminescence spectrum 2-17517  
 Ga<sub>0.5</sub>Al<sub>0.5</sub>As epitaxial layers on GaAs, morphology and misfit dislocations 2-5319  
 Ga<sub>0.5</sub>Al<sub>0.5</sub>As, heterostructure MESFET devices 2-1802  
 Ga<sub>0.5</sub>Al<sub>0.5</sub>As LPE growth, GaAs substrate dislocation behaviour 2-1480  
 GaAs crystals, selective corrosion and selective growth (*Chinese*) 2-9438  
 GaAs epitaxial layers, impurity luminescence study (*Chinese*) 2-13563  
 GaAs, high purity, LPE growth conditions and elec. props. 2-46958  
 GaAs, mass transfer processes influence 2-5838  
 GaAs, peculiarities of isothermal contact of liq. and solid phase during LPE 2-30763  
 GaAs solar cells for space applications 2-27651  
 GaAs-G LPE film, dislocation clusters, TEM obs. 2-45762  
 p-GaAs/P-Ga<sub>1-x</sub>Al<sub>x</sub>As isotype heterojunction in DH laser materials 2-46111  
 GaAs-GaAlAs DH lasers, nonradiative lifetime and leakage losses 2-7763  
 GaAs-GaAlAs modulation doped multilayer struct., optimum cond. and effective mobility conditions, LPE grown struct. 2-5456  
 GaAs-ZnSe heterojunction interface, LPE conditions effect 2-45748  
 GaAs<sub>1-x</sub>Sb<sub>x</sub>GaAs heterojunction cascade solar cell, LPE growth and photocurrent spectra 2-37215  
 Ga<sub>0.47</sub>In<sub>0.53</sub>As, LPE growth, baking temp. effect on purity, photoluminesc. and elec. props. 2-27106  
 Ga<sub>0.47</sub>In<sub>0.53</sub>As, low temp. LPE growth 2-17637  
 GalnAsP single-mode optical waveguides 2-49911  
 GalnAsP-InP injection laser, fabrication and output characteristics 2-4517  
 Ga<sub>0.1</sub>In<sub>0.9</sub>As<sub>1-x</sub>P<sub>x</sub>/InP terraced substrate single-mode laser 2-16016  
 Ga<sub>0.1</sub>In<sub>0.9</sub>As<sub>1-x</sub>P<sub>x</sub>/InP stripe lasers with chemically etched-mirrors, review 2-44332  
 Ga<sub>0.1</sub>In<sub>0.9</sub>As<sub>1-x</sub>P<sub>x</sub>/InP laser, 1.3 μm, index-guiding struct. grown on terraced substrate 2-936  
 Ga<sub>1-x</sub>In<sub>x</sub>P<sub>1-y</sub>As<sub>y</sub>, thin epitaxial layers, refl. spectra 2-17563  
 GaSb epitaxial layer growth, on InAs substrates 2-46953  
 Gd<sub>2</sub>O<sub>3</sub>/O<sub>2</sub> LPE growth and dissolution, physical chem. of garnet molten solns. 2-46959  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, detector grade, LPE growth from Te rich solns. 2-17638  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te epitaxial layers, slider LPE growth using Hg press. controlled growth solns. 2-31645  
 Hg<sub>1-x</sub>Cd<sub>x</sub>Te, LPE 2-36803  
 p-Hg<sub>1-x</sub>Cd<sub>x</sub>Te, slider LPE growth on CdTe substrate 2-17639  
 In-Ga-P-As, LPE growth in vertical furnace 2-46954  
 InAs<sub>1-x</sub>P<sub>x</sub>Sb<sub>y</sub>, LPE growth on InAs substrates 2-40717  
 In<sub>0.05</sub>Ga<sub>0.95</sub>As-In<sub>0.5</sub>Ga<sub>0.5</sub>As<sub>1-x</sub>P<sub>x</sub>-GaAs heteroepitaxial system, dislocation struct., buffer layer effect 2-35504  
 InGaAsP grown by LPE, layer thickness calc. 2-45768  
 InGaAsP, high purity grown by liq. phase epitaxy 2-36802  
 InGaAsP lattice, matched to InP, growth and charact. review 2-13662  
 InGaAsP, material requirements for near IR photodetectors, LPE and VPE growth techniques 2-15224

**liquid phase epitaxial growth continued**

- InGaAsP/InP 1.3 μm laser material, meltback and pullover as causes of LPE growth disturbances 2-46956  
 InGaAsP/InP:Cd DH lasers, LPE growth 2-22178  
 InGaAsP-InP planar buried heterostruct. laser diode with low threshold current fabrication by LPE technique 2-34784  
 p-In<sub>0.7</sub>Ga<sub>0.25</sub>As<sub>0.55</sub>P<sub>0.45</sub>Cd LPE layer, doping characts. and elec. props. 2-41031  
 In<sub>0.5</sub>Ga<sub>0.5</sub>As<sub>1-x</sub>P<sub>x</sub>, stabilisation by InP substrate inside unstable region in LPE 2-51833  
 In<sub>1-x</sub>Ga<sub>x</sub>As<sub>1-y</sub>Sb<sub>y</sub>, LPE growth with enriched composition on InAs substrate 2-27107  
 InP, high purity grown by liq. phase epitaxy 2-36802  
 InP, LPE film growth for MESFET appl. 2-9293  
 InP, LPE-grown, effect of substrate orientation on electrical properties 2-26522  
 InP, props., prep. and device appls., review 2-51087  
 InP, use of SiO<sub>2</sub> boats for LPE 2-2468  
 InP-InGaAsP, DH laser wafer, LPE growth and struct. 2-45744  
 InP-InGaAsP heterostructure, electrolum. polarization due to internal strain 2-41432  
 LiNbO<sub>3</sub> layer growth in LiVO<sub>3</sub> high temp. soln. 2-12928  
 LiNbO<sub>3</sub> single cryst. films, LPE growth for SAW devices 2-2467  
 PbSnSeTe-PbSeTe DH laser, lattice matched, low threshold 2-39668  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te: Cd crystals and LPE layers, doping and elec. props. 2-45223  
 PbTe, LPE growth on PbSnTe substrate through stripe openings on CaF<sub>2</sub> coating 2-2465  
 PbTeSe, LPE growth lattice-matched to PbSnTe, phys. and elec. props. 2-5320  
 Si film, 2D grating graphoepitaxy from Si-Au supersaturated soln. 2-41535  
 Si, laser annealing, rel. to LPE (*Japanese*) 2-5777  
 Si, lateral epitaxy by seeded solidification on SiO<sub>2</sub> 2-5314  
 Si single cryst. film, lateral epitaxy by seeded solidification, using stationary graphite heater 2-2464  
 (Y, Gd, Sm, Tm)<sub>2</sub>(Fe, Ga)<sub>2</sub>O<sub>12</sub> garnet films, grown from PbO-B<sub>2</sub>O<sub>3</sub> flux, growth conditions influence on props. 2-30760  
 (Y, Yb, Bi, Gd)<sub>3</sub>(Fe, Al)<sub>3</sub>O<sub>12</sub> epitaxial garnet films, domain wall widening 2-13324  
 Y<sub>2</sub>Fe<sub>2</sub>O<sub>7</sub> layers, grown epitaxially on spheres, facet formation 2-1782  
 YIG epilayers, SIMS anal. of Pb and B content 2-27497  
 Y<sub>2</sub>Sm<sub>0.4</sub>Fe<sub>0.9</sub>Ga<sub>0.1</sub>O<sub>12</sub> epitaxial LPE garnet films, growth steps due to misorientation 2-12939  
 (YSmGdR)<sub>2</sub>(GaFe)<sub>2</sub>O<sub>12</sub> (R=Tm, Yb, Lu), single layer LPE films for 1 μm diameter bubble ion implanted contiguous disc devices 2-5569  
 (YSmLuCa)<sub>2</sub>(FeGe)<sub>2</sub>O<sub>12</sub>, LPE grown, mag. bubble props., melt composition depend. 2-31250

**liquid semiconductors**

- see also electron energy states of liquid semiconductors*  
 binary semiconductor alloys, liq. and amorphous, bonding 2-8436  
 conference, Grenoble, France, (July 1981) 2-38359  
 semiconductor-metal transition, review 2-1969  
 As-Ge-Se, glasses and melts, thermal and elec. cond. 2-8683  
 As-Se, liquid, elec. and thermoelec. props. 2-17120  
 As-Se, liquid, elec. cond., thermoelec. power and semicond.-metal transition 2-26425  
 As<sub>2</sub>Se<sub>3</sub>:Ag, fused, impurity cond., temp. depend. 2-17126  
 Cu<sub>2</sub>Se, molten, semicond.-metal transition 2-5444  
 Cu<sub>2</sub>Te, molten, semicond.-metal transition 2-5444  
 Cu<sub>2</sub>TiSe<sub>2</sub>, liquid, elec. cond. and thermoelec. power 2-13063  
 GaTe, liquid semiconductor, nucl. quadrupole relax. 2-46421  
 Ge, liquid, structural modelling 2-40251  
 Ge-Se-As(Sb)(Bi) melt, influence of bond metallisation on elec. cond. 2-5402  
 Se, liquid, photoconductivity 2-40960  
 Se-Tl, liq. elec. cond. and thermoelectric power 2-51165  
 Se-Te alloys, Se-rich, motional correl. time of dil. <sup>111</sup>Cd impurities, TDPAC meas. 2-31348  
 Se<sub>2</sub>Te<sub>1-x</sub>, liq. semicond., NMR study 2-31320  
 (Se<sub>0.5</sub>Te<sub>0.5</sub>)<sub>1-x</sub>Cu<sub>x</sub>(As<sub>2</sub>), liquid, metal-nonmetal transition, mag. susceptibility study 2-40791  
 (Se<sub>0.5</sub>Te<sub>0.5</sub>)<sub>1-x</sub>M<sub>x</sub> (M=Cu, Ti, Ag, Na) liquid semiconductor, elec. cond., thermopower and mag. susceptibility 2-40909  
 Si, liquid, structural modelling 2-40251  
 Si, reflectance, temp. depend. 2-2210  
 Ti<sub>2</sub>Te<sub>3</sub>:S(Se), electrophys. props. over solid and liq. range, added S and Se effect 2-40883  
 V<sub>2</sub>O<sub>5</sub>, liquid, elec. cond. relax. 2-40910  
 V<sub>2</sub>O<sub>5</sub>-P<sub>2</sub>O<sub>5</sub>, glass melt, electrocrystn. of VO<sub>x</sub> cpds. used in threshold switches 2-17617

**liquid-solid transformations** *see solid-liquid transformations***liquid structure**

- see also classical theories of fluid structure; long-range order; neutron diffraction examination of liquids; quantum theories of fluid structure; short-range order; X-ray diffraction examination of liquids*  
 acetaldehyde aqueous solns., struct. and dielect. props. 2-5622  
 acetone solvation in fluid and aq. systems, IR spectra study 2-8407  
 alkali metals and alloys, structure determ., electron-ion plasma 2-30383  
 alcohols, structure in bulk props. 2-5035  
 alkali halide solns., struct. relax. and Brillouin scatt. 2-51608  
 alkali ions, hydration and struct. changes in H<sub>2</sub>O(D<sub>2</sub>O), isotope effects, thermodynamics 2-16545  
 alkali metals and alloys, elec. resist. and struct., electron-ion plasma model 2-26356  
 alkaline earth ions, hydration and struct. changes in H<sub>2</sub>O(D<sub>2</sub>O), isotope effects, thermodynamics 2-16545  
 aromatic-aliphatic polyesters, mesogenic elements and flexible spacers in the main chain 2-50517  
 benzene, anisotropic reorientation, influence of mol. shape and electrical props. 2-25711  
 benzene, radial distrib. function, average coords. and adiabatic bulk modulus (*French*) 2-45003  
 benzene, thermodynamic props. and struct., appl. to polymer solns. 2-8641  
 n-butane, liq., struct. and props., conform., Monte Carlo simulations 2-30377  
 chloroform, liq., struct. investig. 2-35370  
 2-chloropyrimidine, anisotropic reorientation, influence of mol. shape and electrical props. 2-25711  
 collective modes in fluids and neutron scatt. 2-50508



**liquid structure continued**

- commensurability effects for liq. in periodic medium 2-20981  
 cyano compounds with different ring systems, mol. packing in nematic phase 2-16574  
 dense systems of isotropic particles, light scatt., dipole induced dipole model 2-30376  
 diatomic fluid structure near a wall 2-20992  
 3,5-dichloro-2-hydroxythiophenol in soln., conformational study 2-43938  
 2,6-dichloroanisole, anisotropic reorientation, influence of mol. shape and electrical props. 2-25711  
 1,2-dichloroethane, liq., struct. and props., conform., Monte Carlo simulations 2-30377  
 D-dimensional hard sphere systems, modified cell theory 2-25705  
 dimethylformamide, appl. soln., dielectric const. and struct. props. 2-13389  
 dimethylmalonate acid salt, in aq.-soln. symmetry and conformation (French) 2-1379  
 dimethylsulphoxide, aq. soln., dielectric const. and struct. props. 2-13389  
 electrolyte solutions, liq. struct., X-ray diffr. study 2-45012  
 electrolyte structure, neutron scatt. isotope difference method (German) 2-8411  
 electrolytes, aq. solns., compressibility, structural aspects, electrostriction 2-40459  
 electrolytes, dipole hard sphere model, binary distrib. function and screening pot. calc. (Russian) 2-45001  
 ethanol-water mixtures, struct. features, picosecond fluorescence anisotropy obs. 2-20994  
 ethers in aq. solns., struct. and kinetics by ultrasonic methods 2-1383  
 fluid media, three-photon transitions, tensor patterns and polarisation ratios 2-1382  
 fluid phases of matter, hard sphere model 2-35368  
 fluoro liquid cryst., mesogenic power rel. to mol. ang. correl. in isotropic phase (French) 2-8425  
 formaldehyde aqueous solns., struct. and dielect. props. 2-5622  
 glass forming liquid, statistical free volume model 2-25703  
 glycerol liquid, X-ray struct. factor 2-12454  
 halide ions, hydration and struct. changes in  $H_2O(D_2O)$ , isotope effects, thermodynamics 2-16545  
 hard sphere systems, nearly algebraic approx. 2-50502  
 heavy water, liquid struct. factor, isochoric temp. derivative 2-30381  
 hidden structure in liquids 2-50507  
 ionic solution near an uncharged surface with image forces 2-16548  
 2-D Lennard Jones system, sublimation, vaporisation and melting, Monte Carlo simulations, struct., thermodynamic props. 2-21270  
 lipids, biological, behaviour in water 2-45011  
 liquid crystalline polymers, synthesis, struct. and props. 2-50516  
 liquid metals, electroneutrality conditions and interionic correls. 2-30719  
 liquid noble metals, effective pair potential and thermodynamic props. 2-45015  
 maleic acid copolymers in aq. soln., viscosity and osmotic second virial coeff. 2-40587  
 melting and liq. and glassy states 2-26023  
 metal, thermodynamic properties using one-component plasma reference system 2-45013  
 metal transport in Hg, liq. amalgams struct. 2-30643  
 metals, liquid, diffraction models, thermodynamics, electrical cond. changes (Dutch) 2-8414  
 metals, model at melting point (Russian) 2-35378  
 metals, phonon dispersion curves, Percus-Yevick phonon description 2-40507  
 methanol in water solution at 300K 2-45004  
 methyl alcohol-d<sub>4</sub> liq. struct., neutron diffr. meas. 2-35375  
 molecular fluids struct., reference interaction site model theory (Japanese) 2-25709  
 molecular polar fluid, site-site correlation functions, RISM eqn. 2-25700  
 molecular relaxation, vibrational and orientational 2-16547  
 monochlorobenzene, anisotropic reorientation, influence of mol. shape and electrical props. 2-25711  
 multicomponent fluid struct. near solid substrates 2-20990  
 neopentane liquid struct. and mol. correlation functions 2-16551  
 non-aqueous solutions 2-6705  
 nonpolar liquid, hot electron scatt. 2-30941  
 orthodichlorobenzene, anisotropic reorientation, influence of mol. shape and electrical props. 2-25711  
 polyacrylamide soln., orientational effects in stream and strand decomposition 2-25405  
 polydiacetylenes, struct., conjugation lengths, Raman photoselection study 2-45010  
 polyethylene imine, branched, polymer coil struct. change during Cu II complex formation (Russian) 2-20223  
 polymer solutions, dil., dynamic struct. factor, theory 2-12451  
 polymers, melt, cryst. and glass phase, statistical thermodynamics 2-5037  
 polyoxyethylene aqueous soln., orientational effects in stream and strand decomposition 2-25405  
 serum albumin, bovine, aq. solns., struct. props. 2-22698  
 silicate melts, struct. role of  $Al^{3+}$ , Raman spectroscopic obs. at 1 atm. 2-22003  
 simple classical liquids, incoherent scatt. function 2-44996  
 simple liquids, intermediate scatt. junction determ. 2-44978  
 simple liquids, radial distrib. function calc., new approach (Russian) 2-25707  
 sodium dodecyl sulphate, conc. micellar soln., neutron scatt. investig. 2-31953  
 soft sphere characterisation from liq. structure factors 2-12460  
 solutions, solid-like contributions in liqs. and molar vol. from dielec. studies 2-20985  
 spherical microstructures, struct. and stress 2-21429  
 sticky hard sphere potential liq., struct. and isothermal compressibility 2-16546  
 supercooled liquid, icosahedral bond orientational order, computer simulation 2-12443  
 surface forces, operating at  $\sim 30$  Å separation, theory 2-45687  
 TBDA, smectic-I and smectic-F phases, struct. correls. 2-21022  
 ternary liq. mixtures, sound vel. and interaction investig. 2-30530  
 o-terphenyl, supercooled liq., homodyne light beating spectroscopy 2-31521  
 tetrahydrofuran at 25°C, aq. binary mixture ultrasonic absorpt. 2-1565  
 thermophysical props. with allowance for intermol. interactions 2-8405  
 trichlorobenzene, 1,2,3- and 1,2,4-, anisotropic reorientation, influence of mol. shape and electrical props. 2-25711

**liquid structure continued**

- vinyl acetate-butyl acrylate copolymers microstruct. studied by  $^1H$  and  $^{13}C$  NMR spectra, polymerisation effect 2-44148  
 water, collective excitations, mol. dynamics simulation 2-25710  
 water, computer simulation study using 2D model, mol. distrib. functions, equations of state 2-35360  
 water, ice like struct. and radial distrib. function, H-bonds 2-12447  
 water, intermolecular pot. functions and props., semi-empirical model 2-39461  
 water and aqueous solutions, nonequil. props. of surface 2-30716  
 water struct. and proton cond. at high press., review 2-1386  
 water-propylene glycol mixtures, struct. features studied using Ar solubility method 2-12448  
 X-ray scattering pattern, first sharp max., interpretation 2-25686  
 Al, liquid, interionic pot. from struct. data 2-20996  
 Al, liquid, structure study using molecular dynamics method 2-25719  
 Al, radial distrib. functions 2-40256  
 Al, small and large angle struct. factors 2-40254  
 Ar, incoherent scattering function in simple classical liquids 2-44996  
 Ar, radial distrib. functions and struct. parameters, unified kinematic theory of diffr. 2-25715  
 Ar, salting out from alkali halide solns. in  $D_2O(H_2O)$ , struct. effects 2-16801  
 $As_2Se_3$ , liquid covalently bonded alloys, bond equilibrium theory 2-45014  
 $CO_2$ , liquid, mol. distrib. functions, stat. mech. theory 2-40245  
 $CS_2$ , liq., struct., correlation functions, orientational model 2-5038  
 $Ca(ClO_4)_2 \cdot 4H_2O$ , liq. and glassy states, OH stretching Raman spectra, H-bonds 2-22006  
 Cd complexes, Cd(glycine),  $^{113}Cd$ - $^{15}N$  spin-spin coupling const., soln struct., NMR obs. 2-43943  
 Cdi-DMSO complexes in soln., struct., X-ray diffr. 2-12453  
 Cdi- $H_2O$ , complexes in soln., struct., X-ray diffr. 2-12453  
 $CD_4$  aq. solns., X-ray diffr. study at 9 and 62°C 2-12455  
 $CiSi_4$ , liq., partial struct. factors, X-ray determ. (German) 2-50509  
 DBr, liq. struct. determ. by slow neutron scatt. 2-35374  
 Er, liquid, interionic pot. from struct. data 2-20996  
 Fe, liquid, structure study using molecular dynamics method 2-25719  
 Fe-B liq. and amorphous alloys, struct. (Russian) 2-8413  
 Fe-C-B alloys, liq. and amorphous struct. (Russian) 2-8413  
 Ga, liquid, struct. determ. by synchrotron radiation 2-25718  
 Ga-Cd(Tl) melts, atomic distrib. pattern during demixing 2-12459  
 Ge, liquid, structural modelling 2-40251  
 $GeCl_4$ , liq., partial struct. factors, X-ray determ. (German) 2-50509  
 $H_2O$ , normal and supercooled, Raman scatt. and struct. 2-17461  
 $H_3O^+$ , the real ions in aq. soln. and bases 2-5034  
 He film, spatial orderings and elementary excitations 2-1697  
 $^3He$ , ground state energies, effective correlation theory 2-12872  
 $^3He$ -He decomposing mixture, structure factor, light scatt. obs. 2-35828  
 $^4He$ , liquid, structure factor and anomalous dispersion 2-35791  
 $^4He$ , liquid structure factor temp. depend., neutron scatt. study 2-30674  
 $^4He$ , superfluid, interacting boson props., excitation spectrum, struct. factor and sound vel. 2-21410  
 $In^{3+}$  in  $In_2(SO_4)_3 \cdot xH_2O$  soln., X-ray diffr. study 2-1380  
 K, freezing and liq. struct. factor 2-40517  
 Kr, liquid state props. along saturation line, Monte Carlo simulation 2-25716  
 Li-Na, liquid, structure determ., electron-ion plasma 2-30383  
 Lil aq. soln.,  $Li^+$  second hydration shell, X-ray and MD studies 2-12457  
 Lil aq. soln. struct. props. derived from mol. dynamics simulation 2-12456  
 $Li_0.8Pb_{0.2}$  heterocoordinated liq. alloy, dynamical struct. factor of conc. fluctuations 2-20997  
 Lu, liquid, interionic pot. from struct. data 2-20996  
 Mg, small and large angle struct. factors 2-40254  
 $N_2$ , mol. distrib. functions, stat. mech. theory 2-40245  
 Na, freezing and liq. struct. factor 2-40517  
 Na liquid, struct. factor, neutron scatt. meas. 2-45016  
 Na-K(Cs) liquid systems, elec. resist. and struct., electron-ion plasma model 2-26356  
 $NaAlSi_3O_8$ , viscosity, 800 to 1000°C, random network struct. 2-12802  
 NaI in alcoholic solns., structure in bulk props. 2-5035  
 Nd, liquid, interionic pot. from struct. data 2-20996  
 Ne liquid, neutron scatt. data anal., isothermal density derivative of pair correl. function 2-40247  
 $NiCl_2$  aq. soln., Ni-Cl bonding at high  $Cl^-/Ni^{2+}$  ratios, X-ray diffr. investig. 2-40248  
 $NiCl_2$  ionic solutions, struct. 2-8412  
 $OH^-$ , the real ions in aq. soln. and bases 2-5034  
 Pb, liquid structure factors, soft sphere charact. 2-12460  
 Pb, small and large angle struct. factors 2-40254  
 Rb, expanded liquid, vel. autocorrelation function, mol. dynamics study 2-20998  
 Rb, incoherent scattering function in simple classical liquids 2-44996  
 Rb, struct. factor, frield oscills. effect 2-40253  
 $SO_4^{2-}$  melts, anion-cation interactions, spectrosc. obs. 2-41378  
 Se, liq., expanded, mol. struct., 600-1400°C 2-50514  
 Se-S liquid mixture, viscosity 2-12799  
 Se-Te liquid mixtures, sound vel. meas. under high press. 2-35594  
 Se-Tl liquid mixture, viscosity 2-12799  
 Si, liquid, structural modelling 2-40251  
 $SiCl_4$ - $GeCl_4$  mixtures, liq., partial struct. factors, X-ray determ. (German) 2-50509  
 ZnBr in ethyl acetate soln., local order study by EXAFS 2-46822

**liquid surface waves** see surface waves (fluid)**liquid theory**

- see also classical theories of fluid structure; equations of state of liquids; quantum theories of fluid structure  
 alkali halide molten salt surface, double layer effects 2-12449  
 alcohols, surface tension, Eotvos const., compressibility, press. coeff., expansivity and Gruneisen parameter 2-30718  
 alkali metals, selfconsistent theory, surface tension 2-25717  
 alkali metals and alloys, elec. resist. and struct., electron-ion plasma model 2-26356  
 alloys, binary, self-diffusion, appl. of hard sphere theory 2-21340  
 alloys, regular solution theory rel. to electron theory 2-40255  
 anisotropic liquid with rotational degrees of freedom, chain version of the molecular field approx. 2-25720  
 anisotropic liquids, thermodynamic props., mol. field approx. 2-25721



**liquid theory continued**

- atomic fluids, two-body dynamics as probed by interaction induced light scatt. 2-31513  
benzene, thermodynamic props. and struct., appl. to polymer solns. 2-8641  
binary Lennard-Jones systems, mass depend. of self diffusion coeff. determ. by mol. dynamics simulation 2-21336  
binary mixtures, excess free volume evaluation 2-30531  
charged dangling bonds model, appl. to self-ionisation and disproportionation 2-13015  
charged fluids, solvation forces, expression for free energy 2-37094  
charged fluids, solvation forces, nonlinear theory 2-50501  
charged hard spheres, correl. functions, first order corr. 2-50499  
charged hard-sphere mixture, generalised mean sphere approximation soln. 2-50503  
chemical pot. computation 2-50497  
classical fluid, with strong repulsive pot., vel. correl. function, singularity 2-35366  
collective modes, rel. to superionic conds. 2-45493  
collective modes in fluids and neutron scatt. 2-50508  
commensurability effects for liq. in periodic medium 2-20981  
conditional-distribution and free-volume theory analysis, diffusive motion, thermodynamic props. 2-12445  
conservative difference schemes for equations for incompressible viscous liquid in Euler variables (*Russian*) 2-30375  
dense liquid, thermal relax. under shock compression 2-35565  
dense systems of isotropic particles, light scatt., dipole induced dipole model 2-30376  
diatomic liquids, vibr. dephasing, isotropic Raman lineshape 2-31464  
diatomic molecules in liq. state, rot.-translational coupling 2-35373  
dielectric theory of fluid fields 2-35362  
D-dimensional hard sphere systems, modified cell theory 2-25705  
N,N-dimethylformamide, mol. rot. correl. time 2-35377  
dipolar fluid, two dims., dielect. const. and thermodynamics 2-21931  
direct correlation function, singlet densities, and freezing 2-40244  
dynamical processes in liquids, electron spin echo spectrosc. 2-41202  
effective hard sphere diameters evaluation 2-20984  
electrical double layers, finite ion size effects, Monte Carlo methods 2-20986  
electrolyte solutions, high dilution, equilib. and transport excess props., ion pairs limit 2-9546  
electrolytes, dipole hard sphere model, binary distrib. function and screening pot. calc. (*Russian*) 2-45001  
electron-ion liquids, thermodynamic calcs. 2-35718  
excess Gibbs energy models, equations of state, local composition concept 2-19062  
fluid, Lennard-Jones, free energy, vapour-liquid equilib., Monte Carlo calcs. 2-50500  
fluid mixtures, mol. dynamics calcs. of pair correl. functions and local mole fractions (*German*) 2-50496  
fluid phases of matter, hard sphere model 2-35368  
fluids and Lorentz models, vel. autocorrelation functions 2-40243  
free energy derivation in the mean spherical approx. 2-50882  
fused-salt binary mixtures, hard-sphere theory applic. to isothermal compressibilities 2-16703  
glass forming liquid, statistical free volume model 2-25703  
hard sphere fluid, chemical pot., scaled particle theory, Monte Carlo methods 2-44995  
hard sphere fluid mixtures, equilib. statistical mechanical theory 2-1376  
hard sphere model in region of fluid metastability, diffusivity 2-1377  
hard sphere systems, nearly algebraic approx. 2-50502  
hard spherocylinder fluid, struct. and thermodynamic props., perturbation theories 2-12442  
harmonic one-dimens. liq., density correlation and transport coeff. 2-35364  
heavy water surface tension, Eotvos const., compressibility, press. coeff., expansivity and Gruneisen parameter 2-30718  
inert gases, liquid mixtures, phase separation, diagram calcs., variational theory 2-2491  
integral eqns. for radial distrib. function 2-8406  
ionic solution near an uncharged surface with image forces 2-16548  
Ising model, singlet-triplet, appl. to simple fluids, nematic mixtures and <sup>3</sup>He-<sup>4</sup>He mixtures 2-131  
Langevin equation approach 2-50506  
Lennard Jones fluid, triplet correl., thermodynamics and configuration space struct. 2-8404  
Lennard-Jones diatomic fluids, nonequilib. mol. dynamics simulation and generalised hydrodynamics of transverse modes 2-35372  
Lennard-Jones fluid, monolayer, solvation forces 2-12888  
Lennard-Jones fluid, one dimensional, velocity autocorrelation-function, mol. dynamics calcs. 2-12440  
Lennard-Jones liquid mixtures, free energy of mixing phase stability and local composition 2-40240  
Lennard-Jones simple liq., attractive forces role in cage effect 2-40239  
linear hard interaction site model fluids, equation of state 2-35635  
liquid, thermodynamics using hard sphere vs. one component plasma reference systems 2-8415  
liquid phase instability criterion towards solid formation 2-35644  
liquid-vapour interface, molecular models 2-8690  
local antisymmetries of isothermal behaviour of the Lennard-Jones and real fluids 2-50498  
local composition expressions, from partition functions 2-20983  
metal, variational prop. of effective medium approx. 2-1815  
metal solutions, thermodynamic props. perturbed hard-sphere and corresponding states model 2-1635  
metals, liquid, diffraction models, thermodynamics, electrical cond. changes (*Dutch*) 2-8414  
metals, simple, finite mean free paths and elec. resist. 2-40868  
methane, dense fluid, Van der Waals partition function, empirical corrections 2-44994  
molecular dynamics simulation, self-diffusion, mol. orientation and rot. 2-30374  
molecular fluids, principal moments of inertia, quantum corrections and computer simulations 2-20989  
molecular fluids thermodynamic perturbation theory, independent mol. interaction sites model 2-35371  
molecular reorientation, review (*German*) 2-45002  
molecular rotational relaxation in liqs., mol. quasi-hydrodynamic free space model 2-35361  
multicomponent fluid struct. near solid substrates 2-20990  
negative Hamaker coeffs. 2-35359

**liquid theory continued**

- nonadiabatic transitions at almost-adiabatic perturbations limit, random motion 2-45000  
one dimensional harmonic liquids, energy density correlation, heat transport 2-44998  
Percus-Yevick equation, critical point scaling 2-5032  
polarisable fluids, quantal statistical mechanical model 2-20988  
polarisation quantum theory, mean spherical and related approx. solns. 2-40241  
polarization density profiles for dipoles against an electrified wall in the MS and RLHNC approximations 2-25701  
poly(n-alkylisocyanates) in soln., phase behaviour, model calcs. 2-40252  
polyethylene, liq., conformational entropy excluding gauche state transitions 2-8408  
polymer melts, entanglement dynamics, computer simulation 2-12446  
polymer solutions, entanglement dynamics, computer simulation 2-12446  
polymers, concentration-temperature plane, Monte Carlo simulation 2-5036  
polymers, melt, cryst. and glass phase, statistical thermodynamics 2-5037  
polymers, soln. and bulk melt chain systems, Monte Carlo and mol. dynamics simulation 2-8409  
quadrupolar fluids, ang. pair correl. function, second-order perturbation expansion 2-50505  
quadrupolar fluids, pade approximants, the second virial coefficient and perturbation theory 2-30373  
r-mer fluids, equilib. theory 2-1582  
r-mers, pure, Guggenheim approximation theory 2-41915  
real fluids, potential model for spherical mols., parameter determ. 2-20982  
rod-like molecular fluids with Kihara-type interactions, mol. distrib. functions, stat. mech. theory 2-40245  
rod-like molecular fluids with Kihara-type interactions, thermodynamic props., stat. mech. theory 2-40246  
simple fluids, hard and soft-core eqns. of state, charact. curves and loci of C<sub>p</sub> 2-12715  
simple fluids, with radial many-body interactions, higher-order correl. functions of number fluctuations 2-10715  
simple liquid, thermoacoustical relations, temp. coeffs. of vol. and US vel. 2-25989  
simple liquid, thermodynamic behaviour, mean field approx. with nonadditive lateral interactions 2-25706  
simple liquids, radial distrib. function calc., new approach (*Russian*) 2-25707  
site interaction fluids, equation of state from site-site correl. function 2-21266  
soft inverse power potential systems, bridge function universality and semiempirical freezing criterion 2-35367  
solutions, solid-like contributions in liqs. and molar vol. from dielec. studies 2-20985  
solvated electrons cavity model 2-12444  
spherical and disk like mol. in liq., self diffusion coeff., viscosity and density 2-16829  
statistical mechanics, potential distrib. theory (*Dutch*) 2-50504  
statistical thermodynamics of liquids 2-21265  
sticky hard sphere potential liq., struct. and isothermal compressibility 2-16546  
Stockmayer fluids, polarisable, static permitt., from simulation 2-5033  
symmetric top molecules, ang. vel.-orientation conditional probability density, reorientational correl. functions 2-25702  
thin hard rod fluid, mol. dynamics study, transport props. scaling behaviour 2-3539  
thin liquid films, interaction forces (*German*) 2-30721  
triangular well fluid, eqn. of state 2-30562  
two-dimensional melting, first order transition, isothermal-isobaric Monte Carlo study 2-1599  
two-dimensional melting mechanisms, computer simulation studies 2-1598  
van der Waals fluid, nucleation, spinodal decomp. and interface motion 2-20987  
velocity autocorrelation function resolution 2-35365  
vibrational relax., anharmonicity, Coriolis coupling, and solvent effect contribs. 2-4371  
water, computer simulation study using 2D model, mol. distrib. functions, equations of state 2-35360  
water, molecular dynamics simulation, reaction field method appl. 2-50511  
water, quasicomponent distrib. function anal., internal energy, heat capacity and press., temp. depend. 2-40238  
water, random network model 2-1384  
water, surface tension, Eotvos const., compressibility, press. coeff., expansivity and Gruneisen parameter 2-30718  
Yvon-Born-Green, integral equation and critical corrs. 2-44999  
Al, liquid, interionic pot. from struct. data 2-20996  
Ar-N<sub>2</sub> mol. fluids, thermodynamic functions, perturbation theory 2-20993  
Ar-O<sub>2</sub> mol. fluids, thermodynamic functions, perturbation theory 2-20993  
CS<sub>2</sub>, orientational correl. param. calc. 2-35363  
Er, liquid, interionic pot. from struct. data 2-20996  
Ga-Au (Ag)(Cu), liquid, elec. cond. and mag. susceptibility (*Russian*) 2-51143  
H<sub>2</sub>O, liquid, Monte Carlo simulations between two rigid walls 2-1381  
<sup>4</sup>He, ground state, hard-core square well pot. parameters redeterm. 2-50950  
LiI aq. soln., Li<sup>+</sup> second hydration shell, X-ray and MD studies 2-12457  
LiI, aq. soln., self-diffusion and reorientational motion 2-50510  
LiI aq. soln. struct. props. derived from mol. dynamics simulation 2-12456  
Lu, liquid, interionic pot. from struct. data 2-20996  
N<sub>2</sub> liquid, repulsive forces, Monte Carlo calcs. 2-12441  
N<sub>2</sub> liquid, thermodynamic props. from perturbation theory for ISM fluids 2-30628  
Nd, liquid, interionic pot. from struct. data 2-20996  
Rb, liq., moments of current correl. functions and triplet correl. 2-35379

**liquid-vapour transformations**

- see also boiling; condensation; evaporation; liquefaction of gases  
acetone-chloroform, isothermal vapour-liquid equilibria, meas. device 2-5213  
acetone-chloroform-methanol, isothermal vapour-liquid equilibria, meas. device 2-5213  
alkali halide molten salt surface, double layer effects 2-12449



**liquid-vapour transformations continued**

- alkali metals,  $\text{NH}_3$  solns. and vapours, phase separations and metal-nonmetal transition 2-8605  
 n-alkanone-n-alkane (-n-alkanone) mixtures, thermodynamic props., quasi-chemical group contribution model 2-21326  
 critical phenomena, asymm. Landau-Ginzburg-Wilson model 2-8603  
 critical ultrasonic and hypersonic attenuation for the liquid-gas phase transition 2-50766  
 ethanol-benzene, isothermal vapour-liquid equilibria, meas. device 2-5213  
 fluctuation theory of phase transitions with coupled order parameters 2-48663  
 fluids, critical X-ray and neutron scatt., scaling corrections 2-1604  
 function maxima of condensed phase-ideal vapour binary systems at constant temperature (*Russian*) 2-16822  
 hexamethyldisiloxane-toluene (-ethanol), vapour-liquid equilibria, 333.15 to 358.15K 2-21281  
 hydrocarbon+organic compound binary systems, vapour-liquid equilibrium, eqns. of state, activity coeffs. 2-21283  
 interface region, light scatt. due to density fluctuations 2-2297  
 isothermal, meas. device based on isotope microscope 2-5213  
 2-D Lennard Jones system, sublimation, vaporisation and melting, Monte Carlo simulations, struct., thermodynamic props. 2-21270  
 Lennard-Jones fluid, free energy, vapour-liquid equilib., Monte Carlo calcs. 2-50500  
 metal, liq.-vapour interface, struct. in density profile 2-30720  
 nonideal mixtures, fluid phase equilibria model 2-21285  
 phase simple liquids, phase coexistence eqn. (*Ukrainian*) 2-50838  
 phospholipid bilayer, lattice model, phase transitions and crit. behaviour 2-16768  
 propane-isomeric hexane mixtures, critical states 2-21284  
 ternary mixtures, liq.-gas equilibria, singlet-triplet Ising model appl. 2-1603  
 toluene-ethanol, vapour-liquid equilibria, 333.15 to 358.15K 2-21281  
 transition metal hydrides, isotopic effect in gas-liquid phase transition 2-5214  
 van der Waals liquid-vapour coexistence curve, parametric soln., student calc. 2-48448  
 water-steam mixture, eqn. of state, sound velocity 2-40511  
 Ar, liquid-vapour interfacial width, Van der Waals description 2-26032  
 C, condensed phase-gas phase transform. near graphite-liquid-vapour triple point 2-45546  
 $\text{He-H}_2$  mixture in liq.-gas phase equil. region, enthalpy calc. and Joule-Thomson coeff. 2-20806  
<sup>3</sup>He, thermal cond. near liquid-vapour crit. point 2-35824  
<sup>3</sup>He-<sup>4</sup>He mixtures, Rayleigh scatt. light intensity and linewidth, near gas-liq. crit. point 2-36662  
<sup>4</sup>He, anomalous viscosity near gas-liq. crit. point obs. 2-35728  
 Hg, liquid-vapour interfacial width, Van der Waals description 2-26032  
 $\text{N}_2$ -n-hexadecane, gas-liquid equilibria at elevated temps. and press. 2-21282  
 $\text{NaNO}_3\text{-KNO}_3$  molten mixture, thermal energy storage fluid for large-power solar systems 2-6189

**liquid waves**

- see also capillary waves; ocean waves; surface waves (fluid)  
 air carried along by an overspill wave, flow conditions (*French*) 2-3039  
 compliant tubes, fluid-filled, linear and nonlinear pulse propag. 2-50317  
 deformation of a liquid surface by an impinging gas jet 2-50305  
 elastic shell, semi-infinite, with fluid, nonlinear waves propagation (*Russian*) 2-12167  
 hydroacoustic wave, plane, diffr. on open end of plane semi-infinite waveguide with thin elastic walls 2-4846  
 hydroelastic systems, waves and dispersion relations 2-50226  
 inclined thin film flows, waviness and associated mass transfer 2-44742  
 internal waves in the ocean stratified with variable buoyancy frequency 2-30153  
 liquid under supercritical pressure, high-freq. oscillations regions determ. 2-16332  
 nonlinear viscous media, interaction between regular and random waves (*Russian*) 2-12170  
 particle trajectories in highest water waves 2-16335  
 running stream free surface shape disturbed by submerged semi-elliptical body 2-4841  
 sound excitation, thermo-optical methods, book contrib. 2-31460  
 steady composite waves on flowing liq. surface over a wavy bottom 2-4839  
 stratified liquid, radiation of internal waves by rapidly moving sources 2-20725  
 turbulent rotating chemical waves 2-35169  
 two way water wave propag. in a channel, solitary wave solns. 2-12168  
 viscosity effects on water wave of long period 2-47903  
 viscous compressible in cylindrical shell, wave propag. 2-8170  
 viscous liquid curtain, wave motion, dynamic surface tension 2-30157  
 water, nonlinear waves, reflected and transmitted discontinuities and mathematical model (*Italian*) 2-20689  
 water, period waves and their convergence to solitary waves in long-wave limit 2-50282  
 water, viscous decay of envelopes solitons 2-39934  
 water hammer pressure wave, attenuation study 2-20756  
 water wave propagation models, review 2-16338  
 water wave propagation over a rectangular trench 2-6390  
 water wave radiation problems, null-field eqns. 2-35172  
 water waves, model eqn. soln 2-6750  
 $\text{H}_2\text{O}$ , short wave packets, two-dimens. evolution in finite depth systems 2-1211

**liquids**

- for generalities only; for specific aspects see appropriate headings  
 see also liquid structure; liquid theory; solutions  
 high temperatures, device for meas. optical characteristics 2-23700  
 level measurement using pulse echo US technique 2-48675

**literature reviews** see reviews**lithium**

- see also nuclei with .....  
 adsorption, on W(100) faces, work function and heat of adsorp. 2-21444  
 alkaline electrolyte-lithium miniature primary batteries aqueous and non-aqueous types construction and characts. comparison 2-52316  
 atom,  $^2\text{D}^0$  resonance, elastic and inelastic scatt., autoionising state saddle-point techniques 2-20156  
 atom, Clementi Roetti atomic HF wave functions, improved local accuracy using global constraints 2-39300

**lithium continued**

- atom, core exchange polarisation effects calc. using SCF Xalpha wave functions 2-43800  
 atom, electron and positron elastic scatt. 2-20187  
 atom, electron impact ionisation, cross section, optical pumping, crossed beam expt. 2-15903  
 atom, expectation values in equalities, momentum density monotonicity, HF calcs. 2-39302  
 atom, Glauber generalised oscillator strength for allowed transitions 2-15742  
 atom, inner shell excitation freq., spin flipping operator effects anal. (*Spanish*) 2-665  
 atom, isoelectronic sequence, improved Hylleraas calc. for ground state energies 2-24592  
 atom, low-energy electron scatt. and impact excitation, absolute total cross sections 2-4388  
 atom, metastable levels, laser extreme UV obs. 2-29543  
 atom, Rydberg states, colour centre laser optogalvanic spectroscopy in hollow cathode discharges 2-49316  
 atomic absorption, optogalvanic reson. detect. 2-2744  
 atoms, ionisation rate const. in CO flames, RF reson. determ. 2-4239  
 batteries development, precise microtechnique appl. 2-52312  
 battery systems, review of advantages and appls. 2-6135  
 clusters, binding energy, ionisation pot., CNDO/BW study 2-815  
 contacts, doped, for semicond. nucl. radiation detectors 2-19851  
 diffusion thermodynamics and kinetics in  $\text{V}_2\text{O}_5$  2-26148  
 dislocation structure, sample prep. for TEM (*French*) 2-50650  
 dry batteries using lithium anodes (*German*) 2-52313  
 electrical cond., 1.2 to 10K, quadratic temp. depend. 2-35999  
 electrical transport props. 2-40869  
 electron-phonon interaction, point-contact spectra 2-8763  
 film, skin depth meas. at X-band use of CESR (*French*) 2-36431  
 fusion reactors, inertial confinement, forced-convection Li test loop for developing and designing cooling and blanket systems (*Japanese*) 2-24416  
 gas, transport processes 2-35250  
 intercalation with  $\text{Na}_2\text{Cr}_2\text{S}_7$  in secondary Li batteries 2-9637  
 interstellar Li, obs. towards  $\sigma$  Scorpii,  $\beta^1$  Scorpii and 55 Cygni 2-28521  
 isoelectronic sequence, electron impact excitation 2-7653  
 isotope separation using RF spectroscopy 2-49586  
 Knight shift vol. depend. 2-9046  
 $\text{KTAO}_3$  Li electric dipole glass, birefringence 2-13446  
 lens for high energy particle beams axially symmetric focusing 2-24465  
 $\text{Li}^+$  insertion studies in  $\text{Cu}_2\text{VS}_2$  2-22442  
 liq. blankets, response to neutrons and X-ray pulses 2-39216  
 liq. interaction with austenitic stainless steel 2-41798  
 liq. interaction with Nb-Zr-C, O content influence 2-41799  
 liq. solubility of Nb, V, and stainless steel components 2-1629  
 liq. metal curtain for ICF reactors 2-7335  
 melting curve eqn. under high press., Simon's eqn. 2-45537  
 melting thermodynamics under high press., Simon eqn. 2-5208  
 molecule, electron correl. functions, Fermion Monte Carlo variational method appl. 2-24619  
 molecule, excitation by laser, isotopes, transition moment, UV fluoresc. obs. 2-20117  
 molecule, exponential transformation of molecular orbitals, general formulation for UHF calcs. 2-39298  
 molten, influence of creep of Nb alloys 2-41696  
 nonaqueous cells, primary and secondary, anode passivation 2-47462  
 nuclear reaction anal. using nuclear track detectors 2-17935  
 nucleosynthesis review 2-3192  
 phonon dispersion relations, phenomenological models 2-45435  
 plastic behaviour study 2-21216  
 polyacetylene:Li, charge transfer and bond alternation calcs. 2-808  
 primary cells,  $(\text{MoO}_3\text{V}_{0.7})_2\text{O}_5$  solid solution cathode, electrochemical behaviour 2-52315  
 primary cells, typical systems, appls. and comparison with other available batteries, review 2-2783  
 screw dislocation struct., internal friction meas. 2-40482  
 secondary cells,  $\text{Li}/(\text{MoO}_3\text{V}_{0.7})_2\text{O}_5$  structural characts. 2-52323  
 secondary cells,  $\text{Li}/\text{LiAsF}_6\text{-2-Me-THF/TiS}_2$  electrodes morphological characts. anal. using electrochemical and surface studies, application in spacecraft 2-22604  
 solar type stars Li abundances 2-10401  
 solid ion electrolytes for advanced battery systems 2-22560  
 steel, stainless, exposed to liq. Li, trapping and radiation-induced detrapping of H 2-45272  
 submonolayers on Nb and V, molecular ion formation during sputtering 2-41519  
 surface+ $\text{H}_2$  interaction, diatomics in-molecules calcs., Li cluster simulation 2-45713  
 US attenuation and vel., effect of martensitic phase transform. 2-45393  
 wave-vector-dependent plasmon linewidth 2-26315  
 $\beta''\text{-Al}_2\text{O}_3$ , Li-stabilised, prep. and characts. 2-2482  
 CdS:Li crystal, interstitial electromigration, exciton luminescence study 2-5279  
 CdS:Li piezoelectric semicond. transducer, elec. energy conversion into sound, carrier injection effects 2-50047  
 CdTe:Al, Li, IR absorpt. of Al-Li defect pairs 2-9169  
 $\text{Fe}_2\text{O}_3$ :Li, optical and magneto-optical props. 2-17449  
 Ge:Li,  $\gamma$ -irrad., radiation defect interaction with impurity atoms 2-25918  
 Ge:Li, Hall effect, cyclotron resonance study of converted regions 2-40941  
 Ge:Li, photocond. IR detectors, low photon background appl. 2-19179  
 Ge:Li film, amorphous, electret effect 2-17395  
 KBr:Li, A-centres, ground state and optical props. 2-21530  
 KBr:Li, phonon absorpt. lines, uniaxial stress depend. 2-30547  
 KBr:Li, X-irrad., F-H<sub>2</sub> pair conversion into  $\alpha\text{-I}_A$  pairs 2-40375  
 KCl:Li, A-centres, ground state and optical props. 2-21530  
 KCl:Li, Ag<sup>+</sup>, interstitial Ag centre form. by optical destruction of Ag<sup>+</sup> centres, absorpt. spectra study 2-41386  
 KCl:Li,  $\text{F}_A$  (II) col. centre saddle point relax., luminesc. study 2-36693  
 KCl:Li, optically excited colour centres, ultrafast configurational relax. 2-31552  
 KCl:Li colour center laser, flashlamp excitation 2-7777  
 KCl:Li<sup>+</sup>, phonon coupling in tunnelling systems at zero temp. instanton calcs. 2-1569  
 K:Li( $\text{F}_2^+$ )<sub>2</sub> centre laser, broadly tunable action beyond 3  $\mu\text{m}$  2-34763  
 $\text{K}_2\text{Mg}_8\text{Ti}_8\text{As}_8\text{O}_{46}$ :Li, one-dimens. ionic cond., AC cond. and  $^6\text{Li}$  NMR study 2-13372



## lithium continued

- KTaO<sub>3</sub>:Li, defect induced fluctuations, dielec. and optical props. meas. 2-26889  
 KTaO<sub>3</sub>:Li<sup>2+</sup>, Mn<sup>2+</sup>(Fe<sup>3+</sup>)(Gd<sup>3+</sup>), ESR spectra, effect of off-centre Li impurity 2-26737  
 Li, anharmonic features, X-ray diffr. study 2-45502  
 Li<sup>+</sup>, fine and hyperfine struct. 2-19966  
 Li<sup>+</sup>, ground state, Coulomb integral, local density functional theory 2-11371  
 Li<sup>+</sup>, in Ar, ion mobility, directly determ. pot. 2-4913  
 Li<sup>+</sup> influence on H-bonds of formamide-H<sub>2</sub>O complex, ab initio calcs. 2-39519  
 Li<sup>+</sup>, metastable levels, laser extreme UV obs. 2-29543  
<sup>6</sup>Li, elastic scatt. cross section, optical model parameters, data compilation 1968 to 1981 2-38369  
 Li-<sup>28</sup>Al, <sup>28</sup>Al dynamic polarisation by Overhauser effect, <sup>28</sup>Al  $\beta$ -decay props. determ. 2-31325  
 Li/Cl<sub>2</sub> in SO<sub>2</sub>Cl<sub>2</sub> inorganic battery system, D cell discharge characts. 2-9636  
 Li/LiI/I<sub>2</sub> (PVP) pacemaker battery, solid electrolyte role 2-18045  
 Li/LiI/1-n-butylpyridinium polyiodide solid electrolyte cell, reaction mechanisms 2-17900  
 Li/MnO<sub>2</sub> battery systems, properties and advantages 2-6134  
 Li/SO<sub>2</sub> battery systems, properties and advantages 2-6134  
 Li/SOCl<sub>2</sub> cathode-limited cells, ambient temp. discharge characts. 2-47464  
 Li/SOCl<sub>2</sub> primary cells, super-high-rate, performance and safety 2-52314  
 Li/solid electrolyte battery systems, properties and advantages 2-6134  
 Li/VO<sub>x</sub> rechargeable cells using 2-methyltetrahydrofuran/LiAsF<sub>6</sub> 2-47467  
 Li-3d metal double layers, cond. electron spin resonance 2-31288  
 Li-Al/FeS cell performance prediction equations, development by multiple regression analysis 2-22457  
 Li-Al<sub>2</sub>O<sub>3</sub> solid-state secondary battery system 2-18044  
 Li-Li<sup>+</sup>N interface behavior under anodic polarisation, diffusion 2-16874  
 Li-like atom, photoionisation cross sections, close coupling calcs., autoionizing reson. 2-43872  
 Li-like ions, 1s2s2p config., relativistic Auger and X-ray emission rates, multiplet fluoresc. 2-11447  
 Li-like ions, electron impact ionisation, cross section calcs. 2-4391  
 Li-like ions, electron impact ionisation, cross section and rates, appl. to plasmas 2-7651  
 Li-like ions, electron-ion scatt., cross sections, weak-coupling approx. 2-44115  
 Li-like ions, intershell correlation corrections to energy levels of n=2 states 2-43810  
 Li-like ions, photo-Auger ionisation, cross sections, isolated resonance approx. 2-43878  
 Li-like ions, relativistic Auger and X-ray deexcitation rates 2-11446  
 Li-methylamine soln., phase separations and metal-nonmetal transition 2-8605  
 Li-organic electrolyte rechargeable batteries, TiO<sub>2</sub>, anatase, as cathode materials 2-14062  
 Li<sup>+</sup>-NH<sub>3</sub>(H<sub>2</sub>O)(HF), complex form., electronic struct., FSGO method 2-41918  
 Li+H<sub>2</sub>, exchange reactor, pot. surfaces, nonempirical calcs. 2-22435  
 Li+HF—LiF+H, vibr. distrib., pot. energy surfaces, collinear quasiclassical study 2-22426  
 Li+He<sup>+</sup>(He<sup>+</sup>), electron capture cross sections 2-34559  
 Li+He(Ne)(Ar)(Xe), Li excitation, time of flight spectra vector polarisation anal. 2-784  
 Li<sup>+</sup>+CO<sub>2</sub>(N<sub>2</sub>O), energy transfer, vibr. and rot. excitation cross sections calcs. 2-20163  
 Li<sup>+</sup>+TiS<sub>2</sub>, electrointercalation at solid soln. liq. soln. electrodes, mass transport and heterogeneous rate parameters 2-22467  
 Li<sup>2+</sup>+H<sub>2</sub>(He), electron capture cross-sections 2-20176  
 Li<sup>3+</sup>+H, charge transfer and excitation cross-section calcs. 2-44085  
 Li<sup>3+</sup>+H, ionisation, excitation and charge transfer cross section calcs. 2-44089  
 Li<sup>3+</sup>+H collisions, CT cross sections 2-34564  
 Li<sup>3+</sup>+H<sub>2</sub>(He), electron capture cross-sections 2-20176  
 Li<sup>+</sup>+H (i=2,3), electron capture cross section meas. 2-787  
 Li<sup>+</sup>+H(1s)—Li<sup>3+</sup>+H<sup>+</sup>+e, crossed beam obs. 2-44072  
<sup>7</sup>Li, E<sup>+</sup> state, pulsed optical-optical double reson. spectra, Franck-Condon factors 2-34456  
<sup>7</sup>Li, optical-optical double reson. spectrum, two-photon spectra, vibr. and rot. relax., mol. const. 2-20094  
<sup>6</sup>Li atomic beam optical pumping process and polarised alkali ion sources 2-575  
<sup>7</sup>Li projectiles in liquid organic substances, electronic stopping cross section, intermol. interactions effect 2-21197  
<sup>7</sup>Li, laser transitions assignment, Ar<sup>+</sup> and Kr<sup>+</sup> laser pumping 2-7750  
<sup>7</sup>Li<sup>+</sup>+Li<sup>+</sup>, form. of <sup>7</sup>Li<sup>2+</sup>, cross sections, scaling laws 2-783  
<sup>7</sup>Li<sup>2+</sup>, form. from <sup>7</sup>Li<sup>+</sup> collisions, cross sections, scaling laws 2-783  
 MnO<sub>2</sub> electrodes, Li insertion stoichiometry 2-27585  
 NaCl:Li<sup>+</sup>, hopping motion of self-trapped exciton, decay kinetics and  $\pi$  luminesc. 2-5351  
 NaF:Li, additively coloured, F-centre decay props. 2-12590  
 Si:H, Li amorphous film, DC glow discharge deposited, photovoltaic effect 2-46170  
 Si:Li, bound excitons, photoluminesc., temp. depend. Zeeman study 2-51644  
 Si:Li, ionized impurity diffusion, influence of an internal electric field 2-21396  
 Si:Li polycrystalline solar cells, effect of diffusion on grain boundary transport and minority carrier recombination 2-37399  
 Si(Li) detector, efficiency in standard X-ray fluoresc. geometries 2-38732  
 Si(Li) five channel solid-state detector, characts. 2-43150  
 ZnSe:Al, Li, IR absorpt. of Al-Li defect pairs 2-9169  
 ZnSe:Li, Na, luminesc. spectra, exciton emission and donor-acceptor pair recomb. 2-46671

## lithium alloys

- Al-Li, irradi., interstitial-solute complexes, configs. and binding energies 2-30483  
 Al-Li alloys, thin-film prep. ion-beam thinning, precipitation 2-31698  
 Al-Li system, alloy development 2-31693  
 Al-Li-Mg, corrosion cracking, role of defects near boundary 2-17772  
 Al-Li-X alloys, microstruct., mech. props. and corrosion resist. 2-31740  
 Al-Zn-Mg-Li, oxidation behaviour, influence of Li 2-9465

## lithium alloys continued

- Li-Al/FeS<sub>2</sub> batteries, ceramic-coated positive current collectors 2-47469  
 Li-FeS battery system for electric utility storage and load levelling 2-32059  
 Li-Na, liquid, structure determ., electron-ion plasma 2-30383  
 Li-Si electrodes in molten salt cell, BN stability 2-14059  
 Li-Si/FeS<sub>2</sub> primary cell, reactive interface materials characterisation 2-14056  
 LiAl, <sup>7</sup>Li diffusion, quasielastic neutron scatt. studies 2-21374  
 LiAl, anomalous heat capacity and elec. resist. near crit. comp. 2-40565  
 LiAl, chemical-diffusion coefficients, electrochem. technique determ. 2-45633  
 LiAl, electronic struct., self consistent calc. 2-12962  
 LiAl fast-ion electrode, defects and disorder 2-21300  
 $\beta$ -LiAl, pure and doped, NMR, spin-lattice relaxation time, diffusion coeffs. and vacancy concs. 2-21910  
 $\beta$ -LiAl, pure and doped, NMR study 2-36465  
 Li<sub>1-x</sub>Al<sub>x</sub> (x=0.49, 0.50, 0.51), superionic, NMR relaxation study of Li motion 2-21909  
 LiCd(Zn), self-consistent linear muffin-tin orbital calcs. 2-21496  
 LiPb, bonding in liquid and amorphous binary semiconductor alloys 2-8436  
 Li<sub>0.8</sub>Pb<sub>0.2</sub> heterocoordinated liq. alloy, dynamical struct. factor of conc. fluctuations 2-20997  
 Li<sub>17</sub>Pb<sub>83</sub> liquid metal eutectic coolant/breeder, coupled neutronics-photonics anal. 2-7360  
 Mg-Li-Al-Ca, fatigue crack growth rate at 20 and -135°C 2-41747
- lithium compounds**  
 see also lithium alloys  
 acetate, mol. motion, NMR study 2-5594  
 acetylacetonate, dielec. behaviour and IR spectra 2-13390  
 formate, parametric scatt. spectrum second-order vibrs. 2-46611  
 guided-wave acousto-optic Bragg cells with SAW transducers, centre freqs. >1 GHz, 500 MHz bandwidth 2-7893  
 intercalates, triangular lattice gas, cluster variation method 2-35641  
 intercalation compound with  $\alpha$ -Li<sub>2</sub>Se<sub>3</sub> 2-26856  
 intercalation compound with TiS<sub>2</sub>, ZrSe<sub>2</sub>, secondary cell, electrochem. characts. 2-18041  
 Li<sub>1-x</sub>Na<sub>x</sub>NbO<sub>3</sub>-SrNbO<sub>6</sub>, Czochralski growth, constitutional supercooling and cryst. quality (Chinese) 2-40302  
 LiBr-H<sub>2</sub>O absorption machine for active solar cooling system 2-18130  
 LiF, thermal neutron irradi., density depend. on radiation heating temp., macroscopic form. (Russian) 2-16682  
 lithium ammonium tartrate cryst., dielec. and elastic props. 2-36494  
 lithium iodide-based solid electrolytes 2-21643  
 methylammonium sulphate, cryst. growth, quantitative analysis and thermal decomp. props. 2-41506  
 2-methyltetrahydrofuran/LiAsF<sub>6</sub>, electrolyte in Li/VO<sub>x</sub> rechargeable cells 2-47467  
 phase equilibria and ionic cond. 2-16873  
 solid electrolyte batteries, EEC research, review 2-22561  
 superionic conductors, electrodes and electrolytes, new materials, review 2-21359  
 trifluoromethane sulphonate-polyethylene oxide electrolyte, thermal history-cond. relationship 2-40598  
 Ag<sub>2</sub>Li<sub>1-x</sub>FeO<sub>2</sub> structure, stoichiometry, preparation 2-27115  
 AgNbO<sub>3</sub>-LiNbO<sub>3</sub> system, phase equil. and transforms., ferroelec. props. 2-50833  
 Al-Li-B system, B-rich phases grown from melts, X-ray diffr. study 2-46904  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-Ag<sub>2</sub>O-Li<sub>2</sub>O-H<sub>2</sub>O, proton NMR of absorbed H<sub>2</sub>O 2-26786  
 Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O,  $\beta$ - and  $\beta''$  phases, protonic species, cond., and vibr. spectra 2-26923  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O, decomp. mechanisms rel. to ionic cond. 2-41897  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O, diffusion of water into cond. plane, IR absorpt. study 2-45629  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O, F<sup>+</sup>-centre in cond. planes, EPR and ENDOR study 2-26744  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O-H<sub>2</sub>O, intercalation of water, IR absorpt. and neutron diffr. study 2-27431  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O-H<sub>2</sub>O, proton NMR of absorbed H<sub>2</sub>O 2-26786  
 Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O-Na<sub>2</sub>O,  $\beta$ - and  $\beta''$ -phases, ionic cond. 2-26131  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O-Na<sub>2</sub>O, ceramic solid electrolyte, DC resistivity 2-50917  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-Li<sub>2</sub>O single cryst., ionic cond. 2-12820  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-Li<sub>2</sub>O, ion exchange prep., ionic cond. props. 2-12835  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-Li<sub>2</sub>O, mixed ionic diffusion, kinetic non-ideality 2-26126  
 $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-Li<sub>2</sub>O, Na<sup>+</sup> distrib. temp. depend., NMR study 2-26119  
 $\beta''$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-Li<sub>2</sub>O, struct. and cond. plane, powder neutron diffr. study 2-25841  
 Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O-Li<sub>2</sub>O-MgO,  $\beta$  and  $\beta''$  phases, growth, struct., comp. and ionic cond. 2-26122  
 B<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O glasses, ionic cond., relation to alkali metal ion conc. (French) 2-50922  
 B<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O-Li<sub>2</sub>MO<sub>4</sub>, vitreous, solid electrolytes, synthesis and characterisation (French) 2-16895  
 B<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O-Cl<sub>2</sub>, superionic glass, US props. 2-45399  
 B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-Li<sub>2</sub>O glass, Raman spectroscopy and NMR (French) 2-9150  
 B<sub>2</sub>S<sub>3</sub>-Li<sub>2</sub>S, vitreous domains, ionic cond., synthesis and elec. props. (French) 2-50905  
 Bi<sub>1/4</sub>(Li<sub>1/4</sub>)<sup>1/3</sup>Bi<sub>3/4</sub>-V<sub>2</sub>O<sub>20</sub>, B<sup>2+</sup>=P, As, B phases with sillenite structure (French) 2-16621  
 C<sub>6</sub>Li, Auger line shape construction 2-27031  
 C<sub>6</sub>Li, graphite intercalation cpd., universality, tricriticality, and Potts transition 2-40535  
 Ca/LiClO<sub>4</sub>-LiNO<sub>3</sub> thermal battery cells, high rate discharge 2-32044  
 Co<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>O, elec. cond. and thermoelec. power meas. 2-36041  
 CsLiMoO<sub>4</sub>, ferroelectric phase transitions, optical, dielec. and X-ray obs. 2-36568  
 CsLiMoO<sub>4</sub>(WO<sub>4</sub>), ferroelectric transitions, dielec. and elastic study 2-31408  
 CsLiSO<sub>4</sub>, structural and physical props. 2-1613  
 Gd<sub>2</sub>O<sub>3</sub>-(CaO):Li<sub>2</sub>O, reversible polymorphic transitions 2-50842  
 KLiSO<sub>4</sub>, ionic conductor, dielec. const. in DC field (Chinese) 2-41245  
 KLiSO<sub>4</sub>, phase transitions, EPR study 2-31281  
 K<sub>0.1</sub>Li<sub>0.9</sub>SbO<sub>3</sub>, struct. and cond. props. (French) 2-5273  
 K<sub>1-x</sub>Li<sub>x</sub>Ta<sub>1-y</sub>Nb<sub>y</sub>O<sub>3</sub>, ferroelec. phase transition, symm. breaking impurity effect, Raman scatt. study 2-26837  
 K<sub>1-x</sub>Li<sub>x</sub>Ta<sub>1-y</sub>Nb<sub>y</sub>O<sub>3</sub>, ferroelec. transitions, Raman scatt. studies 2-26888  
 K<sub>1-x</sub>Li<sub>x</sub>TaO<sub>3</sub> crystal growth by slow-cooling method, NMR meas. of Li content, phase diagram 2-46900



## lithium compounds continued

- K<sub>2</sub>SO<sub>4</sub>-Li<sub>2</sub>SO<sub>4</sub> mixtures, plastic deform., stress relax. meas. 2-25974  
 Li<sub>2</sub>O, T in-reactor solid breeder expt. TRIO-01, neutronics calcs 2-43598  
 La<sub>2</sub>Li<sub>2</sub>O<sub>6</sub>, ordered antiferromagnetic perovskite, crystal struct. and mag. props. (*French*) 2-8486  
 La<sub>2</sub>LiRuO<sub>6</sub>, ordered antiferromagnetic perovskite, crystal struct. and mag. props. (*French*) 2-8486  
 Li clusters, multibody effects, unrestricted HF study and their relevance to atom-surface interactions 2-11610  
 Li complex, dibenzo-18-crown-6 lithium halide complexes, solid electrolytes with mobile halide ions 2-12832  
 Li containing glasses, partially quenched, ionic cond. variation 2-8669  
 Li salt solutions, subMM absorpt. coeffs. meas. 2-4277  
 Li salts in D<sub>2</sub>O and H<sub>2</sub>O, homogeneous nucleation and glass transition temp., doubly unstable glass regions 2-12716  
 Li/LiC<sub>2</sub>O<sub>2</sub>F<sub>2</sub>-polyethylene oxide/Li<sub>2</sub>Na<sub>2</sub>TiS<sub>2</sub> (y=0, 0.16) electrochem. cell investig. 2-21369  
 Li/LiI/Li<sub>2</sub> (PVP) pacemaker battery, solid electrolyte role 2-18045  
 Li/LiI/n-butylpyridinium polyiodide solid electrolyte cell, reaction mechanisms 2-17900  
 Li/SO<sub>2</sub>Cl<sub>2</sub> inorganic battery system, effect of halogen addition on performance 2-22567  
 Li/SOCl<sub>2</sub> inorganic battery system, effect of halogen addition on performance 2-22567  
 Li-CO<sub>2</sub> complexes, geometries and stabilities, self consistent field HF method 2-39293  
 Li-La phosphate glass:Cr<sup>3+</sup>, Nd<sup>3+</sup>, energy transfer between Cr and Nd ions 2-44313  
 Li-Li<sub>2</sub>N interface behavior under anodic polarisation, diffusion 2-16874  
 Li-NH<sub>3</sub>, system, phase diagram exam. in Li(NH<sub>3</sub>)<sub>3</sub> cpd. region 2-17669  
 Li-NH<sub>3</sub> solns., low freq. Raman spectra 2-2228  
 Li-Ti-Zn ferrite, effect of MnO<sub>2</sub> and Bi<sub>2</sub>O<sub>3</sub> additives on props. (*Slovak*) 2-2105  
 Li-Zn-Co ferrites, mag. anisotropy anomaly due to Co, permeability meas. 2-26622  
 LiAl composite electrodes in solid state battery 2-27583  
 LiAlB<sub>4</sub>, crystal structure 2-45132  
 LiAlF<sub>4</sub>, vibr.-rot. Hamiltonian 2-15769  
 LiAlO<sub>2</sub>, decomp. mechanisms rel. to ionic cond. 2-41897  
 LiAlO<sub>2</sub>, single crystal, Czochralski growth, props. 2-2439  
 LiAlO<sub>2</sub>, T in-reactor solid breeder expt. TRIO-01, neutronics calcs 2-43598  
 LiAl<sub>2</sub>O<sub>3</sub>:Cr<sup>3+</sup>, energy levels and wave functions calcs. 2-17033  
 LiAl<sub>2</sub>O<sub>3</sub>:Fe<sup>3+</sup>, fluorescence of octahedral site impurities 2-51657  
 LiAl<sub>2</sub>O<sub>3</sub>-Al<sub>2</sub>O<sub>3</sub>, precipitation of metastable phases with periodic antiphase struct. (*French*) 2-47044  
 Li<sub>2</sub>AlO<sub>4</sub>, decomp. mechanisms rel. to ionic cond. 2-41897  
 β-LiAlSiO<sub>4</sub>, commensurate-incommensurate transition 2-45565  
 β-LiAlSiO<sub>4</sub>, eukryptite, superionic cond., excess sp. ht. at low temp. 2-30619  
 β-LiAlSiO<sub>4</sub>, Li diffusion, NMR study, dimensionality effects 2-21375  
 β-LiAlSiO<sub>4</sub>, paramagnetic-incommensurate-commensurate transitions, Ising model 2-46326  
 LiAsF<sub>6</sub>/tetrahydrofuran, electrolyte for rechargeable Li cell, use of insoluble sulphide positive electrodes 2-47468  
 LiBO<sub>2</sub>, crystal struct. and charge density distrib. 2-40340  
 Li<sub>2</sub>B<sub>6</sub>(OH)<sub>2</sub>, cryst. struct., deform. electron density 2-35464  
 LiBeF<sub>3</sub>, struct., force field, freq. and intensities of normal modes, ab initio calc. IR spectrum 2-49254  
 LiBe<sub>2</sub>H<sub>3</sub>, complex, struct. and stability, ab initio calcs. 2-29502  
 LiBr-CuBr, molten salt systems, mass spectrometric study, enthalpies and entropies of form. 2-9589  
 LiBr-H<sub>2</sub>O, electrochem. behaviour, AC impedance spectra and ionic conduction 2-22468  
 LiC<sub>18</sub>, graphite intercalation cpd., electronic struct. calc. 2-12955  
 LiCN, bonding nature of MIO through one-electron partitioning of electronic energy anal. 2-43756  
 Li<sub>2</sub>CO<sub>3</sub>, decomp. mechanisms rel. to ionic cond. 2-41897  
 LiCa<sub>2</sub>Nb<sub>2</sub>O<sub>10</sub>, sheet perovskite (*French*) 2-35454  
 LiCdBO<sub>3</sub>, hexagonal, refined cryst. struct. 2-25833  
 Li<sub>2</sub>CdBr<sub>4</sub>, ternary bromides, spinel structure, struct. and stability (*German*) 2-5095  
 LiCe(PO<sub>3</sub>)<sub>4</sub>, cryst. struct. and IR spectra 2-22202  
 LiCl, aq. solns., complex refr. indices determ. at sub mm wavelengths 2-31440  
 LiCl aqueous solutions, isopiestic molality obs. at elevated temps. 2-37091  
 LiCl, crystal surface, semiempirical approach to electronic struct. 2-46092  
 LiCl, dil. aq. soln., cond. meas. at low temp. 2-50895  
 LiCl, dispersed second phase particles, enhanced ionic cond., <sup>7</sup>Li NMR study (*Chinese*) 2-41206  
 LiCl, effect of dispersed second phase particle on cond. 2-12809  
 LiCl glasses, trapped electron photo-stimulated conversion kinetics into trapped H 2-13988  
 LiCl glasses, visible absorpt. band of trapped electrons between 4 and 100K 2-13526  
 LiCl:Ca<sup>2+</sup>(Sr<sup>2+</sup>), ionic cond. of pure and doped single crystals 2-26115  
 LiCl-AlCl<sub>3</sub> melt mixtures, viscosity determ. 2-21341  
 LiCl-B<sub>2</sub>O<sub>3</sub> glass, diborate and metaborate, fast Li<sup>+</sup> cond. 2-16886  
 LiCl-CuCl, molten salt systems, mass spectrometric study, enthalpies and entropies of form. 2-9589  
 LiCl-Li<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>, superionic glass, low temp. US props. 2-35601  
 LiClO<sub>4</sub>, aq. solns., complex refr. indices determ. at sub mm wavelengths 2-31440  
 LiClO<sub>4</sub> in solutions, dielect. relax. meas. 2-2181  
 LiClO<sub>4</sub> ionic clusters in low dielec. const. media, conductivity meas. 2-35723  
 LiClO<sub>4</sub>-polyethylene oxide electrolyte, thermal history-cond. relationship 2-40598  
 Li<sub>2</sub>Co<sub>1-x</sub>Co<sub>2</sub>O<sub>4</sub>, spinels, cation distrib. and elec. props. 2-26423  
 Li<sub>2</sub>Co<sub>2</sub>, cathode material for batteries of high energy density 2-18043  
 LiCrO<sub>2</sub>, mag. struct. determ. (*French*) 2-21771  
 Li<sub>2</sub>CrO<sub>4</sub>, IR spectra 2-29582  
 Li<sub>2</sub>Cr<sub>2</sub>PO<sub>6</sub>·3H<sub>2</sub>O, cryst. struct. determ. 2-35469  
 LiD, excitation parameters and exciton-phonon interaction const., luminesc. and Raman spectroscopy study 2-16997  
 LiD, lattice dynamics shell model and deformation dipole model 2-8585  
 LiErF<sub>4</sub>, oxidation products, X-ray diffr. and differential thermal anal. study 2-16609

## lithium compounds continued

- LiF (001) surface phonons, inelastic atom scatt. time of flight spectra study 2-50982  
 LiF, annealing of radiation defects, chemiluminesc. and thermostimulated luminesc. (*Russian*) 2-9205  
 LiF cooled window for H Lyman-β lamp 2-4569  
 LiF covered Cu surface, time of flight studies of positron interactions 2-9220  
 LiF crystal, dislocation motion damping const., press. depend. 2-45193  
 LiF crystal, light impurity atoms lattice location studies by (n,α) reaction 2-601  
 LiF crystal F<sub>2</sub> colour centre laser (*Chinese*) 2-25014  
 LiF, crystal surface, semiempirical approach to electronic struct. 2-46092  
 LiF, defect props., modified INDO calc. 2-40824  
 LiF, deformation resist., elec. field effect 2-35577  
 LiF, diffraction effects during inelastic X-ray scatt. (*Russian*) 2-9217  
 LiF, dislocation dynamics statistical theory, math. props. 2-25898  
 LiF, dislocation struct., influence of deform., hardening curves 2-45198  
 LiF dosimeters, appl. of cavity theories to high-energy response 2-24435  
 LiF, electronic structure, hole centres (*Russian*) 2-21527  
 LiF, energy density of collapsing cavitation bubble 2-45147  
 LiF, F, H, V<sub>g</sub> centres, electronic struct., optical absorption energy, INDO calc. 2-45886  
 LiF, F<sub>2</sub><sup>-</sup> color centre laser, picosecond pulses, 1.1 to 1.25 μm 2-44341  
 LiF F<sub>2</sub><sup>-</sup> centre CW laser, 1.14-1.2 μm range 2-44308  
 LiF F<sub>2</sub><sup>+</sup> tunable colour centre laser and holographic selector 2-4529  
 LiF, F<sub>2</sub><sup>+</sup> centre form. and destruction by pulsed high-density electron beam irradi. 2-45157  
 LiF, F<sub>2</sub>-centers as passive shutters for laser cavities 2-29839  
 LiF, F<sub>2</sub>-centre form. upon pulsed dense electron beam irradi. 2-50635  
 LiF film, vac. evap., intrinsic stress determ. using cantilevered plate technique 2-21472  
 LiF film roughness determ. using guided light modes 2-31578  
 LiF, Frenkel pairs separation, self-trapped exciton annihilation mechanism, INDO simulation 2-25870  
 LiF, γ-irrad., refr. index dispersion in impurity absorpt. band region using deform. induced birefr. 2-36595  
 LiF, HFC half projected method, density matrix, second order calc. (*Spanish*) 2-29492  
 LiF, IR spectra, isotope induced one phonon absorpt. coeff. meas. 2-46562  
 LiF in liquid <sup>3</sup>He, plastic flow stress temp. depend., phonon channelling mechanism 2-5179  
 LiF, influence of free abrasive conc. on defective zone parameters (*Russian*) 2-5966  
 LiF, ionic clusters, sputtering 2-46916  
 LiF laser high repetition rate, pumped by Cu vapour laser 2-16004  
 LiF, microstructural changes in high electric fields 2-26066  
 LiF, phonon-dislocation dipole interaction at low temp., effect on thermal and US props. 2-45483  
 LiF, plane-parallel insulator, electron irradiation result at atm. press. 2-5158  
 LiF, plane-parallel insulator, charge accumulation after electron irradi. 2-30495  
 LiF, polarisation effects at small-angle boundaries, space charge distrib. 2-26819  
 LiF, radiolysis processes, temp. depend. (*Russian*) 2-6047  
 LiF, recoil sputtering mechanism, excited sputtered particle source 2-17589  
 LiF single salt, viscosity at elev. temp., 1133 to 1772K 2-30644  
 LiF, soft X-ray photoelectric yield and absorption spectra near F K-absorption edge, empirical construction 2-17596  
 LiF, spectra and lasing props. of colour centres (*Chinese*) 2-9174  
 LiF surface, (001), Ne scattering, mol. beam apparatus 2-2405  
 LiF surface, H adsorption, mol. parametrised CNDO and ab initio calcs. 2-16944  
 LiF, surface defect influence on Compton scatt. 2-35873  
 LiF, surface electron states, INDO and quasimol. large unit cell model calcs. (*Russian*) 2-17130  
 LiF TLD, neutron sensitivity calc. 2-43619  
 LiF TLD, relative thermoluminescent response of 4 keV X-rays to <sup>60</sup>Co γ-rays 2-15636  
 LiF thin film, optical vibr. modes by thermal emission 2-17594  
 LiF, total gamma-ray cross section meas. 2-43738  
 LiF<sup>+</sup>, electronic states, binding energy, MO calcs. 2-7498  
 LiF(Mg,Cu,P), TLDs, sensitivity to LET irradi. (*Japanese*) 2-5757  
 LiF:Ca(Sr), X-ray irradi., ESR study 2-26743  
 LiF:Mg, colour centres, photoluminesc. polarisation 2-22083  
 LiF:Mg, colour centres at 3.5 and 5 eV, optical absorpt. and thermoluminesc. studies 2-46649  
 LiF:Mg<sup>2+</sup>, rapid cooling effect on dispersion of impurity-vacancy pairs 2-21166  
 LiF:Mg<sup>2+</sup>, thermally stimulated polarisation and depolarisation currents 2-9074  
 LiF:OH crystal, quasicontinuous generation of stimulated emission of F<sub>2</sub><sup>+</sup>O<sub>2</sub><sup>-</sup> centres 2-41381  
 LiF:V<sup>2+</sup>, associated impurity-vacancy defect electronic struct. 2-40830  
 LiF-BeF<sub>2</sub>, molten, interaction with stainless steel 2-41800  
 LiF-BeF<sub>2</sub> eutectic mixture, viscosity at elev. temp., 812.5 to 1573K 2-30644  
 LiF-MgF<sub>2</sub> precipitated composites, fracture toughness meas. 2-36941  
 LiF-ThF<sub>4</sub>, fused, elec. cond. 2-21339  
 LiF-UO<sub>2</sub>, photoluminescence study 2-26973  
 LiF<sub>2</sub>U<sup>6+</sup>, cryst., vac. UV absorpt. spectra 2-31530  
 LiF(001), inelastic scatt. of CO, rot., laser-induced fluoresc. 2-29693  
 LiF(001)+N<sub>2</sub> system, quasispinning and rainbow mechanism 2-41474  
 LiFeCo<sub>3</sub>TeO<sub>8</sub>, spinel, <sup>57</sup>Fe and <sup>125</sup>Te Mossbauer study 2-41240  
 Li<sub>2</sub>Fe<sub>2-x</sub>M<sub>x</sub>O<sub>4</sub> (M=Co, Mn, Ti, Al), microwave relax. props. 2-26760  
 LiFeNi<sub>3</sub>TeO<sub>8</sub>, spinel, <sup>57</sup>Fe and <sup>125</sup>Te Mossbauer study 2-41240  
 LiFeO<sub>2</sub>, elec. props. and phase transform., complex admittance study 2-30935  
 Li<sub>2</sub>Fe<sub>2</sub>O<sub>4</sub> matrix, ferrite form., Se<sub>2</sub>O<sub>3</sub>-CeO<sub>2</sub>-Co<sub>2</sub>O<sub>4</sub> activator effect 2-22441  
 Li<sub>2</sub>Fe<sub>2</sub>O<sub>4</sub>, substruct. and partial dislocations, duration of grinding influence 2-50645  
 Li<sub>2</sub>Fe<sub>2</sub>O<sub>8</sub>, order-disorder transition, first order 2-30589  
 Li<sub>2</sub>FeS<sub>2</sub>, cathodic material for Li secondary battery 2-22562  
 Li<sub>2</sub>FeS<sub>2</sub> electrochemical system, thermodynamic model 2-17899  
 LiFeSnO<sub>4</sub>, polymorphism and polymorphic transition, X-ray diffr. and electron microscopy obs. 2-50575  
 Li<sub>2</sub>FeV<sub>3</sub>O<sub>8</sub>, structural aspects of Li insertion 2-25850



## lithium compounds continued

- Li<sub>2</sub>FeV<sub>2</sub>O<sub>8</sub>, topotactic lithium reactions with ReO<sub>3</sub> related shear structures 2-27433  
 Li<sub>2</sub>FeV<sub>2</sub>O<sub>8</sub>, Mossbauer study 2-26802  
 Li<sub>2</sub>FeV<sub>2</sub>O<sub>8</sub>, effect of Li on electronic config., <sup>57</sup>Fe Mossbauer study 2-13377  
 LiGaO<sub>2</sub>, IR active modes, absolute Raman cross-sections and effective charge parameters 2-2277  
 LiGa<sub>2</sub>O<sub>7</sub>:Cr<sup>3+</sup>, energy levels and wave functions calcs. 2-17033  
 LiGa<sub>2</sub>O<sub>7</sub>:Cr<sup>3+</sup>, luminesc. of exchange coupled Cr<sup>3+</sup> pairs 2-51660  
 LiGa<sub>2</sub>O<sub>7</sub>:Fe<sup>3+</sup>, fluorescence of octahedral site impurities 2-51657  
 LiGaSe<sub>2</sub>, dielectric const. and bond parameters 2-51513  
 LiGaSe<sub>2</sub> single cryst. growth and characterization 2-13637  
 LiH crystals, reson. secondary luminesc. with self-localising excitons of mol. type 2-22062  
 LiH, electron collisions var. functional, Schwinger var. principle extension 2-34585  
 LiH, electron correlation described by an extended germinal model 2-11409  
 LiH, electron impact, separable exchange approx., linear algebraic approach 2-34586  
 LiH, electron impact exchange interactions, separable approx. 2-4401  
 LiH, electron scattering, exchange interactions, linear algebraic approach 2-24862  
 LiH, electronic struct., XPS study 2-27049  
 LiH, ground state polarisability, SCF and CAS SCF calcs. 2-49277  
 LiH, lattice dynamics shell model and deformation dipole model 2-8585  
 LiH, magnetic shielding tensors temp. dependence 2-29531  
 LiH, polycrystn., surface features resulting from oxidation and thermal etching, 350°C high vac. bake 2-47206  
 LiH, rot. const. vibr. const. and binding energies calc. using Born-Mayer interaction pot. model 2-15766  
 Li<sub>2</sub>H<sub>2</sub> (m≤n≤4), electronic struct., ab initio SCF MO calc. 2-43788  
 LiH<sub>2</sub>PO<sub>4</sub> single cryst., polariton intensity as a function of wave vector orientation (*French*) 2-30803  
 LiH<sub>2</sub>PO<sub>4</sub>, ionic cond. and electrochem. props. 2-40596  
 LiHfO<sub>3</sub>, uniaxial ferromag., transverse elec. susceptibility, dielec. study 2-31366  
 LiI aq. soln., Li<sup>+</sup> second hydration shell, X-ray and MD studies 2-12457  
 LiI, aq. soln., self-diffusion and reorientational motion 2-50510  
 LiI aq. soln. struct. props. derived from mol. dynamics simulation 2-12456  
 LiI, ionic conduction, composition and imperfections effects 2-21371  
 LiI-Li<sub>2</sub>S-P<sub>2</sub>S<sub>3</sub> glasses, fast ion cond. 2-12823  
 LiI-NH<sub>4</sub>-(H<sub>2</sub>O), conductivity and phase equilibrium 2-21372  
 LiIO<sub>3</sub> crystal, efficient intracavity SHG of Nd<sup>3+</sup>:YAG CW laser radiation 2-34843  
 LiIO<sub>3</sub> crystal, sum freq. generation, appl. to ps. fluoresc. depolarisation meas. in dye crystal violet soln. 2-31536  
 α-LiIO<sub>3</sub> crystal, X-ray irradiated, ESR spectra 2-46380  
 LiIO<sub>3</sub> crystal singly reson. parametric oscillator for intracavity IR spectroscopy, feasibility study 2-33652  
 LiIO<sub>3</sub>, freq. conversion of Nd solid slab lasers for visible laser sources 2-25068  
 LiIO<sub>3</sub>, magnetogyration symm. anal. and Faraday effect (*Russian*) 2-22000  
 LiIO<sub>3</sub>, Raman modes, press. depend. 2-31452  
 α-LiIO<sub>3</sub>, Raman spectrum, piezospectroscopic study 2-46592  
 α-LiIO<sub>3</sub> single crystals, dislocation loops 2-50651  
 α-LiIO<sub>3</sub>, uniaxial cryst., spontaneous Raman scatt. angular depend. 2-46613  
 LiIO<sub>3</sub>-Si layered system, Gulyaev-Blyushtein and Rayleigh wave amplification 2-21980  
 LiI<sub>2</sub>H<sub>2</sub>O, conductivity enhancement by dispersed oxide phases 2-16875  
 LiI<sub>2</sub>H<sub>2</sub>O, electrochem. behaviour, AC impedance spectra and ionic conduction 2-22468  
 LiInO<sub>2</sub>, decomp. mechanisms rel. to ionic cond. 2-41897  
 Li<sub>2</sub>InO<sub>3</sub>, decomp. mechanisms rel. to ionic cond. 2-41897  
 LiInSe<sub>2</sub>, growth, physicochem., electrophysical and optical characts. (*Russian*) 2-20386  
 LiInSe<sub>2</sub>, dielectric const. and bond parameters 2-51513  
 LiK<sup>2+</sup>, ab initio SCF pair pot. and polarisabilities 2-49537  
 LiKSO<sub>4</sub> fast ion conductor, vibr. spectroscopic study, temp. depend. 2-22048  
 LiKSO<sub>4</sub>, LO mode, anomalous temp. depend., 200 to 725K, Raman scatt. study 2-46595  
 LiKSO<sub>4</sub>, pyroelectric, piezoelectric, dielectric and structural props. 2-46487  
 LiKSO<sub>4</sub>, weakly IR active modes detection, optical rot. meas. 2-46535  
 Li<sub>2</sub>K<sub>2</sub>Ti<sub>2</sub>S<sub>6</sub>, co-intercalated, prep., Li activity and K stability 2-17641  
 LiLu<sub>0.5-x</sub>Er<sub>0.5</sub>Tm<sub>2</sub>Ho<sub>2</sub>F<sub>6</sub>, scheelite single crystals, Czochralski growth and laser characts. 2-5807  
 LiLu(SO<sub>4</sub>)<sub>2</sub>, X-ray cryst. struct. determ. 2-21110  
 Li<sub>2</sub>MCl<sub>4</sub> (M=Mg, Mn, Fe, Cd), spinel struct., ionic conductivity 2-5269  
 Li<sub>2</sub>Mg<sub>2</sub>XO<sub>6</sub>, X=Nb, Ta, Sb, cryst. data, X-ray powder diff. data 2-45130  
 Li<sub>2</sub>MnBr<sub>4</sub>, ternary bromides, spinel structure, struct. and stability (*German*) 2-5095  
 Li<sub>2</sub>MnO<sub>2</sub>, variation of cond. with Li insertion 2-9644  
 Li<sub>2</sub>MoO<sub>4</sub>, electronic struct. and XPS, discrete variational Xalpha calc. 2-39444  
 Li<sub>2</sub>MoO<sub>4</sub>, IR spectra 2-29582  
 Li<sub>0.5</sub>(Mo<sub>0.25</sub>V<sub>0.75</sub>)<sub>2</sub>O<sub>8</sub>, structure, transport and equilibrium props. 2-26136  
 Li<sub>2</sub>N, amorphous ionic conductor, sound vel. temp. depend., H impurity tunnelling 2-30534  
 Li<sub>2</sub>N, interlayer and intralayer diffusion, <sup>6</sup>Li and <sup>7</sup>Li NMR studies 2-21373  
 Li<sub>2</sub>N, superionic cond., excess sp. ht. at low temp. 2-30619  
 Li<sub>2</sub>N, superionic conductor, X-ray and neutron diff. study 2-21363  
 Li<sub>2</sub>N thin film solid electrolytes for electrochromic devices 2-17447  
 Li<sub>2</sub>N:D, crystal struct. by single-cryst. neutron diff. 2-21116  
 Li<sub>2</sub>N:H, ionic conductivity, complex least squares fitting, admittance data 2-50919  
 Li<sub>2</sub>N-LiCl system solid electrolytes, synthesis and NMR study 2-12827  
 LiNbO<sub>3</sub> film, optical two-coordinate modulator-beam splitter appl. (*Russian*) 2-11805  
 Li<sub>2</sub>N<sub>2</sub>Cl<sub>2</sub> as solid electrolyte for practical battery appls. 2-14061  
 Li(NH<sub>3</sub>)<sub>4</sub>, structural transitions, phase diagram of Li-NH<sub>3</sub> system 2-17669  
 (LiNH<sub>4</sub>SO<sub>4</sub>)<sub>2</sub> cryst., phase transitions 2-51895

## lithium compounds continued

- LiNH<sub>4</sub>SO<sub>4</sub>, ferroelec. transitions detect. by DC conductivity studies 2-5646  
 LiNH<sub>4</sub>SO<sub>4</sub> ferroelectric cryst., elec. cond., temp. depend. 2-36036  
 LiNH<sub>4</sub>SO<sub>4</sub> single crystals, piezoelec. props. 2-31384  
 LiN<sub>2</sub>H<sub>2</sub>SO<sub>4</sub>, proton cond., activation enthalpy 2-12829  
 LiNO<sub>3</sub>, ionic association studies by PMR 2-13364  
 LiNa<sup>2+</sup>, ab initio SCF pair pot. and polarisabilities 2-49537  
 LiNaSO<sub>4</sub> fast ion conductor, vibr. spectroscopic study, temp. depend. 2-22048  
 LiNaSO<sub>4</sub>, with <sup>6</sup>Li and <sup>7</sup>Li, Raman and IR reflectivity spectra 2-41342  
 LiNaSO<sub>4</sub> X-irradiated single crystals, EPR and optical absorpt. spectra of paramag. centres 2-26749  
 Li<sub>2</sub>Na<sub>2</sub>WO<sub>6</sub> bronze, thermodynamics and kinetics of electrochemical Li insertion 2-27434  
 LiNbO<sub>3</sub> powder, phonon echoes, dipolar field fluctuation effects 2-45462  
 LiNbO<sub>3</sub> 2×2 transverse type optical switch, wavelength meas. and demultiplexing appls. 2-16145  
 LiNbO<sub>3</sub> acousto-optic Q switch (*Chinese*) 2-20343  
 LiNbO<sub>3</sub>, backward-wave phonon echoes at 17 GHz 2-45461  
 LiNbO<sub>3</sub> bicrystal, thermal bonding, influence of planar diffusion bonded boundaries on props. 2-26840  
 LiNbO<sub>3</sub>, c-plate orientation, diffused optical waveguides on +c and -c faces, integrated optics appls., chemical etching 2-11853  
 LiNbO<sub>3</sub> channel waveguide interferometric modulator 2-49894  
 LiNbO<sub>3</sub>, computation of O vacancy electron energy levels using a semi-continuum model 2-5364  
 LiNbO<sub>3</sub> crystal, radiation conversion, strong focusing effect 2-49822  
 LiNbO<sub>3</sub>, Czochralski growth, rot. striations (*Chinese*) 2-40301  
 LiNbO<sub>3</sub>, dielectric spontaneous pol. below 50K 2-46467  
 LiNbO<sub>3</sub>, diffused waveguides, electro-optical props. 2-25114  
 LiNbO<sub>3</sub>, elastic wave propag. anisotropy, group velocities 2-30536  
 LiNbO<sub>3</sub>, electro-optic directional coupler integrated with pyroelec. waveguide detector, optical bistability 2-7885  
 LiNbO<sub>3</sub>, electron and ion bombard., electron spectra 2-41462  
 LiNbO<sub>3</sub>, electrooptic crystal, laser beam wavefront inversion in anisotropic self-diff. 2-982  
 LiNbO<sub>3</sub> electrooptic modulator control of Stokes component intensity in stimulated Raman scatt. in optical fibre 2-49933  
 LiNbO<sub>3</sub>, exoelectron emission accompanying piezoelec. effect 2-22151  
 LiNbO<sub>3</sub>, ferroelec., composition and elec. props. 2-30886  
 LiNbO<sub>3</sub>, freq. conversion of Nd solid slab lasers for visible laser sources 2-25068  
 LiNbO<sub>3</sub>, influence of elec. field on optical inhomogeneity 2-21985  
 LiNbO<sub>3</sub>, influence of domain structure on generation and propagation of elastic waves (*Polish*) 2-26199  
 LiNbO<sub>3</sub>, ion implantation, fabrication of single mode optical waveguides 2-20407  
 LiNbO<sub>3</sub> layer growth in LiVO<sub>3</sub> high temp. soln. 2-12928  
 LiNbO<sub>3</sub>, Li in and out diffusion processes, refractive index meas. using SHG phase matching temp. technique 2-16845  
 LiNbO<sub>3</sub>, longitudinal hypersound residual damping reversal (*Russian*) 2-50773  
 LiNbO<sub>3</sub>, optical beam wavefront reversal in anisotropic media 2-44406  
 LiNbO<sub>3</sub>, optical directional coupler, gating of Gbit rate diode laser pulse trains 2-7811  
 LiNbO<sub>3</sub>, optical generation of 76 MHz SAW 2-50036  
 LiNbO<sub>3</sub>, optical nonlinearity and hologram recording (*Russian*) 2-11742  
 LiNbO<sub>3</sub>, optical waveguide prism coupler, temp. compensation 2-11856  
 LiNbO<sub>3</sub>, photorefractive effect, nonphotovoltaic contrib. 2-46525  
 LiNbO<sub>3</sub>, photovoltaic, pyroelec., and piezoelec. outputs under pulsed laser illum. 2-36084  
 LiNbO<sub>3</sub> planar optical waveguide, N×M electroptical switching network for computer communications 2-11849  
 LiNbO<sub>3</sub> plates, laser beam modulation due to elastic waves (*Russian*) 2-20342  
 LiNbO<sub>3</sub> Pockels cell appln. as electronic light shutter 2-49882  
 LiNbO<sub>3</sub> pulsed optical parametric oscillator, conversion efficiency improvement using external signal injection 2-44394  
 LiNbO<sub>3</sub> pyroionisation converter of IR to visible radiation 2-20370  
 LiNbO<sub>3</sub>, Raman scatt. study of low freq. phonon polaritons 2-46559  
 LiNbO<sub>3</sub>, Raman study of optical phonon angular distrib. (*Russian*) 2-17487  
 LiNbO<sub>3</sub> single cryst. films, LPE growth for SAW devices 2-2467  
 LiNbO<sub>3</sub> single-crystal thin films grown by RF sputtering for electrooptic modulator 2-51800  
 LiNbO<sub>3</sub> substrate, coated with supercond. NbN film, quenching of piezoelec. induced SAW attenuation 2-26200  
 LiNbO<sub>3</sub> substrate, for integrated optical data preprocessor, 16-channel, fabrication details 2-44490  
 LiNbO<sub>3</sub> substrate, SAW propag., diff. effects, X-ray topographic study 2-45705  
 LiNbO<sub>3</sub>, surface skimming bulk waves, rel. to reflection suppression in devices 2-44510  
 LiNbO<sub>3</sub>, three-wave nonlinear optical interactions 2-44385  
 LiNbO<sub>3</sub> Ti-diffused, low-loss bends for integrated optics 2-25147  
 LiNbO<sub>3</sub> Ti-diffused waveguide, modal fields and curvature losses 2-4588  
 LiNbO<sub>3</sub> Ti-diffused waveguide, geodesic lens performance characts. 2-4613  
 LiNbO<sub>3</sub>, topotactic to cubic perovskite structural transform. due to ion exchange 2-30587  
 LiNbO<sub>3</sub>, uniaxial cryst., spontaneous Raman scatt. angular depend. 2-46613  
 LiNbO<sub>3</sub> used in SAW devices, effects of ferroelec. domains on surface struct. 2-26188  
 LiNbO<sub>3</sub> waveguides, stoichiometry-control and performance for integrated optics 2-44442  
 LiNbO<sub>3</sub> waveguides, single-mode, planar and channel, fabricated by ion exchange 2-49905  
 LiNbO<sub>3</sub> waveguides exchanged in TiNO<sub>3</sub> soln., characterisation 2-49909  
 LiNbO<sub>3</sub>, work function, polarisation effect, temp. depend., contact pot. difference method 2-17144  
 LiNbO<sub>3</sub>, Y collinear acoustooptic filter, acoustic transducer imaging 2-39791  
 LiNbO<sub>3</sub>:Cu(Eu)(Ni), pure and doped, X-ray induced luminesc. 2-26977  
 LiNbO<sub>3</sub>:Fe, dynamic gratings, phase transformation of coherent light beams meas. 2-11804  
 LiNbO<sub>3</sub>:Fe, ferroelec., photorefractive processes 2-9131  
 LiNbO<sub>3</sub>:Fe, Hall photocurrents 2-21630  
 LiNbO<sub>3</sub>:Fe, magnetophotovoltaic effects 2-21631  
 LiNbO<sub>3</sub>:Fe, one- and two-photon holograms, optical erasure 2-7730



## lithium compounds continued

- LiNbO<sub>3</sub>:Fe, optical erasure dynamics of one-and two-photon holograms 2-29795  
 LiNbO<sub>3</sub>:Fe, photorefractive electrooptic cryst. with vol. phase hologram, light diff. 2-11664  
 LiNbO<sub>3</sub>:Fe, Raman spectra variations for LO phonon lines, exciting light wavelength depend. 2-46601  
 LiNbO<sub>3</sub>:Fe, thermal fixing of holograms, evidence for mobile H<sup>+</sup> ion mechanism 2-24979  
 LiNbO<sub>3</sub>:Fe, white light image processing 2-11654  
 LiNbO<sub>3</sub>:Fe crystal, photorefractive effect, nonfield contrib. 2-9117  
 LiNbO<sub>3</sub>:Fe(Ni), refr. index temp. depend. meas., impurity induced optical anomaly 60 to 120°C 2-26848  
 LiNbO<sub>3</sub>:H<sup>+</sup> (He<sup>+</sup>), propag. of SAW during implantation 2-35875  
 LiNbO<sub>3</sub>:Ti, spectral determ. of Ti distrib. 2-8535  
 LiNbO<sub>3</sub>:Ti asymmetric branching waveguides, optical guided wave propag. characts. 2-16102  
 LiNbO<sub>3</sub>:Ti channel waveguides for switching in integrated optics 2-11852  
 LiNbO<sub>3</sub>:Ti channel waveguide, SHG phase matching, electrooptic and temp. tuning 2-4395  
 LiNbO<sub>3</sub>:Ti diffused, anisotropic, leaky mode investigation, WKB approx. 2-34895  
 LiNbO<sub>3</sub>:Ti diffused channel waveguide, surface-index profile meas. using interferometric technique 2-20406  
 LiNbO<sub>3</sub>:Ti diffused channel waveguide characts. 2-34893  
 LiNbO<sub>3</sub>:Ti diffused waveguides, stoichiometry-control and performance for integrated optics 2-44442  
 LiNbO<sub>3</sub>:Ti diffusion optical waveguide, anal. 2-11813  
 LiNbO<sub>3</sub>:Ti guided-wave devices for optical fibre communications appls. 2-11851  
 LiNbO<sub>3</sub>:Ti guided-wave electro-optical devices for integrated optics, review 2-11864  
 LiNbO<sub>3</sub>:Ti low-loss coherently-coupled waveguide bends, design rules 2-49906  
 LiNbO<sub>3</sub>:Ti low-loss waveguide bends at 1.3 μm 2-49907  
 LiNbO<sub>3</sub>:Ti optical waveguide config., Nb<sub>2</sub>O<sub>5</sub> clad, efficient SHG 2-7838  
 LiNbO<sub>3</sub>:Ti optical waveguides, dispersion curves rel. to fabrication parameters, comparison of theory and expt. 2-11854  
 LiNbO<sub>3</sub>:Ti planar waveguides, SHG anal. for waveguide parameter optimisation 2-49827  
 LiNbO<sub>3</sub>:Ti strip waveguides, optically induced refr. index change, quantitative determ. using integrated optical directional coupler 2-49908  
 LiNbO<sub>3</sub>:Ti tunable electro-optic TE<sub>10</sub> mode convertor/wavelength filter 2-11865  
 LiNbO<sub>3</sub>:Ti waveguide, segmented photoresist Bragg grating for static spatial filter 2-4617  
 LiNbO<sub>3</sub>:Ti waveguide, integrated optic SSB modulator or freq. shifter 2-7855  
 LiNbO<sub>3</sub>:Ti waveguide freq. doubling of GaInAsP laser, coherent green radiation source 2-7833  
 LiNbO<sub>3</sub>:Ti waveguide optical serrodyne freq. translator 2-7886  
 LiNbO<sub>3</sub>:Ti waveguides, electrooptic-photoeffr. modulation 2-25109  
 LiNbO<sub>3</sub>:Ti waveguide, fabrication by ion exchange in TiNO<sub>3</sub> soln. 2-49898  
 LiNbO<sub>3</sub>/Si structure SAW parametric oscill. 2-5297  
 LiNbO<sub>3</sub>-InSb film struct., acoustoelectronic interaction, quantum size effect 2-46081  
 LiNbO<sub>3</sub>-water boundary, propag. characts. of leaky SAWs meas. by acoustic microscope 2-35013  
 LiNbO<sub>3</sub>(TaO<sub>3</sub>) film form. from laser plasma, operating mode investigation 2-46913  
 LiNd(PO<sub>3</sub>)<sub>4</sub> laser, spectral generation investigation 2-4513  
 LiNd(PO<sub>3</sub>)<sub>4</sub>, spectral-luminesc. investig., Nd<sup>3+</sup> level obs., Stark structures 2-2325  
 LiNdP<sub>2</sub>O<sub>12</sub> crystals, IR spectrum, structural props. (Chinese) 2-17454  
 LiNdP<sub>2</sub>O<sub>12</sub> lasers, laser-diode pumped, spike-mode oscills. 2-11701  
 LiNdP<sub>2</sub>O<sub>12</sub> lasers, FM mode-locked, gigabit optical pulse generation 2-44304  
 LiNdP<sub>2</sub>O<sub>12</sub> multimode laser, phase-conjugate refl.-induced spiking oscill. 2-49755  
 LiNdP<sub>2</sub>O<sub>12</sub>, radiative transition probabilities of Nd<sup>3+</sup> ion, oscillator strengths, absorption spectra and fluoresc. 2-26930  
 Li<sub>2</sub>NiP<sub>2</sub>S<sub>6</sub>, electrochem. intercalation of Li, in situ ESR of Ni<sup>2+</sup> (French) 2-21871  
 LiO, pellets, in-pile T release tests 2-43612  
 LiO<sub>2</sub>-SiO<sub>2</sub> glass, crystn., activation energy from derivative DTA curves 2-45049  
 α-LiO<sub>2</sub>, cryst. growth and elec. props., Chinese research 2-46896  
 LiO, antiferroite-cubic cryst., self-diffusion of constituent ions 2-12838  
 LiO, neutron and ion irradi. damage, ESR study 2-17338  
 LiO, neutron irradiated, kinetic studies of T release 2-43606  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>(P<sub>2</sub>O<sub>5</sub>)(SiO<sub>2</sub>) system glasses, acousto-optical effectiveness, conc.-depend. 2-41327  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-P<sub>2</sub>O<sub>5</sub>-SiO<sub>2</sub> system pyroceramics, props. 2-9436  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, struct. state change of Cu<sup>II</sup> and Mn<sup>IV</sup> durin g crystn., ESR obs. 2-41190  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-TiO<sub>2</sub>(ZrO<sub>2</sub>), crystn., laser Raman spectroscopy 2-12491  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-TiO<sub>2</sub> system glasses, phase separation kinetics at presatiation stage, small-angle X-ray scatt. 2-40560  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>-TiO<sub>2</sub> glasses, elastic props., comp. depend., rel. to density and refr. index 2-13768  
 Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub>-SiO<sub>2</sub> and Li<sub>2</sub>O-K<sub>2</sub>O(Ag<sup>+</sup>)-Al<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass ceramics, deform. rate influence on bending strength and failure 2-52046  
 Li<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub> glass, diborate and metaborate, fast Li<sup>+</sup> cond. 2-16886  
 Li<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-Li<sub>2</sub>SO<sub>4</sub>(Li<sub>2</sub>PO<sub>4</sub>) glasses, solid electrolyte, synthesis, struct., correl. and Raman spectra 2-16885  
 Li<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-LiF(Li<sub>2</sub>S) glass, superionic cond. and far IR spectra, expt. and computer simulation 2-16887  
 Li<sub>2</sub>O-Fe<sub>2</sub>O<sub>3</sub>(Cr<sub>2</sub>O<sub>3</sub>)(SnO<sub>2</sub>)(ZrO<sub>2</sub>)(ThO<sub>2</sub>)(V<sub>2</sub>O<sub>5</sub>)-WO<sub>3</sub>, phase relations 2-17668  
 Li<sub>2</sub>O-Ga<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, migration of He 2-12852  
 Li<sub>2</sub>O-GeO<sub>2</sub> glasses, ion exchange interaction with molten alkali nitrates and refr. index gradient 2-26147  
 Li<sub>2</sub>O-MnO-Fe<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> glass, mag. props., Mossbauer effect 2-21842  
 Li<sub>2</sub>O-Na<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub> ion exchanged glass, conc. depend. of refr. index gradient 2-41322  
 Li<sub>2</sub>O-SiO<sub>2</sub> glass, ionic cond., computer simulation 2-16887  
 Li<sub>2</sub>O-SiO<sub>2</sub> glass containing sesquioxides, ion exchange interaction with NaNO<sub>3</sub> and AgNO<sub>3</sub> melts 2-13942  
 Li<sub>2</sub>O-SiO<sub>2</sub> glass system, elec. cond., heat treatment effects 2-35732

## lithium compounds continued

- Li<sub>2</sub>O-Ta<sub>2</sub>O<sub>5</sub>-(TiO<sub>2</sub>)<sub>2</sub>, new non-stoichiometric ferroelectric phases close to LiTaO<sub>3</sub> 2-17422  
 Li<sub>2</sub>O-Ta<sub>2</sub>O<sub>5</sub>-(TiO<sub>2</sub>)<sub>2</sub>, ternary system, variation of ferroelec. Curie temp. with non-stoichiometry in LiTaO<sub>3</sub> region 2-31416  
 Li<sub>2</sub>O-WO<sub>3</sub> glass, rapid quenching technique prep., electrochromic props. 2-31674  
 Li<sub>2</sub>O-ZrO<sub>2</sub>-SiO<sub>2</sub> system, phase diagram 2-2498  
 Li<sub>2</sub>O-ZuO-P<sub>2</sub>O<sub>5</sub> glasses, pH effect on durability 2-5968  
 LiOH, neutron irradiated, kinetic studies of T release 2-43606  
 LiOH, pot. surface, equilib. geometry and dipole moment calc., Mulliken population anal. 2-11420  
 LiOH-LiI(Br)(Cl), phase equilibria and ionic cond. 2-16873  
 Li<sub>2</sub>O.2 SiO<sub>2</sub>, double nucleation in identical glass (Czech) 2-30411  
 LiPO<sub>3</sub>-CeP<sub>2</sub>O<sub>9</sub>, phase equilib. relations 2-22202  
 LiPO<sub>3</sub>-LiI(Br)(Cl) glasses, fast ion cond. 2-12823  
 Li<sub>2</sub>ReO<sub>3</sub>, structural aspects of Li insertion 2-25850  
 Li<sub>2</sub>ReO<sub>3</sub>, topotactic lithium reactions with ReO<sub>3</sub> related shear structures 2-27433  
 Li<sub>2</sub>S-B<sub>2</sub>S<sub>3</sub> glasses, solid electrolyte, synthesis, struct., correl. and Raman spectra 2-16885  
 Li<sub>2</sub>S-GeS<sub>2</sub>, glass form. and ionic cond. 2-12824  
 Li<sub>2</sub>S-P<sub>2</sub>S<sub>5</sub>-LiI glass, superionic cond., and struct. 2-16888  
 LiSCN complex with polyethylene oxide, solid electrolytes, ionic cond. 2-16891  
 Li<sub>2</sub>SO<sub>4</sub>, molten, IR spectra by emission spectrometry (Japanese) 2-9149  
 Li<sub>2</sub>SO<sub>4</sub>, molten, Raman spectra, asymmetric stretching band 2-26901  
 Li<sub>2</sub>SO<sub>4</sub>, plastic deform., stress relax. meas. 2-25974  
 Li<sub>2</sub>SO<sub>4</sub> rotator phase with fast ion cond., neutron, X-ray and Brillouin studies 2-21117  
 Li<sub>2</sub>SO<sub>4</sub>-based glasses, roller quenching prep., struct. and ionic cond. props. 2-30402  
 Li<sub>2</sub>SO<sub>4</sub>-β-Al<sub>2</sub>O<sub>3</sub>:Na<sub>2</sub>O, solid phase ion exchange 2-6025  
 Li<sub>2</sub>SO<sub>4</sub>-K<sub>2</sub>SO<sub>4</sub> mixtures, plastic deform., stress relax. meas. 2-25974  
 Li<sub>2</sub>SO<sub>4</sub>-K<sub>2</sub>SO<sub>4</sub> mixtures, Raman spectra, asymmetric stretching band 2-26901  
 Li<sub>2</sub>SO<sub>4</sub>-K<sub>2</sub>SO<sub>4</sub> molten mixtures, Raman spectra 2-5693  
 Li<sub>2</sub>SO<sub>4</sub>-Li<sub>2</sub>B<sub>2</sub>O<sub>4</sub> (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, phase diagram and ionic cond., DTA and X-ray diff. obs. (Chinese) 2-22201  
 Li<sub>2</sub>S<sub>2</sub>O<sub>7</sub>-K<sub>2</sub>S<sub>2</sub>O<sub>7</sub>, phase studies, thermal anal. investigation 2-2494  
 Li<sub>2</sub>S<sub>2</sub>O<sub>7</sub>-Na<sub>2</sub>S<sub>2</sub>O<sub>7</sub>, phase studies, thermal anal. investigation 2-2494  
 Li<sub>2</sub>SO<sub>4</sub>-(K<sub>2</sub>SO<sub>4</sub>) superionic conductor, plastic deform. 2-21219  
 Li<sub>3</sub>Sb<sub>2</sub>-S<sub>8</sub>, synthesis and cryst. chem. (French) 2-12567  
 Li<sub>2</sub>SiO<sub>3</sub> glass-ceramics, pyroelec. 2-2198  
 LiSmO<sub>3</sub>, decomp. mechanisms rel. to ionic cond. 2-41897  
 Li<sub>2</sub>Ta<sub>2</sub>Fe<sub>2</sub>S<sub>2</sub>, intercalation cpd., electronic struct., Mossbauer effect study 2-31343  
 LiTaO<sub>3</sub>, backward phonon echoes at 17.3 GHz 2-25997  
 LiTaO<sub>3</sub>, backward-wave phonon echoes at 17 GHz 2-45461  
 LiTaO<sub>3</sub> crystal, reduced, photovoltaic and photorefractive props. (Russian) 2-26447  
 LiTaO<sub>3</sub>, electron and ion bombard., electron spectra 2-41462  
 LiTaO<sub>3</sub>, ferroelec., low freq. phonon polaritons, Raman scatt. study 2-51092  
 LiTaO<sub>3</sub>, light scatt. and its appl. 2-26865  
 LiTaO<sub>3</sub>, Mossbauer spectroscopy study 2-31328  
 LiTaO<sub>3</sub>, optical beam wavefront reversal in anisotropic media 2-44406  
 LiTaO<sub>3</sub>, powder, phonon echoes, dipolar field fluctuation effects 2-45462  
 LiTaO<sub>3</sub>, Raman scatt. study of low freq. phonon polaritons 2-46559  
 LiTaO<sub>3</sub>, Raman spectra, isofrequency, noncentral peaks at phase transition 2-46594  
 LiTaO<sub>3</sub> single cryst., defective surface, electron emission 2-22142  
 LiTaO<sub>3</sub>, single cryst., dielec. and pyroelec. props. 2-31385  
 LiTaO<sub>3</sub>, spark radiation 2-51335  
 LiTaO<sub>3</sub> surface skimming bulk waves, rel. to reflection suppression in devices 2-44510  
 LiTaO<sub>3</sub> thin film and devices grown by electrochemical reaction 2-22181  
 LiTaO<sub>3</sub>, topotactic to cubic perovskite structural transform. due to ion exchange 2-30587  
 LiTaO<sub>3</sub>, variation of ferroelec. Curie temp. with non-stoichiometry 2-31416  
 LiTaO<sub>3</sub>:Ti diffused, anisotropic, leaky mode investigation, WKB approx. 2-34895  
 Li<sub>1.8</sub>Ta<sub>1.8</sub>W<sub>0.2</sub>O<sub>6</sub>.nH<sub>2</sub>O, ionic cond., X-ray and NMR study 2-30654  
 LiTbF<sub>4</sub>, uniaxial ferromag., transverse elec. susceptibility, dielec. study 2-31366  
 LiTb<sub>0.5</sub>Ho<sub>0.45</sub>F<sub>4</sub>, random Ising dipole coupled ferromag., mag. susceptibility 2-46261  
 LiTb<sub>2</sub>Y<sub>1-p</sub>F<sub>4</sub>, critical props., phase diagram 2-51407  
 Li<sub>2</sub>Ti<sub>2</sub>O<sub>7</sub> with ramdellite struct., solid electrolyte props. and existence region in phase diagram 2-40592  
 Li<sub>0.33</sub>TiS<sub>2</sub>, <sup>7</sup>Li NMR linewidth and ordering 2-51484  
 Li<sub>2</sub>TiS<sub>2</sub>, anomalous Bragg peak widths, X-ray diff. expts. 2-16630  
 Li<sub>2</sub>TiS<sub>2</sub>, elec. resist. and Hall coeff. at low temp. 2-35984  
 Li<sub>2</sub>TiS<sub>2</sub>, intercalation rate of Li<sup>+</sup>, electrochem. determ. 2-40606  
 Li<sub>2</sub>TiS<sub>2</sub>, lattice parameters and thermoelec. power meas. 2-16633  
 LiTm(SO<sub>4</sub>)<sub>2</sub>, X-ray cryst. struct. determ. 2-21110  
 LiUO<sub>2</sub>(NO<sub>3</sub>)<sub>3</sub>, luminesc. excited state splitting 2-41400  
 Li<sub>2</sub>V<sub>1-x</sub>Co<sub>x</sub>S<sub>2</sub>, layered compounds, mag. props. 2-21765  
 Li<sub>2</sub>V<sub>1-x</sub>Fe<sub>x</sub>S<sub>2</sub>, layered compounds, mag. props. 2-21765  
 Li<sub>2</sub>V<sub>1-x</sub>Ni<sub>x</sub>S<sub>2</sub>, layered compounds, mag. props. 2-21765  
 LiVO<sub>2</sub>, high-pressure form, 2×2×2 NaCl superstruct. 2-12544  
 LiVO<sub>3</sub>, single cryst. prep. and opt. props. 2-41511  
 LiVO<sub>3</sub>-NaVO<sub>3</sub>, Vegard's law in various types of isomorphic substitutions 2-50611  
 Li<sub>2</sub>V<sub>2</sub>O<sub>5</sub>, structure, transport and equilibrium props. 2-26136  
 Li<sub>2</sub>V<sub>2</sub>O<sub>5</sub> cathode material, X-ray diff. thermal anal. and mag. susceptibility 2-22183  
 Li<sub>2</sub>WO<sub>4</sub>, IR spectra 2-29582  
 Li<sub>2</sub>WO<sub>3</sub>, structure, transport and equilibrium props. 2-26136  
 Li<sub>0.5-x-y</sub>Er<sub>0.5</sub>Tm<sub>x</sub>Ho<sub>y</sub>F<sub>4</sub>, scheelite single crystals, Czochralski growth and laser characts. 2-5807  
 LiYF<sub>4</sub>, oxidation products, X-ray diff. and differential thermal anal. study 2-16609  
 LiYF<sub>4</sub>:Nd<sup>3+</sup> energy levels, high resolution absorpt. spectra 2-9141  
 LiYF<sub>4</sub>:Yb<sup>3+</sup>(Tm<sup>3+</sup>)(Ho<sup>3+</sup>), multiphonon transport of excitations between impurity ions 2-17027  
 LiYb(SO<sub>4</sub>)<sub>2</sub>, X-ray cryst. struct. determ. 2-21110  
 Li<sub>2</sub>Zn<sub>1-x</sub>Co<sub>x</sub>O<sub>4</sub>, spinels, cation distrib. and elec. props. 2-26423  
 Li<sub>16-2x</sub>Zn<sub>x</sub>(CrO<sub>4</sub>)<sub>4</sub>, LISICON crystals, superionic cond., NMR study (Chinese) 2-31294



**lithium compounds continued**

- Li<sub>2</sub>Zn<sub>0.6</sub>(Sn<sub>1-x</sub>Ti<sub>x</sub>)<sub>2.8</sub>O<sub>8</sub>, luminescence 2-2330  
 Li<sub>2</sub>ZrSe<sub>6</sub>, elec. resist. and Hall coeff. at low temp., supercond. props. 2-35984  
 Li<sub>2</sub>ZrSe<sub>6</sub>, semiconductor-metal transition upon intercalation 2-21504  
 LiF TLD for protons with non-monoenergetic energy distrib., light conversion efficiencies 2-19772  
 LiF·nAlF<sub>3</sub>, amorphous thin film ionic conductors 2-21355  
 LinbO<sub>3</sub> crystals for light deflection and switching, thermo-optic effect 2-11797  
 LinbO<sub>3</sub>:Ti stripe waveguides, end-fire coupling of optical fibres for interconnection purposes 2-11855  
 MgF<sub>2</sub>-LiF, solid solns., sintering kinetics 2-2483  
 NH<sub>4</sub>LiSO<sub>4</sub>, ferroelec. phase transition, Brillouin scatt. study 2-17421  
 Na<sub>3-x</sub>Li<sub>1-x</sub>W<sub>3</sub>O<sub>12</sub>F<sub>6</sub>, crystallographic and dielectric props., new materials having chiolite related struct. 2-17423  
 Na<sub>2</sub>O-Li<sub>2</sub>O-Al<sub>2</sub>O<sub>3</sub>-P<sub>2</sub>O<sub>5</sub> glasses, elec. cond., mixed alkali effect 2-12825  
 p-Ni<sub>0.98</sub>Li<sub>0.02</sub>O as photoelectrolysis cathode, flatband pot. and band gap 2-36088  
 P<sub>2</sub>O<sub>5</sub>-ZnO-Li<sub>2</sub>O-Fe<sub>2</sub>O<sub>3</sub> glass, ESR spectra, 300 to 700K 2-31268  
 (P<sub>2</sub>O<sub>5</sub>)<sub>0.8</sub>(Li<sub>2</sub>O)<sub>0.2</sub> glass, impurity diffusion study by NMR 2-41217  
 RbLiMoO<sub>4</sub>, ferroelectric transitions, dielec. and elastic study 2-31408  
 SiO<sub>2</sub>-Li<sub>2</sub>O binary glasses, H<sub>2</sub>O vapour effect on internal friction 2-51968  
 Sr<sub>2</sub>NaLiNb<sub>3</sub>O<sub>10</sub>, refr. index and transmissivity (*Chinese*) 2-21963  
 TeO<sub>2</sub>-K<sub>2</sub>Cl<sub>2</sub>-LiCl<sub>3</sub>, liquid salt target for neutron deficient Sb isotopes prod. at ISOLDE 2-19833  
 Ti-Li-O superconductor, hot pressed, aging effects, elec. resistivity 2-2540

lithospace *see Earth crust*lithosphere *see Earth crust***liver**

- biopsied tissue sections, machine vision system for study of multidimensional multicolour images 2-42190  
 cell image processing, variable-threshold digitiser for photodiode arrays 2-27944  
 cells, adhesion to glass surfaces, reflection-contrast microscopy 2-52694  
 erythroid cells, foetal mouse, in vitro X-irrad. effects 2-52578  
 gallstones, small, appl. of hydroelastic waves for removal 2-18330  
 gluconeogenesis inhibition in rats after irrad. (*Russian*) 2-42142  
 hepatocellular carcinoma, CT and angiography 2-9857  
 hepatocytes, giant, form. in γ-irrad. Swiss albino mice 2-37624  
 microsphere angiography in hepatic artery infusion for cancer detect. 2-52609  
 mitochondria from normal and diabetic rats, comparative study of pyruvate transport 2-47586  
 mitoplasts, stoichiometry of H<sup>+</sup> ejection coupled to mitochondrial electron flow 2-37518  
 neutron induced autoradiography, appl. to <sup>239</sup>Pu distrib. and fission fragment range meas. in mouse liver 2-47780  
 phantom materials for radiation dosimetry, liqs. and gels 2-47715  
 radionuclide tomograms, anal. of spatial patterns using distance based method 2-37674  
 regenerative processes, X-ray abolition of tumour inhibitory effect (*Russian*) 2-32261  
 scanning, by single photon emission tomography, clinical appls. (*Dutch*) 2-9864  
 scintigrams, evaluation of digital enhancement techniques 2-37671  
 sonography, appl. to abdomen liver, gallbladder and pancreas (*German*) 2-42176  
 trace elements, high-flux fast neutron activation anal. 2-14037  
 US attenuation coeff., phase insensitive, determ. for fresh bovine liver 2-6248  
 US effects in vivo, mouse liver contact with an aq. coupling medium 2-2895  
 US velocities of several biological tissues 2-37623  
 viscoelastic properties, rat obs. using deform. by compression 2-2885

livestock *see farming***living systems**

- see also biocybernetics; brain models; extraterrestrial life; physiological models*  
 origin and development of living systems, clues from organic matter in meteorites and Precambrian rocks 2-53193

LMC *see Large Magellanic Cloud***load (electric)**

- see also load dispatching; load regulation*  
 molten salt electrolyte cell for propulsion and load levelling (*German*) 2-22566

load control *see load regulation***load dispatching**

- ZnCl<sub>2</sub>, multiple cell battery stack, 1.7 kWh, life testing for eventual application in utility load leveling 2-52322

**load regulation**

- CAES technology 2-18001  
 direct coupled CAES evaluation 2-18000  
 electric thermal storage program, impact on transmission systems 2-32122  
 hybrid advanced compressed air energy storage plant 2-17999  
 peak shifting potential of thermal energy storage systems for residential applications 2-18148  
 power system superconductive magnetic energy storage system characts. 2-18143  
 rechargeable alkaline zinc/ferricyanide hybrid redox battery for utility load levelling and solar photovoltaic/wind appls. 2-22591  
 zeolite heat pump and zeolite heat transformer for load management 2-22668  
 Li-FeS battery system for electric utility storage and load levelling 2-32059  
 Na-S battery for utility load levelling 2-32058  
 Na-S small batteries for load levelling, performance anal. 2-22594

lobes (distribution) *see antenna radiation patterns***local moments in dilute systems**

- alloys, binary, localization, self-consistent theory 2-30833  
 Curie-Weiss susceptibility and general spin fluctuations 2-21777  
 III-V semiconductors, random indirect exchange anisotropy and impurity spin ordering (*Russian*) 2-41107  
 metals, local moments, indirect g-shift bottlenecking 2-51463  
 noble metal-transition metal dil. alloys, Hall effect 2-17048  
 randomly diluted quasi-one-dimens. spin systems, spin correlations 2-2071

**local moments in dilute systems continued**

- resistivity min. due to electron scatt. by coupled mag. impurities 2-30881  
 semiconductor, exchange scattering of photocarriers, involving localised mag. moments, influence of effective exchange field (*Russian*) 2-26348  
 superconductor, Korringa relax. of exchange-interacting localised moments 2-26550  
 transition metal, electronic structure of impurities, review 2-26333  
 two-dimensional Ermakov-type systems, classification scheme 2-28647  
 Ce<sub>0.9-x</sub>La<sub>x</sub>Th<sub>0.1</sub>, mixed valence alloy, mag. excitations, mag. susceptibility and neutron diff. study 2-45913  
 Gd<sub>1-x</sub>Re<sub>x</sub>Al<sub>2</sub> (Re=Dy, Ho, Er), Curie temp., theoretical calc. 2-21793  
 Pd-Co(Fe), dil., forced vol. magnetostriction, conc. and temp. depend. 2-46356  
 Pd-Fe, dilute alloy, nonmagnetic Fe surface impurities, magnetisation props. 2-36311  
 Pd-Fe, dilute alloy, paramagnetic, mag. order, neutron scattering study 2-8960  
 Pd-Mn (0.15 at.%), giant moment system, longit. magnetoresist., 1.5 to 10K 2-36007  
 Pt-Co(Fe), dil., forced vol. magnetostriction, conc. and temp. depend. 2-46356  
 ZnSO<sub>4</sub>-K<sub>2</sub>SO<sub>4</sub>:Mn(Co)(Ni) glasses, mag. susceptibility meas. 2-21764

**localised electron states***see also Anderson model; charge-ordered states; charge transfer states; Wigner crystal*

- actinide compounds, crystal chemistry and electronic struct. 2-21081  
 alcohols, glassy, localised electron spectra evolution gamma irrad. at 4K 2-13513  
 alloys, binary, localization, self-consistent theory 2-30833  
 amorphous and liquid semiconds., conf., Grenoble, France, (July 1981) 2-38359  
 amorphous metals, reson. electron scattering theory 2-26380  
 amorphous semicond., Hall effect due to hopping cond. in localised states 2-40935  
 Anderson model, one-dimensional, exponential localisation proof 2-26268  
 binary chain, isotopically disordered, vibr. states, localization 2-26334  
 compressible nonpolar fluid, excess electron localisation, cavity model 2-25485  
 cubic AN<sub>3</sub>-N semiconductors, least bound core electron excitations, binding energies, chemical shifts 2-26286  
 dimensional and magnetic field effects on localization 2-40814  
 disordered chains, localisation length calcs. 2-51129  
 disordered metals, one- and two-dimens. 2-30663  
 disordered system, electron localisation, critical behaviour and macroscopic manifestations, review 2-40852  
 disordered system, electron localisation, electron local density of states 2-40844  
 disordered systems, electronic states 2-40770  
 disordered systems, localised states, field theory formulation 2-8772  
 disordered systems, one-parameter scaling of localisation length and conductance 2-30835  
 disordered two-dimens. weakly localised, mutual interactions, intervalley impurity scatt. effect 2-26382  
 electron gas, two-dimensional, localisation and quantised Hall resistance 2-17003  
 extended and localised electron states in a one-dimensional system with bond distortion 2-8788  
 films, CVD, amorphous and polycryst., cond. mechanism 2-46171  
 gap states energetic distrib. by phase-shift anal. of modulated photocurrent 2-21484  
 glass, electron pairs self-localisation in tunnelling states 2-17031  
 graphite intercalation compound with K, charge distrib. 2-1852  
 hopping conductivity, two-dimens., semiclassical theory 2-5409  
 Hubbard model, localised electron states, rel. to ferromagnetism theory 2-1865  
 ice, localised excess electrons 2-5370  
 III-V semiconductors, native oxides, chem. bonding model 2-25805  
 insulator, trap filling by ionising radiation, kinetic eqns. 2-30824  
 intermetallic compounds, binary, recursion method, asymptotic behaviour, local densities of states 2-5360  
 lattice relaxation and multiphonon transitions in optical spectra 2-31438  
 lattice with diagonal disorder, electron states, variational treatment 2-17030  
 localised and delocalised electron system, electrical conductivity 2-21553  
 localised two-dimensional electron superlattice on low-symm. surface 2-5448  
 localization in low dimensions 2-30836  
 metal, disordered two-dimens., electron quasiparticle lifetime due to electron-electron scatt. 2-45951  
 metal, narrow-band, with impurities, intraatomic CVV Auger spectrum 2-41461  
 metal solutions, electronic props., review 2-12990  
 metal-insulator transition, Falicov-Ramirez-Kimball model, localised state spatial correlation 2-40792  
 metallic thin wires, one-dimens. type IR divergences 2-16982  
 metals, 5th period elements, core-hole ground state energies, XPS determ. 2-17602  
 metals, local electron mobility edge, supercond. transition temp. press depend. study 2-26284  
 metals, one-dimensional, cond. freq. depend. for variable range rate hopping 2-30853  
 metals, transport phenomena depend. on quasilocal electron states 2-1891  
 metals, transport phenomena depend. on quasilocal electron states 2-5387  
 minimum metallic cond. and conduction near a mobility edge 2-40789  
 molecular glass, localised molecular-ion and exciton states, photoemission, UV absorpt. and transport 2-35974  
 nonpolar medium, autolocalised electron state transitions induced by mag. field (*Russian*) 2-40812  
 one dimensional conductors, fractionally charged excitations 2-45852  
 one dimensional disordered systems, conductivity and localisation of electron states 2-13017  
 one-dimensional CDW at weak impurity pinning, cond., and localisation in presence of interactions 2-36027  
 one-dimensional disordered system, excited states lifetime 2-21600  
 one-dimensional disordered system, localisation 2-40849  
 one-dimensional Heisenberg random antiferromag. model, quantum case, universality 2-13268  
 one-dimensional molecular lattice, excess electron interacting with optical phonons, motion 2-1577  
 one-dimensional multi-channel localisation scatt. model 2-35973



## localised electron states continued

- one-dimensional system, localization 2-13018  
 organic solid, disordered, electronic transport, degree of disorder determ. 2-36043  
 organic solids with diagonal disorder, localised states and electronic transport, review 2-8774  
 photoelectron spectra of  $3d^N$  ions, core levels, formalism 2-51772  
 photoemission, resonant, due to electron-excited direct recombination, satellite line breadths 2-5796  
 polarizing medium, impurity centres of negative Hubbard energy, electron pairing 2-40832  
 poly(p-xylylene) film, electronic struct. 2-9240  
 polymer, localised molecular-ion and exciton states, photoemission, UV absorpt. and transport 2-35974  
 quantum percolation in dilute lattices of various dimensionalities 2-30816  
 quasi-one-dimensional systems, electron localisation, off diagonal Green function matrix elements 2-8773  
 random elastic scatt., long-range correl. and localisation 2-8780  
 random network, 2-D, electron localisation, topological disorder effects 2-40842  
 semiconductor, antiferromagnetic, carrier self-localisation at surface ferro-mag. microregion 2-13160  
 semiconductor, disordered, electron energy spectrum, localisation problem 2-40838  
 semiconductor, intrinsic, electron localisation test, itinerant and localised charge transport 2-40914  
 semiconductor, two-electron self-localised bound  $2^3P$  states 2-26310  
 semiconductor alloys, local order dependent impurity levels 2-26335  
 semiconductors, amorphous, density of localised states, linear specific heat, Anderson model 2-40836  
 semiconductors, amorphous, localised states, exciton effects on electroabsorption 2-41328  
 semiconductors, compensated, localised charge carriers, particle statistics and transport 2-17085  
 semiconductors, ferromagnetic, oriented autolocalised electron states in mag. field, calc. (Russian) 2-45878  
 semiconductors, wide gap, density determ. by field effect 2-45877  
 silicate glasses containing Sb oxide or As oxide, elec. props. 2-16897  
 site-diagonal and off-diagonal disorder, numerical study 2-45907  
 spatially disordered systems, electron localisation calcs. 2-40848  
 superconducting localised states and nonlinear US attenuation 2-26555  
 surface plasmons, confinement by microstruct. on tunnel junctions 2-12986  
 TCNQ salts, freq. depend. cond. and permittivity, localised states, investig. (French) 2-5617  
 thin film, polaritons, Green's functions, power series, Raman scatt. 2-26308  
 transition metal diborides, electronic struct. 2-40778  
 two-dimensional disordered systems, supercond. transition, localisation effects 2-26539  
 two-dimensional system, localisation of electrons under strong mag. field 2-45876  
 Wheeler complex quasiparticle states 2-51130  
 wide gap semiconductors, density of localised states determ. from field effect 2-35918  
 wire, thin, localization at low temp. 2-13019  
 Ag-Pd, local density of unoccupied states, X-ray L absorpt. edge meas. 2-13589  
 Al, granular, localisation and electron interaction effects in magnetoresist. 2-36008  
 Al-Sc(Ti)(V)(Co)(Ni), dil., low field Hall coeff., virtual bound state effect 2-13044  
 Al-Ti(Cr)(Mn)(Fe)(Ni)(Cu), low-field Hall effect, impurity effects 2-36011  
 Al<sub>2</sub>O<sub>3</sub> thin films, electrical cond. meas., Poole Frenkel cond. mechanism 2-17178  
 As<sub>2</sub>S<sub>3</sub> chalcogenide, photodarkening process 2-21960  
 As<sub>2</sub>S<sub>3</sub> film, amorphous, elec. breakdown 2-9089  
 As<sub>2</sub>Se<sub>3</sub>, amorphous, density of state in gap, dispersive photocurrent meas. 2-46059  
 As<sub>2</sub>Se<sub>3</sub> film, amorphous, localised states, optical DLTS meas. 2-45899  
 As<sub>2</sub>Se<sub>3</sub>, glassy, dielec. losses and permittivity, temp. depend. 2-2182  
 As<sub>2</sub>Se<sub>3</sub>/Ag amorphous film, XPS study, core electron binding energy 2-46872  
 B,  $\beta$ -rhombohedral, hopping cond. in strong elec. field 2-40923  
 Ba, 3d electron excitation energies, relativistic HF calc. 2-12991  
 Ba, EELS, dynamic effects, localised states 2-27036  
 BaTiO<sub>3</sub>:Cr(Sn), contact voltammetry investig., acceptor defects form., dielec. nonlinearity rel. to synthesis conditions 2-41283  
 Bi thin film, elec. resist. and magnetoresist. at low temp., electron localisation (Russian) 2-17172  
 CdS, local states US ionization, sonolum. and acoustoelastic current 2-41440  
 $\gamma$ -Ce, 4f levels, XPS and bremsstrahlung isochromat spectroscopy studies 2-27052  
 Ce, EELS, dynamic effects, localised states 2-27036  
 Ce, virtual bound states 2-5372  
 CeAl<sub>3</sub>(Sn)<sub>2</sub>(Pd<sub>3</sub>), 4f levels, XPS and bremsstrahlung isochromat spectroscopy studies 2-27052  
 Co<sup>2+</sup> ions in crystals, optical spectra, covalency effects 2-22050  
 Co<sub>2</sub>Ga<sub>1-x</sub>, electronic band struct. and localised states, rel. to elec. props. 2-40813  
 Cr<sup>3+</sup> ions in crystals, optical spectra, covalency effects 2-22050  
 Cr<sub>1-x</sub>Fe<sub>x</sub>, 3d-like electron localisation, anal. of positron annihilation and Mossbauer data 2-40816  
 Cs, virtual bound states 2-5372  
 Cs-Au liquid alloy, metal-insulator transition 2-1828  
 Cu thin film, magnetoresistance study 2-46160  
 Cu-Ni, local density of unoccupied states, X-ray L absorpt. edge meas. 2-13589  
 Cu<sub>2</sub>Pd<sub>1-x</sub>, chemical-shift effects and valence-electron spectra 2-2411  
 CuZn, recursion method, asymptotic behaviour, local densities of states 2-5360  
 Eu systems, shake-up excitations and core-hole screening, XPS study 2-27053  
 EuB<sub>6-x</sub>C<sub>x</sub>, electron localization and transport props., ESR study 2-41199  
 Fe<sub>2</sub>PO<sub>5</sub>, mixed valence cpd., electron localisation, Mossbauer expts. 2-1870  
 GaAs (110) surface core excitations, ab initio calc. 2-8850  
 GaP films, amorphous and cryst., core levels, disorder effects, XPS and AES 2-46173

## localised electron states continued

- GaP:Fe, hole localization and charge transfer excitation by time depend. photolum. meas. 2-51702  
 Ge, electronic struct., quantitative disorder effect 2-21495  
 Ge, surface electron localisation and cond., effect of adsorbed impurity atoms (Russian) 2-13151  
 Ge:H, amorphous, AC loss at audio freq., electron tunnelling model 2-40897  
 GeS(Se)(Te), amorphous, electronic states calcs. 2-40764  
 H<sub>2</sub>O glasses, localised excess electrons 2-5370  
 He, liquid, photoresonance and mobility of localized electrons (Russian) 2-21419  
 Kr, adsorbed on Pd, layer-dependent core-level shifts 2-2014  
 La, EELS, dynamic effects, localised states 2-27036  
 NbN<sub>2</sub> film, electronic struct., XPS study 2-35934  
 Ni<sup>2+</sup> ions in crystals, optical spectra, covalency effects 2-22050  
 P, amorphous red, localised states, photolum. and ESR studies 2-46739  
 P<sub>2</sub>Se<sub>3</sub>, glassy chalcogenide semiconductors, localised states, photoluminesc. meas. 2-17523  
 Pt wire, resistance at low temp., localization effects 2-30860  
 SMS, absence of purely electronic phase transition in extended Falicov-Kimball model 2-8757  
 Se, amorphous, localised electron states, xerographic spectroscopy 2-45896  
 Se film, amorphous, localised states, optical DLTS meas. 2-45899  
 Se<sub>93</sub>As<sub>6</sub>, amorphous film, carrier mobility, thermal annealing and light irradi. effects 2-13199  
 Se<sub>94.3</sub>Ge<sub>5.7</sub>, amorphous film, carrier mobility, thermal annealing and light irradi. effects 2-13199  
 Si (100) inversion layer, metallic cond., temp. depend., above mobility edge 2-13190  
 Si, electronic struct., quantitative disorder effect 2-21495  
 Si, inversion layer, 2-D electron localisation, electron-electron interaction, review 2-40987  
 Si, inversion layers, magnetoconductance and weak localisation 2-21608  
 Si MOS, two-dimens. system, weakly localised, mutual interactions, intervalley impurity scatt. effect 2-26382  
 Si:F, amorphous, core level and valence band UPS and XPS spectra 2-2414  
 a-Si:H, a-Si:F:H, Schottky-barrier diodes, elec. props. using new techniques 2-46104  
 Si:H, amorphous, electronic struct. of model defect 2-40820  
 Si:H, amorphous, midgap density of states, space charge limited cond. study 2-45897  
 a-Si:H:B(P), luminesc. spectrum, effect of dangling bond states 2-46670  
 Si:H:P(B), amorphous, temp. depend. of ESR spectra, elec. cond. 2-5575  
 Si:H amorphous film, field effect studies, density of localized gap states 2-46169  
 Si:H amorphous Schottky barrier diode characts., mathematical model 2-46102  
 Si:H amorphous Schottky barrier and PIN diodes, I-V characts., density of localised states 2-51281  
 Si:H amorphous Schottky diode, electron transport and deep localized state kinetics 2-46101  
 Si:H(F), amorphous, chem. bonding environment of Si and dopant 2-40275  
 Si:P, metallic, magnetoresist. below 100 mK 2-30863  
 Si-Ni silicide interfaces, potential barrier height and interface states 2-51307  
 Si<sub>3</sub>C<sub>1-x</sub>, amorphous, Stokes shift photoluminesc., comp. depend. 2-46668  
 TiB<sub>2</sub>N<sub>1-x</sub>, core level binding energies, photoelectron spectroscopy 2-41488  
 TiFe, recursion method, asymptotic behaviour, local densities of states 2-5360  
 Ti<sub>2</sub>SnSe<sub>6</sub>, glassy, dielec. losses and permittivity, temp. depend. 2-2182  
 U-Co(Ga)(Fe), mag. props. effect of 5f electron localisation 2-31236  
 V<sub>1-x</sub>Fe<sub>x</sub>, 3d-like electron localisation, anal. of positron annihilation and Mossbauer data 2-40816  
 VO<sub>2</sub>, plasmon resonance critical behaviour at metal-insulator transition 2-26299  
 VO<sub>2</sub>-Ar solid solns., 3d electron localisation, metal-insulator transition, elec. cond. and optical spectra meas. 2-35942  
 V<sub>2</sub>O<sub>5</sub>:Zr (Hf)(Ti)(Ge), electron localisation and ionic radii of cations, ESR obs. 2-45890  
 V<sub>2</sub>O<sub>5</sub>-P<sub>2</sub>O<sub>5</sub>-Sb<sub>2</sub>O<sub>3</sub>-As<sub>2</sub>O<sub>3</sub> glass, elec. props. 2-45968  
 V<sub>2</sub>O<sub>5-x</sub>(x=2, 4), metal-insulator transition, struct. disordering effect (Russian) 2-21501  
 W, surface (100), chemisorption of H, localised electronic interactions, density matrix transition 2-7499  
 Xe, adsorbed on Pd, layer-dependent core-level shifts 2-2014  
 ZnP<sub>2</sub>, high resist. layers, localised states, carrier conc., field effect 2-26412  
 ZnS:Cu, Cl crystal phosphor, localised surface state spectroscopy 2-17131
- localised modes in crystals** see *lattice localised modes*  
**localised states, electron** see *localised electron states*  
**locomotive diesel electric engines** see *diesel-electric locomotives*  
**locomotives**  
 see also *diesel-electric locomotives; electric locomotives; railways*  
 ground vibration estimation procedure for trains on concrete elevated structures 2-9723  
 occupational noise sources 2-2825  
 ring damped railway wheels, modal damping ratios 2-11899
- loggers** see *data loggers; recorders*  
**logging (recording)** see *recording*  
**logic circuit elements** see *logic devices*  
**logic circuits**  
 see also *emitter-coupled logic; logic devices; transistor-transistor logic*  
 CELLO detector, charged particle trigger 2-19902  
 dilepton triggers, fast ECL-CAMAC processor 2-19904  
 fast modular processor for track reconstruction from wire chamber arrays 2-24515  
 high energy physics experiment, FAMP multiprocessor system appl., triggering 2-24551  
 high-energy experiment, trigger monitor readout 2-24557  
 high-energy experiments, fast microprocessor appls. 2-19938  
 multiplicity logic unit, for gamma-ray detection 2-19894  
 multipurpose hadron spectrometer, trigger processor 2-19925



**logic circuits continued**

- muon trigger for UA1 expt., fast online track finding, microprocessor appl. 2-19928
- nucleon decay detector, data acquisition and triggering system, pattern recognition 2-24549
- online trigger processors in DORIS and PETRA expts. 2-24522
- particle detector 'crystal box', intelligent trigger processor 2-19906
- recoil missing mass trigger, ECL-CAMAC processor system 2-19903
- trigger processor, XOP, for high-energy physics appls. 2-24523
- UA<sub>2</sub> detector, triggering, data acquisition 2-19923
- vacuum deposition shutter position indicator system 2-19096

**logic devices**

- see also *fluidic logic*
- optical angular discriminator, appls. for logical operators 2-11651
- variable grating mode liquid crystal device for optical processing and computing 2-11652

**logic testing**

- CAMAC, logic state analyser 2-24560

**long-range order**

- see also *order-disorder transformations*
- adsorbed layers with antiphase boundaries or islands, struct. function, LEED determ. 2-16949
- alloy, long-range ordered, brittle to ductile transition, grain size effect 2-27260
- amorphous ferromagnets, Curie temp., susceptibility, coordination number fluctuation effects 2-46258
- crystal ordering, theory 2-40300
- crystal stability in random field produced by vibrs. of continuous medium (*Russian*) 2-25808
- inhomogeneous solid soln. elastic energy 2-1125
- interface phase, ordered, segregation equilibria 2-40557
- Ising model, infinite range, tricrit. point 2-46321
- isotropic magnets, non-Heisenberg mag. struct. 2-31190
- magnetic system, quasi two-dimens., successive phase transitions 2-36365
- melting or cryst. growth, surface struct. at high temp. 2-45540
- one-dimensional and two-dimensional systems, substrate effects on long range order and neutron scatt. characts. 2-1764
- one-dimensional conductors with interchain interaction, structural energy and phonon dynamics 2-25999
- Permalloy, <sup>119</sup>Sn Mossbauer obs. of ordering process, mag. hyperfine field, annealing influence, elec. resist. 2-9058
- protein crystals, long-range order study by X-ray diff. 2-25681
- quasi-one-dimensional system, struct. ordering 2-13050
- random bond Ising model in self-avoiding walk approximation 2-46320
- semiconductor, microstructural information from opt. props. in near IR to near UV range 2-21972
- semiconductors, covalent, electronic struct. of bulk and surface vacancies, short- and long-range-order effects 2-13005
- steel, C, martensite structure after  $\chi$ - $\alpha$  transition (*Russian*) 2-51892
- TBBA, smectic H-smectic C phase transition, X-ray diff. study 2-12752
- ternary alloys ordering in self-consistent field approx. 2-3527
- tetrafluoromethane monolayers on graphite, triple pt. phase diagram and two-dimens. behaviour 2-1765
- type-II superconductors, NMR studies of supercond. props., review 2-31059
- $\beta$ -Al<sub>2</sub>O<sub>3</sub>-Na<sub>2</sub>O(K<sub>2</sub>O), ion rich, quasi long range order and ionic cond. 2-26120
- CaCl<sub>2</sub> aq. soln., heat capacities and volume, long range order transitions 2-50877
- CeSb, antiferromagnetic, critical neutron scatt. 2-17263
- Cu<sub>3</sub>Al alloy, two-body interatomic interaction and props. 2-1617
- Er<sub>1-x</sub>Ho<sub>x</sub>Rh<sub>2</sub>B<sub>4</sub>, neutron scatt. study of mag. transitions 2-17285
- Fe-Al, cold worked, Mossbauer study of atomic reordering 2-17377
- Fe-Al (30.5 at.%), ordered alloy, plastically deformed, antiphase domain boundary tubes obs. 2-41691
- Fe-Al alloy system, Fe-rich, long-range order parameter, Mossbauer spectra (*Chinese*) 2-2165
- Fe-Pb (50 to 80 at.%), superlattice alloys, vol. change on ordering (*Japanese*) 2-27174
- Fe<sub>1-x</sub>Ni<sub>x</sub> binary alloys, Fe-rich, at. ordering, elec. resist. and mag. moment meas. 2-35992
- HfO<sub>2</sub>-Dy<sub>2</sub>O<sub>3</sub> system, high temp. solid solns., ordering 2-25797
- HfO<sub>2</sub>-Er<sub>2</sub>O<sub>3</sub> system, high temp. solid solns., ordering 2-25797
- HfO<sub>2</sub>-Yb<sub>2</sub>O<sub>3</sub> system, high temp. solid solns., ordering 2-25797
- Mg-In, phase transition, internal friction study 2-45560
- MgCl<sub>2</sub> aq. soln., heat capacities and volume, long range order transitions 2-50877
- NaCl, aq. soln., heat capacities and volume, long range order transitions 2-50877
- Na<sub>3</sub>Sc<sub>2</sub>P<sub>2</sub>O<sub>12</sub>, cryst. struct. and phase transitions 2-26047
- Na<sub>1+x</sub>Zr<sub>2</sub>(P<sub>3-x</sub>Si<sub>x</sub>)O<sub>12</sub>, cryst. struct. and phase transitions 2-26047
- Ni-Mo-Cr, Hastelloy, long-term ageing characts. 2-9361
- NiCl<sub>2</sub> aq. soln., heat capacities and volume, long range order transitions 2-50877
- Ni-Cr, substructure after laser irradiation (*French*) 2-12606
- NiFe<sub>2</sub>-Ni<sub>2</sub>Cr system, struct. transform., conc. depend. (*Russian*) 2-22196
- Ni<sub>3</sub>Fe, substructure after laser irradiation (*French*) 2-12606
- Pd, neutron polarisation anal. study of order and mag. transition 2-17264
- Ti<sub>48</sub>Ni<sub>43</sub>V<sub>9</sub>, long-period struct., electron diff. and electron microscopy study (*Russian*) 2-35442

**long tailed pair** see *Differential amplifiers***Lorentz transformation**

- Abelian gauge theory, Lorentz-invariant renormalisability 2-48899
- classical vector and tensor eqns. of motion of spin in orthogonal fields 2-18933
- confining gauge theories, unbroken flavour symmetries 2-29069
- electrodynamics, geometrical formulation 2-11010
- EM field stochastic quantisation 2-29060
- field theories, noncovariance, light-cone quantisation, scale-invariance 2-29004
- heavy-ion induced reactions, dynamical similarity 2-29282
- Heisenberg field, extended objects, Lorentz covariance, tree approx. 2-3695
- latent heat, Lorentz invariance, transformation, in inertial frame 2-40
- long-ray interaction between spins 2-3681
- Lorentz gauge field, linear approx. 2-48865
- Lorentz invariant theories of gravitation 2-18837
- massless high spin particles, Lorentz covariant energy-momentum tensor 2-6955

**Lorentz transformation continued**

- Newtonian mechanics, relativistic, necessity of many-particle forces 2-3377
- pseudoEuclidean space, rotations and proper Lorentz transforms. 2-23437
- reduction of four-vector field in terms of standard helicity representation of inhomogeneous Lorentz group for imaginary mass system 2-28650
- relativistic quantum theory, symplectic formulation, Lorentz and Poincare invariance 2-23822
- specific heat, Lorentz invariance, transformation, in inertial frame 2-40
- supergravity component gauges, Lorentz transform. 2-15100
- superluminal imaginary Lorentz transform of Maxwell's eqns. and elec. charge 2-38
- Thomas precession, discrete symm. breaking, Lorentz group elements 2-33319
- U( $\infty$ ) Yang-Mills theory, master field string structure 2-28994
- ultrarelativistic positronium superpenetrability (*Russian*) 2-23438
- $\pi$ p, 200 GeV, elastic scatt. cross section calc. using Glauber model 2-29129
- QQ-systems, Schrodinger vs. Dirac bound state spectra, effective power-law pot. Lorentz structure 2-38865

**Lorenz number**

- AgSbTe, thermoelec. hole spectrum model of transport props. 2-26424
- As-Se, liquid, elec. and thermoelec. props. 2-17120
- As-Se, liquid, elec. cond., thermoelec. power and semicond.-metal transition 2-26425
- Cu<sub>2</sub>Se, molten, semicond.-metal transition 2-5444
- Cu<sub>2</sub>Te, molten, semicond.-metal transition 2-5444
- GeTe, thermoelec. hole spectrum model of transport props. 2-26424
- MnTe, thermoelec. hole spectrum model of transport props. 2-26424

**Loschmidt number** see *constants***loss angle**

- see also *dielectric losses*
- disperse materials, complex permittivity determ. in microwave range 2-19135
- loss tangent, permittivity, measurable values for waveguide microwave methods 2-46453
- (Na<sub>1-x</sub>Pb<sub>x</sub>)(Nb<sub>1-x</sub>Ti<sub>x</sub>)O<sub>3</sub> solid solns., diagram and transitions, dielec. props. 2-40530
- PbMg<sub>1/3</sub>Nb<sub>2/3</sub>O<sub>3</sub>, ferroelectric, induced diffuse phase transitions 2-17426
- Pb(Zr,Ti)O<sub>3</sub>, piezoceramic, electrophys. props. in tetragonal-rhombohedral transition region 2-41275

**loss angle, dielectric** see *dielectric losses***loss-angle measurement**

- coil, series and parallel cct. (*German*) 2-15183

**loss measurement**

- acoustic wave propag. in duct, transverse resonance mode, acoustic filter, evaluation by meas. of transmission loss 2-4671
- electrocalorimetric apparatus for loss meas. in supercond. 2-23662
- optical fibre lightguides, loss measurement by refl. from end faces 2-34915
- optical time domain reflectometry in single-mode fibre 2-3610
- optical-fibre loss, measuring equipment for very small variations 2-44462
- superconducting magnet, AC loss measurement, calorimetric method (*Chinese*) 2-19130
- superconducting magnets, AC loss measurement at low frequency (*Chinese*) 2-15196
- superconducting magnets, loss measurement (*Chinese*) 2-19139
- US piezoelectric transducers, sensitivity meas. (*Russian*) 2-35028
- GaAs/GaAlAs curved rib waveguides, loss value meas. 2-11867

**losses**

- see also *dielectric losses*; *eddy current losses*; *heat losses*; *loss angle*; *magnetic leakage*
- electrochemical and morphological study of the effect of temperature on the restructuring and loss of capacity of alkaline battery electrodes 2-22574
- fluoride glass, 3d transition element doped, IR impurity absorpt. losses 2-25089
- glass IR optical fibres, prediction of loss minima 2-4595
- integrated optic circuit losses, expt., fibre pigtail of chips 2-16146
- integrated optics, leaky modes on waveguides 2-4612
- integrated optics, low-loss bends 2-25147
- integrated optics devices, fabrication technology 2-49948
- IR metallic waveguides, bending loss mode-coupling anal. 2-11810
- middle-IR optical fibres with Pb oxide glass cladding, ref. index of glass, waveguide transmission loss 2-34930
- monomode fibre, Rayleigh backscattered signals obs. using multichannel photon counting technique 2-16118
- multimode-fibre link with imperfect joints, power losses against offsets 2-25124
- optical CC glass waveguides with Ag<sup>+</sup> ion exchange, loss anal. 2-11858
- optical fibre, single-mode losses, optical freq. domain reflectometry study 2-39741
- optical fibre backscatter loss signature/ determ., long-range, using two-point processing 2-39753
- optical fibre bending loss formulae for step-index optical fibre and their applicable regions 2-34933
- optical fibres, loss reduction, fibre fabrication processes (*Japanese*) 2-49925
- optical fibres, mode conversion coeffs. and mode depend. losses, simultaneous meas. in freq. domain 2-11821
- optical fibres, single mode, microbending loss in a loose tube coating 2-1026
- optical fibres as temperature sensors using cladding and jacket loss effects 2-25117
- optical fibres for communication, mismatches rel. to joint and splice losses, standardisation of parameters (*German*) 2-44474
- optical multi/demultiplexers for single-mode fibre transmission 2-16120
- optical open resonator, diff. power losses for symm. perturbed curved reflectors 2-938
- optical single-mode fibres, fundamental mode spot-size meas. 2-29877
- optical waveguide, curved dielectric, method for diminishing total transmission losses 2-16097
- optical waveguide, glass thin-film, low loss, using surface coating and laser annealing 2-7859
- optical waveguide, hollow core, oxide-glass-cladding, loss calc. 2-44445
- plasma, laser produced, scaling laws, radiation losses effect 2-50421
- polystyrene core optical fibre, low loss 2-44471
- quartz glass-polymer fibre waveguides,  $\gamma$  irradi. influence on optical loss temp. depend. 2-49932
- resonator losses, programmed modulation, laser generation 2-29833



**losses continued**

- single-mode dispersion-force fibres, 1.5 micron wavelength, fabrication 2-34928  
 spectrophone, acoustically resonant, cavity loss mechanisms 2-43094  
 superconducting composite wire, in situ formed, twisted, AC losses 2-8944  
 type II superconductor, induced-voltage waveform. response to time-varying mag. field 2-26569  
 waveguides, hollow, for IR, losses and phase const. changes caused by bends 2-39733  
 Al<sub>0.9</sub>Ga<sub>0.1</sub>As buried heterostruct. laser, single mode operation by loss stabilisation 2-7788  
 Cu-Zn-Al, high damping alloys, dynamic props. 2-47109  
 Cu-S-CdS sprayed solar cells 2-37320  
 GaAs solar cells with distributed parameters, I-V characts. effect of ohmic losses 2-18055  
 InGaAsP-InP diode lasers, intrinsic saturable absorption anal. 2-977  
 InGaAsP-InP laser, current injection induced acoustic signals 2-950  
 LiNbO<sub>3</sub> Ti-diffused waveguide, modal fields and curvature losses 2-4588  
 Nb, AC loss above and below lower supercond. crit. field 2-36279  
 Nb<sub>3</sub>Sn-Cu filamentary superconducting wire, in situ prep. and props. 2-8942  
 PbSnSeTe-PbSeTe DH laser, lattice matched, low threshold 2-39668  
 Se amorphous film, vapour deposited, optical loss as meas. of crystallinity 2-36724  
 TiO<sub>2</sub> film, reactive DC plasmatron sputtered, optical and struct. props. 2-51043  
 W surface (001), EELS angular depend., clean and adsorbate covered surfaces 2-51754  
 ZnO optical waveguide material, VPE CVD technique 2-51827

**loudness**

- see also *acoustic intensity measurement*  
 acoustic sensation transmission limits, hearing and masking (*Hungarian*) 2-16180  
 auditory bone conduction vibrators, loudness balance calibration 2-52657  
 decibel as unit of sound press. level, addition and subtraction operations 2-20504  
 random fluctuating sound, loudness meas. by discrimination test, hearing system simulation (*Japanese*) 2-27810  
 sound level meters, plug-in concept, IEC 651 meas. standard 2-20503  
 speech loudness, subjective rating (*Japanese*) 2-44606

**loudspeakers**

- coaxial flat-plane loudspeaker with polymer-graphite honeycomb sandwich plate diaphragm 2-25217  
 electroacoustical transducer composite shell, dynamic props., theoretical and expt. study 2-29924  
 honeycomb disk diaphragm loudspeakers 2-25213  
 intense sound source power meas., three-points-in-tube method (*Chinese*) 2-50025  
 olefin polymer diaphragm, description 2-25218  
 polymer-graphite composite loudspeaker diaphragm 2-25214  
 pulse-testing device for electroacoustic meas. 2-25198  
 resonances of loudspeaker diaphragms 2-25211  
 scale acoustic models, speech imitation source 2-25199  
 stereophonic, correlation between loudness and quality 2-37583  
 stereophonic reproduction, controlling sound-image localization 2-25216  
 three-dimensional energy plots in the frequency domain 2-50029  
 tweeter using new structure and new material for diaphragm, direct-drive ribbon tweeter 2-25212  
 Be-Al composite diaphragm for dome-type loudspeaker, vacuum deposition production method (*Japanese*) 2-25219

**Love waves**

- Atlantic, upper mantle seismic wave attenuation 2-42271  
 Eurasia, teleseismic Love wave polarisation anomalies 2-52732  
 central India, seismic surface wave velocity obs. 2-28017  
 parabolic approximation for surface waves 2-22904  
 parametric excitation in the microwave region by an electric field in a piezoelectric plate 2-7938  
 phase velocities, partial derivatives with respect to shear velocities (*Spanish*) 2-30054  
 propagation in dissipative medium under gravity 2-37777  
 propagation in viscoelastic layer over half space with irregular interface 2-50158  
 transmission past a rounded edge, theoretical aspects. 2-8567  
 United States, S-wave attenuation regional variation and freq. depend. 2-28209

**low energy electron diffraction**

- adsorbed layers with antiphase boundaries or islands, struct. function, LEED determ. 2-16949  
 adsorbed overlayer, critical properties near transition temp. using LEED intensity 2-1761  
 azulene monolayers on Pt(111), order-disorder phase transition 2-26211  
 cyclopropane, chemisorption and reaction on Ir (110) surface 2-40674  
 diamond {111}, surface struct., bulk-like characts., LEED determ. 2-35872  
 emission and scattering techniques, cong., Alghero, Italy (Sept. 1980) 2-42795  
 graphite, adsorbed N<sub>2</sub>, fluctuation induced phase transition 2-40686  
 graphite, adsorbed N<sub>2</sub>, molecular axes orientation ordering 2-40685  
 interaction after heating, surface phase form., LEED, EELS, AES, TEM, and photoelectron spectra 2-35747  
 magnons, surface and interface mag. struct. near surface, review 2-21783  
 metallic thin film growth, AES and LEED studies (*Japanese*) 2-1788  
 metals, Rydberg resonances in spin polarised LEED 2-8401  
 mirror system for intensity meas. in LEED, computer-controlled 2-48745  
 reflection coefficient of low electrons, effect of macroscopic field near boundary (*Russian*) 2-20979  
 stepped surface, chemisorption theory, adatom binding energies, LEED intensity expression 2-1770  
 surface, (111) and (100), HBr(HCl) adsorpt., superlattice formation, expt. study 2-45726  
 surface structure, of solids 2-44988  
 thin film formation, substrate surface characterization 2-50975  
 Ag (100), coadsorption of K, Cl and O LEED, AES, work function, and thermal desorption meas. 2-1745  
 Ag epitaxial growth, on GaAs{001} surfaces 2-26248  
 Al-GaAs interfaces, at. geometry, soft XPS and elastic LEED studies 2-8714  
 Al{111} surfaces, oxidation initial stages, LEED and AES study 2-45724

**low energy electron diffraction continued**

- Au (110), search for broken symmetry 2-1716  
 Au epitaxial film on Pt (100), surface struct., LEED and AES meas. 2-1718  
 Au/Si (111) interface, growth mode, energetics, structural and electronic props. 2-2002  
 Au-Si surface phases, LEED, AES, and sputter depth profiling 2-1714  
 CdTe surface, (110), LEED intensities, dynamical anal. 2-12893  
 Co adsorbed on Cu surface, reconstruction, CDW, surface mag. and O<sub>2</sub> adsorption 2-12911  
 Cu thin overlayer on Ni (111), thermal stability study 2-1791  
 Cu(311), LEED crystallographic anal., comparison of Zanazzi-Jona and Pendry reliability indices 2-45692  
 Fe (111) surface, water vapour adsorption, LEED and work function changes meas. 2-26206  
 GaAs (100) surface, mosaic blocks dimensions, determ. by LEED 2-50973  
 GaAs, expt. determ. of bonding of III and V elements 2-35871  
 GaAs surface, (111), pulsed laser annealing, LEED study 2-45267  
 GaP (110) and (111) surfaces, atomic struct., LEED study 2-8693  
 GaP (110) surface struct., elastic LEED intensities, dynamic anal. 2-12891  
 Ge epitaxial films on GaAs (110), surface defect struct., LEED study 2-8694  
 Ge surface, (111), pulsed laser annealing, LEED study 2-45267  
 He, LEED study of clean high Miller index surfaces 2-50972  
 Ir (110), chemisorption and decomp. of NO, thermal desorption, XPS, UPS, AES, LEED, and contact pot. meas. 2-12913  
 Ir (110), chemisorption of N<sub>2</sub> and coadsorption of H<sub>2</sub>, thermal desorption, XPS, UPS, AES, and LEED meas. 2-12914  
 Ir, chemisorpt. of O<sub>2</sub> on (110) face, surface struct., LEED and thermal desorpt. obs. 2-21445  
 Mg, oxidation, early stages, LEED, EELS, work function, and ellipsometry meas. 2-27344  
 Mo (110) surface structure, LEED determ. 2-26189  
 Mo (112), adsorption of Ba, work function, thermal stability, LEED and contact pot. meas. 2-45731  
 Mo, adsorbed Cs, work function, thermal stability, LEED study 2-45732  
 N<sub>2</sub> physisorbed on graphite, LEED obs. of vapour press. isotherms, phase coexistence and transforms. 2-1762  
 Na<sub>2</sub>WO<sub>3</sub> (100), surface order-disorder transition involving mobile Na atoms, LEED study 2-1720  
 Nb, adsorbed O<sub>2</sub>, submonolayer oxidation phases on (110) face 2-40697  
 Ni (100), surface magnetism near crit. region, spin-polarised electron scatt. study 2-31197  
 Ni (110) surface mag. state, polarized electron diff. study 2-2058  
 Ni (111), adsorption of NO, electron stimulated desorption and LEED study 2-12912  
 Ni surface, (110), O<sub>2</sub> chemisorption and NiO growth, LEED and AES study 2-26229  
 Ni surface, {001}, reconstruction, LEED study 2-26194  
 Ni(001), spin-orbit effects in LEED, expt. and theory 2-12894  
 Ni(111), chemisorbed O 2-1752  
 Ni(311), LEED crystallographic anal., comparison of Zanazzi-Jona and Pendry reliability indices 2-45692  
 Pd (331) stepped surface, struct. stability and chemisorption props. of O<sub>2</sub> and NO 2-1746  
 Pd/Si epitaxial film, surface struct. 2-45689  
 Pt (111), adsorption of naphthalene, LEED beam symmetry extinction 2-1741  
 Pt epitaxial film on Au (100), surface struct., LEED and AES meas. 2-1718  
 PtO<sub>2</sub> surface struct. and stability, LEED and AES study 2-45696  
 Re (1010), adsorption of Ba, work function, thermal stability, LEED and contact pot. meas. 2-45731  
 Rh(110) and (100) surfaces, LEED crystallographic anal., comparison of Zanazzi-Jona and Pendry reliability indices 2-45692  
 Ru(001), adsorption of CO island size and disordering 2-40675  
 Si (111), nitridation by N atoms, LEED, AES, desorption, and mass spectra meas. 2-17757  
 Si (111)/Au interface, AES, EELS, LEED and depth profiling study, UHV conditions 2-21446  
 Si (111)-Ag interface, struct. and electronic props., LEED, photoemission and Auger meas. 2-21448  
 Si, adsorption of Bi, sticking coeff., first adlayer struct. influence 2-45733  
 Si, LEED study of clean high Miller index surfaces 2-50971  
 Si surface, (001)-2X1, surface plasmon dispersion, inelastic LEED study 2-17006  
 Si surface, (111), Ag growth and surface struct., expt. study 2-45727  
 Si surface, (111), correlation in surface state bands 2-26467  
 Si surface, (111), pulsed laser annealing, LEED study 2-45267  
 Si surface, (111), vicinal, laser and thermal annealed, LEED study 2-12892  
 Si surface, quenched clean (111), disordered  $\sqrt{(19) \times \sqrt{(19)}}$  struct. obs. by LEED and UPS 2-1723  
 TiC(001) and (111) surfaces, atomic struct., electronic struct., chemisorption 2-40654  
 Ti(0001) chemisorption of O<sub>2</sub>, surface states study 2-26221  
 W (001), electron spin polarisation, effect of ordered O adsorption 2-1717  
 W (001) and (110), Rydberg surface resons., LEED study 2-17138  
 W (100), spin dependence of electronic surface resonant scatt. 2-36121  
 W, chemisorbed O, island form. and dissolution, LEED study 2-1757  
 W surface, (001), electron reflection mechanism, polarised LEED study 2-36745  
 W surface, (110), adsorpt. of NO and heat treatment, surface reconstruction 2-26193  
 W-KNO<sub>3</sub> surface, K<sup>+</sup> thermal ion emission, energy distrib. by mass spectroscopy (*Japanese*) 2-22141  
 W(100) and (110), surface phase study of C monolayers 2-26191  
 Zr(0001), LEED crystallographic anal., comparison of Zanazzi-Jona and Pendry reliability indices 2-45692

**low gravity experiments** see *zero gravity experiments***low induction loss** see *loss angle***low-pass filters**

- measurement errors reduction in vibrating sensors, using low pass filter (*German*) 2-19071  
 metallic mesh interference filters, very long-wavelength low-pass 2-4576



**low-temperature physics** *see cryogenics***low-temperature production**

- see also Joule-Thomson effect; magnetic cooling; refrigeration*  
 cryorefrigerator, for use in cryopumps, high operational reliability (*German*) 2-10815  
 demountable nuclear cooling apparatus for  $^3\text{He}$ , comparison with welded device 2-33544  
 dilution refrigerator, high power, low heat losses, for use with nuclear cooling, 0.006K 2-33546  
 dilution refrigerator for NMR meas. of mag. cpds. 2-31323  
 evaporation rates baffle config. for efficient use of liquid He 2-33548  
 magnetic refrigerator, double acting reciprocating, design and performance 2-19112  
 metal sponge step heat exchanger fabrication and performance characts. 2-33547  
 microliquefier, Joule-Thomson type, starting time analysis 2-38657  
 MINILAB, rotating nuclear demagnetisation cryostat, design and performance 2-33545  
 space He refrigerator, at 4.4K, for Salyut-6 2-19111  
 spectroscopy experiments, automatic liq.  $\text{N}_2$  filling system 2-23645  
 two stage valveless expansion engine 2-186  
 He temperature refrigeration cycle, max. practical efficiency 2-33534  
 $^3\text{He}$ - $^4\text{He}$  dilution refrigerator in combination with an ESR spectrometer 2-33550  
 $^4\text{He}$ -cycling dilution refrigerator,  $^3\text{He}$ - $^4\text{He}$  two phase counterflow, visual obs. 2-35830  
 YAG,  $\text{Er}^{3+}$  and  $\text{Nd}^{3+}$  substituted, adiabatic demagnets., low-temp. prod. device appl. 2-21795

**low-temperature techniques**

- see also cryostats; refrigeration*  
 bushings, for high AC voltage 2-6857  
 cold trap, thermal loss (*Japanese*) 2-19113  
 constructional materials, unit for mech. props. determ. at low temps. 2-5997  
 conversion electron Mossbauer spectroscopy using channel electron multipliers at low temp. 2-24479  
 cryogenic ionization chamber for high-resolution fission cross-section measurements 2-19846  
 cryogenic refrigeration, using low temp. heat source 2-6856  
 dewar, super-insulated, for liq.  $\text{N}_2$  2-10810  
 Dewar flask, multishielded, construction and performance 2-48709  
 diffractometer, with  $\text{Si}(\text{Li})$  detector, and low-temp. cryostat to meas. X-ray diffuse intensity 2-43151  
 electron microprobe analysis, Na content in natural and synthetic glass 2-6072  
 energy-dispersive diffractometer, low-temp. apparatus 2-19230  
 experiments in ultra-high vac., technical problems (*Japanese*) 2-43028  
 gas gun, refueling of  $\text{D}_2$  pellets, in nuclear fusion plants (*German*) 2-11272  
 gas surface studies, mol. beam apparatus 2-2405  
 Helmholtz resonator, extended, in low-temp. photoacoustic spectroscopy 2-43096  
 leaktight vacuum seals for large windows and flanges at liq. He temp. 2-19117  
 liquefied gas containers and applics., review 2-38656  
 liquid cryogenics, safety in design of storage and transfer facilities 2-3585  
 low energy ground state electron/position cryogenic source 2-34224  
 low temperature measurement, optimisation of methods 2-10806  
 photoacoustic cell for low temp. PAS of solids 2-33639  
 Photoacoustic spectrometer, solid state 2-33644  
 piezoelectric detection of optoacoustic spectra of cryogenic temps.,  $\text{Nd}(\text{OH})_3$  below 10K 2-43108  
 plasma etching for semiconductor masking 2-41819  
 plastic insulating foam for liquid H tank, closed cell proportion meas. method (*Chinese*) 2-15176  
 pneumatic materials test system for low temp. appl. 2-22404  
 polychlorotrifluoroethylene, specific heat meas., 2.5 to 20K 2-16813  
 polymer materials, fibre reinforced, mechanical and thermal props., test facilities, down to 4.2K 2-22405  
 PTFE, specific heat meas., 2.5 to 20K 2-16813  
 PVC pipes, high density, carrier lines, He gas recovery 2-3584  
 stabilizer for low and infralow temperatures 2-43024  
 steels, AISI-T8 and C1045, wear resistance improvement by cryogenic treatment 2-22344  
 steels, temperature rise on cryogenic impact test, in austenite, Al, 45 C, and 15Mn26Al4 (*Chinese*) 2-17794  
 temperature controllers, for cryogenic appl. 2-10812  
 thermal contact to dielectric materials at low temperature 2-48708  
 Thermometrics thermistors evaluation for use at cryogenic temp. 2-182  
 thin biological samples, ultrarapid freezing 2-32382  
 Ag-Cu (10 wt.%), elec., thermal, and mech. props. use as construction material in low temp. expts. 2-35995  
 He liquefier, ADL-Collins type, with activated charcoal 2-10813  
 He, liquid, AC breakdown strength in millimetre gap range, low-loss He cryostat appl. 2-5635  
 He, liquid, dielectric breakdown, influence of electrode materials, cryogenic equipment for spark gap cooling 2-5634  
 $\text{N}_2$ , liq., automatic level regulator 2-43025  
 Rh-Fe resistance thermometer, low-temp. appls. (*Chinese*) 2-15168  
 Si diode, cryogenic thermometry 2-3583

**LPE** *see liquid phase epitaxial growth***LS coupling** *see Russell-Saunders coupling***LSA** *see limited space charge accumulation***LSI** *see large scale integration***lubrication***see also friction*

- antifriction materials for cryogenic environments, review 2-22343  
 antifriction performance of lubricants, new method for rapid estimation 2-27393  
 bonded solid film lubricants, frictional behaviour 2-36975  
 boundary frictional processes, depth of vac. influence, lubricant choice (*Russian*) 2-31797  
 bubbly lubricated externally pressurised thrust bearings 2-25324  
 elastohydrodynamic lubrication, non-conventional 2-27296  
 gas lubricant flow including slipping of first and second order, Reynolds eqns. (*Russian*) 2-50324  
 gas lubrication problems, generalized similitude method appl. 2-35094  
 hydrodynamic journal bearings with non-Newtonian lubricants, finite element anal. 2-35092  
 joints, human, lubrication, effects of cartilage roughness 2-27822

**lubrication continued**

- joints, human, viscoelastic fluid film lubrication 2-27823  
 journal lubrication and normal stress measurement 2-20717  
 knee joint replacement, artificial, wear and lubrication 2-9891  
 liquid-crystalline state of interphase layers during sliding 2-44689  
 liquid-film lubrication problems, cavitation algorithm 2-25328  
 multimode rotor bearing system, parameter estimation 2-39868  
 oil, metallic particle transport in plasma emission and atomic absorption spectrometry 2-9578  
 oil sealed roughing pumps, catalyzer trap 2-23654  
 optomechanical instrument sliding bases, math. methods and laboratory evaluations of friction coeff. 2-29892  
 PVC, hard, influence of lubricants on rheological props. (*German*) 2-9422  
 rotation effect, in lubrication problems 2-8099  
 rubber surface squeeze film 2-25329  
 sliding contact, high-velocity, generation of wear debris 2-36974  
 steel, 14HG and N18K9MST, low temp. internal friction, surface mineral oil layer influence (*Polish*) 2-27209  
 steel, alloy, drilling, influence of liq. Sn-Zn and powder Sn-Zn suspension cutting fluids 2-2591  
 steel, C, contact fatigue life, effect of elemental S addition in lubricant 2-27288  
 steel, sliding near, autoradiography method using labelled lubricant 2-2656  
 theory, book 2-17  
 turbomolecular pumps, air-cooled, to be mounted in any position (*German*) 2-10817  
 vacuum pump selection, below  $10^{-2}$  Pa, assessment criteria (*French*) 2-23655  
 Ag<sub>2</sub>Mg, low temp. internal friction, surface mineral oil layer influence (*Polish*) 2-27209  
 Al-Mg, hot forming, lubricants action 2-27292  
 CoPt, low temp. internal friction, surface mineral oil layer influence (*Polish*) 2-27209  
 Fe-Ti (2 wt.%) alloy, low temp. internal friction, surface mineral oil layer influence (*Polish*) 2-27209  
 MoS<sub>2</sub>, sputtered coating, synergistic effects of cosputtered metals 2-30774  
 MoS<sub>2</sub>, sputtered film in rolling hertzian contacts, tribological characts. 2-30776  
 Sn-Zn cutting fluids, molten aid suspensions, influence on drilling alloy steel 2-2591  
 WSe<sub>2</sub>-In-Ga sputtered film in rolling hertzian contacts, tribological characts. 2-30776

**Luder's bands**

- steel, alloy, plastic strain ratio, variation with strain level 2-17715

**Ludwig-Soret effect** *see diffusion in solids***luminescence** *see brightness***luminescence**

- see also cathodoluminescence; chemiluminescence; electroluminescence; fluorescence; fluorescent screens; ionoluminescence; luminescence of gases; luminescence of liquids and solutions; luminescence of solids; luminescent devices; phosphorescence; phosphors; photoluminescence; sonoluminescence; stimulated emission; superradiance; thermoluminescence; triboluminescence*  
 conference, Berlin, Germany (July 1981) 2-42779  
 emission and scattering techniques, cong., Alghero, Italy (Sept. 1980) 2-42795  
 inert gas oxides, excimers in matrices 2-49482  
 molecular luminescence, temp. quenching mechanisms 2-34486  
 recombination and retrapping probabilities, luminesc., kinetics 2-7595  
 research, review 2-51689  
 resonant secondary emission, transient quasi-line spectra 2-31532  
 review and survey 2-46664  
 three-level at. system, nonlinear optical response 2-25065  
 vision research implications in luminescence investigations 2-52488

**luminescence chambers** *see scintillation chambers***luminescence of gases**

- aerodynamic flows, density meas. using laser induced fluoresc. (*French*) 2-50344  
 air luminescence yield under influence of  $^{239}\text{Pu}$   $\alpha$ -particles 2-48006  
 air pollution detection, room temperature phosphorescence and synchronous luminescence techniques development 2-32160  
 diacetyl-anthracene, electronic excitation energy triplet-triplet transfer, temp. depend. 2-20815  
 diacetyl-pyrene gas, electronic excitation energy triplet-triplet transfer, temp. depend. 2-20815  
 dibenzofuran, dye vapour, fluorescence characteristics in UV-region (*Japanese*) 2-4918  
 fluorene, dye vapour, fluorescence characteristics in UV-region (*Japanese*) 2-4918  
 naphthalene-diacetyl gas, electronic excitation energy triplet-triplet transfer, temp. depend. 2-20815  
 p-terphenyl, dye vapour, fluorescence characteristics in UV-region (*Japanese*) 2-4918  
 Ar excited by  $\alpha$ -particles, recombination luminesc. at high-pressure, time depend. 2-50368  
 CO<sub>2</sub>, waveguide laser, parameters of active medium by luminesc. study 2-34721  
 Kr excited by  $\alpha$ -particles, recombination luminesc. at high-pressure, time depend. 2-50368  
 N<sub>2</sub>, luminesc. studies at liq. He temps. 2-30273  
 NO<sub>x</sub>, generation in ozonizers, meas. by chemiluminescence method 2-8262  
 SF<sub>6</sub>, laser excited, transient population distrib. 2-691  
 Xe, excited by  $^{252}\text{Cf}$  fission fragments, electron thermalisation, recombination luminesc. 2-43840  
 Xe excited by  $\alpha$ -particles, recombination luminesc. at high-pressure, time depend. 2-50368  
 Xe, high pressure, scintillator excited by  $\alpha$ -particles, decay curves elec. field depend. 2-50369

**luminescence of inorganic solids**

- A band spectral line shape 2-41420  
 acenaphthene:acenaphthene quinone, anomalous temp. depend. of phosphorescence kinetics (*Russian*) 2-41426  
 alkali halide crystal, fundamental luminesc. following dense electron-beam nanosecond irradiation 2-5755  
 alkali halide crystals, vacancy and interstitial formation under optical excitation generation conditions 2-31572



## luminescence of inorganic solids continued

- alkali halide thin single-crystal layers, prebreakdown electrolum. mechanism 2-46770  
 alkali halides, activated, recombination photostimulated luminesc. kinetics (*Russian*) 2-5741  
 alkali halides, coloured, electron recombination kinetics with  $\alpha$ -centres 2-21528  
 alkali halides,  $\text{Eu}^{2+}$  luminesc., temp. depend. 2-46662  
 alkali halides, X-irradiated at low temps., thermally stimulated exoelectron emission and thermolum. (*Japanese*) 2-51777  
 alkali metal halides, F centre luminesc.: uniaxial stress induced polarisation, expl. studies 2-17519  
 alkali metal halides, self-trapped exciton,  $^1\text{S}_0$  state lifetime, temp. depend. 2-17554  
 alkali metal neodymium polyphosphates,  $\text{MnD}(\text{PO}_3)_4$ , spectral-luminesc. investig.,  $\text{Nd}^{3+}$  level obs., Stark structures 2-2325  
 amorphous semiconductors, conf., Grenoble, France, (July 1981) 2-38359  
 anthracene: 2-hydroxyanthracene cryst., fluoresc. lifetime and site-selective photochem. 2-51694  
 anthracene, phonon relax., hot luminescence study 2-46740  
 a- $\text{As}_2\text{S}_3$ , luminesc., optically detected ESR 2-46756  
 band profile, exciton capture probability depend. on trap depth and temp. 2-2343  
 C Si:H, amorphous, photoluminesc. and photocond., fatigue and Staebler-Wronski effects, irreversibility 2-46731  
 chalcogenide and other glasses, structural model of two-level states 2-21039  
 chalcogenide glasses, quasimolecular defects, rel. to elec. and optical props. 2-13016  
 chalcogenide glasses, review of studies at Ioffe Physical-Technical Institute, USSR 2-45050  
 chalcogenide glasses, time resolved optical spectroscopy, review 2-46732  
 chelates, energy transfer, high press. luminesc. study 2-36681  
 corundum:Cr, influence of impurity on defect struct. (*Russian*) 2-17029  
 diamond:As(B), synthetic, luminance wave obs. (*Russian*) 2-22095  
 diamond, crystal growth-sector boundary luminesc. 2-41434  
 diamond, electron irradi., TR12 vibronic band, uniaxial stress effects 2-13519  
 diamond, natural, dislocation-rich, cathodoluminescence study 2-31565  
 diamond, natural, vibronic bands, luminesc. and absorpt. spectra 2-51653  
 diamond, resonant excitation of GR 1, luminescence and cathodoluminescence study 2-46685  
 diamond, synthetic, relaxation phenomena in N-type negative resistance region 2-26994  
 diamond, type IIb, electron irradiated, luminesc. excitation 2-41409  
 ferroelectric semiconductors, fluctuonic electron states, photoferroelectric phenomena 2-45825  
 ferroelectrics, ABO<sub>3</sub> type, luminesc. props. 2-31539  
 Ga<sub>1-x</sub>In<sub>x</sub>-P-GaAs heterostructures, luminesc., effect of mismatch between lattice consts. and thermal expansion coeffs. 2-9195  
 GaP:ZnO, defect reactions, photolum. studies 2-2333  
 glass:Cr(III), luminesc. conc. quenching, EPR study 2-31265  
 glass:Mn<sup>2+</sup>, 3d level struct., luminesc. excitation spectra obs. 2-9192  
 glass, laser excited fluorescence spectroscopy, book contrib. 2-17549  
 glass, radioluminesc. photon counting distrib., fluctuations of multiplied-Poisson light 2-4473  
 glass, radioluminescence, shot-noise-driven Poisson process discrimination by external dead time 2-34705  
 glasses, IR spectra, rel. to nonradiative deactivation of rare earth ions 2-26921  
 group V amorphous semiconductors, review 2-45037  
 high pressure, review 2-5746  
 II-VI compounds, intrinsic defects and luminescence 2-46684  
 II-VI semiconductors, defect formation, combined method of determining mode and energy of activation 2-8508  
 II-VI semiconductors, excited states at deep centres, nonradiative recomb. processes 2-8770  
 II-VI semiconductors, V<sup>2+</sup> photoluminescence, energy matrix diagonalisation calc. 2-51662  
 impurity system, hole burning, effect on selectively excited spectra 2-36702  
 inert gases, solid and liquid, exciton self-trapping, defect prod. 2-41388  
 ion bombardment, emission spectra, contamination induced changes 2-46777  
 LED physics, book contrib. 2-51713  
 luminesc. lifetimes, temp. depend. 2-2327  
 metal-semiconductor junction, spatial distrib. of excited luminesc. centres 2-9202  
 metaphosphate glass dosimeters, radiophotoluminesc., time-resolved study 2-19911  
 molecular crystals, exciton-exciton annihilation kinetics 2-2344  
 naphthalene:pentacene, laser-induced energy transfer spectra 2-46725  
 non-radiative relaxation, energy transfer 2-46757  
 p-n heterojunctions, reabsorption influence on electroluminescence kinetics 2-17551  
 panel electroluminescence, book contrib. 2-51714  
 phenoxathiin, pure and thick single cryst., absorption and emission spectra (*French*) 2-22080  
 phosphate glass for lasers, rare-earth ion luminesc. quenching by OH impurity groups 2-51705  
 quartz, cryst. and glassy, hot carrier ambipolar diffusion length, ultrasoft X-ray range 2-9198  
 rare earth compounds, Tb<sup>3+</sup>(Eu<sup>3+</sup>) doped, photoluminescence, synchrotron radiation excitation 2-51664  
 rare earth oxides, cathodoluminescence spectra 2-46759  
 rare earth-amino acid complexes, bonding, luminesc. and absorpt. spectra 2-46726  
 ruby:Cr, heavily doped, stationary radioluminesc., temp. depend. 2-36703  
 ruby, cryst., radioluminesc. and colour centre conc., temp. effects 2-13568  
 ruby, laser-pumped, electronically excited states effect on elastic consts., sound vel. changes 2-12692  
 ruby, R<sub>1</sub> fluorescent line, high press. red shift 2-21981  
 ruby, Raman transitions, excited state electronic lines, homogeneous broadening 2-2285  
 ruby excitation transfer between pairs of ions made equivalent by piezoelectric effect 2-46720  
 ruby R<sub>1</sub> fluorescence freq. shift, in press. meas. in diamond cell 2-6865  
 ruby rod crystals, luminesc. R<sub>1</sub> line 2-22087  
 scheelites, thermoluminescence polarisation, rel. to thermal decay of intrinsic hole centres 2-13576

## luminescence of inorganic solids continued

- semiconductor, high-resolution optical spectroscopy characteris., review 2-17534  
 semiconductor, photolum. and photolum. excitation spectroscopy characteris., review 2-17533  
 semiconductor superlattice, hydrogenic impurity states in quantum well, luminescence spectra 2-21535  
 semiconductor technology, optical characterisation techniques, conf., San Jose, USA (Apr. 1981) 2-14972  
 semiconductor ultrathin layers, exciton luminescence and exciton-polaritons 2-46689  
 semiconductor-oxide interface, cathodolum. characteris. 2-17556  
 semiconductors, exciton luminescence and exciton-polaritons 2-46689  
 semiconductors, photoelectric effect in semiinfinite surface-barrier struct., luminescence 2-17114  
 semiconductors, photoluminescence as a diagnostic 2-51700  
 silicate glass: Cu, high SiO<sub>2</sub> content, nature of colour centres of Cu-ruby type 2-9199  
 thiathrene, pure and thick single cryst., absorption and emission spectra (*French*) 2-22080  
 thiogallates, Er<sup>3+</sup> doped, luminesc. props., energy transfer 2-46721  
 two-level system, stationary radioluminesc., temp. depend. 2-36703  
 Ag complex, Ag-pyridine clusters, luminesc. and enhanced Raman spectra 2-46658  
 Ag film, photon emission under slow electron irradi., spectral characts., temp. depend. 2-46782  
 Ag island film, luminesc. obs. during elec. current passage 2-36707  
 Ag, polycrystalline, surface optical emission polarization under electron bombardment 2-46787  
 Ag<sub>n</sub> clusters, luminesc. and enhanced Raman spectra 2-46658  
 AgBr(Cl): layer, dye sensitised photolum. 2-46728  
 AgBr(I) photographic emulsion microcrystals, luminesc. spectra, max. luminesc. freq. (*Russian*) 2-13565  
 AgCl:Hg, photoluminescence study (*Russian*) 2-26988  
 Ag<sub>2</sub>O, mag. field enhanced exciton luminescence, polarisation and intensity 2-46754  
 (Al,Ga)As epilayers, and DH lasers, minority carrier lifetime and luminescence 2-8807  
 (Al,Ga)As multilayers, efficient luminesc. band created by athermal laser processing 2-9177  
 Al-Al<sub>0.5</sub>O<sub>3</sub>-Ag tunnel junctions on gratings, light emission 2-41431  
 AlAs-Al<sub>0.5</sub>Ga<sub>0.5</sub>As-GaAs superlattices, absorpt., stimulated emission and clustering 2-46794  
 AlAs-GaAs MBE superlattice, photolum., 0.7 to 0.08  $\mu\text{m}$  2-2329  
 Al<sub>1-x</sub>(BO<sub>3</sub>)<sub>4</sub>Tb<sup>3+</sup> cathodoluminescence saturation effects 2-51717  
 AlGaAs, DH IR source, luminesc., external quantum efficiency, rough and smooth emitting surfaces 2-51712  
 Al<sub>1-x</sub>Ga<sub>x</sub>As DH laser, deep level luminesc., spatial distrib. 2-915  
 Al<sub>1-x</sub>Ga<sub>x</sub>As, grown by MOVPE, luminescence 2-9182  
 Al<sub>1-x</sub>Ga<sub>x</sub>As grown by MBE, photoluminescence studies 2-13532  
 Al<sub>1-x</sub>Ga<sub>x</sub>As, photoluminesc. with graded forbidden band under pulsed excitation 2-13545  
 Al<sub>1-x</sub>Ga<sub>1-x</sub>As, photoluminescence, carrier mobility and lifetime determ. 2-41424  
 Al<sub>1-x</sub>Ga<sub>1-x</sub>As:Cr variable gap semicond. solid solns., deep impurity centres and impurity photoluminescence 2-17025  
 Al<sub>1-x</sub>Ga<sub>1-x</sub>As:Ge(Sn)(Te) epitaxial layers, photolum. rel. to surface composition (*Russian*) 2-9189  
 Al<sub>1-x</sub>Ga<sub>1-x</sub>As:Si graded-band-gap p-n structs., photoluminescence spectra 2-13528  
 Al<sub>1-x</sub>Ga<sub>1-x</sub>As:Sn, MBE grown, photolum. spectrum, As/Ga flux ratio effect 2-5734  
 n-Al<sub>1-x</sub>Ga<sub>x</sub>As:Te, heavily doped, photolum. in indirect energy gap region 2-2324  
 Al<sub>1-x</sub>Ga<sub>1-x</sub>As-GaAs quantum-well heterostruct. lasers, MBE grown, alloy clustering, photoluminesc. study 2-44336  
 $\alpha$ -Al<sub>2</sub>O<sub>3</sub>, charge trapping, optical absorpt., photocond., and luminesc. meas. 2-40963  
 $\alpha$ -Al<sub>2</sub>O<sub>3</sub>, electron irradi., thermolum. curves, influence of impurities and heat treatment atm., trap parameters 2-41436  
 AlSb, LPE from Sb solns. 2-31643  
 Ar, solid, excitons, hot luminescence and self trapping 2-17527  
 As<sub>2</sub>S<sub>3</sub>, amorphous, intimate valence alternation pairs, exciton and pair recombination, photoluminesc. study 2-46432  
 As<sub>2</sub>S<sub>3</sub>, amorphous and cryst., radiative recomb. of localised excitons 2-36685  
 Au, electron irradiated, cathodoluminescence study 2-46786  
 Au surface plasma dispersion relation determ. by MOM tunnel structs. 2-36152  
 Au-oxide-n-GaAs struct., forward biased, electroluminesc. 2-17553  
 BN film, CVD on to fused SiO<sub>2</sub> and sapphire 2-51806  
 BN powders, fast luminesc. from C-related defects 2-46675  
 B<sub>2</sub>O<sub>3</sub>-K<sub>2</sub>O:In<sup>3+</sup> glass, photoluminescence (*Russian*) 2-26987  
 BaGd<sub>2</sub>-Nd<sub>2</sub>(MoO<sub>4</sub>)<sub>4</sub> single crystals, luminesc. and stimulated emission 2-5748  
 BaMnF<sub>6</sub>, antiferromag., pure exciton and magnon sideband optical transitions 2-2332  
 Ba<sub>2</sub>NaNb<sub>3</sub>O<sub>15</sub>, ferroelectric, surface photoluminesc. 2-26982  
 Ba<sub>2</sub>NaNb<sub>3</sub>O<sub>15</sub>, ferroelectric, photoluminescence 2-2342  
 Ba<sub>2</sub>(Pt-(CN)<sub>4</sub>)<sub>4</sub>H<sub>2</sub>O quasi-one-dimens. cond., emission quenching by (Ni(CN)<sub>4</sub>)<sub>4</sub> dopants and interpret. 2-31535  
 BaSnSi<sub>3</sub>O<sub>8</sub>:Ti<sup>4+</sup>, luminesc. and lattice param. 2-22070  
 Ba<sub>0.8</sub>Si<sub>0.6</sub>Nb<sub>0.6</sub>O<sub>6</sub>:Pr<sup>3+</sup>, fluorescence lifetime study 2-17524  
 BaTiO<sub>3</sub>, ferroelectric, electroluminescence phase rot., elec. field amplitude effect 2-31560  
 BaZnF<sub>4</sub>:Mn, growth, EPR and luminescence 2-26735  
 BaZrSi<sub>3</sub>O<sub>9</sub>:Ti<sup>4+</sup>, luminesc. and lattice param. 2-22070  
 Be, CC 2-13575  
 BeAl<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, spectroscopic and lasing props. 2-17538  
 BeO crystal, luminesc. excitation in fundamental absorpt. region 2-51706  
 Bi, galvanomagnetic instability, electroluminescence 2-46043  
 Bi<sub>2</sub>Ge<sub>2</sub>O<sub>9</sub>:Eu<sup>3+</sup>, emission and excitation spectra, Stark levels and crystal field parameters 2-13537  
 BiI<sub>3</sub>, indirect exciton secondary emission, resonant Raman and hot luminesc. studies 2-45842  
 Bi<sub>1-x</sub>La<sub>0.6</sub>WO<sub>6</sub>, emission and excitation spectra, luminesc. study 2-31534  
 Bi<sub>2</sub>WO<sub>6</sub>, emission and excitation spectra, luminesc. study 2-31534  
 C fibre microtip emitter, electrolum. effects associated with electron field emission 2-27057  
 (Ca,Ba)S:Cu,Nd phosphor, electrolum. behaviour 2-22093



## luminescence of inorganic solids continued

- CaCO<sub>3</sub>, calcite single cryst., quenching and X-ray effects on absorpt. and luminesc. 2-51720  
 CaF<sub>2</sub>, natural, X-ray excited luminesc., temp. depend. rel. to thermoluminesc. 2-26966  
 CaF<sub>2</sub> precipitates, rare earth doped, O-compensated sites, defect processes 2-41399  
 CaF<sub>2</sub>:Eu<sup>2+</sup>, acoustic phonon freq. depend. lifetimes 2-45437  
 CaF<sub>2</sub>:Pr<sup>3+</sup>, dimers and clusters, laser selective excitation and time-resolved spectroscopy 2-31545  
 CaF<sub>2</sub>:Tb<sup>3+</sup>(Yb<sup>3+</sup>), defect clustering identification using three body energy transfers 2-22076  
 CaF<sub>2</sub>:3Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>:Ce, Mn phosphors, luminesc. depreciation 2-46679  
 CaO:Bi<sup>3+</sup> phosphor, mag. field effect on luminescence 2-17525  
 CaO:Mg, neutron irradi., ODMR study of electron transfer from excited F centres 2-46430  
 CaO-Mn(Fe)(Co)(Ni), charge transfer transitions, energies of optical absorption and emission 2-22052  
 CaO(Si)(Se):Pb<sup>2+</sup> phosphors, luminesc. spectra, mag. field effect (*French*) 2-41417  
 Ca(PO<sub>3</sub>)<sub>2</sub>:Eu<sup>3+</sup>, excitation energy transfer, temporal and temp. depend., reson. fluoresc. 2-21650  
 Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>:Mn<sup>2+</sup>(Ce<sup>3+</sup>), X-irrad., thermoluminesc. 2-41439  
 CaS:Ag phosphors, luminesc. kinetics, phosphoresc. decay, thermoluminesc., and electrolum. meas. 2-13539  
 CaS:B, thermolum. phosphor, phys. parameters, operation importance 2-22101  
 CaS:Bi phosphor, luminescence study 2-22071  
 CaS:Bi<sup>3+</sup>, phosphor, mag. field effect on luminescence 2-17525  
 CaS:Eu, single crystals, luminesc. and excitation spectra (*Japanese*) 2-9271  
 CaS:Hd, Cu, electroluminesc., temp. depend. 2-31558  
 CaS:R (R=rare earth), DC electrolum. 2-46767  
 CaSO<sub>4</sub>:Dy, Bi, phosphors; X-ray induced fluorescence and phosphorescence 2-26956  
 CaSO<sub>4</sub>:Dy, phosphorescence and thermoluminescence study 2-46746  
 CaSO<sub>4</sub>:Dy ribbon, TLD-900, kinetics and thermolum. parameters at low dose levels 2-22100  
 CaWO<sub>4</sub>:Sm<sup>3+</sup> cryst., energy transfer investig. by dye laser spectroscopy 2-41397  
 Cd, ion bombard., at. excitations, photon emission study 2-13575  
 CdBi<sub>2</sub>:Ni<sup>2+</sup>, impurity ion absorpt., emission and excitation spectra 2-2321  
 CdCl<sub>2</sub>:Ni<sup>2+</sup>, impurity ion absorpt., emission and excitation spectra 2-2321  
 CdCr<sub>2</sub>Se<sub>4</sub>, cathodolum., band struct., impurity states 2-31562  
 CdCr<sub>2</sub>Se<sub>4</sub>(S<sub>2</sub>), photoluminescence and elec. struct. 2-46687  
 CdF<sub>2</sub>:Eu<sup>3+</sup>, optical study of Eu<sup>3+</sup> centres 2-9185  
 CdF<sub>2</sub>:Mn metal-semiconductor junction, luminesc. impact excitation, spatial profiling 2-46761  
 Cd<sub>1-x</sub>Ga<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, cathodolum., band struct., impurity states 2-31562  
 n-Cd,Hg<sub>1-x</sub>Te, impurity radiative recomb. 2-46752  
 CdI<sub>2</sub>, photoluminescence, stimulated, and optical gain spectrum 2-46708  
 Cd<sub>1-x</sub>In<sub>x</sub>Cr<sub>2</sub>Se<sub>4</sub>, cathodolum., band struct., impurity states 2-31562  
 Cd<sub>1-x</sub>Mn<sub>x</sub>Te, semimag. semicond., nonresonant energy transfer, time-resolved spectroscopy 2-46718  
 Cd<sub>3</sub>Nb<sub>2</sub>O<sub>7</sub>, photolum., rel. to structural phase transitions 2-36672  
 CdPb<sub>2</sub>, structured luminescence spectrum excited by electron beam 2-26998  
 CdP<sub>2</sub>, spontaneous and stimulated emission 2-26938  
 CdS, biexciton states, real and virtual, Raman, fluoresc. and radiative recomb. spectroscopy 2-45841  
 CdS, contrib. of plasmon to optical gain spectra of high density electron-hole plasma 2-51683  
 CdS crystals, emitted radiation spectral and time dependences 2-51719  
 CdS, dislocation energy states, piezo-optical investigation, photoluminescence and absorption spectra obs. 2-51123  
 CdS epitaxial film on InP(111), excitonic luminesc. 2-26986  
 CdS epitaxial layers, excitation spectrum, purity influence 2-41441  
 CdS, evidence of quadrupole transitions to excited states of I<sub>2</sub>-bound exciton 2-2335  
 CdS, excitation mechanisms, excited states of I, bound exciton 2-26975  
 CdS laminar crystals, exciton luminesc., spectral and temporal props. 2-17543  
 CdS, local states US ionization, sonolum. and acoustoelastic current 2-41440  
 CdS, luminescence and absorpt. study of plasticity (*Russian*) 2-17545  
 CdS, luminescence study of free exciton lifetime and diffusion length 2-5756  
 CdS, neutron irradi., electron-phonon interaction, luminescence study (*Russian*) 2-13559  
 CdS, previously laser irradiated crystals, recomb. radiation spectra (*Russian*) 2-41427  
 CdS single crystals, semicond., line emission 2-51708  
 CdS, small particles deposited on transparent substrate luminesc. and Raman spectra, size effects 2-51691  
 CdS, small-angle light scatt. by dislocations, green luminescence 2-46628  
 CdS, US luminesc., fine struct. 2-17559  
 CdS, ultrasonic excitation of orange sonoluminescence 2-2350  
 CdS:Cu,Cl, activated phosphors, radiative and nonradiative recomb. centre struct. photoluminescence obs. 2-35966  
 CdS:In layer and whisker, vapor reaction growth, luminesc. spectrum 2-46674  
 CdS:Li crystal, interstitial electromigration, exciton luminescence study 2-5279  
 n-CdS:Te, semiconductor photoelectrodes, luminescence, photocurrent 2-14087  
 CdS-anthracene interface, exciton reflection and luminesc. spectra 2-51091  
 CdS(Se), luminescence, time-resolved picosecond, at high excitation 2-46707  
 CdS<sub>1-x</sub>Se<sub>x</sub>, characts. of emitted recombination radiation 2-41425  
 CdS<sub>1-x</sub>Se<sub>x</sub>, localised exciton resonant secondary emission 2-46695  
 CdS<sub>1-x</sub>Se<sub>x</sub>, solid solns., photoluminesc. spectra 2-31554  
 CdSe, high density electron-hole plasma, picosecond luminesc. and relax. 2-51682  
 CdSe, hot electron-hole plasma, spatial expansion, time resolved photoluminesc. study 2-46051  
 CdSe:Co<sup>2+</sup>, zero-phonon lines in optical spectra 2-46650  
 CdTe, bound multiple exciton complex, in luminesc. spectra, Zeeman splitting 2-13553  
 CdTe, cold semicond., hot electrons, luminesc. expts. 2-51676  
 CdTe, irradiation induced intrinsic excitonic luminesc. 2-2337  
 CdTe p-n junctions, electrolytically prepared, emission props. 2-2347  
 CdTe, p-n junctions, LPE grown, injection electroluminescence 2-13569  
 CdTe undoped p-type annealed in vacuum, electrical and crystalline props. 2-5750  
 Ce<sub>1-x</sub>R<sub>x</sub>Na(SO<sub>4</sub>)<sub>2</sub>H<sub>2</sub>O (R=Nd, Ho, Er), excitation and emission spectra, decay kinetics, and energy transfer 2-26963  
 (Cr(NCS)<sub>6</sub>)<sup>3-</sup> in frozen alcohol solvents, phosphoresc. lifetimes 2-2346  
 Cs<sub>2</sub>Bi<sub>2</sub>Br<sub>9</sub>, luminescence and photocond. 2-46676  
 CsBr, tunnelling charge transfer to Frenkel defects, luminesc. obs. 2-45153  
 CsI:Na, electron pulse irradiation, kinetics of luminesc. and relaxation (*Russian*) 2-5740  
 CsI:Na, self-trapped exciton luminescence 2-41414  
 CsI:Na crystals, thermal stability of activation centres 2-51722  
 CsI:Na(Tl<sup>+</sup>)(Eu<sup>2+</sup>)(Sr<sup>2+</sup>), V<sub>k</sub> centre migration, thermolum. and TSC meas. 2-8675  
 CsMnCl<sub>3</sub>, excited electronic state gigantic splitting during exciton self-localisation, luminesc. study (*Russian*) 2-26954  
 Cs<sub>2</sub>MoO<sub>4</sub>-UO<sub>2</sub>MoO<sub>4</sub> system, phase relations, complex cpds. form. 2-50834  
 Cs<sub>2</sub>NaSc(Y)(In)Cl<sub>6</sub>(Br<sub>3</sub>):MoCl<sub>3</sub><sup>3-</sup>(Br<sub>3</sub><sup>3-</sup>) crystals, IR and visible luminesc. spectra, vibronic struct., vibr. freq. 2-36687  
 CsPbCl<sub>3</sub>(Br<sub>3</sub>), ferroelec., exciton absorpt., luminesc. and reson. Raman scatt. 2-46638  
 Cs<sub>2</sub>TlCl<sub>6</sub>:TlCl<sub>6</sub><sup>2-</sup>, cubic cryst., IR and visible luminesc. 2-51667  
 Cs<sub>2</sub>ZnCl<sub>6</sub>:TlCl<sub>6</sub><sup>2-</sup>, cubic cryst., IR and visible luminesc. 2-51667  
 Cu, electron irradiated, cathodoluminescence study 2-46786  
 Cu surface (111) states, dislocation annihilation luminesc. 2-46793  
 Cu wire, rupture by MHD instability, luminesc. 2-26999  
 Cu-CdS Schottky barriers, exciton refl., absorpt., and photoluminesc. spectra 2-36668  
 CuCl, quantum size effect in excitonic absorpt. spectrum (*Russian*) 2-13577  
 CuCl, reson. Raman scatt. and luminescence from highly excited states 2-22025  
 CuFeS<sub>2</sub>, natural chalcopyrite, colour centre decay, thermolum. meas. 2-5758  
 CuGaS<sub>2</sub>, angular phonon dispersion in bound exciton spectra 2-5747  
 Cu<sub>2</sub>O, exciton luminescence 2-46709  
 Cu<sub>2</sub>O, mag. field enhanced exciton luminescence, polarisation and intensity 2-46754  
 Cu<sub>2</sub>O, study of non-thermalised luminesc. spectra 2-31553  
 Cu<sub>2</sub>-S-ZnS heterostruct., electroluminescence 2-17552  
 Dy<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec.-ferroelastic, phase transition, cathodo- and photolum. study 2-36550  
 Er<sub>2</sub>O<sub>3</sub>, candoluminescence spectra 2-46759  
 Eu complex, Eu(oxydiacetate)<sub>3</sub><sup>-</sup>, f-f transition, optical props. calcs. 2-51545  
 Eu complex, europium benzoyltrifluoroacetone chelate, luminescence lifetime, optical environment effects 2-51686  
 Eu<sup>2+</sup> in cubic elpasolites, absorption mag. circular dichroism and emission spectra 2-36608  
 Eu<sup>3+</sup>, in glasses, <sup>5</sup>D<sub>0</sub>-<sup>7</sup>F<sub>0</sub> transition, homogeneous and inhomogeneous linewidths 2-13534  
 EuGa<sub>2</sub>:Cr<sup>3+</sup>, site selective fluoresc. spectrum 2-22066  
 EuP<sub>6</sub>O<sub>4</sub>, time resolved laser induced fluoresc. 2-46678  
 F:acridine cryst., triplet-triplet absorpt. study 2-46702  
 GaAlAs DH laser, strain related degradation phenomena, SEM cathodoluminescence and induced current study 2-39652  
 GaAlAs:Cr<sup>2+</sup>, luminesc. of Cr<sup>2+</sup> internal transition 2-51661  
 GaAlAs:Sn, thin layer emitters, luminescence and Sn-X centres 2-46772  
 Ga<sub>0.68</sub>Al<sub>0.32</sub>As:Te(Zn) laser pumped by electron beam, cathodolum. and threshold current density, doping influence 2-7766  
 Ga<sub>1-x</sub>Al<sub>x</sub>As MBE layers, alloy clustering 2-40740  
 p-Ga<sub>1-x</sub>Al<sub>x</sub>As:Ge, LPE grown, charge compensation, photoluminescence spectrum 2-17517  
 Ga<sub>1-x</sub>Al<sub>x</sub>As:Si epitaxial layers, free-to-bound transitions, photoluminesc. study 2-22072  
 n-Ga<sub>1-x</sub>Al<sub>x</sub>P epitaxial films, cathodoluminesc. spectra 2-22097  
 GaAs (100) surface, cathodoluminesc. lifetime pattern meas. 2-31563  
 GaAs, cathodoluminescence lifetime patterns of surface near dislocations 2-46780  
 GaAs; cold semicond., hot electrons, luminesc. expts. 2-51676  
 GaAs crystals and solid solns., hot electron luminescence 2-46712  
 p-GaAs, degenerate, low temp. luminesc., doping effect 2-36695  
 GaAs, electron-hole plasmas and excitons, picosecond luminesc. spectroscopy 2-51677  
 GaAs epitaxial layers, impurity luminescence study (*Chinese*) 2-13563  
 p-GaAs, heavily doped, hot carrier relax., picosecond luminesc. study 2-46742  
 GaAs, hot carrier photoluminescence, picosecond correlation effects 2-46713  
 GaAs, impurity luminescence decay kinetics 2-41423  
 GaAs, inhibited relaxation of nonresonantly excited electrons in a cold lattice, photolum. meas. 2-46741  
 GaAs, laser annealed, pulsed, and ion implanted, photoluminesc. spectrum 2-51643  
 GaAs, laser annealing induced defects 2-40433  
 n-GaAs, lightly doped, nonequib. carrier transport transient processes, recombination effect 2-36061  
 GaAs, photogenerated degenerate electron distrib., spin relax. time 2-17528  
 GaAs, photoluminescence spectra, obs. of emission band at ~1.40 eV 2-36676  
 GaAs, photoluminescence of UHV cleaved crystals 2-51642  
 p-GaAs, polarisation of hot photoluminescence spectra, role of split-off subband 2-17542  
 GaAs, proton bombarded and annealed, photolum. 2-22074  
 GaAs, proton implanted, damage profile, cathodoluminescence, SIMS, chemical staining and C-V meas. 2-40449  
 GaAs, proton implanted, cathodolum., Rutherford backscatt. and SIMS studies 2-46778  
 n-GaAs, Raman scatt. from ion implanted carriers 2-46607  
 GaAs Schottky contacts, light emission behaviour, exptl. data 2-41429  
 GaAs, semi-insulating bulk-grown, selective excitation luminesc. 2-51641  
 GaAs, spatial expansion of electron-hole plasma, luminesc. meas. 2-51680



## luminescence of inorganic solids continued

- GaAs superlattice, obs. of tunable band gap and 2-D subbands, luminesc. and Raman meas. 2-2232
- GaAs, VPE layers, implanted and annealed, elec. and optical props. 2-46164
- p-GaAs, Z 2-17114
- GaAs:Be MBE layers, photoluminescence study 2-31543
- GaAs:C, ion implanted, photolum. study 2-17512
- GaAs:C, metal-organic VPE, elec. and optical props. of deep levels 2-8768
- GaAs:Cr, compensated, nonequilib. carrier recomb., Cr impurity centre role, photoelec. props. and luminesc. 2-30928
- GaAs:Cr, diffused, photoluminescence study 2-36694
- GaAs:Cr, luminescence, no phonon at 0.84 eV, Zeeman and axial stress splitting calc. 2-51659
- GaAs:Cr, no-phonoluminescence, ground set of states 2-41402
- GaAs:Cr, photoluminescence anisotropy, high mag. field Zeeman splitting 2-22090
- GaAs:Fe, heat treated substrate, photoluminescence props. studies 2-13531
- GaAs:Ge(Se), neutron transmutation doping, elec. and physical props. 2-12619
- GaAs:Mn, Fe, heat treatment effects on surfaces, thermal redistrib. of impurities 2-5151
- GaAs:Nb, impurity luminesc., intracenter transitions 2-51703
- GaAs:Si (Te), cathodoluminescence and dislocation struct. 2-31566
- GaAs:Si epitaxial p-n junctions, injection luminesc. 2-46773
- GaAs:Te, heavily doped, degenerate, photoluminescence 2-26979
- GaAs:Te, Zn, heavily doped material with p-n junction, SEM local cathodolum. obs. 2-46776
- GaAs:Zn, nonequilib. substitutional-interstitial Zn diffusion, photoluminesc. study 2-16899
- GaAs:Zn, polycrystalline, optoelectronic props. rel. to grain boundary features, cathodoluminesc. anal. 2-36713
- GaAs:Zn<sup>+</sup>, implanted layers, photoluminescence study 2-41422
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As heterojunctions, exciton excited levels 2-13551
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As multiquantum well structures, opt. props. and interface disorder, growth-temp. optimisation 2-8869
- GaAs-Al<sub>1-x</sub>Ga<sub>x</sub>As:Si interface, far IR emission from 2D electrons 2-2336
- GaAs-Ga<sub>1-x</sub>Al<sub>x</sub>As DH and multiple quantum well superlattices, luminesc. props. and struct. 2-46779
- GaAs-type semiconds., electron-nucleus spin system, optical orientation in inclined mag. field 2-35981
- GaAs<sub>1-x</sub>P<sub>x</sub>, direct gap, high excitation luminesc., electron-hole plasma expansion effects 2-51679
- GaAs<sub>1-x</sub>P<sub>x</sub>, direct-gap, electron-hole plasma expansion, photoluminesc. study 2-21617
- GaAs<sub>1-x</sub>P<sub>x</sub> layers, mixed cryst. comp. rel. to vapour phase comp. in Ga-HCl-PH<sub>3</sub>-AsH<sub>3</sub>-(NH<sub>3</sub>)-H<sub>2</sub> system 2-36791
- GaAs<sub>1-x</sub>P<sub>x</sub>:N, cathodoluminescence spectra 2-2348
- GaAs<sub>1-x</sub>P<sub>x</sub>:N, photoluminescence spectra 2-41421
- GaInAs-AlInAs structures grown by molecular beam epitaxy 2-21456
- Ga<sub>0.47</sub>In<sub>0.53</sub>As, LPE growth, baking temp. effect on purity, photoluminesc. and elec. props. 2-27106
- GaInAsP-InP layers, long wavelength, temp. depend. photolum., surface recomb. vel. 2-5753
- Ga<sub>1-x</sub>In<sub>x</sub>P MBE film, struct. and photolum. props. 2-45758
- Ga<sub>1-x</sub>In<sub>x</sub>P:N, luminescence study of exciton radiation transitions 2-46693
- Ga<sub>1-x</sub>In<sub>x</sub>P-GaAs MBE DH, interface recombination vel. and misfit strain, photoluminescence study 2-22073
- GaN epitaxial film on sapphire, SEM, electron diffr. and cathodolum. obs. 2-45753
- GaN epitaxial layers, photoluminescence 2-46663
- GaN:Zn, photoluminesc. and electroluminesc., light polarisation 2-26980
- GaP, deep levels in light-emitting devices, electron trap and hole trap discharge rates temp. dependence (*Japanese*) 2-30818
- GaP diodes, deep recombination centre parameters, TSC study 2-35972
- GaP, impurity-doped, efficient linear IR to visible upconversion, IR detect. using NEA photocathode 2-17532
- GaP, lanthanide doping influence on elec. and photolum. props., LED material 2-41391
- GaP, recombination-enhanced defect reactions, cathodoluminesc. and photoluminesc. study 2-46783
- GaP:Ag(Au), influence of heat treatment on distrib. of diffused impurities 2-26141
- GaP:Bi p-n struct., electrolum. and photoresponse spectra 2-36709
- GaP:Co<sup>2+</sup>, IR luminesc., temp. depend. 2-51654
- GaP:Cr, photoluminesc., near IR-visible up conversion 2-49819
- GaP:Cu, photoluminescence spectrum 2-46694
- GaP:Fe, hole localization and charge transfer excitation by time depend. photolum. meas. 2-51702
- GaP:Ge and GaP:Ge, Cr epitaxial films, behaviour of Ge, elec. props. and photoluminesc. 2-13008
- GaP:N, dense carrier system, decay kinetics and phase behaviour 2-51678
- GaP:N, luminescence study of exciton radiation transitions 2-46693
- GaP:Nb, impurity luminesc., intracenter transitions 2-51703
- GaP:Pr,Y, heat treated, photoluminescence 2-17541
- GaP:S, donor state valley-orbit splitting 2-40826
- p-GaSb, degenerate, low-temp. luminesc., doping effect 2-36695
- GaSb:Te, Czochralski grown, impurity distrib., cathodoluminesc. study 2-51715
- GaSe, excitonic spectra, phase transitions (*Russian*) 2-31557
- GaSe, intercalated, exciton photoluminescence and reflection spectra 2-17540
- GaSe, polarised luminescence in mag. field 2-9197
- GaSe:Cu, defect level analysis, photoluminescence spectra 2-9184
- GaSe:O, edge luminesc. spectrum, 4.2K, isoelectronic impurity effect 2-9196
- GaSe<sub>1-x</sub>S<sub>x</sub>, edge luminesc. spectra, optical and microwave study 2-46751
- GaSe<sub>1-x</sub>S<sub>x</sub>, polarised luminescence in mag. field 2-9197
- Gd(Cr<sub>1-x</sub>Al<sub>x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688
- Gd(Cr<sub>1-x</sub>Ga<sub>x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688
- Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub> crystals, electroluminescence with nonequilib. domain struct. 2-13574
- Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>, ferroelec.-ferroelastic transition, cathodo- and photolum. study 2-36550
- Gd<sub>2</sub>(MoO<sub>4</sub>)<sub>3</sub>:Tb<sup>3+</sup>(Eu<sup>3+</sup>), ferroelec.-ferroelastic, luminescence spectra near phase transition 2-31538

## luminescence of inorganic solids continued

- Gd<sub>2</sub>O<sub>3</sub>:Bi, luminescence props. 2-26961
- GdOCl:Eu<sup>3+</sup>, free ion and cryst. field parameters, Stark levels, fluore. 2-9178
- Ge, donor-bound multi-exciton complexes, theory, recomb. spectra calc. 2-1840
- Ge, electron-hole droplet cloud, phonon-wind-induced anisotropy 2-12976
- Ge, electron-hole droplets, momentum damping time and phonon wind force 2-12977
- Ge, electron-hole liquid in high mag. field, luminesc. meas. 2-26989
- p-Ge, far IR emission from population-inverted hot-carrier system 2-46771
- Ge, thermoluminescence rise in far IR spectrum (*Russian*) 2-31571
- Ge, uniaxially deformed, excitons and excitonic molecules in mag. field (*Russian*) 2-5354
- Ge, uniaxially stressed, luminescence of excitonic molecules 2-46692
- Ge:As, luminescence study, exciton excited hole state 2-46691
- Ge:Ga, impurity band, antiferromag. ordering, photoluminescence study 2-2340
- Ge:Sb(As)(Ga), electron-hole liq., photoluminesc. polarisation in mag. field study 2-35952
- GeO<sub>2</sub>-Li<sub>2</sub>O:Nd, energy transfer, radiationless quenching rate, fluorescence obs. 2-46723
- GeSe<sub>2</sub> glass, photoluminescence spectra after thermal annealing 2-46750
- HgCdTe, luminescence 2-26957
- HgCdTe, recombination processes in 3 to 5  $\mu$ m 2-21529
- HgI<sub>2</sub>, diffuse reflectance spectra, luminescence and polymorphism 2-46747
- Ho complex, Ho(oxydiacetate)<sub>3</sub><sup>3+</sup>, f-f transition, optical props. calcs. 2-51545
- Ho<sub>2</sub>O<sub>3</sub>, candoluminescence spectra 2-46759
- In<sub>0.53</sub>Ga<sub>0.47</sub>As, near-band-gap absorpt. and photolum. 2-41394
- InGaAsP DH, electroluminescence, efficiency and kinetics 2-13573
- InGaAsP DH layers, laser characts., nonradiative recomb. effect 2-29820
- InGaAsP, deep level center photolum., comp. depend. 2-5751
- InGaAsP heterostructures, nonequilib. carrier lifetime and edge luminesc. reemission 2-13554
- InGaAsP-InP DH laser, degradation obs. by electron probe microanal. 2-44282
- InP, cold semicond., hot electrons, luminesc. expts. 2-51676
- InP, inhibited relaxation of nonresonantly excited electrons in a cold lattice, photolum. meas. 2-46741
- InP, ion implanted, damage profile, cathodoluminescence, SIMS, chemical staining and C-V meas. 2-40449
- n-InP LPE layer, donor-acceptor pair recomb. from donor ground and first excited states 2-5752
- n-InP, photoluminescence press. depend. 2-46686
- p-InP, polarisation of hot photoluminescence spectra, role of split-off sub-band 2-17542
- InP, proton implanted, cathodolum., Rutherford backscatt. and SIMS studies 2-46778
- InP:Co<sup>2+</sup>, impurity levels, photoluminesc. study 2-51655
- InP:Fe, optical and capacitance spectroscopy 2-30925
- InP:Fe<sup>2+</sup>, deep impurity centres, photoluminesc. and DLTS study 2-51656
- InP:Se epitaxial layer, heavily doped, electroluminescence and photoluminescence 2-2353
- InP:Sn(Ge)(S), etched and unetched, dislocation obs. and Huber etching assessment 2-40396
- InP:Yb epitaxial films; photoluminescence spectra, fine struct. intracenter transitions 2-51704
- InP-InGaAsP heterostructure, electrolum. polarization due to internal strain 2-41432
- InSn<sub>0.4</sub>O<sub>2</sub>-Ta<sub>2</sub>O<sub>5</sub>-ZnS:Mn-Ta<sub>2</sub>O<sub>5</sub>-Al thin film struct., DC electrolum. 2-46764
- Ir (III) complexes, luminesc. spectra, vibr. progression anal. 2-17515
- KBr, optically pumped F centre, spin-memory loss, luminesc. obs. 2-46716
- KBr:Ag(Cu), A<sub>1</sub>-centres, luminesc. linear polarisation obs. 2-36689
- KBr:Ti, surface recombination luminescence 2-36698
- KCl, acoustoluminescence excitation (*Russian*) 2-22103
- KCl, luminescence, F-centre pair electron transfer 2-26974
- KCl:Ag(Cu), KCl-KI:Ag(Cu), A<sub>1</sub>-centres, luminesc. linear polarisation obs. 2-36689
- KCl:Ba, thermoluminescence and D<sub>3</sub> and F-centre stability 2-9204
- KCl:KH, ground, excited state absorption, emission and Raman props. of F<sub>1</sub>(H<sup>+</sup>) centre 2-36643
- KCl:Li, F<sub>A</sub> (II) col. centre saddle point relax., luminesc. study 2-36693
- KCl:PbCl<sub>2</sub>, X-ray irradi., H, V<sub>2</sub> centres, polarised luminesc., absorption, emission bands 2-46745
- KCl:EuCl<sub>2</sub>, precipitated phases, optical absorpt. and luminesc. 2-26934
- KCl(Br), F-H recomb. and intrinsic light emission 2-26967
- K<sub>2</sub>EuW<sub>10</sub>O<sub>36</sub>·18H<sub>2</sub>O, luminesc. 2-22068
- KI, hot luminesc. of self-trapped excitons 2-41415
- KI:Na<sup>+</sup>, photoluminescence 3 eV emission band, excitons state annihilation by impurity 2-17531
- KI:S<sub>2</sub>(Se<sub>2</sub>), phonon-impurity interactions, reson. Raman scatt., hot and ordinary luminesc. study 2-46585
- KI:Ti, impurity luminesc. decay, 336 nm, excitation in A-absorption band (*Russian*) 2-2331
- KI:Ti, surface recombination luminescence 2-36698
- KI:Ti phosphor, uniaxial stress effect on A emission band at low temp. 2-13547
- KMgF<sub>3</sub>, rare earth doped, X-ray induced luminescence 2-51663
- K<sub>2</sub>UO<sub>2</sub>Cl<sub>4</sub>·xH<sub>2</sub>O, polarised luminescence, IR and Raman spectra 2-13546
- LaAlO<sub>3</sub>:Cr<sup>3+</sup>, energy transfer, fluore. responses, time resolved laser spectroscopy 2-26964
- LaCl<sub>3</sub>:Eu<sup>3+</sup>, Ho<sup>3+</sup>(Pr<sup>3+</sup>), energy transfer from <sup>5</sup>D<sub>1</sub> and <sup>5</sup>D<sub>0</sub> levels, temp. depend. 2-26978
- LaMgB<sub>2</sub>O<sub>7</sub>:Eu<sup>3+</sup>(Tb<sup>3+</sup>), self-quenching of luminesc., one-dimens. interactions 2-26965
- La<sub>1-x</sub>Nd<sub>x</sub>MgAl<sub>11</sub>O<sub>19</sub>, prep., struct., optical and mag. props. 2-31619
- LaOCl:Eu<sup>3+</sup>, free ion and cryst. field parameters, Stark levels, fluore. 2-9178
- LaOCl:R<sup>3+</sup> (R=Sm, Eu, Tb, Dy, Tm), fluore., local crystal symmetry 2-41403
- LaOF: rare earth ion doped, crystal fields and luminesc. props. 2-40855
- LaP<sub>2</sub>O<sub>7</sub>, energy transfer mechanisms, donor-acceptor interaction, fluorescence obs. 2-46719



## luminescence of inorganic solids continued

- La,Pr<sub>1-x</sub>Ce<sub>x</sub>:Nd, fluorescence, inhomogeneous profiles, satellite lines, energy-transfer and up-conversion processes 2-51652  
 La<sub>2</sub>S<sub>3</sub>:Ce(Nd), luminescence, and energy transfer 2-51685  
 γ-La<sub>2</sub>Si<sub>2</sub>Nd<sup>3+</sup>, broad-band semicond., photolum. of Nd<sup>3+</sup>, stimulated emission from electron transitions 2-13529  
 Li-La phosphate glass:Cr<sup>3+</sup>, Nd<sup>3+</sup>, energy transfer between Cr and Nd ions 2-44313  
 LiAlO<sub>2</sub>:Fe<sup>3+</sup>, fluorescence of octahedral site impurities 2-51657  
 LiD, exciton parameters and exciton-phonon interaction const., luminesc. and Raman spectroscopy study 2-16997  
 LiF, annealing of radiation defects, chemiluminesc. and thermostimulated luminesc. (Russian) 2-9205  
 LiF:Mg, colour centres, photoluminesc. polarisation 2-22083  
 LiF:Mg, colour centres at 3.5 and 5 eV, optical absorpt. and thermoluminesc. studies 2-46649  
 LiF-U<sub>2</sub>O<sub>8</sub>, photoluminescence study 2-26973  
 LiGa<sub>2</sub>O<sub>5</sub>:Cr<sup>3+</sup>, luminesc. of exchange coupled Cr<sup>3+</sup> pairs 2-51660  
 LiGa<sub>2</sub>O<sub>5</sub>:Fe<sup>3+</sup>, fluorescence of octahedral site impurities 2-51657  
 LiH crystals, reson. secondary luminesc. with self-localising excitons of mol. type 2-22062  
 LiNbO<sub>3</sub>:Cu(Eu)(Ni), pure and doped, X-ray induced luminesc. 2-26977  
 LiNdP<sub>2</sub>O<sub>12</sub>, radiative transition probabilities of Nd<sup>3+</sup> ion, oscillator strengths, absorption spectra and fluoresc. 2-26930  
 LiTaO<sub>3</sub> single cryst., defective surface, electron emission 2-22142  
 Li<sub>1-x</sub>Ca<sub>x</sub>(Sm,Ti)<sub>2</sub>O<sub>8</sub>, luminescence 2-2330  
 Lu(Cr<sub>2</sub>Al<sub>1-x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688  
 Lu(Cr<sub>2</sub>Ga<sub>1-x</sub>)<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, Cr<sup>3+</sup> luminescence study 2-46688  
 LuOCr:R<sup>3+</sup> (R=Sm, Eu, Tb, Dy, Tm), fluoresc., local crystal symmetry 2-41403  
 Lu<sub>2</sub>O<sub>3</sub>:Ce<sup>3+</sup>, red luminesc., large Stokes shifts 2-51669  
 Lu<sub>2</sub>Y<sub>1-x</sub>Sc<sub>x</sub>O<sub>3</sub>:Nd, thermostimulated luminesc. 2-51721  
 Mg, ion bombard., at. excitations, photon emission study 2-13575  
 MgAl<sub>2</sub>O<sub>4</sub>, UV-irradiated, absorpt. and thermoluminesc. spectra 2-13516  
 MgAl<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, luminescence spectrum, N-lines, identification 2-41404  
 MgAl<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, luminesc. spectrum, N-lines, origin 2-41405  
 MgAl<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, luminescence spectrum, N-lines, partial spectrum 2-41406  
 Mg<sub>2</sub>N<sub>2</sub>, forbidden band width, refl., luminesc. and excitation spectra, thermochromic transitions 2-8754  
 MgO crystals, deformed region on (111) plane, cathodolum. obs. 2-36710  
 MgO, edge cathodoluminescence and reflectivity in edge vacuum 2-2349  
 MgO, excitons and edge luminescence 2-46781  
 MgO:2Al<sub>2</sub>O<sub>3</sub> crystals, defects, spectrosc. investig. 2-2323  
 MgO:Al, edge cathodoluminescence and reflectivity in edge vacuum 2-2349  
 MgO:Al, excitons and edge luminescence 2-46781  
 MgO:Mn(Fe)(Co)(Ni), charge transfer transitions, energies of optical absorption and emission 2-22052  
 Mg<sub>2</sub>P<sub>2</sub>, photoluminescence and optical absorption 2-13555  
 MgS:Bi<sup>3+</sup> phosphor, mag. field effect on luminescence 2-17525  
 MgS:Mn<sup>2+</sup> phosphor, luminescence and EPR spectra (French) 2-22082  
 MgS:Pb<sup>2+</sup> phosphor, luminesc. spectra, mag. field effect (French) 2-41417  
 Mn complex, (C<sub>2</sub>H<sub>5</sub>NH)<sub>2</sub>Mn<sub>2</sub>Zn<sub>1-x</sub>Cl<sub>2</sub>, green luminescent tetrahedral complexes, Mn<sup>2+</sup> EPR spectra 2-51647  
 Mn complex, ((CH<sub>3</sub>)<sub>2</sub>N)<sub>2</sub>Mn<sub>2</sub>Zn<sub>1-x</sub>Cl<sub>2</sub>, green luminescent tetrahedral complexes, Mn<sup>2+</sup> EPR spectra 2-51647  
 Mn complex, Mn(Ph<sub>3</sub>PO)<sub>2</sub>Cl<sub>2</sub>, mechanoluminesc. and electrolum. 2-46792  
 MnF<sub>2</sub>:Zn<sup>2+</sup>, magnon sideband transactions, fluorescence line narrowing 2-46749  
 NH<sub>4</sub>MnF<sub>6</sub>, optical and EPR spectra, 80 to 300K 2-46637  
 (NH<sub>4</sub>)<sub>2</sub>UO<sub>2</sub>Cl<sub>4</sub>.xH<sub>2</sub>O, polarised luminescence, IR and Raman spectra 2-13546  
 Na fluorophosphate glasses, struct., spectral luminesc. characteristics 2-26984  
 NaBr, F-centres, radiative and non-radiative processes 2-9193  
 NaBr:Eu<sup>2+</sup>, precipitated phase, optical absorpt. and luminesc. spectra 2-41408  
 NaBr:Ti phosphor, centres responsible for near UV emission, luminesc. props. 2-31540  
 NaCl, acoustoluminescence excitation (Russian) 2-22103  
 NaCl crystal, donor-acceptor pairs, tunnel and thermally induced luminesc. 2-51724  
 NaCl, hopping motion of self-trapped exciton, decay kinetics and π luminesc. 2-5351  
 NaCl, pure and Cu doped, exoelectron emission and thermolum. meas. 2-17610  
 NaCl, triplet self-trapped exciton, Frenkel defect form. and intersystem crossing 2-41401  
 NaCl:Ag, surface recombination luminescence 2-36698  
 NaCl:Pb<sup>2+</sup>, A band spectral line shape 2-41420  
 NaCl:Sr, pretreated, effect of activator content on thermolum. 2-13579  
 NaCl:Sr, UV irradiated, deformed, glow curve meas. 2-5759  
 NaCl:Yb<sup>2+</sup>, IR luminesc. and absorpt. spectra of 4f<sup>14</sup>-4f<sup>13</sup>5d transition 2-51668  
 Na<sub>2</sub>DyW<sub>10</sub>O<sub>36</sub>.18H<sub>2</sub>O, luminesc. 2-22068  
 NaF:Li, additionally coloured, F-centre decay props. 2-12590  
 NaGdGeO<sub>4</sub>:Nd<sup>3+</sup>, spectral-luminesc. props., laser crystal potential 2-41393  
 NaI crystal, donor-acceptor pairs, tunnel and thermally induced luminesc. 2-51724  
 NaI crystals, reson. secondary luminesc. with self-localising excitons of mol. type 2-22062  
 NaI, F-centres, radiative and non-radiative processes 2-9193  
 NaI, hot luminesc. of self-trapped excitons 2-41415  
 NaI:Eu<sup>2+</sup>, precipitated phase, optical absorpt. and luminesc. spectra 2-41408  
 NaI:Ti response to relativistic Ne, Ar, and Fe ions, scintillation efficiency curves 2-26997  
 NaMgF<sub>3</sub>, rare earth doped, X-ray induced luminescence 2-51663  
 NaNO<sub>2</sub>, phonon relax., hot luminescence study 2-46740  
 NaNO<sub>2</sub>, pyroelectric luminesc. 2-31567  
 Na<sub>2</sub>O-B<sub>2</sub>O<sub>3</sub>-SiO<sub>2</sub>:Mn<sup>2+</sup> glasses, luminesc. decay times as probe of thermal phase separation 2-46681  
 Na<sub>2</sub>SmW<sub>10</sub>O<sub>36</sub>.18H<sub>2</sub>O, luminesc. 2-22068  
 Na<sub>2</sub>TbW<sub>10</sub>O<sub>36</sub>.18H<sub>2</sub>O, luminesc. 2-22068  
 Nb-V alloy, ion bombarded, emission spectra, contamination induced changes 2-46777

## luminescence of inorganic solids continued

- Nd phosphate concentrated laser glasses, review 2-34764  
 NdAl<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub>, time-resolved site-selection spectroscopy study 2-13538  
 Nd<sub>2</sub>La<sub>1-x</sub>P<sub>2</sub>O<sub>14</sub>, luminesc. kinetics and excitation spectra, quenching 2-46724  
 Nd<sub>2</sub>O<sub>3</sub>, candeloluminescence spectra 2-46759  
 Ne, condensed, relax. processes from higher excited states of self-trapped excitons 2-26959  
 P, amorphous, time-resolved luminesc. meas. 2-46735  
 P, amorphous, red, localised states, photolum. and ESR studies 2-46739  
 P<sub>2</sub>O<sub>5</sub>-Li<sub>2</sub>O-ZnO-Al<sub>2</sub>O<sub>3</sub>:Nd, energy transfer, radiationless quenching rate, fluorescence obs. 2-46723  
 P<sub>2</sub>O<sub>5</sub>-Nd<sub>2</sub>O<sub>3</sub>:Nd, energy transfer, radiationless quenching rate, fluorescence obs. 2-46723  
 P<sub>2</sub>Se<sub>3</sub>, glassy chalcogenide semiconductors, localised states, photoluminesc. meas. 2-17523  
 PbI<sub>2</sub>, electron-hole liquid, thermodynamic props., luminescence study 2-8759  
 PbI<sub>2</sub>, luminescence and hyper-Raman emission 2-46697  
 Pb<sub>3</sub>MgNb<sub>2</sub>O<sub>8</sub>, photoluminescence rel. to ferroelec. phase transition, domain struct. effect 2-9176  
 PbMoO<sub>4</sub>, luminesc. quantum yield and photocond., surface effect 2-46744  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te epitaxial films, photoluminesc., effect of impurities 2-36696  
 Pb<sub>1-x</sub>Sn<sub>x</sub>Te:Bi, photo- and electroluminescence spectra 2-13549  
 PbTiO<sub>3</sub>, photolum., rel. to structural phase transitions 2-36672  
 Pr complex, Pr(oxydicetate)<sub>3</sub><sup>3-</sup>, f-f transition, optical props. calcs. 2-51545  
 Pt (IV) complexes, luminesc. spectra, vibr. progression anal. 2-17515  
 RBMgF<sub>3</sub>, rare earth doped, X-ray induced luminescence 2-51663  
 RbBr:Eu<sup>2+</sup>, thermoluminesc., fluoresc., and optical absorpt. meas., luminesc. mechanism 2-27002  
 RbCl:Ag(Cu), A<sub>2</sub>-centres, luminesc. linear polarisation obs. 2-36689  
 RbCl:Pb<sup>2+</sup>, A band spectral line shape 2-41420  
 RbI, recombination luminescence of H-centres (Russian) 2-5742  
 RbLu<sub>3</sub>F<sub>10</sub>:Eu<sup>2+</sup>, α and β phases, luminescence, cryst. struct. effects (French) 2-51690  
 RbMnCl<sub>3</sub>, phase transitions, Raman scatt. obs. 2-31476  
 Rb<sub>2</sub>UO<sub>2</sub>Cl<sub>4</sub>.xH<sub>2</sub>O, polarised luminescence, IR and Raman spectra 2-13546  
 Rh (III) complexes, luminesc. spectra, vibr. progression anal. 2-17515  
 Rh complex, hexaamminerhodium (III) compound, luminesc. lifetimes, temp. depend. 2-2327  
 Ru complex, Ru(4,4',4''-triphenyl-2,2',2''-tripyrindine)<sub>2</sub><sup>2+</sup>, decay times, polarisation ratio, visible luminescence obs. 2-36673  
 Ru(II) complex, Ru(4'-phenyl-2,2',2''-tripyrindine)<sub>2</sub><sup>2+</sup>, decay times, polarisation ratio, visible luminescence obs. 2-36673  
 Ru(II) complex, Ru(2,2',2''-tripyrindine)<sub>2</sub><sup>2+</sup>, decay times, polarisation ratio, visible luminescence obs. 2-36673  
 ScOCr:R<sup>3+</sup> (R=Sm, Eu, Tb, Dy, Tm), fluoresc., local crystal symmetry 2-41403  
 Si, amorphous, bipolaronic ground-state and dangling-bond clusters 2-40846  
 Si, amorphous, dangling bond site dehybridisation, light-induced metastable states 2-21497  
 Si, amorphous, p<sup>+</sup>-i-n<sup>+</sup> junction, injection electroluminesc. and photoluminesc. 2-46769  
 Si, amorphous, photolum., influence of excitation density and n-type doping 2-46734  
 Si, amorphous, plasma deposited and CVD coatings, ion implantation, elec. cond. and photoluminesc. 2-40905  
 Si, amorphous, time resolved optical spectroscopy, review 2-46732  
 Si amorphous film, props. control by control of plasmachemical prep. processes, use in solar cells 2-36799  
 Si, cathodoluminescence imaging 2-31564  
 Si, Czochralski-grown, thermally induced luminesc. centres 2-46666  
 Si, deep level luminesc. spectra and decay lifetime meas., scanning cathodoluminesc. microprobe system 2-28943  
 Si, electron-hole droplet nucleation, role of shallow impurities and defects, photolum. study 2-2339  
 Si, electron-hole liq. props., stress depend., photoluminesc. study 2-40799  
 Si, electron-hole plasma, non-equilib., dynamical props. 2-51675  
 Si, epitaxial layer, impurities, photoluminescence study 2-17521  
 Si, evaluation using electron-hole drops (Japanese) 2-51696  
 Si, excited states at deep centres, nonradiative recomb. processes 2-8770  
 a-Si, glow discharge, fatigue effect in luminesc. at low temp. 2-46755  
 Si, ion implanted laser annealed, defect photoluminesc. 2-46667  
 Si, neutron irradiat., 1.0186 eV luminesc. centre symm. and nature 2-41418  
 Si, plastically deformed, radiative recomb. on dislocations, energy state in band gap 2-9186  
 Si wafer, Czochralski grown, photolum. characteris. of thermally-induced defects 2-17535  
 Si:Au, photoluminescence, impurity states 2-36692  
 Si:B, electron-hole drops, luminescence 2-45845  
 Si:B, impurity bound localised holes antiferromag. ordering, polarised luminesc. in mag. field 2-36701  
 Si:B, luminescence study of excited states in impurity band 2-5367  
 Si:B, recombination radiation of exciton-impurity band 2-2345  
 Si:B(P)(As), thermally evaporated, near-surface layer impurities, luminescence anal. 2-17526  
 Si:C, implanted, photoluminescence study 2-41419  
 a-Si:H, a-Si:F:H, Schottky-barrier diodes, elec. props. using new techniques 2-46104  
 Si:H, amorphous, absorpt. and excitation spectra 2-22053  
 Si:H, amorphous, laser beam defect creation, luminesc. and ODMR study 2-35533  
 Si:H, amorphous, luminesc. and recomb., review 2-5733  
 Si:H, amorphous, luminescence props. 2-46730  
 Si:H, amorphous, multiphase description, photoluminesc., TSC, optical absorpt. and elec. cond. meas. 2-41412  
 Si:H, amorphous, photoluminescence, no-Stokes shift model 2-36683  
 Si:H, amorphous, time resolved luminesc. and fatigue effects 2-9179  
 Si:H, amorphous, ultrashort laser pulse annealing, expt. study 2-21170  
 Si:H, amorphous-microcryst. mixed phase film, photoluminesc. 2-26960  
 Si:H, Cl glow discharge films, amorphous, optical characts. and photoluminesc. 2-31546  
 Si:H, O sputtered films, amorphous, optoelectronic props., effect of O 2-41443  
 a-Si:H, recomb. processes and gap states, time-resolved luminesc. meas. 2-46736  
 Si:H, sputtered, amorphous, time resolved photolum. spectra 2-46737



## luminescence of inorganic solids continued

- a-Si:H(B,P), luminesc. spectrum, effect of dangling bond states 2-46670  
 Si:H,Cl amorphous film, photolum. studies 2-46738  
 Si:H amorphous, electron and laser beam induced centres, photoluminescence study 2-36682  
 Si:H amorphous films, luminesc. spectra, defect induced red shift 2-17536  
 Si:H amorphous films, photocond. and photolum 2-40959  
 Si:H amorphous films for electrophotographic appl., photoelec. props. 2-46168  
 Si:H and Si:H,B, amorphous, photoluminesc. spectrum, B doping and prep. conditions effect 2-36684  
 a-Si:H film, photocond. anal. luminesc. meas. of cond. band tail 2-46062  
 a-Si:H films, impurity doping, morphological study, electrical and optical properties 2-45789  
 Si:He(Ne)(Ar), ion implanted, radiative recomb. centres, photoluminesc. study 2-9194  
 Si:In, excitation spectroscopy of P, Q, R isoelectronic lines 2-2338  
 Si:O, C, luminescence, thermally-induced defects 2-46748  
 Si:P(Li), bound excitons, photoluminesc., temp. depend. Zeeman study 2-51644  
 Si:Ti, isoelectronic bound exciton luminesc. lines, role of deep acceptors 2-17529  
 SiC (6H), ion implanted, defect luminescence spectra 2-36712  
 SiC:Al<sup>+</sup> implanted epitaxial diodes, cathodoluminescence characts. 2-17557  
 α-SiC:Al<sup>+</sup> LED, electroluminesc. spectra fine struct. 2-46774  
 SiC:B, impurity states 2-13013  
 Si<sub>3</sub>C<sub>1-x</sub>, amorphous, Stokes shift photoluminesc., comp. depend. 2-46668  
 Si<sub>3</sub>C<sub>1-x</sub>, amorphous plasma deposited coating, luminesc. 2-41413  
 Si<sub>3</sub>C<sub>1-x</sub>:H, amorphous films, photocond. and photolum 2-40959  
 n-SiC(6H), electron bombarded, subthreshold defect form., cathodoluminescence obs. 2-51718  
 a-Si<sub>3</sub>N<sub>1-x</sub>:H, wide optical-gap, photoconductive, elec. and optical props. 2-26439  
 SiO<sub>2</sub> core optical fibre, tribolum. spectrum 2-46791  
 SiO<sub>2</sub> glass, luminesc. autoradiography after α, β or γ irradi. 2-5743  
 SiO<sub>2</sub>, irradiated with electrons and γ-rays, defect form. dose depend. 2-21176  
 SiO<sub>2</sub> optical fibres, as-drawn and irradi., photoluminesc. study, role of nonbridging O defect centres 2-13536  
 SiO<sub>2</sub>:Li<sub>2</sub>O-CaO-Al<sub>2</sub>O<sub>3</sub>:Nd, energy transfer, radiationless quenching rate, fluorescence obs. 2-46723  
 SiO<sub>x</sub>, amorphous glow discharge film, band gap, photoluminesc. study 2-40766  
 SiO, glow-discharge films, amorphous photoluminesc. study 2-46669  
 Sn<sub>2</sub>-Ans-Cu<sub>2</sub>S-ZnS:Mn(Cu)-AP thin film cell, shortwave electrolum. 2-26996  
 SnS<sub>2</sub>-4H and 6Hb, exciton luminescence, exciton-phonon interaction 2-22088  
 SrF<sub>2</sub>:Ho<sup>3+</sup> single cryst., laser excited fluorese. study 2-36678  
 SrF<sub>2</sub>:Mn(Co)(Ni), thermoluminescence, X-ray excited, charge change processes 2-41437  
 SrF<sub>2</sub>:Sm<sup>2+</sup>, coated with Be film, phonon fluorese. spectra excited by elec. current pulses 2-36699  
 Sr<sub>2</sub>Na<sub>0.8</sub>R<sub>0.2</sub>XO<sub>6</sub> (R=La, Gd, Eu; X=W, U), energy transfer phenomena, cryst. struct. 2-13540  
 SrS:Cu,Gd, phosphors, photo- and electro-luminescence 2-51709  
 SrS:R (R=rare earth), DC electrolum. 2-46767  
 SrTiO<sub>3</sub>, photolum., rel. to structural phase transitions 2-36672  
 Tb complex, Tb<sup>3+</sup>Dy<sup>3+</sup>(Ho<sup>3+</sup>) (ammoniaisopropionidacetato).4H<sub>2</sub>O, luminesc., circular dichroism, energy transfer 2-46722  
 Tb complex, Tb(oxydiacetate)<sub>3</sub><sup>3-</sup>, f-f transition, optical props. calcs. 2-51545  
 Tb complex, terbium(III) (L-ammoniaisopropionidacetic acid).hydrate, circularly polarized luminesc. 2-41411  
 TbP<sub>2</sub>O<sub>7</sub>, Tb<sup>3+</sup> cathodoluminescence saturation effects 2-51717  
 3TeO<sub>2</sub>.Na<sub>2</sub>O:Er<sup>3+</sup>(Ho<sup>3+</sup>)(Nd<sup>3+</sup>), local OH group vibrs. and excited state decay 2-51692  
 ThO<sub>2</sub>:Eu<sup>3+</sup>, luminescence by photonic and chem. excitations 2-41407  
 Ti, sputtered, excited atom energy parameter meas., photon emission 2-11432  
 TiO<sub>2</sub>, diffusion doped, elec. and optical props. 2-5369  
 TiO<sub>2</sub>, TSC and thermoluminescence curves 2-13398  
 Tm<sub>2</sub>O<sub>3</sub>, candoluminescence spectra 2-46759  
 UO<sub>2</sub> complexes, luminesc. excited state splitting 2-41400  
 UO<sub>2</sub>(H<sub>2</sub>PO<sub>4</sub>)<sub>2</sub>, mechanoluminescence and space groups 2-22091  
 W-ThO<sub>2</sub>, anal. by SIMS and electron probe microanalyser, cathodoluminesc. 2-41953  
 WO<sub>3</sub>-Na<sub>2</sub>O-P<sub>2</sub>O<sub>5</sub>:Eu<sup>3+</sup> glasses, phase separation and crystn., luminesc. study 2-46682  
 Xe crystals, two-phonon polariton scatt., reson. luminesc. and Raman scatt. meas. (Russian) 2-26890  
 Xe monocrystals, surface excitons and surface polaritons in luminesc. spectrum (Russian) 2-26953  
 Xe, solid, excitons, hot luminescence and self trapping 2-17527  
 YAG, plastic deform. of subsurface layers rel. to point defect motion, microcathodolum. obs. 2-46775  
 YAG:Nd, disintegration of transient colour centres, luminesc. 2-22067  
 YAG:Tb<sup>3+</sup> cathodoluminescence saturation effects 2-51717  
 YAl<sub>3</sub>B<sub>3</sub>O<sub>12</sub>:Bi<sup>3+</sup> (Ce<sup>3+</sup>), energy transfer, luminesc. study 2-51649  
 YAlO<sub>3</sub>:Eu<sup>3+</sup>, nuclear mag. moment anomaly of Eu<sup>3+</sup>, optical hole burning and optically detected NQR expts. 2-2163  
 Y<sub>1-x</sub>Bi<sub>x</sub>Al<sub>3</sub>B<sub>3</sub>O<sub>12</sub>:Cr<sup>3+</sup> (Tb<sup>3+</sup>), energy transfer, luminesc. study 2-51649  
 Y<sub>1-x</sub>Ce<sub>x</sub>Al<sub>3</sub>B<sub>3</sub>O<sub>12</sub>:Tb<sup>3+</sup>, energy transfer, luminesc. study 2-51649  
 YOCi:Eu<sup>3+</sup> free ion and cryst. field parameters, Stark levels, fluorese. 2-9178  
 Y<sub>2</sub>O<sub>3</sub>:Ce<sup>3+</sup>, red luminesc., large Stokes shifts 2-51669  
 Y<sub>2</sub>O<sub>3</sub>:Eu phosphors, excitation mode into charge transfer band 2-36711  
 Y<sub>2</sub>O<sub>3</sub>:R<sup>3+</sup>, Tb<sup>3+</sup> phosphor, photoluminesc. and cathodoluminesc., Tb<sup>3+</sup> enhancement mechanism 2-51666  
 Y<sub>1-x</sub>R<sub>x</sub>Al<sub>3</sub>B<sub>3</sub>O<sub>12</sub> (R=Sm, Gd, Dy), luminesc., conc. quenching 2-41416  
 YVO<sub>4</sub>:Eu, phosphor, cryst. growth by chem. transport method 2-9257  
 Yb<sup>3+</sup>-glass, reson. luminesc., absolute quantum yield meas., modulation method 2-31497  
 (Zn,Cd)S:Ag,Cl DC electrolum. powder cell, donor-acceptor recombination luminesc. 2-46768  
 Zn, ion bombard., at. excitations, photon emission study 2-13575  
 ZnAl<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, luminescence spectrum, N-lines, identification 2-41404  
 ZnAl<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, luminesc. spectrum, N-lines, origin 2-41405

## luminescence of inorganic solids continued

- ZnAl<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, luminescence spectrum, N-lines, partial spectrum 2-41406  
 ZnB<sub>2</sub>O<sub>4</sub>:CdB<sub>2</sub>O<sub>4</sub>:PbF<sub>2</sub>, spectral luminesc. study 2-26985  
 ZnGa<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, luminescence spectrum, N-lines, identification 2-41404  
 ZnGa<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, luminesc. spectrum, N-lines, origin 2-41405  
 ZnGa<sub>2</sub>O<sub>4</sub>:Cr<sup>3+</sup>, luminescence spectrum, N-lines, partial spectrum 2-41406  
 ZnO, adsorbed O influence on luminesc. temp. depend. 2-31542  
 ZnO, biexciton radiative recombination, mechanism and band profile 2-46753  
 ZnO, electron-hole condensate, high exciton binding energy, luminesc. spectra 2-35950  
 ZnO epitaxial film, exciton luminesc. rel. to deposition conditions 2-51698  
 ZnO, exciton complexes, luminescence and absorpt. spectra, mag. field effect 2-1834  
 ZnO, phosphor, self-activated, electroluminescence 2-46760  
 ZnO single crystals, photoluminescence of free A-exciton, exchange interactions effect 2-2334  
 ZnO sputtered thin films, luminesc. props. 2-46673  
 ZnO, stimulated emission obs. at high one-photon excitation level, UV photolum. 2-36669  
 ZnO:Cu, photoluminescence, vibronic struct. 2-41410  
 ZnO:DyAg, phosphors, electrolum. and photolum. obs. 2-5744  
 ZnO-B<sub>2</sub>O<sub>3</sub> system, solid state reaction, thermolum. analysis (Spanish) 2-51723  
 Zn<sub>3</sub>P<sub>2</sub>, elec. cond. and thermoluminescence studies 2-27005  
 Zn<sub>3</sub>P<sub>2</sub>, extrinsic photoluminescence, temp. depend. 2-26990  
 Zn<sub>3</sub>P<sub>2</sub>, pair transitions, photolum. meas. 2-22057  
 ZnS, cathodoluminescence in TEM 2-41435  
 ZnS, crystn. from soln., X-ray anal., luminesc. 2-41507  
 ZnS doped phosphors, phosphoresc. using pulsed N<sub>2</sub> lasers 2-36677  
 ZnS phosphors, luminesc. props., influence of formation temp. 2-46729  
 ZnS single crystals, photoluminesc. band intensity, Ne ion irradi. effects 2-31548  
 ZnS thin electroluminescent epitaxial films, X-ray structural study 2-21466  
 ZnS:Ag, Ce phosphors, photoelectroluminesc. 2-13564  
 ZnS:Ag, Cu, Cl phosphor powders, prep. and blue electroluminesc. 2-26992  
 ZnS:Ag, luminescence decay by laser excitation 2-22085  
 ZnS:Al, single cryst., polarisation of electrolum. 2-22094  
 ZnS:Ce, Cu(Ag), phosphorescence decay and thermolum. study 2-22099  
 ZnS:Cu, Ce phosphors, photoelectroluminesc. 2-13564  
 ZnS:Cu, yellow emission of Cu centres, band shift, activator conc. depend. (German) 2-31541  
 ZnS:Cu,Al luminophors, energy spectrum of traps 2-46789  
 ZnS:Cu,Mn, mechanism of Cu-induced hexagonal-cubic transformation 2-12725  
 ZnS:Cu,Nd,Cl film, laser phenomena in direct current electrolum. and cathodolum. 2-13572  
 ZnS:Er thin film, DC electrolum., spectral intensity 2-46766  
 ZnS:Fe<sup>2+</sup>, impurity triplet to quintet luminesc. 2-51658  
 ZnS:Gd (Cu,Gd)(Mn,Gd), electroluminescent, optical props. 2-36708  
 ZnS:Mn, ionoluminescence, irradi. enhancement mechanism 2-51716  
 ZnS:Mn,Er thin film, electrolum., mutual interaction between Mn and Er centres 2-46765  
 ZnS:Mn films, pulsed XeCl laser annealing, photoluminesc. study 2-50693  
 ZnS:Mn thin film electrolum. device, electrolum. characts. depend. on device parameters 2-31559  
 ZnS:Mn<sup>2+</sup>, E states luminesc., zero-phonon lines, elec. field effects 2-51553  
 ZnS:Mn(TbF<sub>3</sub>) AC thin film device, electrolum. mechanism 2-46763  
 ZnS:Tm<sup>3+</sup> fluorescence from nonequivalent Tm<sup>3+</sup> centres 2-51665  
 ZnS:YEuO<sub>2</sub>S thin film, electrolum. complex centre characts., fluorese. and time resolved spectra 2-46672  
 ZnS(F<sub>2</sub>):Mn, collision excitation cross-sections and energy levels of deep and very deep centers in electroluminescence 2-46762  
 ZnS(Se):Mn, high field electrolum., impact excitation and ionization 2-9201  
 ZnSe, bound exciton emission, near-bandgap luminescence spectra 2-17520  
 ZnSe, cryst., luminesc. at high excitation levels 2-31547  
 ZnSe crystals, effect of heat treatment in Zn, Se, Cd vapour on optical and electro-optical props. 2-13450  
 ZnSe, doped, luminescence centres, activation energy of form. 2-41392  
 ZnSe, electrically active grain boundaries, SEM cathodoluminescence and induced current obs. 2-40417  
 ZnSe film, MBE grown, photoluminescence spectra 2-17522  
 ZnSe, metalorganic chemical VPE growth, photoluminesc. and Raman scatt. obs. 2-31630  
 n-ZnSe organometallic CVD layer, cond. mechanism 2-51355  
 ZnSe, resonant exciton photoluminescence and cathodoluminescence 2-2341  
 ZnSe, self-activated luminescence anisotropic centre symm. (Russian) 2-13561  
 ZnSe, self-activated luminesc., anisotropic centre symm. 2-26983  
 ZnSe single crystals subjected to one- and two-photon excitation, luminesc. and lasing 2-34770  
 n-ZnSe, thermoluminescence, and TSC 2-41438  
 ZnSe:Cu, single crystals, luminesc. and photocond. 2-13543  
 ZnSe:ErF<sub>3</sub> thin films, electrolum. 2-26993  
 ZnSe:Li, Na, luminesc. spectra, exciton emission and donor-acceptor pair recomb. 2-46671  
 ZnSe(NiP), organometallic CVD growth, shallow acceptor doping, photoluminesc. study 2-51107  
 (ZnSe),(CdTe)<sub>1-x</sub>, luminesc. under one-photon laser pumping, exciton behaviour 2-36697  
 (ZnSe)<sub>1-x</sub>(GaAs)<sub>x</sub>, solid soln. crystals, photoluminesc. 2-31550  
 ZnSiO<sub>4</sub>, doped and undoped, photoluminesc. and photocond. 2-51672  
 ZnSiO<sub>4</sub>:Mn<sup>2+</sup>(Mn<sup>2+</sup>,As), photoexcited and photostimulated luminesc. and cond. 2-51670  
 ZnSiO<sub>4</sub>:Mn<sup>2+</sup>(Mn<sup>2+</sup>,As), phosphorescence, electron traps effect 2-51671  
 Zn<sub>2</sub>SiO<sub>4</sub>:Mn phosphors, electron trapping and luminesc. mechanisms, tunnelling model 2-5739  
 Zn<sub>2</sub>SiO<sub>4</sub>-Be<sub>2</sub>SiO<sub>4</sub> system, Mn-activated solid soln. form and characts. 2-40552  
 Zn<sub>3</sub>Sn<sub>1-x</sub>Ti<sub>x</sub>O<sub>4</sub>, luminescence 2-2330  
 ZnTe, laser induced O diffusion, photoluminesc. study 2-50923



**luminescence of inorganic solids continued**

- ZnTe, pulse photoexcited, excitons and electron-hole plasma 2-51681  
 ZnTe:O, photolum. and excitation spectra of  $O_2$  centre 2-2328  
 ZrF<sub>4</sub>-BaF<sub>2</sub>-ThF<sub>4</sub>-TbF<sub>3</sub> glasses, luminesc. props. 2-26962
- luminescence of liquids and solutions**  
 3-acetylamin-N-methylphthalimide, in polar solvents, phosphoresc., orientational relax. effects 2-24774  
 anthracene, soln., fluoresc. lifetime, viscosity and temp. depend. 2-34481  
 aromatic molecules in solution, quenching by  $O_2$ , singlet state luminescence 2-34466  
 benzene, liq., photoionisation, fluoresc. and electron scavenger quenching 2-34503  
 benzenediazonium para-substituted salts, phosphoresc. study 2-7597  
 benzophenone, circular polarisation of phosphoresc., triplet-singlet transition optical activity 2-29650  
 benzophenone-magnesium mesoporphyrin, donor phosphorescence quenching 2-26991  
 2,2'-bipyridine, two-photon excited fluoresc. and absorpt. 2-13566  
 camphorquinone, circular polarisation of phosphoresc., triplet-singlet transition optical activity 2-29650  
 para-chlorophenyl isocyanate, in ethanol soln., decay time, quantum yield, fluoresc. and phosphoresc. 2-29646  
 chlorophyll, fluoresc. conc. depend. and triplet state yield 2-20106  
 coronene, secondary emission with higher electronic states excitation 2-43989  
 coumarin dye solution, two-photon excited, fluorescence spectra (Russian) 2-13557  
 cyclodextrin inclusion compound, excited-state optical activity 2-2213  
 N,N'-di-2-tolyl-rhodamine, internal conversion, solvent effects, fluoresc. lifetimes 2-43961  
 3,6-diacylamino-N-methylphthalimide, in polar solvents, phosphoresc., orientational relax. effects 2-24774  
 dibenzothiophene, two-photon fluoresc. excitation spectrum 2-36674  
 diethylaniline in isopropanol, fluoresc. intensity mag. modulation 2-22060  
 3,3'-diethyloxadiazocarbonyl iodide, photoinduced isomerisation, fluorescence 2-47331  
 1-dimethylamino-4-cyanonaphthalene, dil. soln., dual fluoresc.; excited state equilib., temp. and viscosity effects 2-15835  
 dye cresyl violet soln., ps. fluoresc. depolarisation meas. by freq. conversion 2-31536  
 dye solutions, multiphoton cross-section meas. with low-power CW laser-induced luminesc. 2-43958  
 dye-impurity cluster system, luminesc. excitation, antisensitisation 2-34485  
 electrochemical shaping of metals, possible causes of luminesc. (Russian) 2-9200  
 ethanol-water mixtures, struct. features, picosecond fluorescence anisotropy obs. 2-20994  
 fluorescein, fluoresc. conc. depend. and triplet state yield 2-20106  
 fluorescence, conc. depolarisation, orientation factor effects 2-43991  
 fluoromethane, vibrational luminescence in cryogenic solutions 2-5749  
 high pressure, review 2-5746  
 hydrocarbons, prebreakdown disturbances and luminescence obs. using laser schlieren technique 2-5631  
 indole, substituted, high press. luminesc. in solns. 2-2326  
 inert gases, solid and liq., exciton self-trapping, defect prod. 2-41388  
 laser pump radiation conversion in luminesc. substances 2-29826  
 liquid phase electrochemiluminesc., diffusion kinetics 2-51710  
 lyoluminescent phosphors, light intensity increase by addition of rare earth ions to solvents 2-46758  
 methyl methacrylate-styrene copolymer, dibromomethane and I<sub>2</sub> quenching, soln. fluoresc. 2-17516  
 9-methylanthracene, soln., fluoresc. lifetime, viscosity and temp. depend. 2-34481  
 molecular and crystalline luminesc., conference proceedings, Samarkand, Oct. 1979 2-33208  
 molecular relaxation processes, luminescent kinetic spectroscopy 2-23733  
 organic molecules in solution, site selection spectroscopy 2-46701  
 phenyl isocyanate, in ethanol soln., decay time, quantum yield, fluoresc. and phosphoresc. 2-29646  
 photoluminescence quantum yields of solutions, conc. quenching, orientational factor in theory 2-51640  
 phthalazine solution, time resolved fluoresc. decay meas. 2-46710  
 phthalocyanine, and metal complexes, solns., excited states, radiative lifetimes, triplet-triplet absorpt. spectra 2-9188  
 polyethylene imine, branched, polymer coil struct. change during Cu II complex formation (Russian) 2-20223  
 polymers, excimer formation and energy migration 2-13544  
 polymethine dyes, anomalous amplification of S<sub>2</sub>-fluorescence intensity after two-step excitation by ps laser pulses (Russian) 2-31556  
 polystyrene, excimers, dibromomethane and I<sub>2</sub> quenching, soln. fluoresc. 2-17516  
 polystyrene, solns., excimer formation and energy migration 2-13544  
 polyvinylarenes, energy migration, triplet mechanism 2-5736  
 prolate molecules in soln., rot. motion of luminesc. 2-20120  
 pyrene in isopropanol, fluoresc. intensity mag. modulation 2-22060  
 radical ion pairs in liq. soln., recombination dynamics, electron hopping effect 2-52186  
 rare earth-amino acid complexes, bonding, luminesc. and absorpt. spectra 2-46726  
 rhodamine 69 in glycerin, mol. luminesc., temp. quenching mechanisms 2-34486  
 rhodamine 6G, in DMSO soln., absorpt. and luminesc. spectra, conc. effects 2-34483  
 rhodamine 6G in ethanol, fluoresc. decay time and quantum yield 2-7586  
 rhodamine 6G soln., reversible product, absorpt. spectrosc. obs. during 2-phase excitation 2-34484  
 rhodamine 6G solns., luminesc. yield, dimerisation effects 2-31549  
 rhodamine B (6C), aq. and ethanol solns., protonation, fluoresc. study 2-26968  
 rhodamine B soln., reversible product, absorpt. spectrosc. obs. during 2-phase excitation 2-34484  
 rhodamines, micellar water solns., fluoresc., conc. quenching 2-24775  
 trans-stilbenes, donor-acceptor-substituted in solvents, fluoresc. anisotropy 2-20122  
 tetracyanobenzene electron donor acceptor complexes, fluoresc., viscosity and temp. effects 2-20113  
 Au liquid-metal ion sources, field evaporation and ionisation, optical emission probe of neutral atoms 2-51707

**luminescence of liquids and solutions continued**

- Cs<sub>2</sub>MoO<sub>4</sub>-UO<sub>2</sub>MoO<sub>4</sub> system, phase relations, complex cpds. form. 2-50834  
 Cu(II) mesoporphyrin IX dimethyl ester, luminesc. and ESR spectra in toluene soln. 2-46659  
 Eu chelates, activation of liq. cryst. phase transition luminesc. 2-26051  
 Eu complex, piperidinium tetrakis (benzoyltrifluoroacetone)europium (III), solvent and temp. effects, fluoresc. 2-43964  
 Eu(II) complex, (1,4,7,10-tetraazacyclododecane-N,N',N'',N'''-tetracetate) europium(II), soln., luminesc. study 2-34468  
 Eu(PO<sub>3</sub>)<sub>3</sub>, photoluminescence of cooling liq. 2-51695  
 Ga liquid-metal ion sources, field evaporation and ionisation, optical emission probe of neutral atoms 2-51707  
 Hg-like ions, fluoresc. complexes in soln., energy and spatial struct. 2-24771  
 N<sub>2</sub>, luminesc. studies at liq. He temps. 2-30273  
 Nd<sup>3+</sup>:POCl<sub>3</sub>-P<sub>2</sub>O<sub>5</sub>-Cl<sub>2</sub>-SnCl<sub>4</sub> system, laser performance and fluoresc. lifetime (Chinese) 2-15996  
 Ne, condensed, relax. processes from higher excited states of self-trapped excitons 2-26959  
 O<sub>2</sub> liquid, visible fluoresc. obs. excited by Q-switched Nd:YAG laser 2-11537  
 Ru complex, Ru(1,10-phenanthroline)<sub>3</sub><sup>2+</sup>, aq. soln., solvent isotope effect on photophysics 2-43963  
 Ru complex, Ru(2,2'-bipyridine)<sub>3</sub><sup>2+</sup>, aq. soln., solvent isotope effect on photophysics 2-43963  
 Tb(PO<sub>3</sub>)<sub>3</sub>, photoluminescence of cooling liq. 2-51695  
 UO<sub>2</sub><sup>2+</sup> aq. solns., quenching by inorganic ions, luminesc. study 2-26970  
 UO<sub>2</sub>(NO<sub>3</sub>)<sub>2</sub>·6H<sub>2</sub>O, snap-frozen melt, lanthanide ion, influence on emission 2-26955
- luminescence of organic solids**  
 n-alkane:copper porphyrin, phosphoresc. spectrum, Zeeman effect, crystal field splitting 2-36686  
 n-alkane:copper porphyrin, Zeeman pattern, vibronic coupling 2-35978  
 4-amino-N-methylphthalimide, in PMMA, solid soln., emission spectrum kinetics, directed energy transfer 2-29653  
 3-aminophthalimide, in PVA, solid soln., emission spectrum kinetics, directed energy transfer 2-29653  
 ammonium tartrate, pyroelectric luminesc. 2-31567  
 anthracene:perylene steady state electrolum. 2-41430  
 anthracene, cryst., laser excitation fluoresc. study 2-36679  
 anthracene, cryst., lattice defect influence on exciton states, luminesc. study 2-26971  
 anthracene, low-temp. fluorescence excitation spectra (Russian) 2-13560  
 anthracene, photoionisation and mag. field modulated recomb., time resolved fluoresc. 2-46680  
 anthracene, R-centre luminescence spectrum (Russian) 2-17544  
 anthracene cryst., polariton luminesc. 2-22059  
 anthracene-2-hydroxyanthracene, energy transfer and chemical reactivity, luminesc. obs. 2-46717  
 anthracene-metal boundary, exciton luminesc. props. 2-26951  
 anthracene-pyromellitic anhydride, isotopically mixed, charge-transfer exciton bandwidth, refl. and luminesc. spectra 2-17537  
 anthracene-tetrachlorophthalic anhydride, charge transfer cryst., triplet excitation energy migration and annihilation 2-26972  
 anthracene-tetrachlorophthalic anhydride, ODMR and luminescence studies of triplet state 2-46431  
 anthracene-trinitrobenzene system, electrolum. obs. 2-17550  
 aromatic polycrystals + N<sub>2</sub> reaction, delayed luminesc. emission and induced chemi-ionisation 2-9187  
 azulene, fluorescence study of lowest triplet state 2-46703  
 benzophenone:benzopinacol crystals, fluoresc., UV irr. effects 2-13542  
 benzophenone,  $\alpha$ -modified, phosphorescence spectra, impurity states (Russian) 2-13558  
 benzophenone, modifications, phosphorescence 4.2 to 240K 2-26950  
 benzophenone single crystals, doped, delayed exciton phosphoresc. (Ukrainian) 2-36675  
 benzopinacol crystals, fluoresc., UV irr. effects 2-13542  
 benzo[a]phenazine, phosphorescence polarisation spectra 2-46706  
 biphenyl, cryst., temp. effect, phase transition, fluoresc. 2-26952  
 2,2'-bipyridine, two-photon excited fluoresc. and absorpt. 2-13566  
 biquinoline, phosphoresc. and delayed excimer fluoresc. 2-31533  
 bis(alkylammonium) manganese tetrachlorides, two-dimens. antiferromag., luminesc. spectra, exchange effects 2-46677  
 bromo-4-chlorononaphthalene, orientationally disordered, phosphorescence spectral diffusion within inhomogeneous line width 2-51651  
 1 bromobutane-1-iodononaphthalene, phosphorescence spectrum 2-46704  
 charge carrier recombination dynamics, mag. field effect 2-36054  
 coronene:perylene, thin crystalline films, fluorescence spectra, energy transfer diagram 2-17514  
 cyanopyridines, isomeric, anomalous luminesc. behaviour 2-41396  
 di(tetramethylammonium)uranyl tetrachloride, electronic and vibr. spectra 2-31493  
 1,5-diazabicyclo(3.3.0)octadiene, phosphoresc., ODMR and EPR of triplet state 2-13535  
 diazomethane photolysis and subsequent thermoluminesc. 2-22452  
 dibenzothiophene, two-photon fluoresc. excitation spectrum 2-36674  
 $\beta$ -9,10-dichloroanthracene, ODMR and luminescence studies of triplet state 2-46431  
 dihydrobenzanthracenes, spiroanthronyl-substituted, excimer luminesc., rel. between fluoresc. and mol. geometry 2-49489  
 4,4'-dimethylbenzophenone, exciton motion electric field effect, phosphoresc. study 2-17518  
 diphenyl: pyrene, coherent effects on spectrum and emission kinetics 2-22065  
 diphenyl:pyrene, absorpt. and fluoresc. spectra 2-31551  
 diphenyl, effect of halogen substitutions on quasilinear phosphorescent spectrum (Russian) 2-13530  
 diphenyl, extrinsic mol. cryst. phosphorescence, decay kinetics 2-22064  
 disordered organic solids, localised states and electronic transport, review 2-8774  
 durene:pyrene, absorpt. and fluoresc. spectra 2-31551  
 durol, extrinsic mol. cryst. phosphorescence, decay kinetics 2-22064  
 dye adsorbed on Ag island films, enhanced surface SHG and two-photon dye luminesc. 2-11755  
 dye molecules adsorbed on Ag, luminescence 2-26976  
 dye monolayer coatings on Ag grating, light emission 2-22075  
 EBBA, nematic liquid cryst., order parameters, polarised fluorescence study, anisotropy effects 2-50524  
 electroluminescence in organic crystals, review 2-36706



**luminescence of organic solids continued**

- ethylene, chemiluminesc. in inert matrix 2-22452  
 glass, nonphotochem. hole burning at OK 2-26958  
 glasses, excess electrons recombination kinetics at low temps. 2-13552  
 n-heptane:coronene single cryst., luminesc. polarization, 4.2K 2-4348  
 high pressure, review 2-5746  
 impurity centres, absorpt. and fluorese. spectra 2-26949  
 insulating polymers, carrier trapping, thermoluminesc. and TSC obs. (Japanese) 2-9076  
 irradiated compounds, field enhanced luminesc. due to electron tunnelling 2-13578  
 methane:benzene (toluene), solid, isothermal luminesc., temp. depend. electron tunnelling 2-27001  
 methane-benzene (toluene) dil. solid solns., UV irr., isothermal luminesc. and thermoluminesc. 2-27000  
 molecular and crystalline luminesc., conference proceedings, Samarkand, Oct. 1979 2-33208  
 molecular cryst., intermediate polaron and bound states with phonons at strong coupling 2-45856  
 molecular crystals, dislocation excitons and manifestations in optical spectra 2-22063  
 molecular crystals, effect of spin relax. on fluorescence 2-46705  
 molecular crystals, exciton luminesc. at high excitation levels 2-22061  
 molecular crystals, triboluminesc. spectra 2-27006  
 monoalkylammonium chlorides activated with Ti, phosphors, luminesc. study 2-9191  
 naphthalene:  $\beta\beta$ -dinaphthylethylene, generation spectrum, effect of excitation nonresonance freq. (Russian) 2-13556  
 naphthalene, phosphorescence study of critical exciton annihilation 2-46700  
 naphthalene, pure and impure cryst., exciton-phonon luminesc. 2-22058  
 naphthalene, triplet exciton annihilation, spin relaxation effects 2-22086  
 naphthalene, X trap system, electron-phonon coupling, phosphoresc. line-shape anal. 2-22069  
 naphthalene N-h<sub>8</sub> and N-d<sub>8</sub>, triplet T<sub>1</sub> Davydov components, high resolution excitation spectra 2-46655  
 naphthalene with d( $\beta$ -naphthyl)-1,2-ethylene, pure electronic transition band in absorpt. and fluorescence spectra (Russian) 2-13562  
 naphthalene-d<sub>8</sub>, phosphoresc., direct excitation spectra, Davydov components 2-46660  
 neodymium formate, cryst. field levels, stark splitting, laser induced fluorese. study 2-36680  
 organic photoconductor, electro-optical induction of recomb. luminesc. 2-13567  
 oxalyl chloride, N<sub>2</sub> laser excited fluorese. at 77K 2-43993  
 perylene, excimer form., time resolved fluorese. spectroscopy 2-46656  
 $\alpha$ -perylene, nonlinear fluorese. reabsorpt. by electronically excited mols. 2-51699  
 perylene in n-heptane cryst., fluorese. selectively laser excited in phonon sideband 2-46711  
 phenanthrene cryst., nonlinear polariton effects 2-41389  
 phenoxathine, pure single crystals, temp. depend. of long lived emission spectra, 50-293K (French) 2-46743  
 phthalocyanine films, vacuum deposited, struct. singularity, crit. optimisation effect 2-5328  
 platinum porphyrin in EPA glass and n-octane crystal, phosphoresc. and polarisation spectra, Zeeman effect 2-22078  
 PMMA, less intensive luminescence, tribobreak-down (Russian) 2-22102  
 poly(1,3-diphenyl-5-(p-methacryloyloxyphenyl)-2-pyrazoline), amorphous, singlet excitation energy migration, fluorescence quenching study 2-51693  
 poly(1,3-diphenyl-5-(p-vinylphenyl)-2-pyrazoline), amorphous, singlet excitation energy migration, fluorescence quenching study 2-51693  
 poly-N-vinylcarbazole, extrinsic carrier photogeneration, charge transfer fluorese. quenching by elect. field 2-41395  
 polyacetylene, electronic excitations, soliton model 2-45851  
 polyacetylene, photoluminesc. and photocond. studies, effect of cis-trans isomerisation 2-17530  
 polycarbonate, less intensive luminescence, tribobreak-down (Russian) 2-22102  
 polymer, block, anthracene mol. diffusion coeff. meas., inductive-resonance energy transfer use 2-45636  
 polymers, excimer formation and energy migration 2-13544  
 polymers, light detection as prebreakdown phenomena 2-17402  
 polymethine dye molecules in alcohol disordered matrix, quasisdiscrete luminesc., 4.2 K 2-11543  
 polystyrene, less intensive luminescence, tribobreak-down (Russian) 2-22102  
 polystyrene films, excimer formation and energy migration 2-13544  
 polystyrene-PMMA copolymer scintillator optical characteristic stabilisation by prolonged heating 2-43695  
 polyvinylarenes, energy migration, triplet mechanism 2-5736  
 polyvinylcarbazole films, fluorese. excitation spectra, mobility threshold for singlet exciton transport 2-51646  
 pyrene, fluorescence spectra, monomer emission 2-46699  
 pyrene, luminescence and excitons 2-46698  
 pyrene, nonlinear fluorese. reabsorpt. by electronically excited mols. 2-51699  
 pyroelectric luminescence 2-9190  
 pyromellitic N,N'-dimethylidide-anthracene, triplet exciton annihilation rate enhancement 2-51697  
 p-terphenyl, cryst., laser-excited delayed fluorese. 2-22079  
 p-terphenyl-tetracene, energy transfer and chemical reactivity, luminesc. obs. 2-46717  
 tetracene, hole burning in spectra in glassy matrices 2-36700  
 tetracene, luminescence spectra, press. and temp. induced modification 2-13541  
 tetramethyl-p-phenylenediamine, delayed fluorese. obs. 2-51645  
 TGS, switching induced electrolum., X-ray irr., effect 2-36704  
 thianthrene, pure single crystals, temp. depend. of long lived emission spectra, 50-293K (French) 2-46743  
 thioxanthene, pure and thick single cryst., absorption and emission spectra (French) 2-22080  
 thioxanthene, pure single crystals, temp. depend. of long lived emission spectra, 50-293K (French) 2-46743  
 uranium oxide (di)formamide hydrate, IR spectra, microanal. and X-ray diff. 2-2710  
 xanthone in mixed crystals, highly resolved dual phosphorescence 2-9175  
 Ar-benzene (toluene) dil. solid solns., UV irr., isothermal luminesc. and thermoluminesc. 2-27000

**luminescence of organic solids continued**

- CdS-anthracene interface, exciton reflection and luminesc. spectra 2-51091  
 H<sub>2</sub>-tetra-4-tret-butylphthalocyanine, hole burning in spectra in glassy matrices 2-36700  
 Mg porphyrin in anthracene fluorese. spectra 2-51648  
 UO<sub>2</sub> complexes, luminesc. excited state splitting 2-41400  
 ZnTe:Be, effect of cation isoelectronic impurity of photoluminescence 2-26969
- luminescence of solids**  
 see also *luminescence of inorganic solids; luminescence of organic solids*  
 acoustoluminescence, self-defect mechanism (Russian) 2-13580  
 charged acceptor-donor complex, recombination luminescence 2-17539  
 cubic crystals, effect of applied stress on luminescence 2-46683  
 electroluminescence, high field, review 2-13570  
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 polar semiconductors, luminescence from bound multiexciton complexes 2-46696  
 radiation chemical potential 2-51688  
 relaxing systems, emission spectra calcs. 2-22081  
 resonant Raman scattering and luminescence of excitonic polaritons 2-5684  
 semiconductor, biexcitons, M-luminesc. band region, self-induced transparency 2-44411  
 semiconductor, excitons bound to neutral donors, props. 2-1838  
 semiconductor, intermediate exciton state, Coulomb attraction effect on impurity absorption and optical recomb. 2-17511  
 semiconductors, photons at non-zero chemical potential 2-22077  
 small-polaron hopping between inequivalent sites, chemical rate treatment, pair recomb. appl. 2-1910  
 theoretical aspects, review 2-46665  
 thin crystal, radiative decay of excitons, crystal size depend. on optical spectra 2-8758
- luminescent devices**  
 see also *fluorescent screens; phosphors; scintillation counters*  
 conference, Berlin, Germany (July 1981) 2-42779  
 electroluminescence, high field, review 2-13570  
 electroluminescent, high-field thin-film, physical concepts, review 2-51711  
 filters, efficiency of wavelength conversion of laser pump light 2-20398  
 fluorescent dye in doped polymer matrix, Stokes shift, use in fluorescent collector 2-46727  
 glass:Cr<sup>3+</sup> based materials, fluorescent, for luminescent solar collector 2-52387  
 research, review 2-51689  
 solar concentrator for photovoltaic systems, efficiency, temp. depend. 2-47485  
 solar planar concentrators 2-47486  
 CaS:R (R=rare earth), DC electrolum. 2-46767  
 SrS:R (R=rare earth), DC electrolum. 2-46767  
 ZnS phosphor powder for electrolum. panels, UV light induced ageing, photoacoustic spectroscopy study 2-5775  
 ZnS:Mn(TbF<sub>3</sub>) AC thin film device, electrolum. mechanism 2-46763
- luminothors** see *phosphors*
- luminors** see *phosphors*
- lunar atmosphere** see *Moon; planetary satellite atmospheres*
- lunar geology** see *lunar rocks and minerals*
- lunar rocks and minerals**  
 10th lunar and planetary science conference, Houston, USA (March 1979) 2-48390  
 anorthositic-noritic-troctolitic (ANT) suite rocks from lunar highlands, mineralogy, petrology and chemistry 2-42619  
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 book 2-23385  
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**lunar seismology**

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**lunar structure**

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**lung**

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 alveolar-capillary membrane permeability assessment, dog, aerosolisation method using radioisotopes 2-52680  
 atelectatic lobe blood flow: open vs. closed chest, positive press. vs. spontaneous ventilation 2-2889  
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 brachytherapy, computerised dose predictions, exam. of consistency and accuracy 2-27907  
 breath sounds, use in pulmonary diagnosis, review 2-32292  
 bronchial tree branches, relation between diameter and flow 2-27813  
 calcification in solitary nodules, detect. by dual energy film subtraction technique 2-22821  
 carcinogenic effects of Rn daughters, U ore dust and cigarette smoke in beagle dogs 2-47639  
 cell proliferation, effects of neutron and X-irrad., mouse expts. 2-18262  
 cells, lack of correl. between hyperthermic killing, thermotolerance, and membrane lipid fluidity 2-27793  
 cells, repair of sublethal and potentially lethal damage after irrad. 2-27831  
 charged particles, transport through spongy materials, lung appl., Monte Carlo calcs. 2-18247  
 deformation of lung tissue, isotropy and homogeneity, dog expts. 2-14274  
 diffusing capacity, nonlinear increases during exercise by seated and supine subjects 2-52522  
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 gaseous uptake dynamics, conc. and 2nd gas effects 2-27815  
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 intra-alveolar fluid press. and interdependence in dogs, oedema effects 2-52524  
 macrophages, rat lung  $^{144}\text{Ce}$  autoradiogram meas. by densitometry or photometry 2-6293  
 mechanical properties of contracted canine bronchial segments in vitro 2-52516  
 mechanics, relations between recoil press., surface area and surface tension 2-2887  
 pulsatile blood flow in a rigid pulmonary alveolar sheet with porous walls 2-22779  
 radiation dose estimates to lung tissues from Rn daughters 2-27901  
 radiation pneumonitis following a large single dose irrad. 2-27834  
 radioactive aerosol, retention in rabbit lung, system for in vivo meas. 2-47765  
 radioisotope images, computerised processing to highlight pulmonary embolism 2-27876  
 regional function in children, accuracy of  $^{13}\text{N}$  inhalation and infusion studies 2-42197  
 respiratory deadspace, apparatus for automatic assessment 2-47735  
 respiratory sound, digital spectrum anal. 2-14303  
 sounds, diagnostic value, preliminary study by CAA 2-14299  
 sputum of bronchitis patients, viscoelasticity, protein content and ciliary transport rate 2-37610  
 surface forces and temp. in excised rabbit lungs, rel. to press.-vol. curves 2-52521  
 transformations due to inhaled radioactivity, method for determ. 2-37626  
 tumour visualisation by computed subtraction scintigraphy with  $^{67}\text{Ga}$  citrate and  $^{113\text{m}}\text{In}$  chloride (Russian) 2-27871  
 US imaging, transmission of contrast 2-37638  
 venous air emboli in sheep: reversible increase in lung microvascular permeability 2-52523  
 water content, microwave meas. method 2-27866  
 X-irradiation, split dose, repair in mice 2-32278  
 $^{103}\text{Pd}$  in lungs, X-ray detect. efficiencies, synthesis of data from two labs. 2-22866  
 $^{239}\text{PuO}_2$ , high fired, inhalation carcinogenesis of repeated exposures in rats 2-22793

**lutecium** *see lutetium***lutetium**

- see also nuclei with .....*  
 atom, single photon photoionisation mass spectroscopy via autoionising resonances 2-49587  
 electron structure, beginning and end of third period, X-ray emission props. (Russian) 2-36736  
 liquid, interionic pot. from struct. data 2-20996  
 thermophysical props. at high temps. 2-35709  
 Lu-H(D), solid solution, anelastic effects 2-45365  
 $^{176}\text{Lu}$ , stellar synthesis rel. to use as cosmic clock or stellar thermometer 2-42588  
 $^{177}\text{Lu}$  impurities in ferromag. host metals, nucl. orientation 2-46397

**lutetium alloys**

- LuCu $_2$ Si $_2$ , mag. disorder resist. 2-17058  
 $\alpha$ -LuD $_{0.01}$ , ion implanted and thermally diffused, D lattice location, channelling study 2-35517  
 LuFe $_2$ , heat capacity, crystal-field effects, mag. props. 2-8985  
 $\alpha$ -Lu(H, D) $_x$ , elec. resist. due to H, 4.4 to 170K, Manninen-Jena effect 2-17046  
 LuH $_x$ , specific heat below 2K, H tunnelling effects 2-30621  
 $\alpha$ -LuH $_x$ (D $_x$ ) solid solns., quenching behaviour at low temp., resist. increase, solubility limit 2-40555  
 LuIn $_3$ , thermal expansion study 2-30638  
 LuTe $_2$ , supercond. transition temp. determ. 2-26537

**lutetium compounds**

- see also lutetium alloys*  
 dipthalocyanine, electrochromism, IR, electronic, and ESR spectra 2-36603  
 dipthalocyanine film, cathodic electrochromism 2-9128  
 KLu(MoO $_4$ ) $_2$ , orthorhombic crystals polarised IR and Raman spectra 2-41362  
 LuAlB $_4$ , single cryst. growth from Al melt, struct. refinement 2-41510  
 LuCl $_3$ , valence shell electronic struct., He 1/II PES 2-755  
 Lu(Cr, Al $_{1-x}$ ) $_3$ (BO $_3$ ) $_4$ , Cr $^{3+}$  luminescence study 2-46688  
 Lu(Cr, Ga $_{1-x}$ ) $_3$ (BO $_3$ ) $_4$ , Cr $^{3+}$  luminescence study 2-46688  
 LuF $_3$ , hysteresis in ionic cond. and excess heat capacity, phenomenological theory 2-50915  
 Lu(Fe $^{2+}$ , M $^{2+}$ )O $_4$ , (M=Mg, Mn, Co, Cu and Zn), layer struct., synthesis and cryst. struct. 2-25827  
 LuH $_x$ -Er $^{3+}$  EPR study 2-46373  
 LuOCr $^{3+}$  (R=Sm, Eu, Tb, Dy, Tm), fluoresc., local crystal symmetry 2-41403  
 Lu $_2$ O $_3$ :Ce $^{3+}$ , red luminesc., large Stokes shifts 2-51669  
 LuPO $_4$ :Fe $^{3+}$ , EPR spectra, crystal field splittings 2-36412  
 LuP $_2$ O $_4$ , struct. characts., IR and Raman obs. 2-41341  
 Lu $_{1-x}$ R $_x$ Rh $_2$ B $_4$ , R=Ce, Yb, Gd, Sm, superconducting transition temp. press. depend. 2-17201  
 LuRh $_2$ B $_4$ , supercond. and mag. transition temp.,  $\alpha$ -particle effect 2-31026  
 LuRh $_2$ B $_4$ , superconducting props. 2-31043  
 LuRh $_2$ B $_4$ , thermal cond., 0.05 to 15K 2-36223  
 Lu(Rh $_{0.85}$ Ru $_{0.15}$ ) $_2$ B $_4$ , nonmagnetic contrib. to superconducting T $_c$  variations 2-31009  
 Lu $_2$ Si $_2$ O $_7$ , floating zone grown, crystal data 2-12556  
 Lu $_2$ Y $_{1-x}$ Sc $_x$ O $_3$ :Nd, thermally stimulated luminesc. 2-51721  
 Nb-Lu $_2$ O $_3$ -Pb superconducting tunnel junction, leakage and thermal stability 2-51374  
 (Sm, Lu, Ca) $_3$ (Si, Lu, Fe) $_2$ O $_2$  film, domain wall motion, magnetisation and comp. depend. 2-26704  
 TiLu $_3$ F $_{10}$ , crystal chem. study (French) 2-16622  
 (Tm $_{1-x}$ Lu $_x$ )RuB $_2$ , reentrant supercond., AC mag. susceptibility meas. 2-17190  
 (Y, Sm, Lu, Ca) $_3$ (Fe, Ga) $_2$ O $_2$ , ferrite-garnet film, 360° dynamic domain wall (Russian) 2-46351  
 Y $_2$ O $_3$ :Lu $_2$ O $_3$ :CrO $_3$ , Z (Russian) 2-5538  
 Y $_2$ O $_3$ :Lu $_2$ O $_3$ :FeO $_3$ , nature of magnetic anisotropy and magnetostriction (Russian) 2-5538  
 YRh $_2$ B $_4$ -LuRh $_2$ B $_4$ -ThRh $_2$ B $_4$ , supercond. behaviour 2-41049  
 (YSmLuCa) $_3$ (FeGe) $_2$ O $_2$ , LPE grown, mag. bubble props., melt composition depend. 2-31250  
 (YSmLuCa) $_3$ (FeGe) $_2$ O $_2$  bubble epitaxial layers, neutron and  $\gamma$ -irrad., mag. props. 2-31252  
 (YSmLuCa) $_3$ -Gd $_4$ (FeGe) $_2$ O $_2$  garnet film, bubble collapse field, zero temp. coeff. 2-36403

**Luxemburg effect** *see ionospheric electromagnetic wave propagation***Lyapunov methods**

- celestial mechanics, three-body problem stochasticity, Lyapunov characts. 2-32820  
 logistic system behaviour, external noise influence 2-38574  
 myelinated nerves models, threshold results 2-9794  
 pneumomechanical model of oscillation generator, stability conditons 2-33  
 saws, disc cutting, motional stability (Russian) 2-8030  
 scalar charged solitons, Lyapunov stability 2-19266

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